

63A.	3x400V.	Schneider.	GV2-G.....	GV2-G245	2x45mm		
...	...	...	...	GV2-G345	3x45mm		
...	...	...	...	GV2-G445	4x45mm		
...	...	...	...	GV2-G254	2x54mm		
...	...	...	...	GV2-G354	3x54mm		
...	...	...	...	GV2-G454	4x54mm		
...	...	...	...	GV2-G554	5x54mm		
...	...	...	...	GV2-G272	2x72mm		
...	...	...	...	GV2-G472	4x72mm		
...			
...			
115A.	3x400V.	Schneider.	GV3-G..64	GV3-G264	2x64mm		
...	...	...	...	GV3-G364	3x64mm		
...			
...			
250A.	3x400V.	Rittal.	Mini PLS (PLS)	9629.000	90mm / 100A		
...	...	...	...	9628.000	72mm / 40A		
...	...	...	...	9617.000	54mm / 40A		
...	...	...	...	9615.000	54mm / 25A		
...	...	...	...	9615.100	45mm / 25A		
...			
...			
...			
630A.	3x400V.	Rittal.	Riline60 (R_60)	9345.700	140mm / 630A	9340.430	55mm / 65A
...	...	...	...	9345.710	140mm / 630A	9340.720	55mm / 40A
...	...	...	...	9345.720	140mm / 400A	9340.460	55mm / 32A
...	...	...	...	9345.730	140mm / 400A	9340.350	45mm / 32A
...	...	...	...	9345.600	105mm / 250A	9340.340	45mm / 25A
...	...	...	...	9345.610	105mm / 250A	...	
...	...	...	...	9342.500	90mm / 160A	...	
...	...	...	...	9342.510	90mm / 160A	...	

C1. Type 1 coordination.

... In the event of a short circuit, the device must reliably switch off the damaged circuit.

... After switching off the short circuit, it is not necessary for the circuit breaker or the contactor to continue to operate.

... ?

... ?

... ...

... ...

... ...

... ...

... ...

C2. Type 2 coordination.

... In the event of a short circuit, the device must reliably switch off the damaged circuit.

... After switching off the short circuit, it is necessary that the device or contactor can still be operated.

... ?

... ?

... ?

... ?

... ?

... ...

... ...

... ...

... ...

Full coordination.

... In the event of a short circuit, the device must reliably switch off the damaged circuit.

... After switching off the short circuit, it is essential that the device and the contactor are unconditionally operable.

... ?

... ...

... ...

... ...

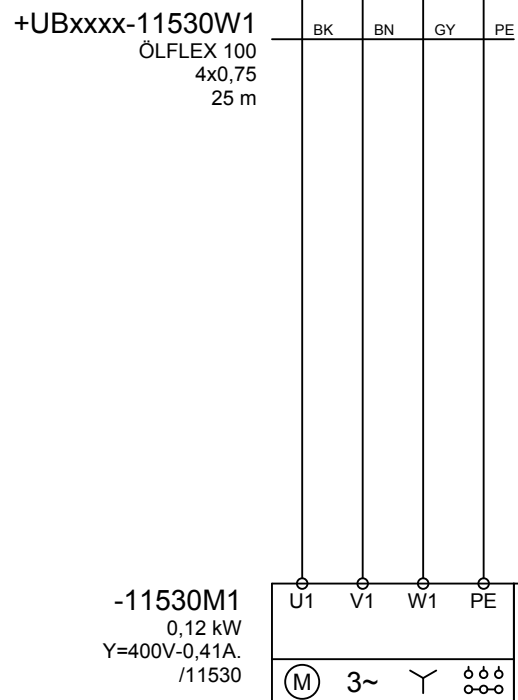
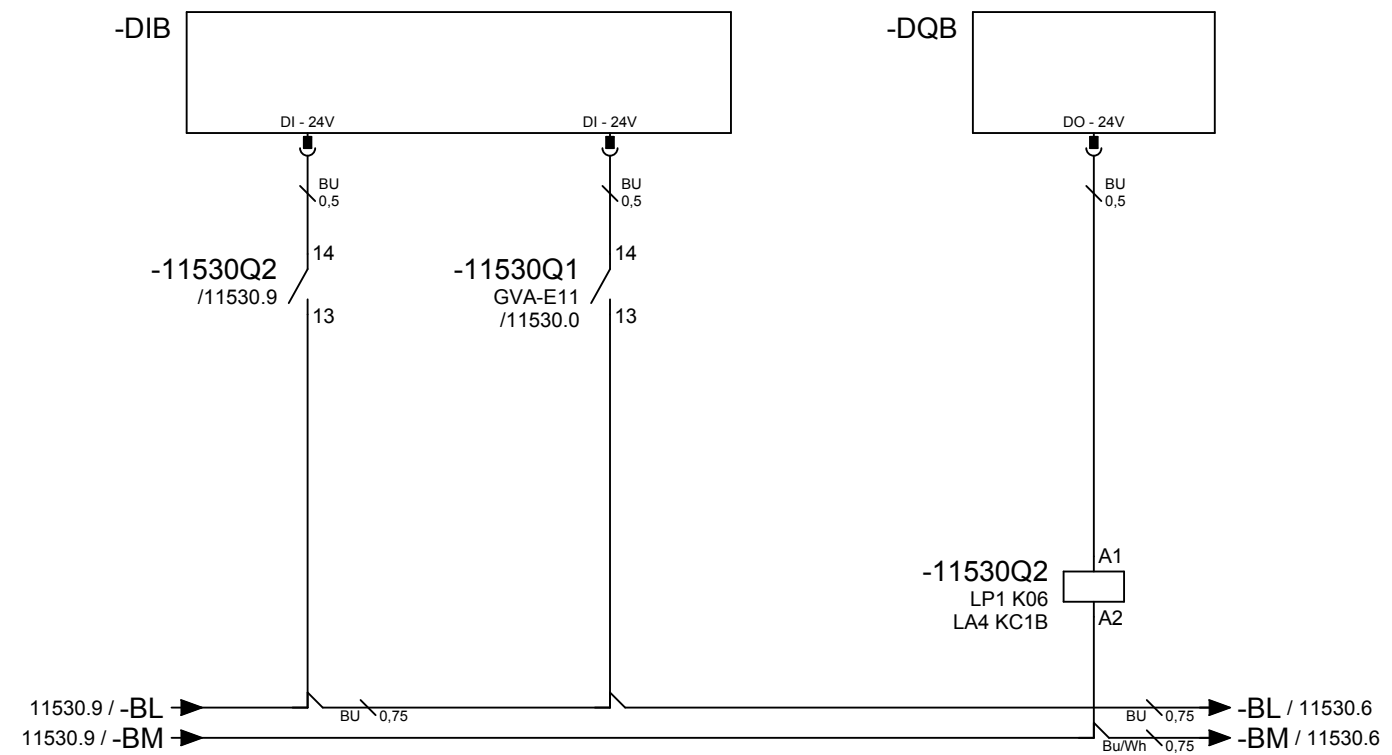
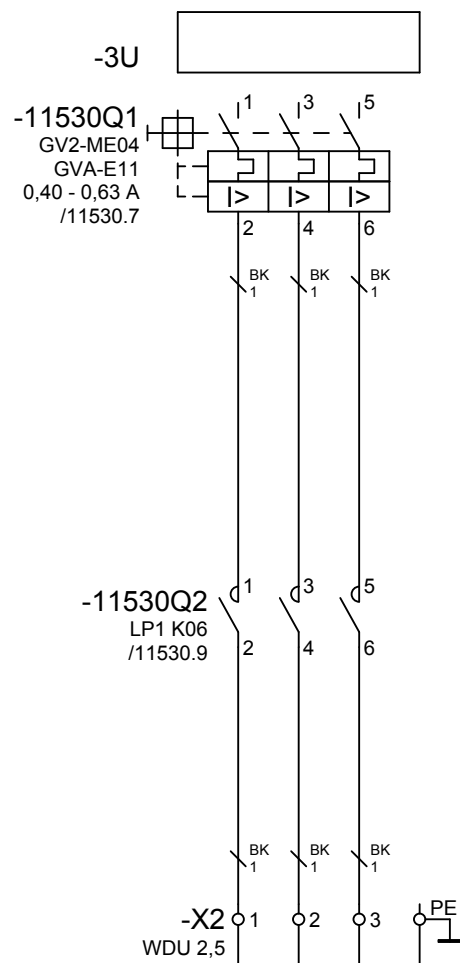
... ...

... ...

... ...

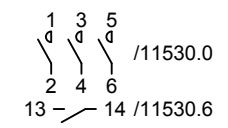
... ...

1. Select the appropriate page in this project.
2. Copy the selected page to the target project structure.
 - ... When inserting, enter the structure and a new page number.
 - ... Do not change the numbering of the devices when inserting them.
3. Renumber devices on the inserted side.
4. Change the structure and motor name.
 - ... Change the data in both symbols at the same time.
 - ... Change the functional text.
 - ... Copy the complete structure of the motor.
5. Edit the function texts for the PLC. Add the motor structure to the PLC function text.
 - ... Ctrl+D. Ctrl+Home. Ctrl+V.
6. Synchronize the function text of the motor.
7. Move the symbol in the field PROCES to technological drawing.
8. Repeat this process for each motor.
 - ... Change the frame of all inserted drawings.
 -
 -
 -
 -
 -
 -
- A. For connecting busbars use:. PACK 21. BUS-BAR.
- B. For other types of terminals use:. PACK. X.
- C. For other cable types use:. PACK. W.
- D. For other cable lengths use:. PACK. W.
- E. To use the frequency converter use:. PACK. T.
- F. For other HW and PLC connections use:. PACK 40. CONTROL.
- G. To use the motor disconnecter use:. PACK. Q.
- H. To use the motor with the thermistor use:. PACK. M.
- K. To use the motor with the brake use:. PACK. M.
-
-

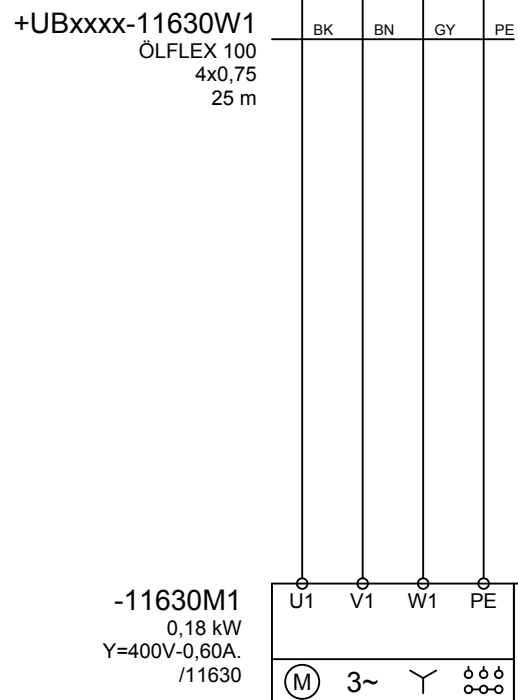
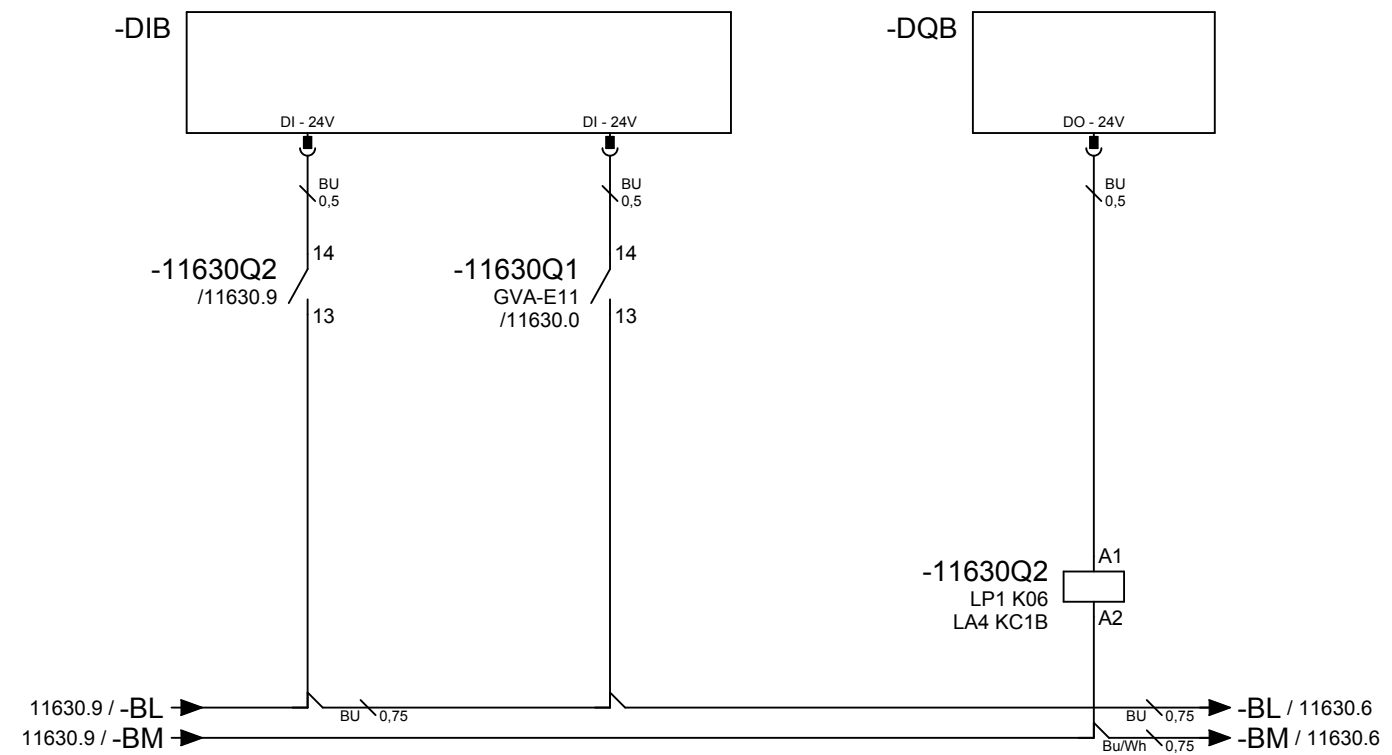
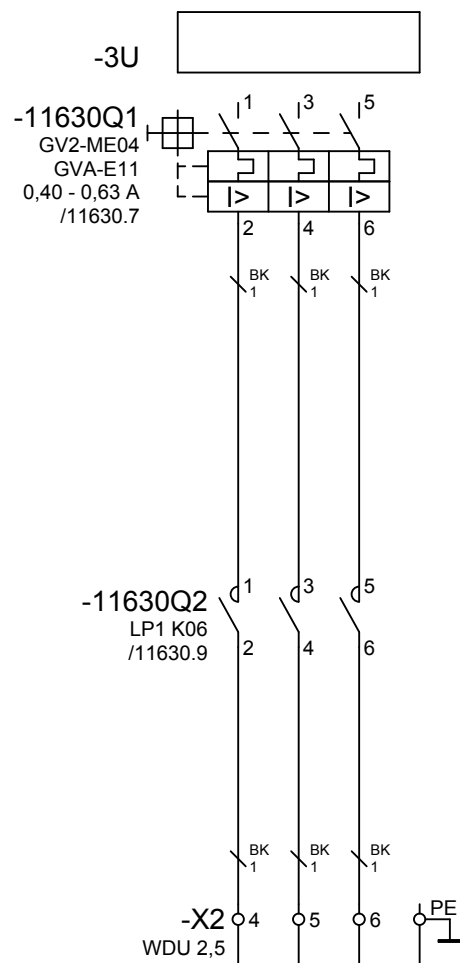


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...

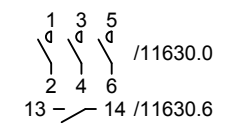


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

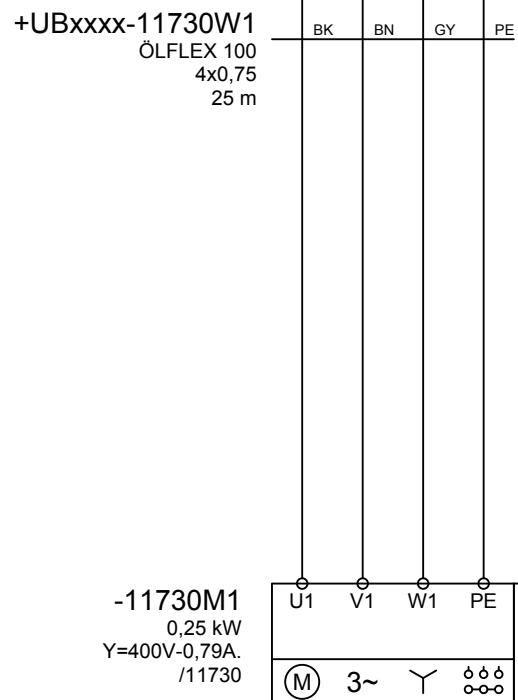
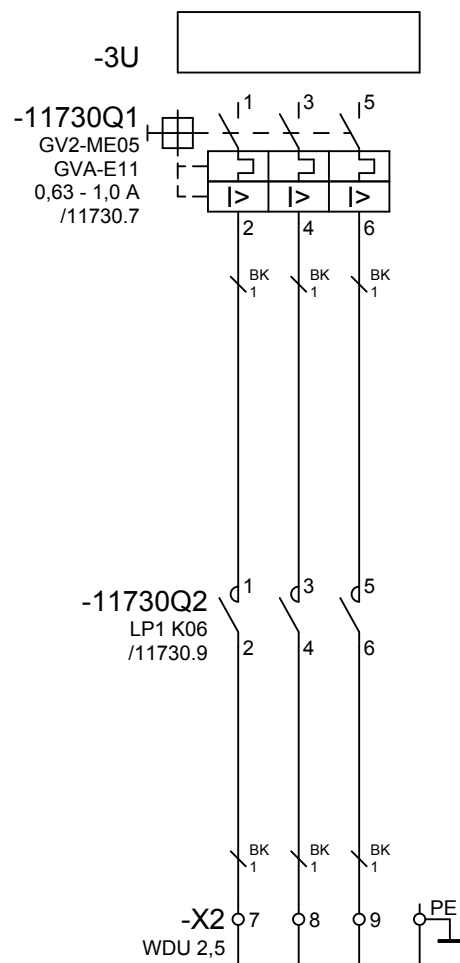


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...

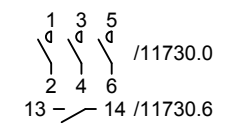
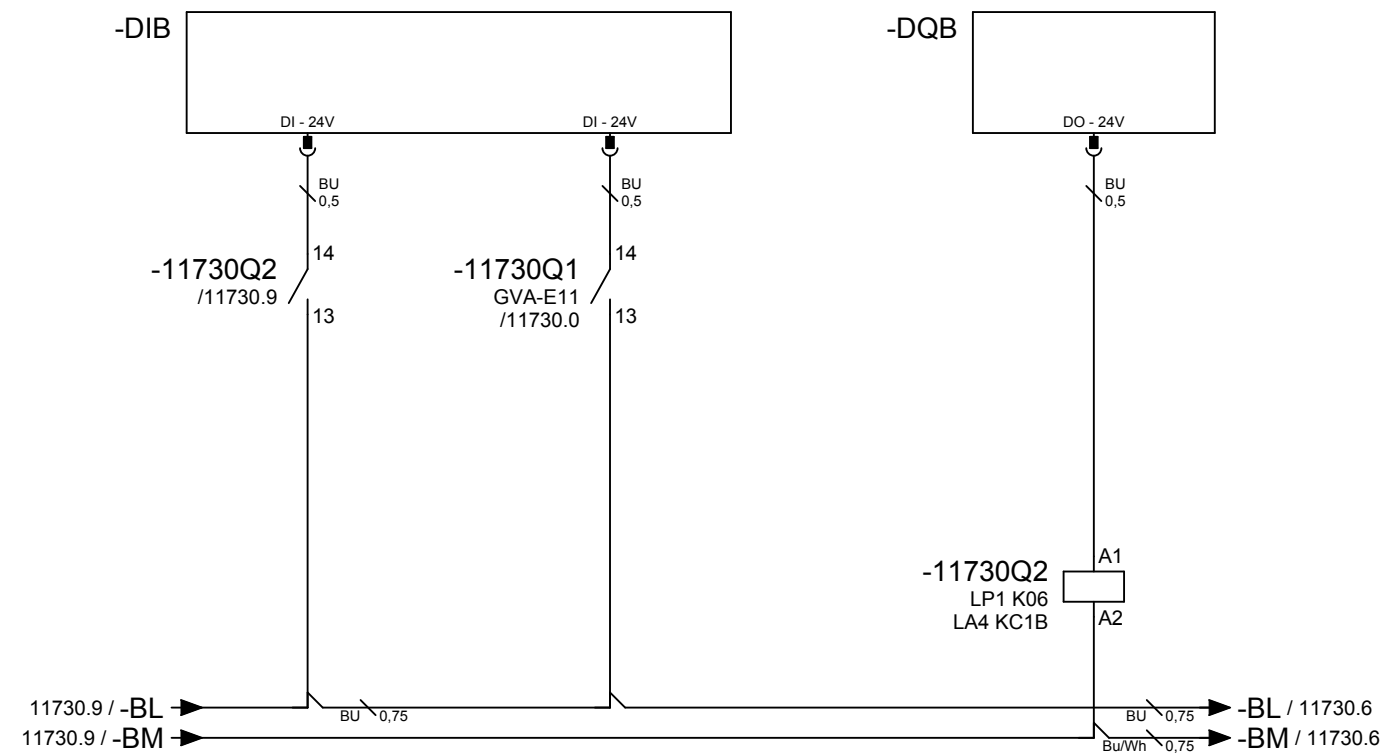


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

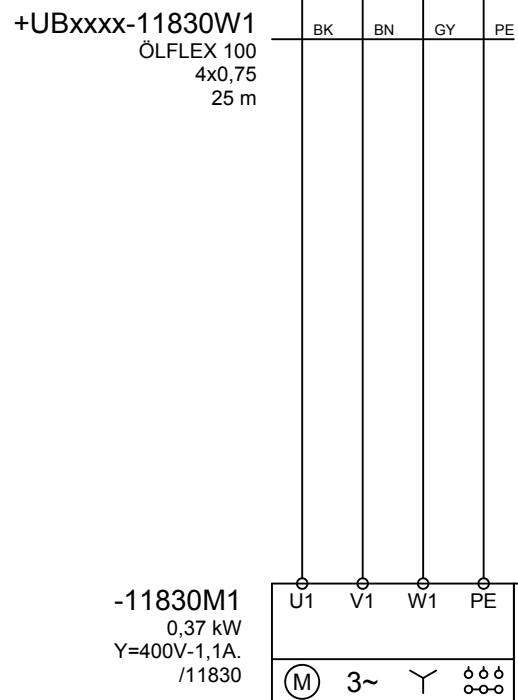
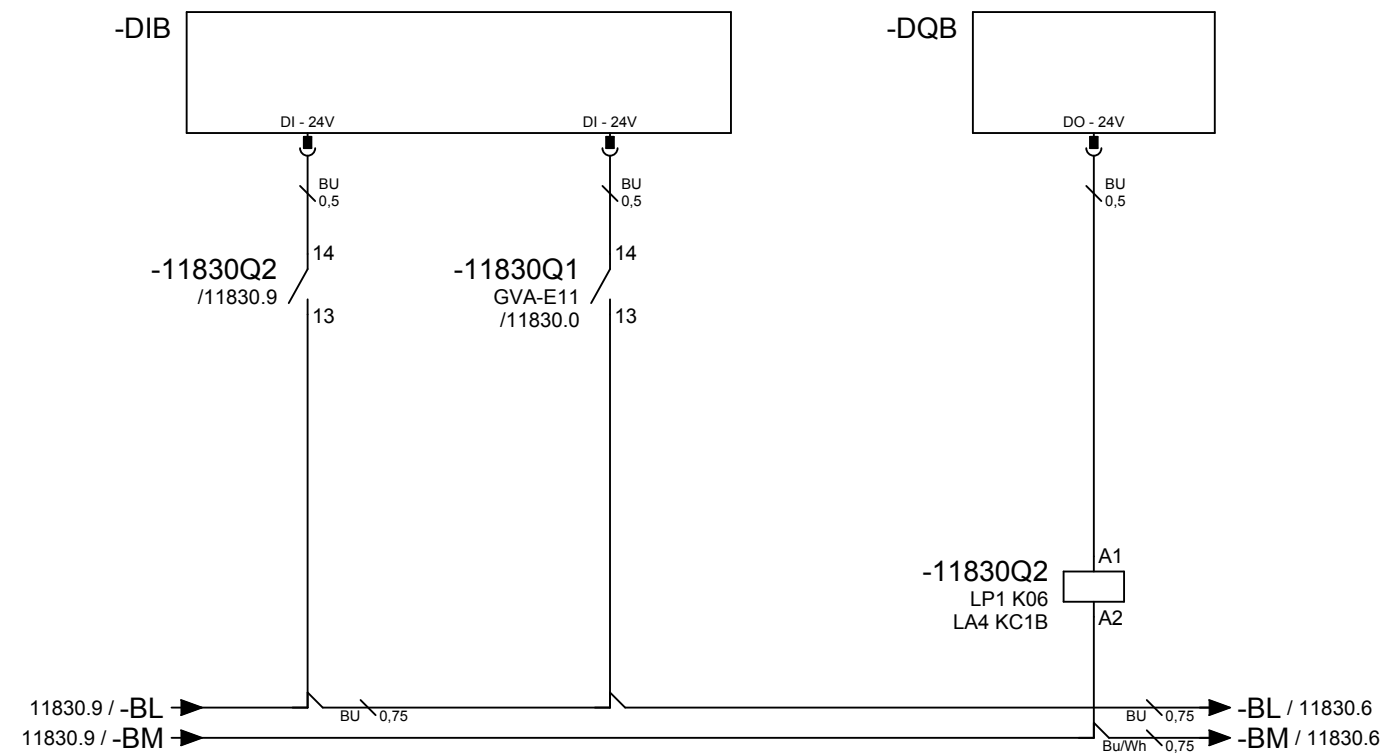
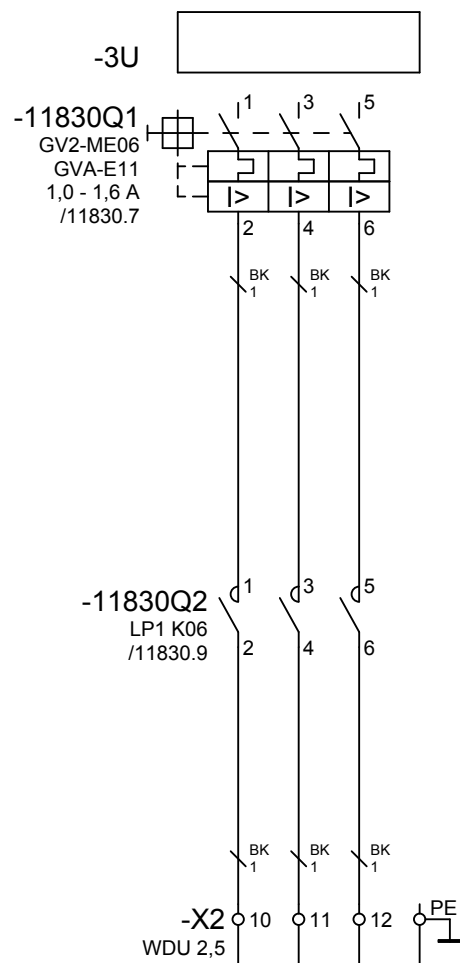


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...

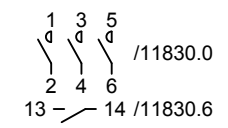


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

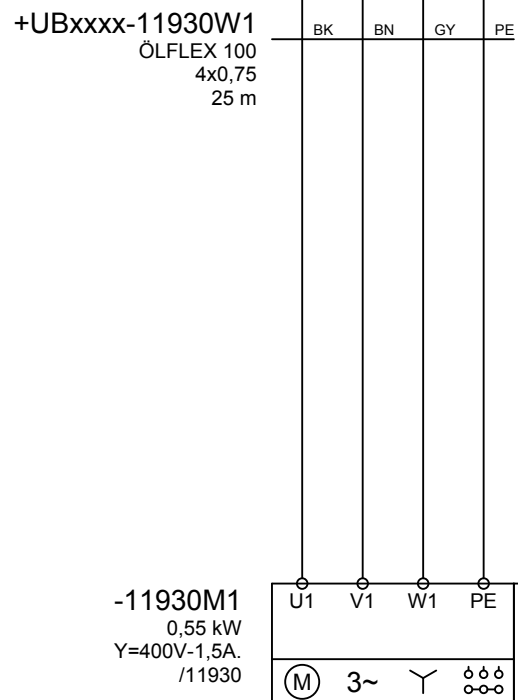
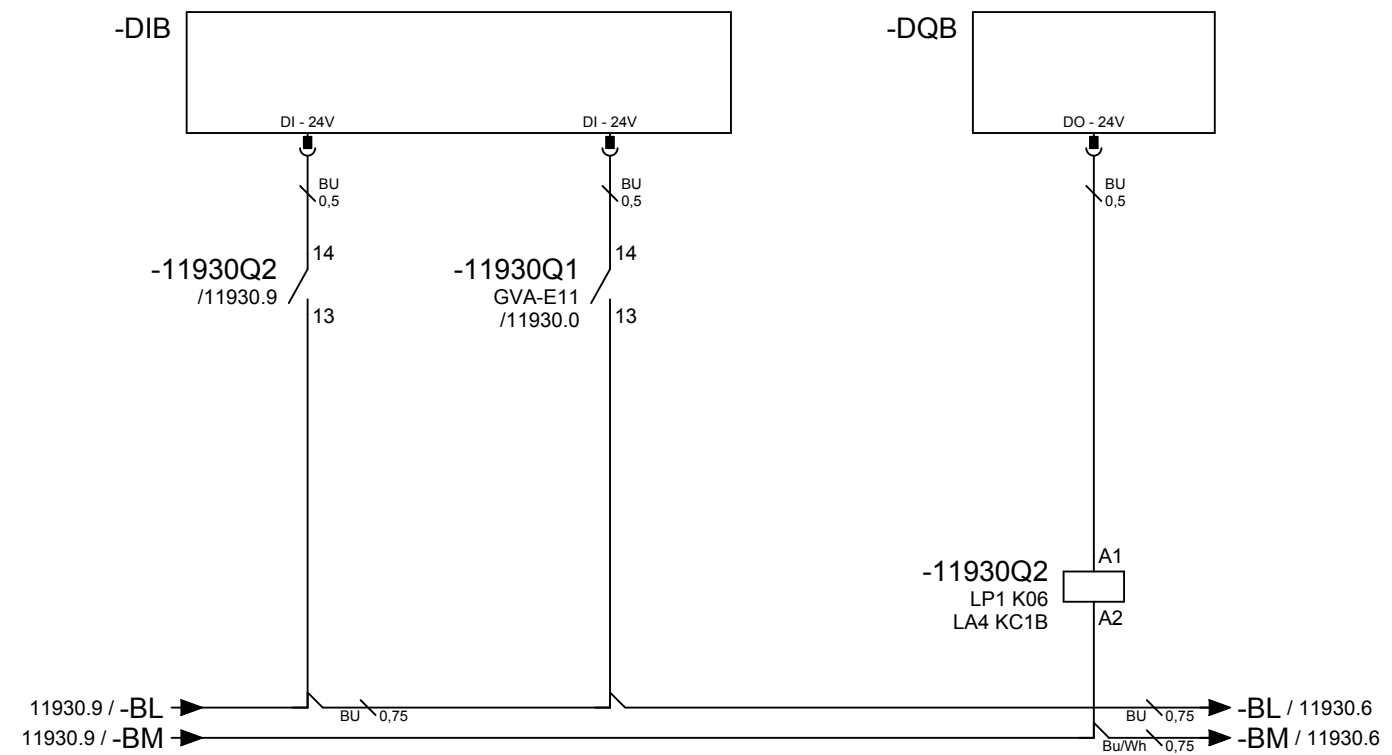
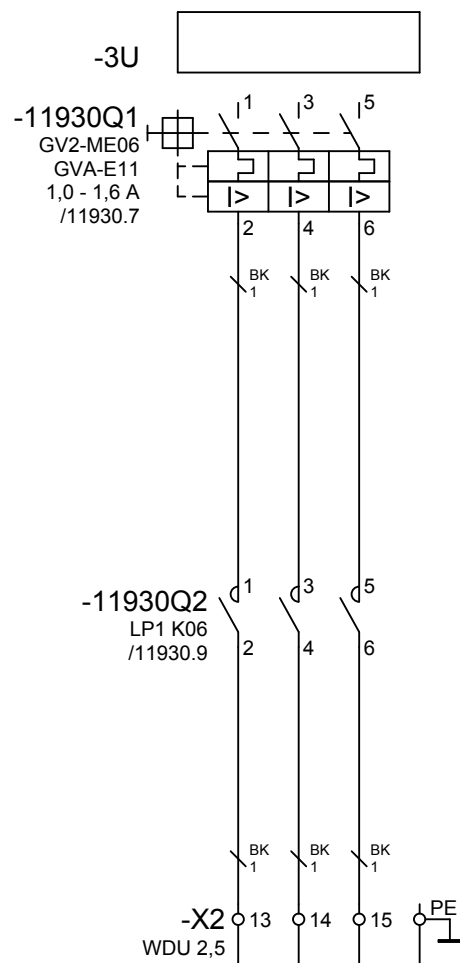


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...

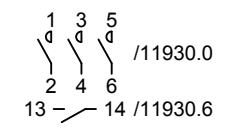


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

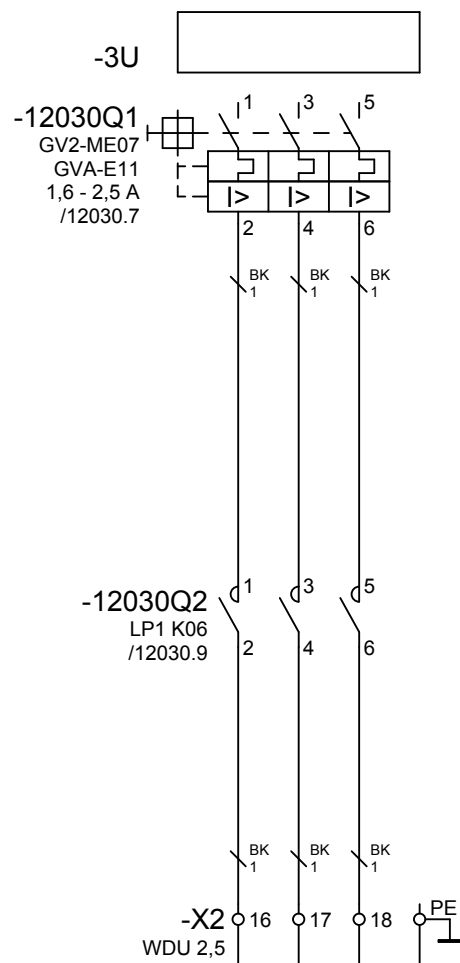


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,5A = 14,4%)
loss U at In	0,08V
loss U at 5xIn	0,38V
heat losses at In	0,34W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,5A = 16,7%)
loss U at In	0,85V
loss U at 5xIn	4,25V
heat losses at In	3,8W (L=3x25m)
...	...
...	...

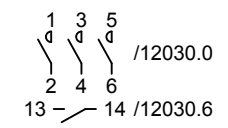
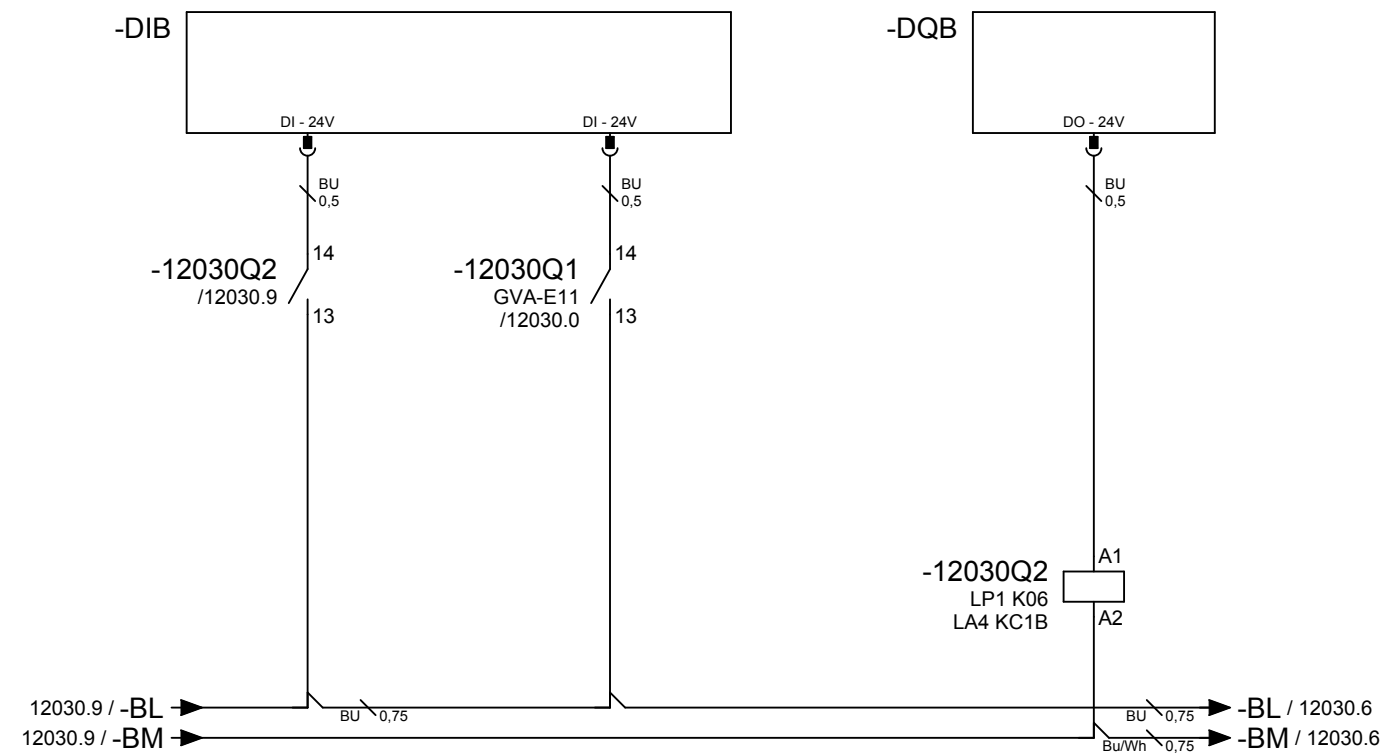


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

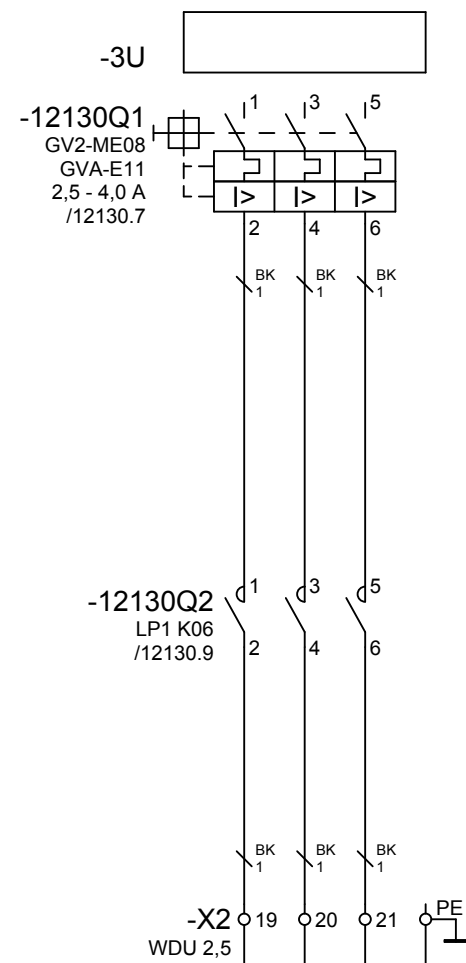


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

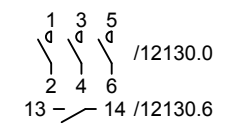
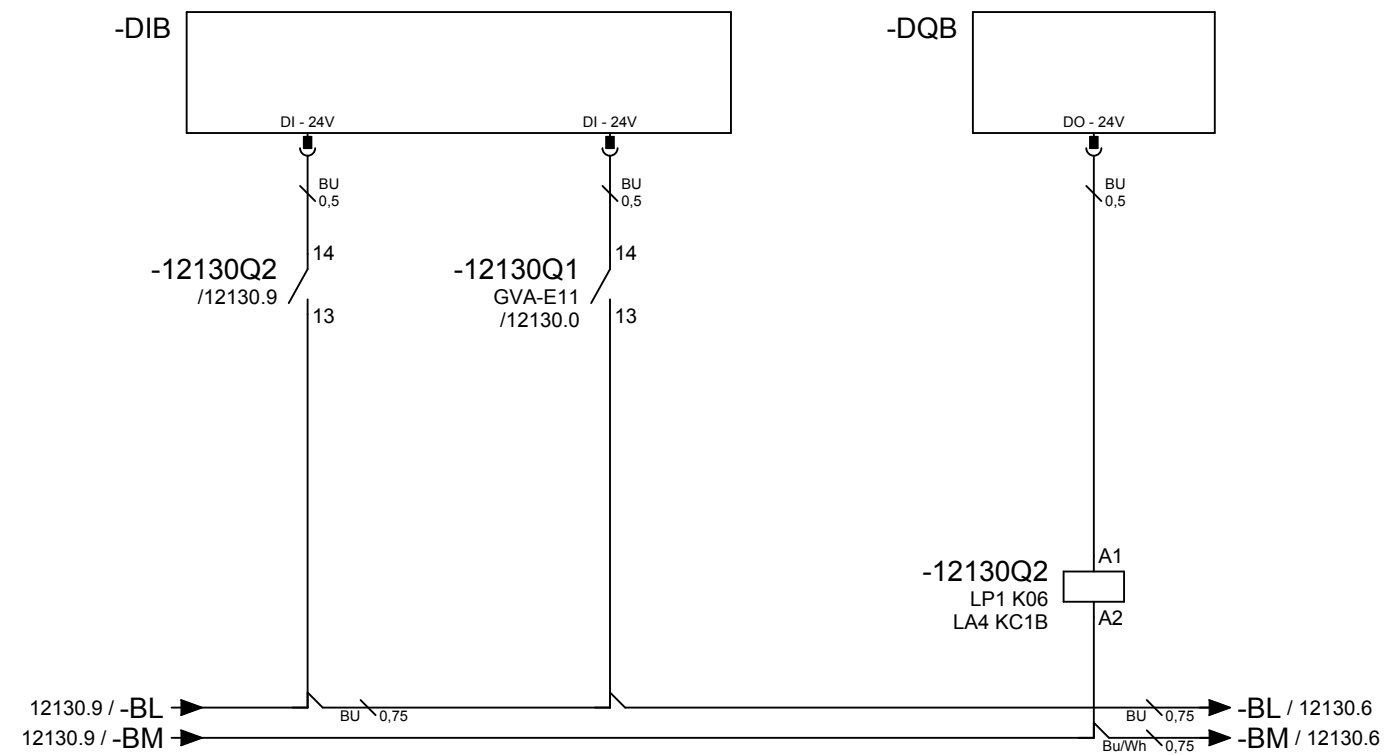
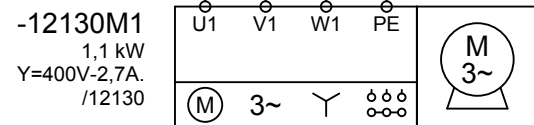


+UBxxx-12130W1
ÖLFLEX 100
4x1
25 m

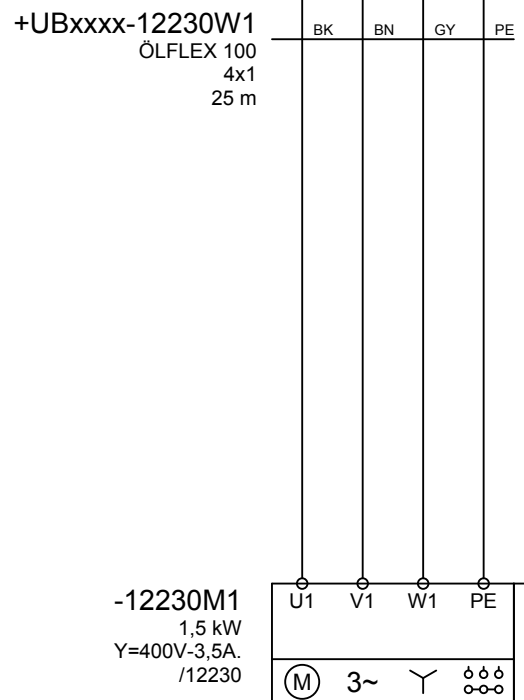
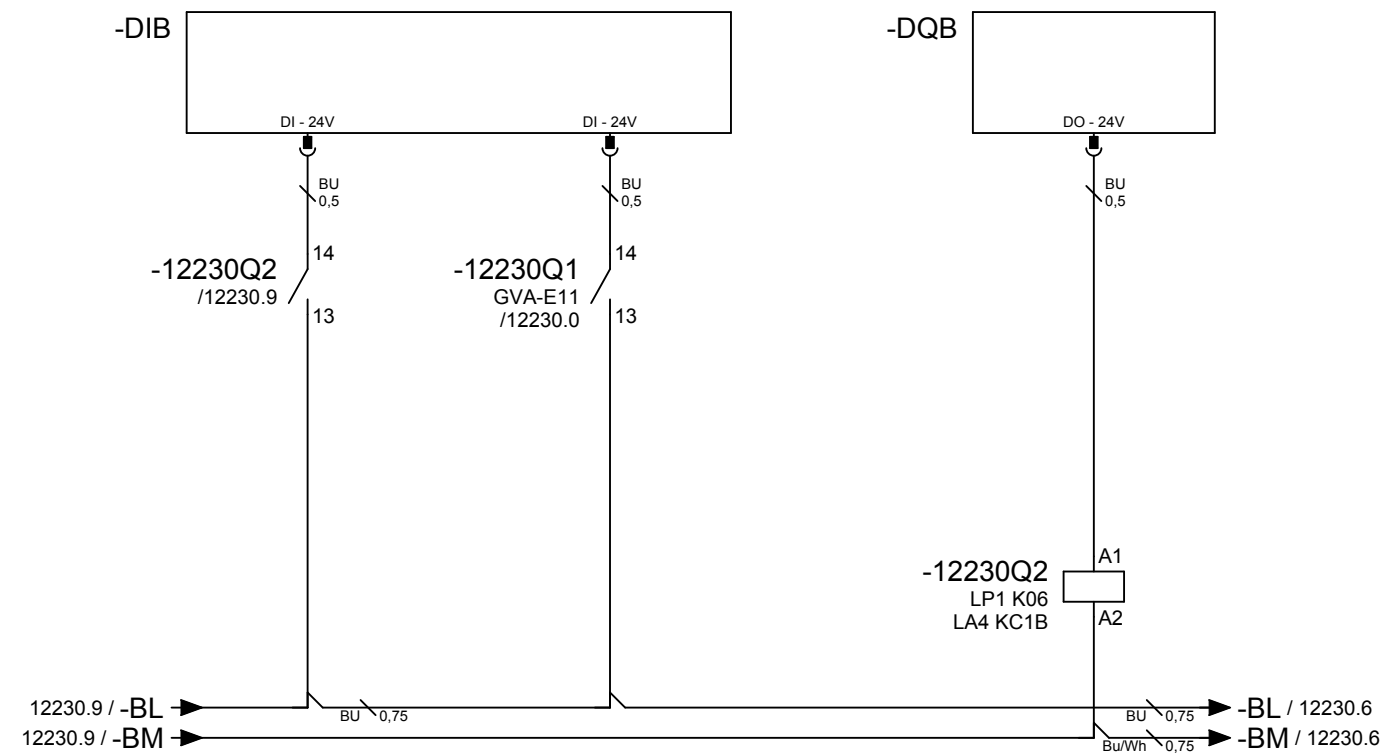
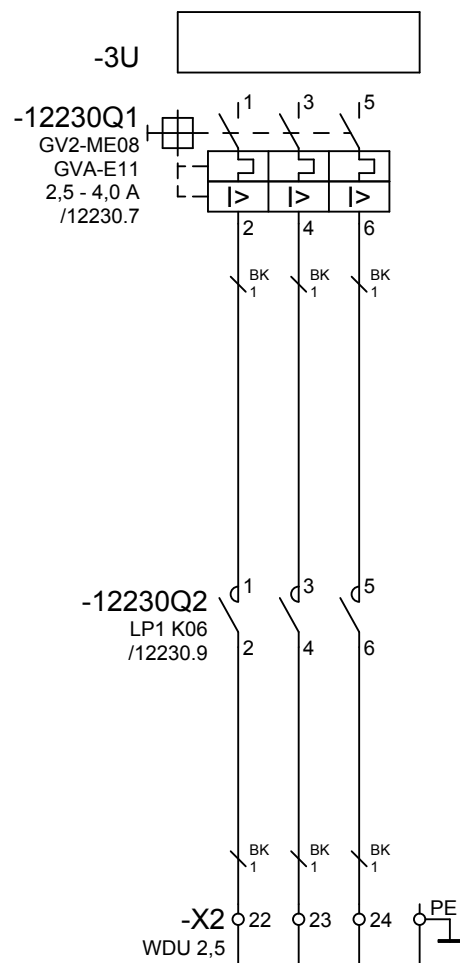
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (2,7A = 26,0%)
loss U at In 0,14V
loss U at 5xIn 0,69V
heat losses at In 1,12W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1mm² = cca 13,0A; (2,7A = 20,8%)
loss U at In 1,15V
loss U at 5xIn 5,74V
heat losses at In 9,3W (L=3x25m)
... ..
... ..

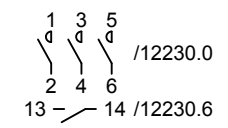


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



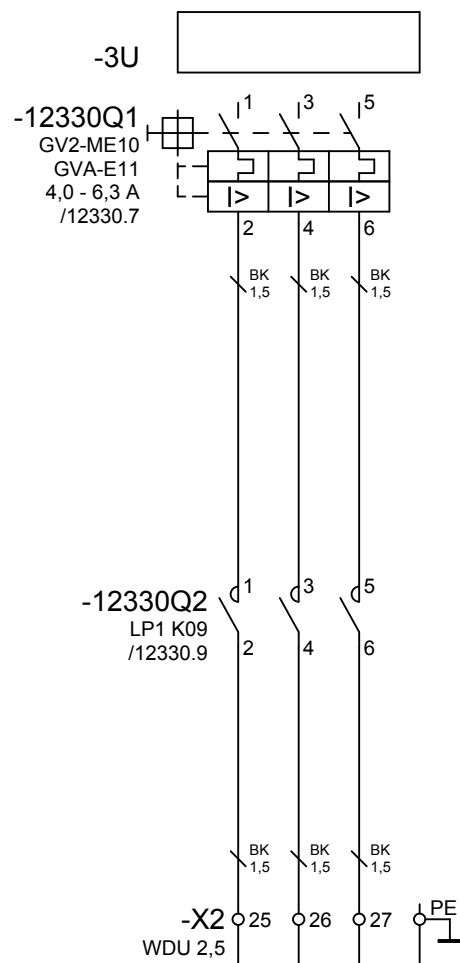
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors.	1,5kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2ME_C1
	TISKO spol. s r. o.	2018	Last revision of project	+ GV2 12230
			Last revision of page	
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	



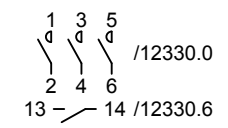
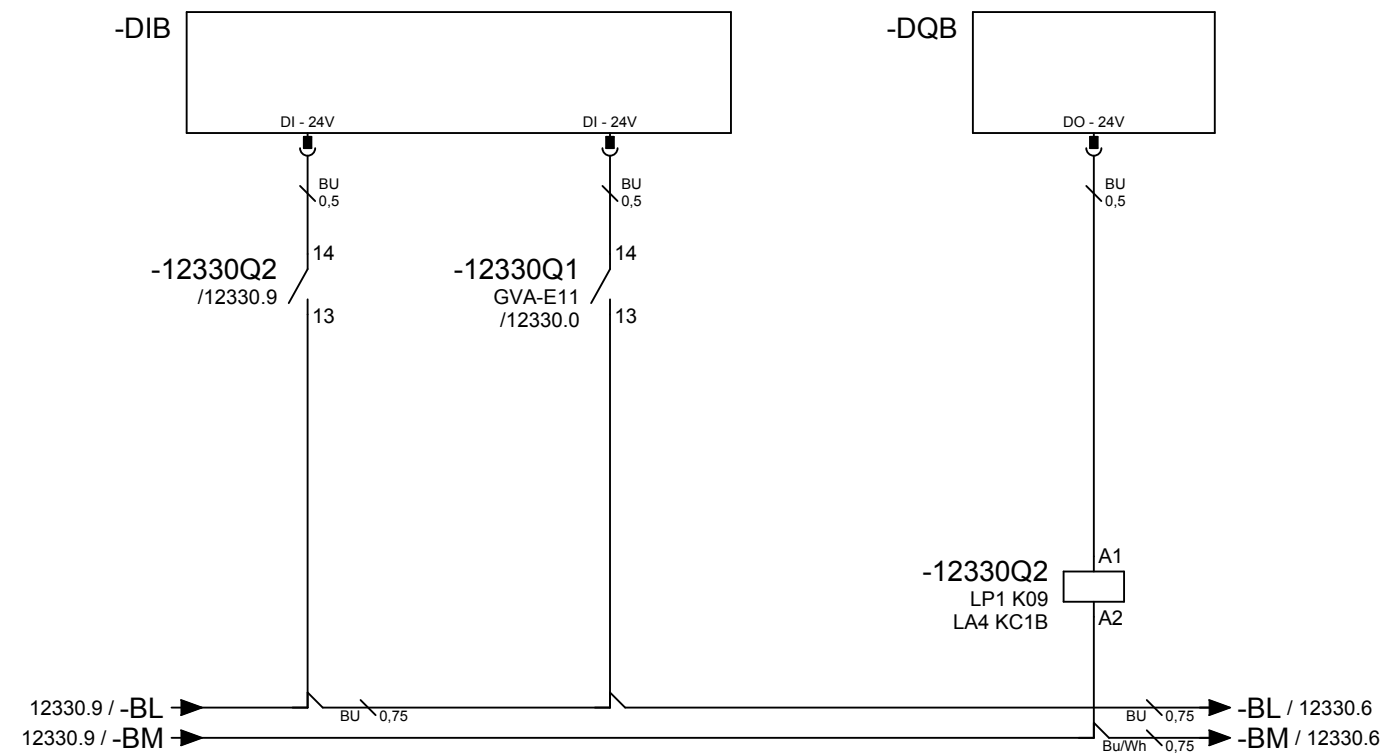
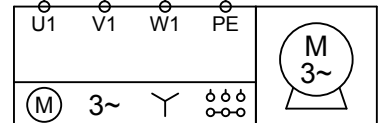
+UBxxx-12330W1
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

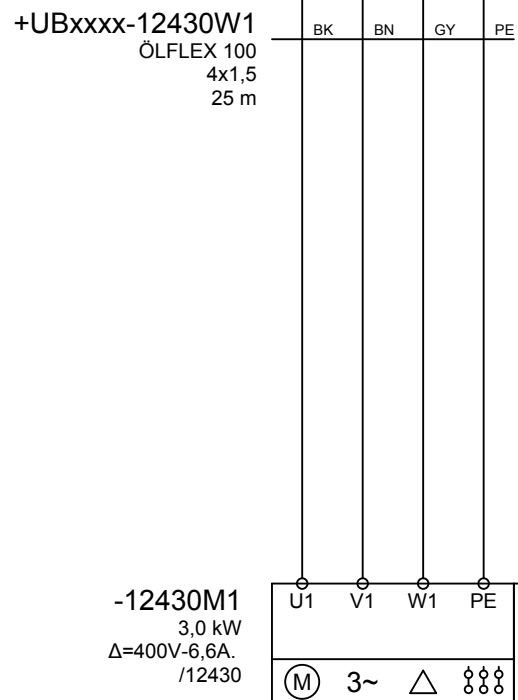
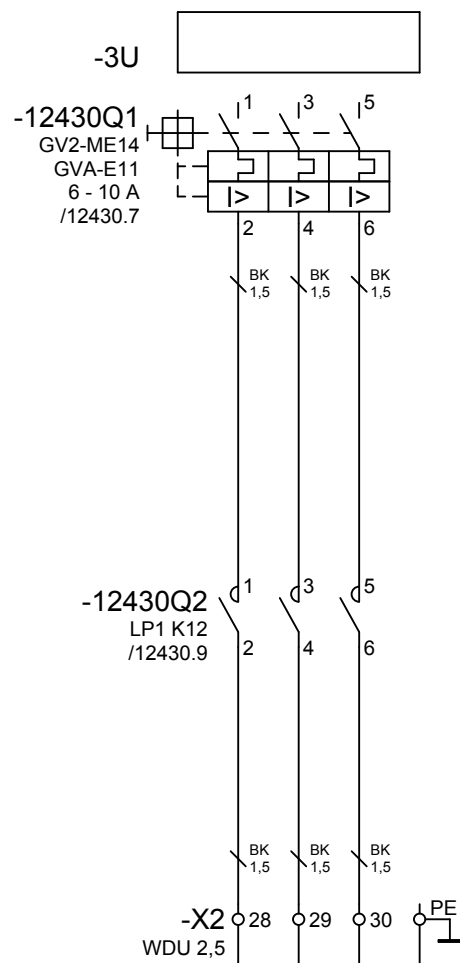
Enclosure B1
load 1,5mm² = cca 13,5A; (5A = 37,0%)
loss U at In 0,17V
loss U at 5xIn 0,85V
heat losses at In 2,55W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (5A = 27,0%)
loss U at In 1,42V
loss U at 5xIn 7,08V
heat losses at In 21,3W (L=3x25m)
... ..
... ..

-12330M1
2,2 kW
Y=400V-4,9A.
/12330

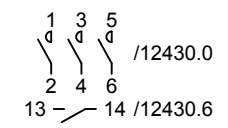
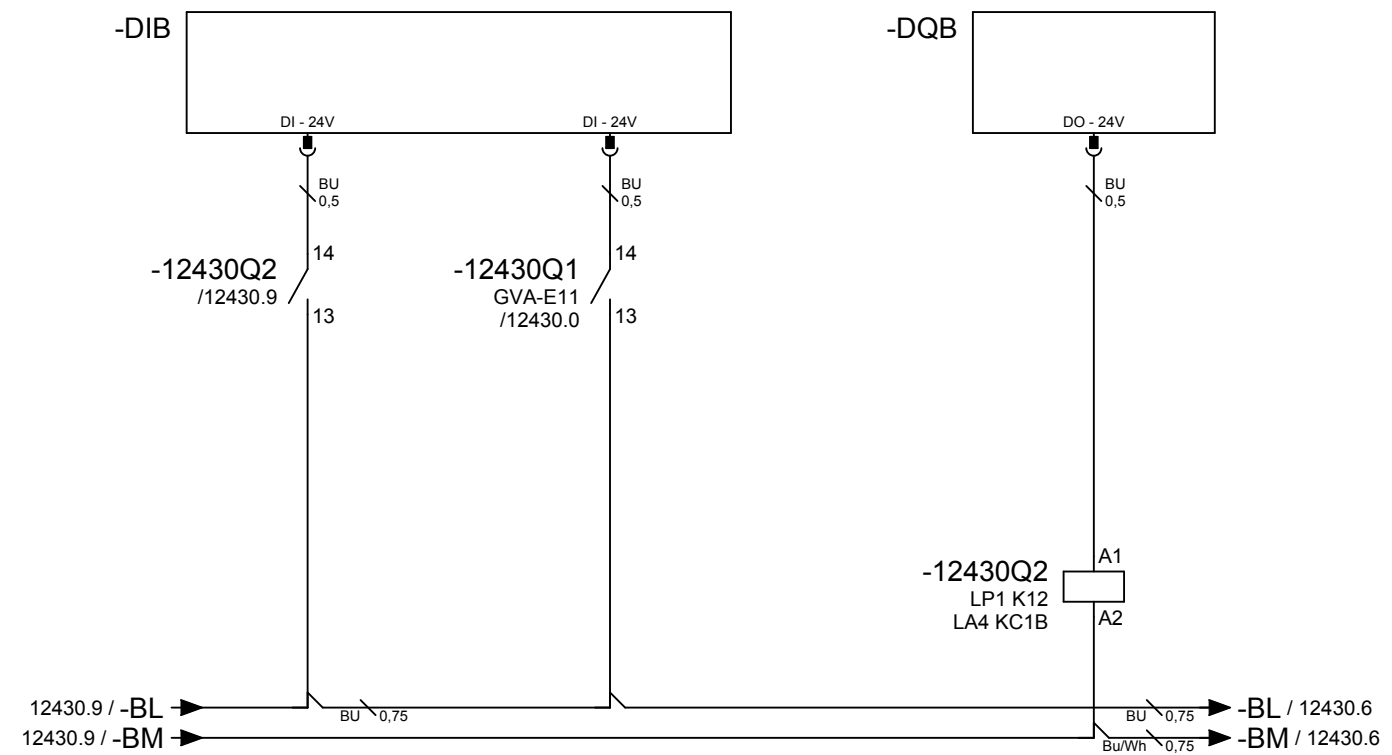


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

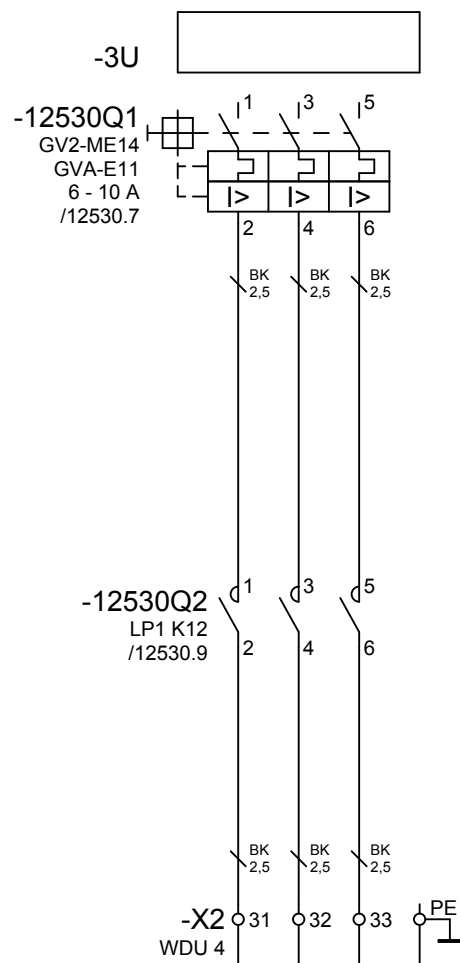


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...

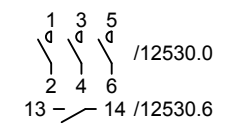
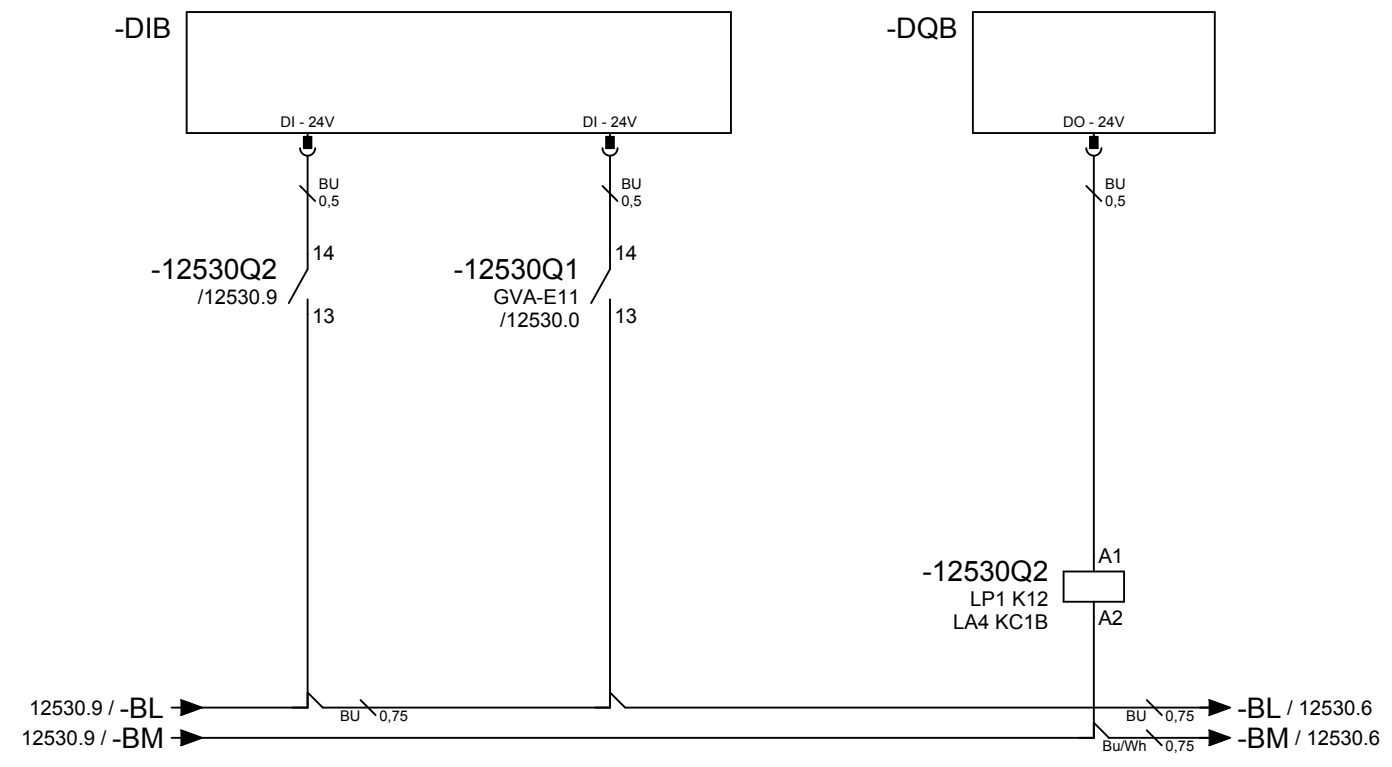


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

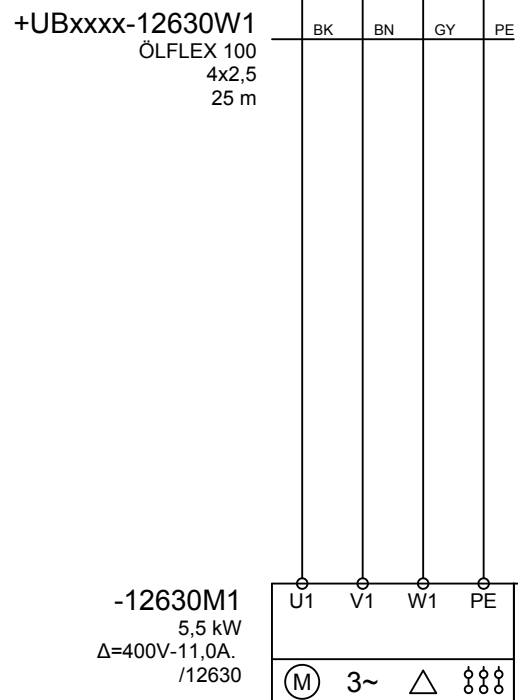
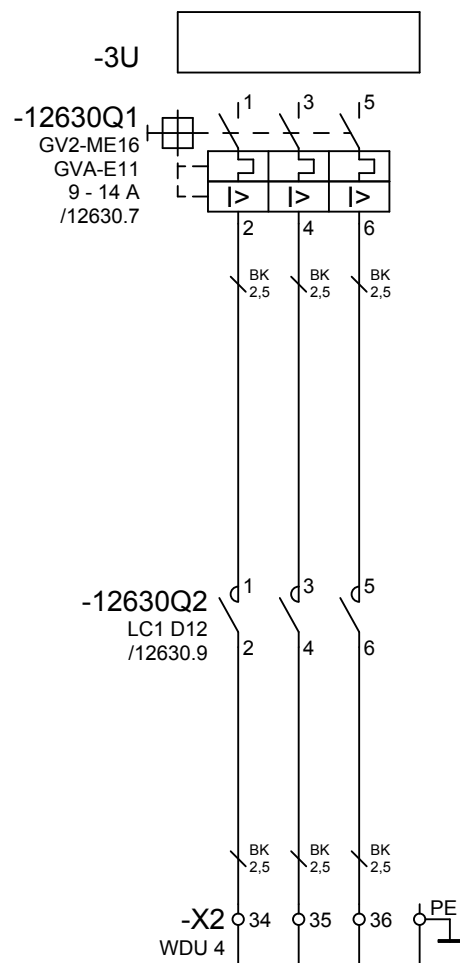


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
...	...

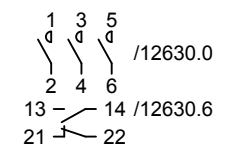
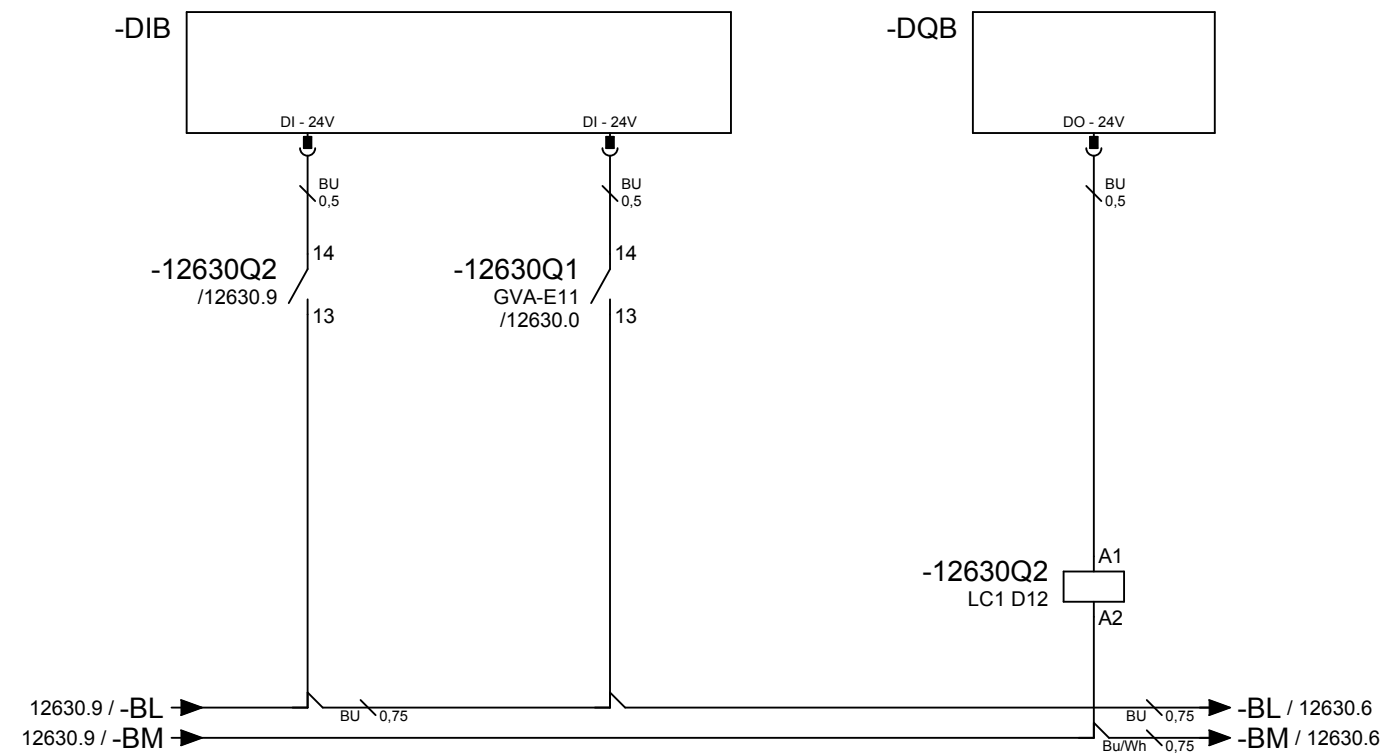


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

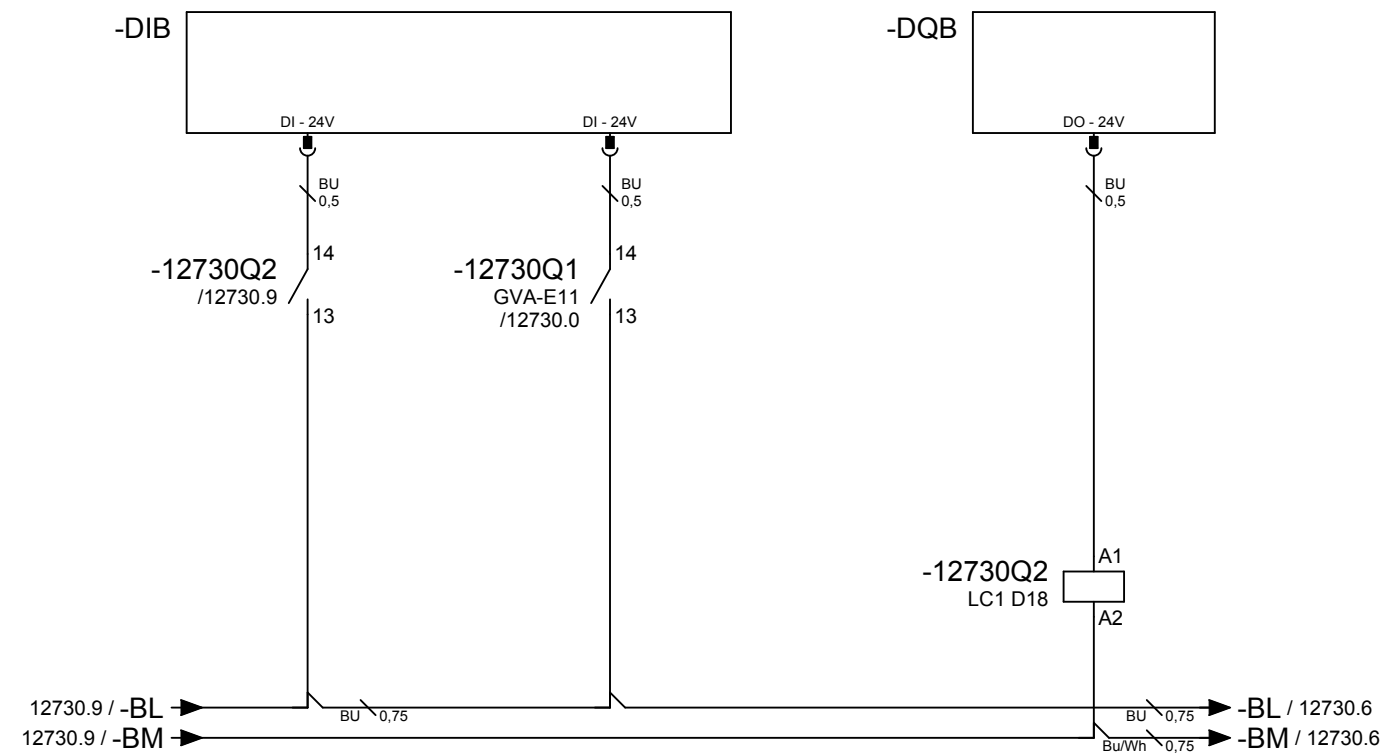
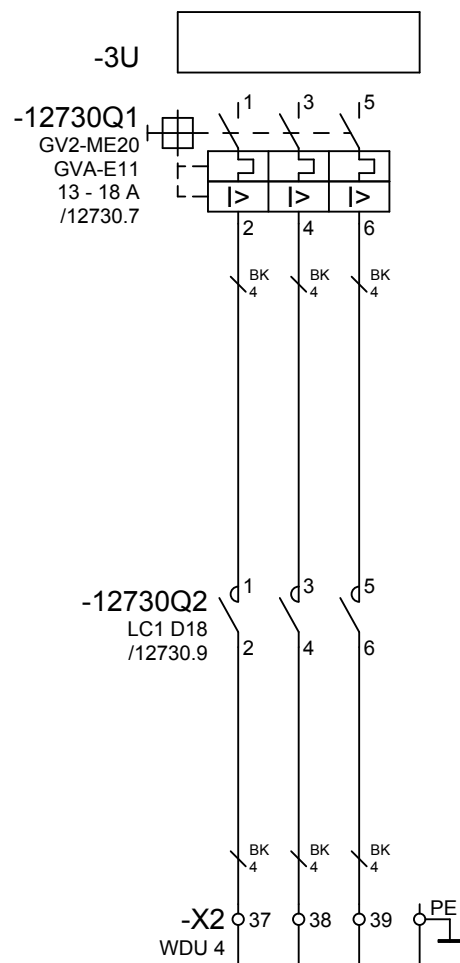


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (11A = 60,1%)
loss U at In	0,22V
loss U at 5xIn	1,12V
heat losses at In	7,41W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	2,5mm ² = cca 25,0A; (11A = 44,0%)
loss U at In	1,87V
loss U at 5xIn	9,35V
heat losses at In	61,7W (L=3x25m)
...	...
...	...

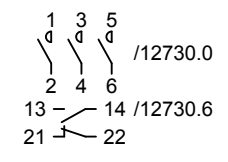


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

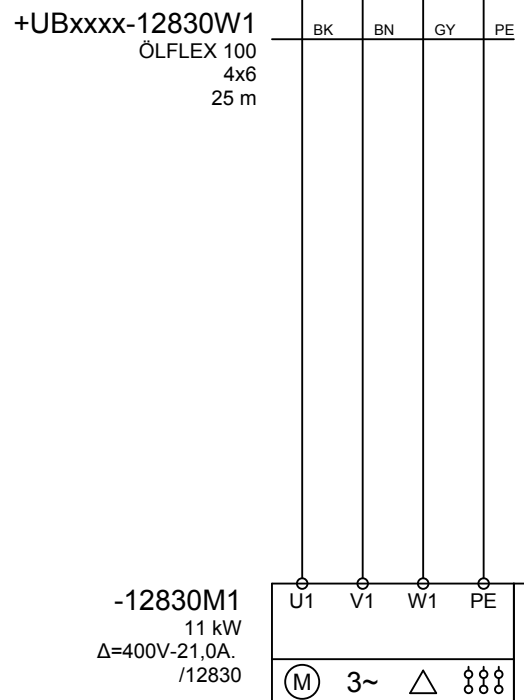
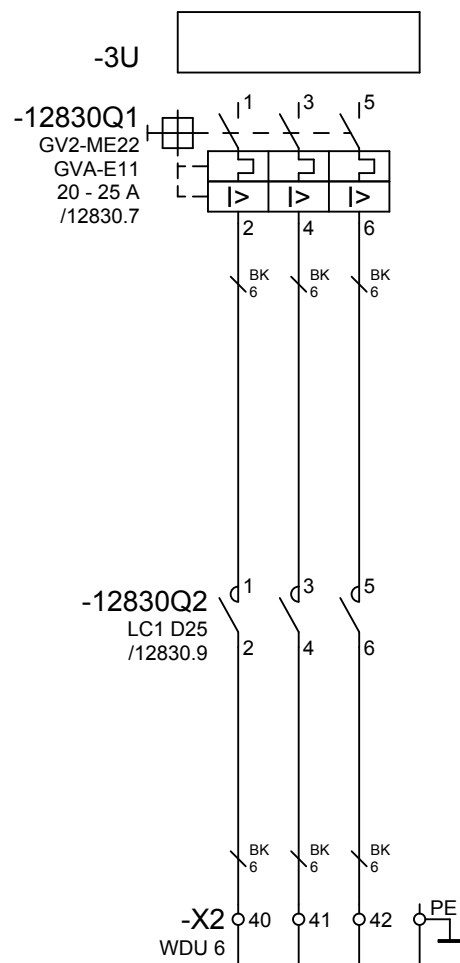


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

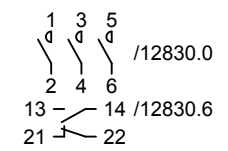
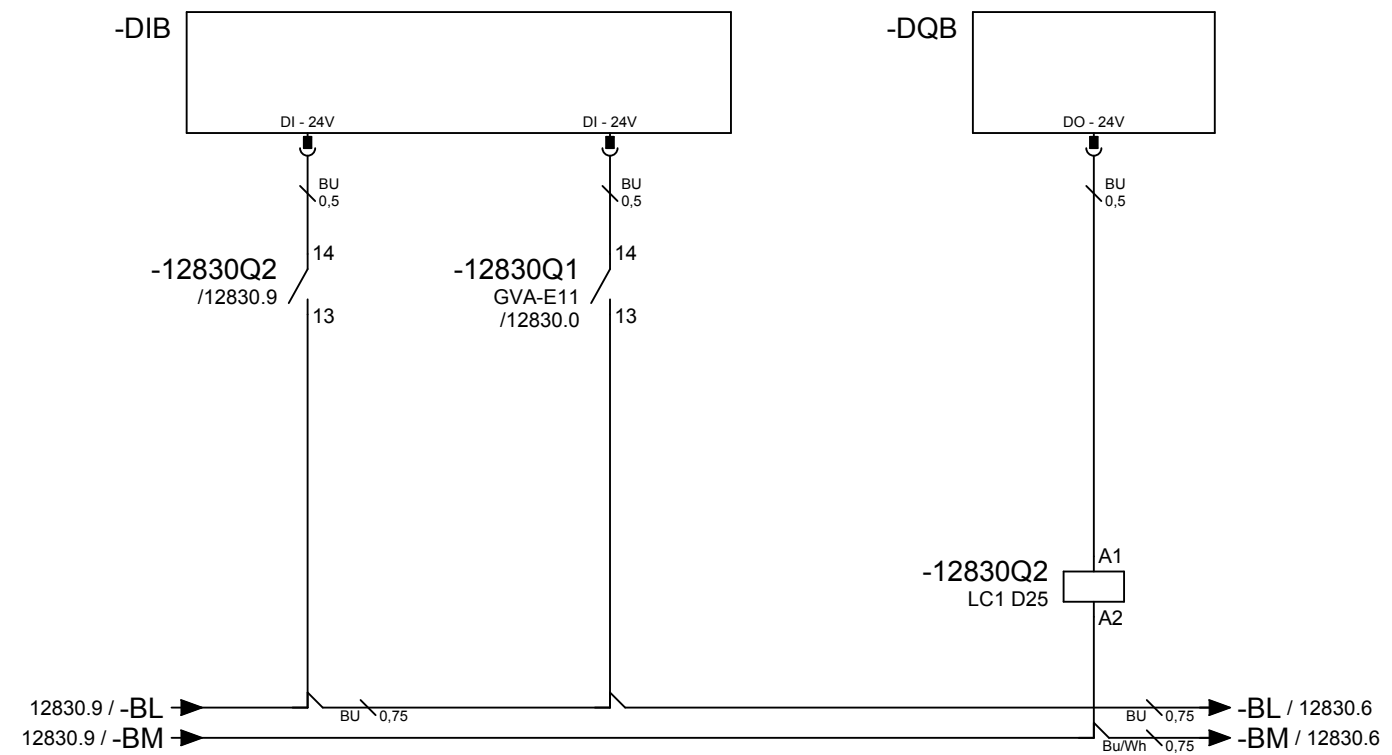


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 15kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

... ...

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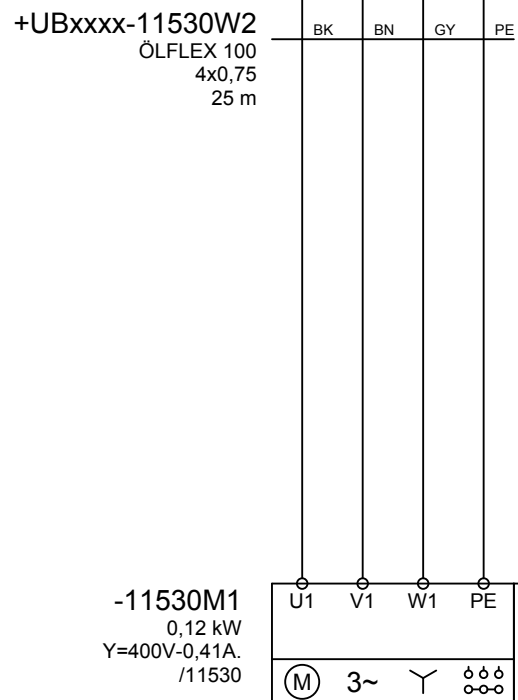
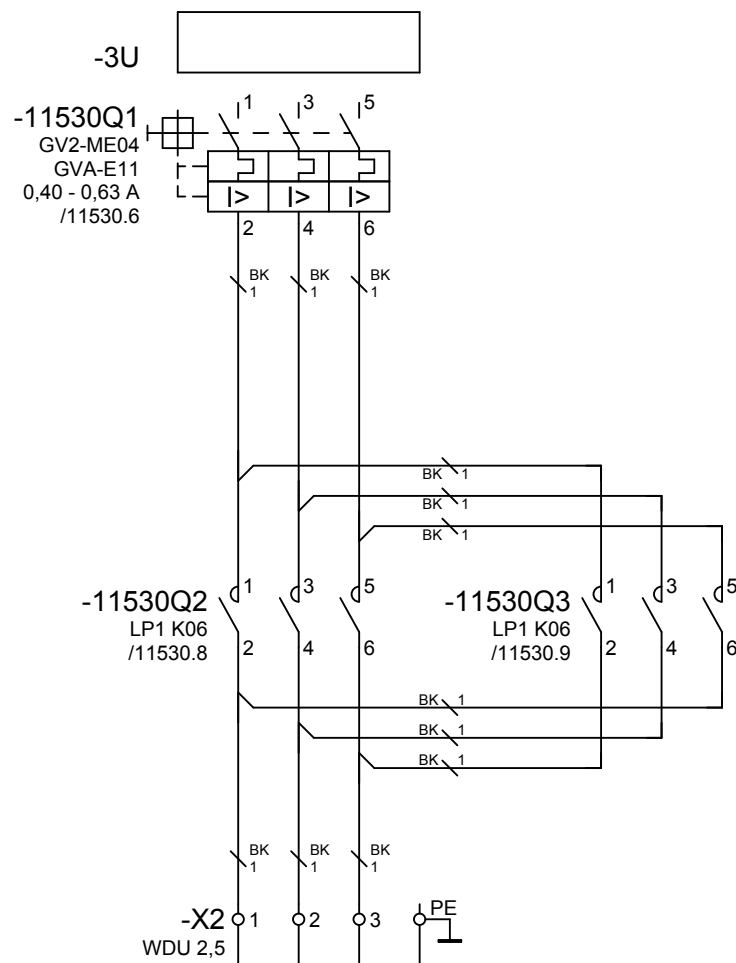
... ...

 <p>TISKO elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>
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Type 1 coordination.
2018

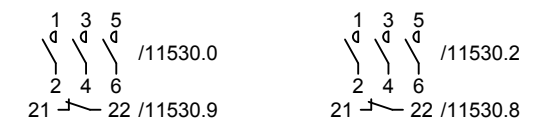
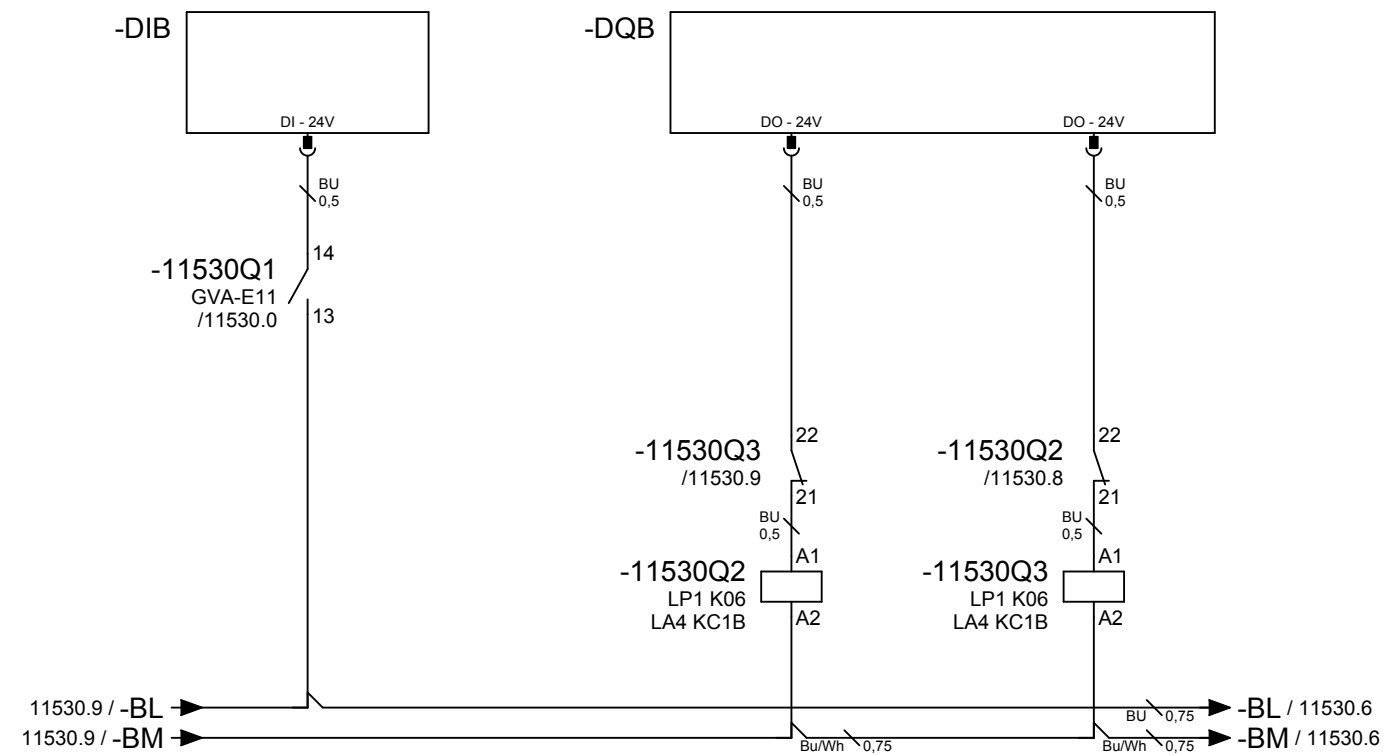
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Last revision of project			
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= GV2ME_C1
+ GV2_Reverz 11000

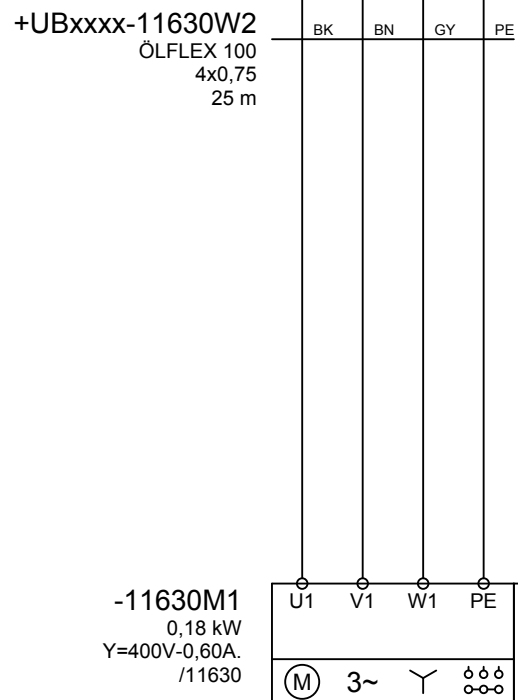
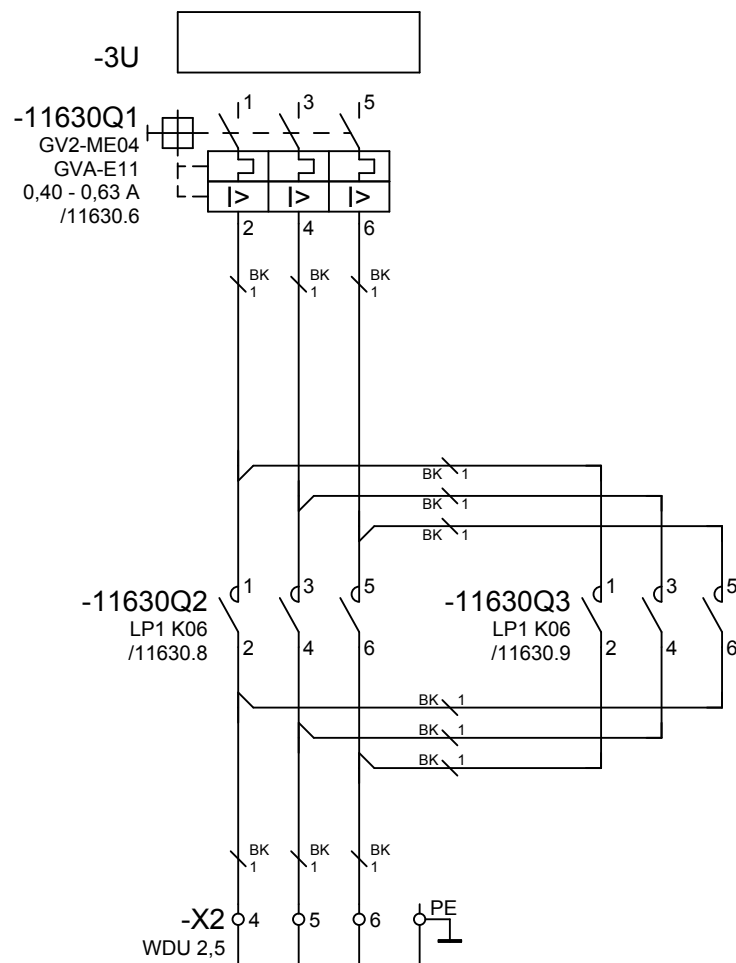


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...

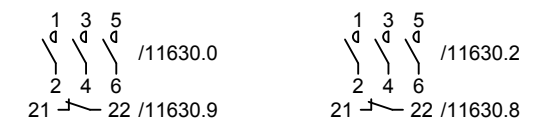
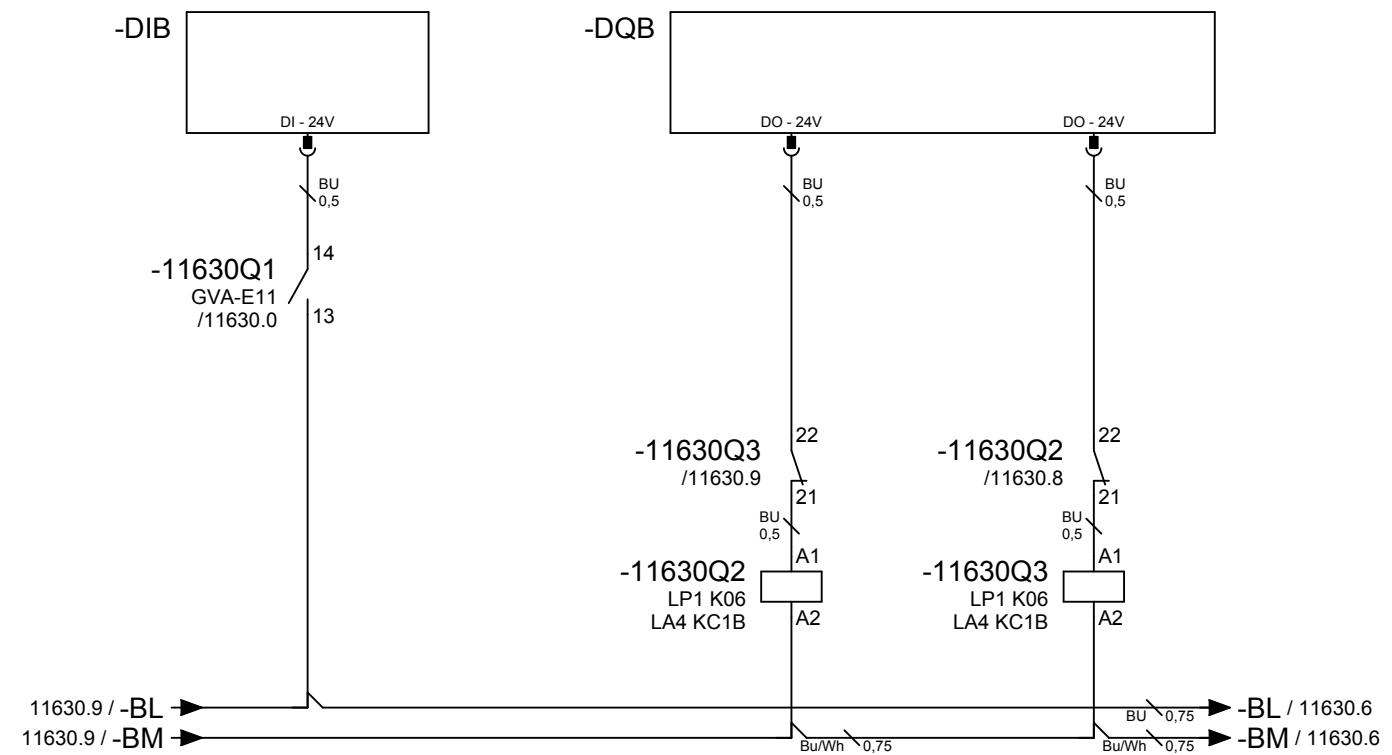


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

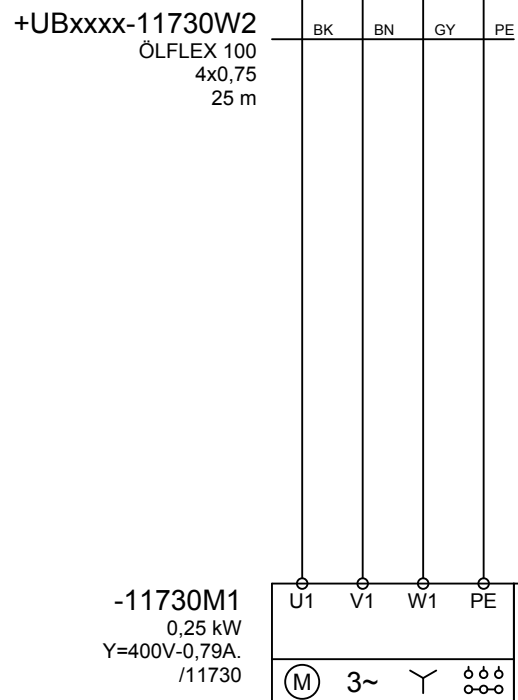
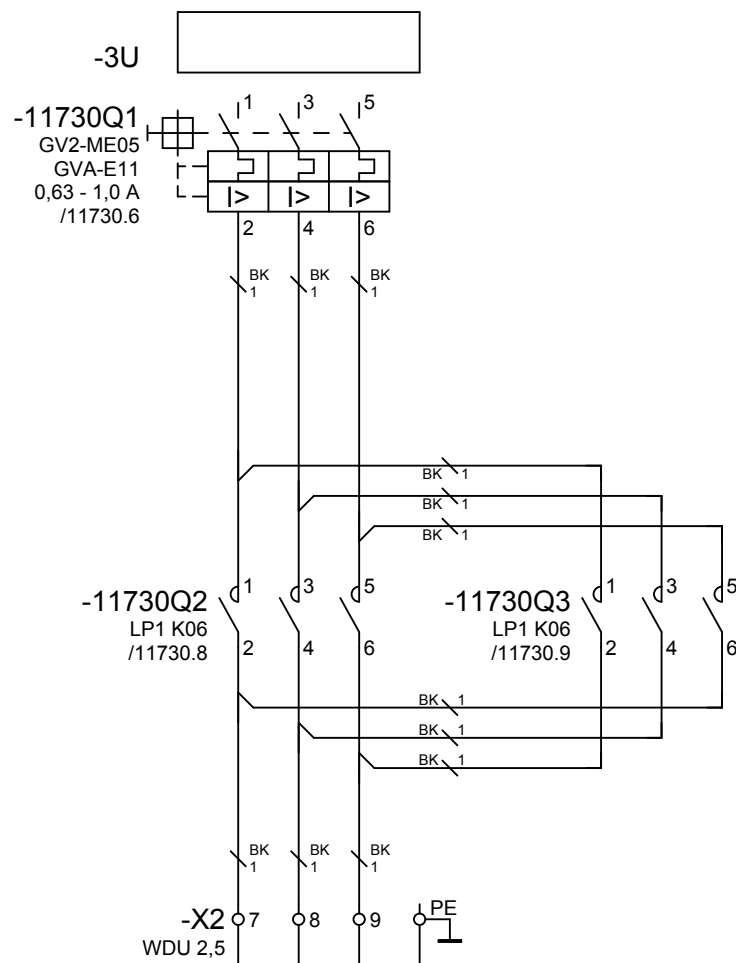


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...

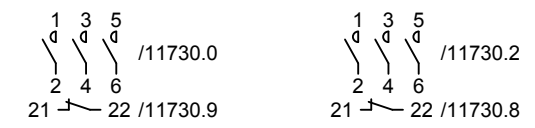
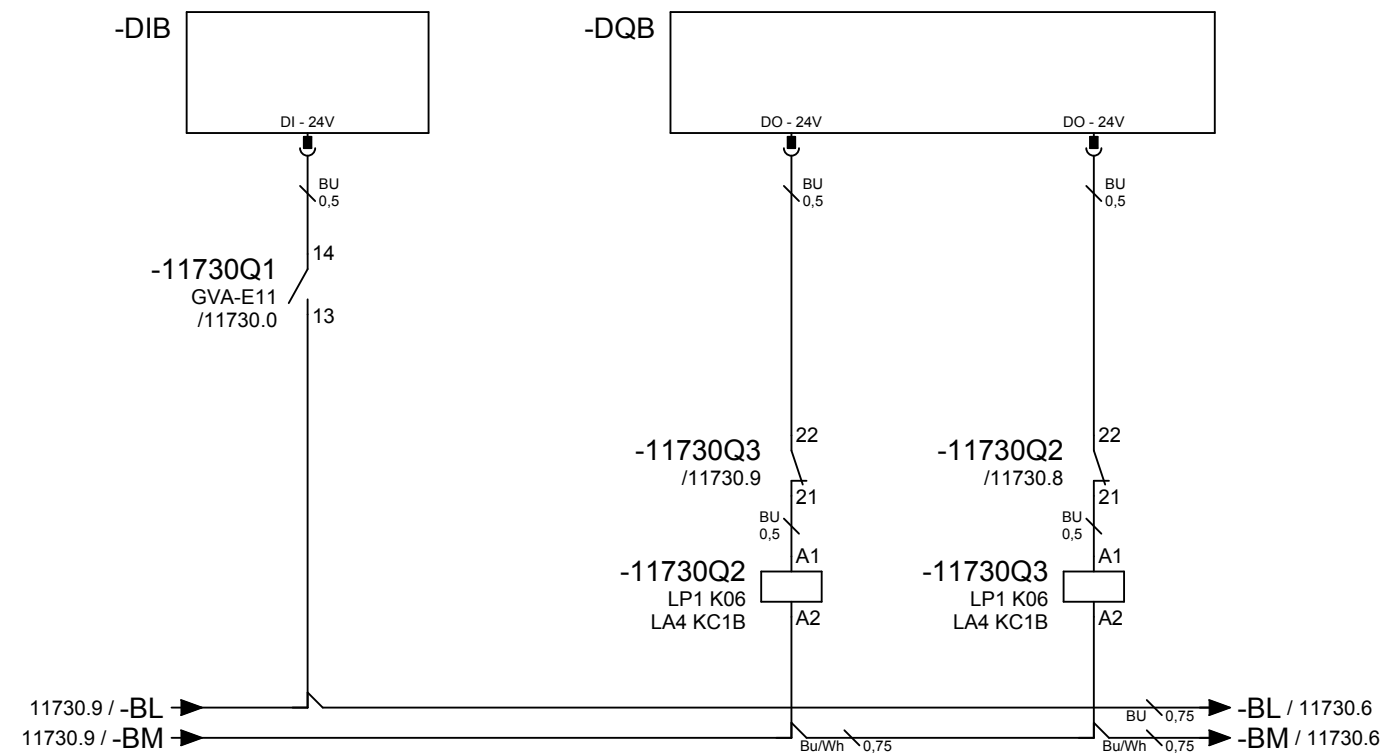


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

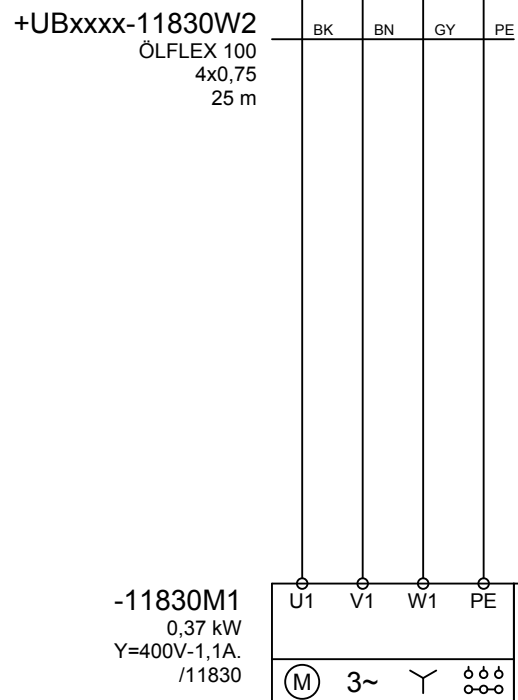
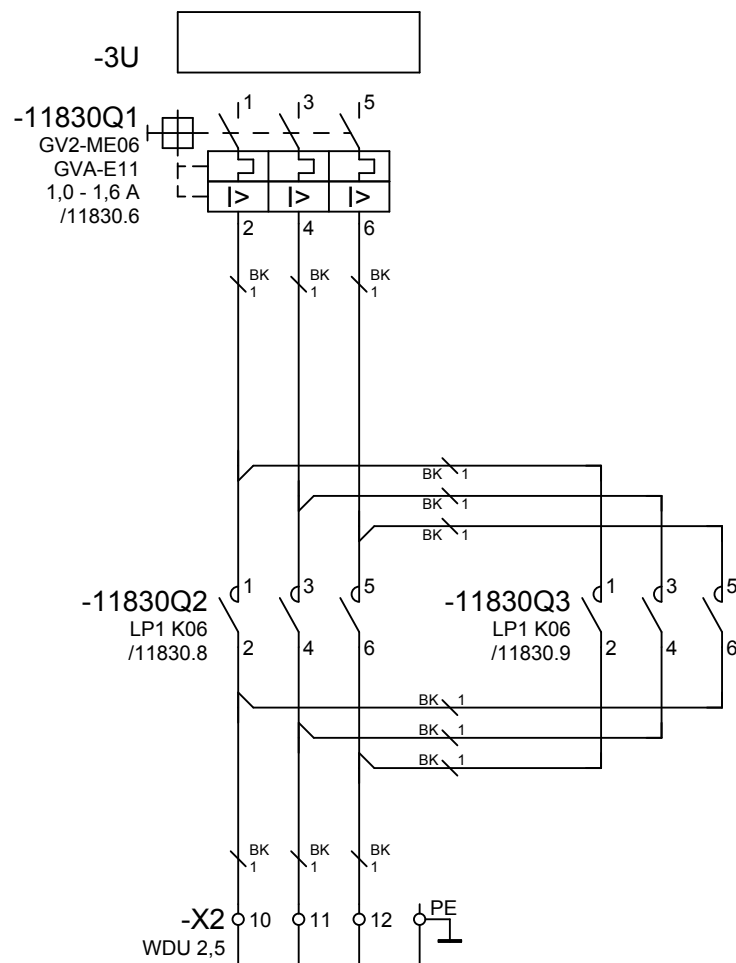


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...

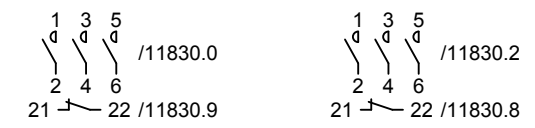
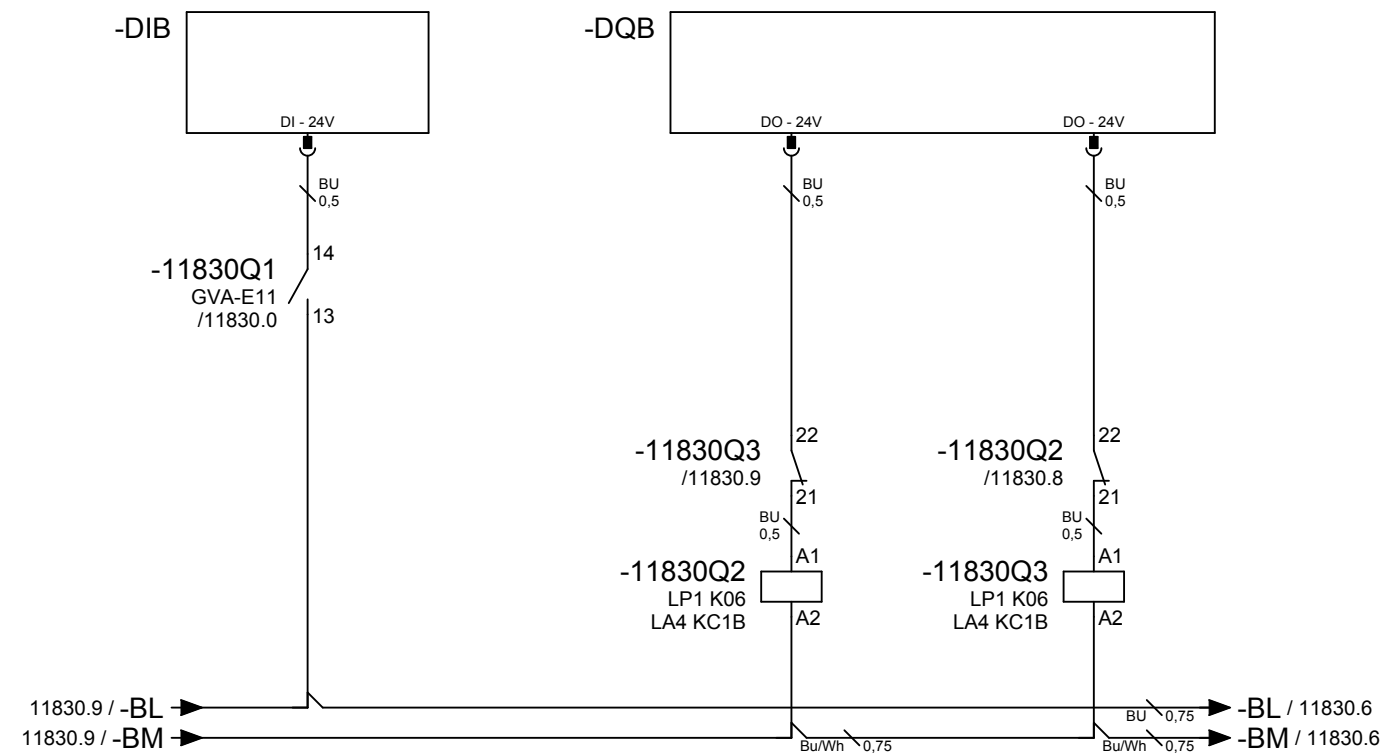


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

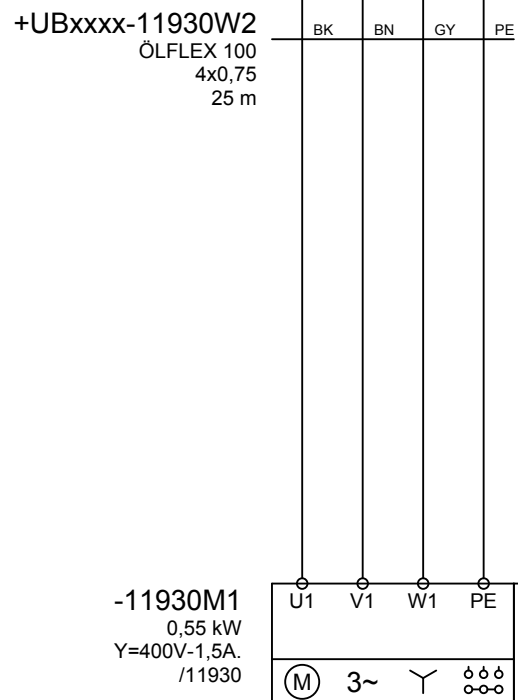
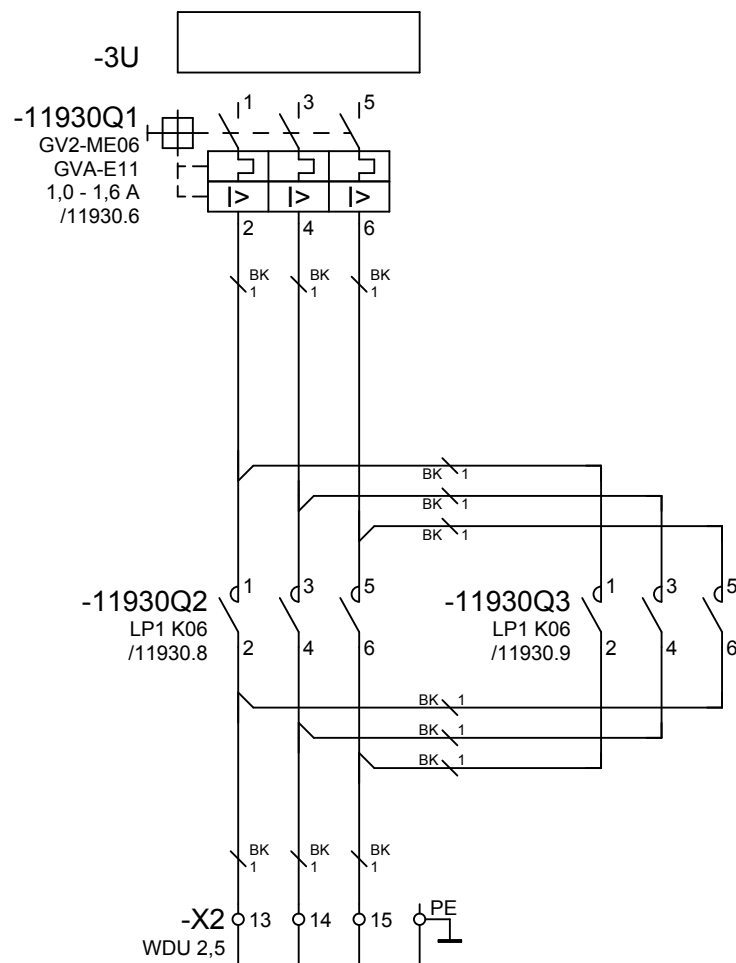


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...

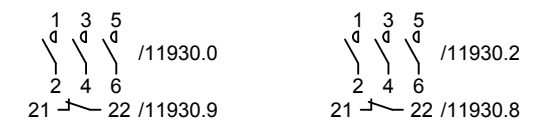
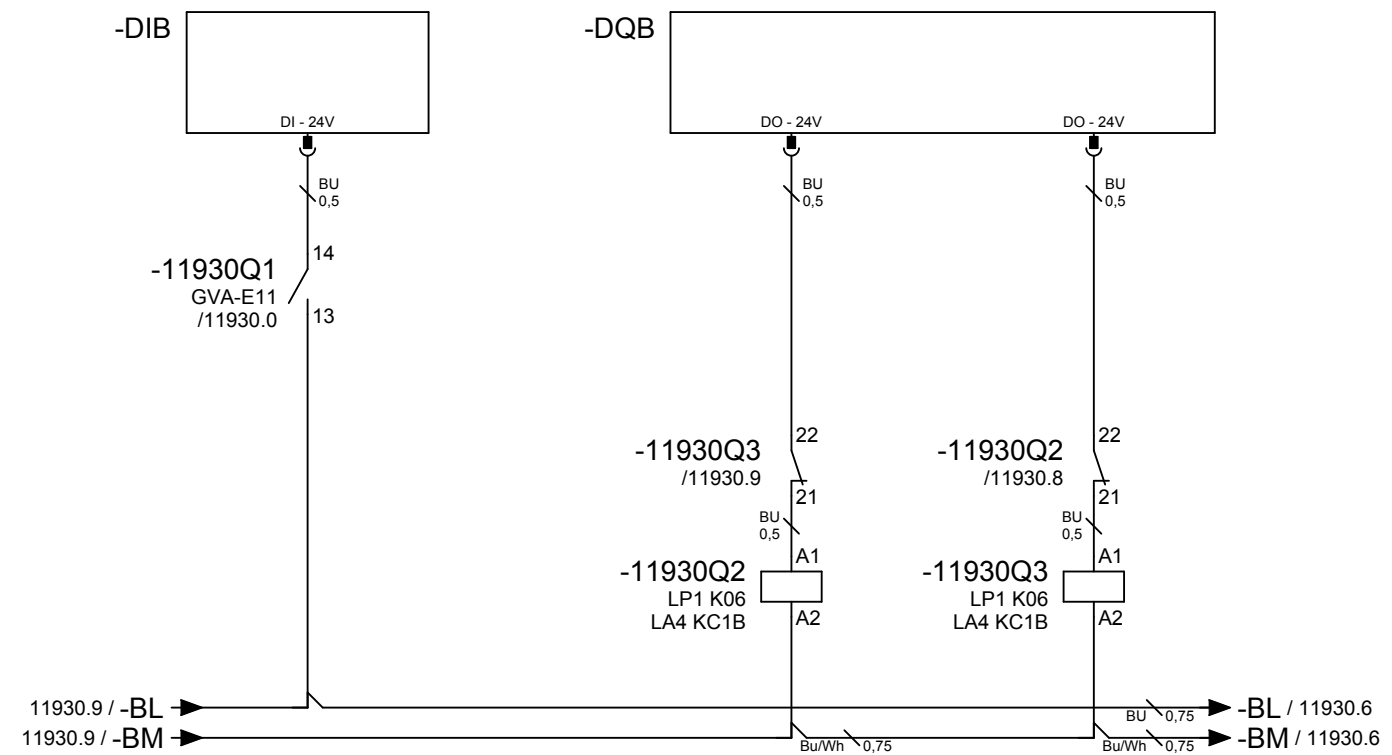


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

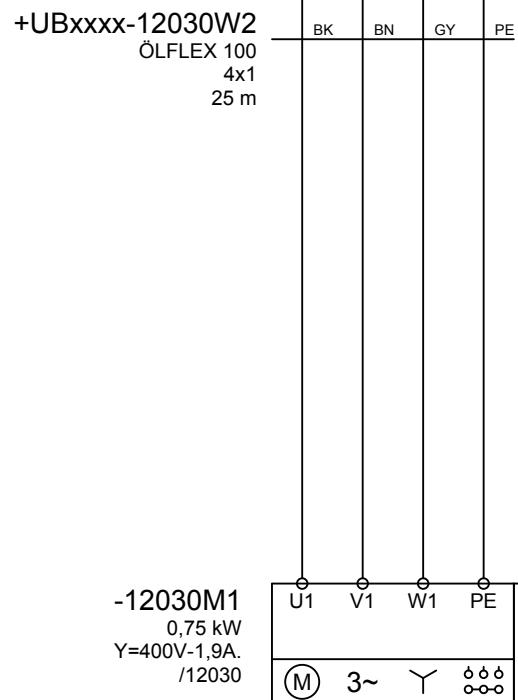
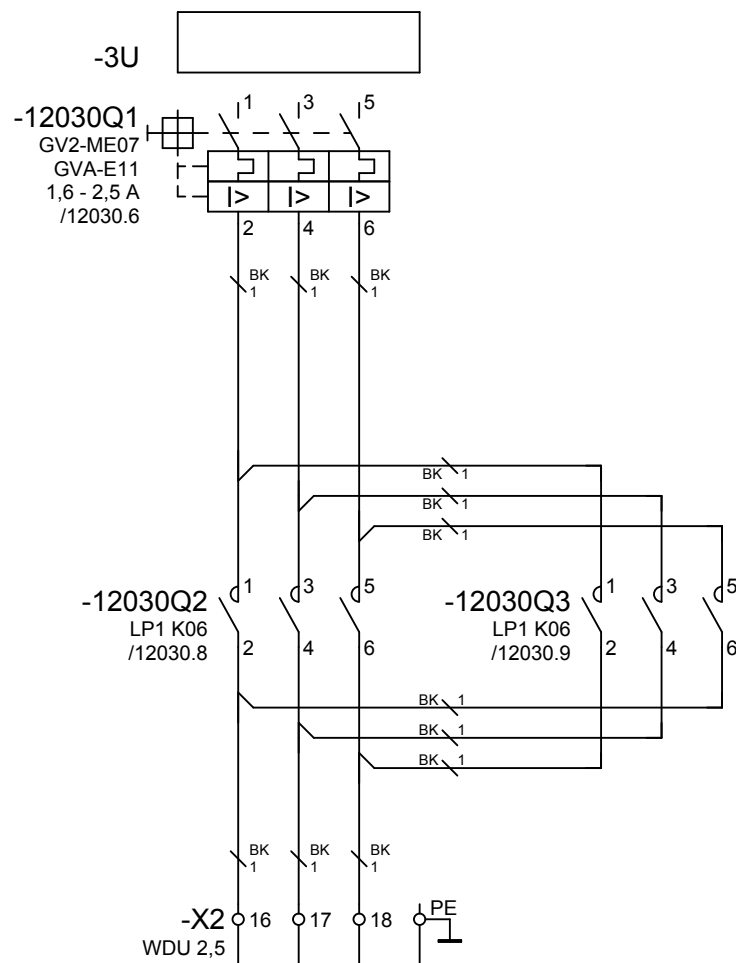


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,5A = 14,4%)
loss U at In	0,08V
loss U at 5xIn	0,38V
heat losses at In	0,34W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,5A = 16,7%)
loss U at In	0,85V
loss U at 5xIn	4,25V
heat losses at In	3,8W (L=3x25m)
...	...
...	...

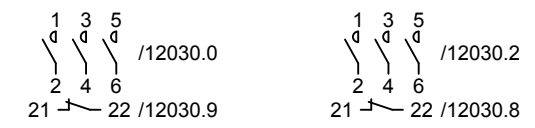
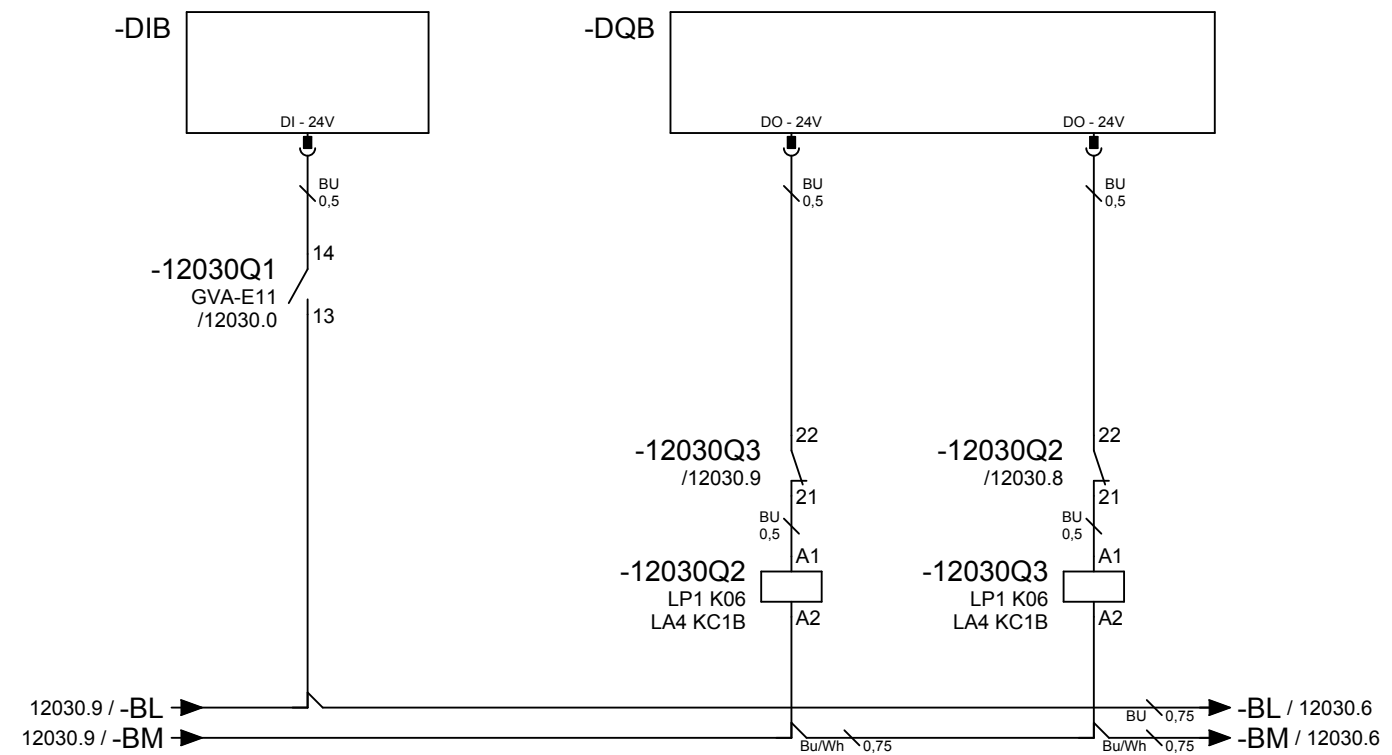


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

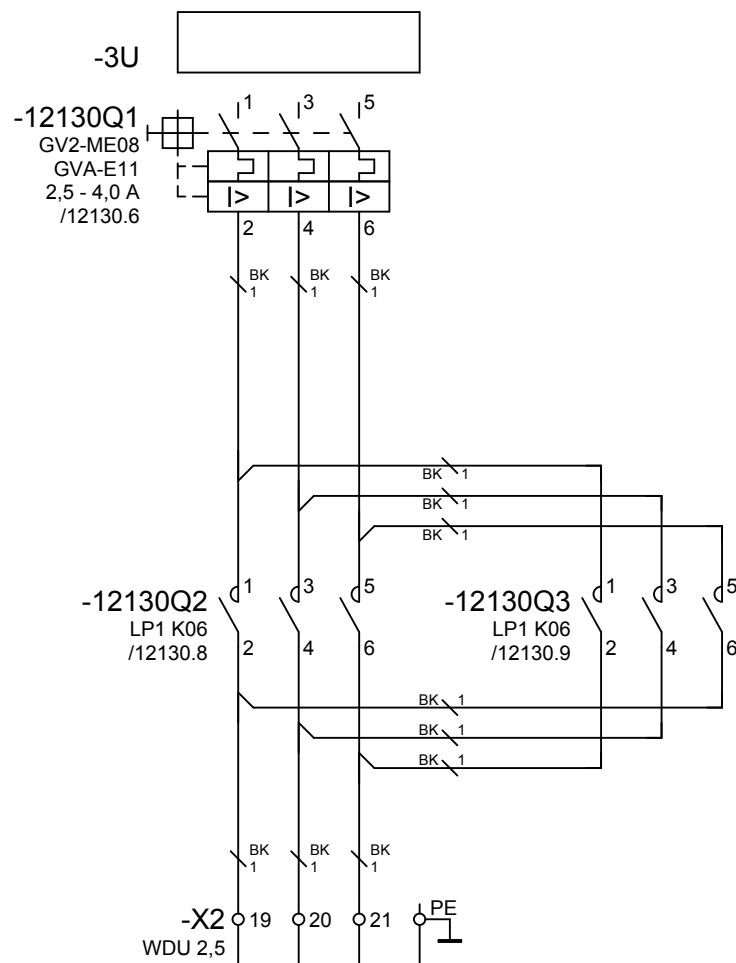


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

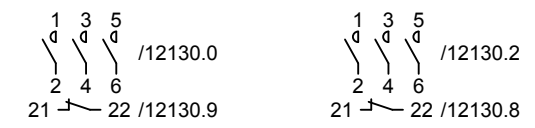
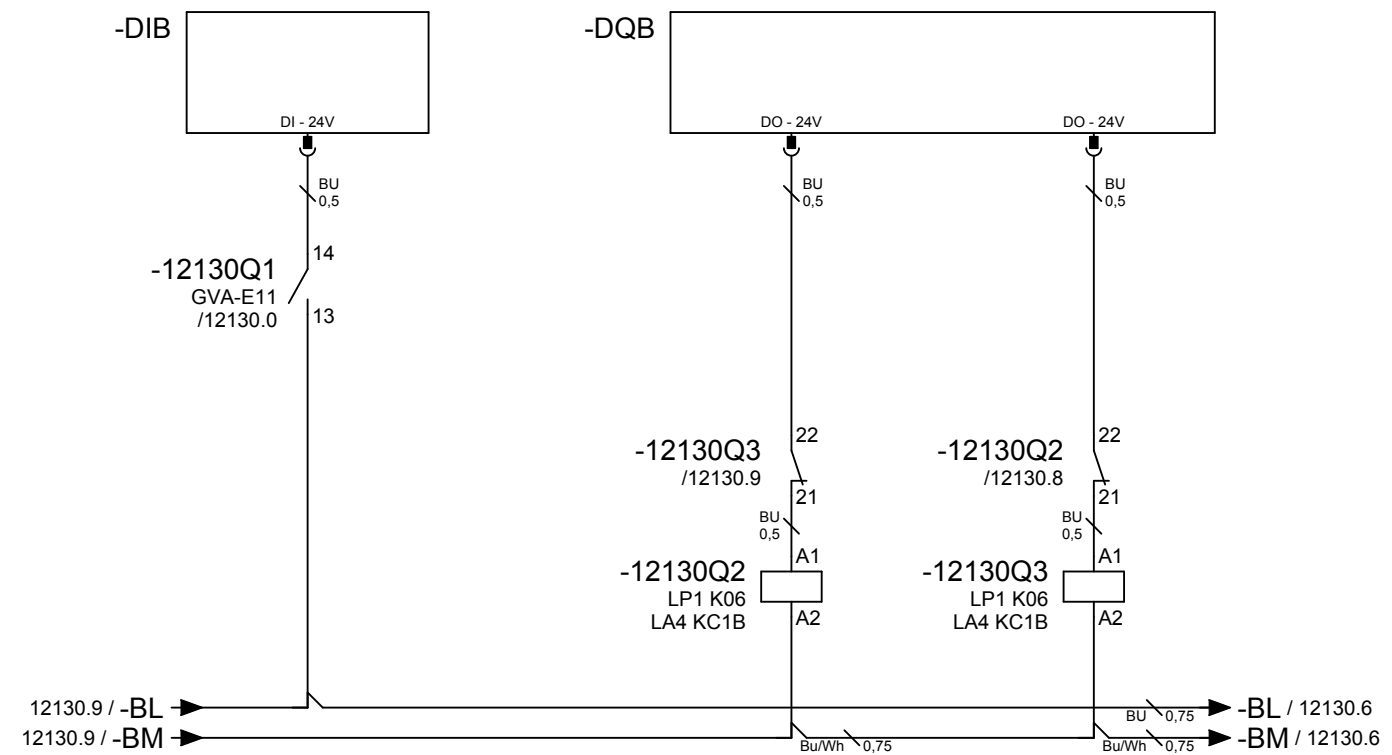
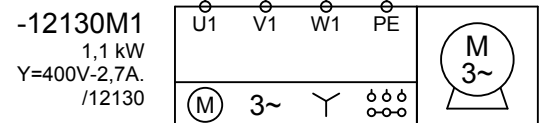


+UBxxx-12130W2
ÖLFLEX 100
4x1
25 m

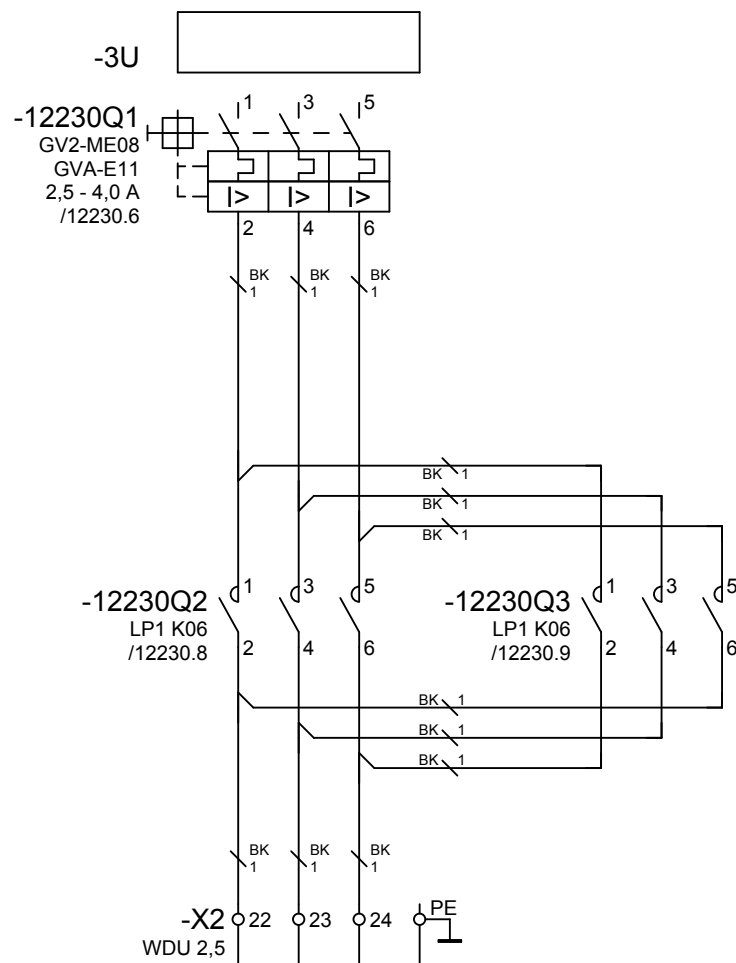
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (2,7A = 26,0%)
loss U at In 0,14V
loss U at 5xIn 0,69V
heat losses at In 1,12W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1mm² = cca 13,0A; (2,7A = 20,8%)
loss U at In 1,15V
loss U at 5xIn 5,74V
heat losses at In 9,3W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



+UBxxx-12230W2
ÖLFLEX 100
4x1
25 m

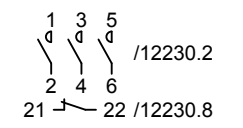
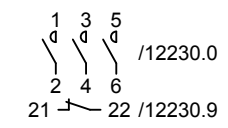
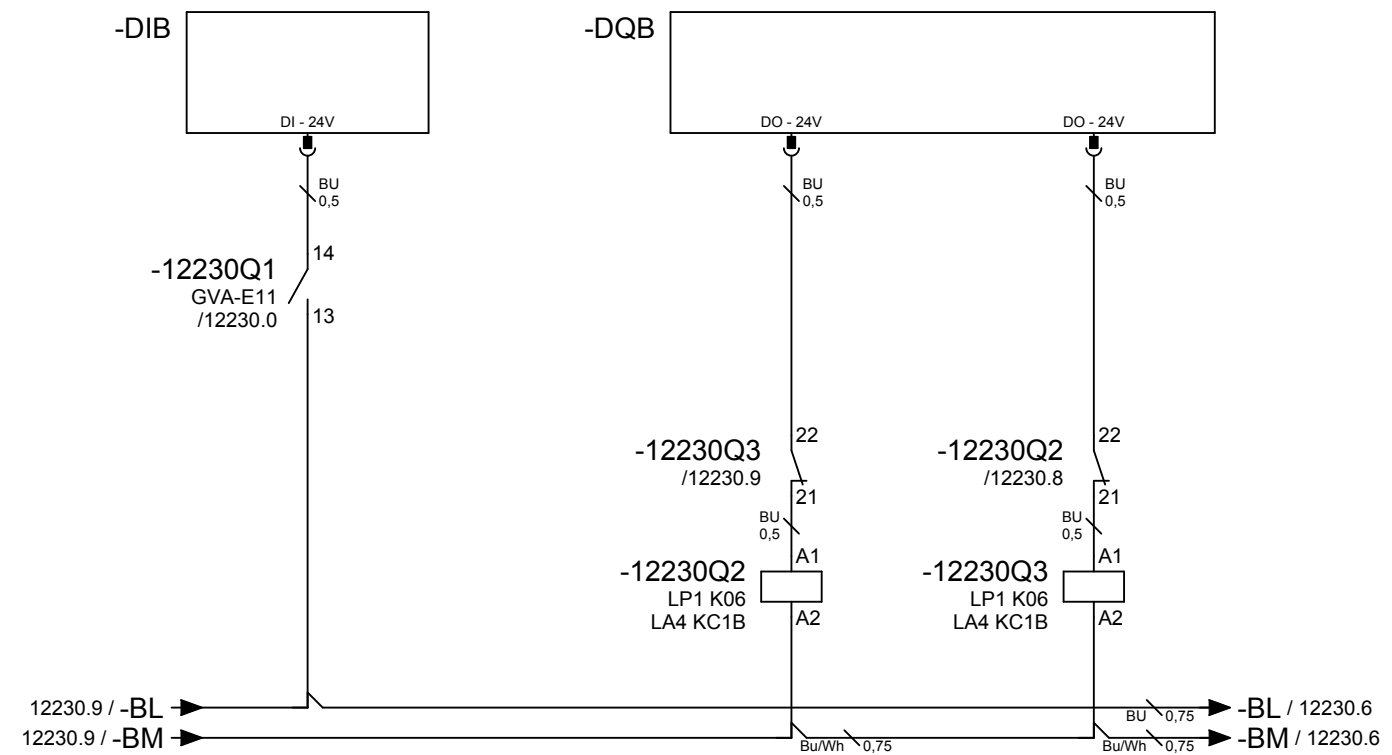
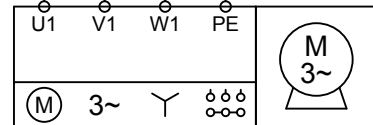
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)

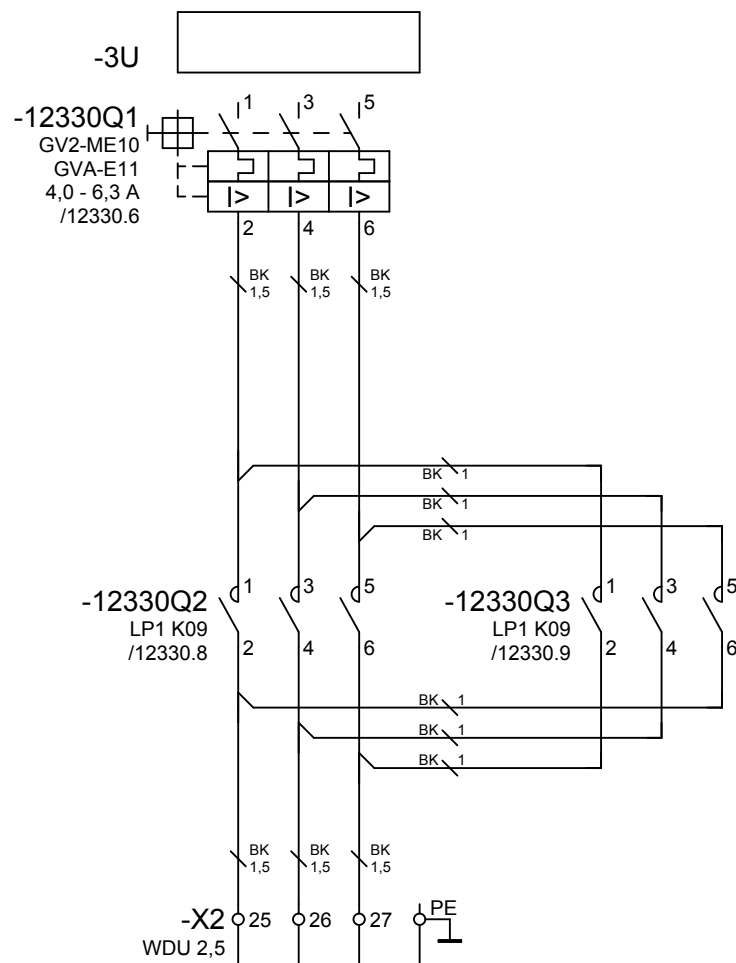
-12230M1
1,5 kW
Y=400V-3,5A.
/12230



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

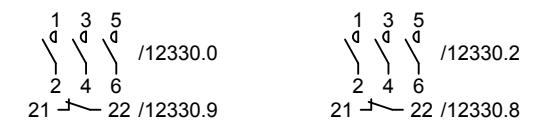
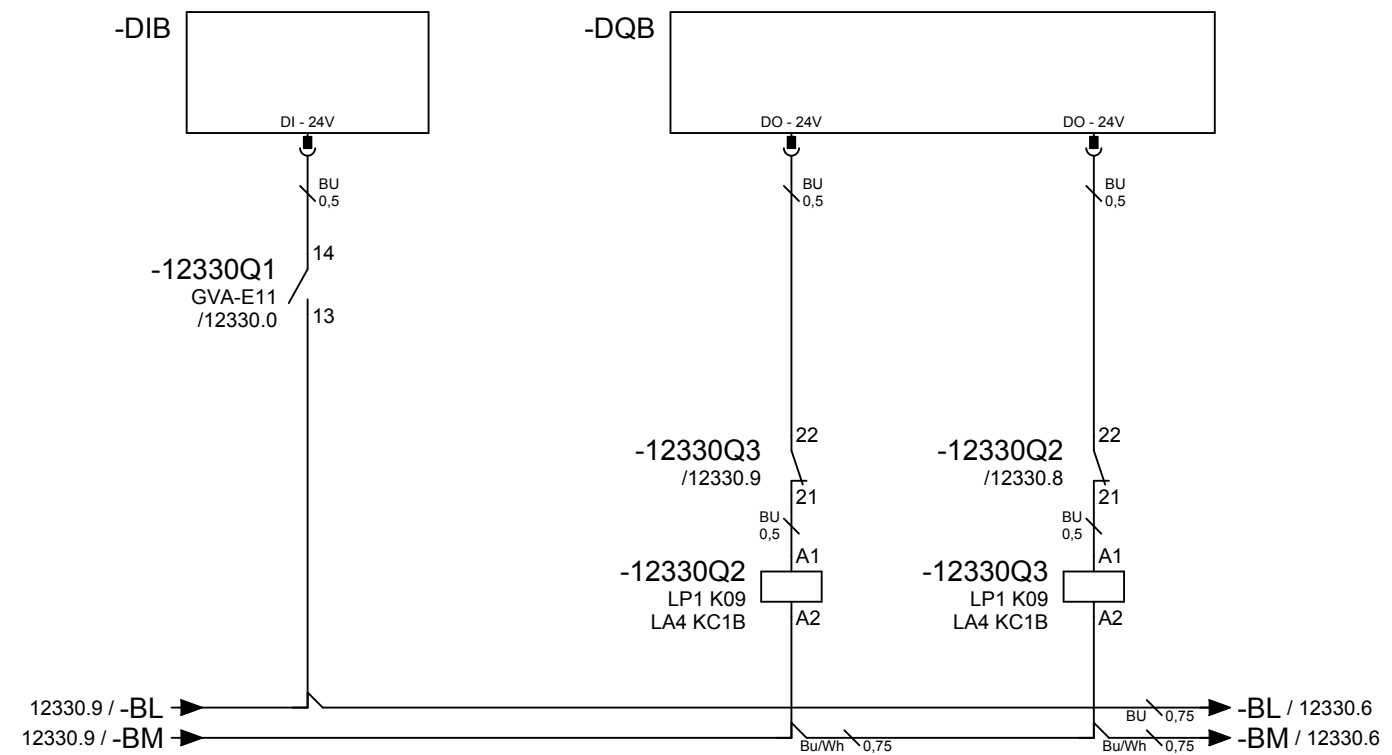
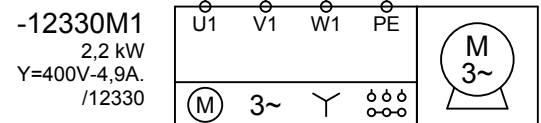


+UBxxx-12330W2
ÖLFLEX 100
4x1,5
25 m

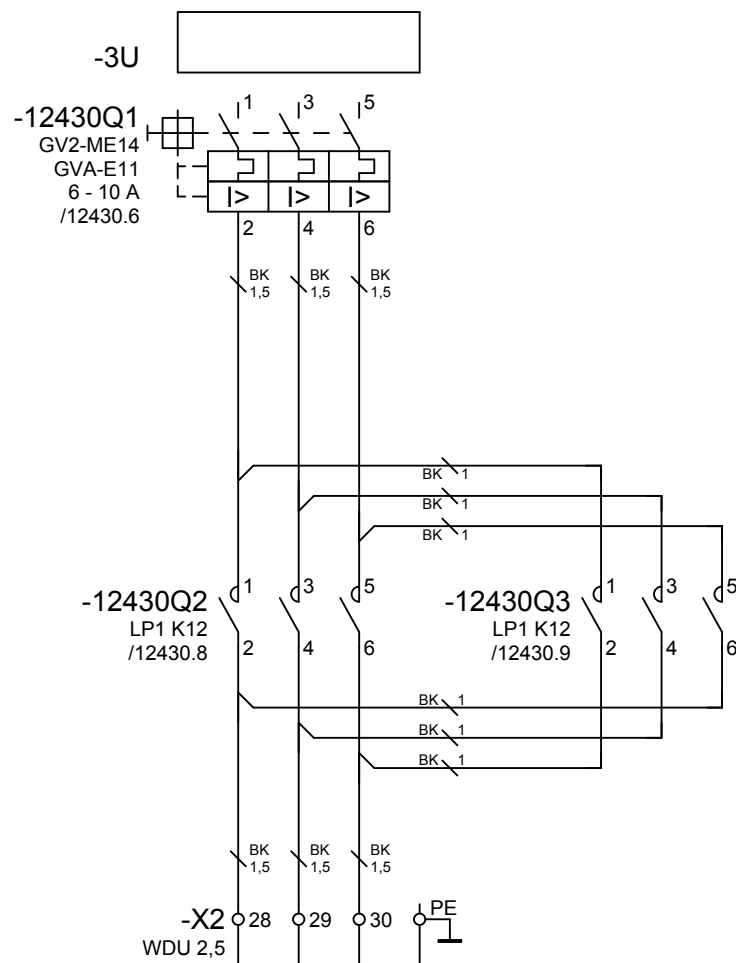
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1,5mm² = cca 13,5A; (5A = 37,0%)
loss U at In 0,17V
loss U at 5xIn 0,85V
heat losses at In 2,55W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (5A = 27,0%)
loss U at In 1,42V
loss U at 5xIn 7,08V
heat losses at In 21,3W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

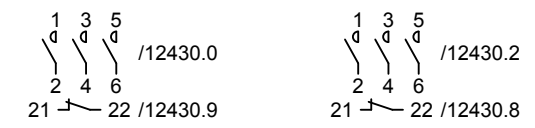
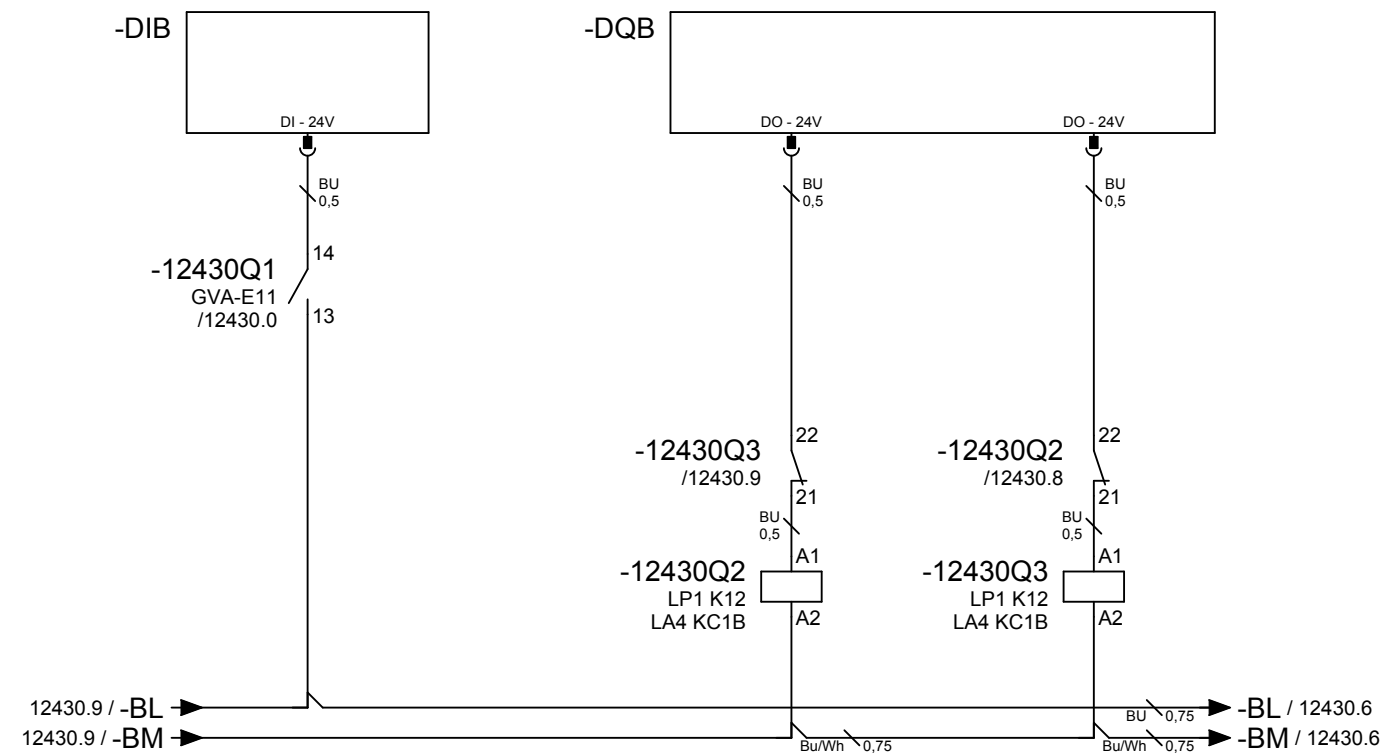
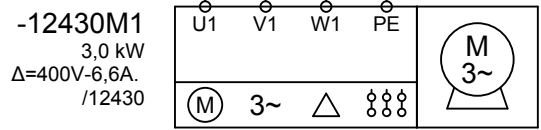


+UBxxx-12430W2
ÖLFLEX 100
4x1,5
25 m

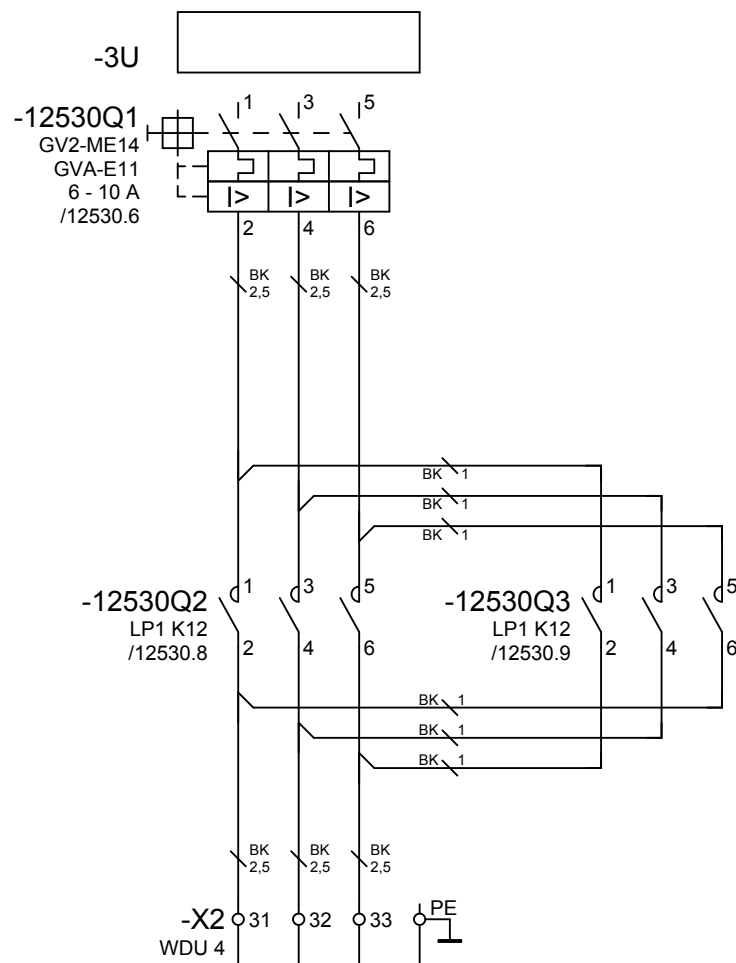
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1,5mm² = cca 13,5A; (7A = 51,8%)
loss U at In 0,24V
loss U at 5xIn 1,19V
heat losses at In 5,00W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (7A = 37,8%)
loss U at In 1,98V
loss U at 5xIn 9,92V
heat losses at In 41,7W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

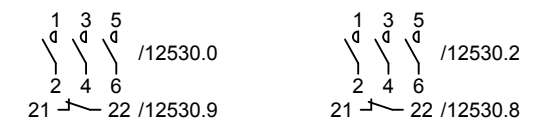
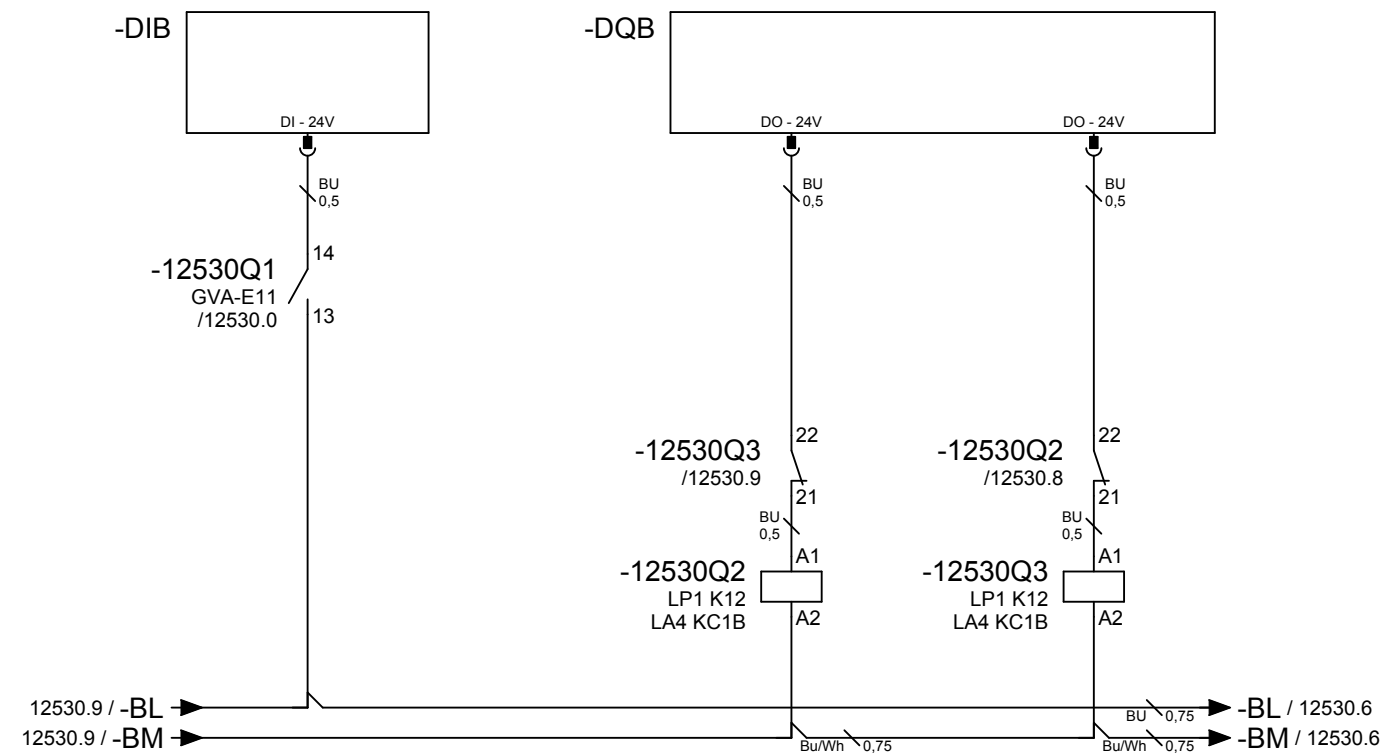
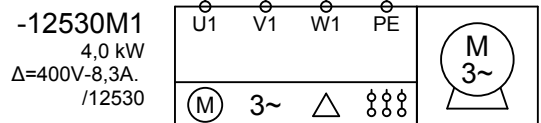


+UBxxx-12530W2
ÖLFLEX 100
4x1,5
25 m

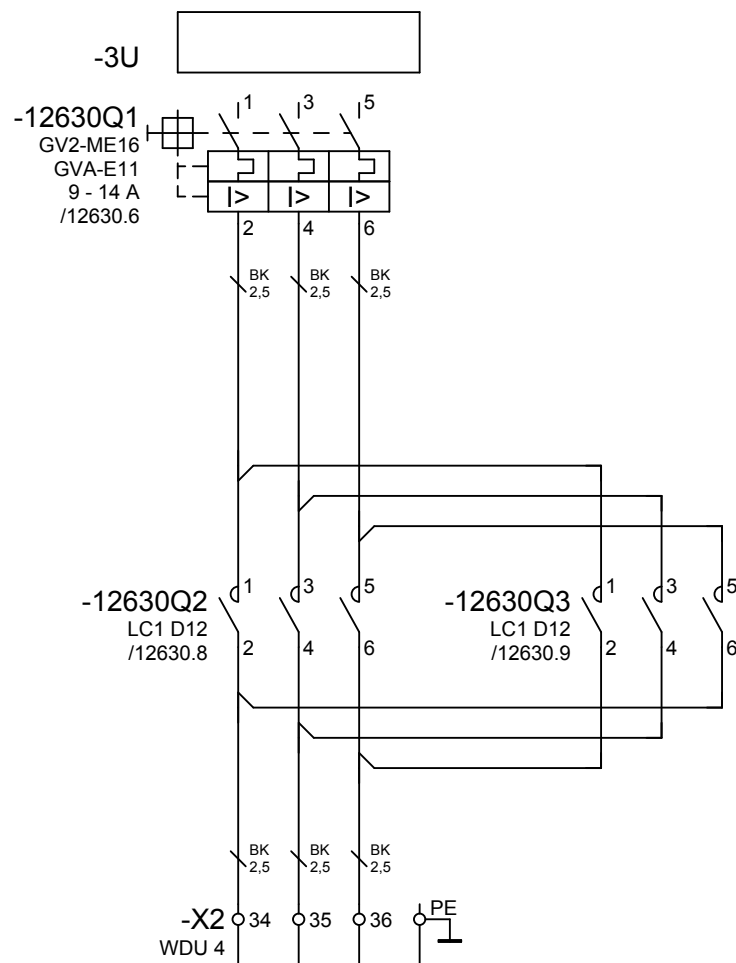
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
loss U at In 0,17V
loss U at 5xIn 0,87V
heat losses at In 4,42W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
loss U at In 2,41V
loss U at 5xIn 12,04V
heat losses at In 61,4W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



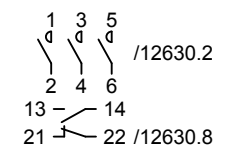
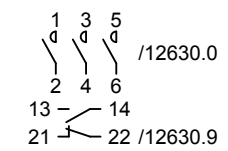
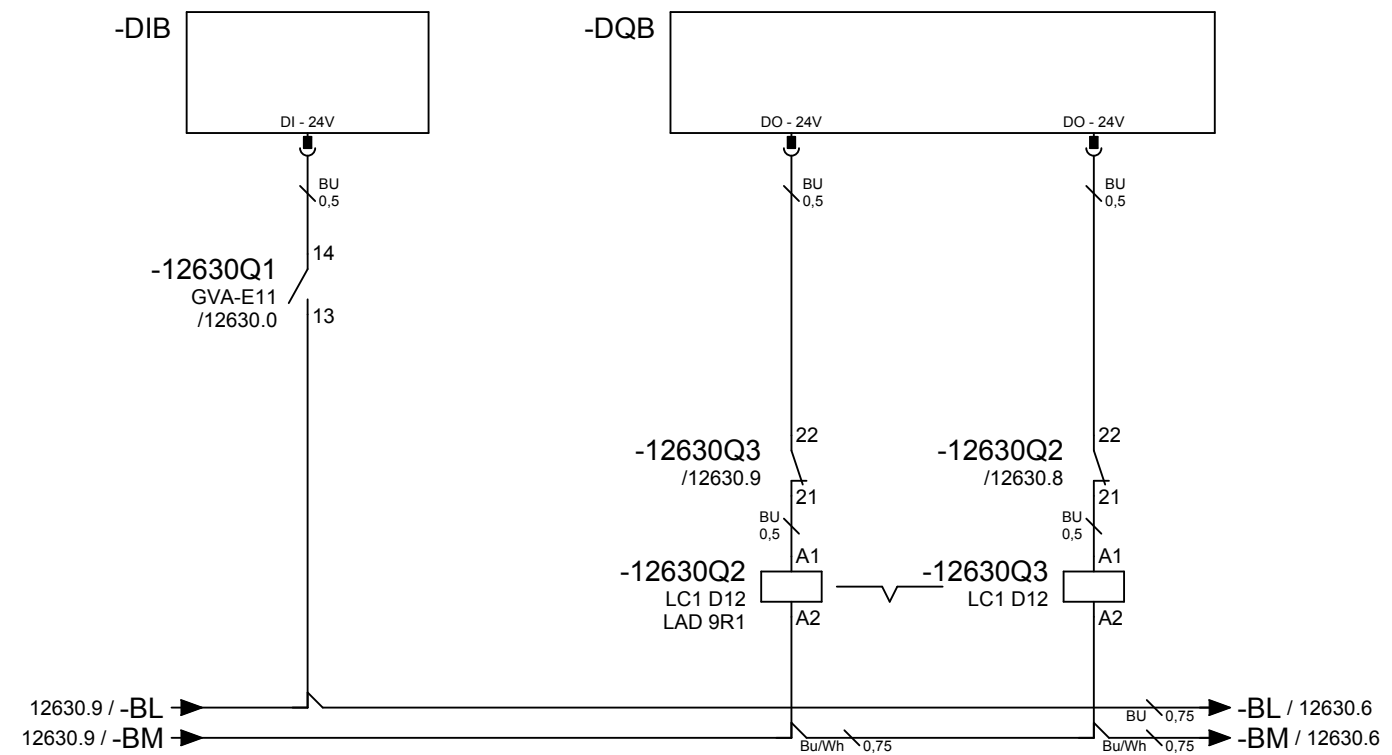
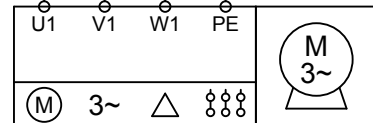
+UBxxx-12630W2
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
...
short circuit resistance 15kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
...
...
...

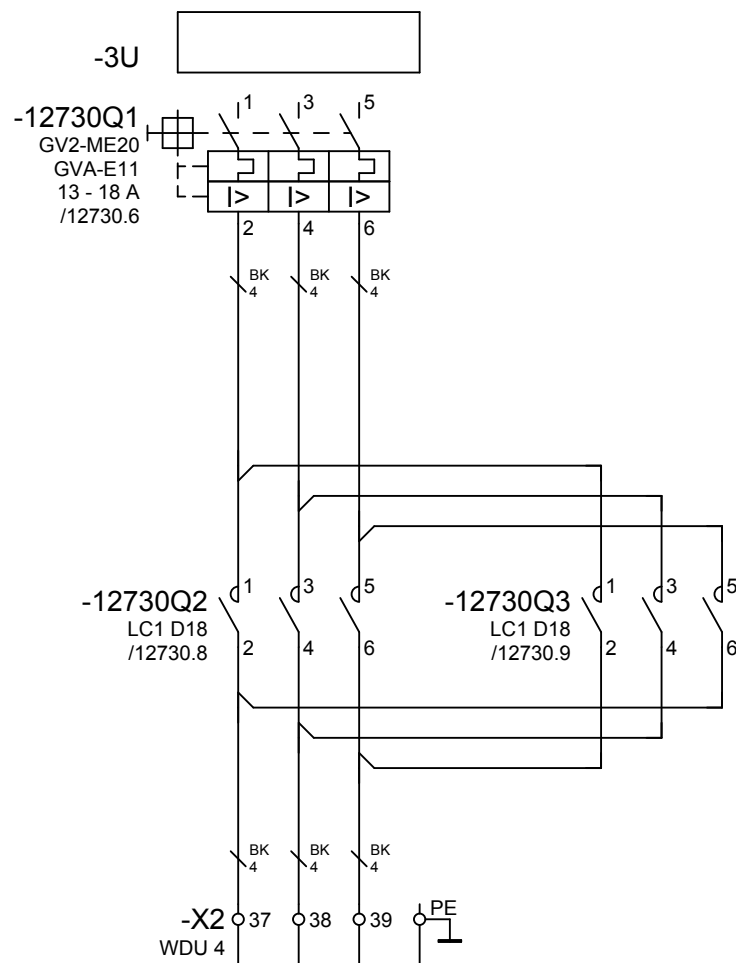
-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

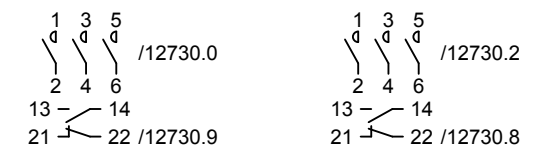
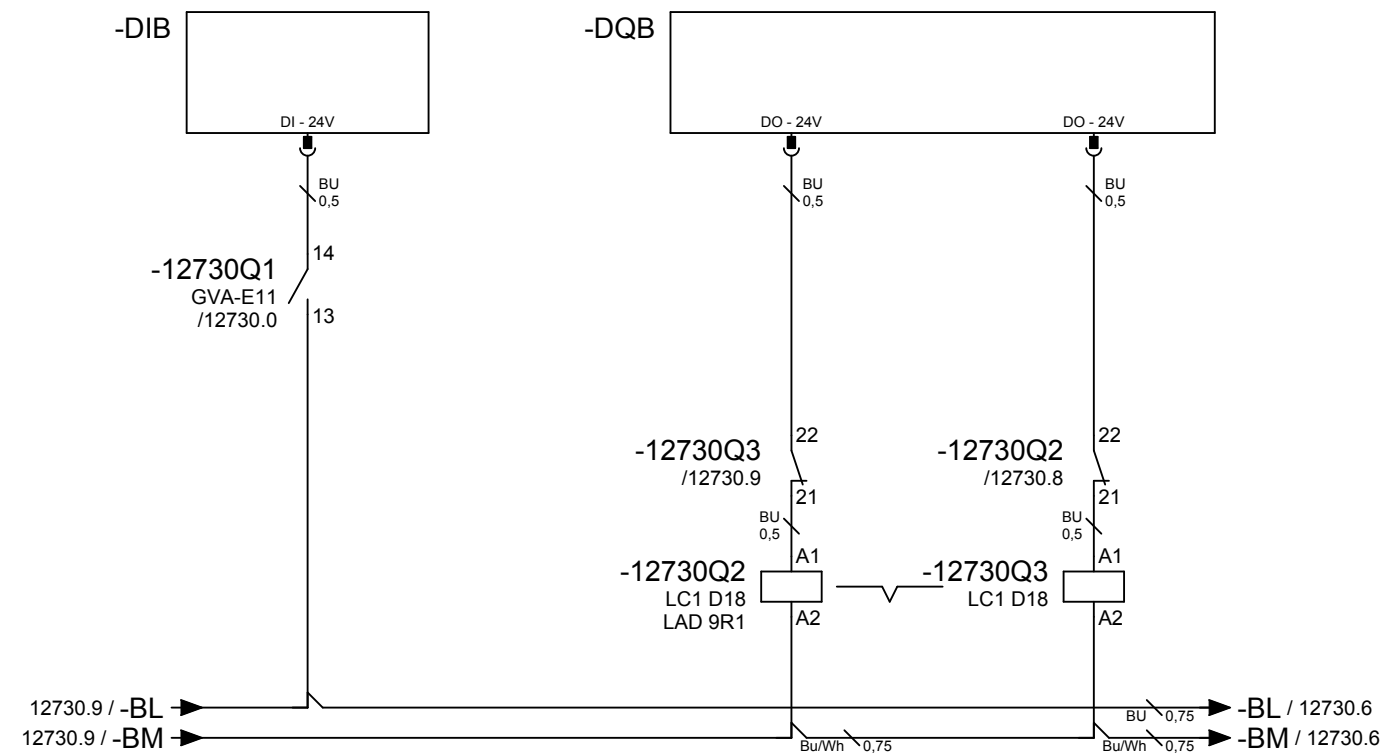
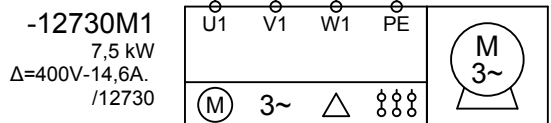


+UBxxxx-12730W2
ÖLFLEX 100
4x4
25 m

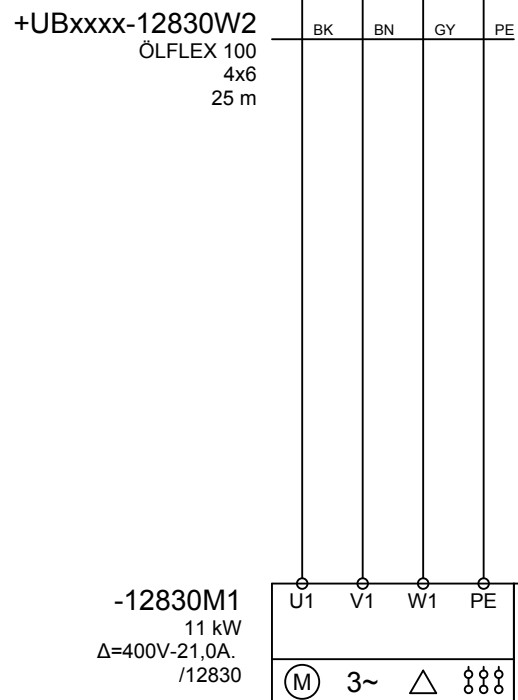
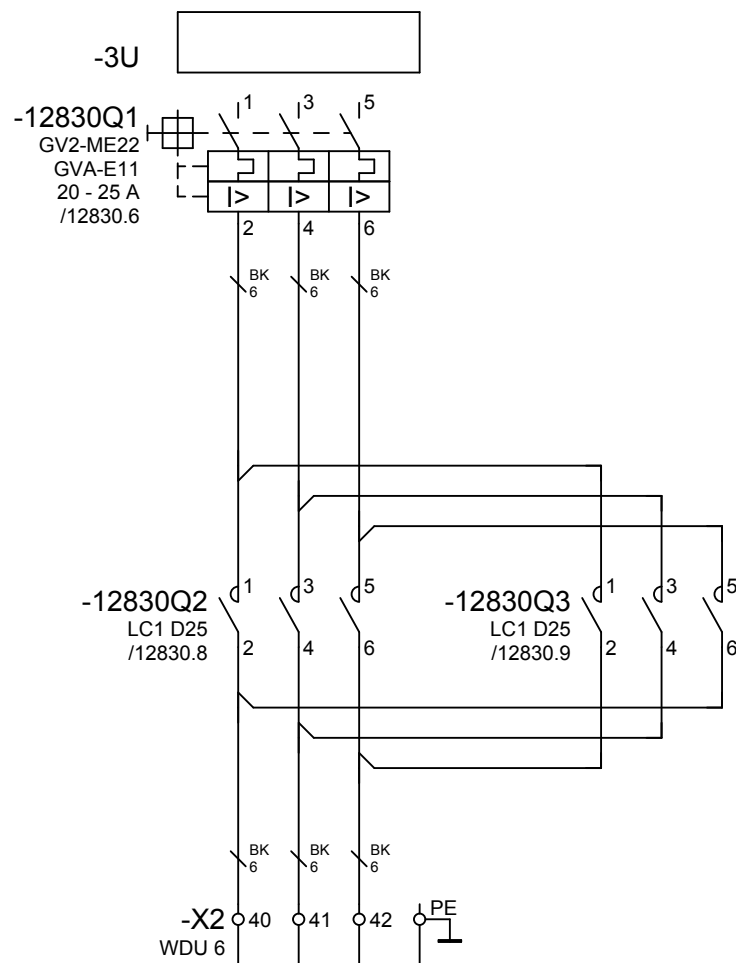
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 15kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..

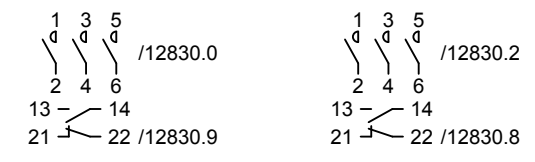
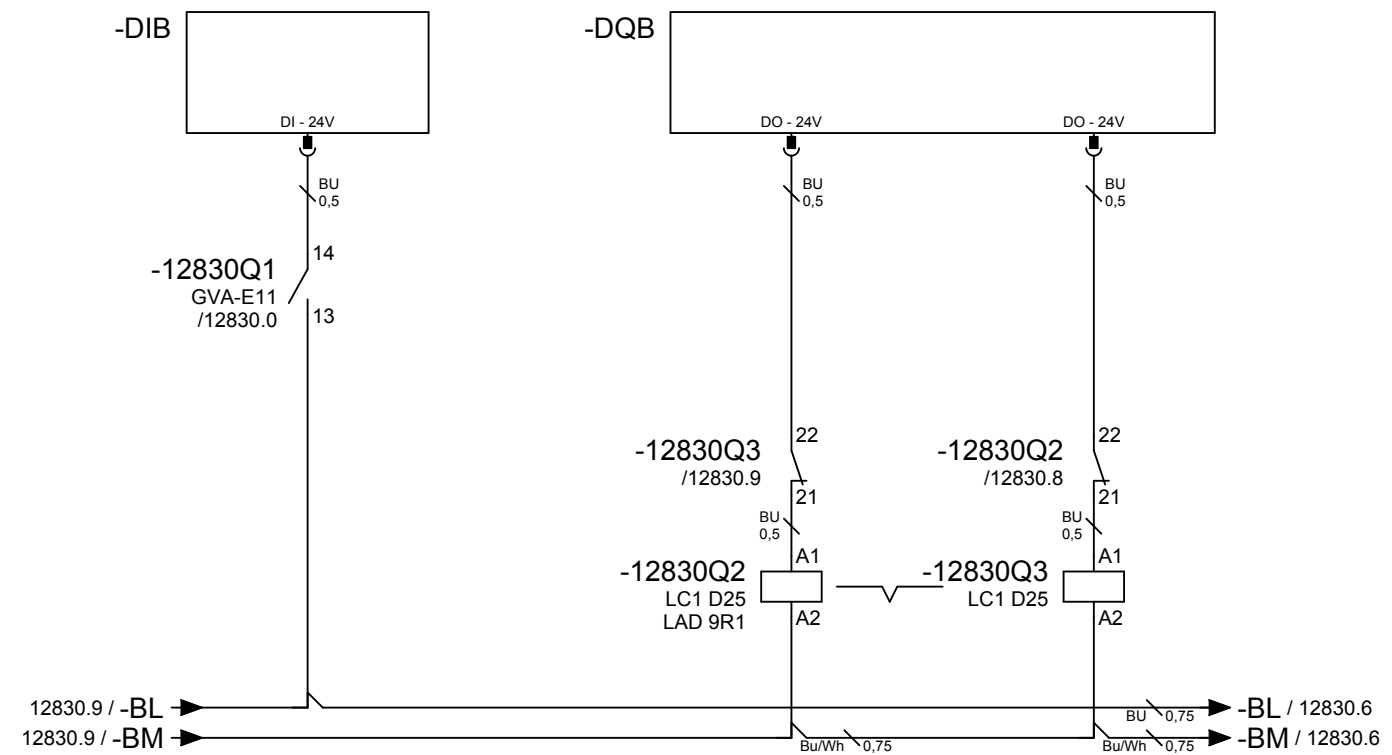


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

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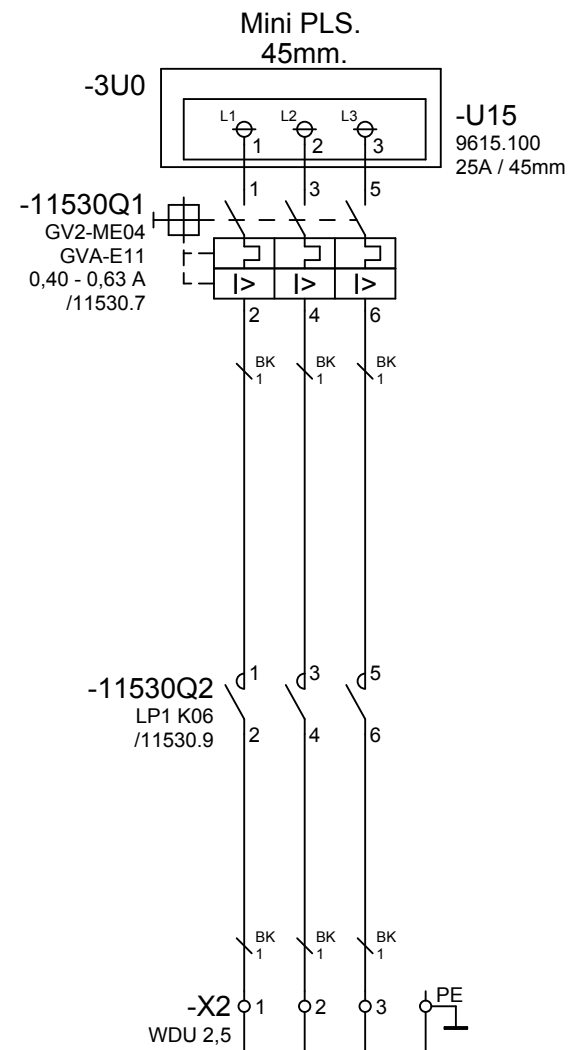
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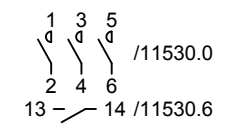
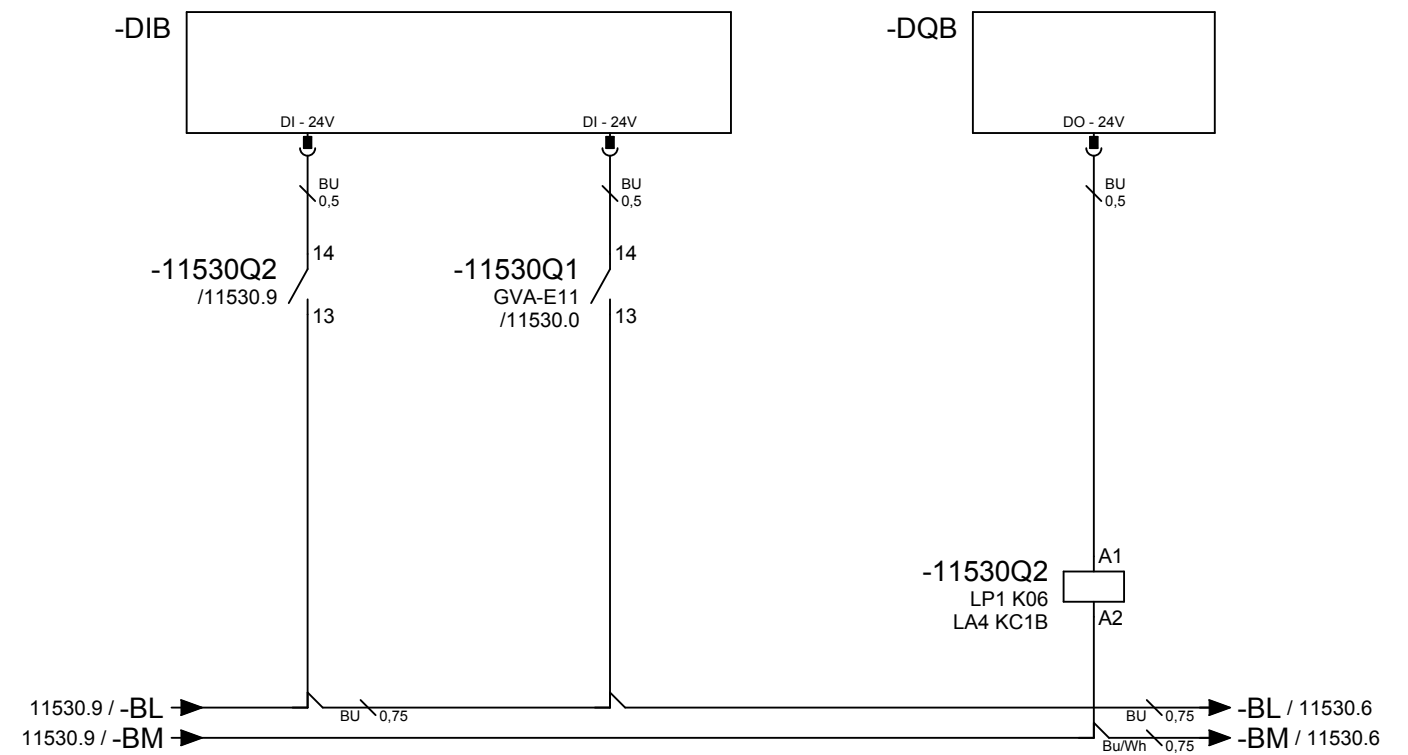
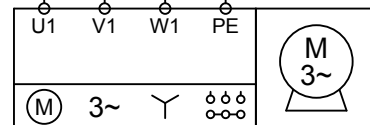


+UBxxx-11530W3
ÖLFLEX 100
4x0,75
25 m

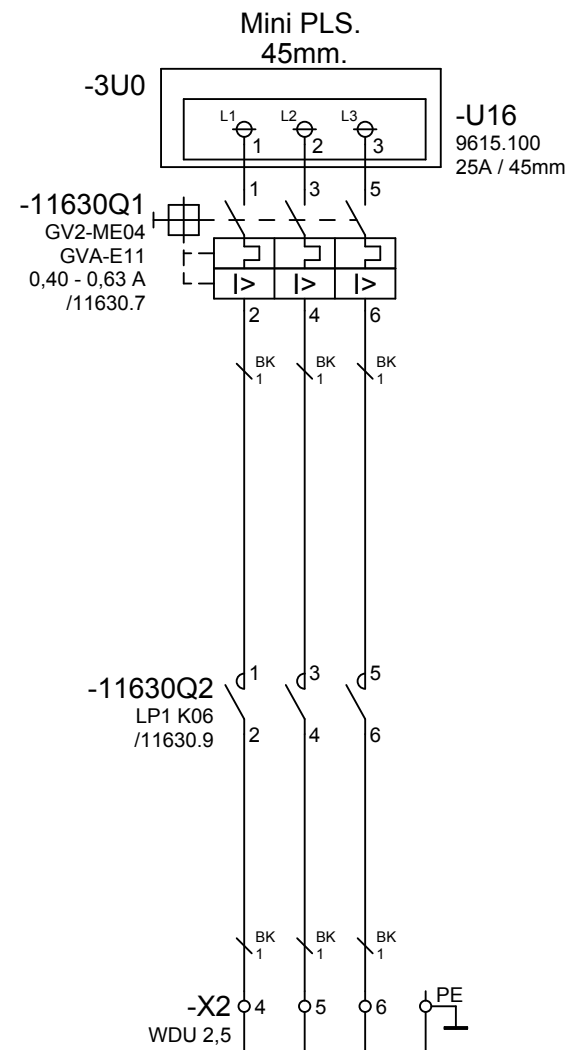
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,41A = 4,0%)
loss U at In 0,02V
loss U at 5xIn 0,10V
heat losses at In 0,03W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
loss U at In 0,23V
loss U at 5xIn 1,16V
heat losses at In 0,3W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

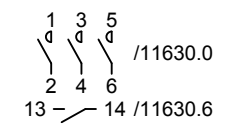
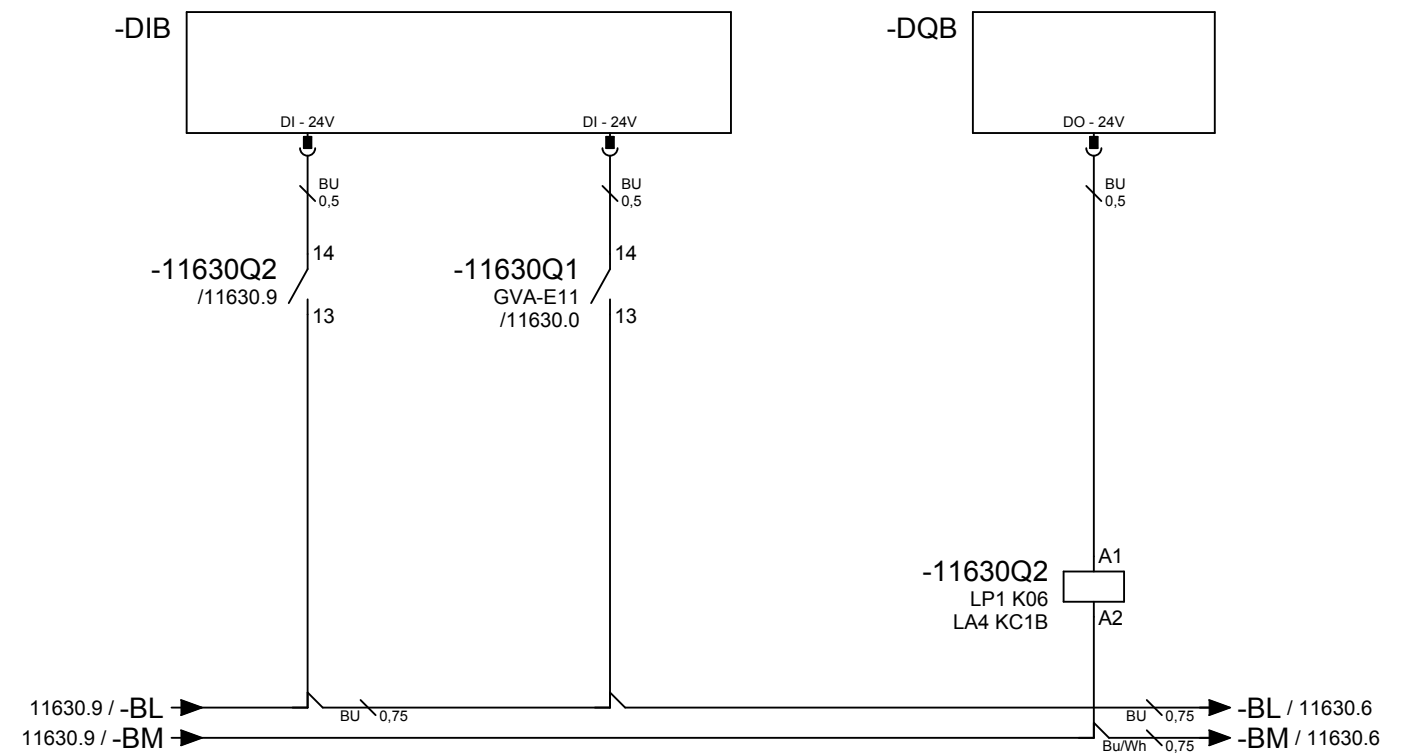


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

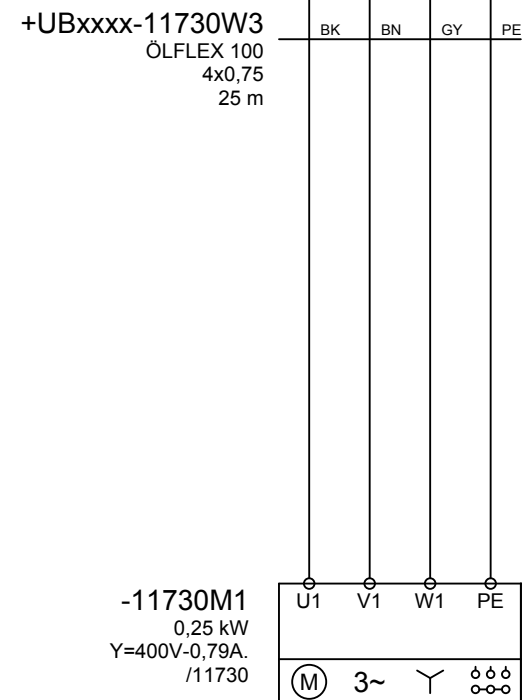
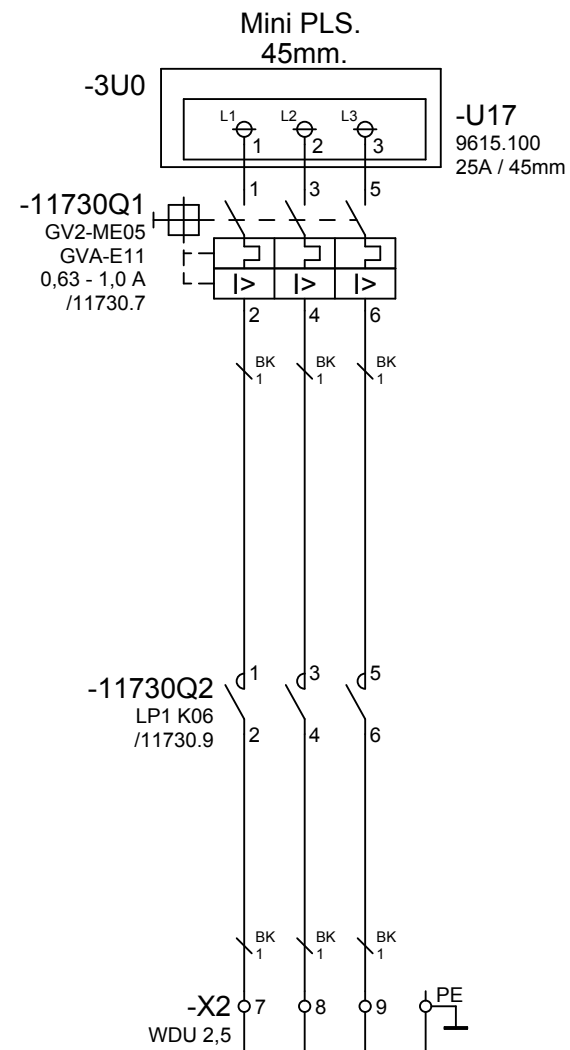
Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

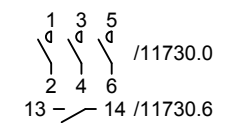
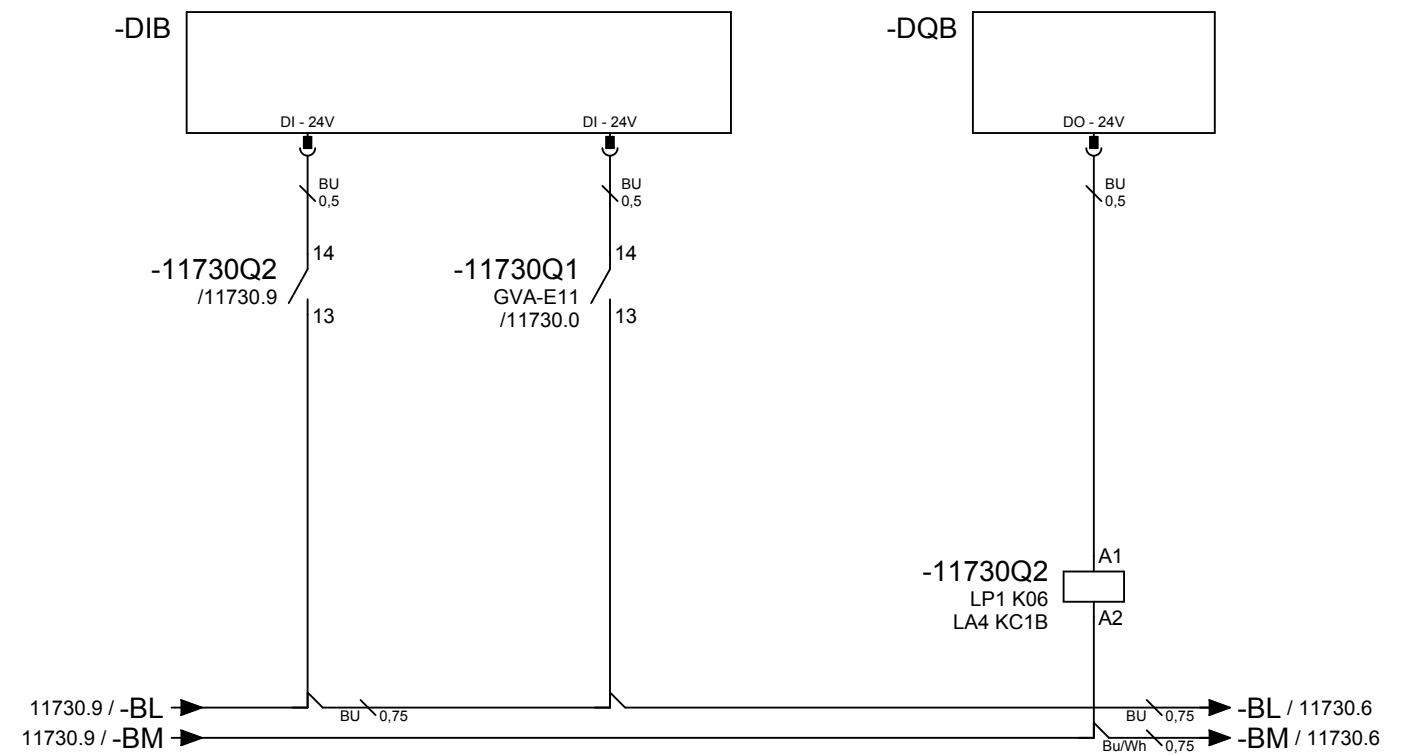


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,8A = 7,7%)
 loss U at In 0,04V
 loss U at 5xIn 0,20V
 heat losses at In 0,10W (L=3x3m)

 short circuit resistance 50kA at 415V

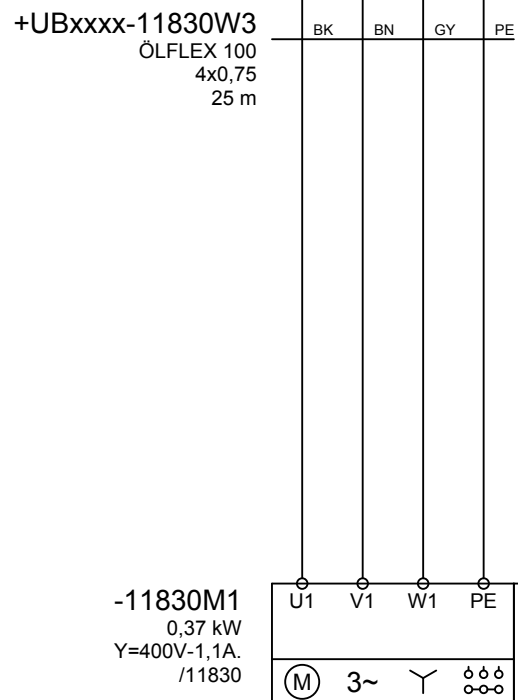
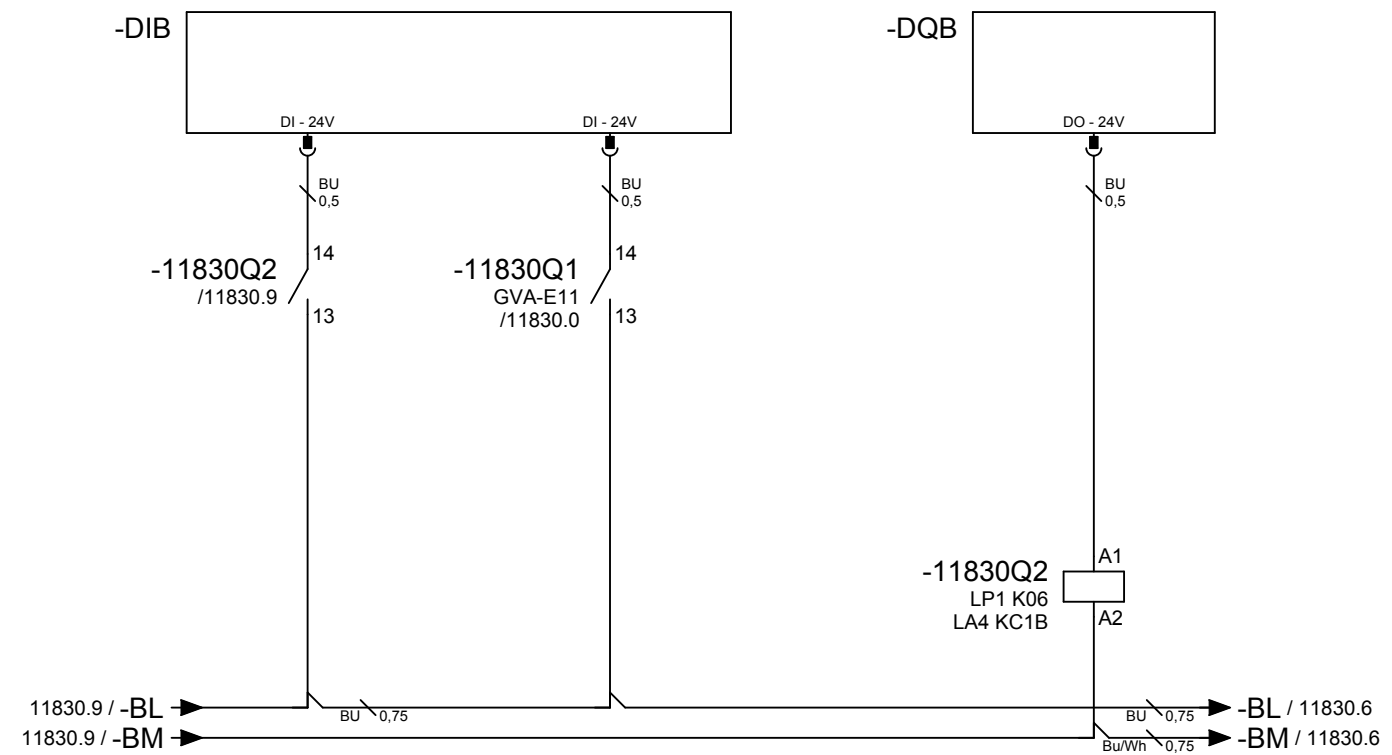
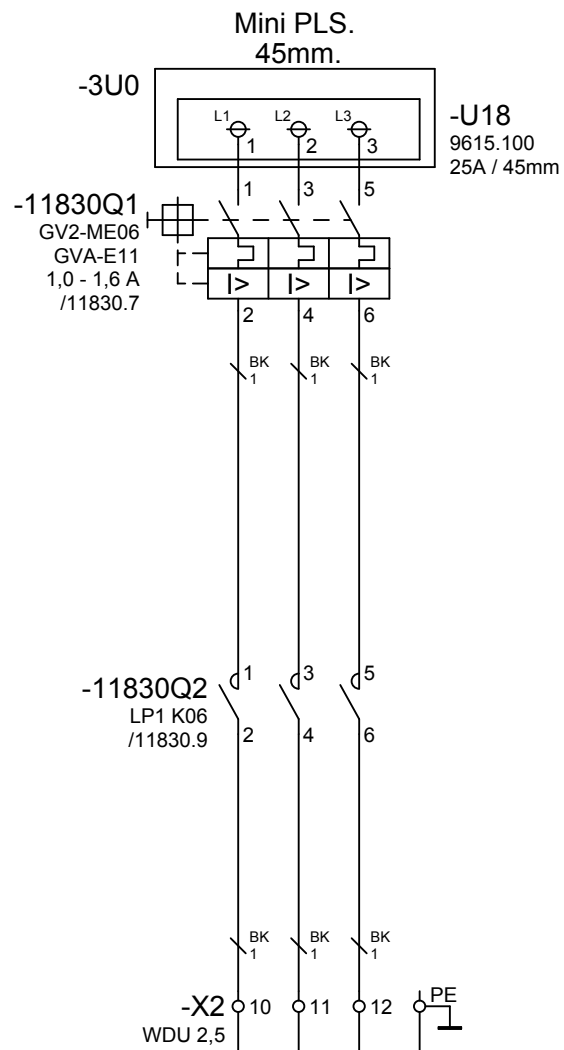
Cable route E
 load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
 loss U at In 0,45V
 loss U at 5xIn 2,27V
 heat losses at In 1,1W (L=3x25m)



Contactor.
1=Switched ON.

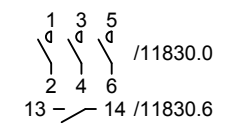
Circuit
breaker. 0=Failure.

Motor.
Contactor.

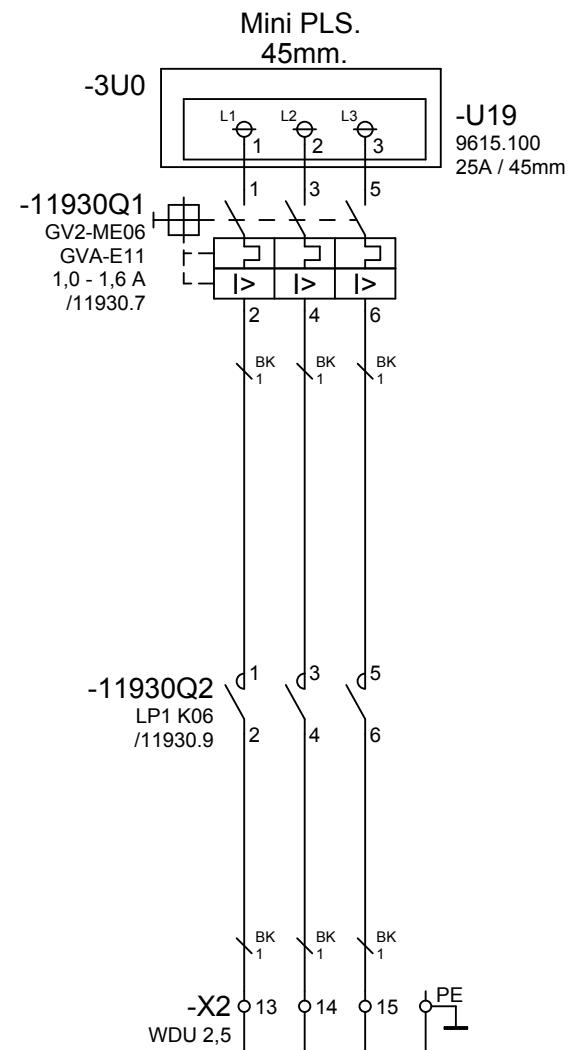


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

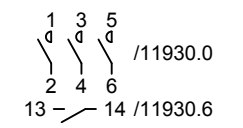
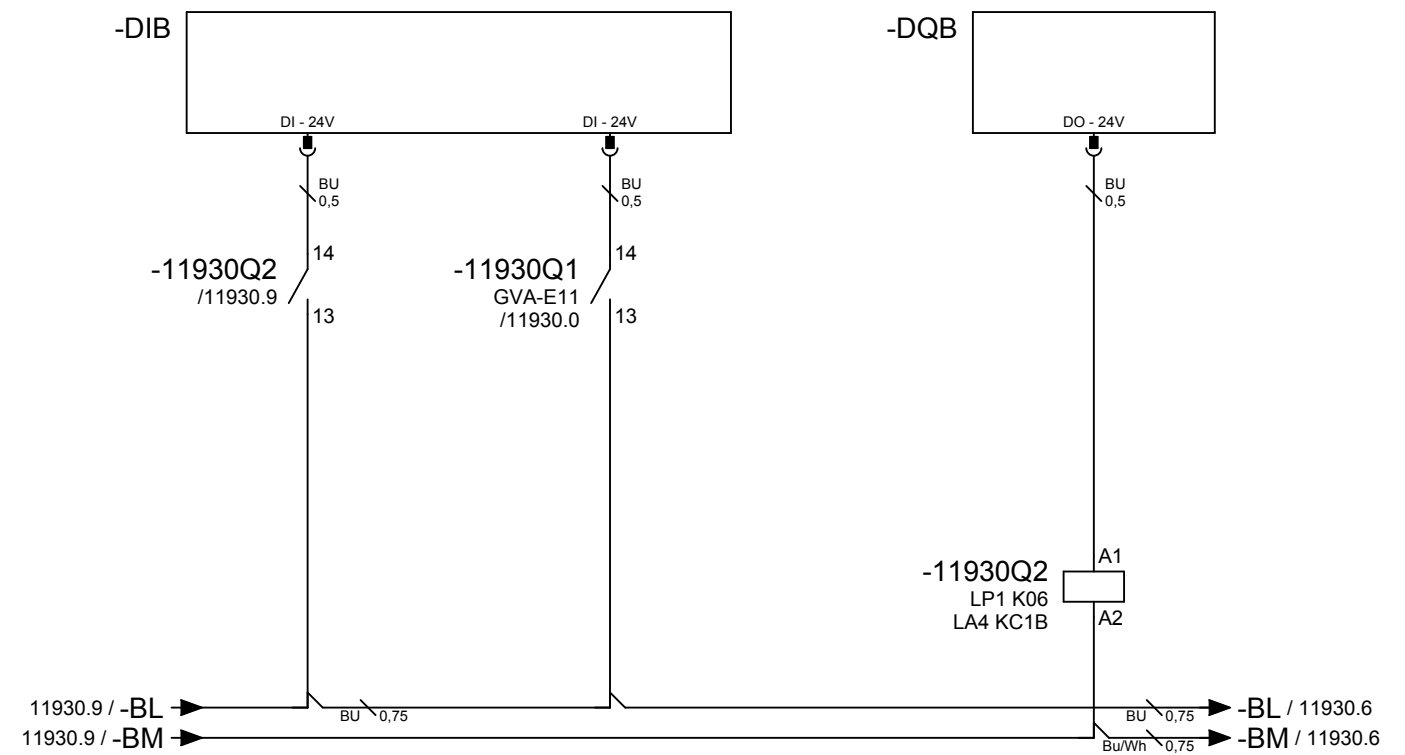


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)

 short circuit resistance 50kA at 415V

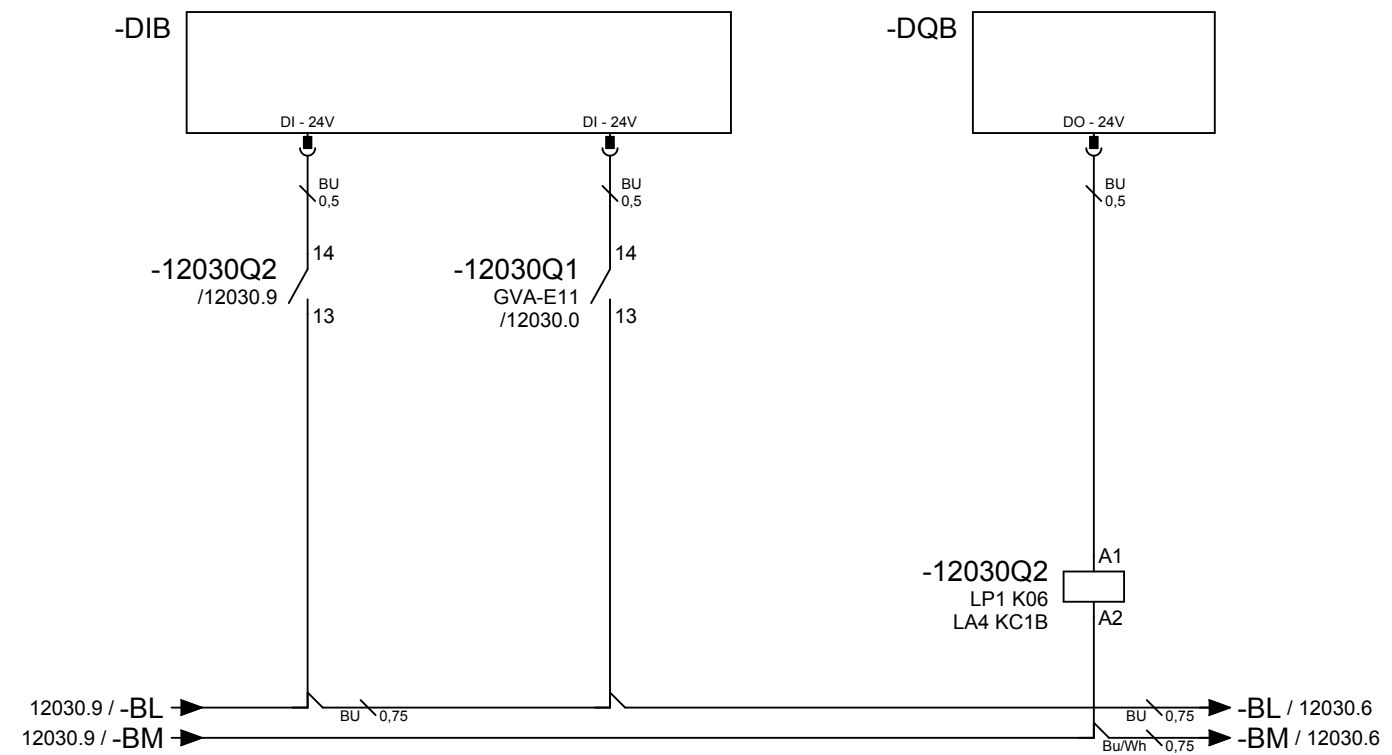
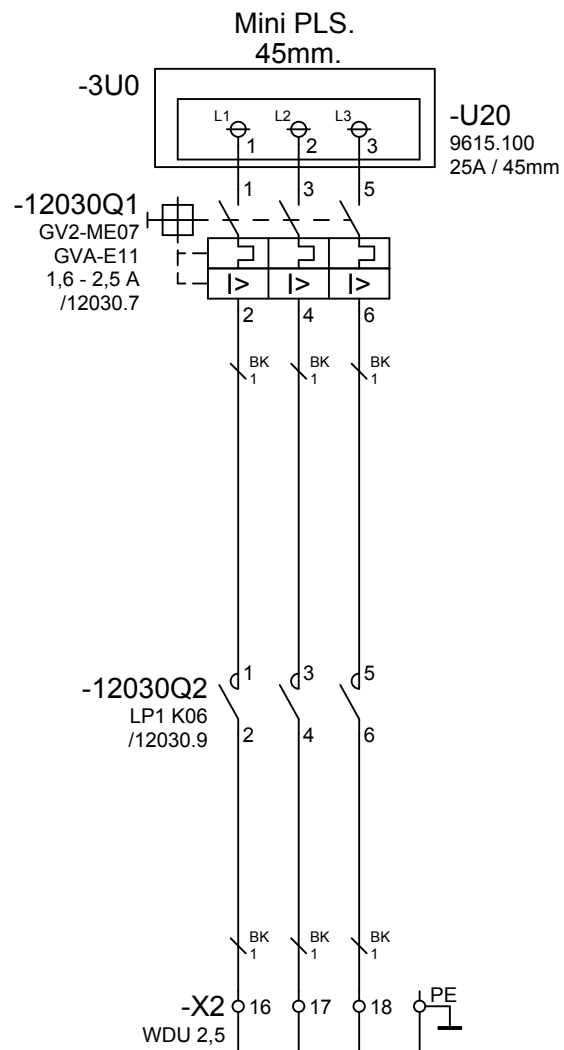
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)



Contactor.
1=Switched ON.

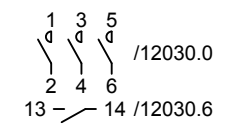
Circuit
breaker. 0=Failure.

Motor.
Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

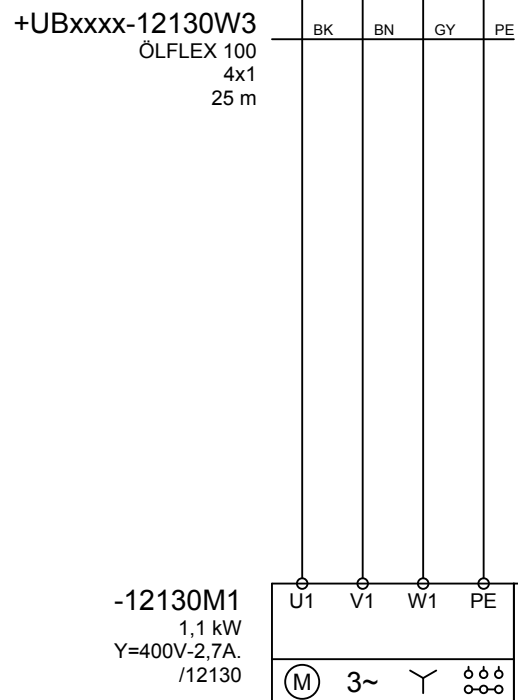
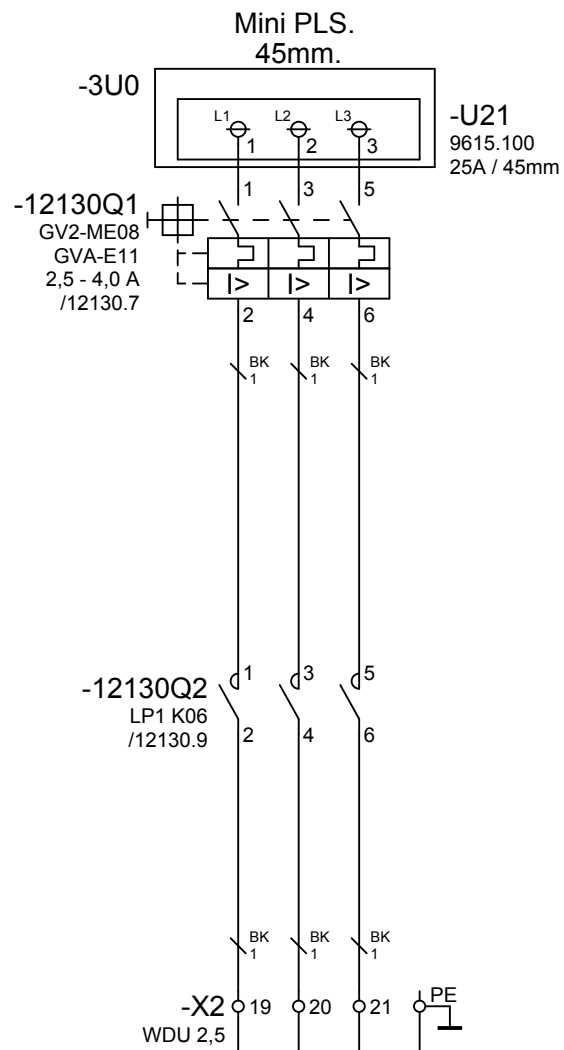
Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...



Contactor.
1=Switched ON.

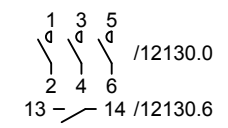
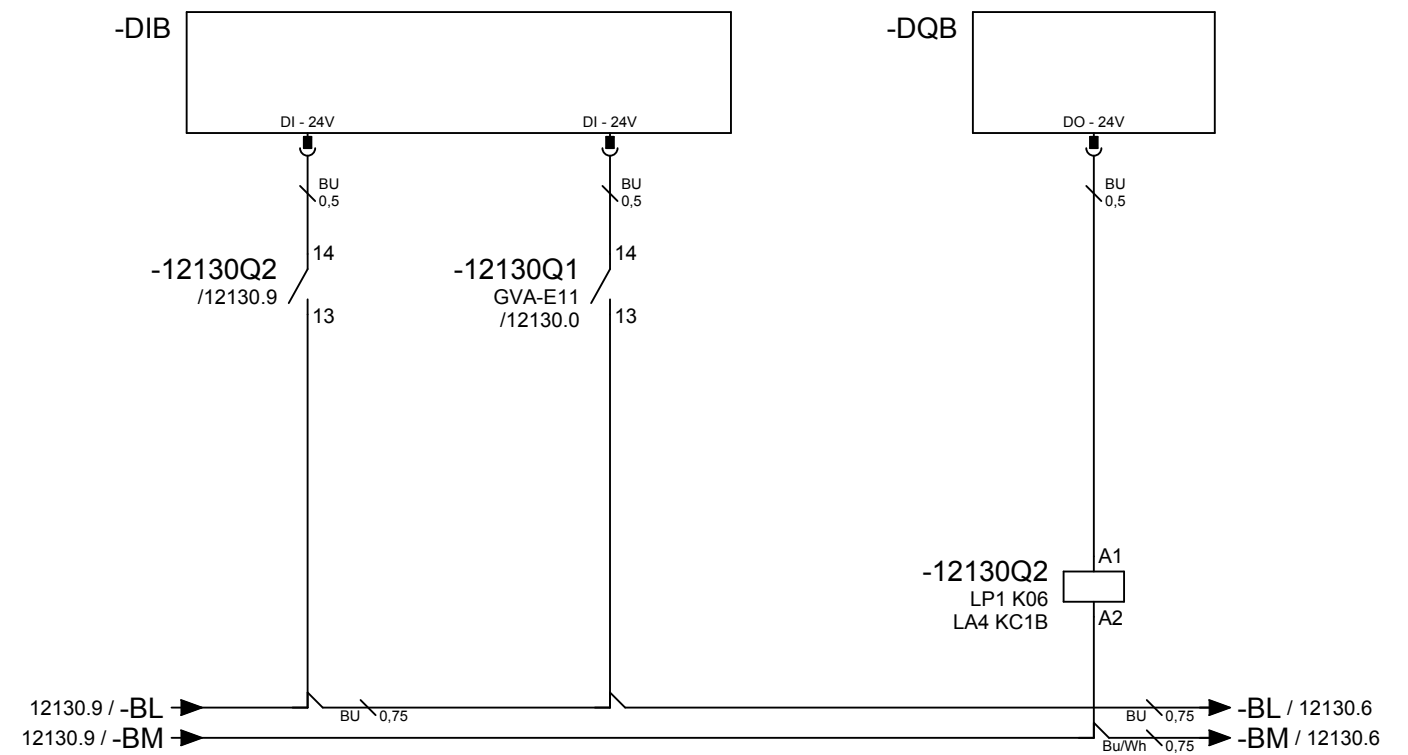
Circuit
breaker. 0=Failure.

Motor.
Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

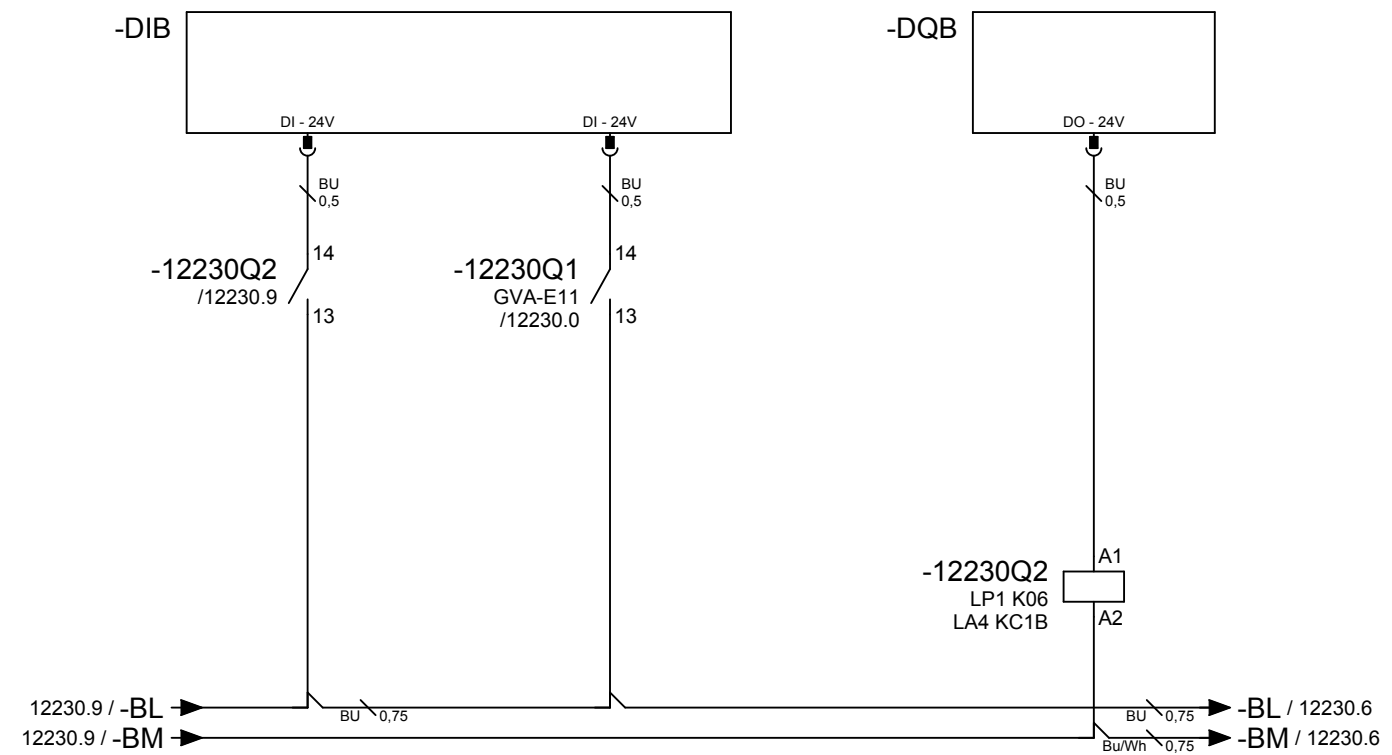
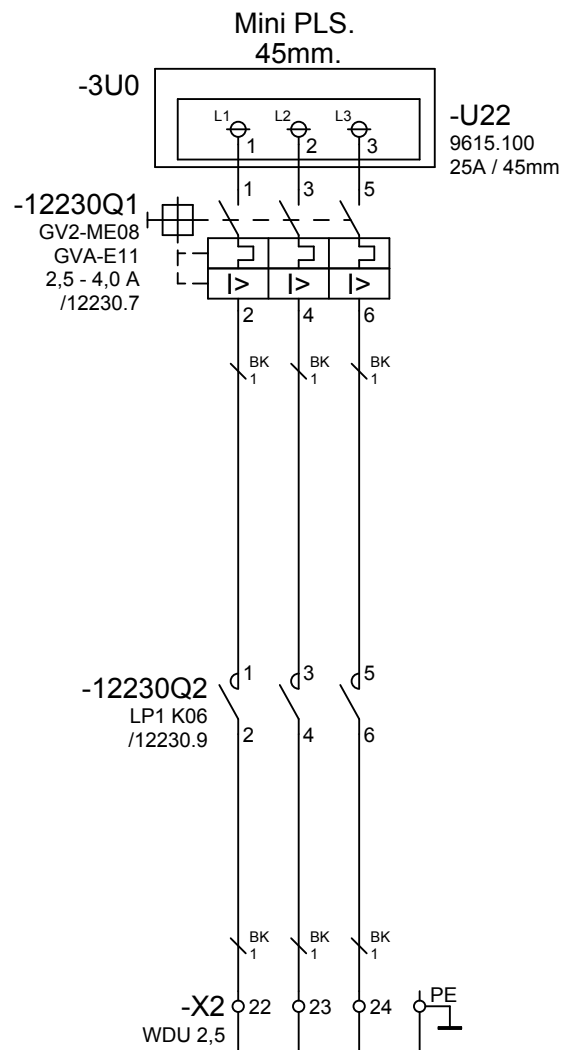
Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

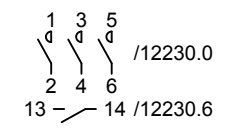
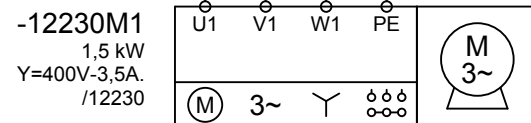


+UBxxx-12230W3
ÖLFLEX 100
4x1
25 m

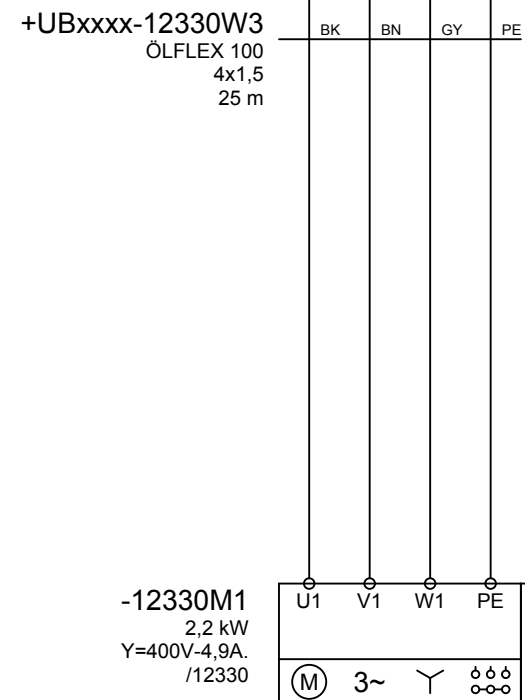
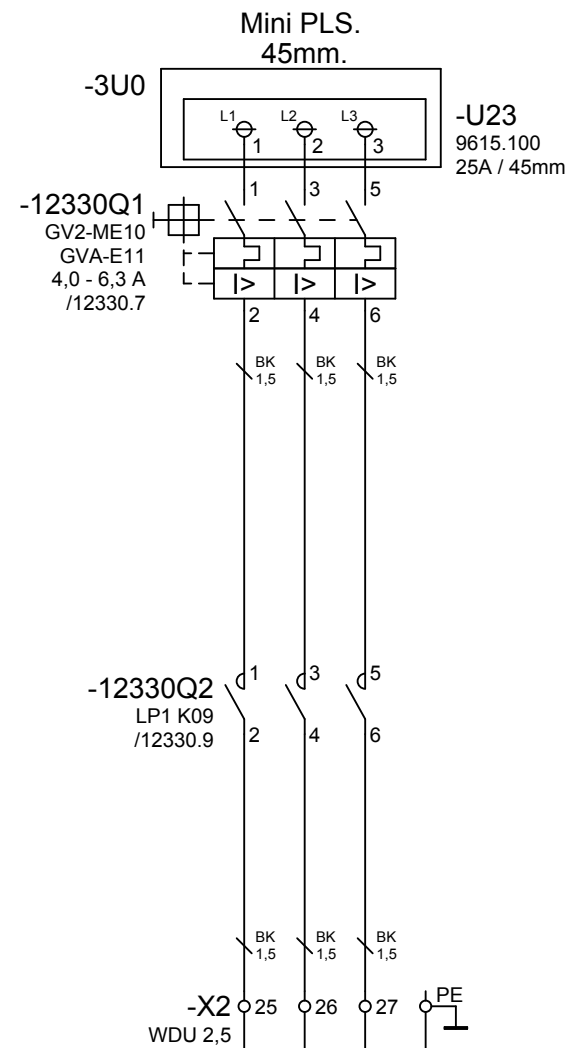
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (3,5A = 33,7%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 1,87W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 1mm² = cca 13,0A; (3,5A = 27,0%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 15,6W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

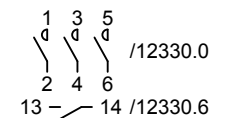
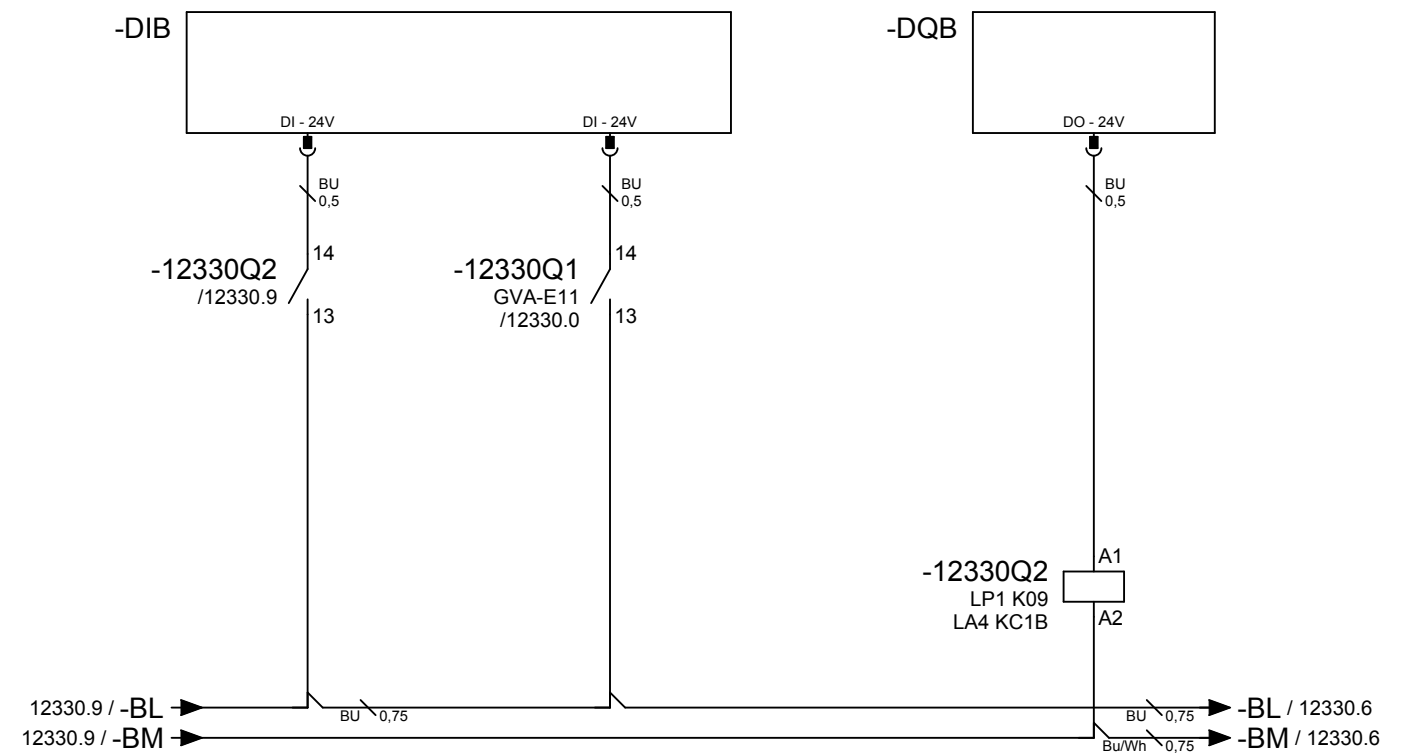


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 50kA at 415V

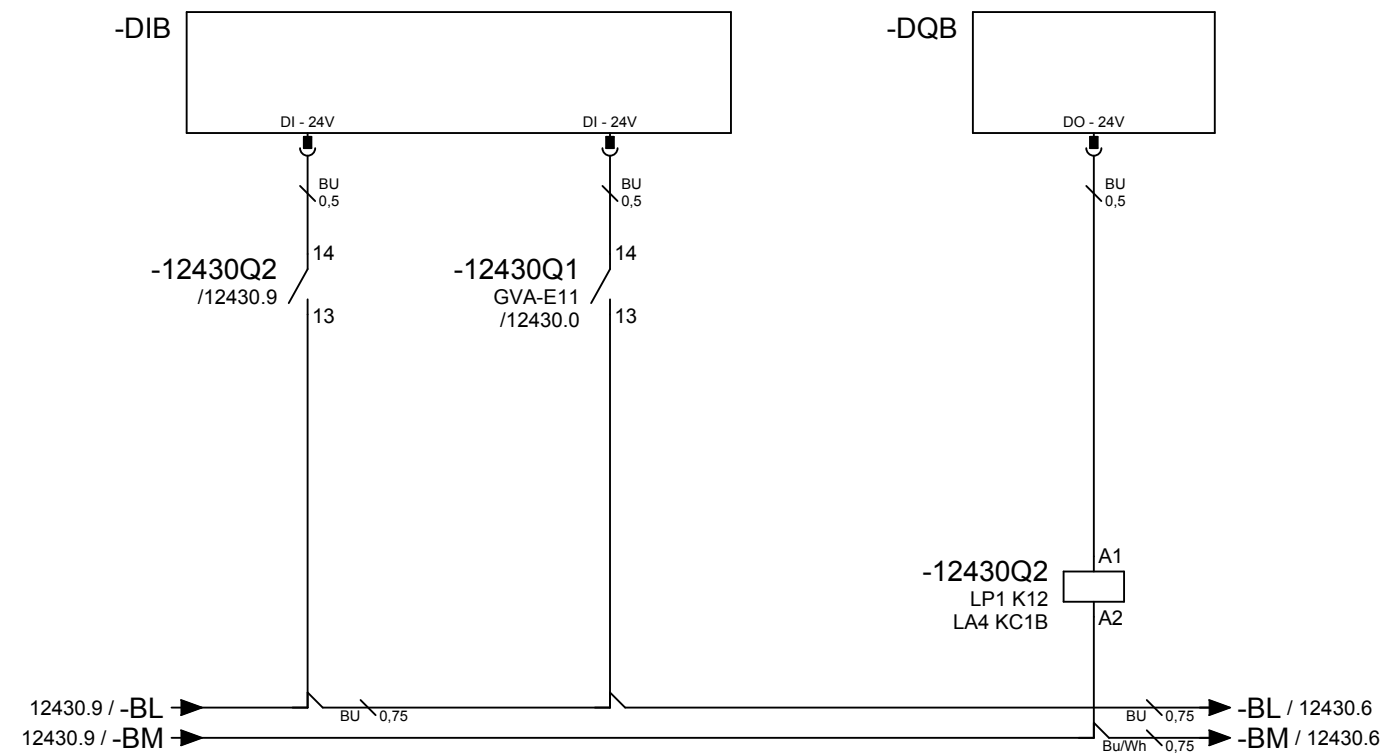
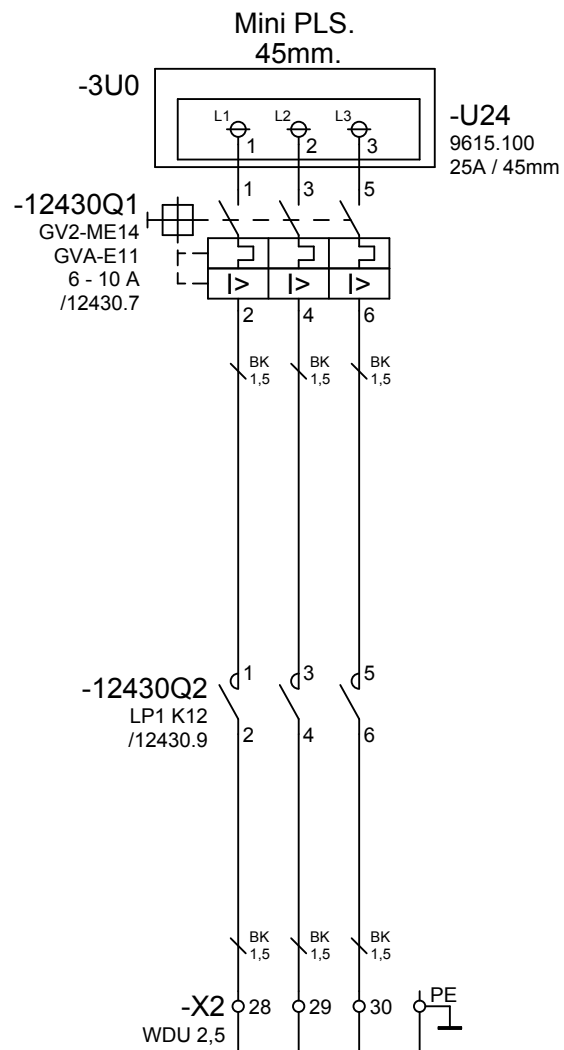
Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

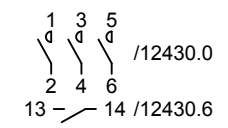


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

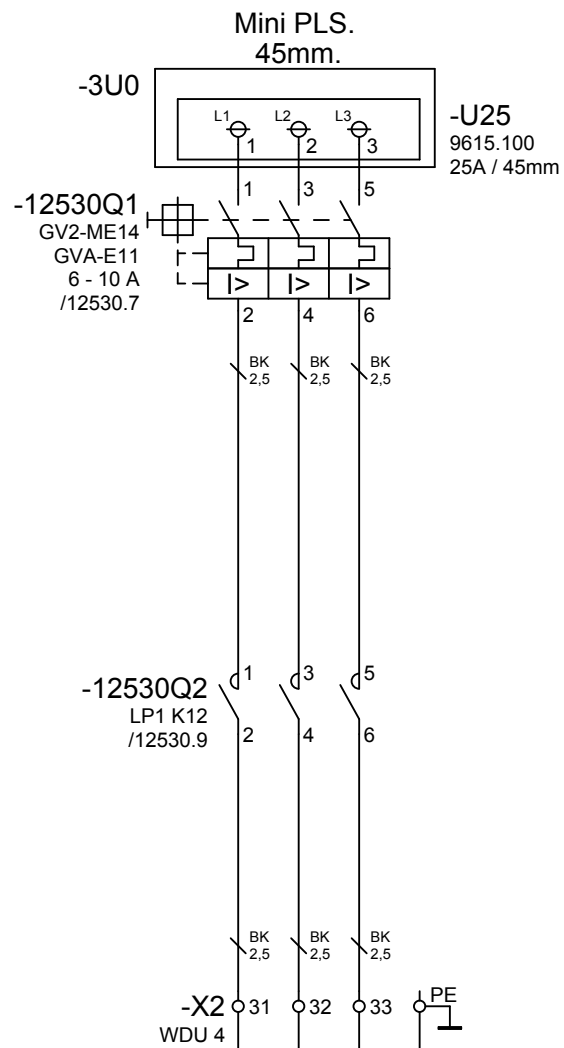
Enclosure B1
 load 1,5mm² = cca 13,5A; (7A = 51,8%)
 loss U at In 0,24V
 loss U at 5xIn 1,19V
 heat losses at In 5,00W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (7A = 37,8%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 41,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

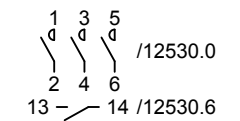
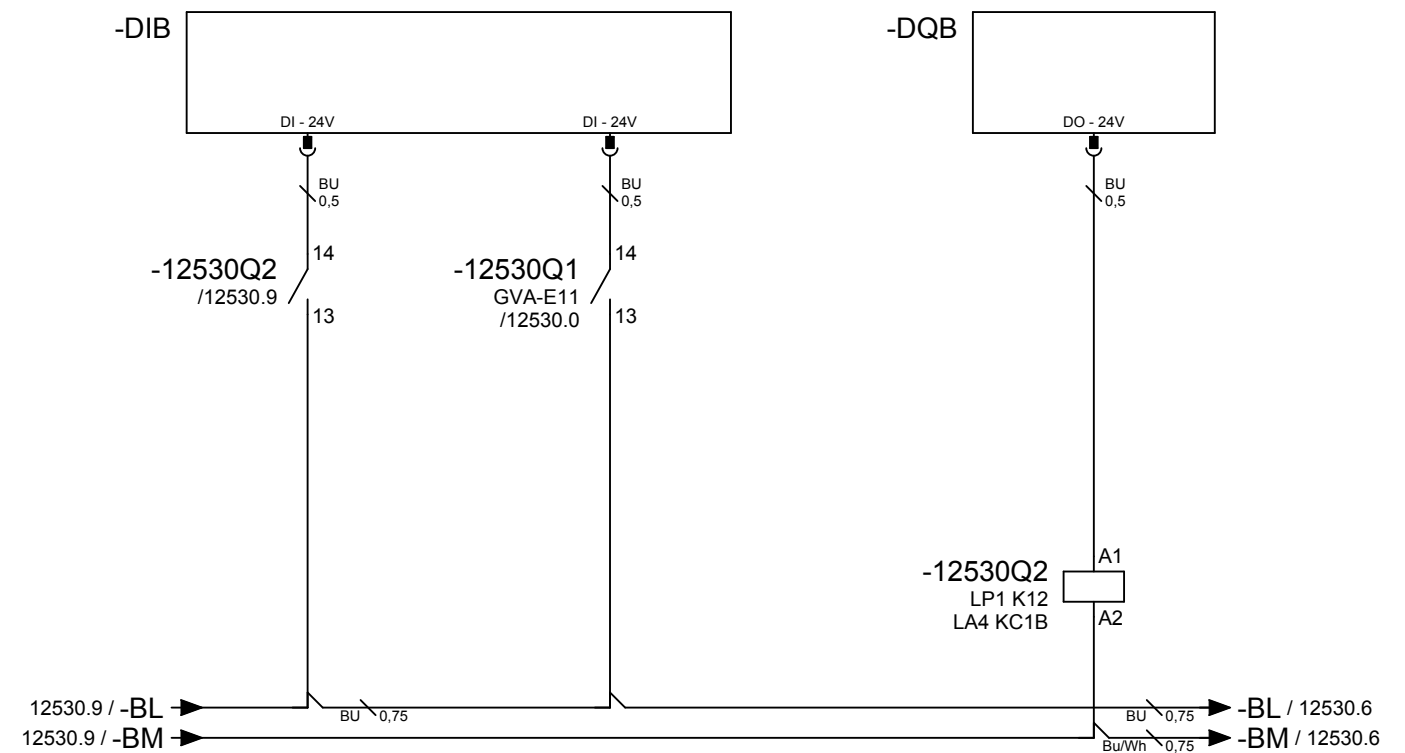


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
 loss U at In 0,17V
 loss U at 5xIn 0,87V
 heat losses at In 4,42W (L=3x3m)

 short circuit resistance 50kA at 415V

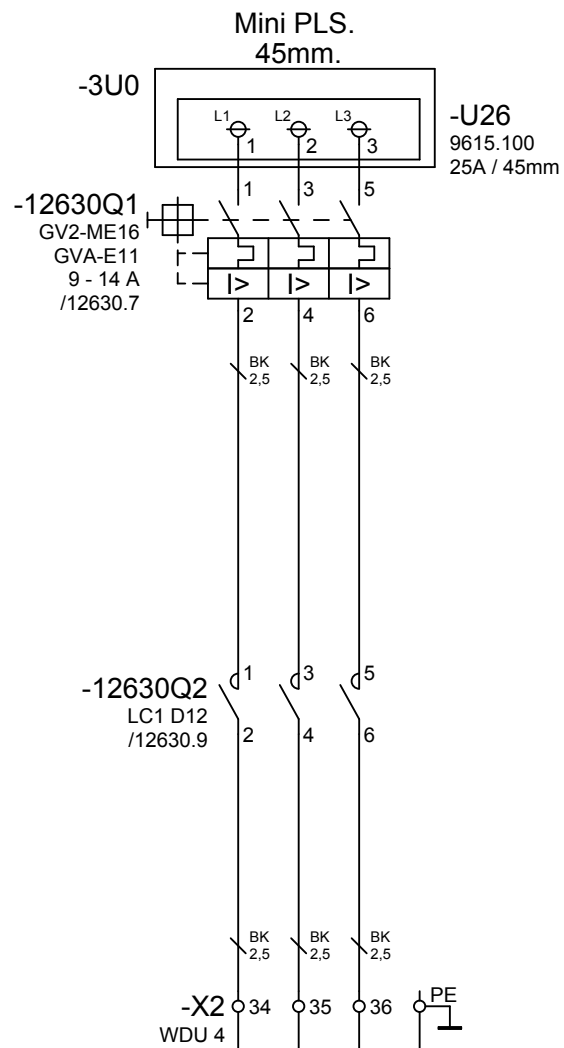
Cable route E
 load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
 loss U at In 2,41V
 loss U at 5xIn 12,04V
 heat losses at In 61,4W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

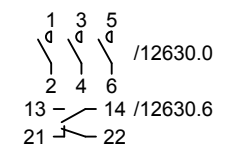
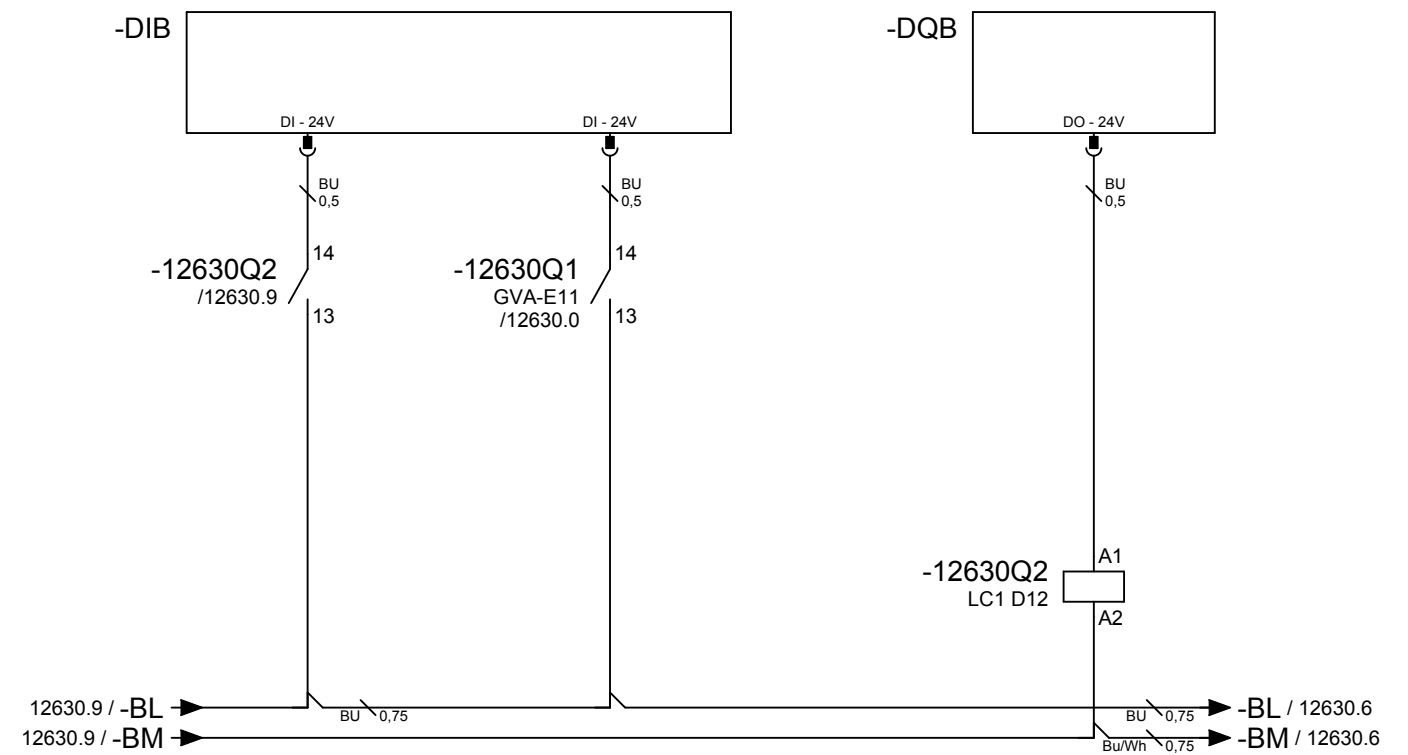


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

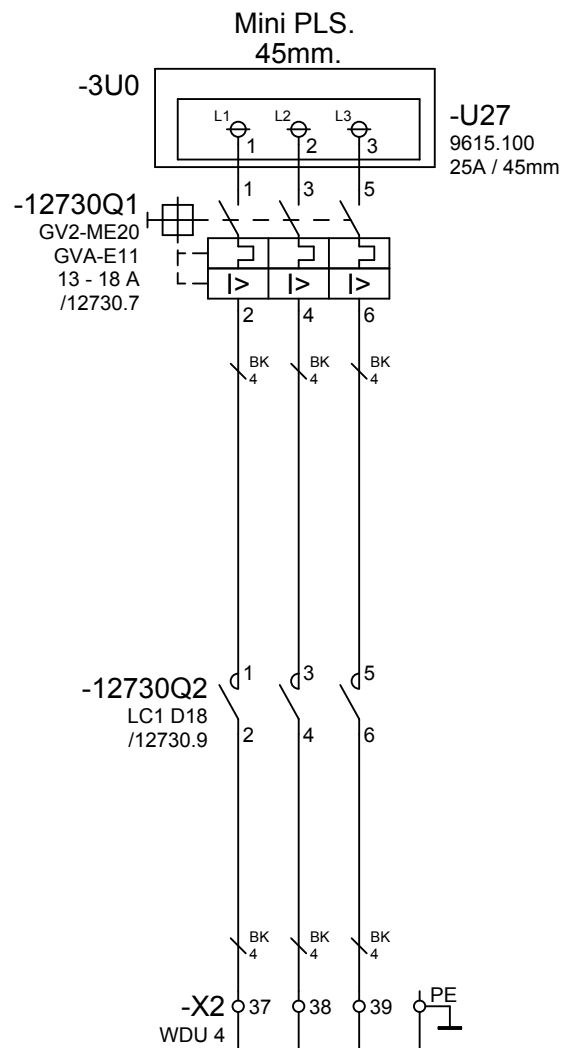
Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 15kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

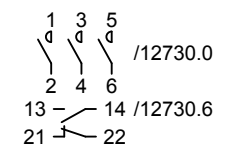
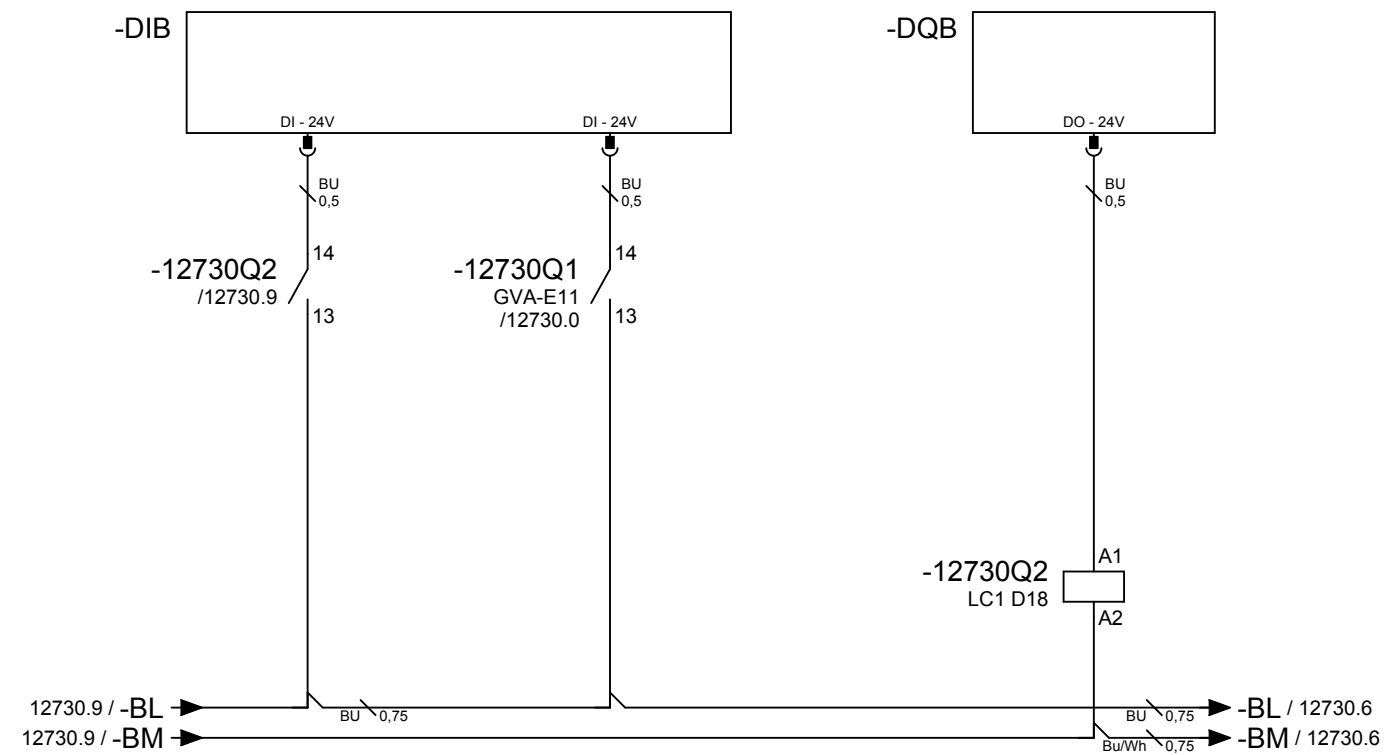
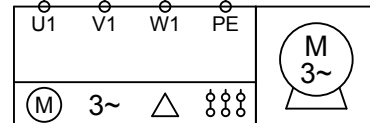


+UBxxx-12730W3
ÖLFLEX 100
4x4
25 m

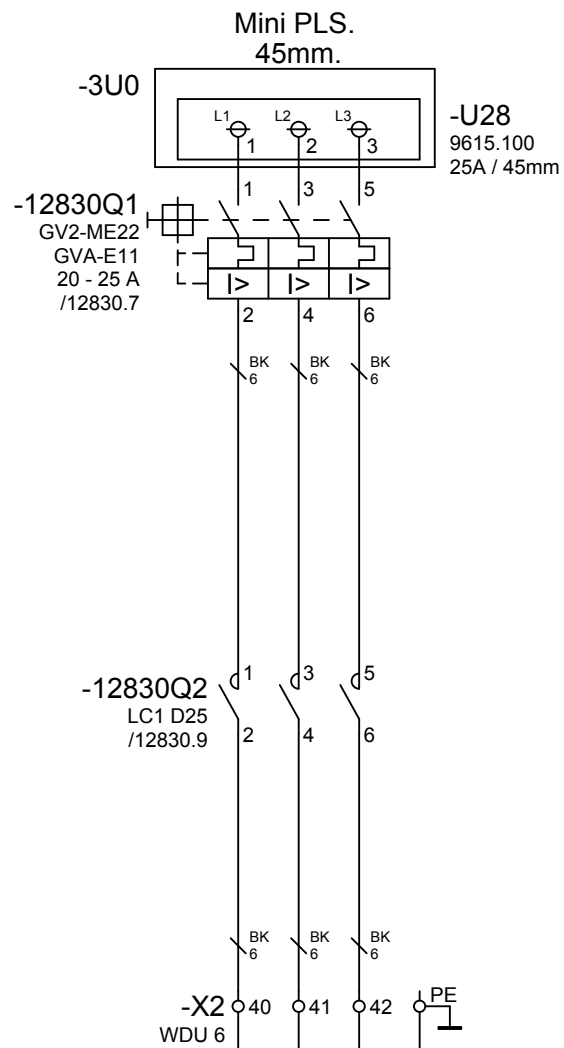
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 15kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

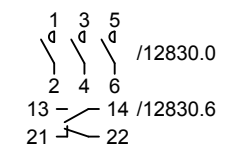
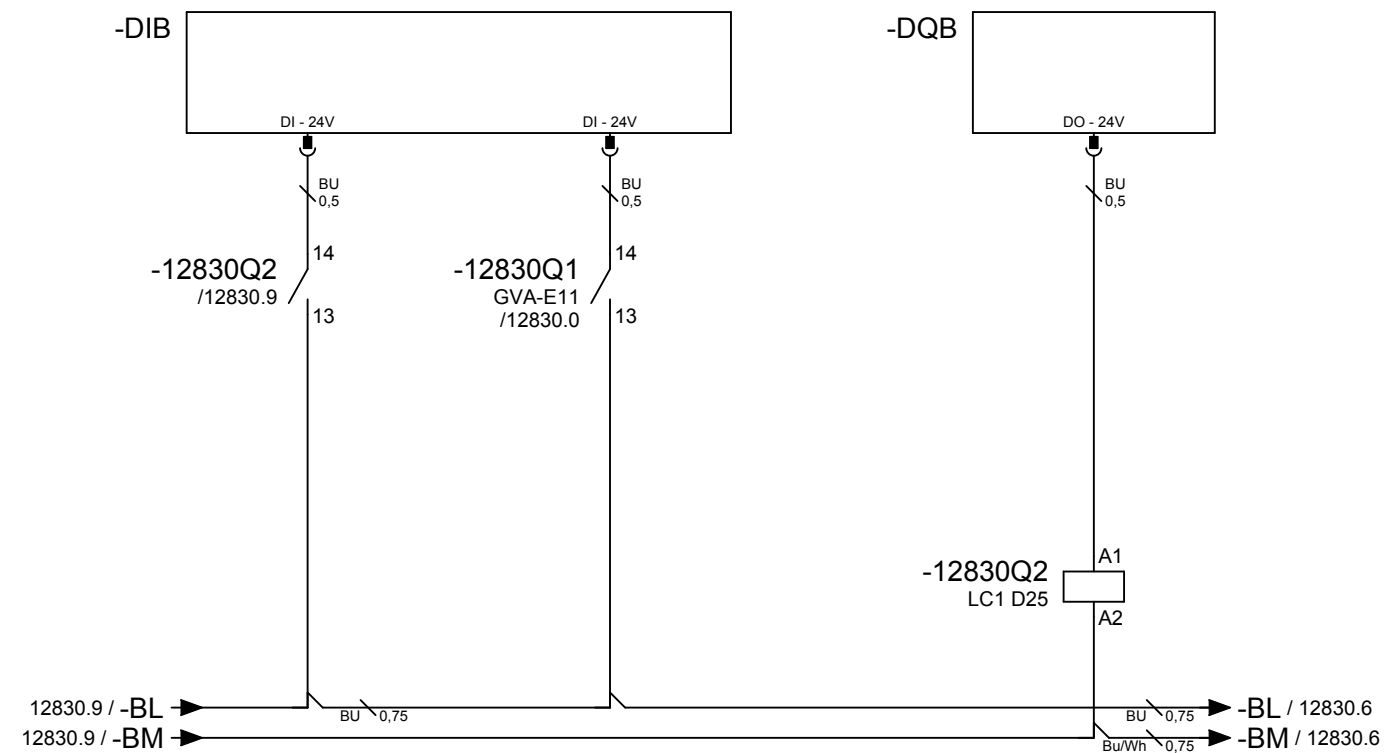


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 15kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)

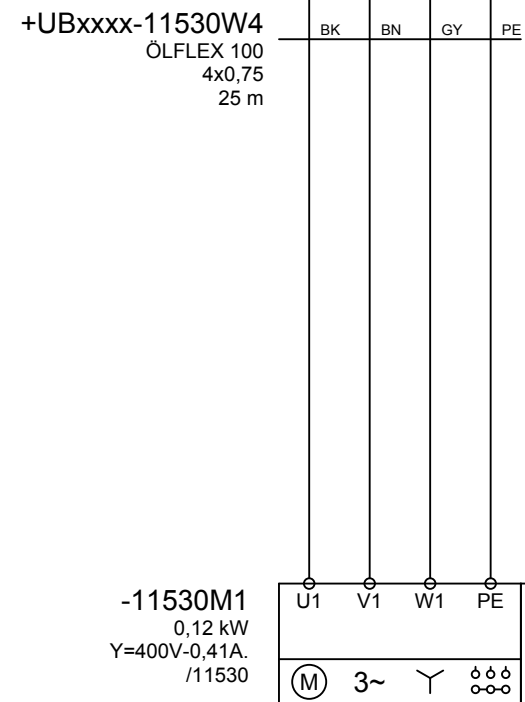
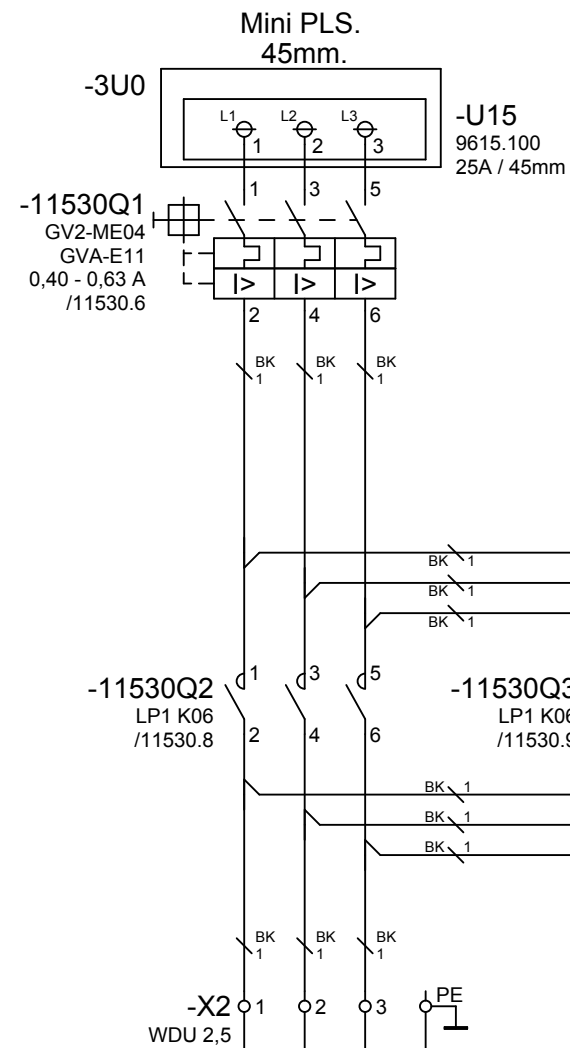


Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

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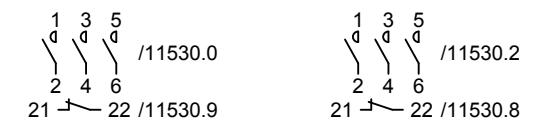
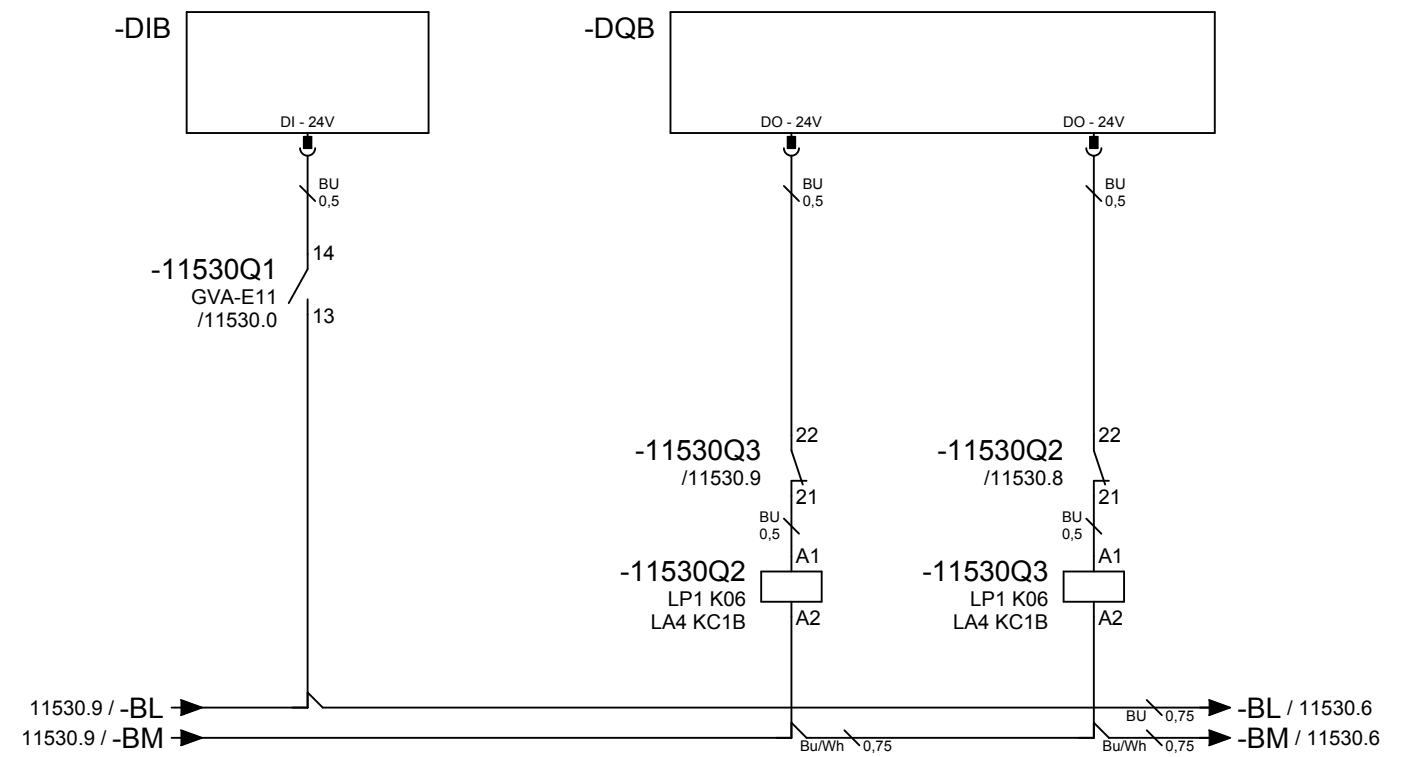


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,41A = 4,0%)
 loss U at In 0,02V
 loss U at 5xIn 0,10V
 heat losses at In 0,03W (L=3x3m)

 short circuit resistance 50kA at 415V

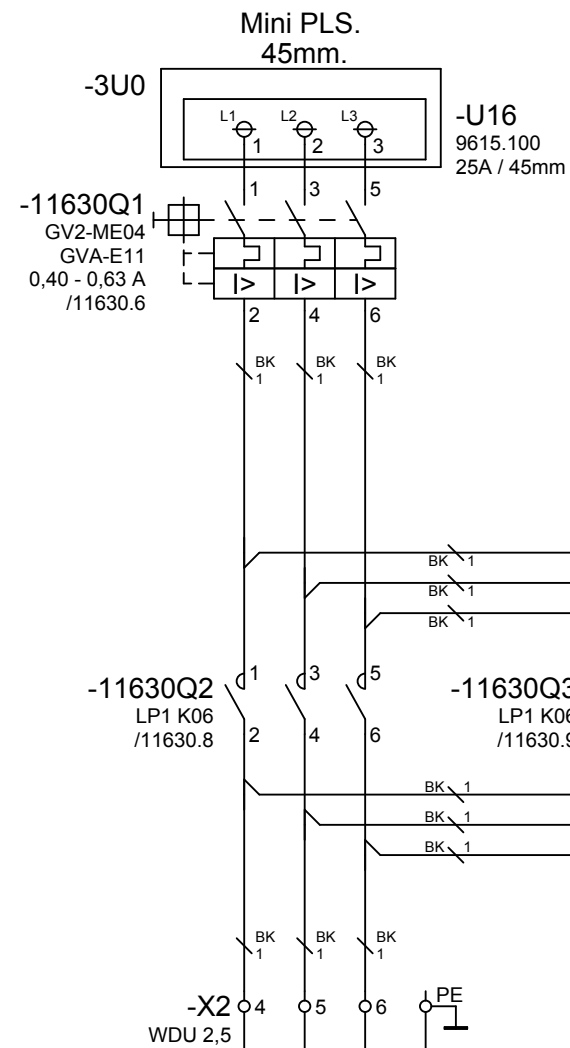
Cable route E
 load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
 loss U at In 0,23V
 loss U at 5xIn 1,16V
 heat losses at In 0,3W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

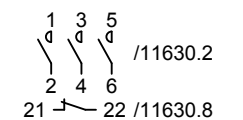
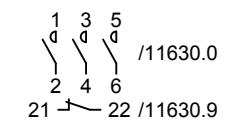
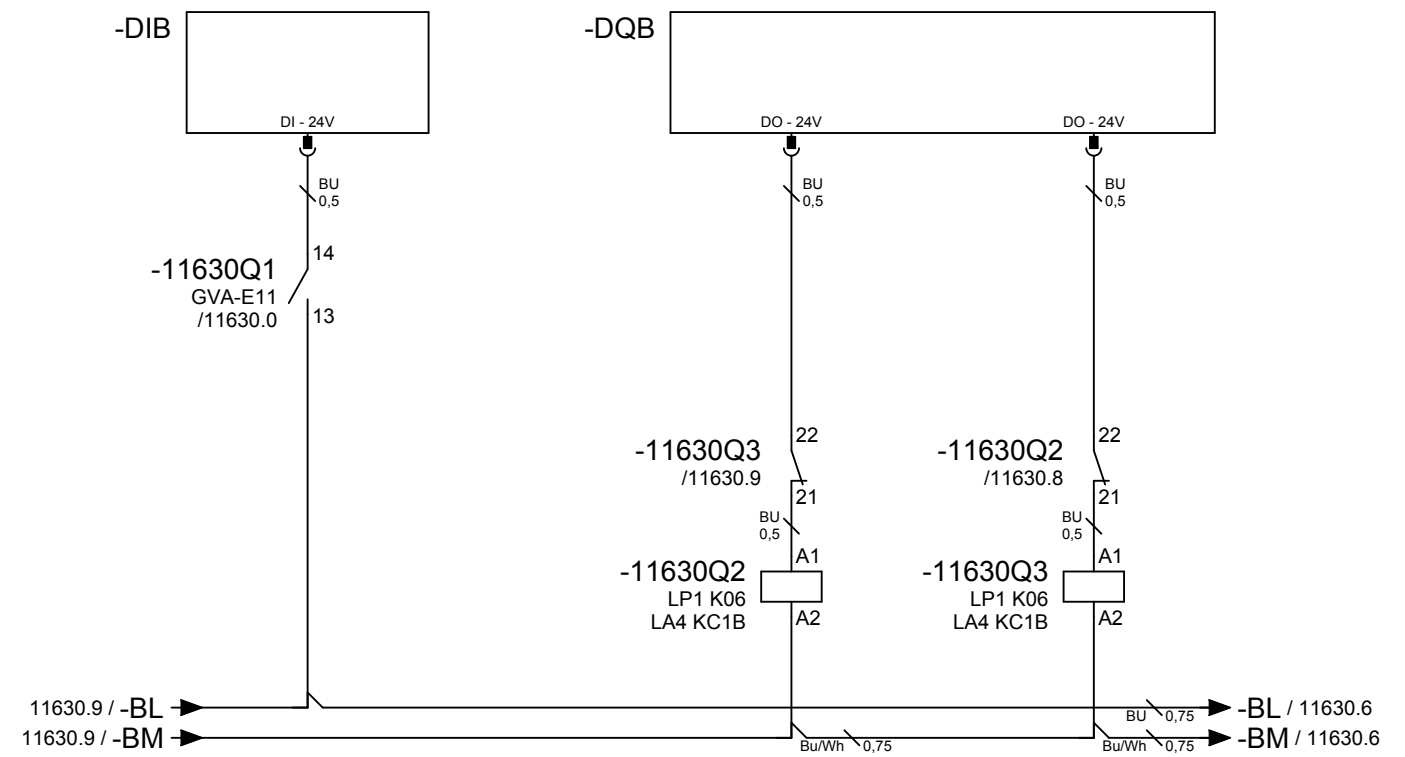


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 50kA at 415V

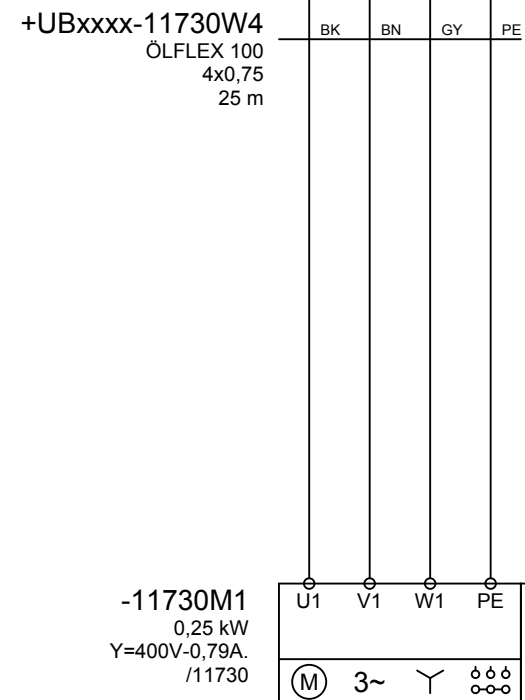
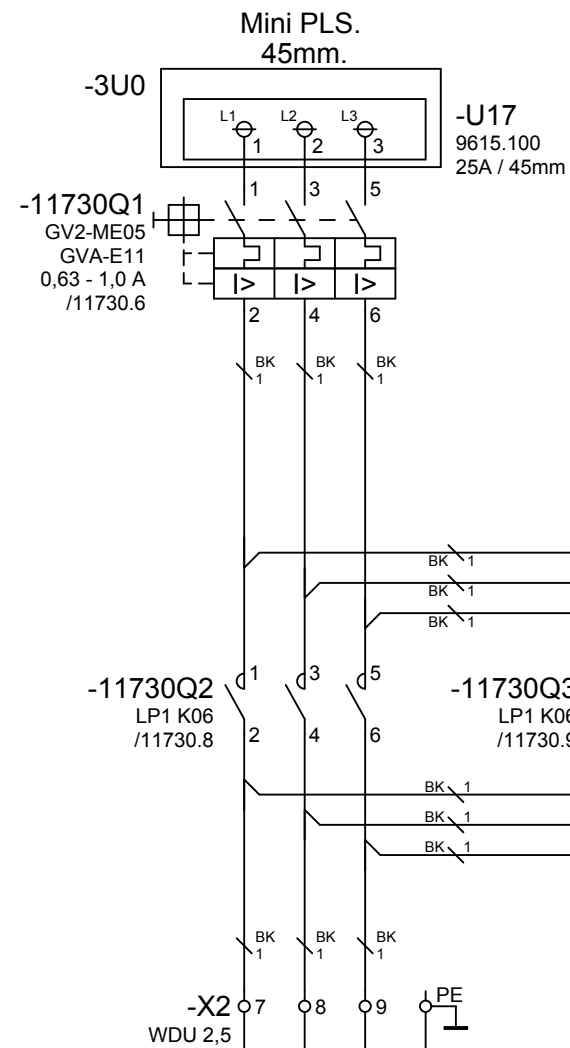
Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

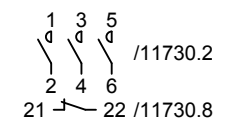
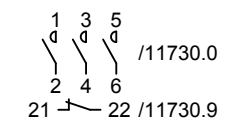
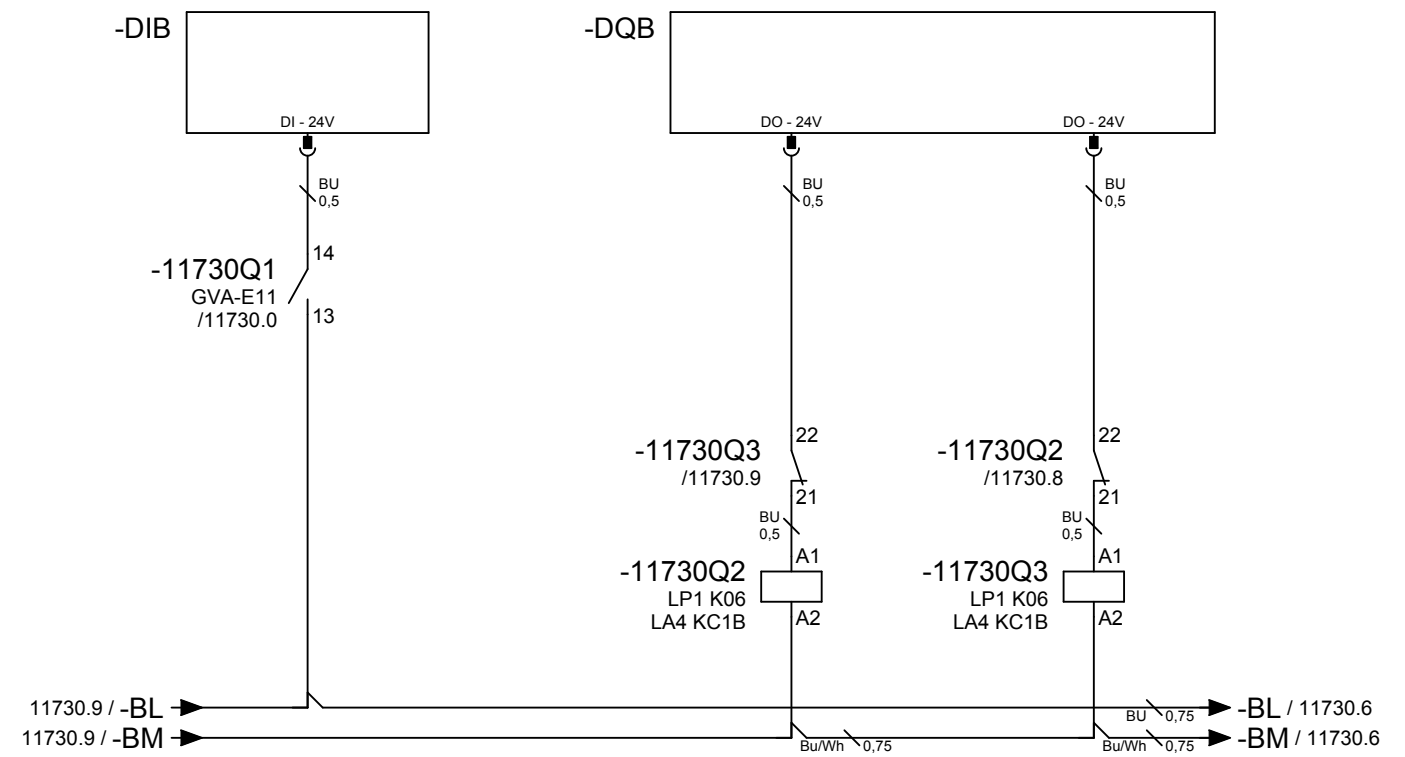


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,8A = 7,7%)
 loss U at In 0,04V
 loss U at 5xIn 0,20V
 heat losses at In 0,10W (L=3x3m)

 short circuit resistance 50kA at 415V

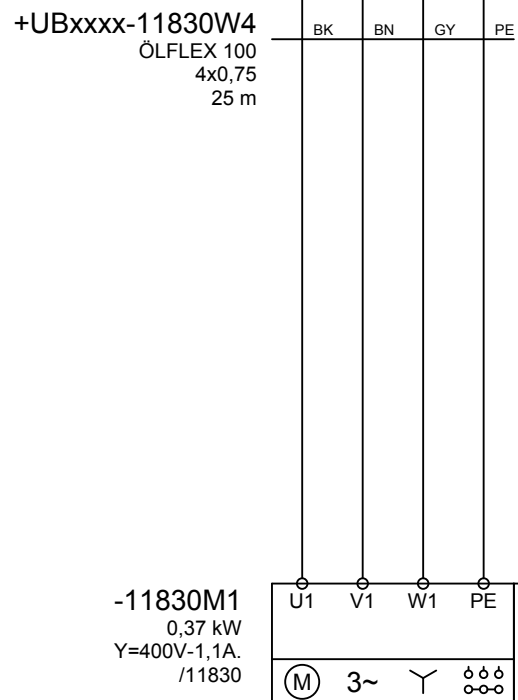
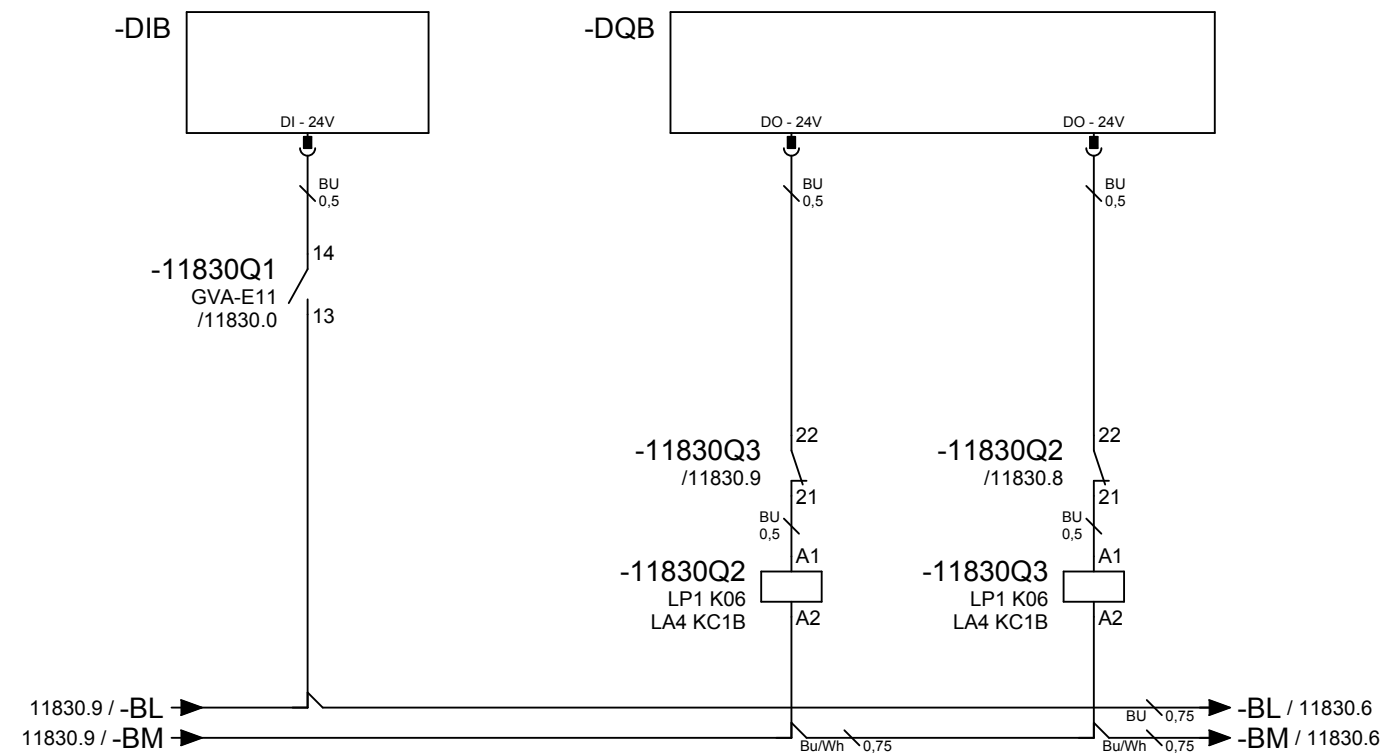
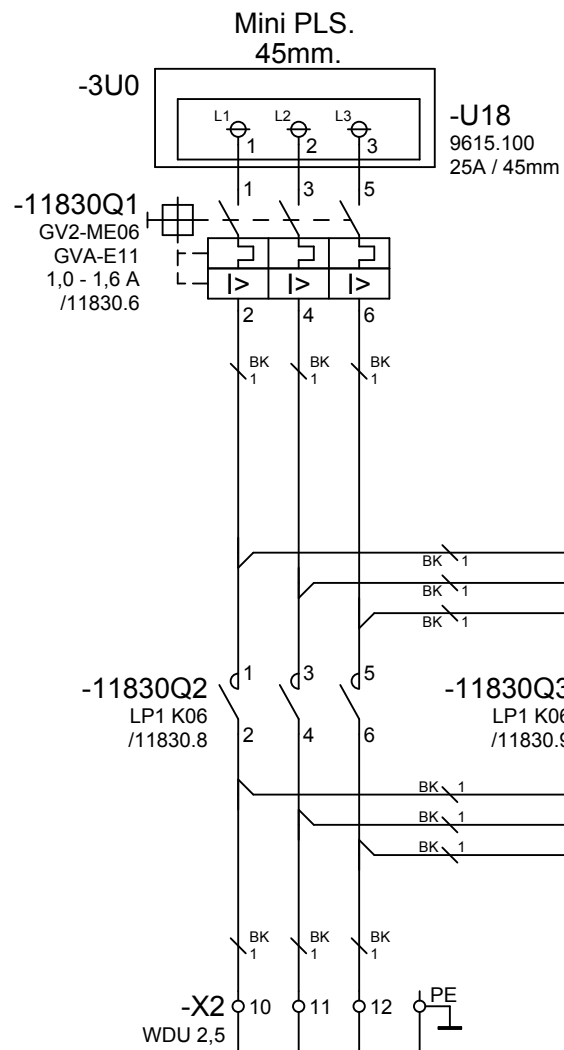
Cable route E
 load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
 loss U at In 0,45V
 loss U at 5xIn 2,27V
 heat losses at In 1,1W (L=3x25m)



Circuit breaker. 0=Failure.

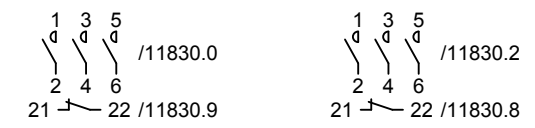
Motor. Contactor.

Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

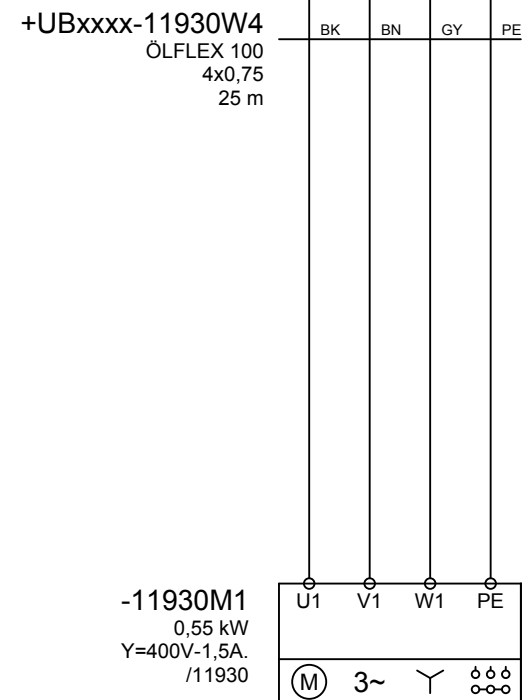
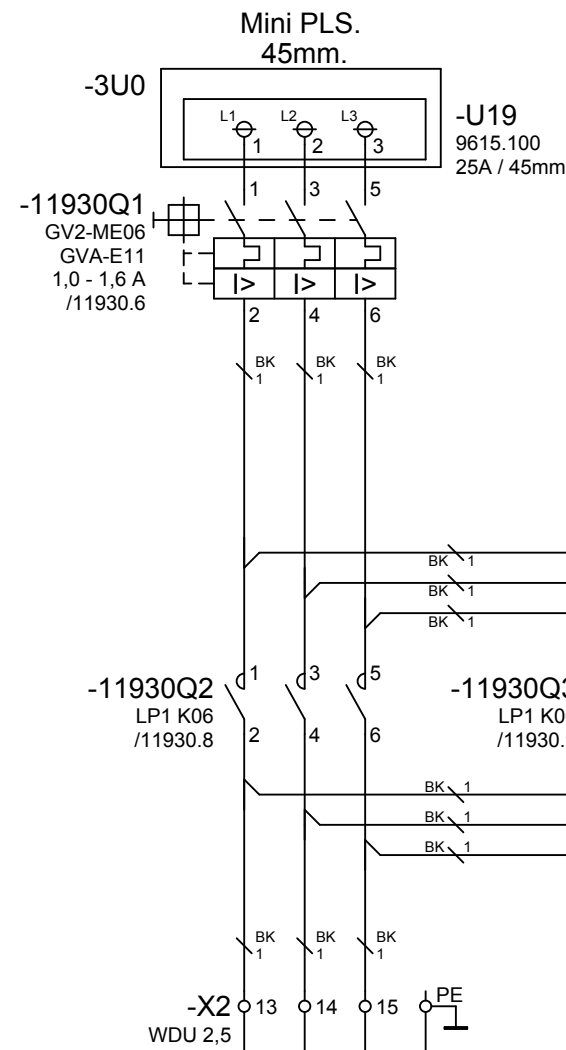
Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure.

Motor. Contactor.

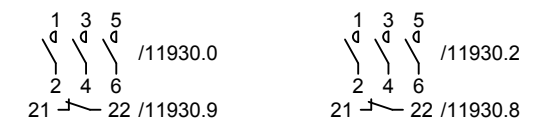
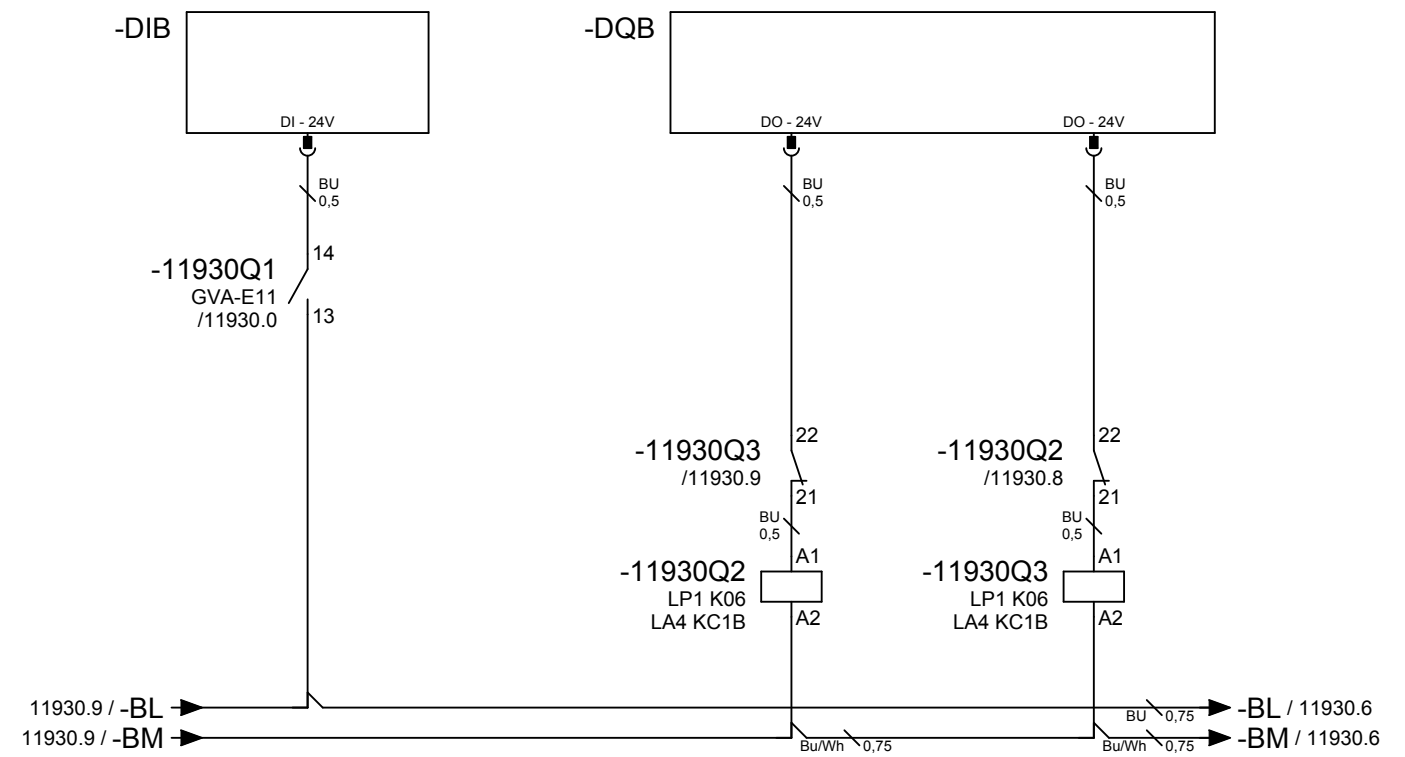
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

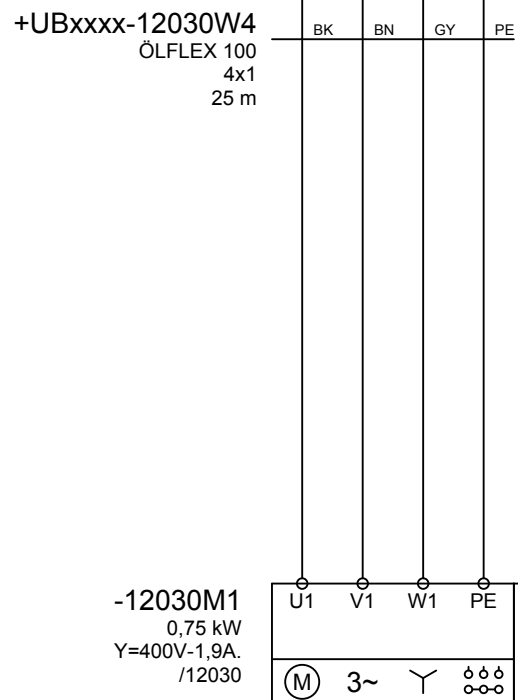
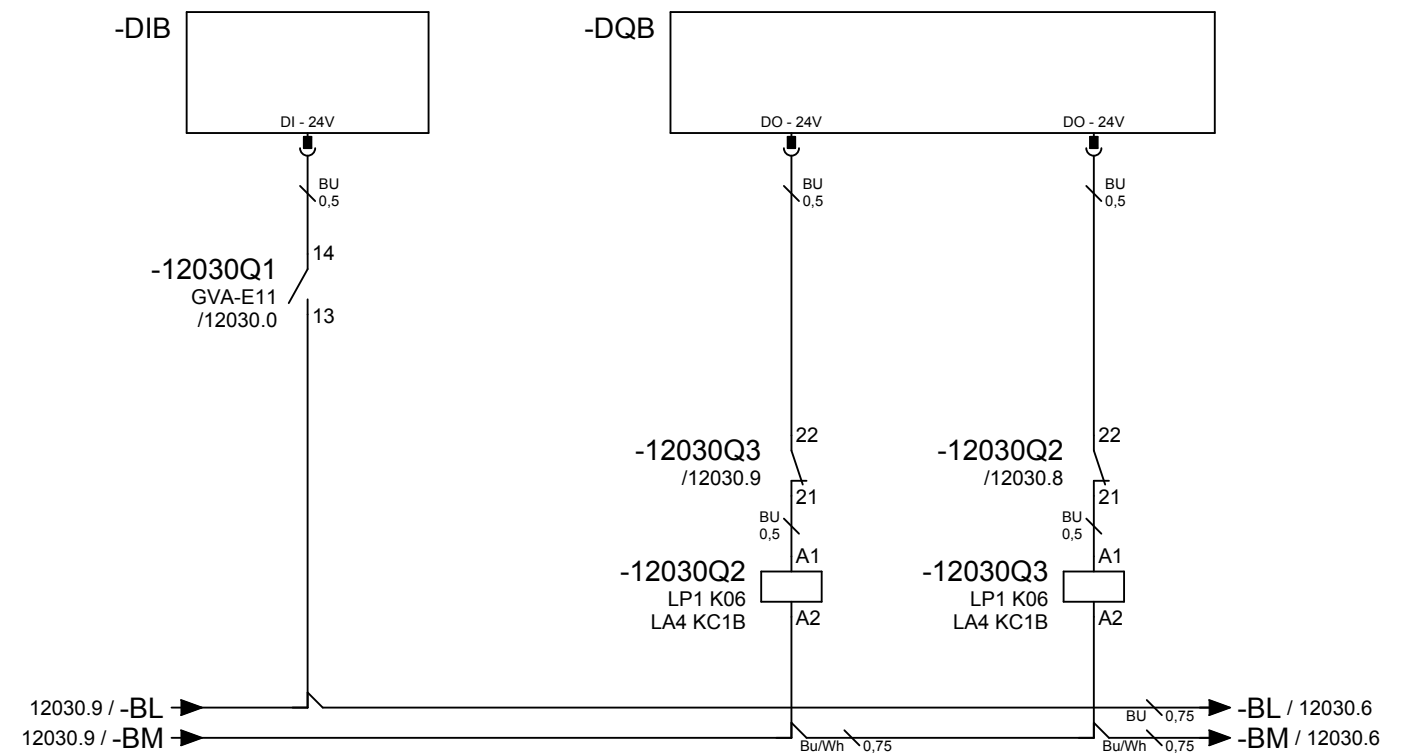
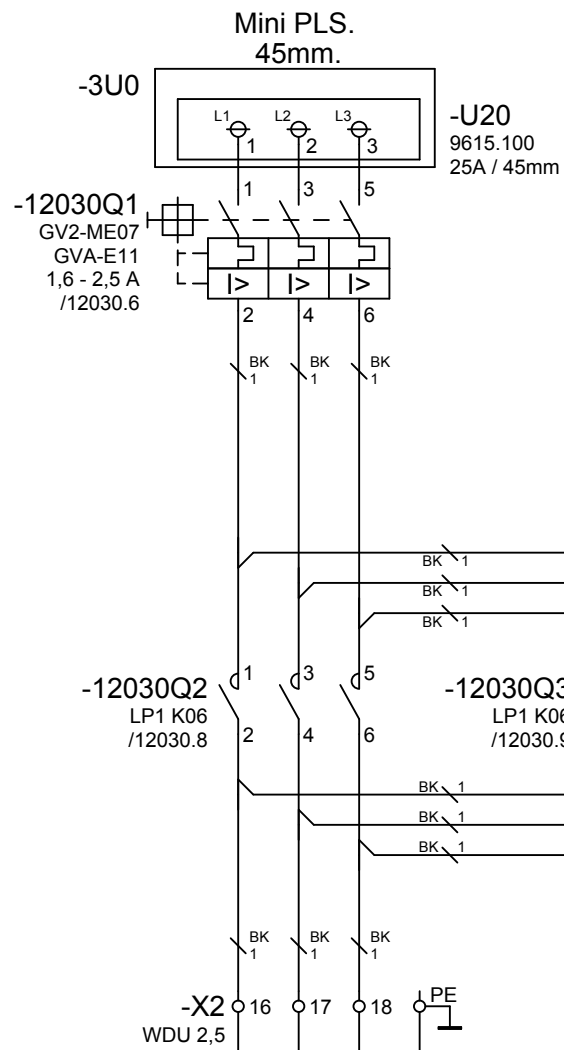
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

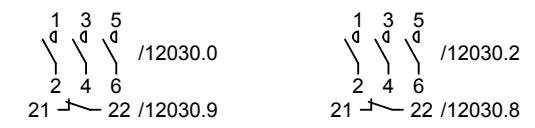
Motor. Contactor.

Motor. Contactor.

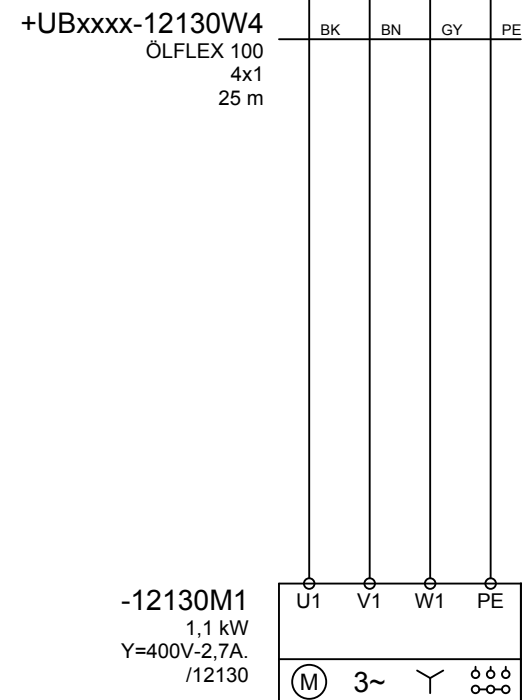
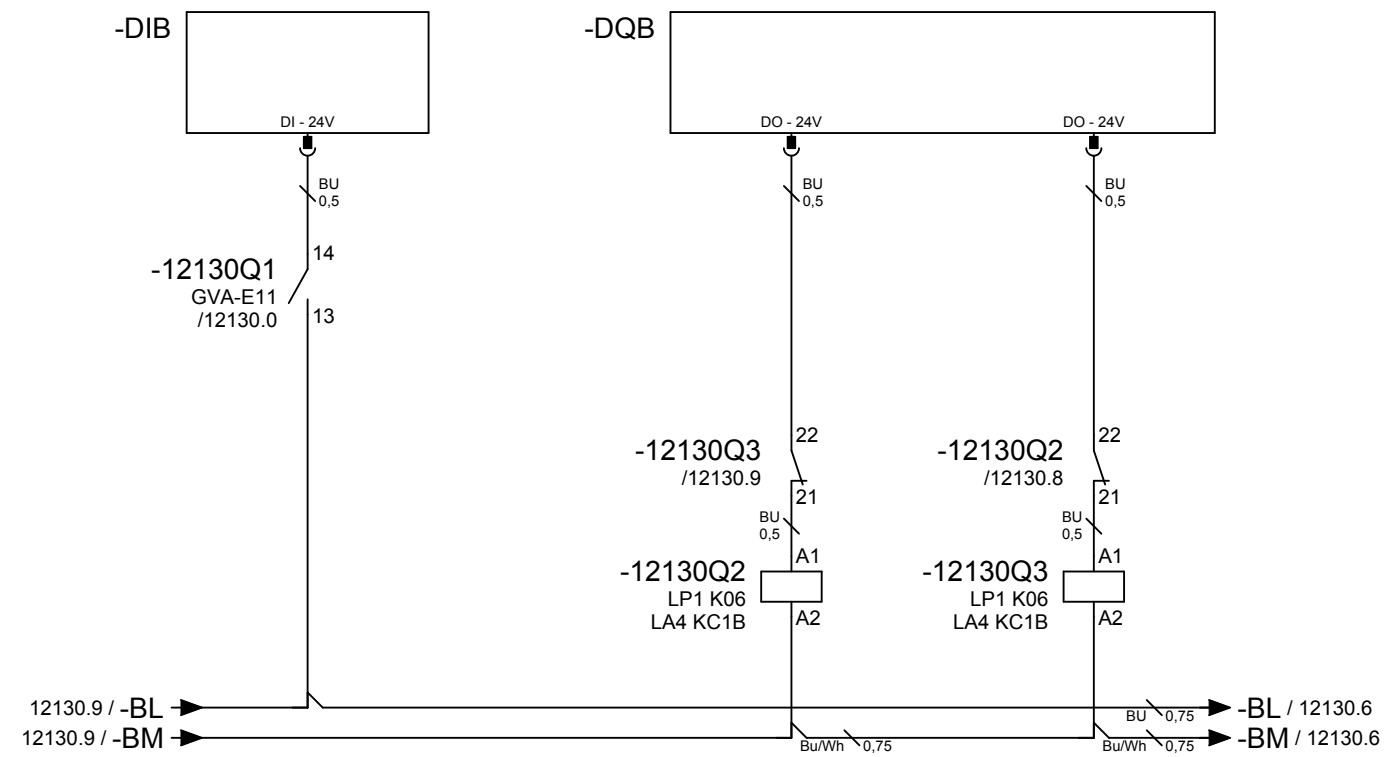
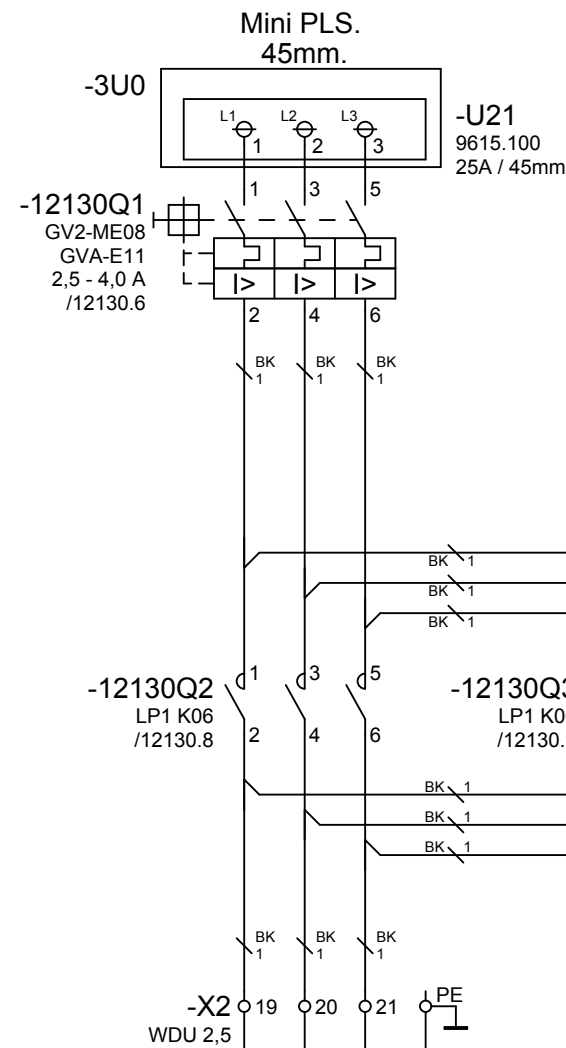


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...

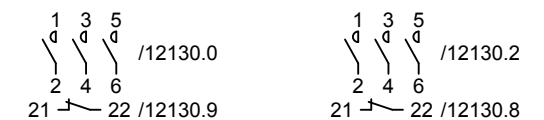


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

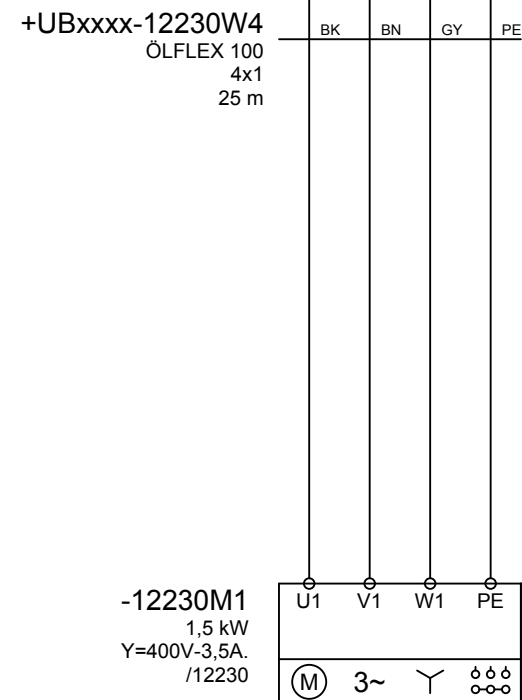
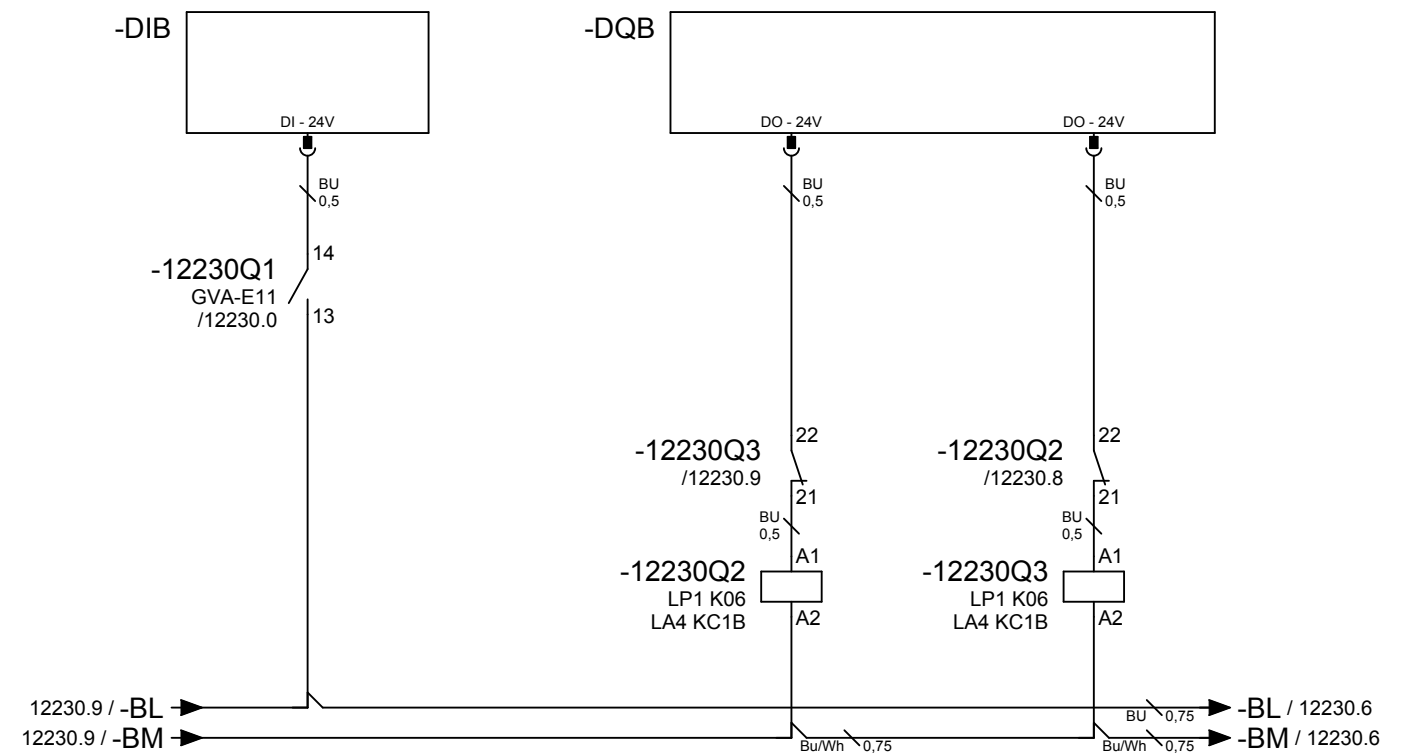
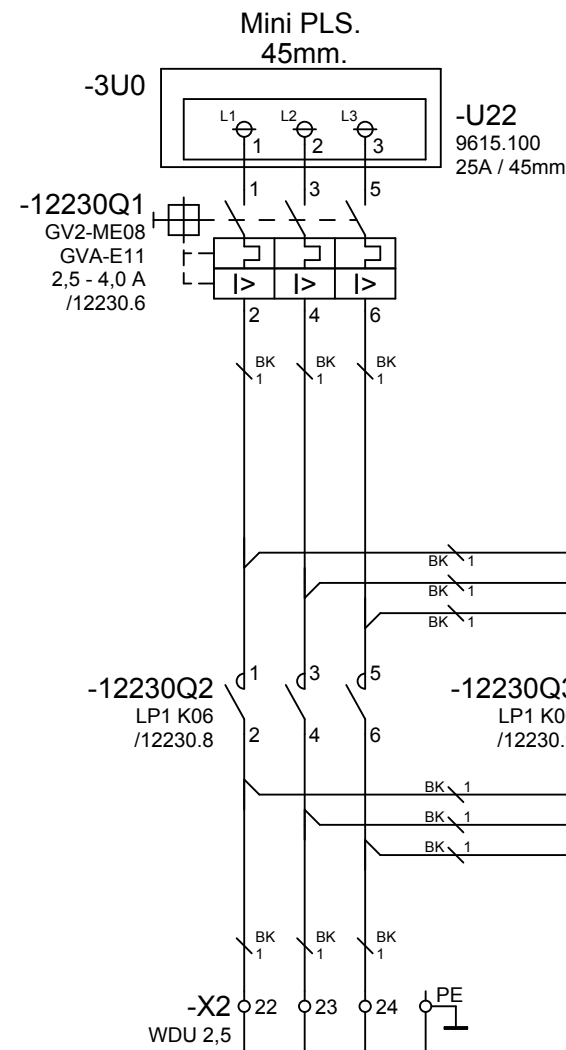
Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

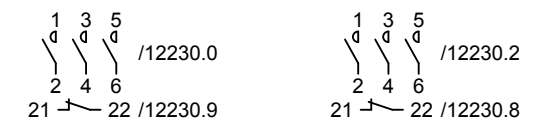


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

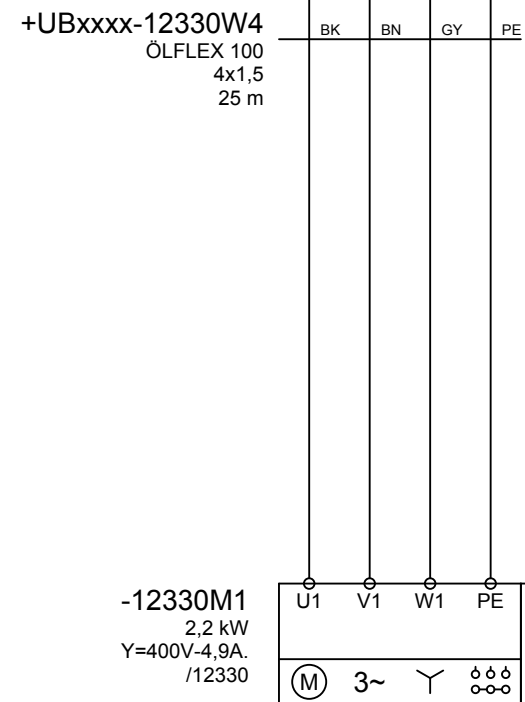
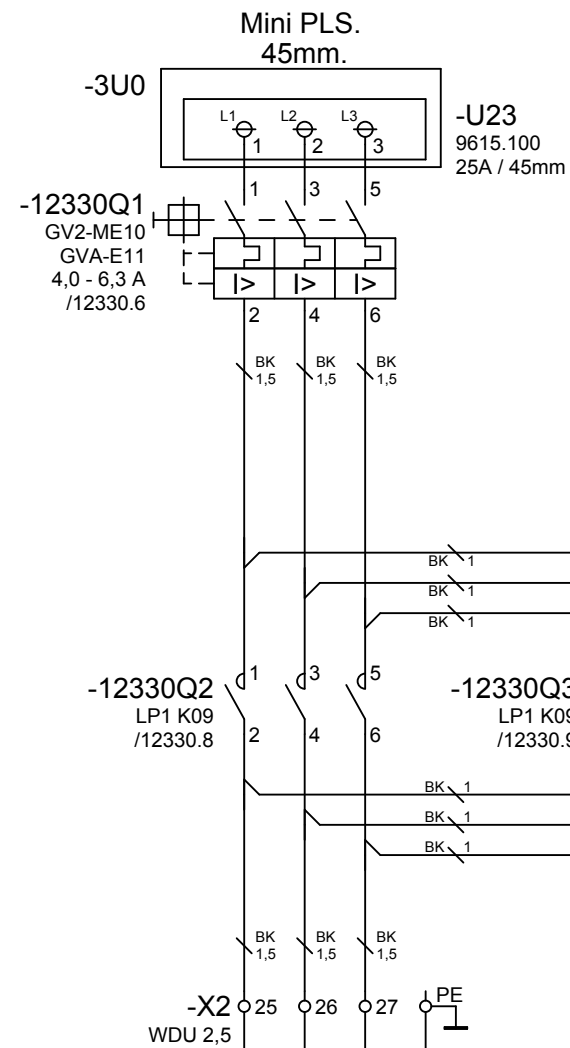
Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

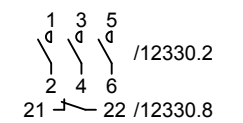
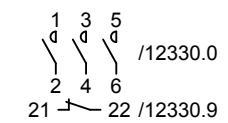
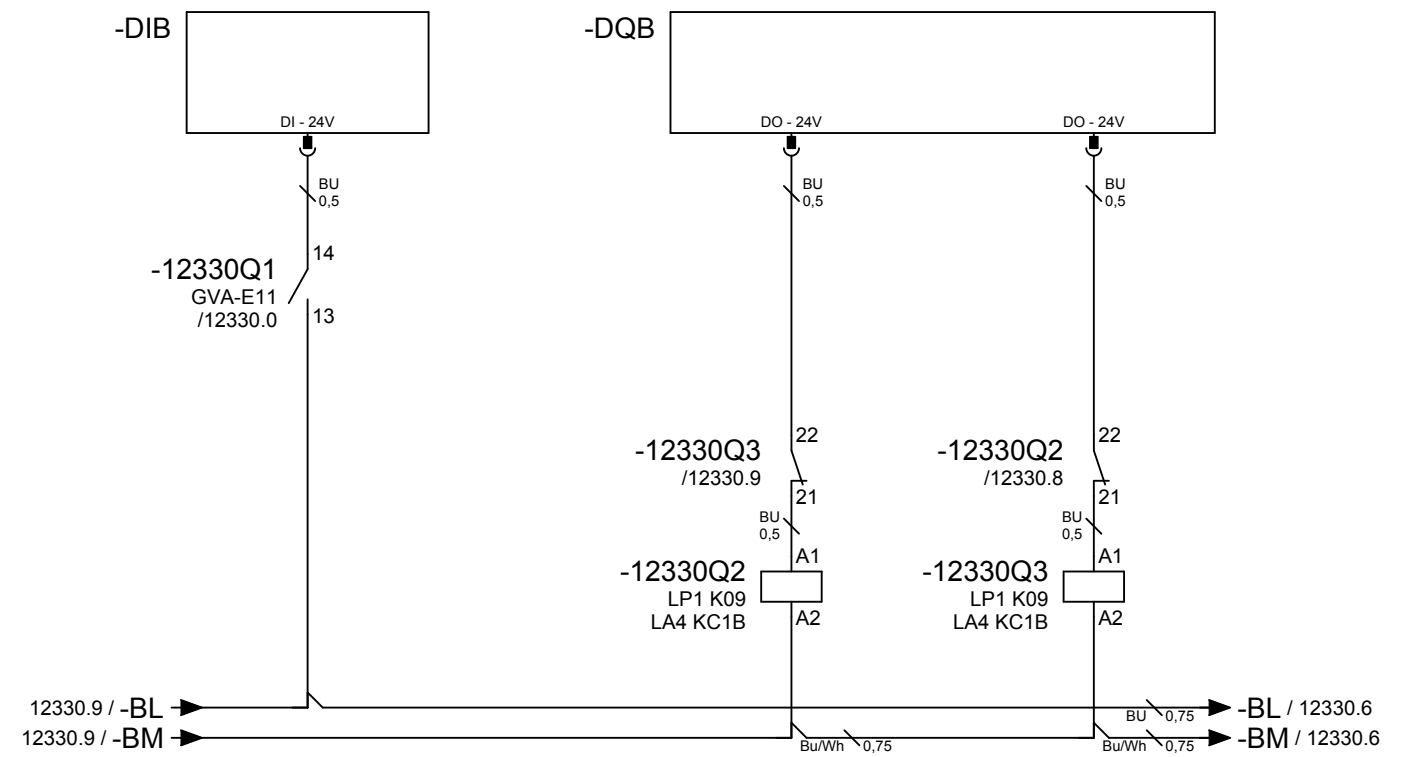


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 50kA at 415V

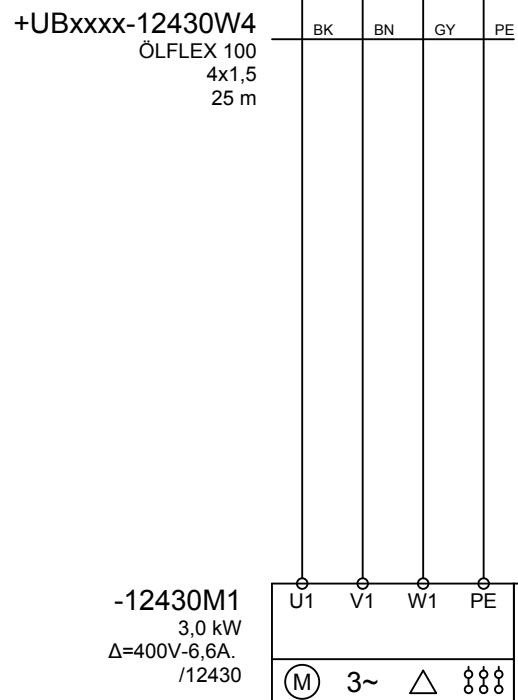
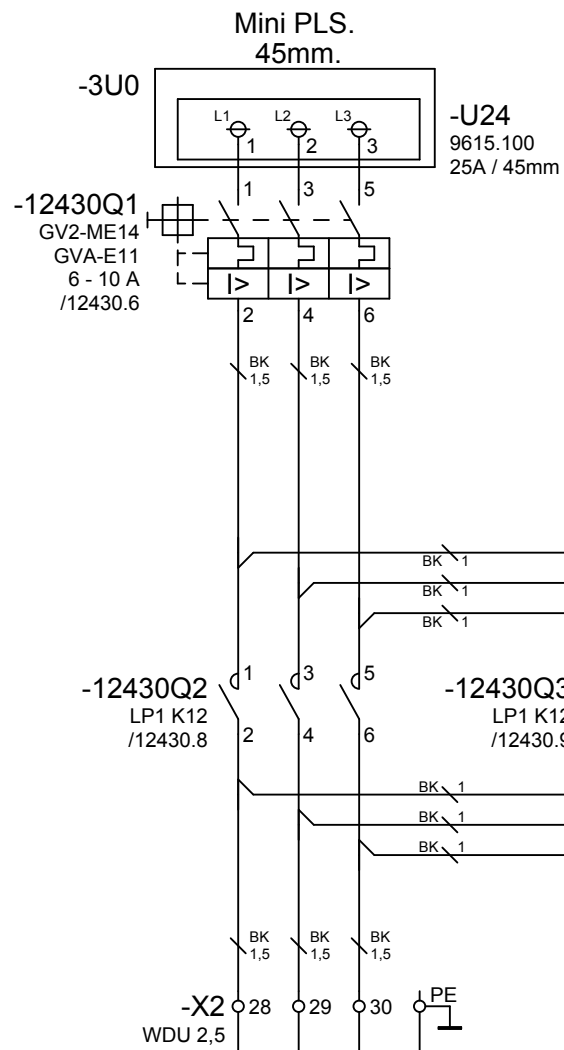
Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)



Circuit breaker. 0=Failure.

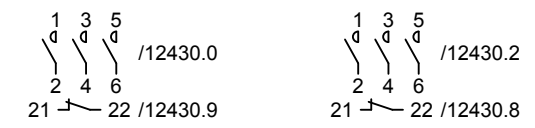
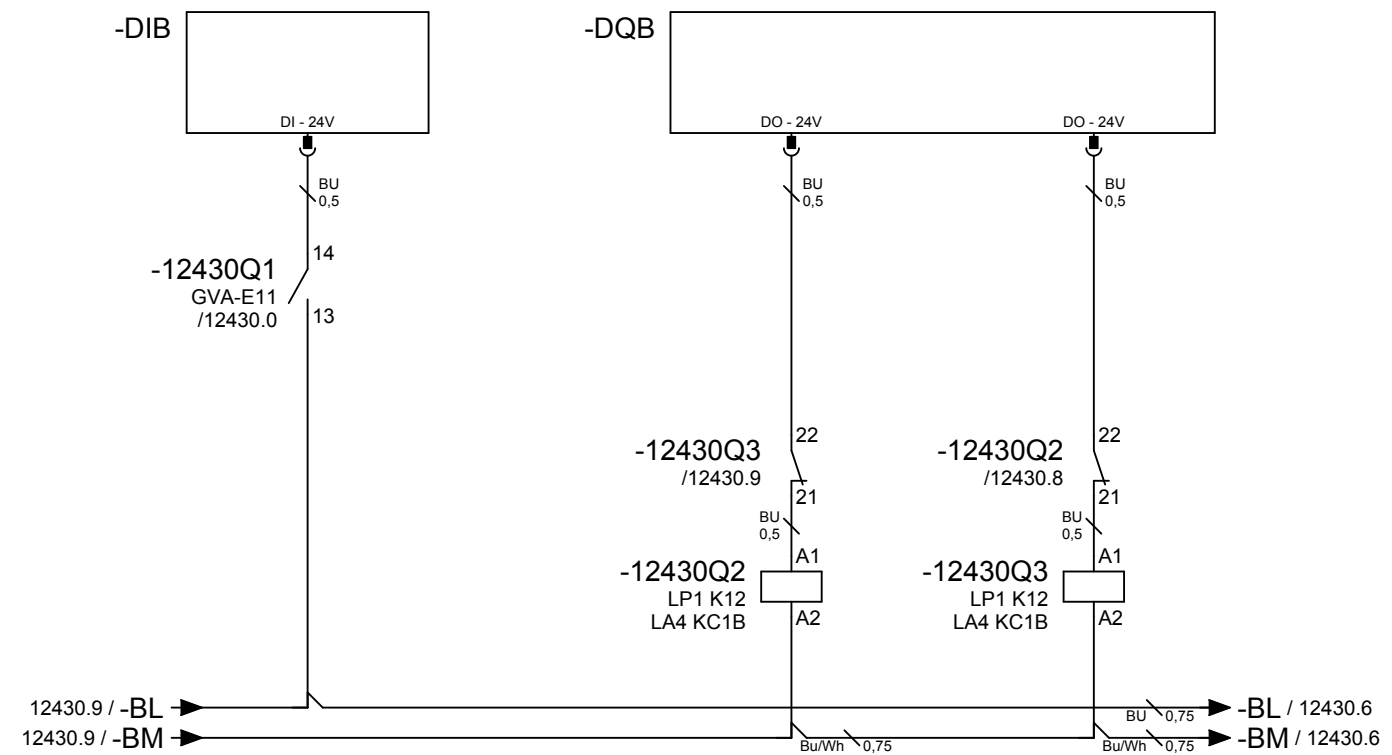
Motor. Contactor.

Motor. Contactor.

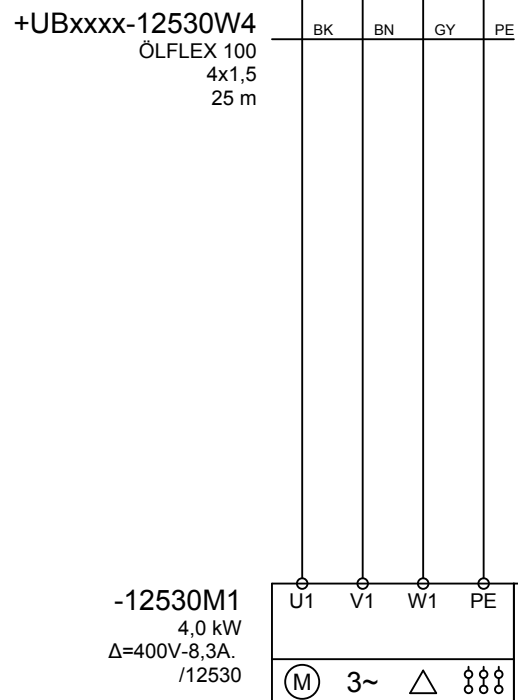
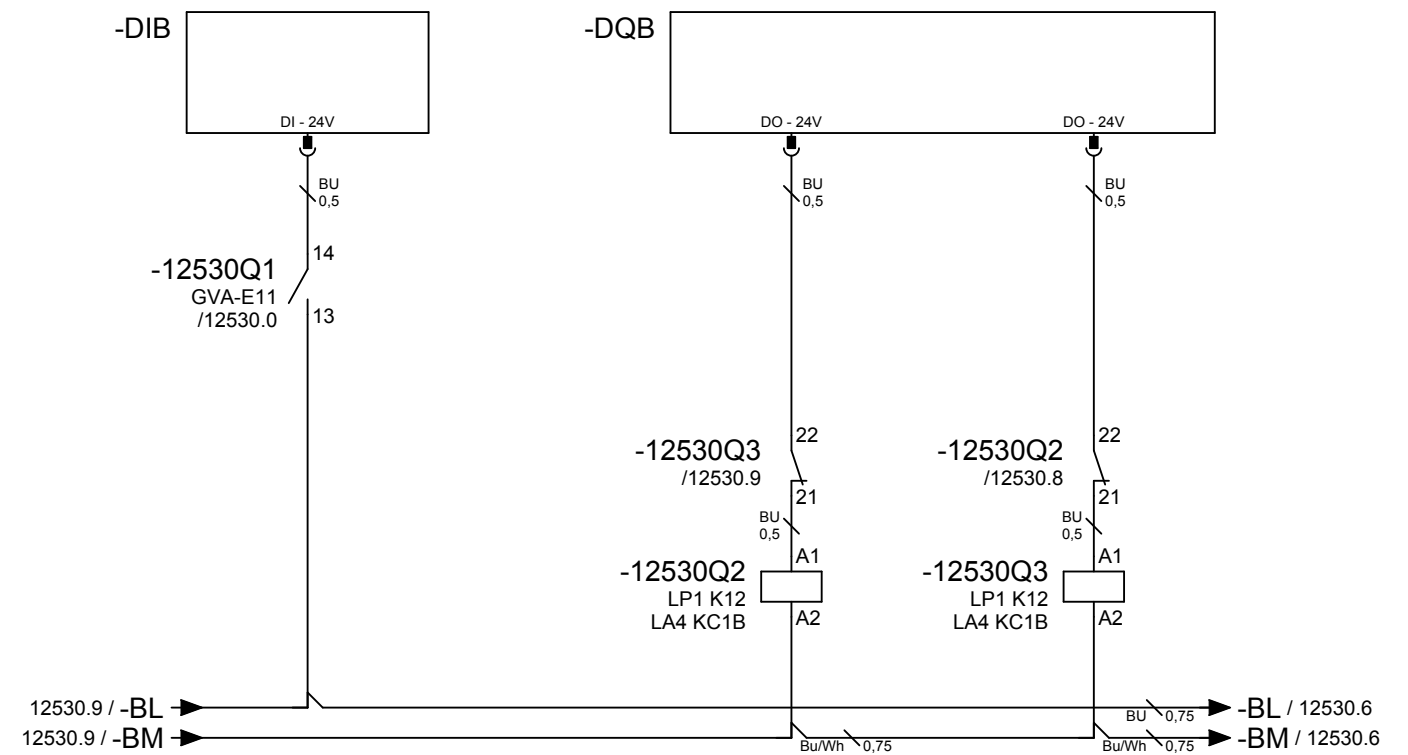
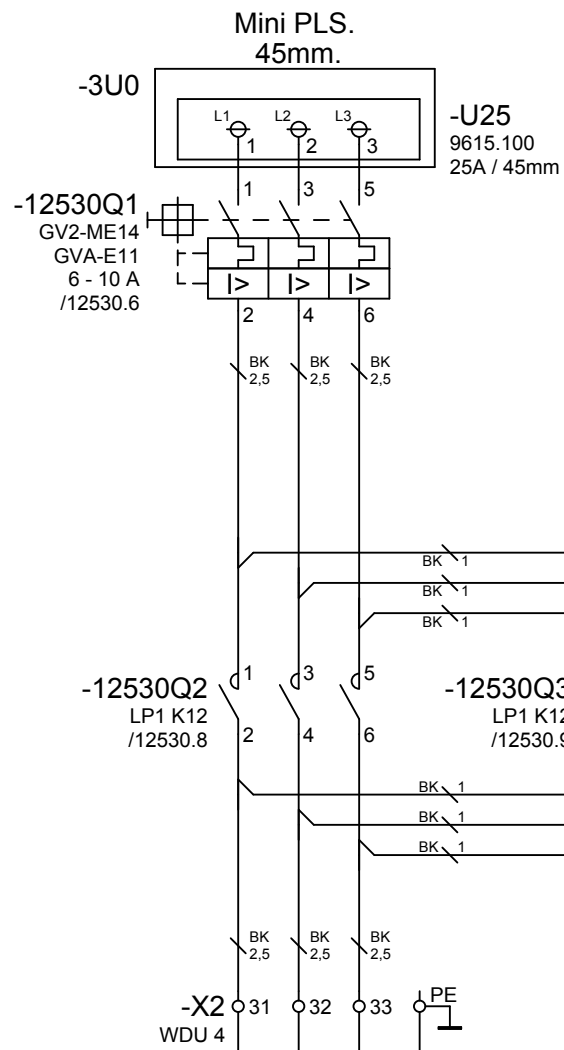


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...

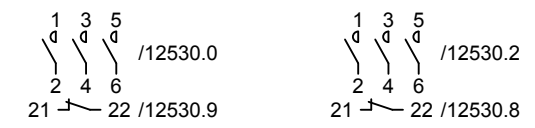


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

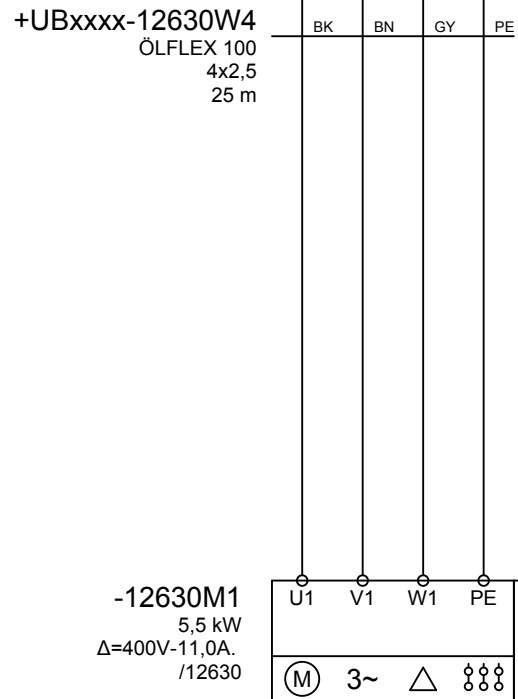
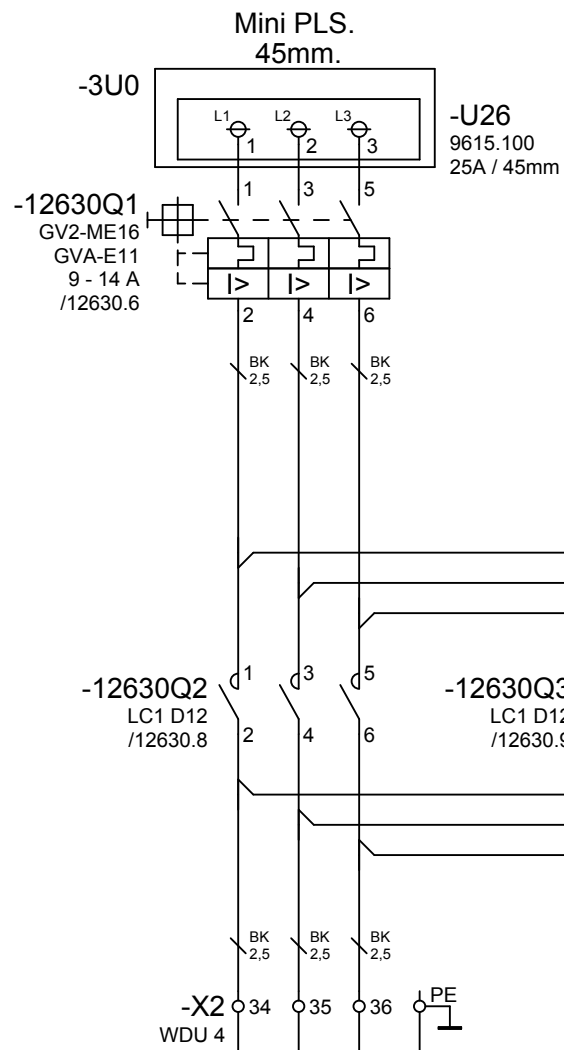
Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

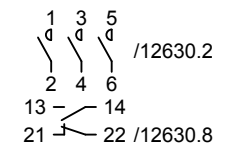
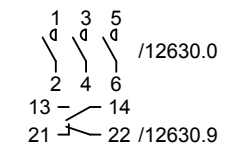
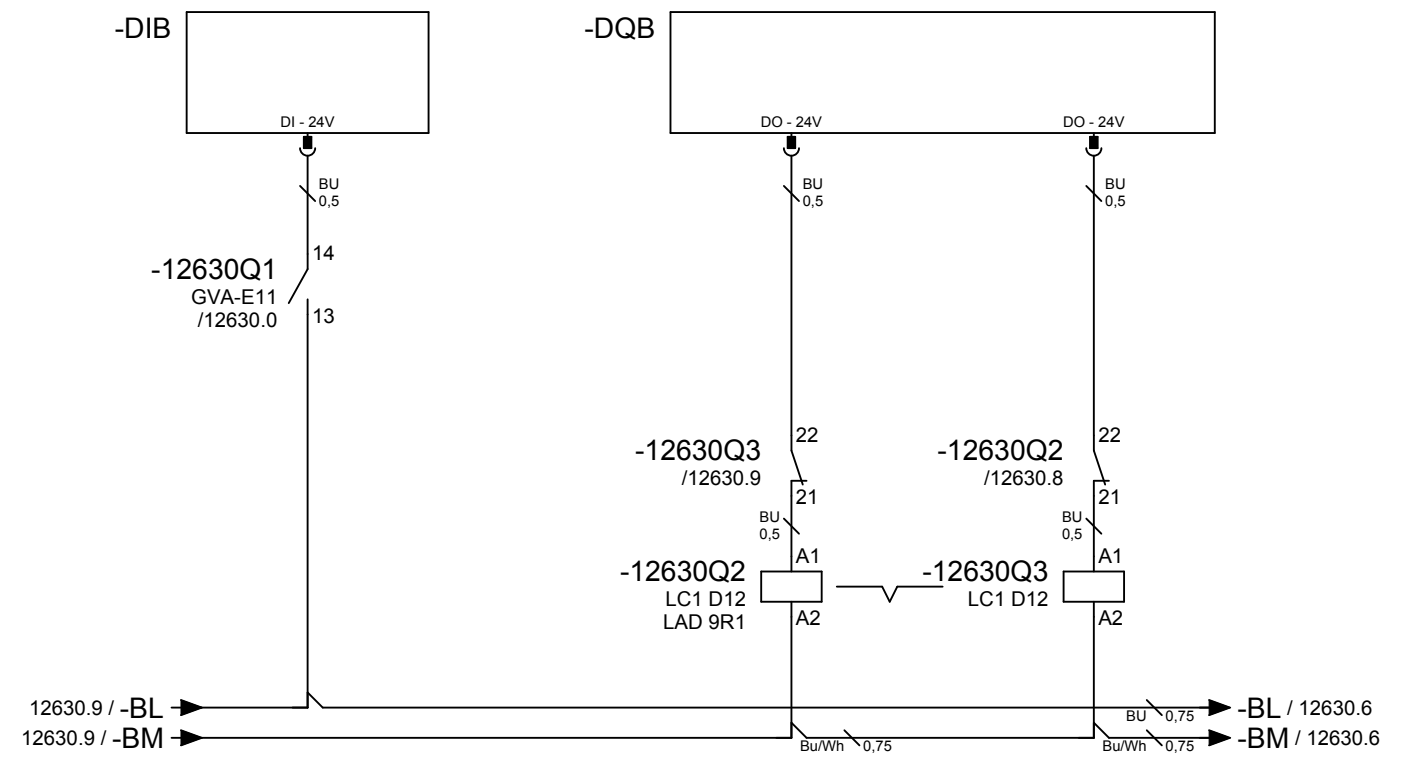


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 15kA at 415V

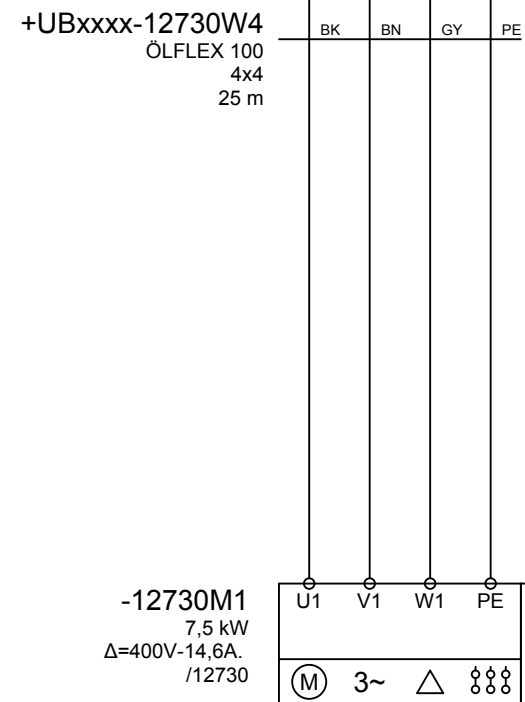
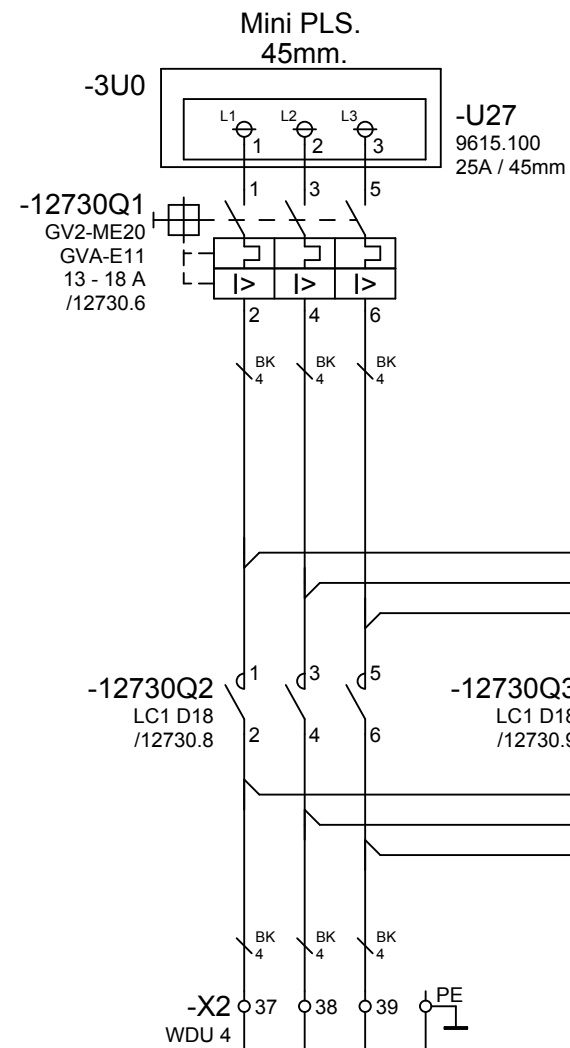
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Circuit breaker. 0=Failure.

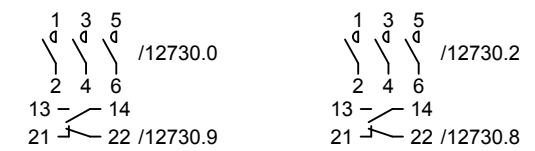
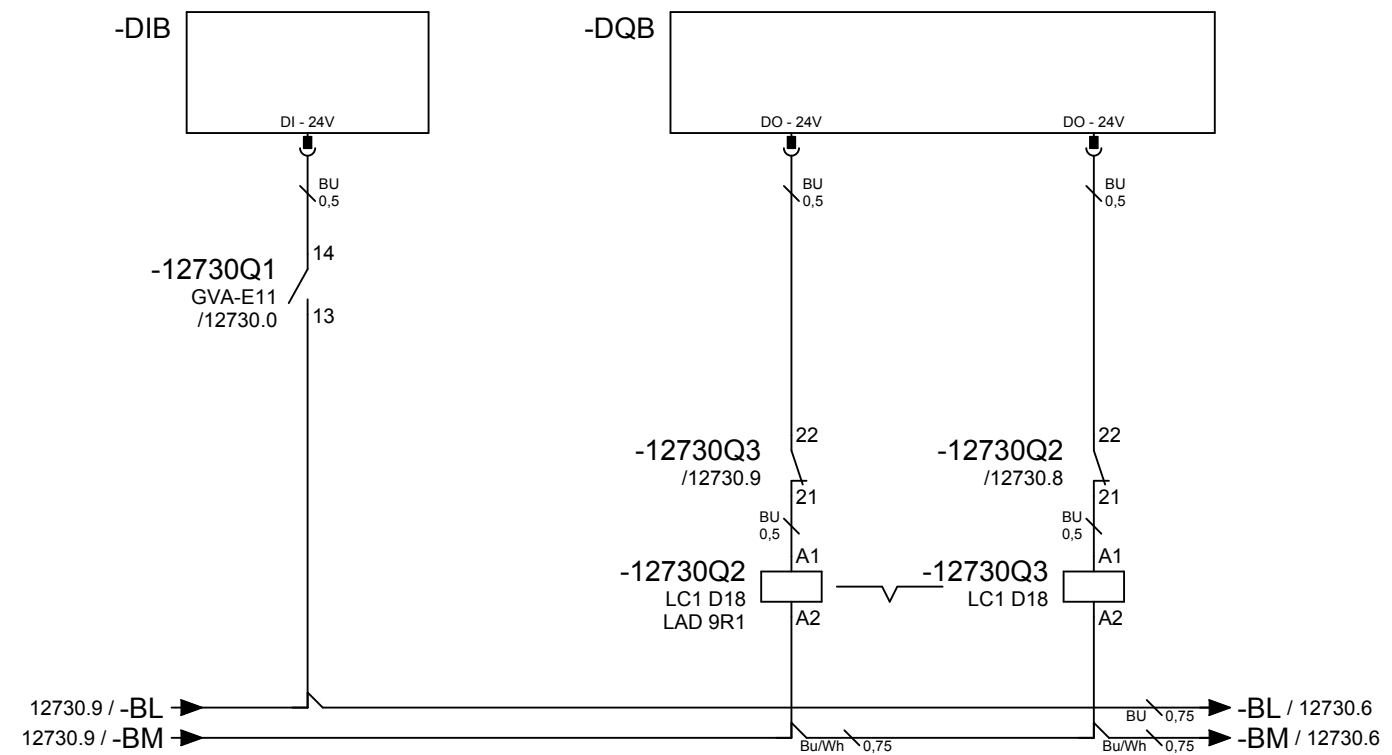
Motor. Contactor.

Motor. Contactor.



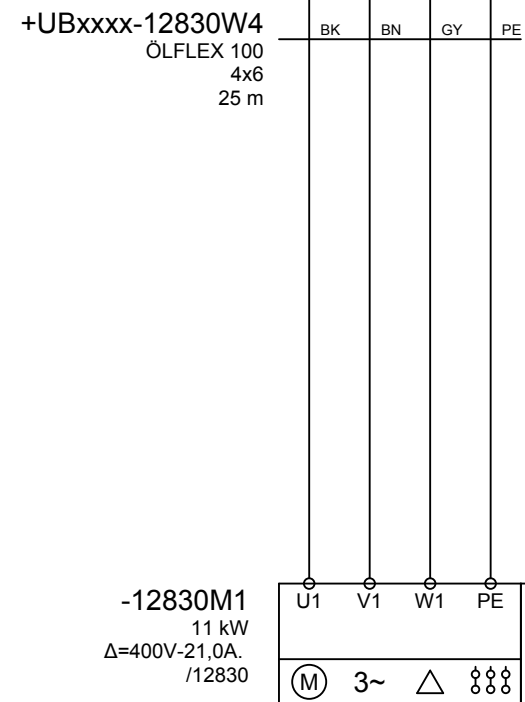
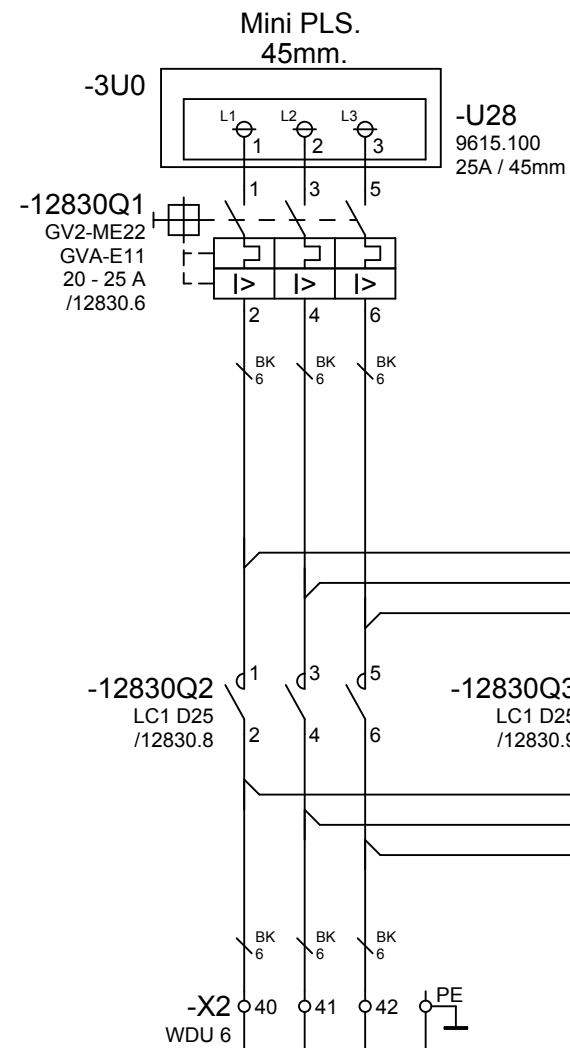
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...



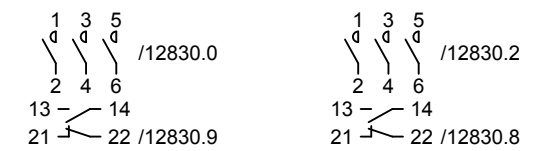
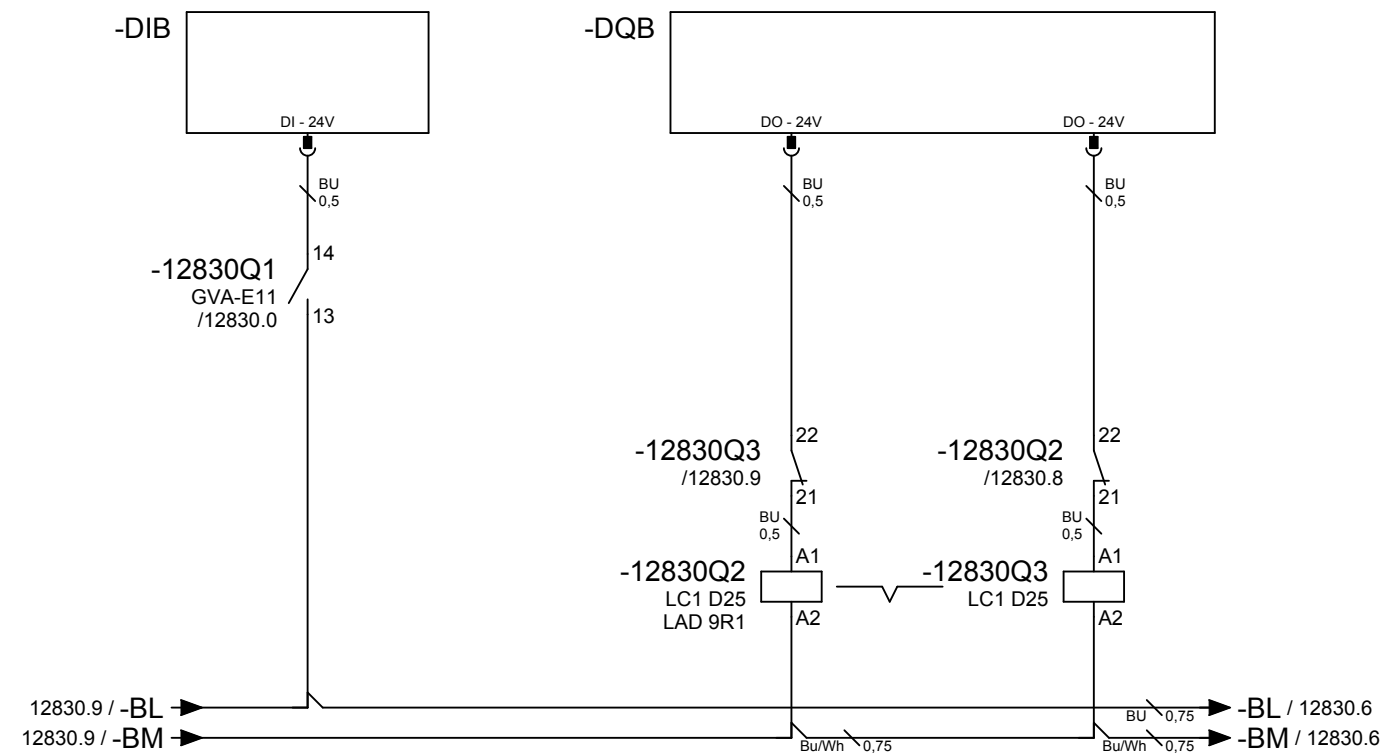
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

	PACK 31. Motors.	7,5kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2ME_C1
	TISKO spol. s r. o.	2018	Last revision of project	+ PLS_Reverz 12730
			Last revision of page	
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

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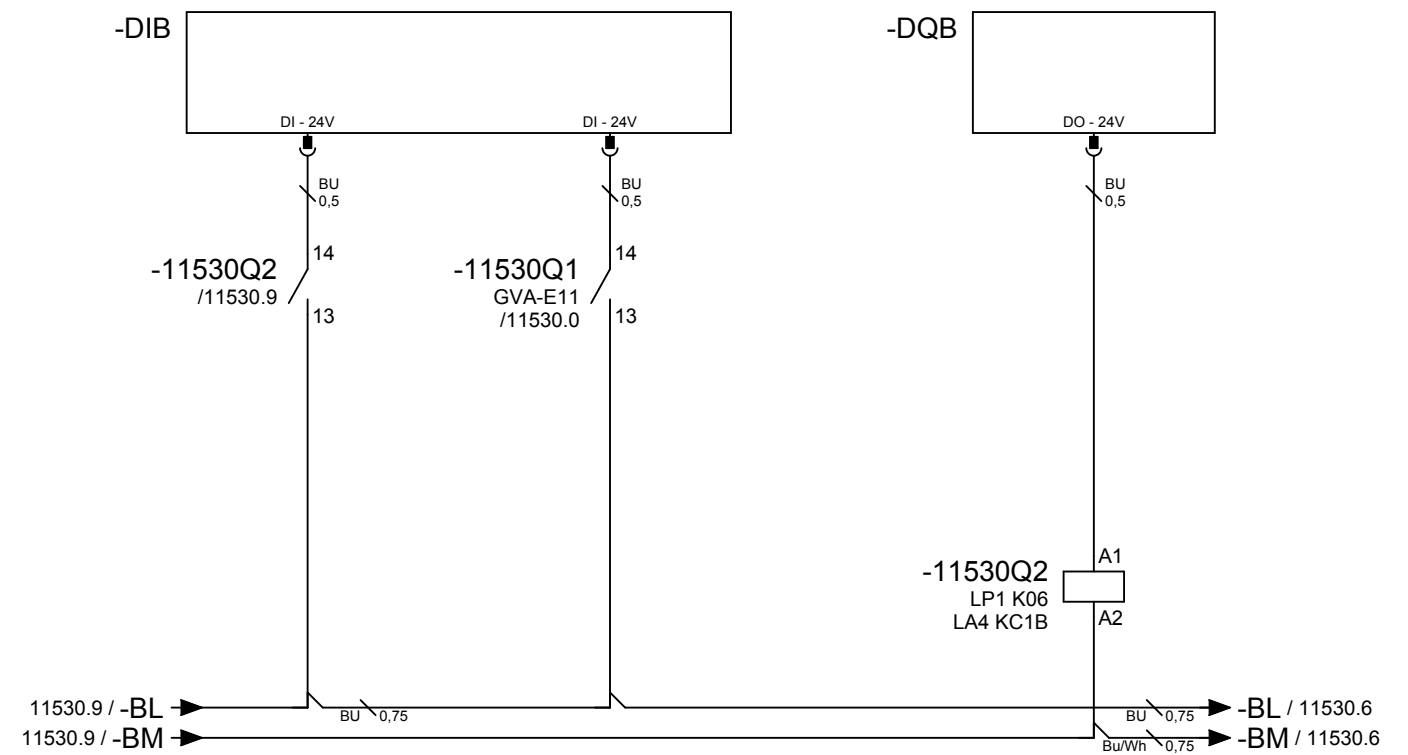
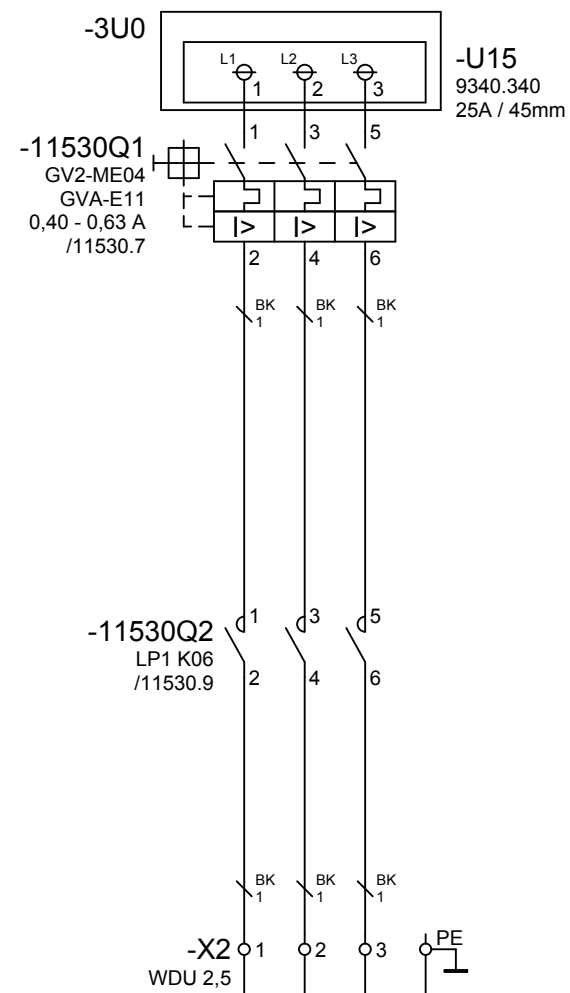
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Creator				V00	01.02.2012	Ing. Tisovčík Ivan		= GV2ME_C1	
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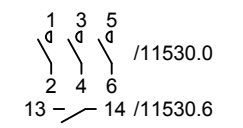
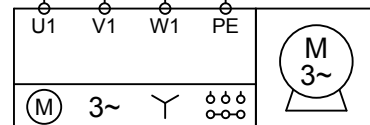


+UBxxx-11530W5
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,41A = 4,0%)
loss U at In 0,02V
loss U at 5xIn 0,10V
heat losses at In 0,03W (L=3x3m)
...
short circuit resistance 50kA at 415V

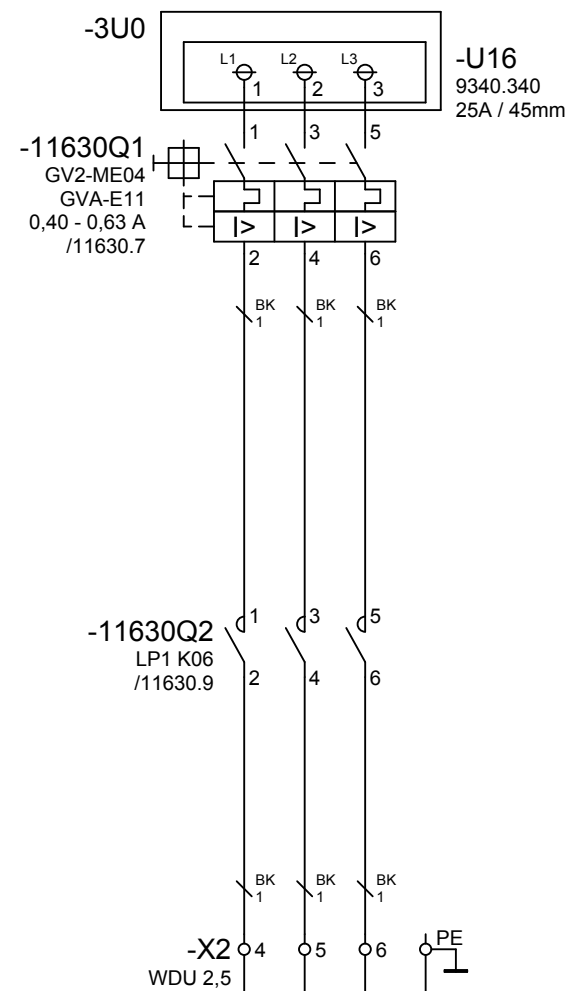
Cable route E
load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
loss U at In 0,23V
loss U at 5xIn 1,16V
heat losses at In 0,3W (L=3x25m)
...
...



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

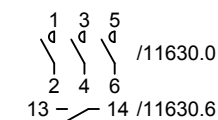
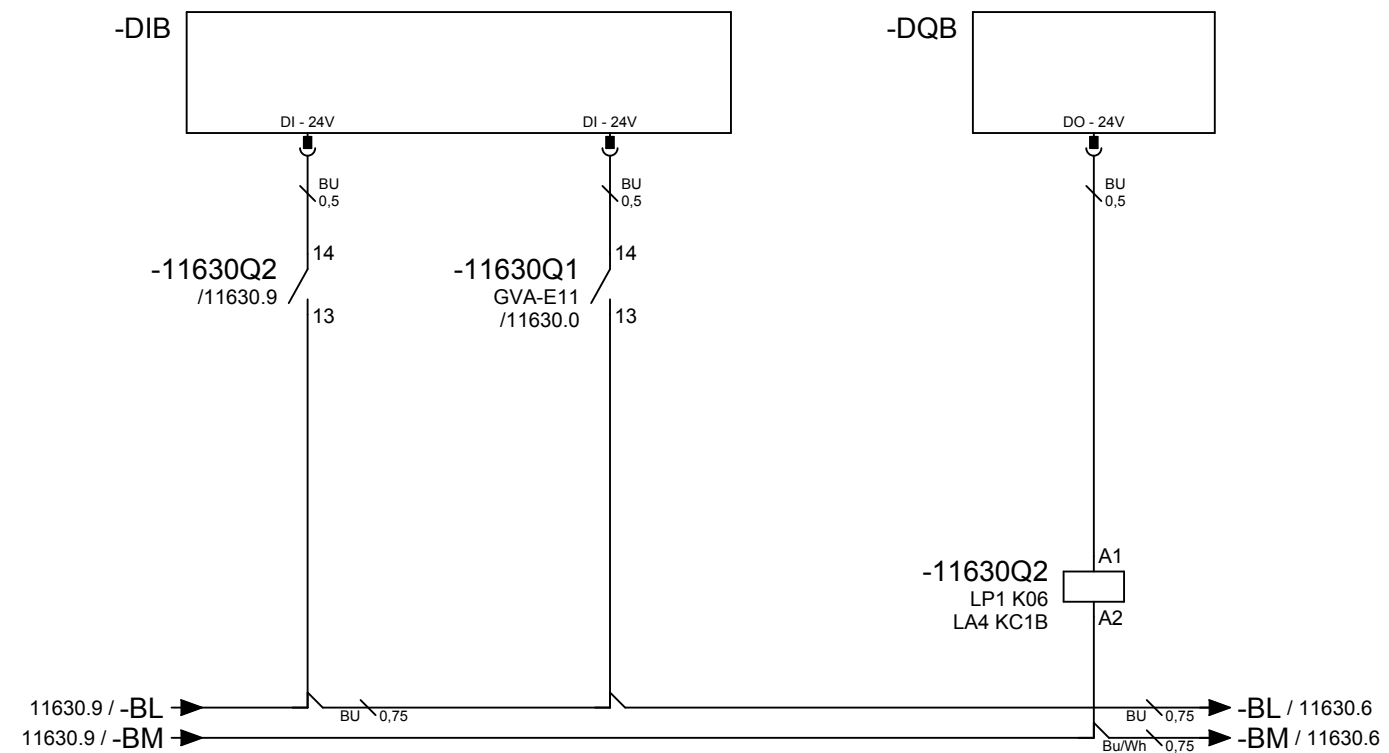


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 50kA at 415V

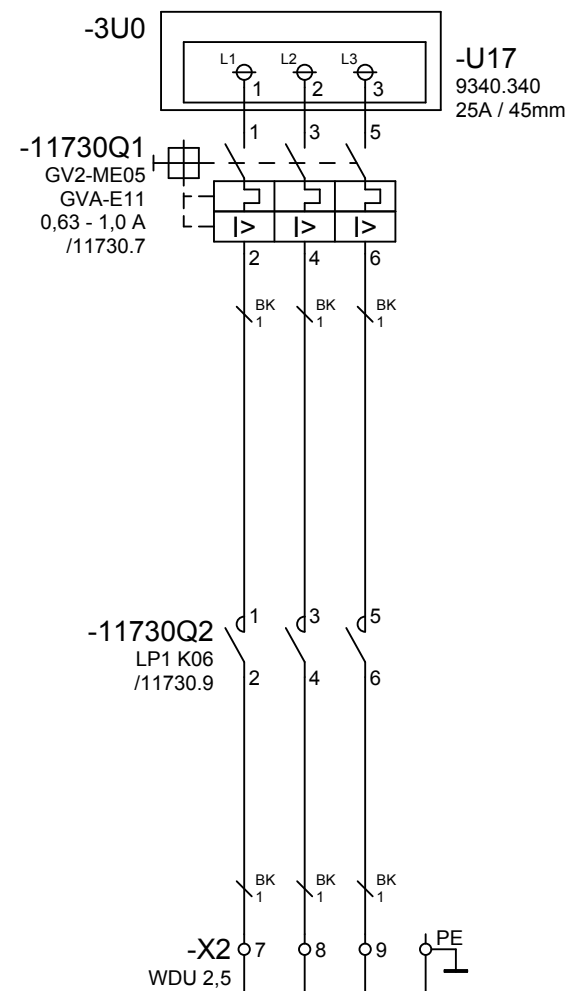
Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

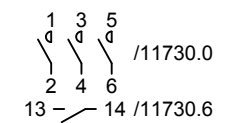
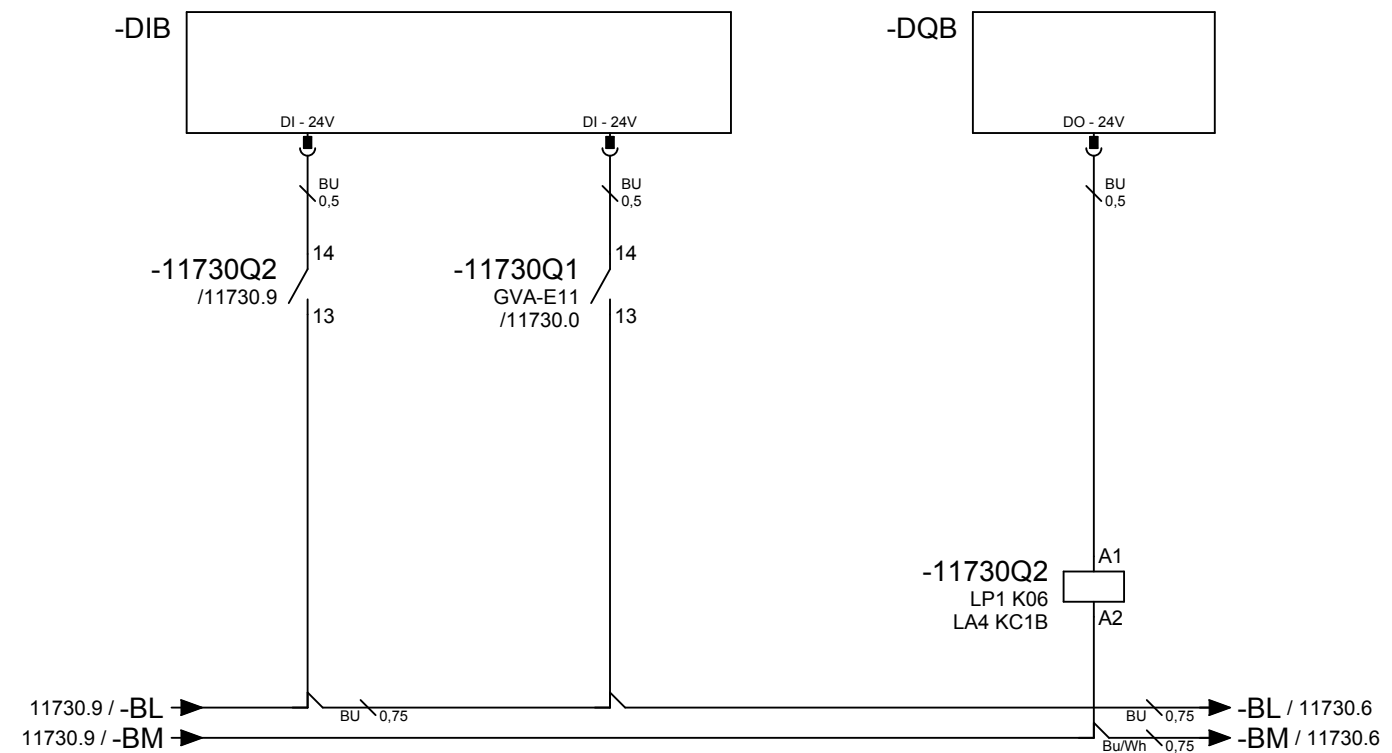


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,8A = 7,7%)
 loss U at In 0,04V
 loss U at 5xIn 0,20V
 heat losses at In 0,10W (L=3x3m)

 short circuit resistance 50kA at 415V

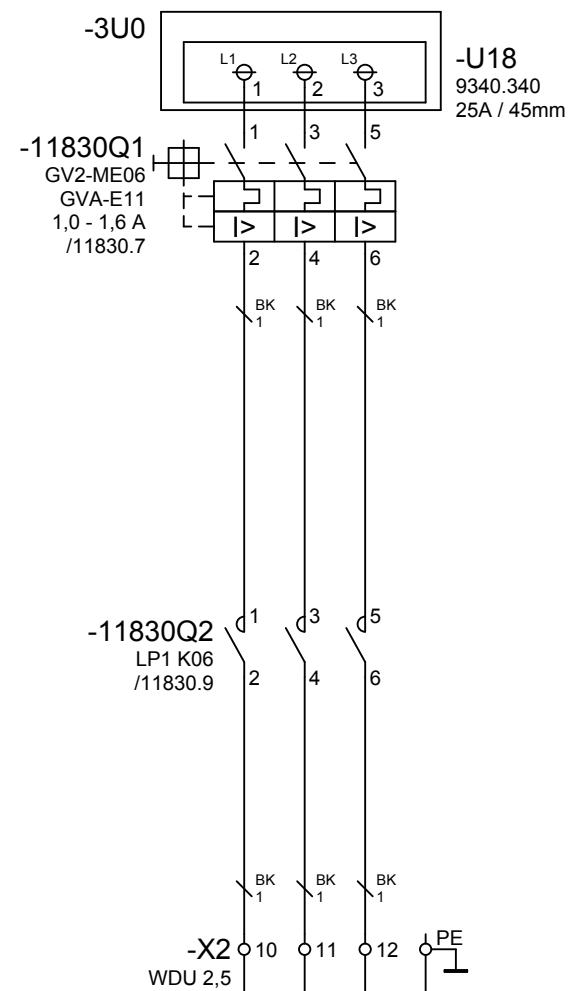
Cable route E
 load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
 loss U at In 0,45V
 loss U at 5xIn 2,27V
 heat losses at In 1,1W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

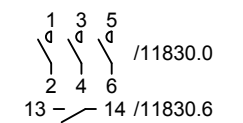
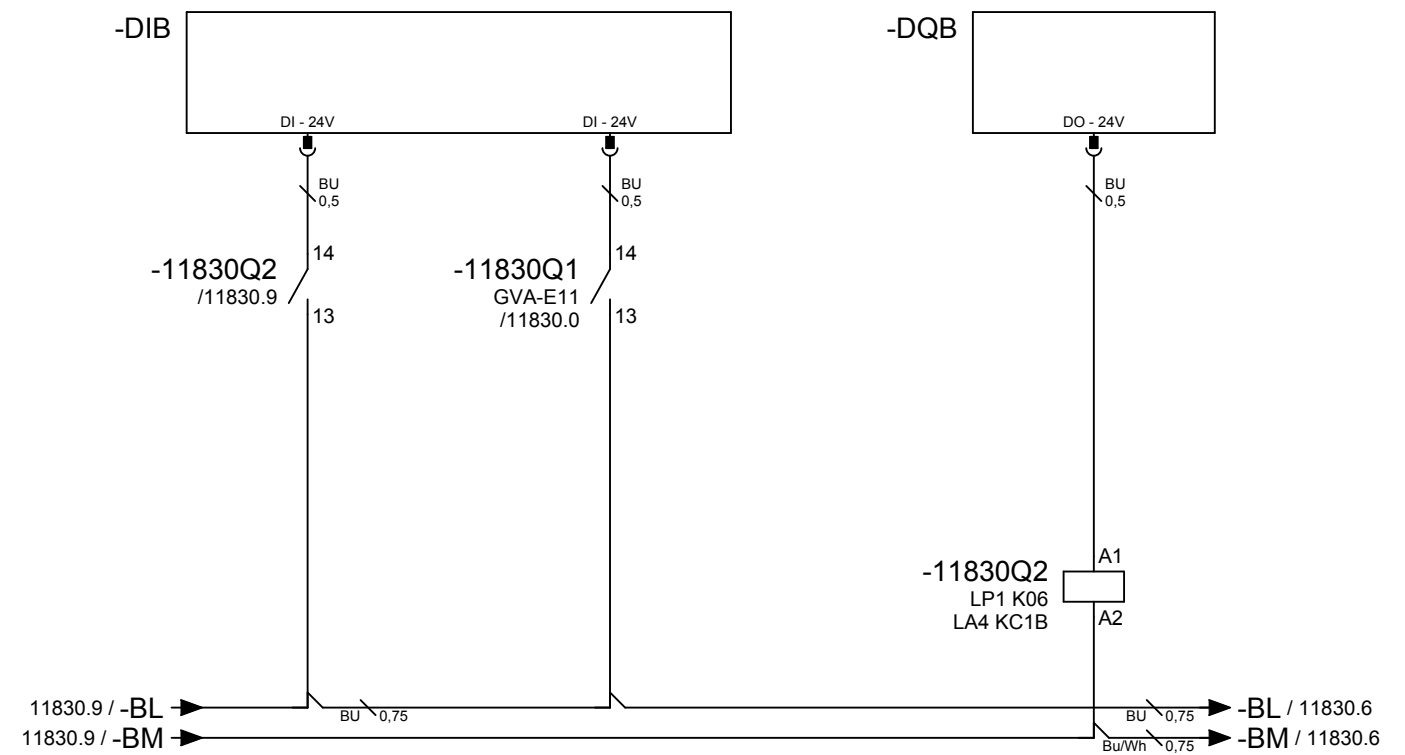
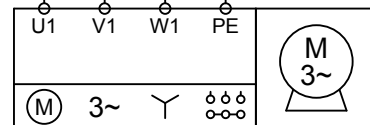


+UBxxx-11830W5
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (1,1A = 10,6%)
loss U at In 0,06V
loss U at 5xIn 0,28V
heat losses at In 0,19W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

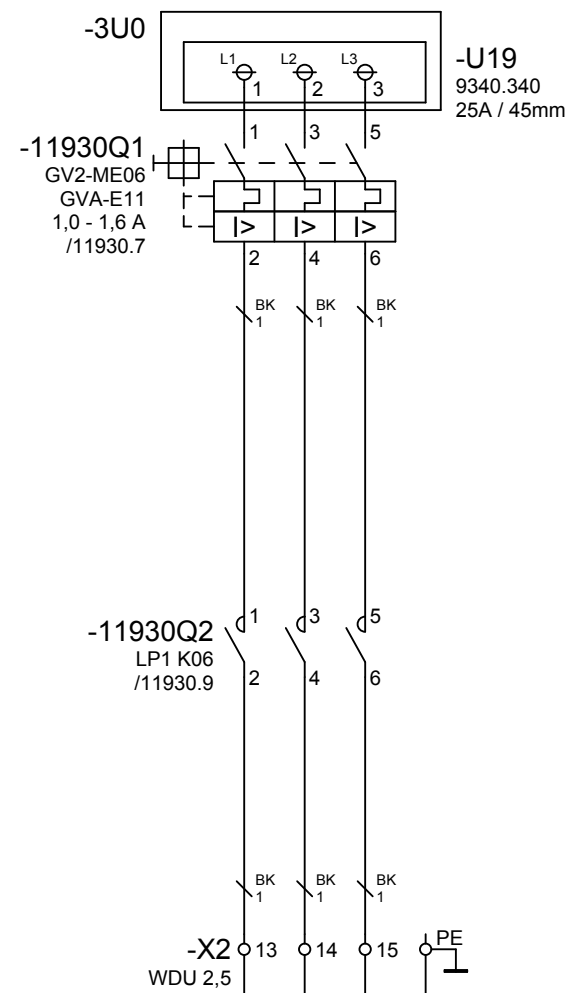
Cable route E
load 0,75mm² = cca 9,0A; (1,1A = 12,2%)
loss U at In 0,62V
loss U at 5xIn 3,12V
heat losses at In 2,1W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

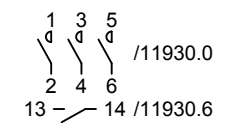
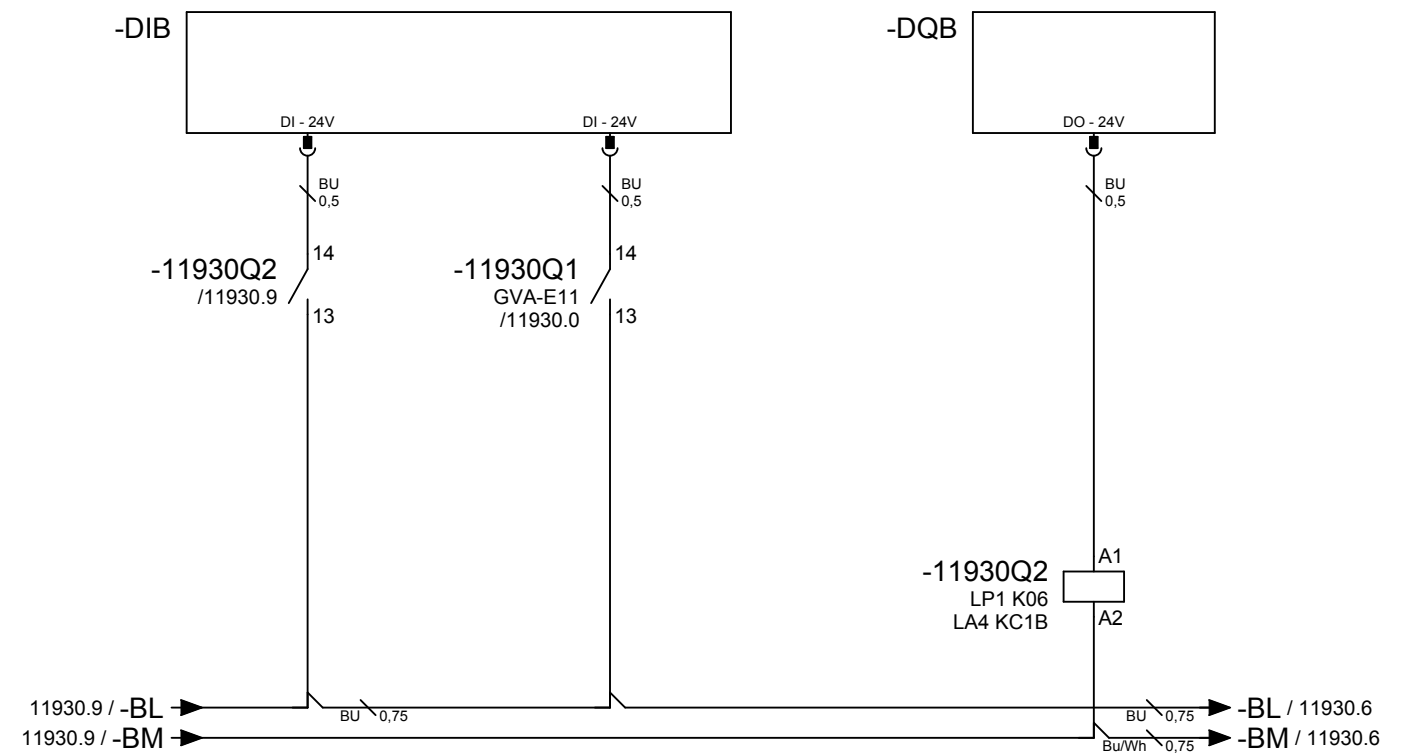
Circuit
breaker. 0=Failure.

Motor.
Contactor.

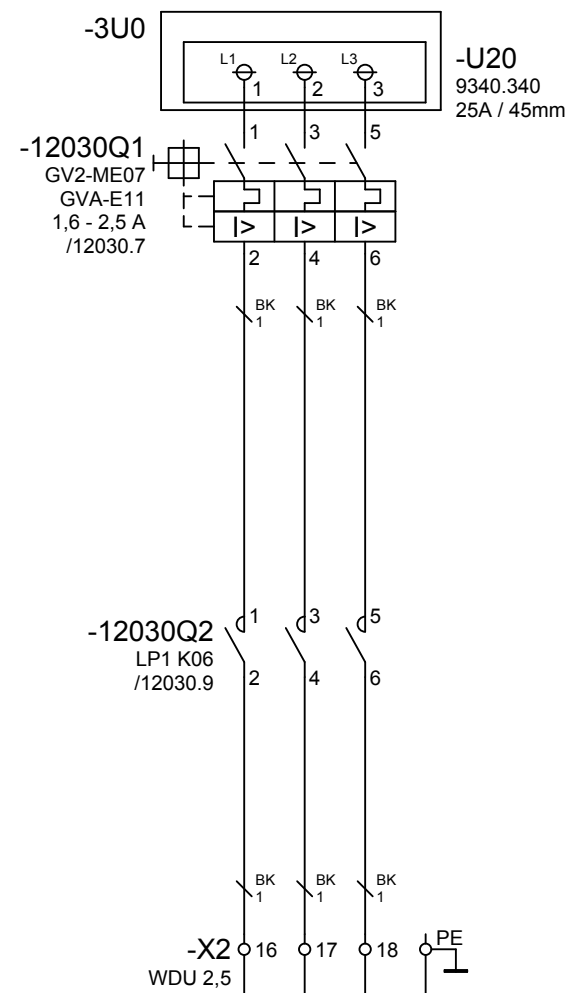


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,5A = 14,4%)
loss U at In	0,08V
loss U at 5xIn	0,38V
heat losses at In	0,34W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,5A = 16,7%)
loss U at In	0,85V
loss U at 5xIn	4,25V
heat losses at In	3,8W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



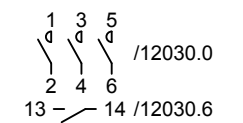
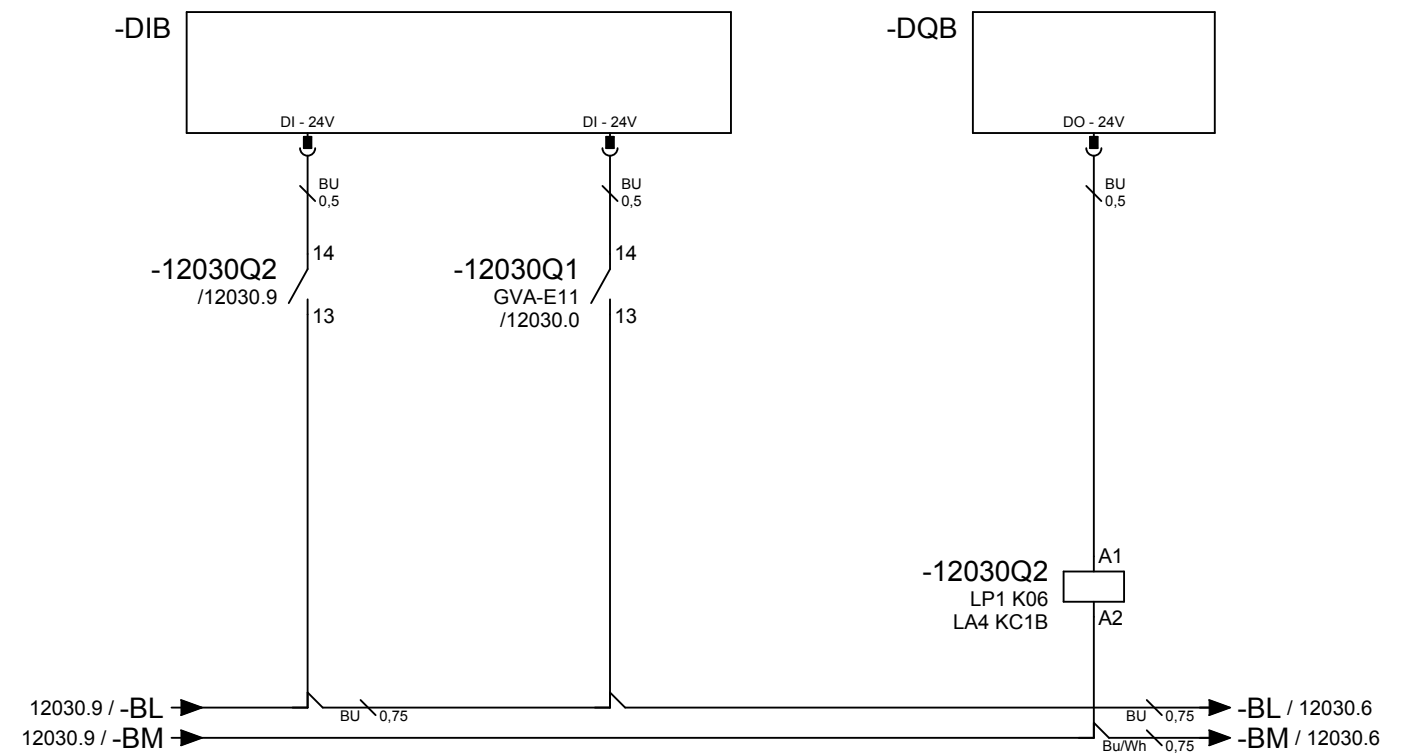
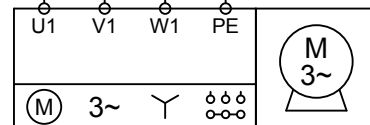
+UBxxxx-12030W5
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,9A = 18,3%)
 loss U at In 0,10V
 loss U at 5xIn 0,48V
 heat losses at In 0,55W (L=3x3m)

 short circuit resistance 50kA at 415V

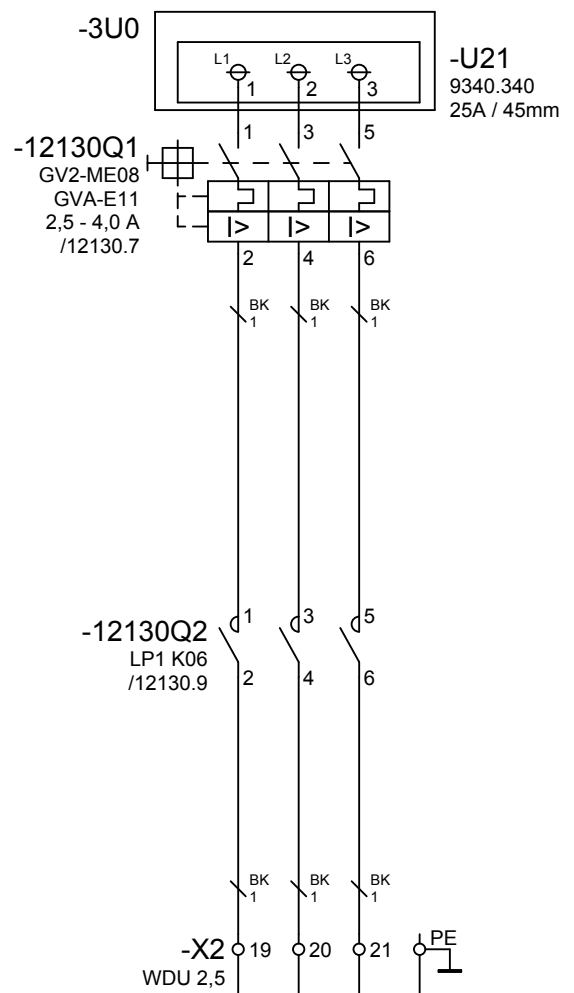
Cable route E
 load 1mm² = cca 13,0A; (1,9A = 14,6%)
 loss U at In 0,81V
 loss U at 5xIn 4,04V
 heat losses at In 4,6W (L=3x25m)



Contactor.
1=Switched ON.

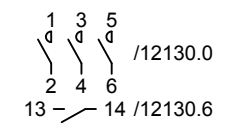
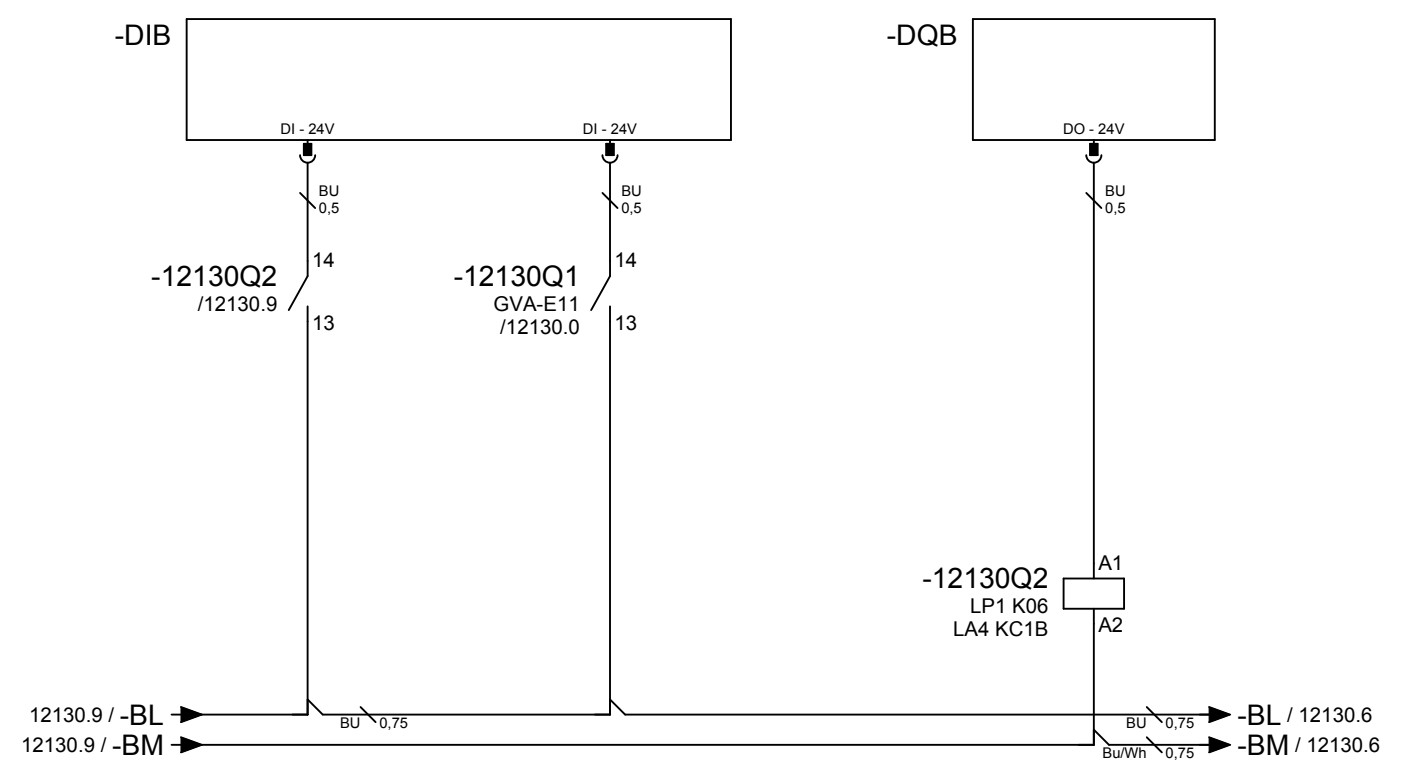
Circuit
breaker. 0=Failure.

Motor.
Contactor.

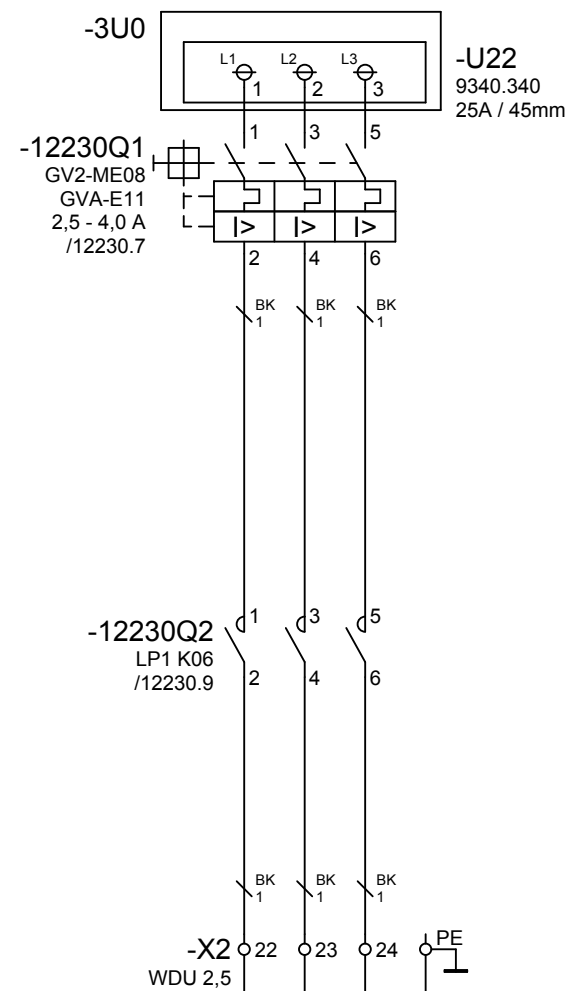


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



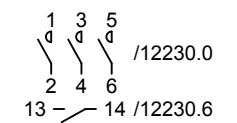
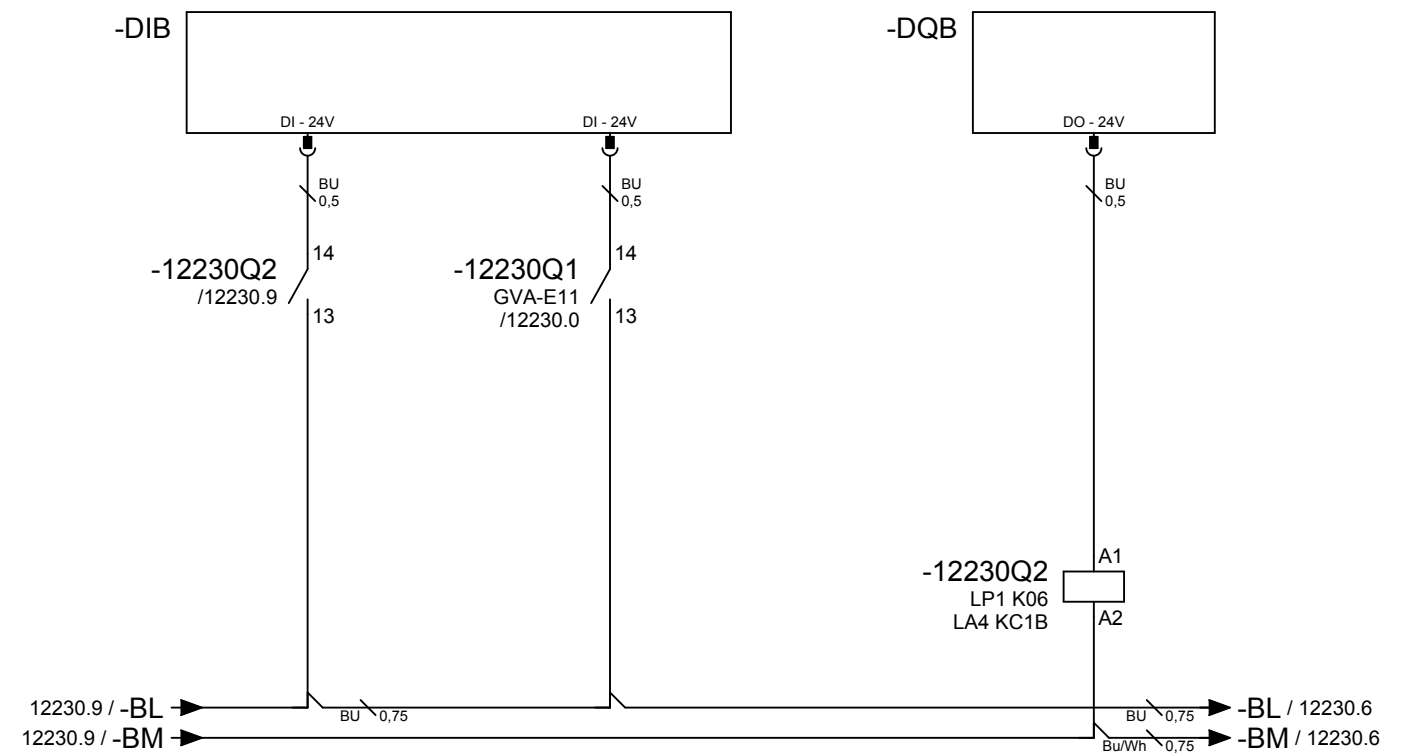
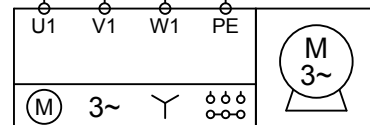
+UBxxxx-12230W5
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

 short circuit resistance 50kA at 415V

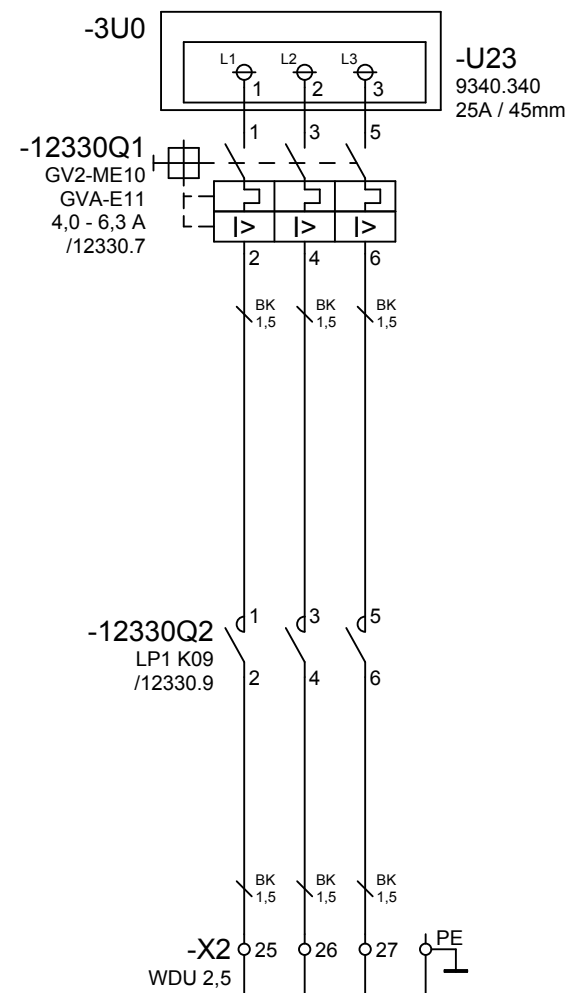
Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.



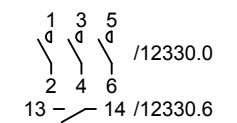
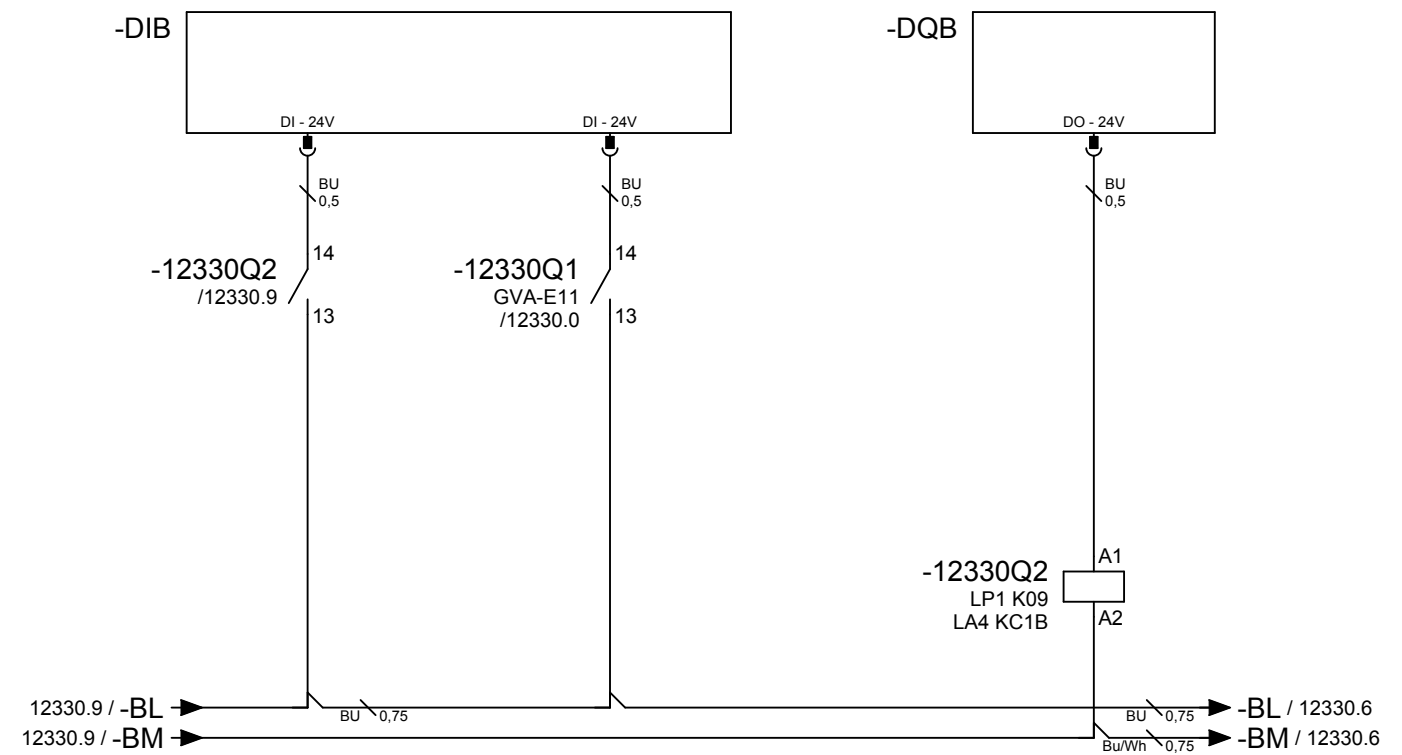
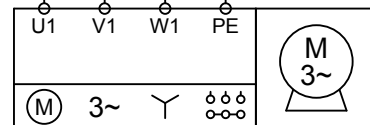
+UBxxxx-12330W5
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

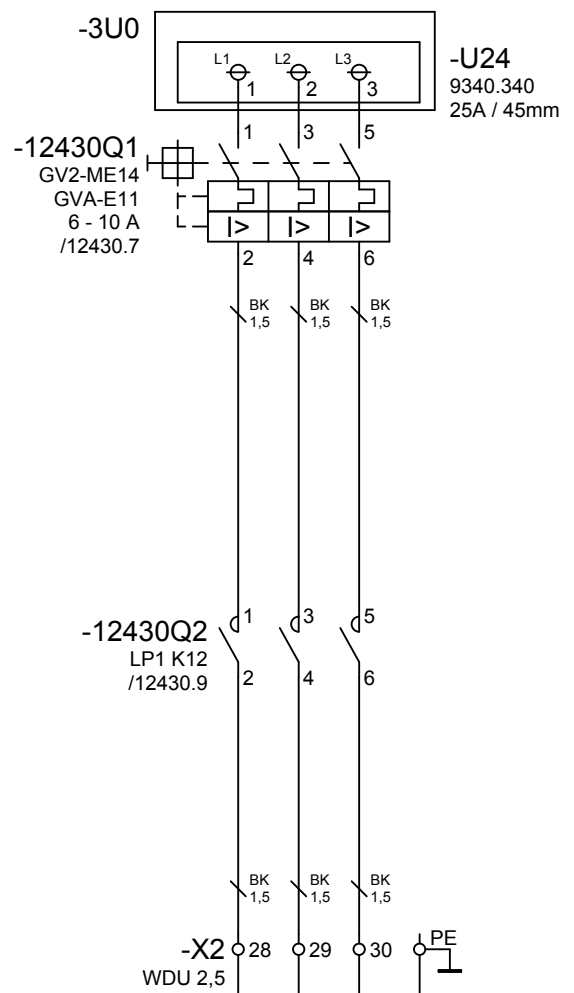
Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)

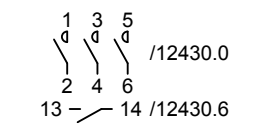
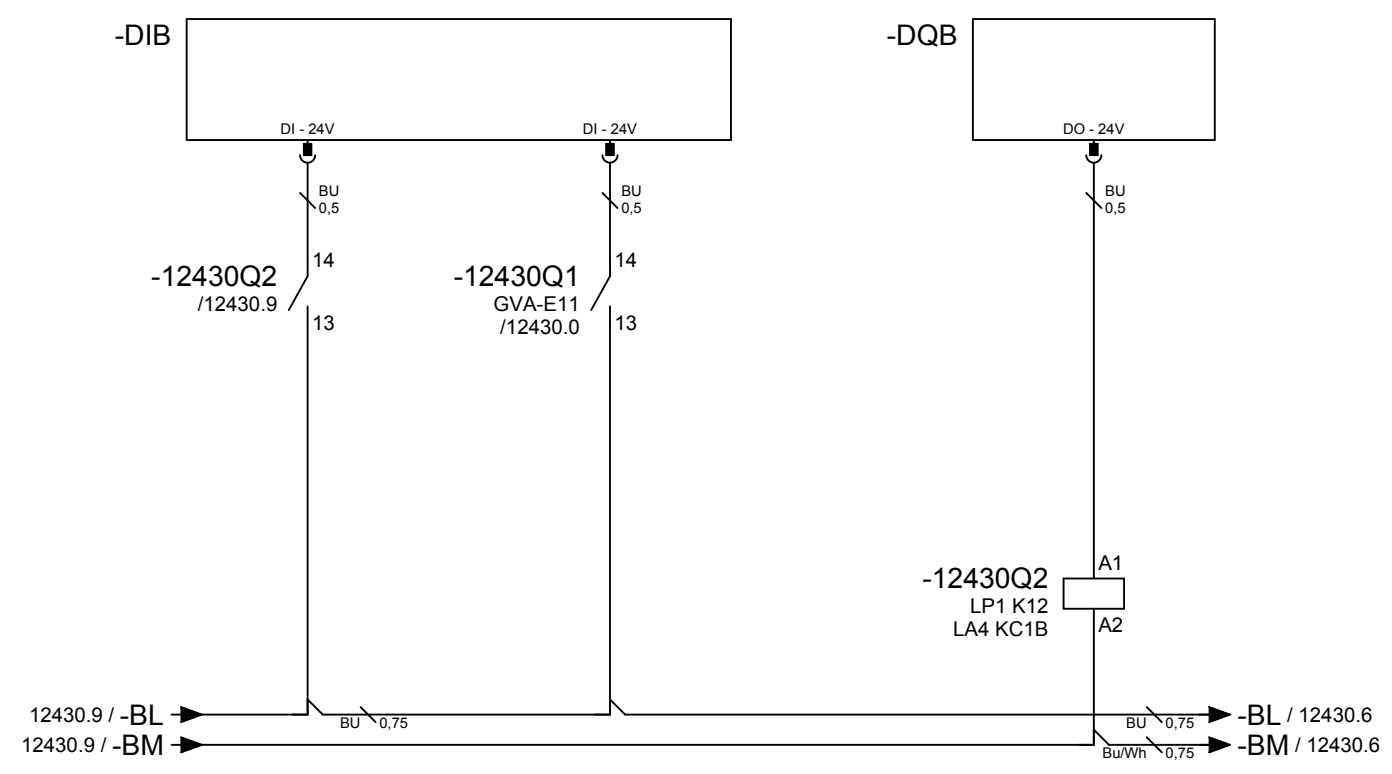


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

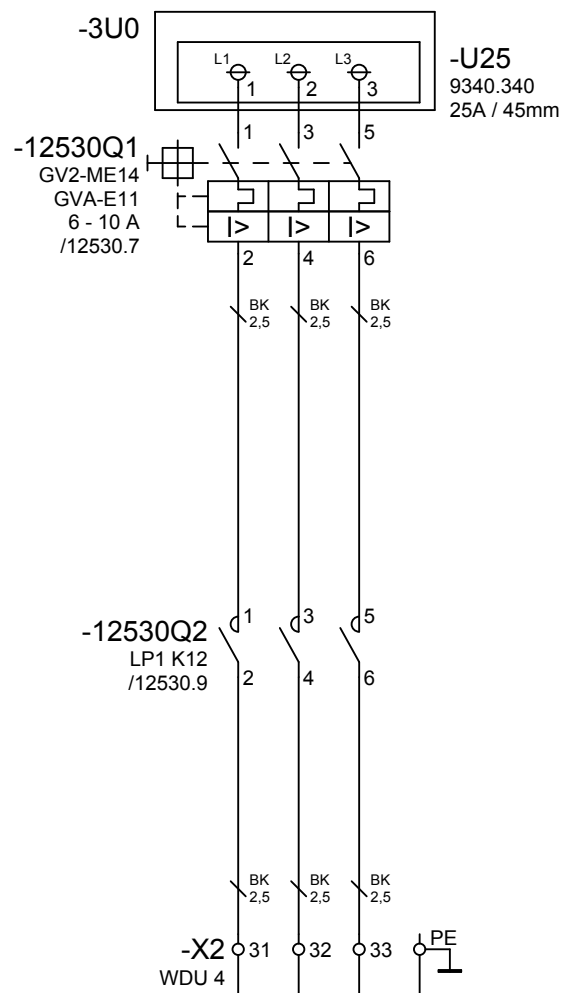


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



+UBxxx-12530W5
ÖLFLEX 100
4x1,5
25 m

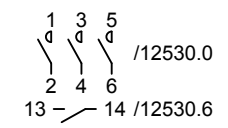
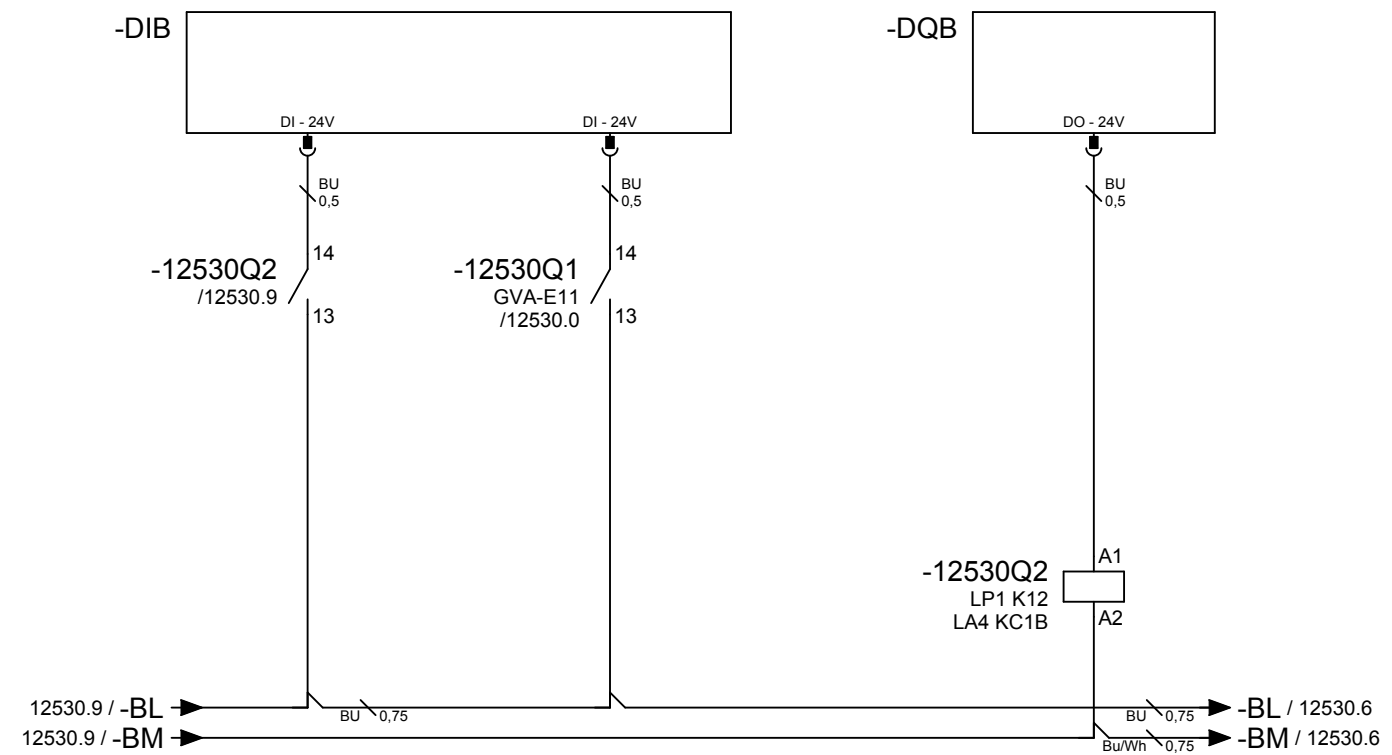
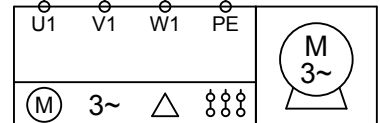
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
 loss U at In 0,17V
 loss U at 5xIn 0,87V
 heat losses at In 4,42W (L=3x3m)

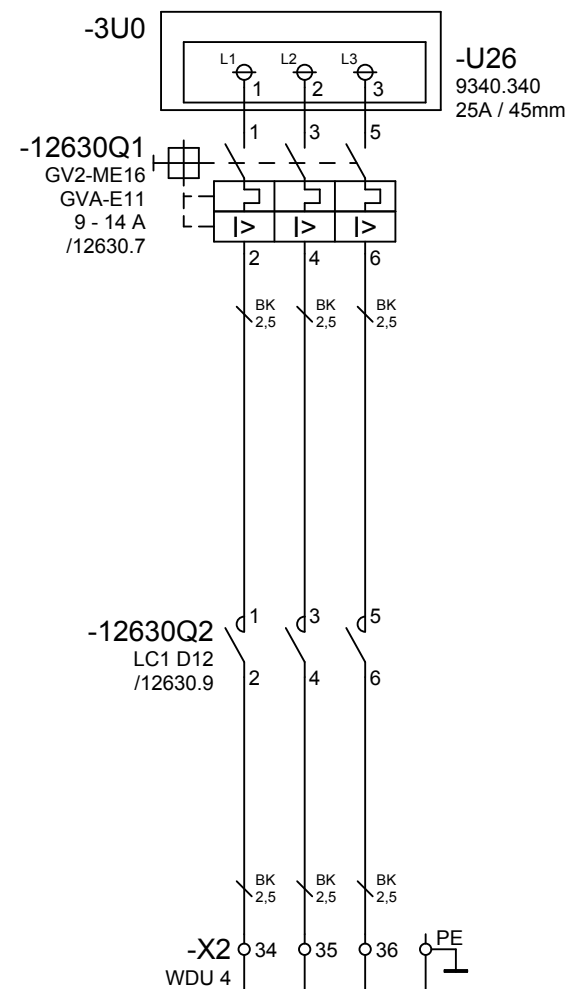
 short circuit resistance 50kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
 loss U at In 2,41V
 loss U at 5xIn 12,04V
 heat losses at In 61,4W (L=3x25m)

-12530M1
4,0 kW
Δ=400V-8,3A.
/12530



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

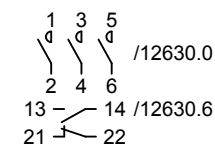
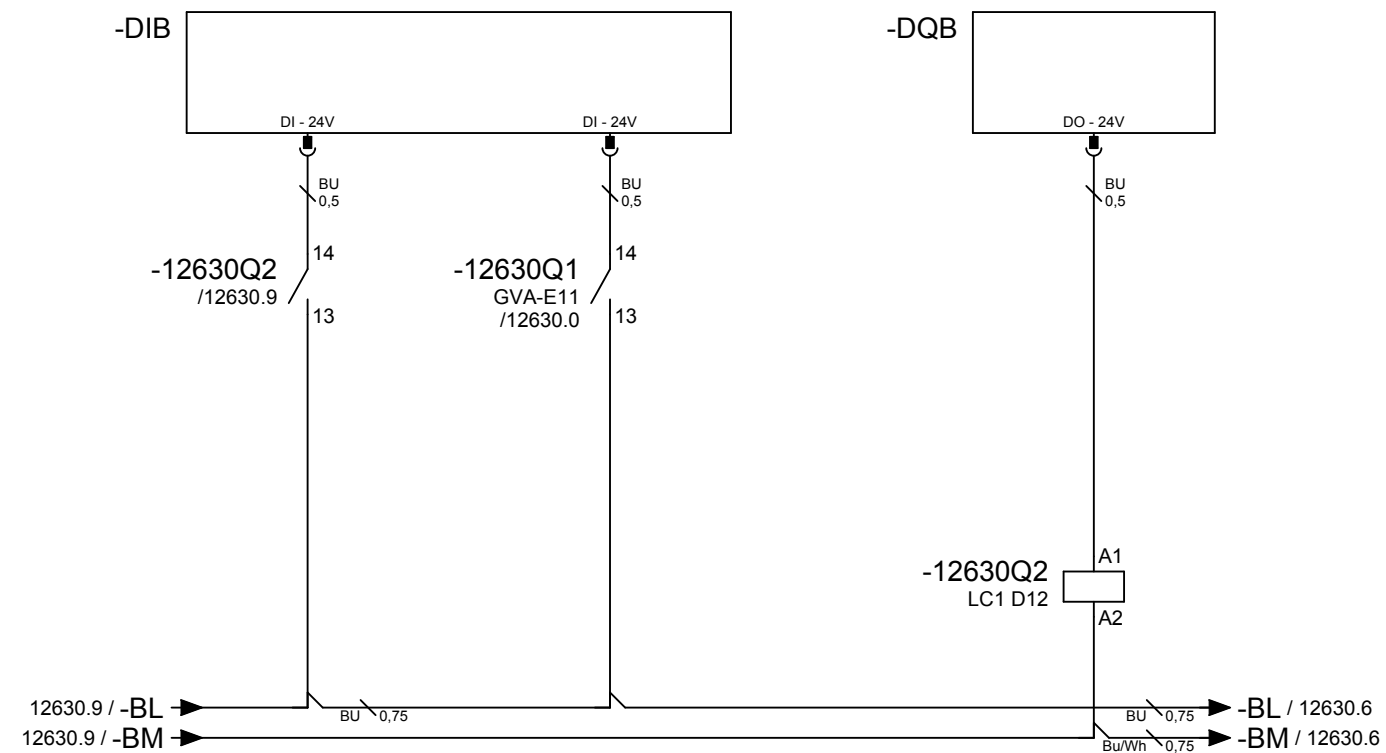


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 15kA at 415V

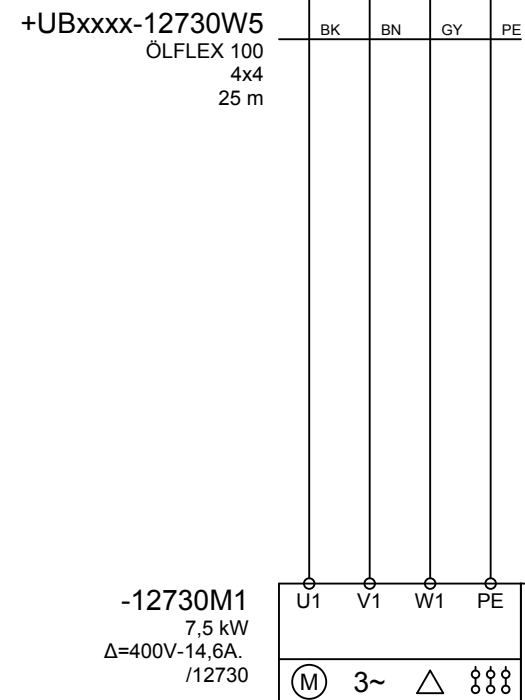
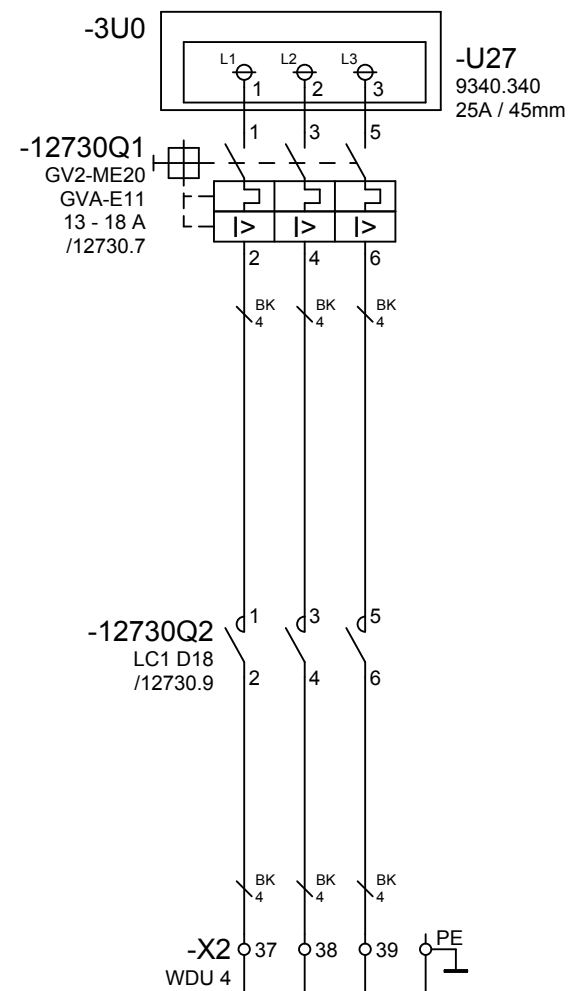
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

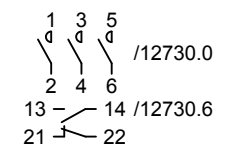
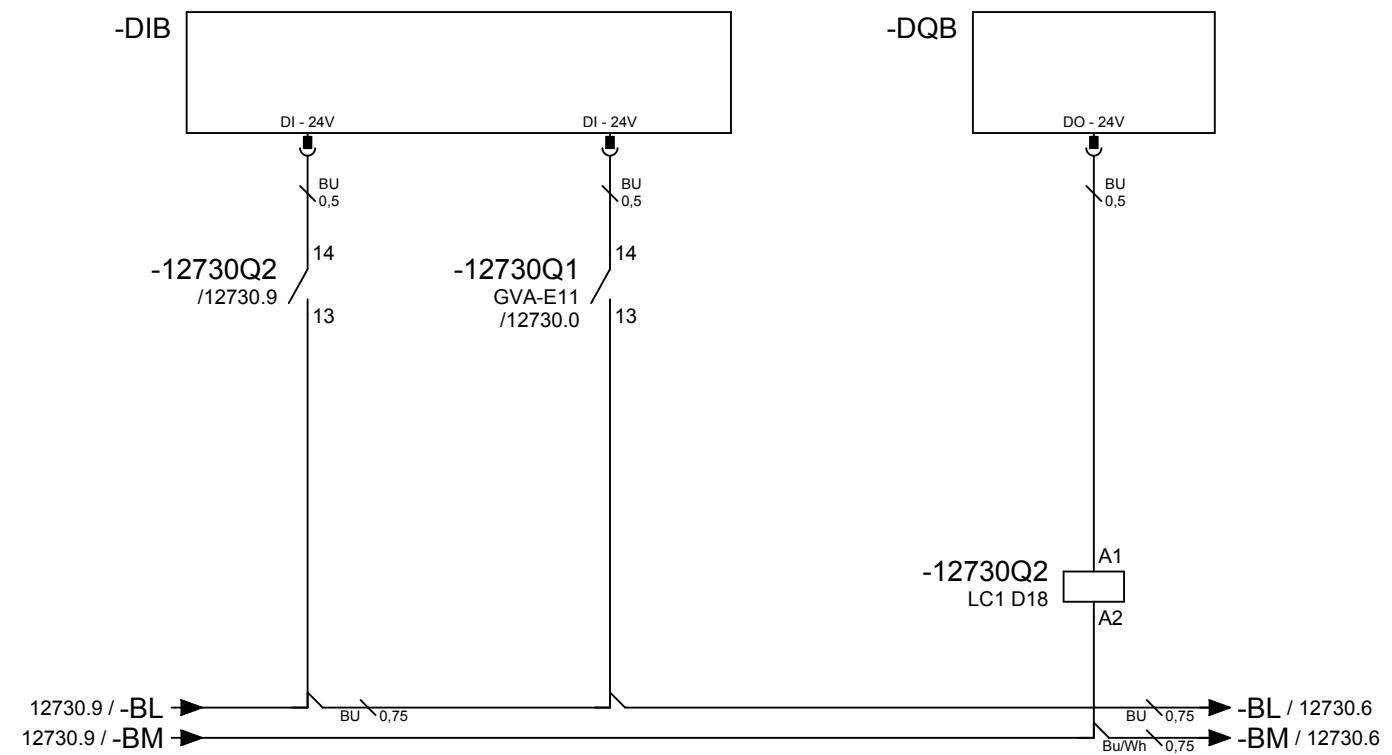


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

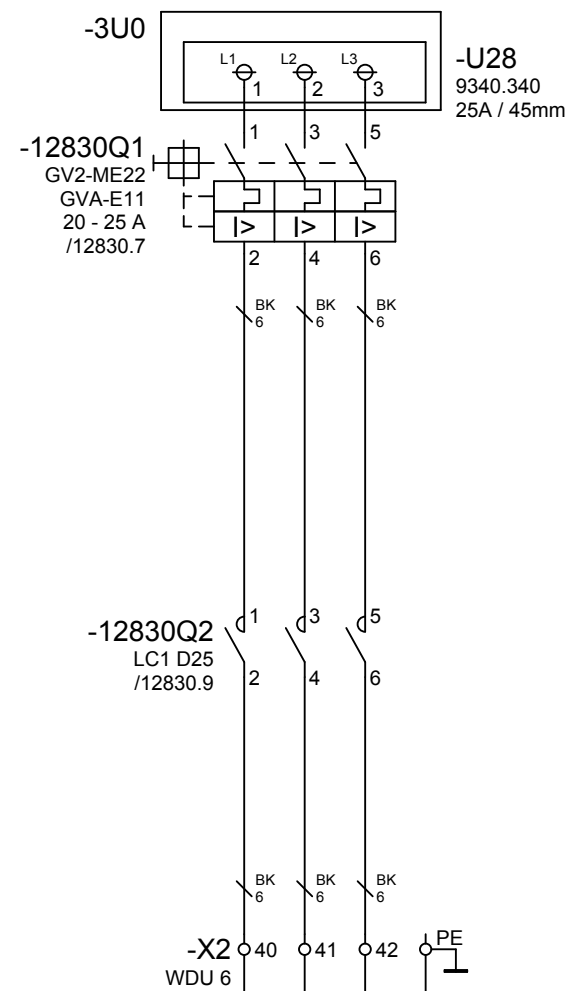
Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 15kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

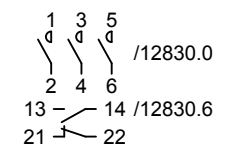
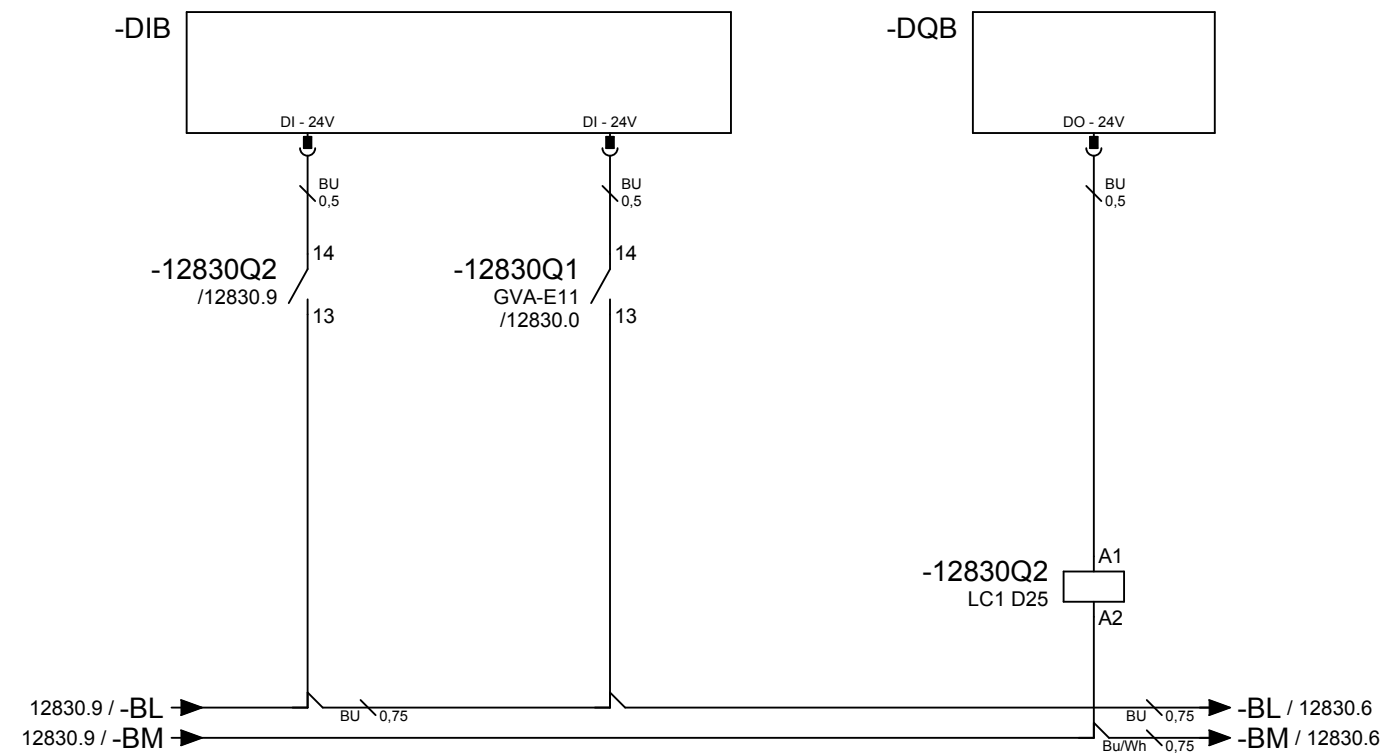


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 15kA at 415V

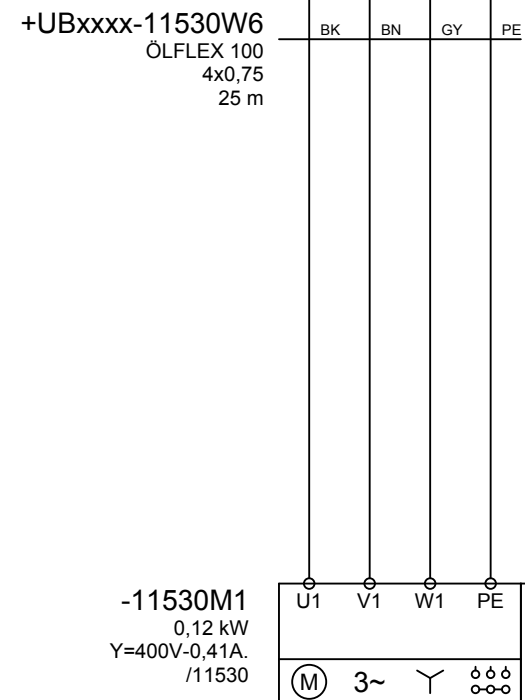
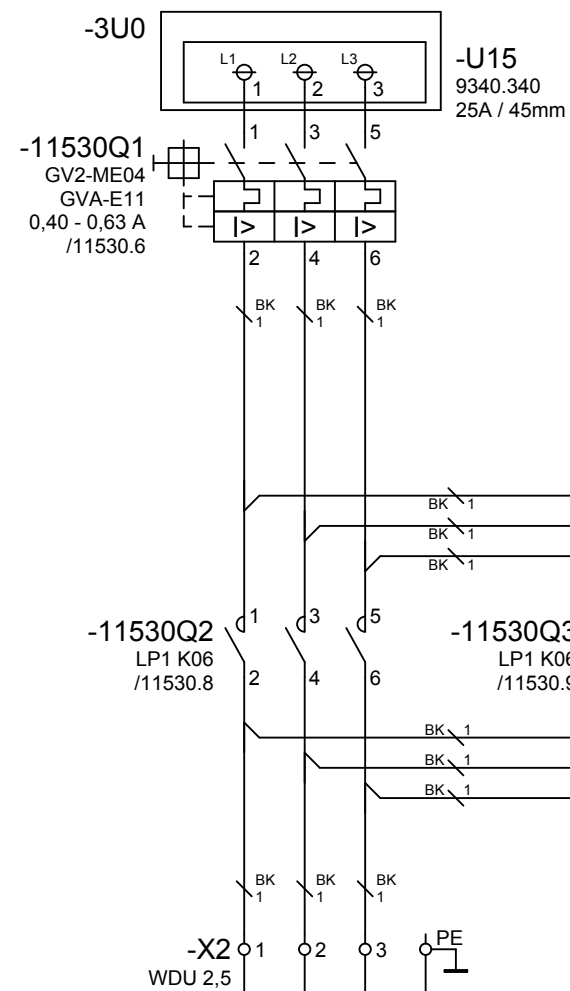
Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

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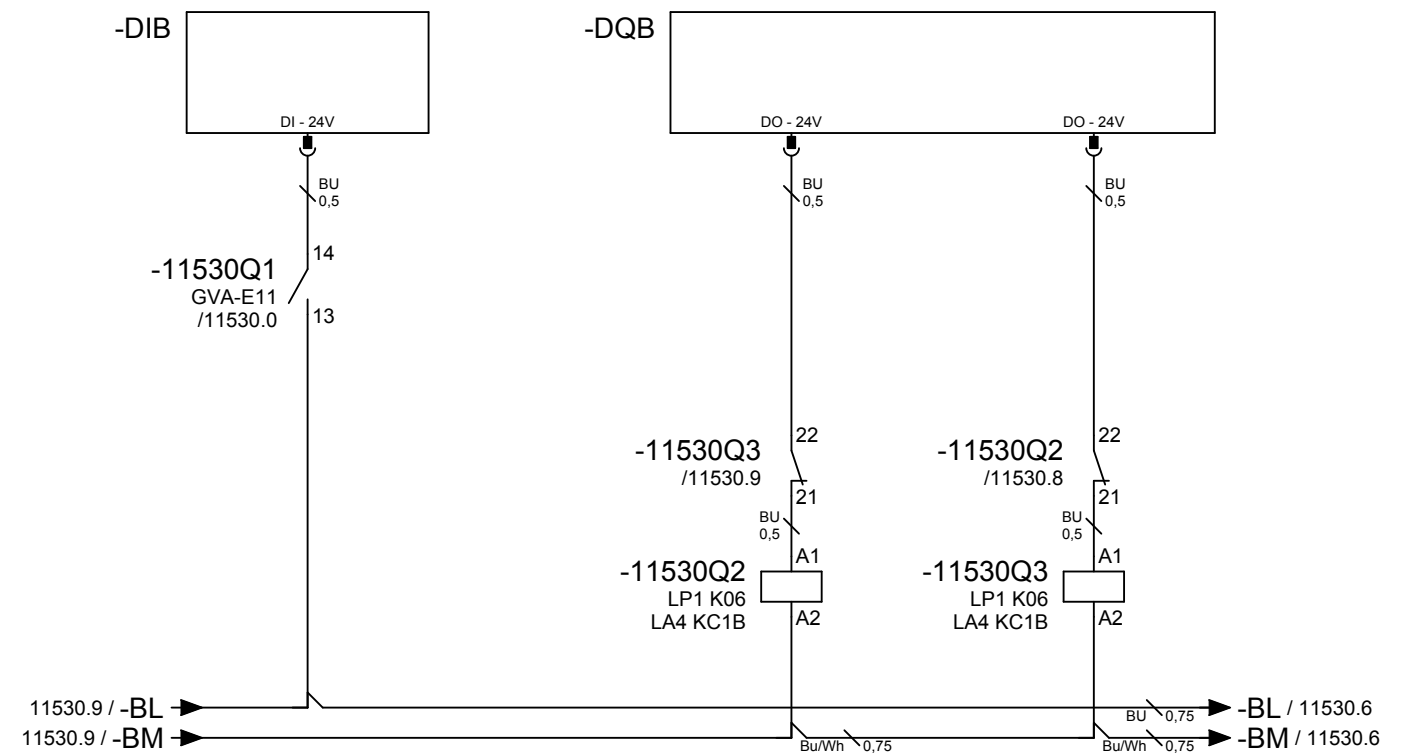


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

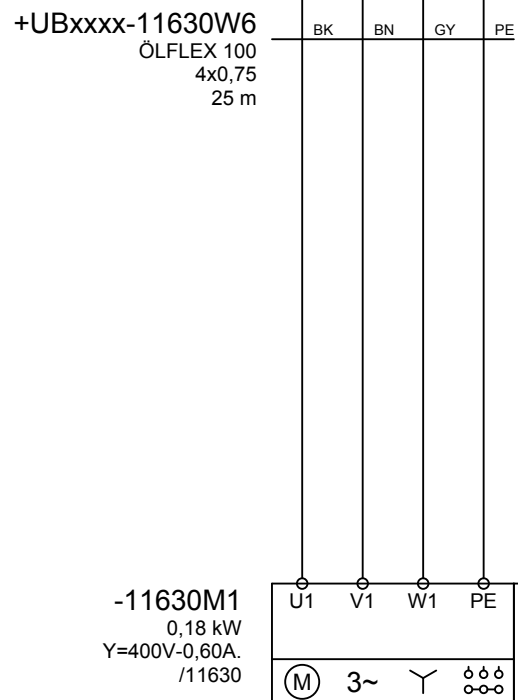
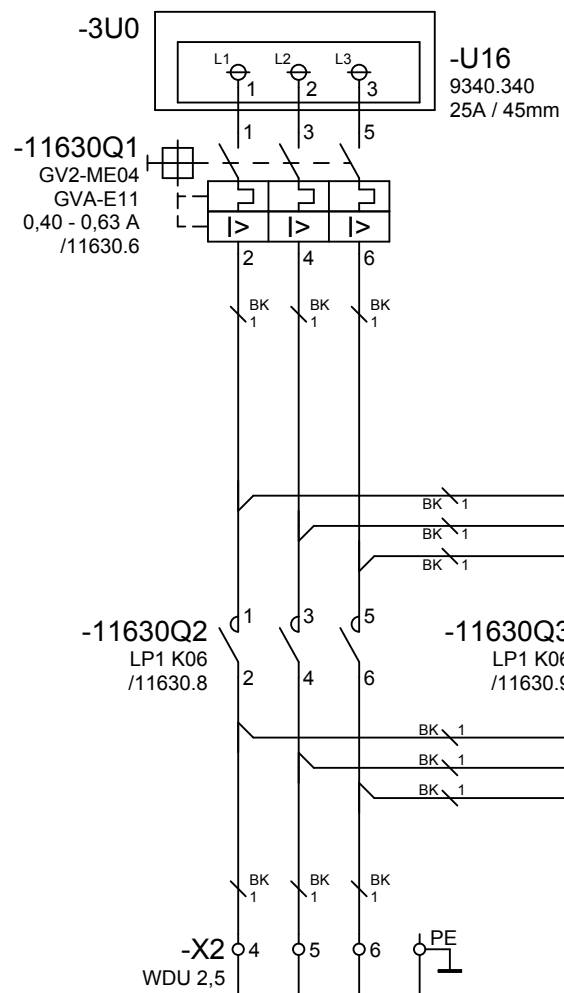
Enclosure B1
 load 1mm² = cca 10,4A; (0,41A = 4,0%)
 loss U at In 0,02V
 loss U at 5xIn 0,10V
 heat losses at In 0,03W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
 loss U at In 0,23V
 loss U at 5xIn 1,16V
 heat losses at In 0,3W (L=3x25m)

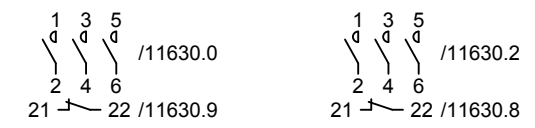
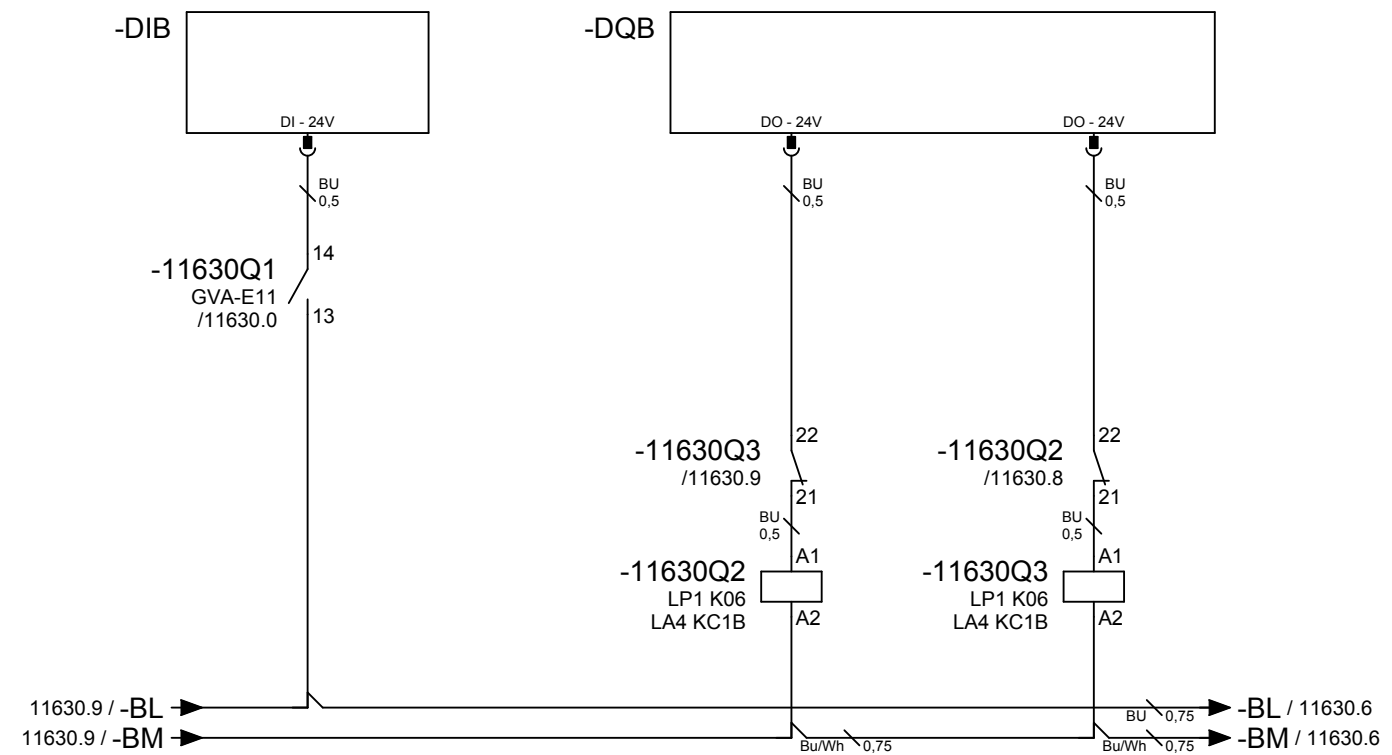


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

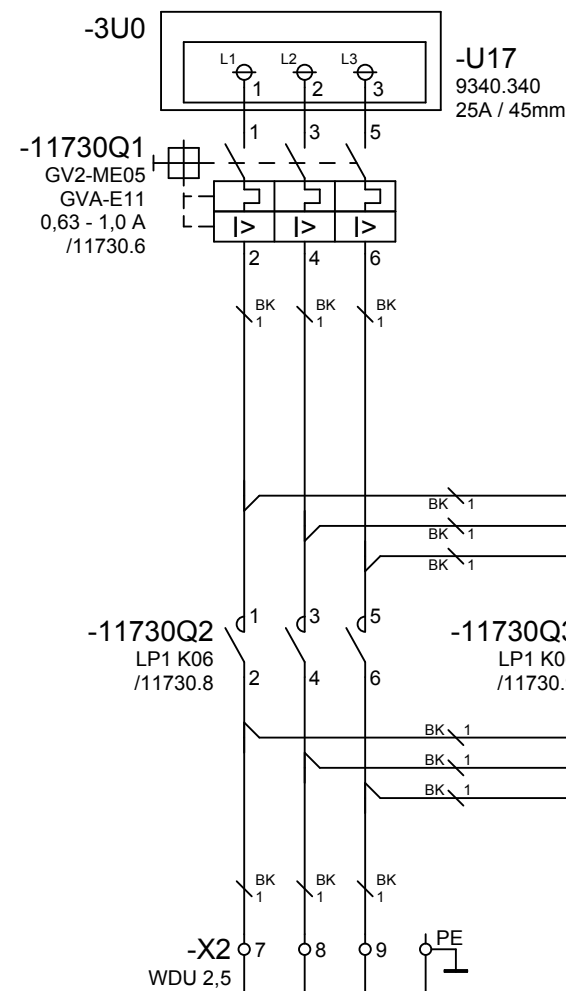


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

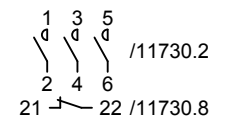
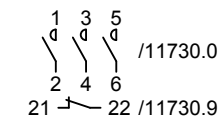
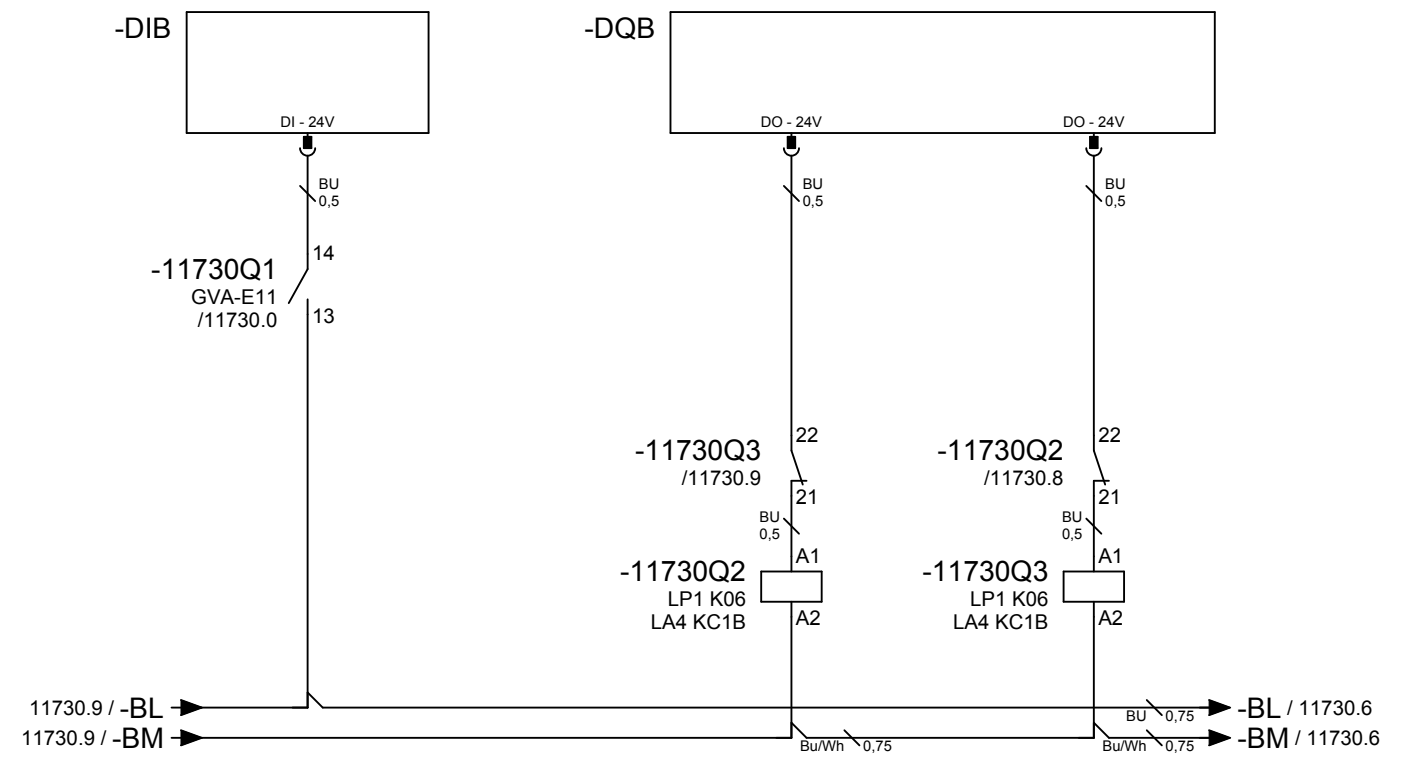
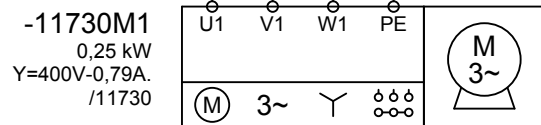


+UBxxx-11730W6
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,8A = 7,7%)
loss U at In 0,04V
loss U at 5xIn 0,20V
heat losses at In 0,10W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

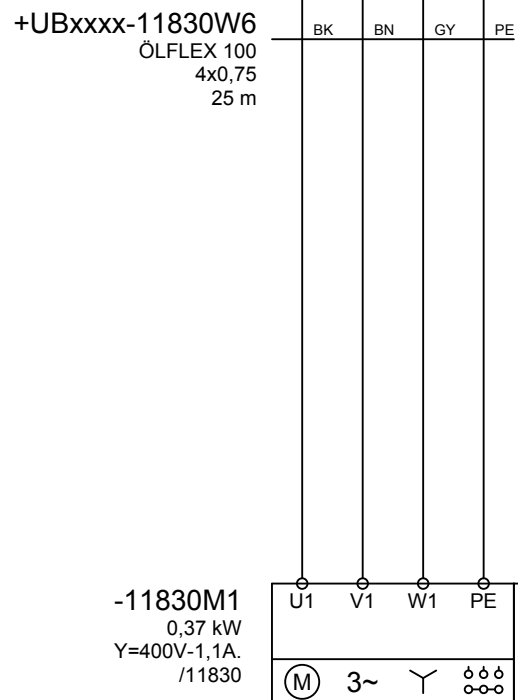
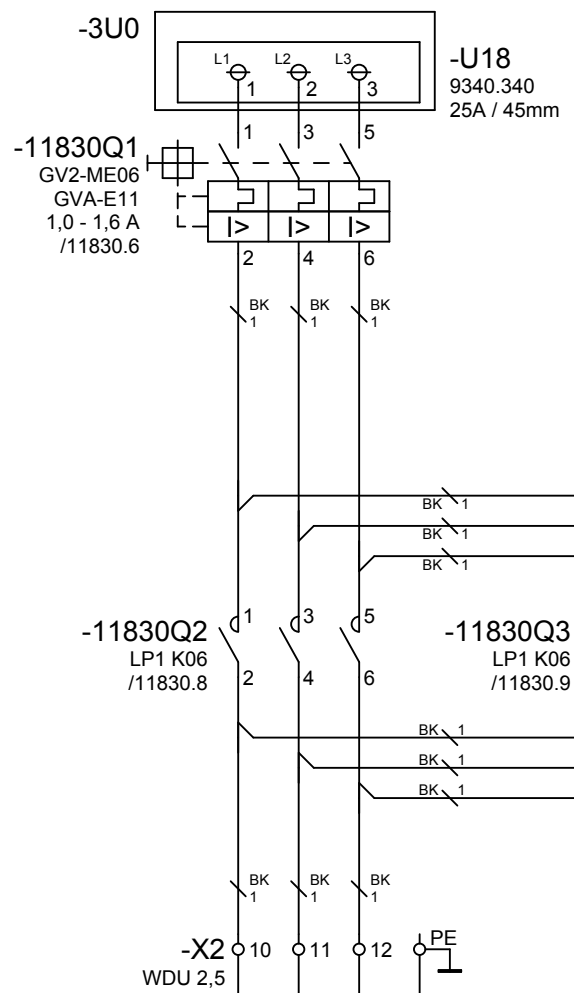
Cable route E
load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
loss U at In 0,45V
loss U at 5xIn 2,27V
heat losses at In 1,1W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure.

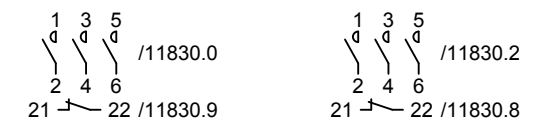
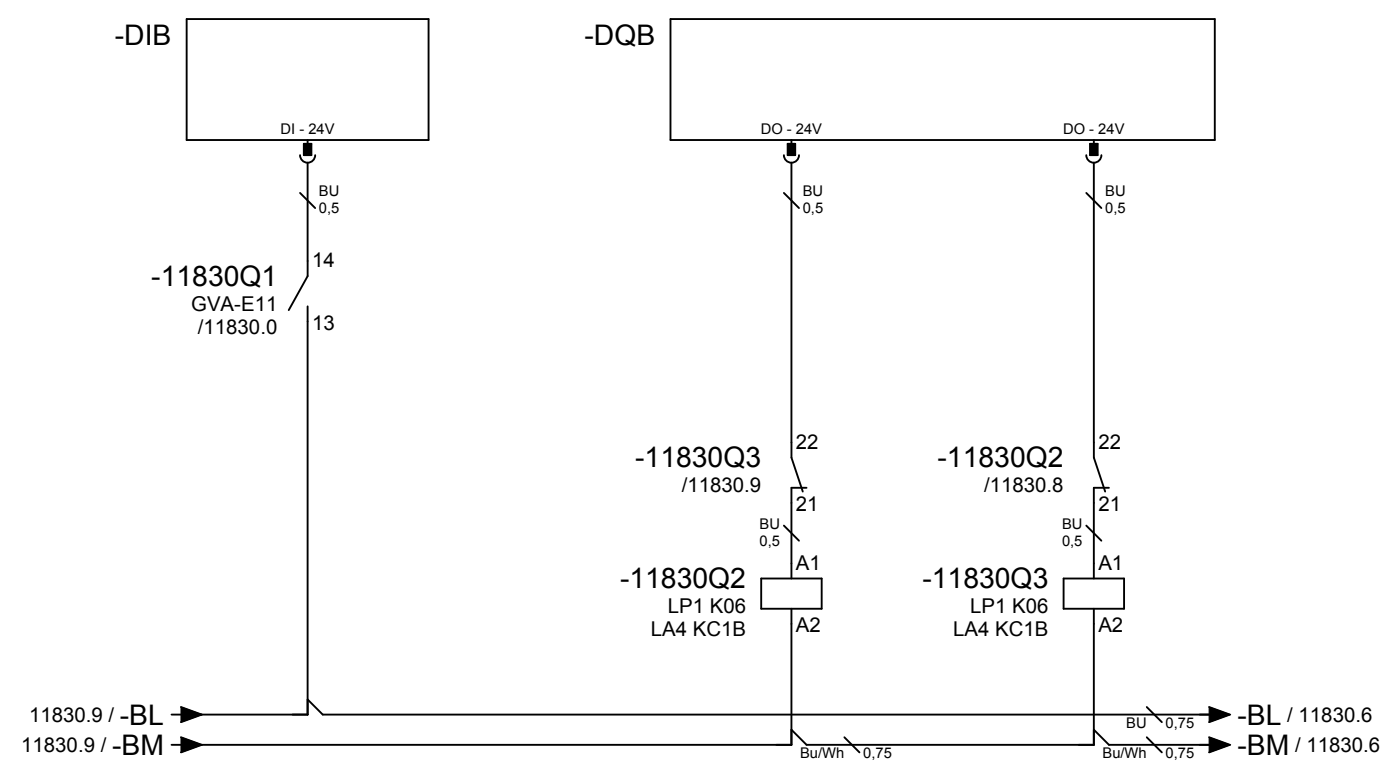
Motor. Contactor.

Motor. Contactor.

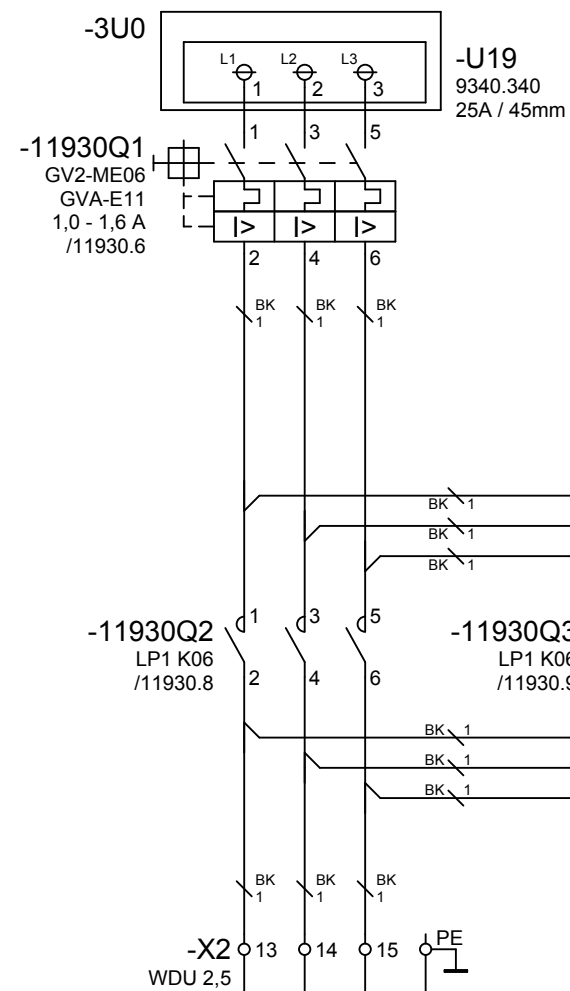


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



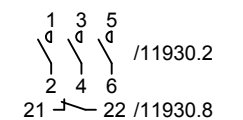
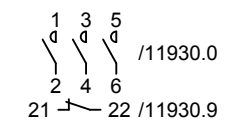
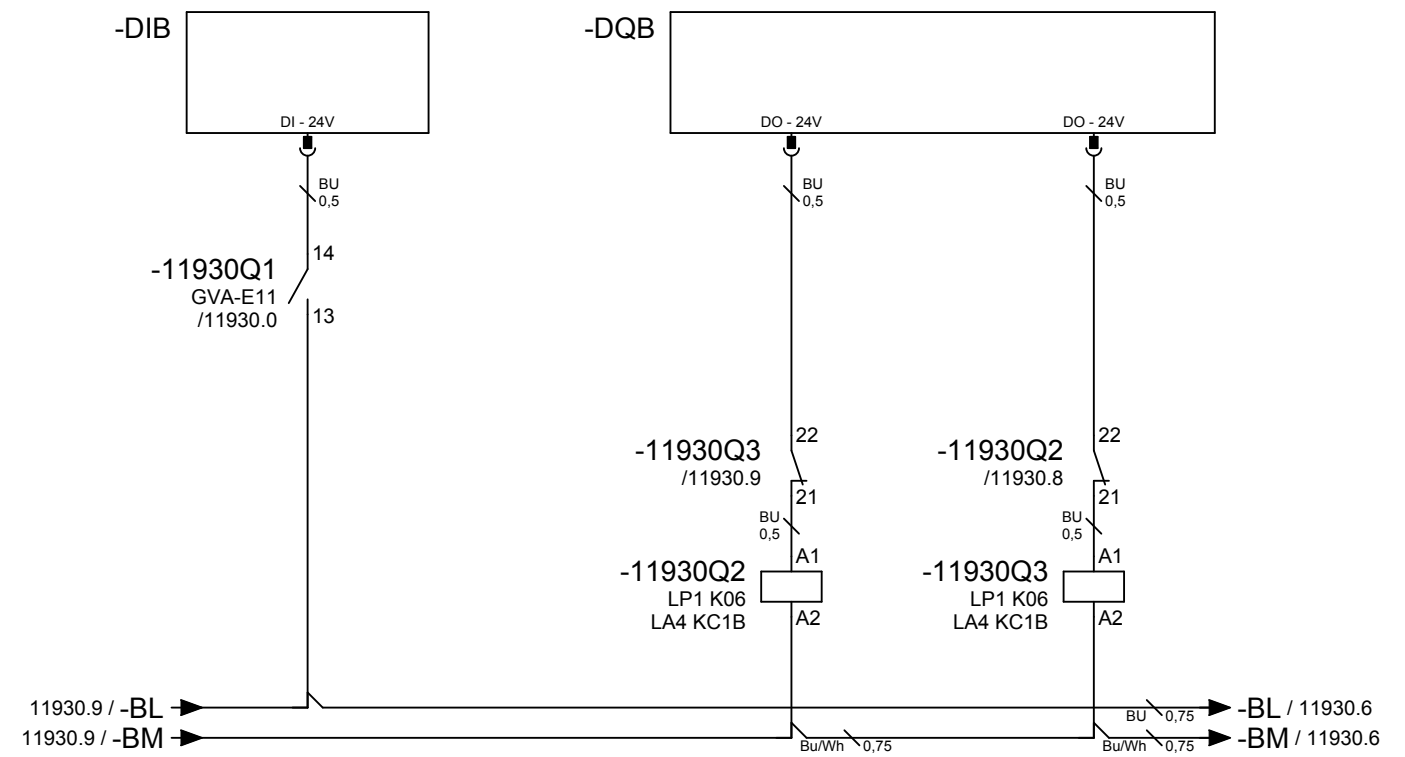
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

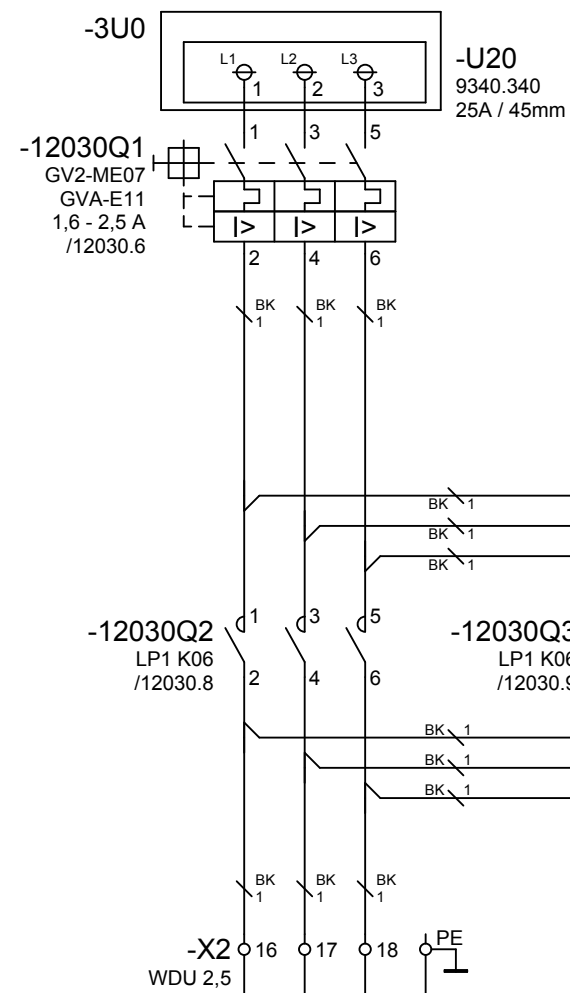
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.



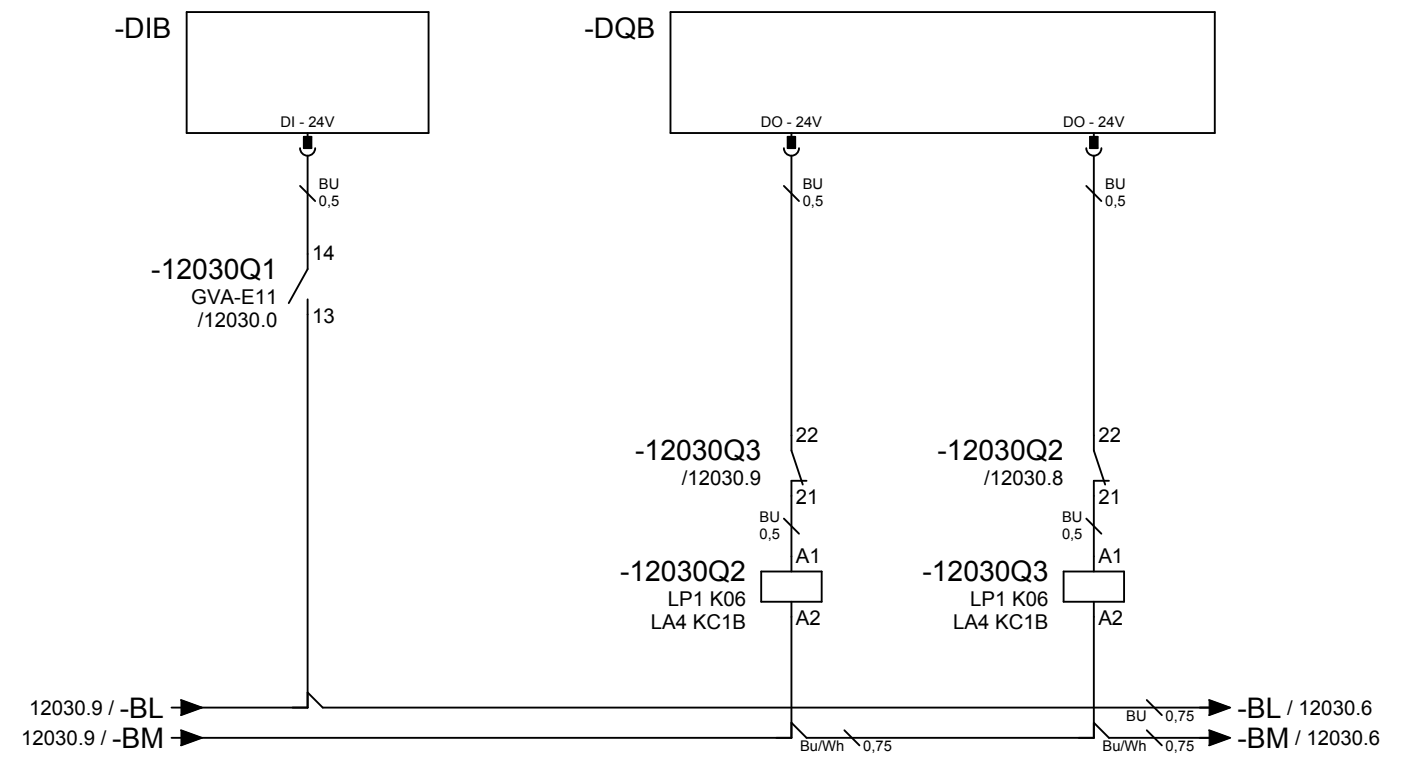
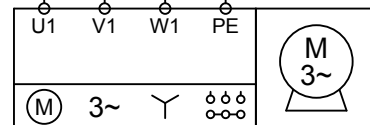
+UBxxxx-12030W6
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

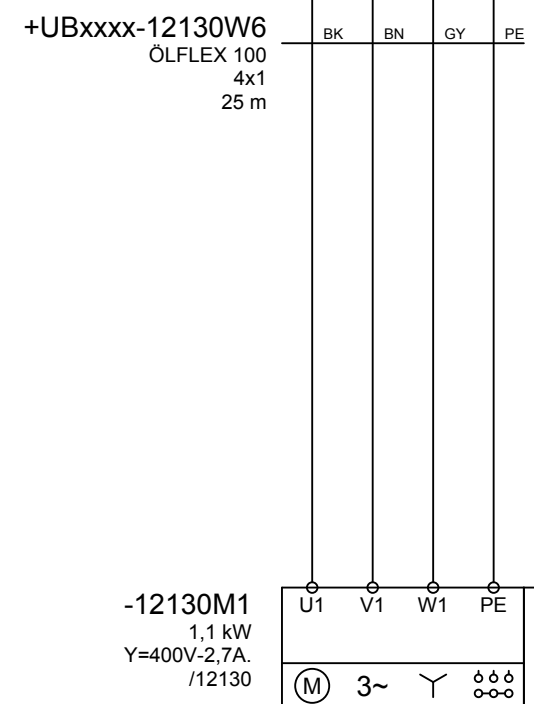
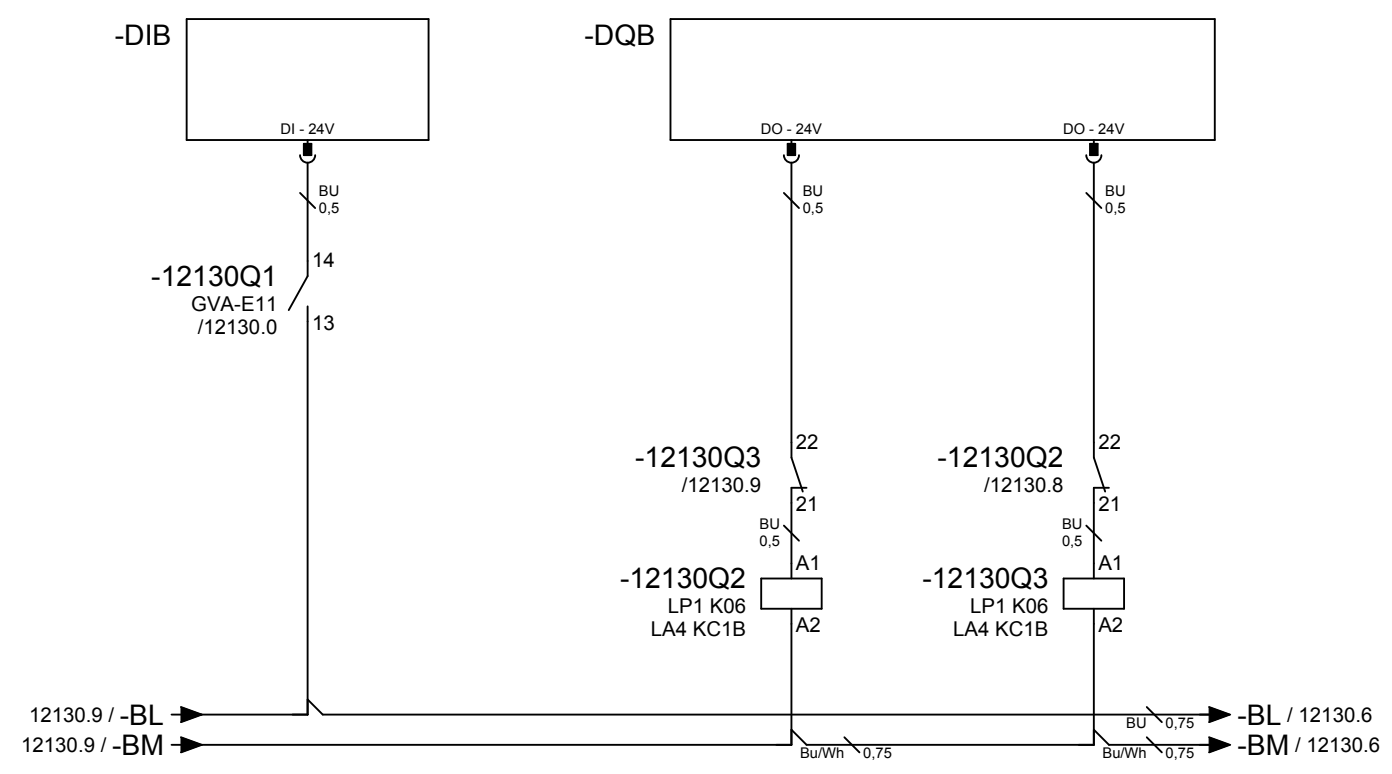
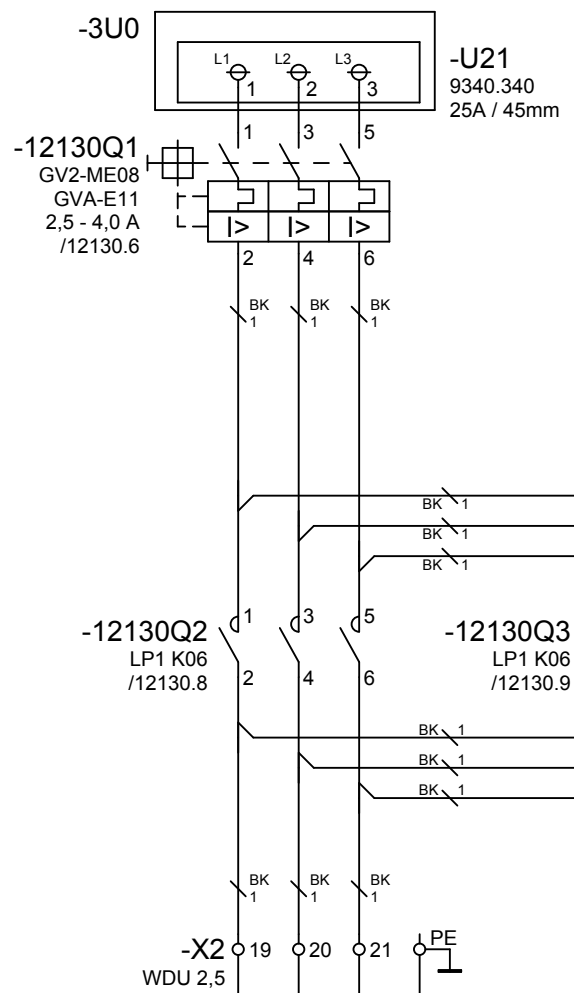
Enclosure B1
 load 1mm² = cca 10,4A; (1,9A = 18,3%)
 loss U at In 0,10V
 loss U at 5xIn 0,48V
 heat losses at In 0,55W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (1,9A = 14,6%)
 loss U at In 0,81V
 loss U at 5xIn 4,04V
 heat losses at In 4,6W (L=3x25m)

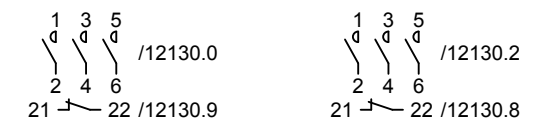


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

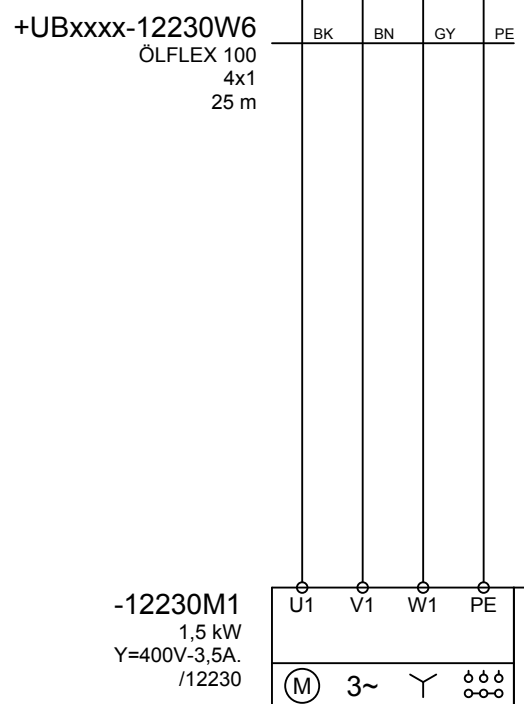
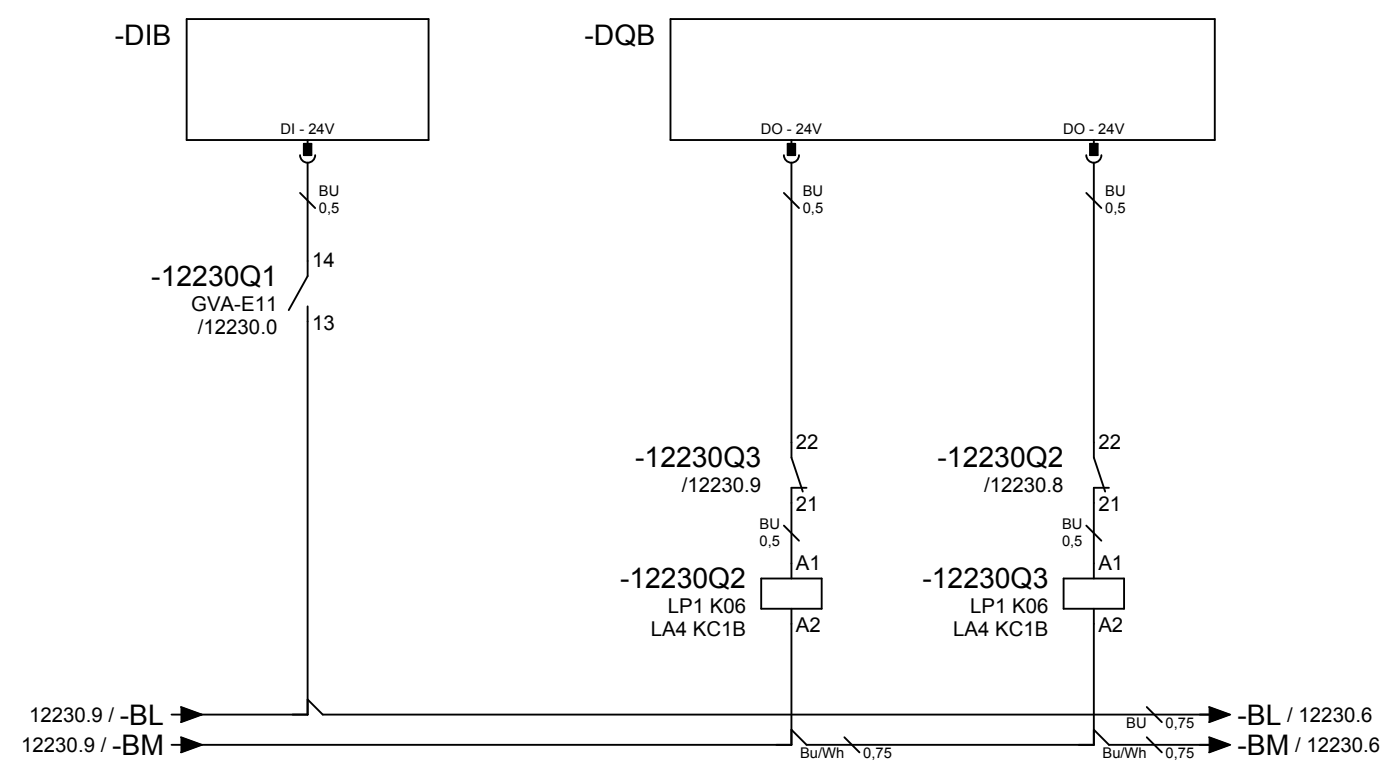
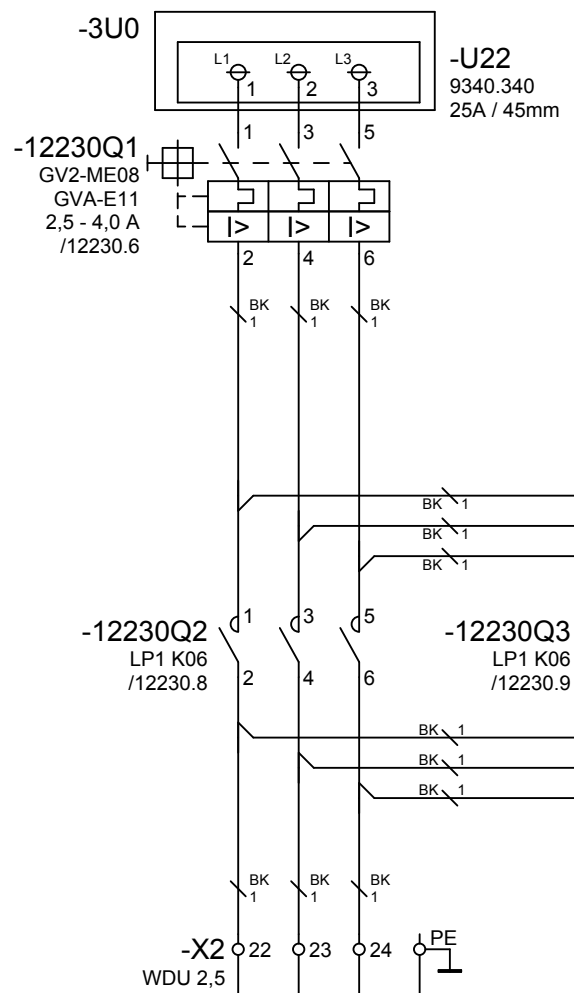


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...

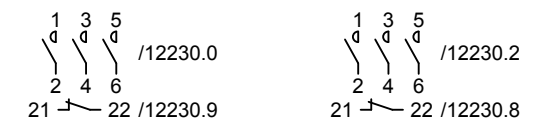


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

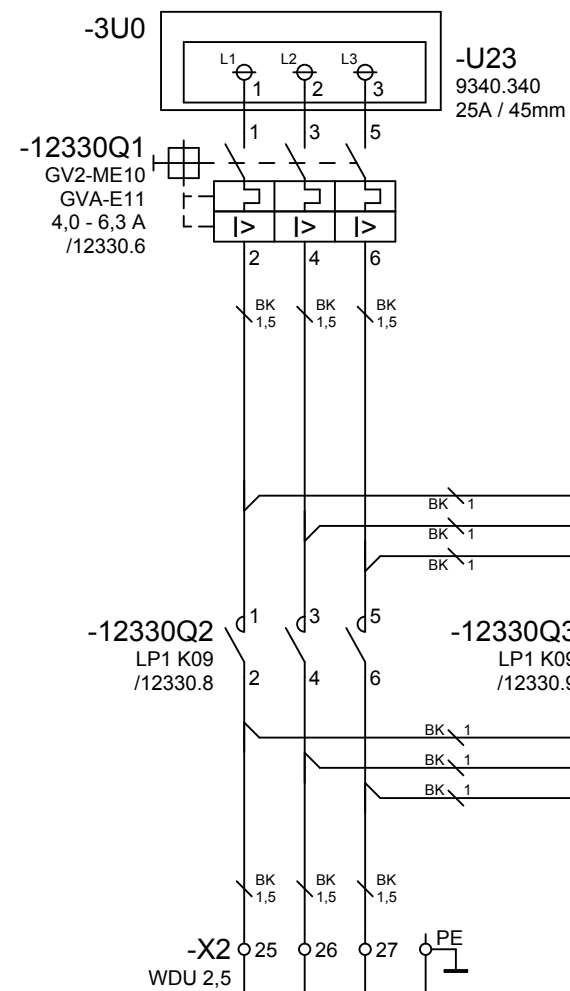


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

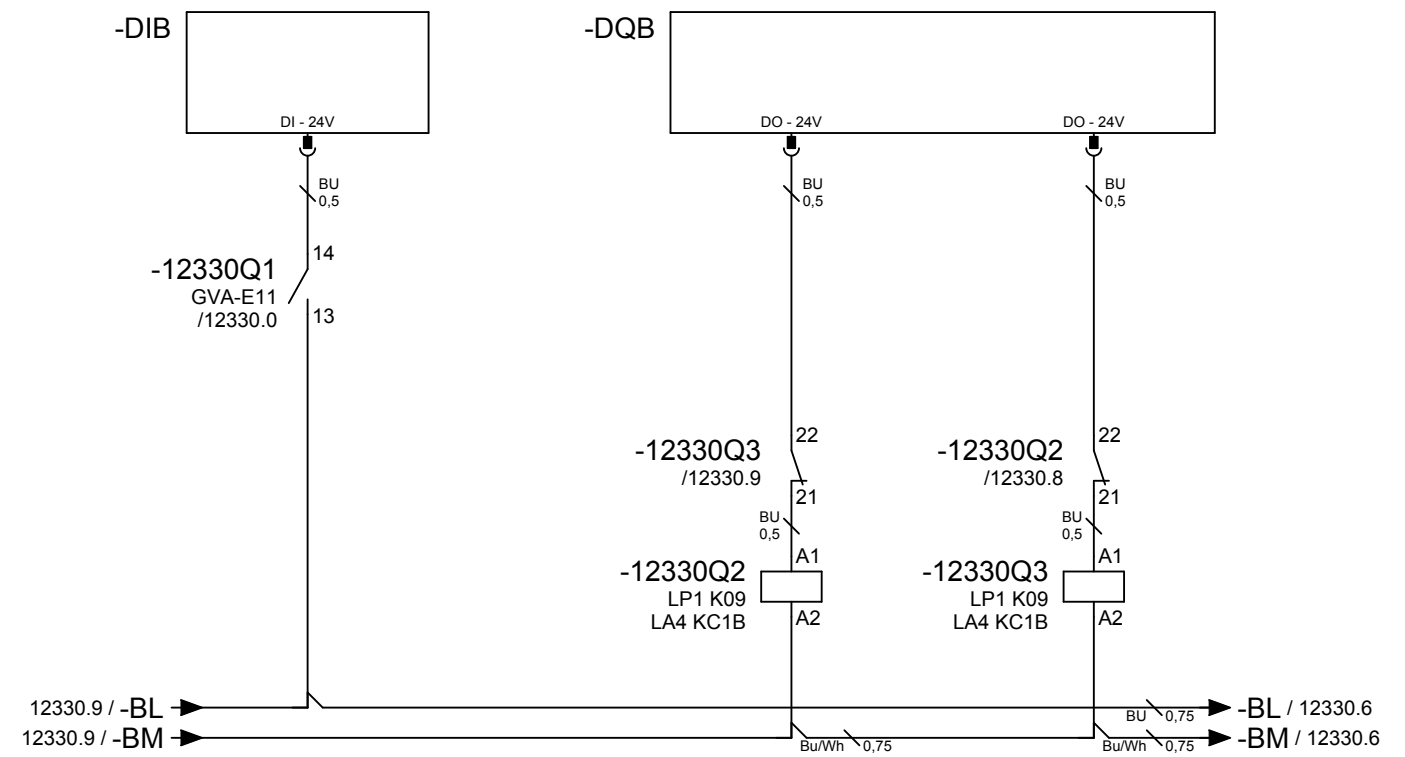


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

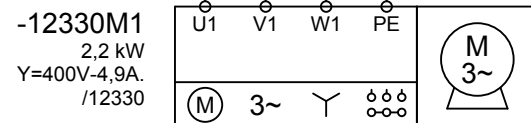
Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 50kA at 415V

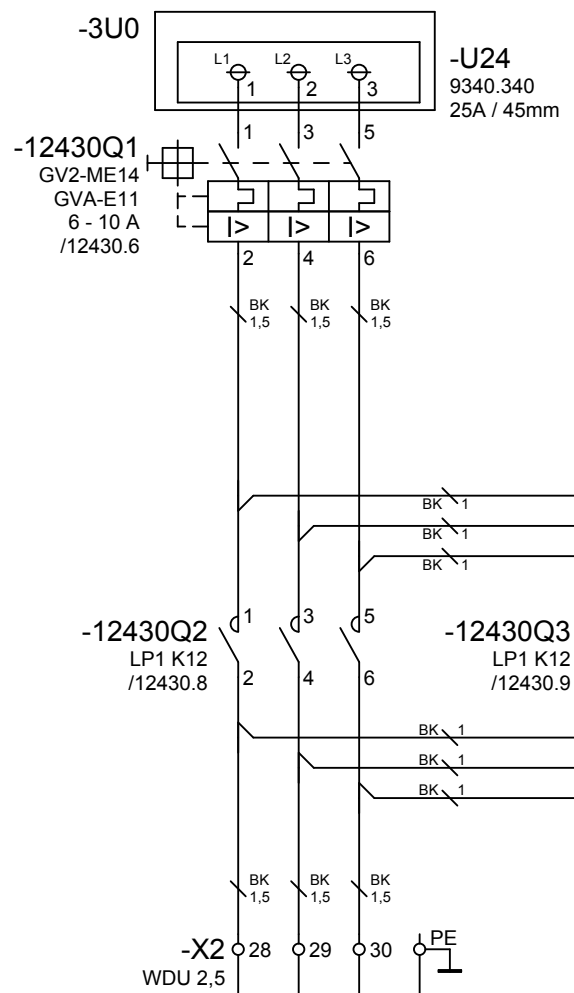
Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)



+UBxxx-12330W6
 ÖLFLEX 100
 4x1,5
 25 m

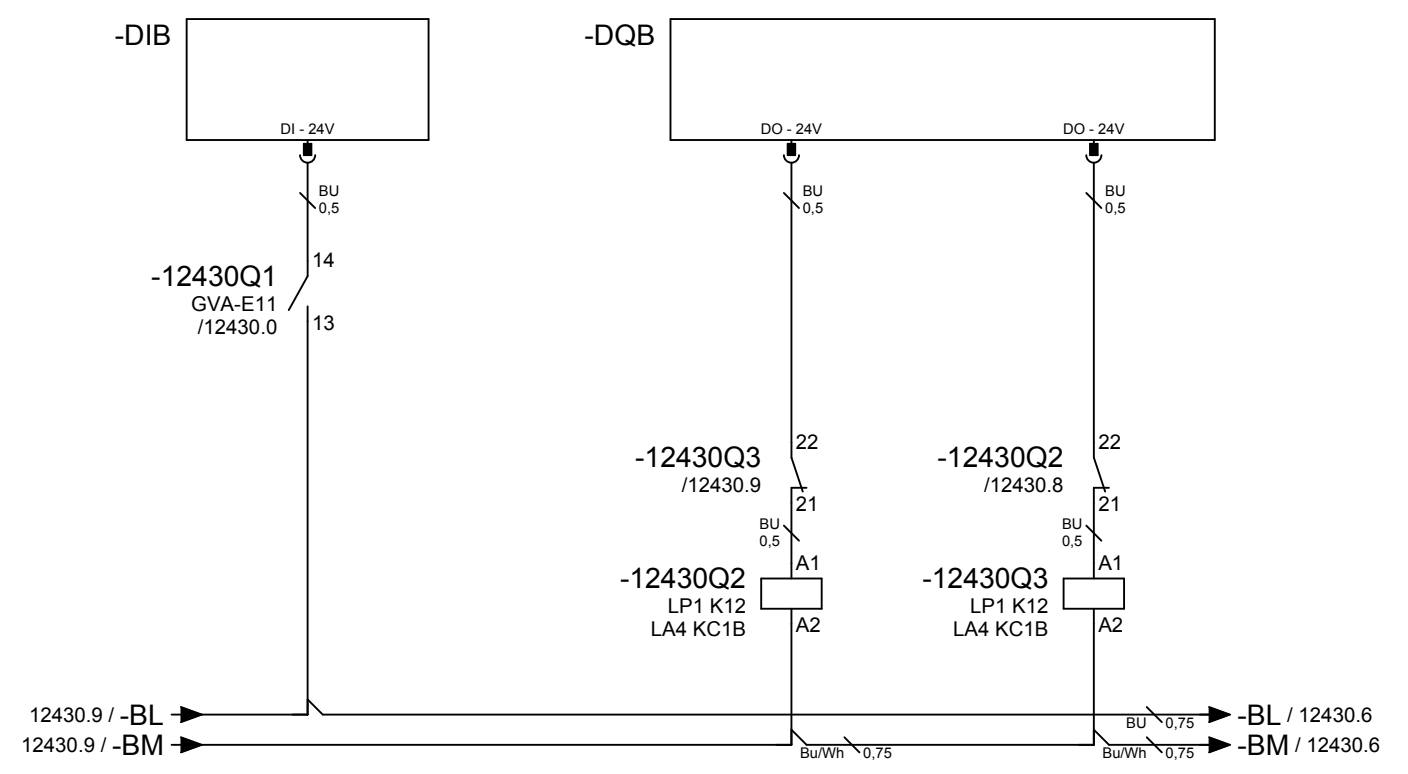


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

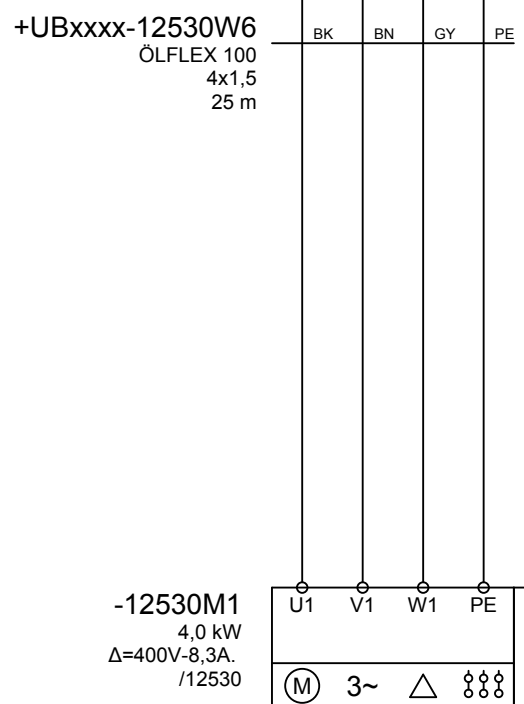
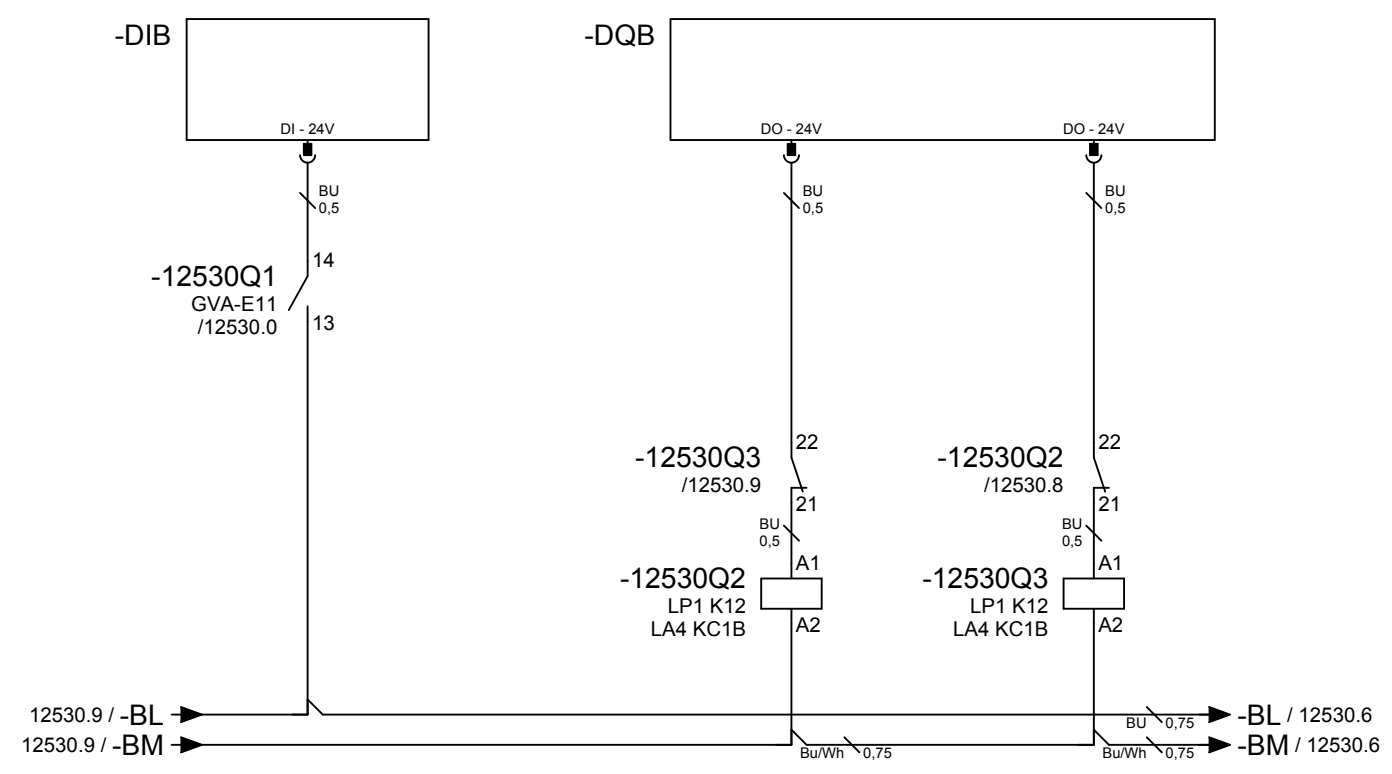
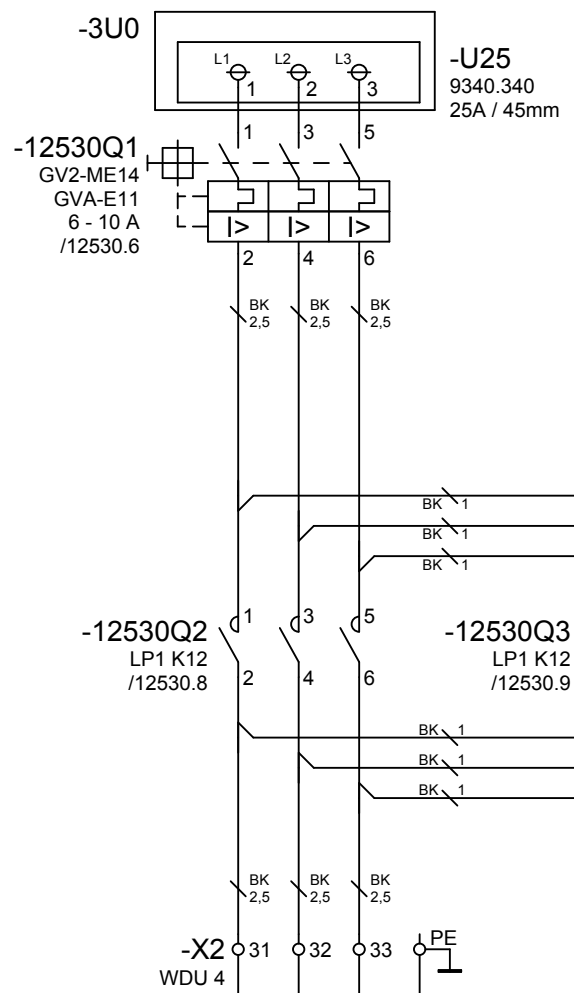


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...

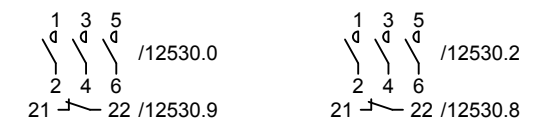


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

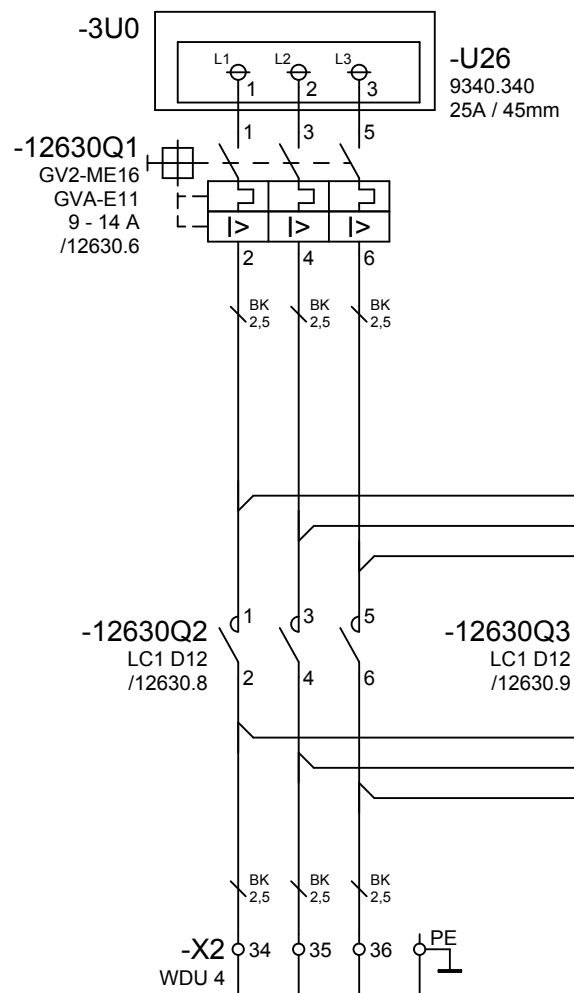


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
...	...

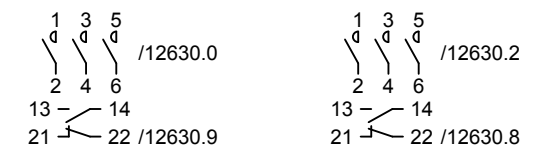
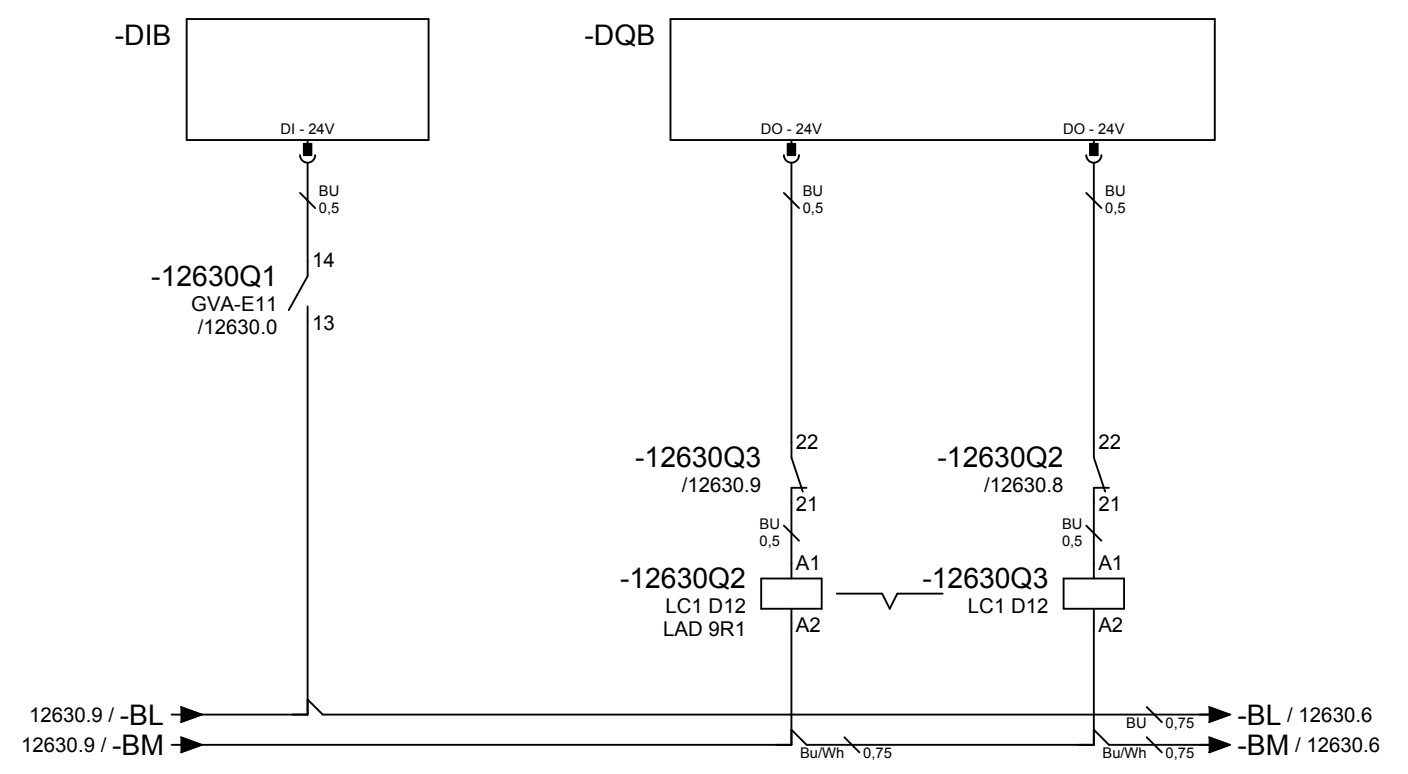


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

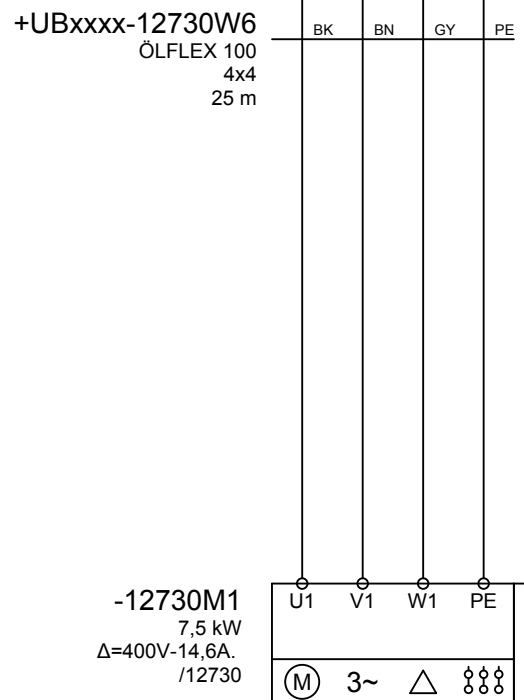
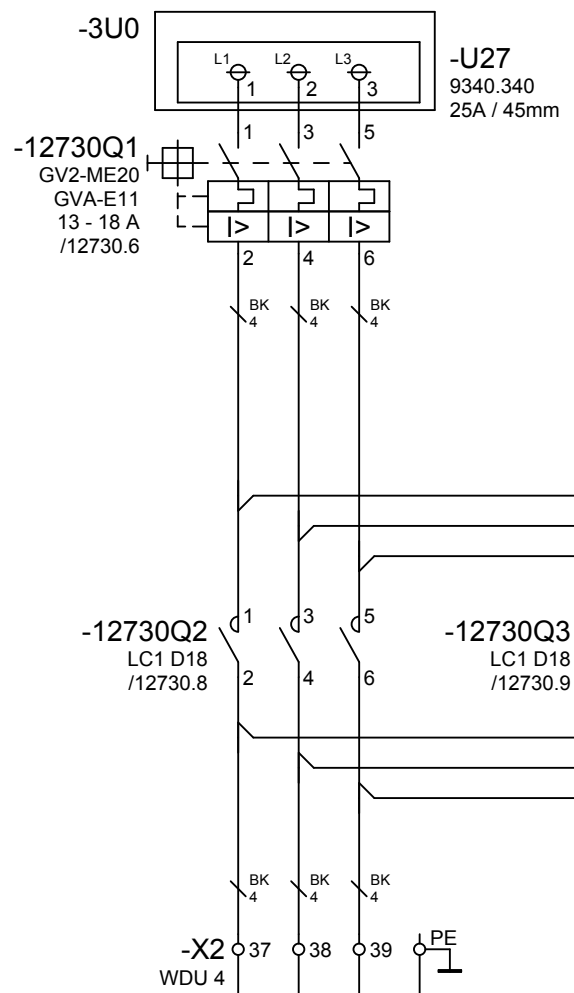


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (11A = 60,1%)
loss U at In	0,22V
loss U at 5xIn	1,12V
heat losses at In	7,41W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	2,5mm ² = cca 25,0A; (11A = 44,0%)
loss U at In	1,87V
loss U at 5xIn	9,35V
heat losses at In	61,7W (L=3x25m)
...	...
...	...

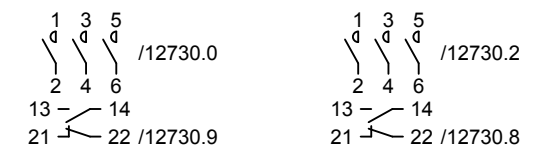
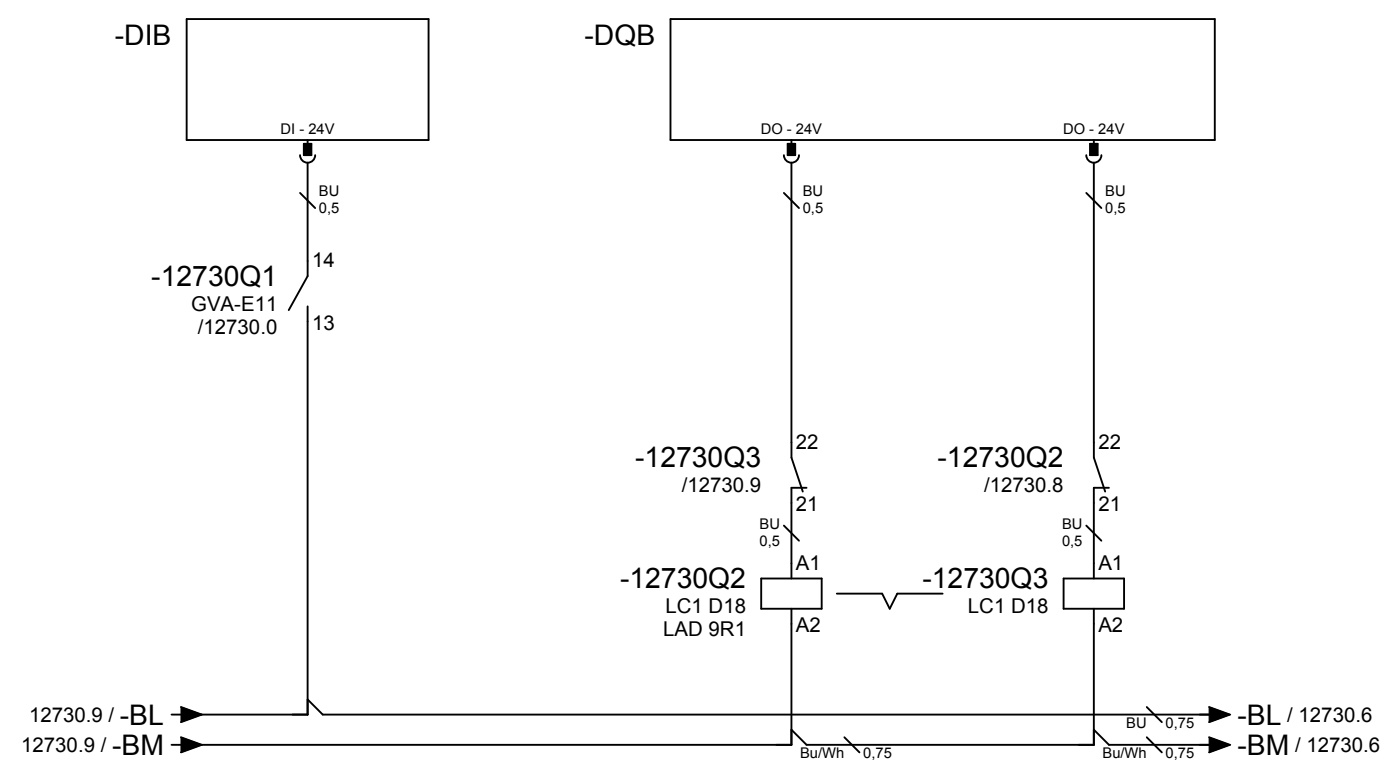


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

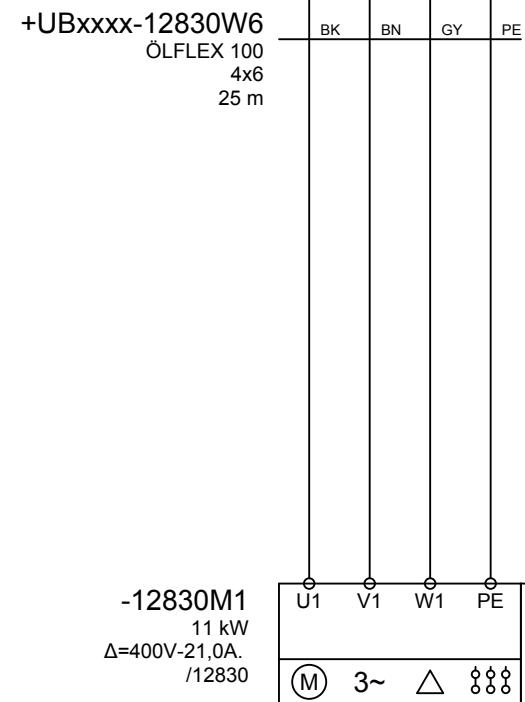
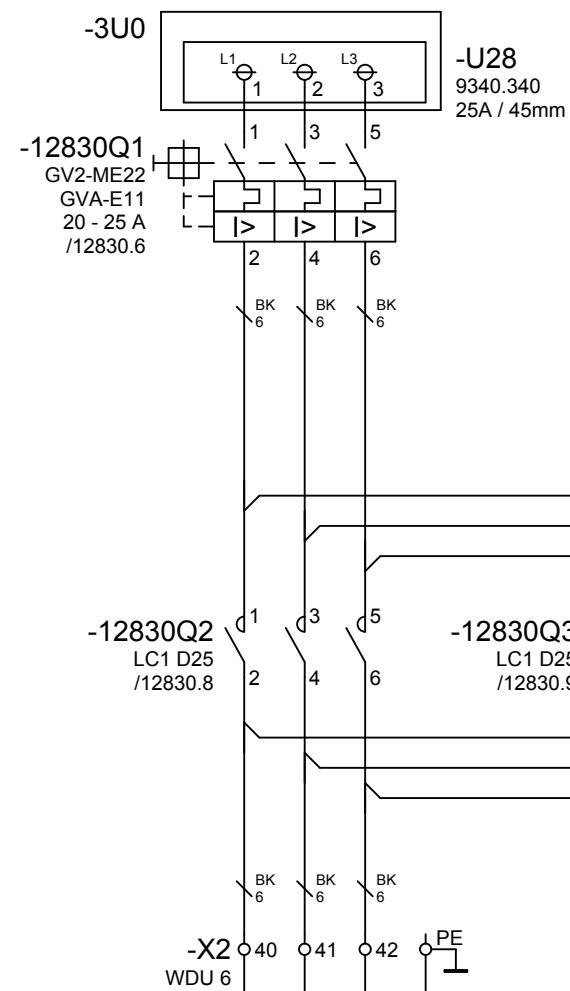


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	15kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

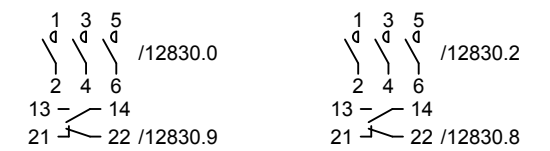
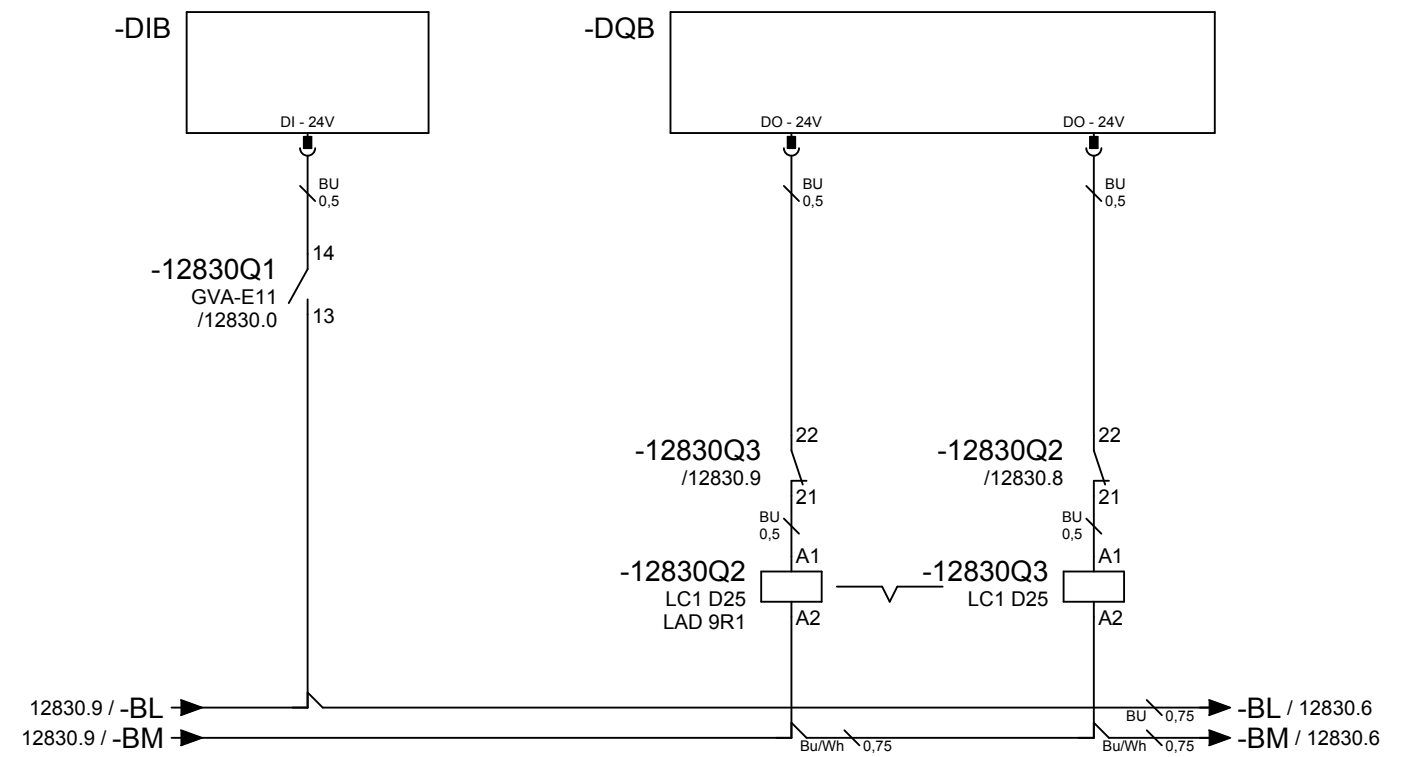


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 15kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

0

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11099

=GV2ME_C1+R_60_Reverz/99999



PACK 31. Motors.
TISKO spol. s r. o.

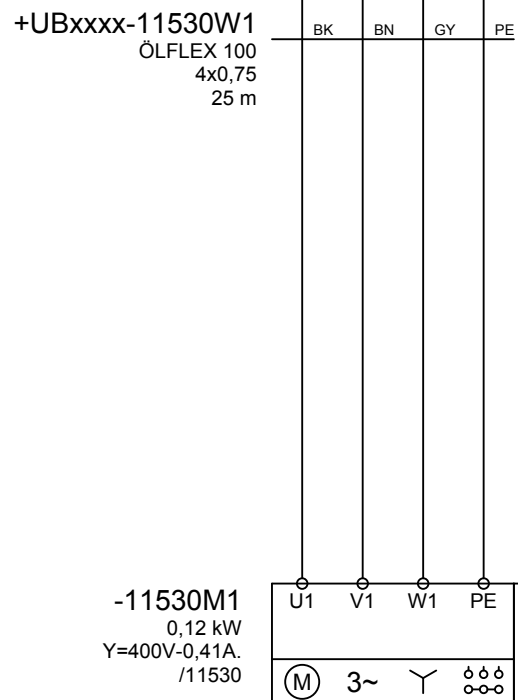
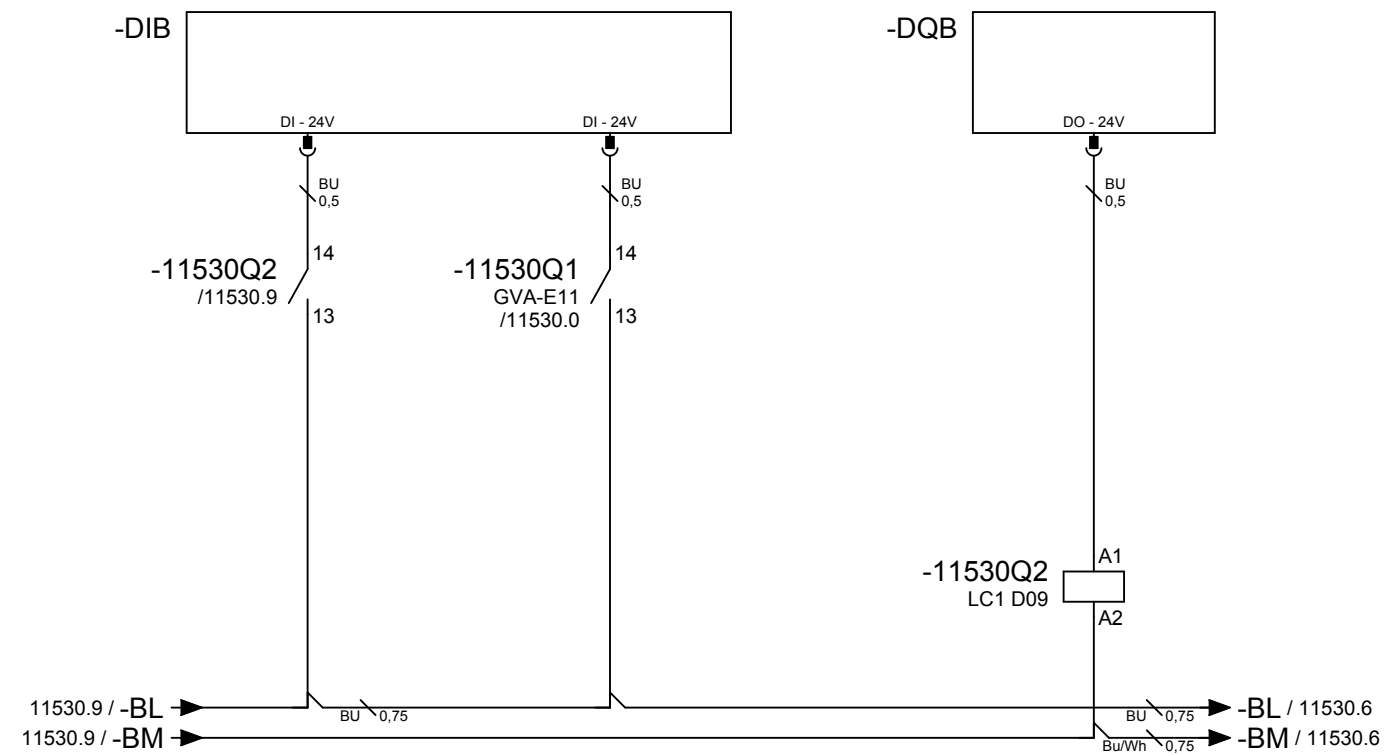
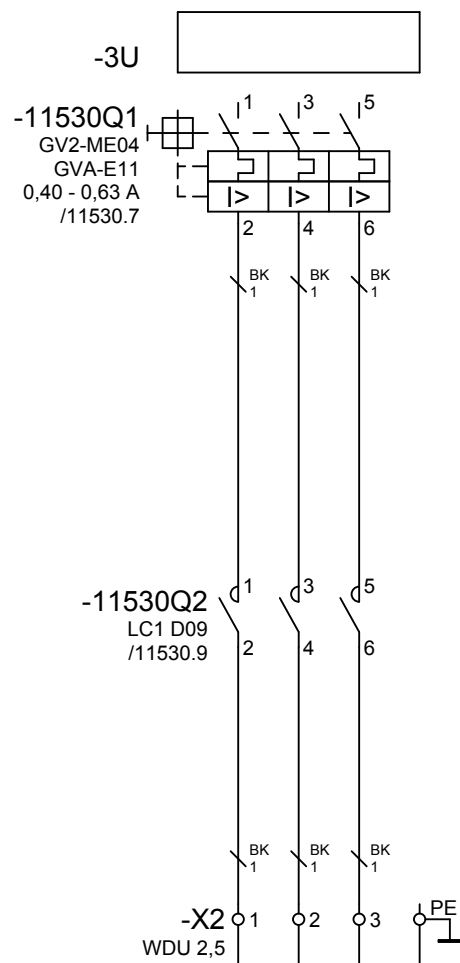
Type 2 coordination.
2018

Creator	V00	01.02.2012	Ing. Tisovčík Ivan
Last revision of project			
Last revision of page			
M = 1 : 1	Grafika	21.10.2018	WUP0U34409

= GV2ME_C2

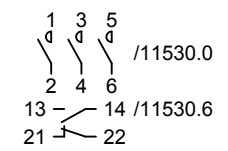
+ GV2

11000



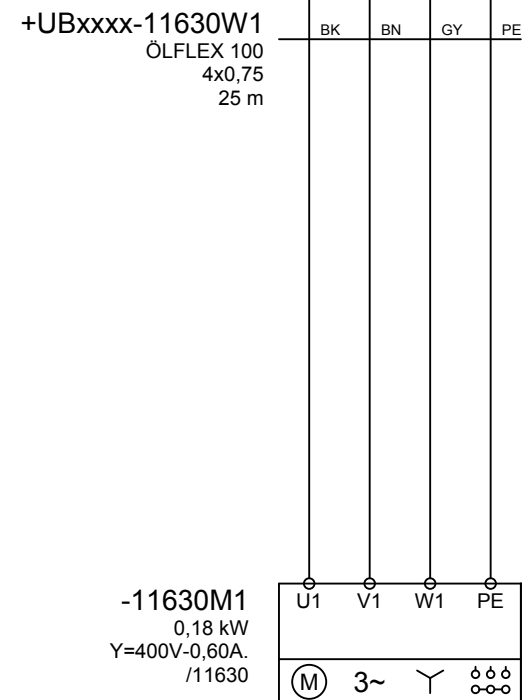
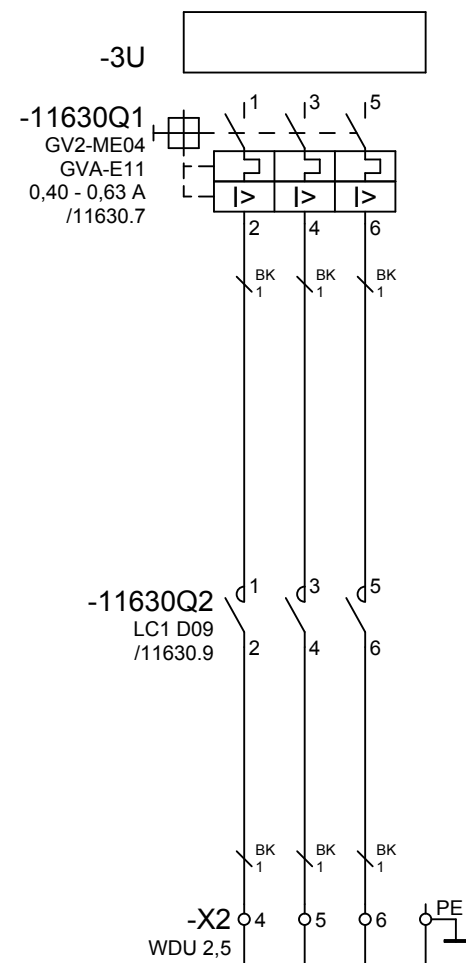
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors.	0,12kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2ME_C2
	TISKO spol. s r. o.	2018	Last revision of project	+ GV2 11530
			Last revision of page	
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	

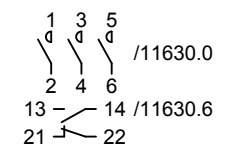
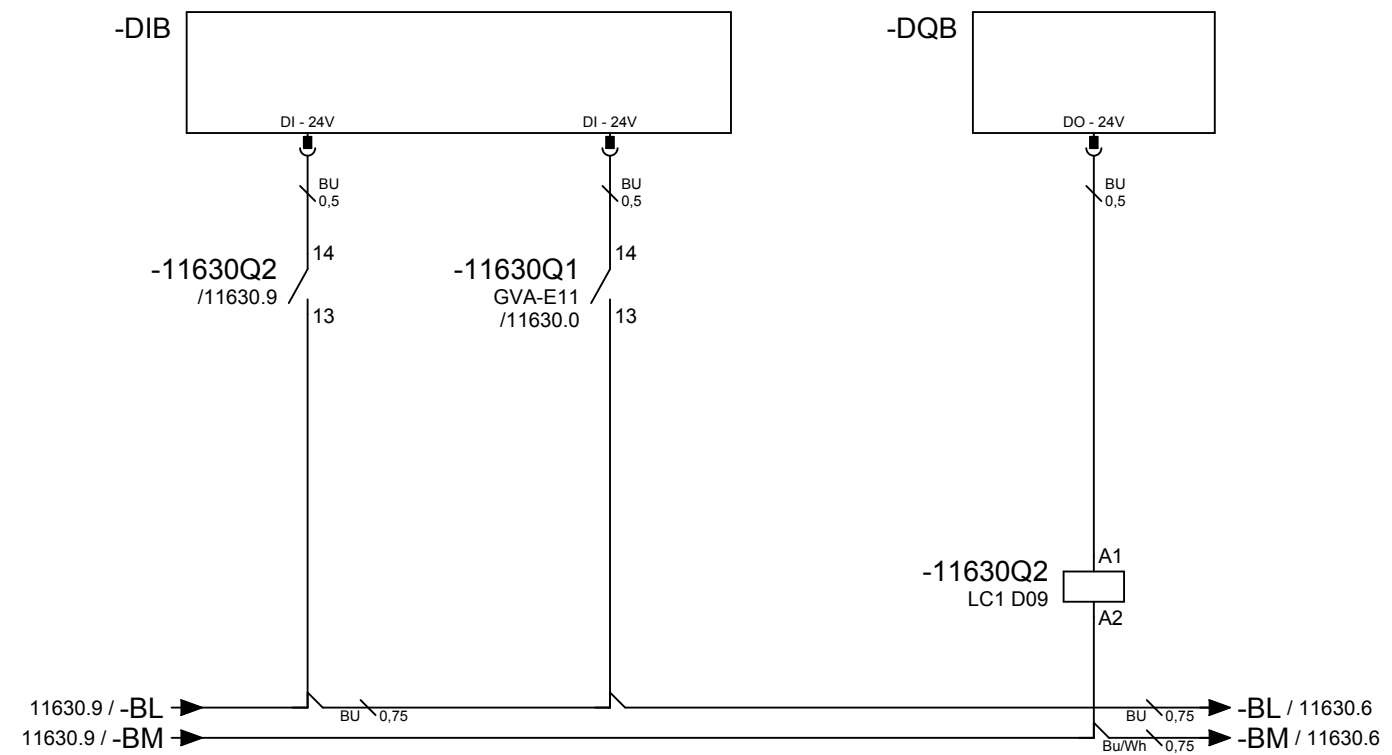


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

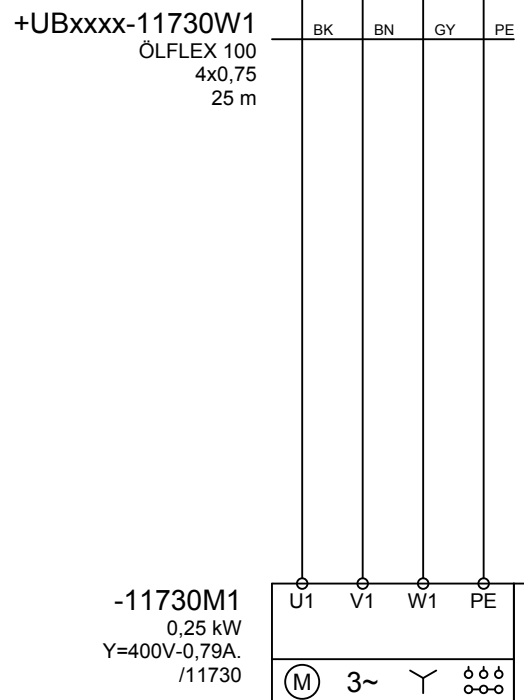
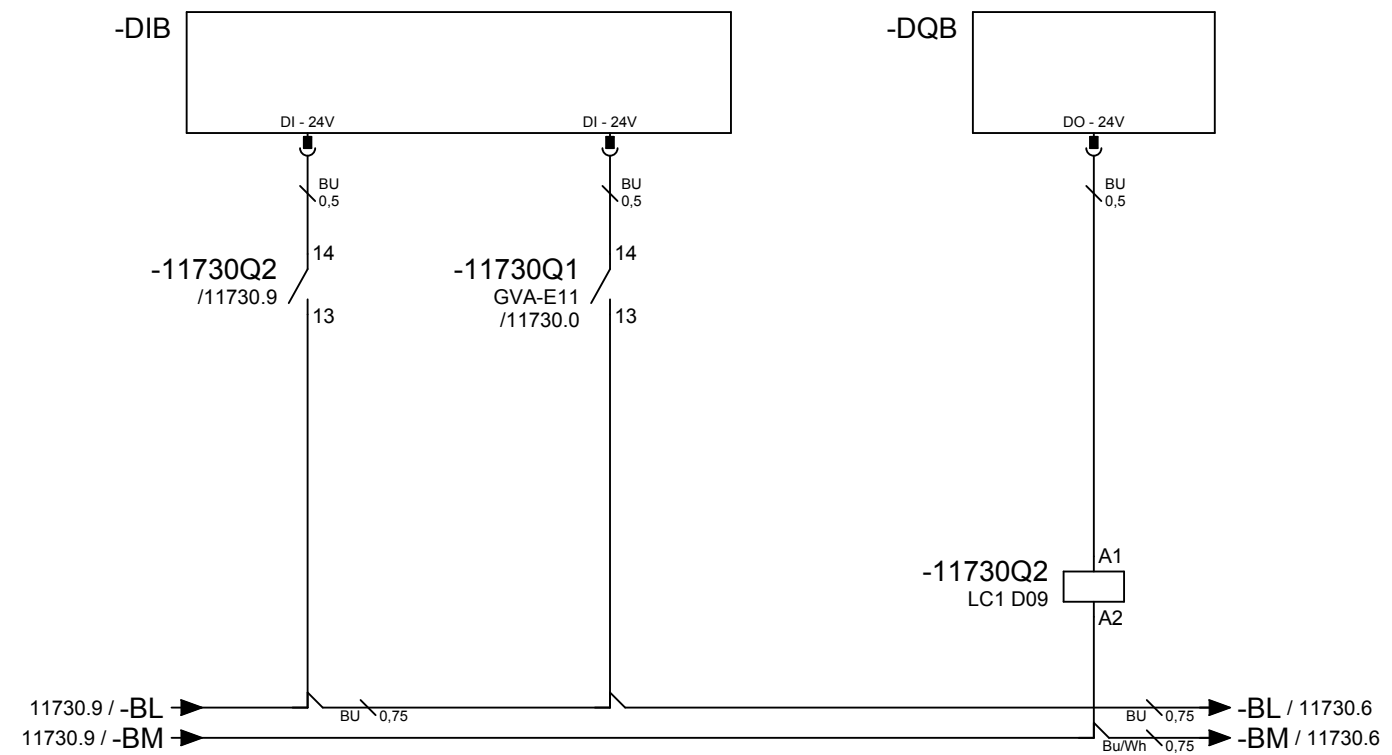
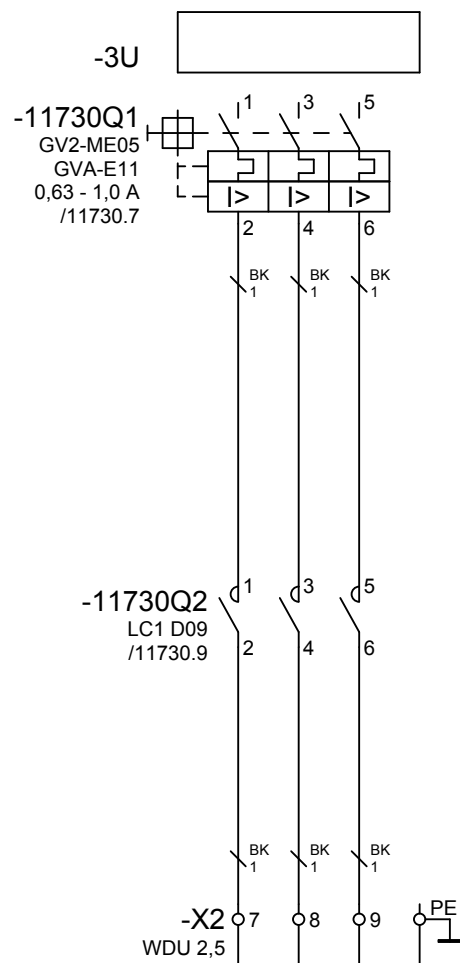
Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)

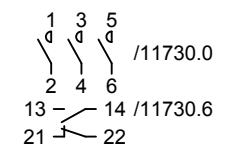


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

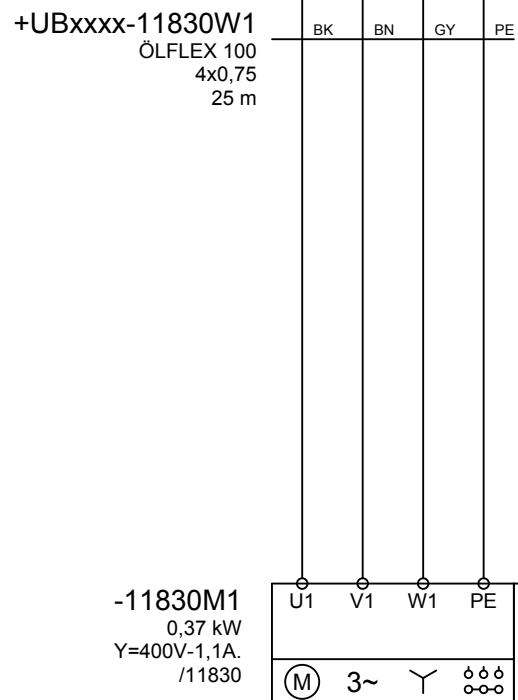
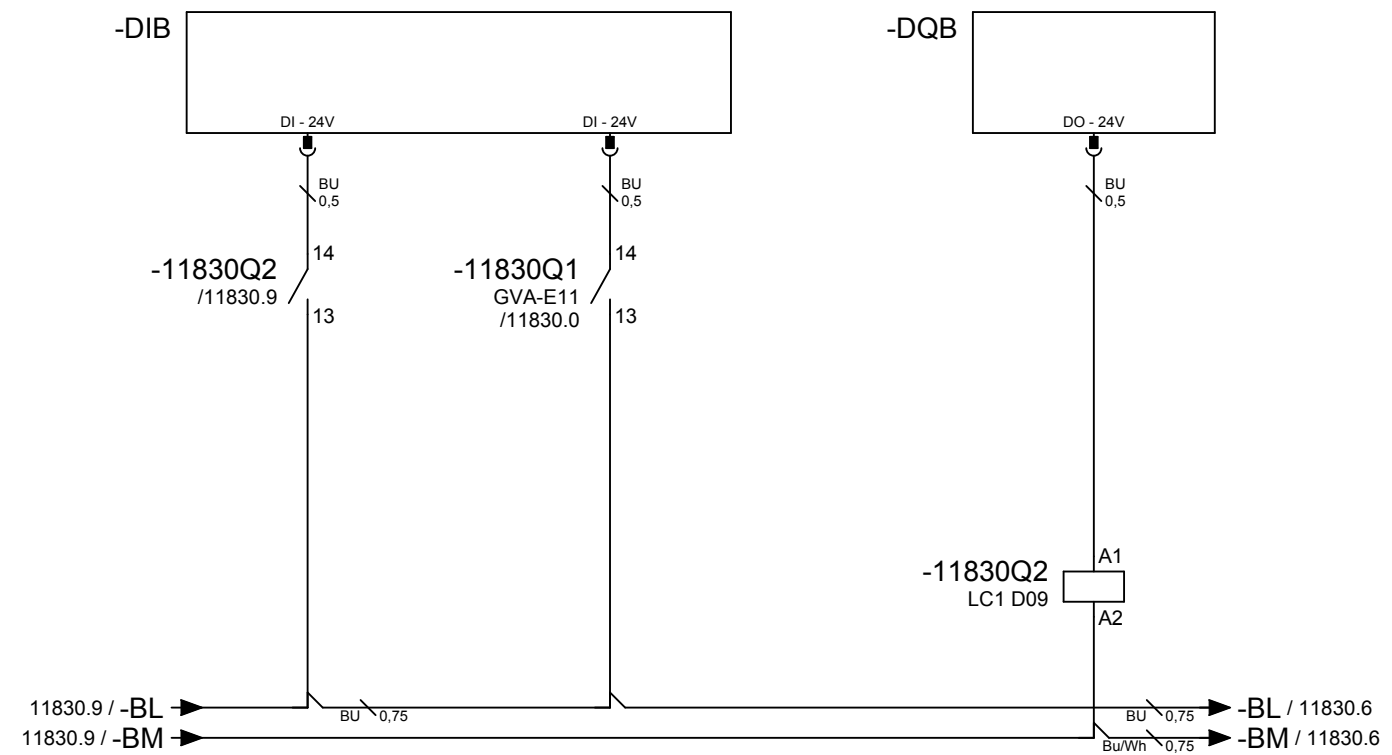
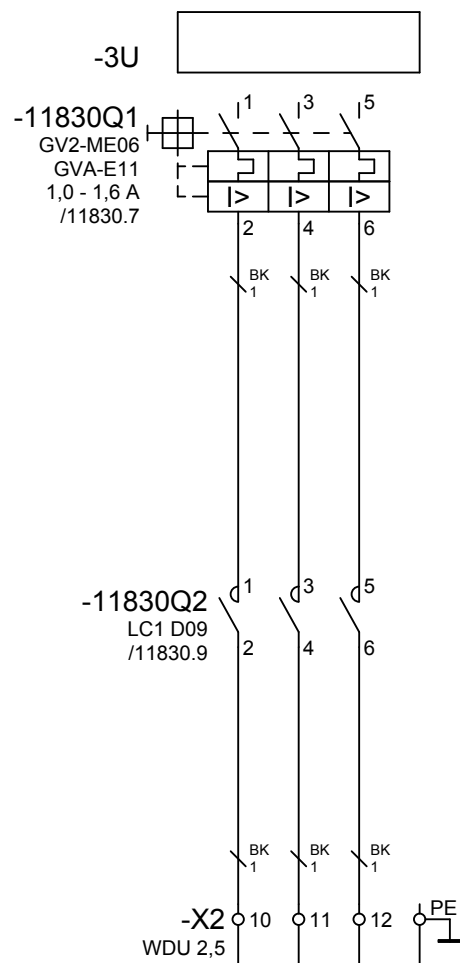


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...

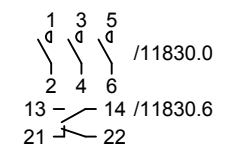


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

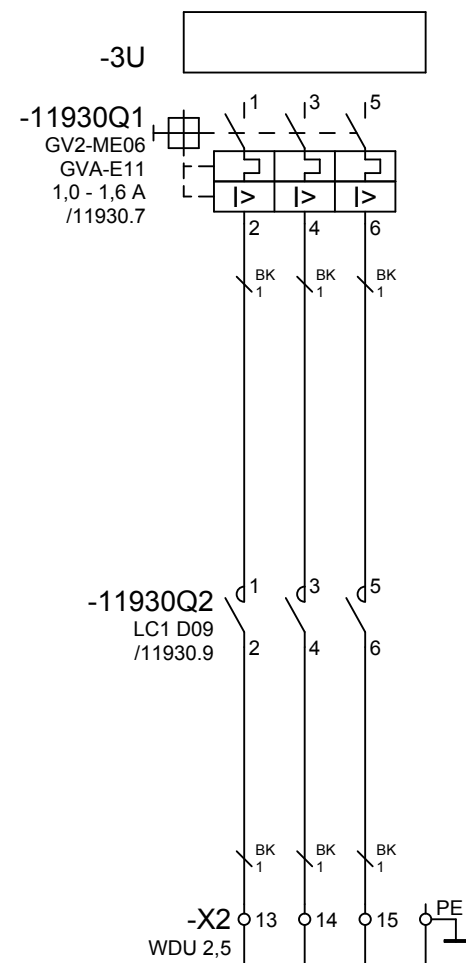


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

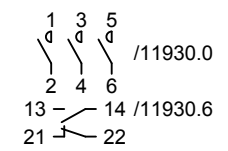
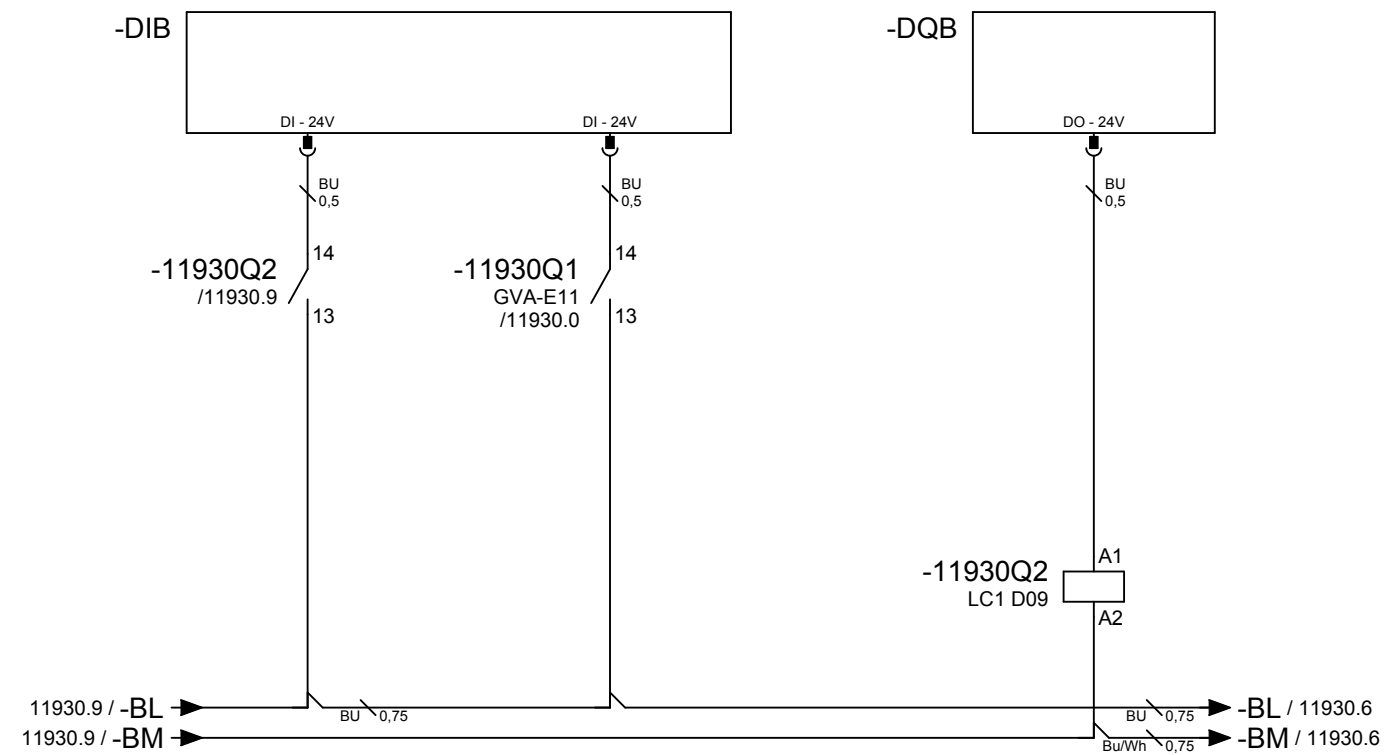
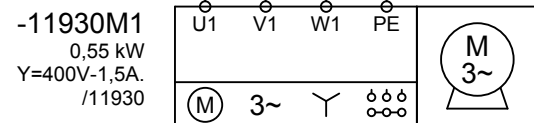


+UBxxx-11930W1
ÖLFLEX 100
4x0,75
25 m

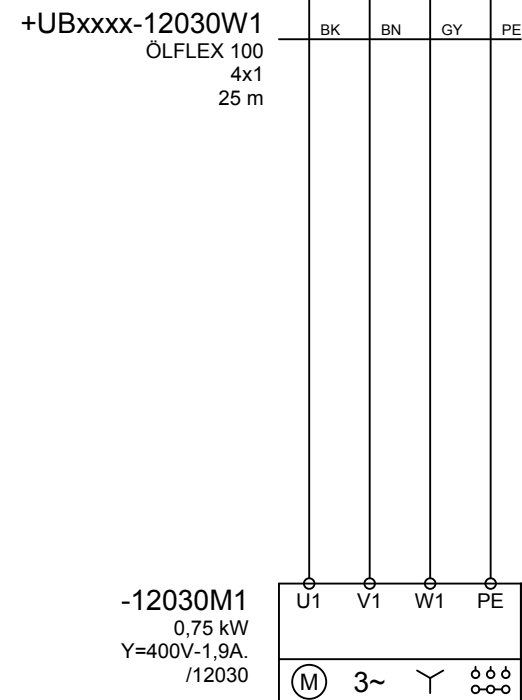
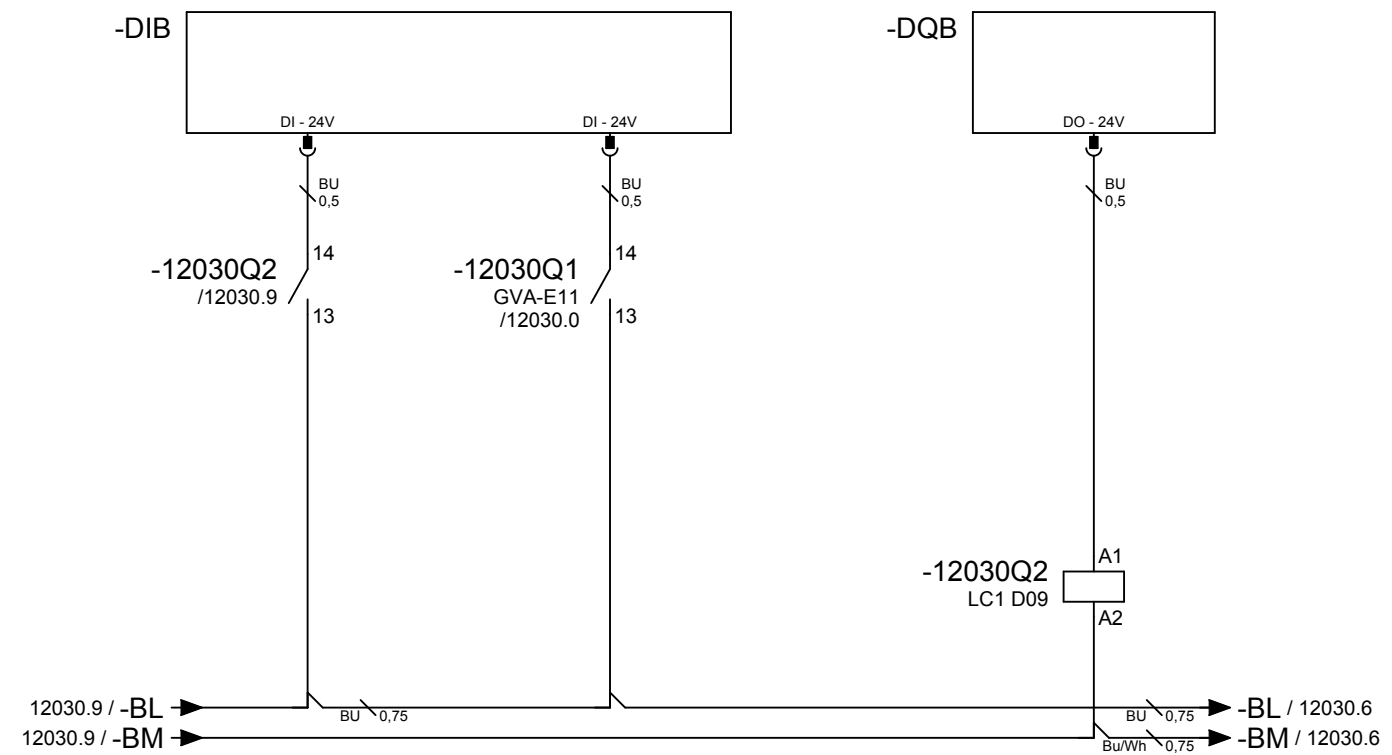
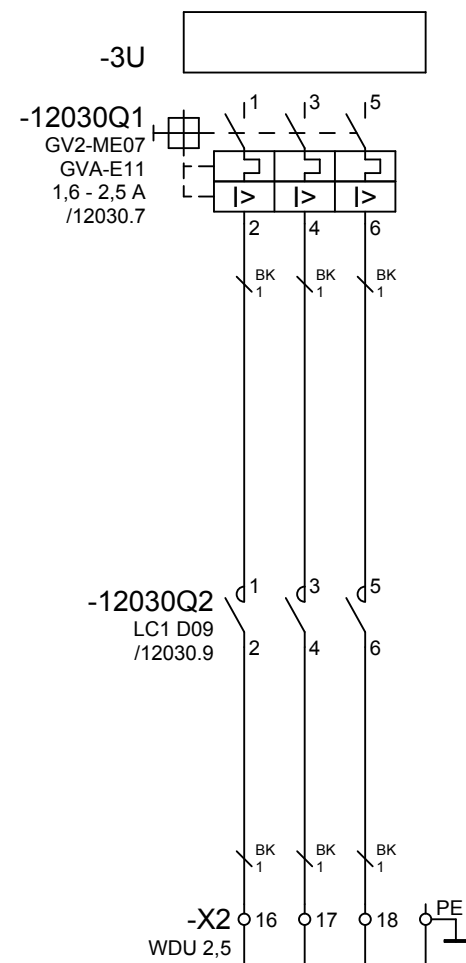
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (1,5A = 14,4%)
loss U at In 0,08V
loss U at 5xIn 0,38V
heat losses at In 0,34W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
loss U at In 0,85V
loss U at 5xIn 4,25V
heat losses at In 3,8W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

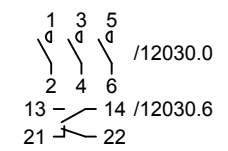


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,9A = 18,3%)
 loss U at In 0,10V
 loss U at 5xIn 0,48V
 heat losses at In 0,55W (L=3x3m)

 short circuit resistance 130kA at 415V

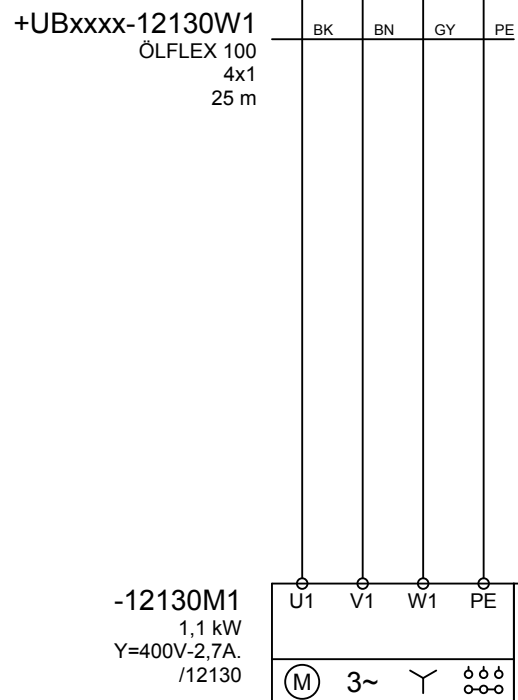
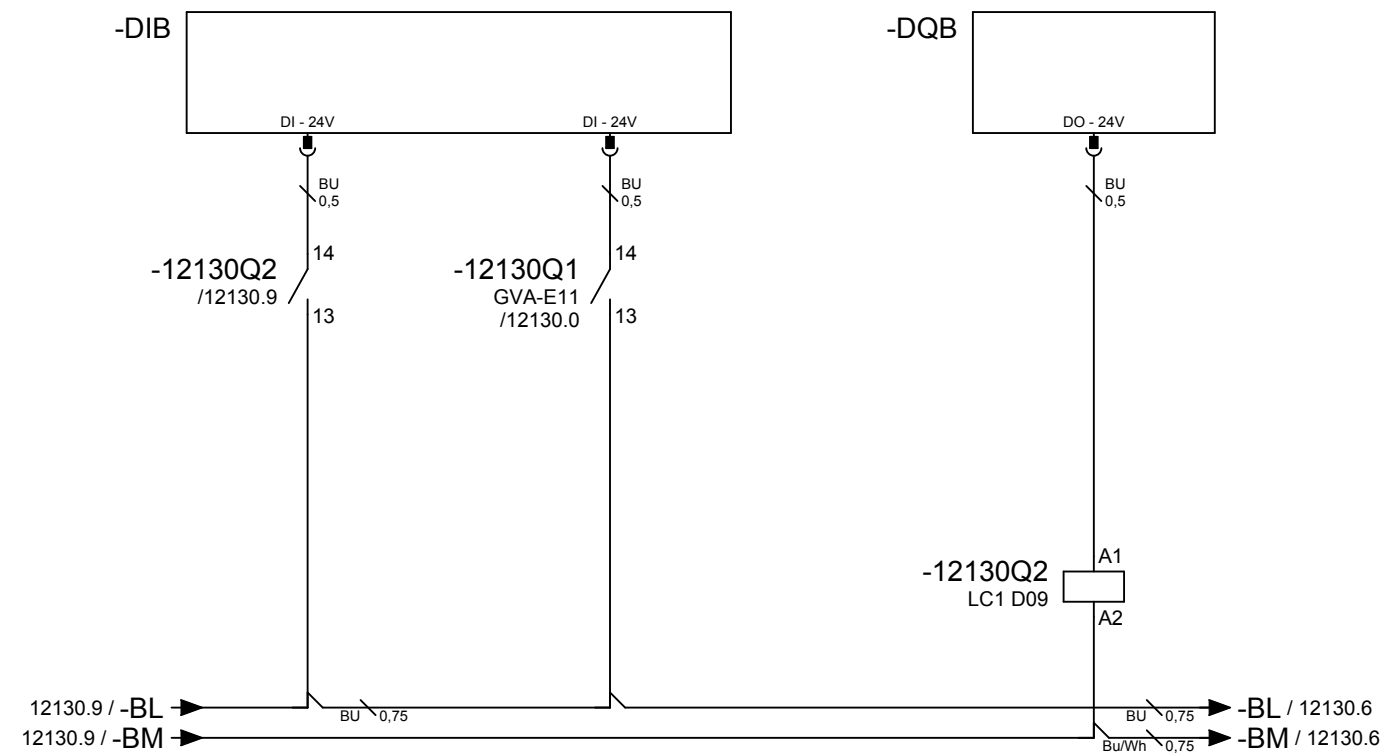
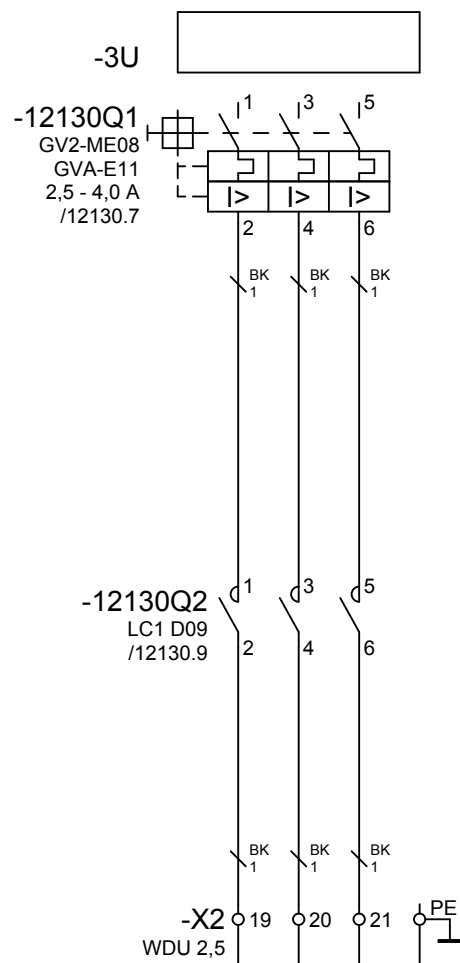
Cable route E
 load 1mm² = cca 13,0A; (1,9A = 14,6%)
 loss U at In 0,81V
 loss U at 5xIn 4,04V
 heat losses at In 4,6W (L=3x25m)



Contactor.
1=Switched ON.

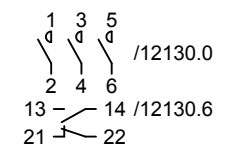
Circuit
breaker. 0=Failure.

Motor.
Contactor.

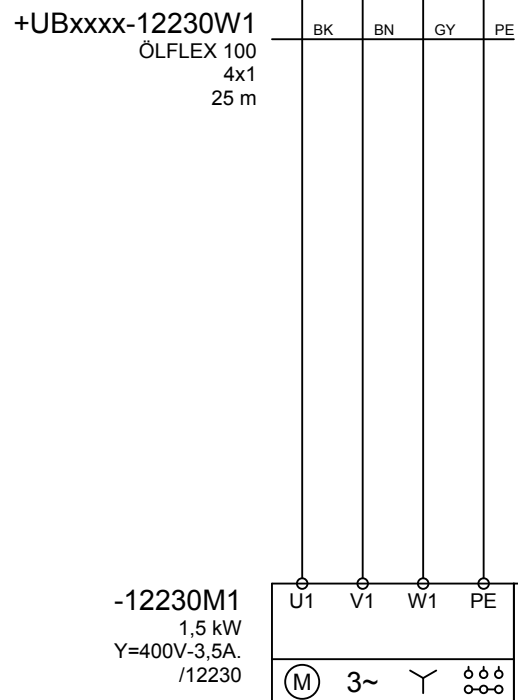
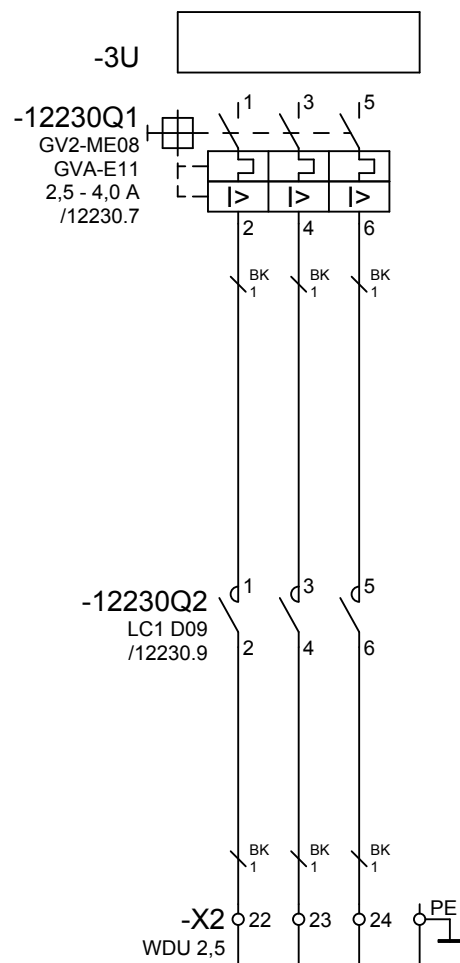


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...

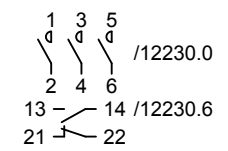
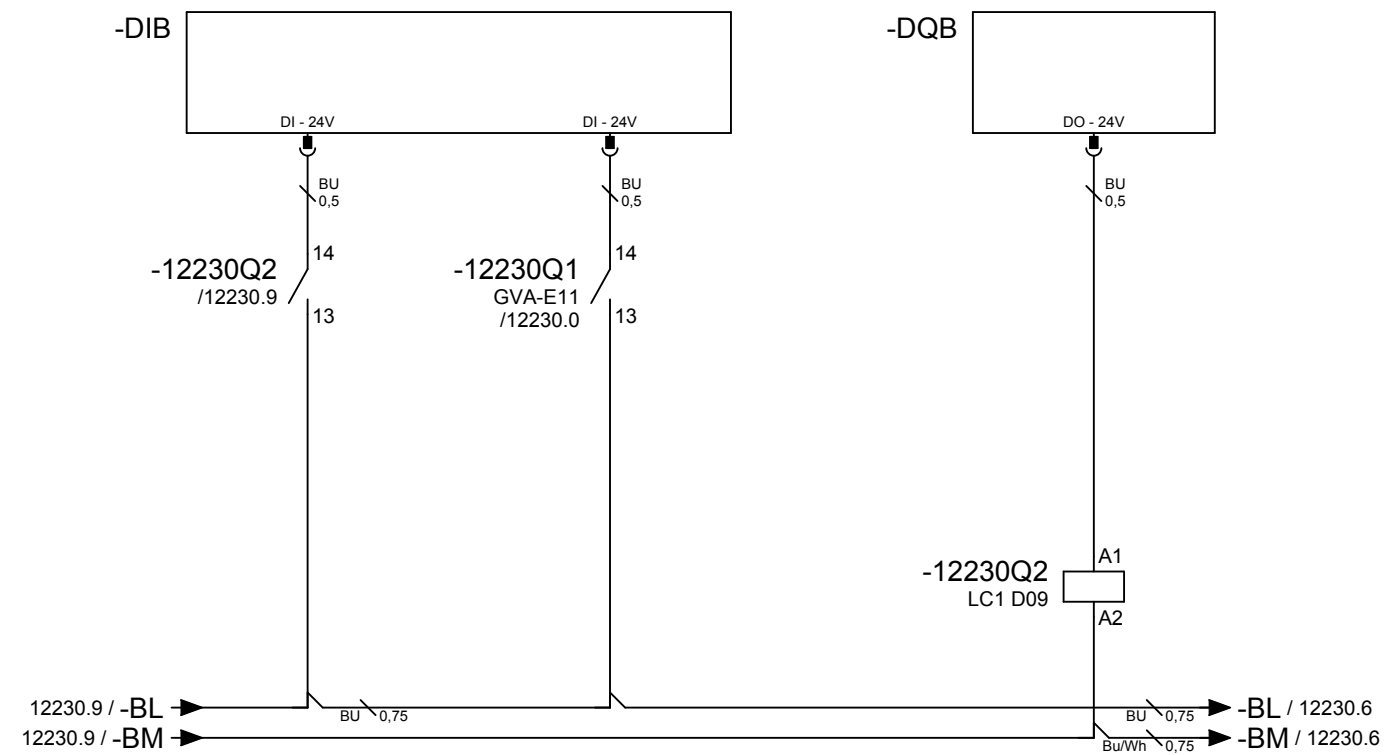


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

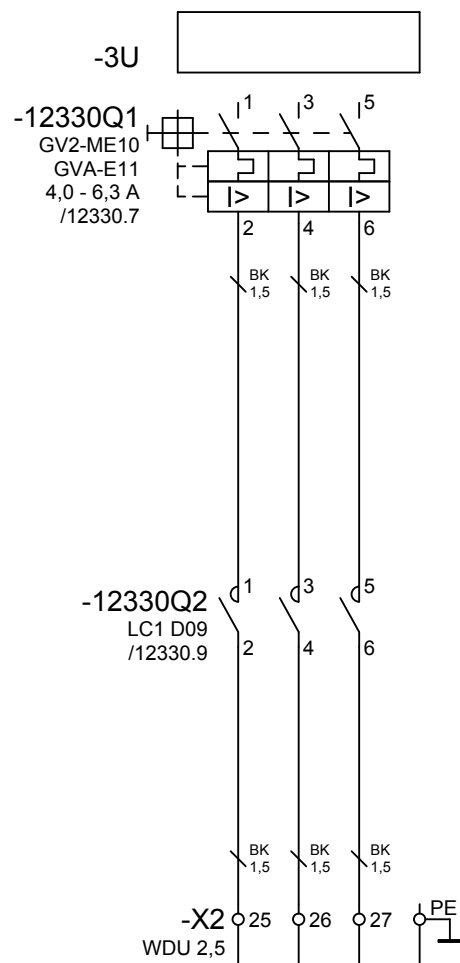


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



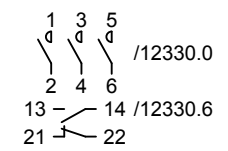
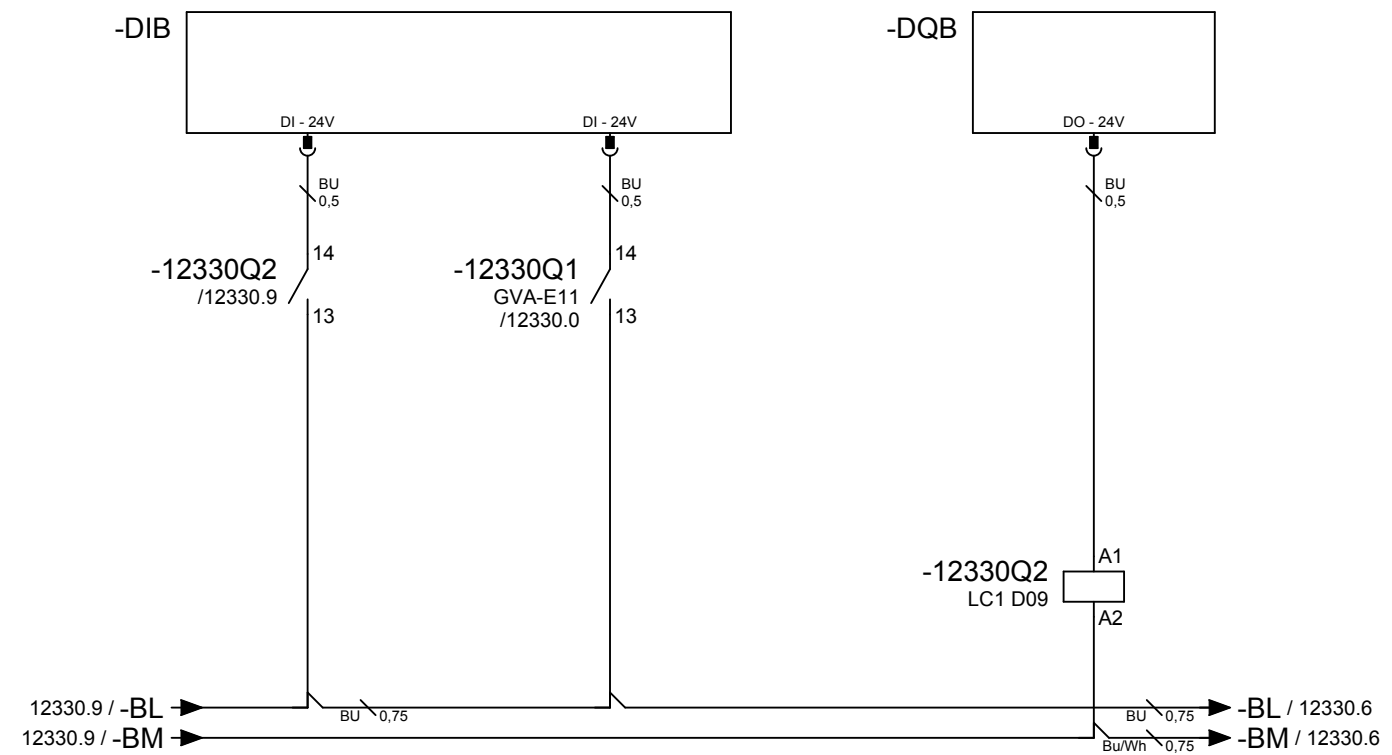
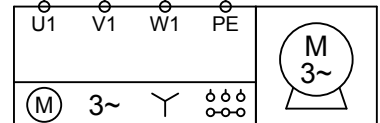
+UBxxx-12330W1
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

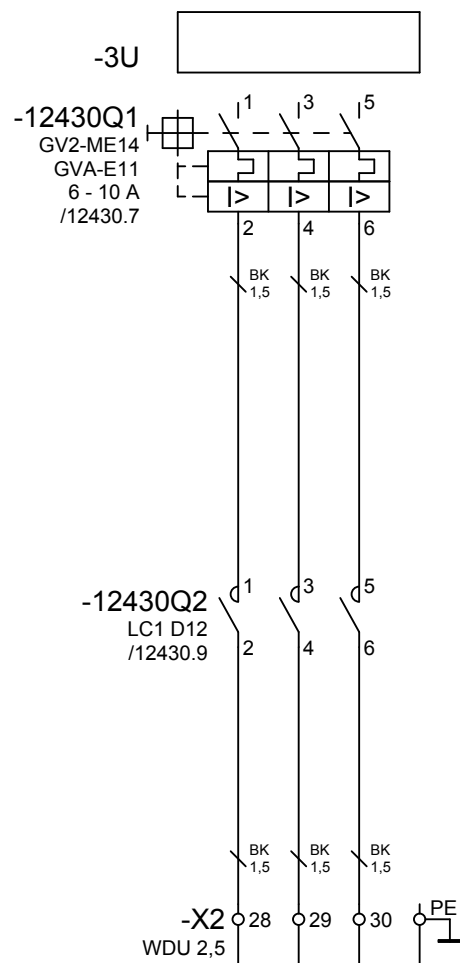
Enclosure B1
load 1,5mm² = cca 13,5A; (5A = 37,0%)
loss U at In 0,17V
loss U at 5xIn 0,85V
heat losses at In 2,55W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (5A = 27,0%)
loss U at In 1,42V
loss U at 5xIn 7,08V
heat losses at In 21,3W (L=3x25m)
... ..
... ..

-12330M1
2,2 kW
Y=400V-4,9A.
/12330



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



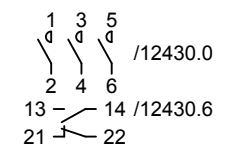
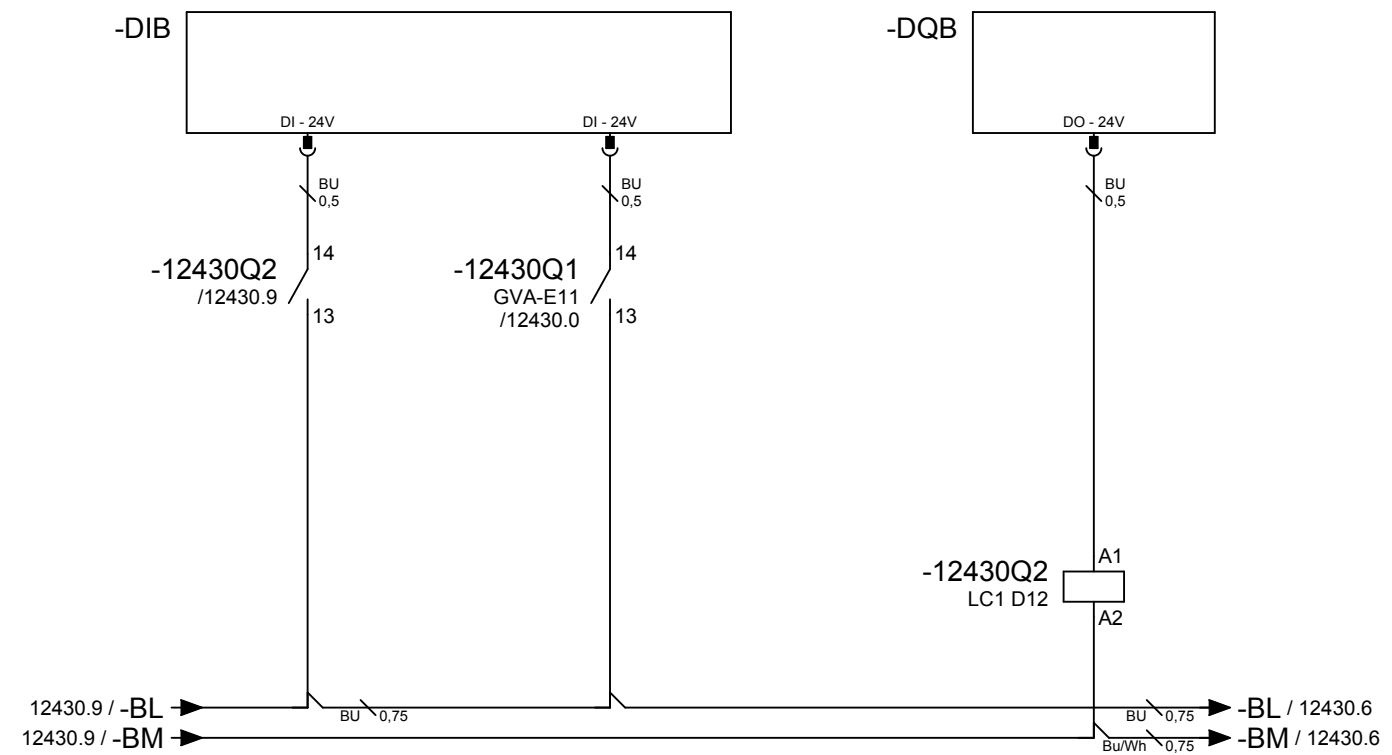
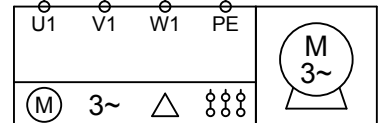
+UBxxx-12430W1
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

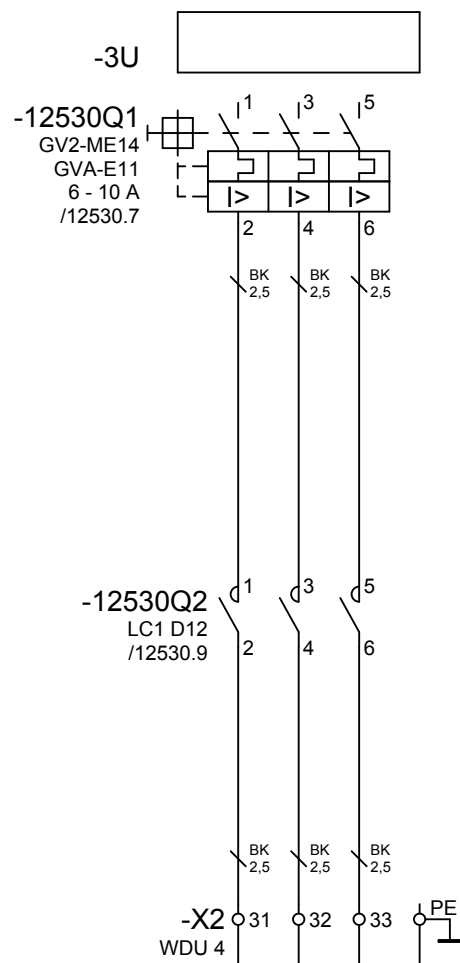
Enclosure B1
load 1,5mm² = cca 13,5A; (7A = 51,8%)
loss U at In 0,24V
loss U at 5xIn 1,19V
heat losses at In 5,00W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (7A = 37,8%)
loss U at In 1,98V
loss U at 5xIn 9,92V
heat losses at In 41,7W (L=3x25m)
... ..
... ..

-12430M1
3,0 kW
Δ=400V-6,6A.
/12430



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



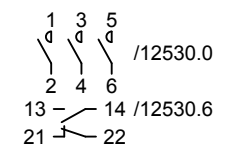
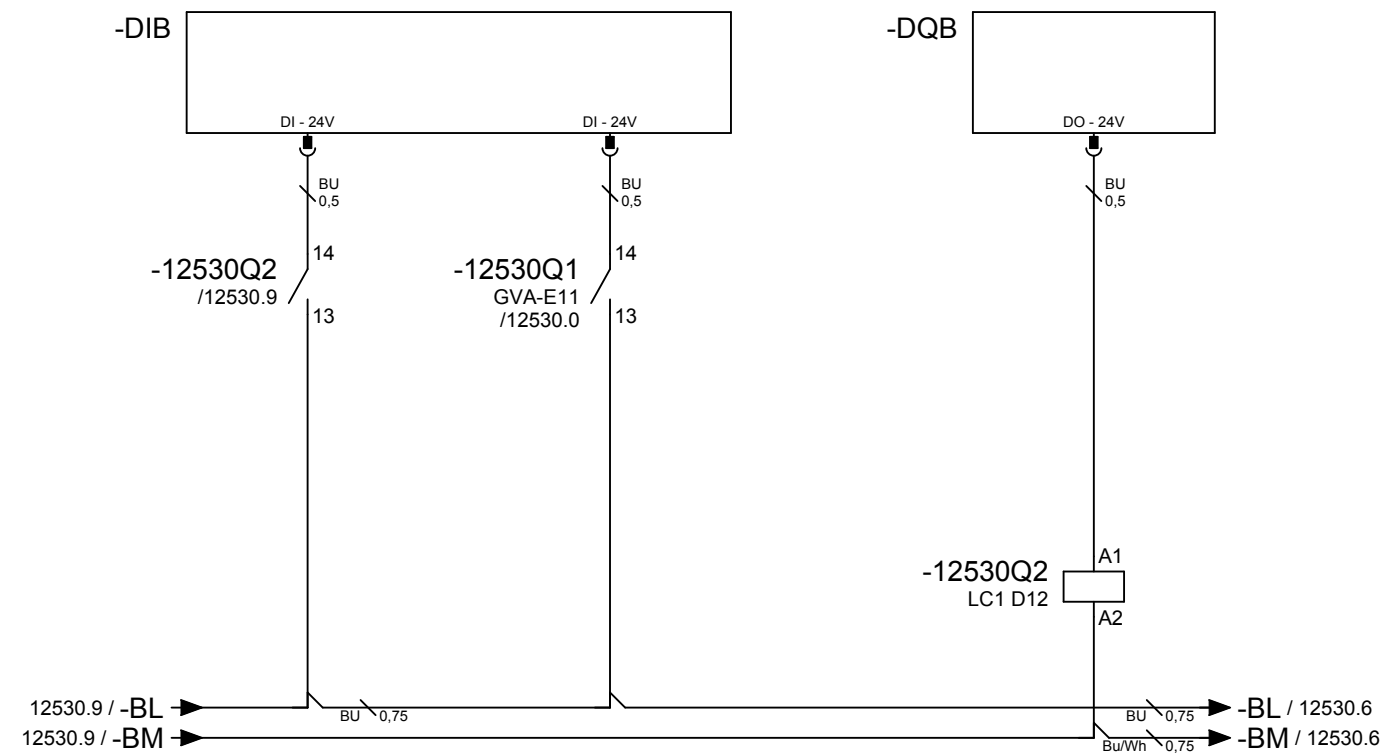
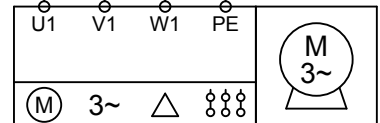
+UBxxx-12530W1
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

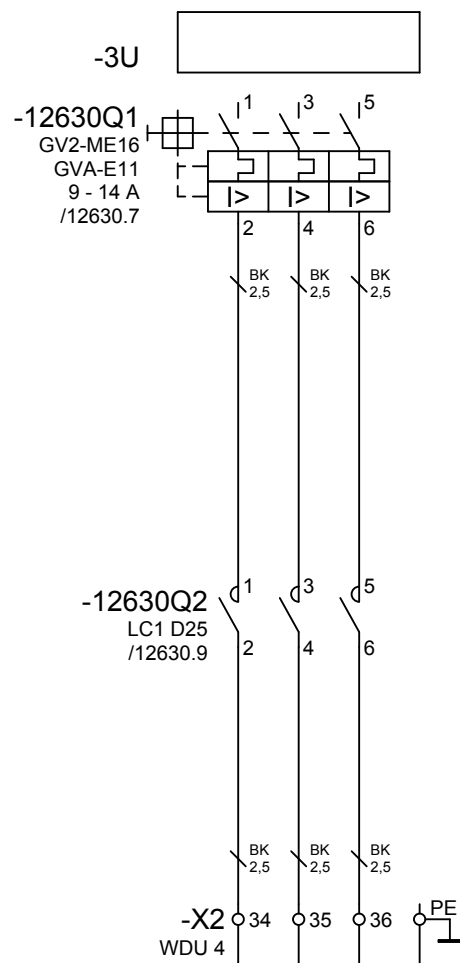
Enclosure B1
load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
loss U at In 0,17V
loss U at 5xIn 0,87V
heat losses at In 4,42W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
loss U at In 2,41V
loss U at 5xIn 12,04V
heat losses at In 61,4W (L=3x25m)
... ..
... ..

-12530M1
4,0 kW
Δ=400V-8,3A.
/12530



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



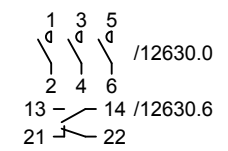
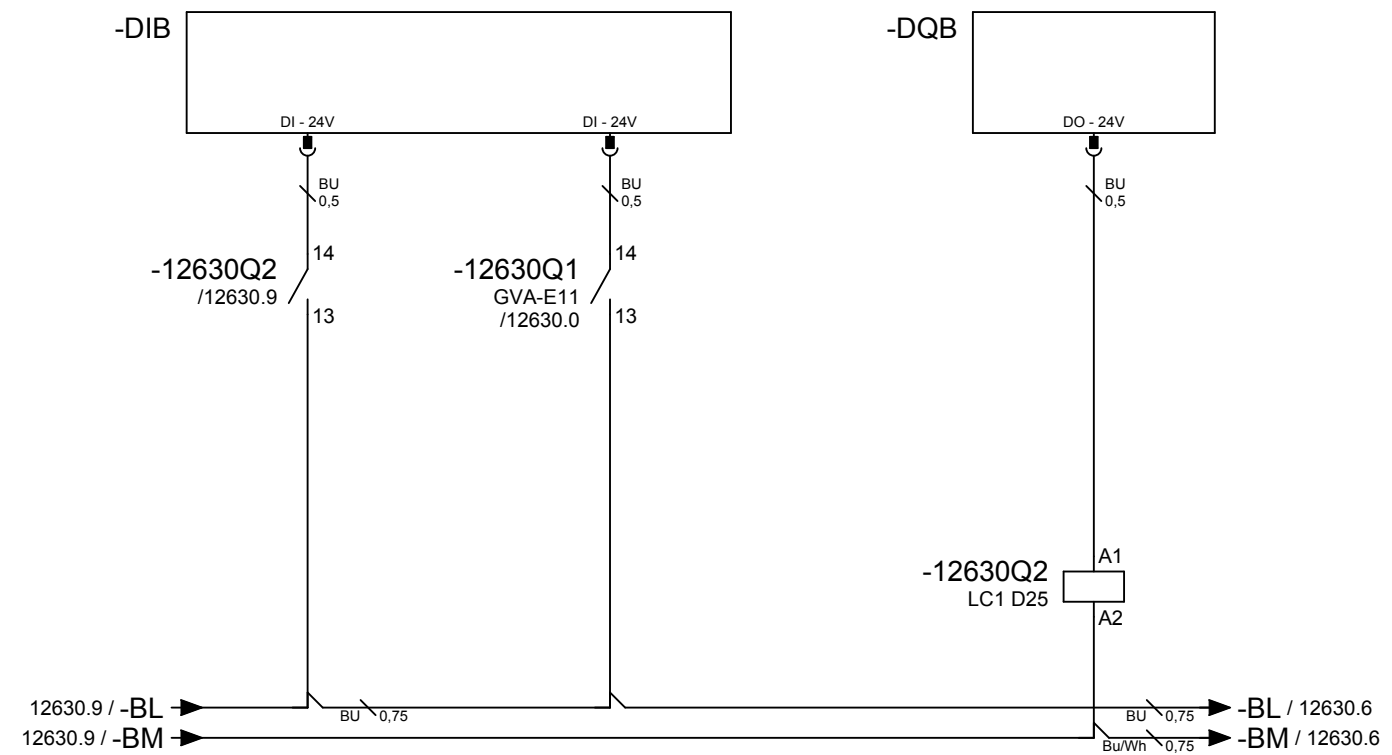
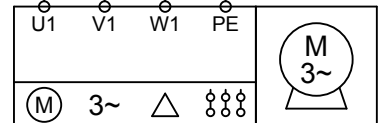
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ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

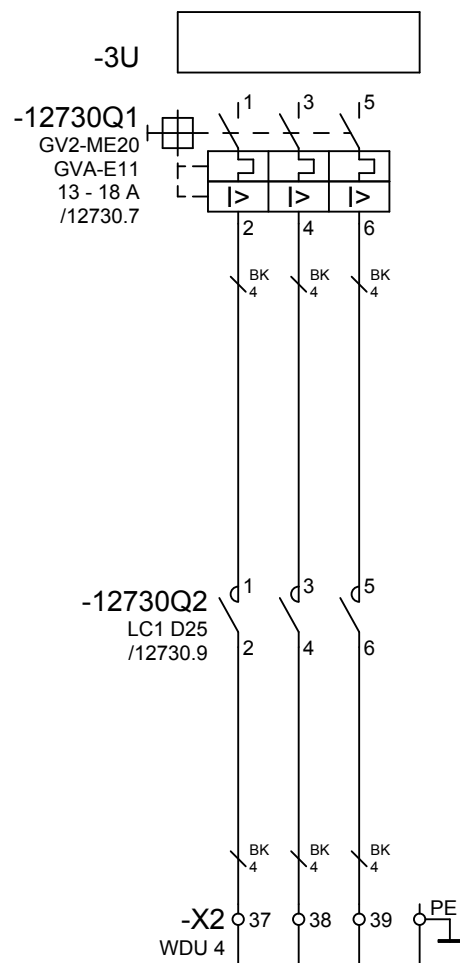
Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..

-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

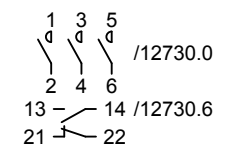
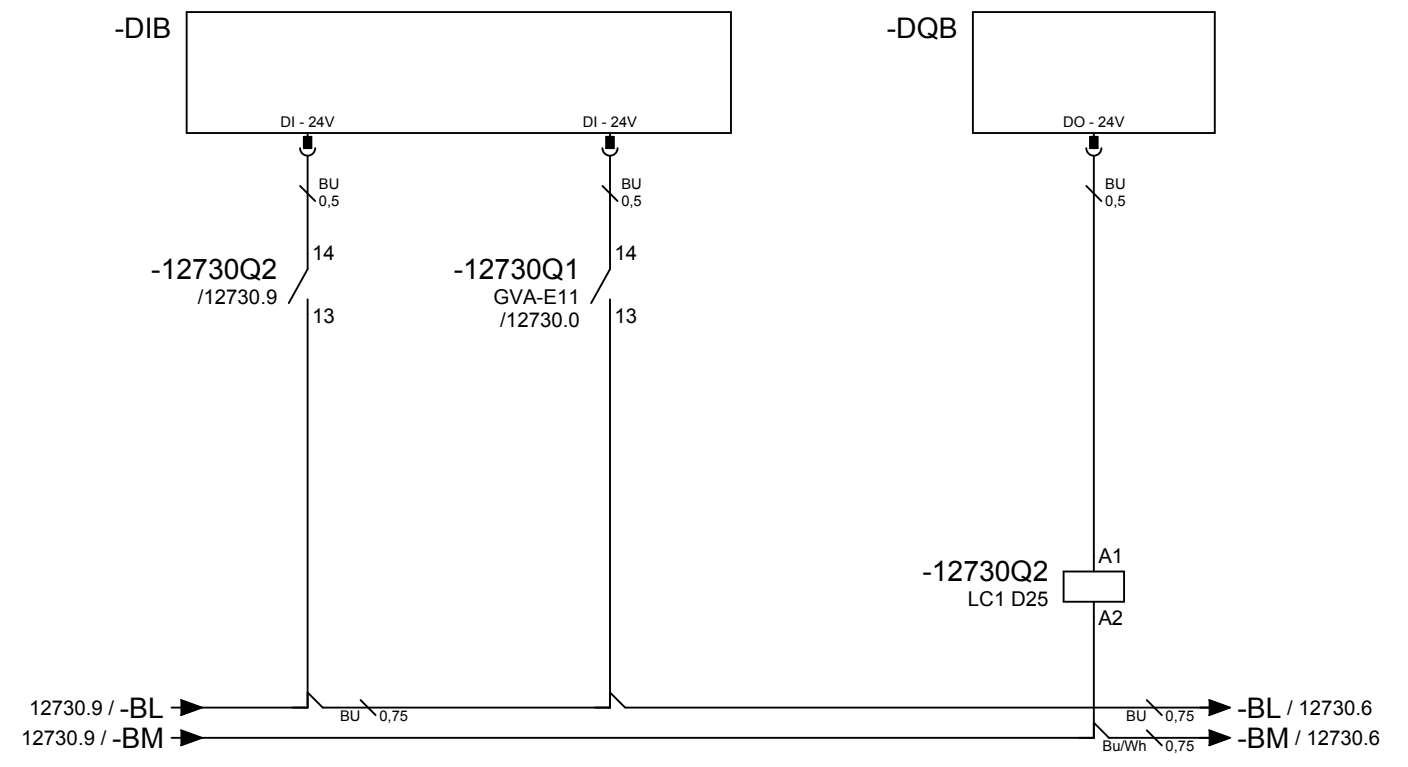
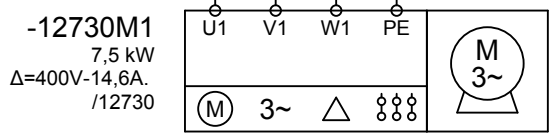


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

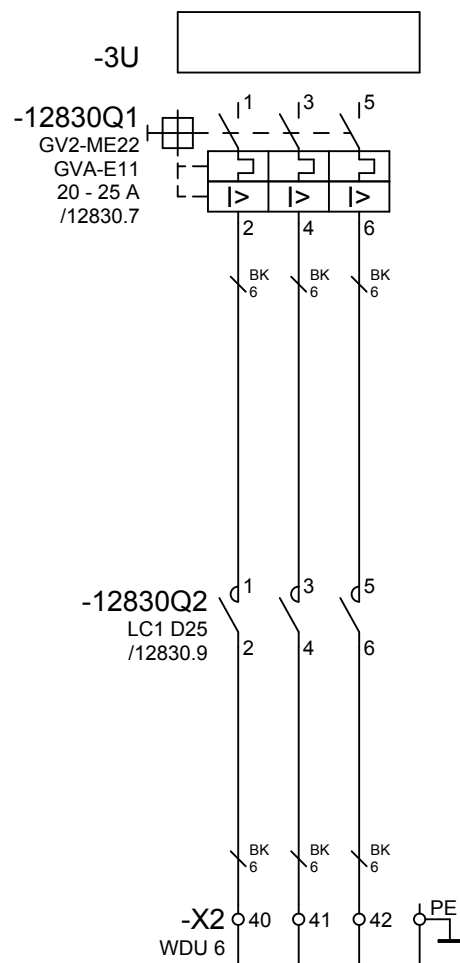
Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



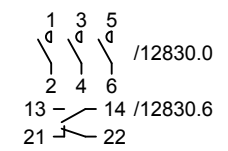
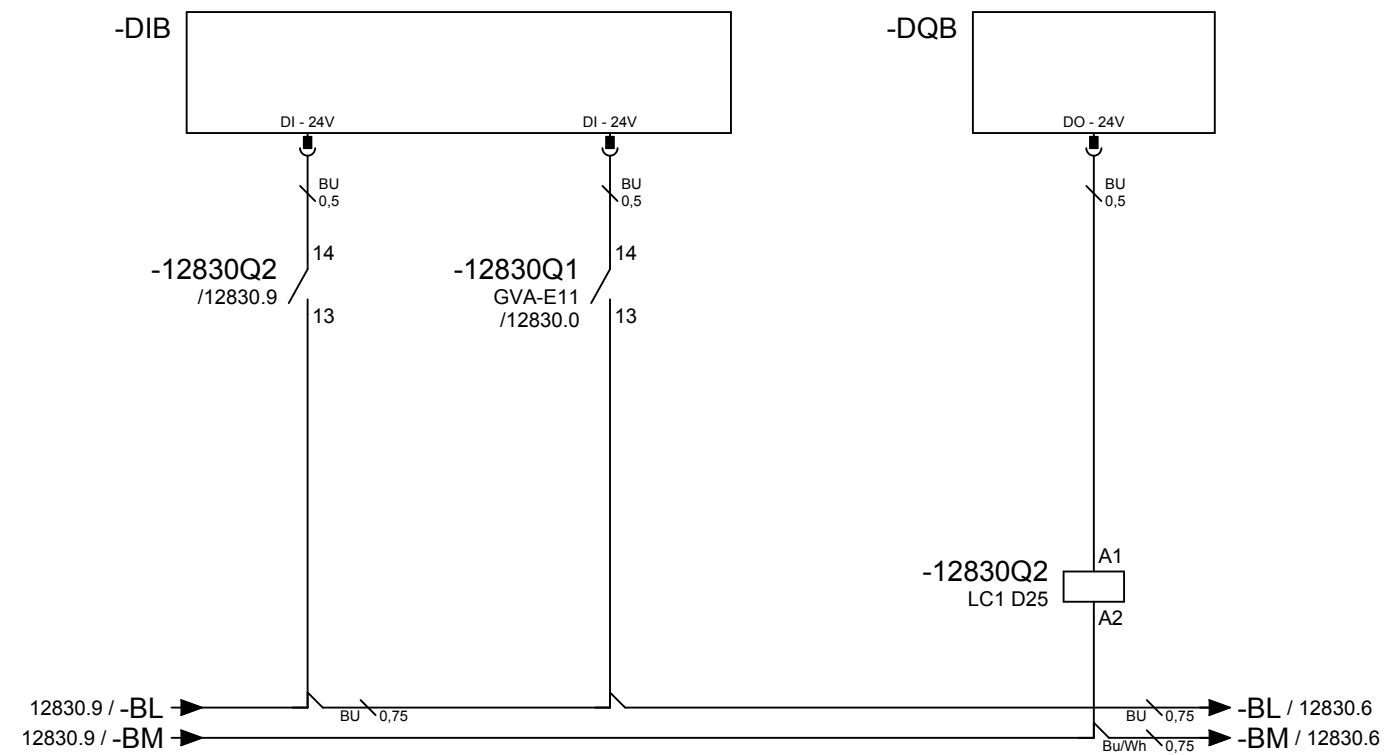
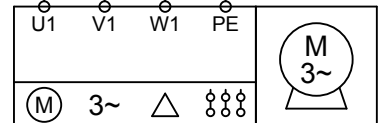
+UBxxx-12830W1
ÖLFLEX 100
4x6
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 6mm² = cca 32A; (21A = 65,6%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 11,25W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 6mm² = cca 43A; (21A = 48,8%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 93,7W (L=3x25m)
... ..
... ..

-12830M1
11 kW
Δ=400V-21,0A.
/12830



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

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+GV2/99999

11099

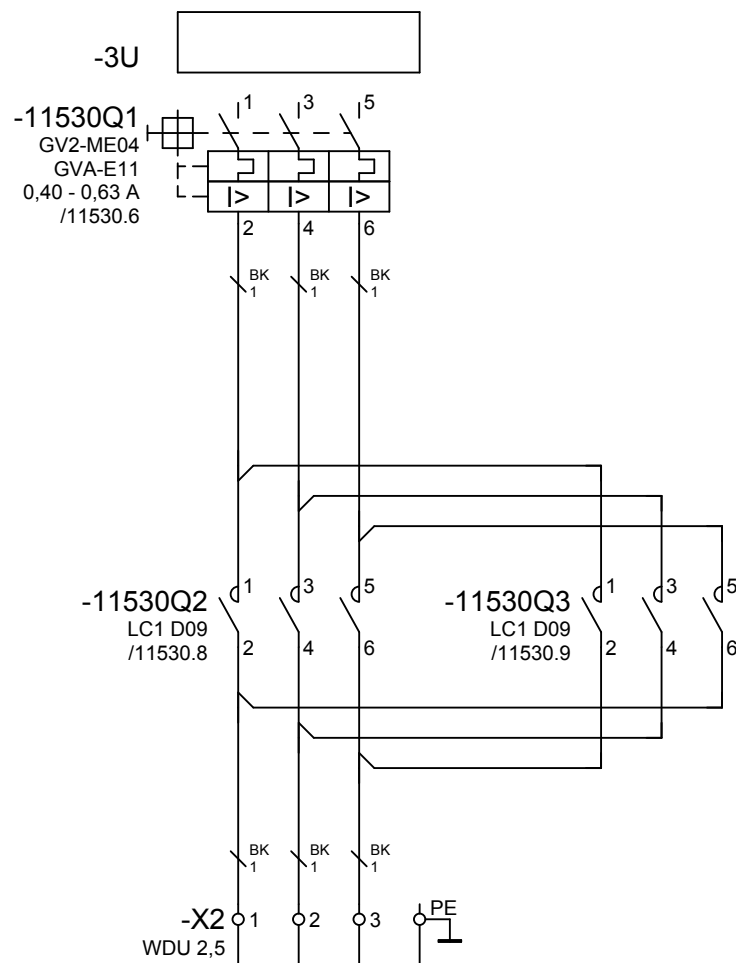
TISKO
elektrotechnická
konštrukčná kancelária
SLOVAKIA (SK) - BA
www.tisko.sk

PACK 31. Motors.
TISKO spol. s r. o.

Type 2 coordination.
2018

Creator	V00	01.02.2012	Ing. Tisovčík Ivan
Last revision of project			
Last revision of page			
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= GV2ME_C2	
+ GV2_Reverz	11000

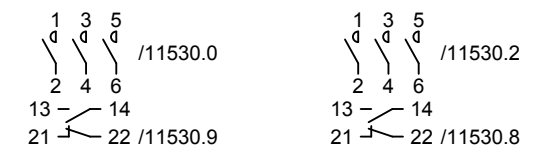
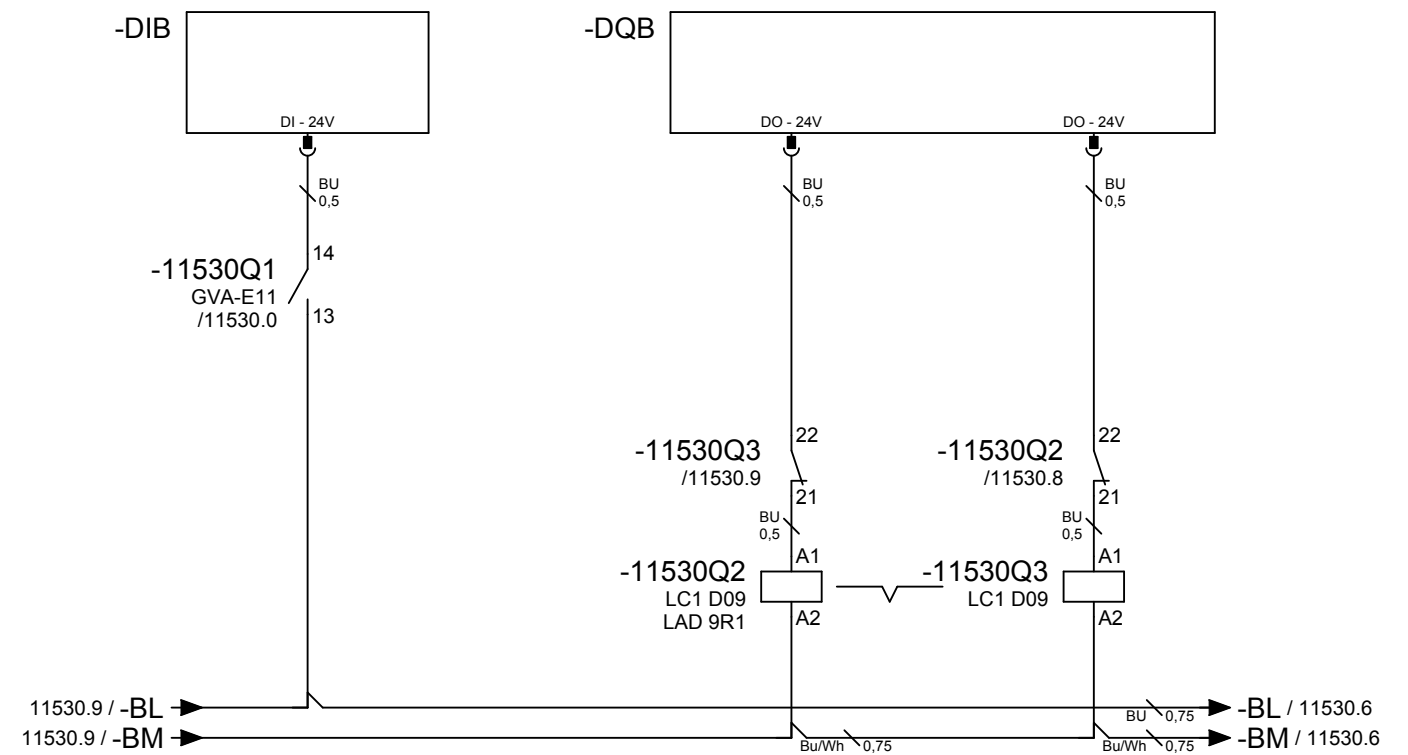
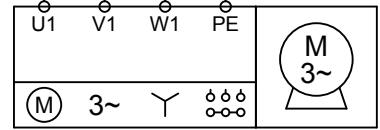


+UBxxx-11530W2
ÖLFLEX 100
4x0,75
25 m

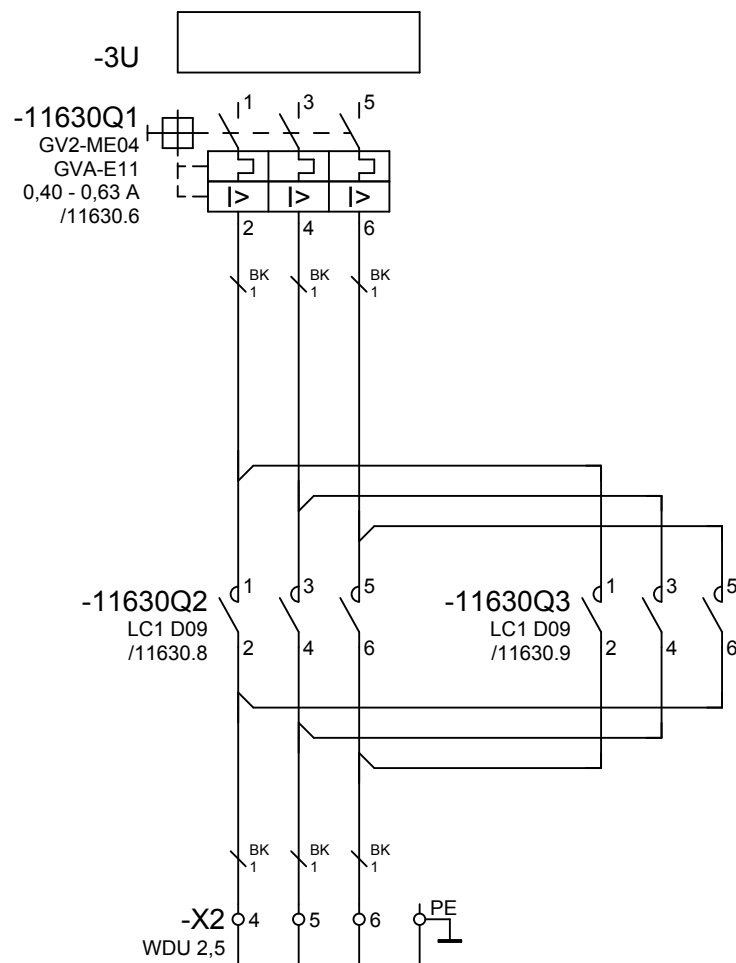
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,41A = 4,0%)
loss U at In 0,02V
loss U at 5xIn 0,10V
heat losses at In 0,03W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
loss U at In 0,23V
loss U at 5xIn 1,16V
heat losses at In 0,3W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



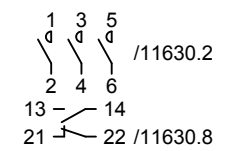
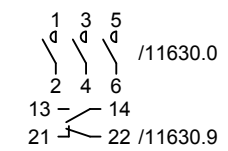
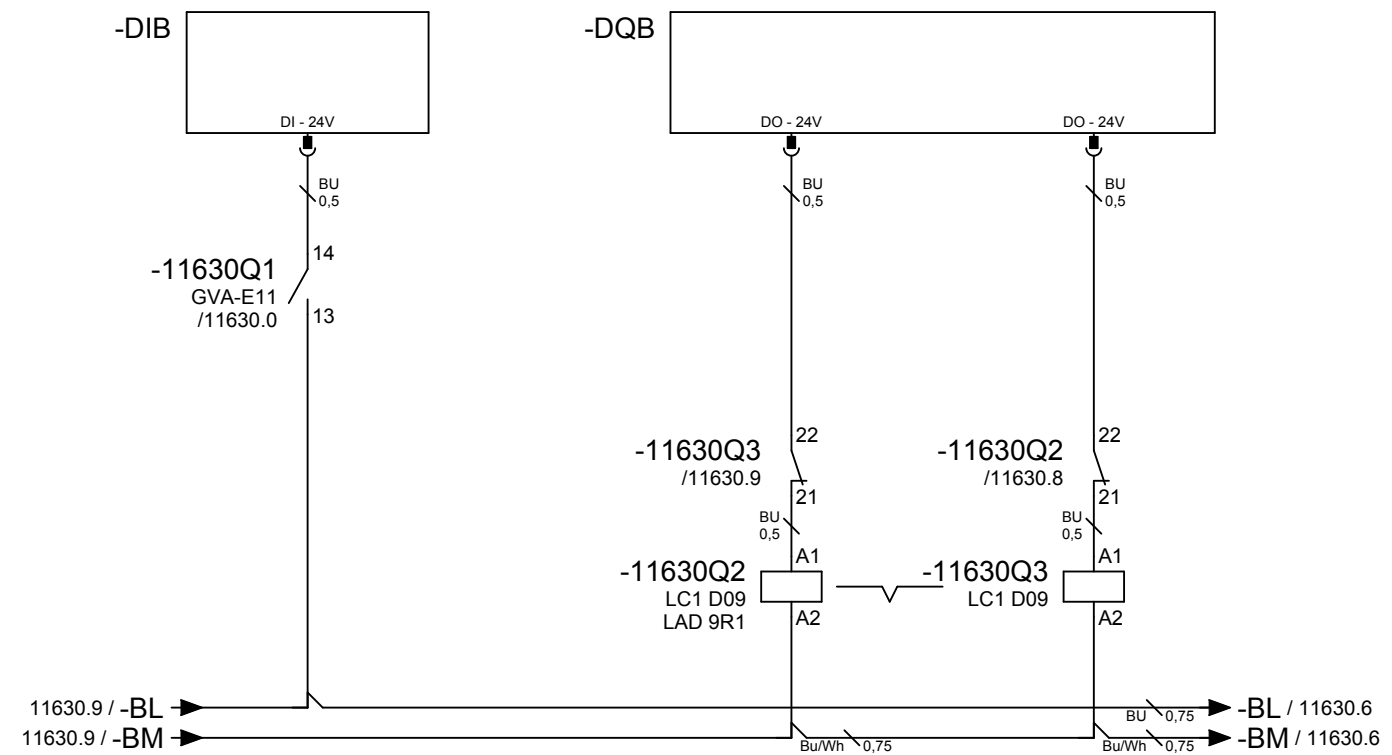
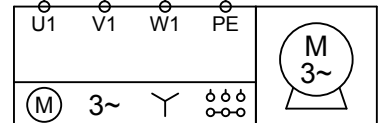
+UBxxx-11630W2
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,6A = 5,8%)
loss U at In 0,03V
loss U at 5xIn 0,15V
heat losses at In 0,06W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
loss U at In 0,34V
loss U at 5xIn 1,70V
heat losses at In 0,6W (L=3x25m)
... ..
... ..

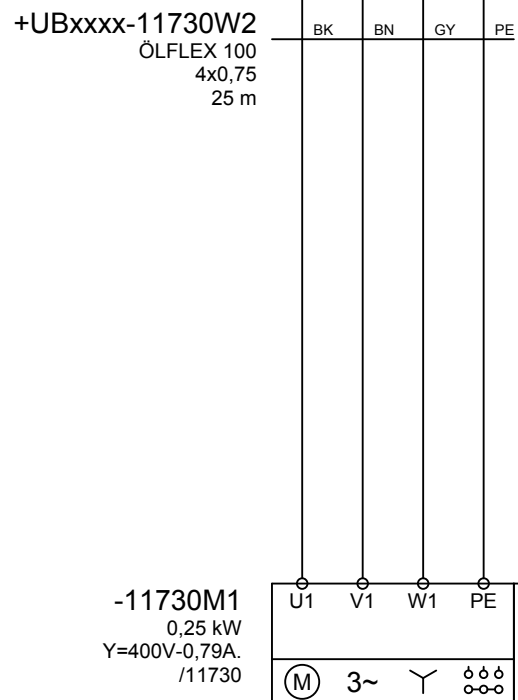
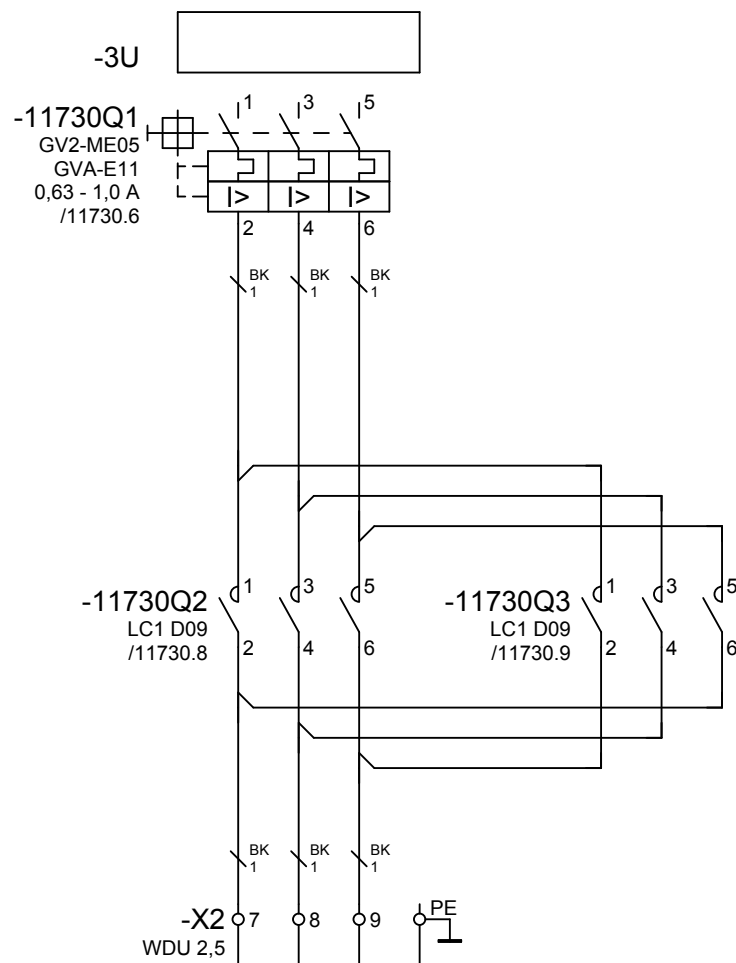
-11630M1
0,18 kW
Y=400V-0,60A.
/11630



Circuit breaker. 0=Failure.

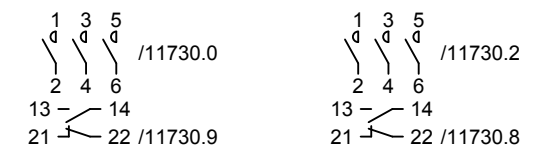
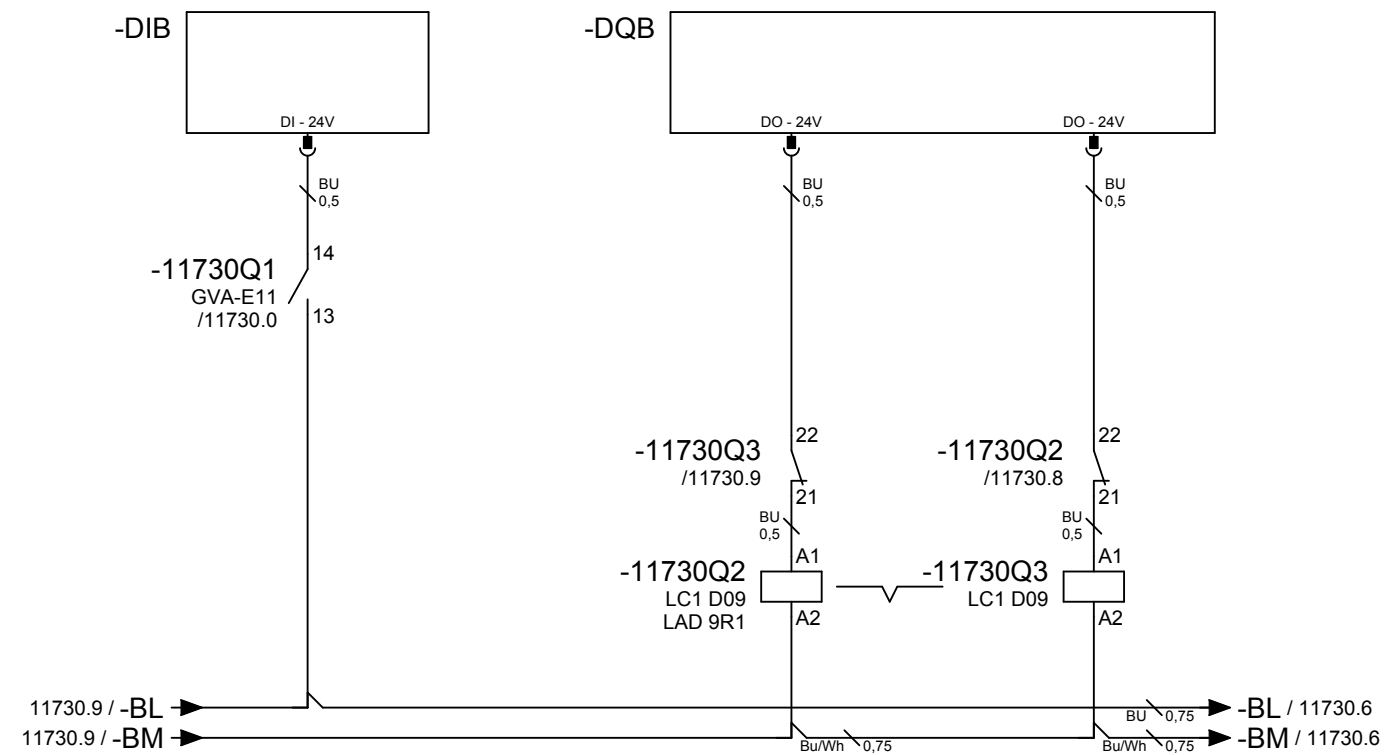
Motor. Contactor.

Motor. Contactor.

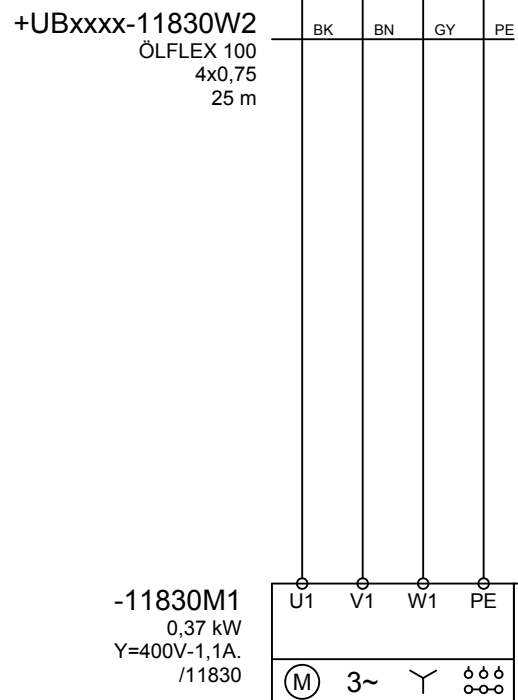
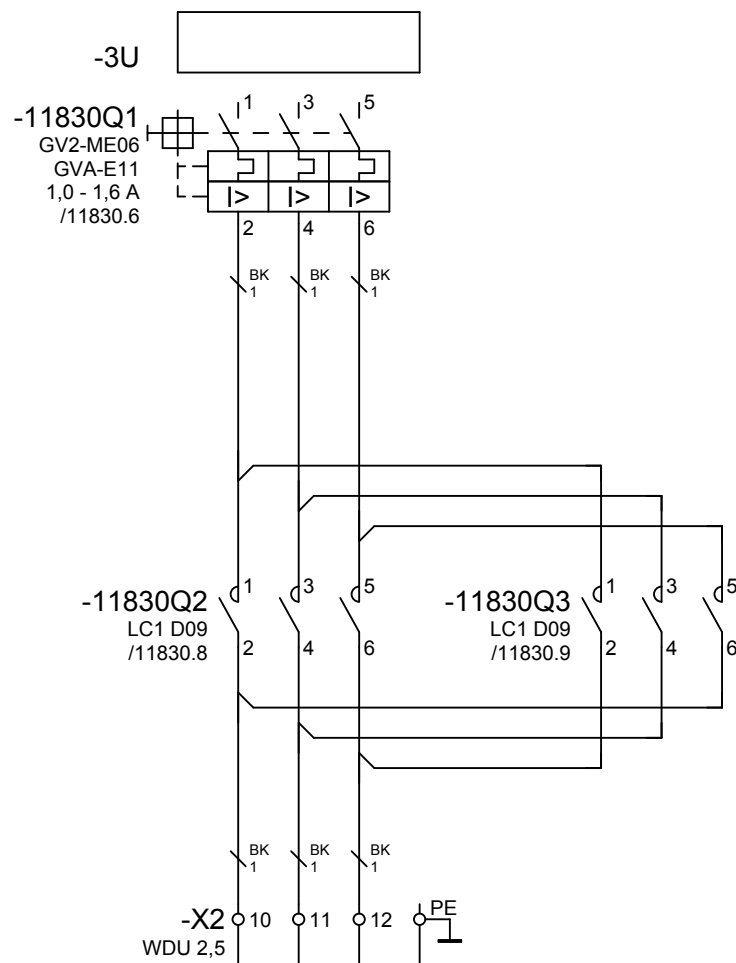


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...

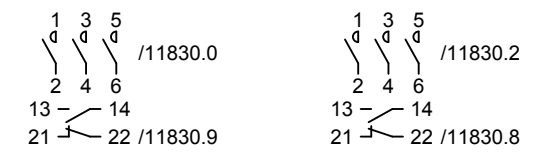
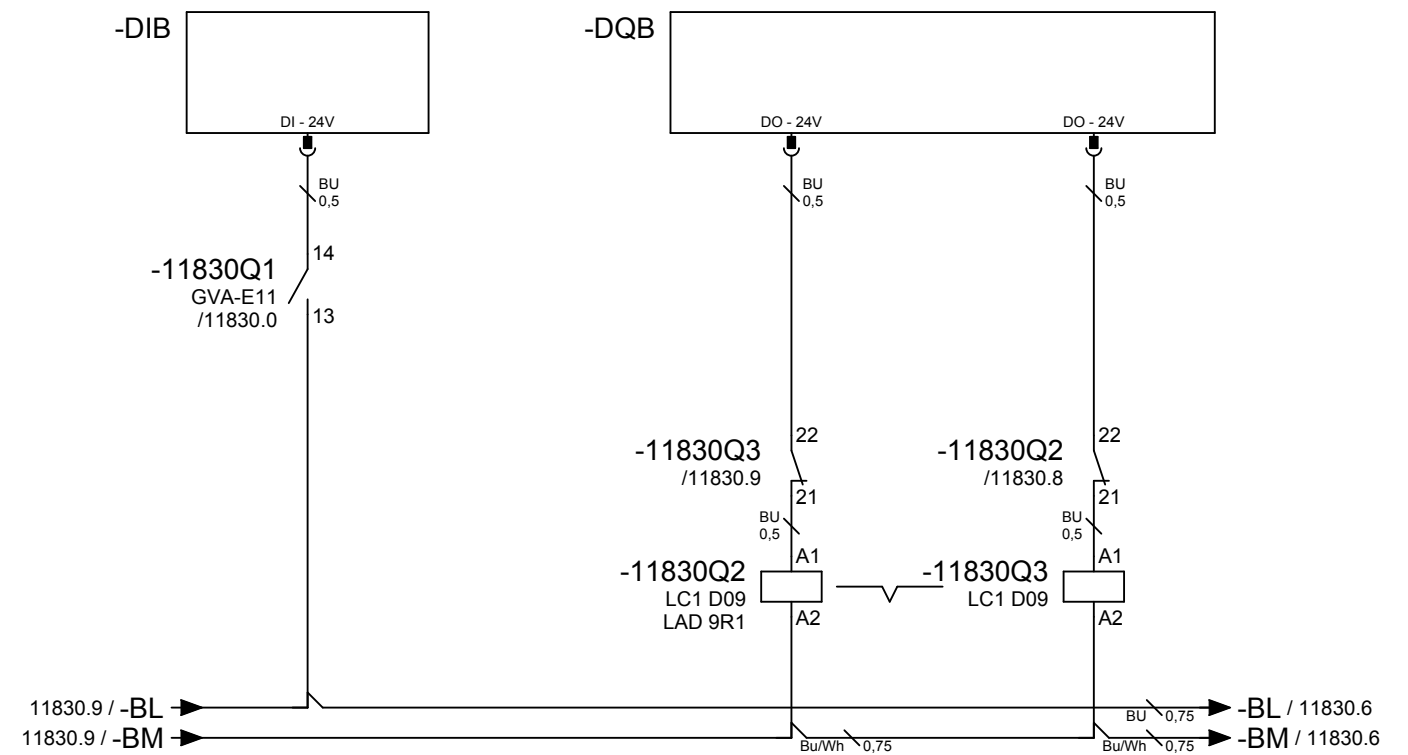


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

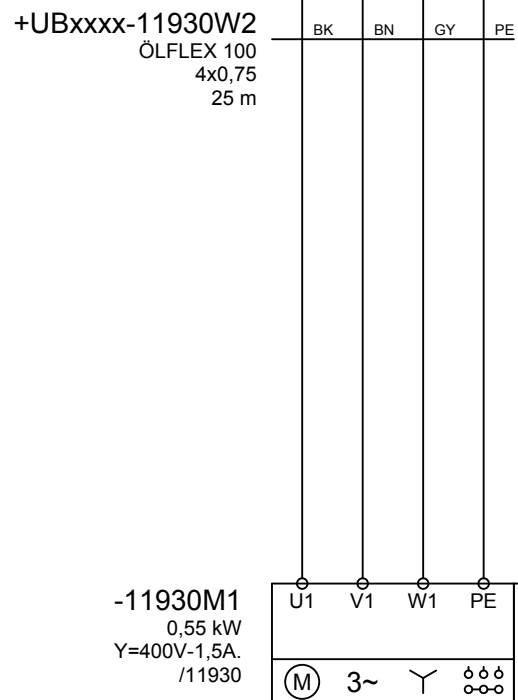
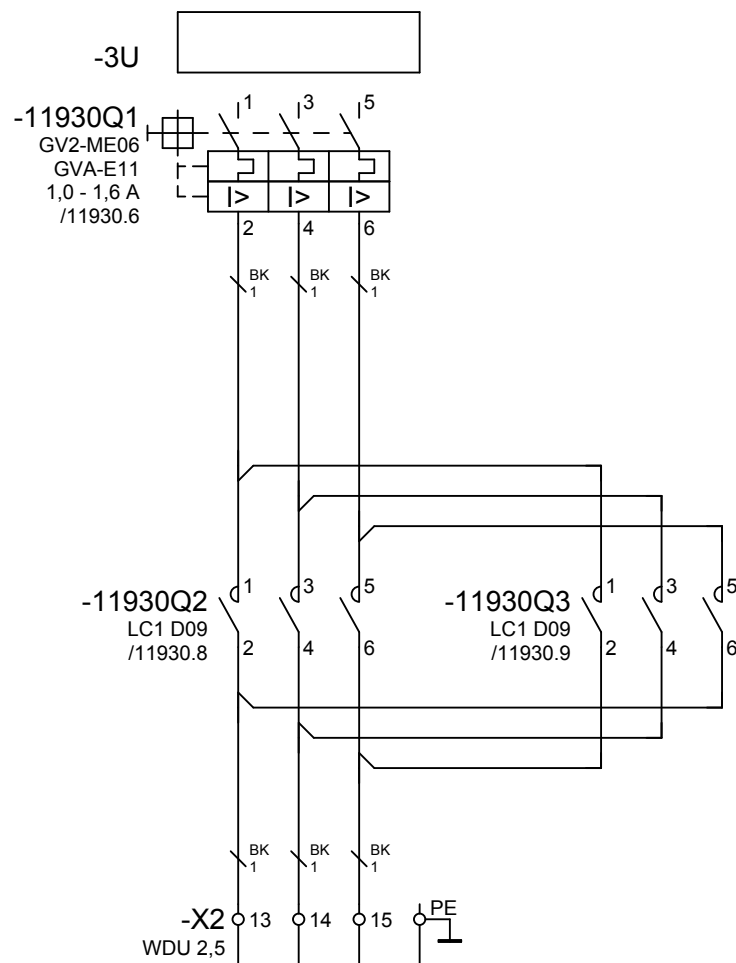


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...

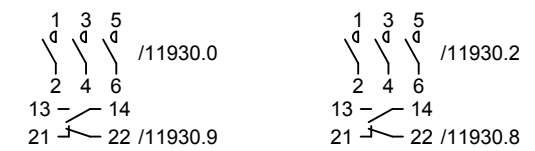
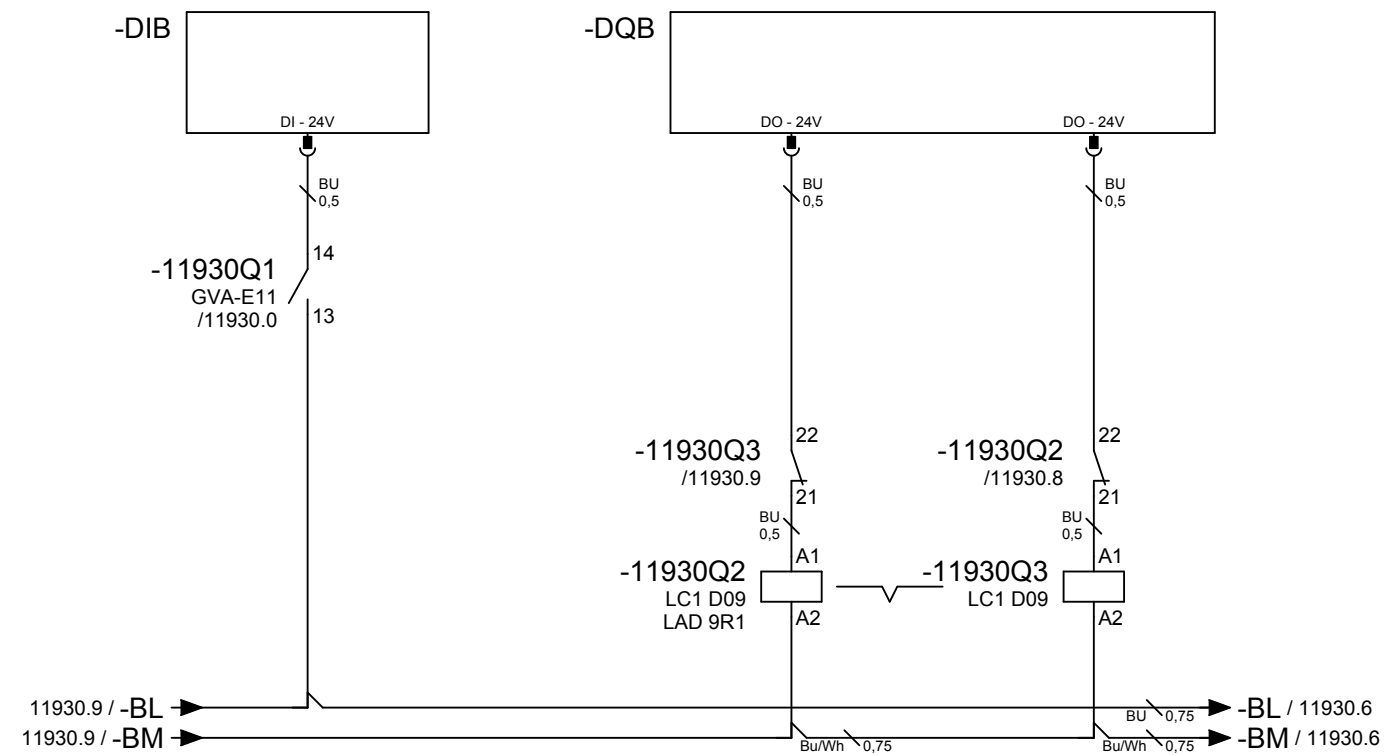


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

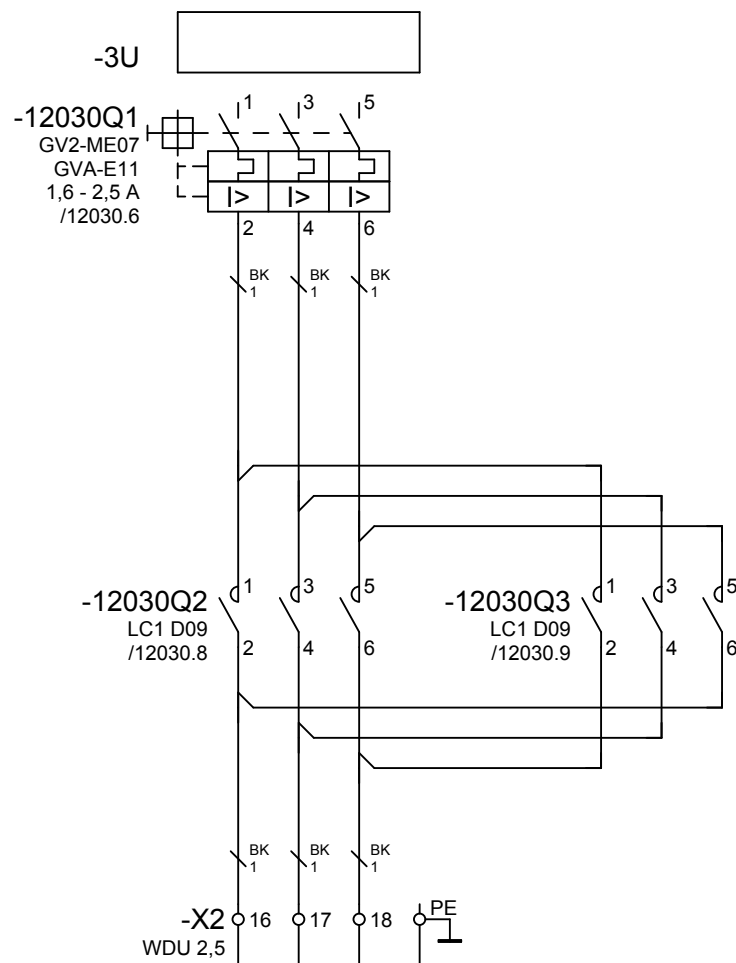


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,5A = 14,4%)
loss U at In	0,08V
loss U at 5xIn	0,38V
heat losses at In	0,34W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,5A = 16,7%)
loss U at In	0,85V
loss U at 5xIn	4,25V
heat losses at In	3,8W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

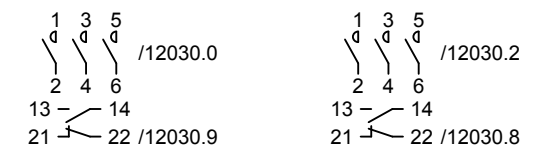
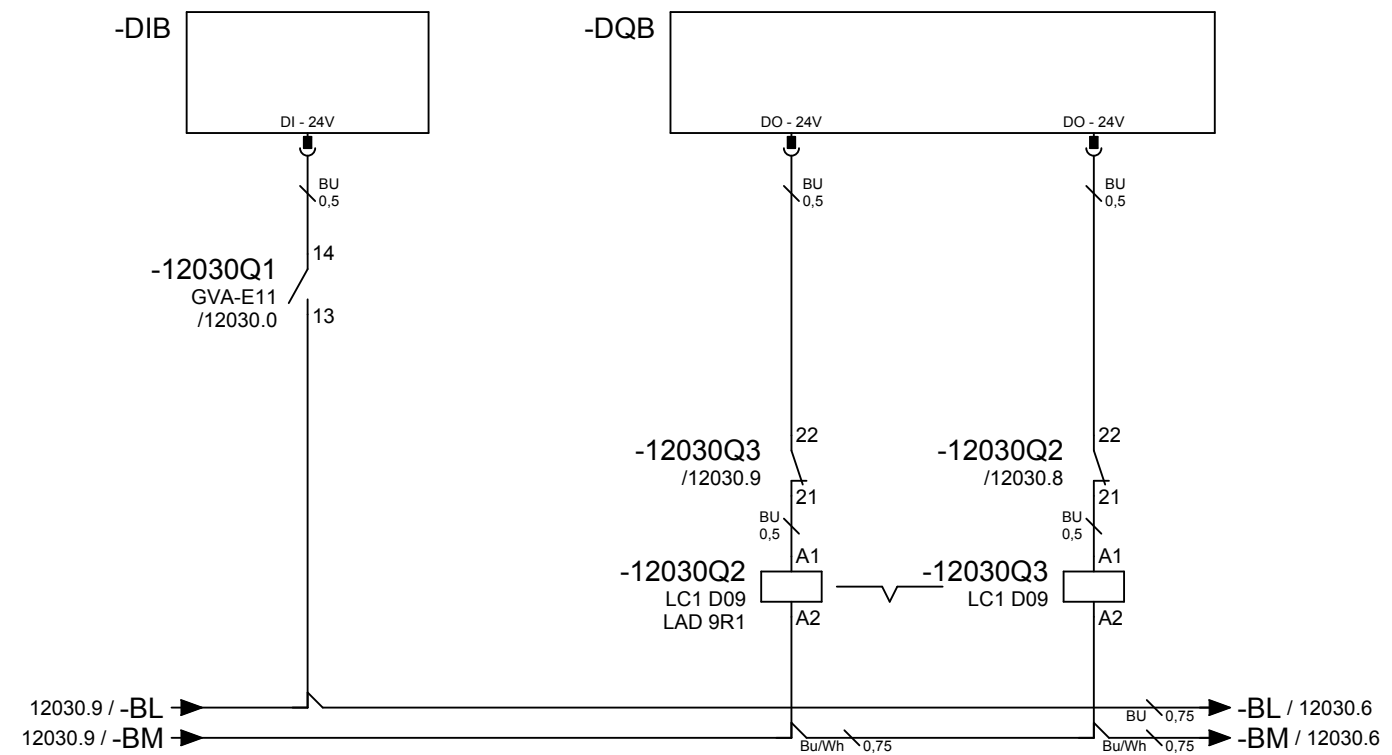
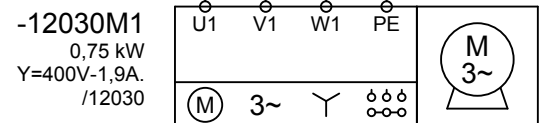


+UBxxx-12030W2
ÖLFLEX 100
4x1
25 m

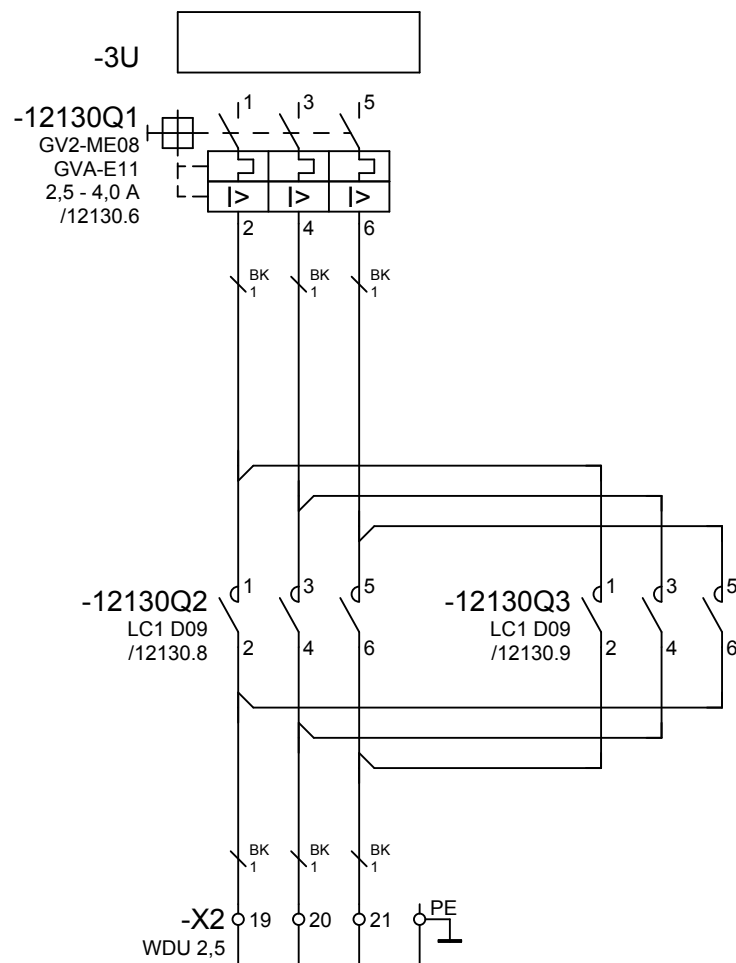
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (1,9A = 18,3%)
loss U at In 0,10V
loss U at 5xIn 0,48V
heat losses at In 0,55W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1mm² = cca 13,0A; (1,9A = 14,6%)
loss U at In 0,81V
loss U at 5xIn 4,04V
heat losses at In 4,6W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



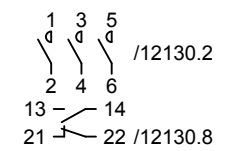
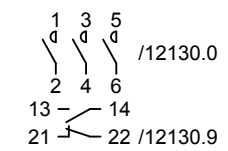
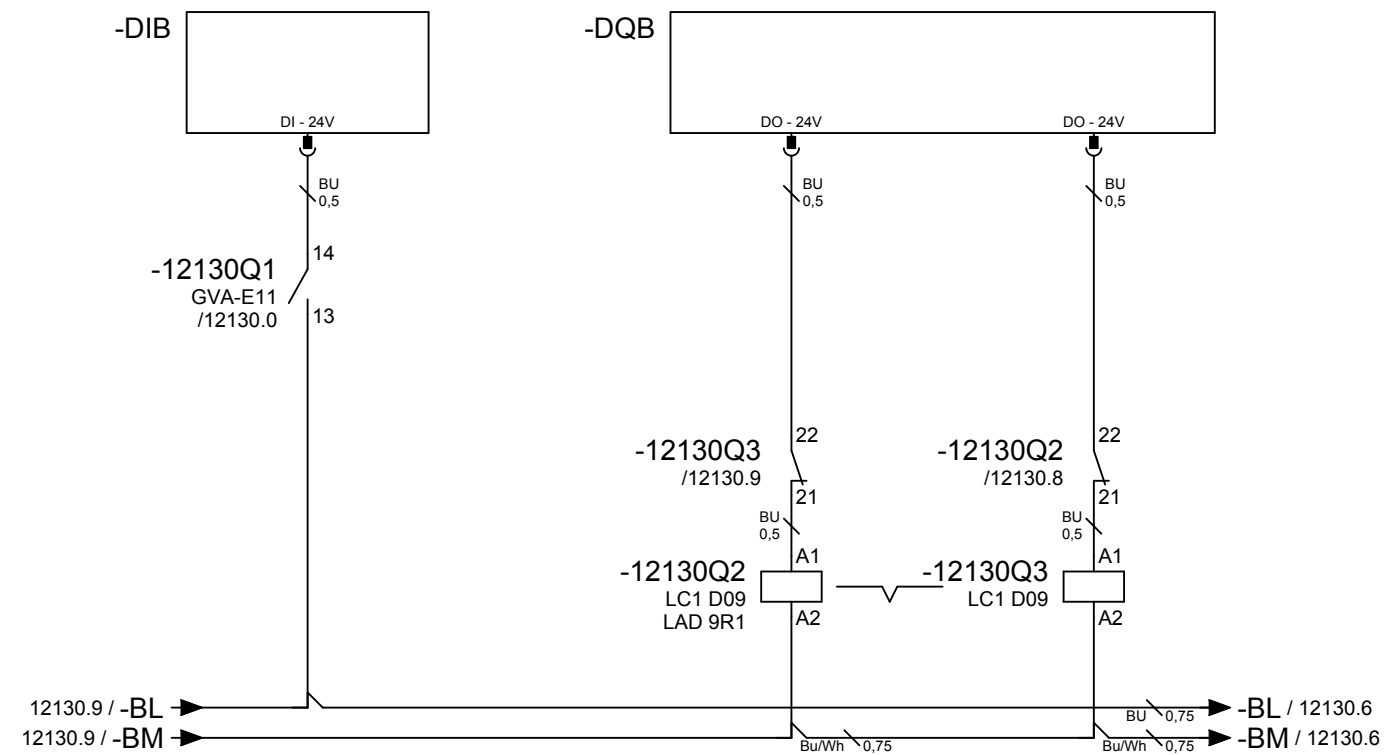
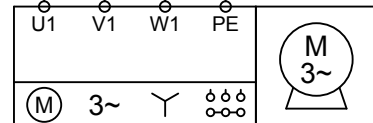
+UBxxx-12130W2
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (2,7A = 26,0%)
loss U at In 0,14V
loss U at 5xIn 0,69V
heat losses at In 1,12W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1mm² = cca 13,0A; (2,7A = 20,8%)
loss U at In 1,15V
loss U at 5xIn 5,74V
heat losses at In 9,3W (L=3x25m)
... ..
... ..

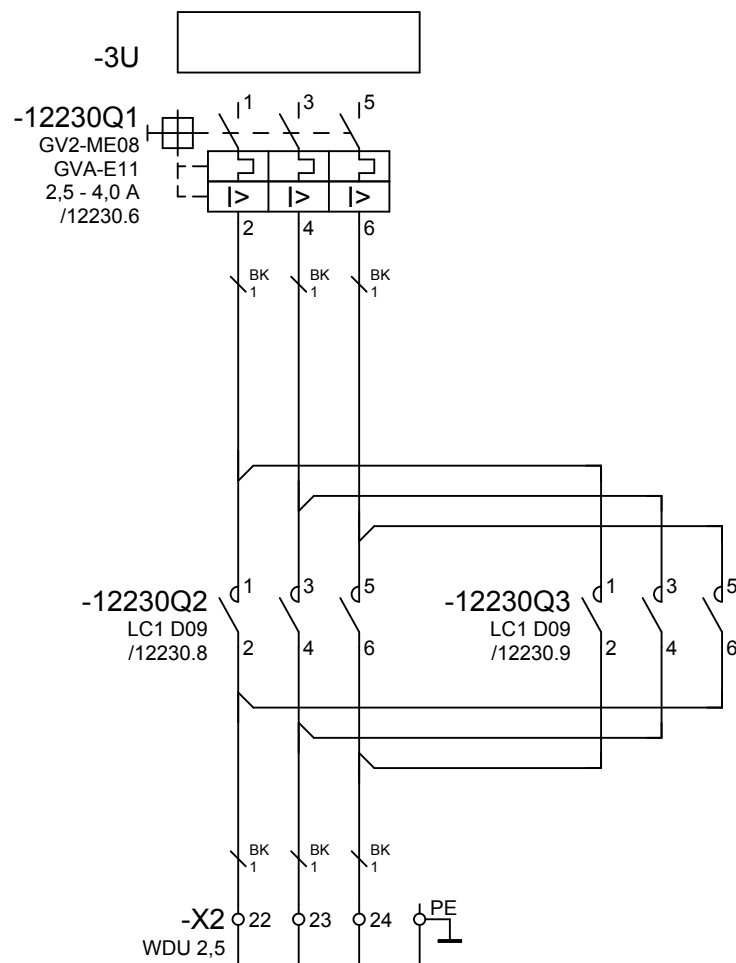
-12130M1
1,1 kW
Y=400V-2,7A.
/12130



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

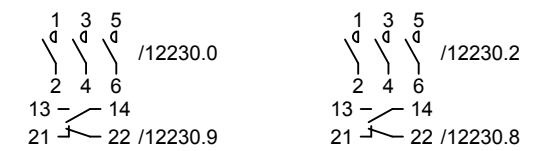
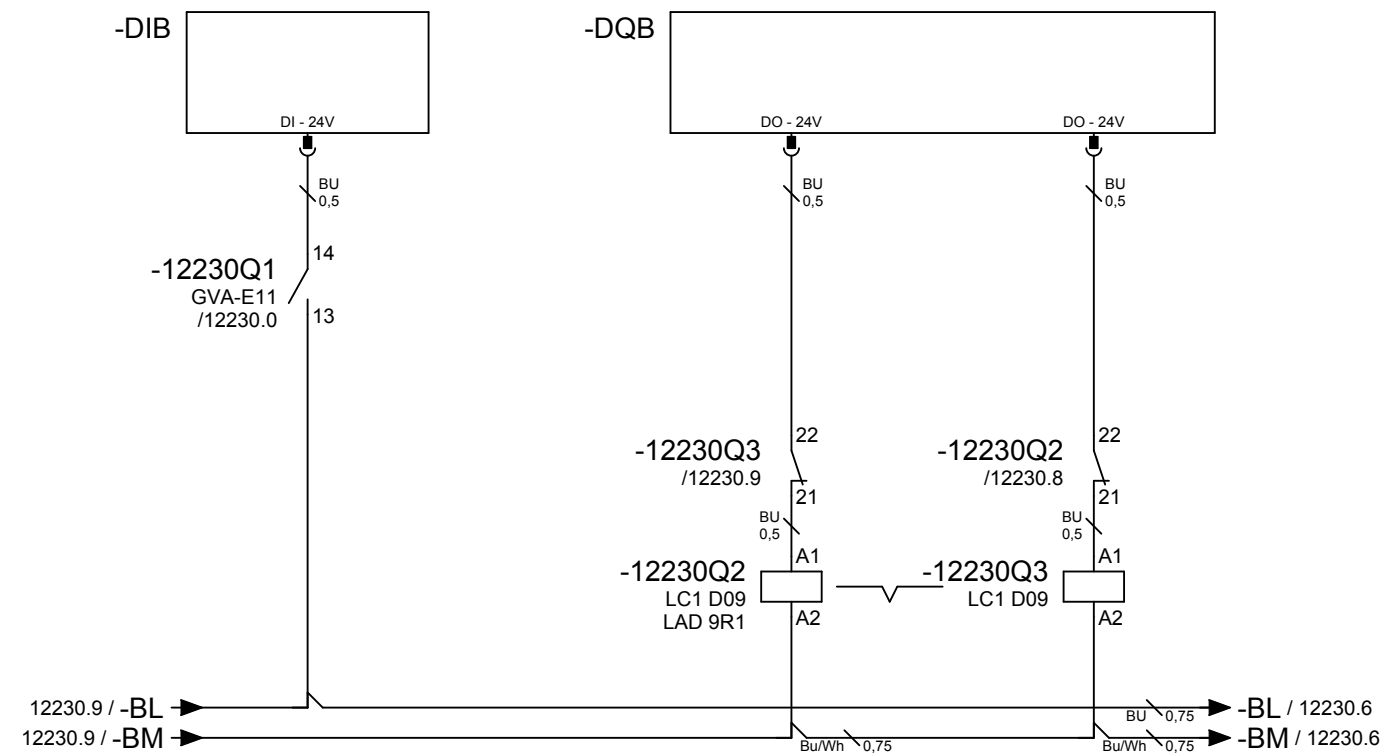
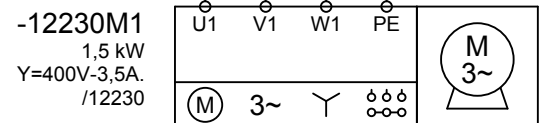


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

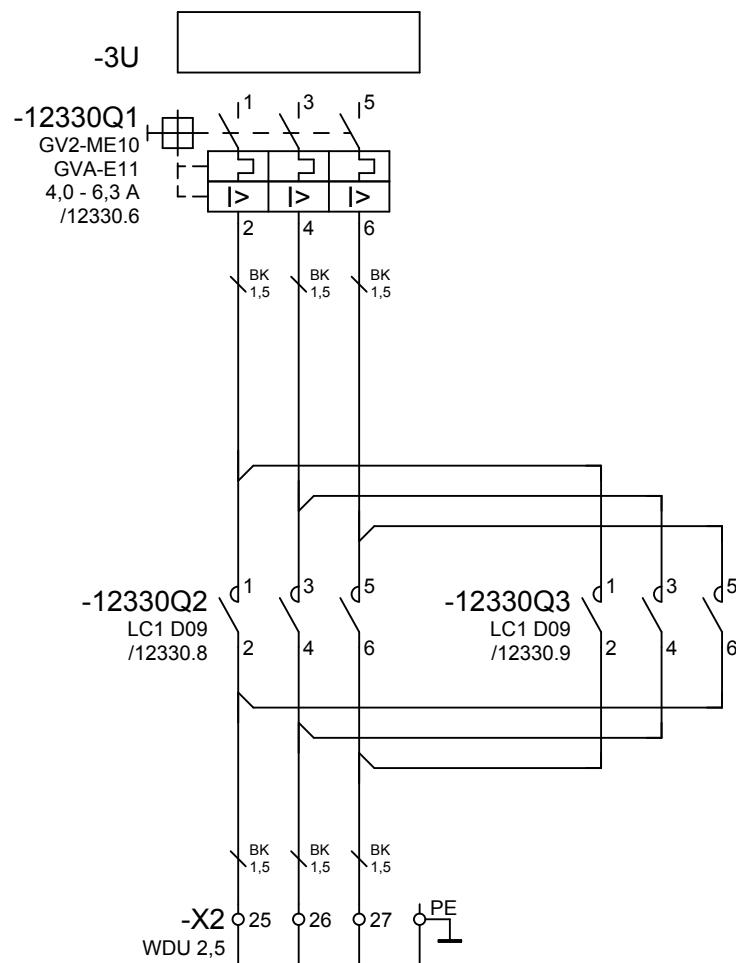
Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



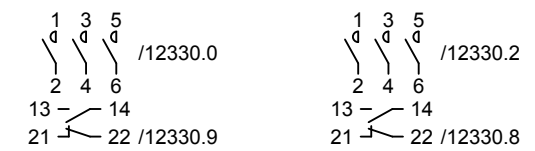
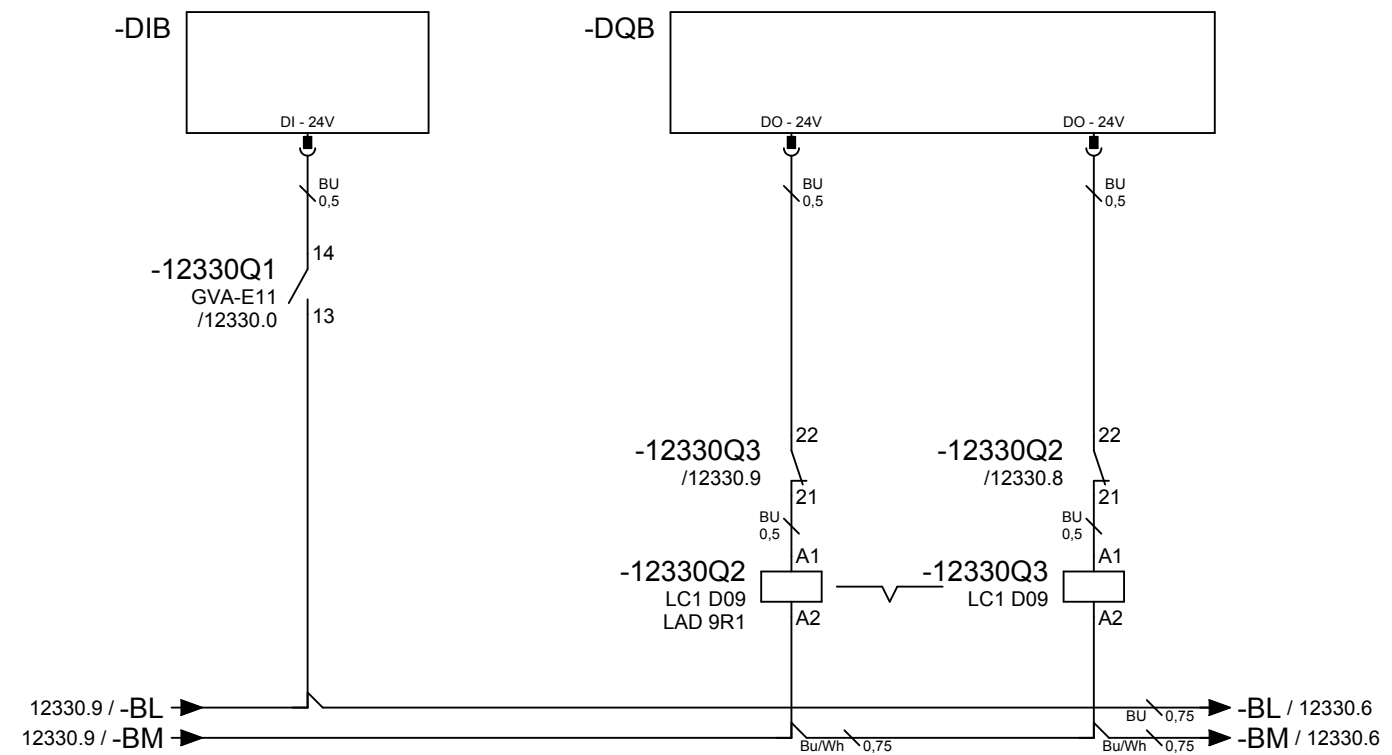
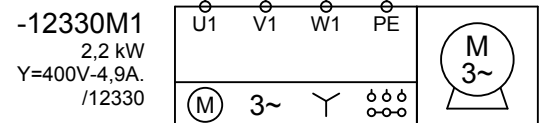
+UBxxx-12330W2
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

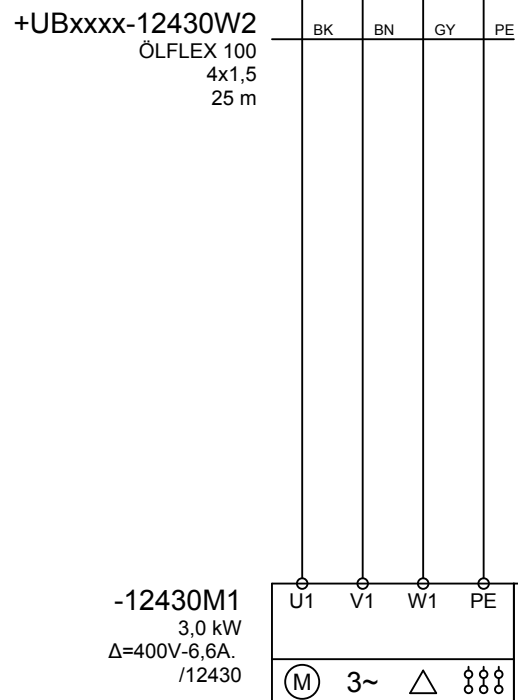
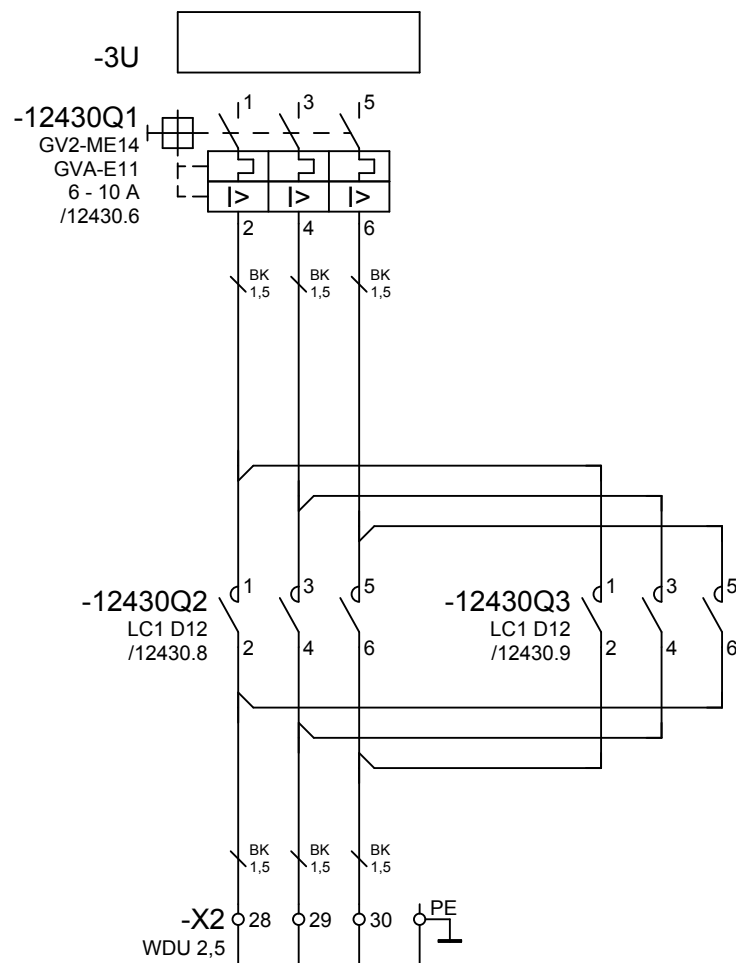
Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)

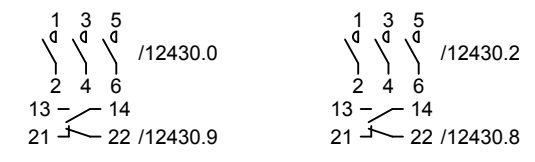
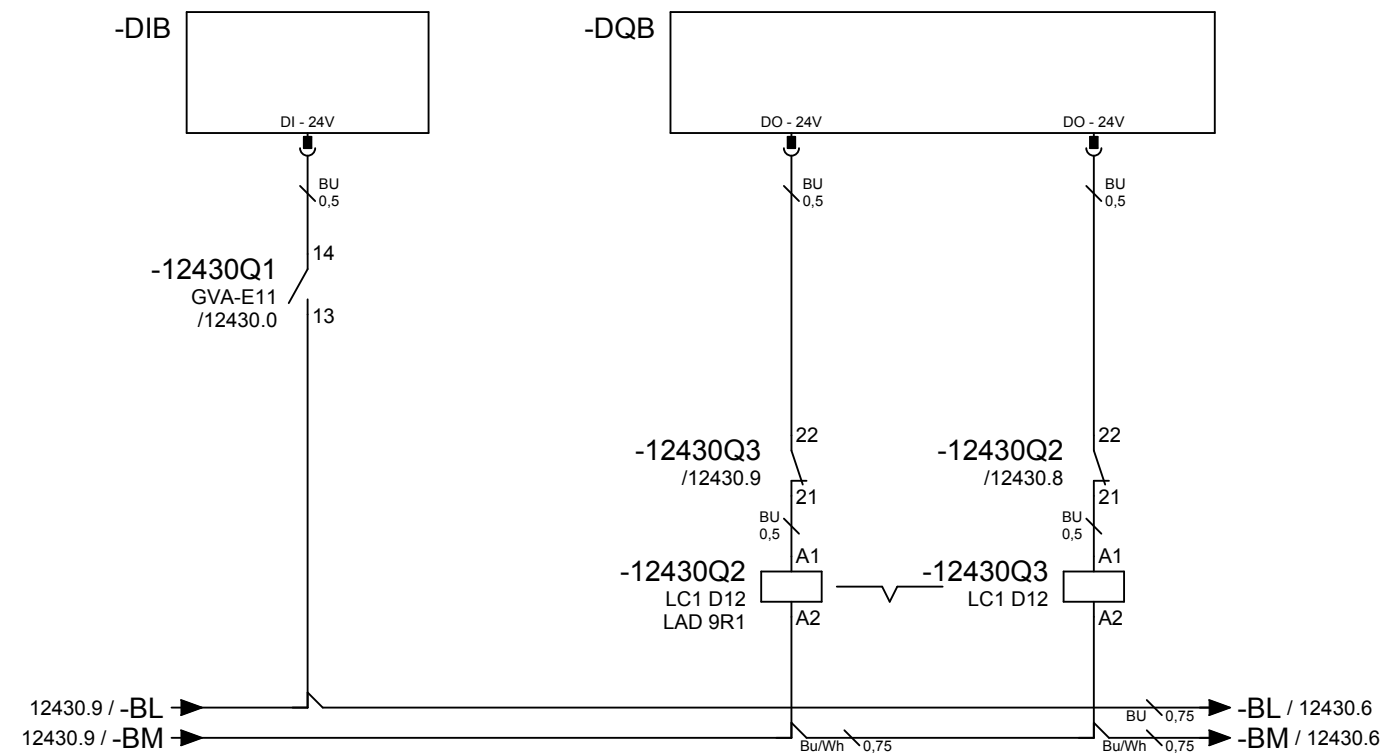


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

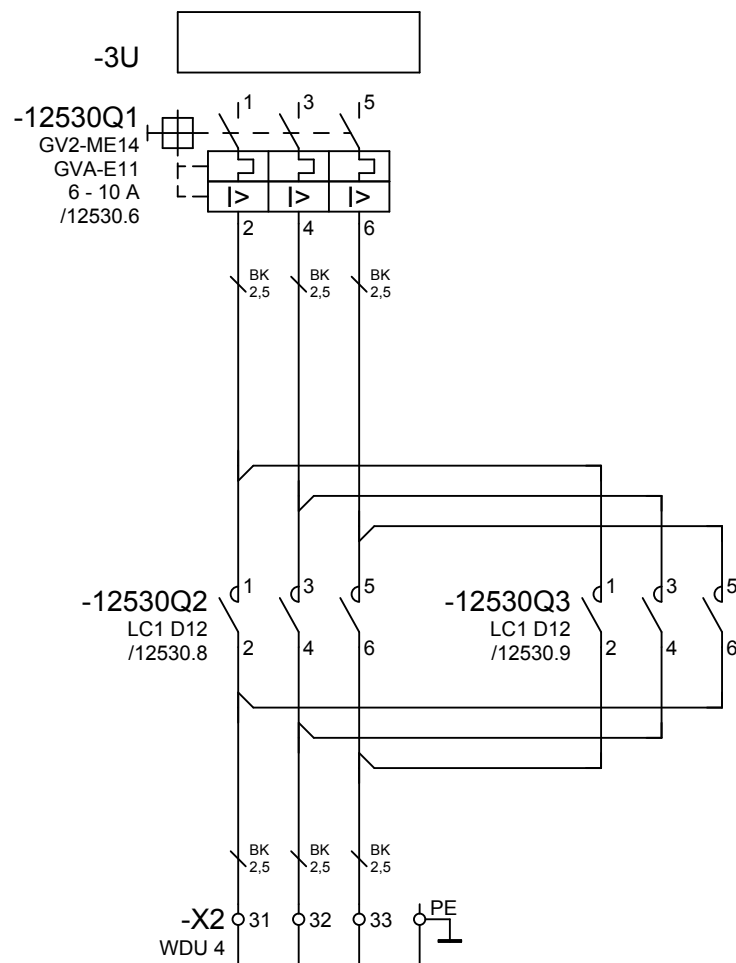


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

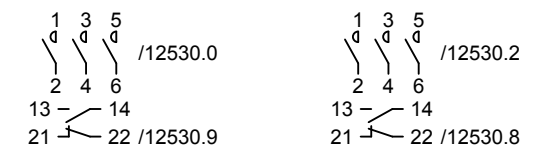
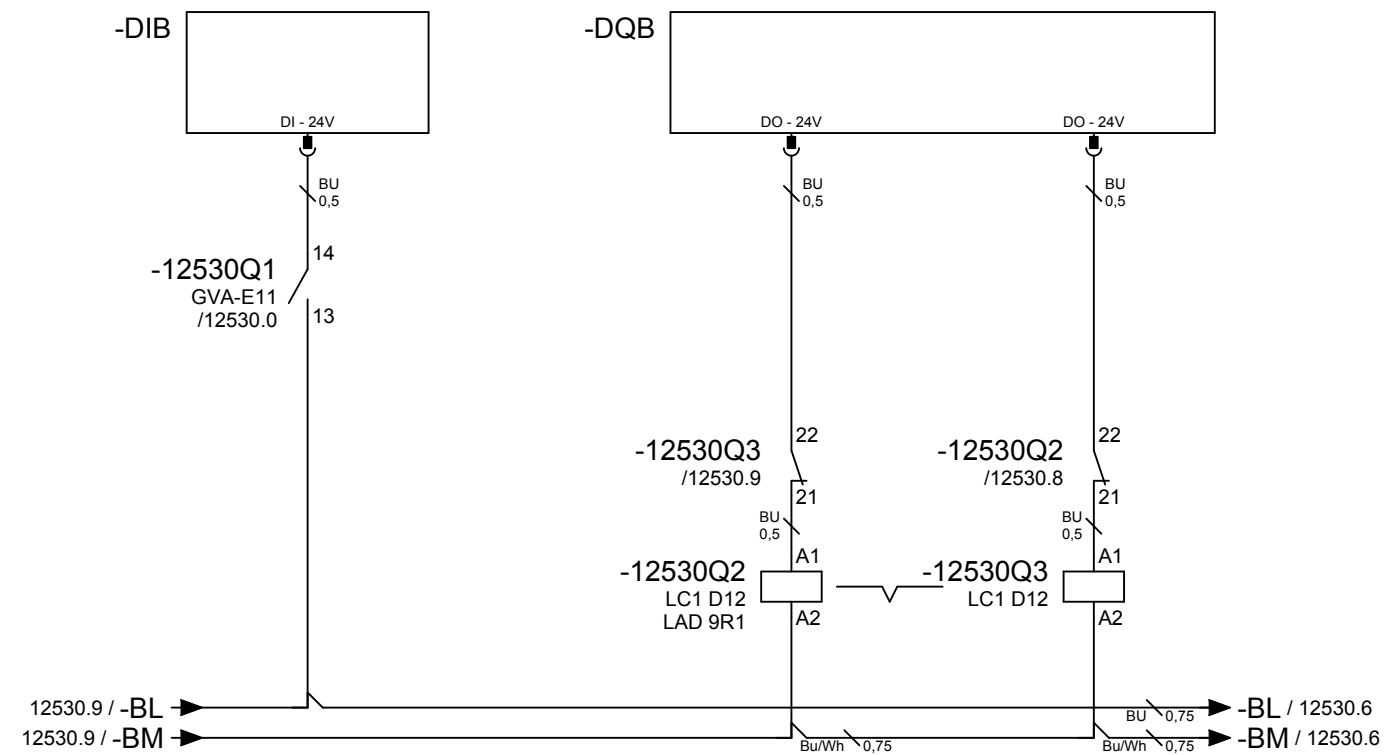
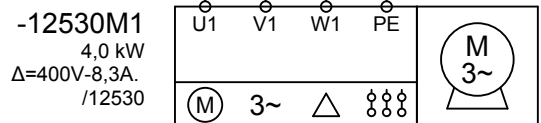


+UBxxx-12530W2
ÖLFLEX 100
4x1,5
25 m

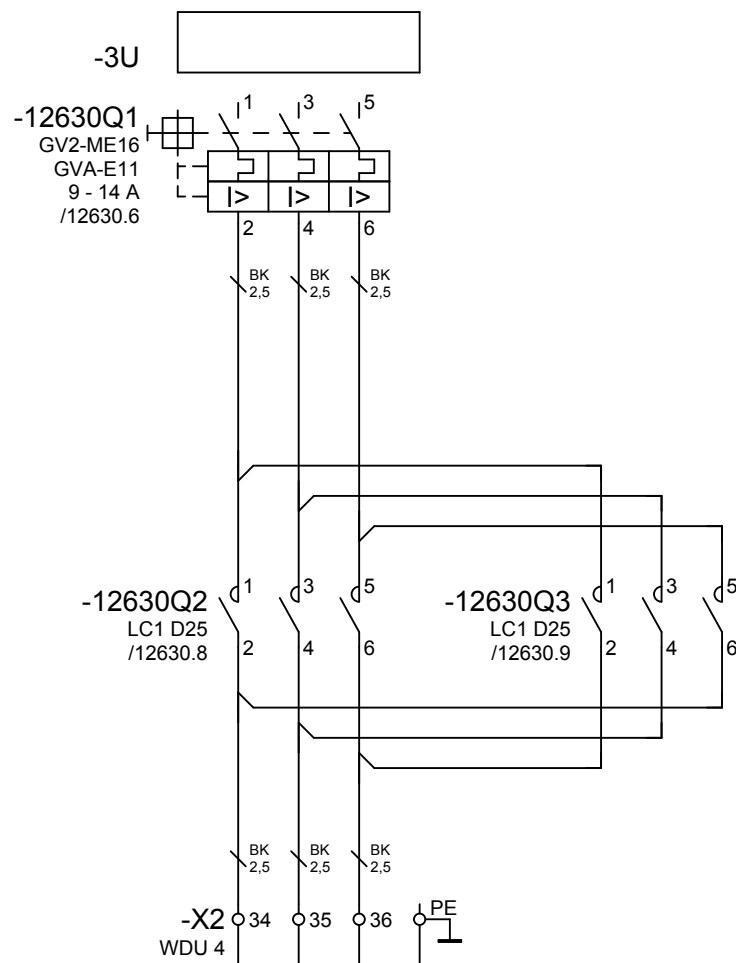
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
loss U at In 0,17V
loss U at 5xIn 0,87V
heat losses at In 4,42W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
loss U at In 2,41V
loss U at 5xIn 12,04V
heat losses at In 61,4W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



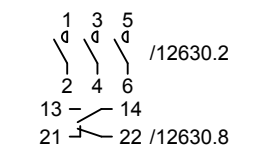
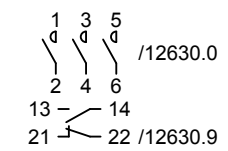
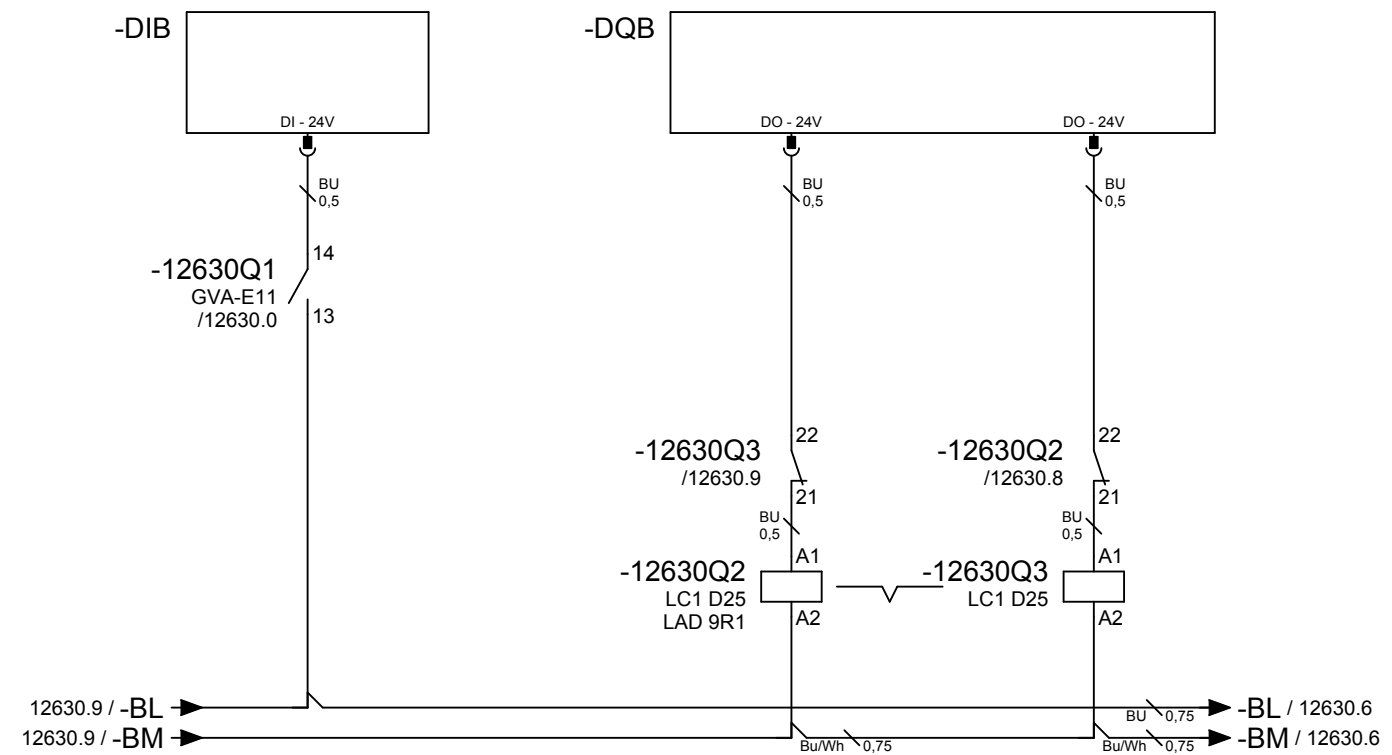
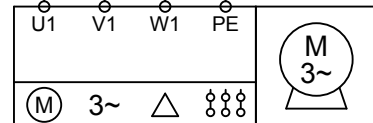
+UBxxxx-12630W2
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..

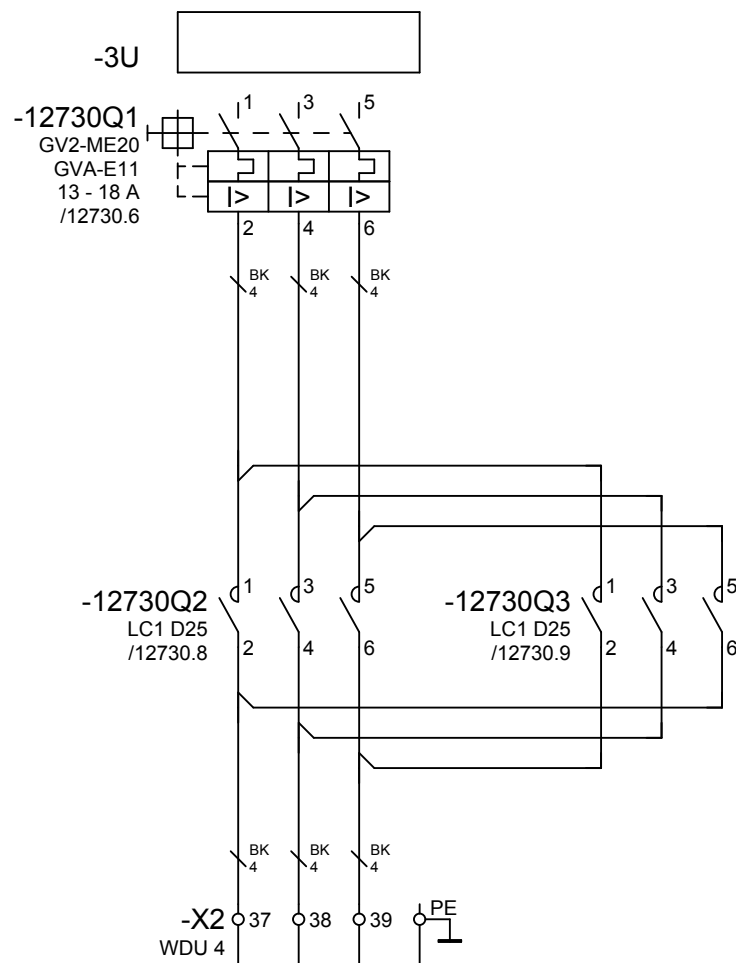
-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.



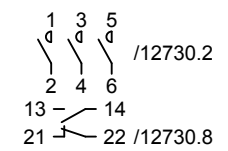
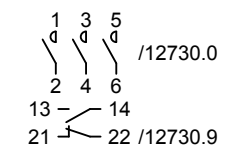
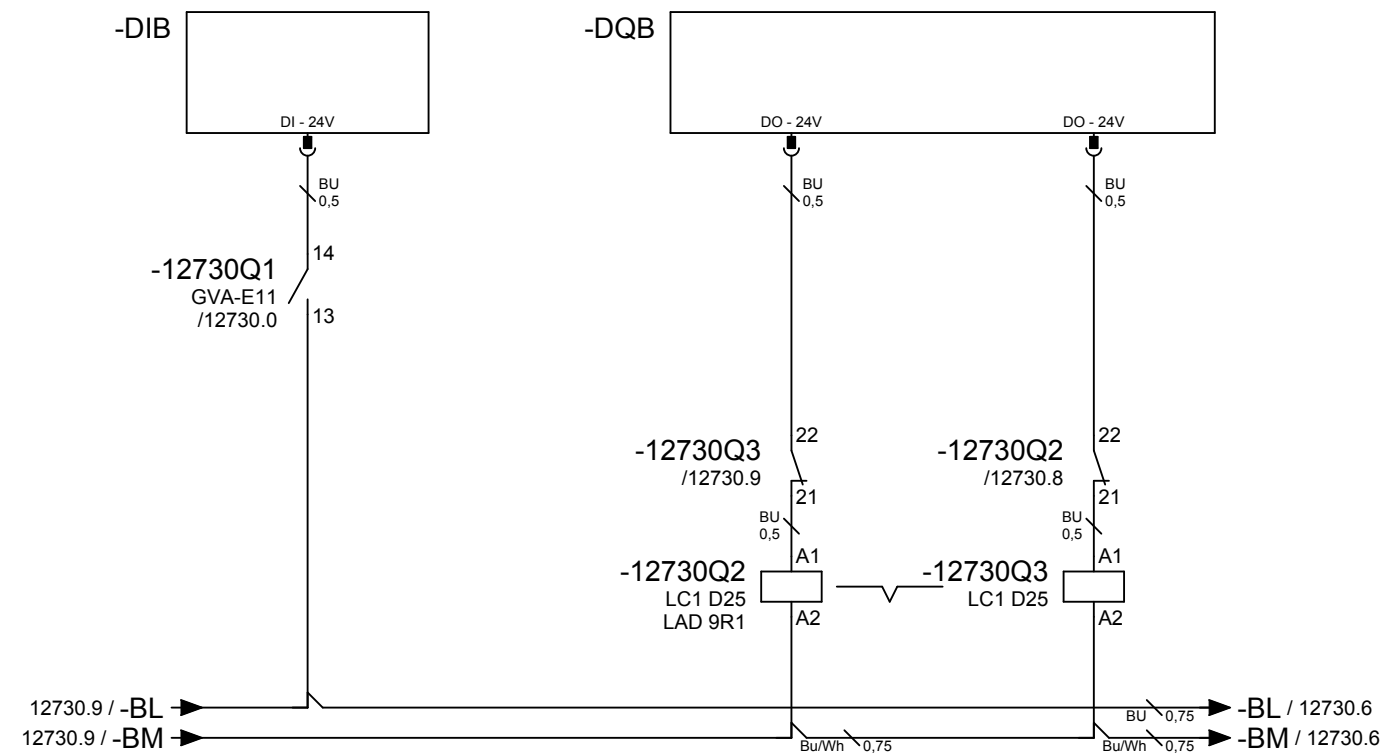
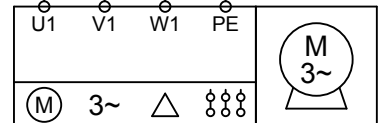
+UBxxx-12730W2
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..

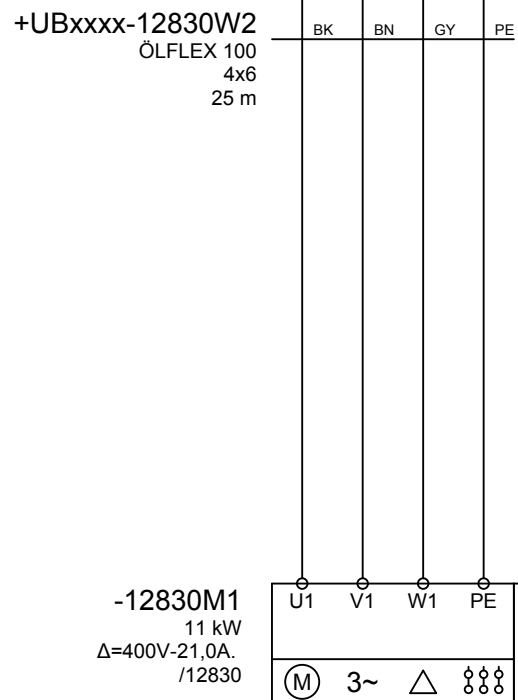
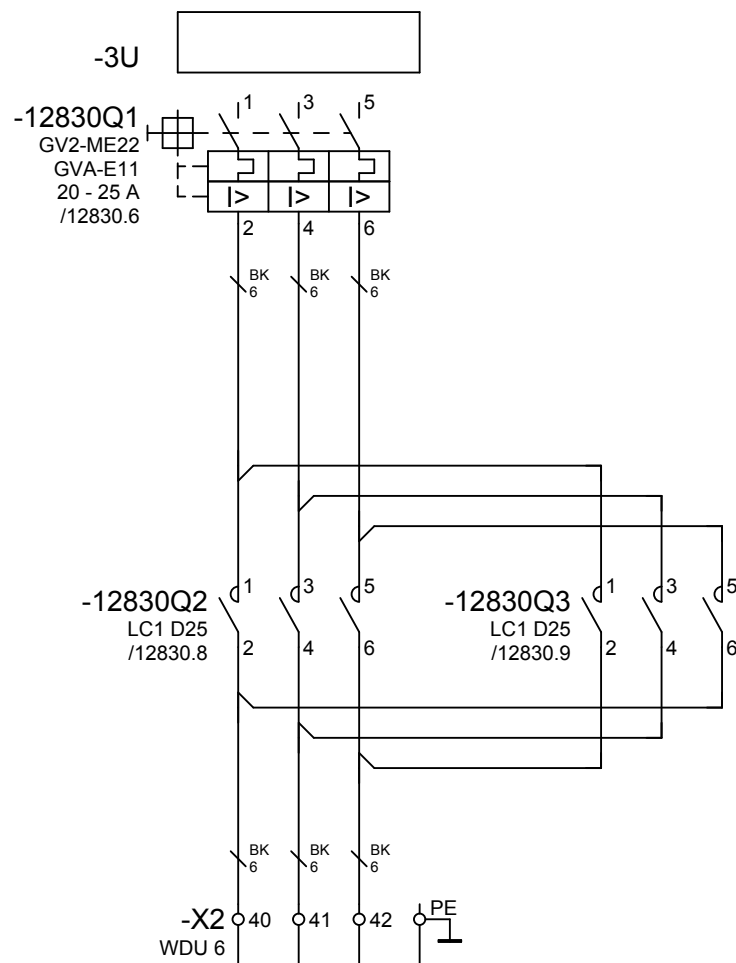
-12730M1
7,5 kW
Δ=400V-14,6A.
/12730



Circuit breaker. 0=Failure.

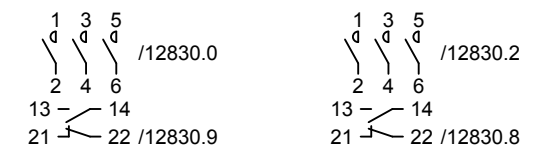
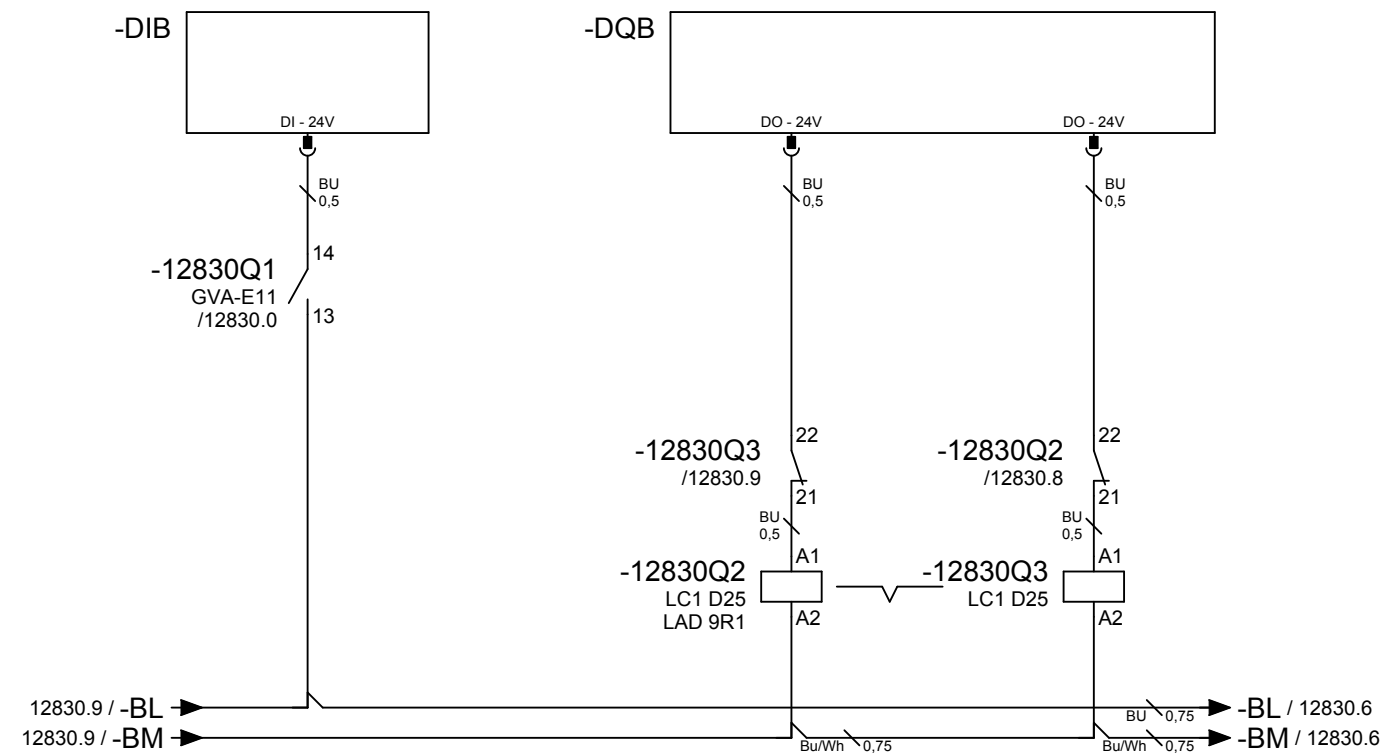
Motor. Contactor.

Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

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PACK 31. Motors.
TISKO spol. s r. o.

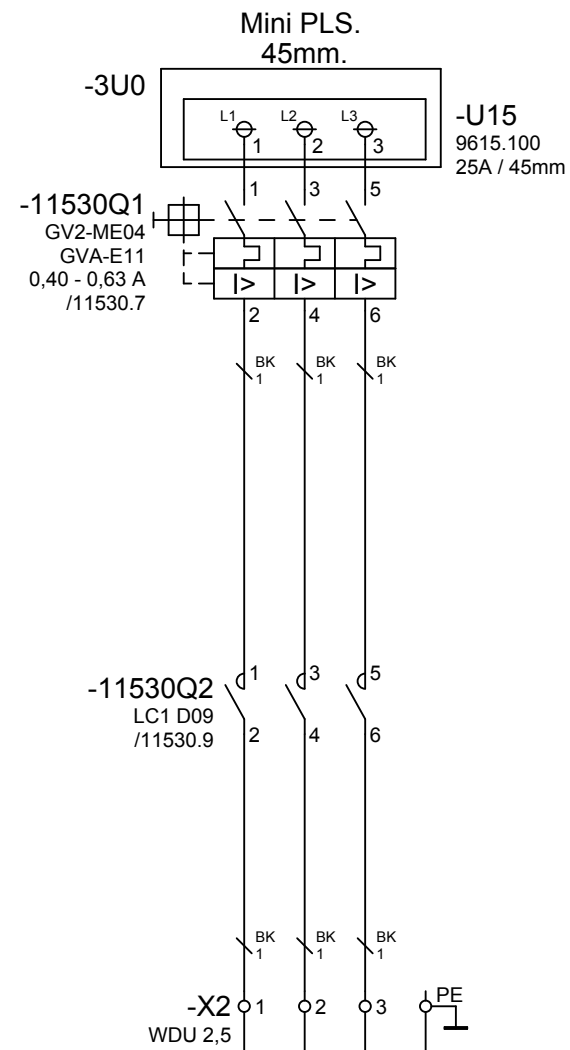
Type 2 coordination.
2018

Creator	V00	01.02.2012	Ing. Tisovčík Ivan
Last revision of project			
Last revision of page			
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= GV2ME_C2

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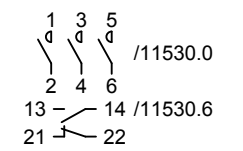
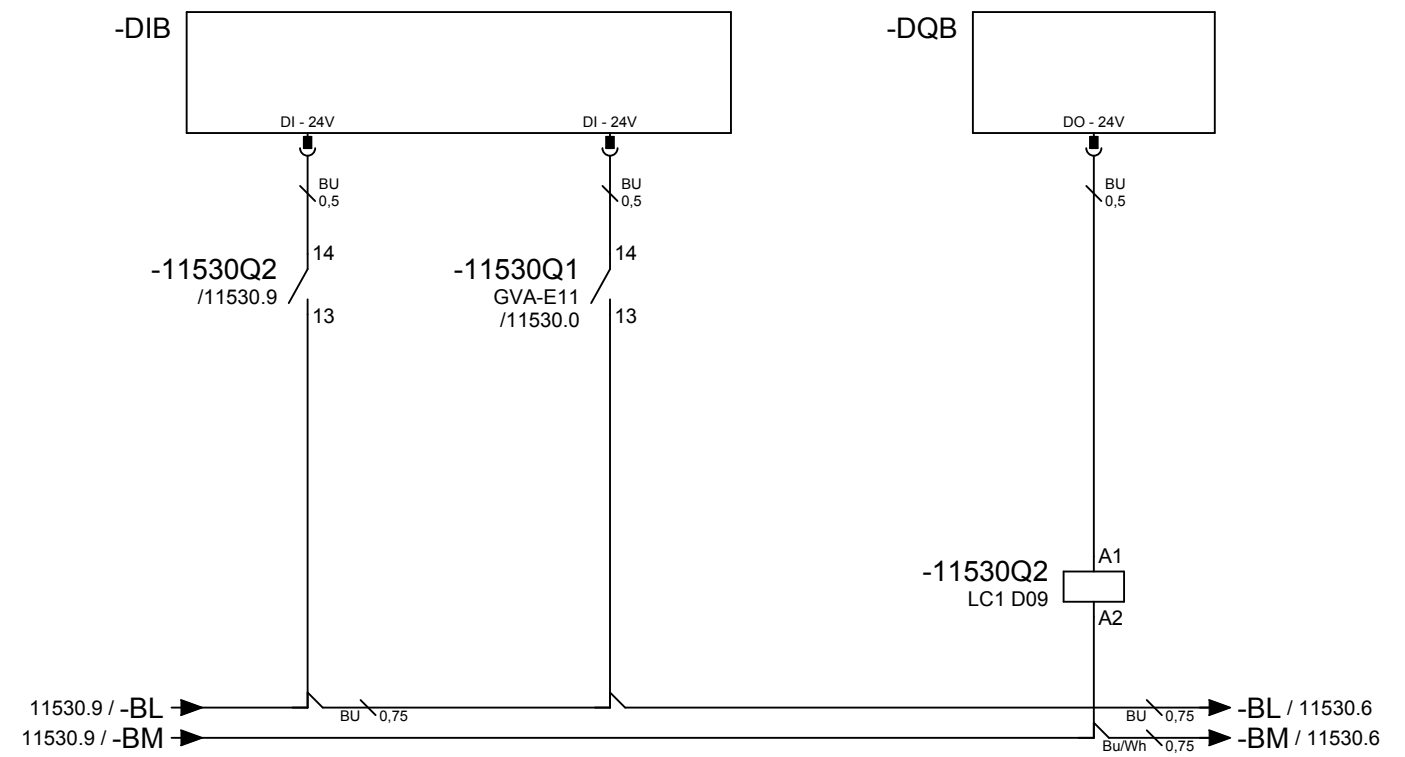


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,41A = 4,0%)
 loss U at In 0,02V
 loss U at 5xIn 0,10V
 heat losses at In 0,03W (L=3x3m)

 short circuit resistance 130kA at 415V

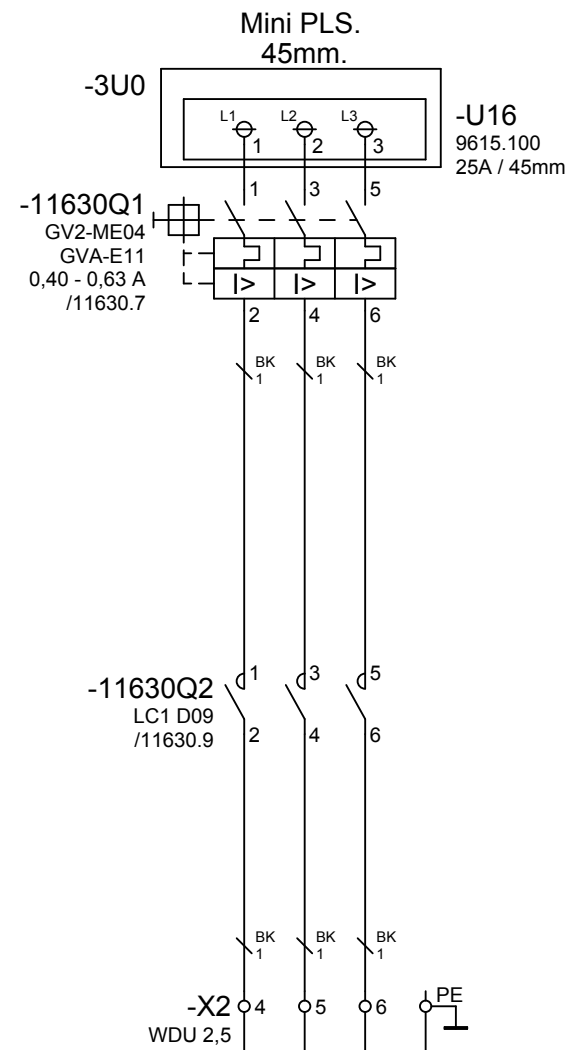
Cable route E
 load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
 loss U at In 0,23V
 loss U at 5xIn 1,16V
 heat losses at In 0,3W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

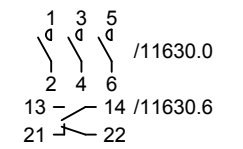
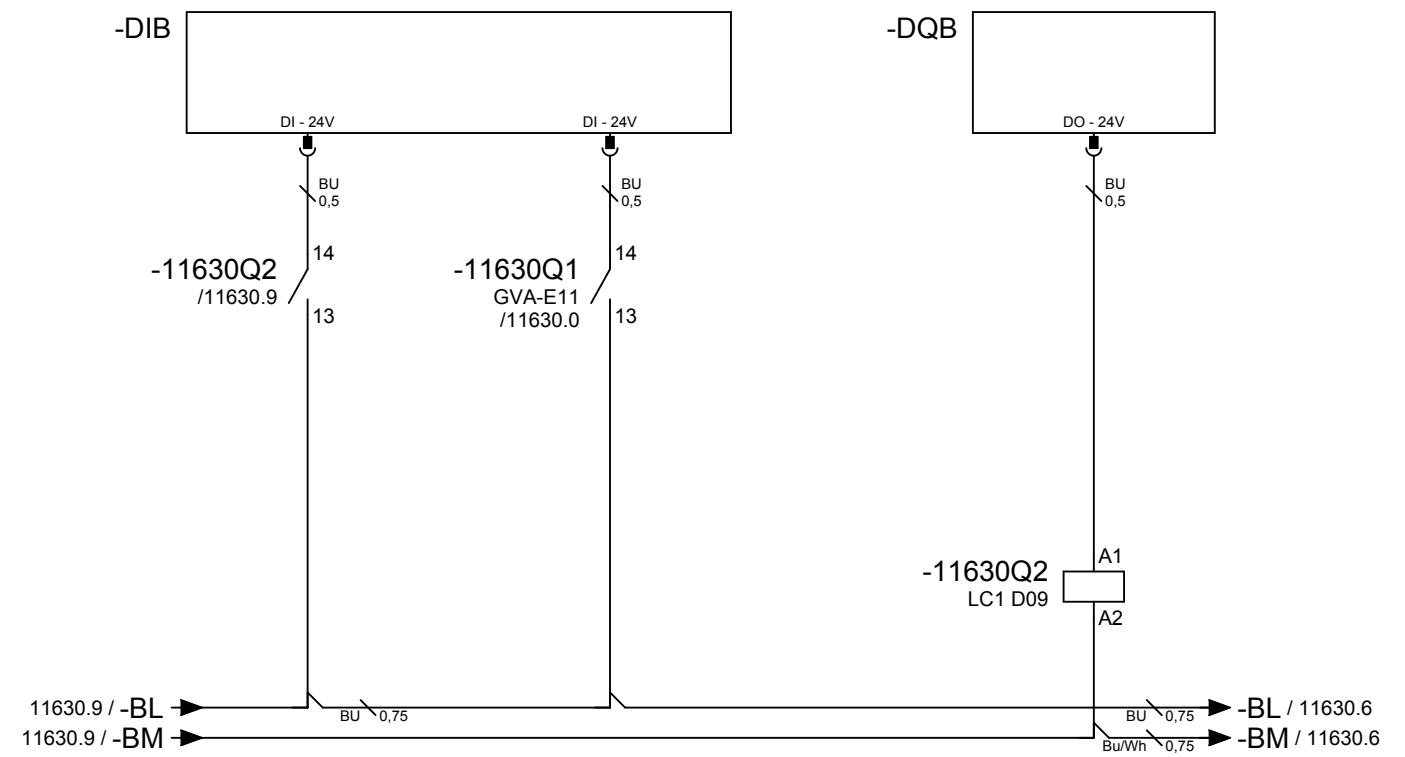


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 130kA at 415V

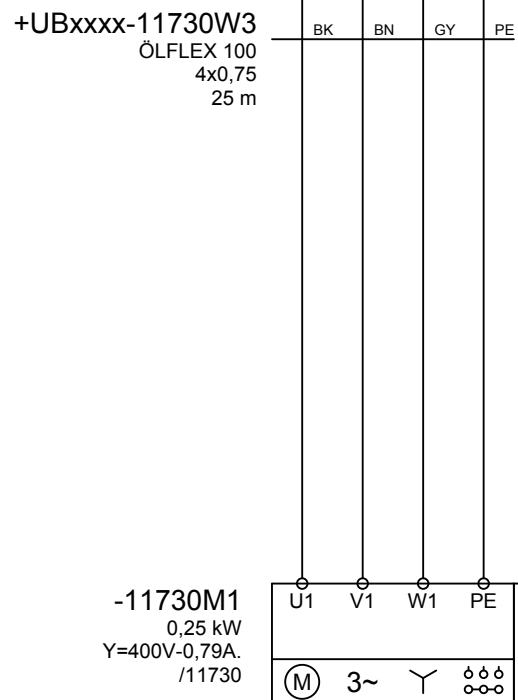
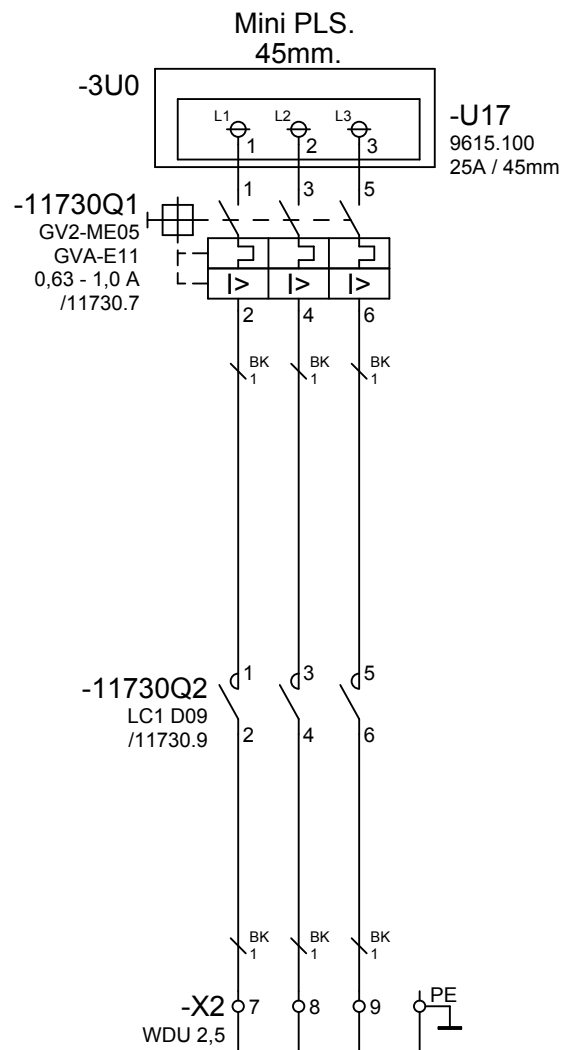
Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

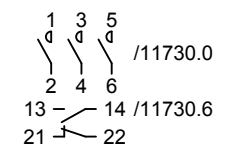
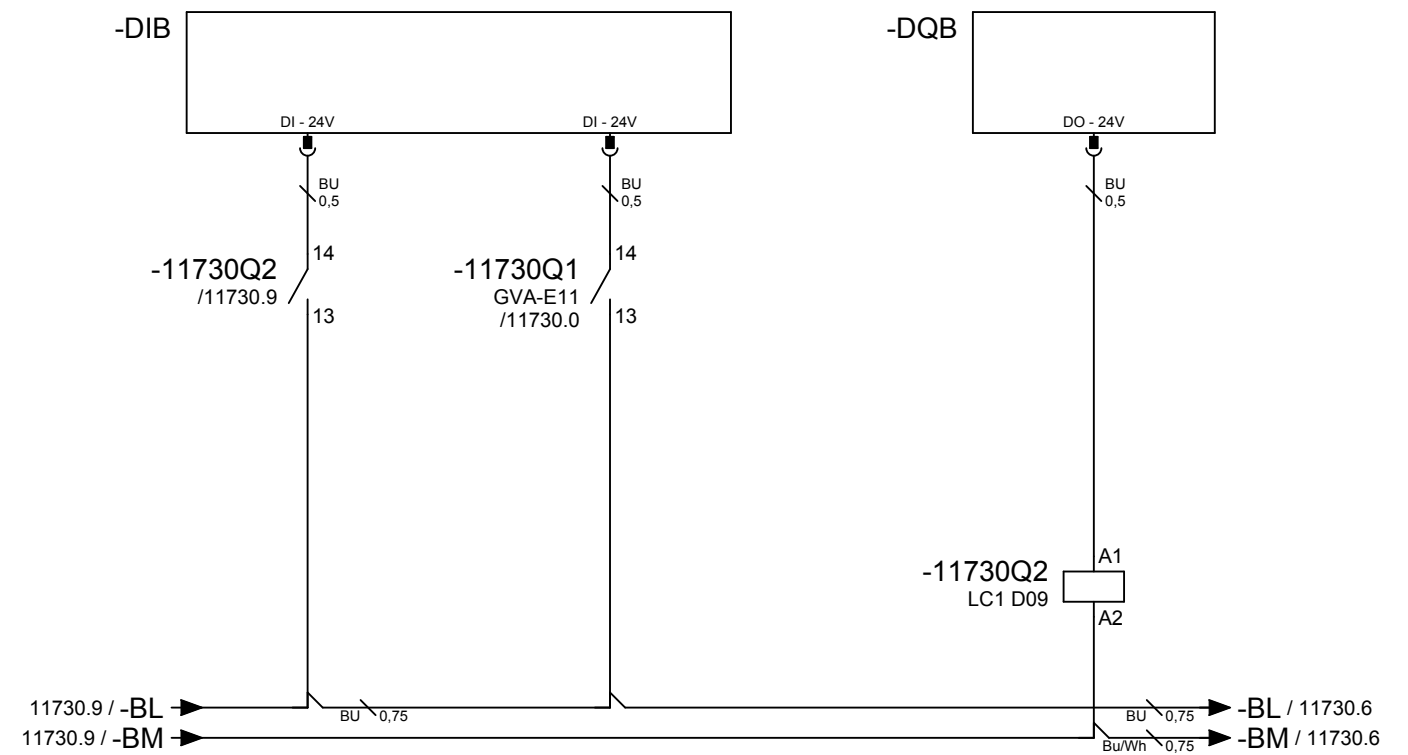


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,8A = 7,7%)
 loss U at In 0,04V
 loss U at 5xIn 0,20V
 heat losses at In 0,10W (L=3x3m)

 short circuit resistance 130kA at 415V

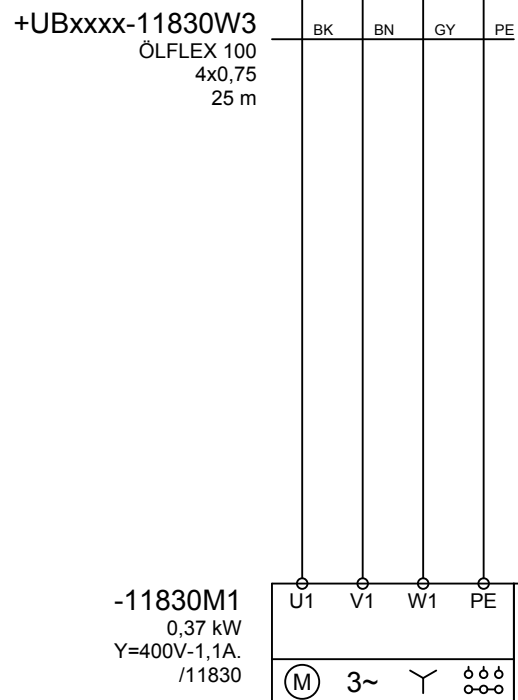
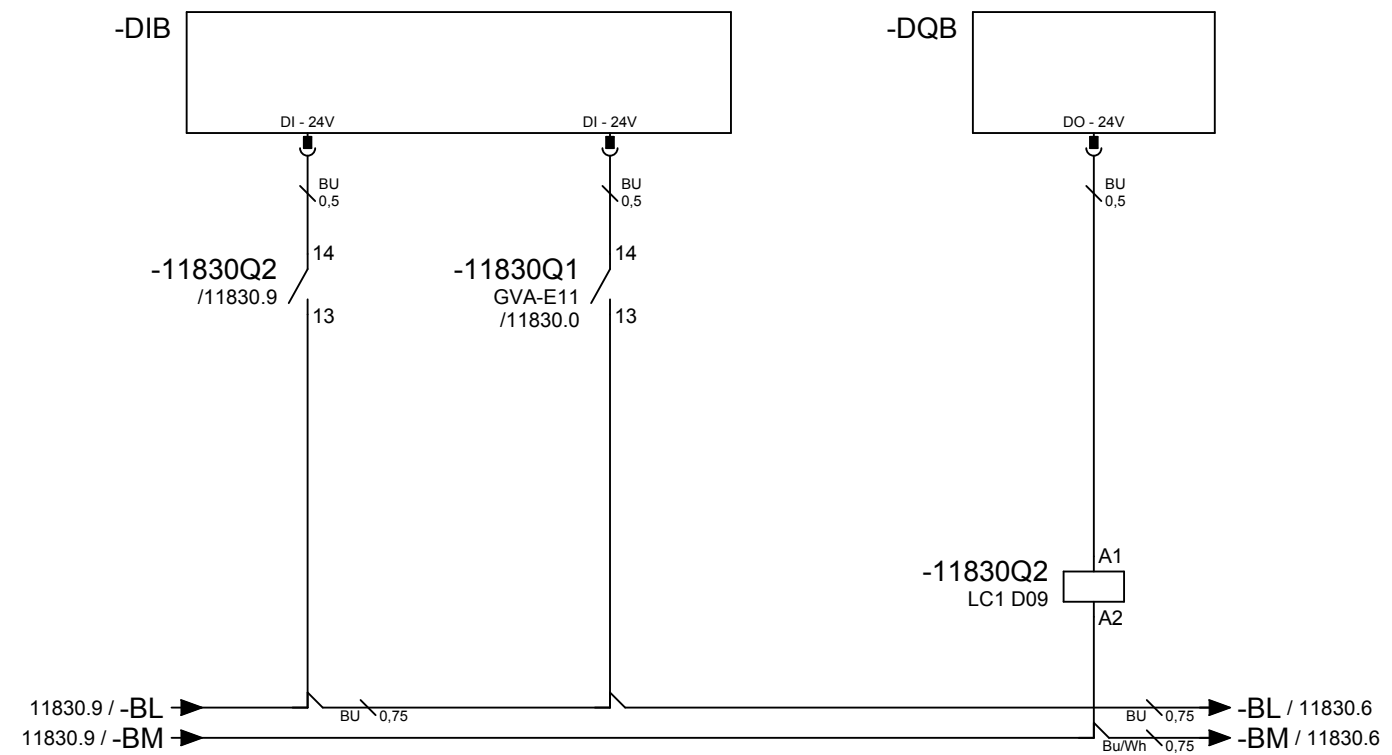
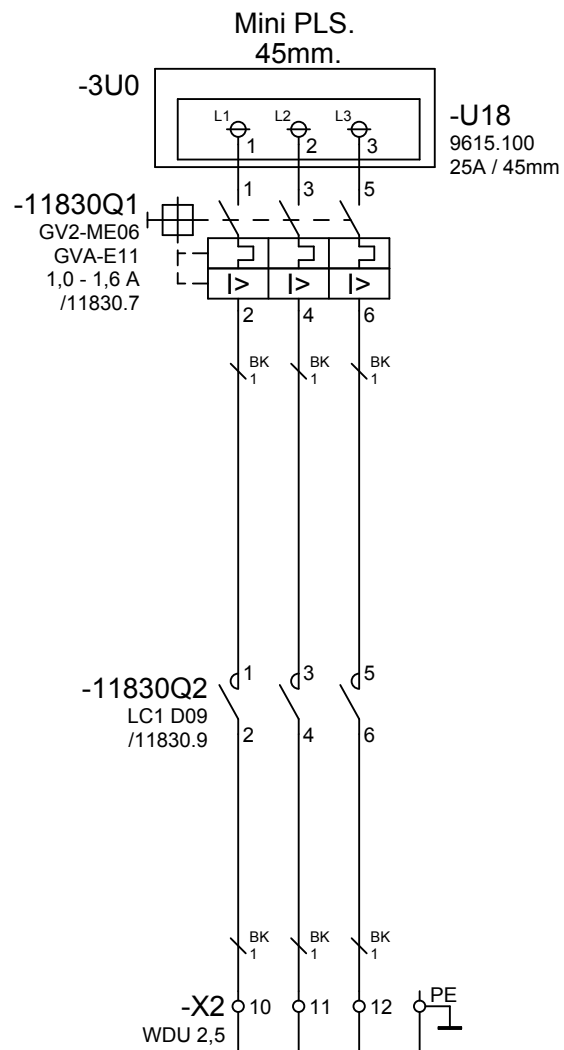
Cable route E
 load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
 loss U at In 0,45V
 loss U at 5xIn 2,27V
 heat losses at In 1,1W (L=3x25m)



Contactor.
1=Switched ON.

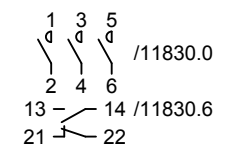
Circuit
breaker. 0=Failure.

Motor.
Contactor.

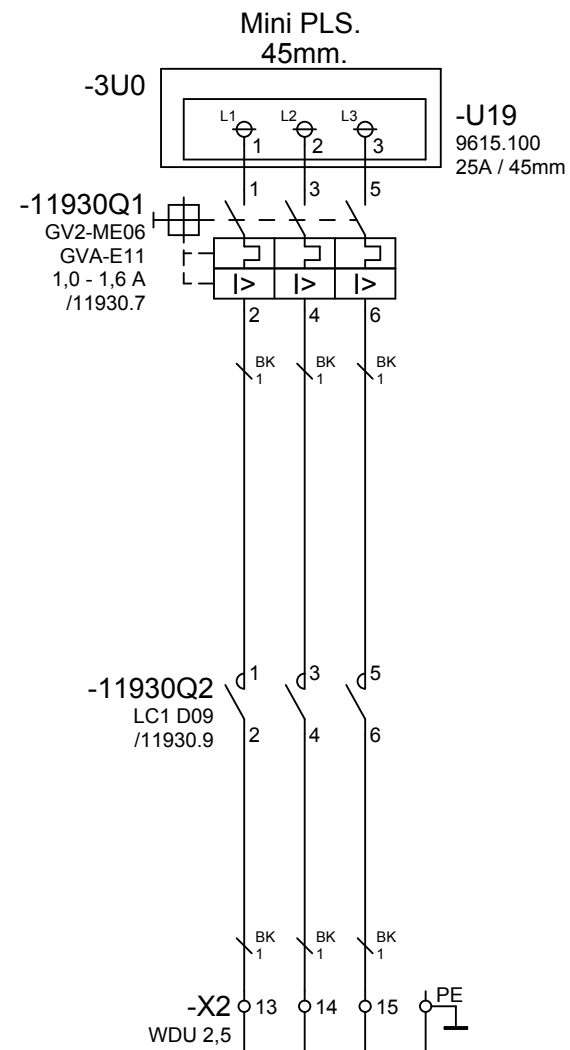


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

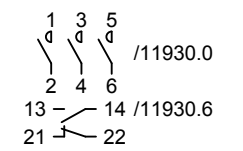
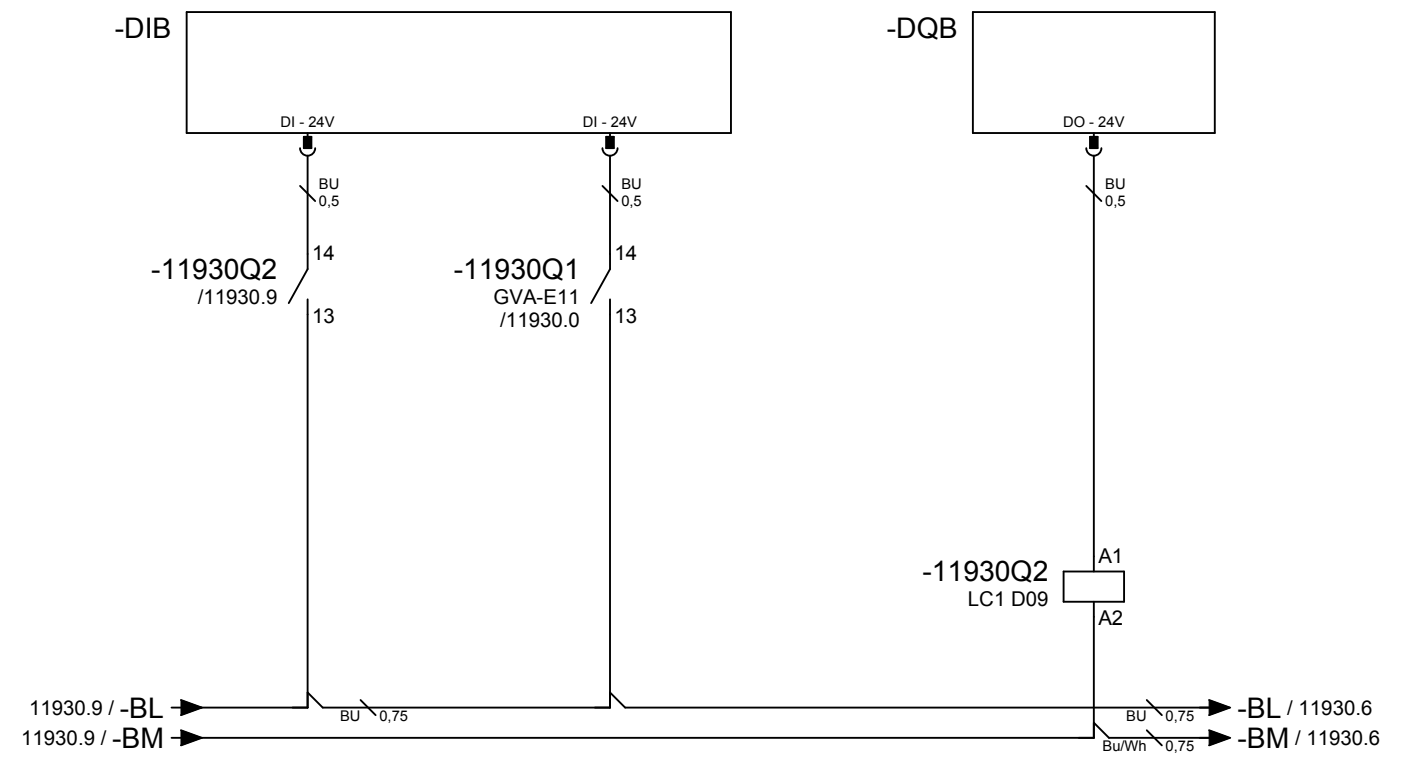


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)

 short circuit resistance 130kA at 415V

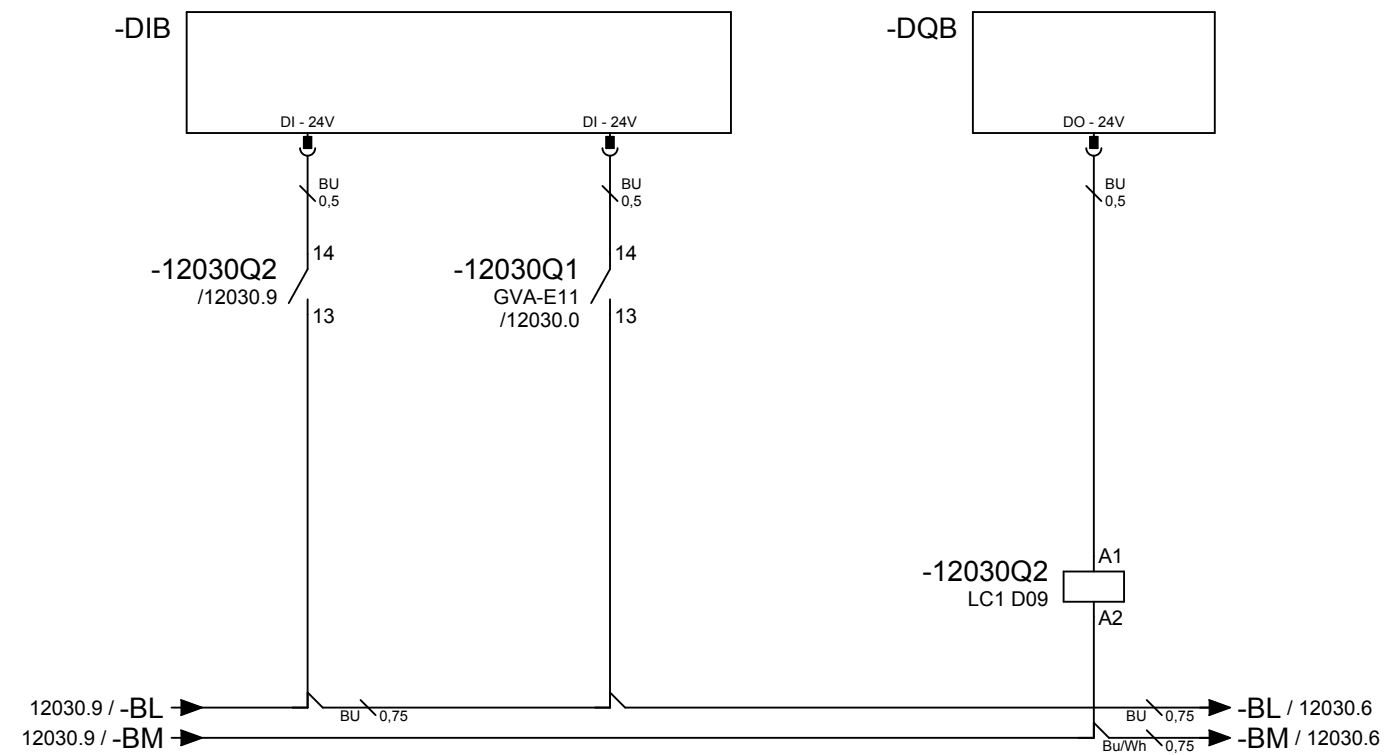
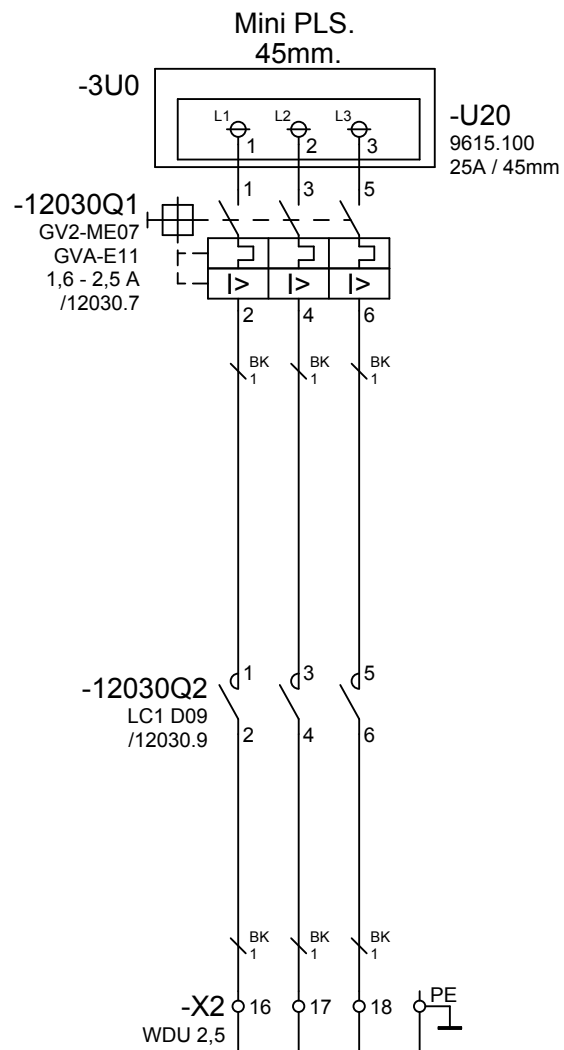
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.



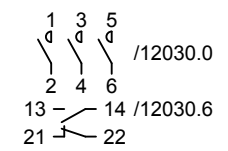
+UBxxx-12030W3 ÖLFLEX 100 4x1 25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

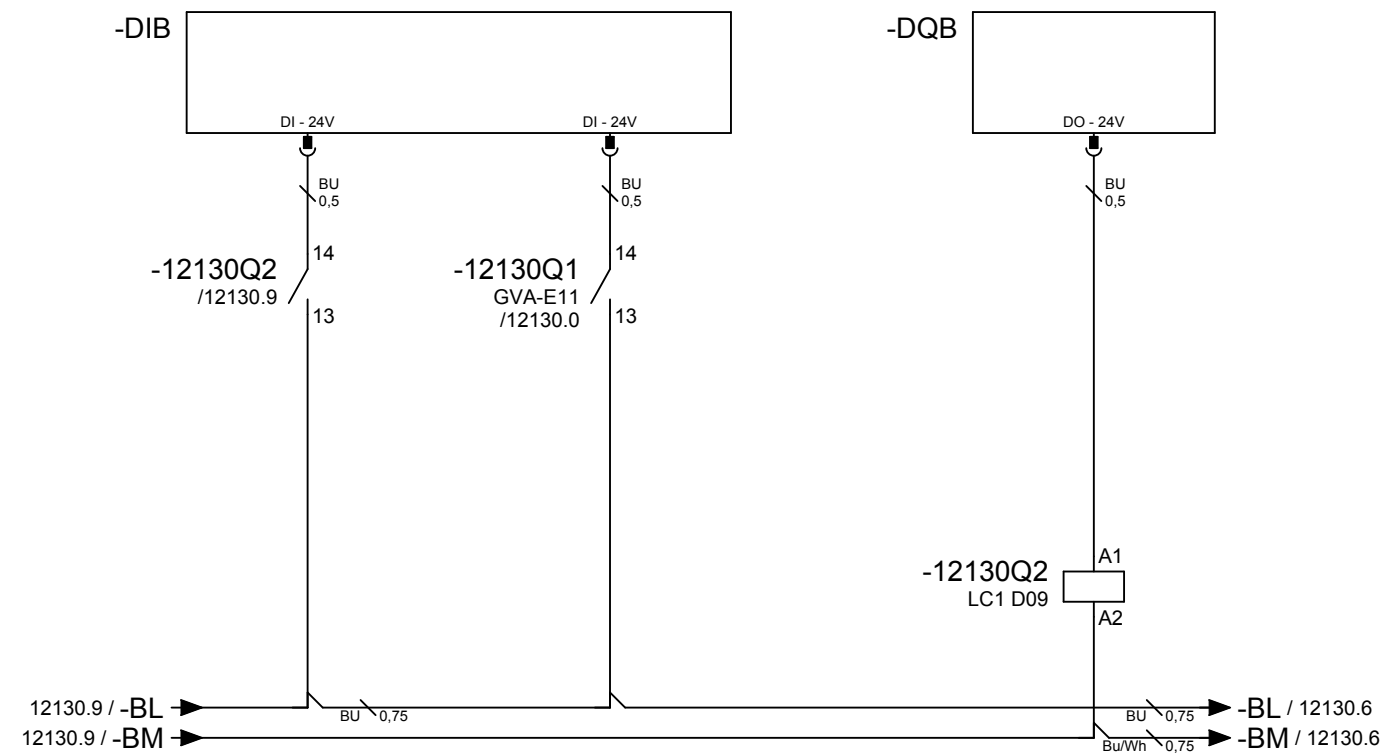
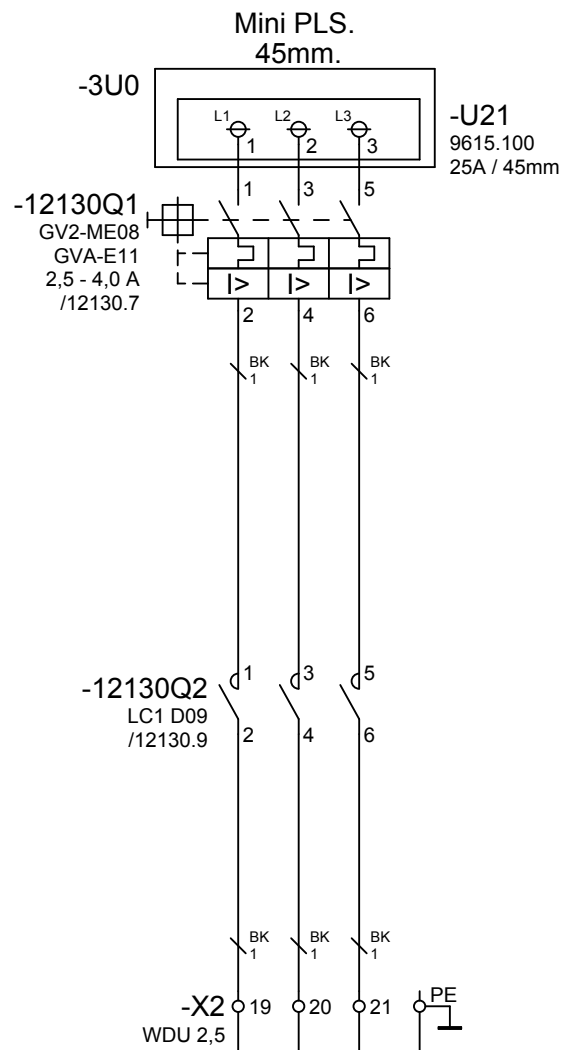
Enclosure B1
 load 1mm² = cca 10,4A; (1,9A = 18,3%)
 loss U at In 0,10V
 loss U at 5xIn 0,48V
 heat losses at In 0,55W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (1,9A = 14,6%)
 loss U at In 0,81V
 loss U at 5xIn 4,04V
 heat losses at In 4,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

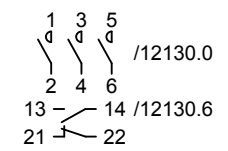


+UBxxx-12130W3
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (2,7A = 26,0%)
loss U at In 0,14V
loss U at 5xIn 0,69V
heat losses at In 1,12W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

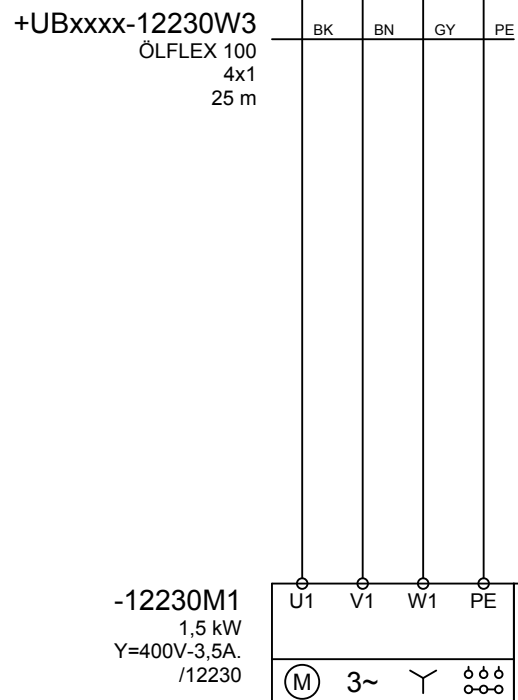
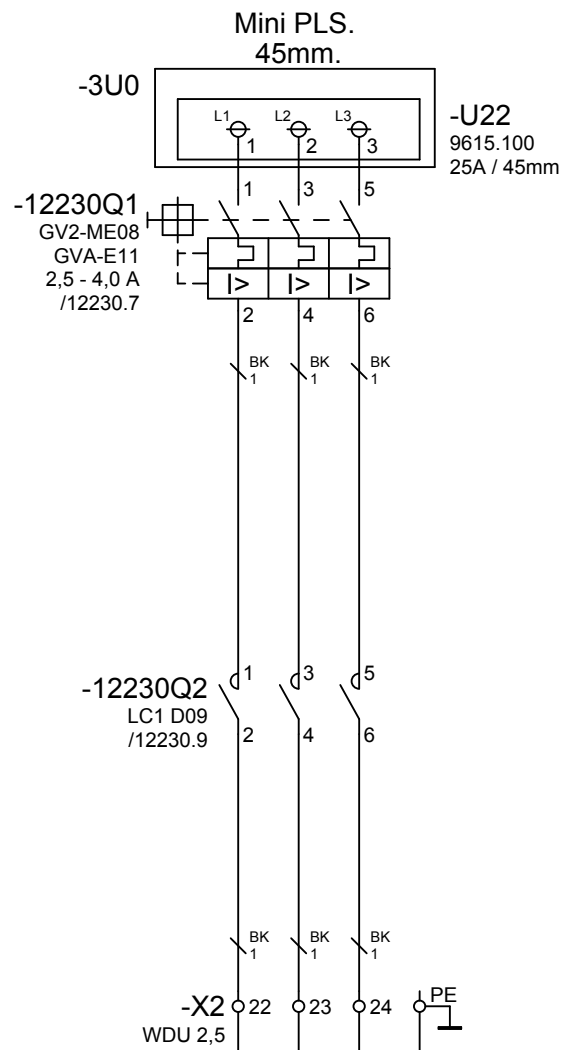
Cable route E
load 1mm² = cca 13,0A; (2,7A = 20,8%)
loss U at In 1,15V
loss U at 5xIn 5,74V
heat losses at In 9,3W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

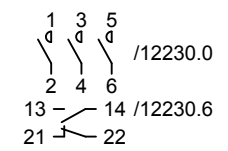
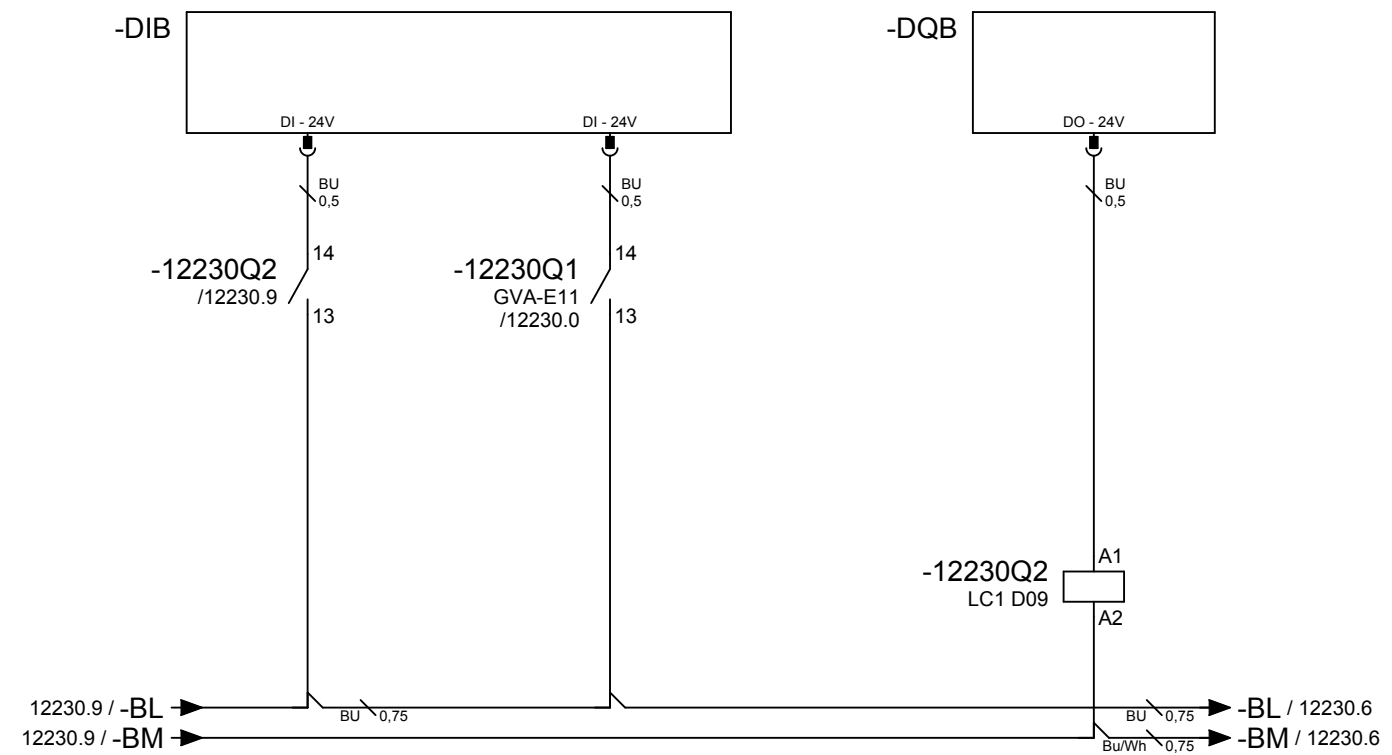
Circuit
breaker. 0=Failure.

Motor.
Contactor.



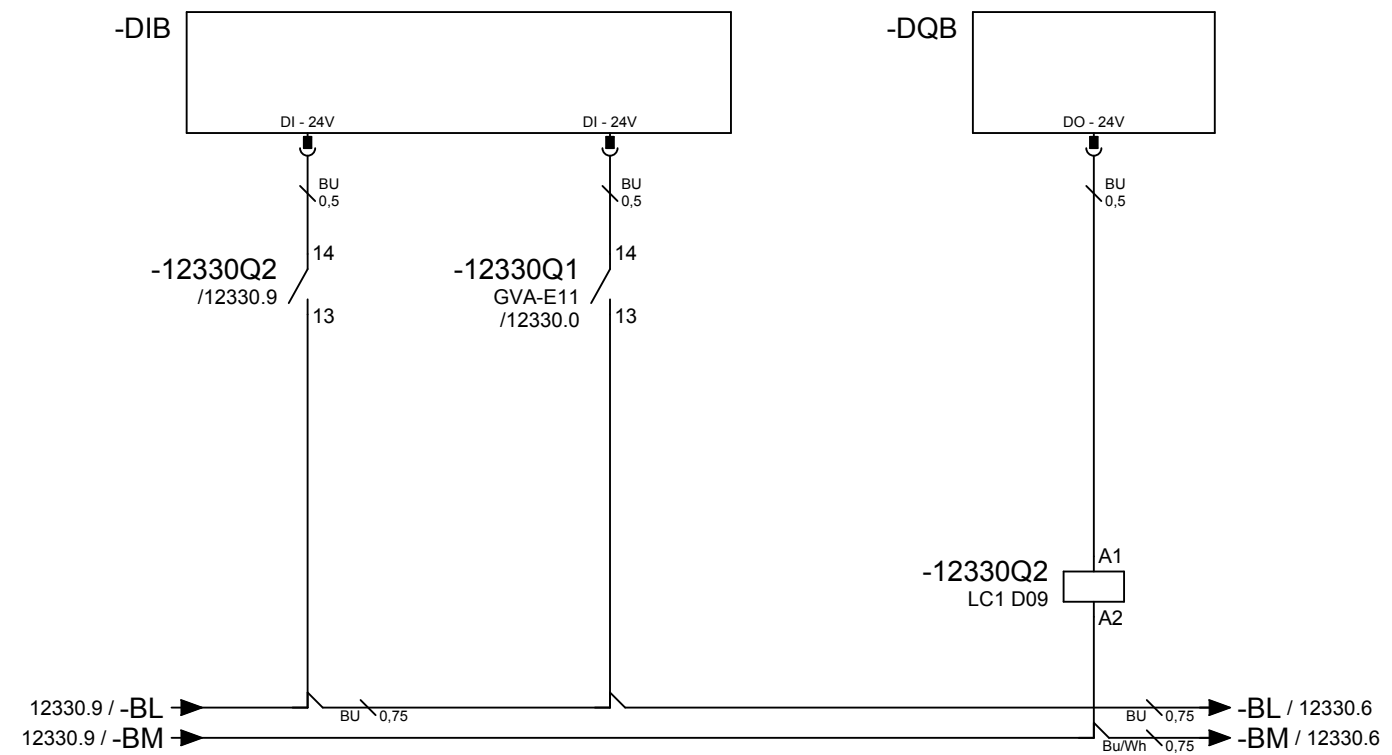
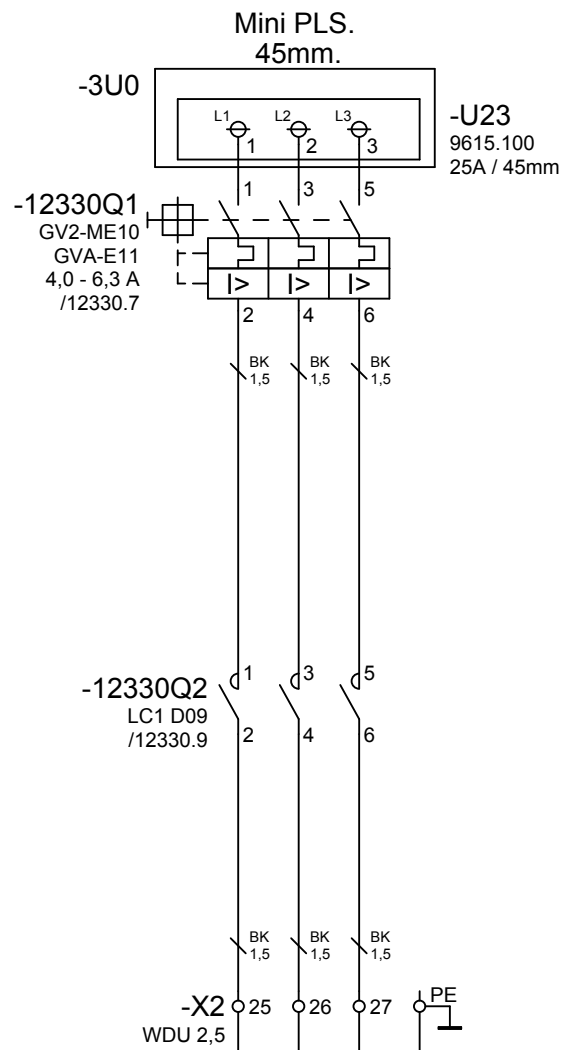
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...



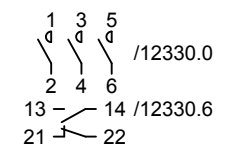
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	PACK 31. Motors.	1,5kW. 2018	Creator	V00	01.02.2012	Ing. Tisovčík Ivan	= GV2ME_C2	
	TISKO spol. s r. o.		Last revision of project					
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				M = 1 : 1	Schéma vícepólového zapojení	21.10.2018	WUP0U34409	12230



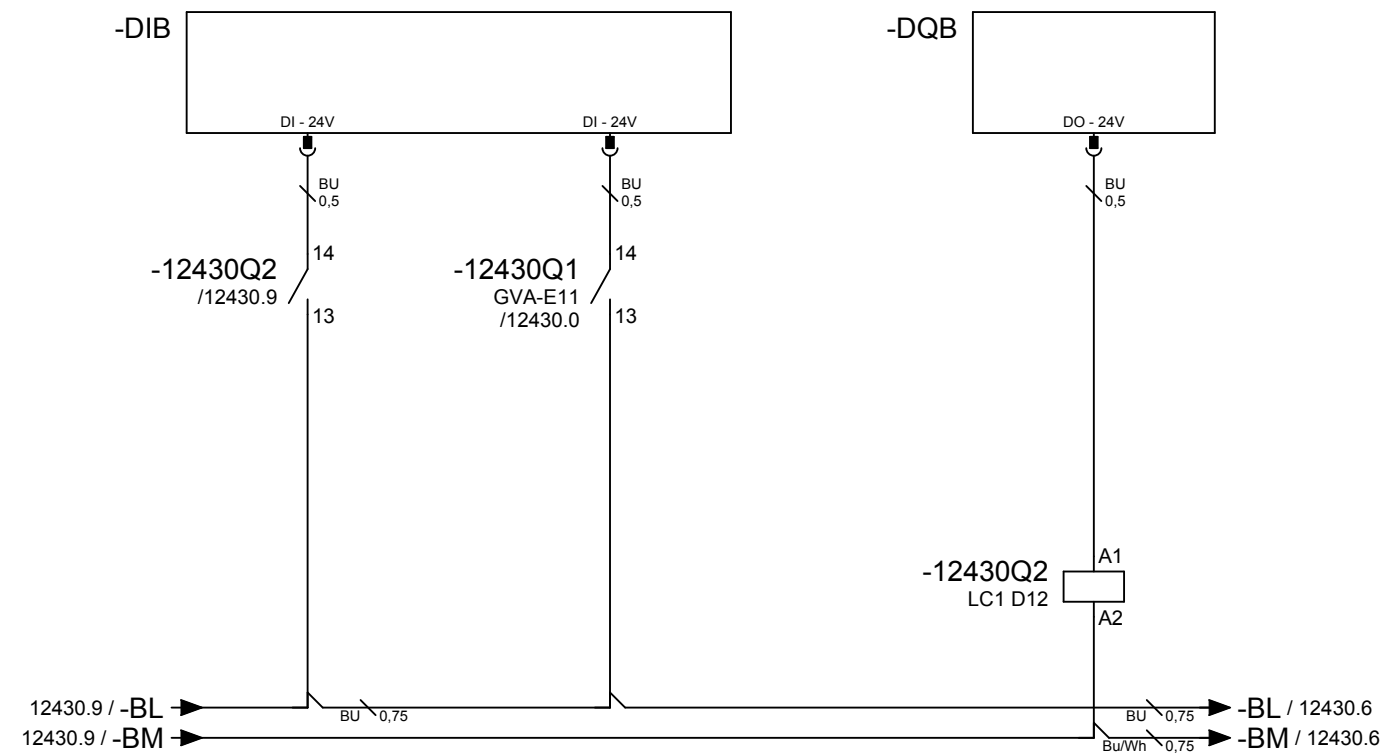
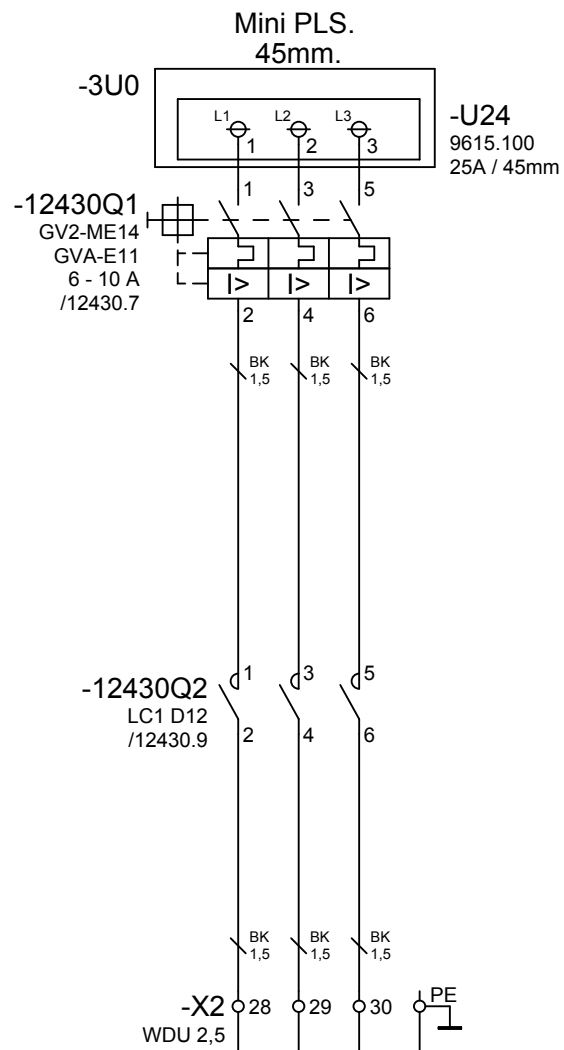
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (5A = 37,0%)
loss U at In	0,17V
loss U at 5xIn	0,85V
heat losses at In	2,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (5A = 27,0%)
loss U at In	1,42V
loss U at 5xIn	7,08V
heat losses at In	21,3W (L=3x25m)
...	...
...	...



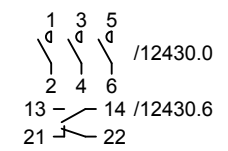
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>2,2kW. 2018</p>	Creator V00 01.02.2012 Ing. Tisovčík Ivan	<p>= GV2ME_C2</p>
			Last revision of project Last revision of page M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409		+ PLS 12330



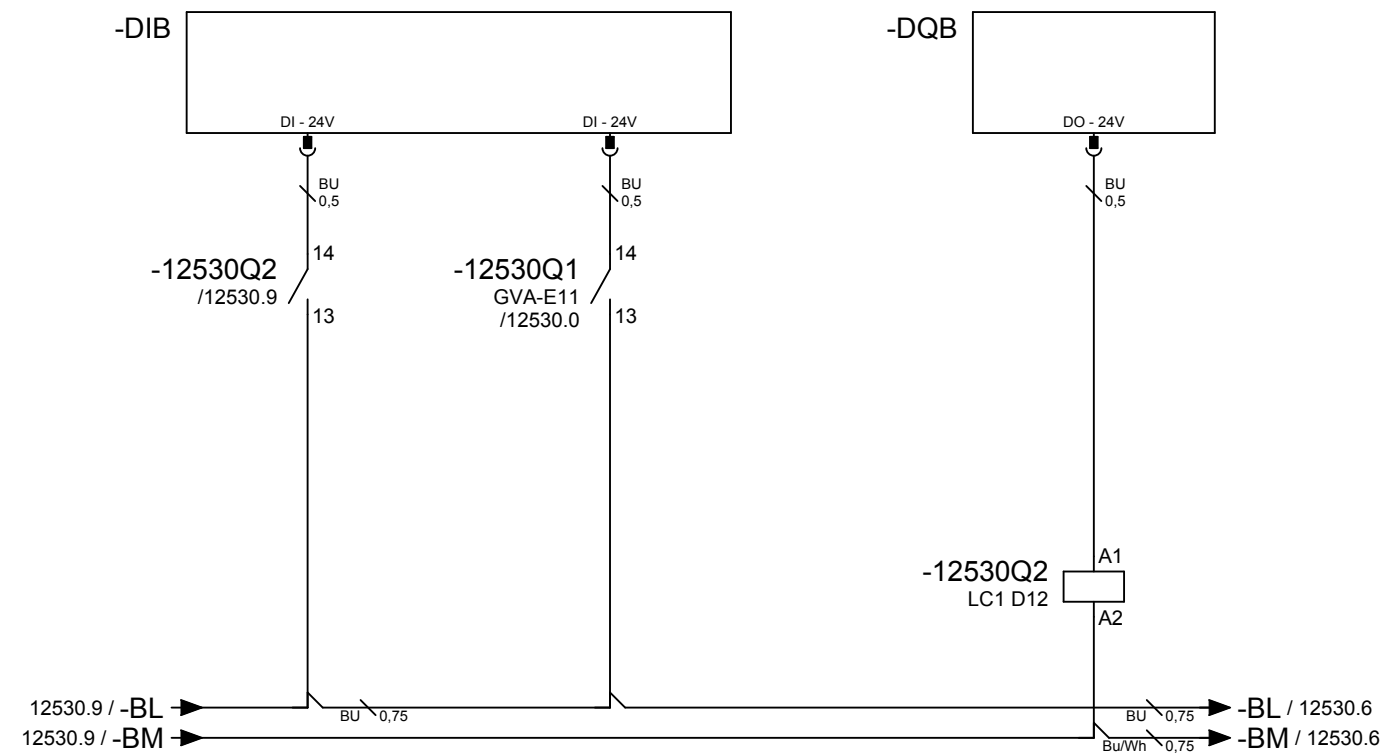
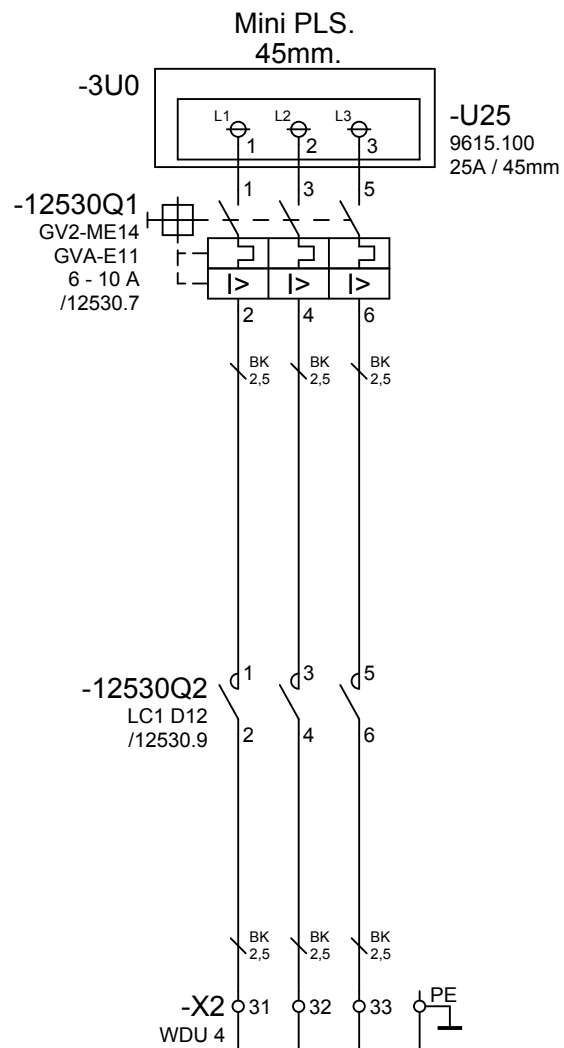
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...



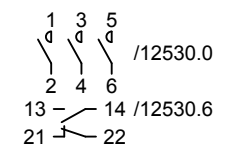
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>3,0kW. 2018</p>	<p>Creator V00 01.02.2012 Ing. Tisovčík Ivan</p>	<p>= GV2ME_C2</p>
			<p>Last revision of project</p> <p>Last revision of page</p> <p>M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409</p>	<p>+ PLS</p> <p>12430</p>



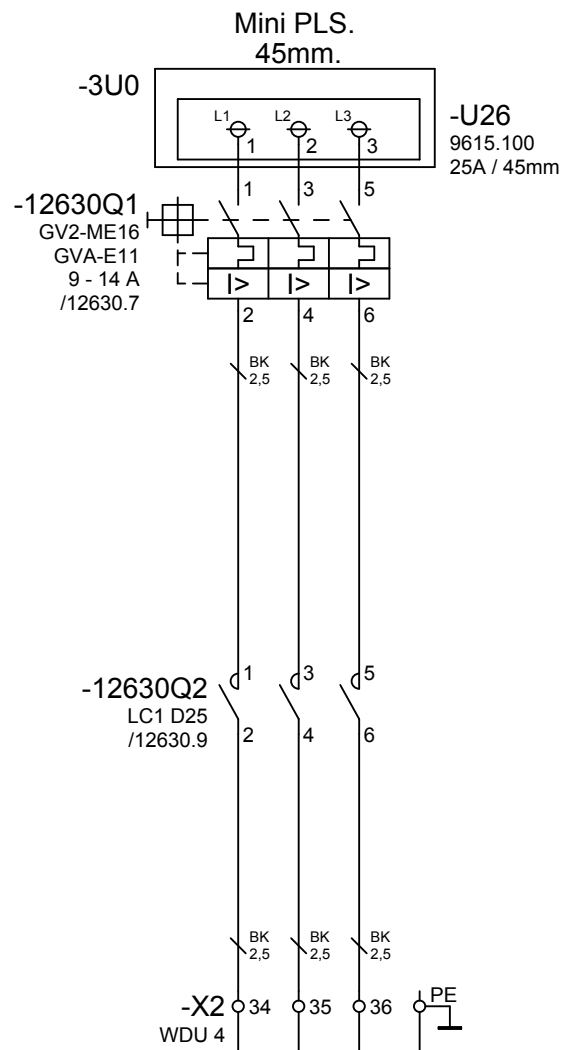
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>TISKO elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	PACK 31. Motors. TISKO spol. s r. o.	4,0kW. 2018	Creator V00 01.02.2012 Ing. Tisovčík Ivan Last revision of project Last revision of page M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	= GV2ME_C2 + PLS 12530
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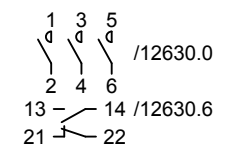
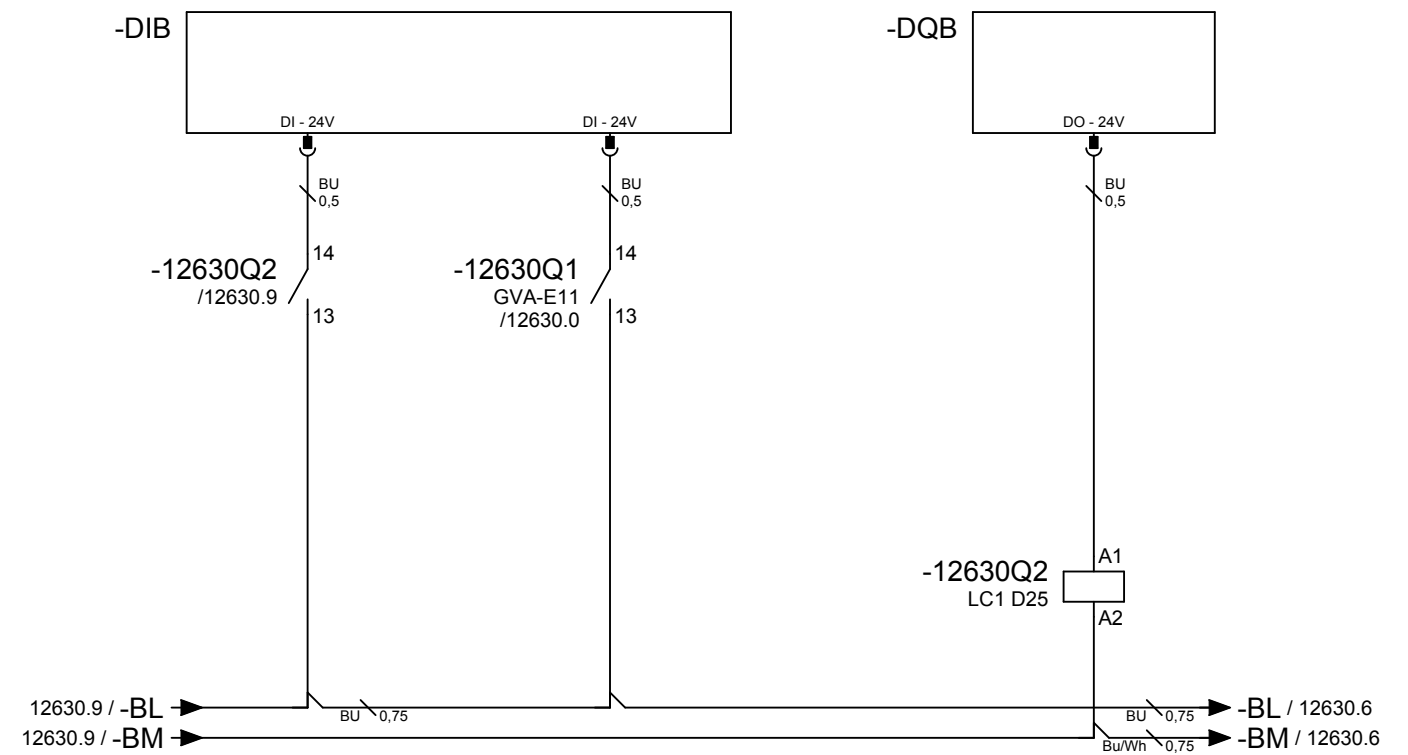


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

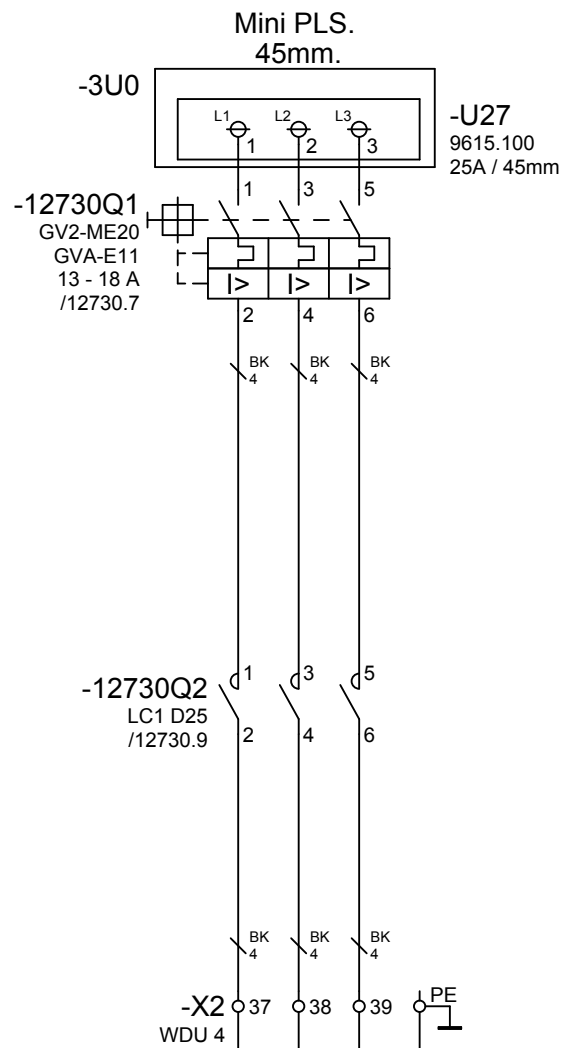
Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

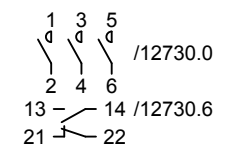
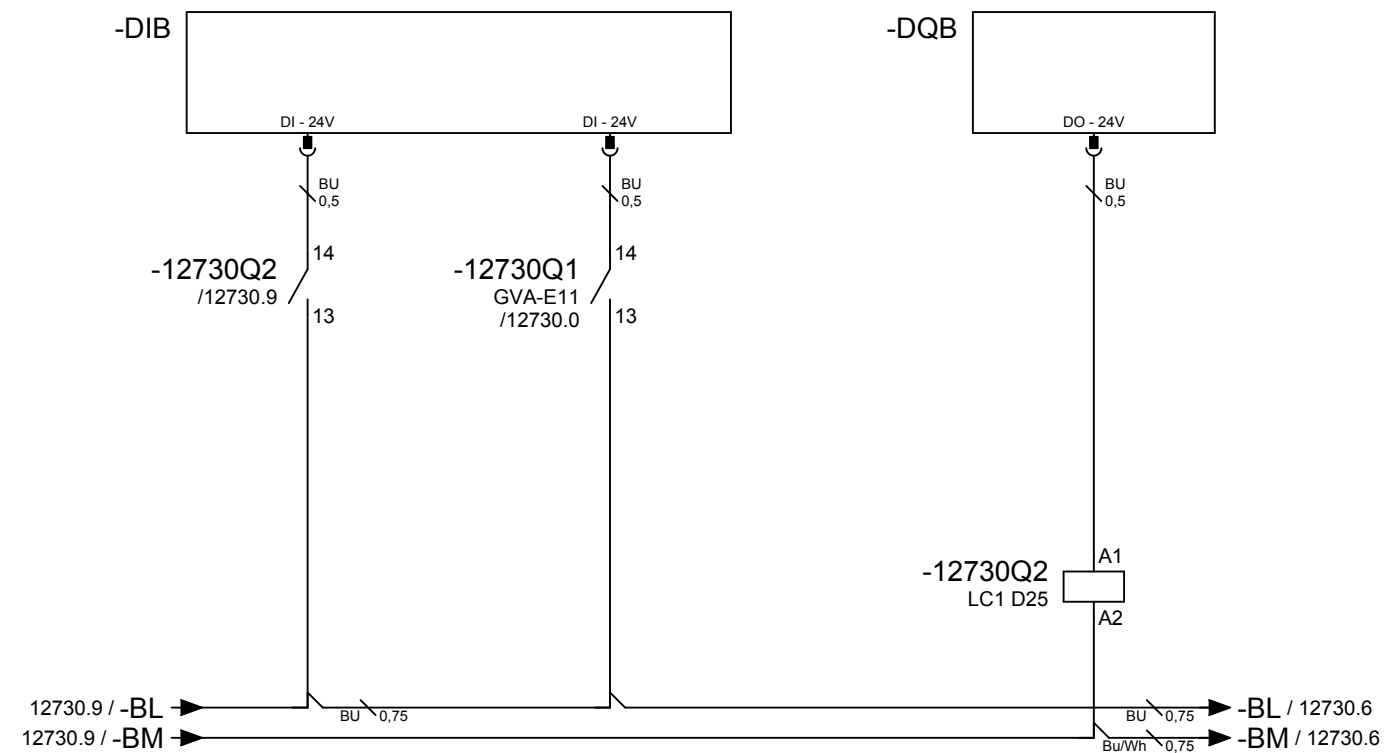
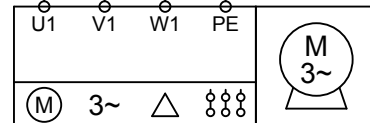


+UBxxx-12730W3
ÖLFLEX 100
4x4
25 m

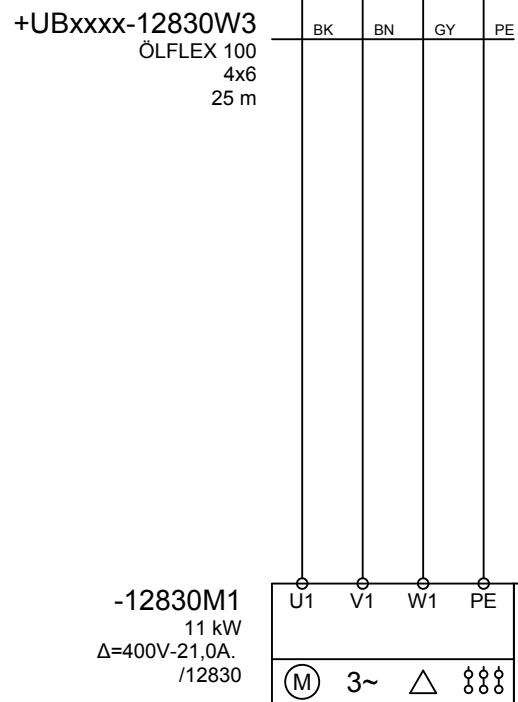
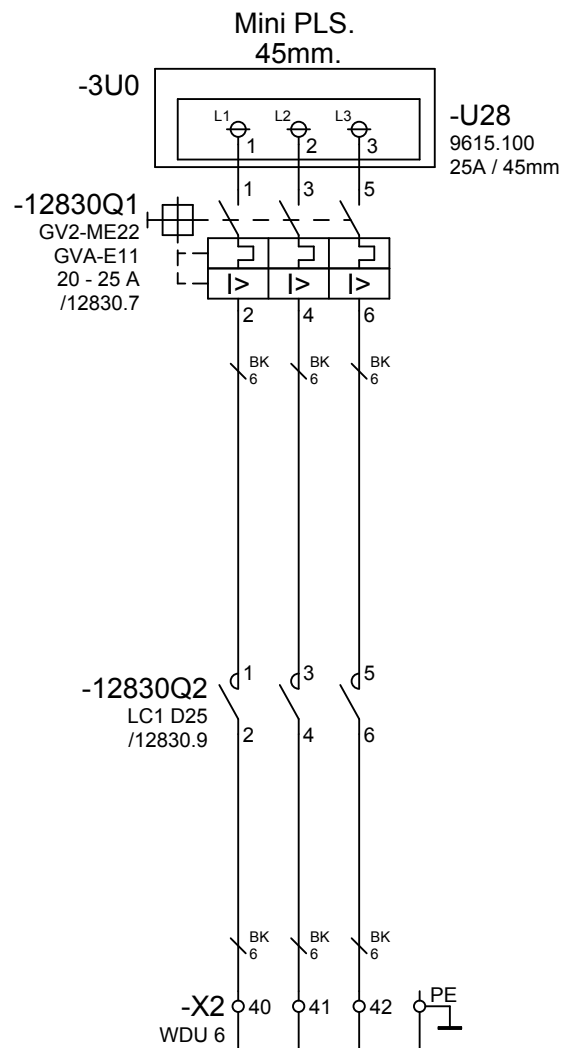
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..



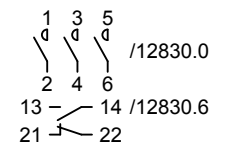
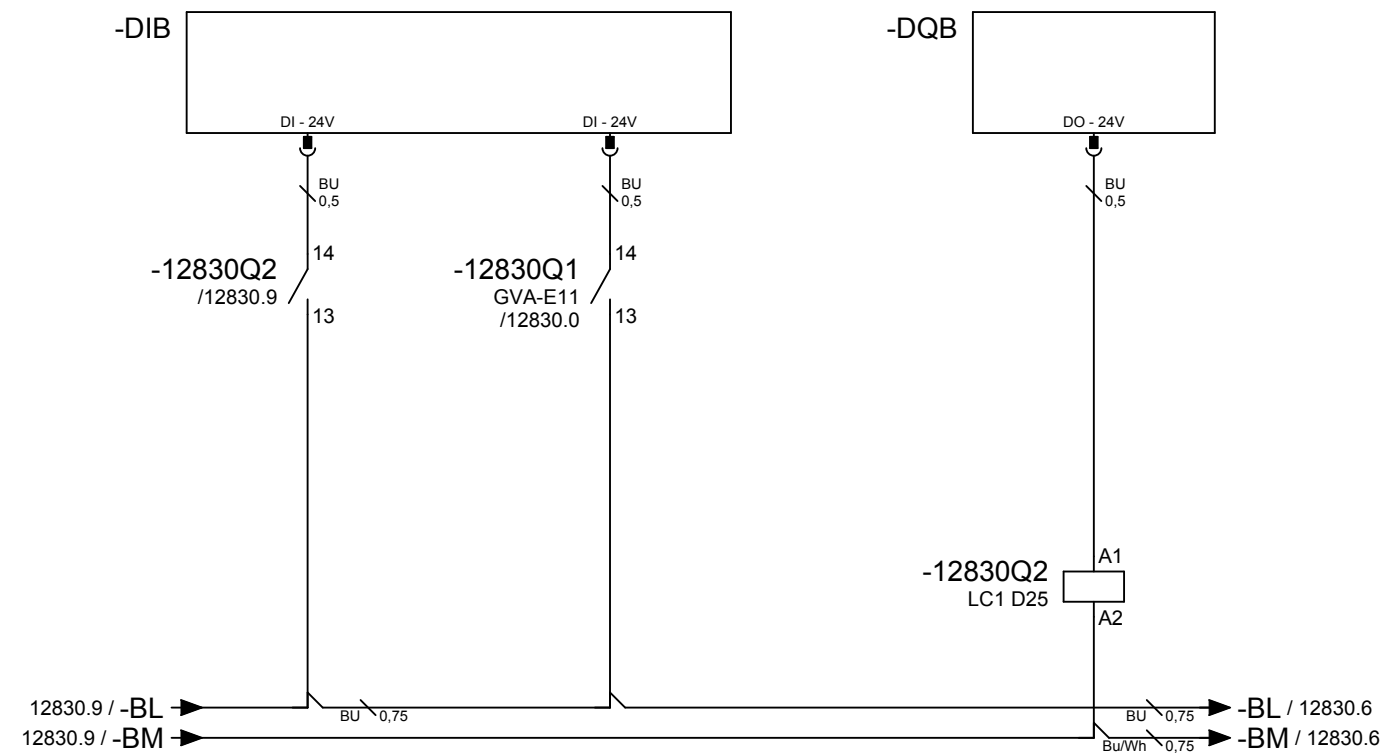
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 6mm² = cca 32A; (21A = 65,6%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 11,25W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 6mm² = cca 43A; (21A = 48,8%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 93,7W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

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+PLS_Reverz/11000

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TISKO
 elektrotechnická
 konštrukčná kancelária
 SLOVAKIA (SK) - BA
 www.tisko.sk

PACK 31. Motors.
 TISKO spol. s r. o.

2018

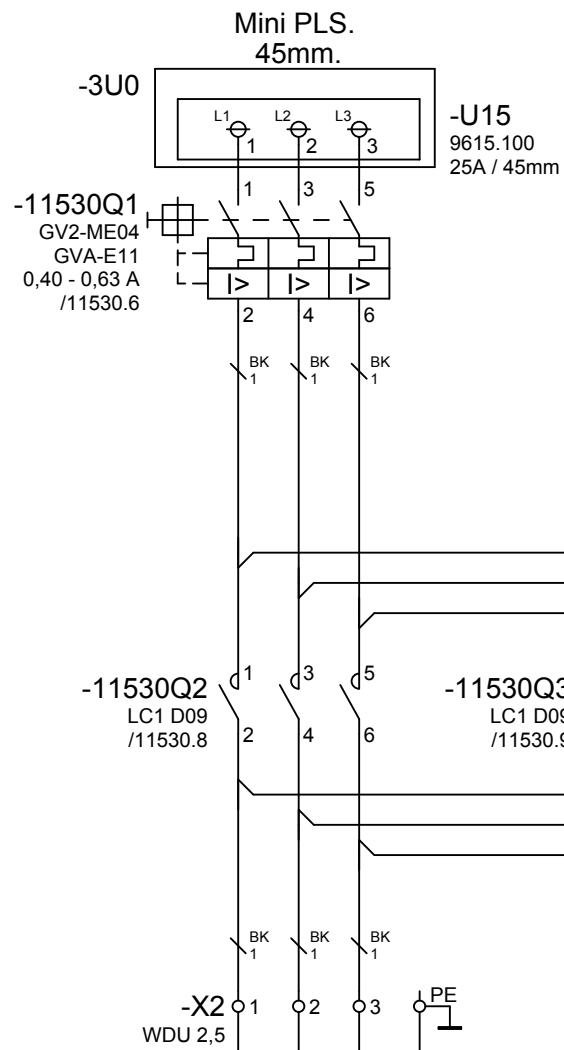
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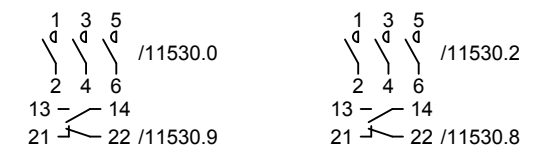
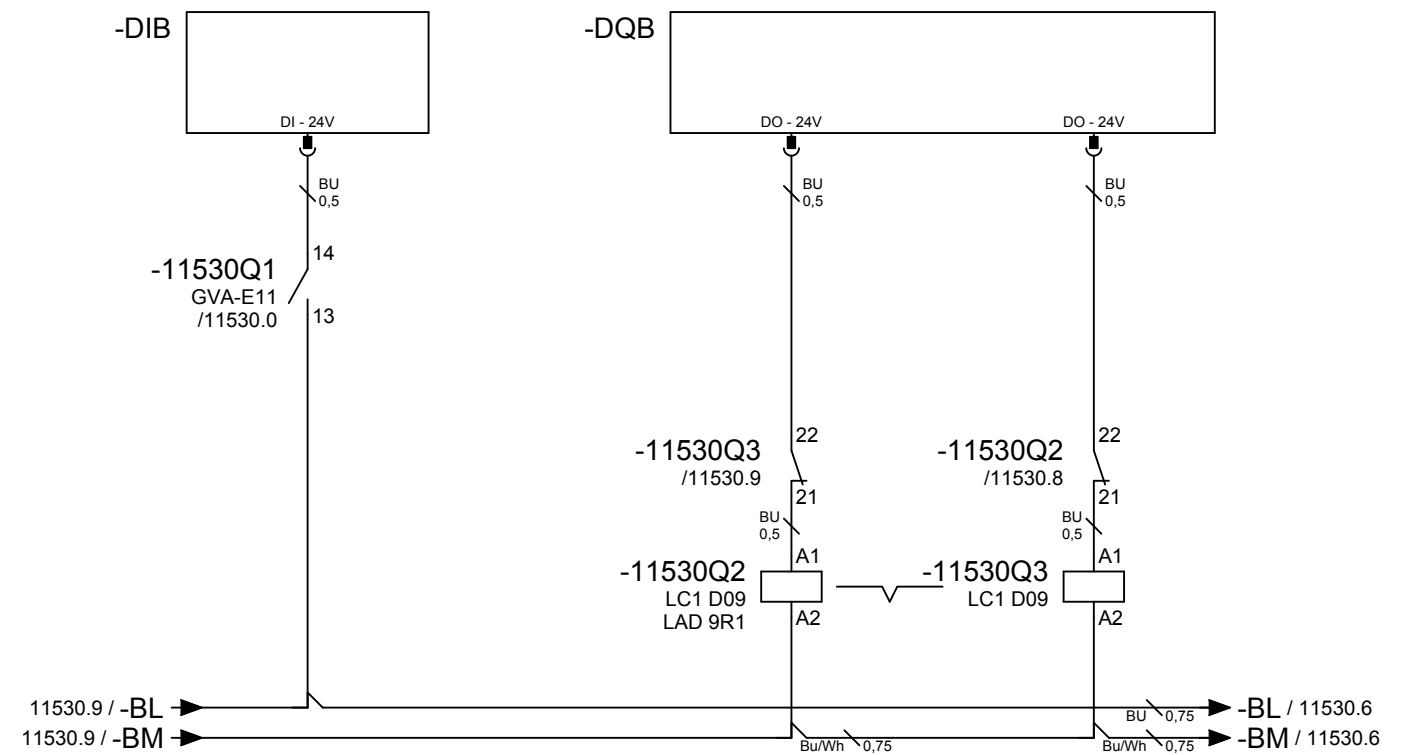
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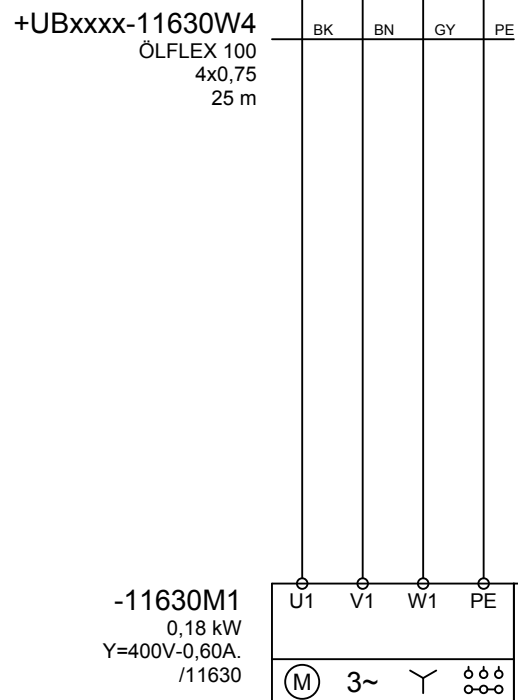
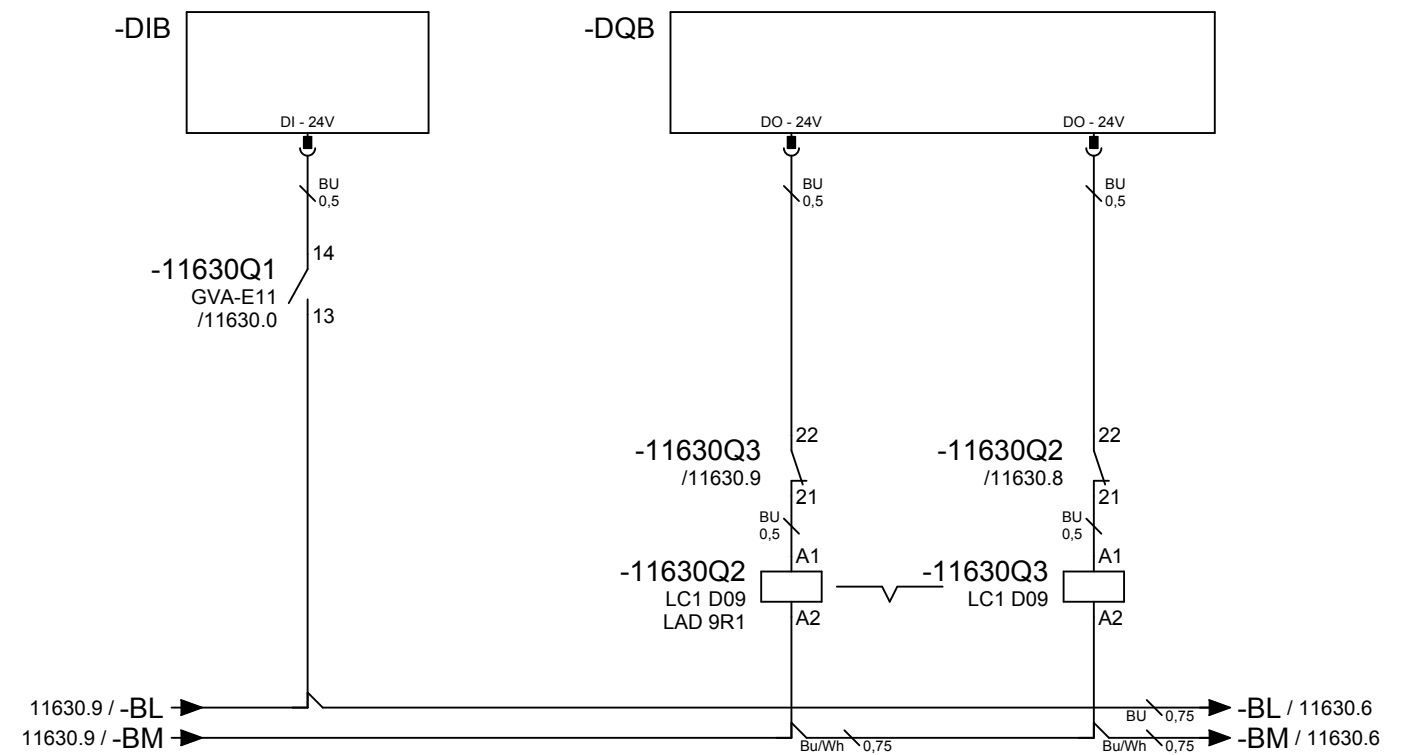
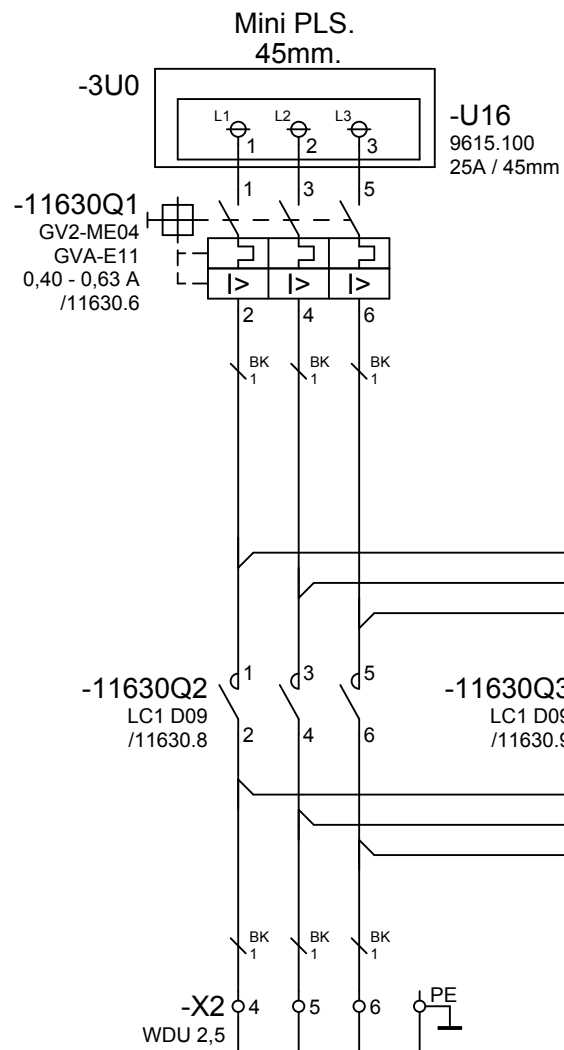


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...

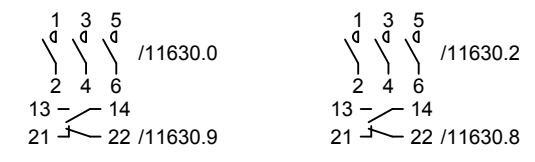


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

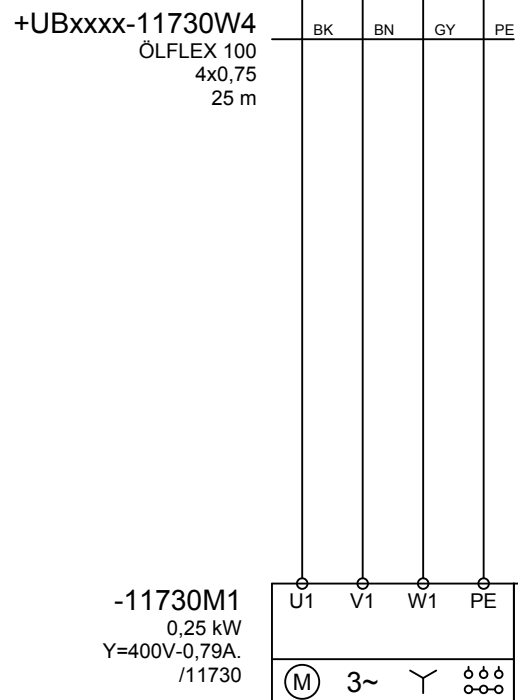
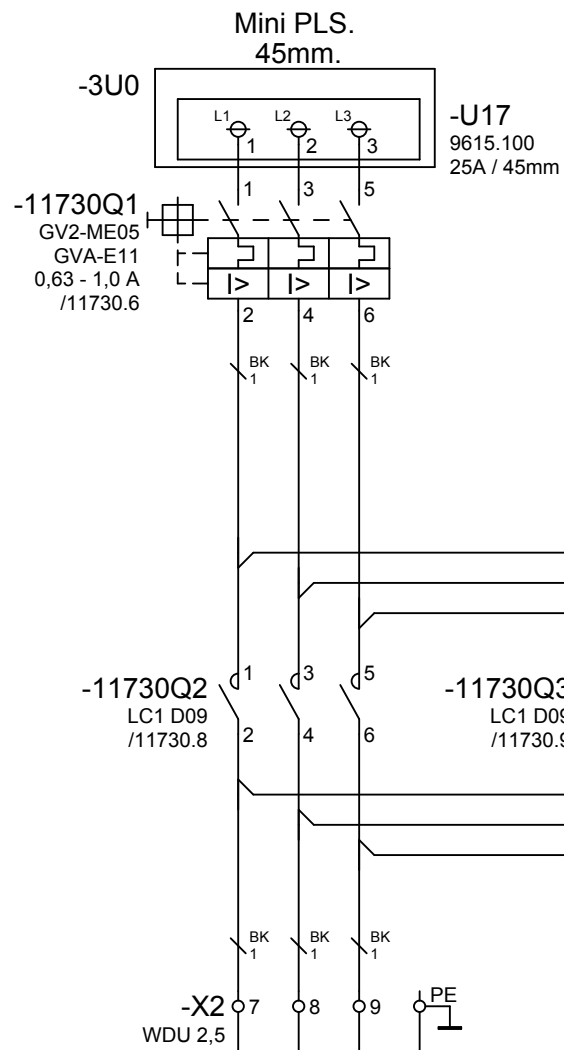


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...

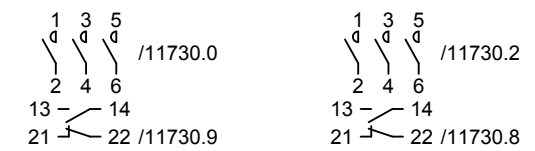
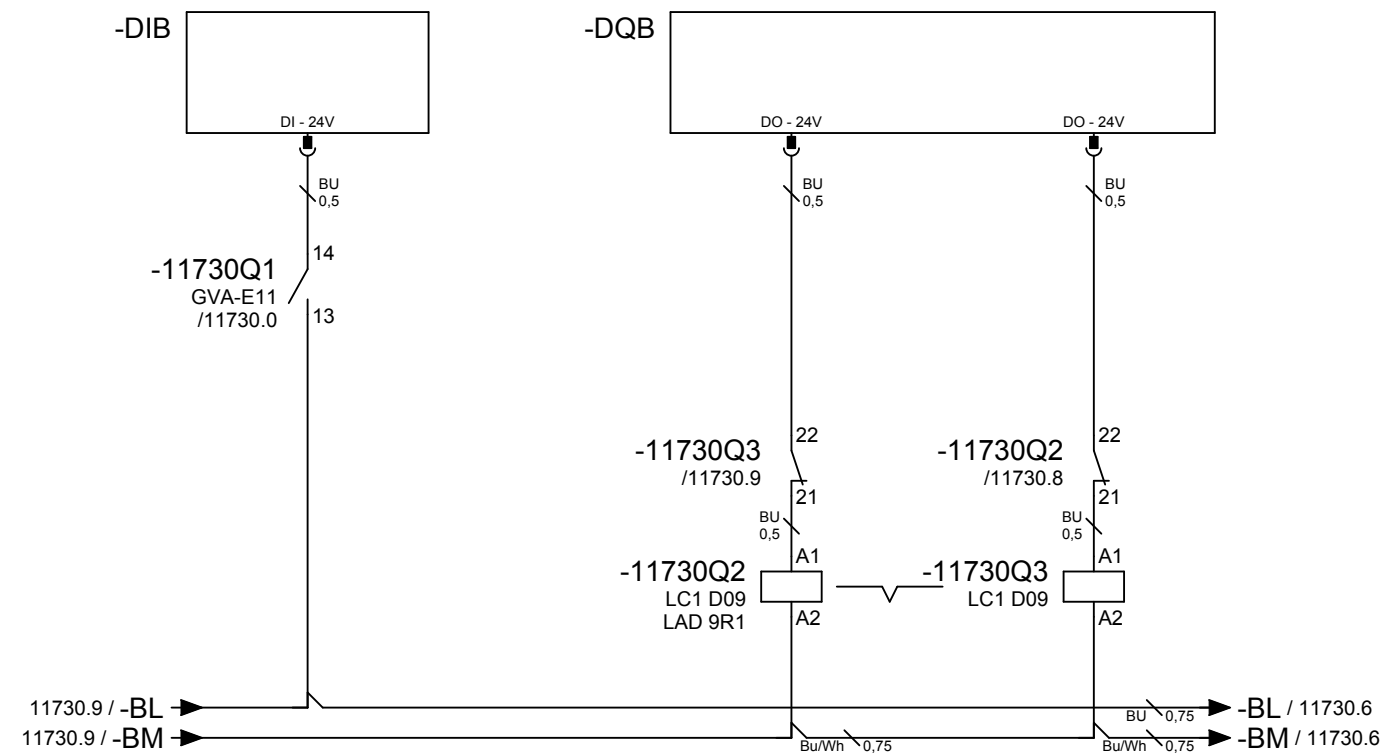


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

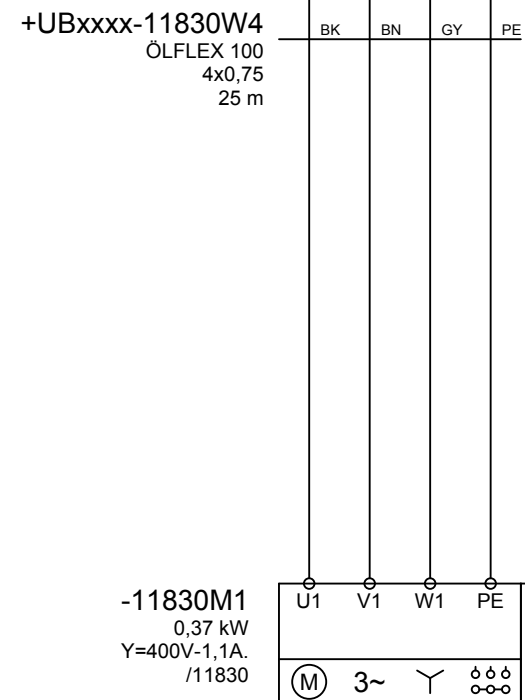
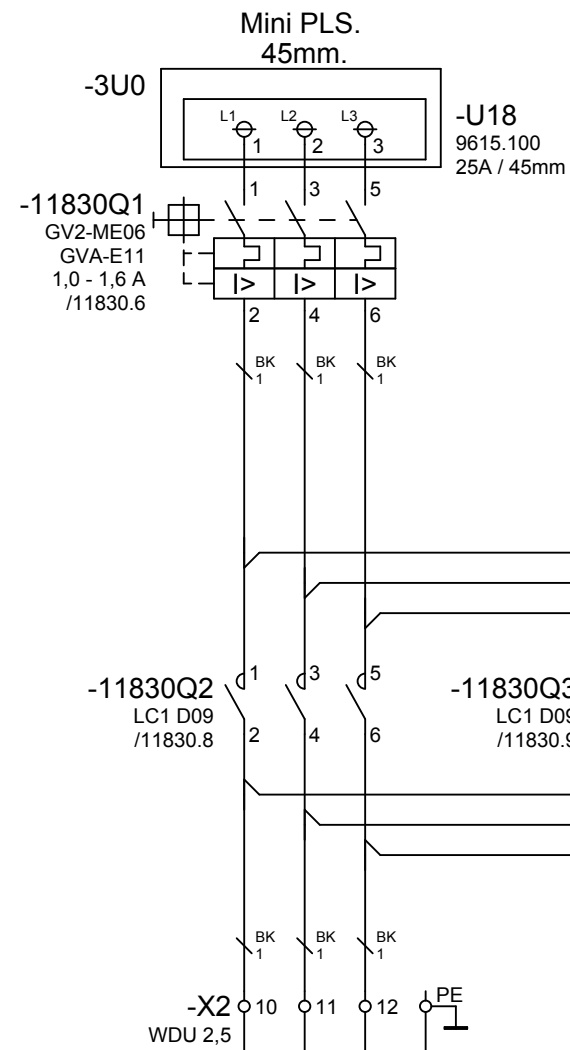


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...

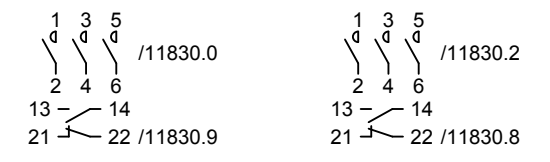
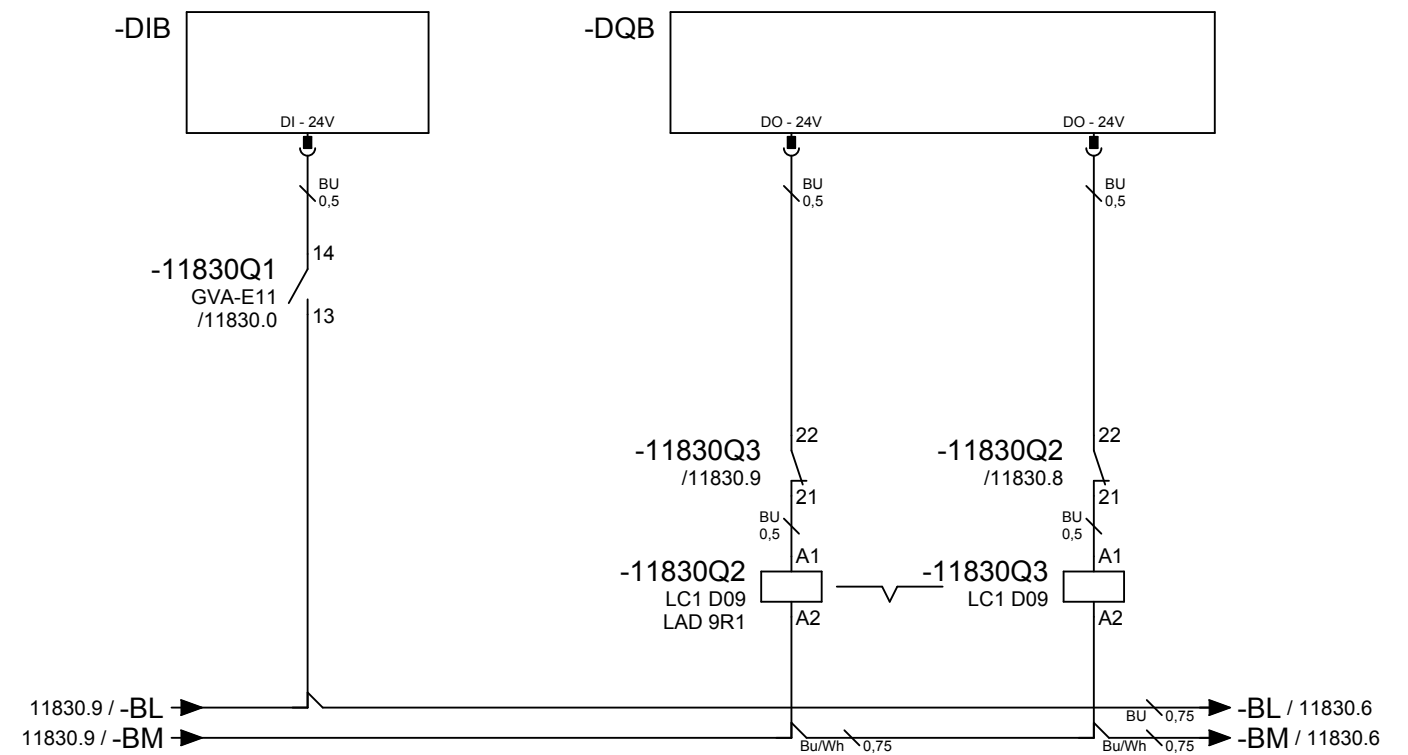


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

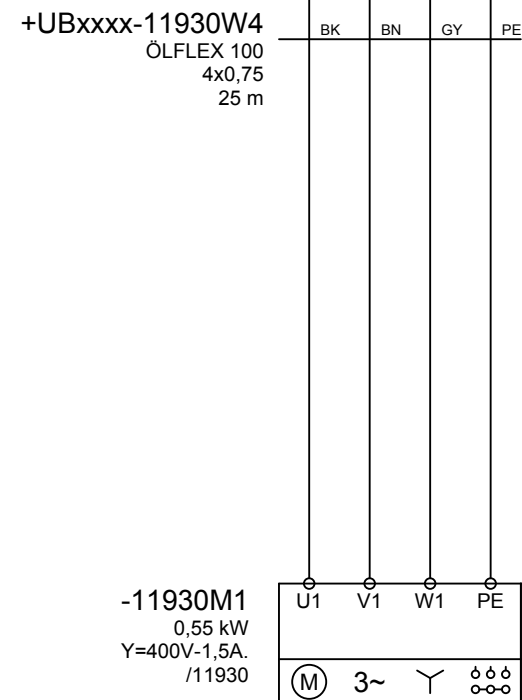
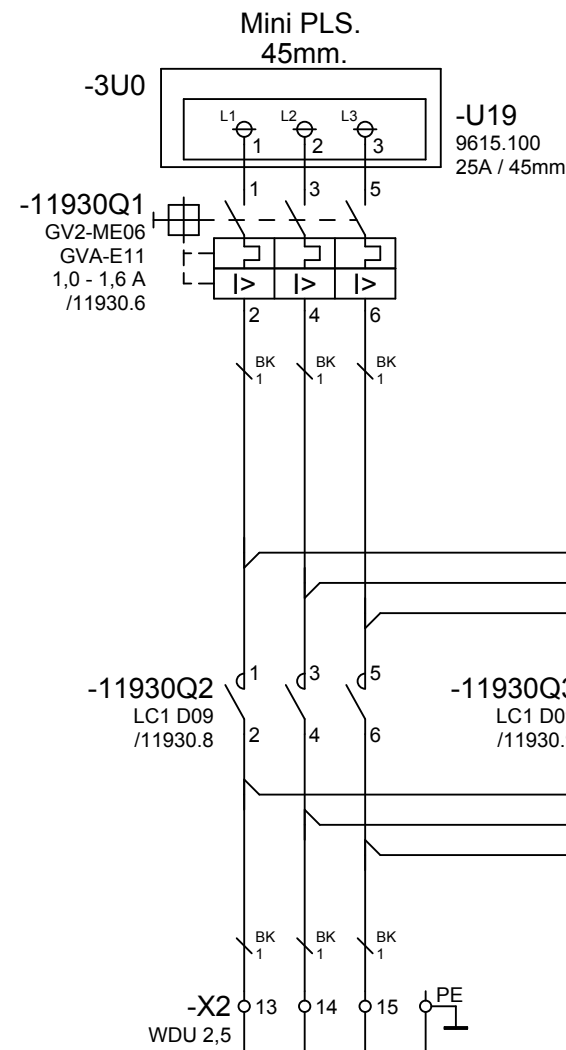


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



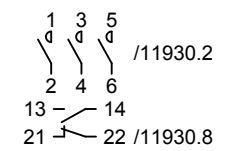
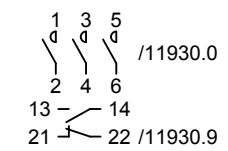
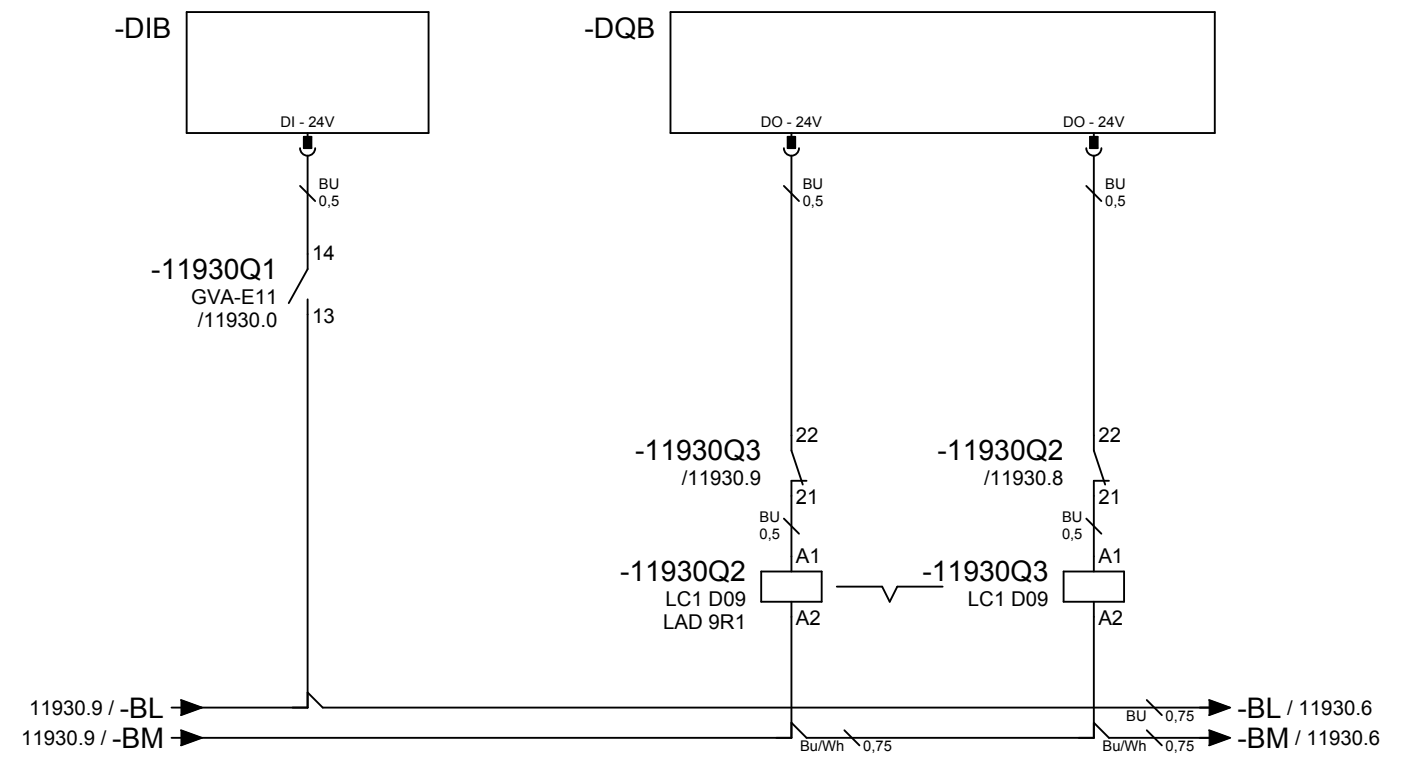
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

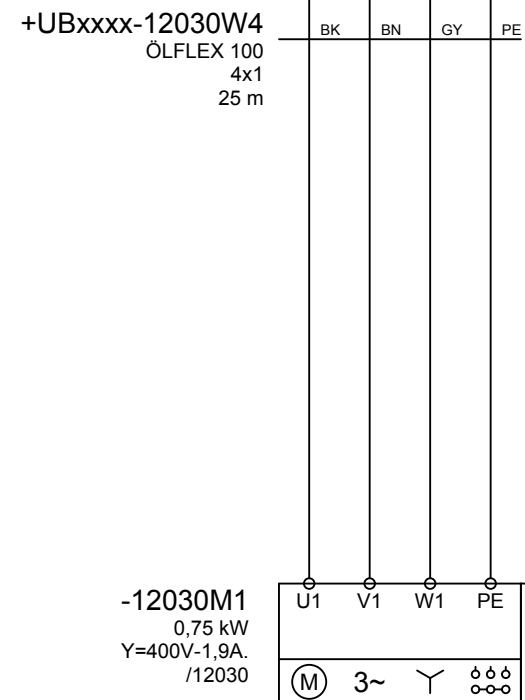
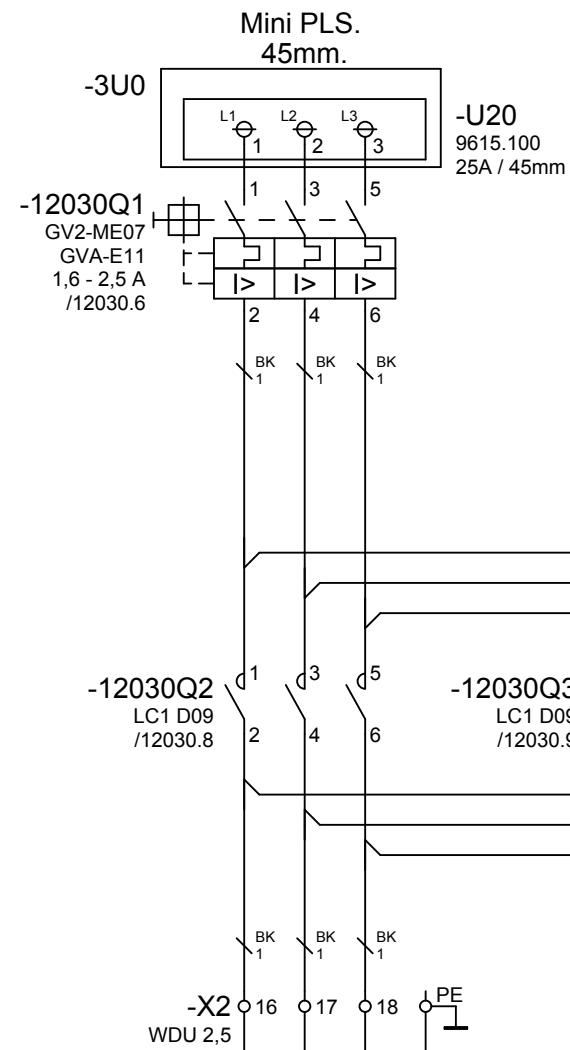
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

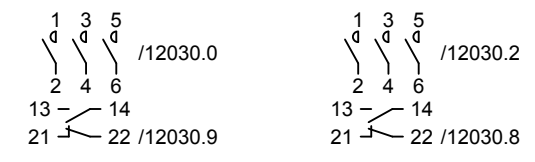
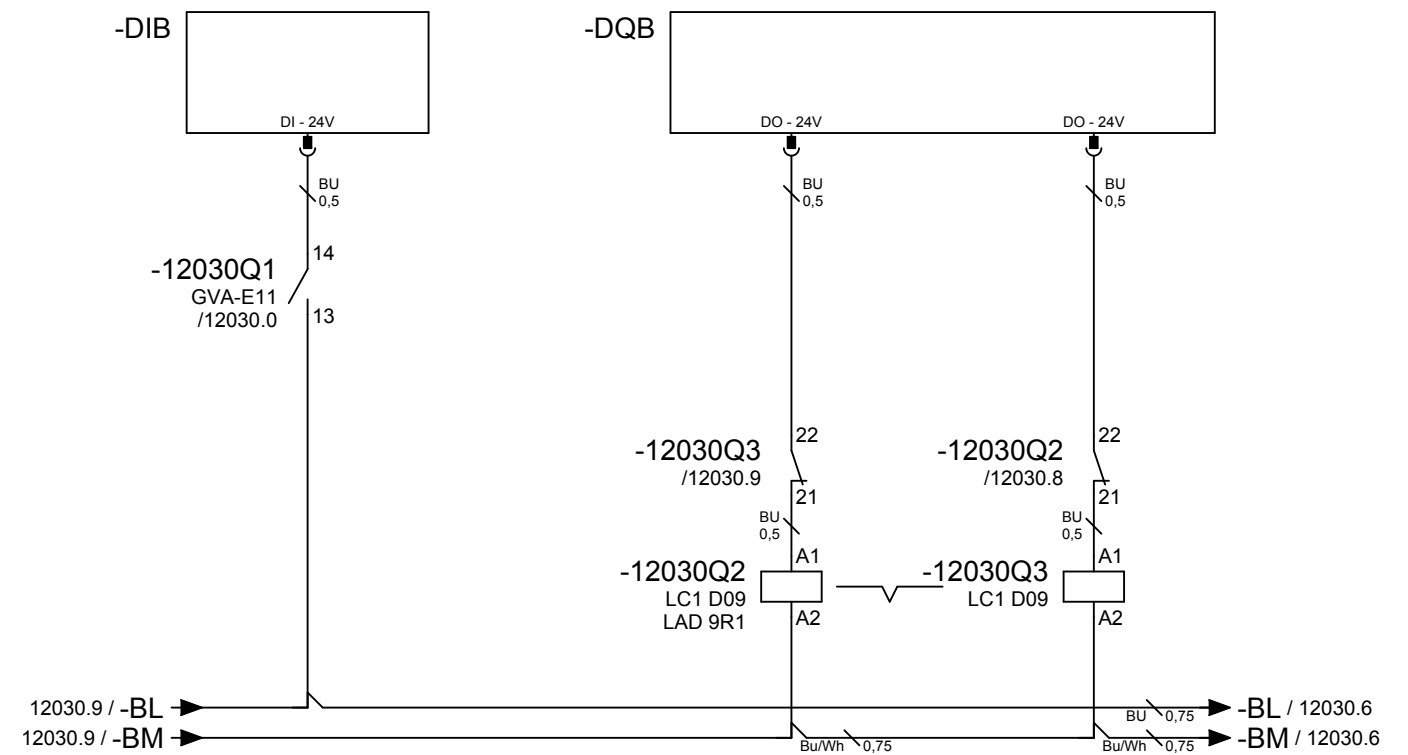
Motor. Contactor.

Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

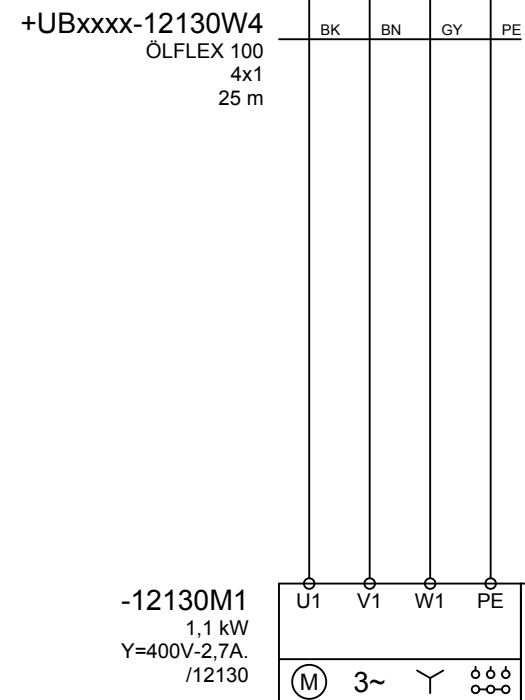
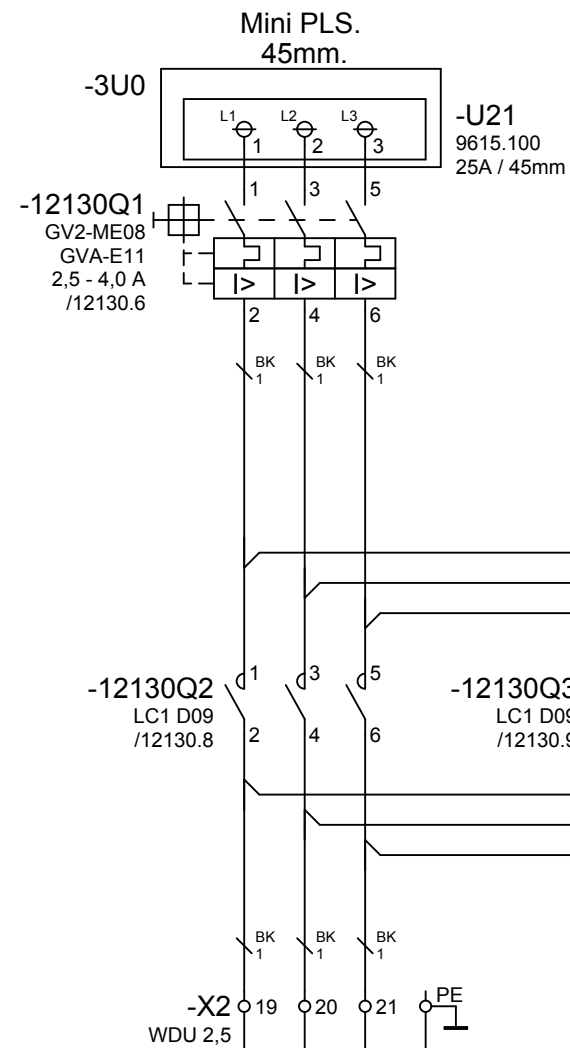
Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure.

Motor. Contactor.

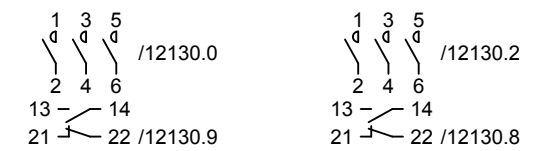
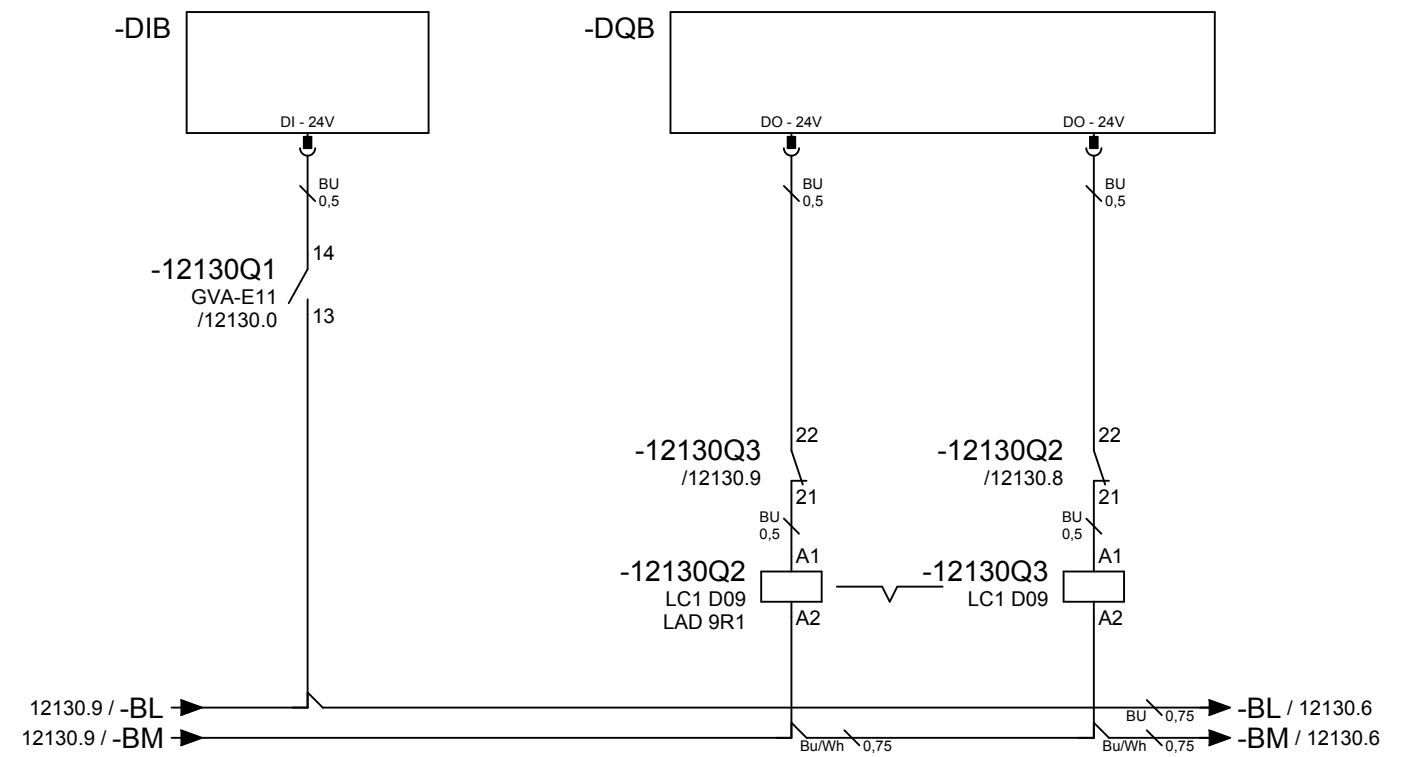
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (2,7A = 26,0%)
 loss U at In 0,14V
 loss U at 5xIn 0,69V
 heat losses at In 1,12W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

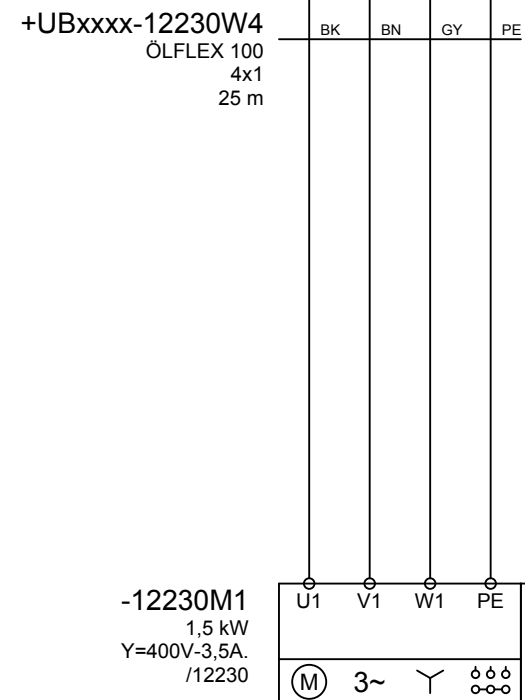
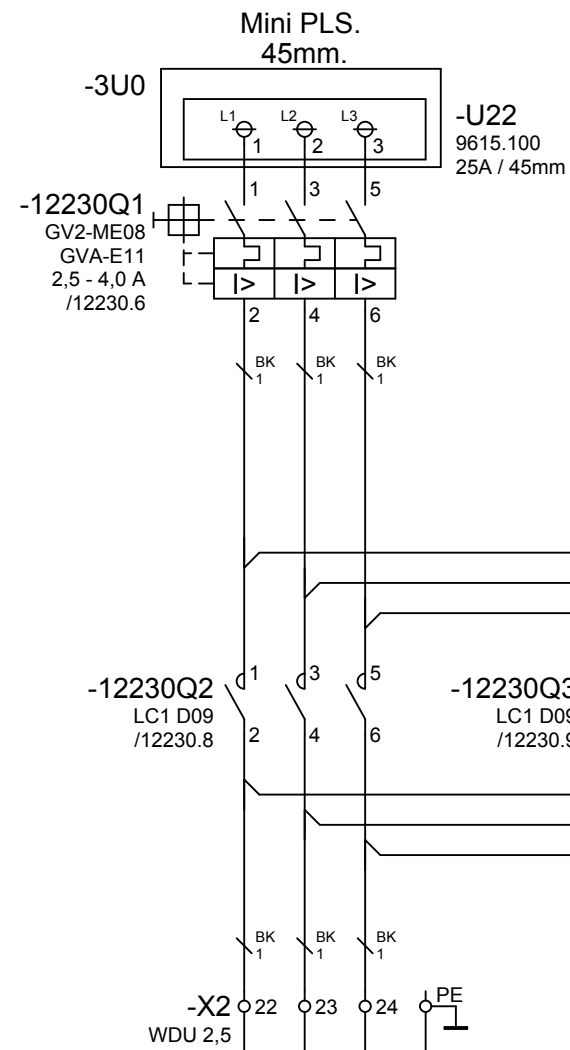
Cable route E
 load 1mm² = cca 13,0A; (2,7A = 20,8%)
 loss U at In 1,15V
 loss U at 5xIn 5,74V
 heat losses at In 9,3W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

Motor. Contactor.

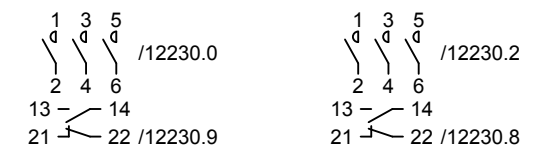
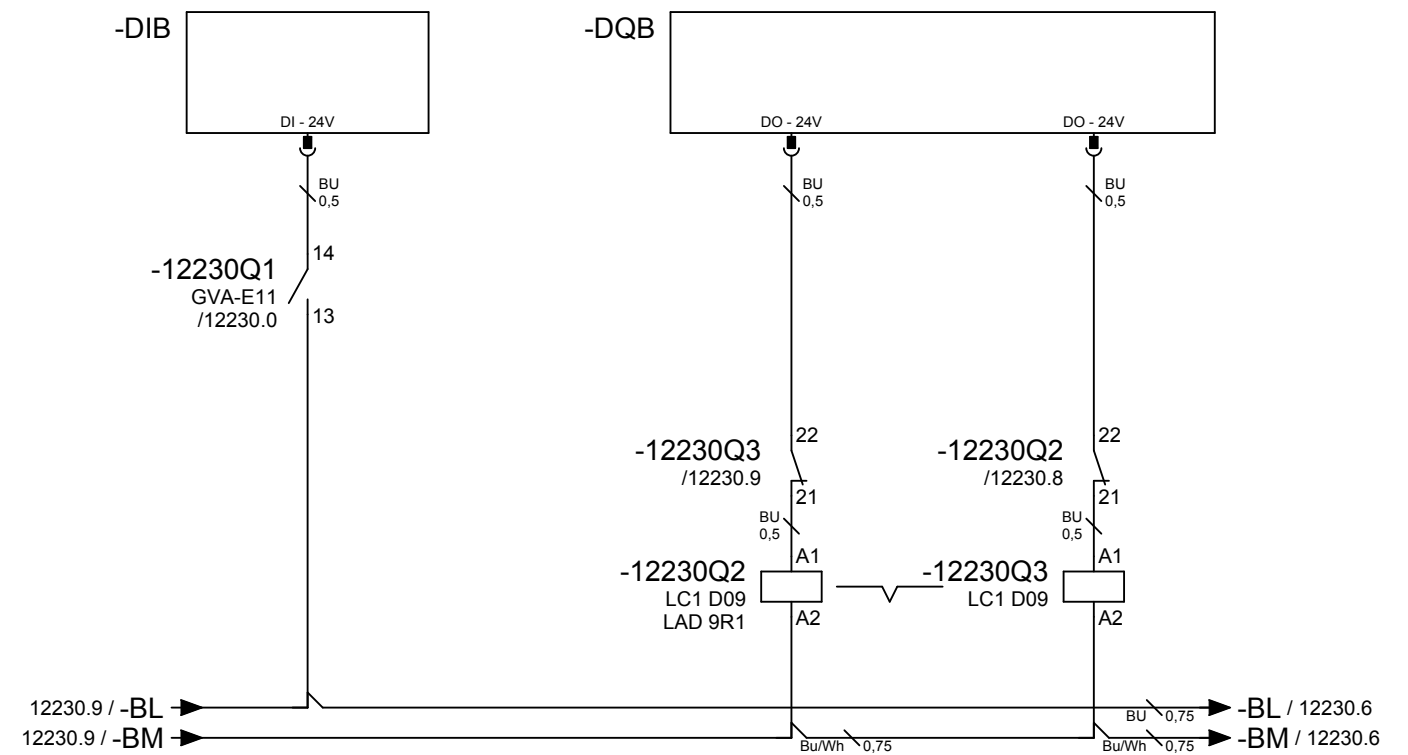
Motor. Contactor.



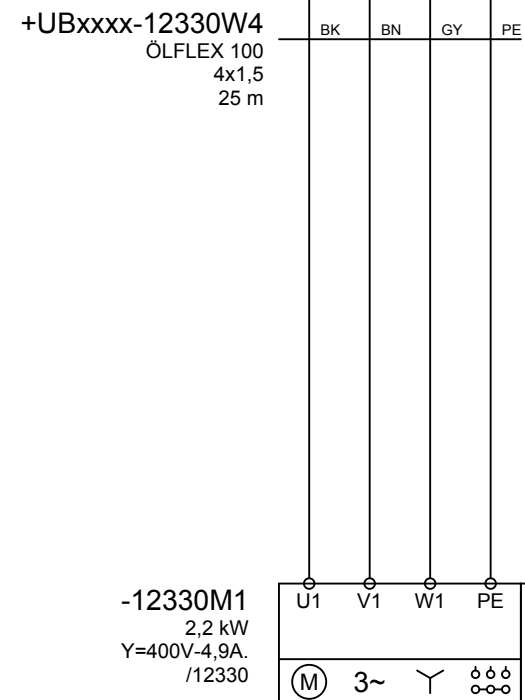
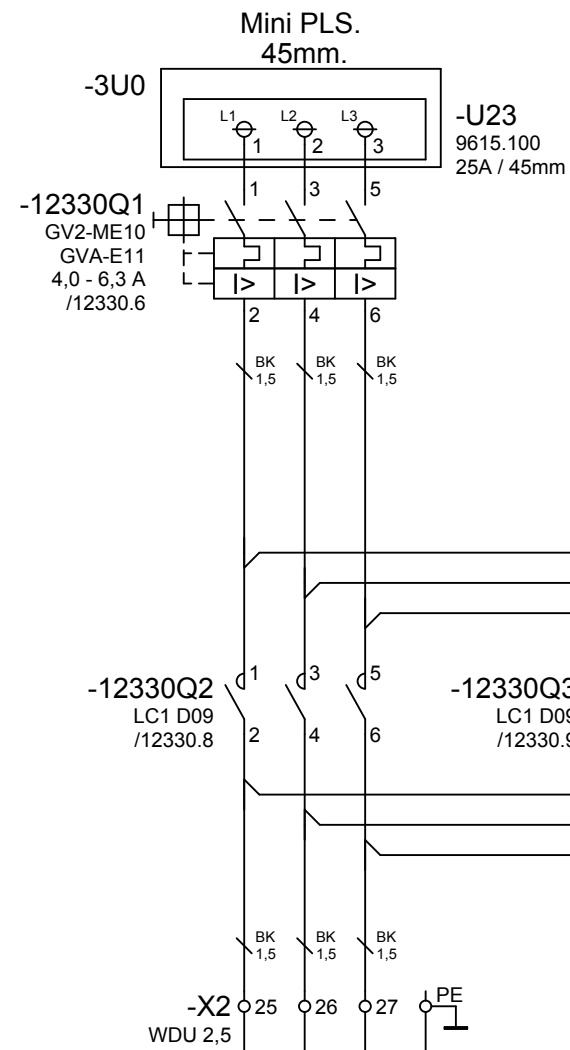
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)
 ...
 ...

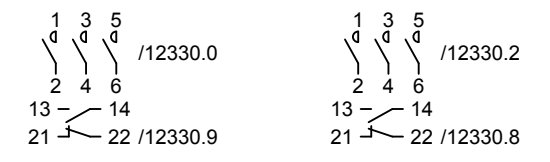
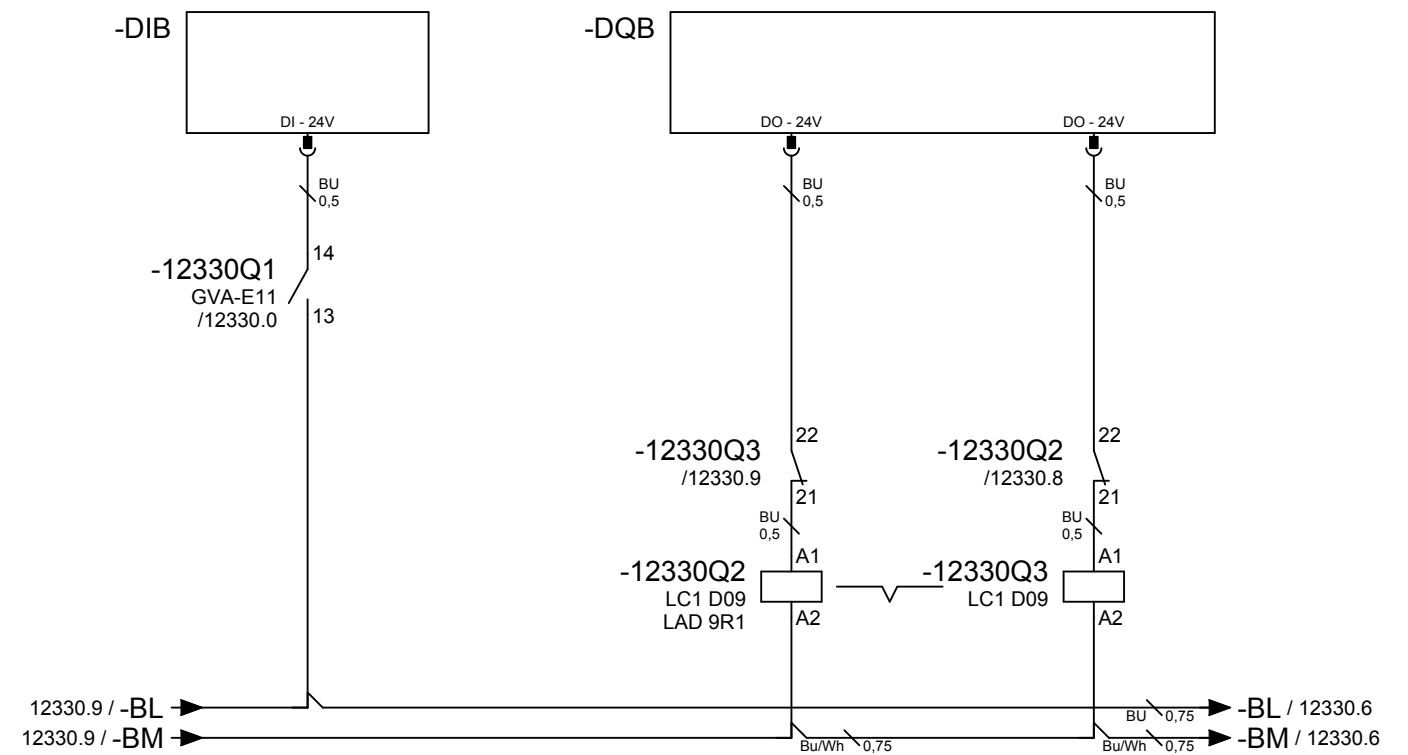


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

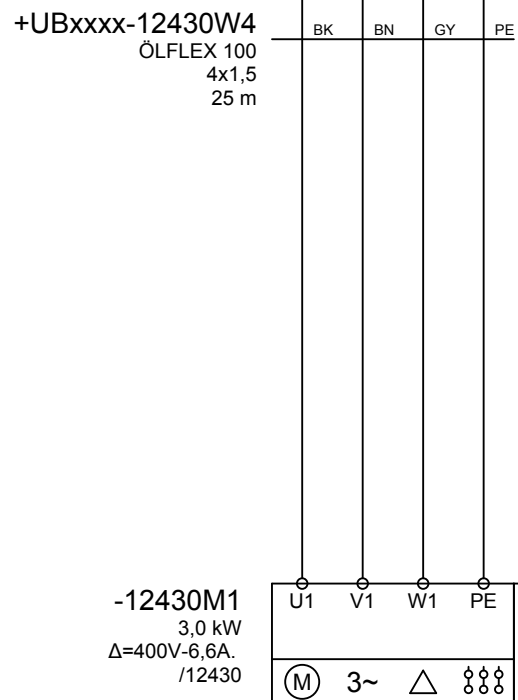
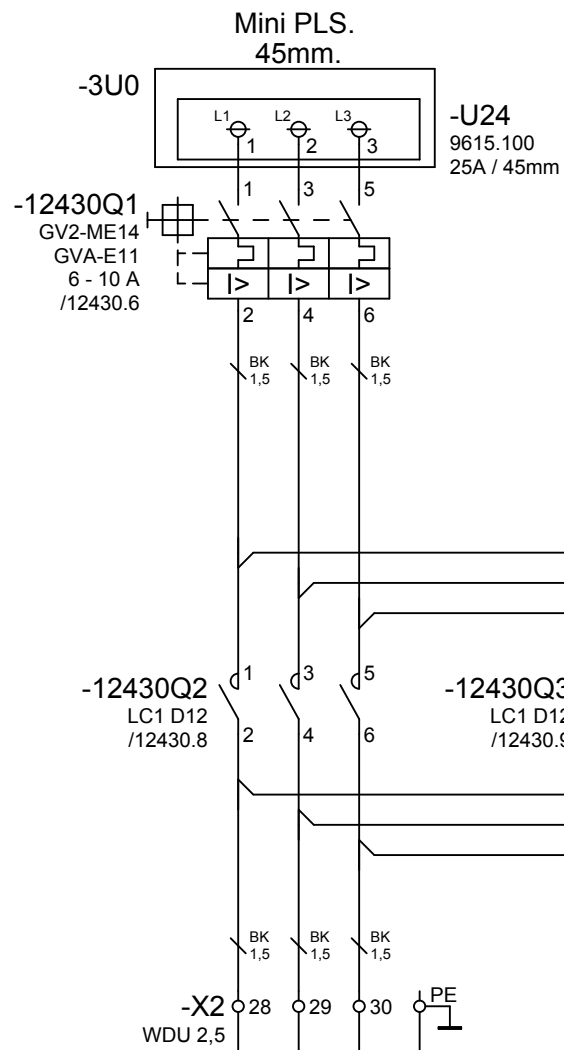


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (5A = 37,0%)
loss U at In	0,17V
loss U at 5xIn	0,85V
heat losses at In	2,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (5A = 27,0%)
loss U at In	1,42V
loss U at 5xIn	7,08V
heat losses at In	21,3W (L=3x25m)
...	...
...	...

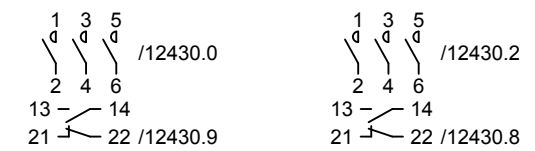
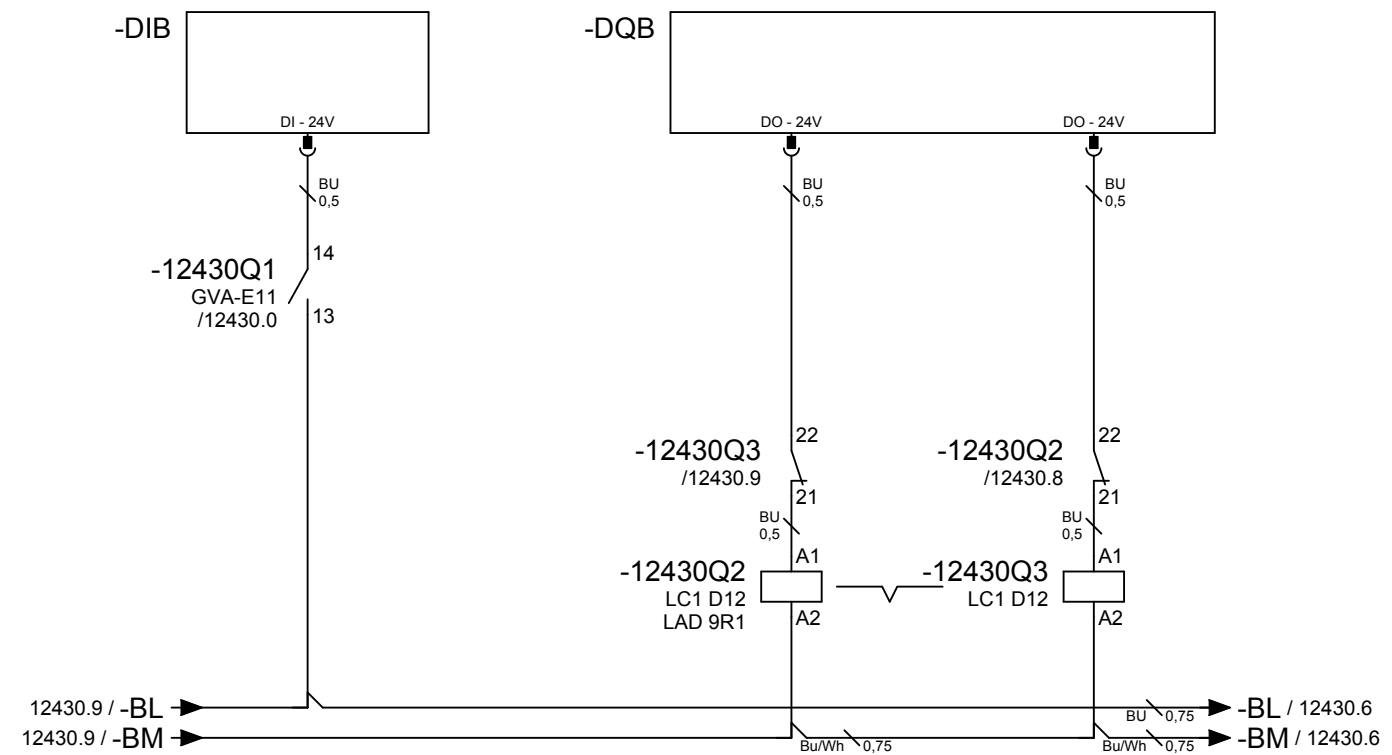


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

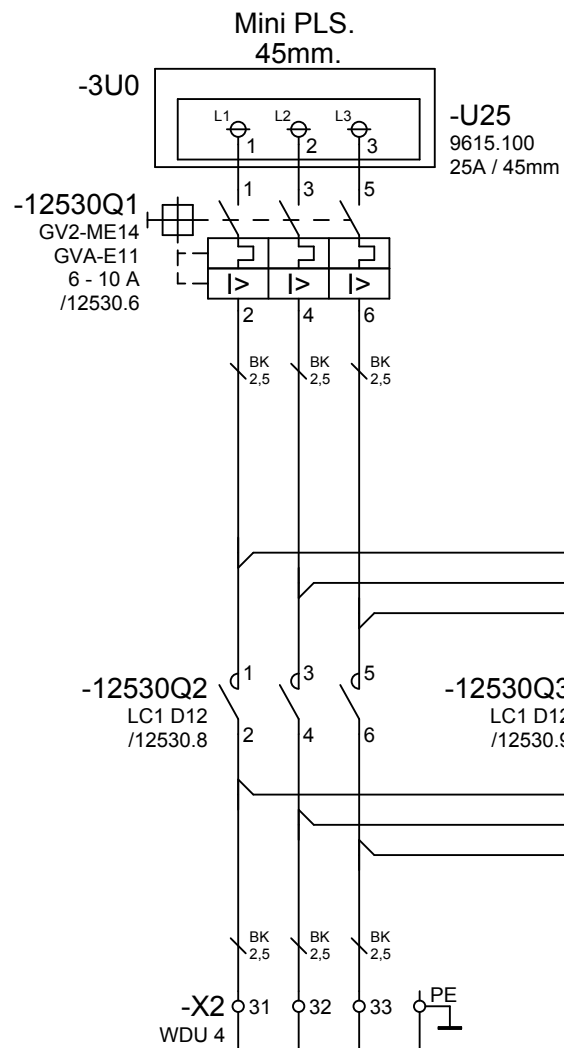


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...



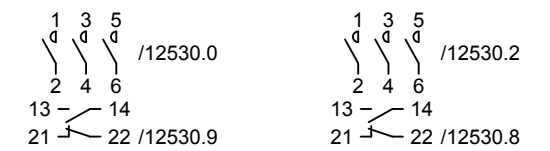
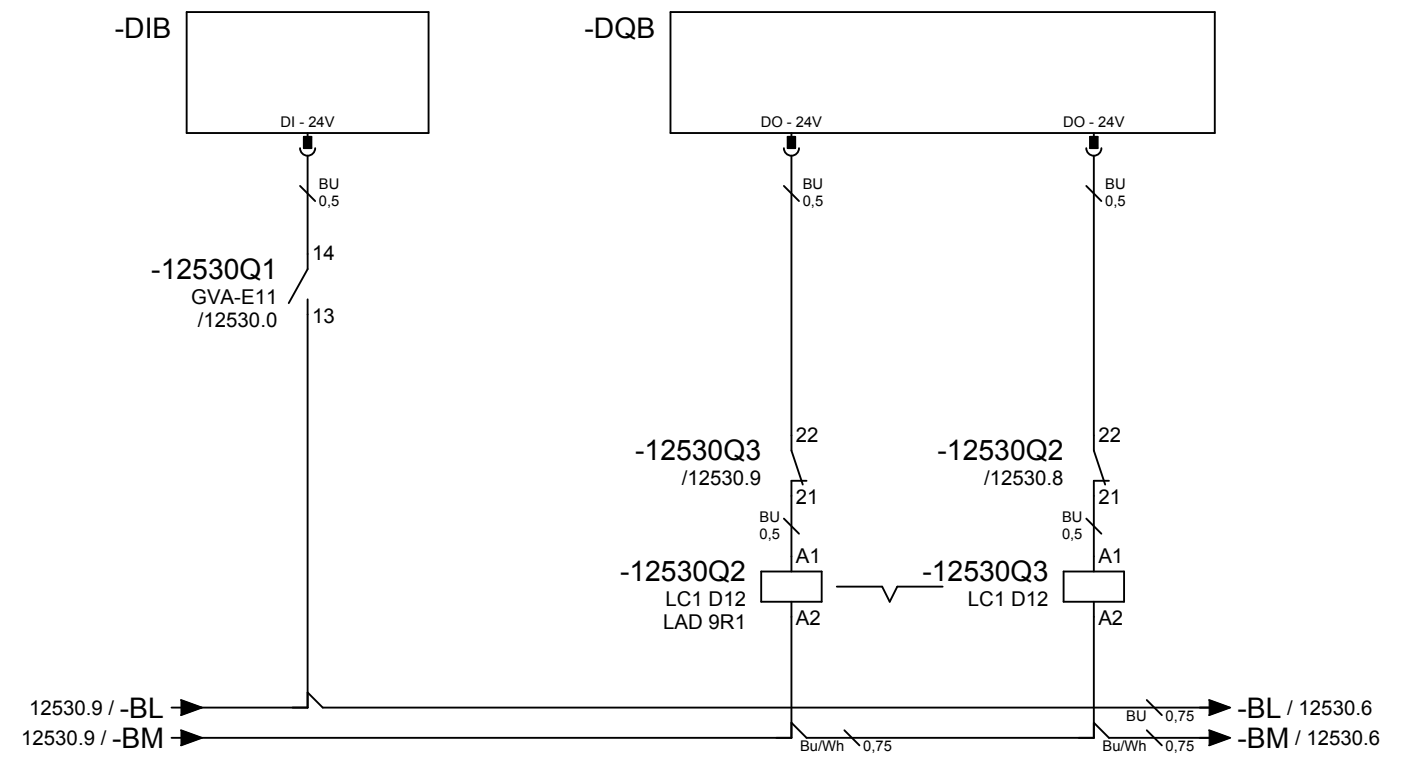
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
 loss U at In 0,17V
 loss U at 5xIn 0,87V
 heat losses at In 4,42W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

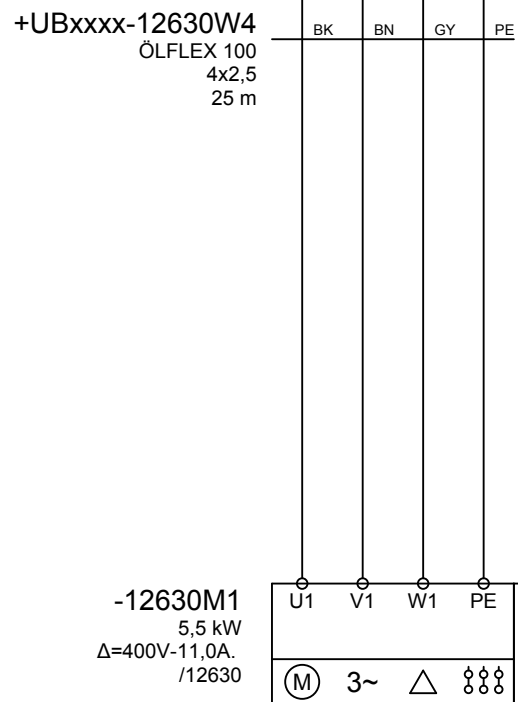
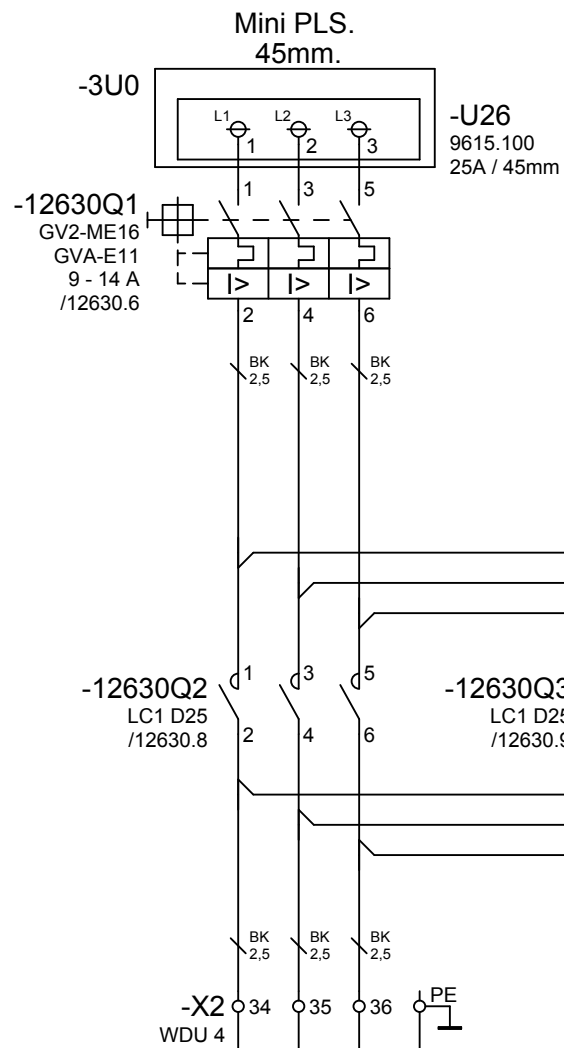
Cable route E
 load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
 loss U at In 2,41V
 loss U at 5xIn 12,04V
 heat losses at In 61,4W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

Motor. Contactor.

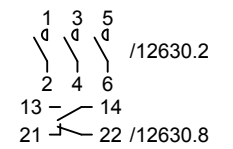
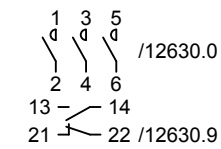
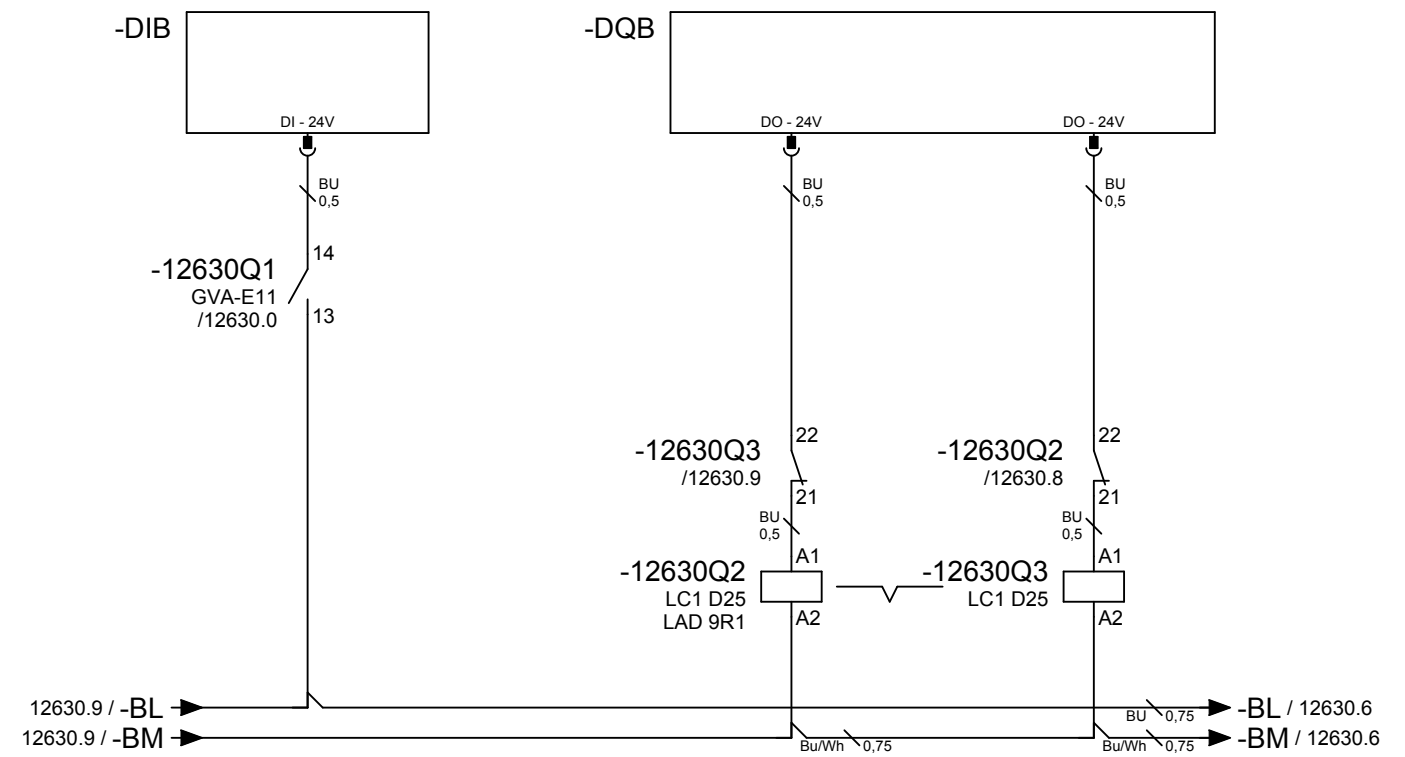
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

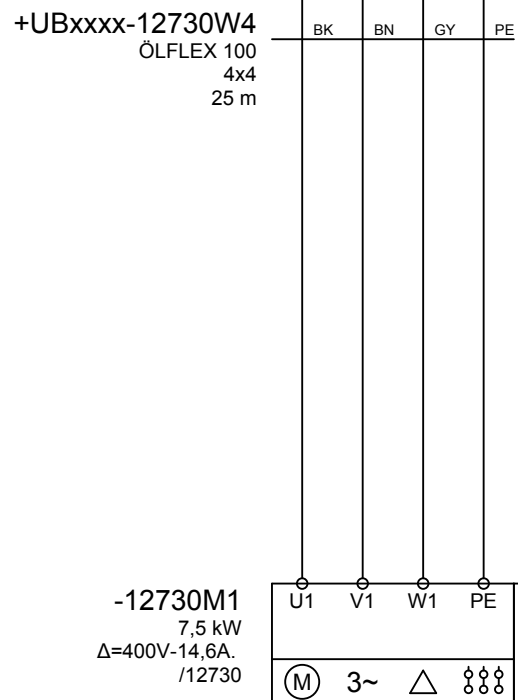
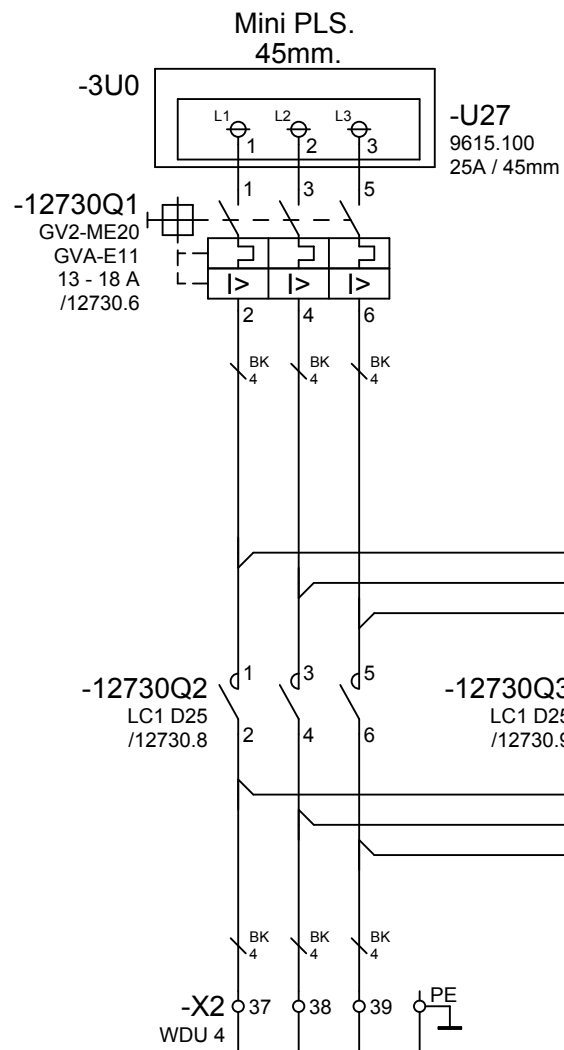
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

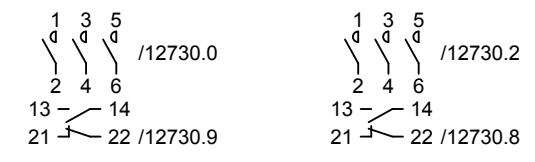
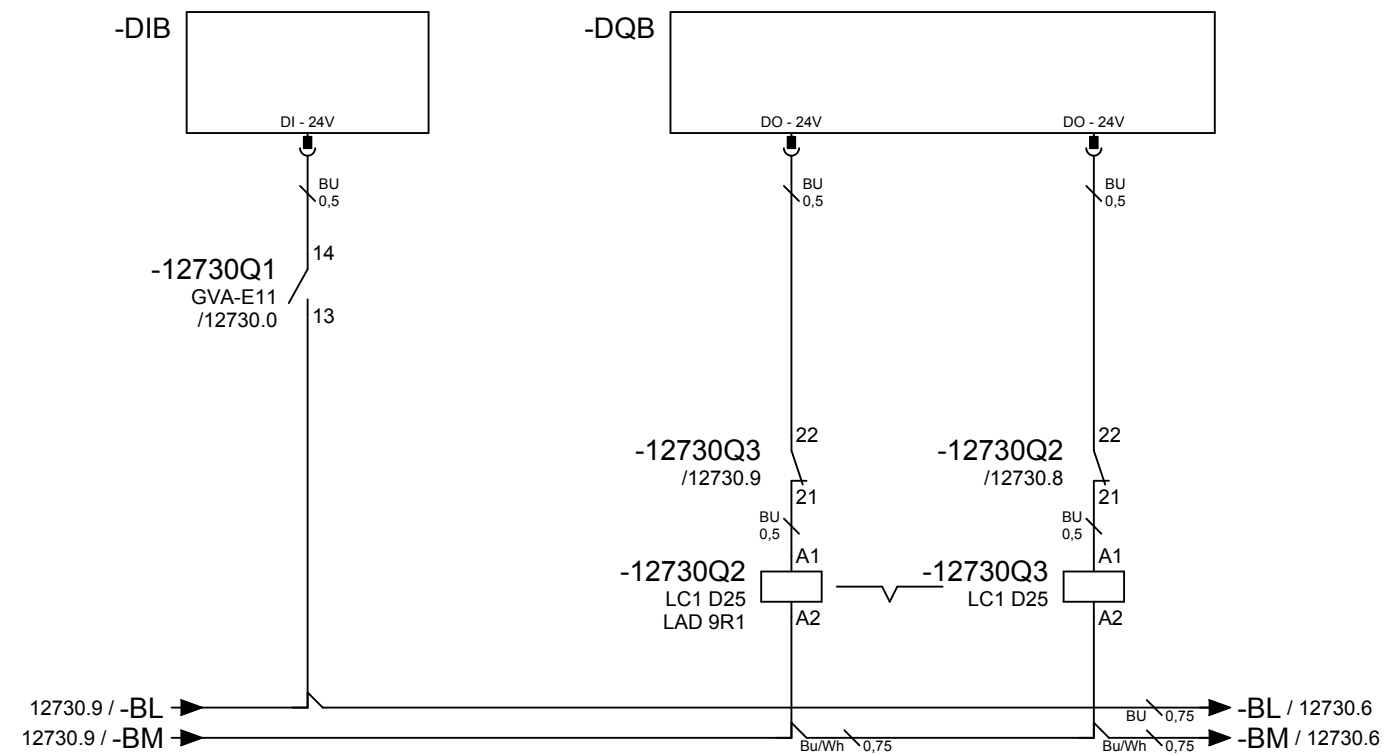
Motor. Contactor.

Motor. Contactor.



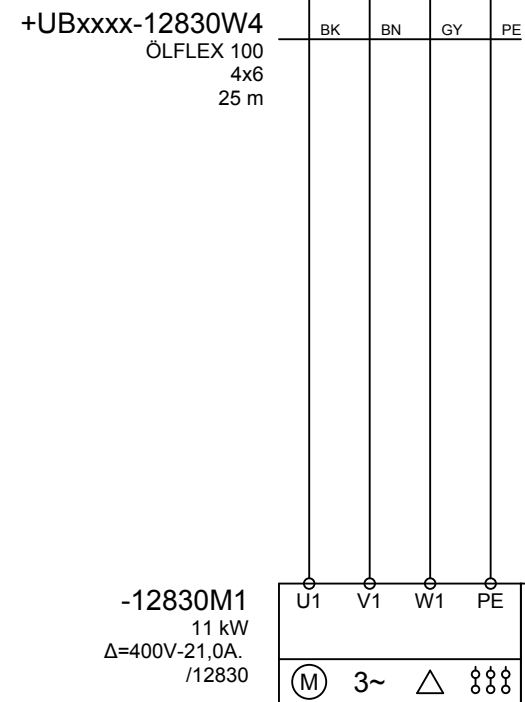
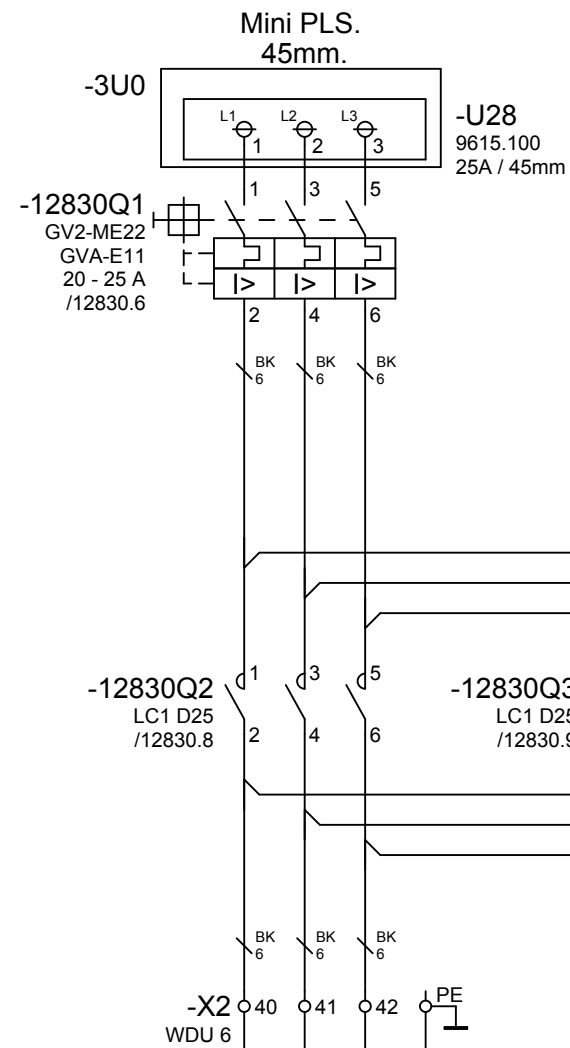
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>7,5kW. 2018</p>	<p>Creator V00 01.02.2012 Ing. Tisovčík Ivan</p> <p>Last revision of project</p> <p>Last revision of page</p> <p>M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409</p>	<p>= GV2ME_C2</p> <p>+ PLS_Reverz 12730</p>
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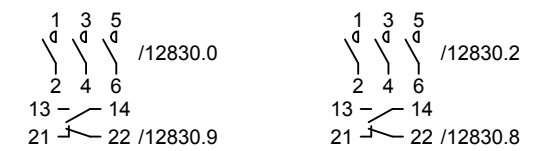
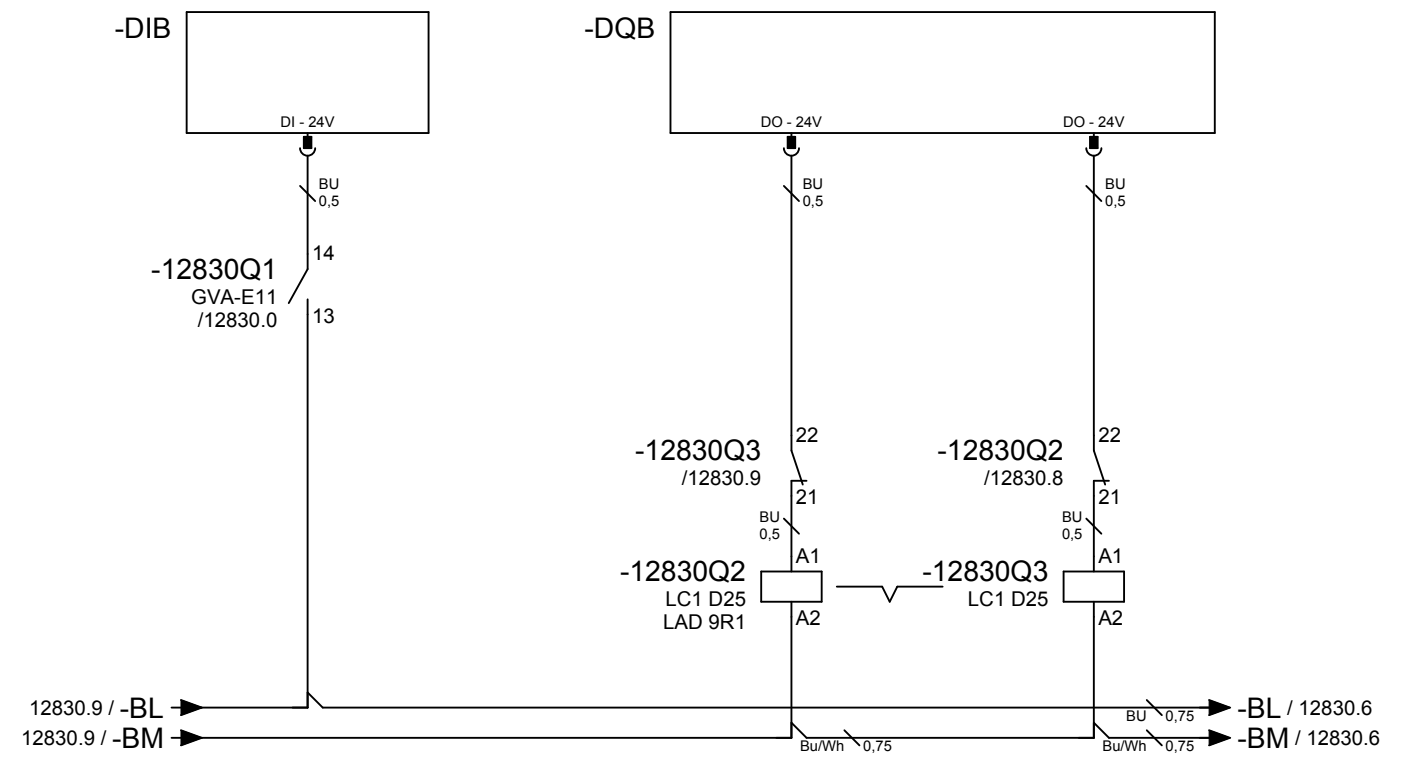


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)

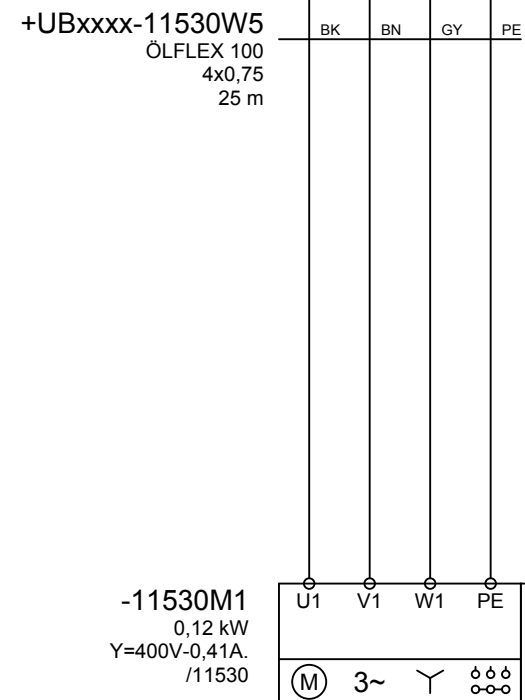
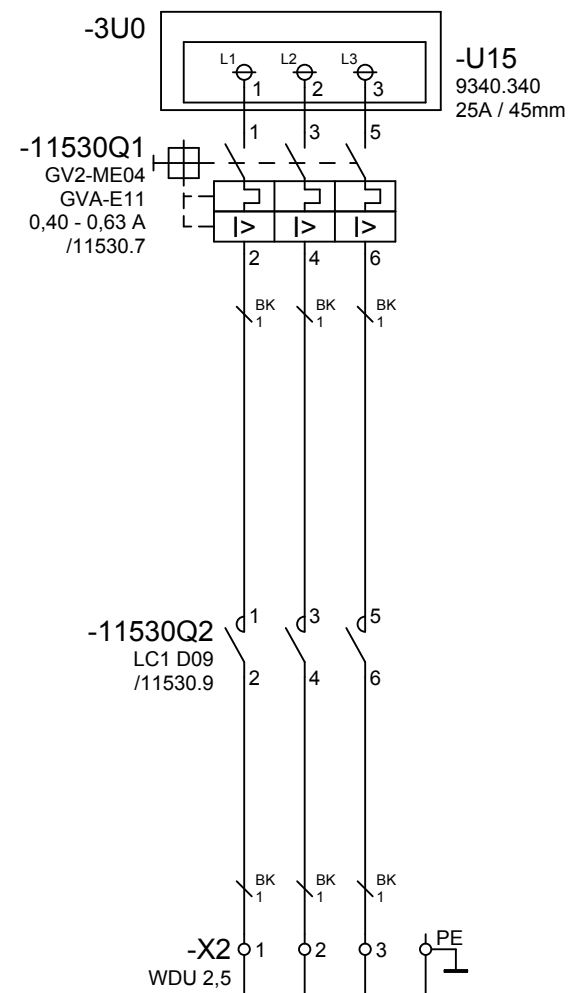


Circuit breaker. 0=Failure.

Motor. Contactor.

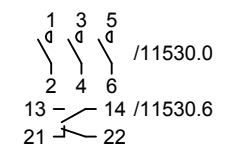
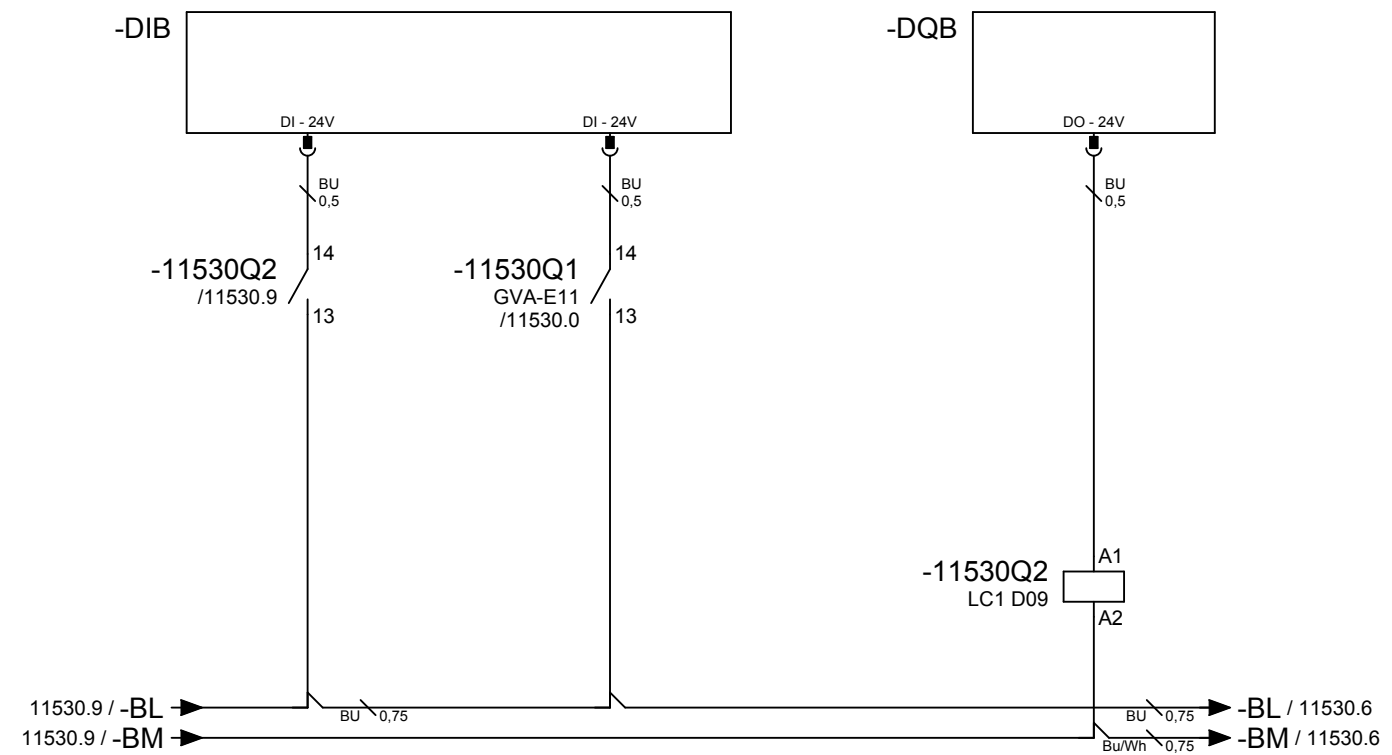
Motor. Contactor.

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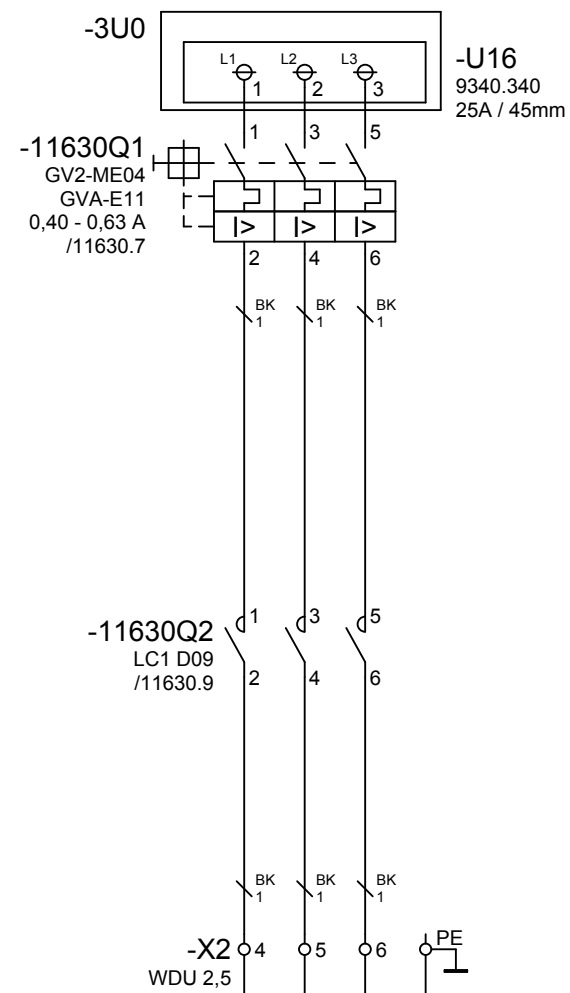


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

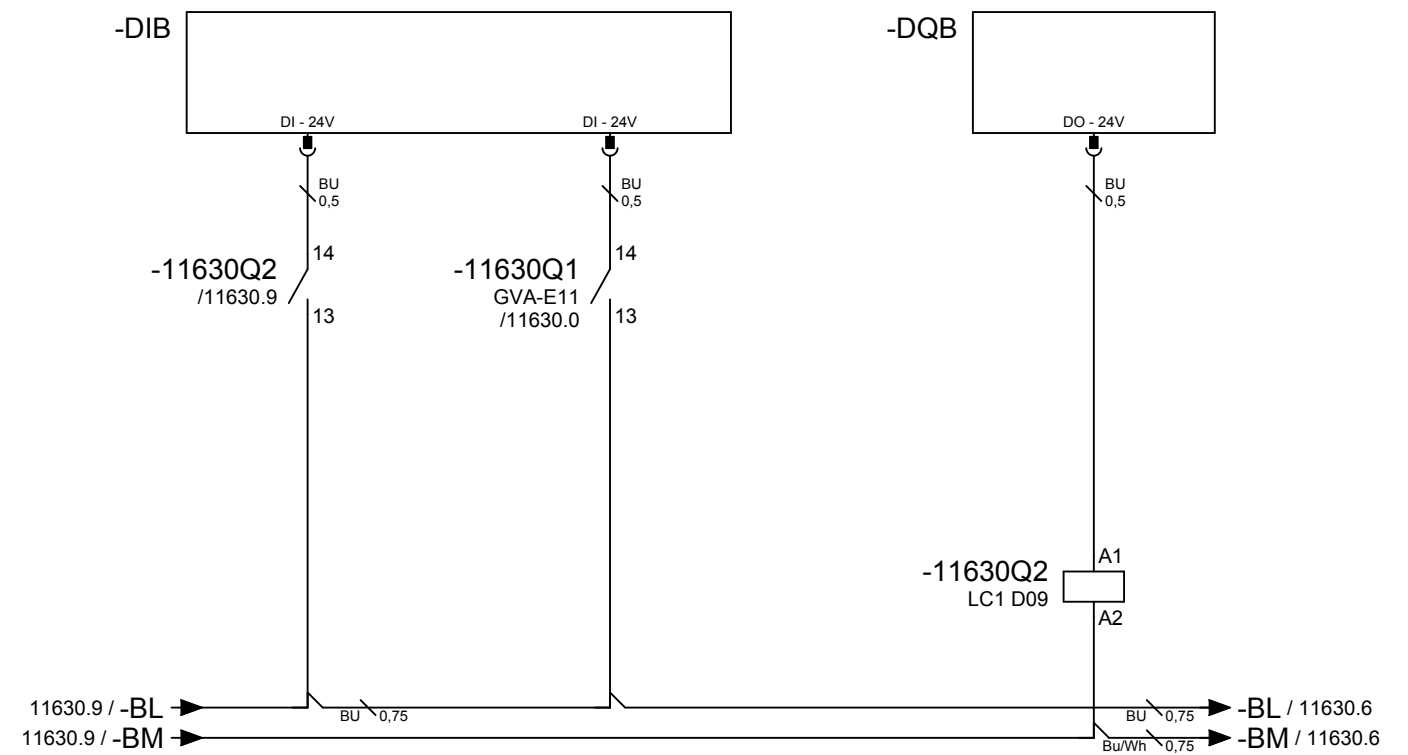
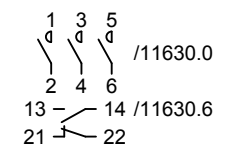


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 130kA at 415V

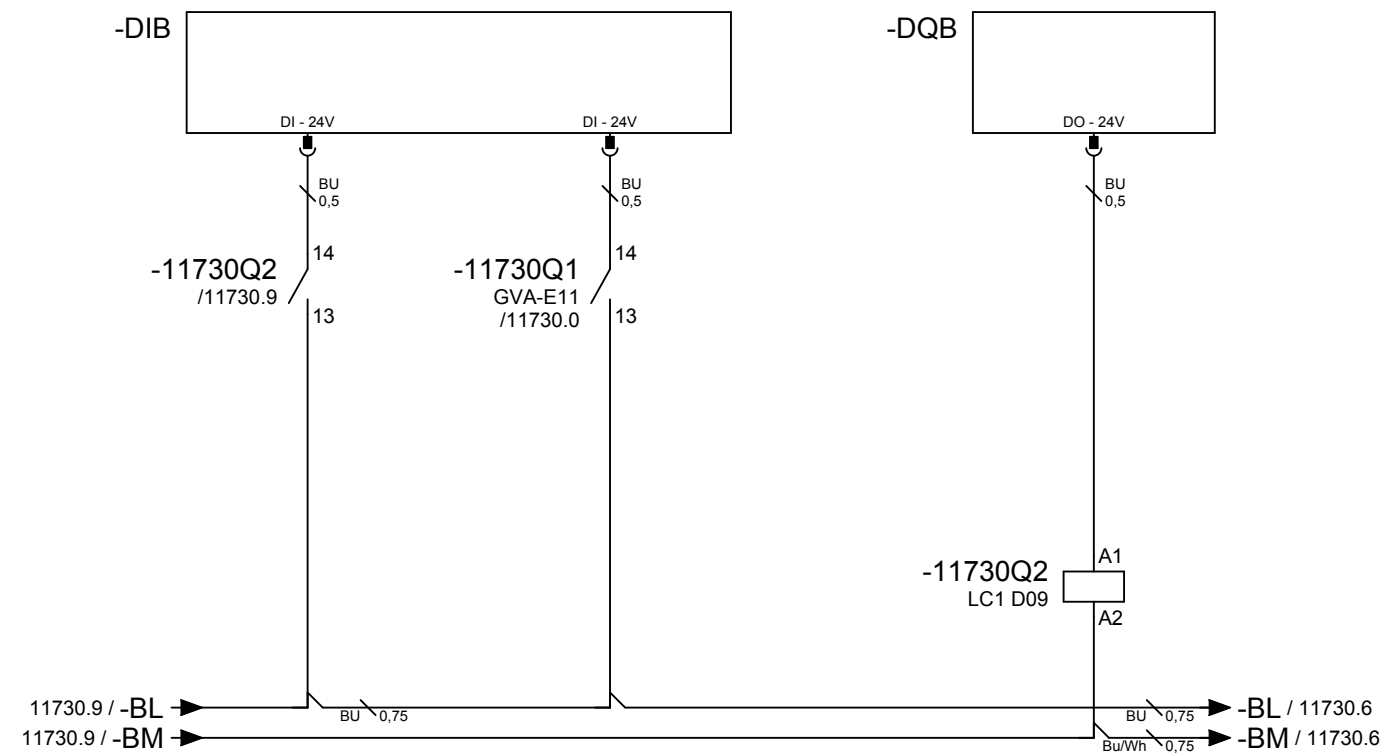
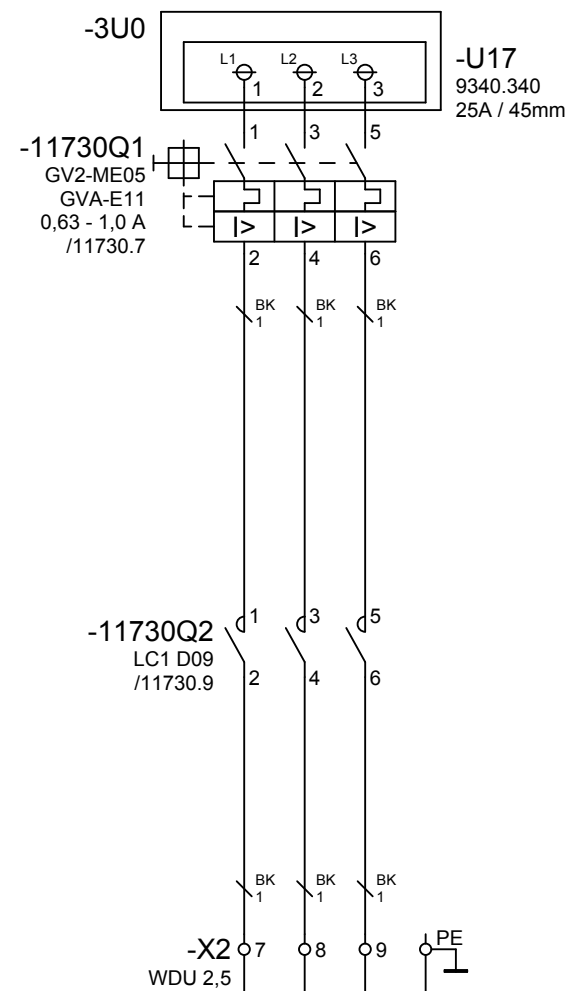
Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

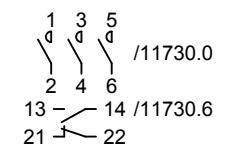
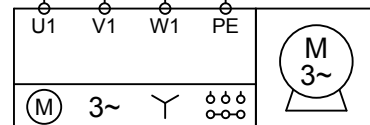


+UBxxx-11730W5
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,8A = 7,7%)
loss U at In 0,04V
loss U at 5xIn 0,20V
heat losses at In 0,10W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

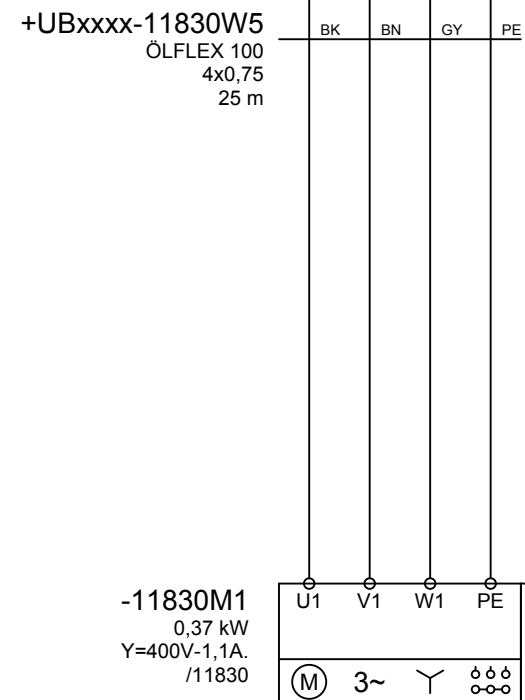
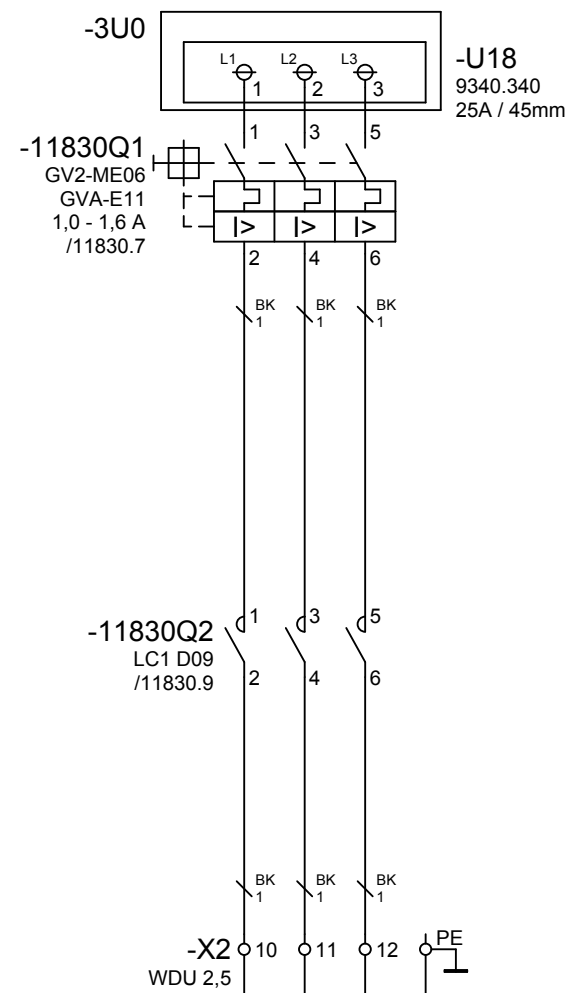
Cable route E
load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
loss U at In 0,45V
loss U at 5xIn 2,27V
heat losses at In 1,1W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

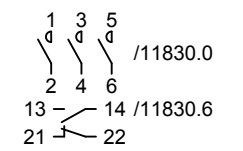
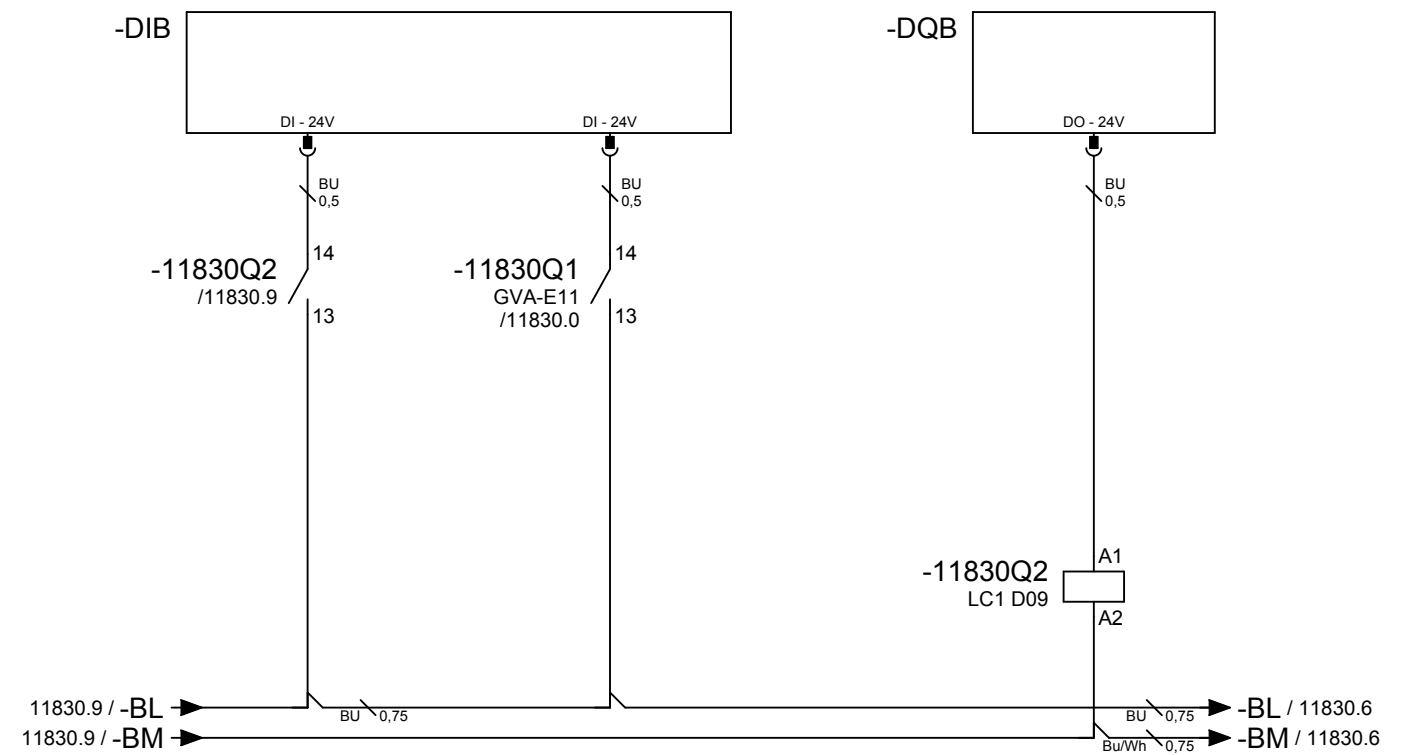


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

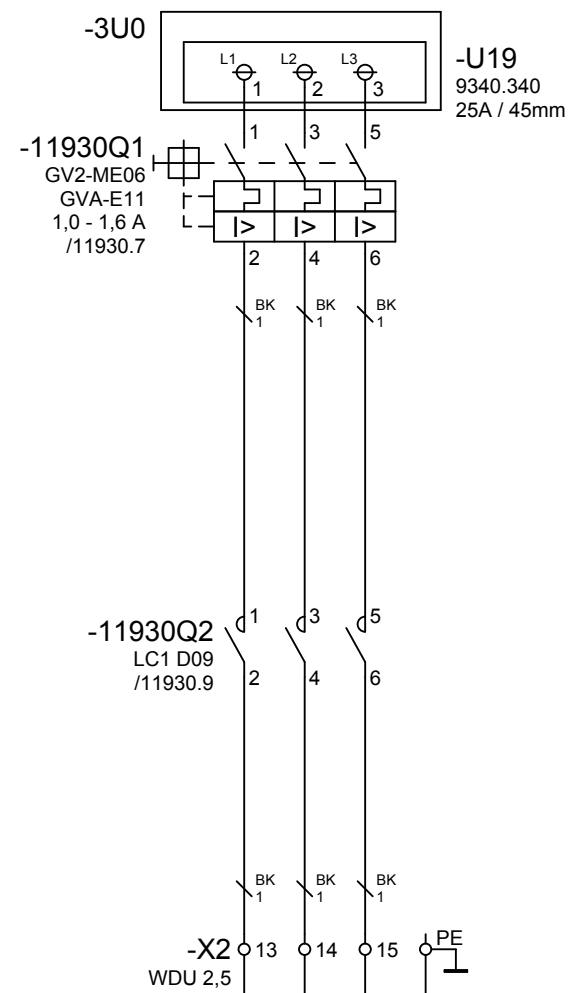
Enclosure B1
 load 1mm² = cca 10,4A; (1,1A = 10,6%)
 loss U at In 0,06V
 loss U at 5xIn 0,28V
 heat losses at In 0,19W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (1,1A = 12,2%)
 loss U at In 0,62V
 loss U at 5xIn 3,12V
 heat losses at In 2,1W (L=3x25m)

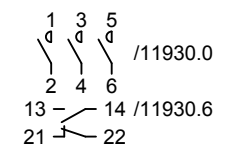
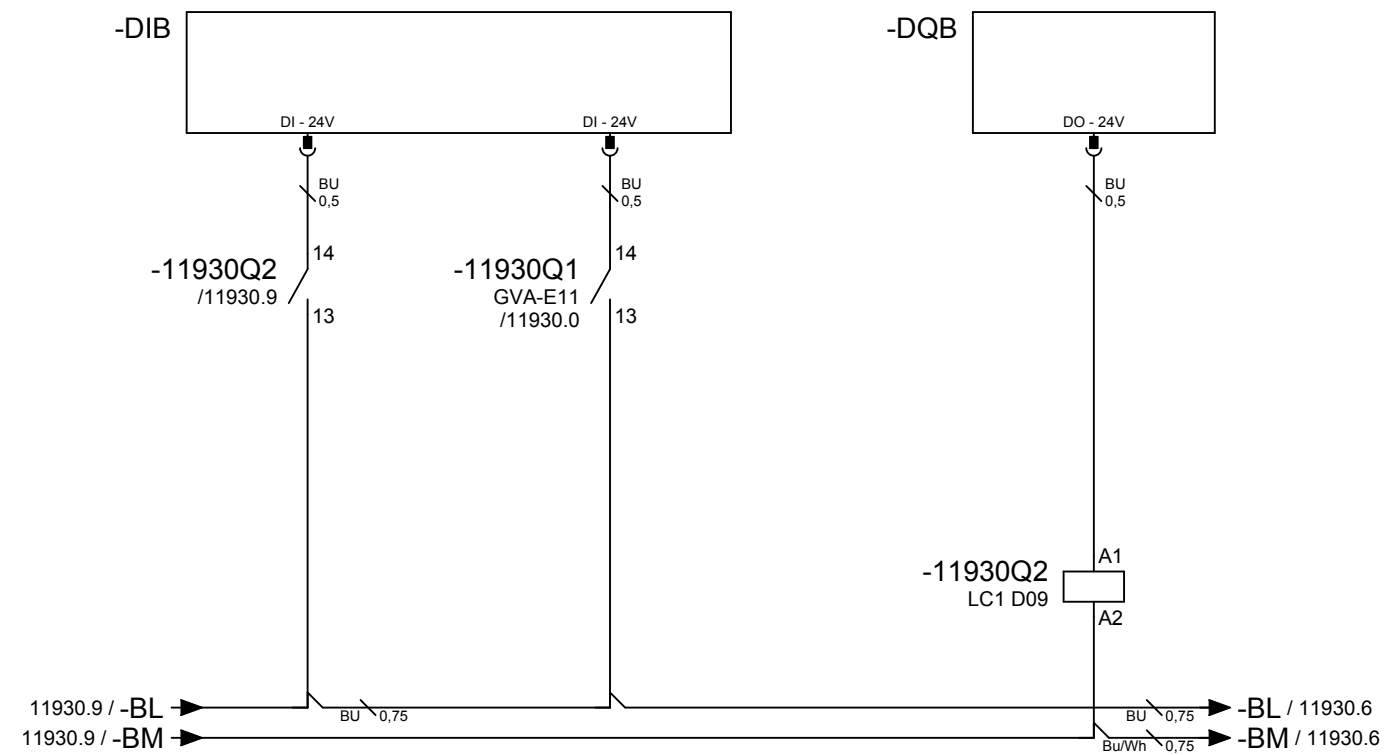


Contactor.
 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

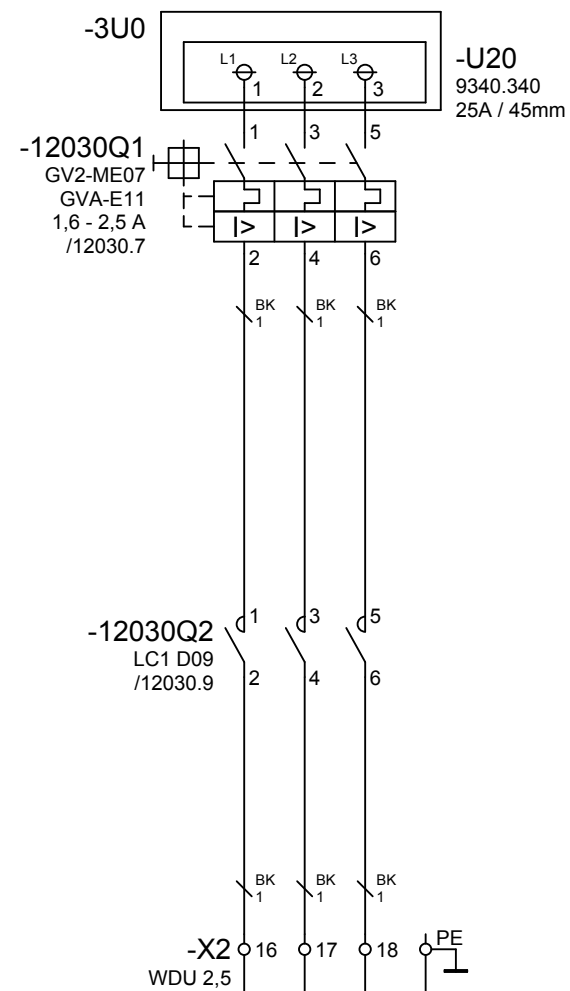


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,5A = 14,4%)
loss U at In	0,08V
loss U at 5xIn	0,38V
heat losses at In	0,34W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,5A = 16,7%)
loss U at In	0,85V
loss U at 5xIn	4,25V
heat losses at In	3,8W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

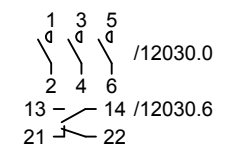
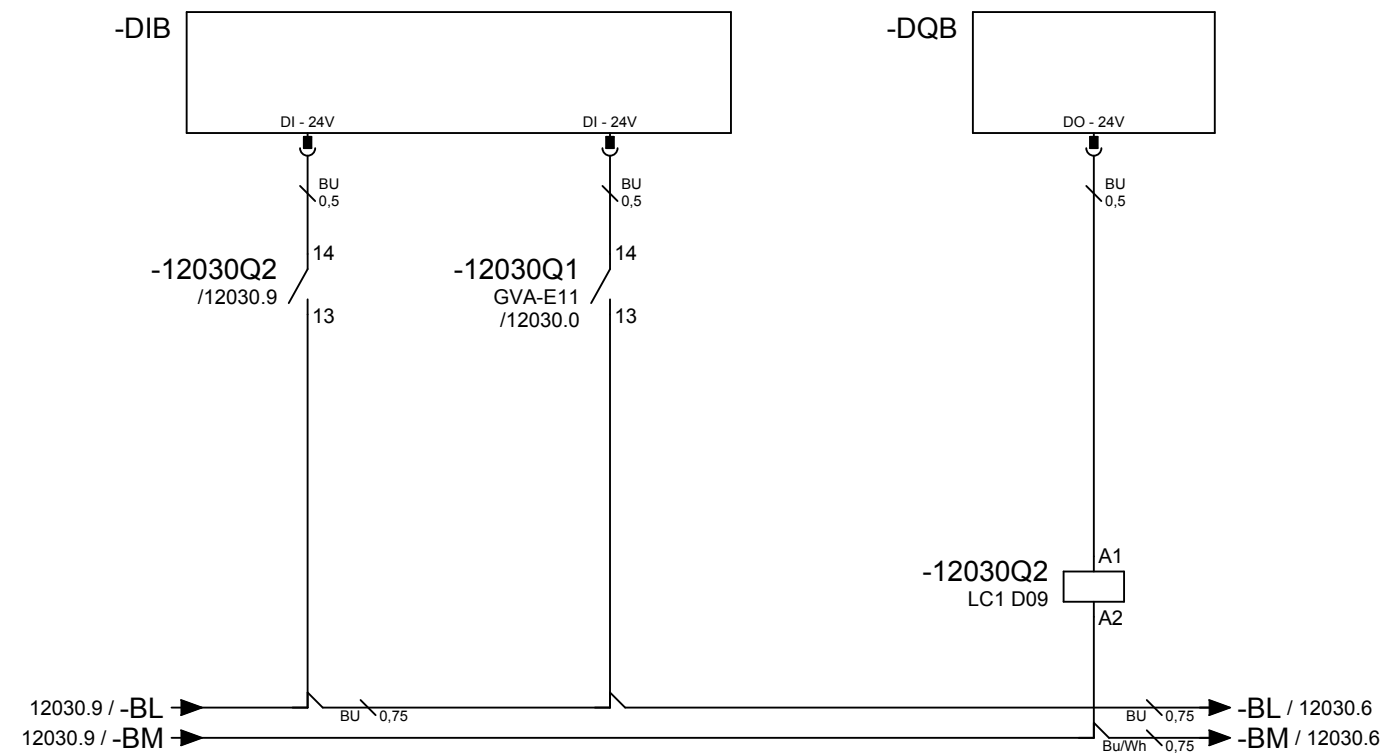
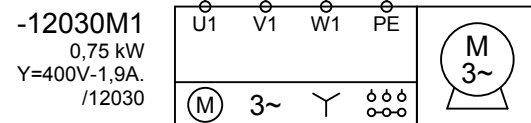


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,9A = 18,3%)
 loss U at In 0,10V
 loss U at 5xIn 0,48V
 heat losses at In 0,55W (L=3x3m)

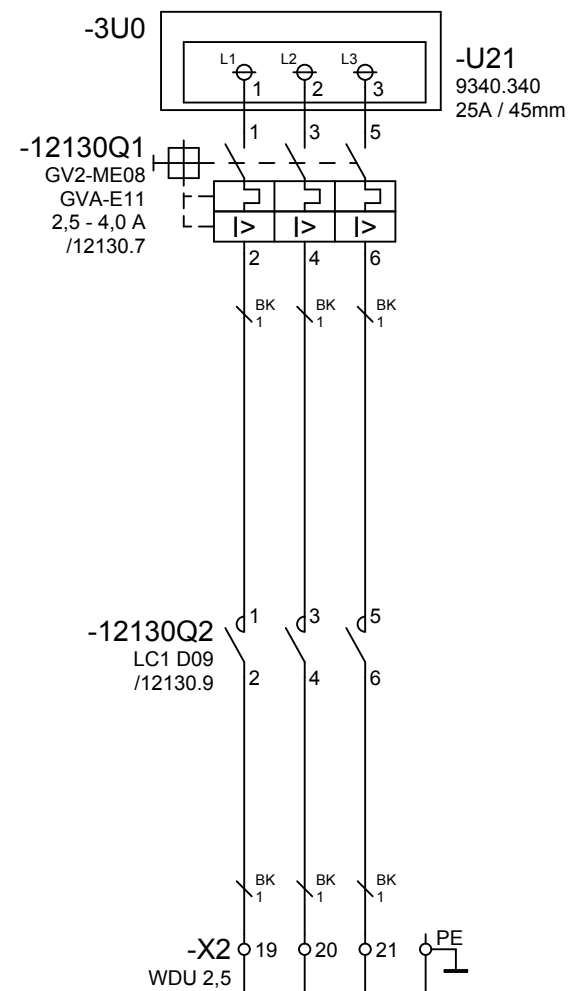
 short circuit resistance 130kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (1,9A = 14,6%)
 loss U at In 0,81V
 loss U at 5xIn 4,04V
 heat losses at In 4,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors.	0,75kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2ME_C2
	TISKO spol. s r. o.	2018	Last revision of project	+ R_60
			Last revision of page	12030
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	

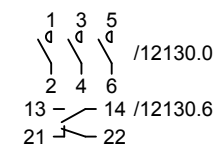
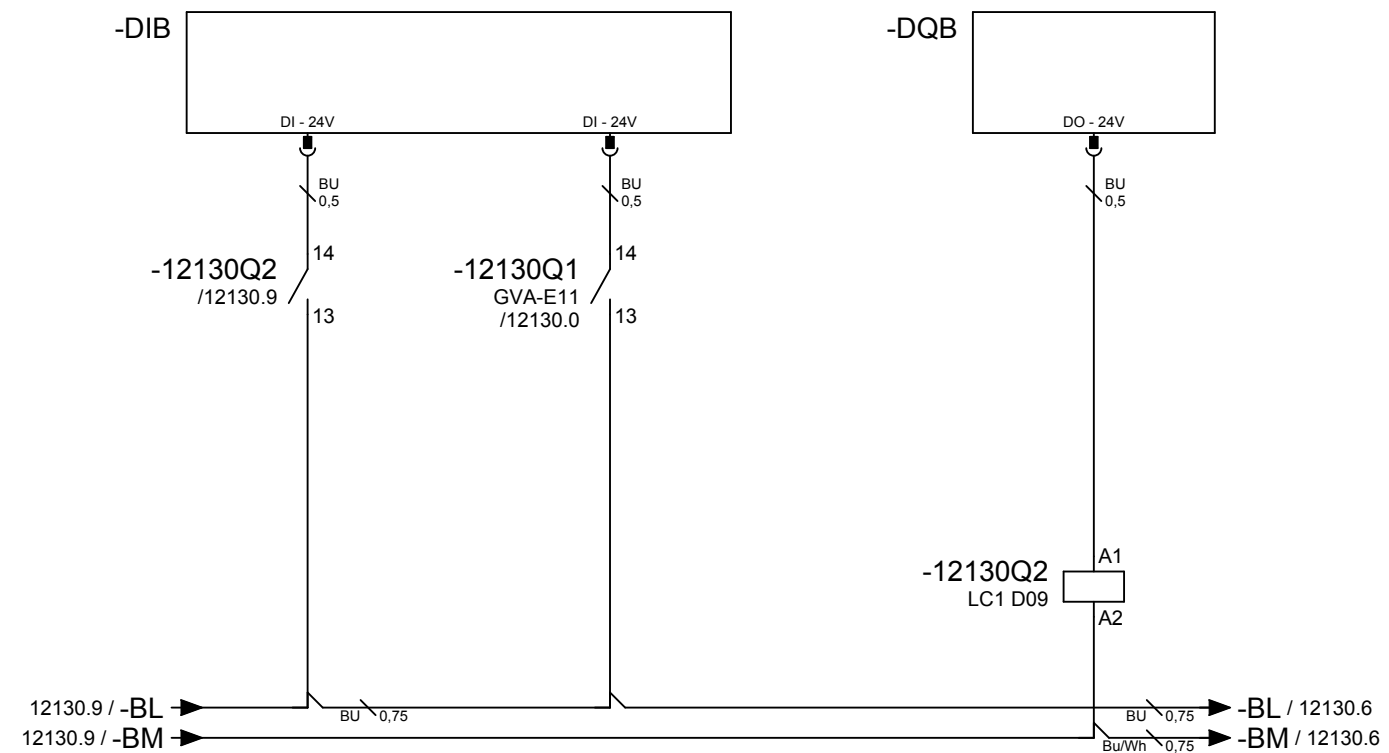
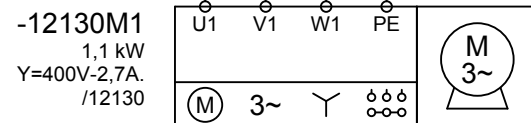


+UBxxxx-12130W5
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (2,7A = 26,0%)
loss U at In 0,14V
loss U at 5xIn 0,69V
heat losses at In 1,12W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

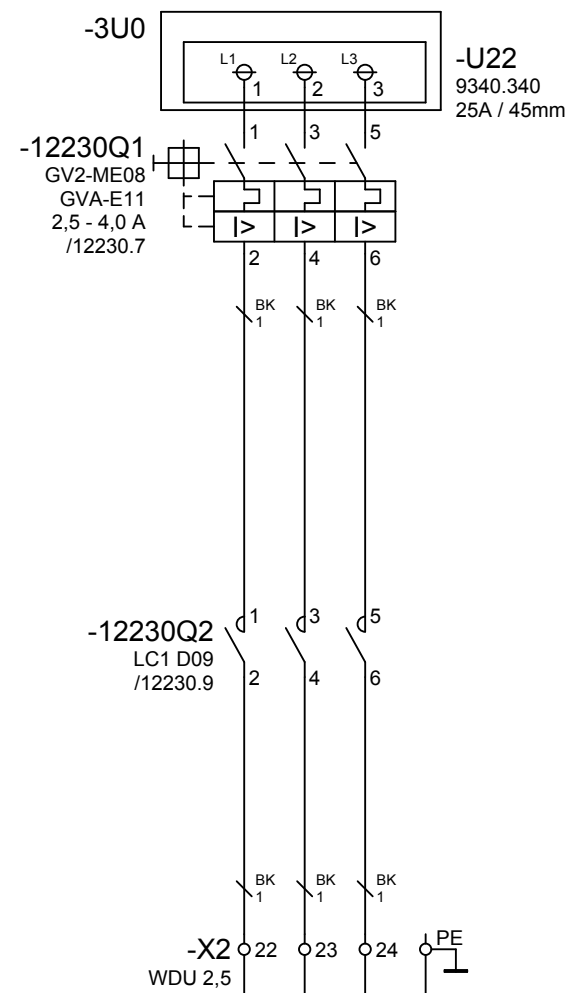
Cable route E
load 1mm² = cca 13,0A; (2,7A = 20,8%)
loss U at In 1,15V
loss U at 5xIn 5,74V
heat losses at In 9,3W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

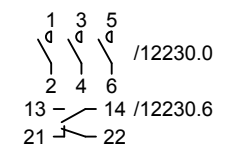
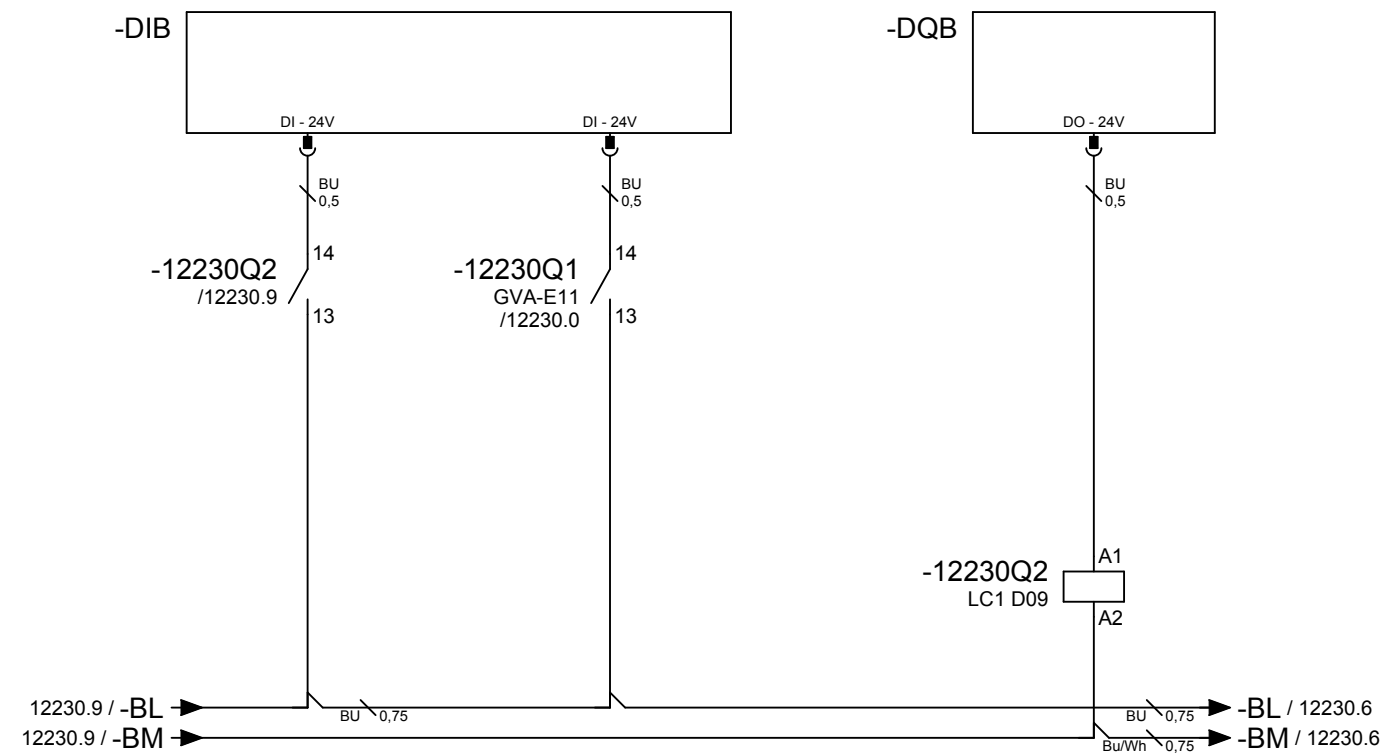
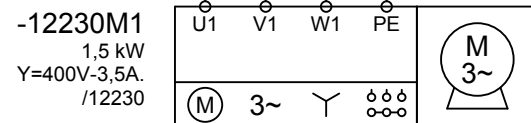


+UBxxx-12230W5
ÖLFLEX 100
4x1
25 m

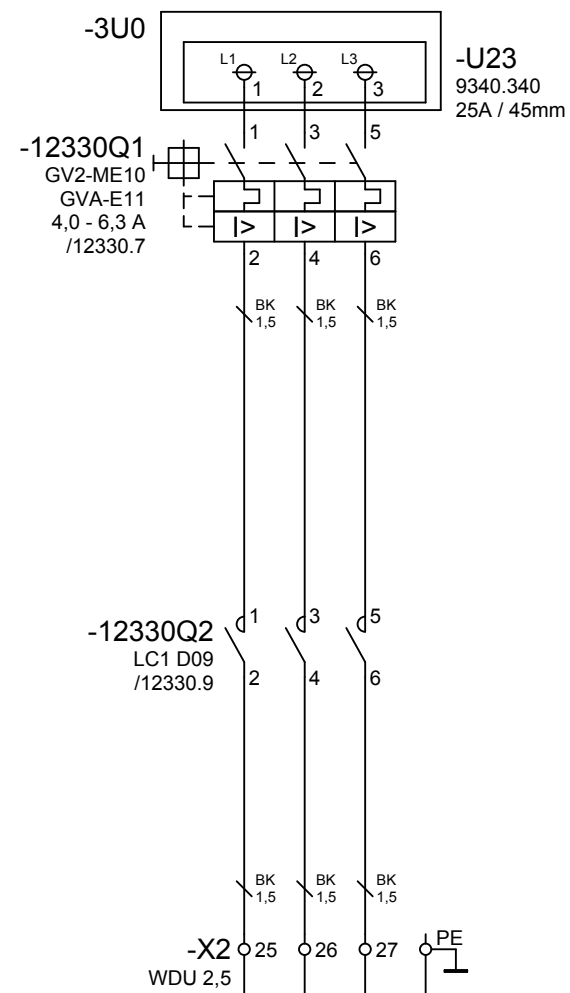
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (3,5A = 33,7%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 1,87W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1mm² = cca 13,0A; (3,5A = 27,0%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 15,6W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

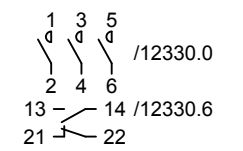
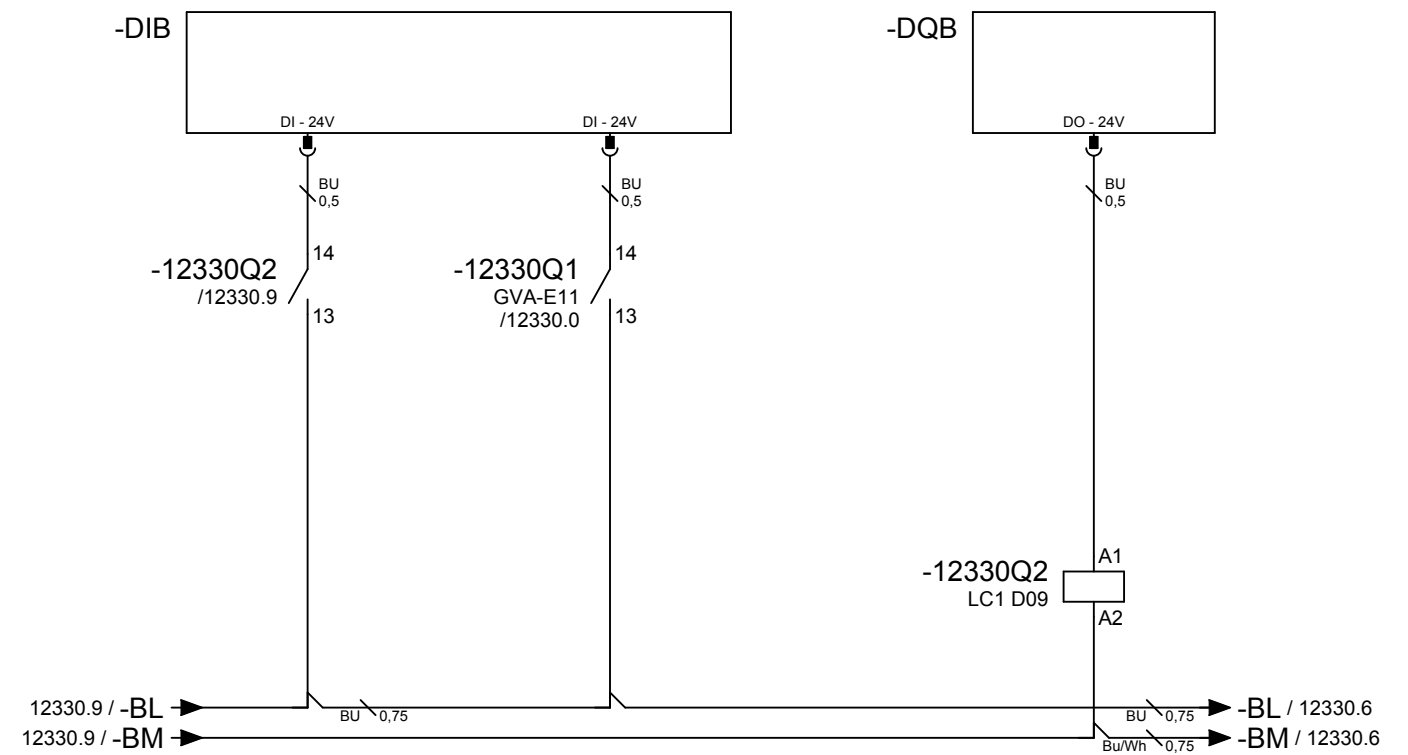


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

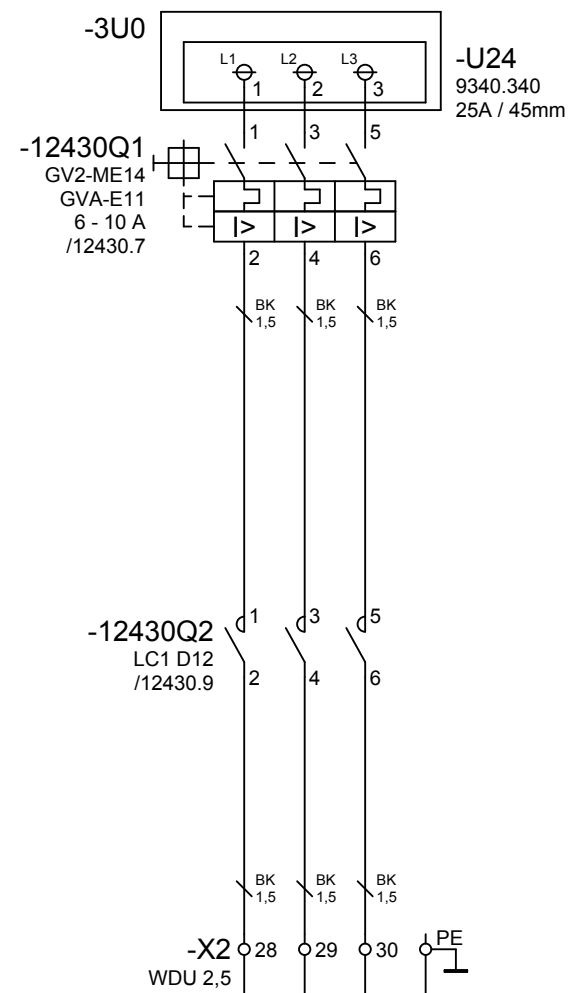
Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)

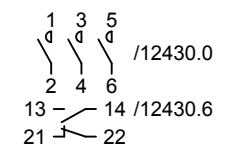
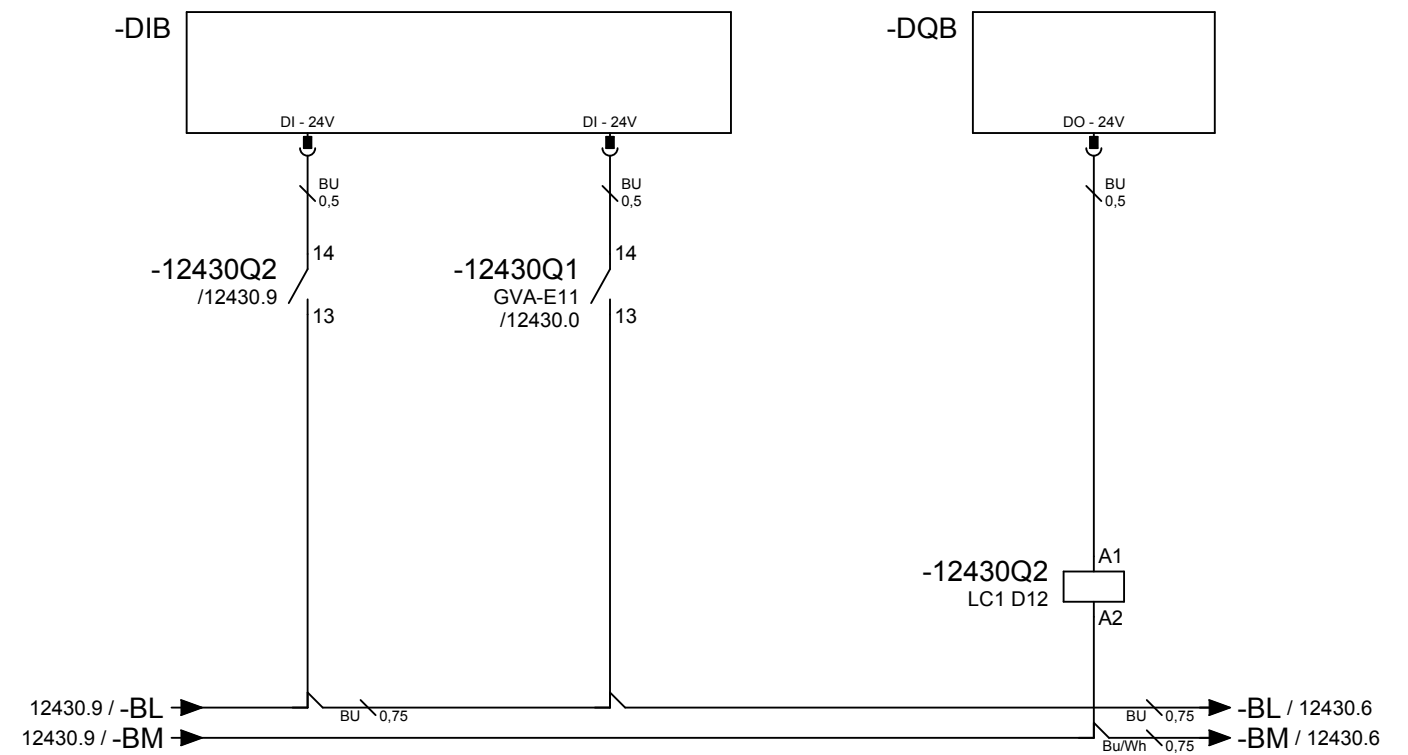


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



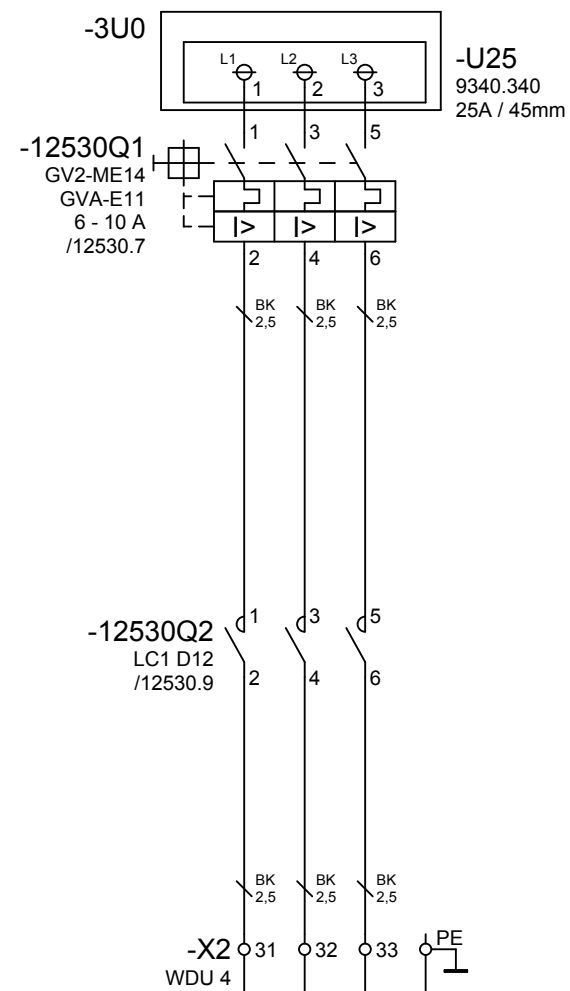
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>TISKO elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>3,0kW. 2018</p>	Creator	V00	01.02.2012	Ing. Tisovčík Ivan	<p>= GV2ME_C2</p>	
			Last revision of project			Last revision of page				+ R_60 12430
			M = 1 : 1	Schéma vícepólového zapojení		21.10.2018	WUP0U34409	



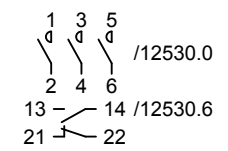
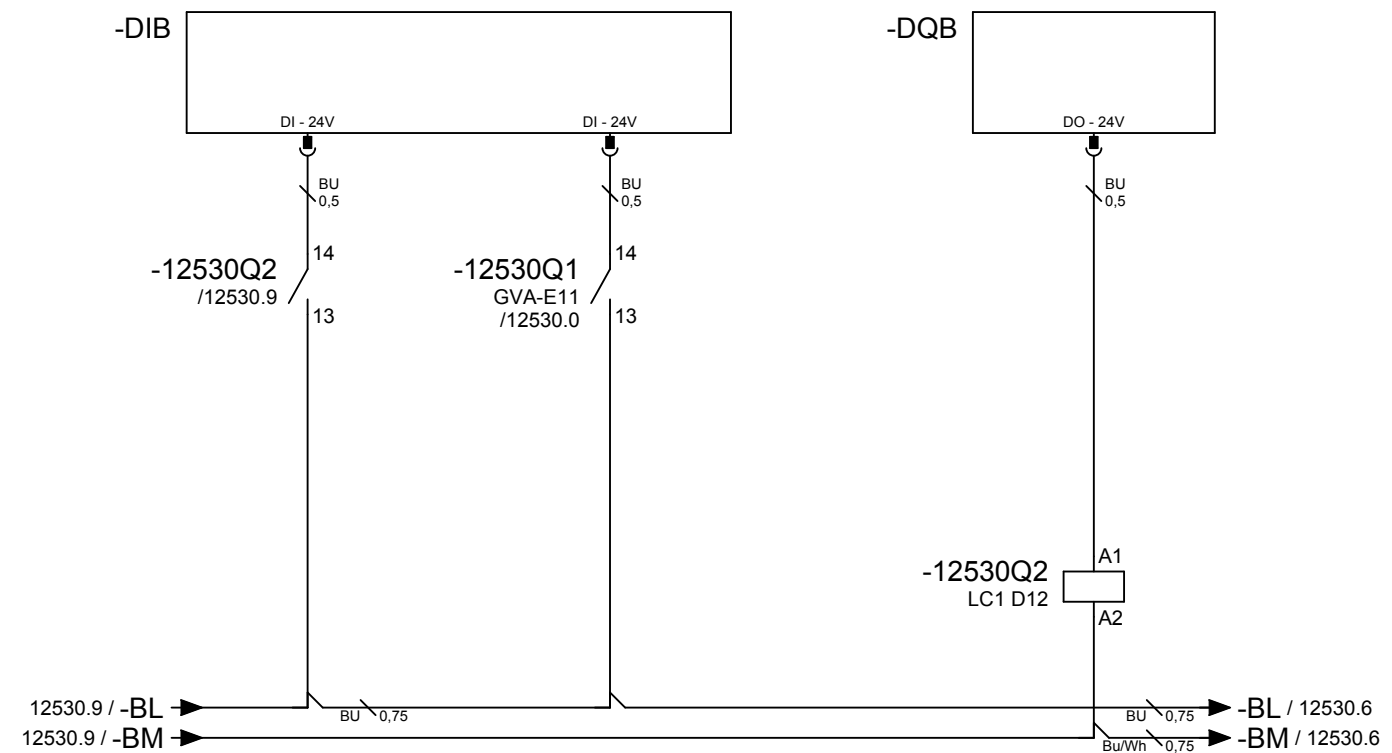
+UBxxx-12530W5
 ÖLFLEX 100
 4x1,5
 25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
 loss U at In 0,17V
 loss U at 5xIn 0,87V
 heat losses at In 4,42W (L=3x3m)

 short circuit resistance 130kA at 415V

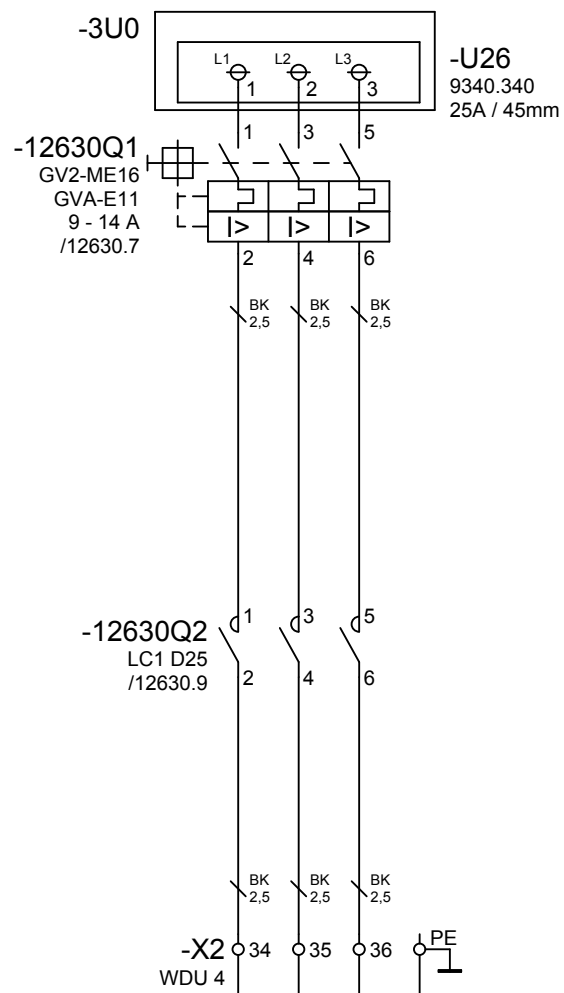
Cable route E
 load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
 loss U at In 2,41V
 loss U at 5xIn 12,04V
 heat losses at In 61,4W (L=3x25m)



Contactor.
 1=Switched ON.

Circuit
 breaker. 0=Failure.

Motor.
 Contactor.

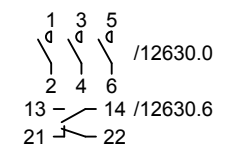
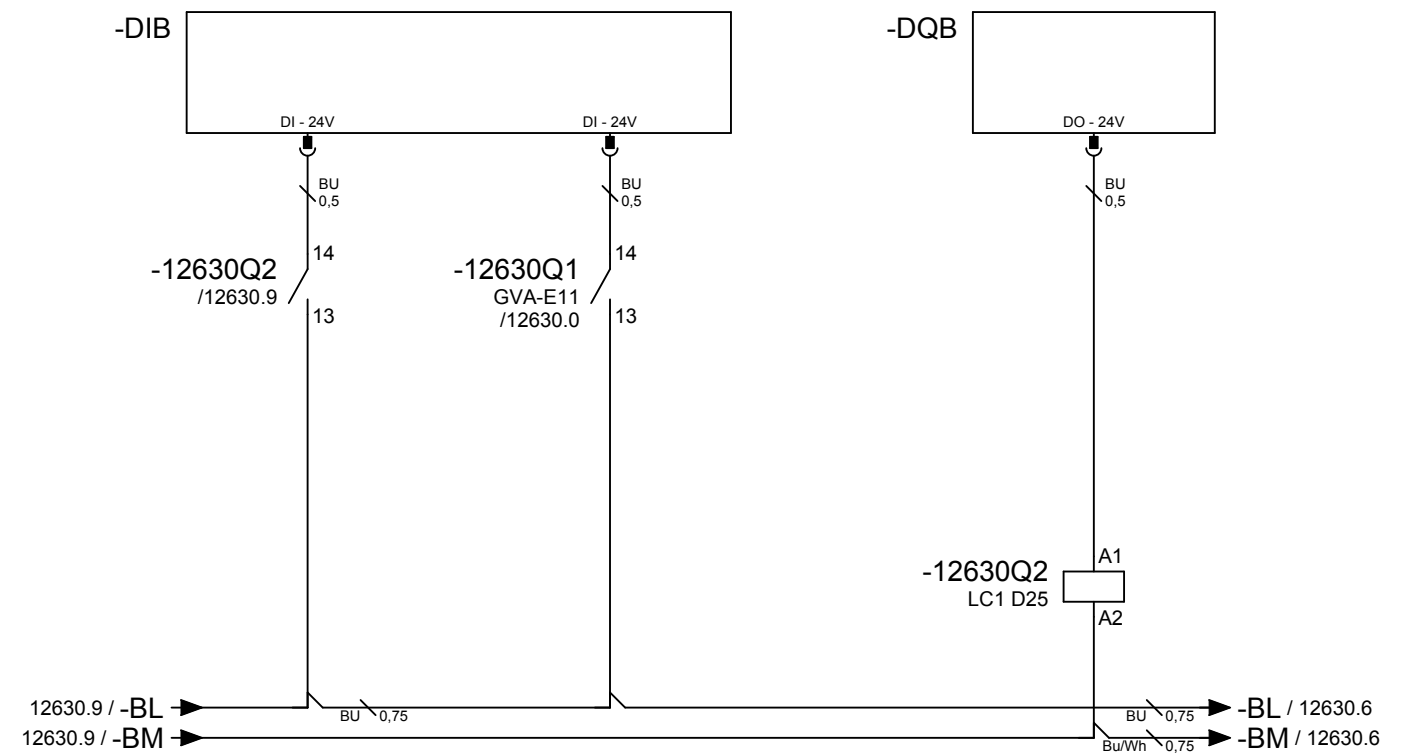


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

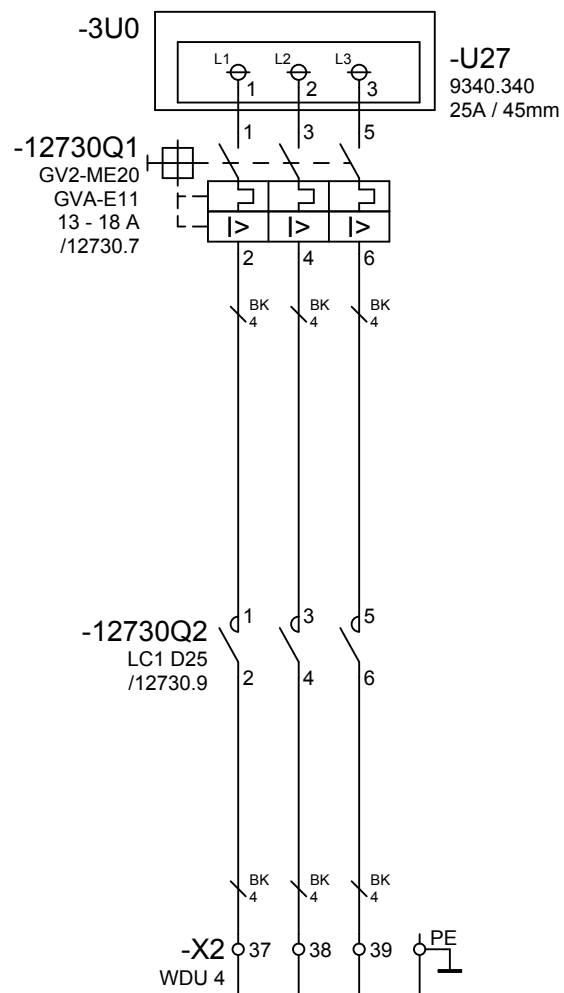
Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

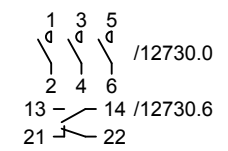
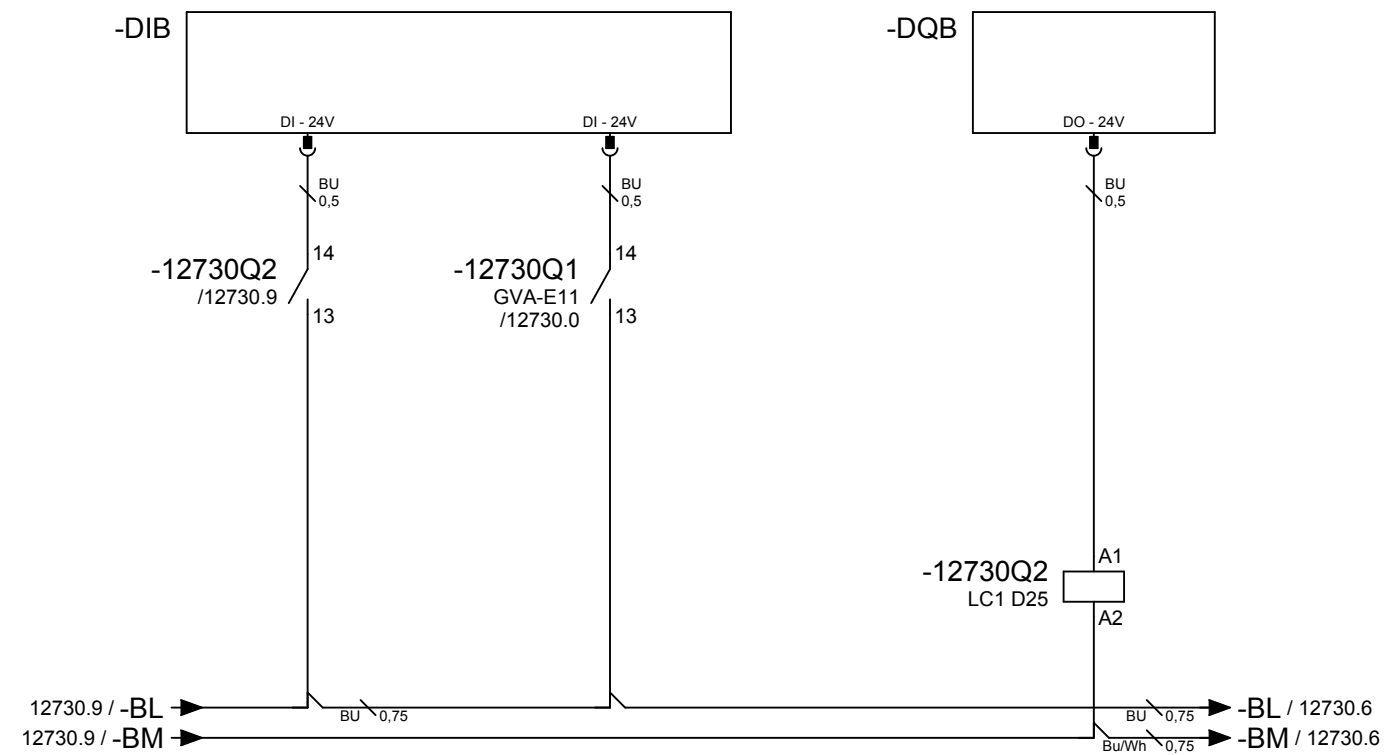


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

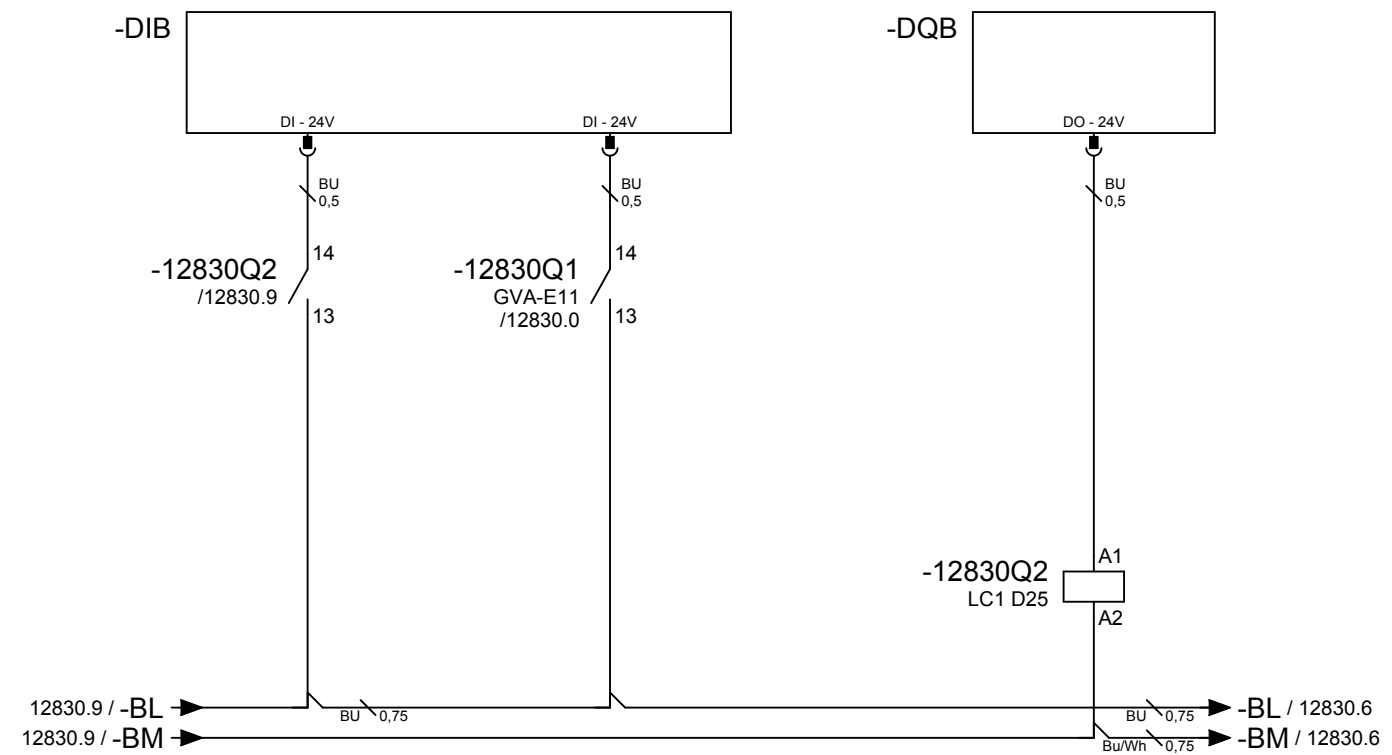
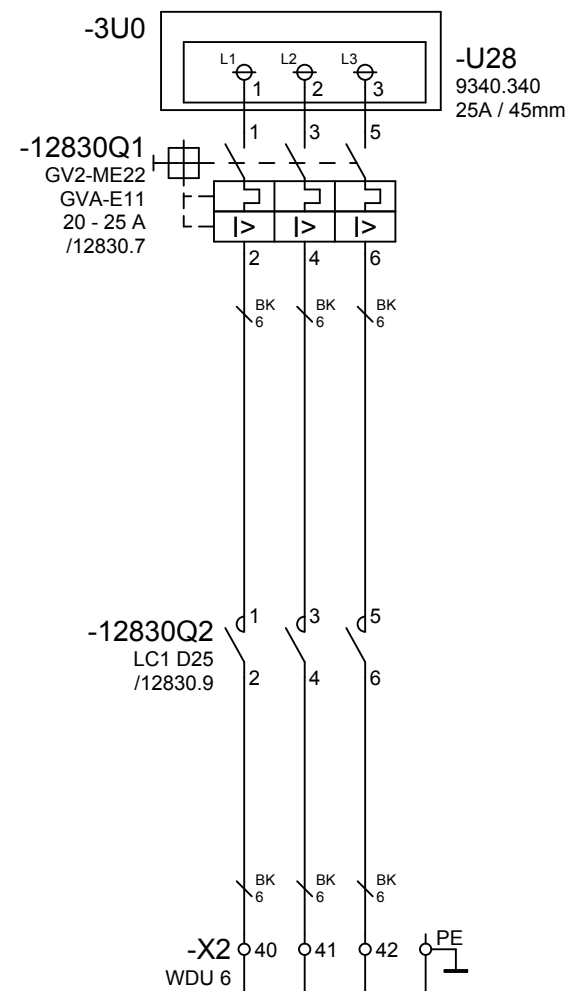
Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

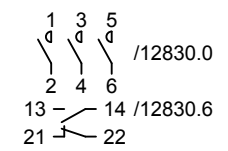


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)

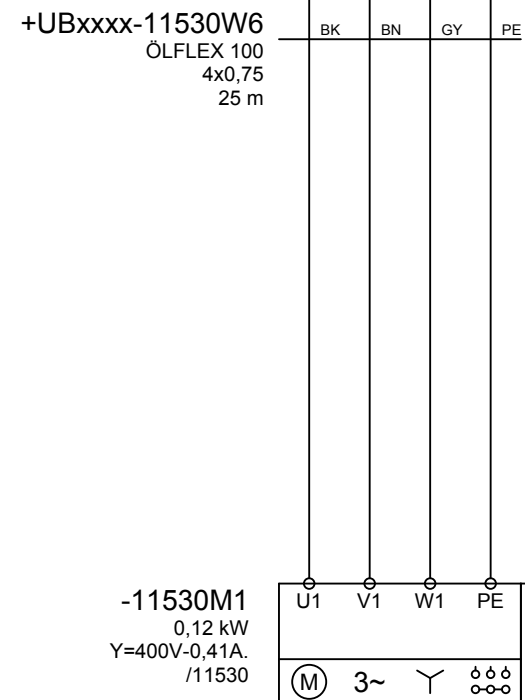
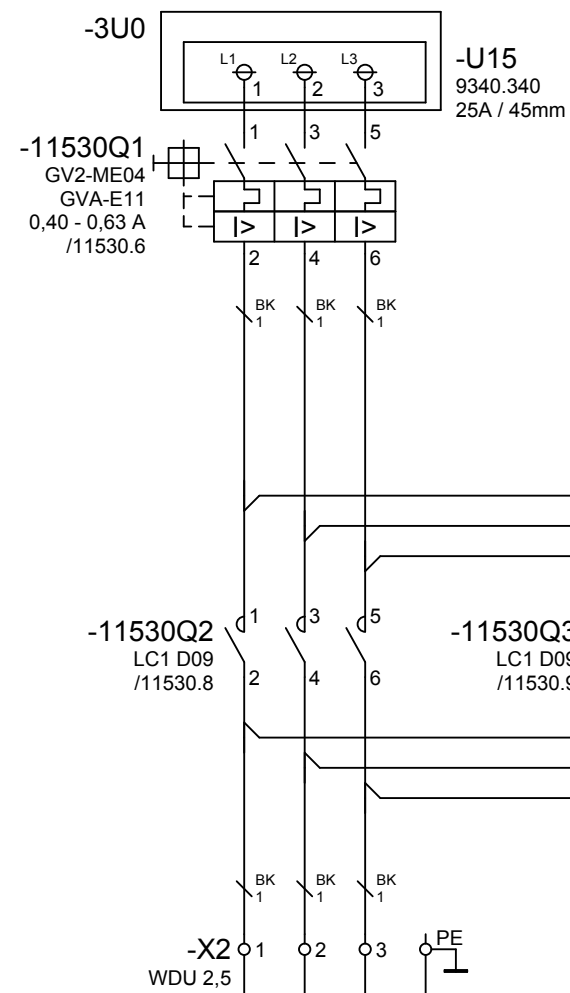


Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

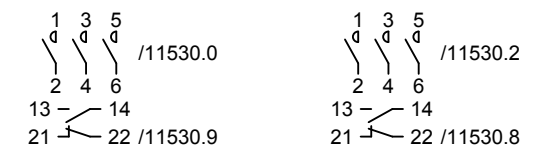
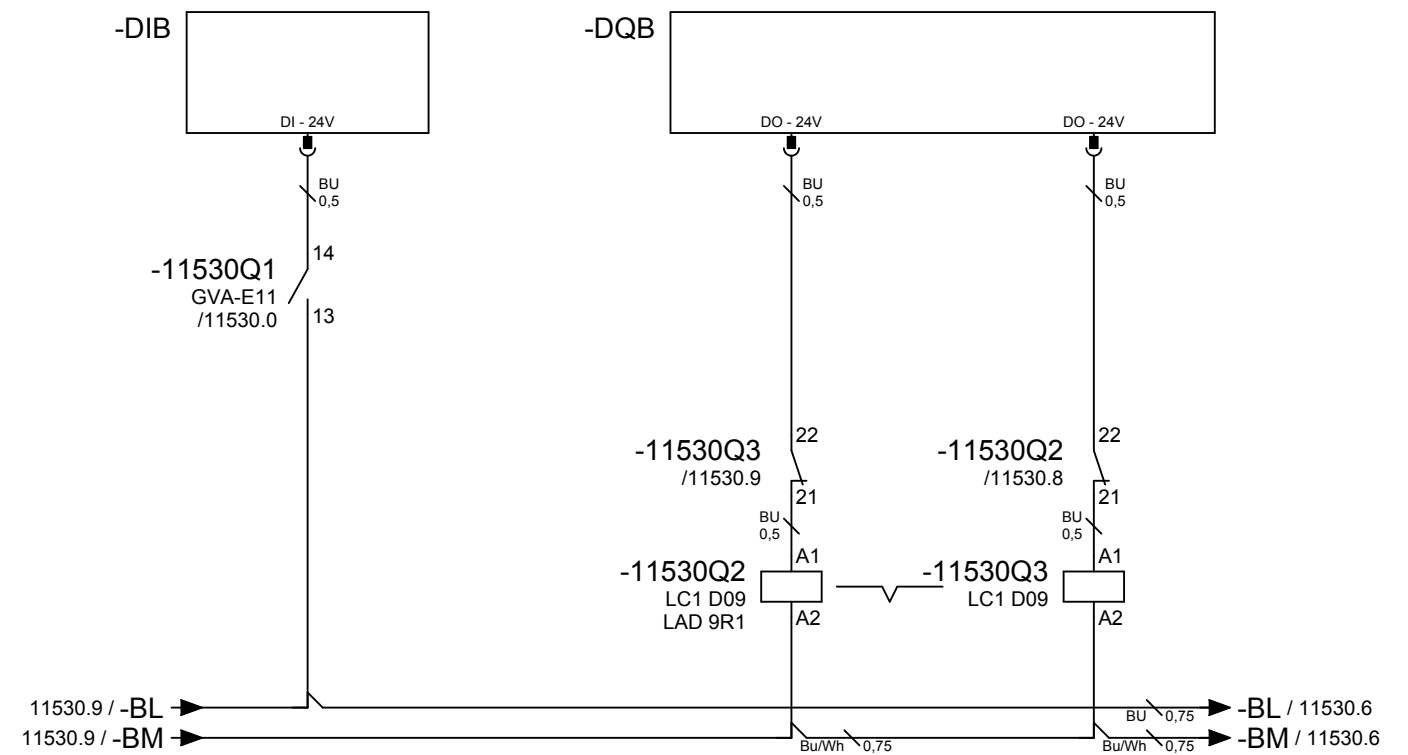
Motor.
Contactor.

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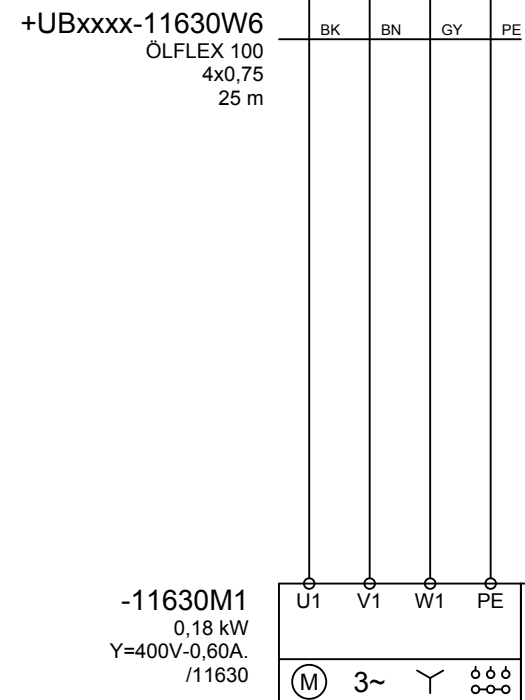
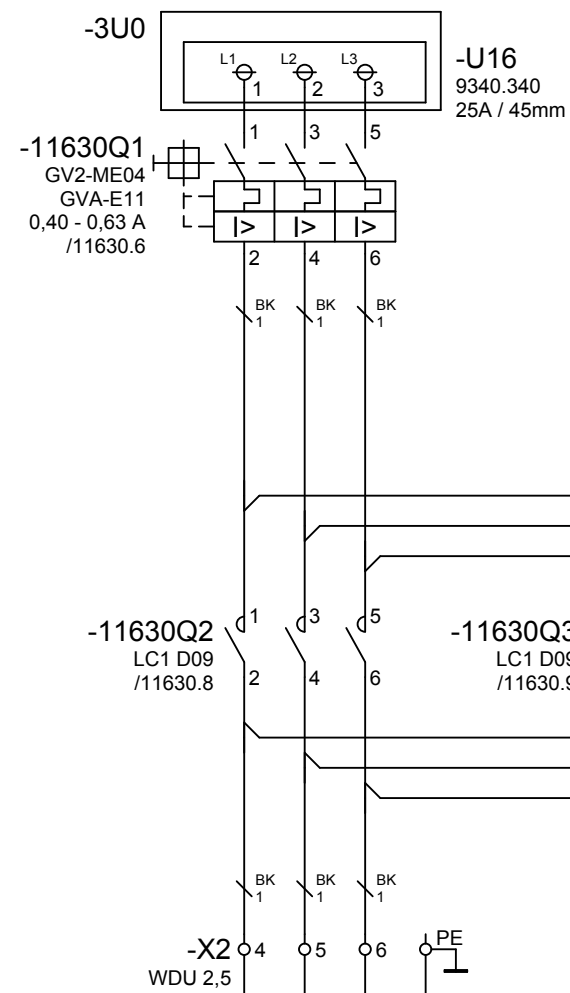


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...

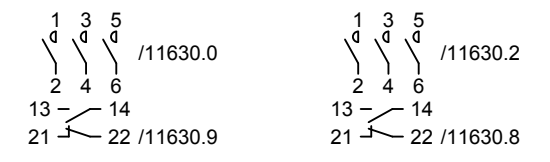
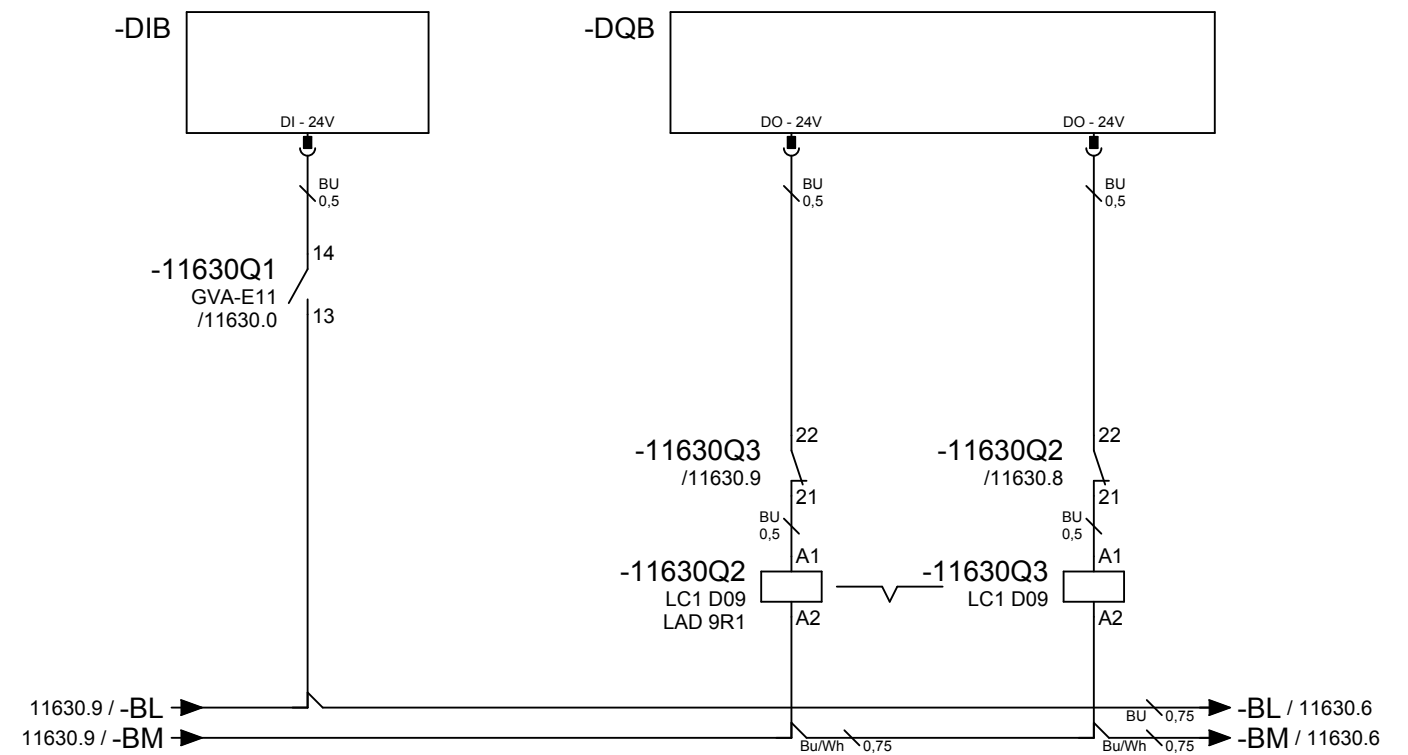


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

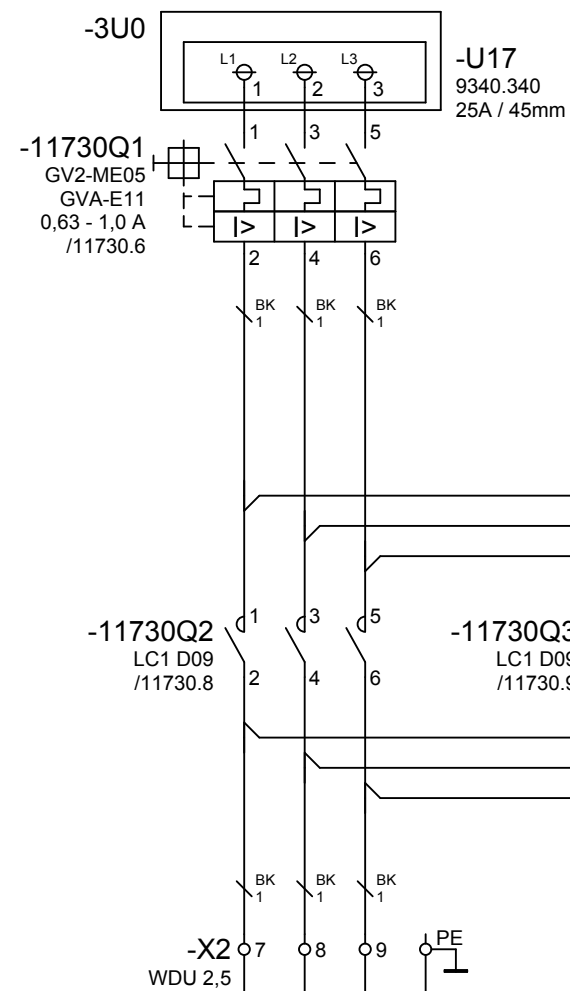


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

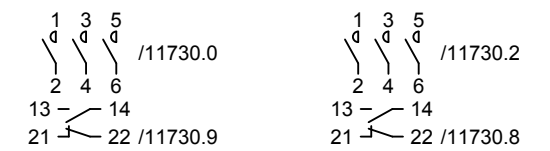
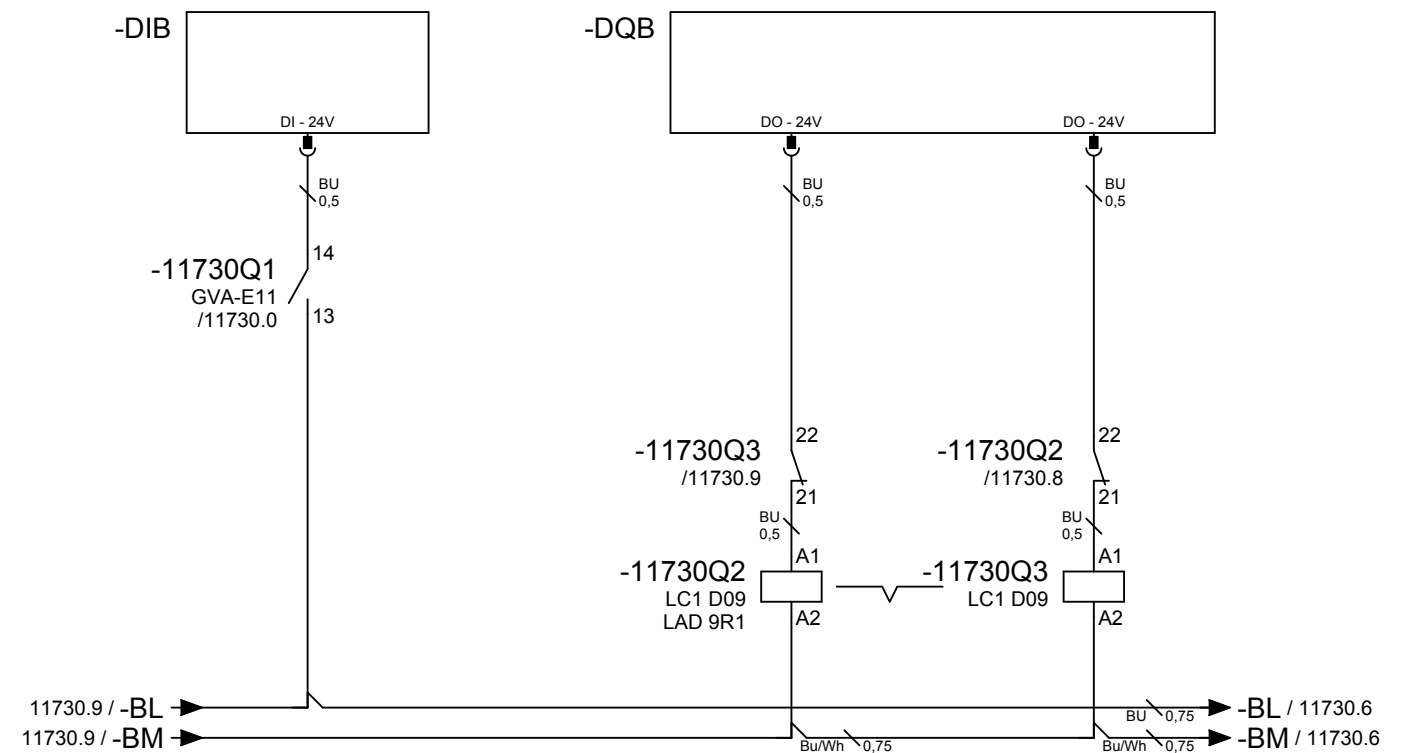


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,8A = 7,7%)
 loss U at In 0,04V
 loss U at 5xIn 0,20V
 heat losses at In 0,10W (L=3x3m)

 short circuit resistance 130kA at 415V

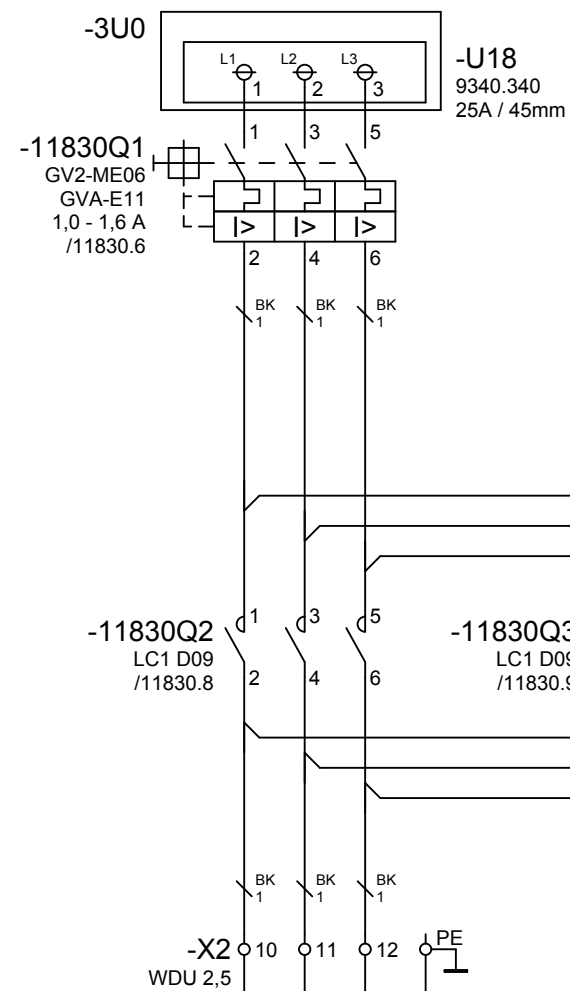
Cable route E
 load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
 loss U at In 0,45V
 loss U at 5xIn 2,27V
 heat losses at In 1,1W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

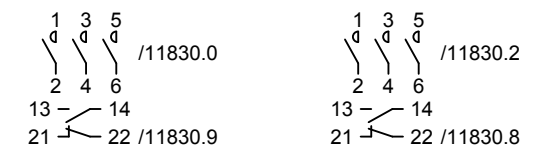
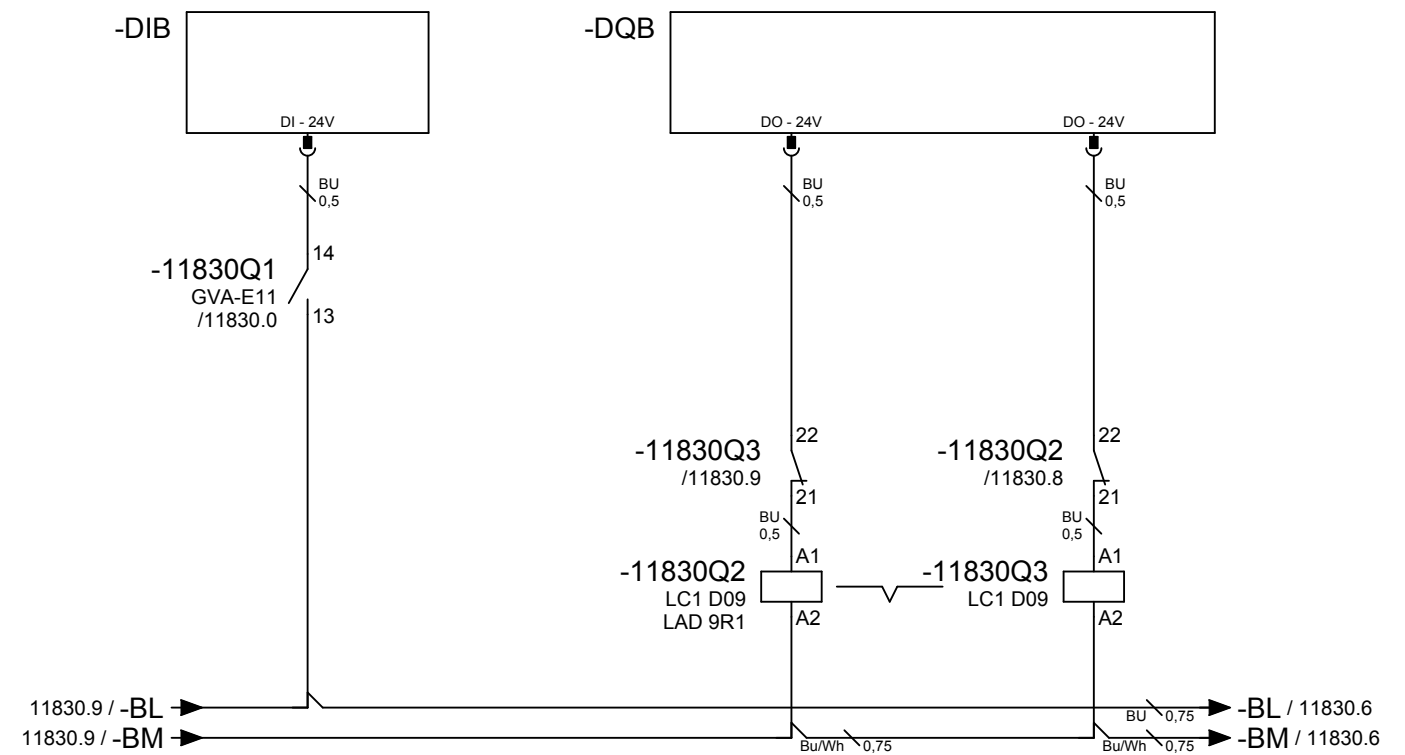
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,1A = 10,6%)
 loss U at In 0,06V
 loss U at 5xIn 0,28V
 heat losses at In 0,19W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

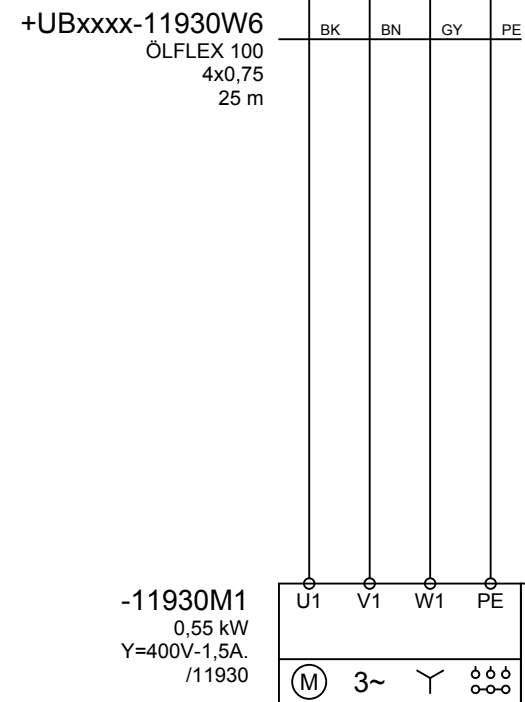
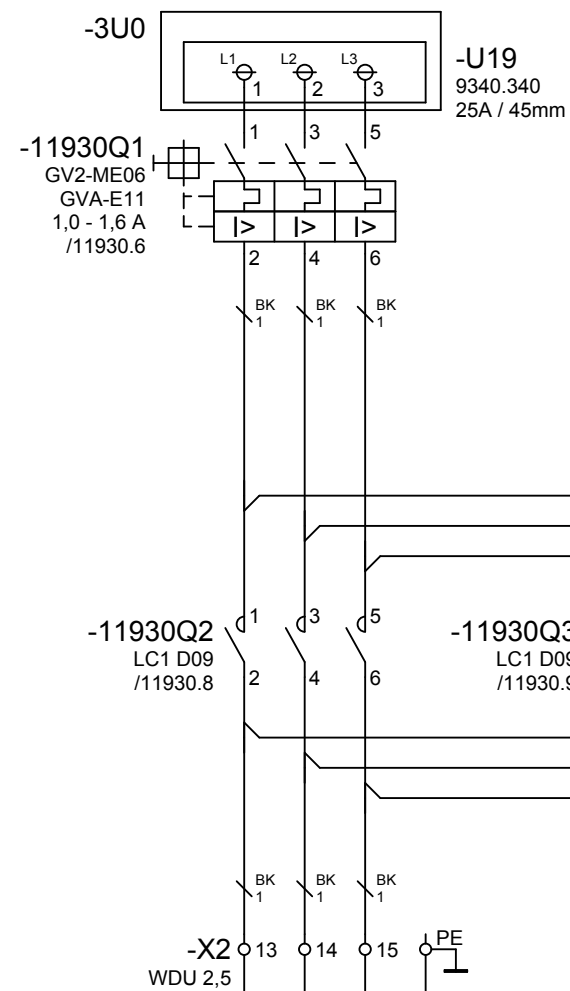
Cable route E
 load 0,75mm² = cca 9,0A; (1,1A = 12,2%)
 loss U at In 0,62V
 loss U at 5xIn 3,12V
 heat losses at In 2,1W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

Motor. Contactor.

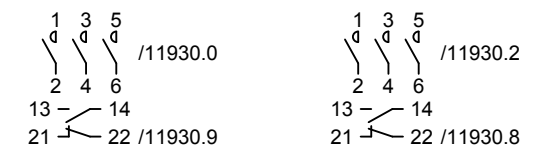
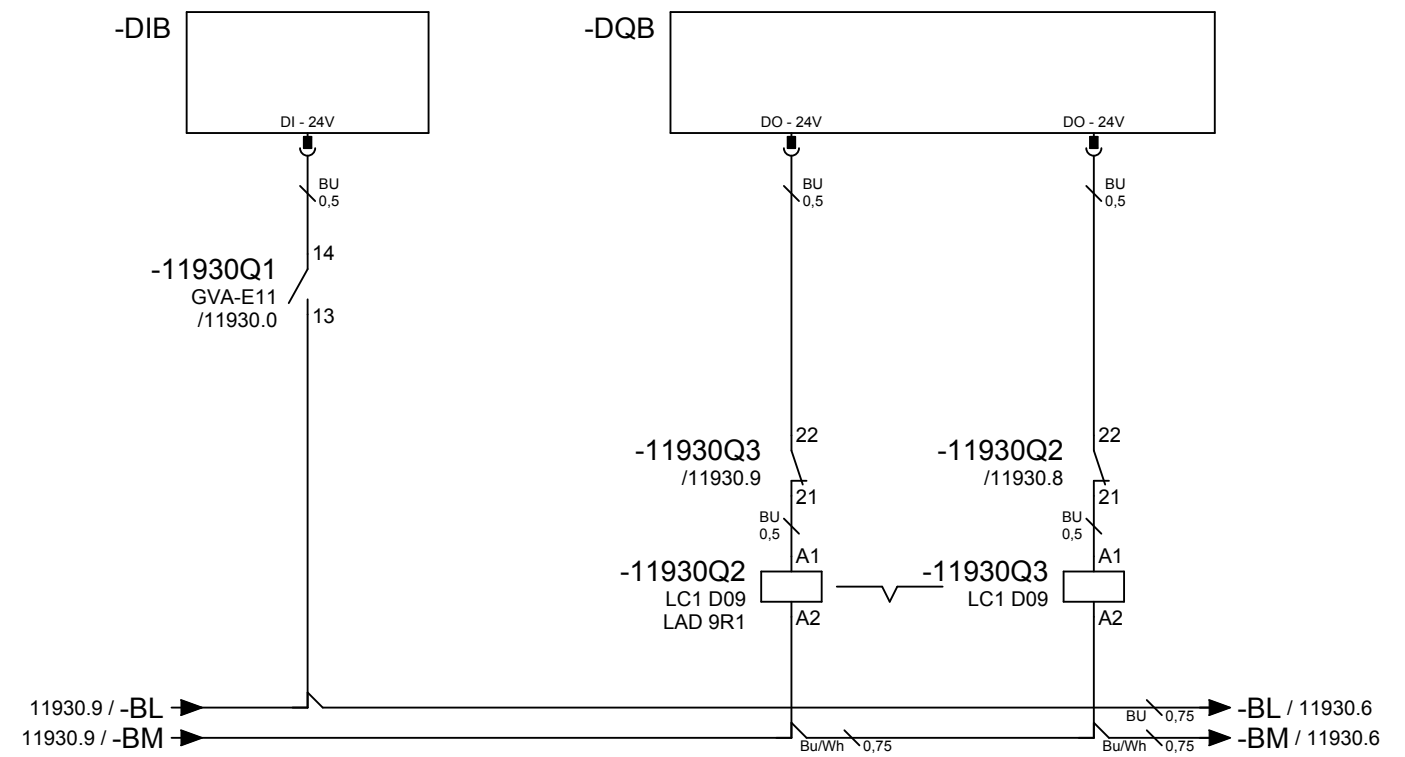
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (1,5A = 14,4%)
loss U at In 0,08V
loss U at 5xIn 0,38V
heat losses at In 0,34W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

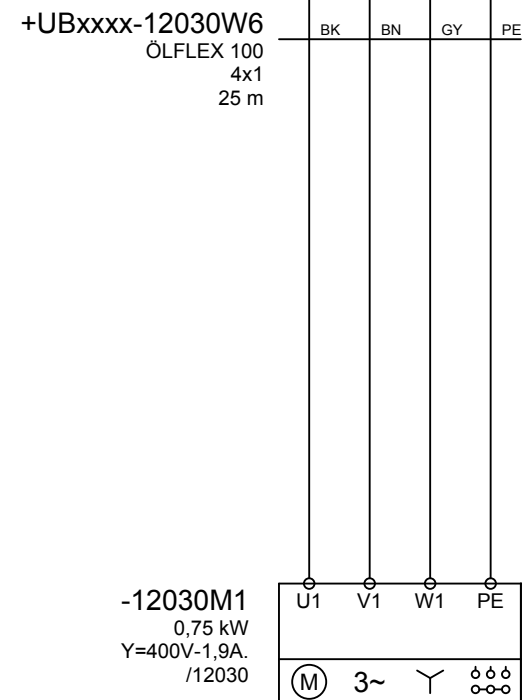
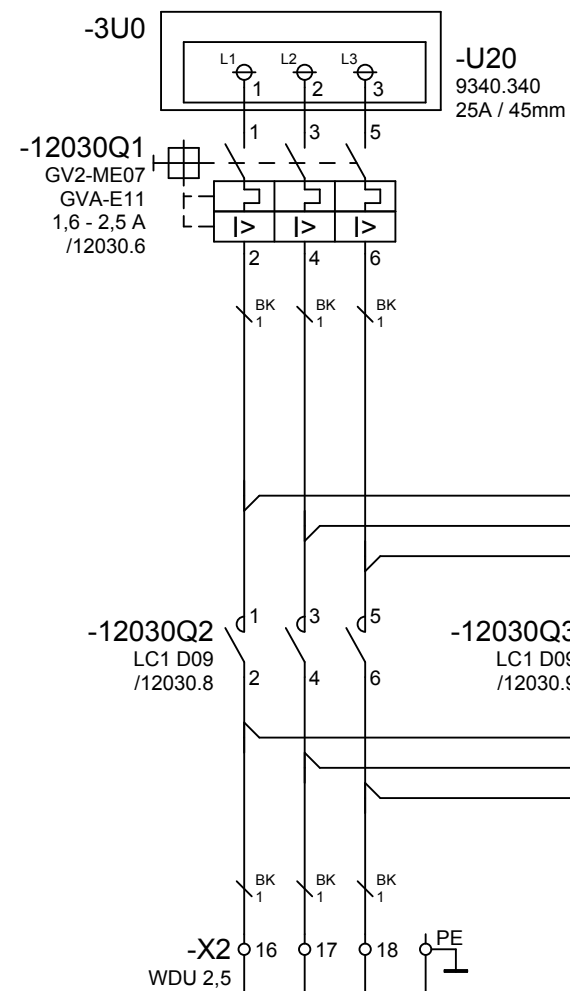
Cable route E
load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
loss U at In 0,85V
loss U at 5xIn 4,25V
heat losses at In 3,8W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure.

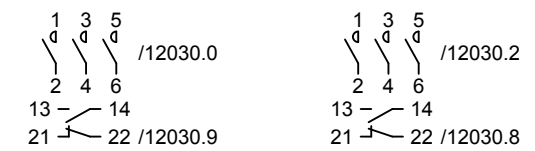
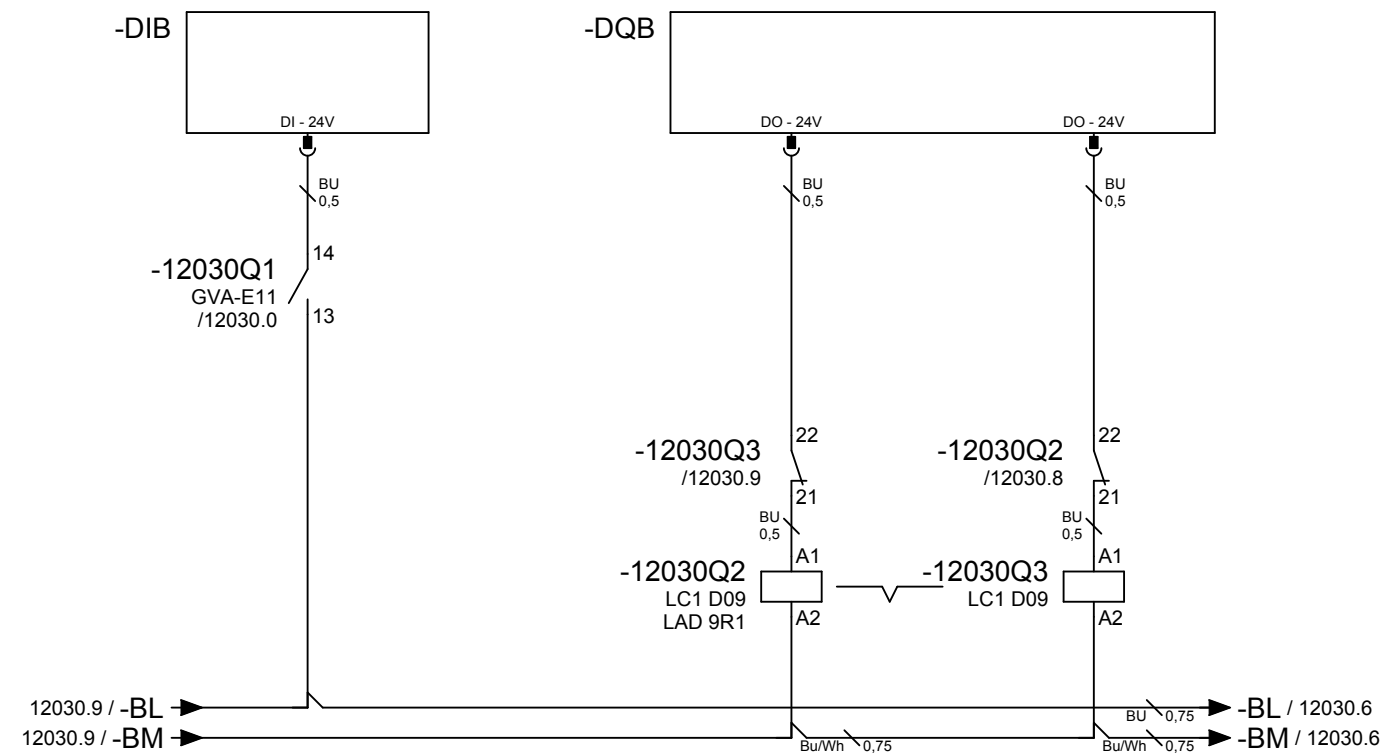
Motor. Contactor.

Motor. Contactor.

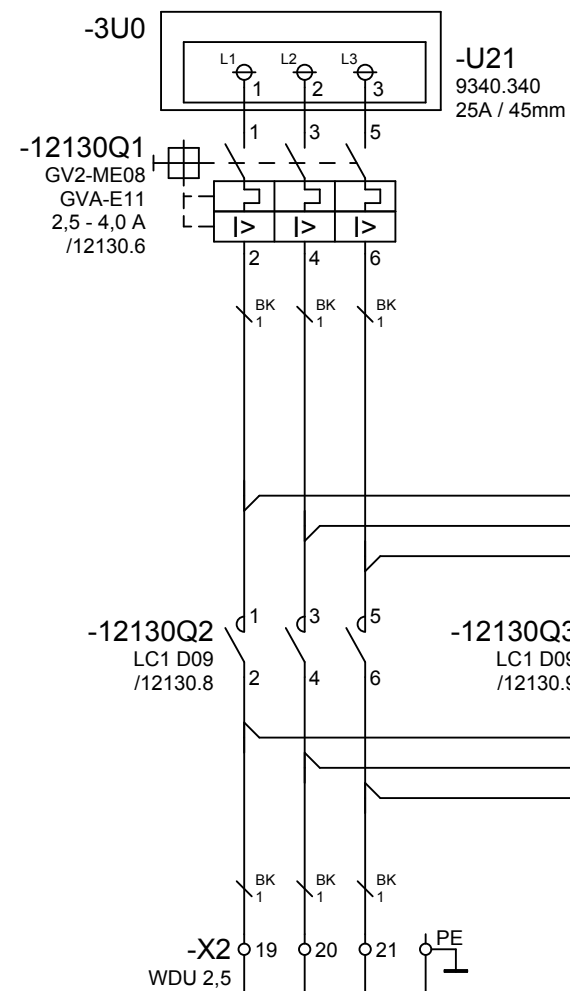


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...

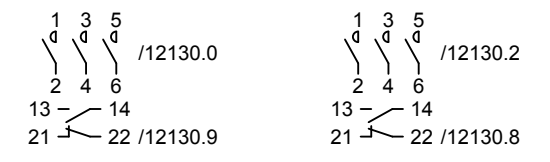
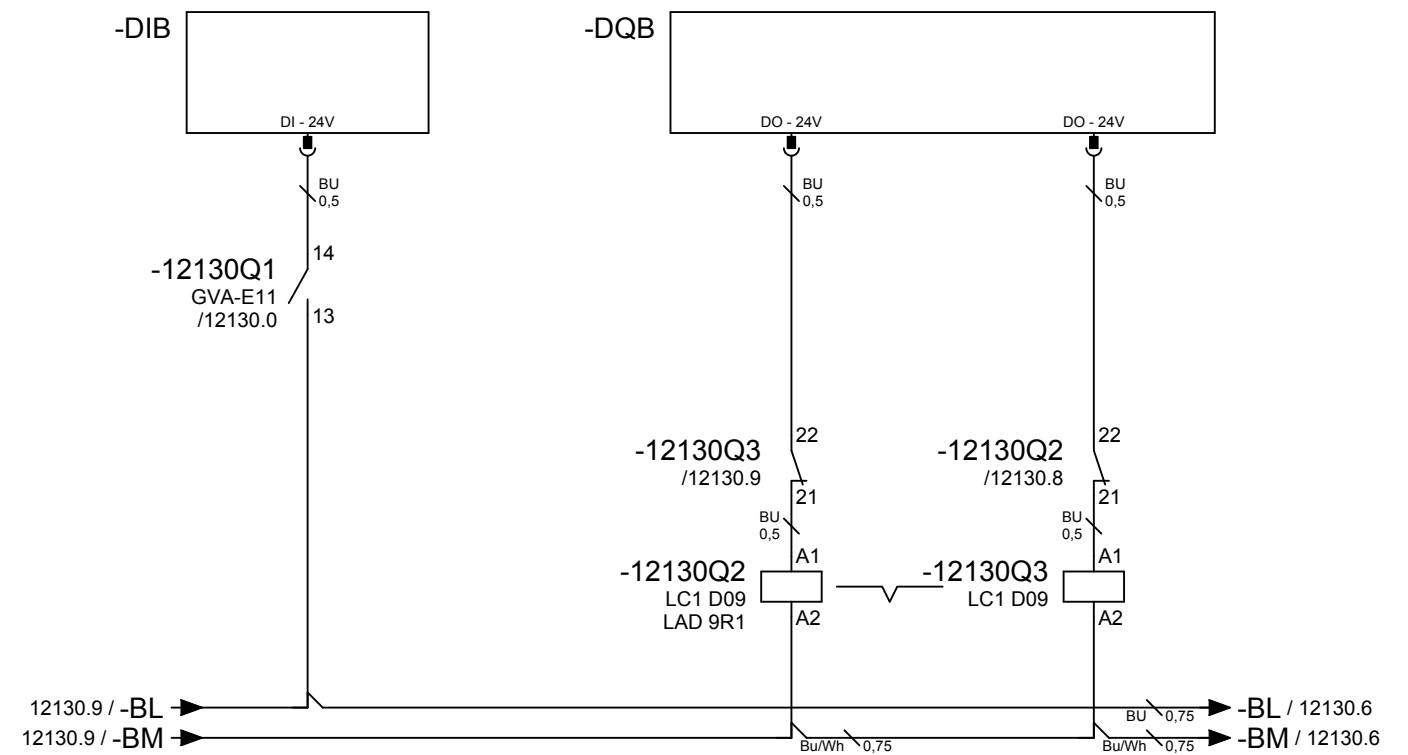


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

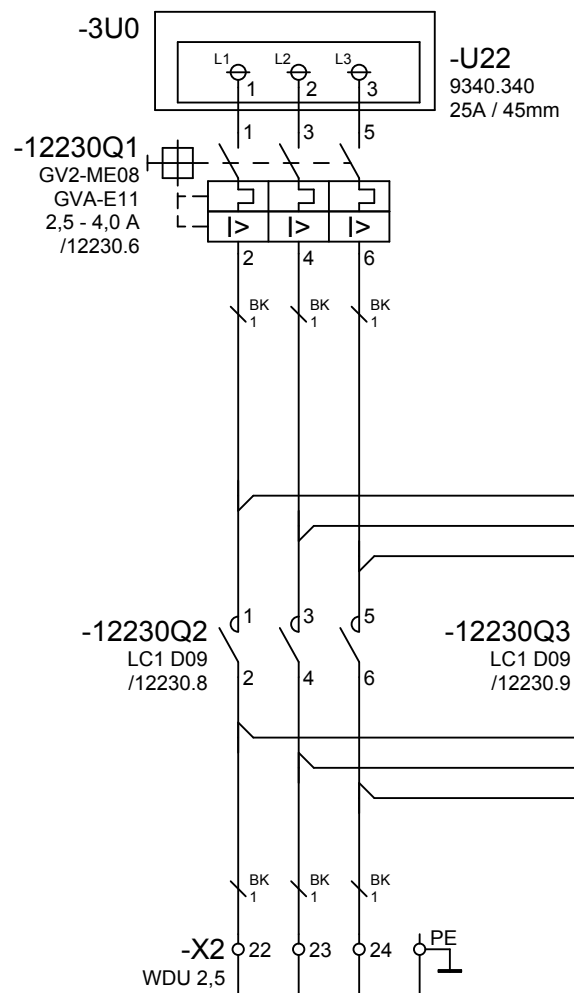


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...

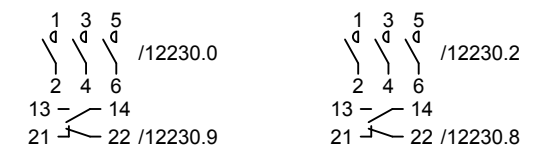
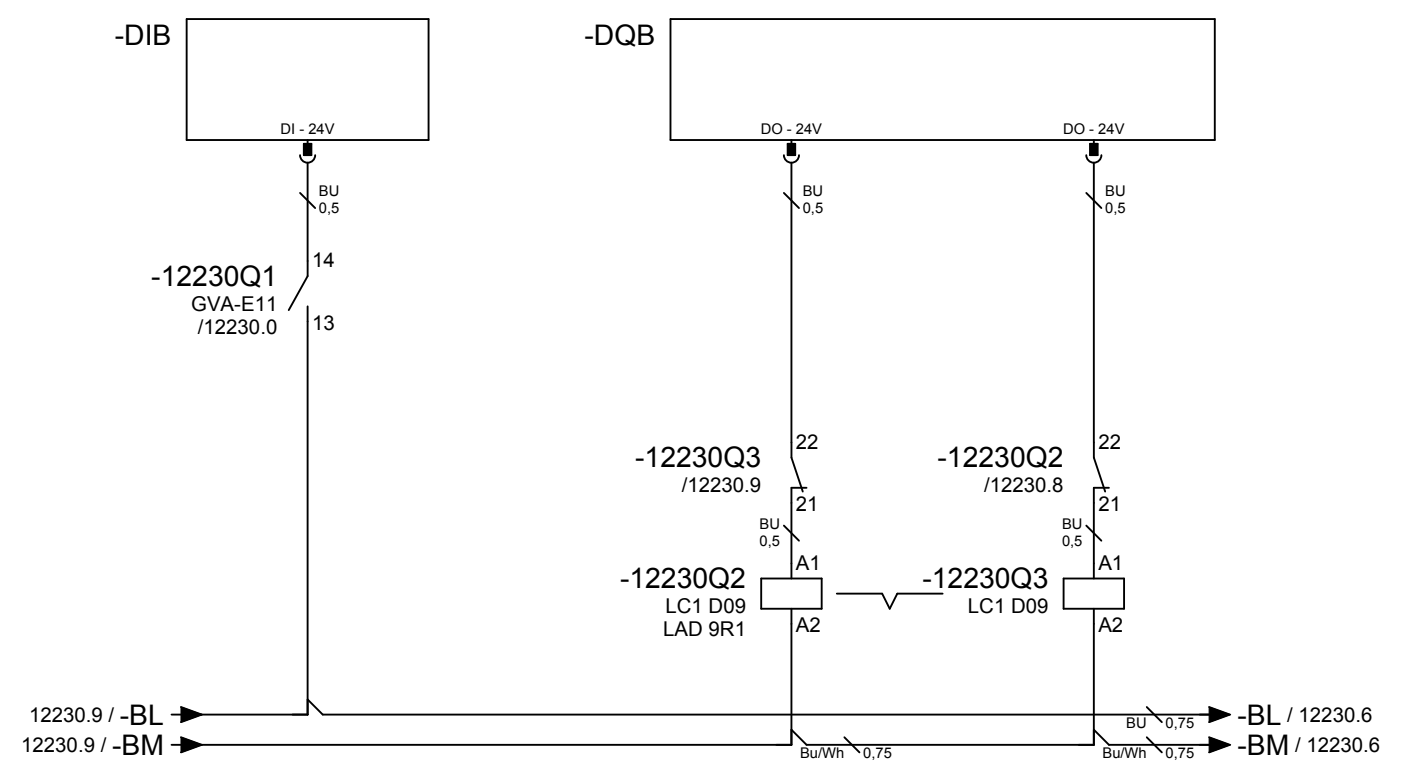


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

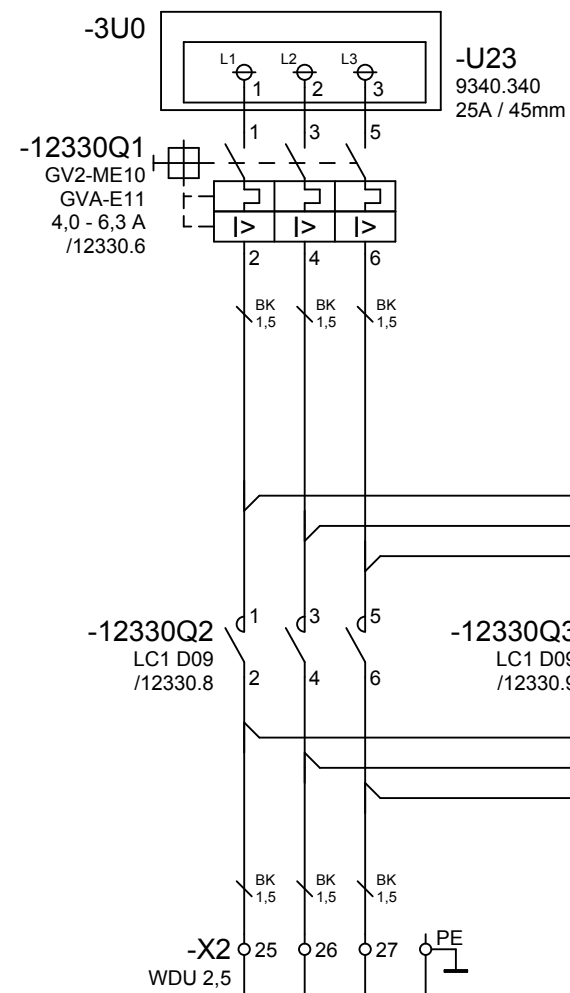


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...

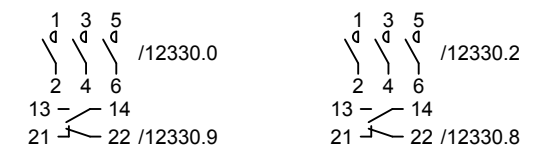
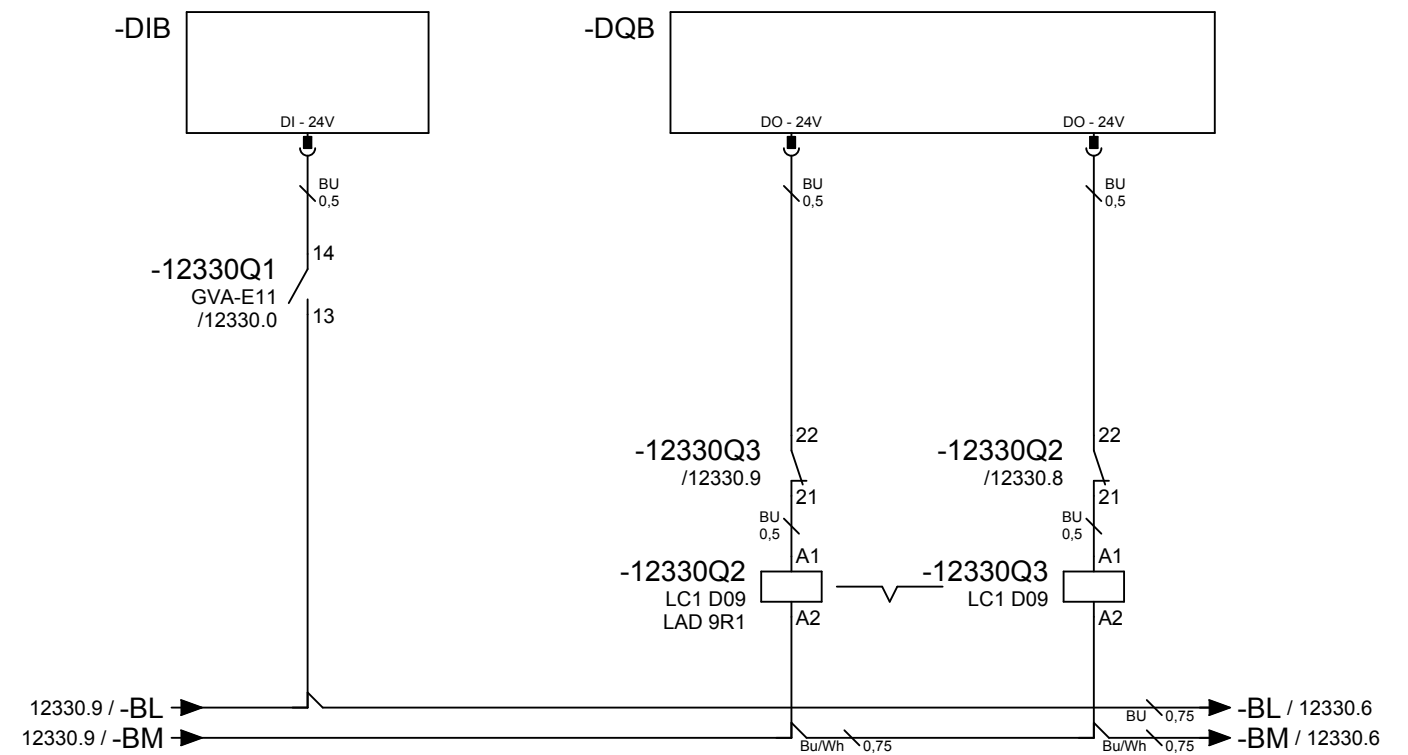


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



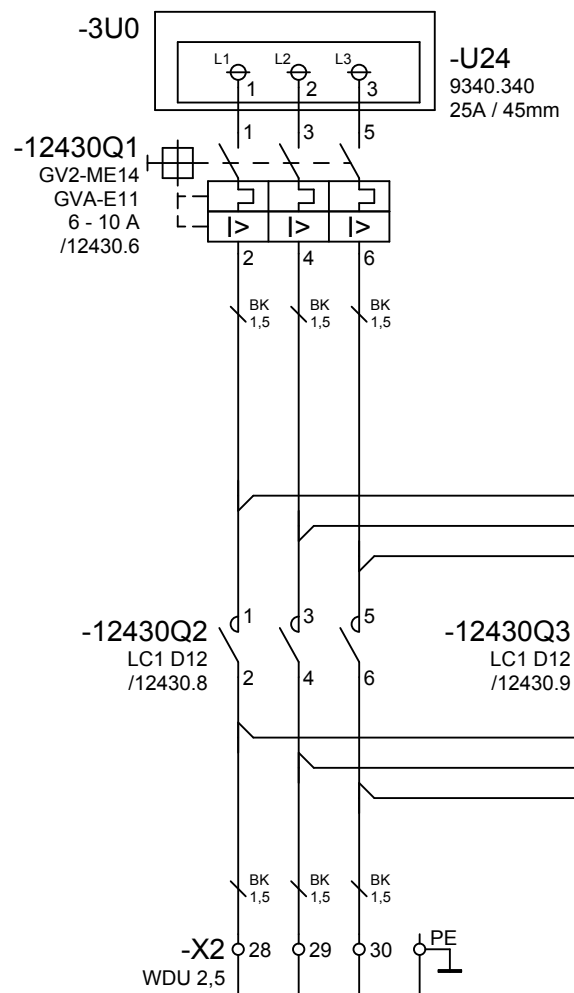
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (5A = 37,0%)
loss U at In	0,17V
loss U at 5xIn	0,85V
heat losses at In	2,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (5A = 27,0%)
loss U at In	1,42V
loss U at 5xIn	7,08V
heat losses at In	21,3W (L=3x25m)
...	...
...	...



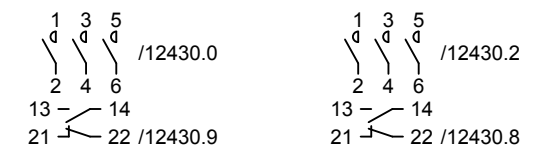
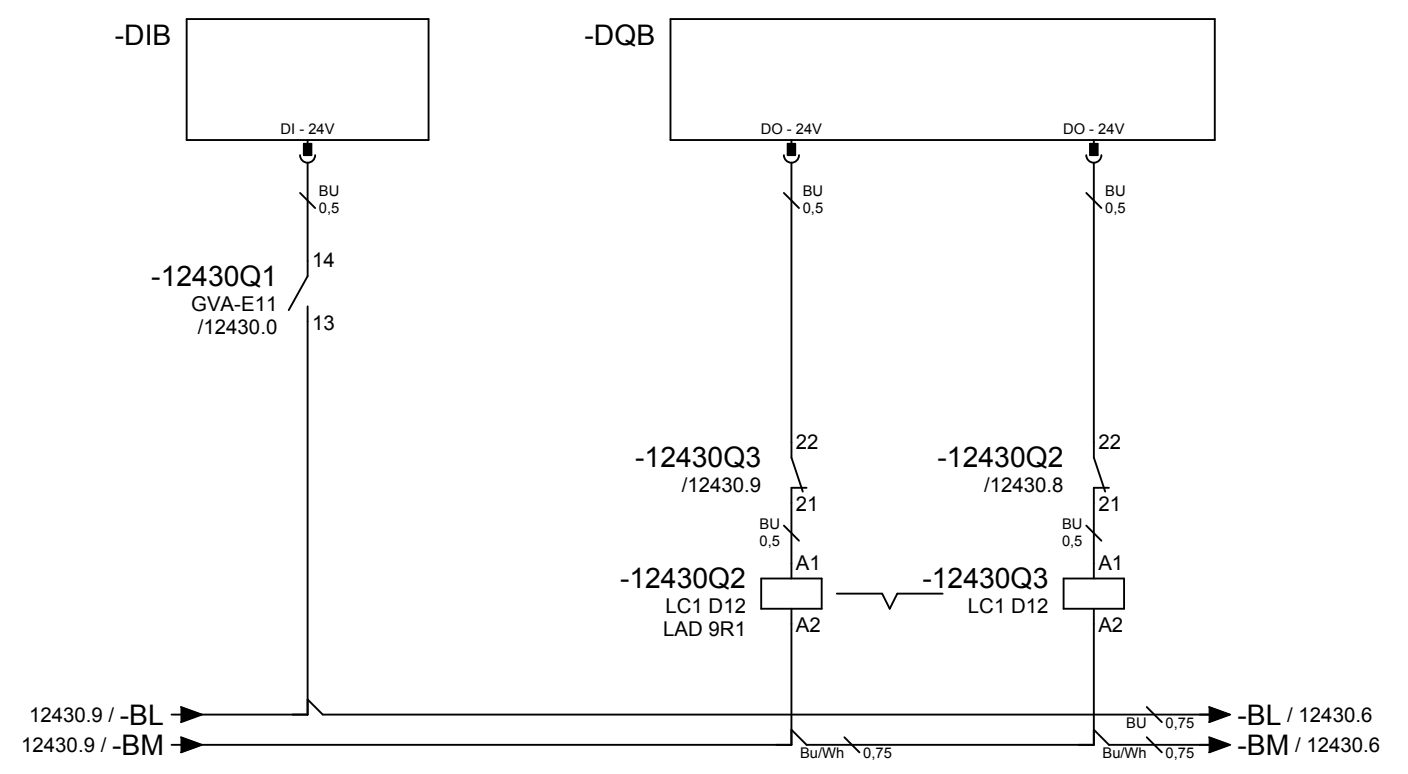
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

	PACK 31. Motors.	2,2kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2ME_C2
	TISKO spol. s r. o.	2018	Last revision of project	+ R_60_Reverz 12330
			Last revision of page	
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	

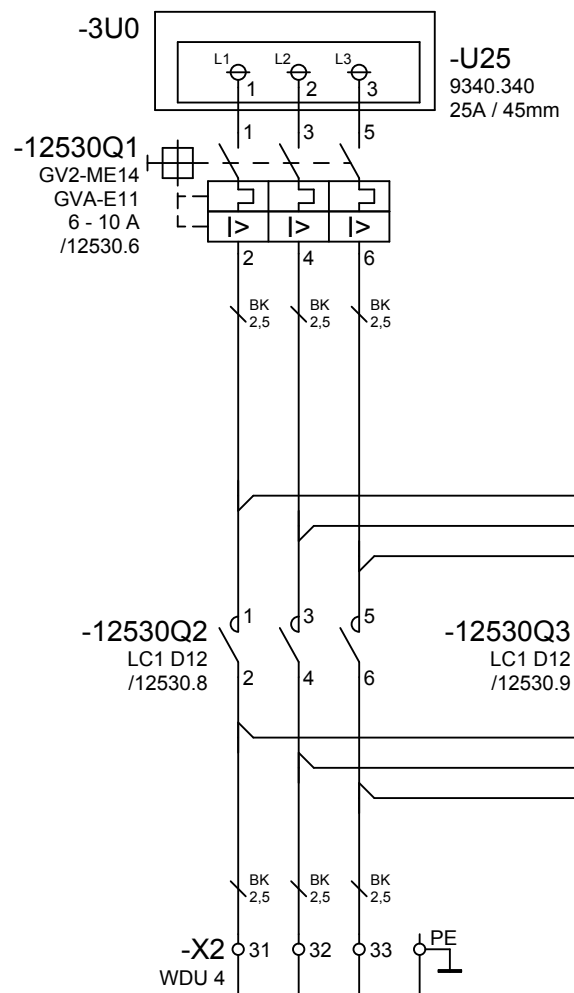


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...

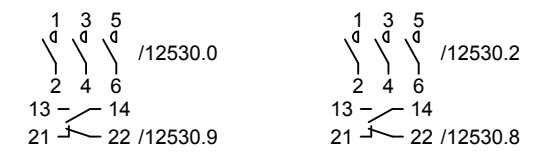
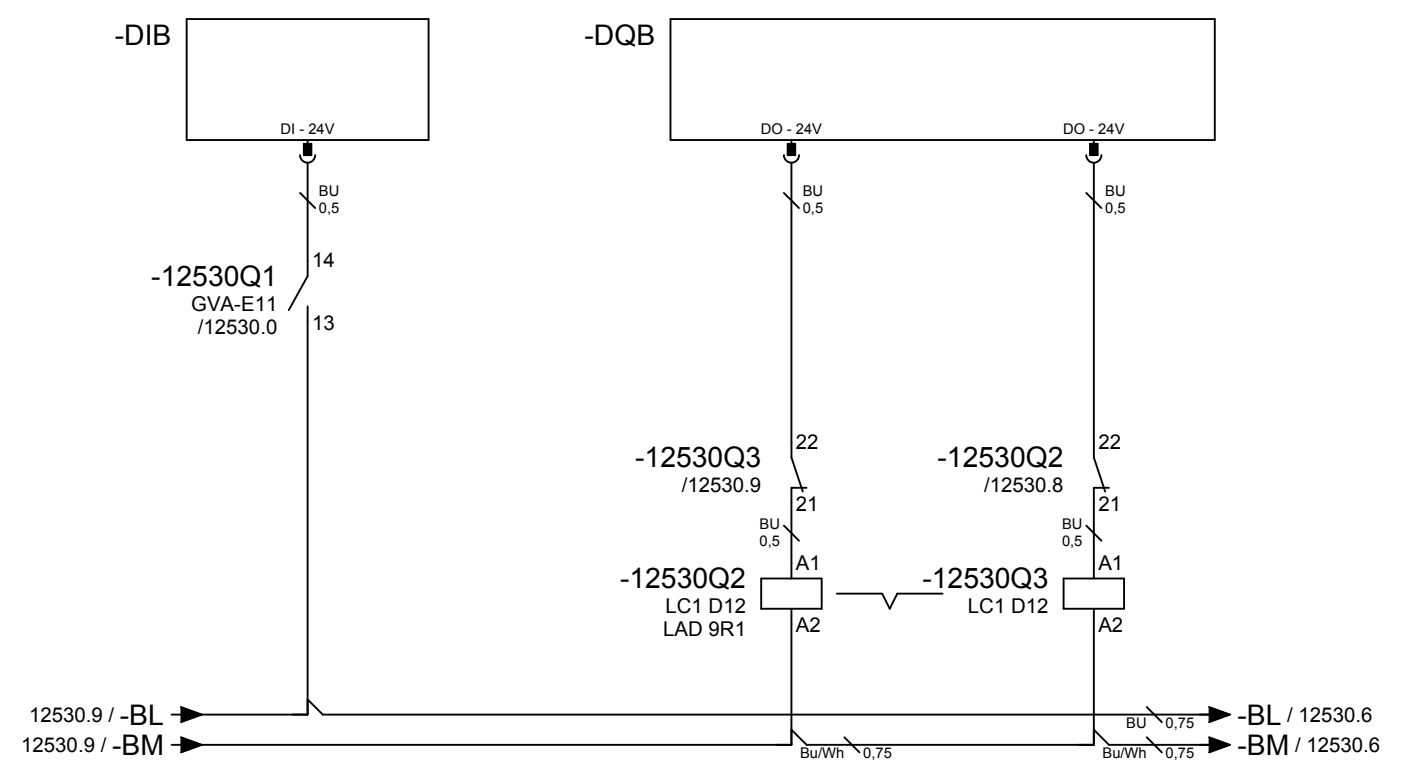


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

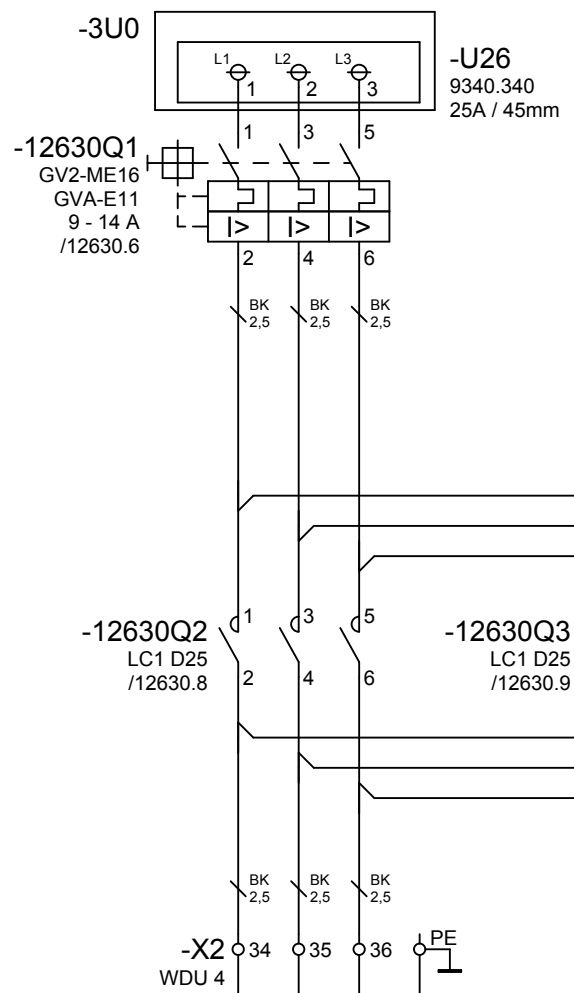


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
...	...

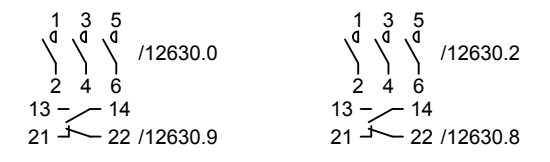
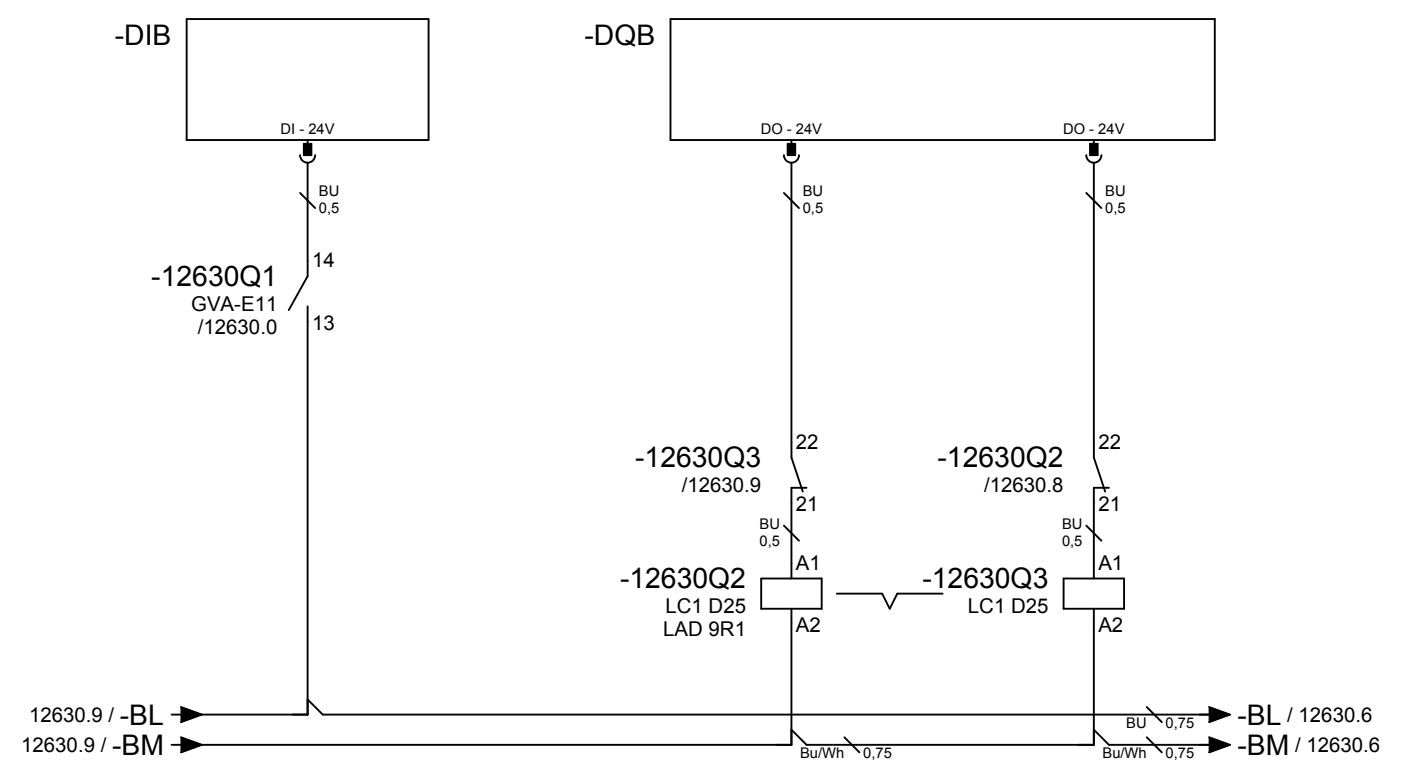


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

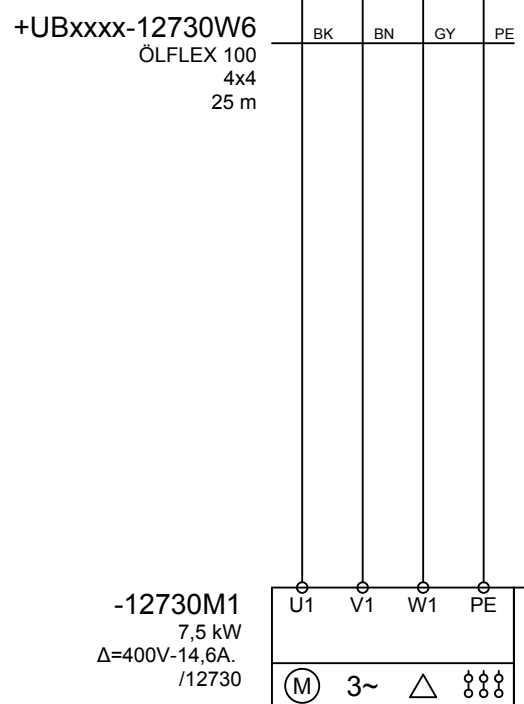
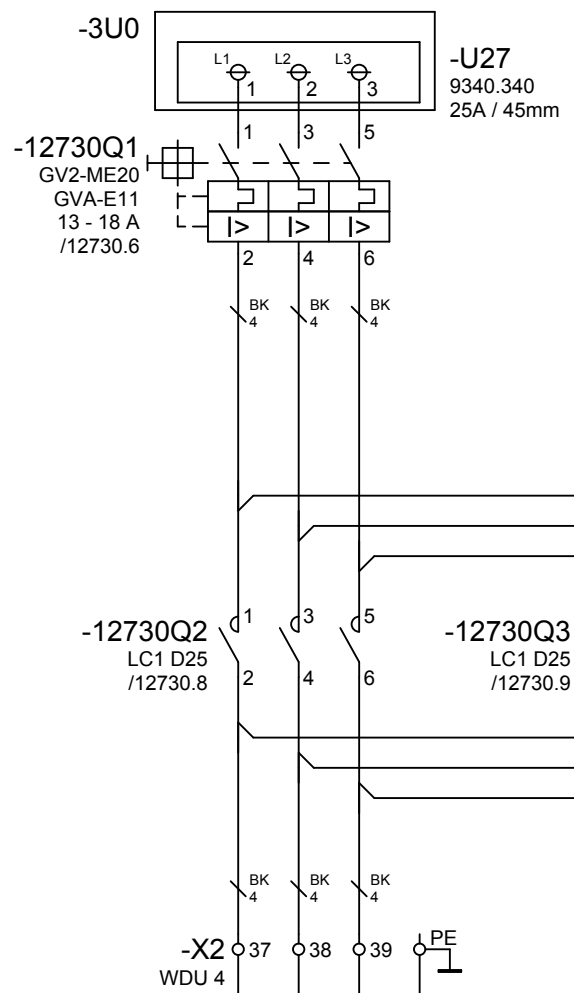


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (11A = 60,1%)
loss U at In	0,22V
loss U at 5xIn	1,12V
heat losses at In	7,41W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	2,5mm ² = cca 25,0A; (11A = 44,0%)
loss U at In	1,87V
loss U at 5xIn	9,35V
heat losses at In	61,7W (L=3x25m)
...	...
...	...

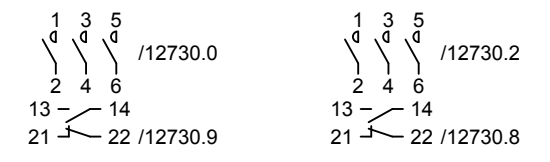
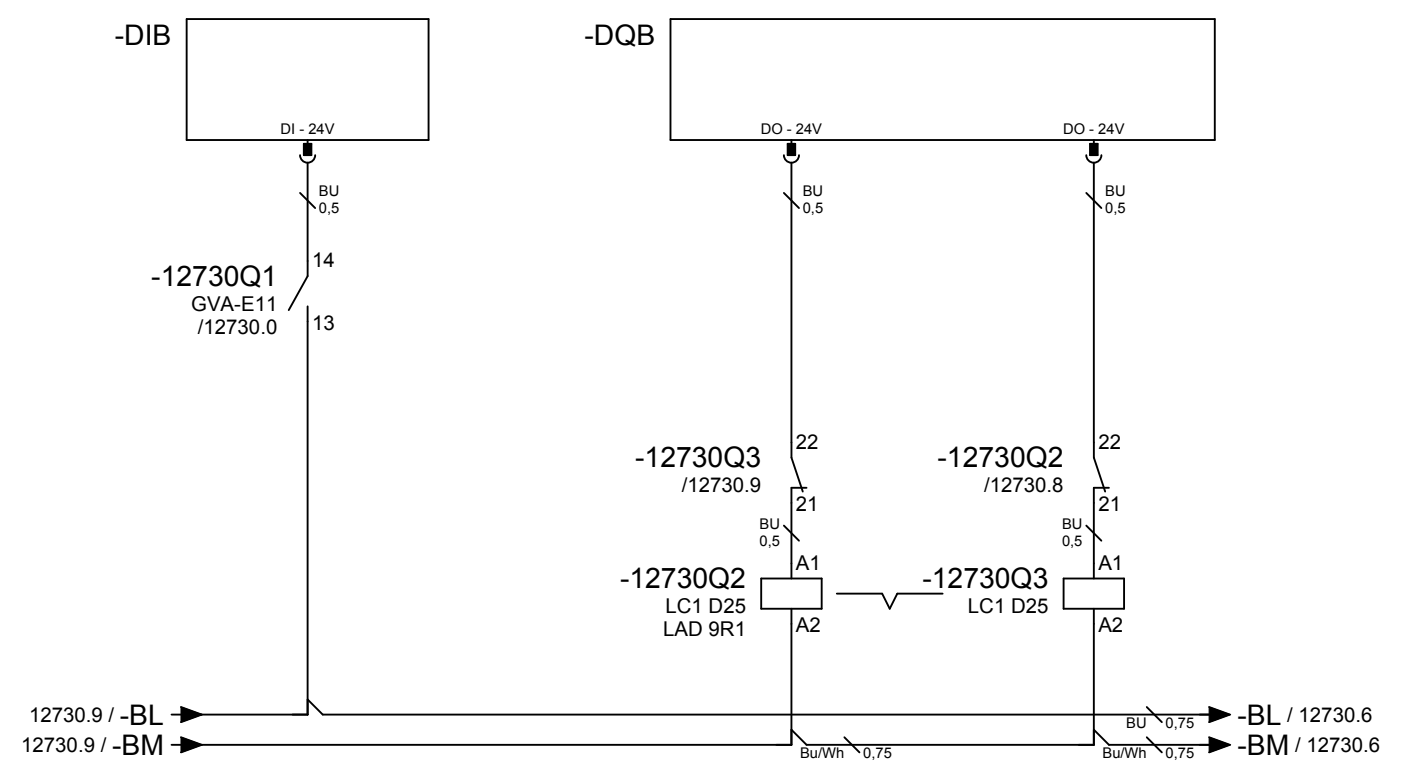


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

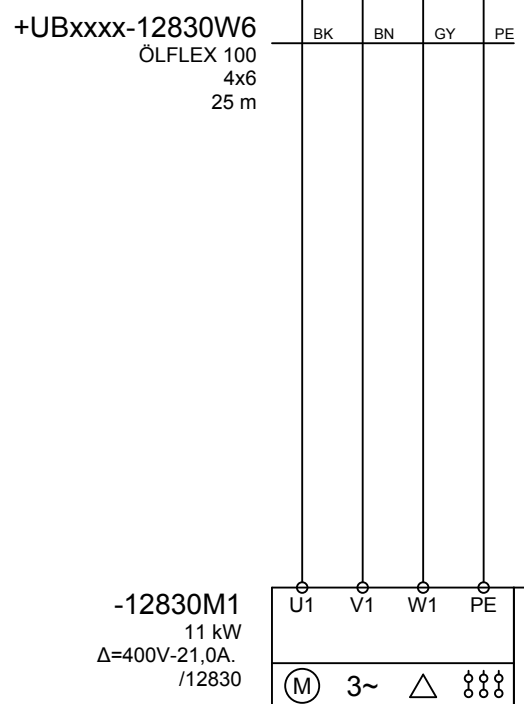
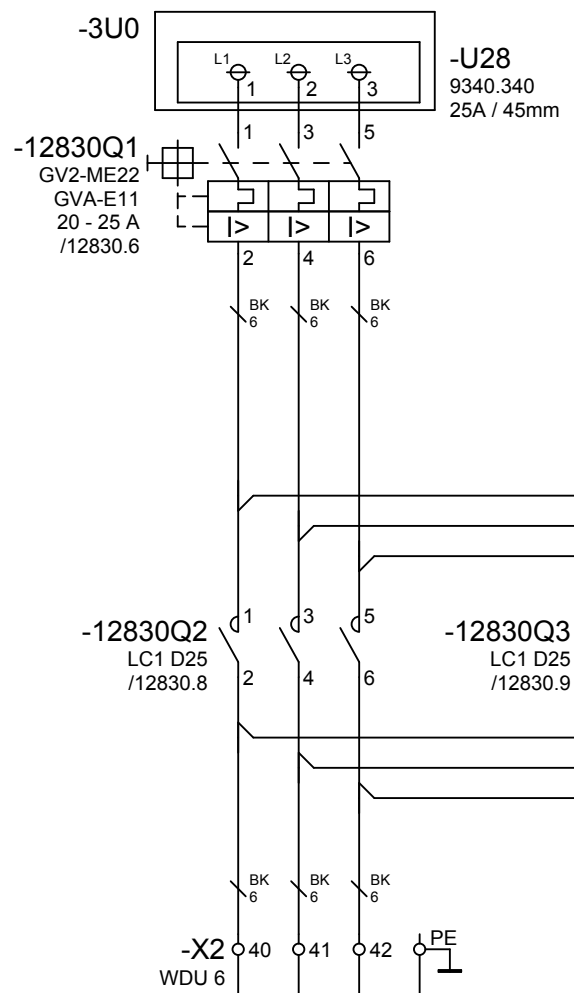


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...

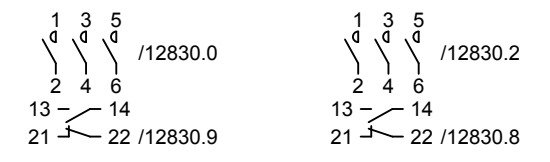
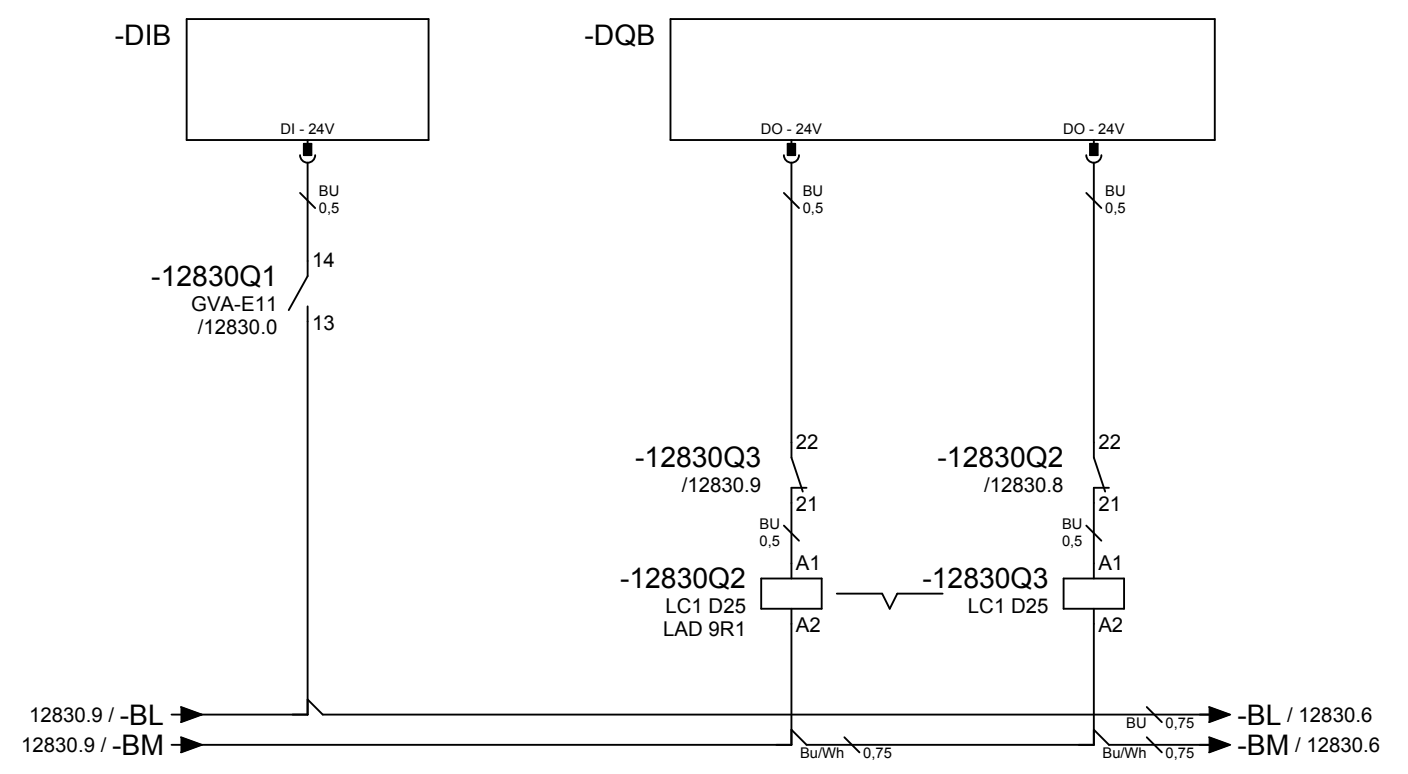


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

0	1	2	3	4	5	6	7	8	9
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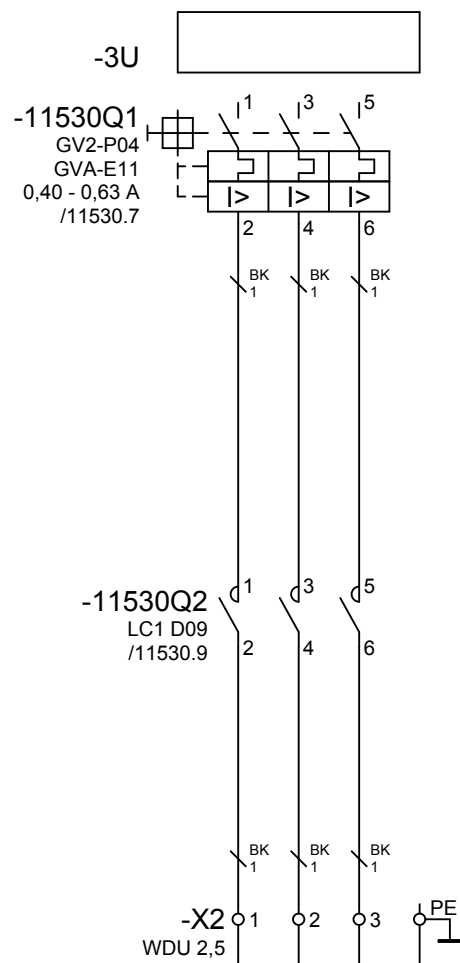
... ...

... ...

... ...

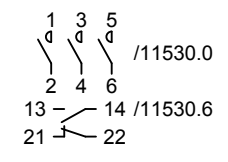
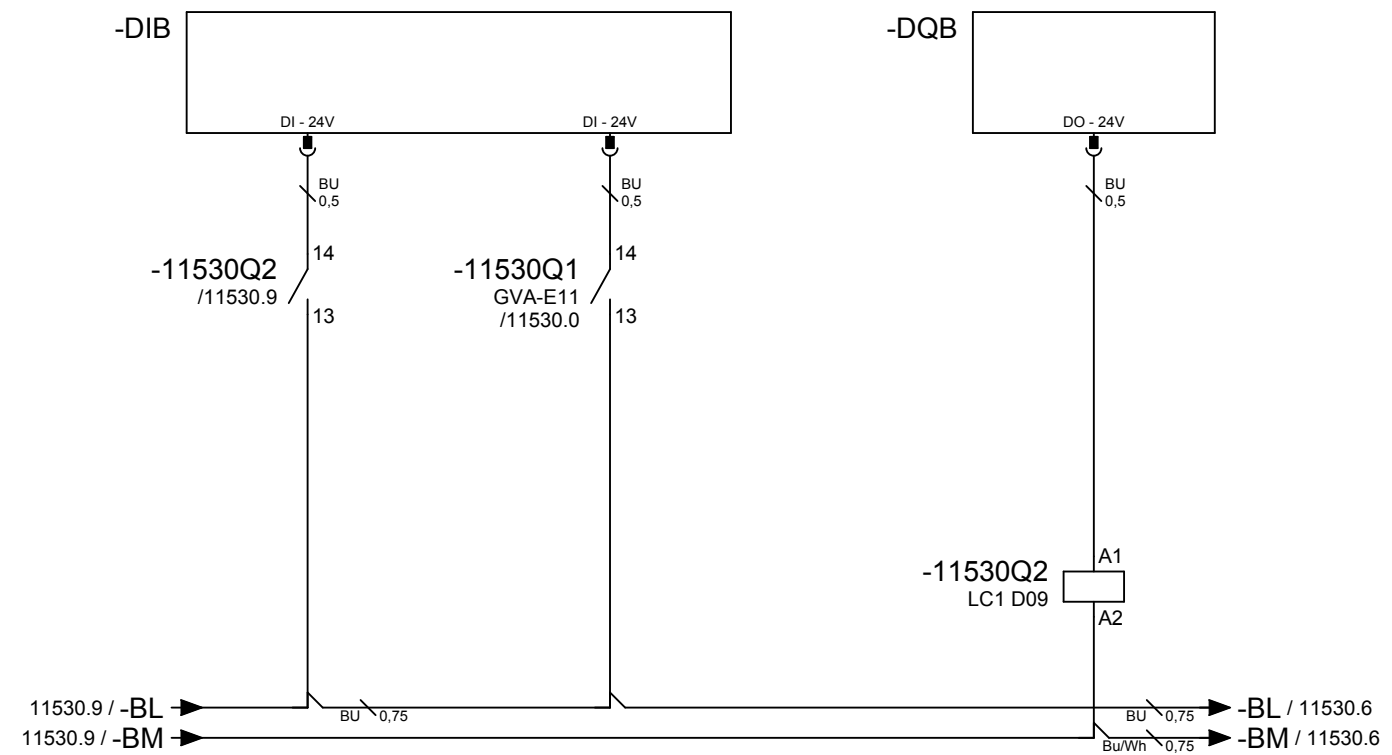
... ...

 <p>TISKO elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>Type 2 coordination. 2018</p>	<p>Creator V00 01.02.2012 Ing. Tisovčík Ivan</p>				<p>= GV2P_C2</p>	
			<p>Last revision of project</p>					
			<p>M = 1 : 1 Grafika</p>					
			<p>21.10.2018 WUP0U34409</p>		<p>+ GV2</p>		<p>11000</p>	



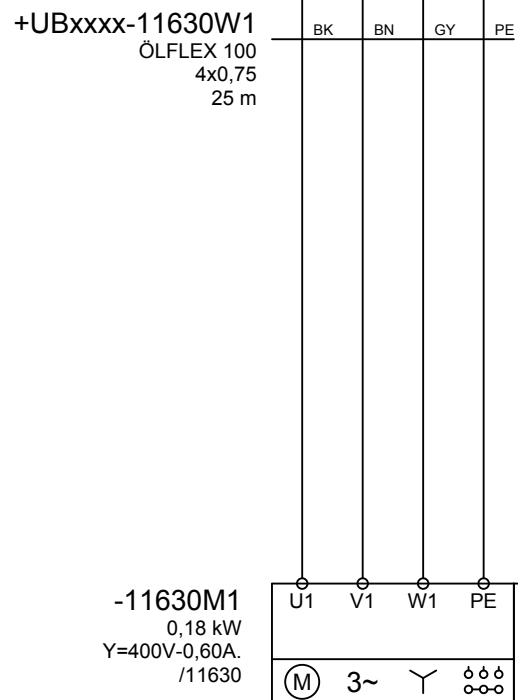
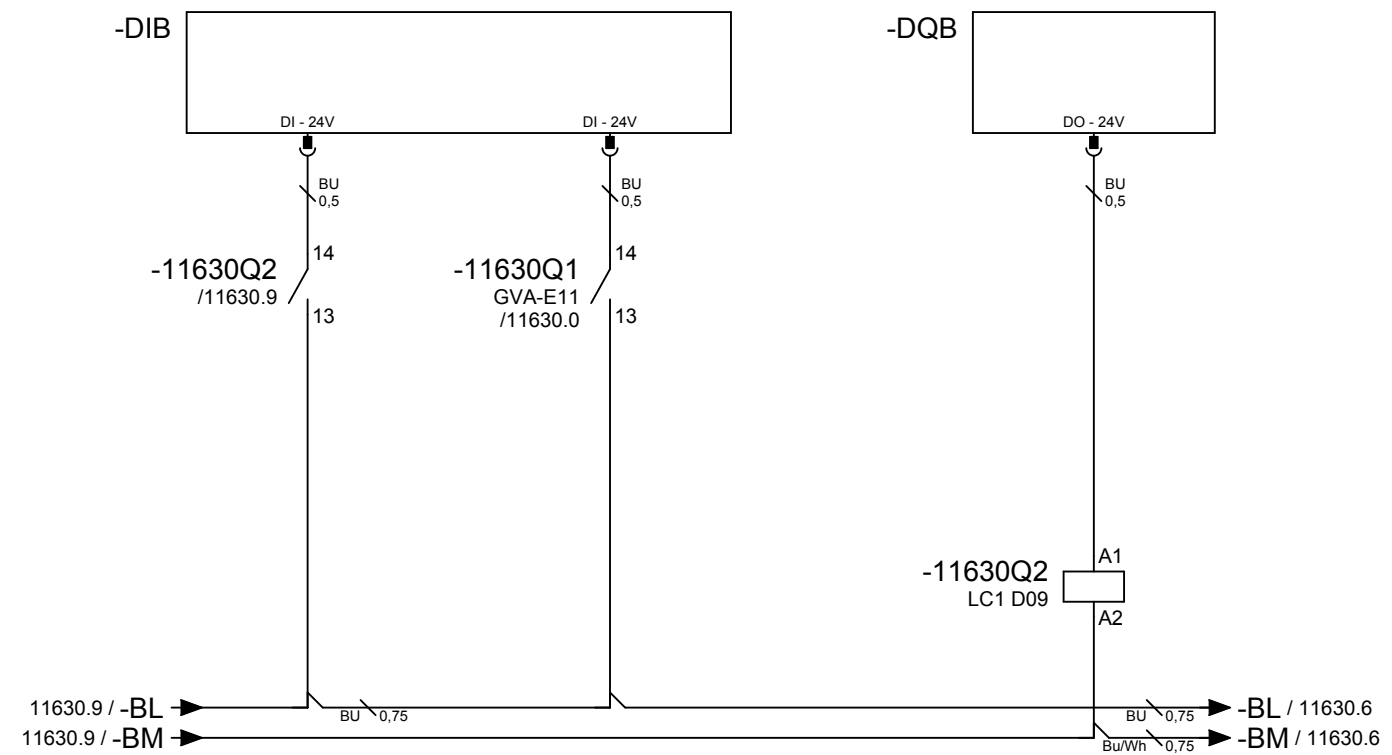
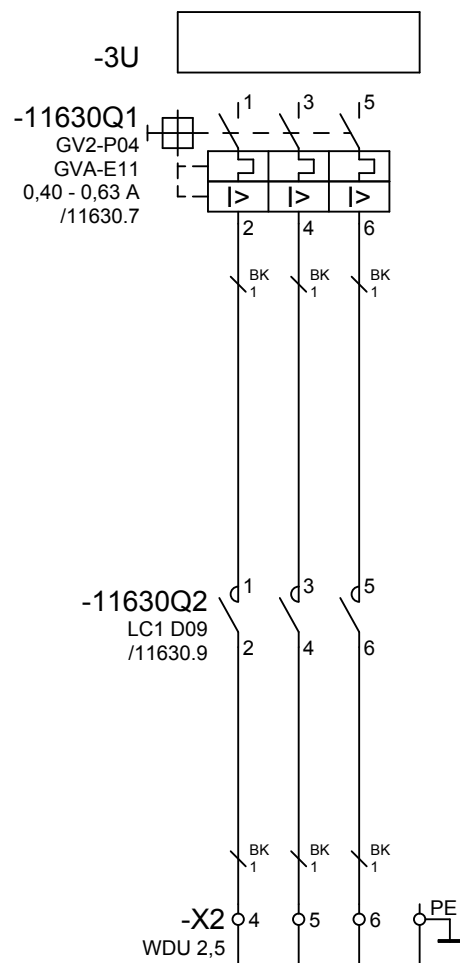
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...



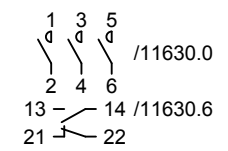
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors.	0,12kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2P_C2
	TISKO spol. s r. o.	2018	Last revision of project	+ GV2 11530
		Last revision of page		
		M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409		



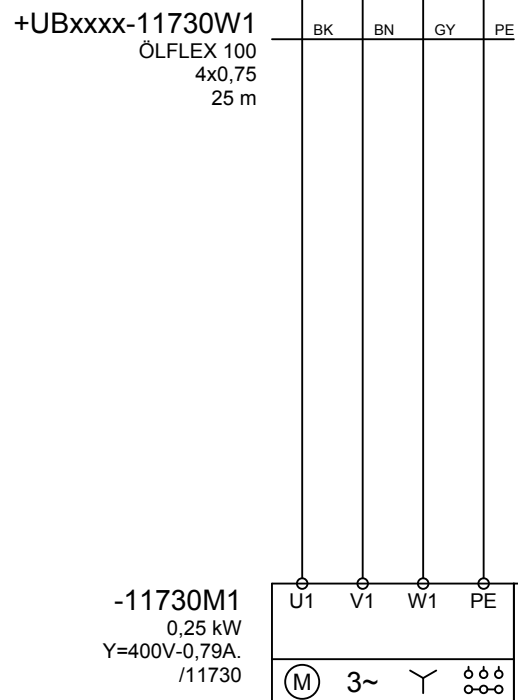
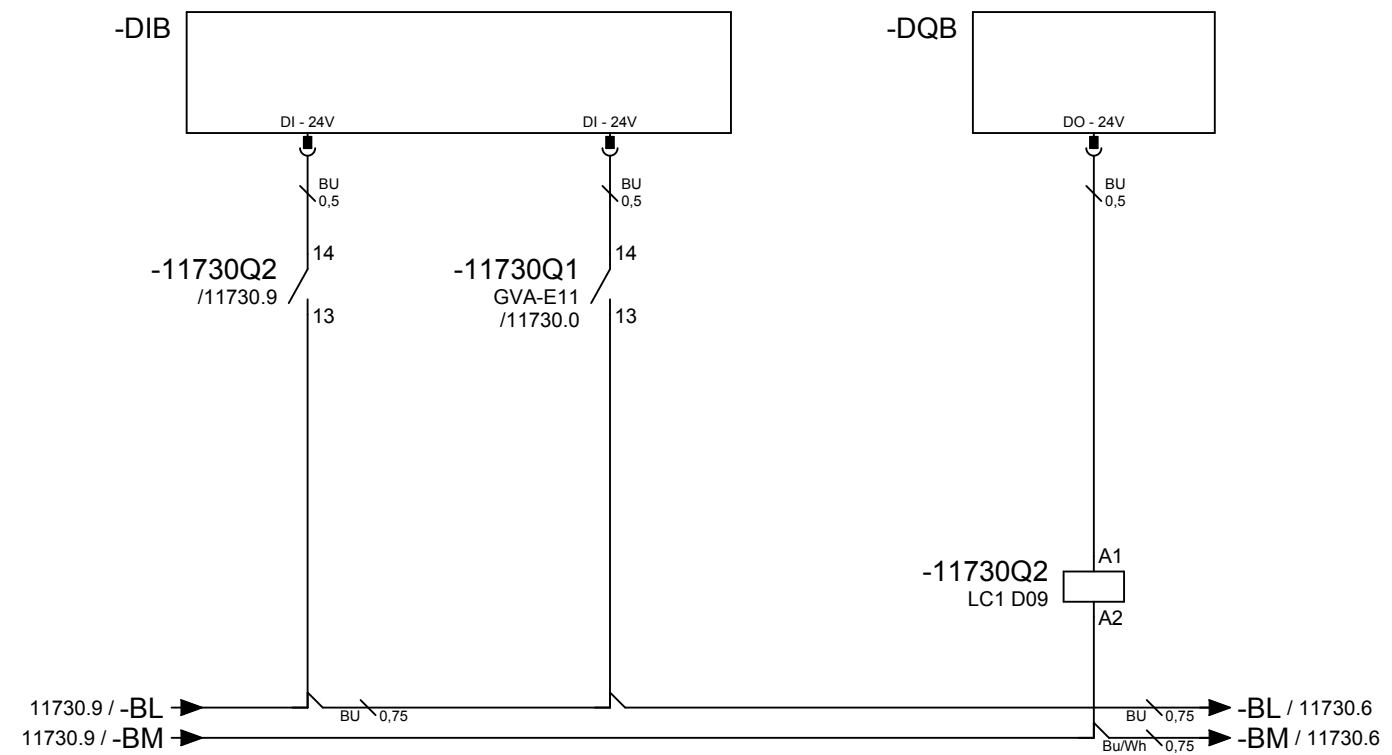
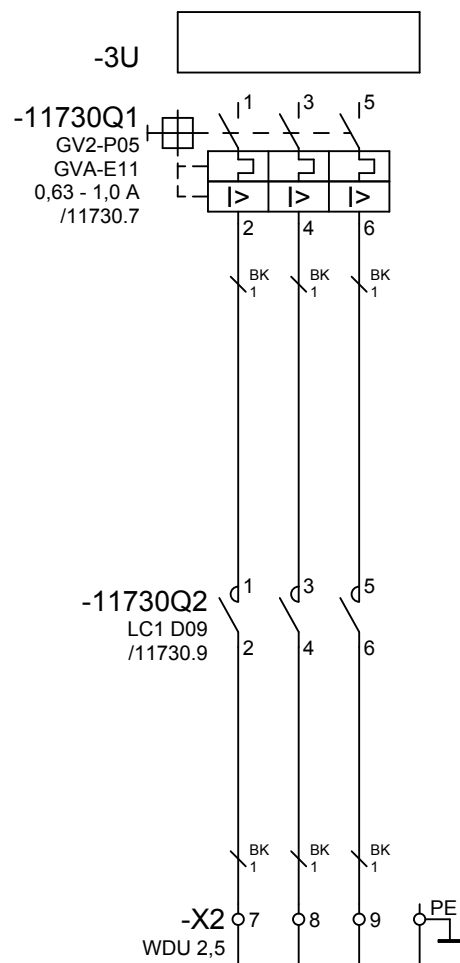
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...



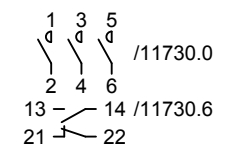
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors. TISKO spol. s r. o.	0,18kW. 2018	Creator V00 01.02.2012 Ing. Tisovčík Ivan Last revision of project Last revision of page M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	= GV2P_C2 + GV2	11630
	elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk				

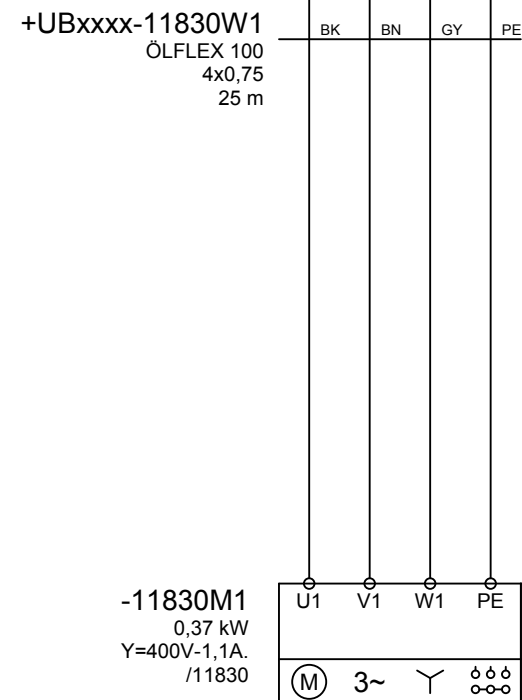
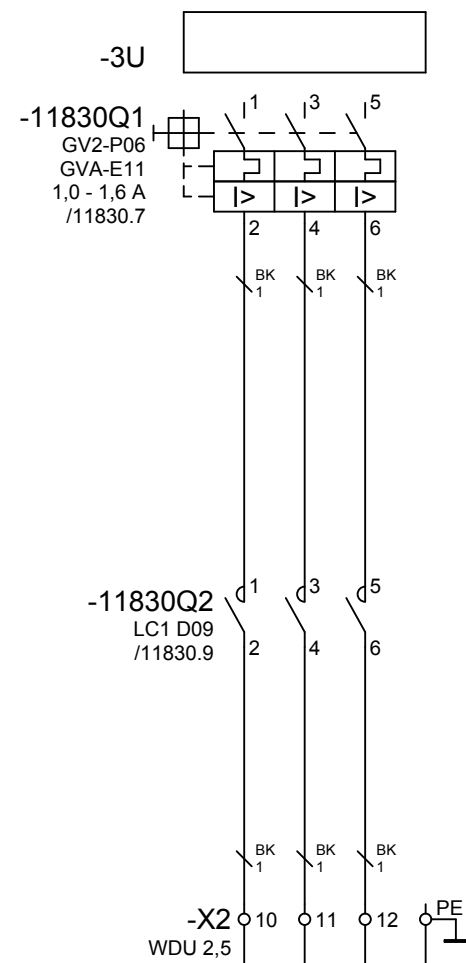


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

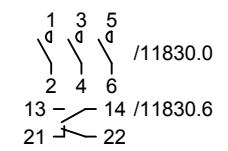
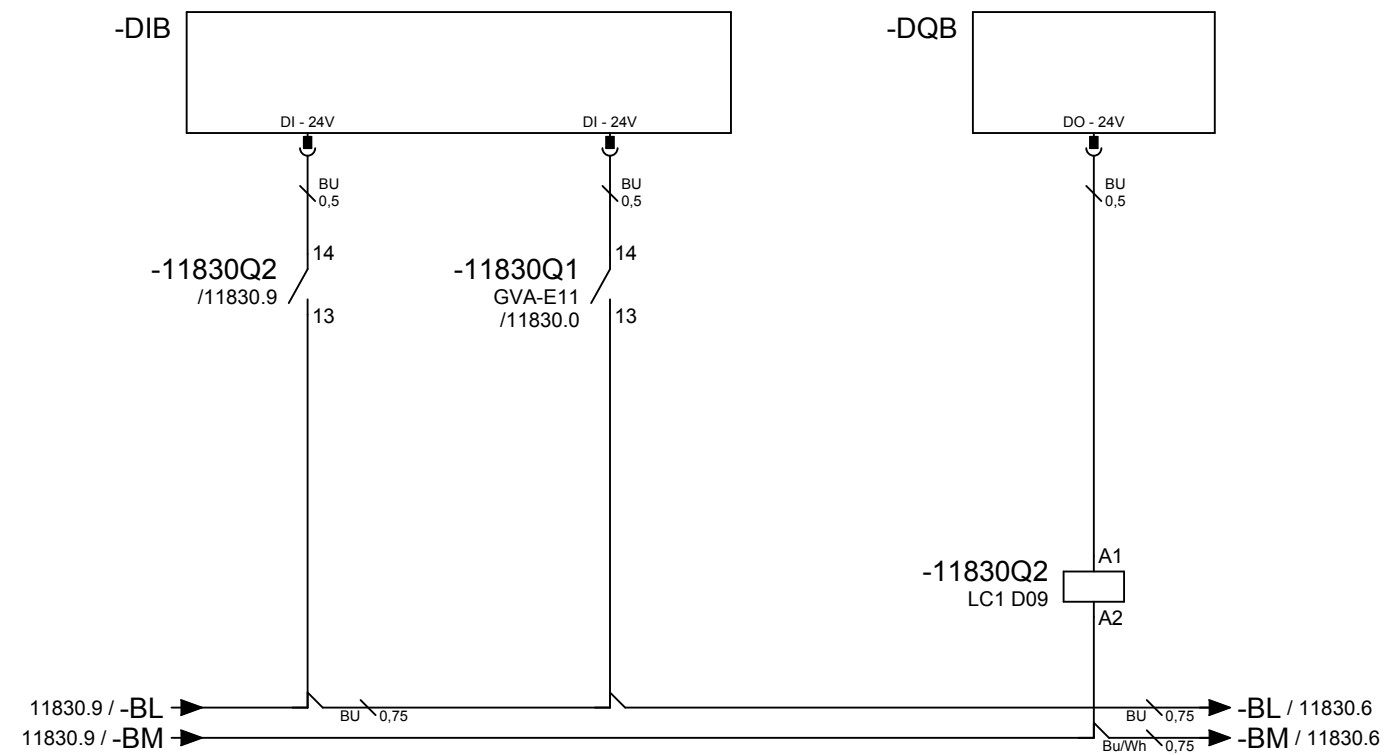


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

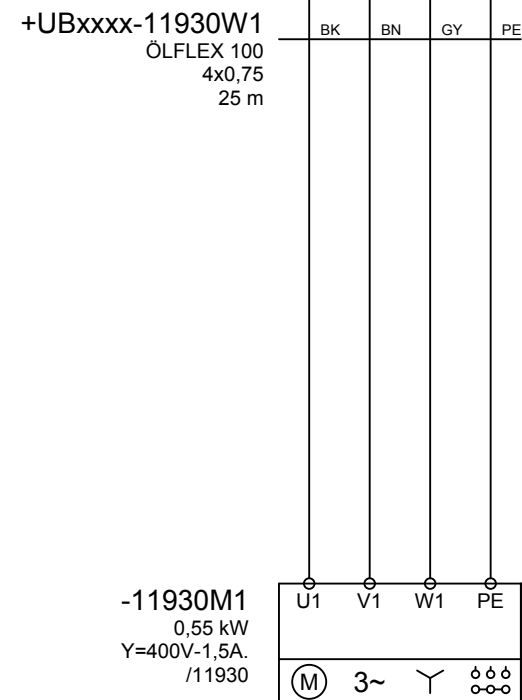
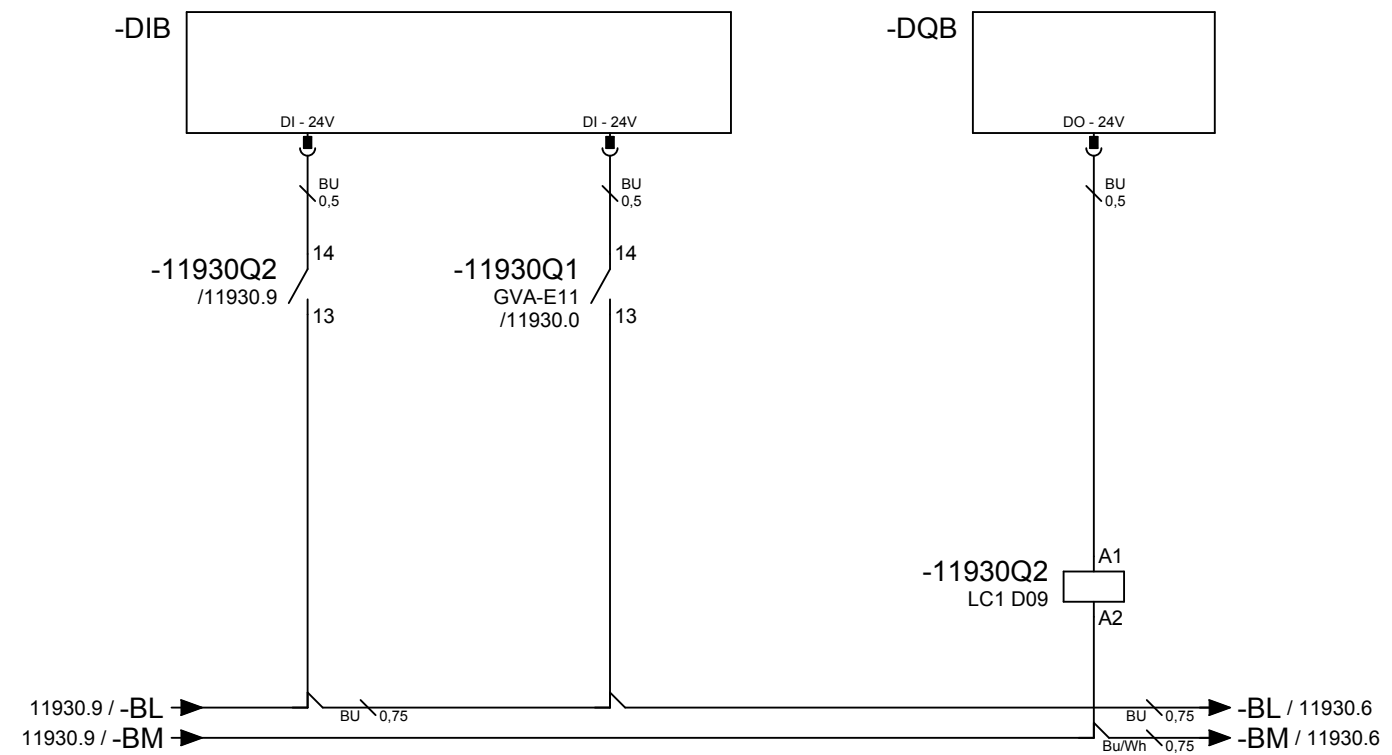
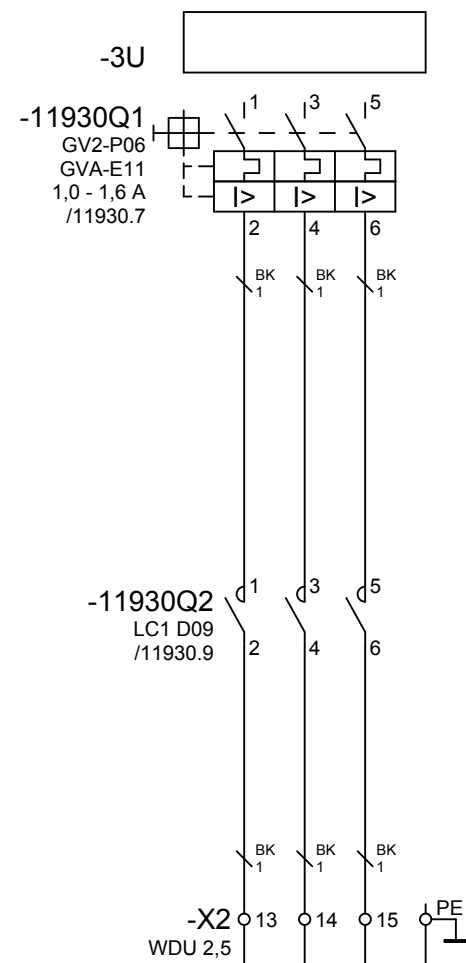
Enclosure B1
 load 1mm² = cca 10,4A; (1,1A = 10,6%)
 loss U at In 0,06V
 loss U at 5xIn 0,28V
 heat losses at In 0,19W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (1,1A = 12,2%)
 loss U at In 0,62V
 loss U at 5xIn 3,12V
 heat losses at In 2,1W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

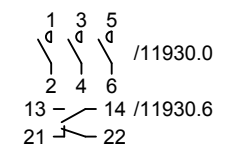


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)

 short circuit resistance 130kA at 415V

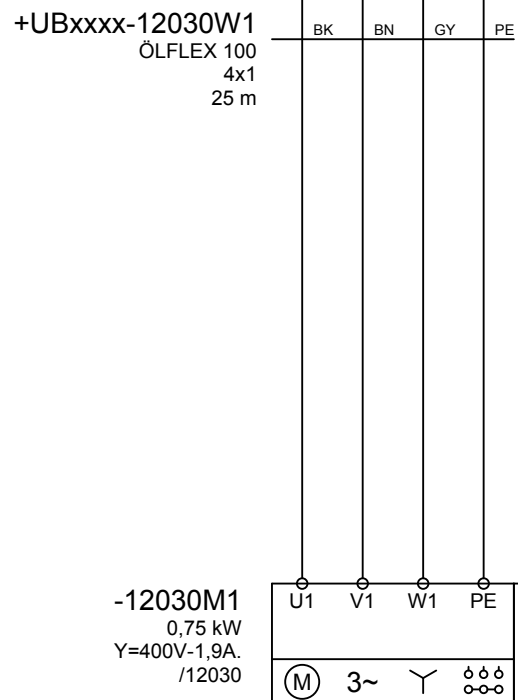
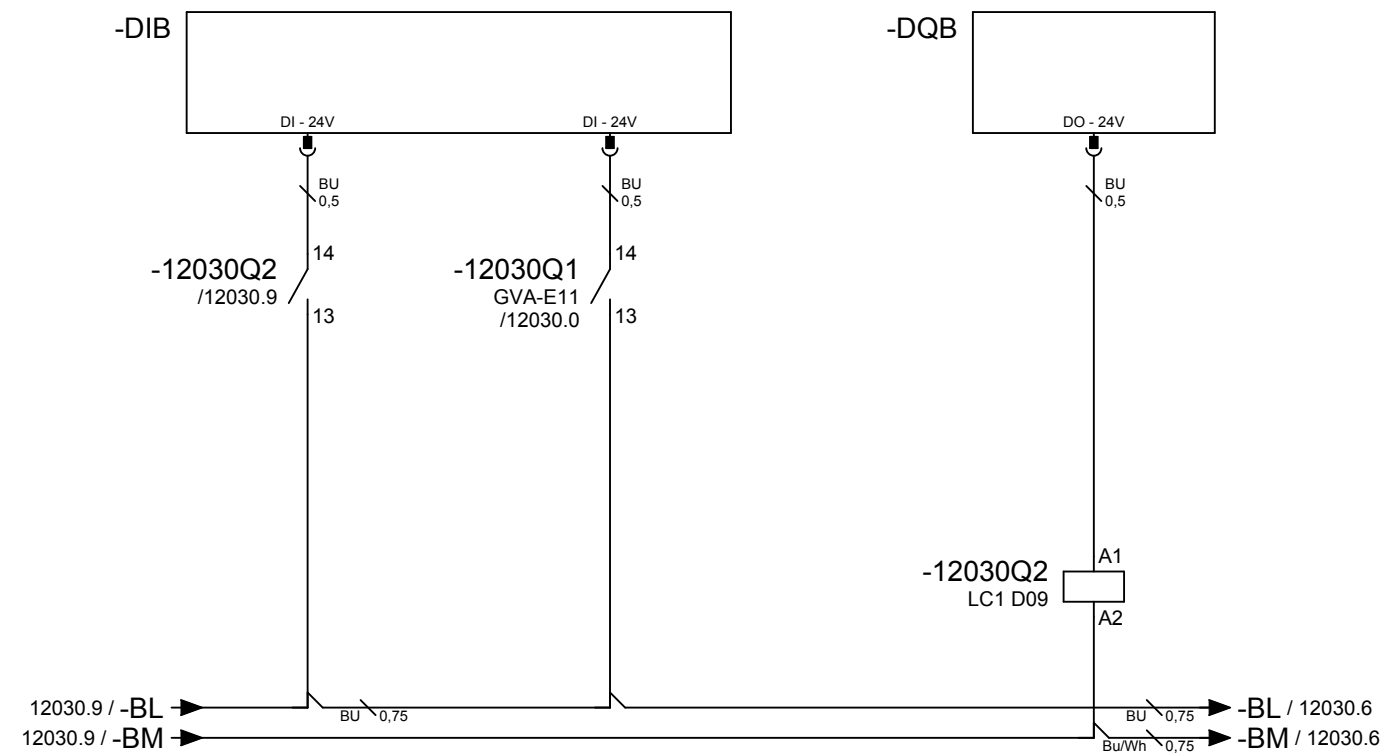
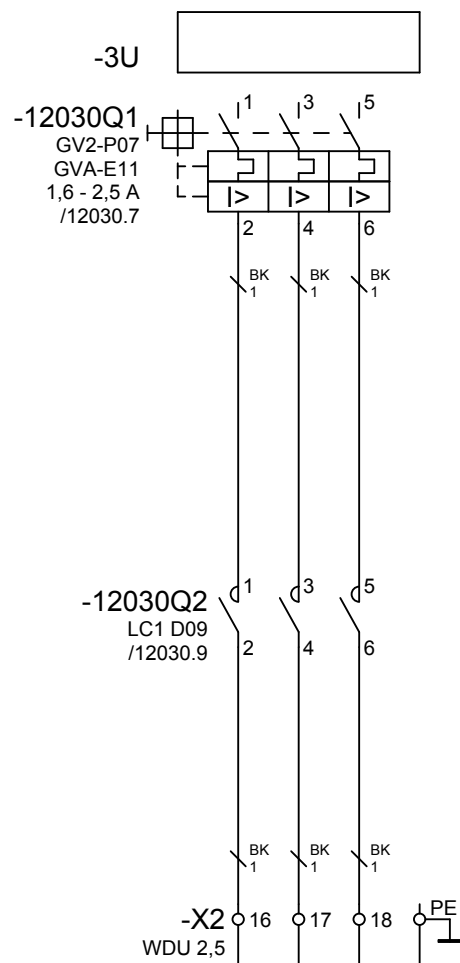
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)



Contactor.
1=Switched ON.

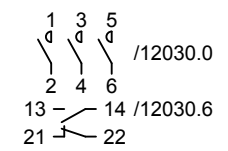
Circuit
breaker. 0=Failure.

Motor.
Contactor.

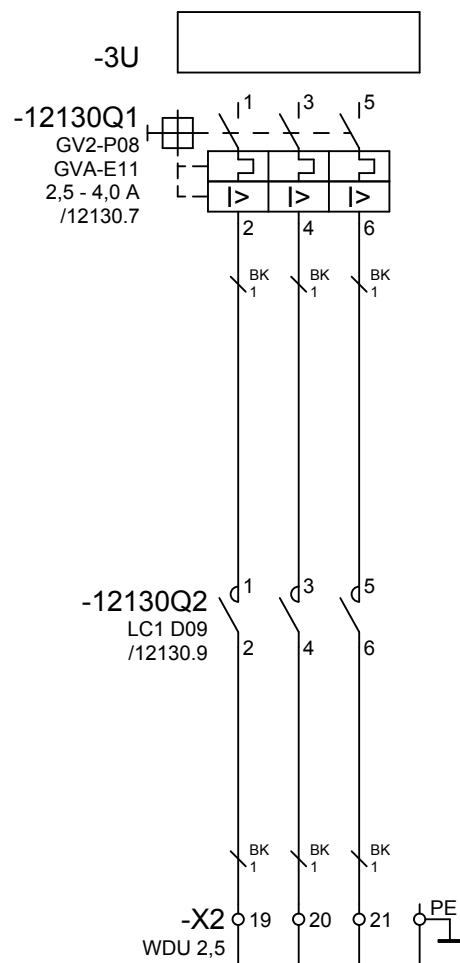


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

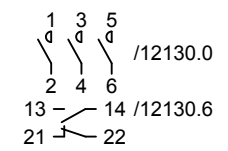
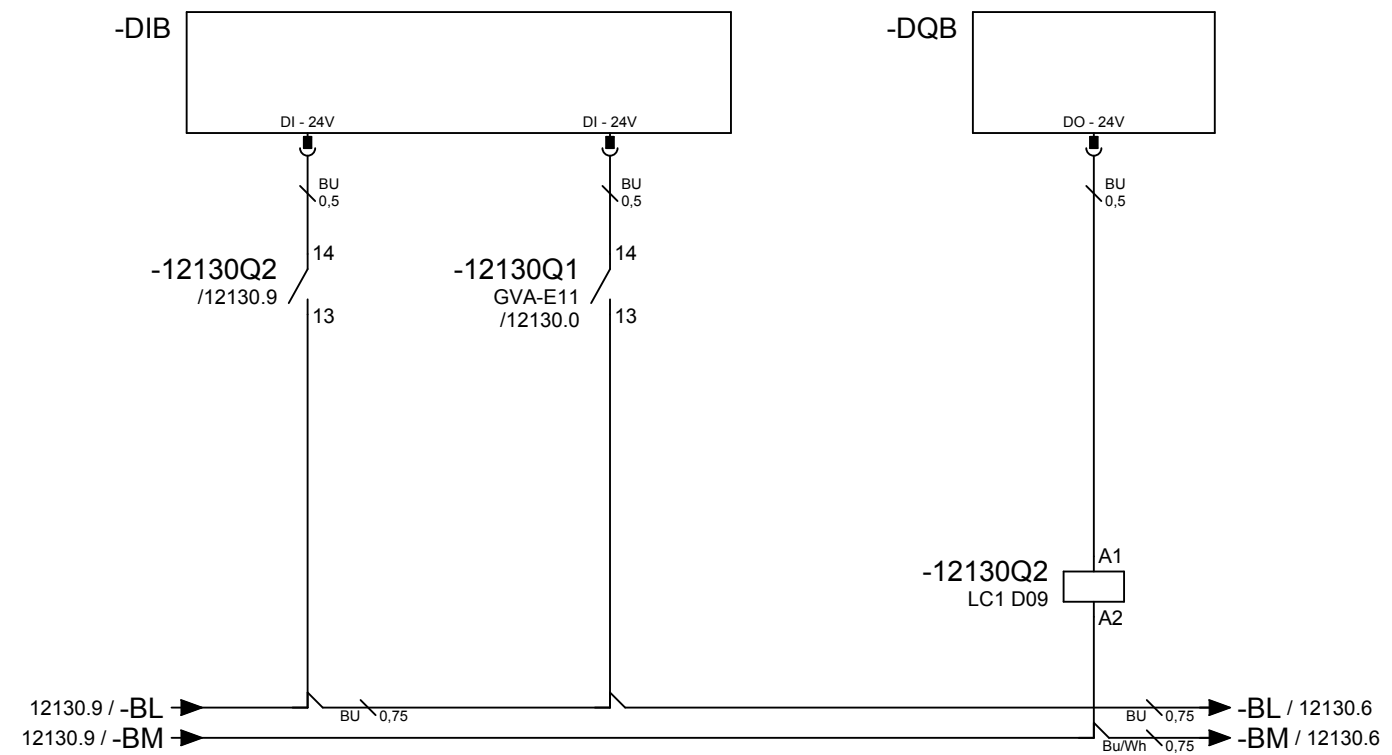
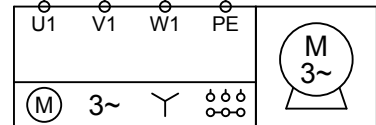


+UBxxx-12130W1
ÖLFLEX 100
4x1
25 m

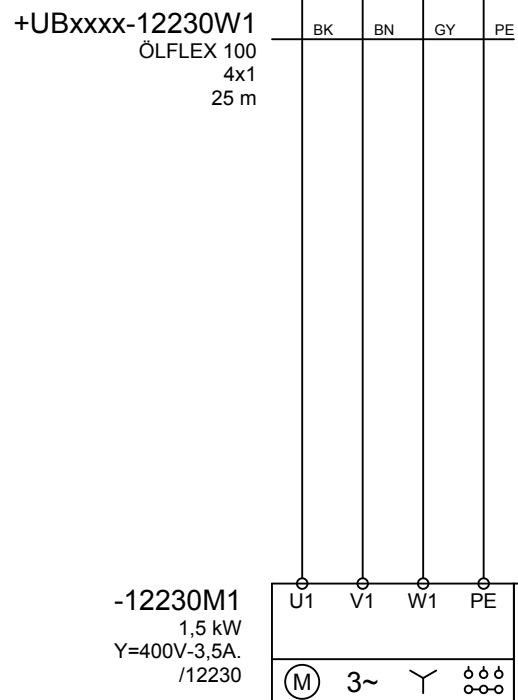
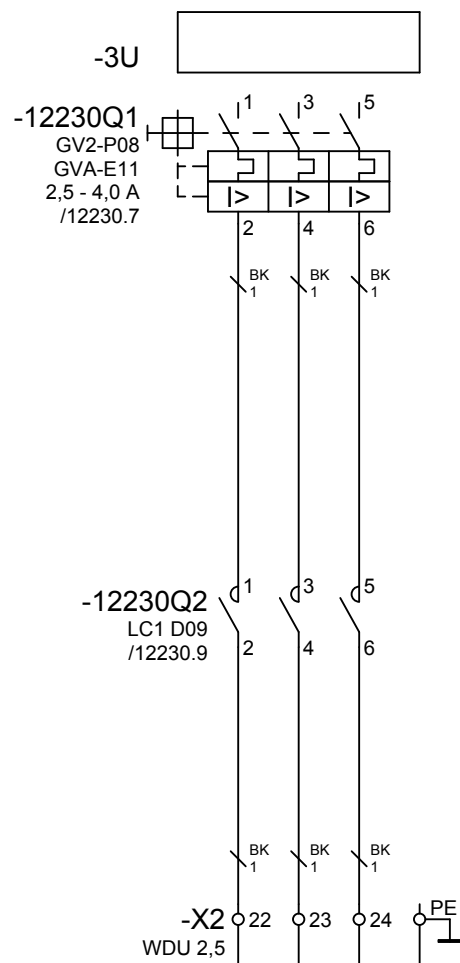
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (2,7A = 26,0%)
loss U at In 0,14V
loss U at 5xIn 0,69V
heat losses at In 1,12W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1mm² = cca 13,0A; (2,7A = 20,8%)
loss U at In 1,15V
loss U at 5xIn 5,74V
heat losses at In 9,3W (L=3x25m)
... ..
... ..

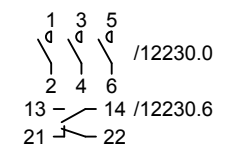
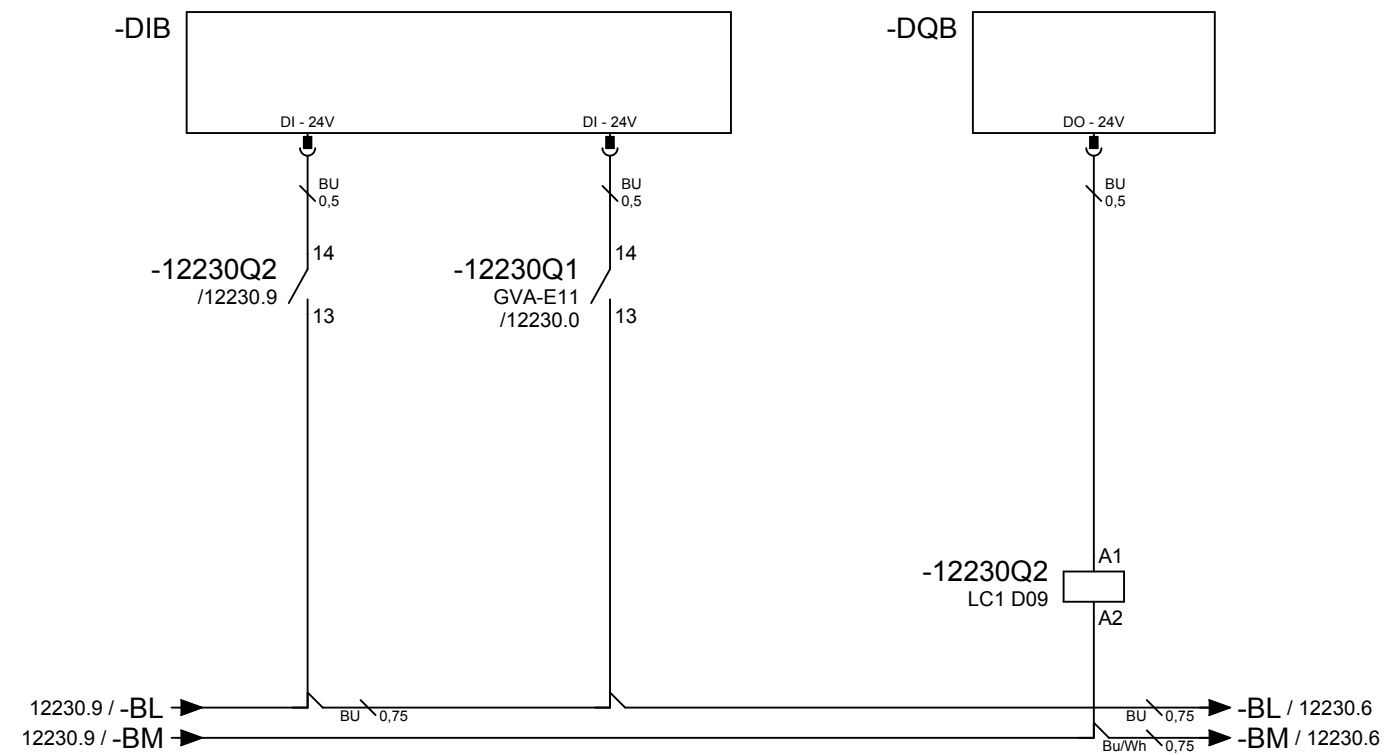


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

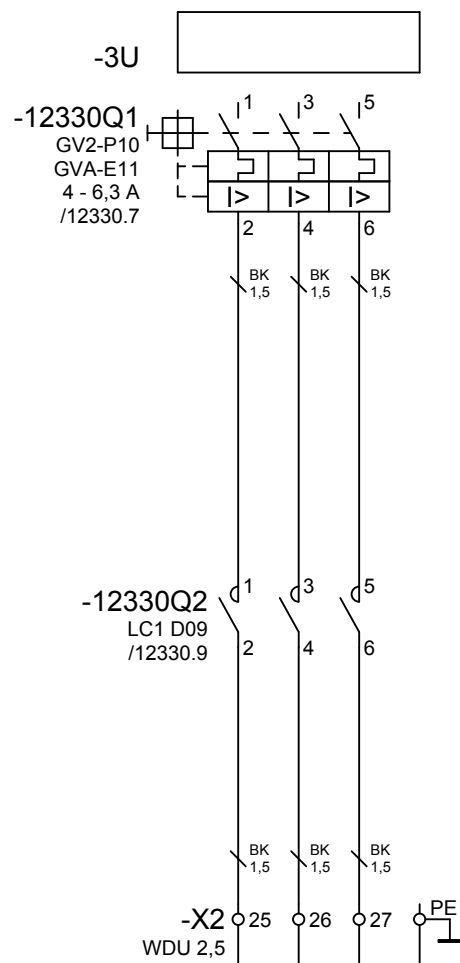


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



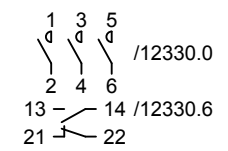
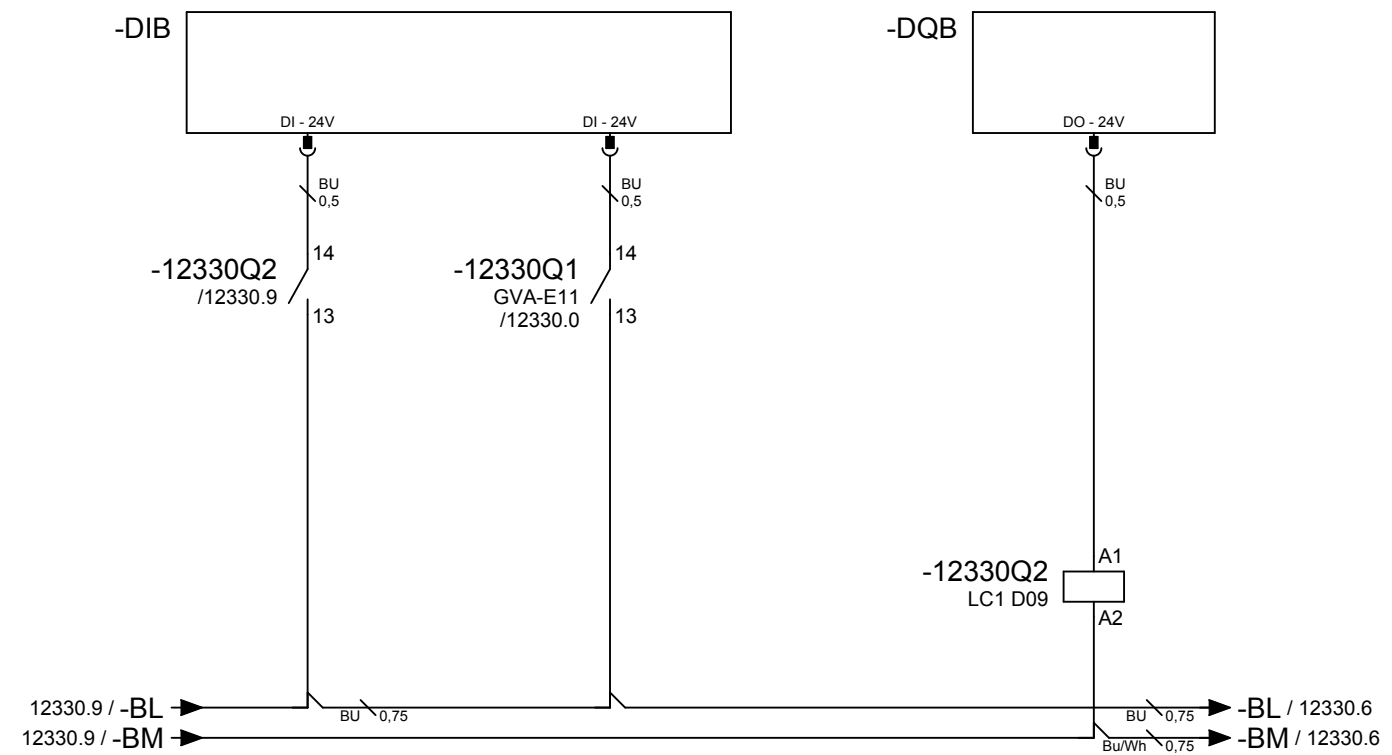
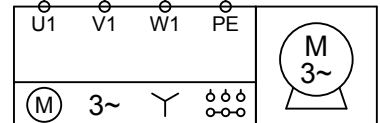
+UBxxx-12330W1
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

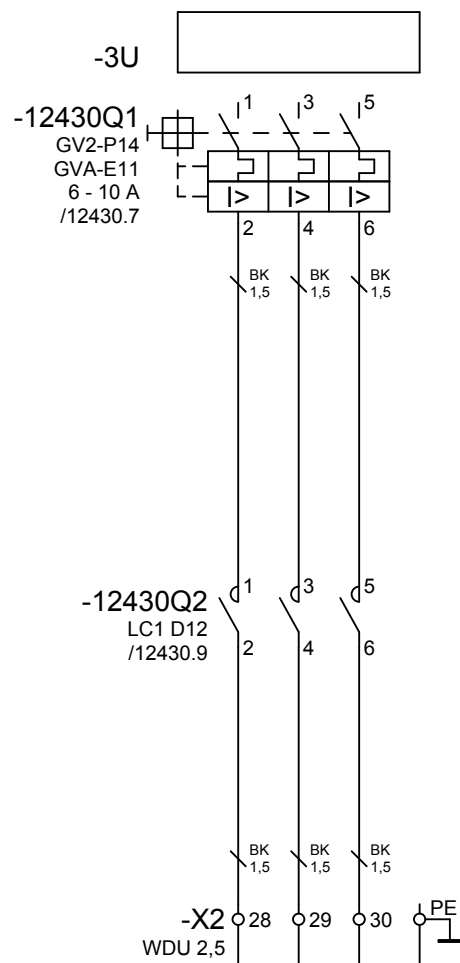
Enclosure B1
load 1,5mm² = cca 13,5A; (5A = 37,0%)
loss U at In 0,17V
loss U at 5xIn 0,85V
heat losses at In 2,55W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (5A = 27,0%)
loss U at In 1,42V
loss U at 5xIn 7,08V
heat losses at In 21,3W (L=3x25m)
... ..
... ..

-12330M1
2,2 kW
Y=400V-4,9A.
/12330



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



+UBxxx-12430W1
 ÖLFLEX 100
 4x1,5
 25 m

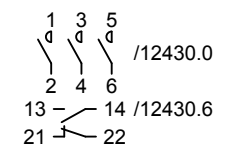
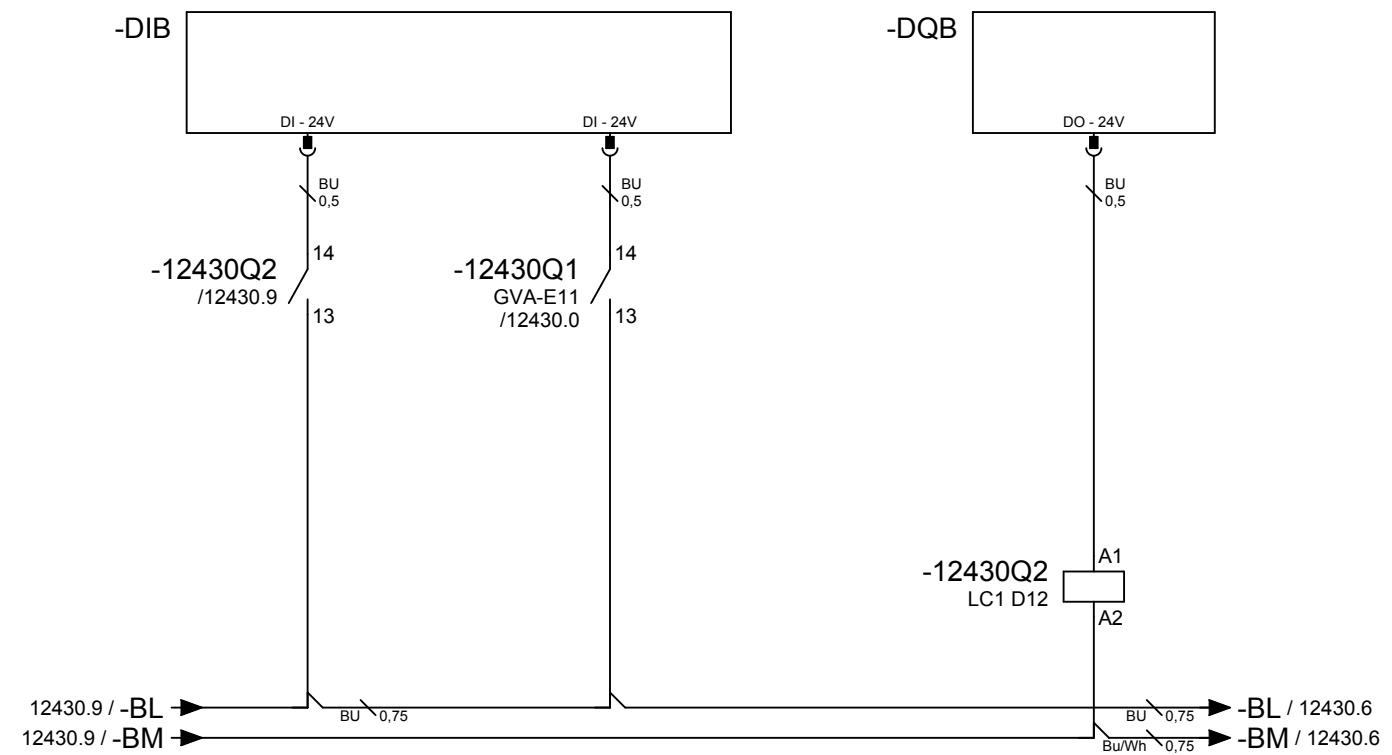
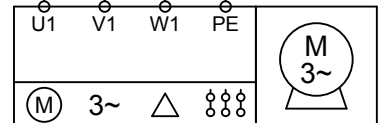
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1,5mm² = cca 13,5A; (7A = 51,8%)
 loss U at In 0,24V
 loss U at 5xIn 1,19V
 heat losses at In 5,00W (L=3x3m)

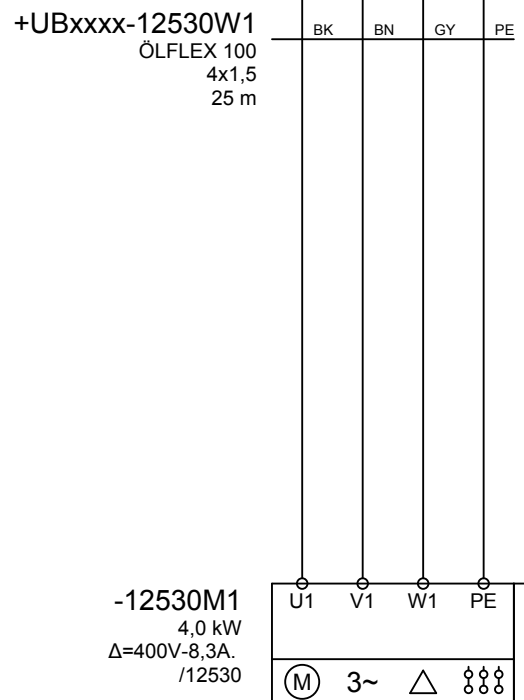
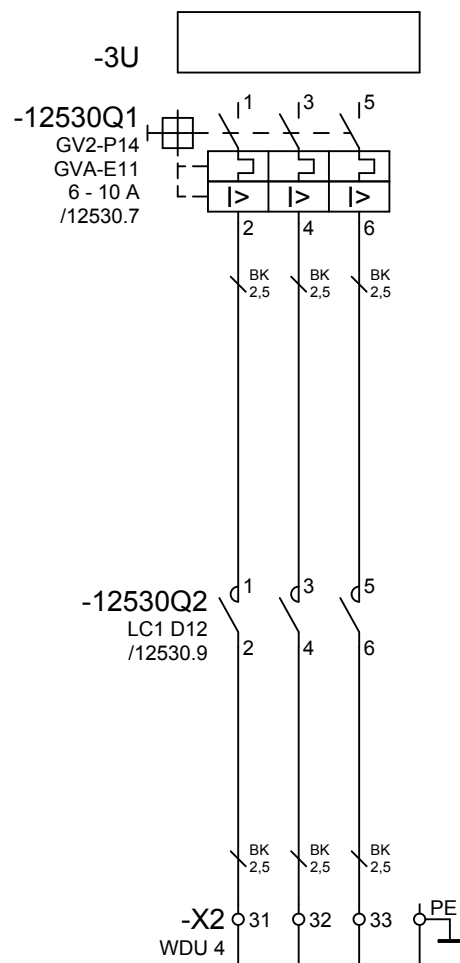
 short circuit resistance 130kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (7A = 37,8%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 41,7W (L=3x25m)

-12430M1
 3,0 kW
 Δ=400V-6,6A.
 /12430

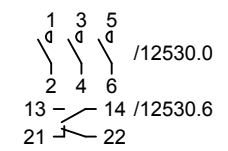
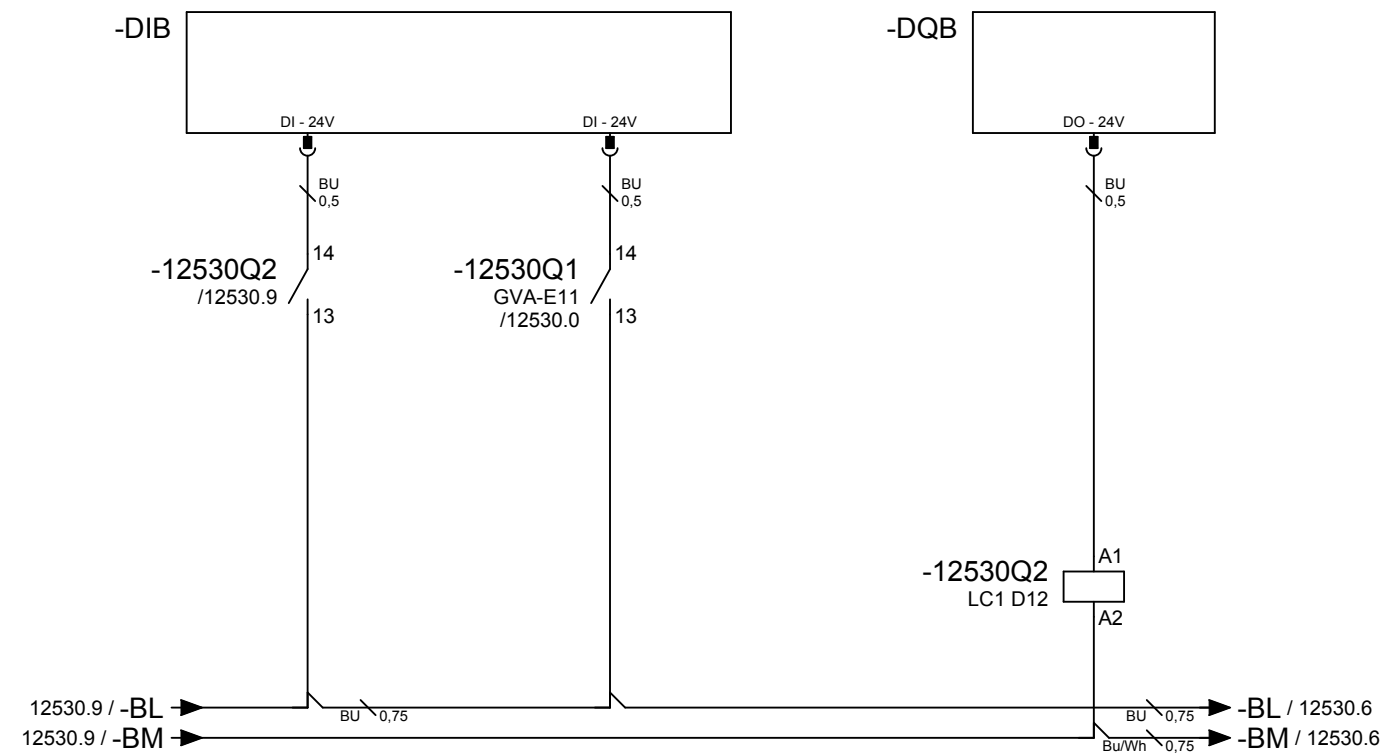


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

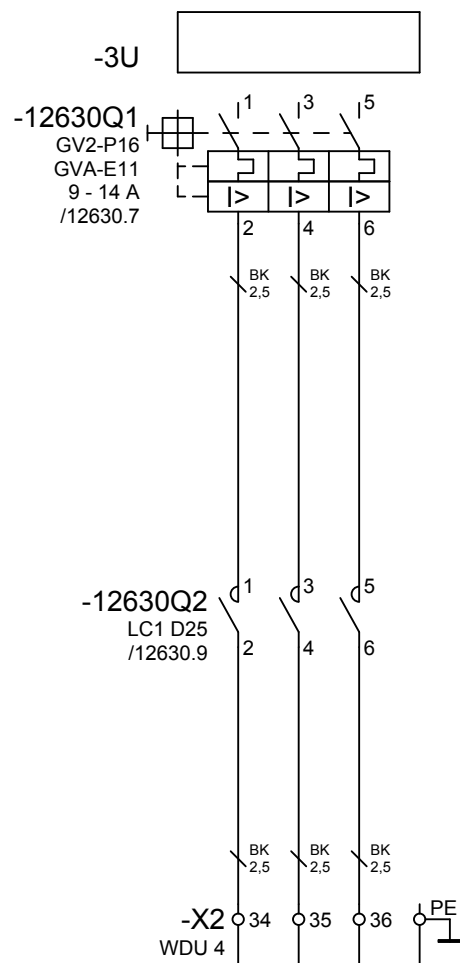


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
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Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



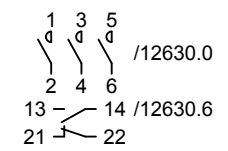
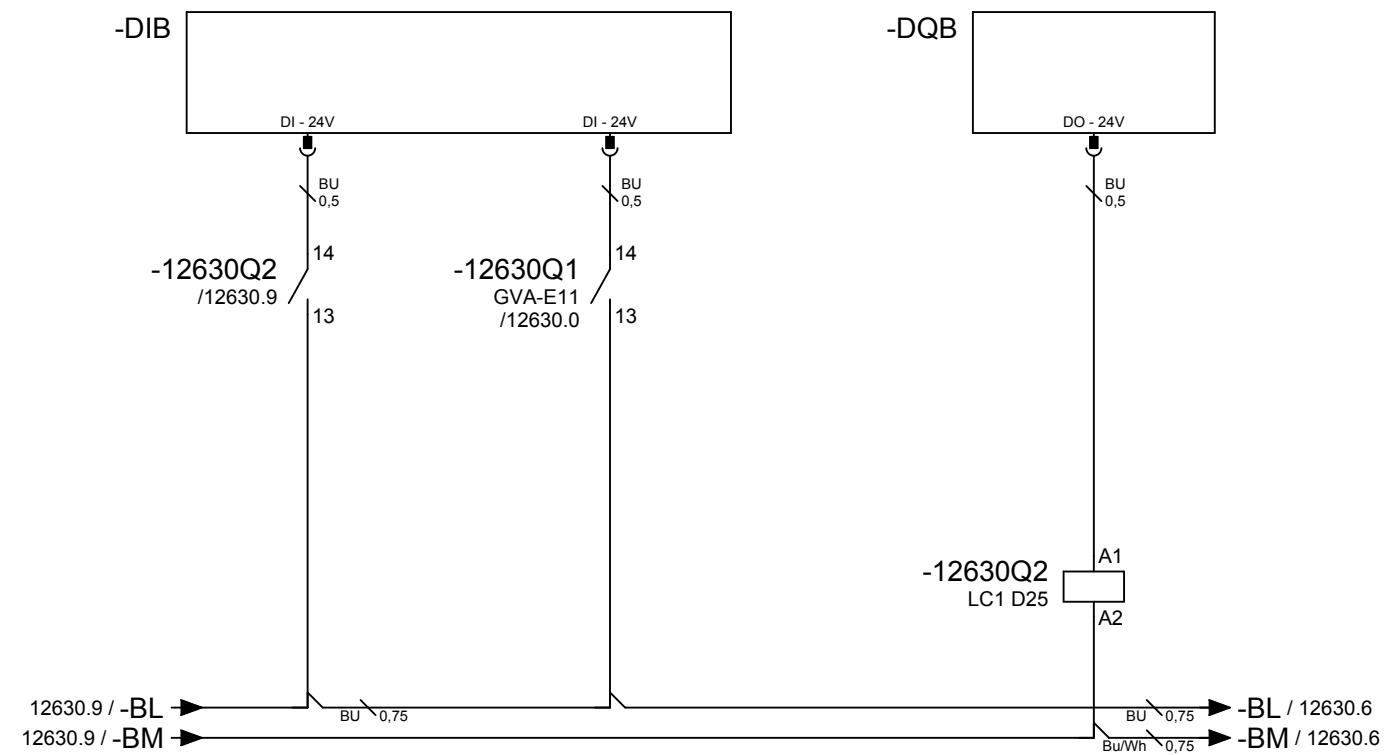
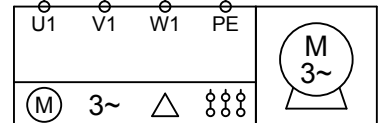
+UBxxx-12630W1
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

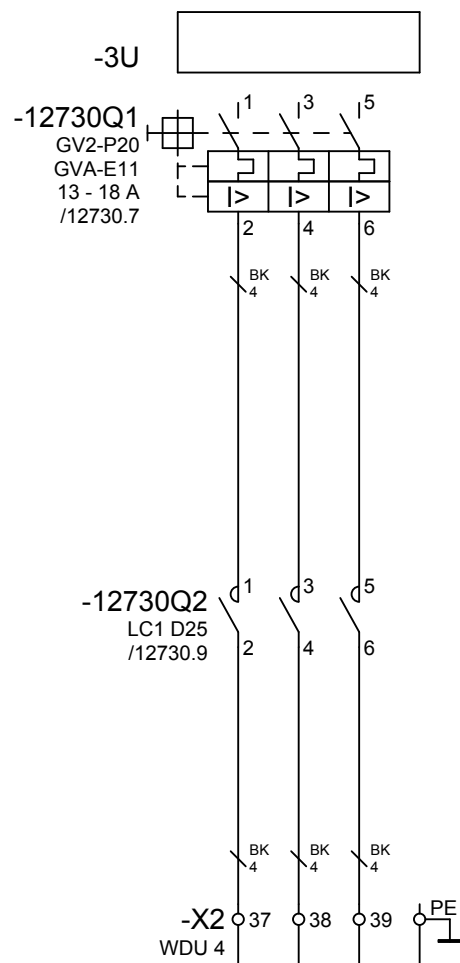
Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..

-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

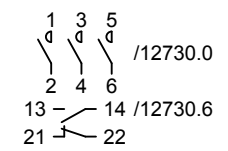
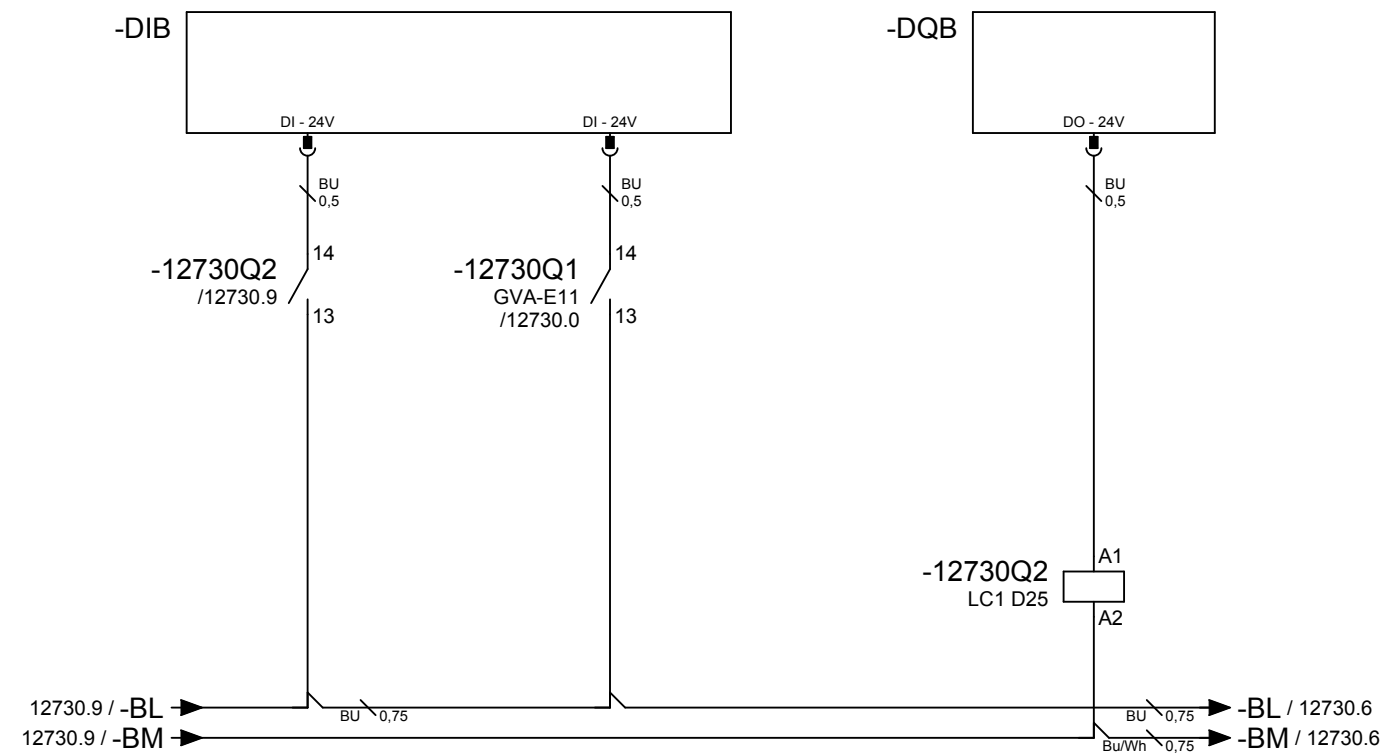


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

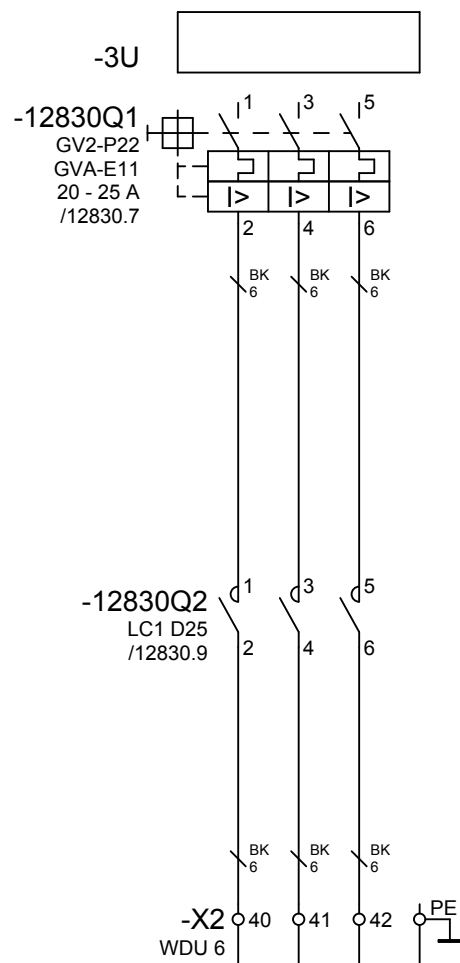
Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

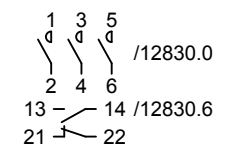
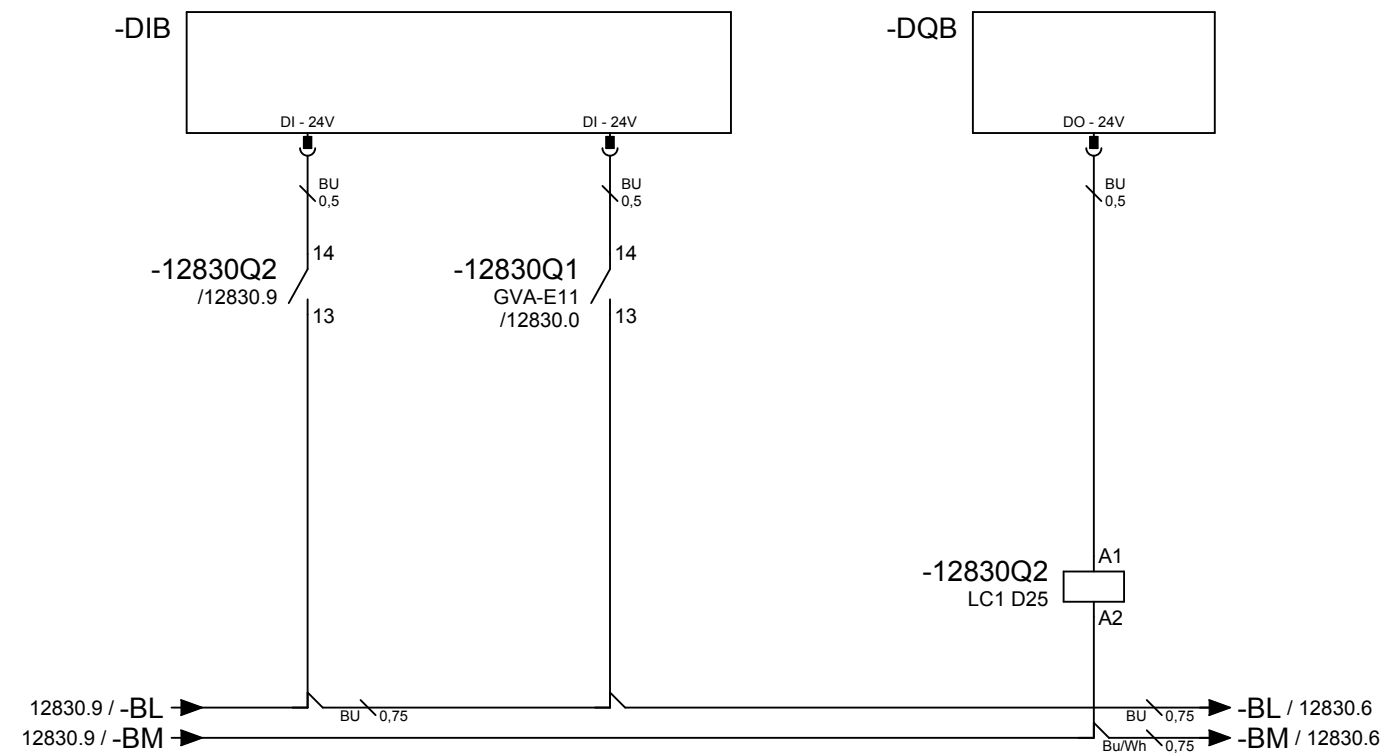


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

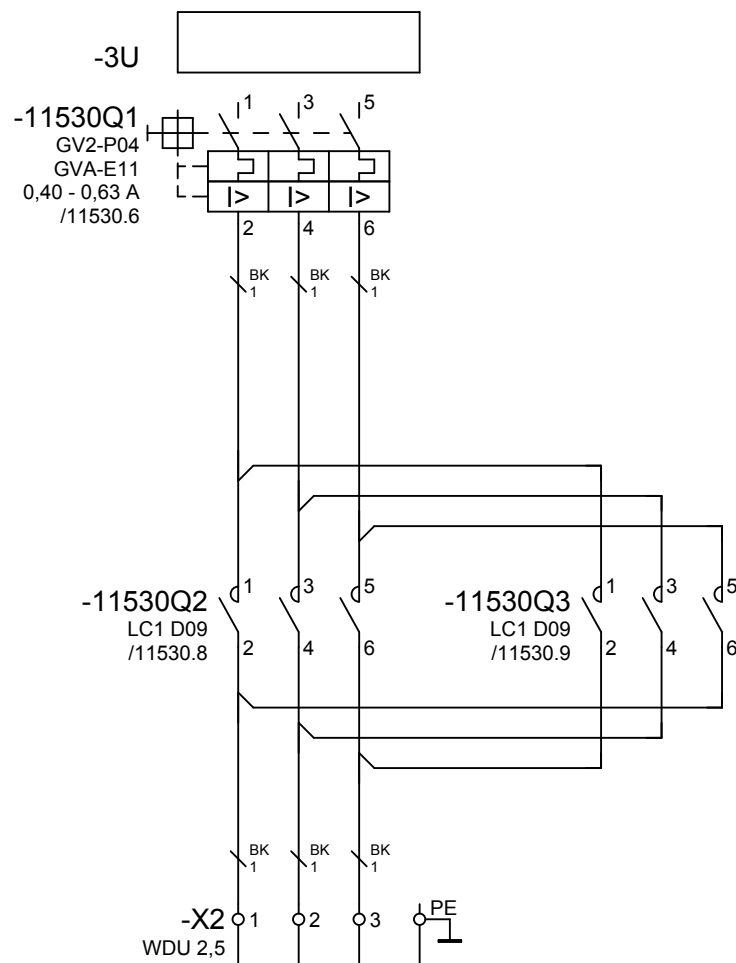
 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

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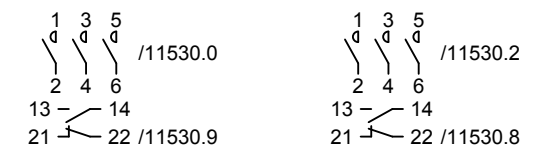
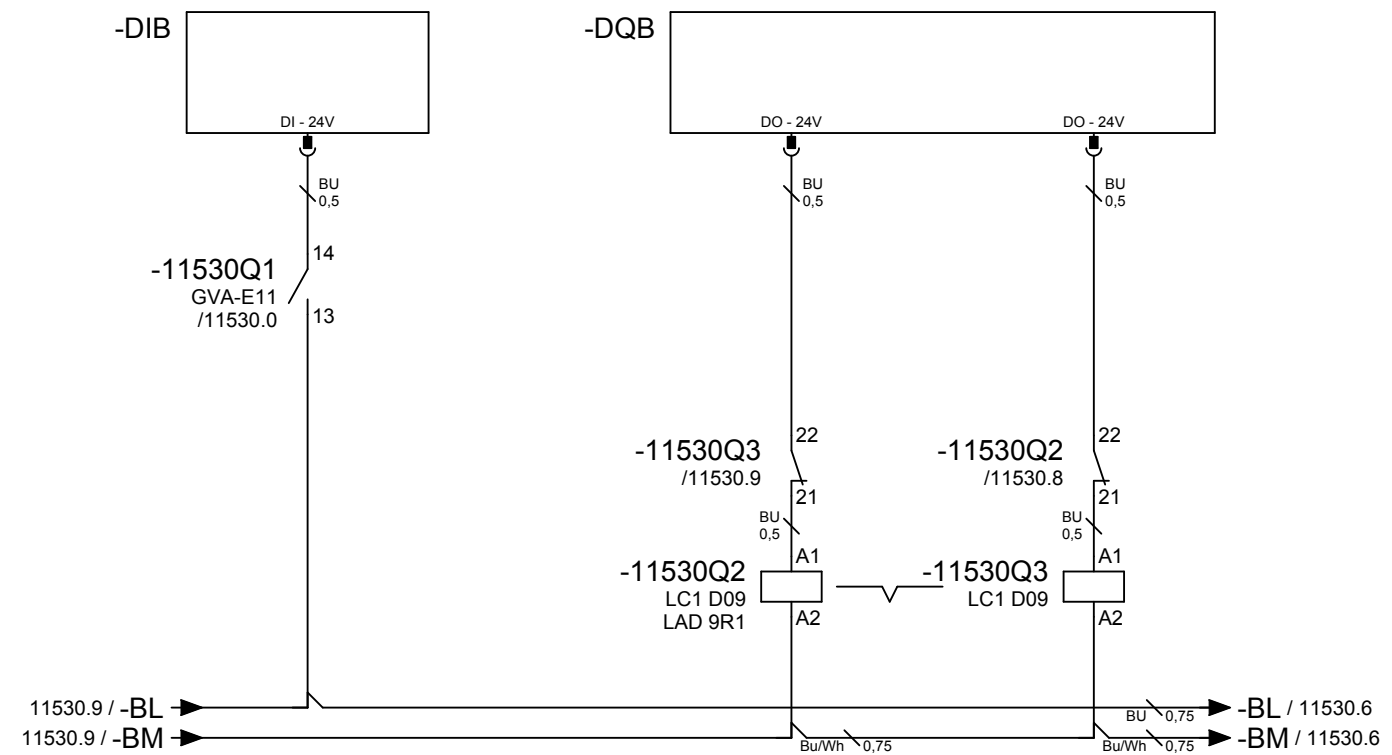
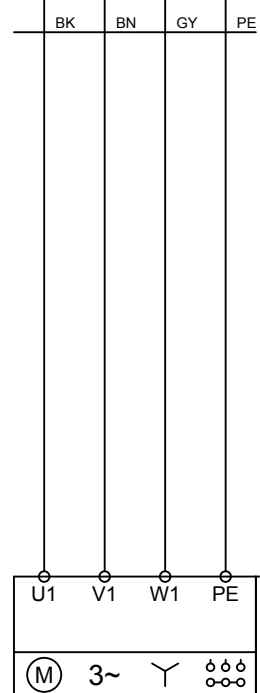


+UBxxx-11530W2
ÖLFLEX 100
4x0,75
25 m

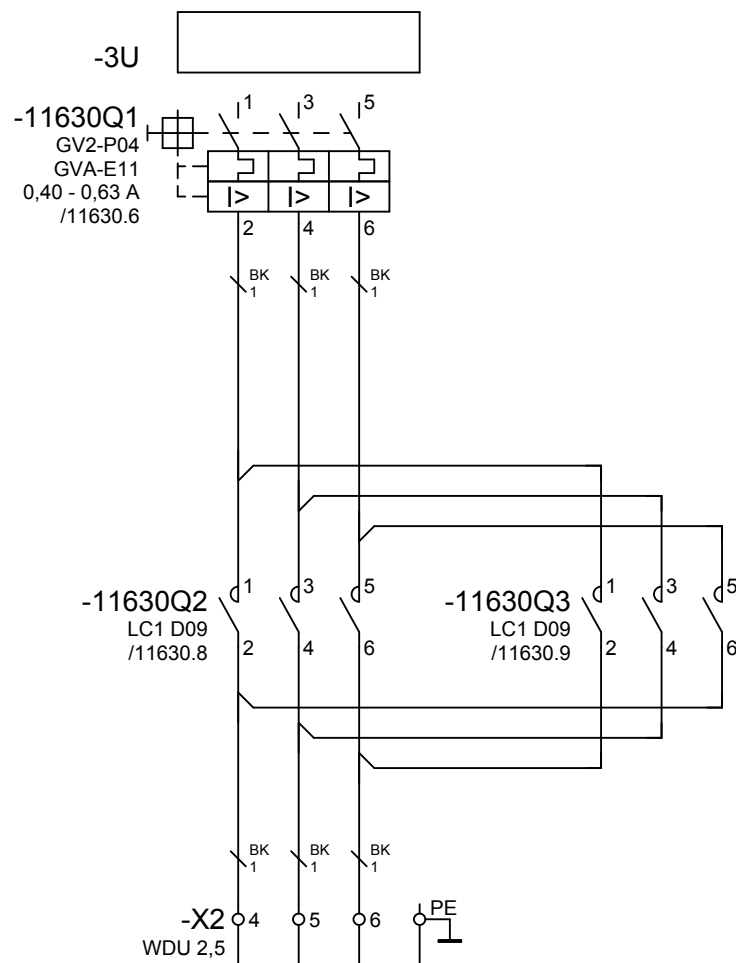
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,41A = 4,0%)
loss U at In 0,02V
loss U at 5xIn 0,10V
heat losses at In 0,03W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
loss U at In 0,23V
loss U at 5xIn 1,16V
heat losses at In 0,3W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

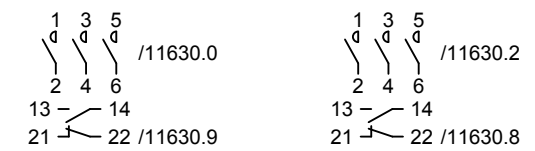
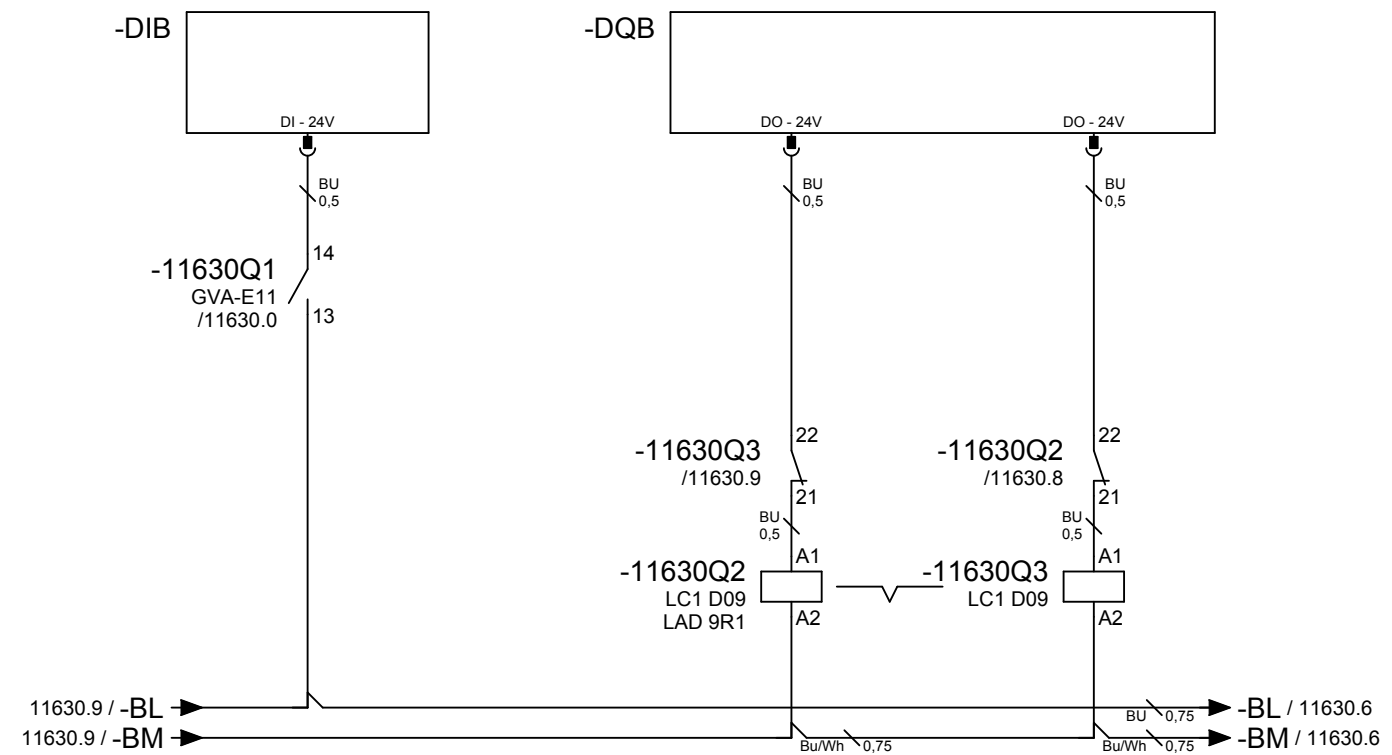
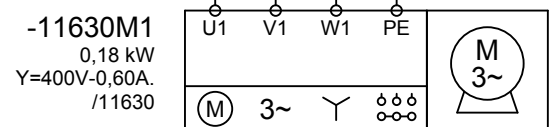


+UBxxx-11630W2
ÖLFLEX 100
4x0,75
25 m

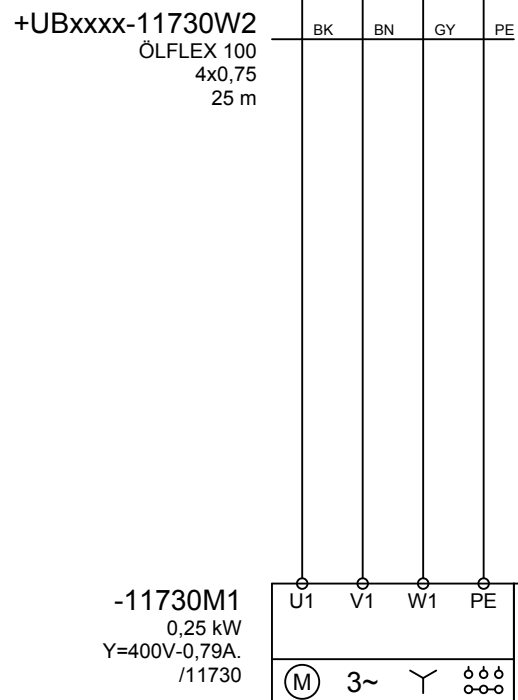
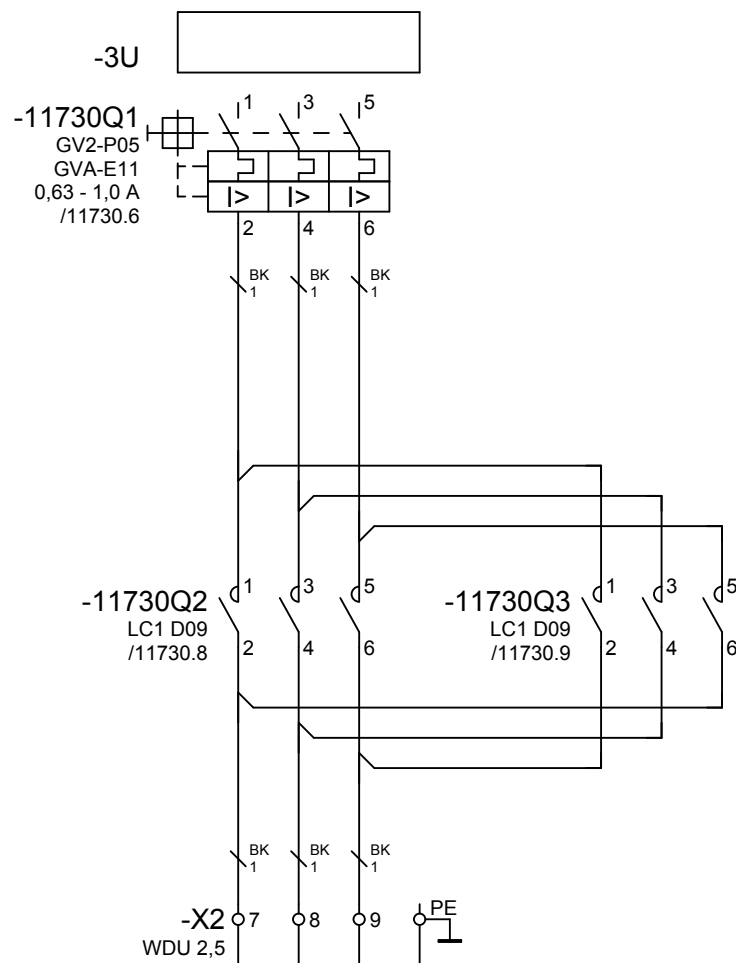
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,6A = 5,8%)
loss U at In 0,03V
loss U at 5xIn 0,15V
heat losses at In 0,06W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
loss U at In 0,34V
loss U at 5xIn 1,70V
heat losses at In 0,6W (L=3x25m)
... ..
... ..

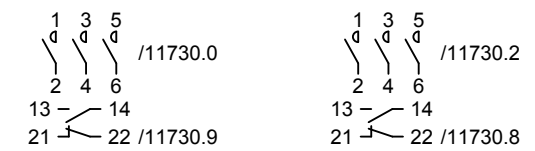
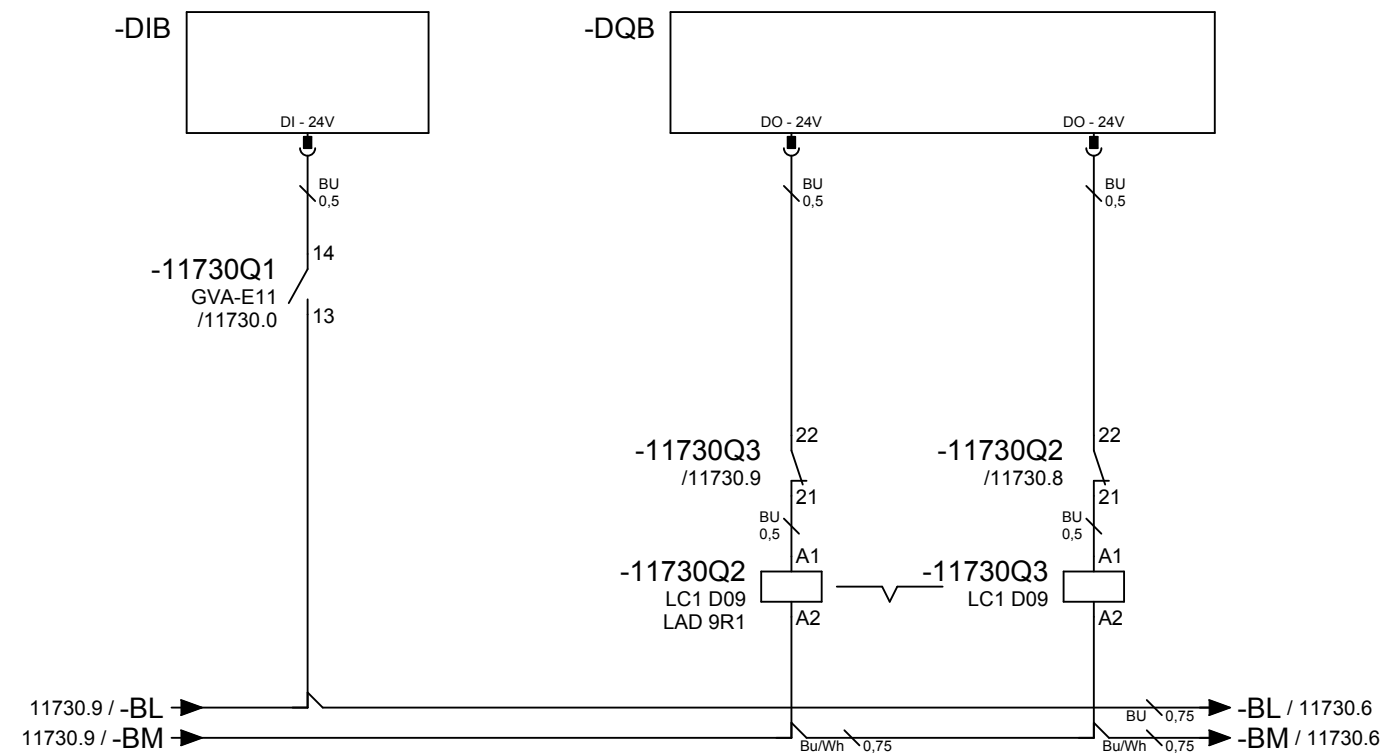


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

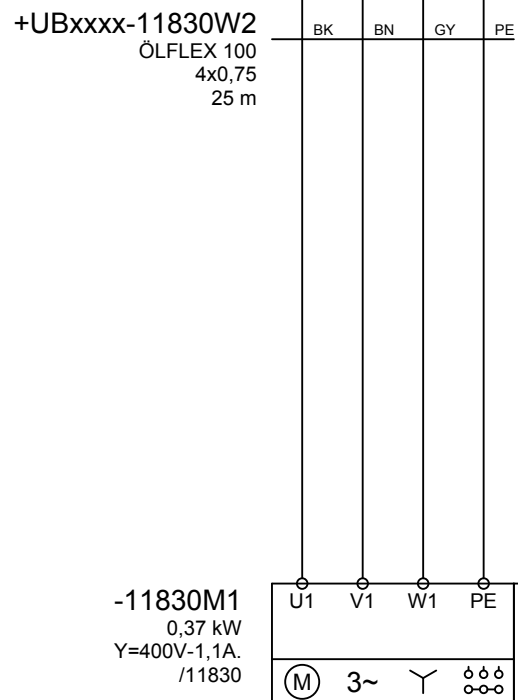
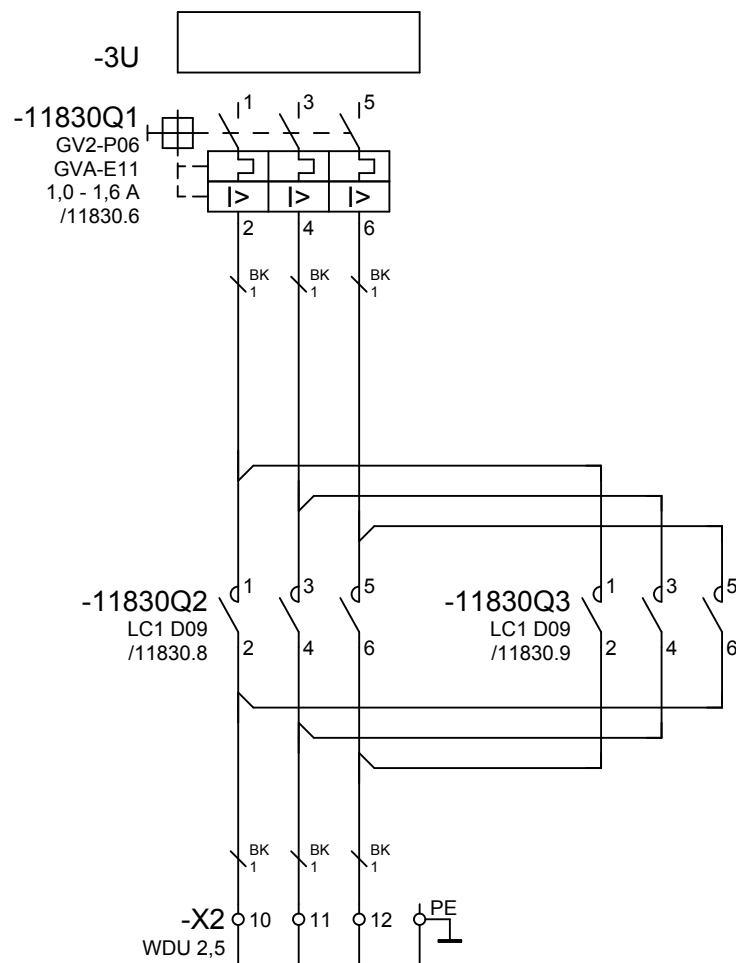


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...

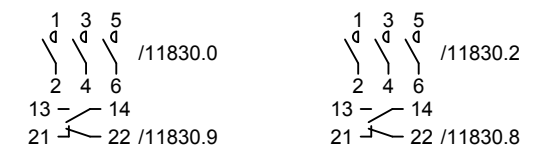
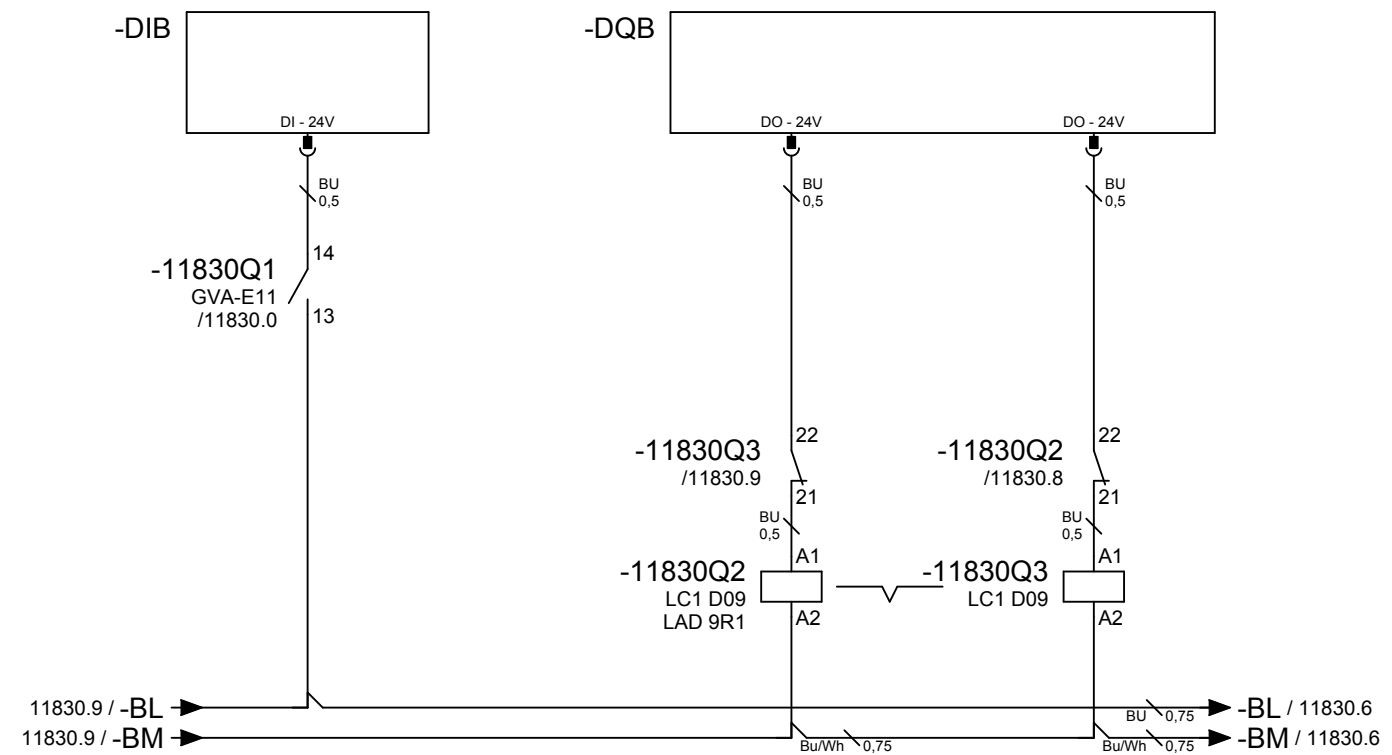


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

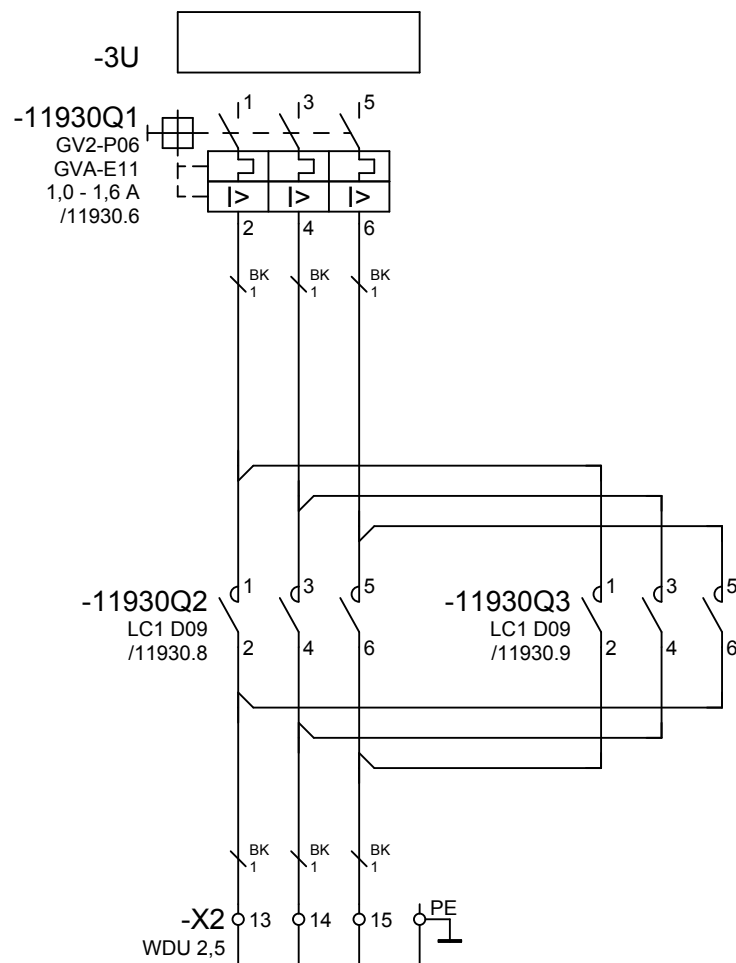


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

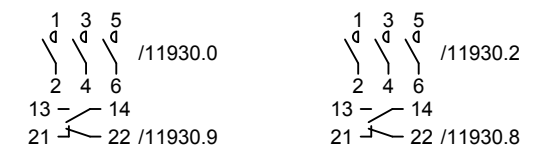
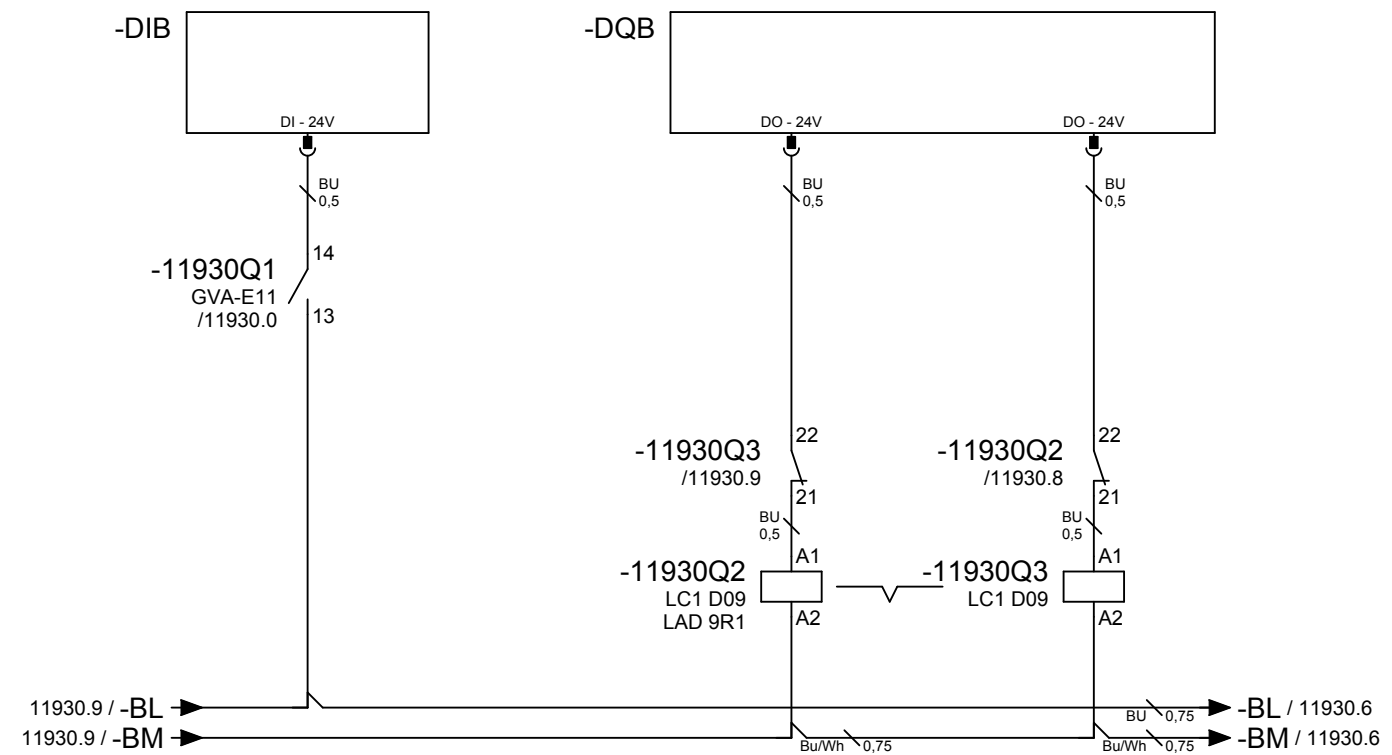
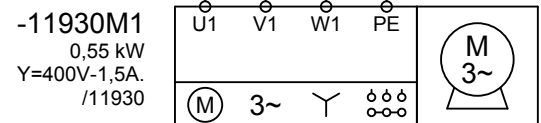


+UBxxx-11930W2
ÖLFLEX 100
4x0,75
25 m

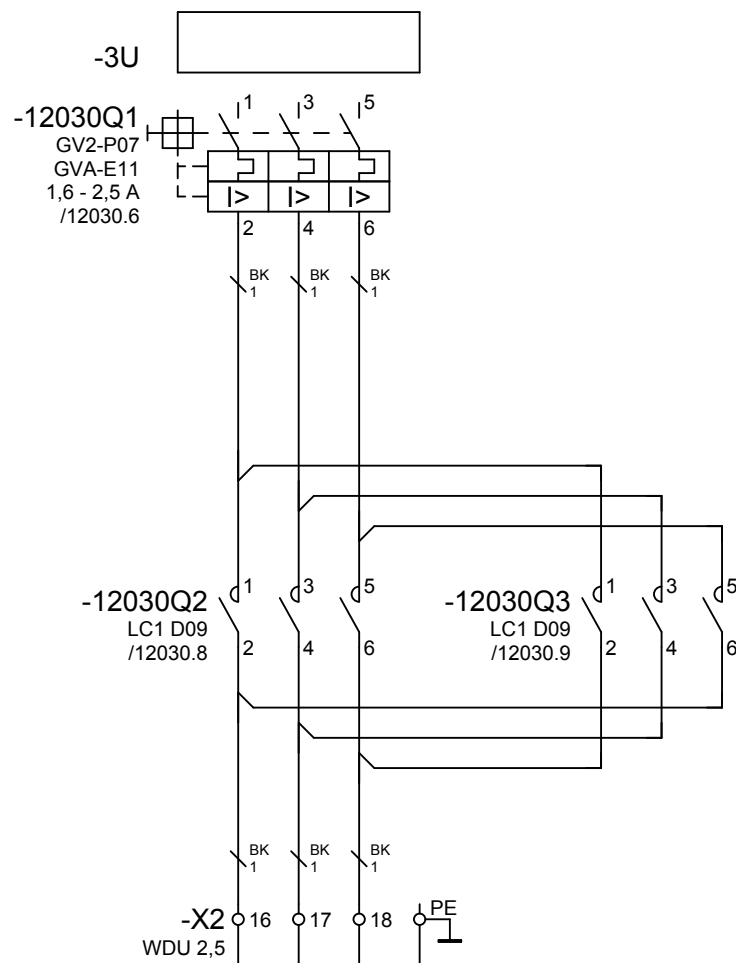
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (1,5A = 14,4%)
loss U at In 0,08V
loss U at 5xIn 0,38V
heat losses at In 0,34W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
loss U at In 0,85V
loss U at 5xIn 4,25V
heat losses at In 3,8W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

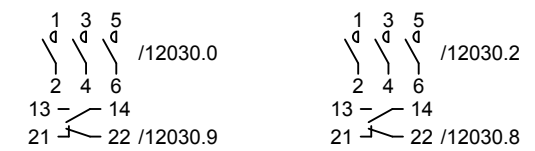
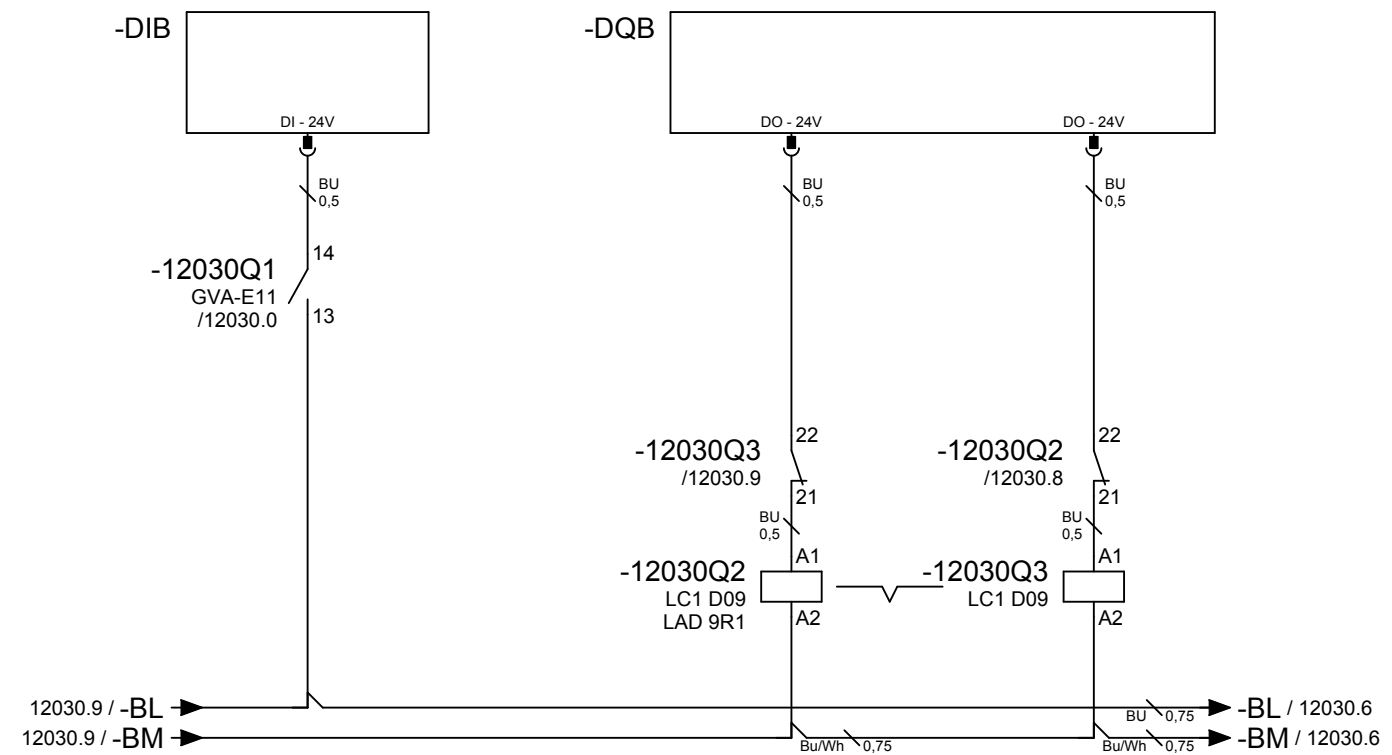
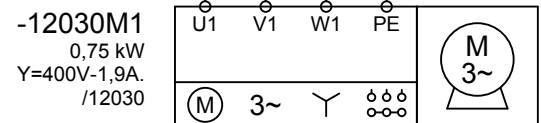


+UBxxx-12030W2
ÖLFLEX 100
4x1
25 m

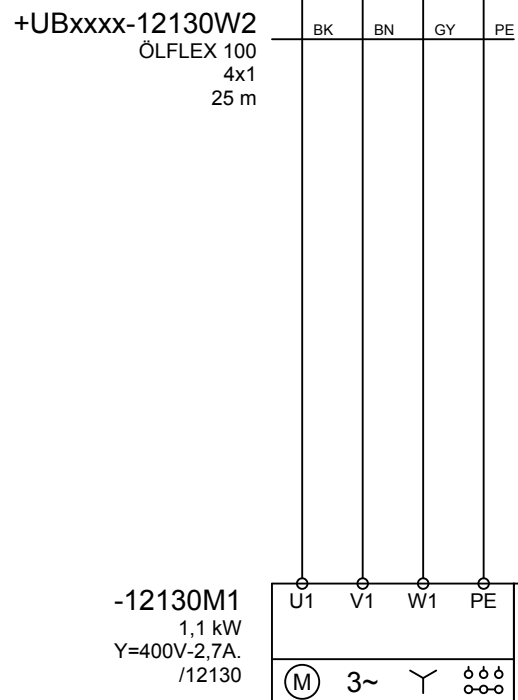
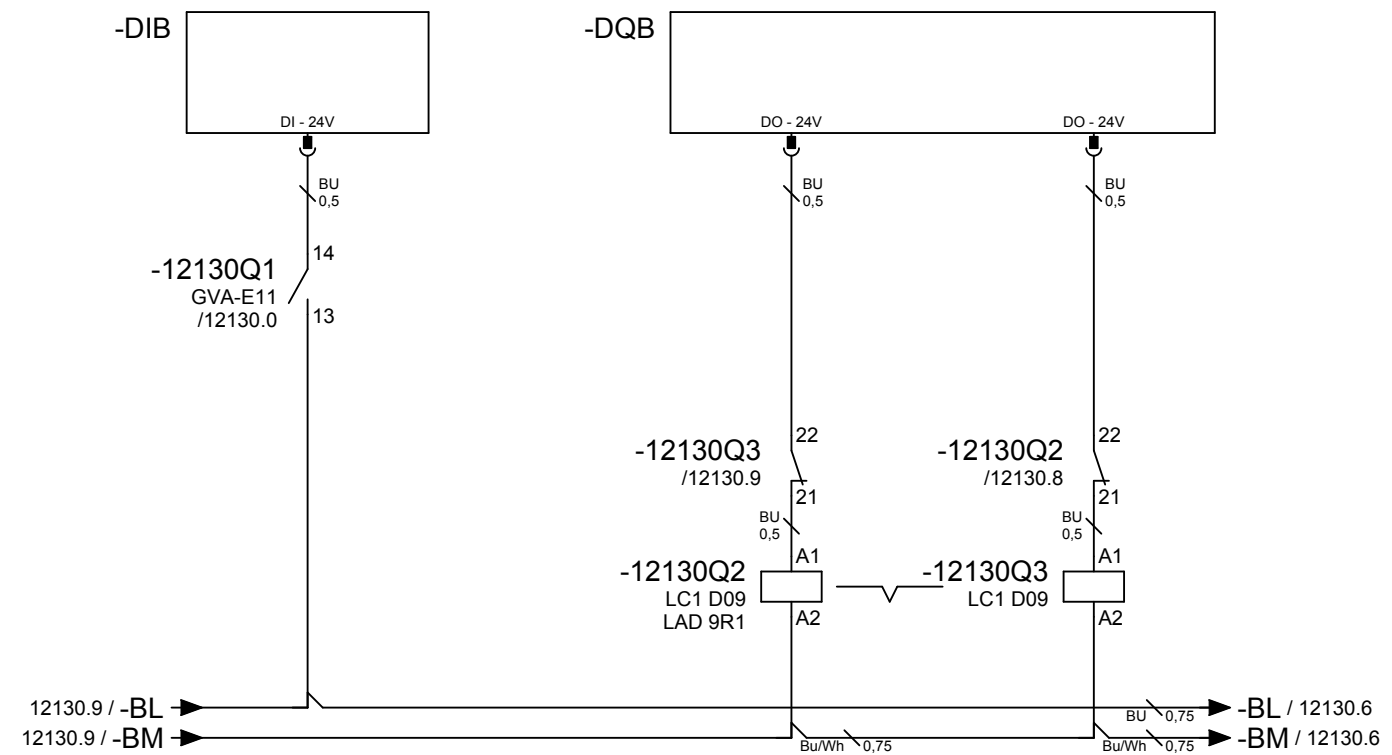
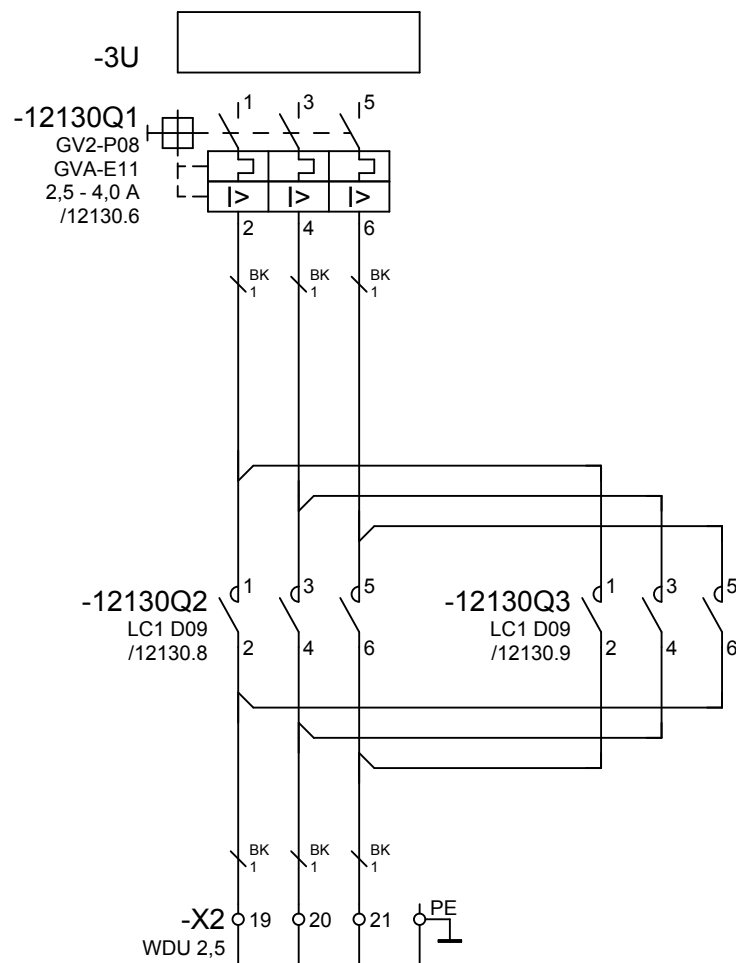
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (1,9A = 18,3%)
loss U at In 0,10V
loss U at 5xIn 0,48V
heat losses at In 0,55W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1mm² = cca 13,0A; (1,9A = 14,6%)
loss U at In 0,81V
loss U at 5xIn 4,04V
heat losses at In 4,6W (L=3x25m)
... ..
... ..

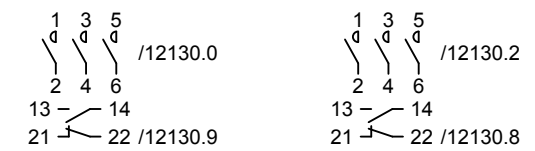


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

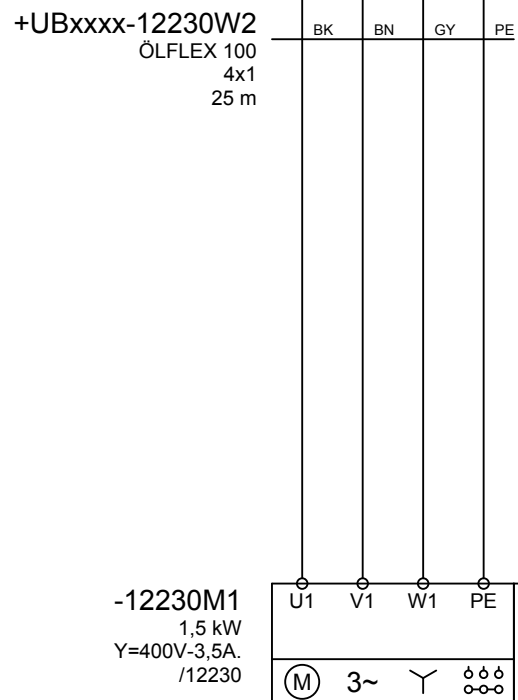
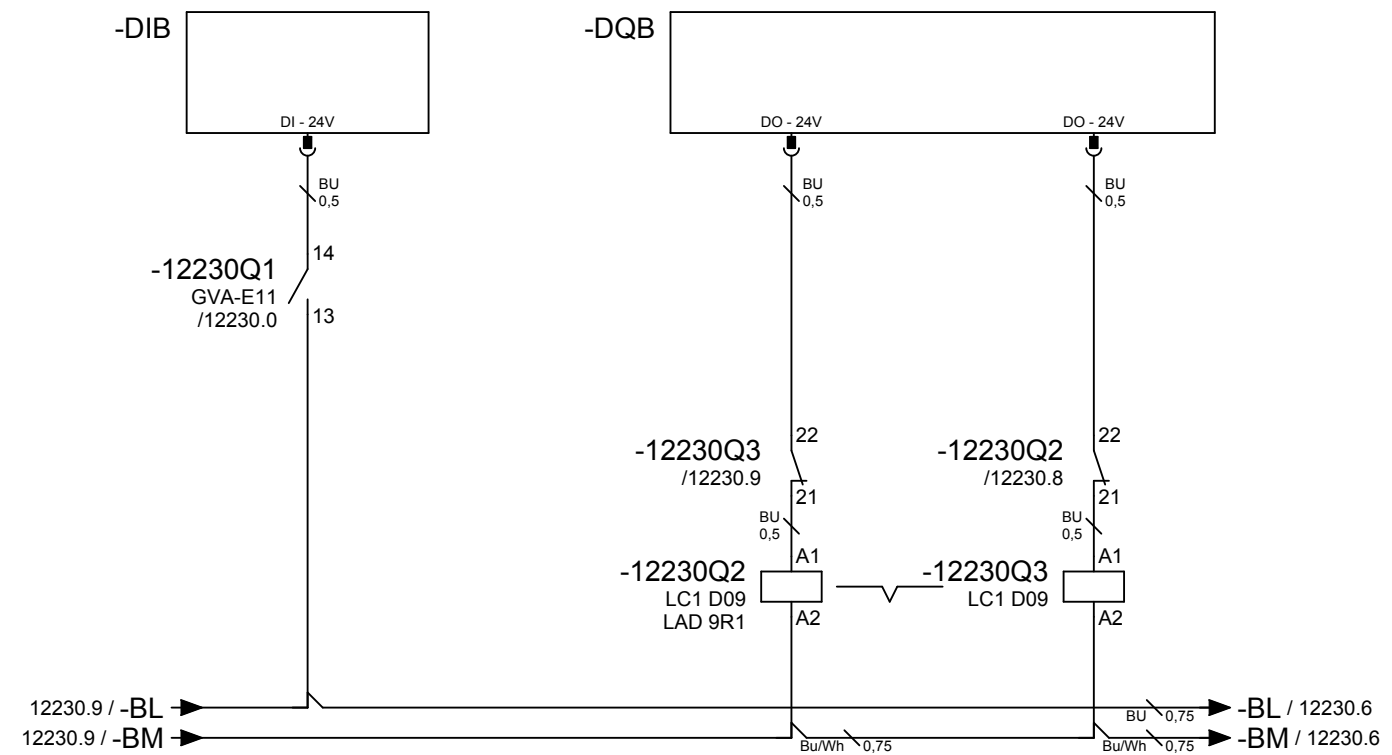
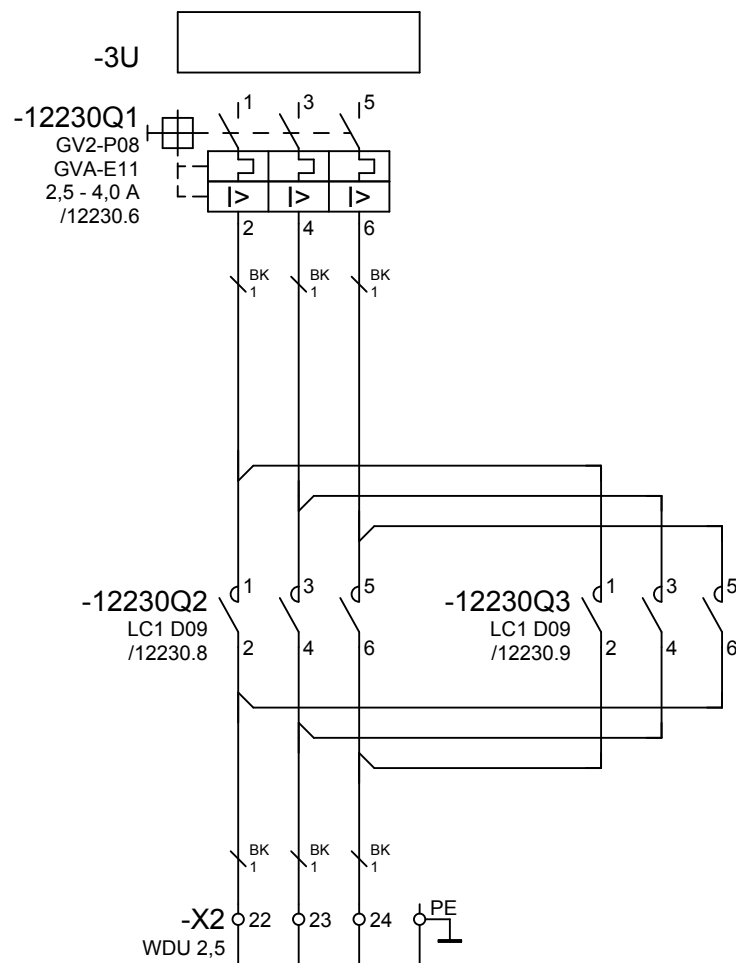


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...

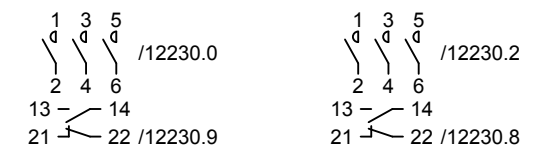


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

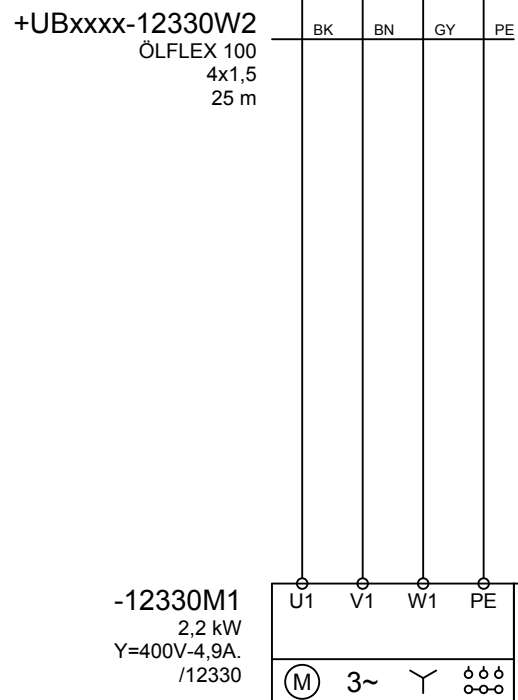
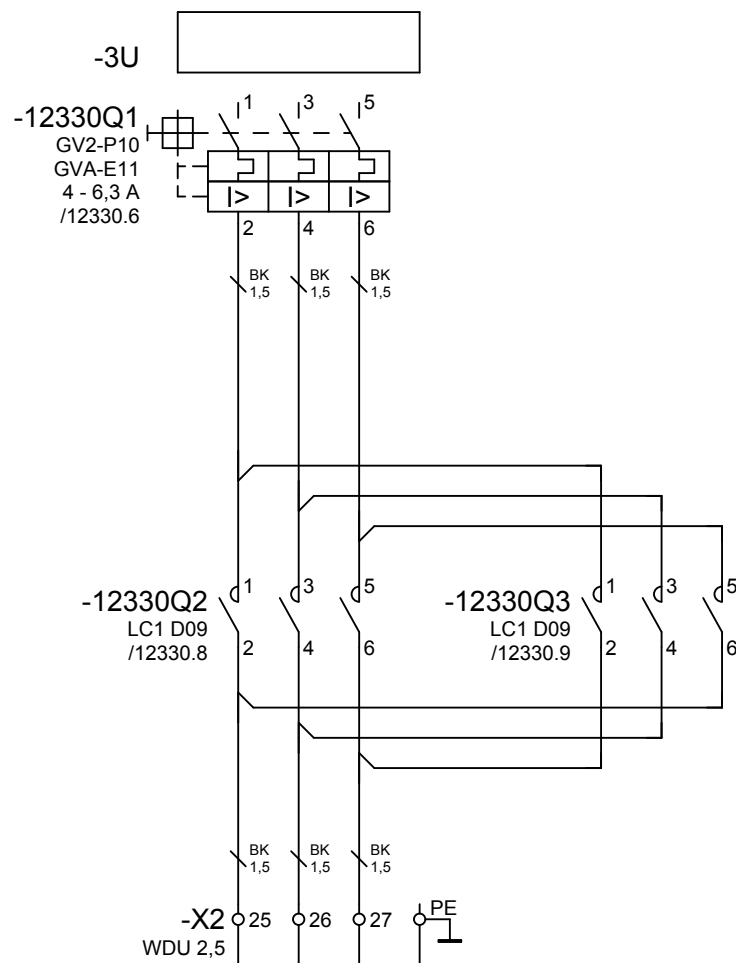


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (3,5A = 33,7%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	1,87W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (3,5A = 27,0%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	15,6W (L=3x25m)
...	...
...	...

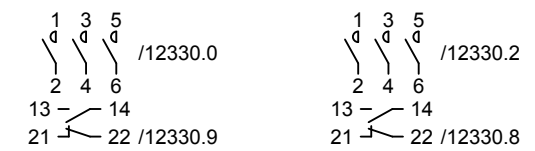
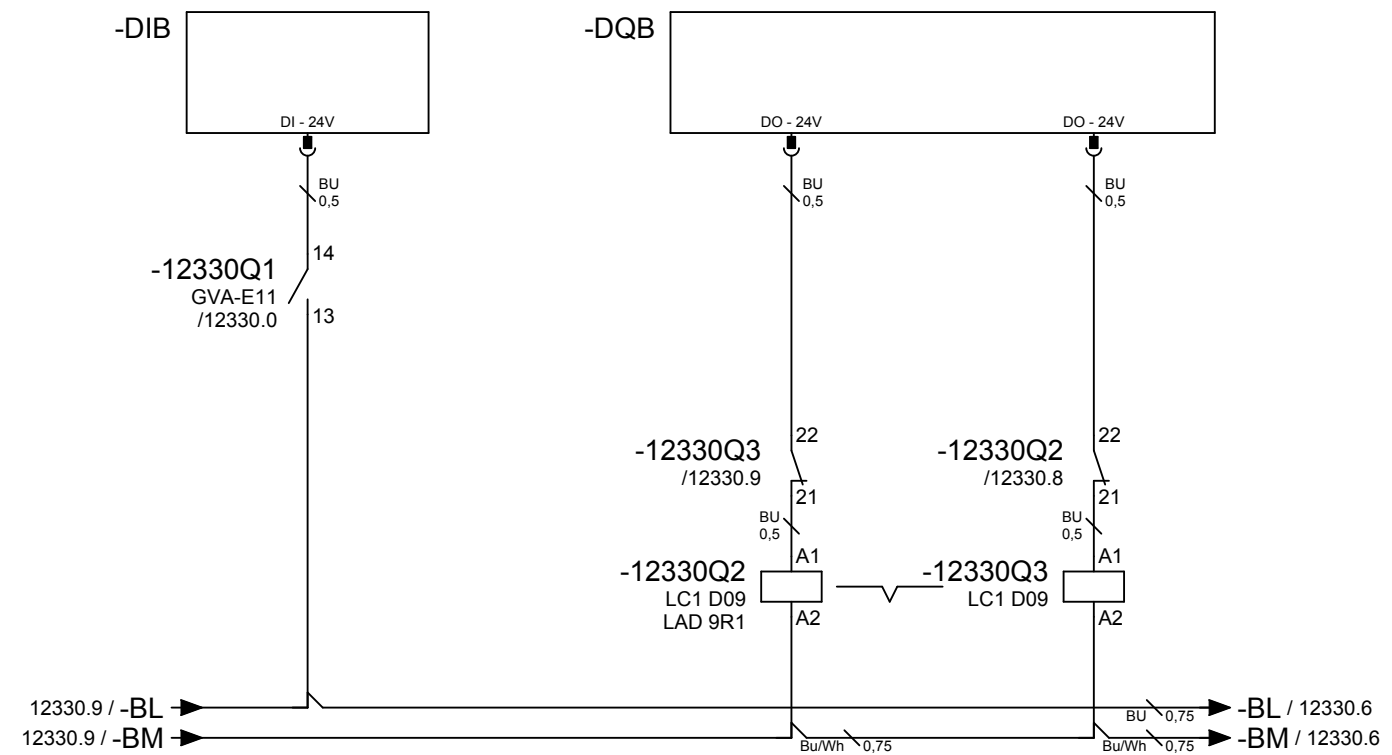


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

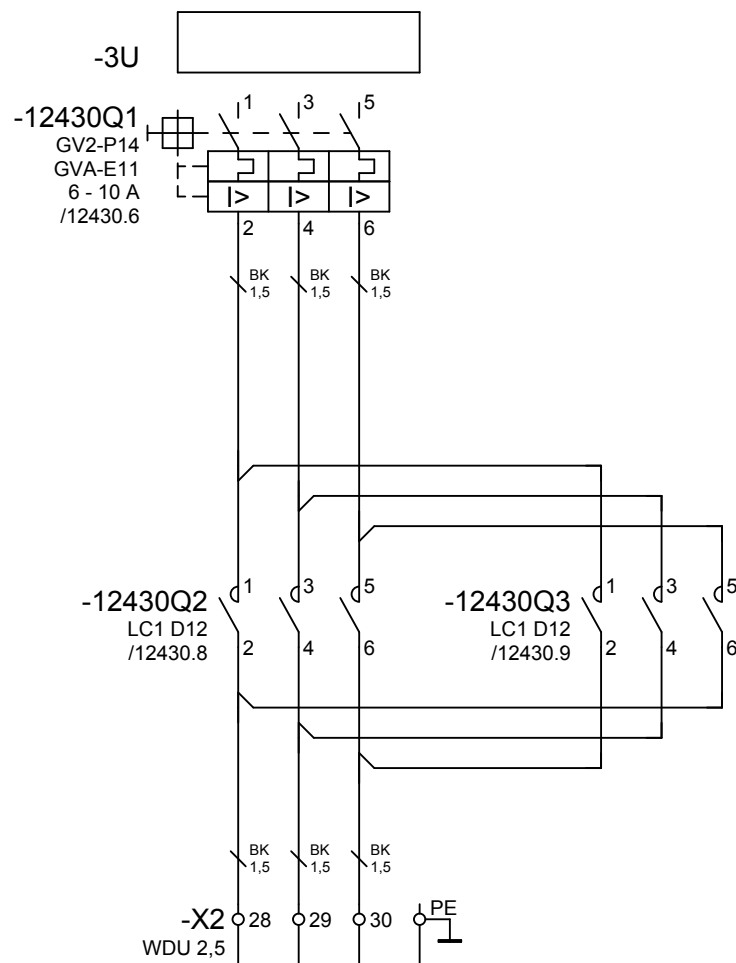


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (5A = 37,0%)
loss U at In	0,17V
loss U at 5xIn	0,85V
heat losses at In	2,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (5A = 27,0%)
loss U at In	1,42V
loss U at 5xIn	7,08V
heat losses at In	21,3W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

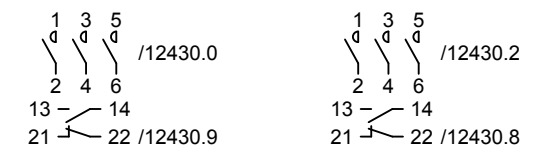
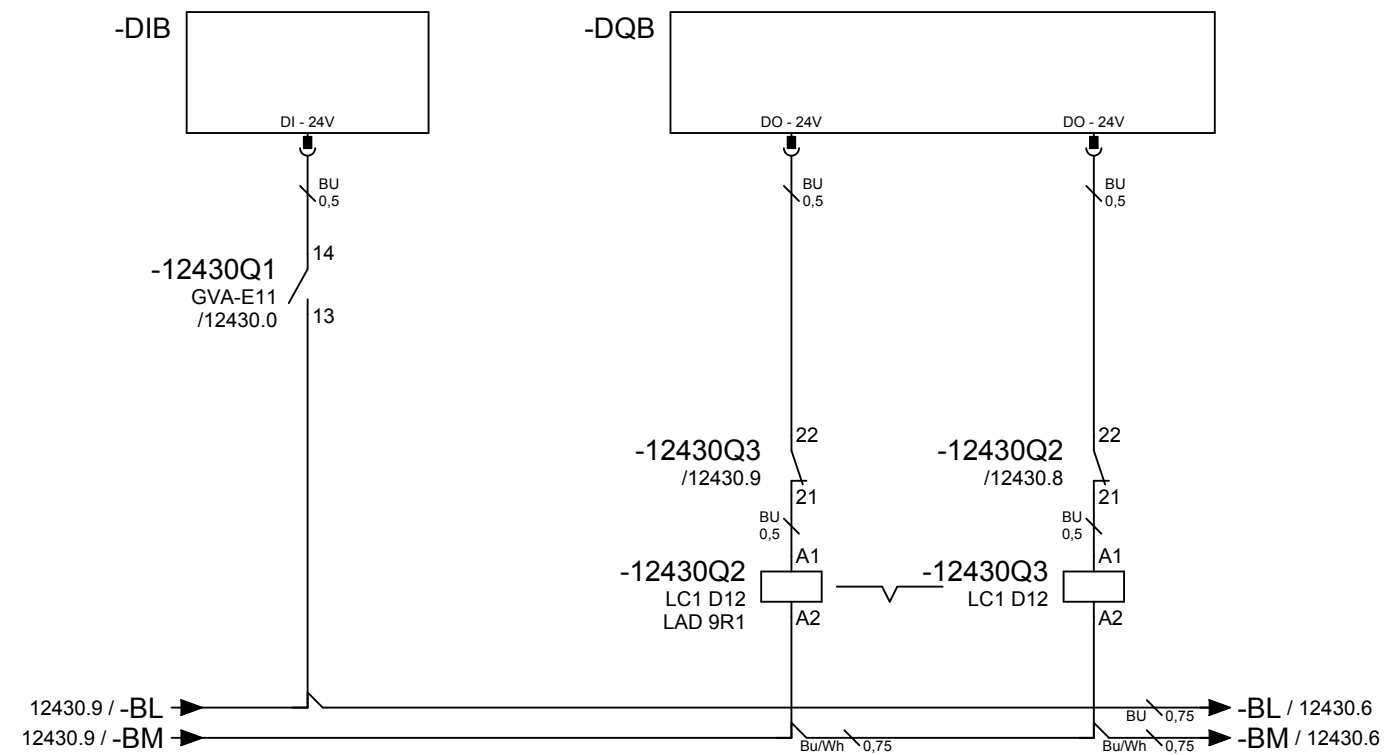
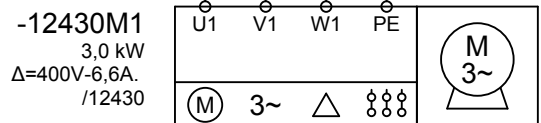


+UBxxx-12430W2
ÖLFLEX 100
4x1,5
25 m

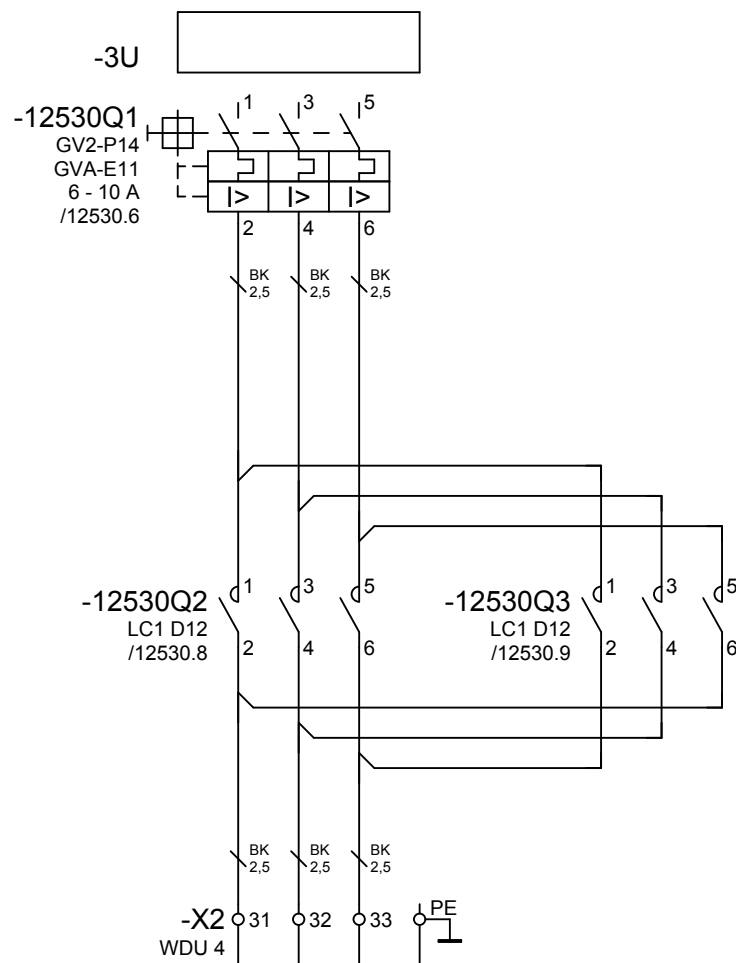
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1,5mm² = cca 13,5A; (7A = 51,8%)
loss U at In 0,24V
loss U at 5xIn 1,19V
heat losses at In 5,00W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (7A = 37,8%)
loss U at In 1,98V
loss U at 5xIn 9,92V
heat losses at In 41,7W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

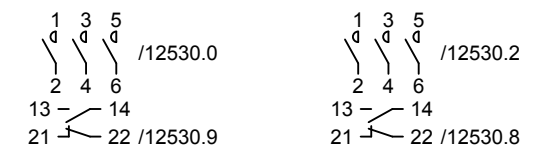
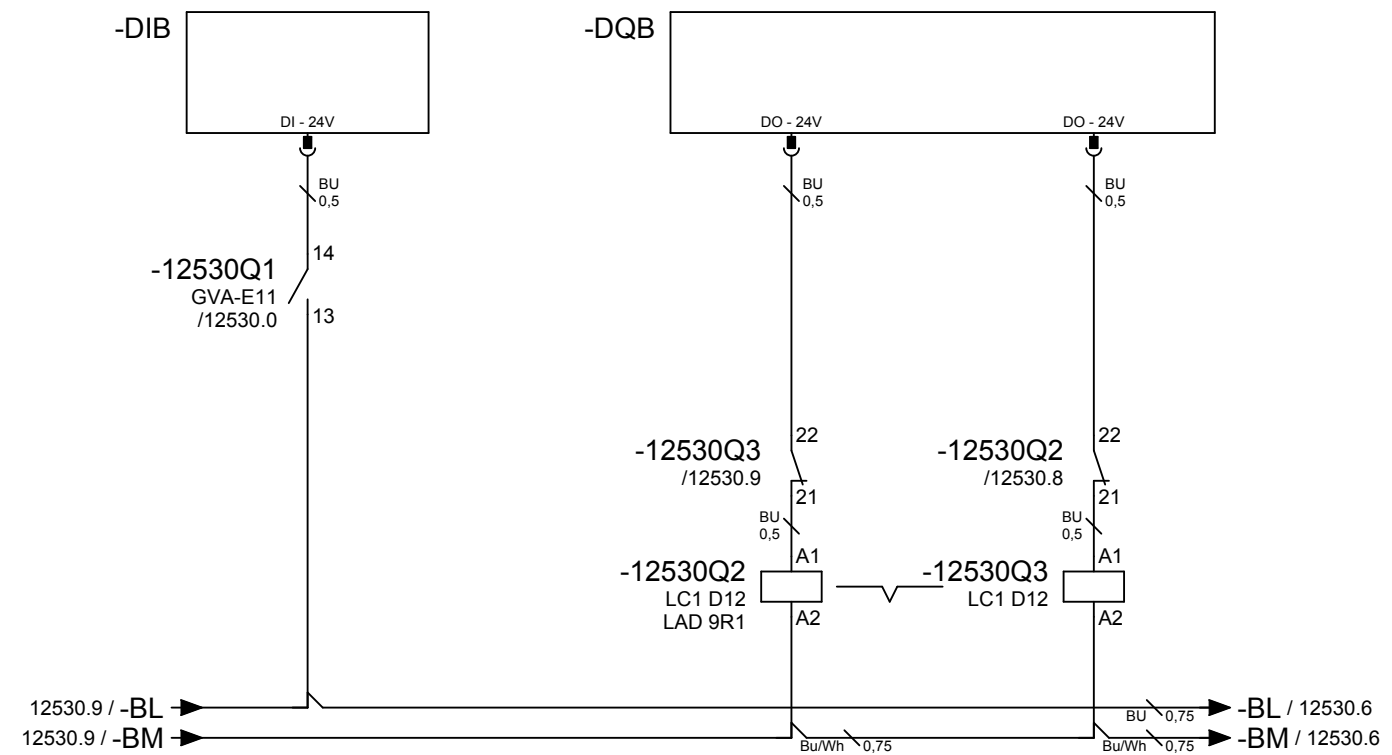
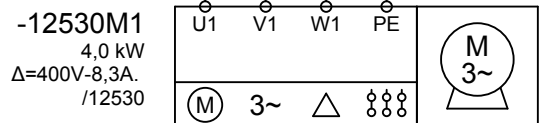


+UBxxx-12530W2
ÖLFLEX 100
4x1,5
25 m

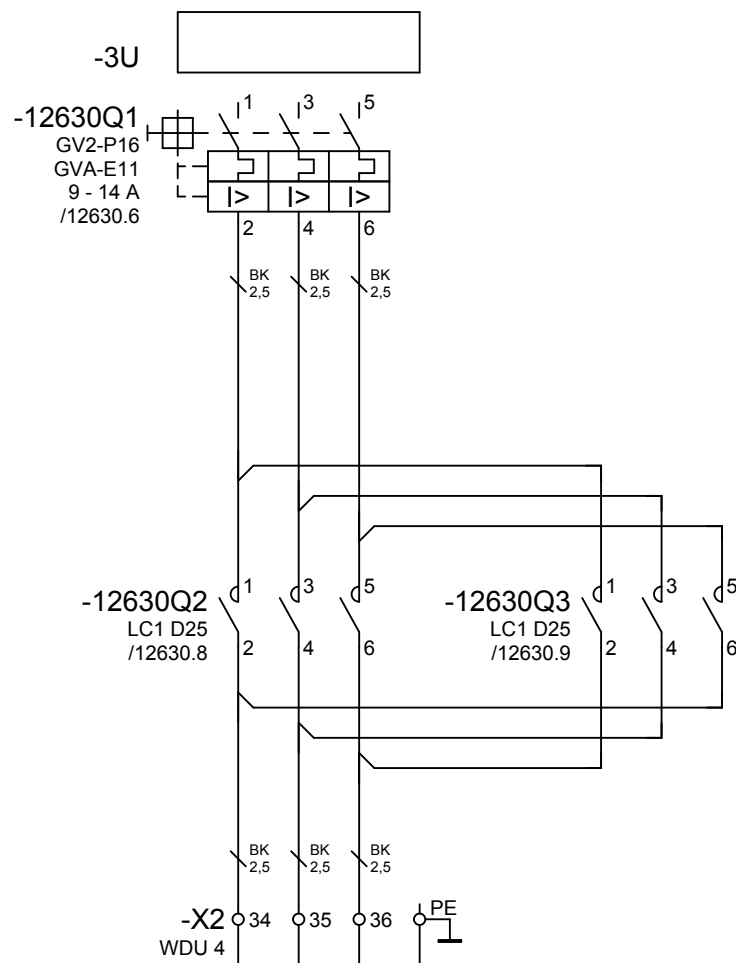
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
loss U at In 0,17V
loss U at 5xIn 0,87V
heat losses at In 4,42W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
loss U at In 2,41V
loss U at 5xIn 12,04V
heat losses at In 61,4W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



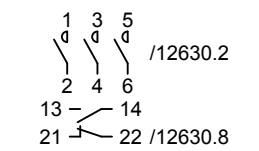
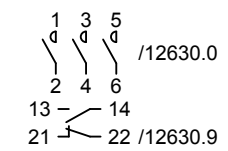
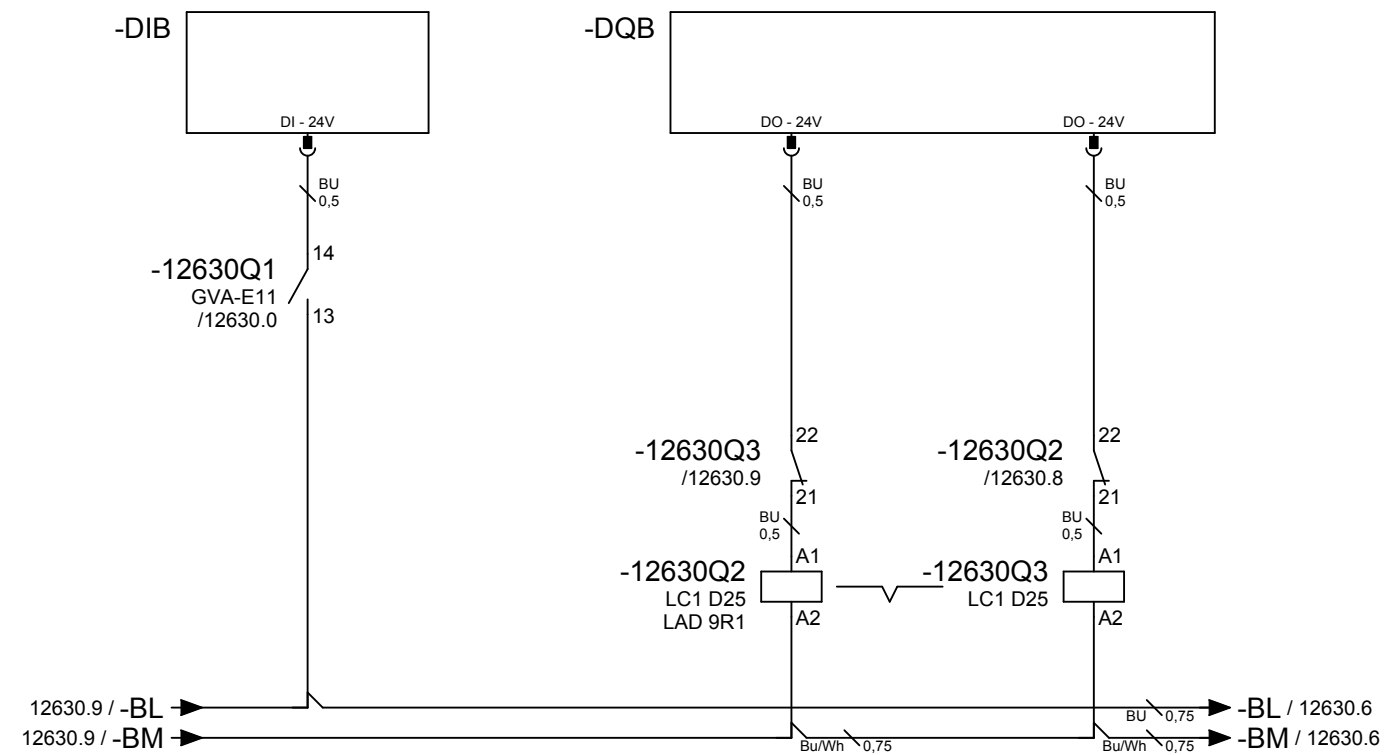
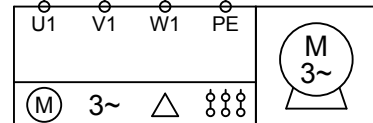
+UBxxx-12630W2
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
...
short circuit resistance 130kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
...
... ..

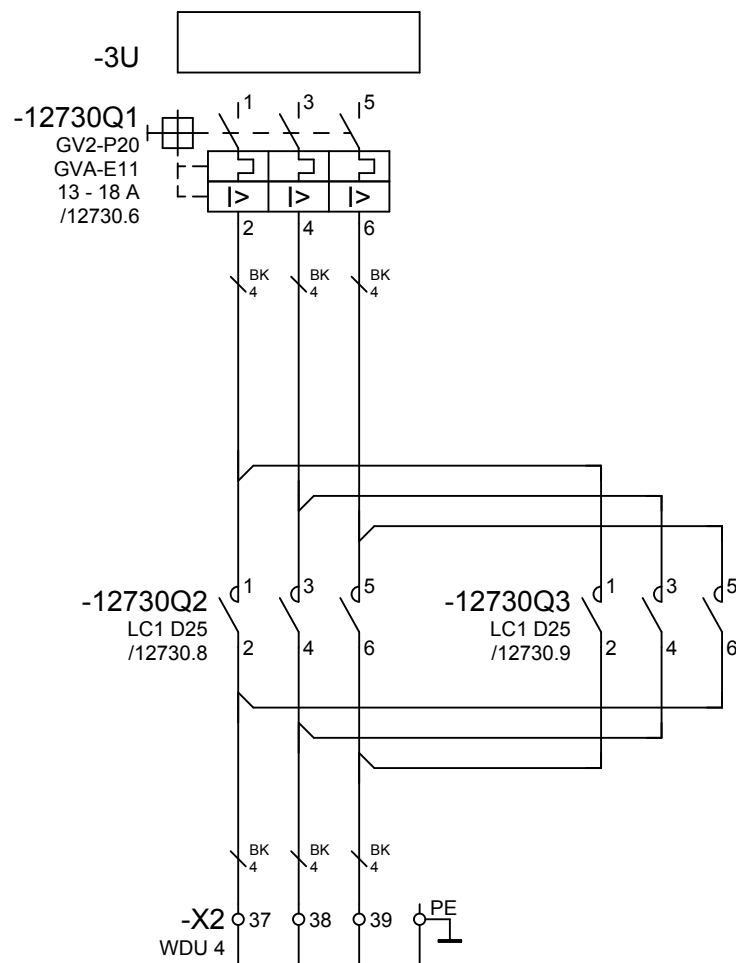
-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

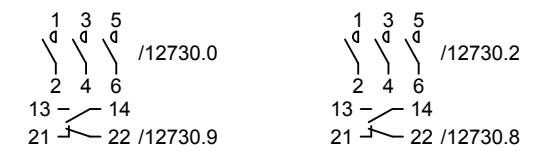
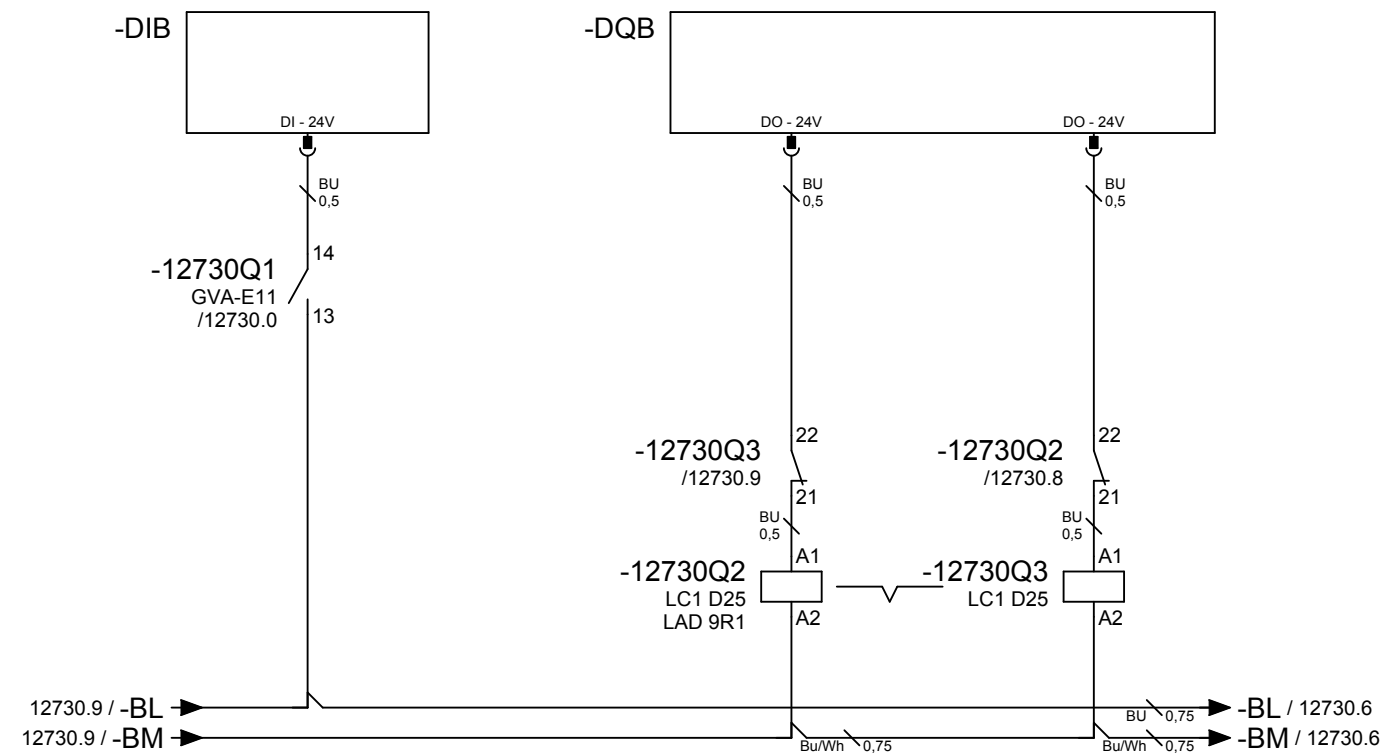
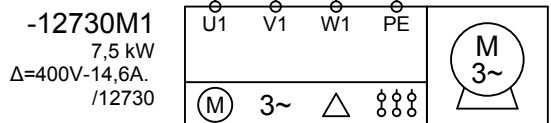


+UBxxxx-12730W2
ÖLFLEX 100
4x4
25 m

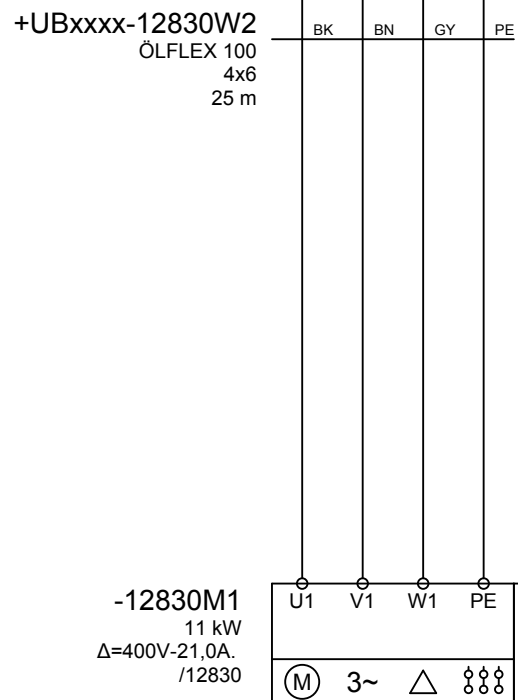
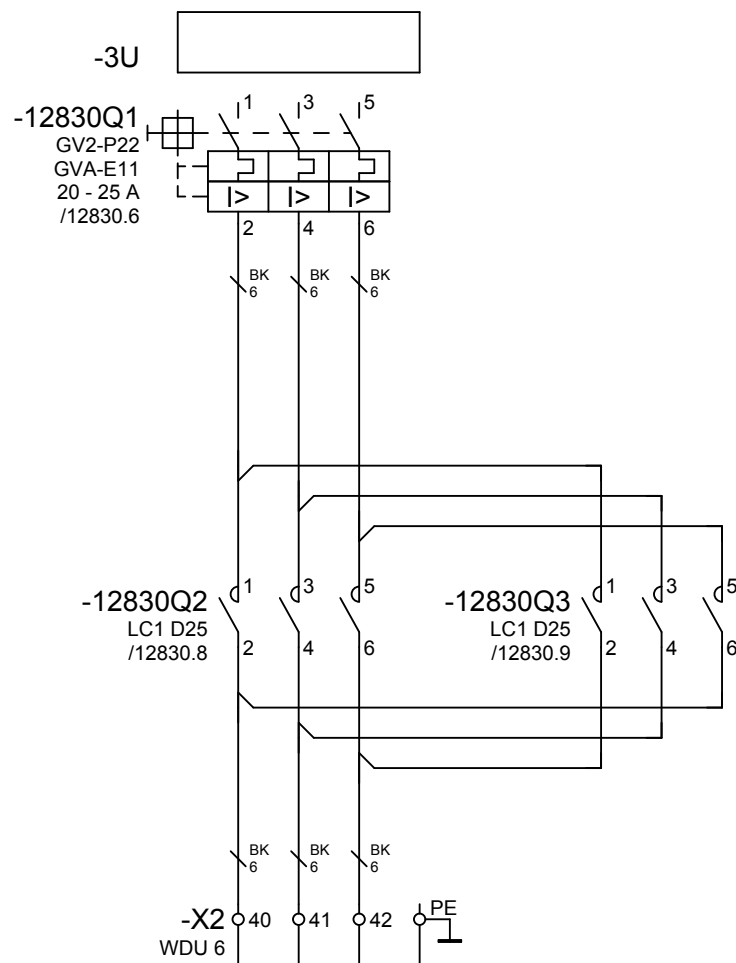
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..

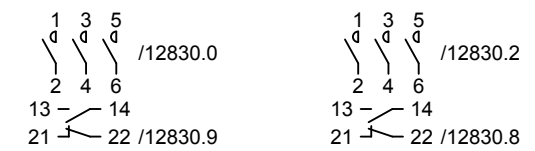
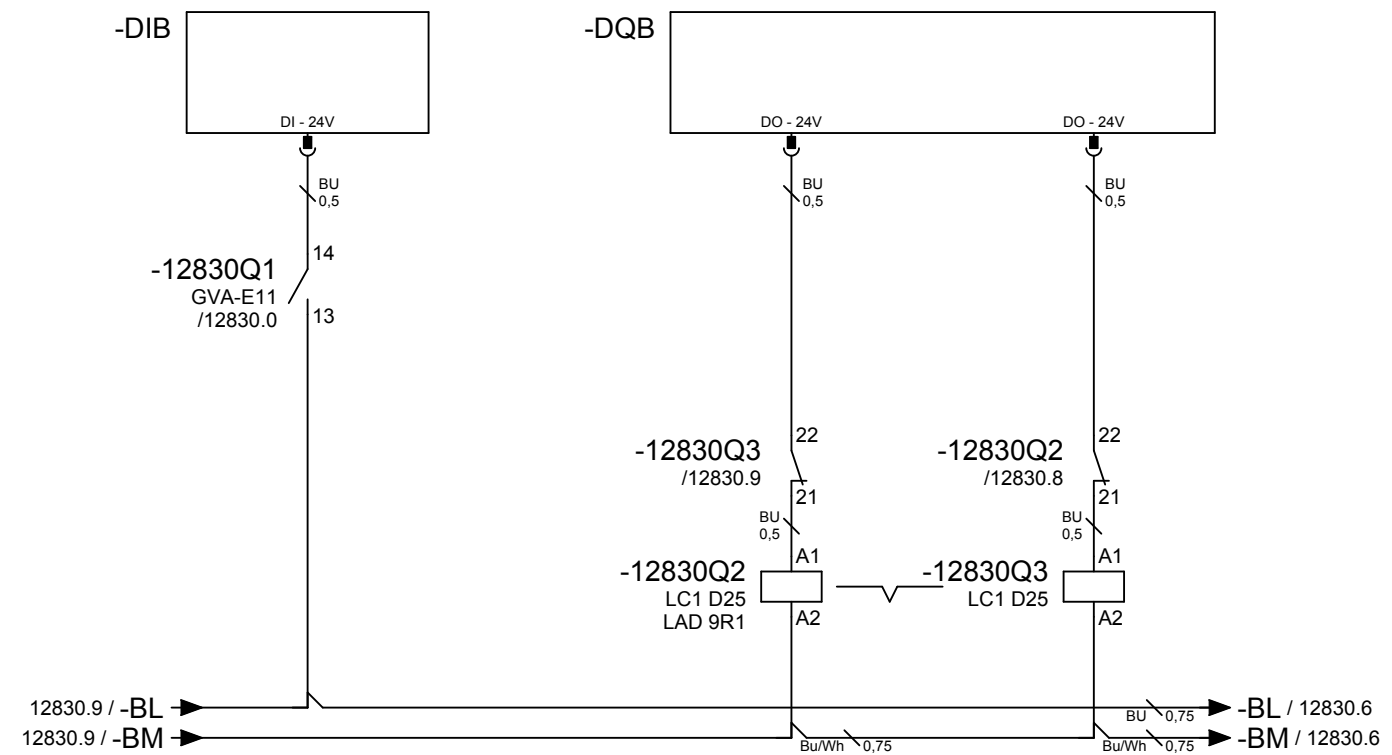


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

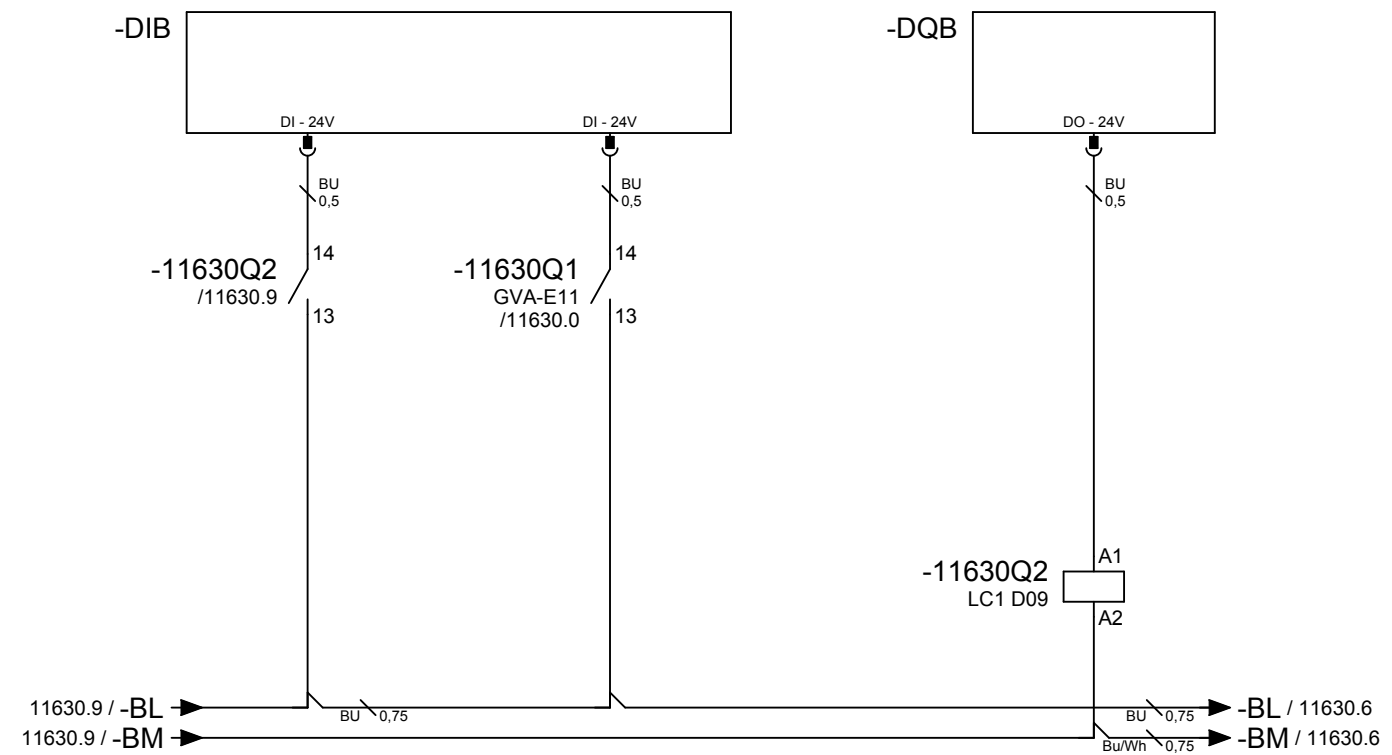
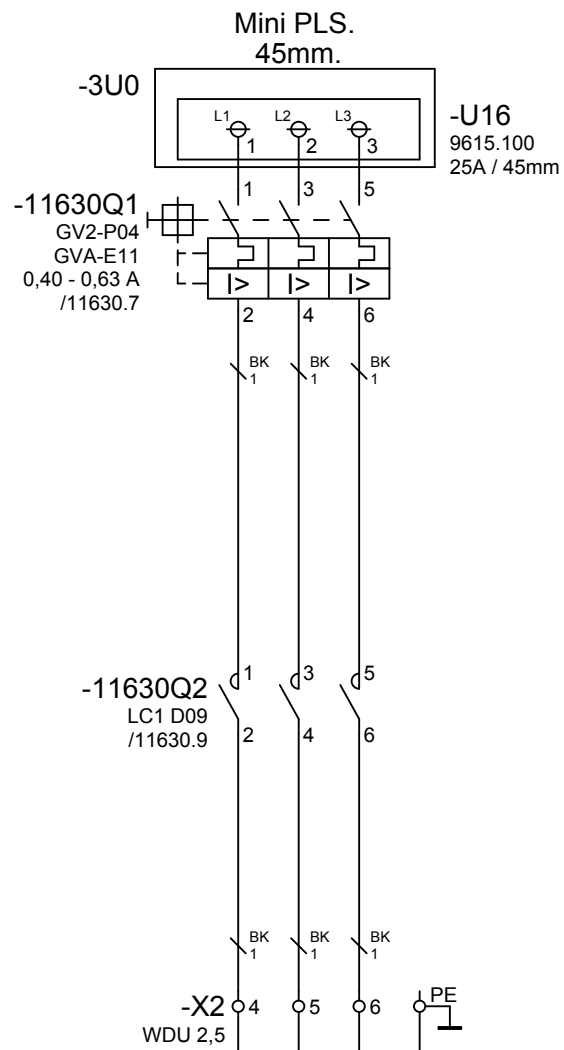


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

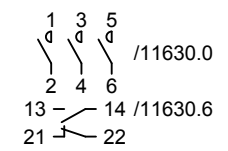
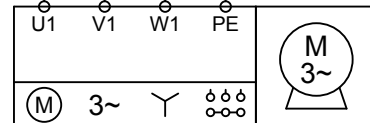


+UBxxx-11630W3
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,6A = 5,8%)
loss U at In 0,03V
loss U at 5xIn 0,15V
heat losses at In 0,06W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

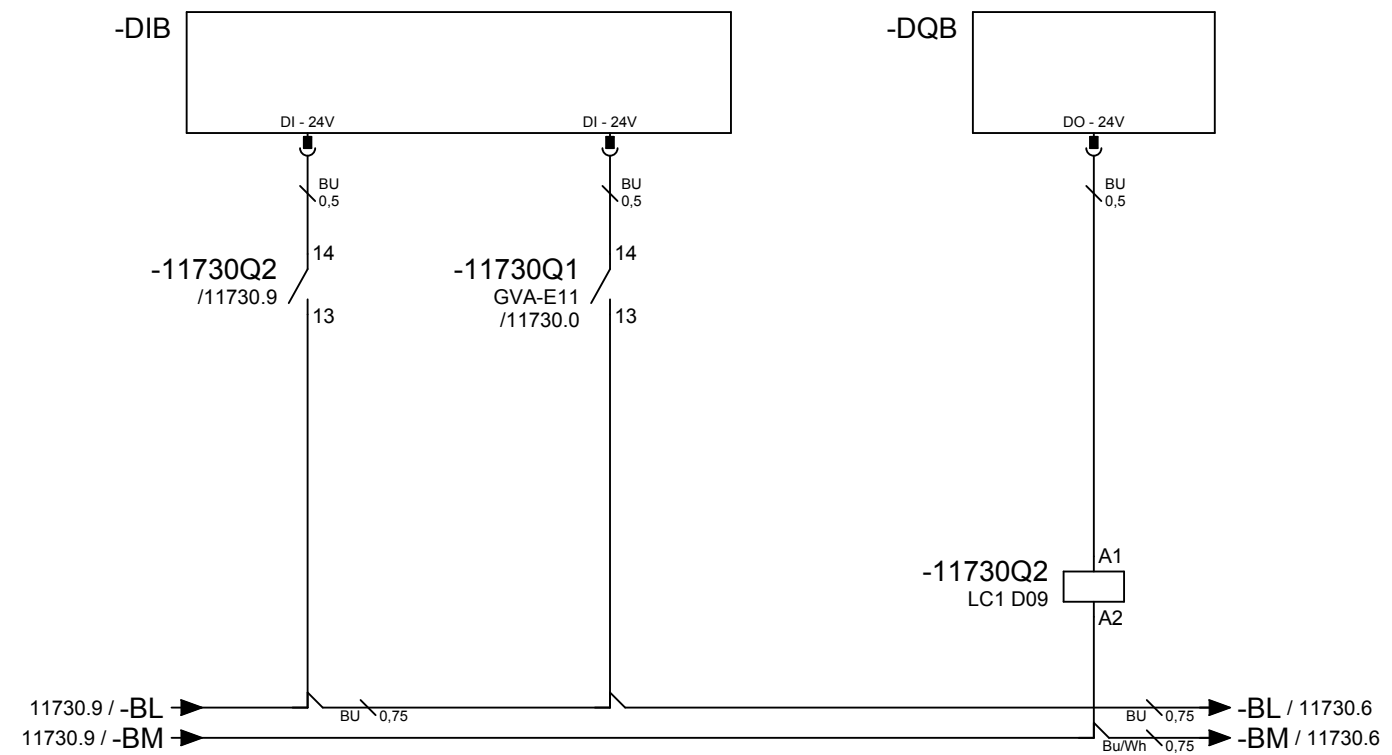
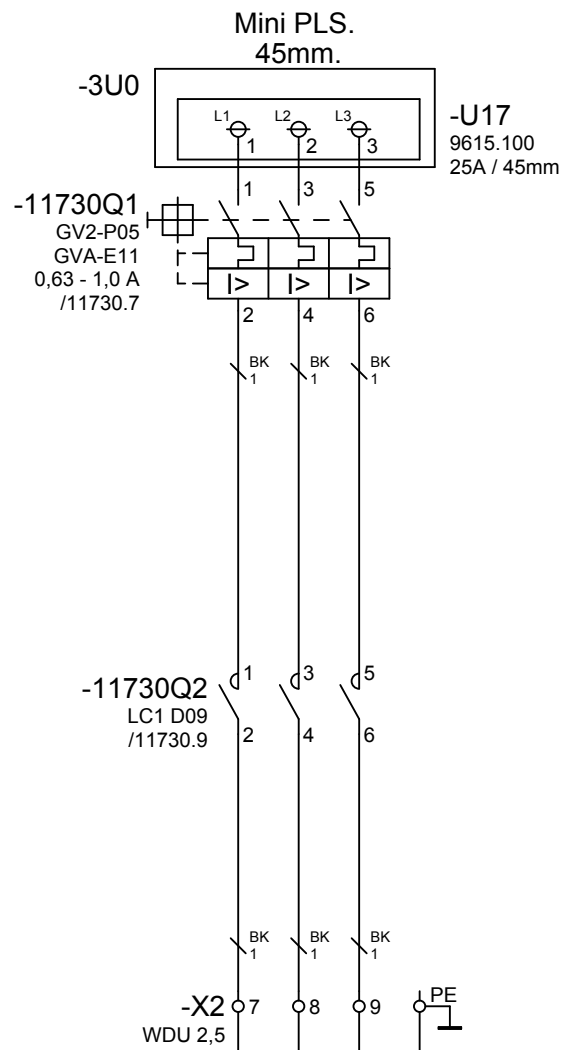
Cable route E
load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
loss U at In 0,34V
loss U at 5xIn 1,70V
heat losses at In 0,6W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

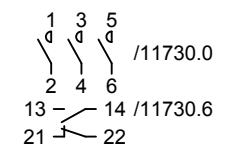


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

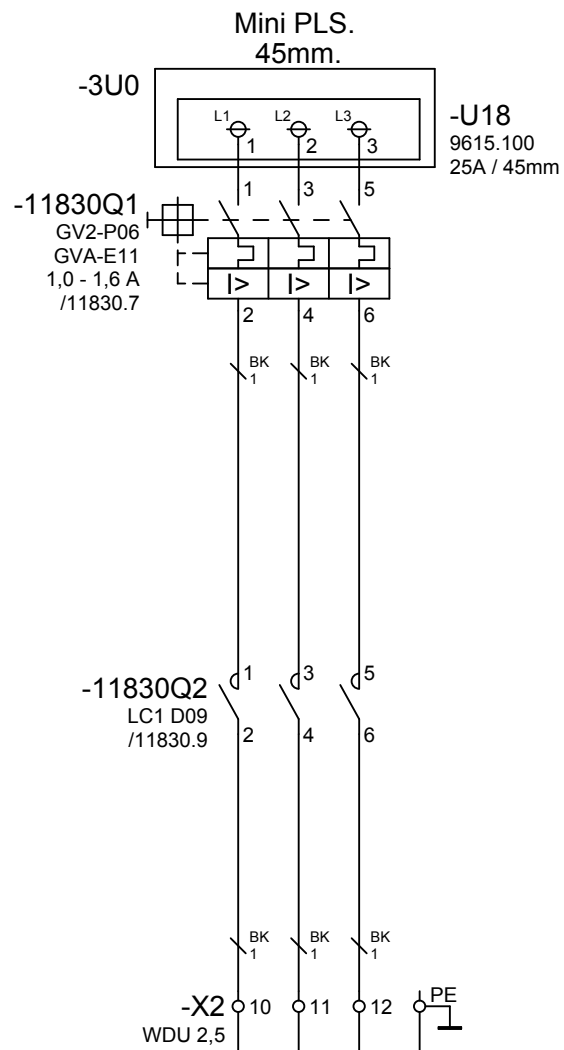
Enclosure B1
 load 1mm² = cca 10,4A; (0,8A = 7,7%)
 loss U at In 0,04V
 loss U at 5xIn 0,20V
 heat losses at In 0,10W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
 loss U at In 0,45V
 loss U at 5xIn 2,27V
 heat losses at In 1,1W (L=3x25m)

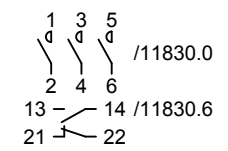
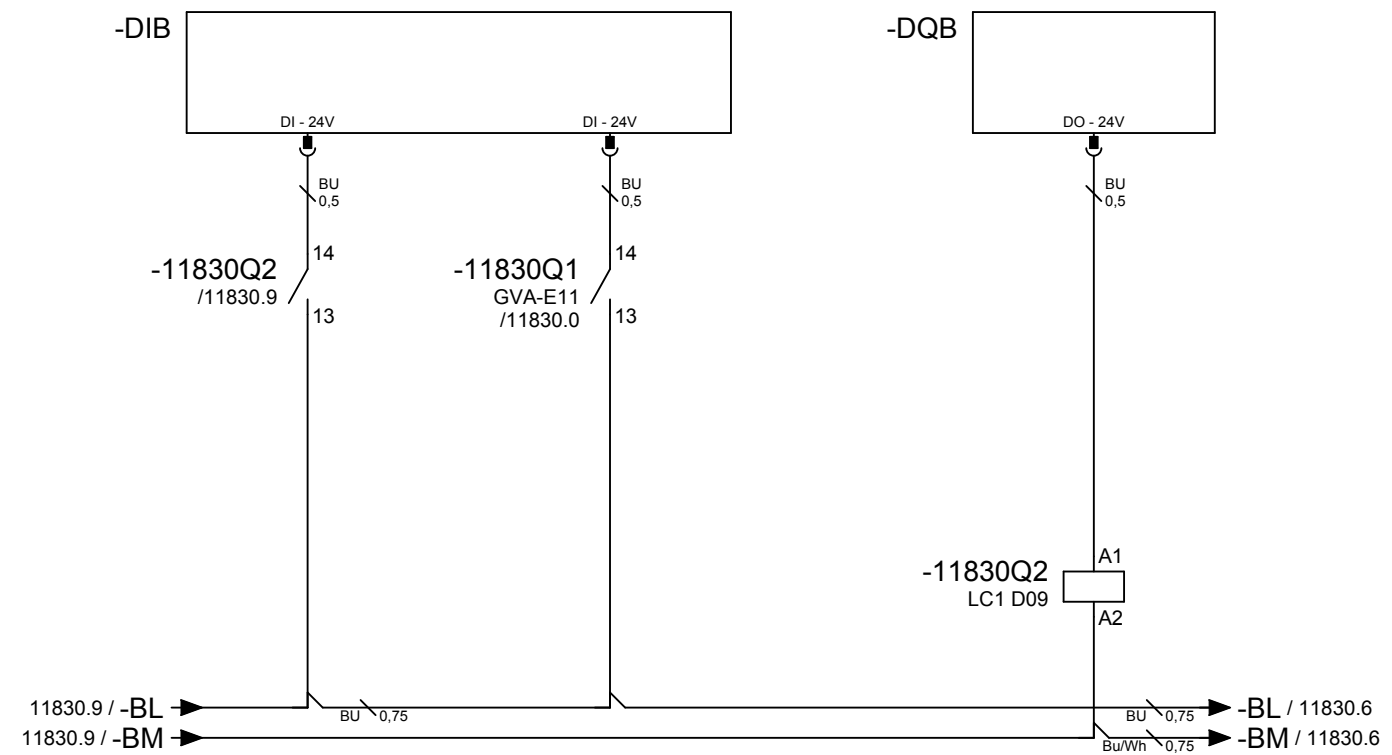


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

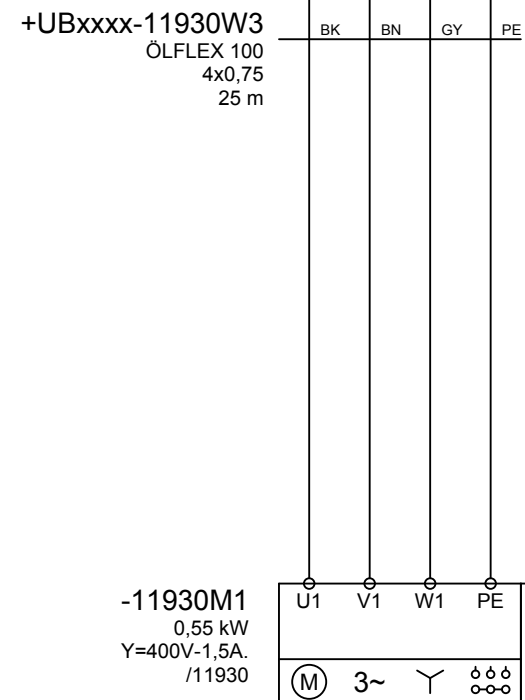
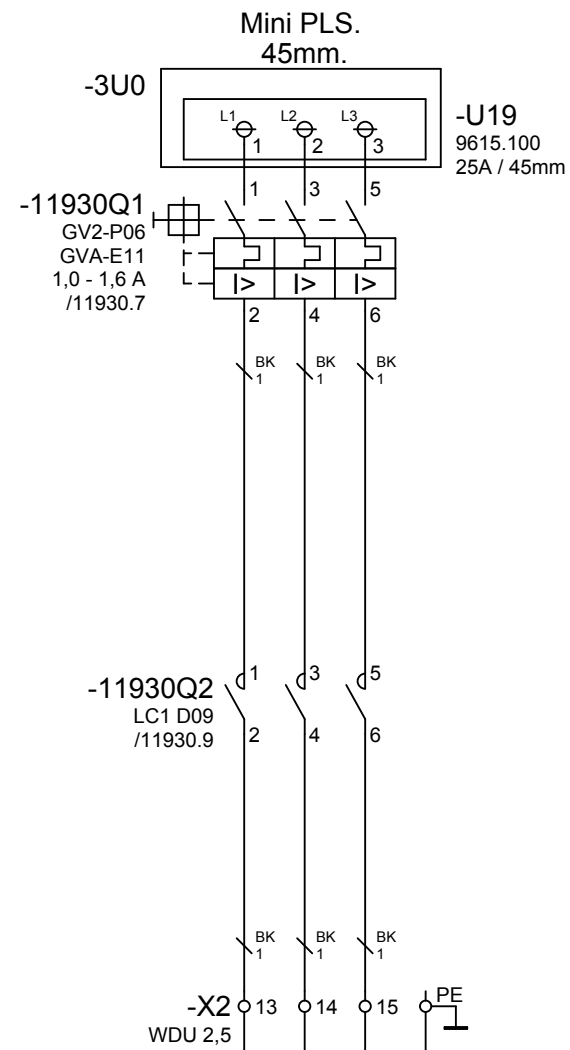


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

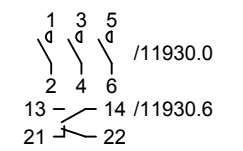
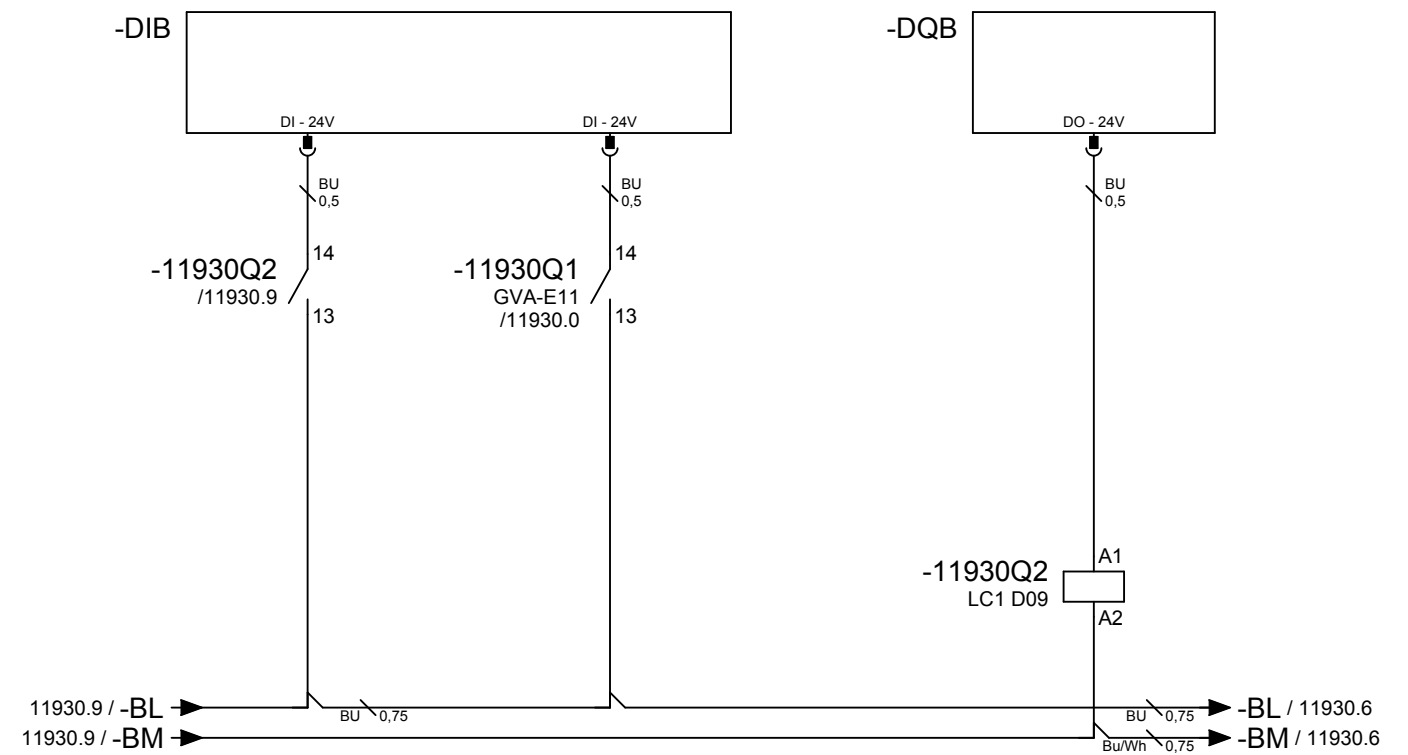


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

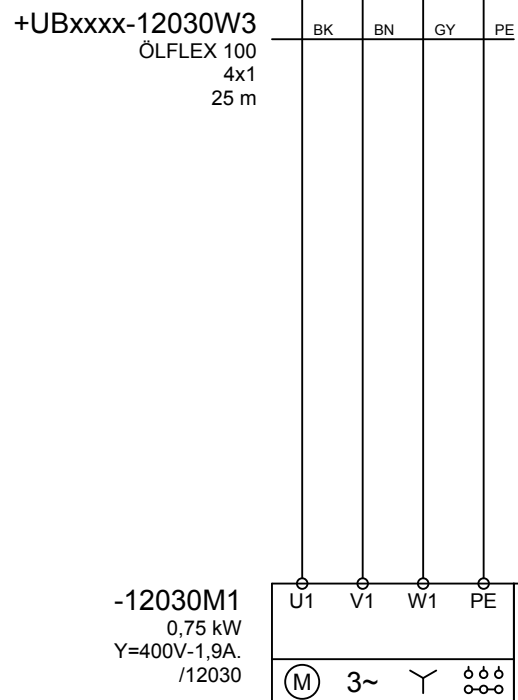
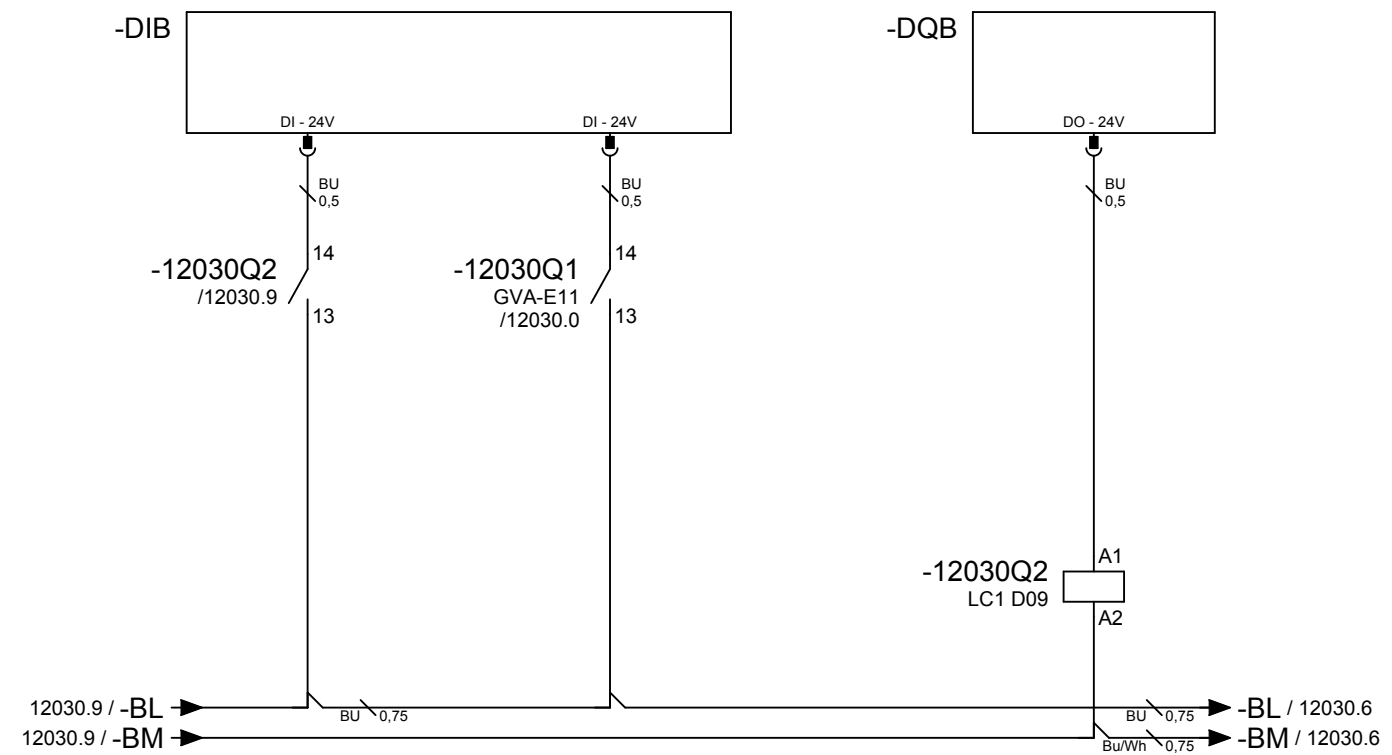
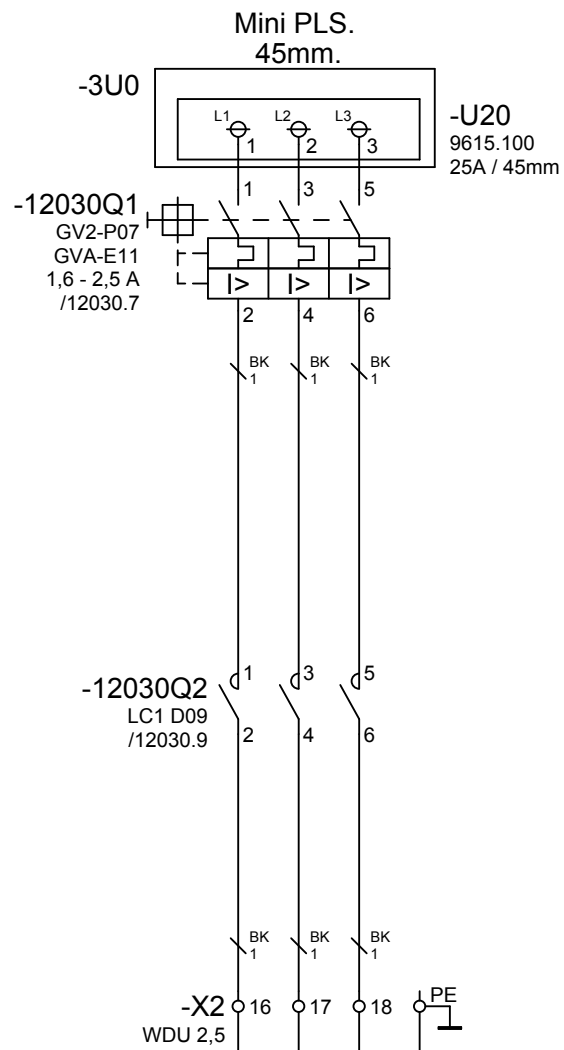
Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)

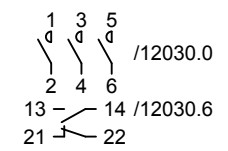


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

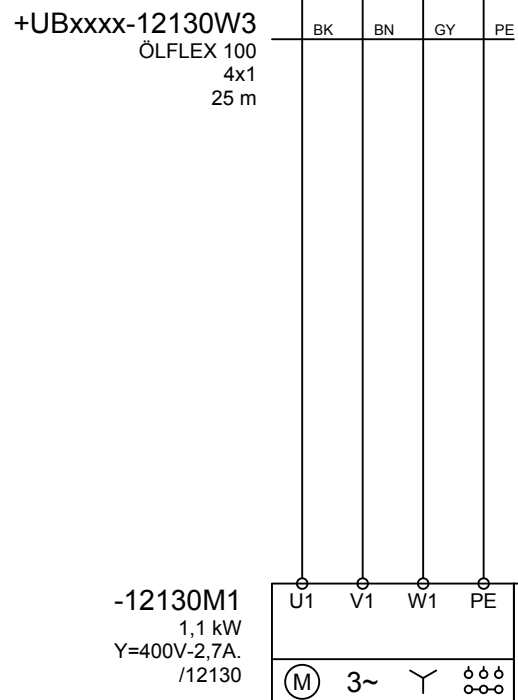
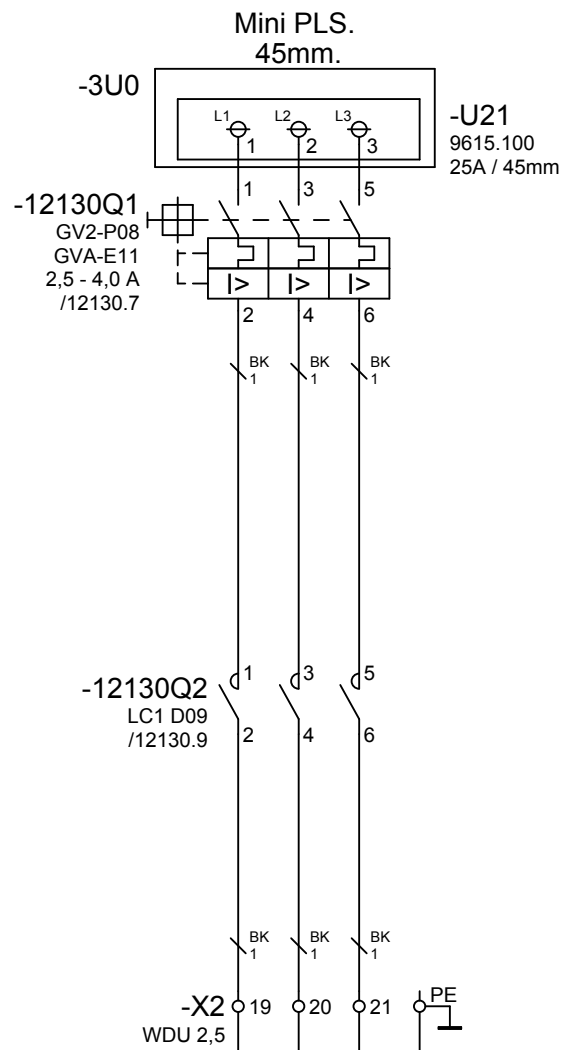


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...

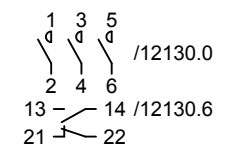
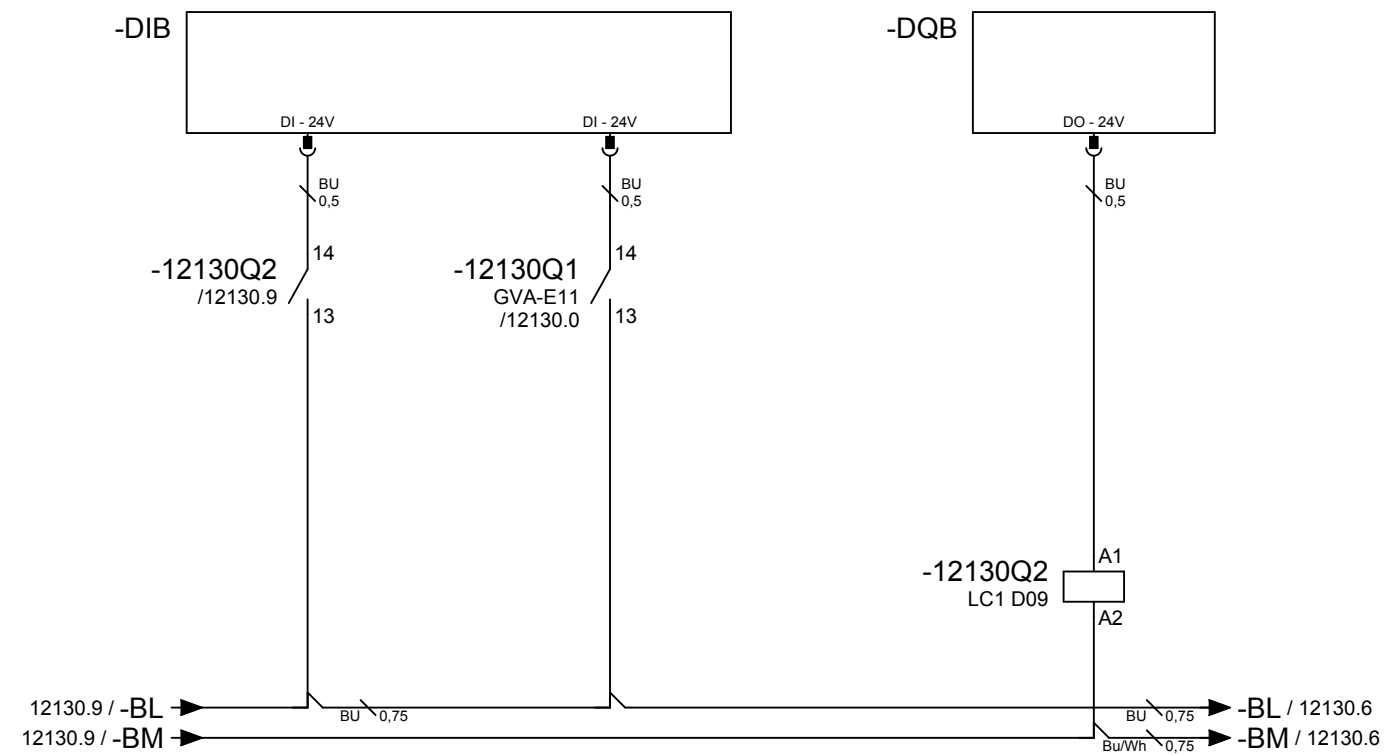


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



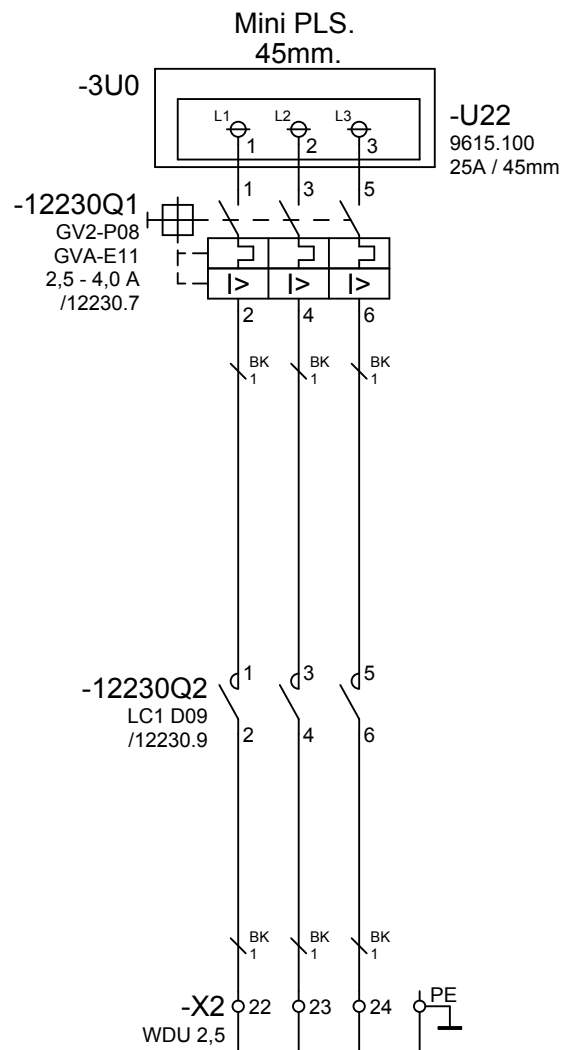
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	PACK 31. Motors.	1,1kW. 2018	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2P_C2	
	TISKO spol. s r. o.		Last revision of project		
			M = 1 : 1 Schéma vícepólového zapojení	21.10.2018 WUP0U34409	+ PLS
					12130

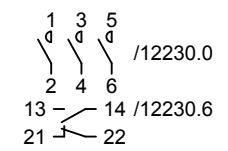
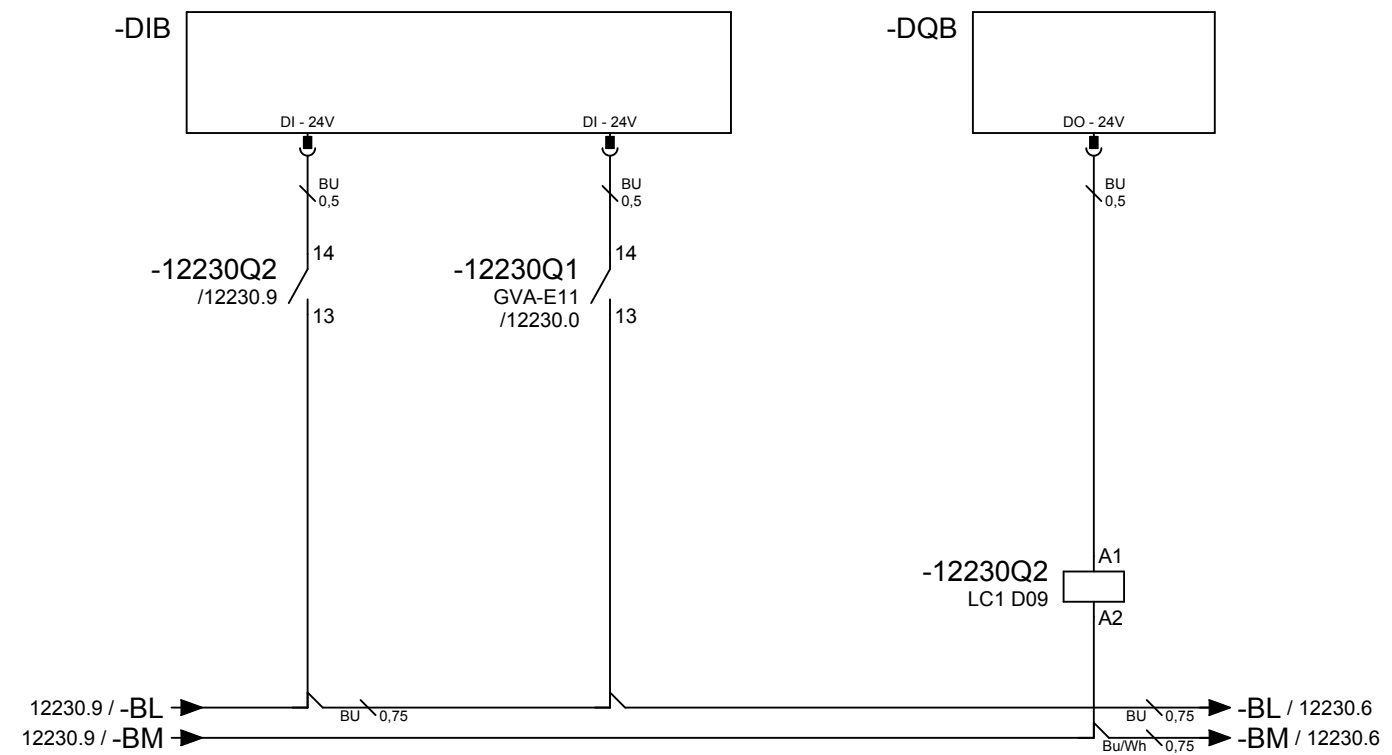
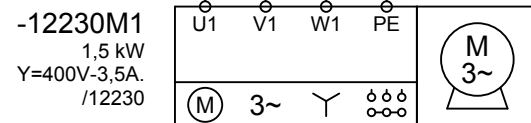


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

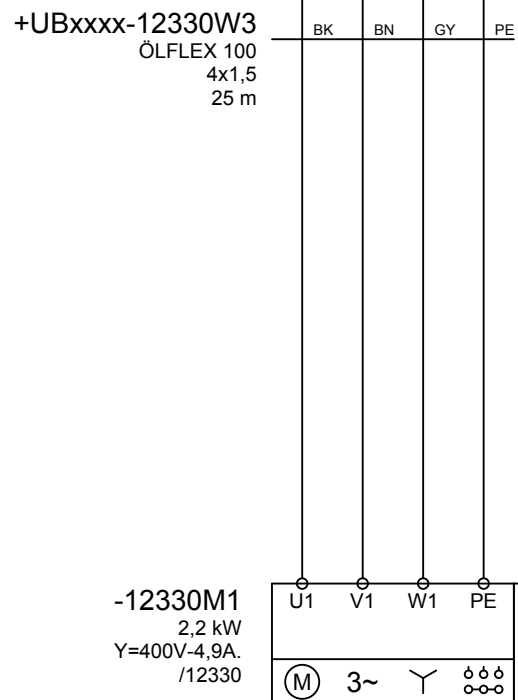
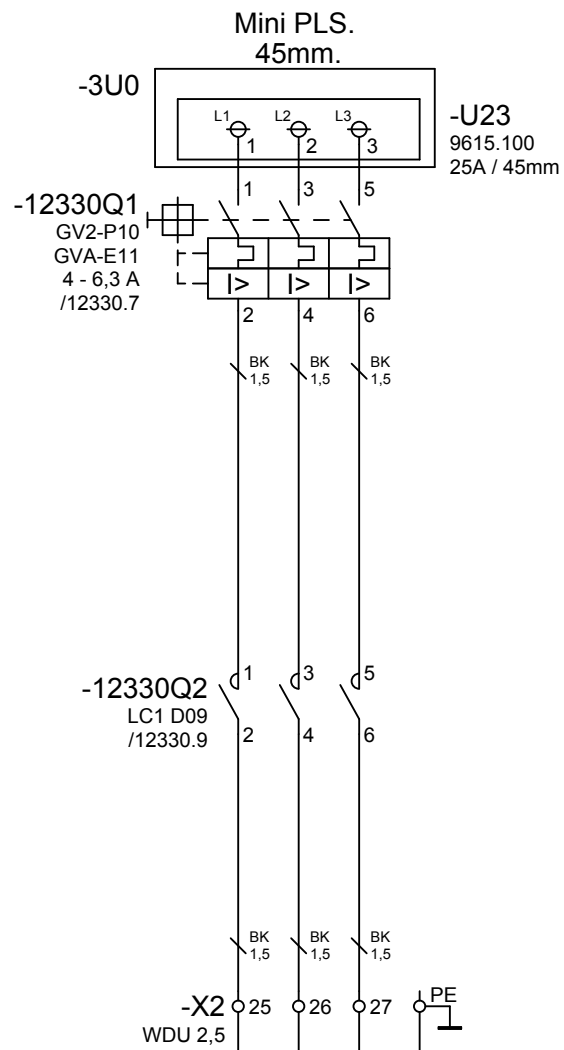
 short circuit resistance 130kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	PACK 31. Motors.	1,5kW. 2018	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2P_C2	
	TISKO spol. s r. o.		Last revision of project		
		M = 1 : 1 Schéma vícepólového zapojení	21.10.2018	WUP0U34409	+ PLS
					12230

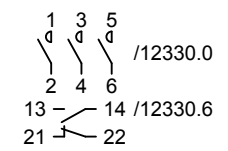
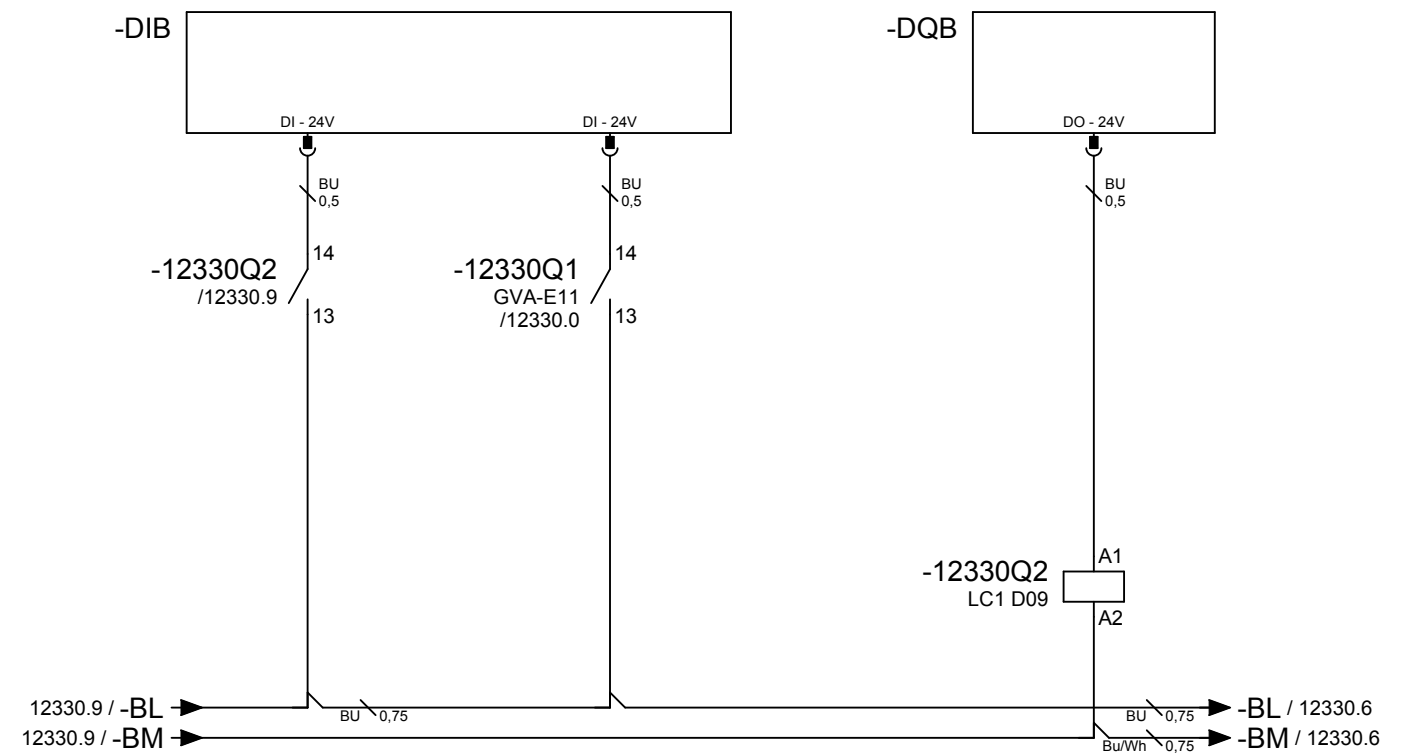


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

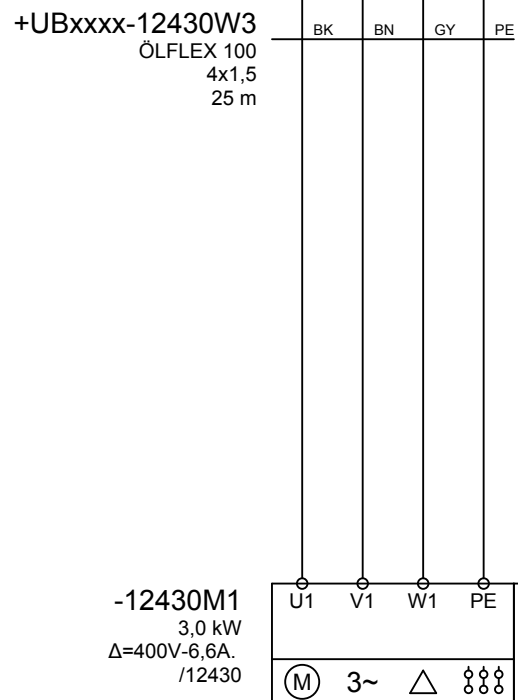
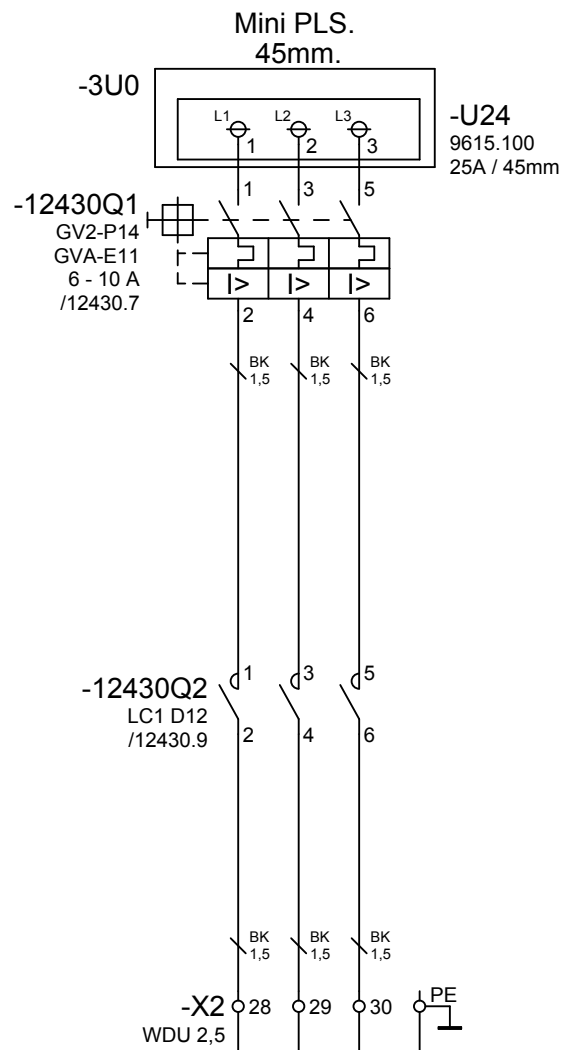
Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)



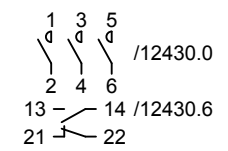
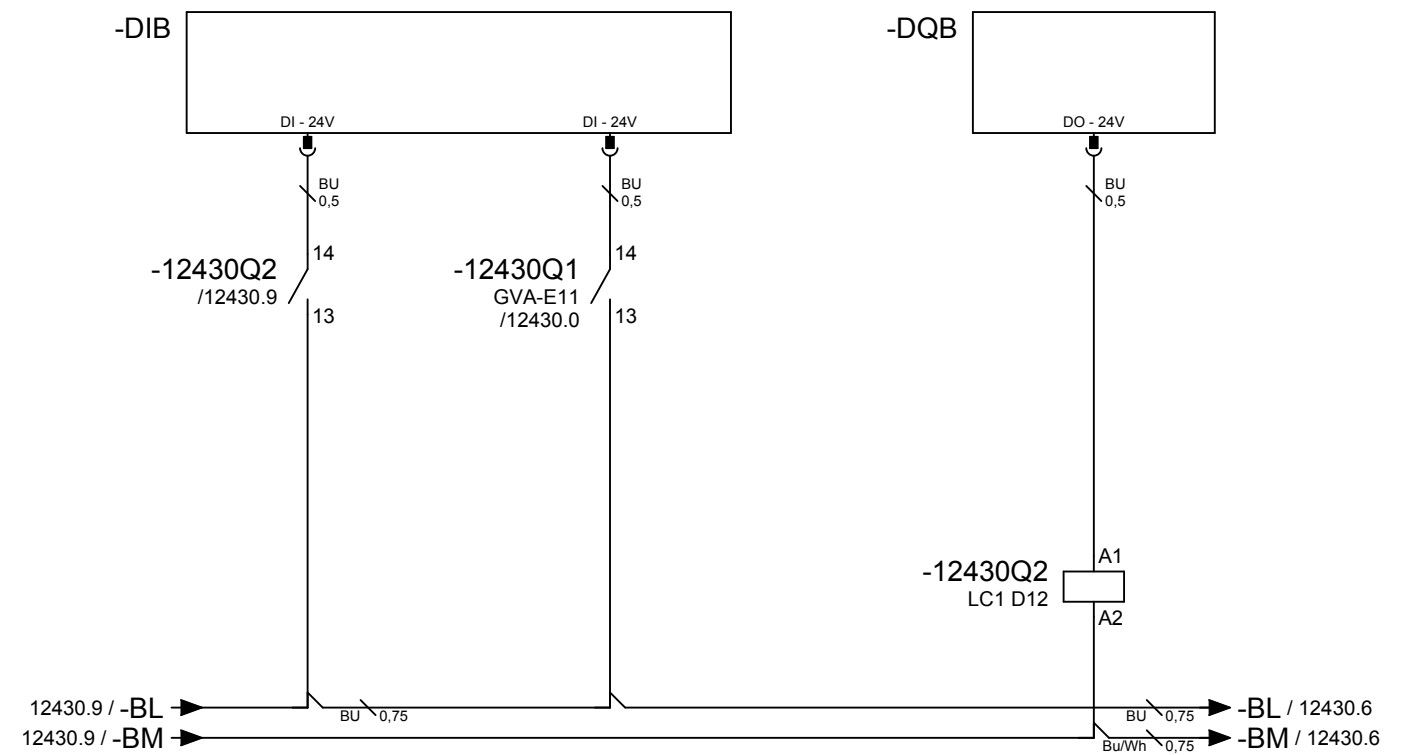
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



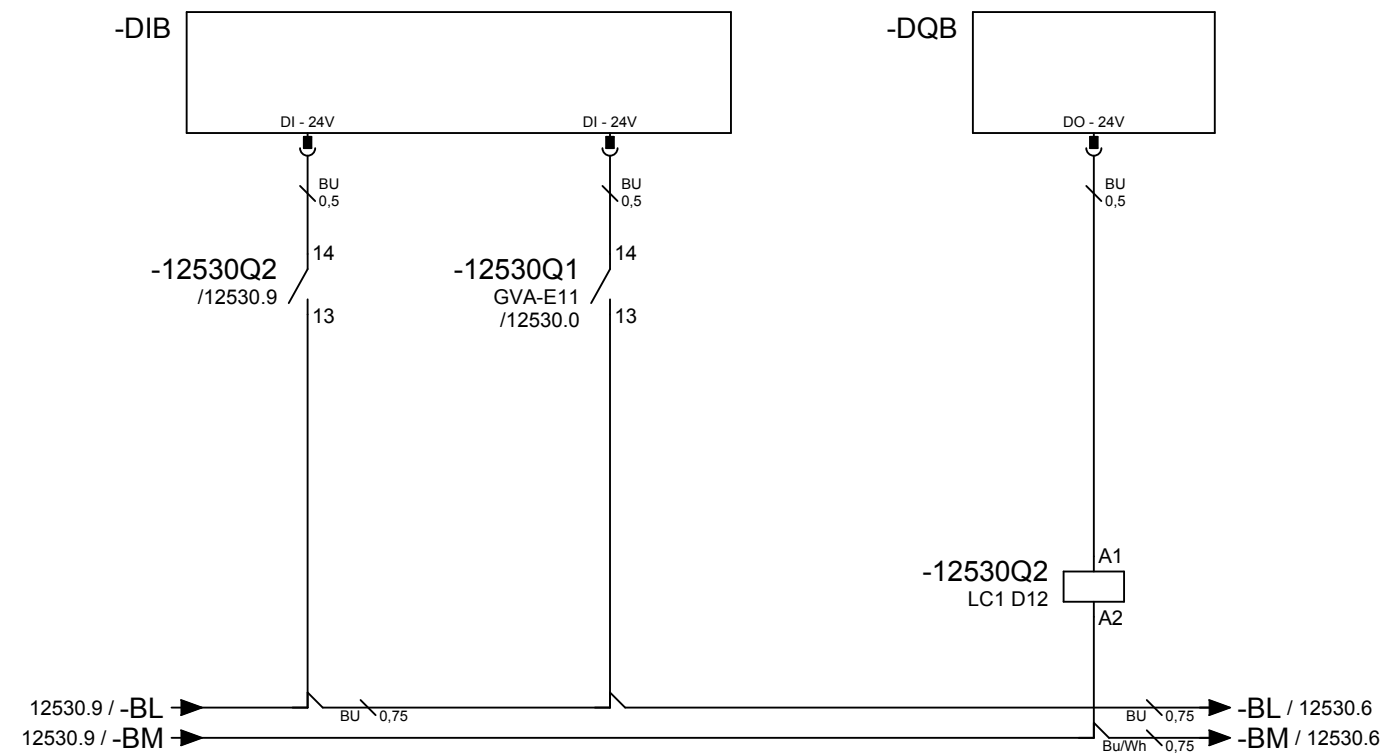
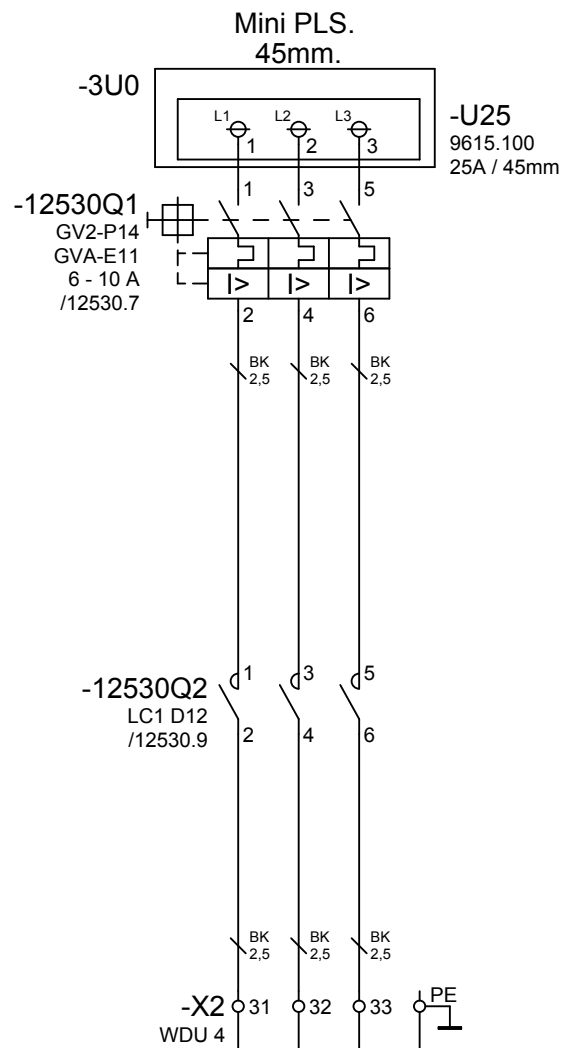
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1,5mm² = cca 13,5A; (7A = 51,8%)
loss U at In 0,24V
loss U at 5xIn 1,19V
heat losses at In 5,00W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (7A = 37,8%)
loss U at In 1,98V
loss U at 5xIn 9,92V
heat losses at In 41,7W (L=3x25m)
... ..
... ..



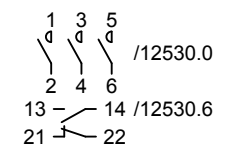
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



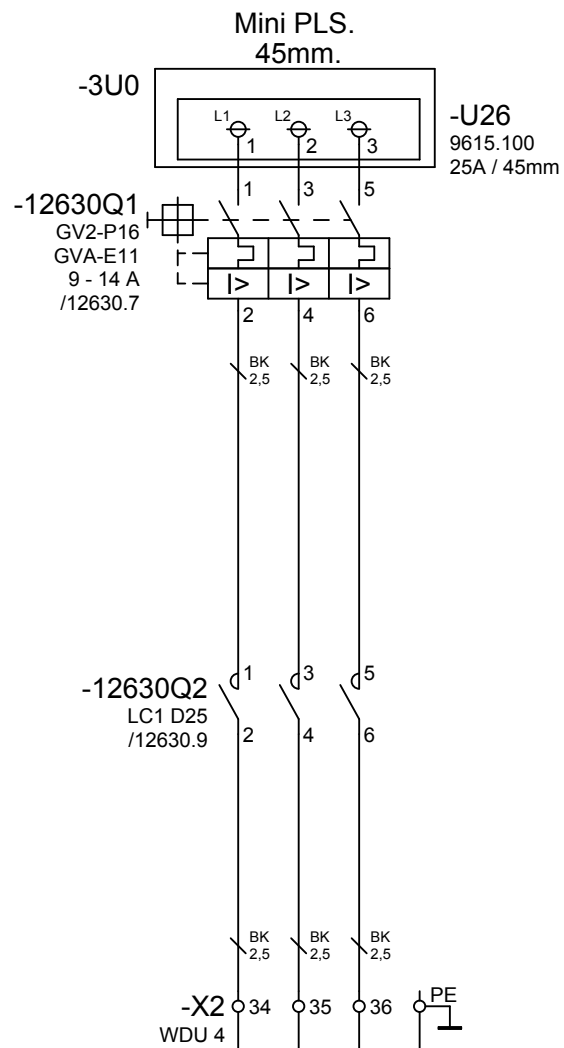
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
loss U at In 0,17V
loss U at 5xIn 0,87V
heat losses at In 4,42W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
loss U at In 2,41V
loss U at 5xIn 12,04V
heat losses at In 61,4W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

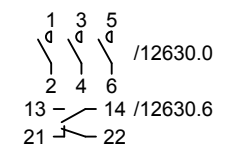
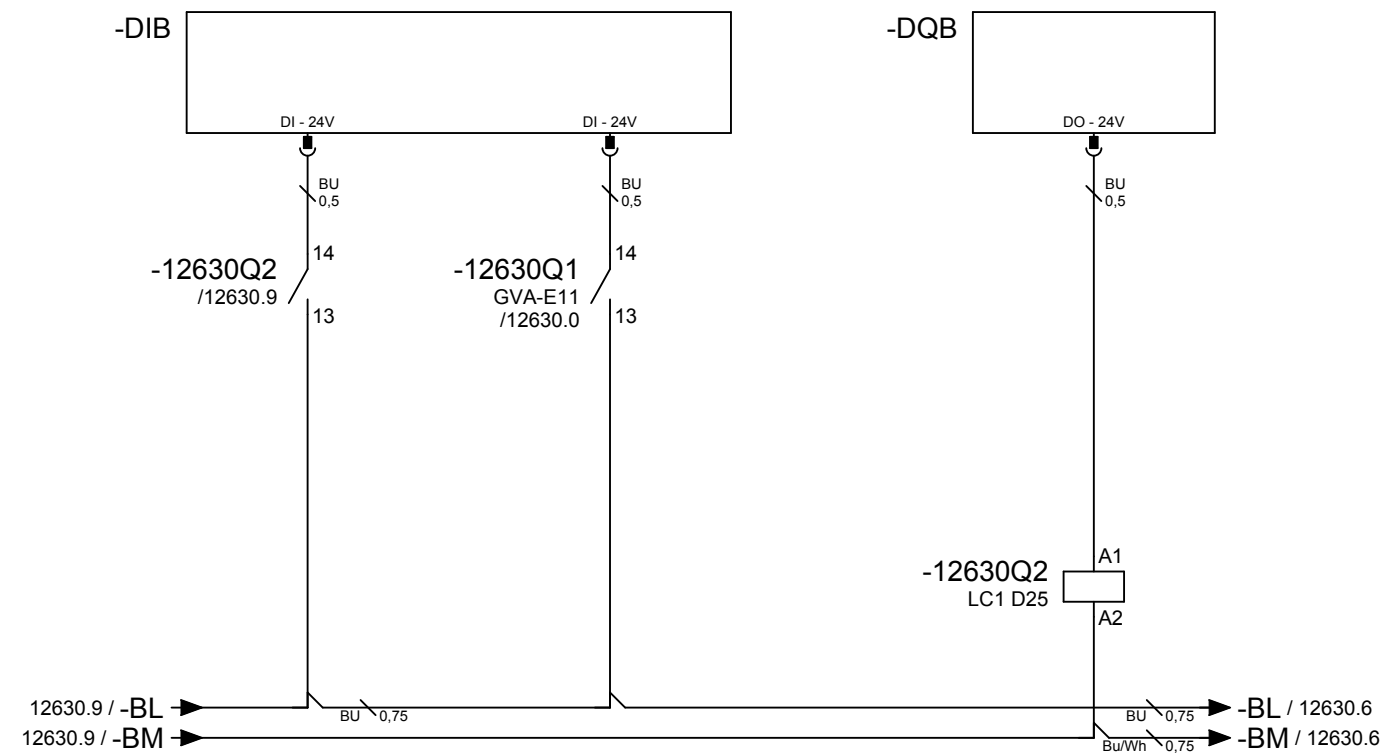


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

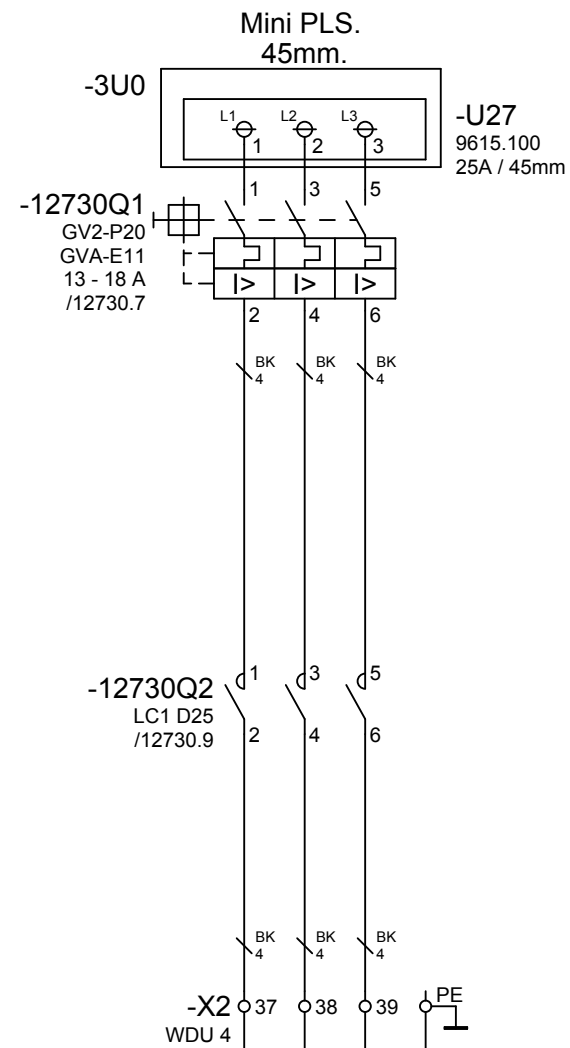
Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

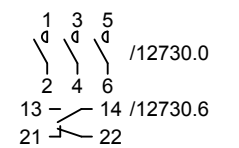
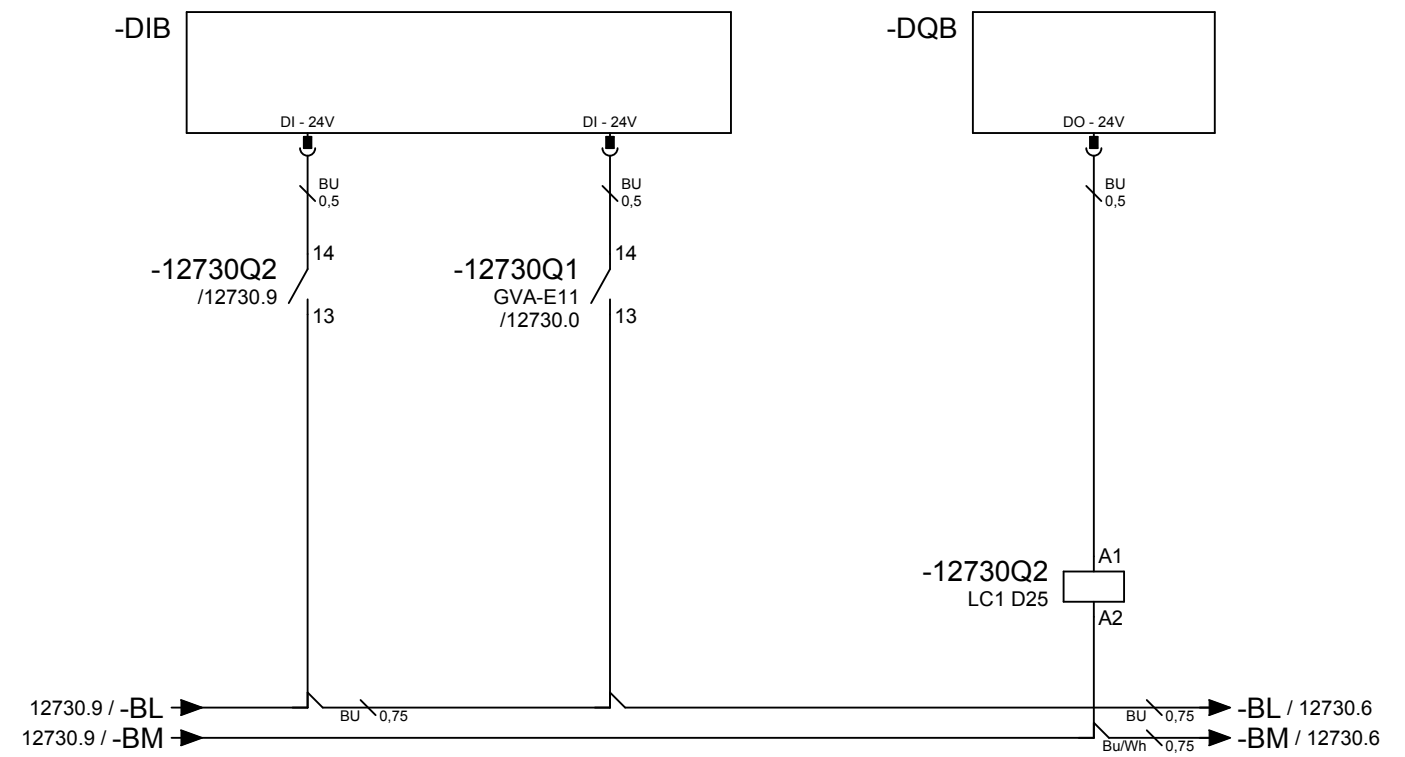


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

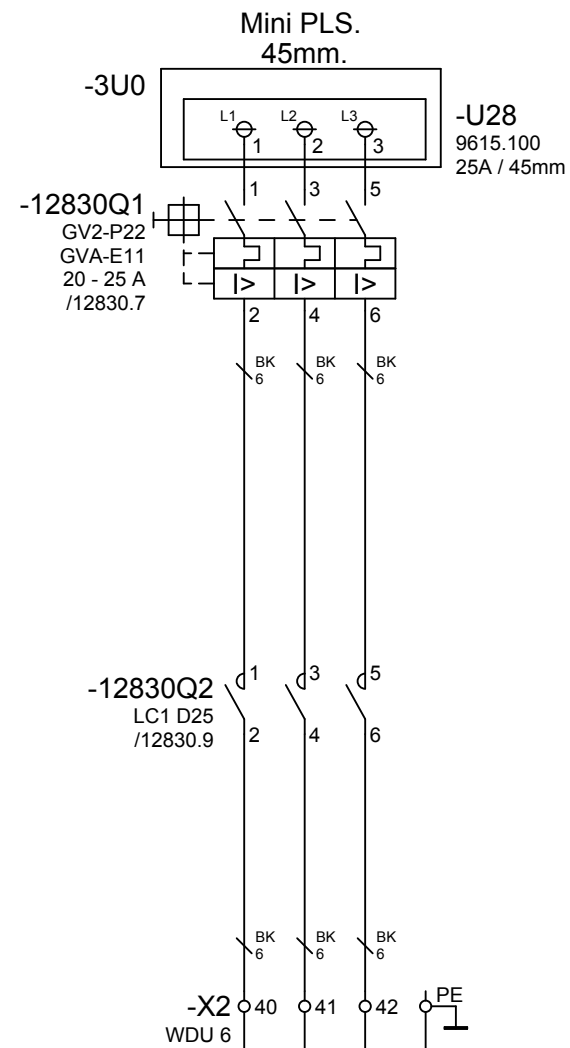
Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

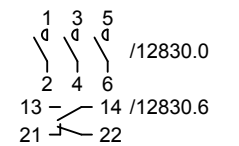
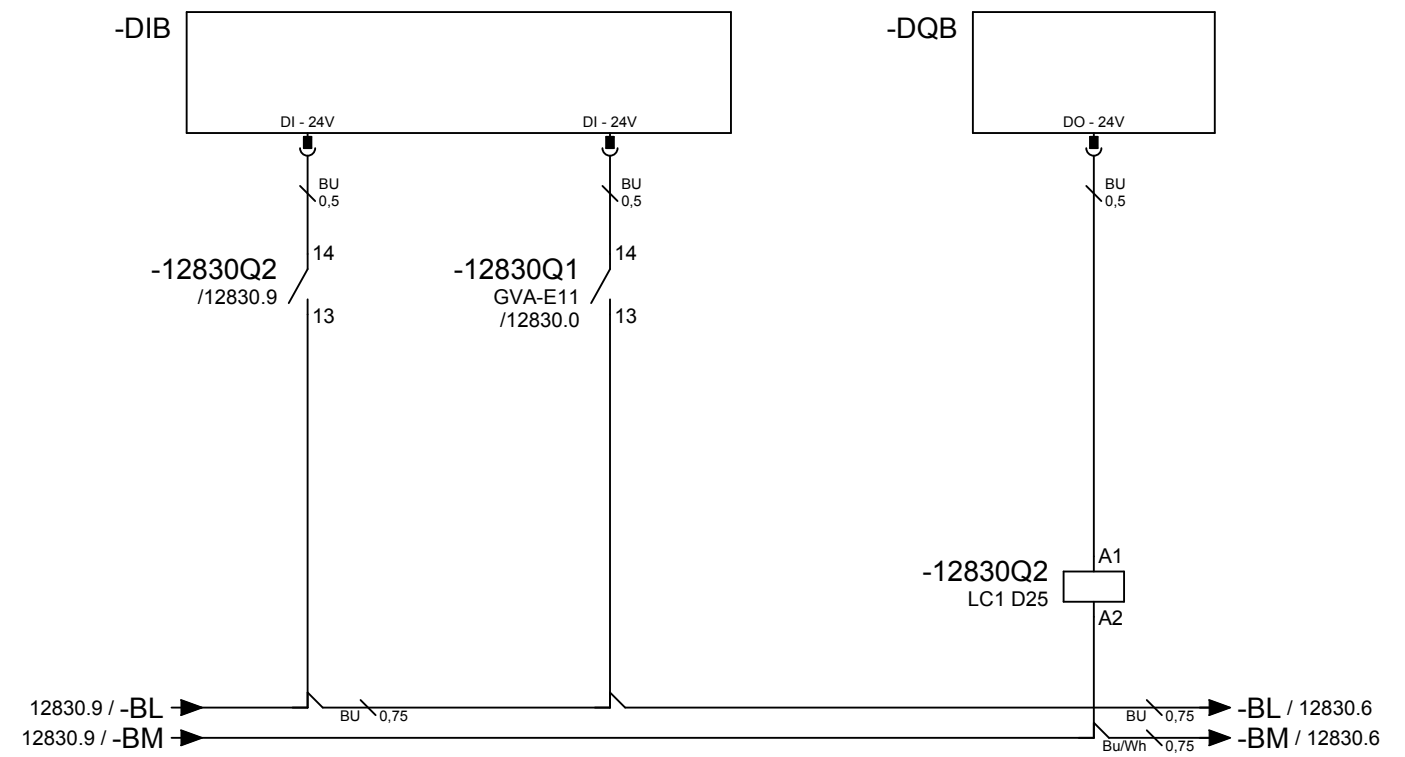


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

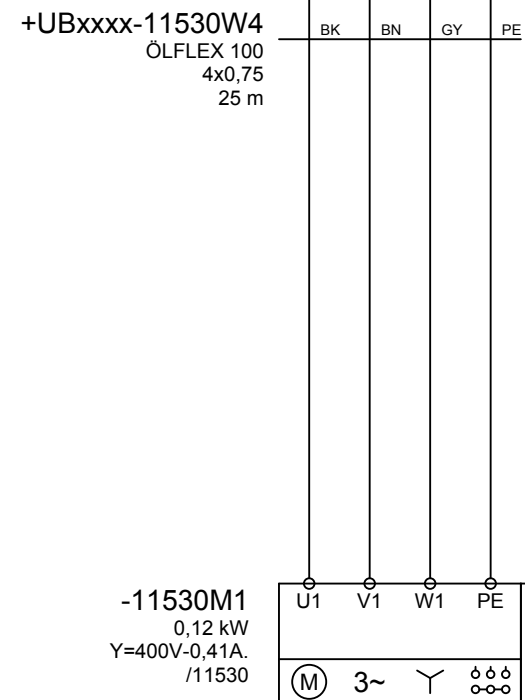
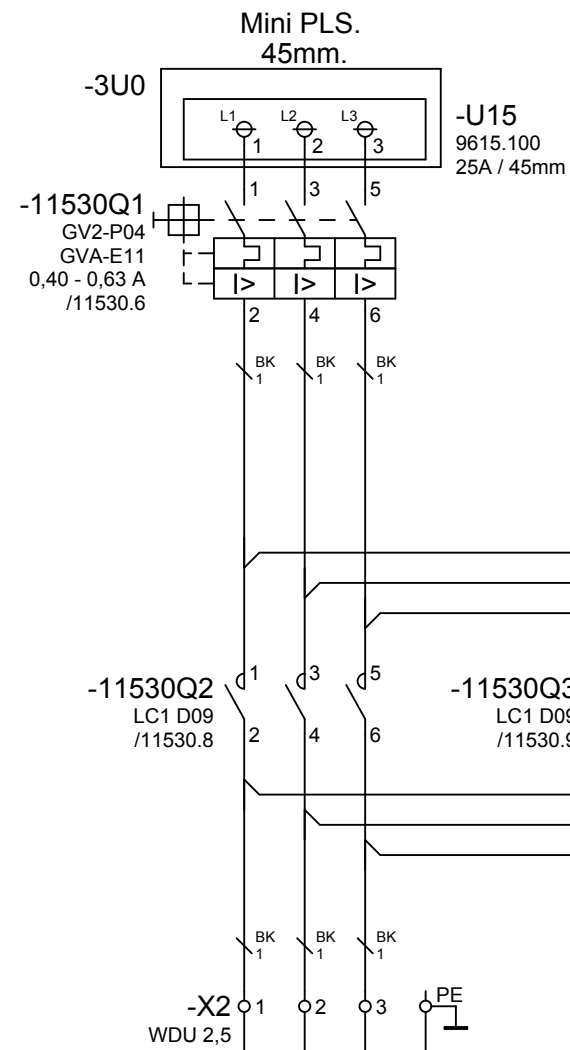
Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

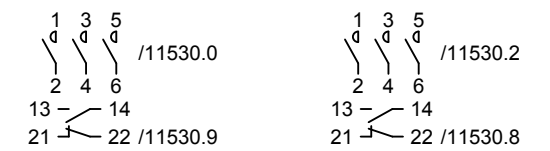
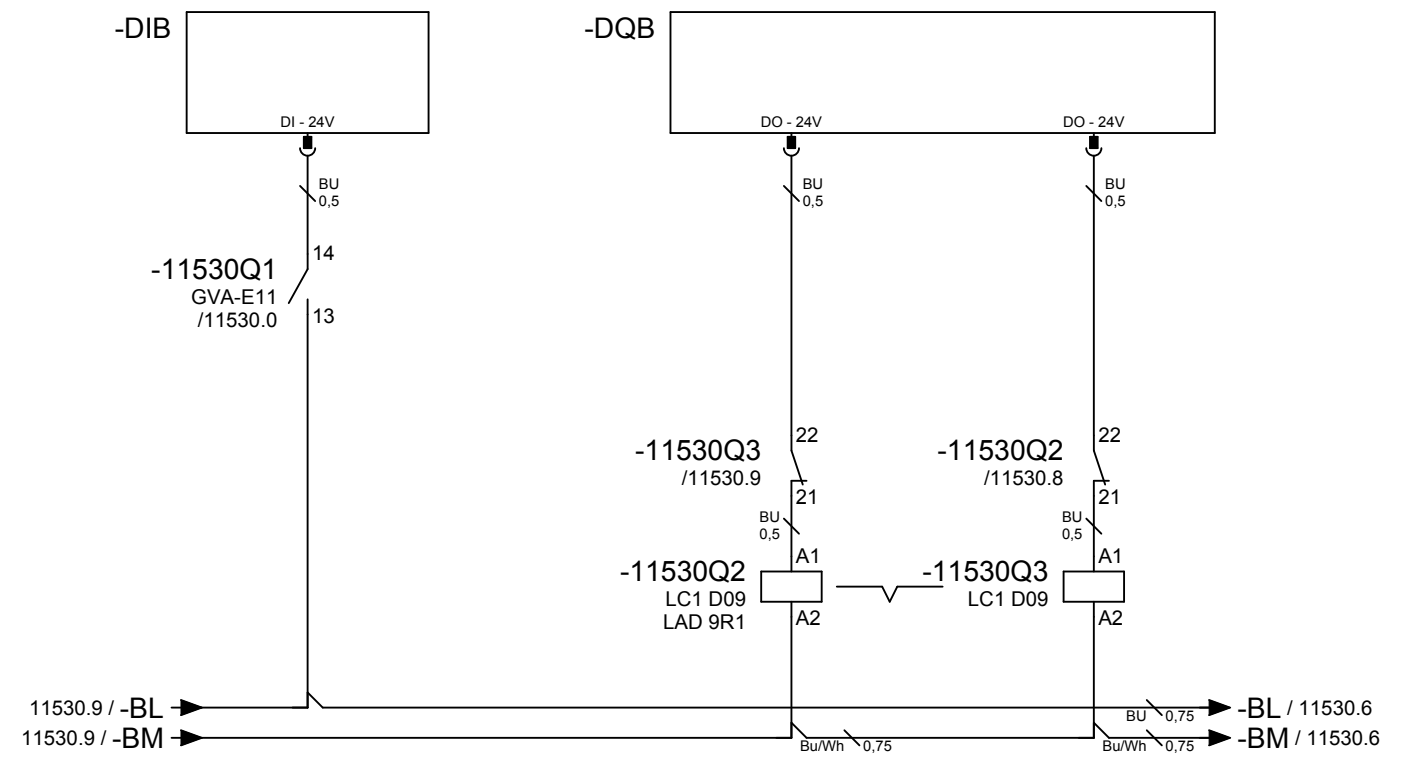


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,41A = 4,0%)
 loss U at In 0,02V
 loss U at 5xIn 0,10V
 heat losses at In 0,03W (L=3x3m)

 short circuit resistance 130kA at 415V

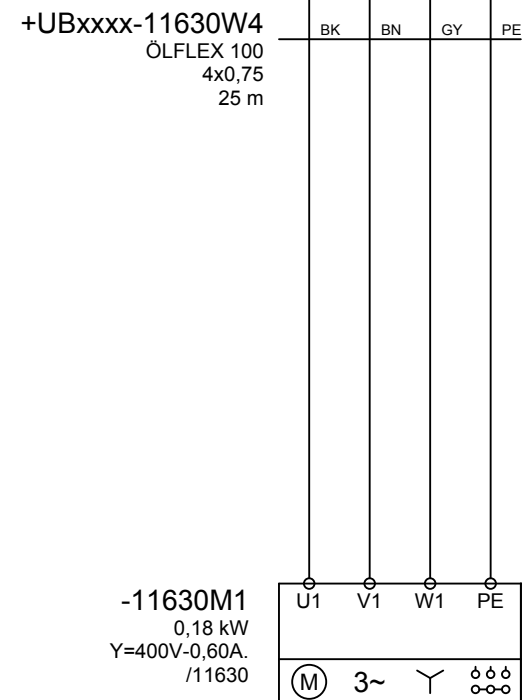
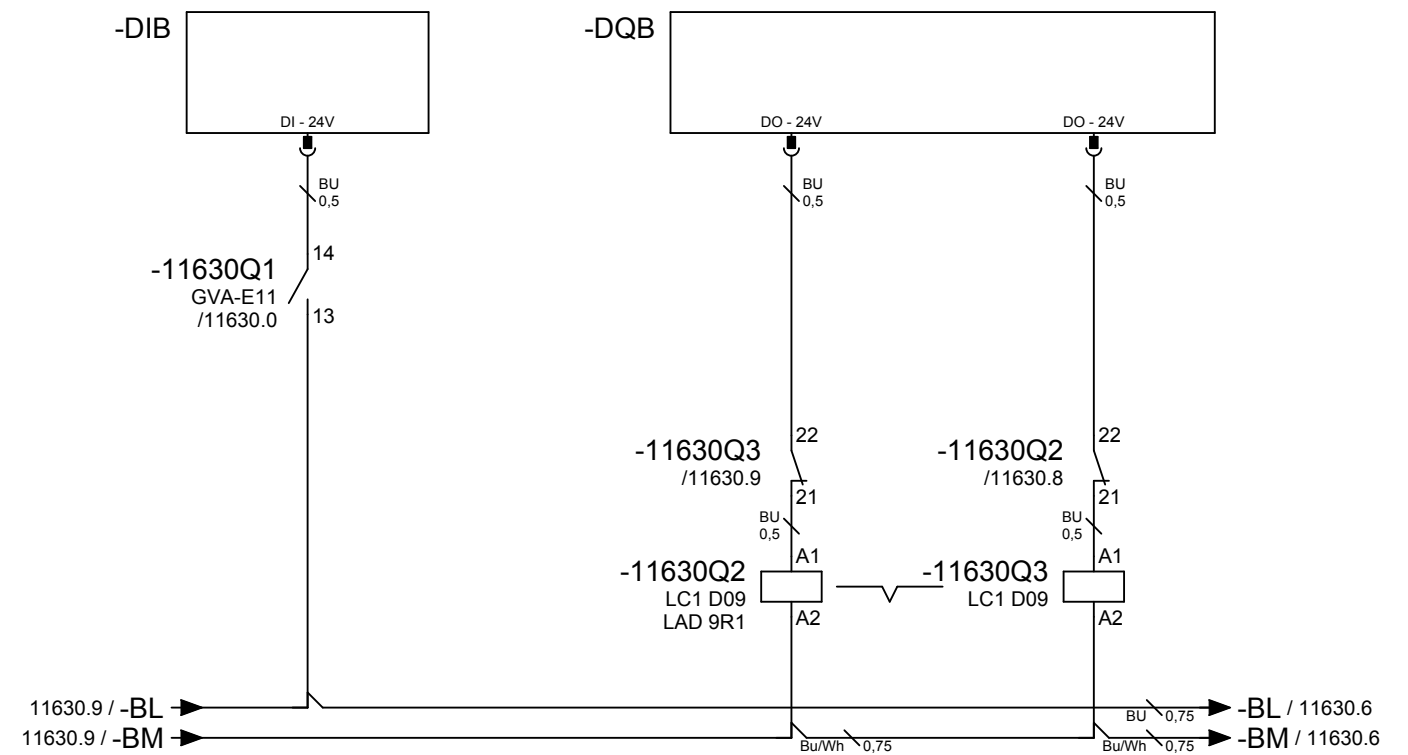
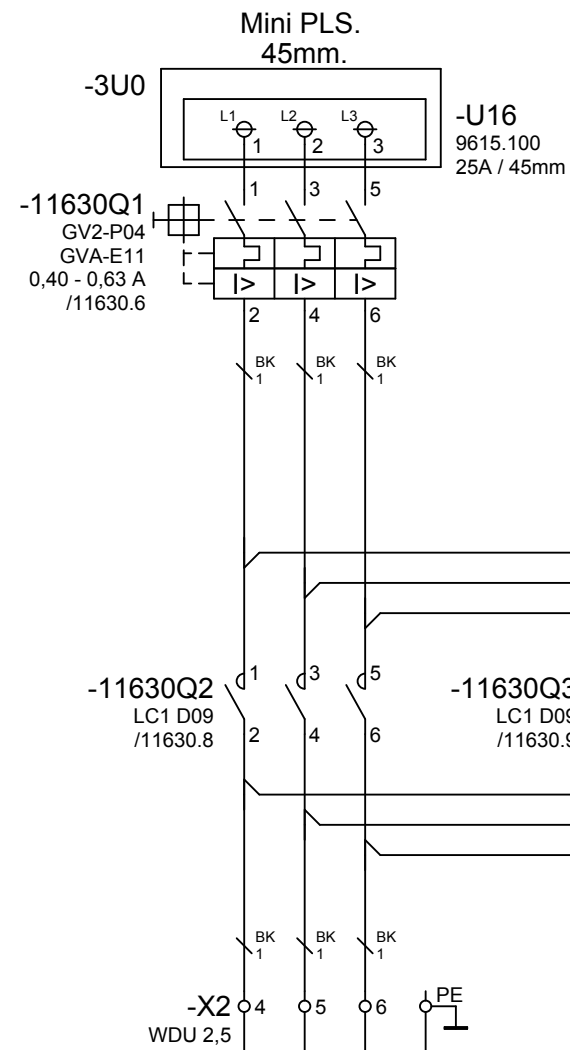
Cable route E
 load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
 loss U at In 0,23V
 loss U at 5xIn 1,16V
 heat losses at In 0,3W (L=3x25m)



Circuit breaker. 0=Failure.

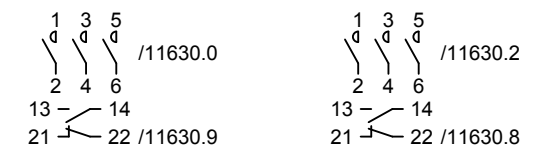
Motor. Contactor.

Motor. Contactor.

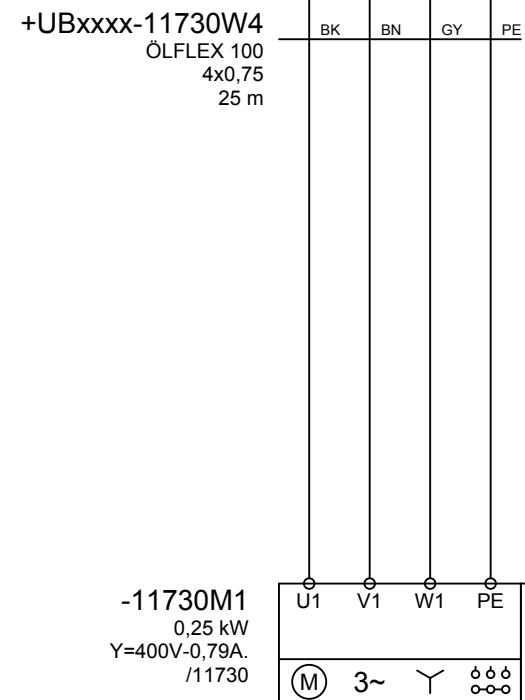
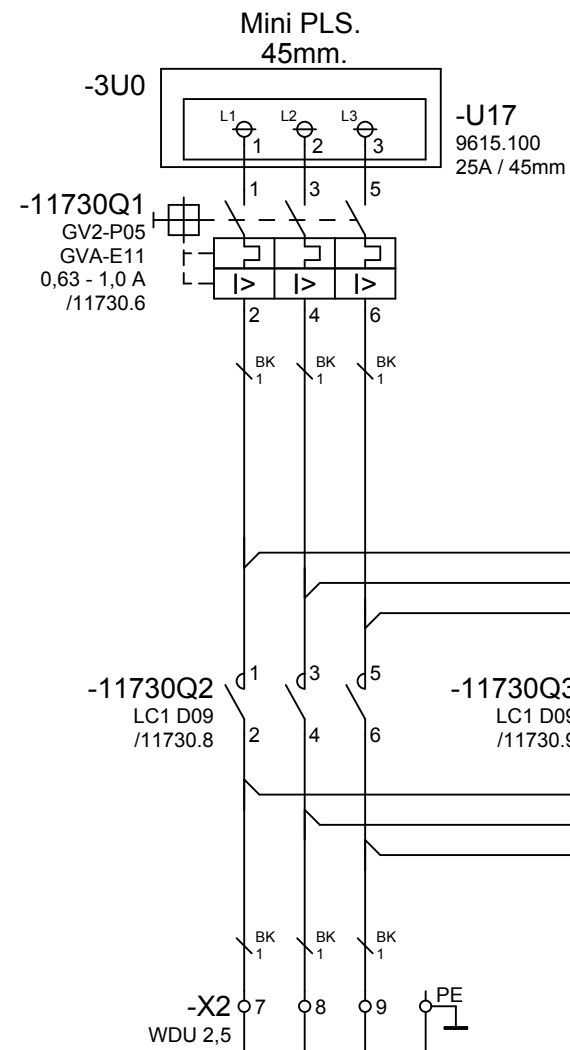


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...

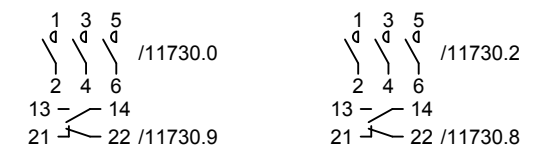
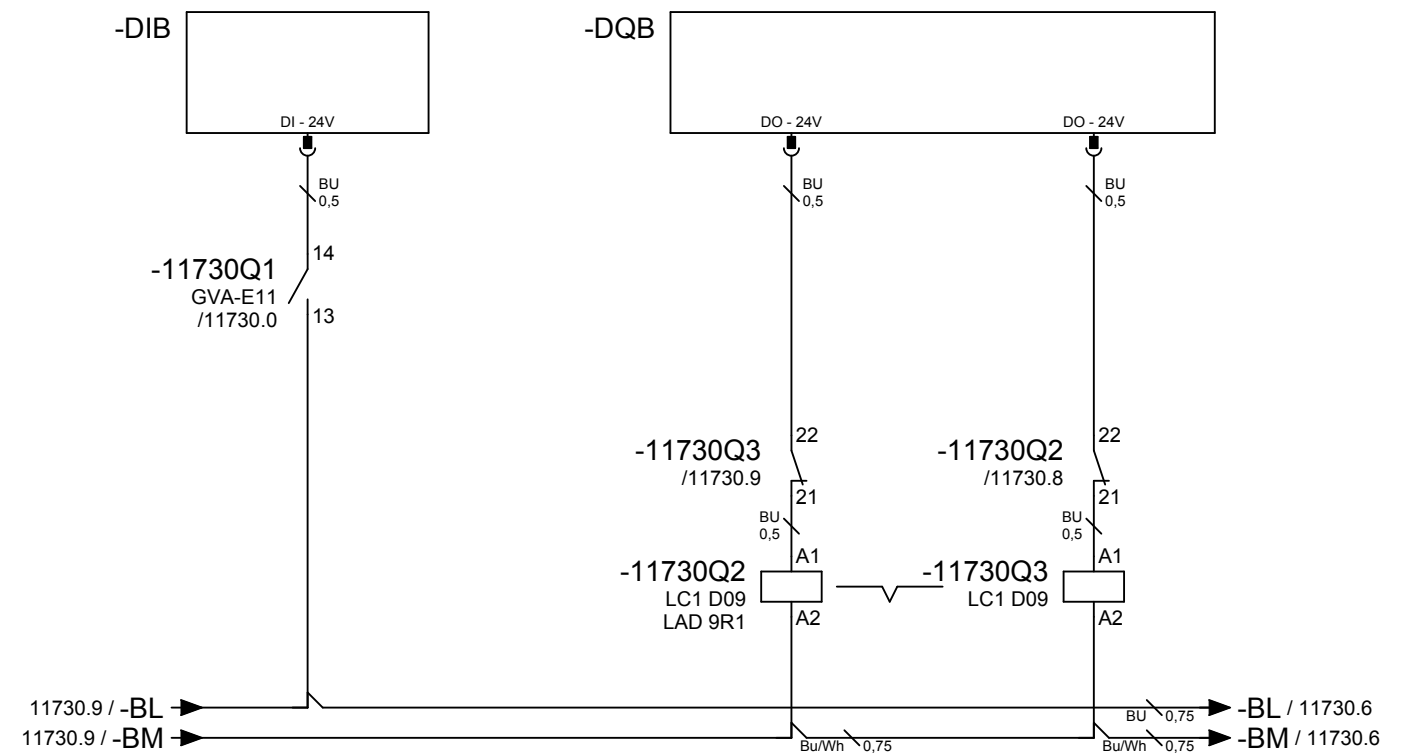


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

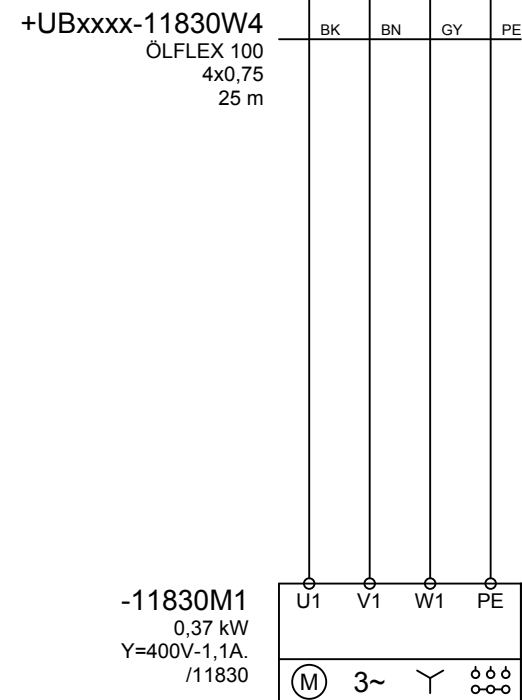
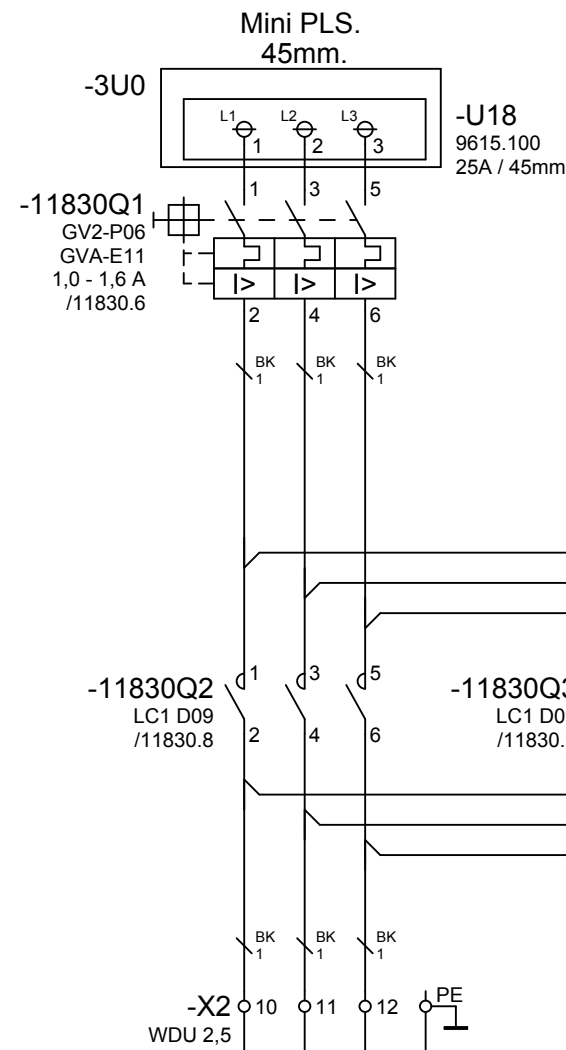


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,8A = 7,7%)
loss U at In	0,04V
loss U at 5xIn	0,20V
heat losses at In	0,10W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,8A = 8,9%)
loss U at In	0,45V
loss U at 5xIn	2,27V
heat losses at In	1,1W (L=3x25m)
...	...
...	...



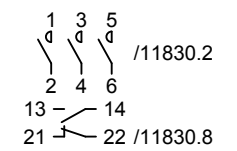
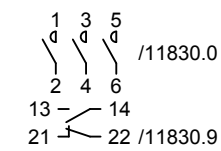
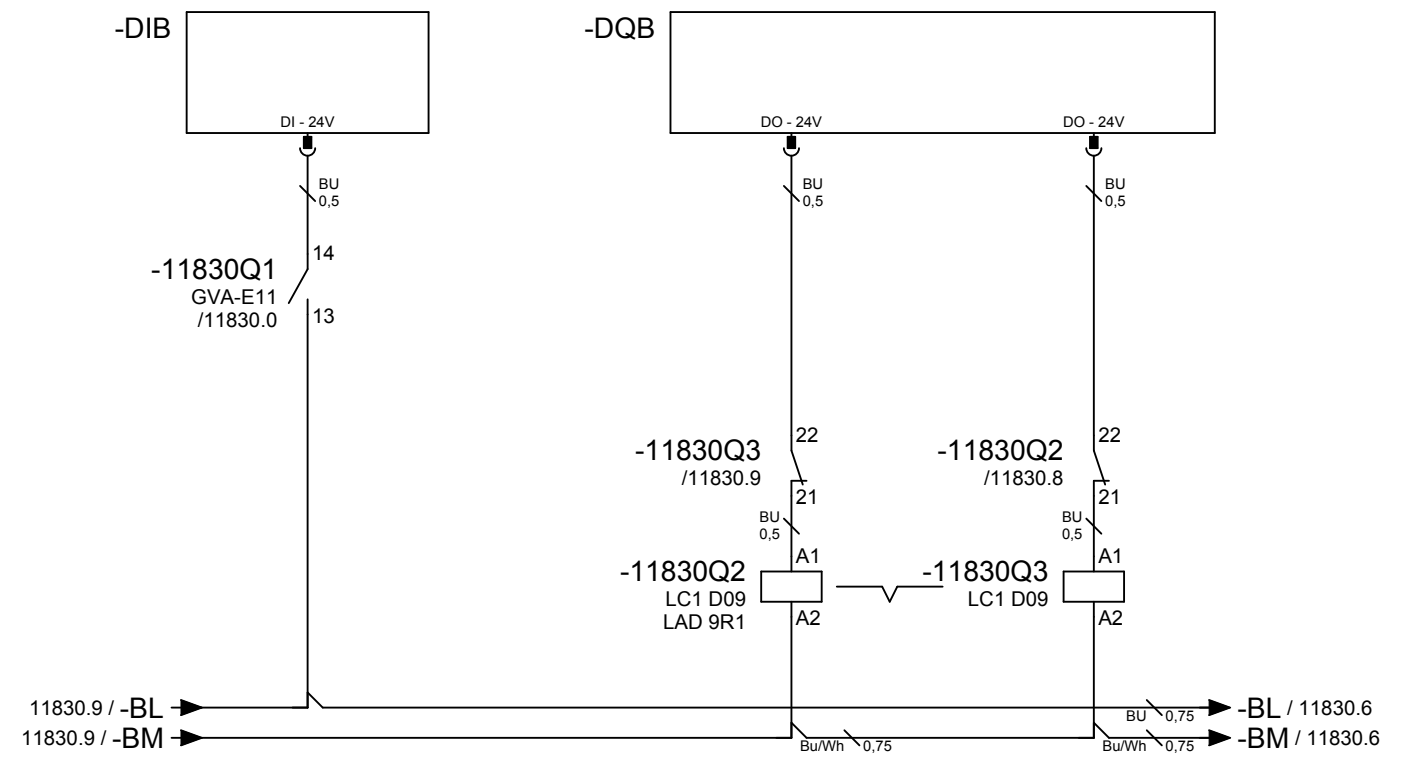
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,1A = 10,6%)
 loss U at In 0,06V
 loss U at 5xIn 0,28V
 heat losses at In 0,19W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

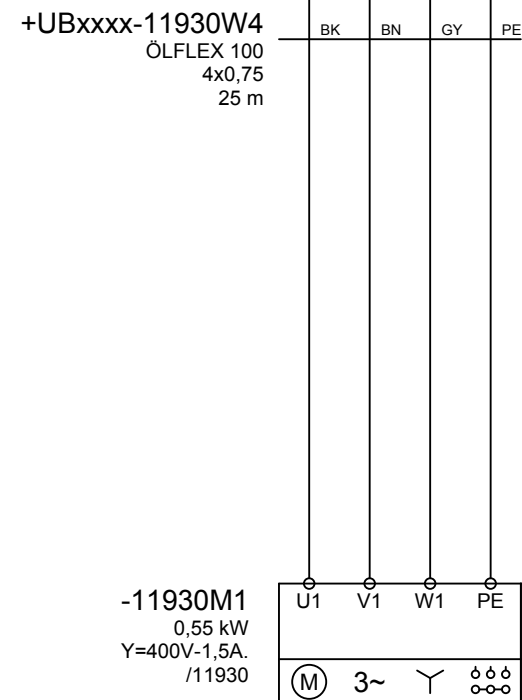
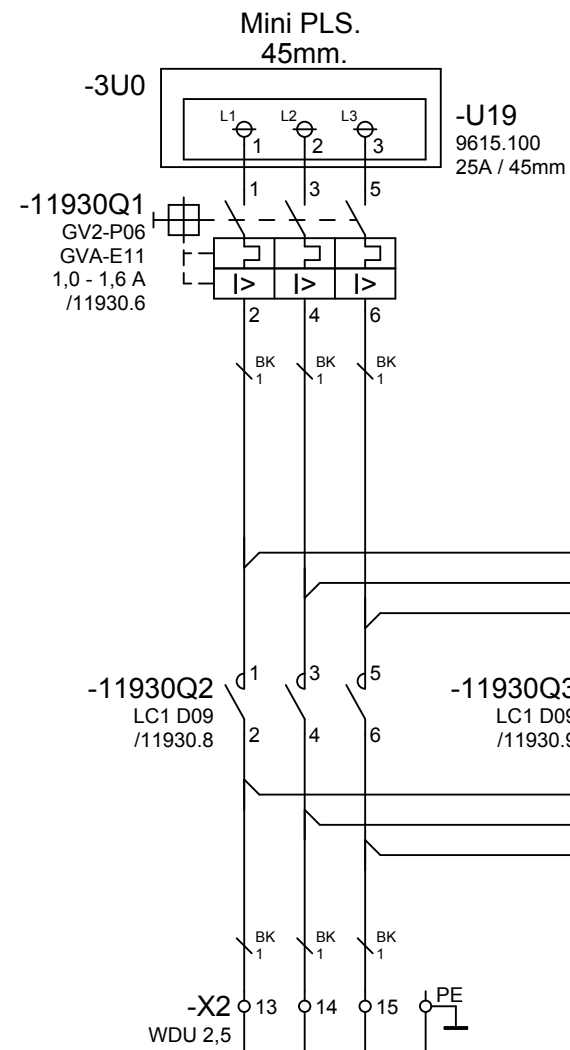
Cable route E
 load 0,75mm² = cca 9,0A; (1,1A = 12,2%)
 loss U at In 0,62V
 loss U at 5xIn 3,12V
 heat losses at In 2,1W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

Motor. Contactor.

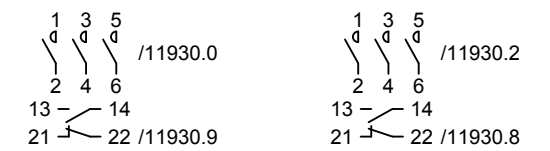
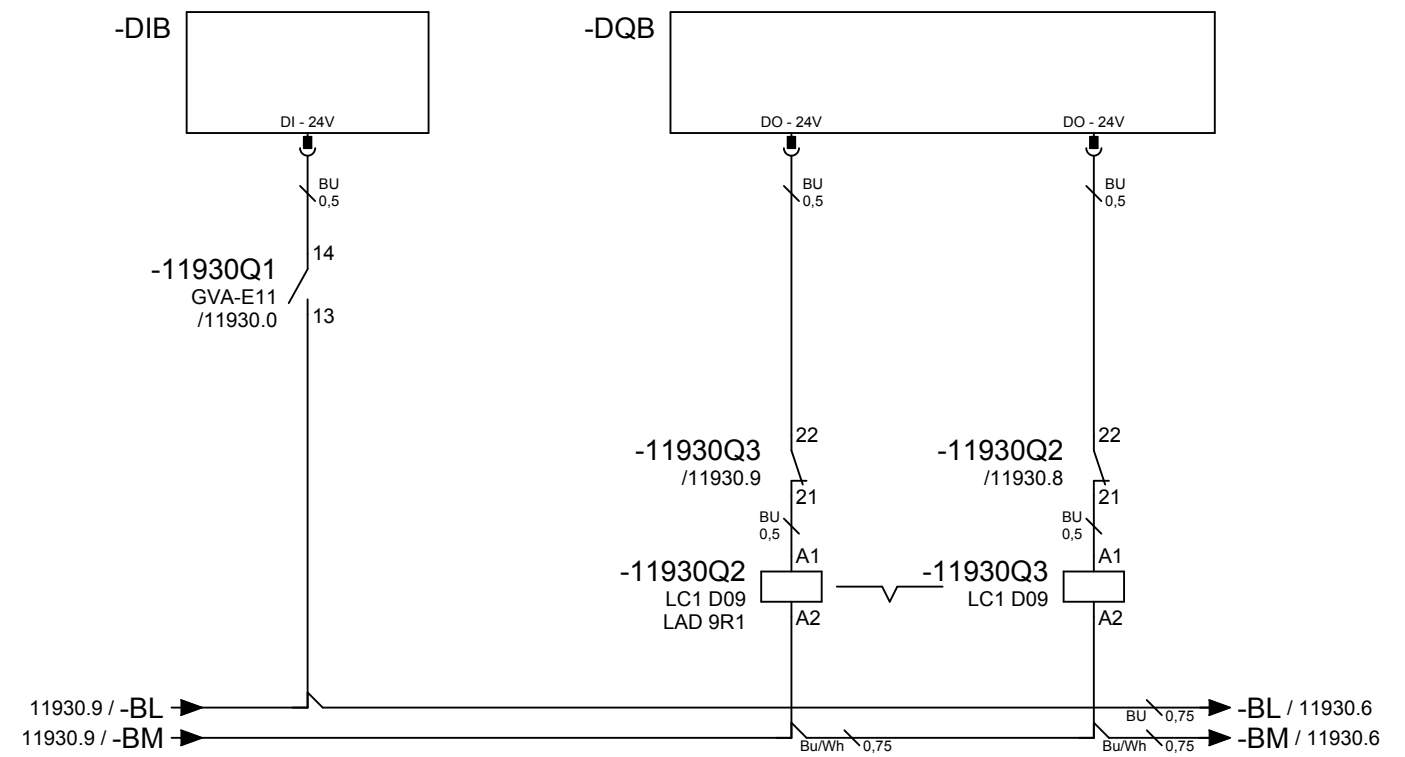
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)
 ...
 short circuit resistance 130kA at 415V

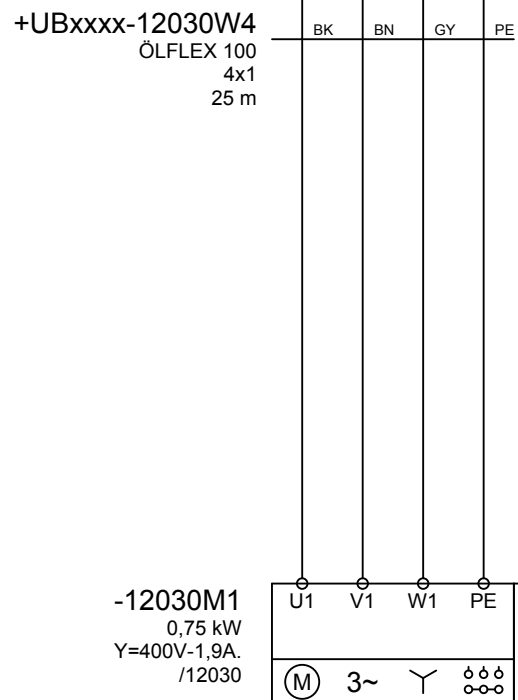
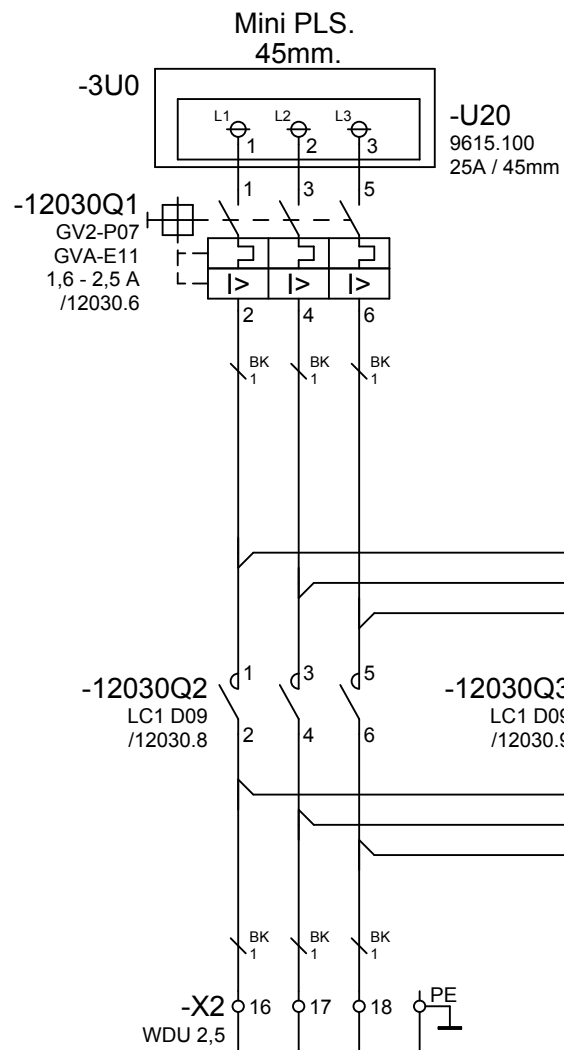
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

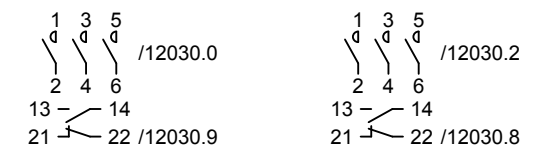
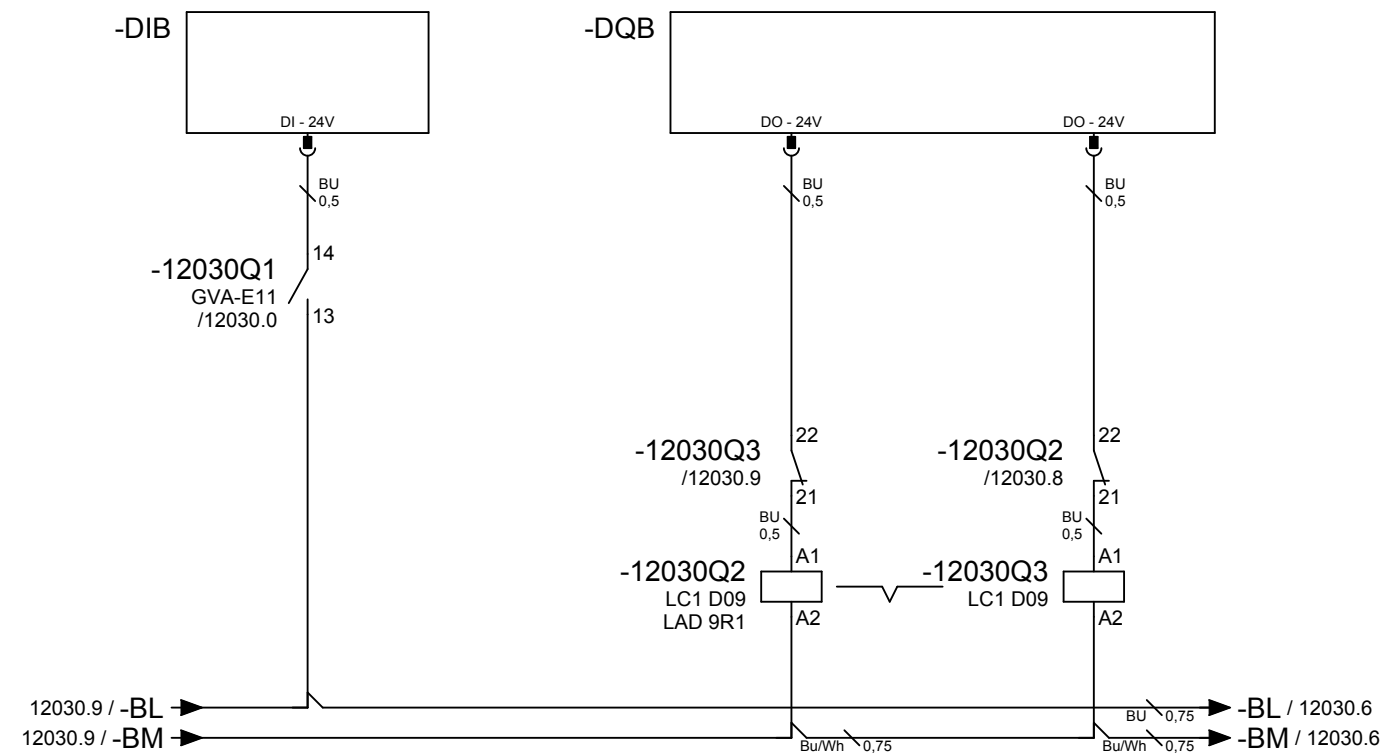
Motor. Contactor.

Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

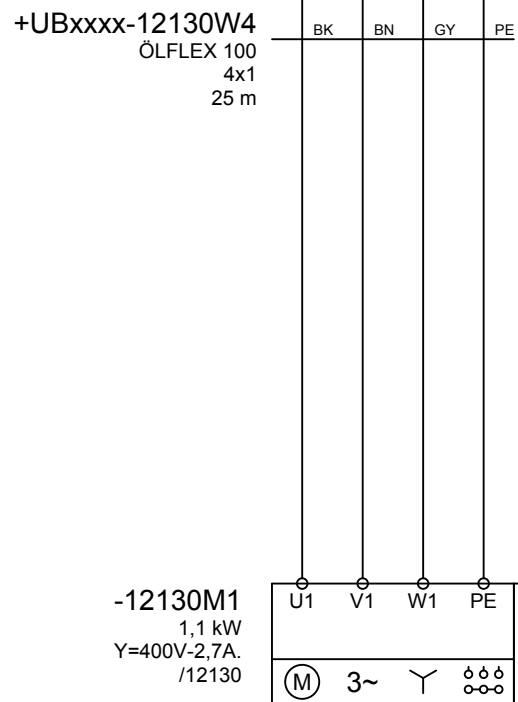
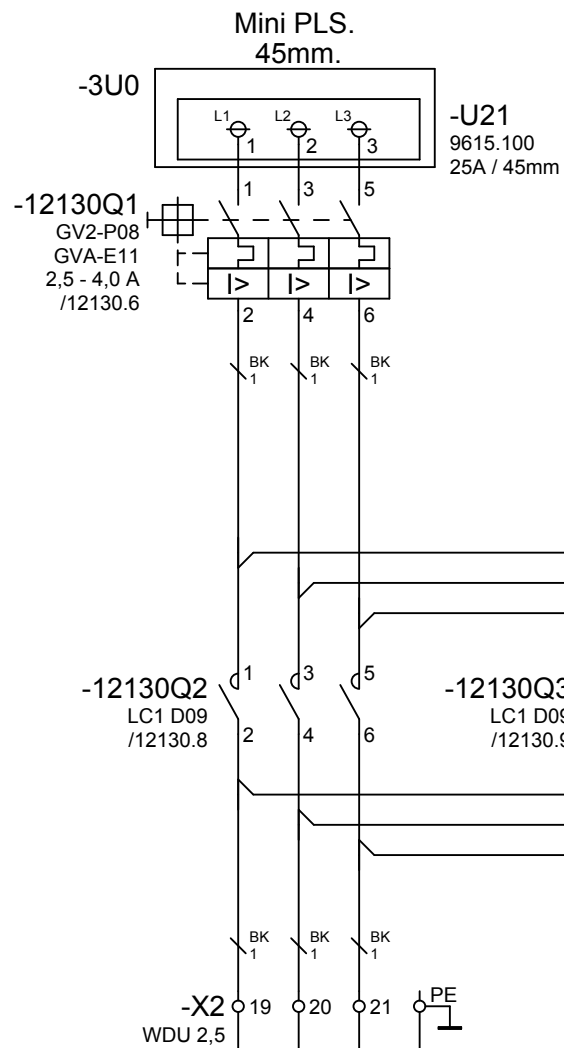
Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure.

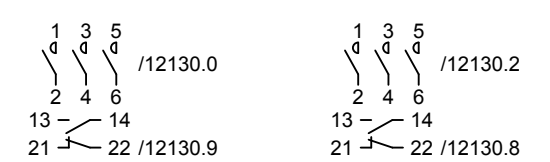
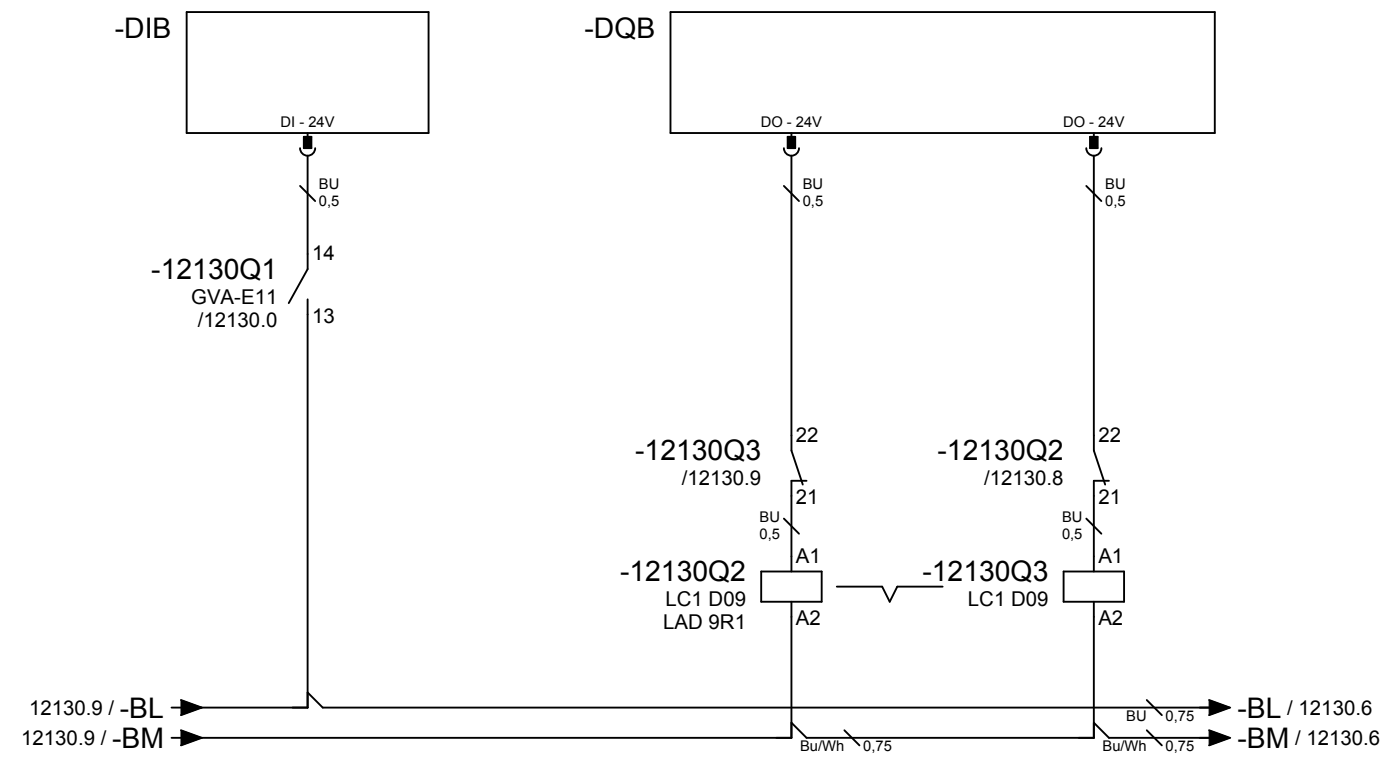
Motor. Contactor.

Motor. Contactor.

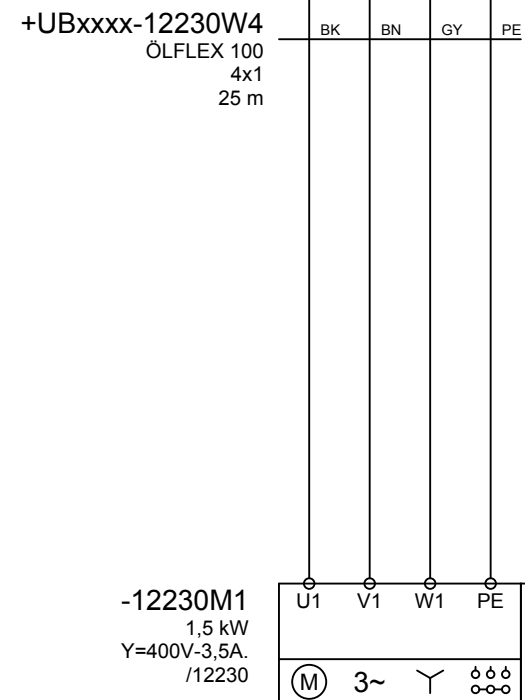
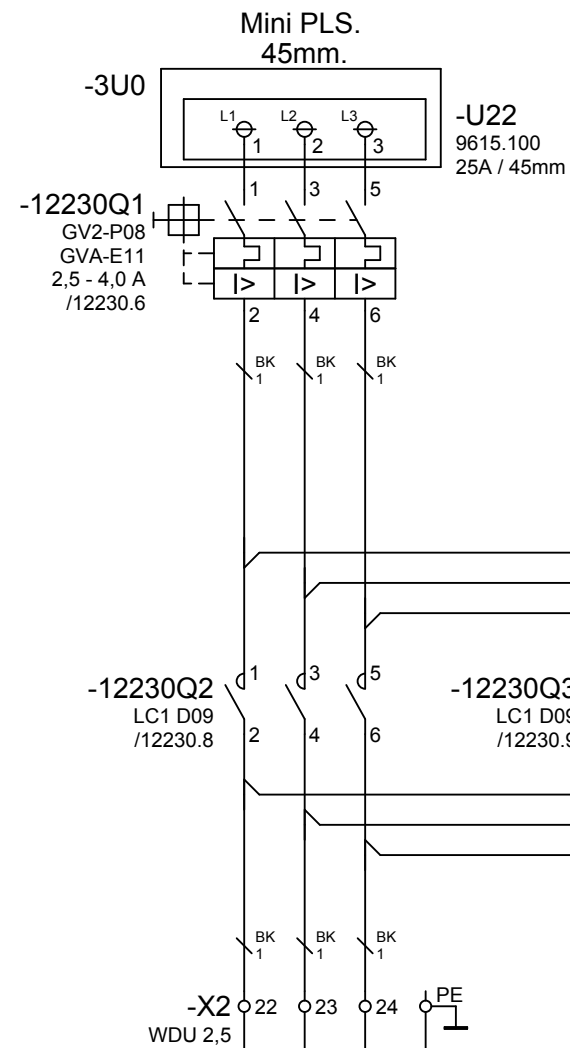


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

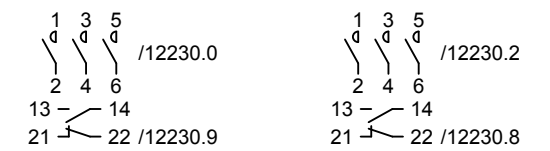
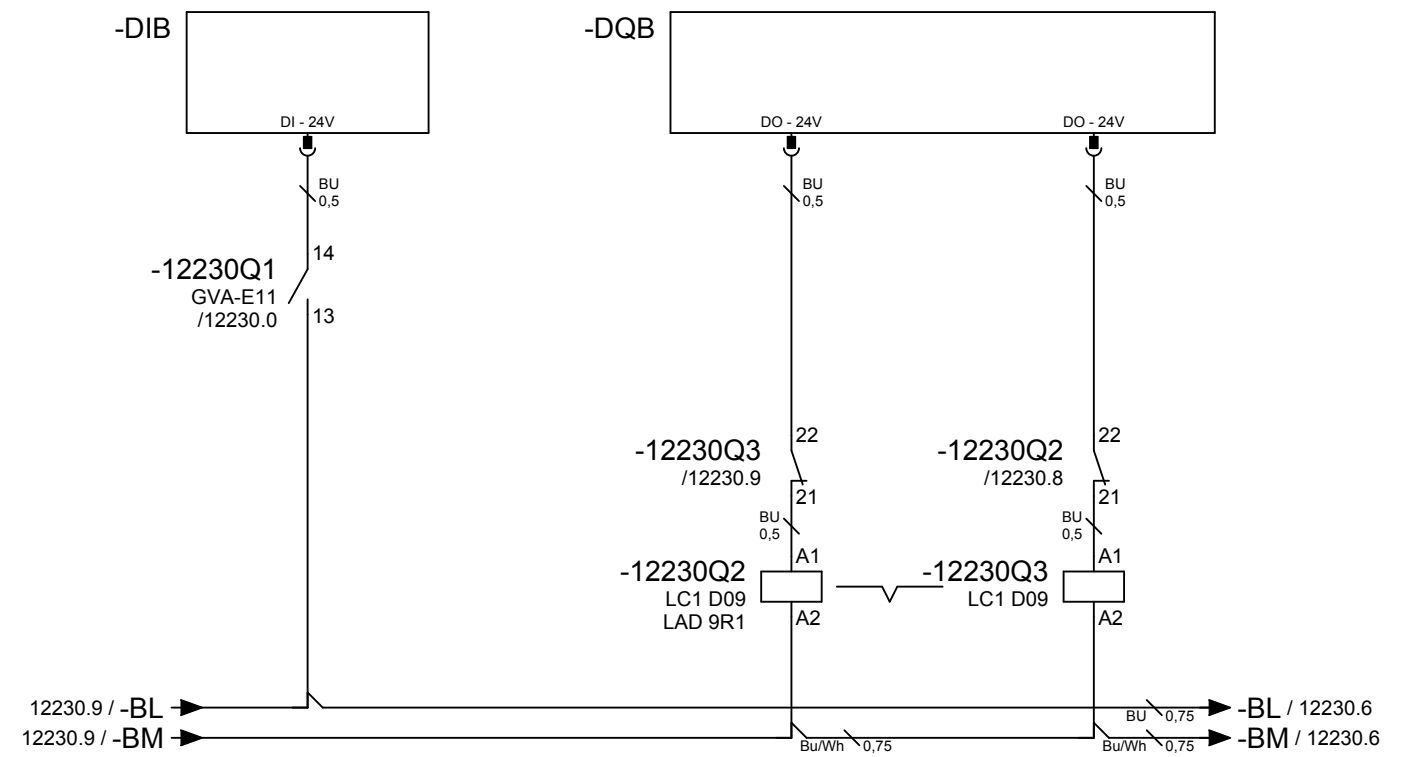


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

 short circuit resistance 130kA at 415V

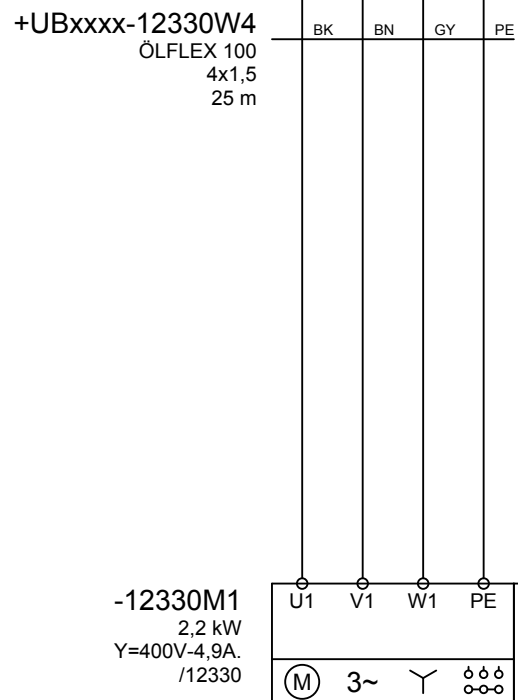
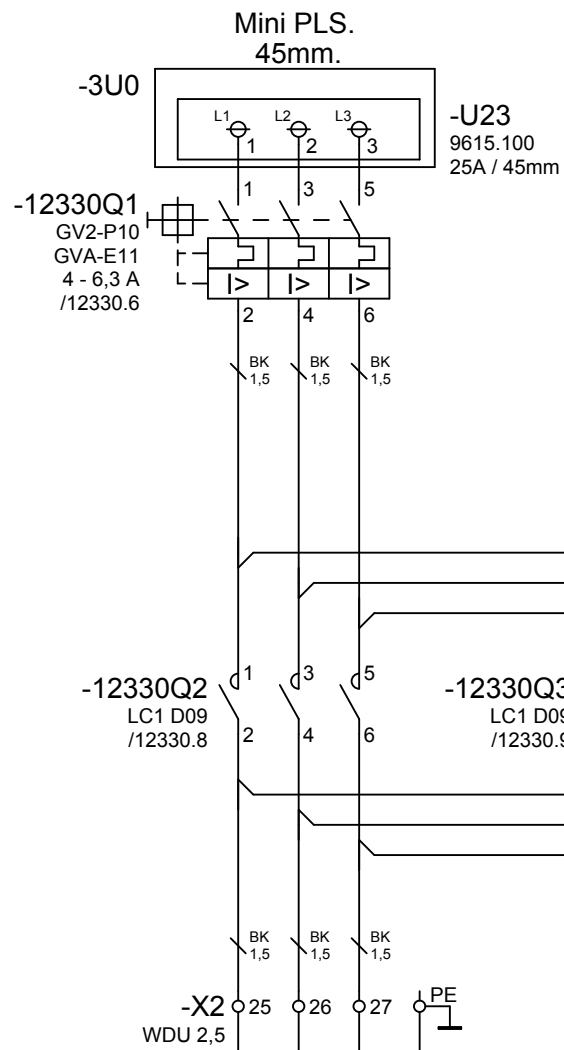
Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)



Circuit breaker. 0=Failure.

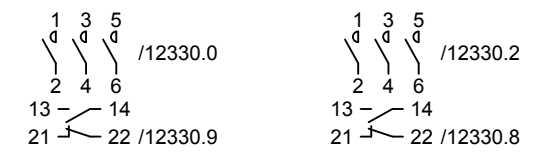
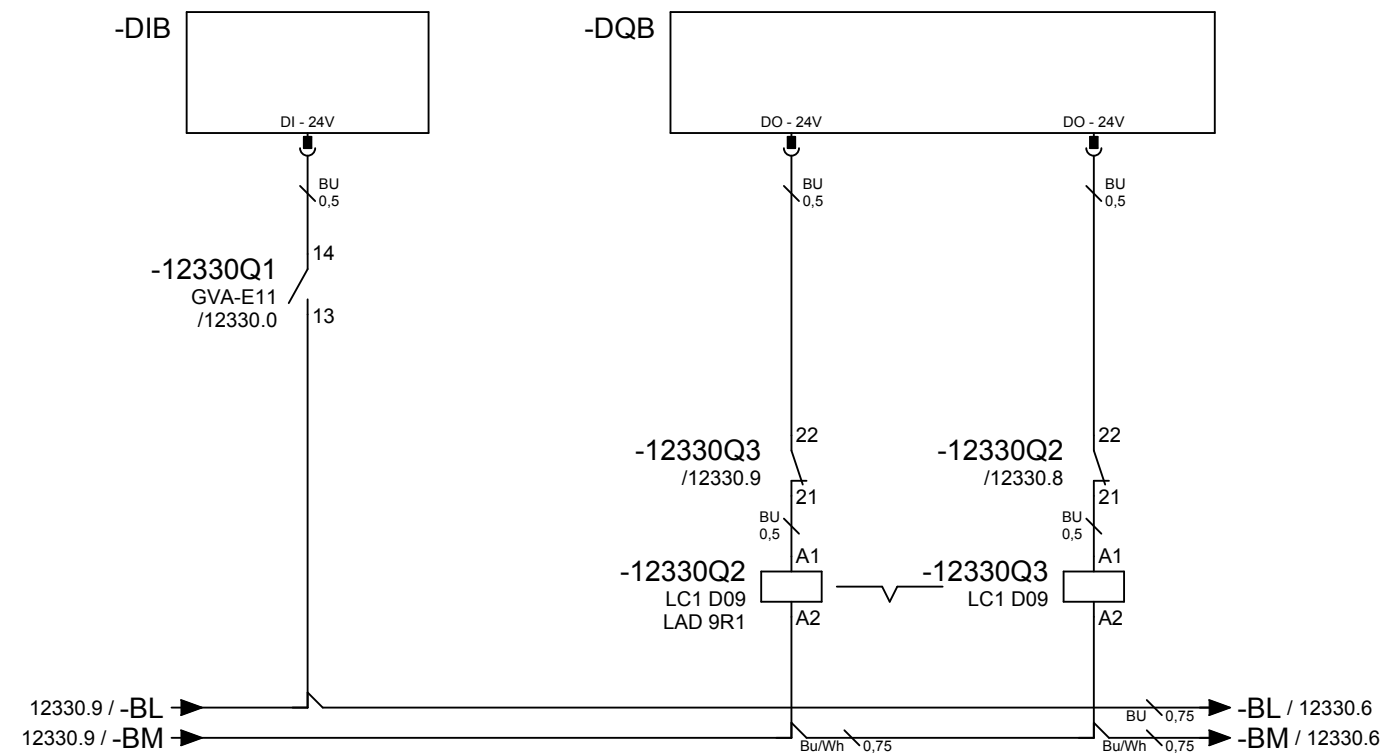
Motor. Contactor.

Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

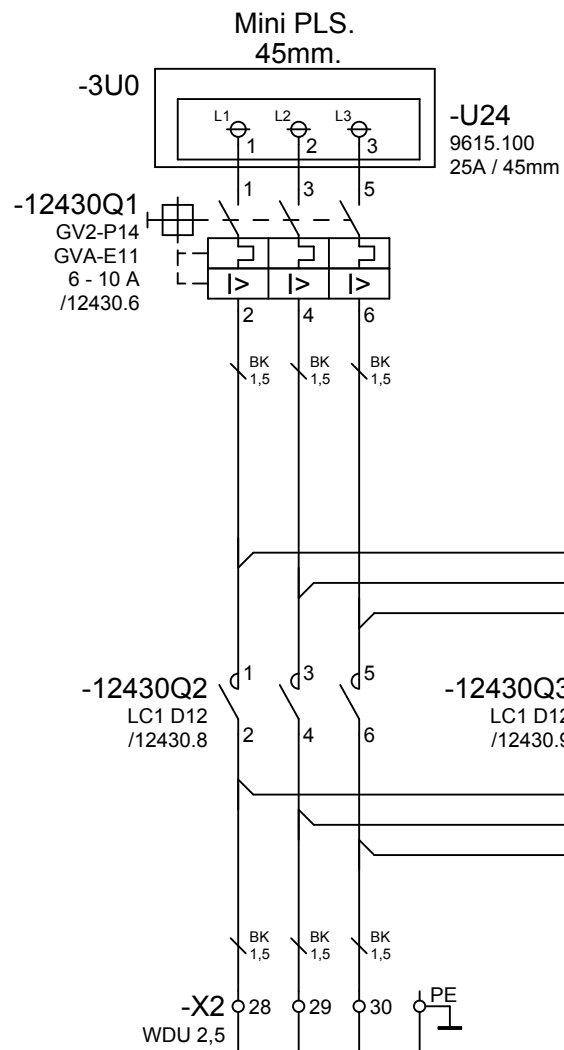
Enclosure	B1
load	1,5mm ² = cca 13,5A; (5A = 37,0%)
loss U at In	0,17V
loss U at 5xIn	0,85V
heat losses at In	2,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (5A = 27,0%)
loss U at In	1,42V
loss U at 5xIn	7,08V
heat losses at In	21,3W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

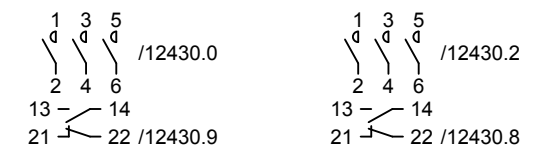
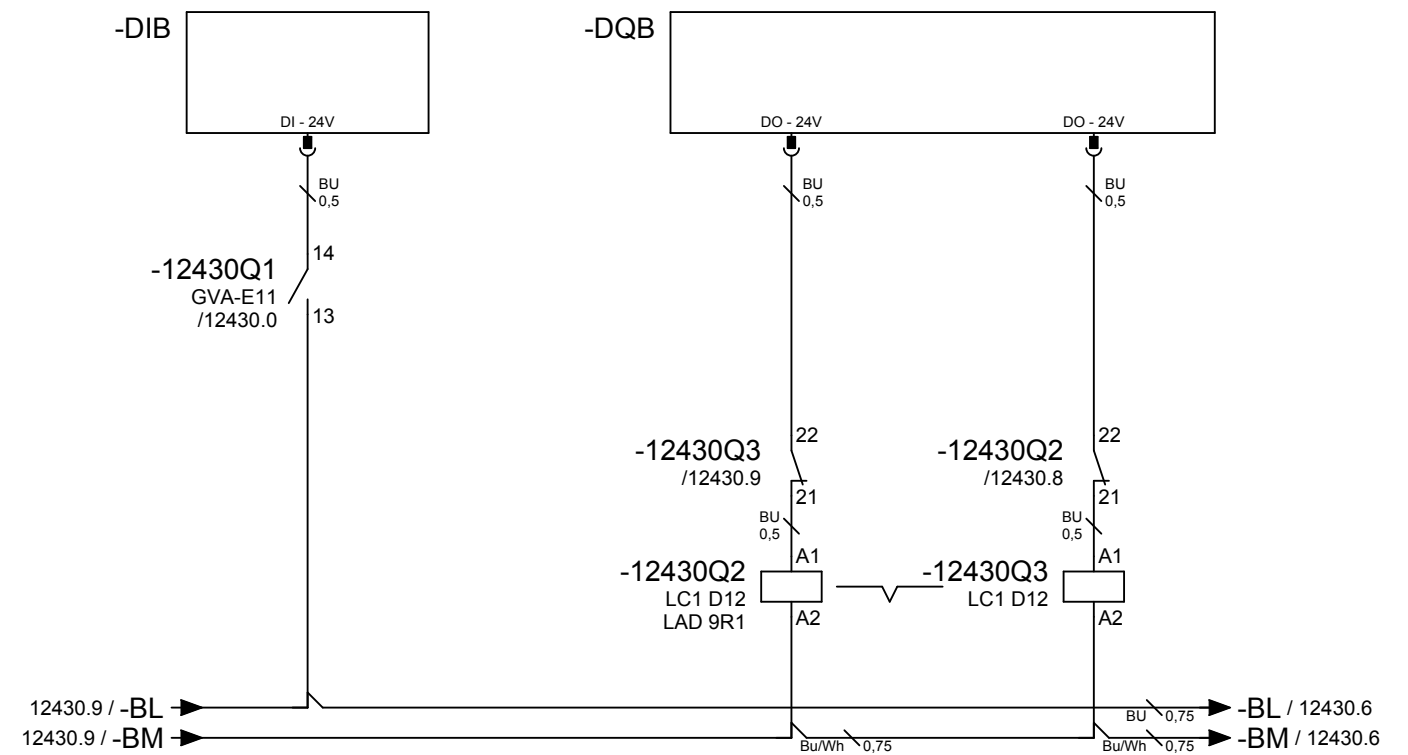
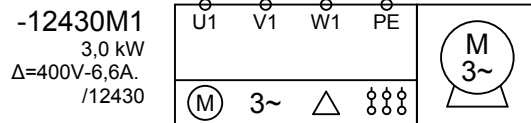


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

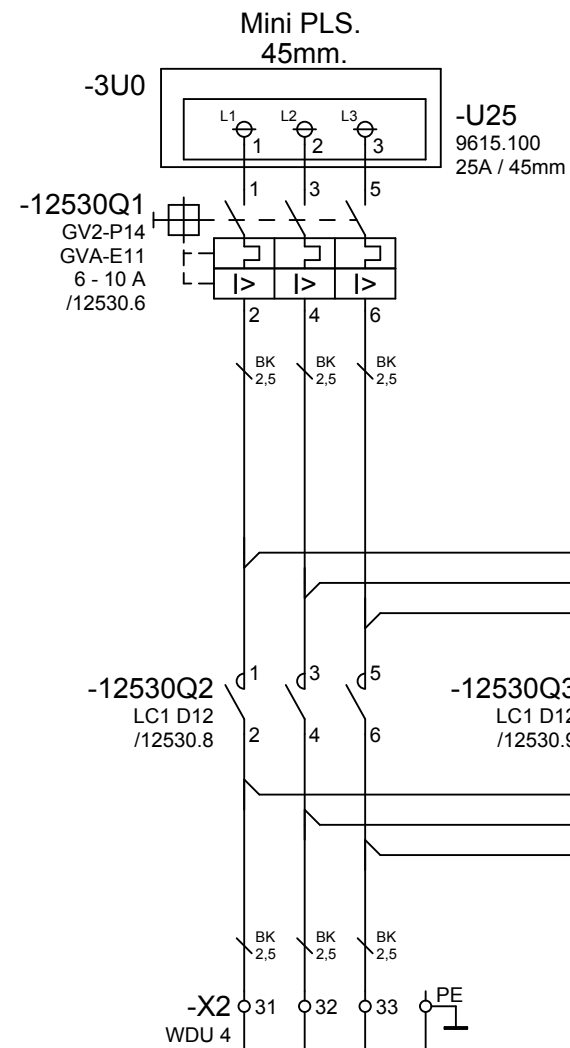
Enclosure B1
 load 1,5mm² = cca 13,5A; (7A = 51,8%)
 loss U at In 0,24V
 loss U at 5xIn 1,19V
 heat losses at In 5,00W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (7A = 37,8%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 41,7W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



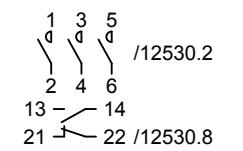
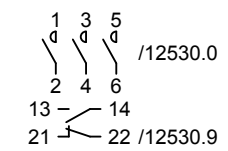
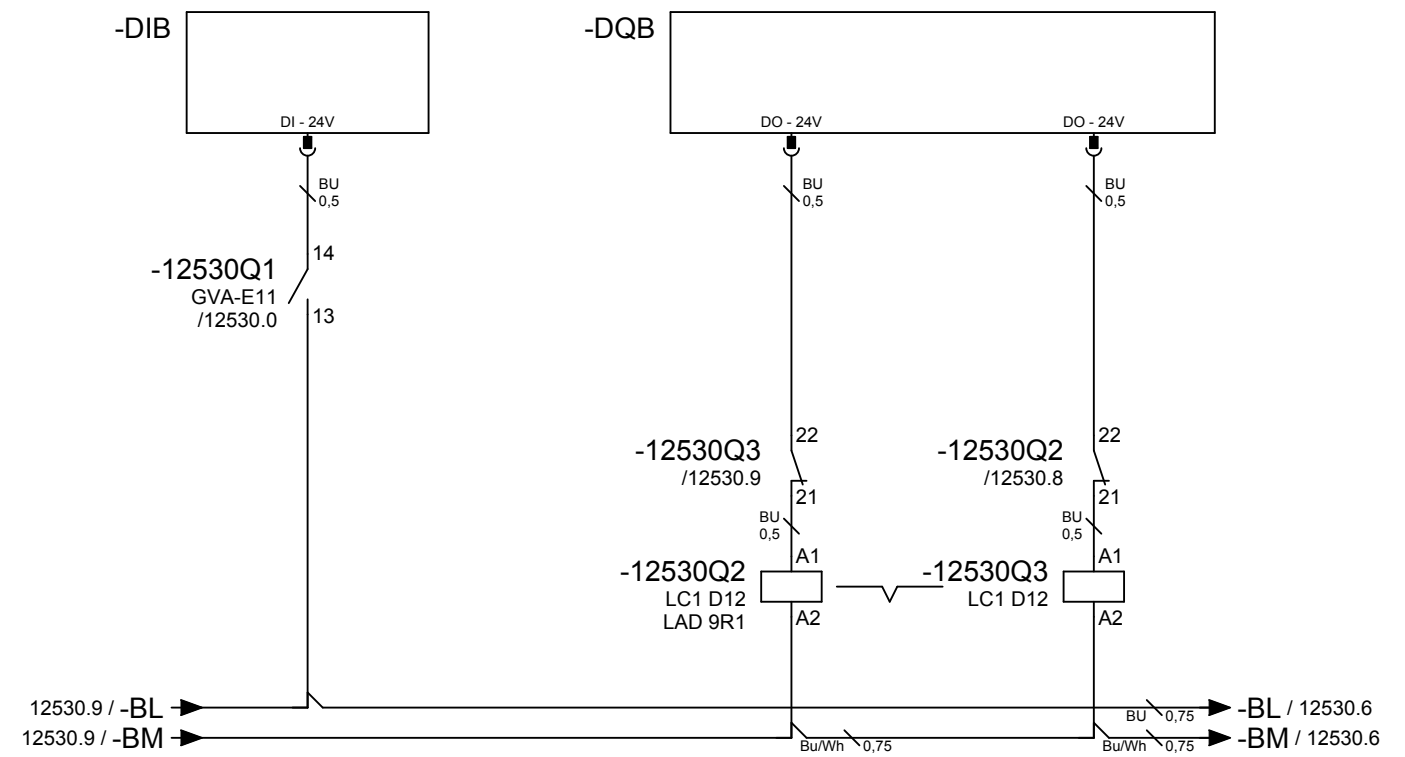
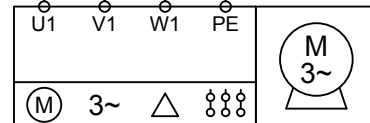
+UBxxx-12530W4
ÖLFLEX 100
4x1,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
loss U at In 0,17V
loss U at 5xIn 0,87V
heat losses at In 4,42W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
loss U at In 2,41V
loss U at 5xIn 12,04V
heat losses at In 61,4W (L=3x25m)
... ..
... ..

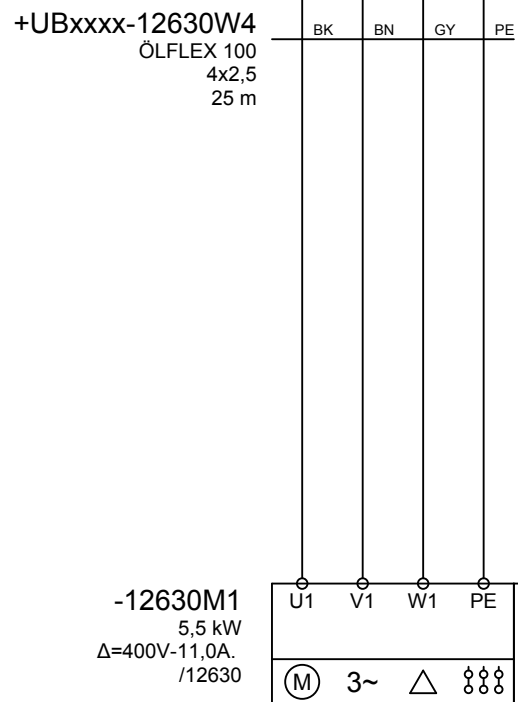
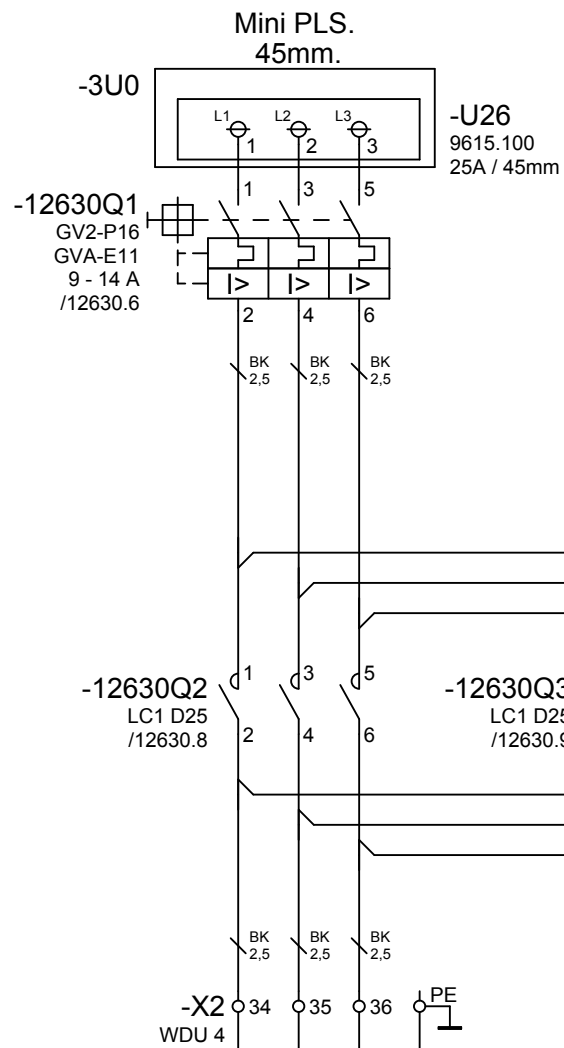
-12530M1
4,0 kW
Δ=400V-8,3A.
/12530



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

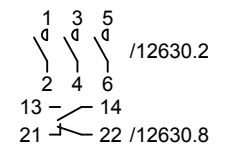
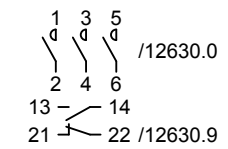
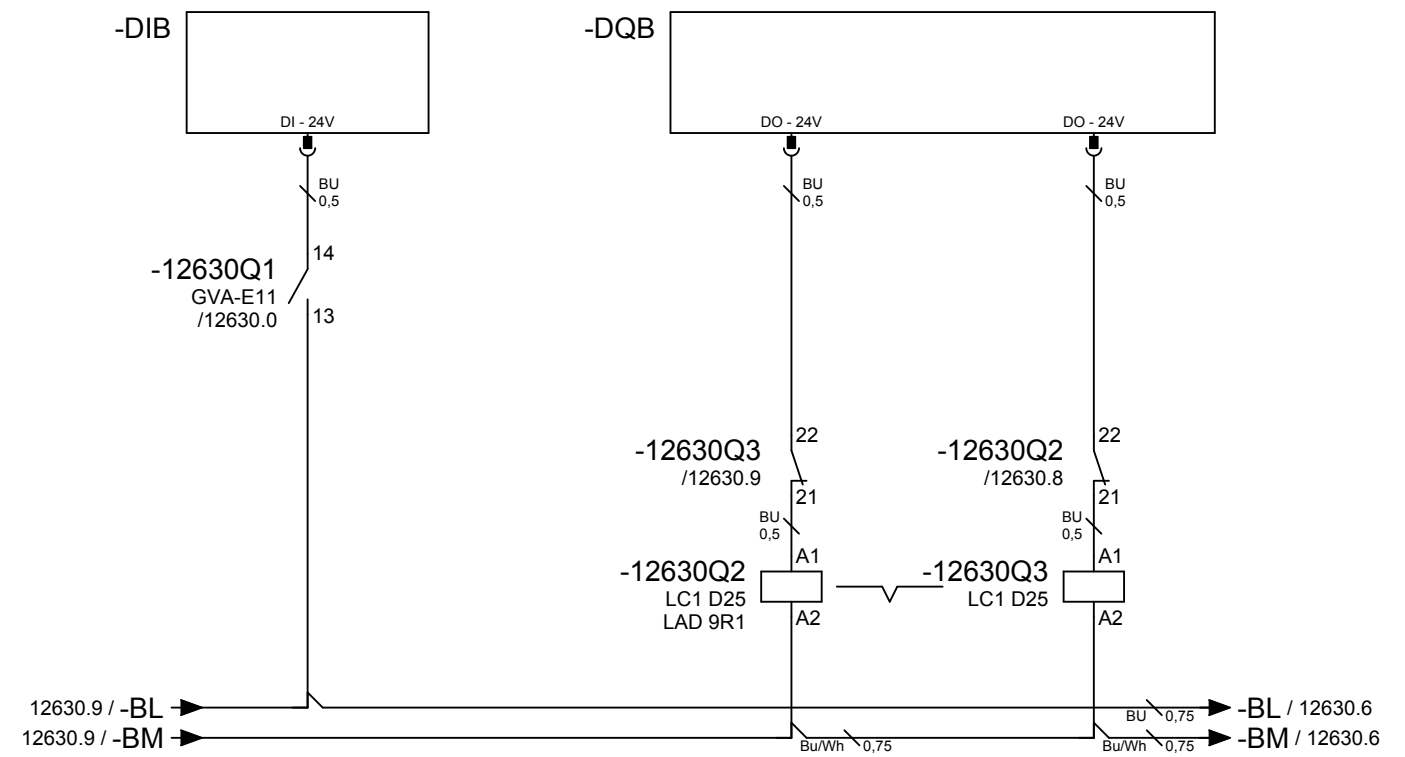


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

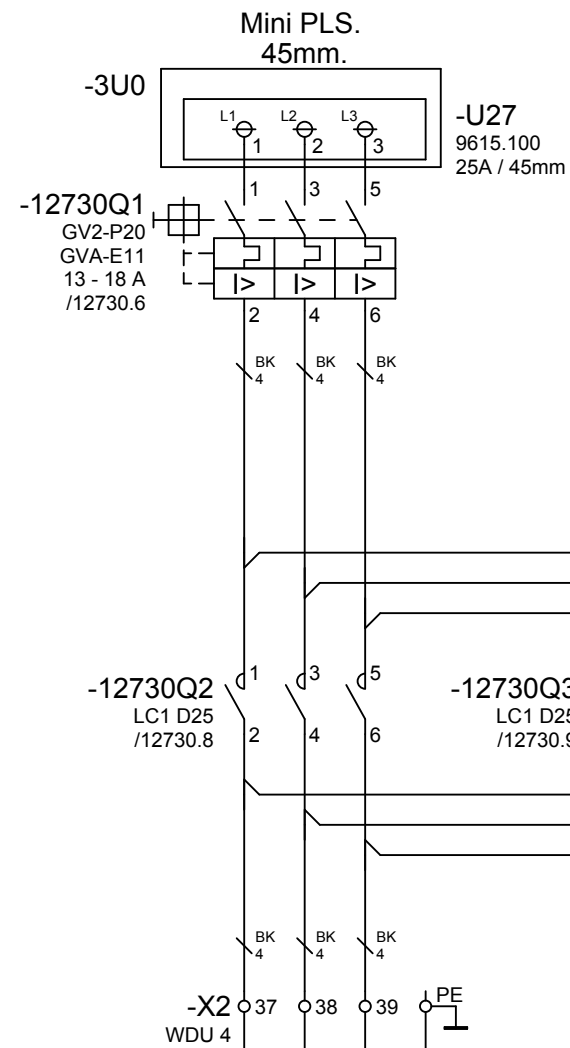
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.



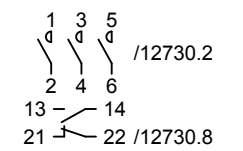
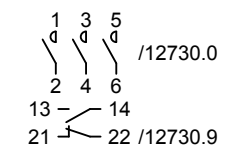
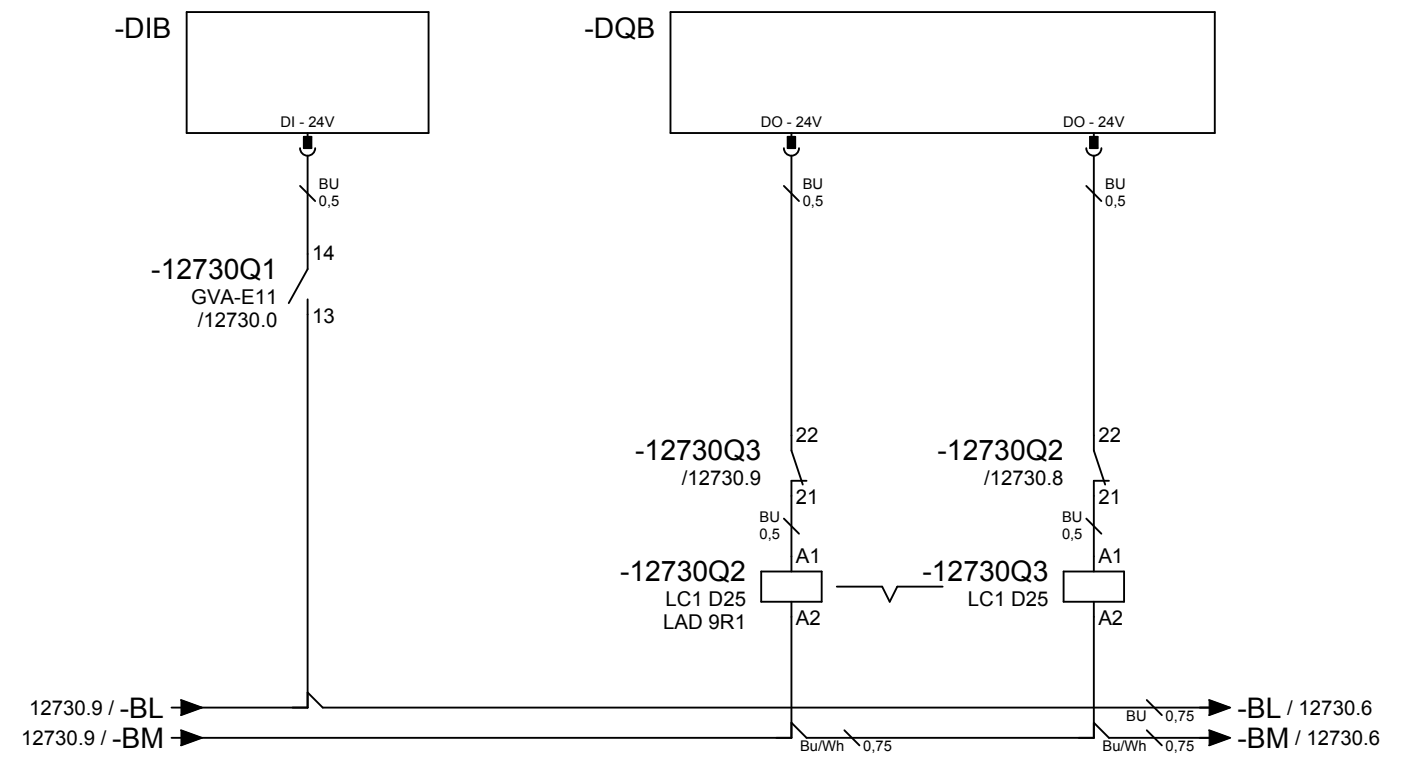
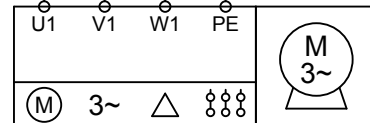
+UBxxx-12730W4
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
...
short circuit resistance 50kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
...
...
...

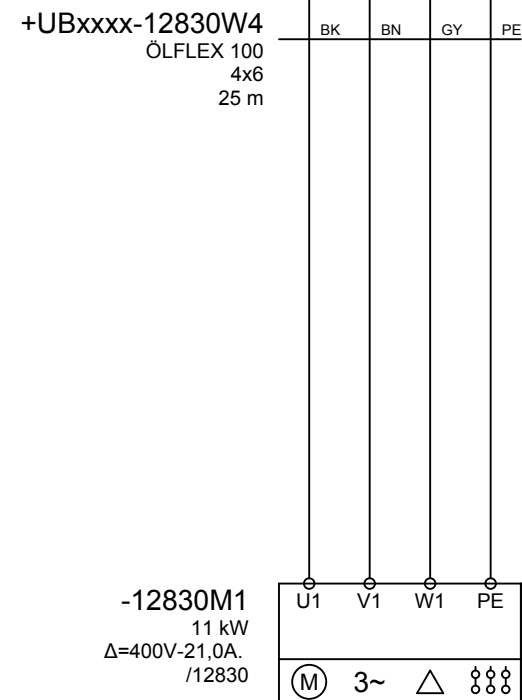
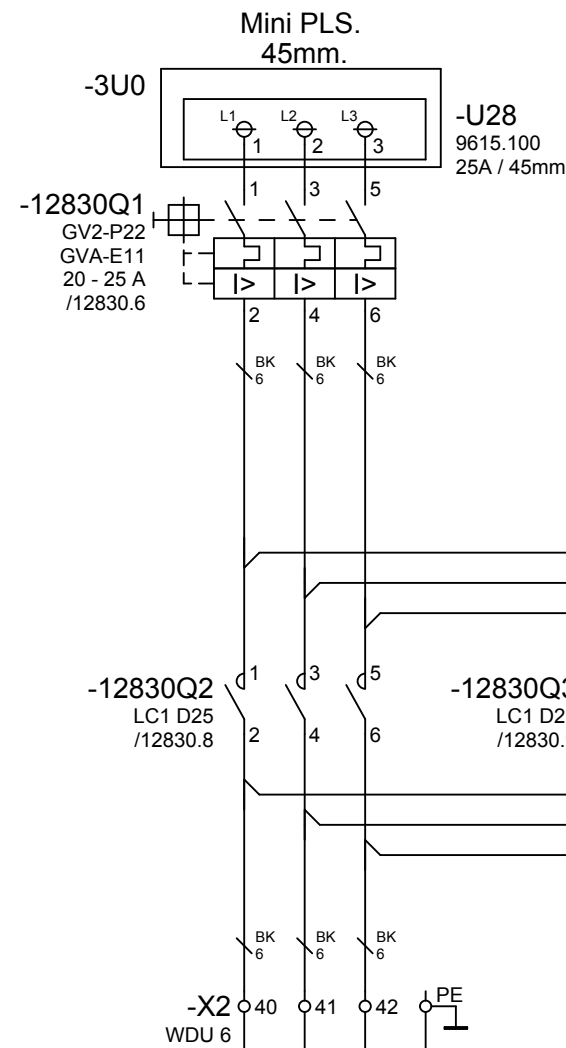
-12730M1
7,5 kW
Δ=400V-14,6A.
/12730



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

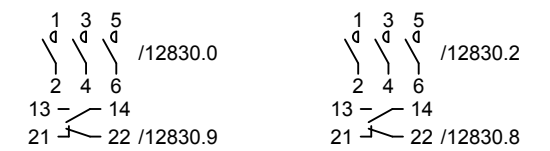
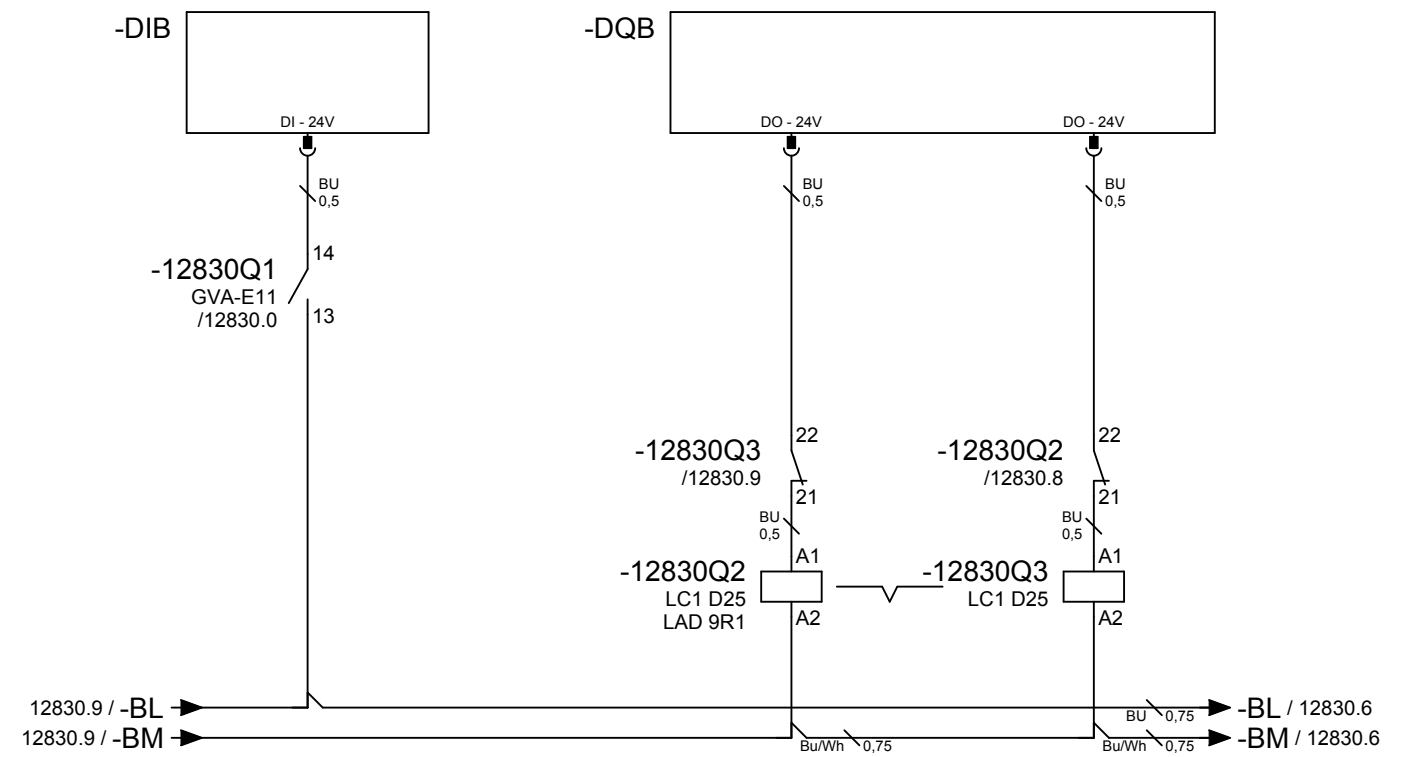


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

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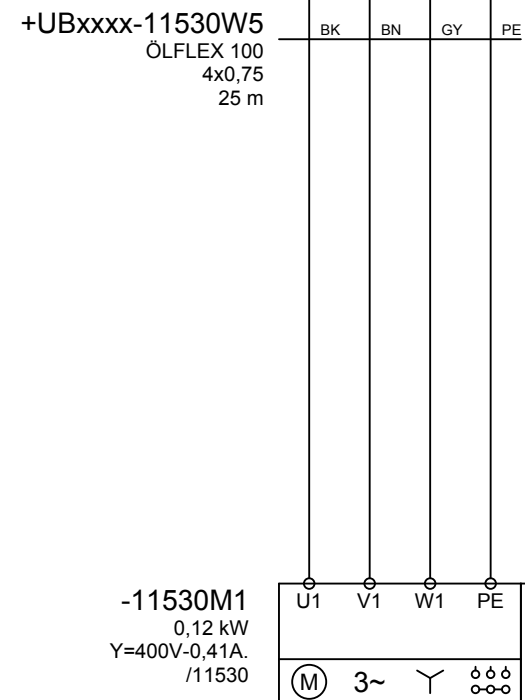
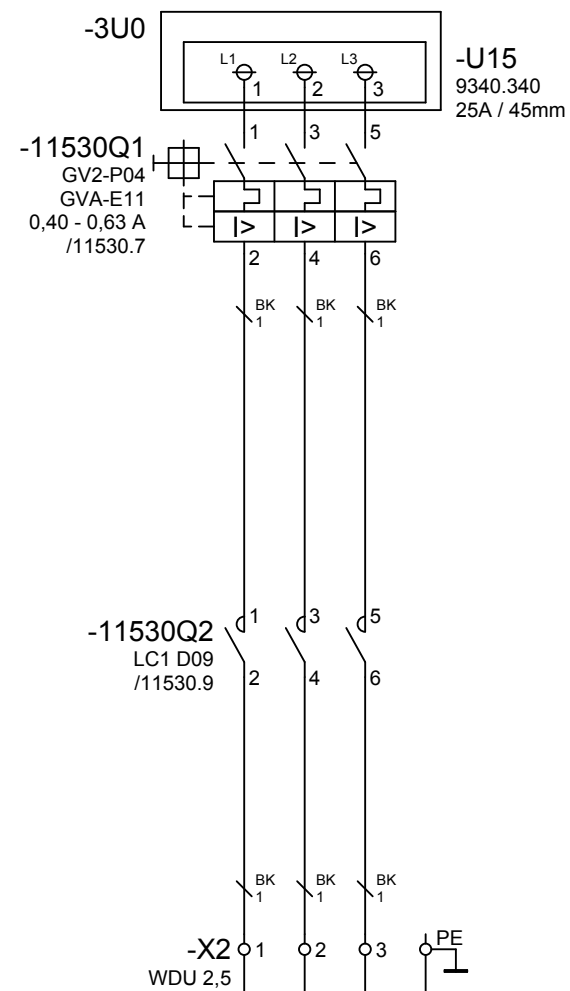
...

...

...

...

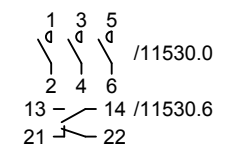
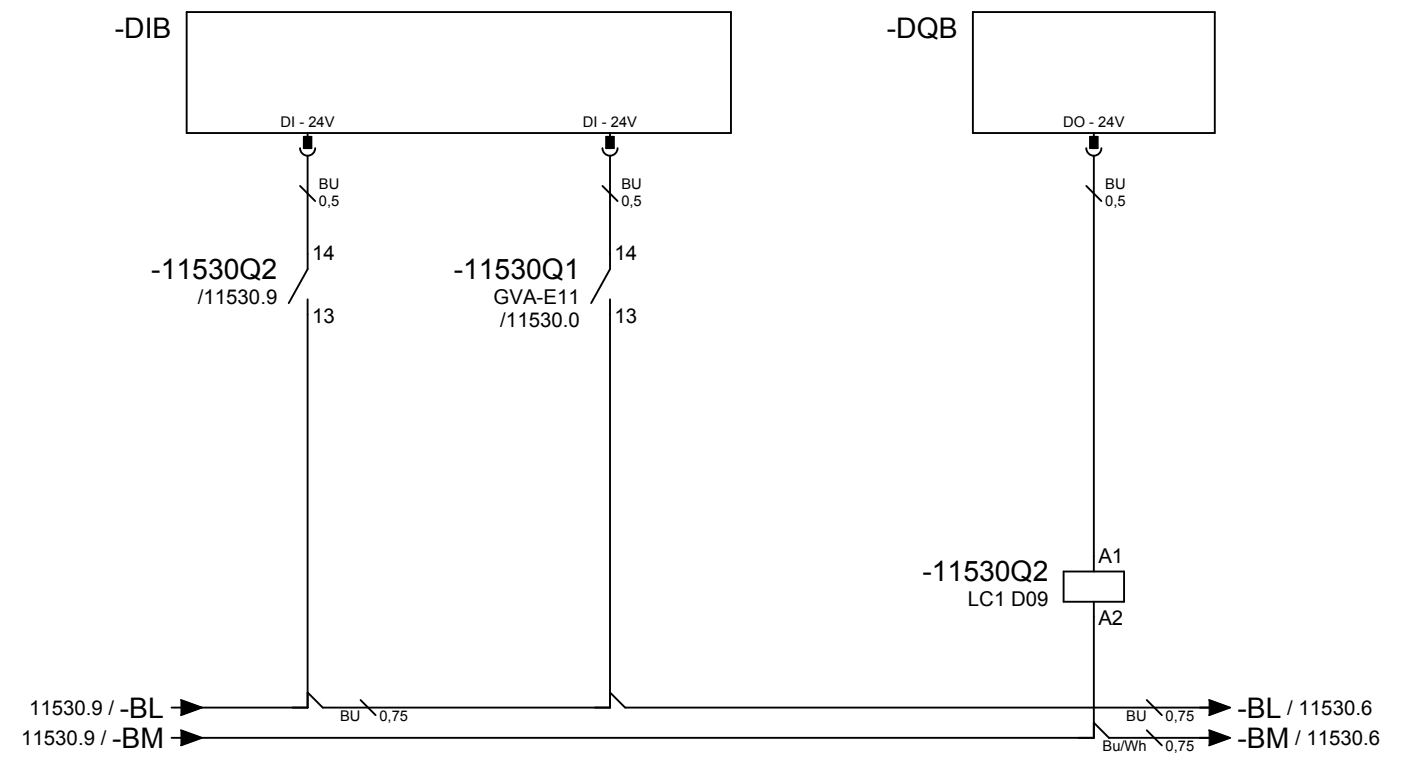
...



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,41A = 4,0%)
loss U at In 0,02V
loss U at 5xIn 0,10V
heat losses at In 0,03W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

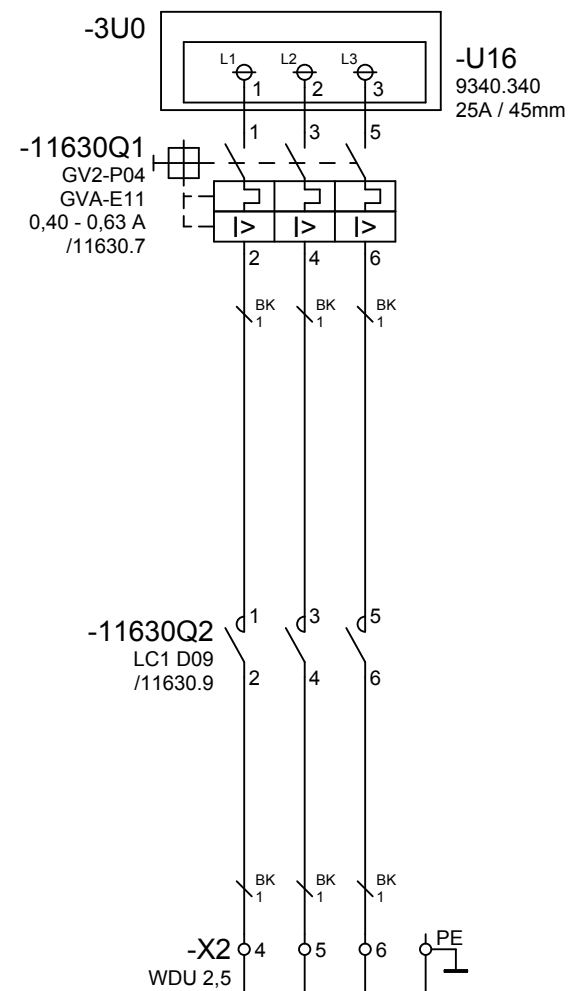
Cable route E
load 0,75mm² = cca 9,0A; (0,41A = 4,6%)
loss U at In 0,23V
loss U at 5xIn 1,16V
heat losses at In 0,3W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

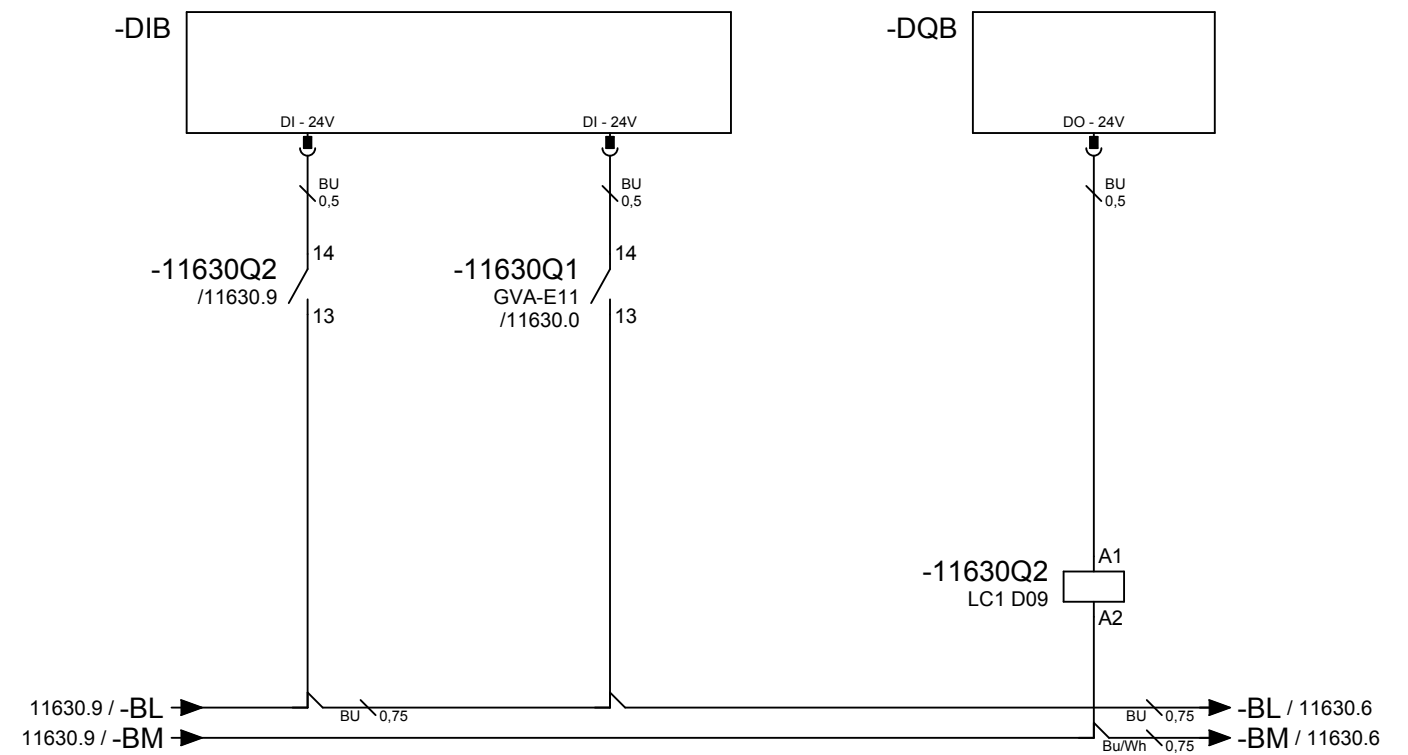
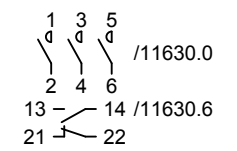


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (0,6A = 5,8%)
 loss U at In 0,03V
 loss U at 5xIn 0,15V
 heat losses at In 0,06W (L=3x3m)

 short circuit resistance 130kA at 415V

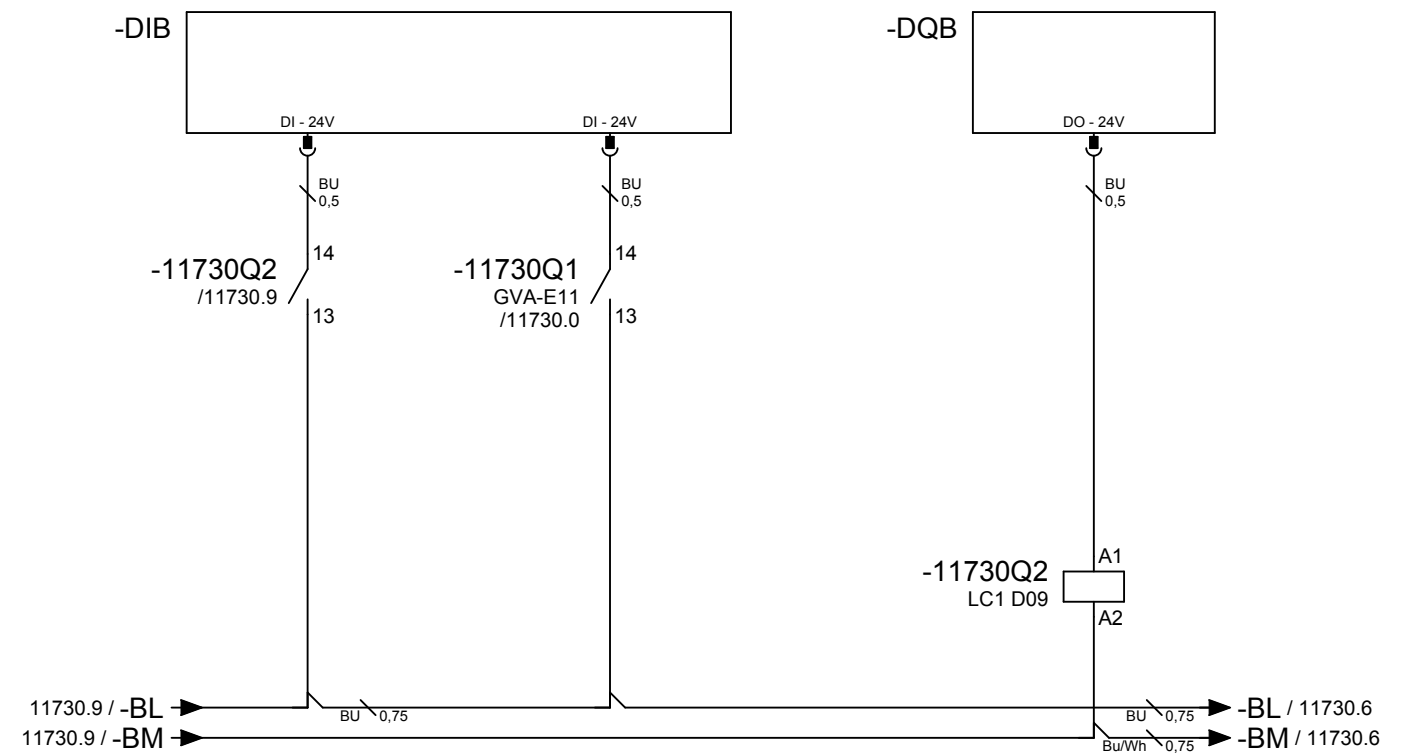
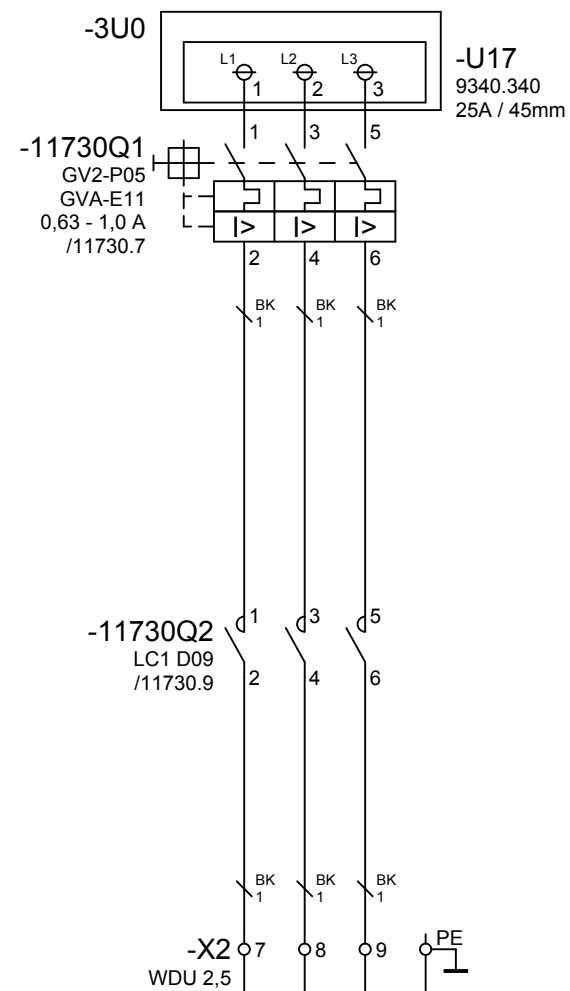
Cable route E
 load 0,75mm² = cca 9,0A; (0,6A = 6,7%)
 loss U at In 0,34V
 loss U at 5xIn 1,70V
 heat losses at In 0,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

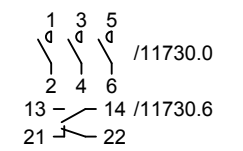
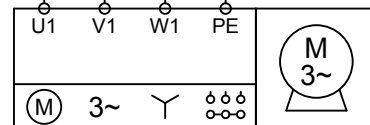


+UBxxx-11730W5
ÖLFLEX 100
4x0,75
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,8A = 7,7%)
loss U at In 0,04V
loss U at 5xIn 0,20V
heat losses at In 0,10W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

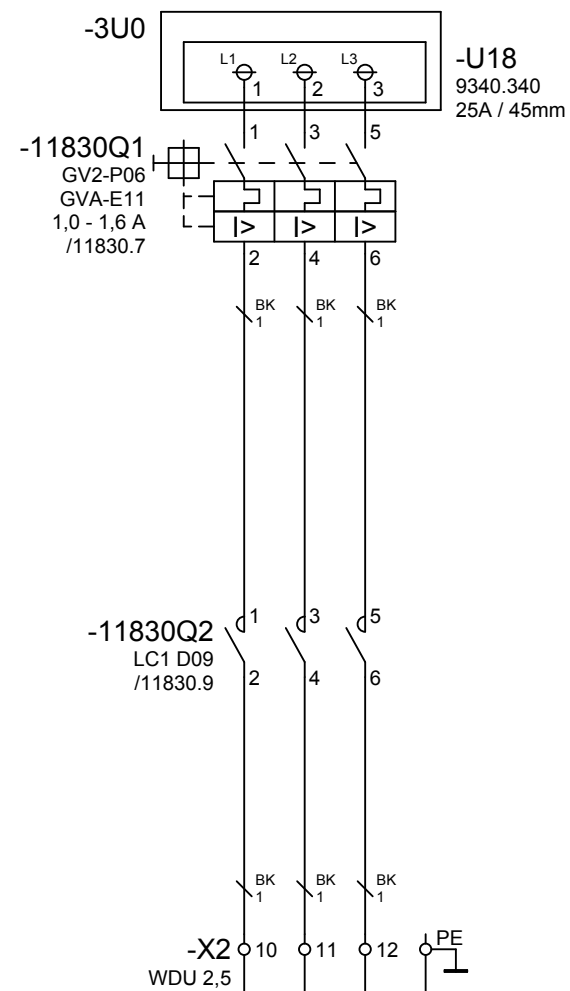
Cable route E
load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
loss U at In 0,45V
loss U at 5xIn 2,27V
heat losses at In 1,1W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

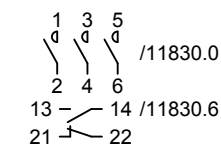
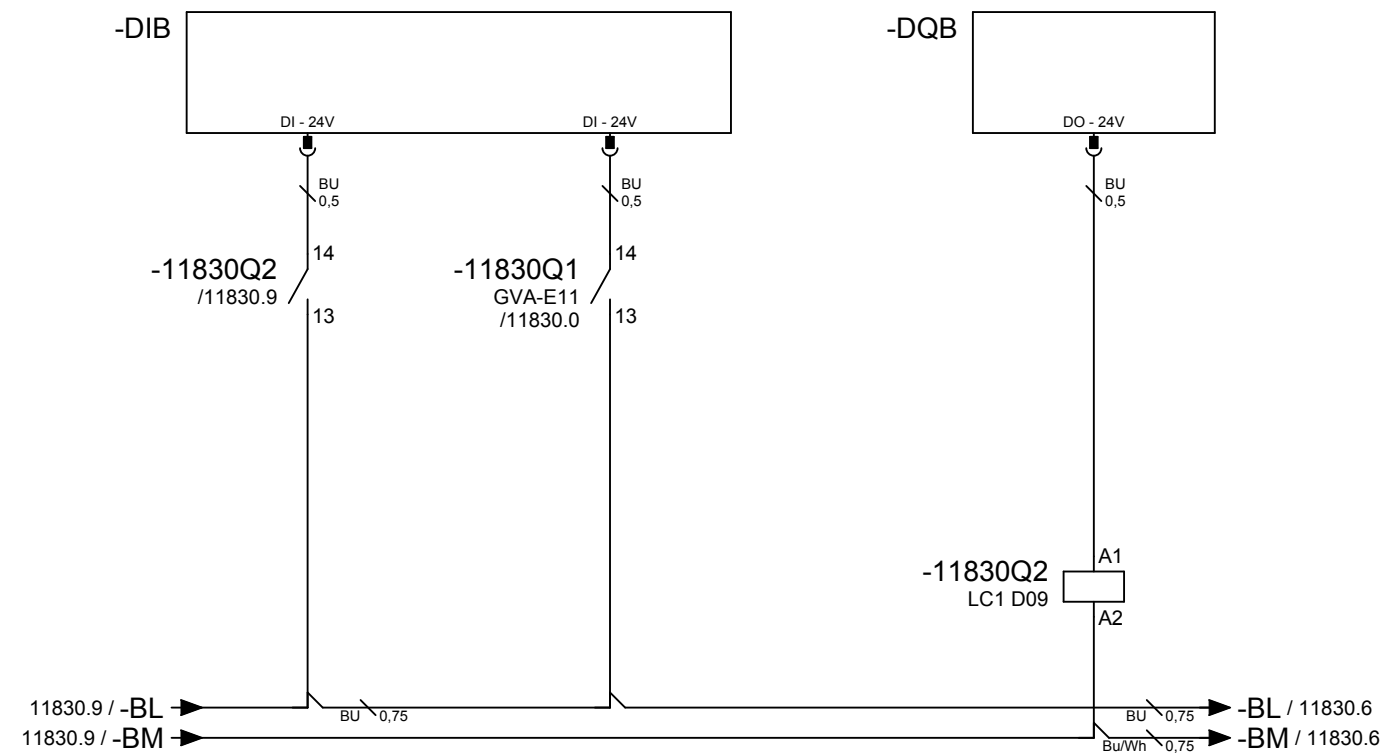


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,1A = 10,6%)
 loss U at In 0,06V
 loss U at 5xIn 0,28V
 heat losses at In 0,19W (L=3x3m)

 short circuit resistance 130kA at 415V

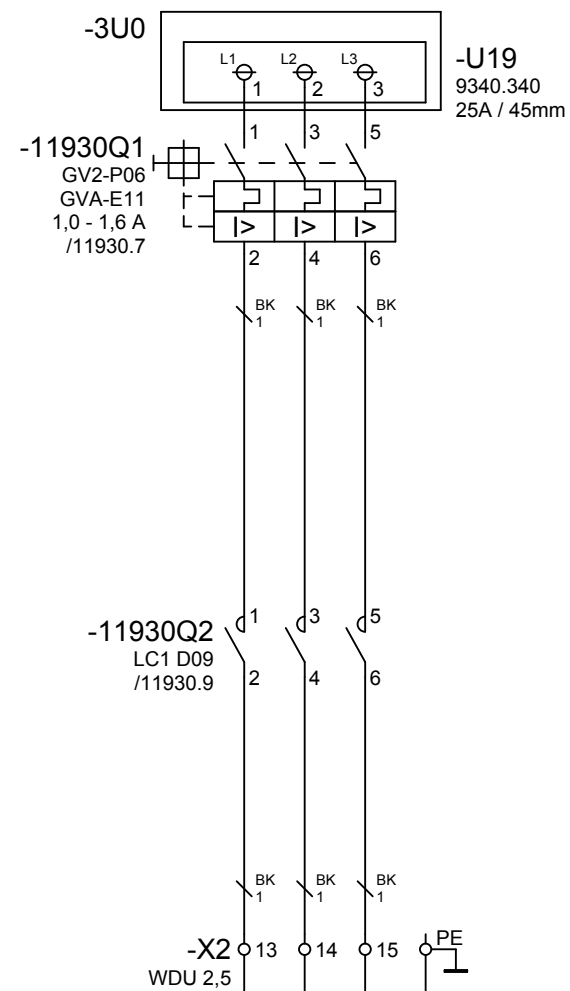
Cable route E
 load 0,75mm² = cca 9,0A; (1,1A = 12,2%)
 loss U at In 0,62V
 loss U at 5xIn 3,12V
 heat losses at In 2,1W (L=3x25m)



Contactor.
1=Switched ON.

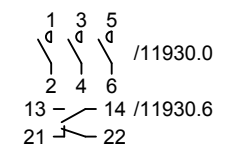
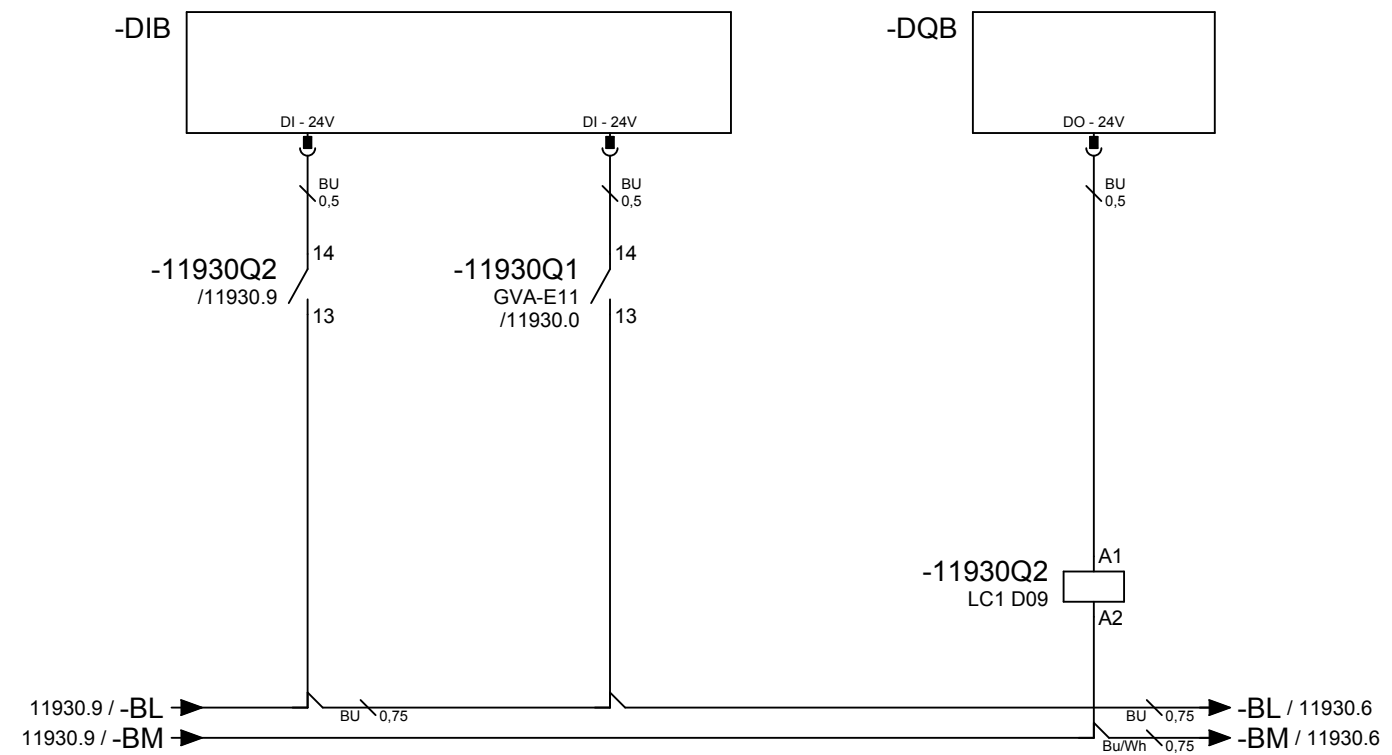
Circuit
breaker. 0=Failure.

Motor.
Contactor.

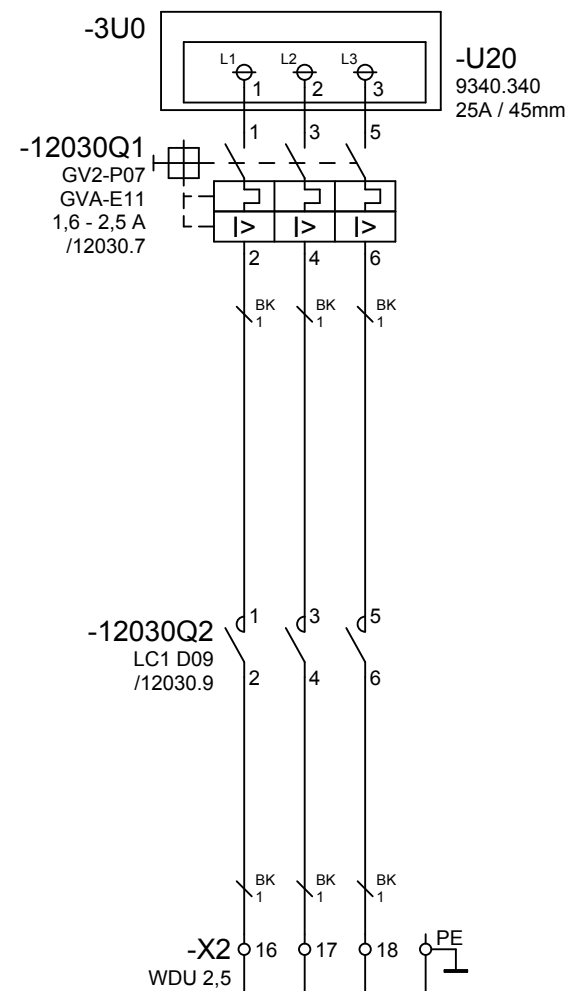


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,5A = 14,4%)
loss U at In	0,08V
loss U at 5xIn	0,38V
heat losses at In	0,34W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,5A = 16,7%)
loss U at In	0,85V
loss U at 5xIn	4,25V
heat losses at In	3,8W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

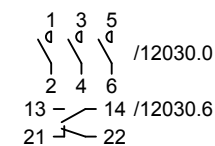
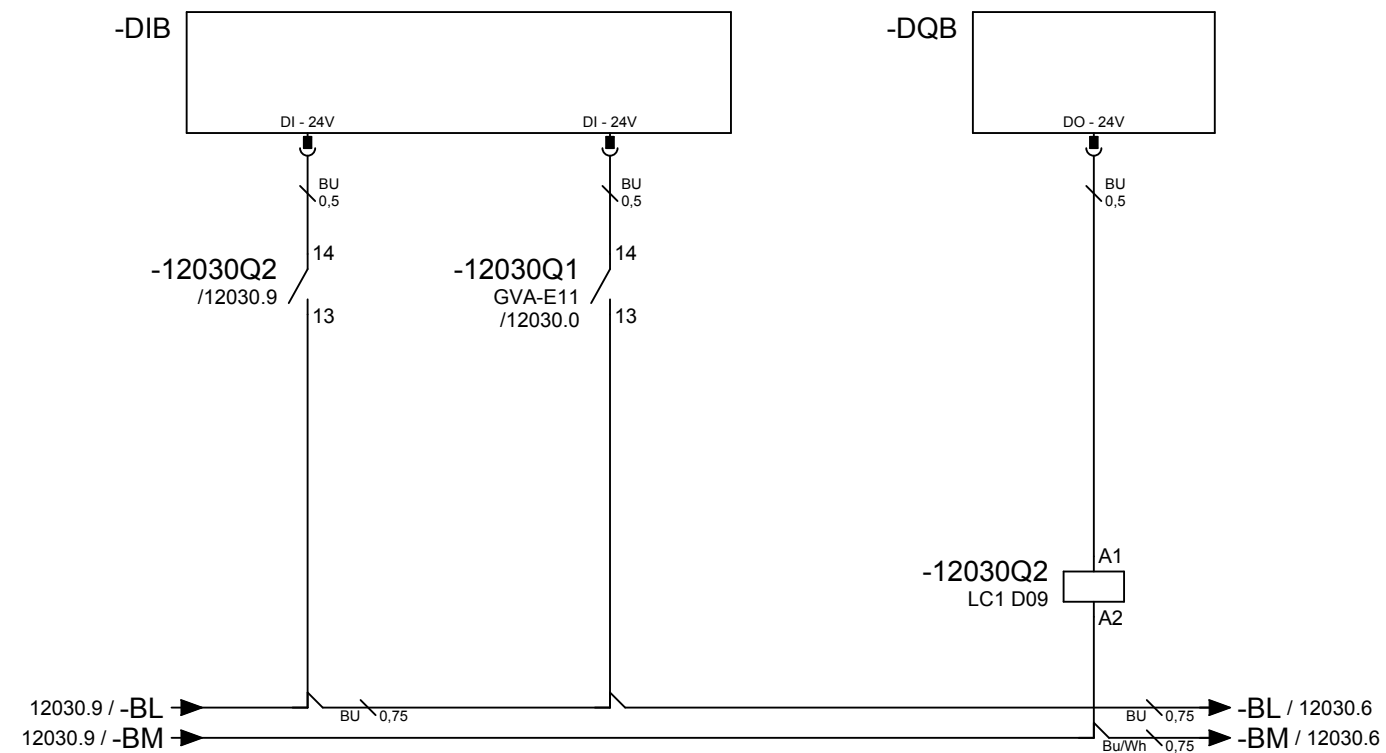


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,9A = 18,3%)
 loss U at In 0,10V
 loss U at 5xIn 0,48V
 heat losses at In 0,55W (L=3x3m)

 short circuit resistance 130kA at 415V

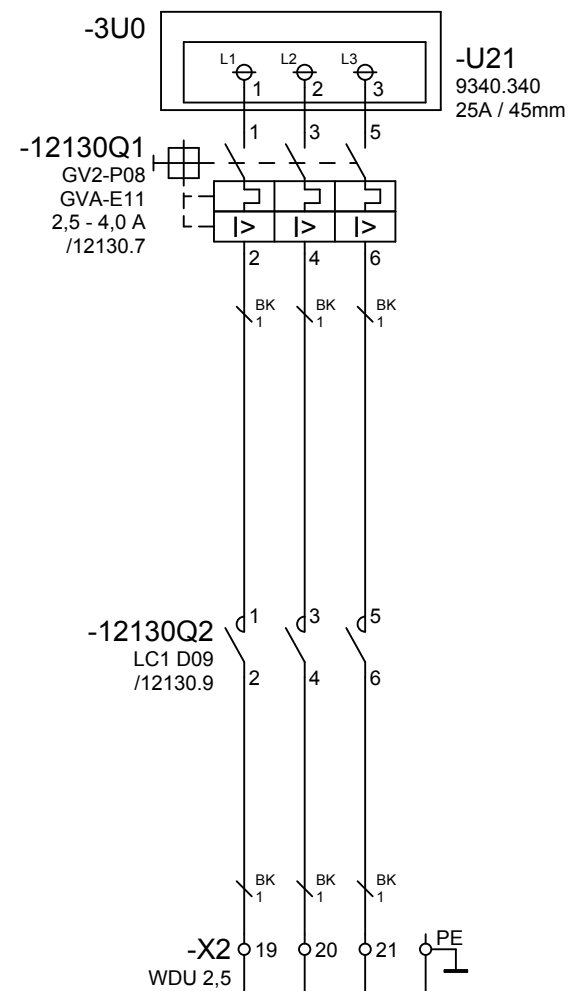
Cable route E
 load 1mm² = cca 13,0A; (1,9A = 14,6%)
 loss U at In 0,81V
 loss U at 5xIn 4,04V
 heat losses at In 4,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.



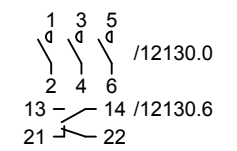
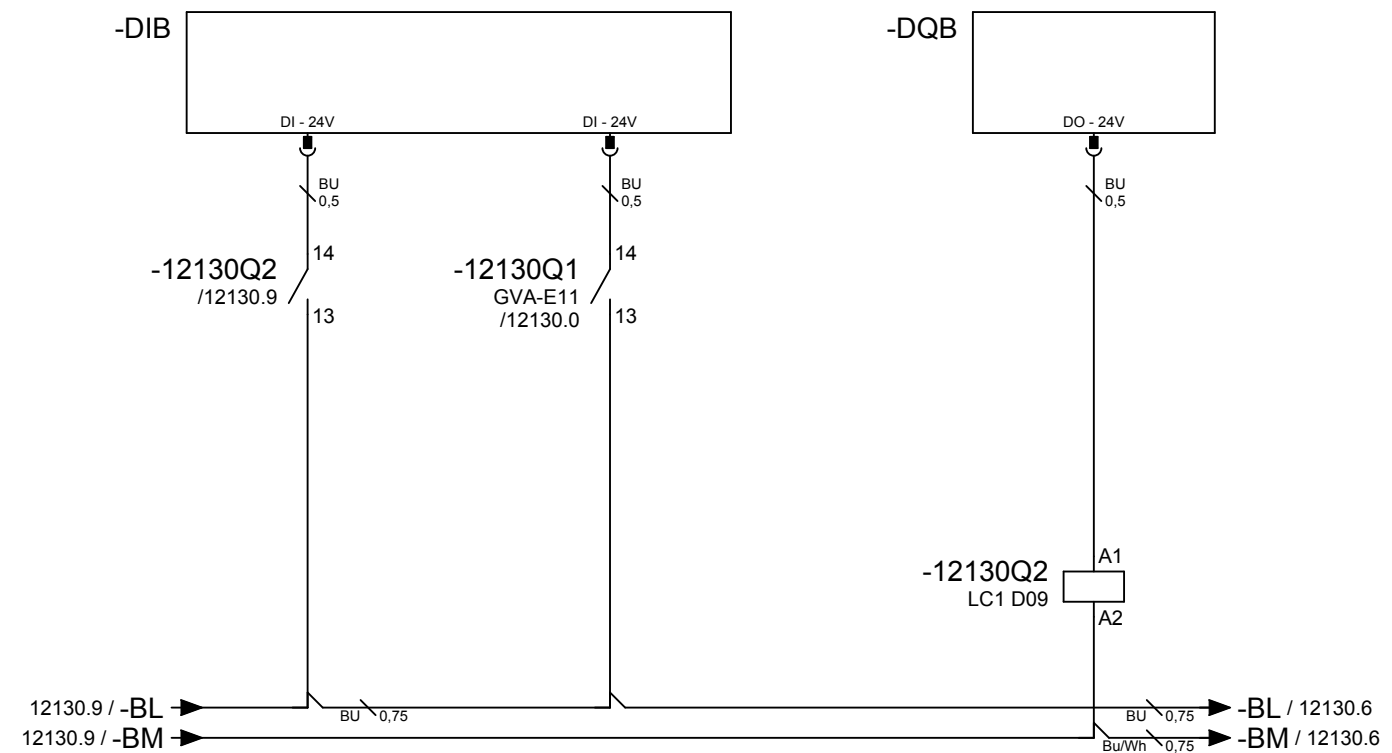
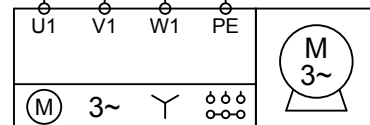
+UBxxxx-12130W5
ÖLFLEX 100
4x1
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (2,7A = 26,0%)
 loss U at In 0,14V
 loss U at 5xIn 0,69V
 heat losses at In 1,12W (L=3x3m)

 short circuit resistance 130kA at 415V

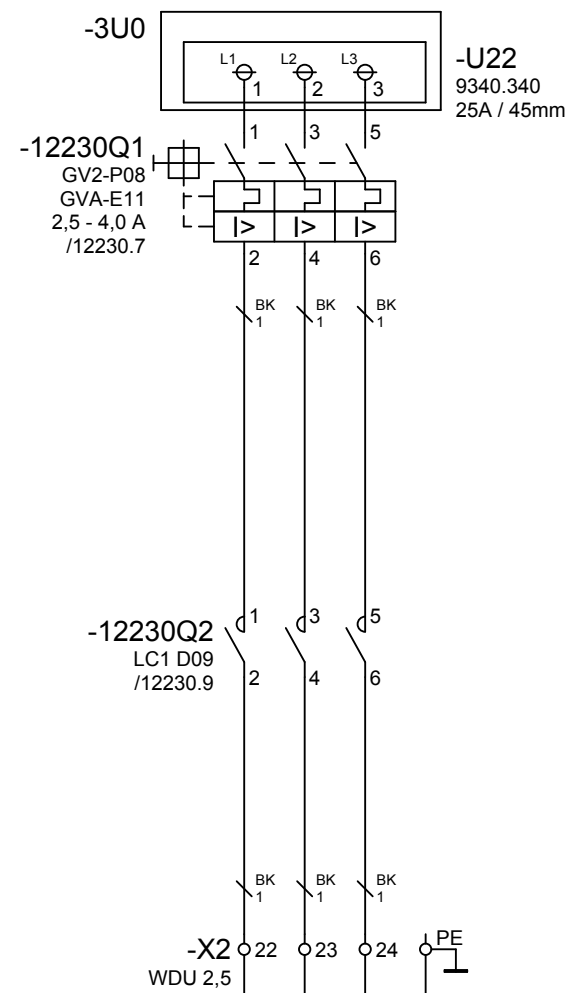
Cable route E
 load 1mm² = cca 13,0A; (2,7A = 20,8%)
 loss U at In 1,15V
 loss U at 5xIn 5,74V
 heat losses at In 9,3W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

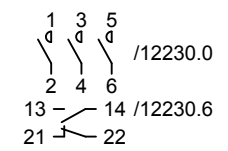
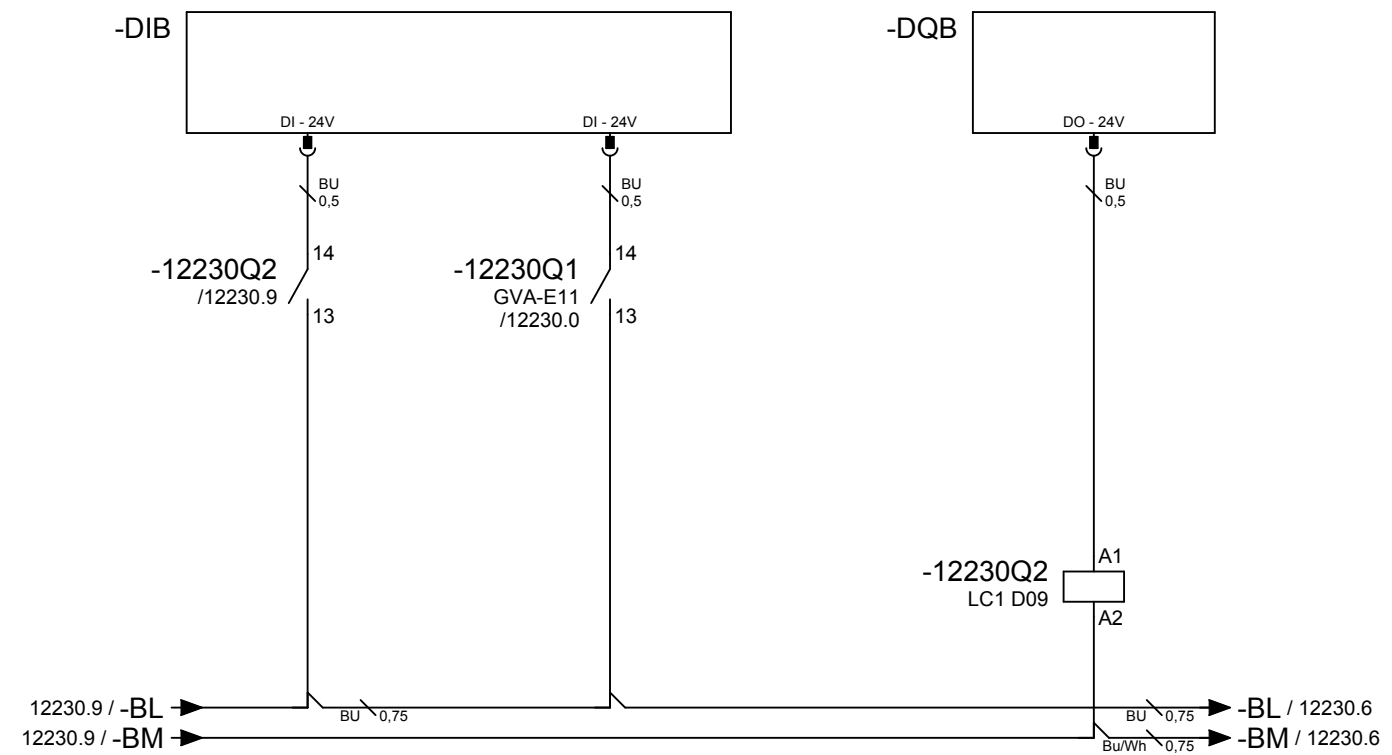


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (3,5A = 33,7%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 1,87W (L=3x3m)

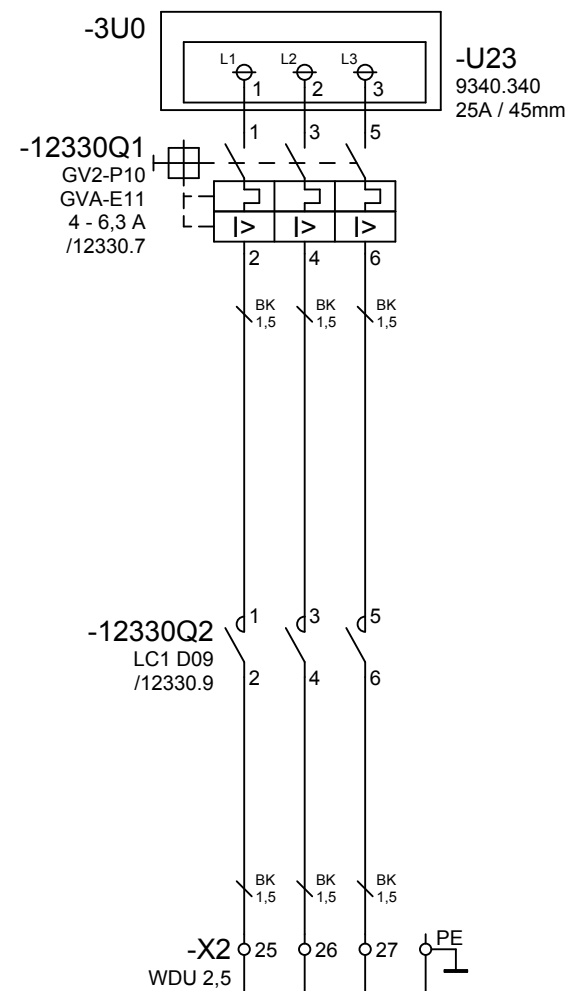
 short circuit resistance 130kA at 415V

Cable route E
 load 1mm² = cca 13,0A; (3,5A = 27,0%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 15,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors. TISKO spol. s r. o.	1,5kW. 2018	Creator V00 01.02.2012 Ing. Tisovčík Ivan Last revision of project Last revision of page M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	= GV2P_C2 + R_60 12230
	elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk			

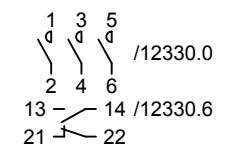
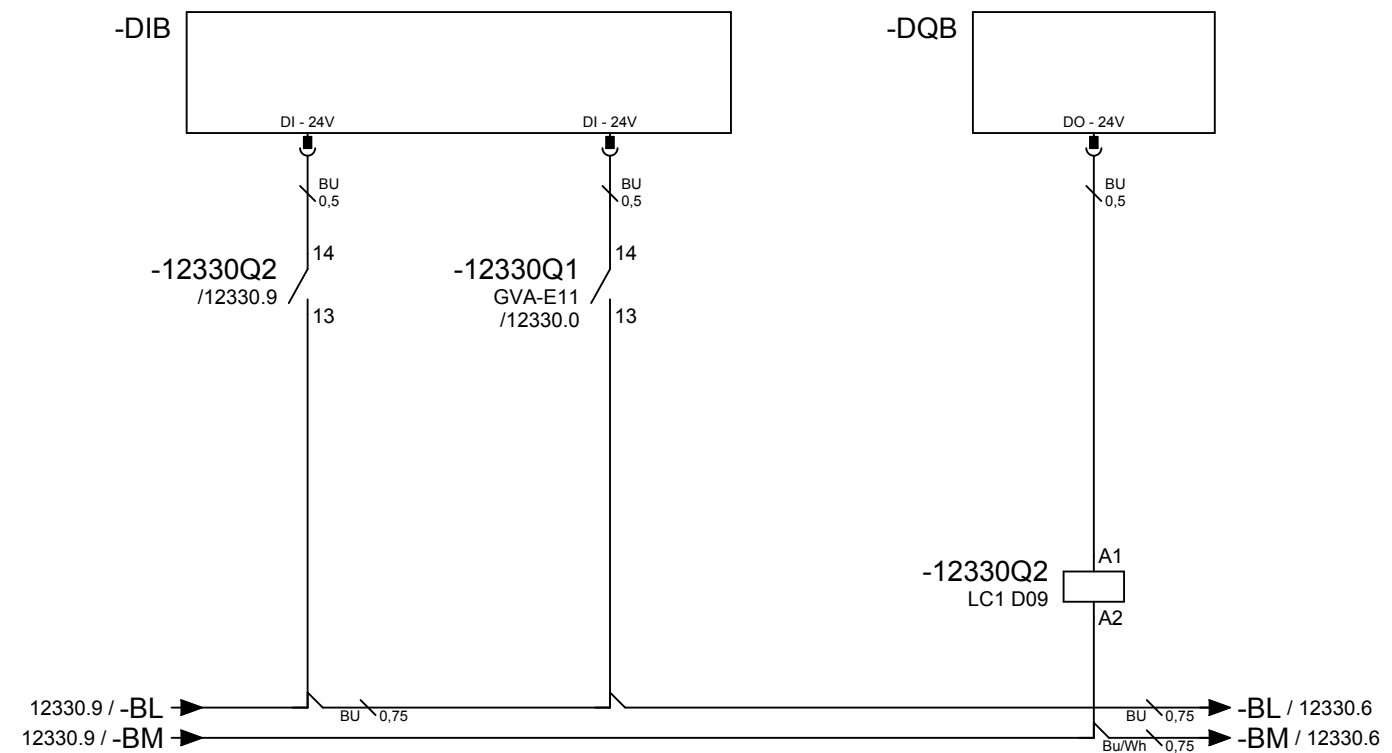
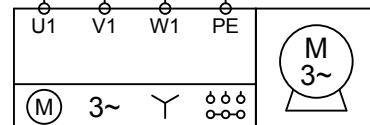


+UBxxx-12330W5
ÖLFLEX 100
4x1,5
25 m

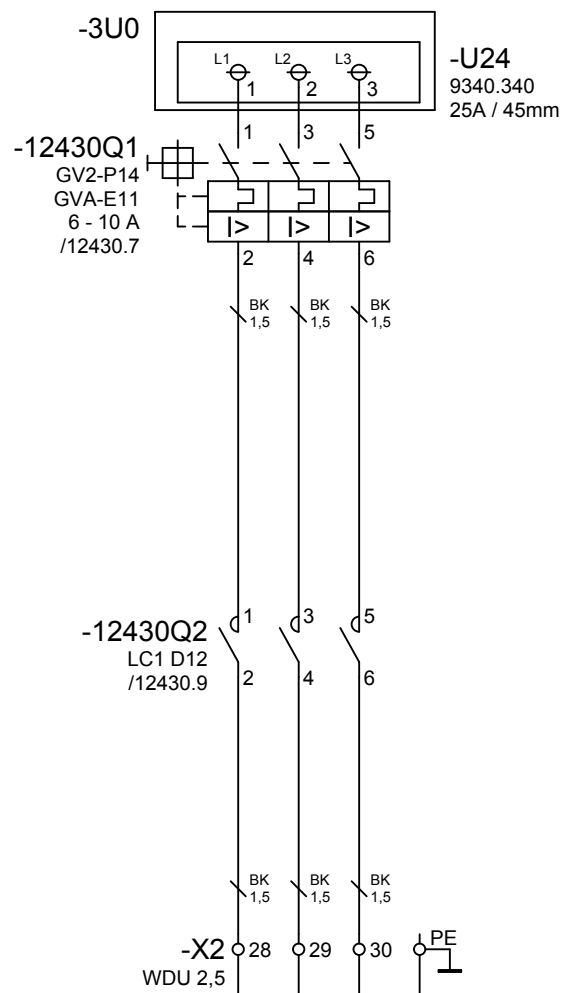
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1,5mm² = cca 13,5A; (5A = 37,0%)
loss U at In 0,17V
loss U at 5xIn 0,85V
heat losses at In 2,55W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1,5mm² = cca 18,5A; (5A = 27,0%)
loss U at In 1,42V
loss U at 5xIn 7,08V
heat losses at In 21,3W (L=3x25m)
... ..
... ..

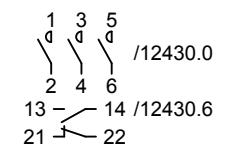
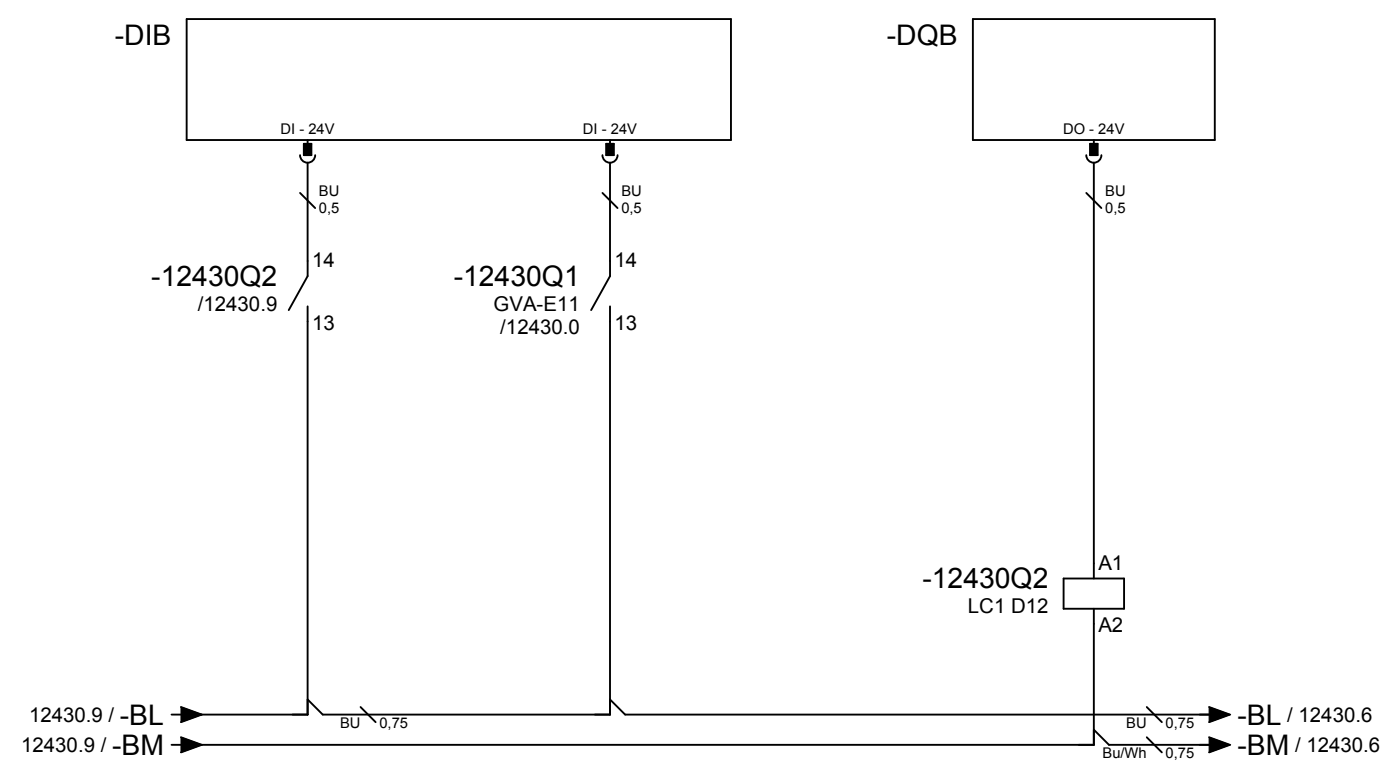


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

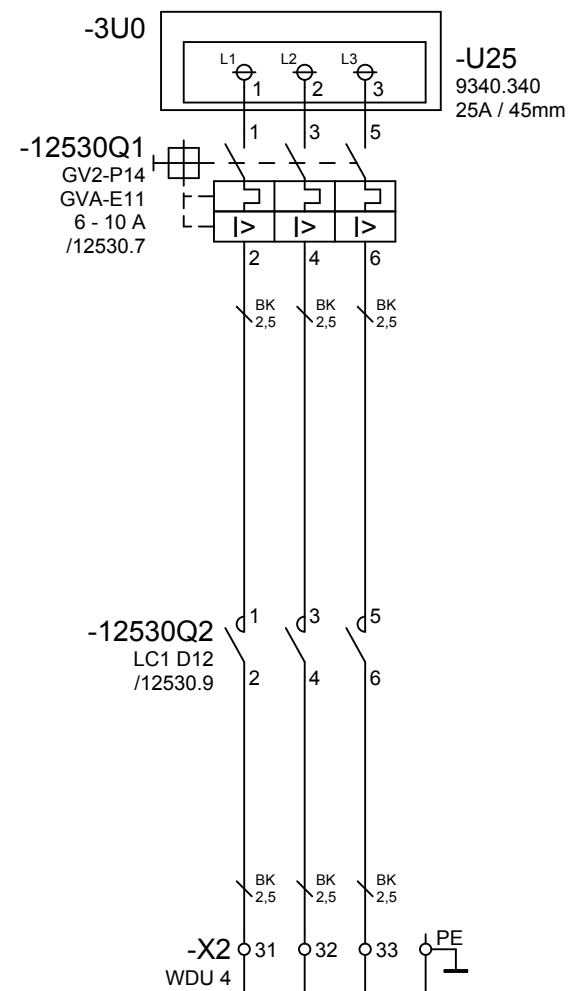


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



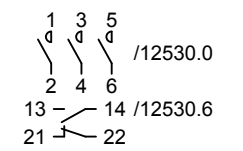
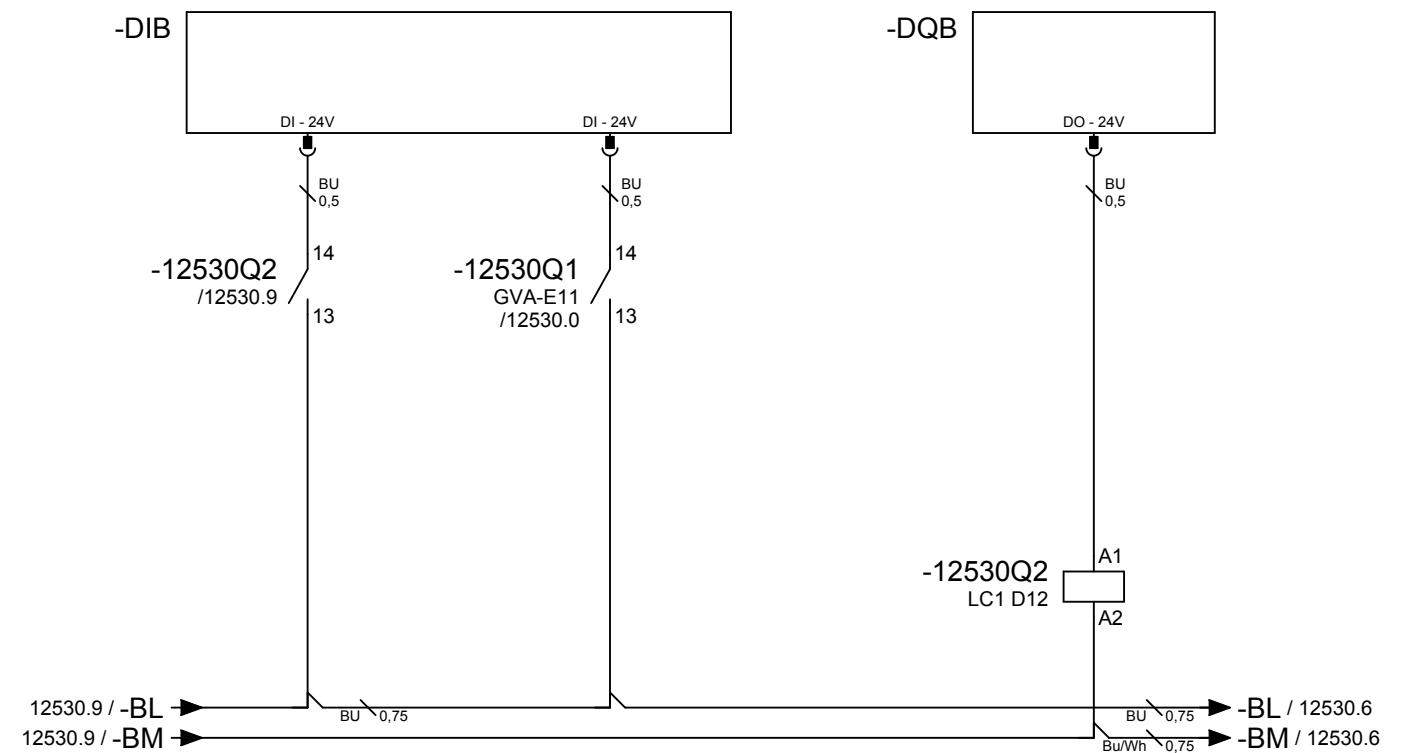
+UBxxx-12530W5
 ÖLFLEX 100
 4x1,5
 25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (8,5A = 46,4%)
 loss U at In 0,17V
 loss U at 5xIn 0,87V
 heat losses at In 4,42W (L=3x3m)

 short circuit resistance 130kA at 415V

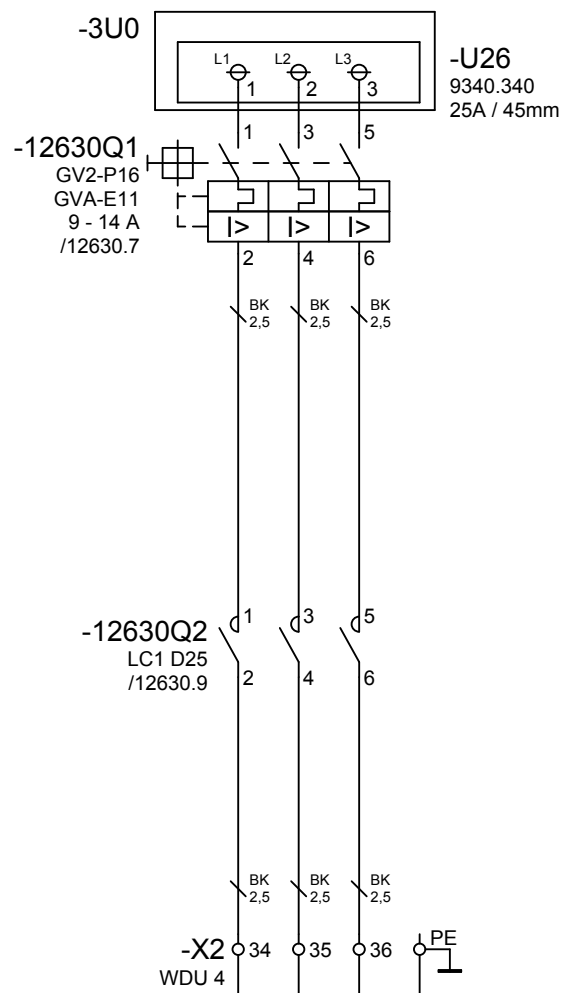
Cable route E
 load 1,5mm² = cca 18,5A; (8,5A = 45,9%)
 loss U at In 2,41V
 loss U at 5xIn 12,04V
 heat losses at In 61,4W (L=3x25m)



Contactor.
 1=Switched ON.

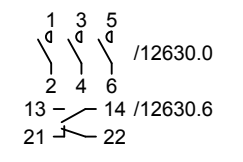
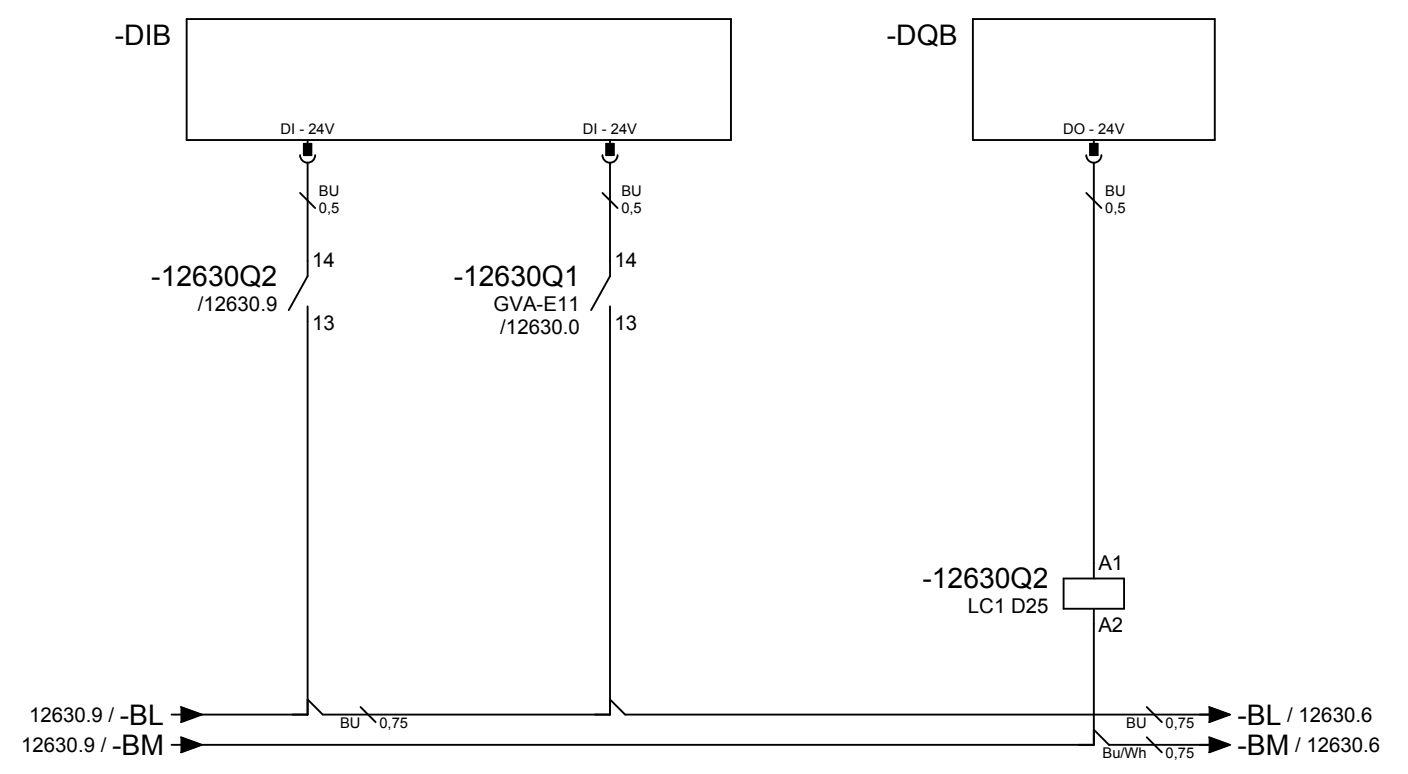
Circuit
 breaker. 0=Failure.

Motor.
 Contactor.



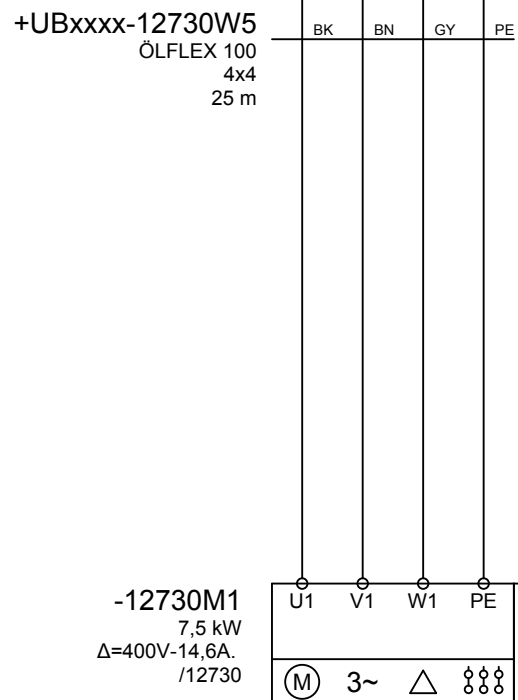
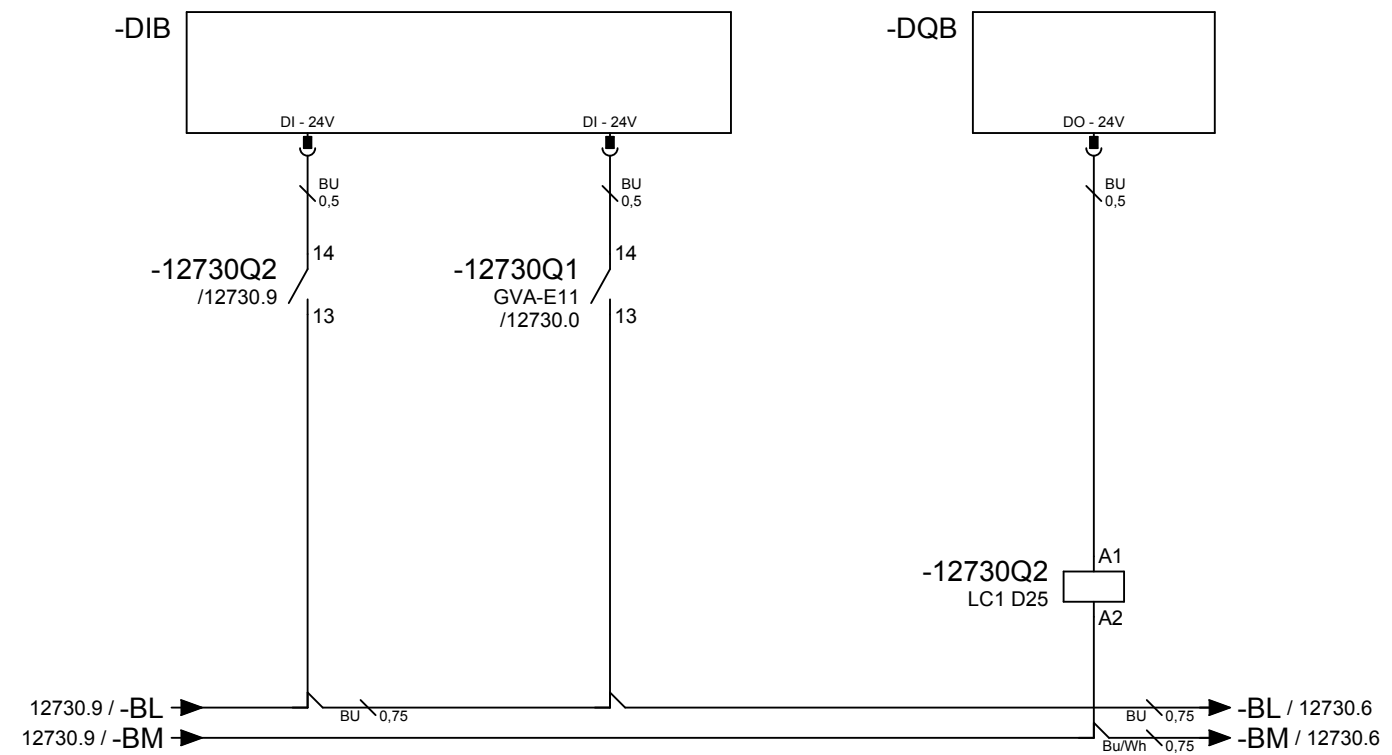
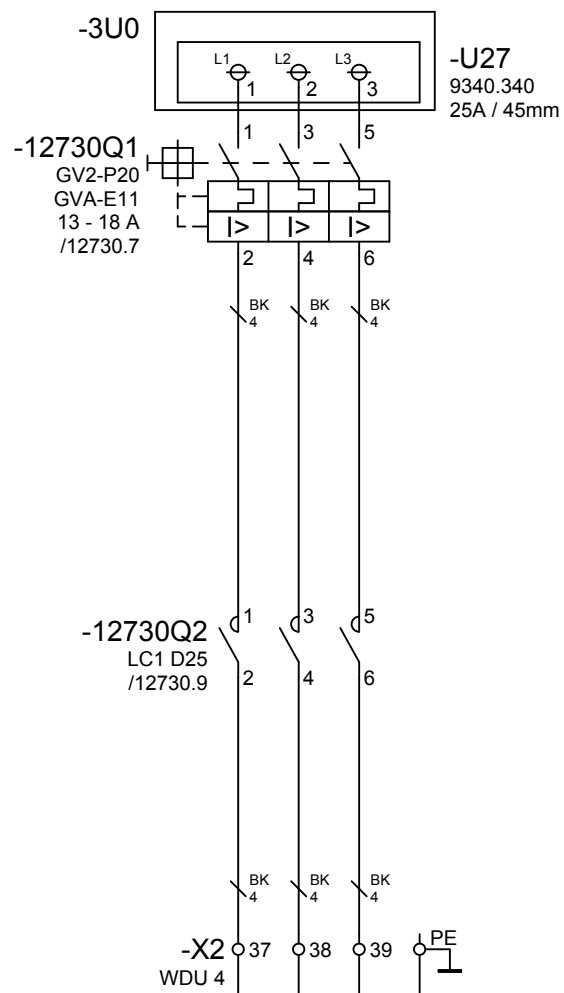
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (11A = 60,1%)
loss U at In	0,22V
loss U at 5xIn	1,12V
heat losses at In	7,41W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	2,5mm ² = cca 25,0A; (11A = 44,0%)
loss U at In	1,87V
loss U at 5xIn	9,35V
heat losses at In	61,7W (L=3x25m)
...	...
...	...



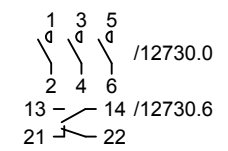
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

	PACK 31. Motors.	5,5kW.	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV2P_C2
	TISKO spol. s r. o.	2018	Last revision of project	+ R_60
			Last revision of page	12630
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	

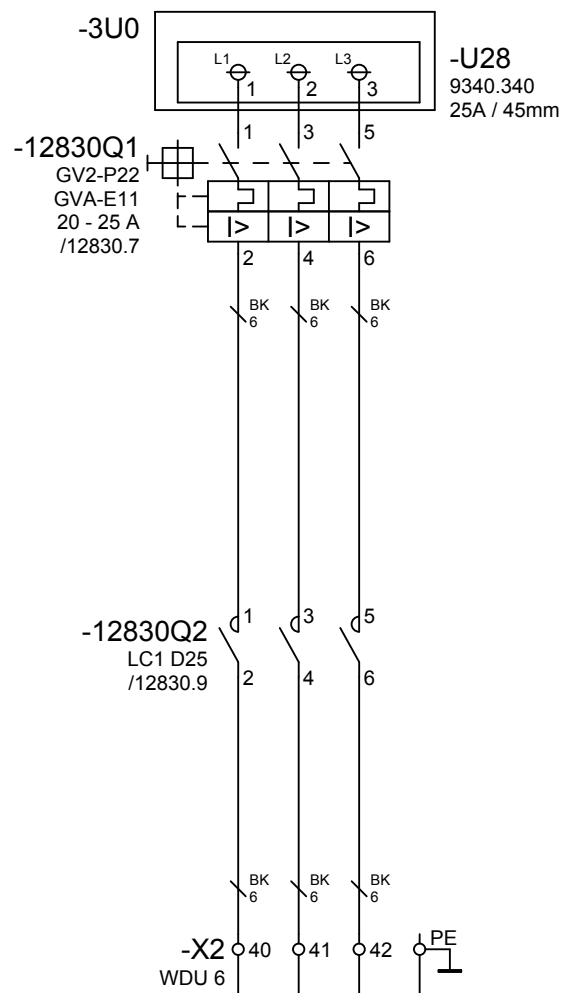


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...

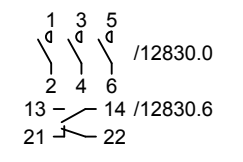
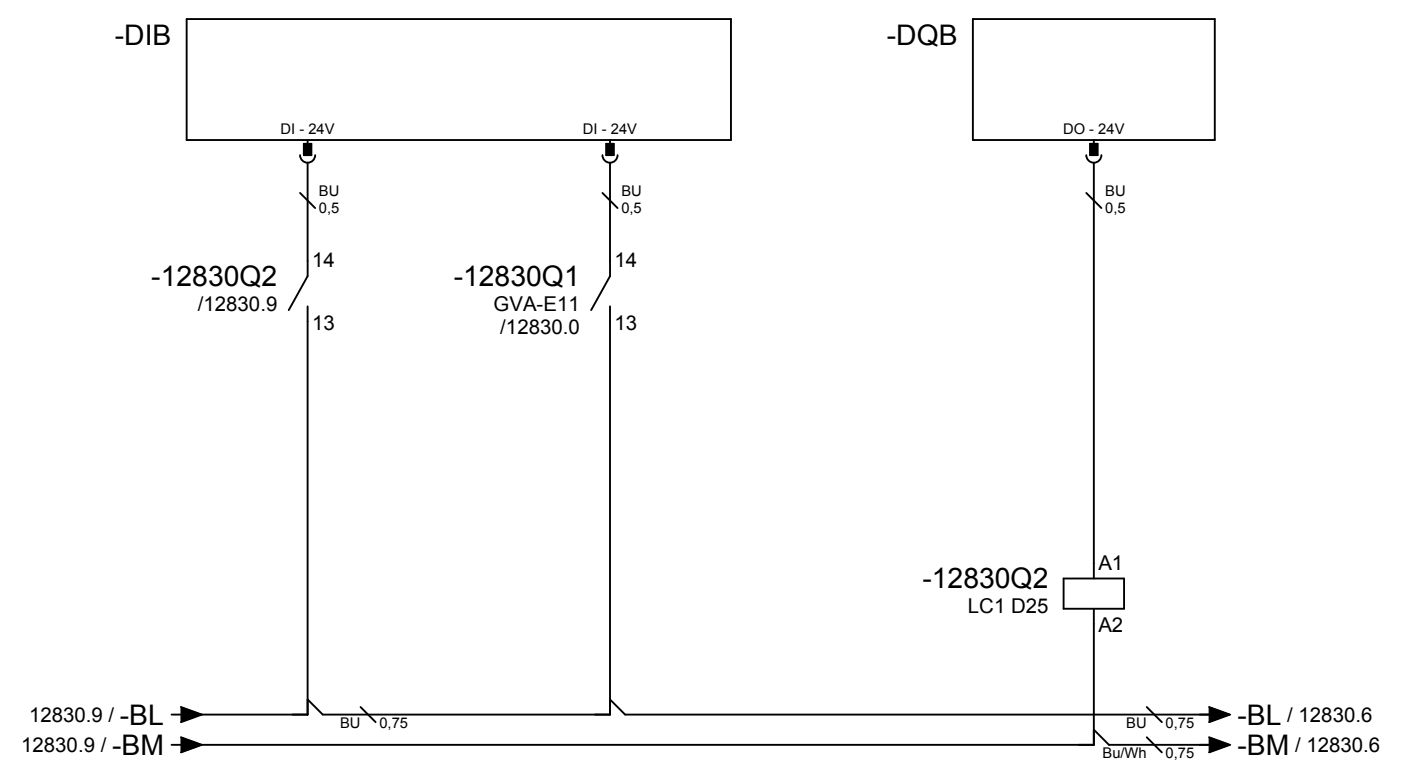


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

0

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+R_60/99999

11099

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 konštruktívna kancelária
 SLOVAKIA (SK) - BA
 www.tisko.sk

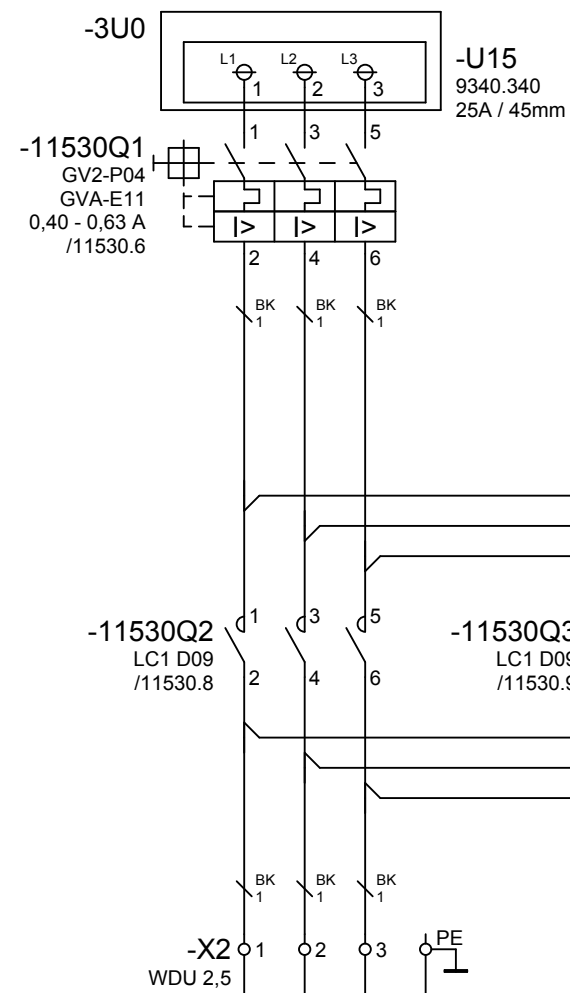
PACK 31. Motors.
 TISKO spol. s r. o.

Type 2 coordination.
 2018

Creator	V00	01.02.2012	Ing. Tisovčík Ivan
Last revision of project			
Last revision of page			
M = 1 : 1	Grafika	21.10.2018	WUP0U34409

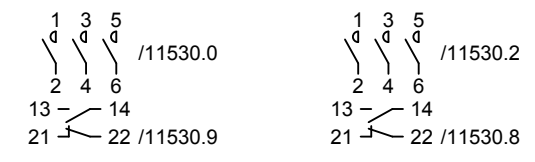
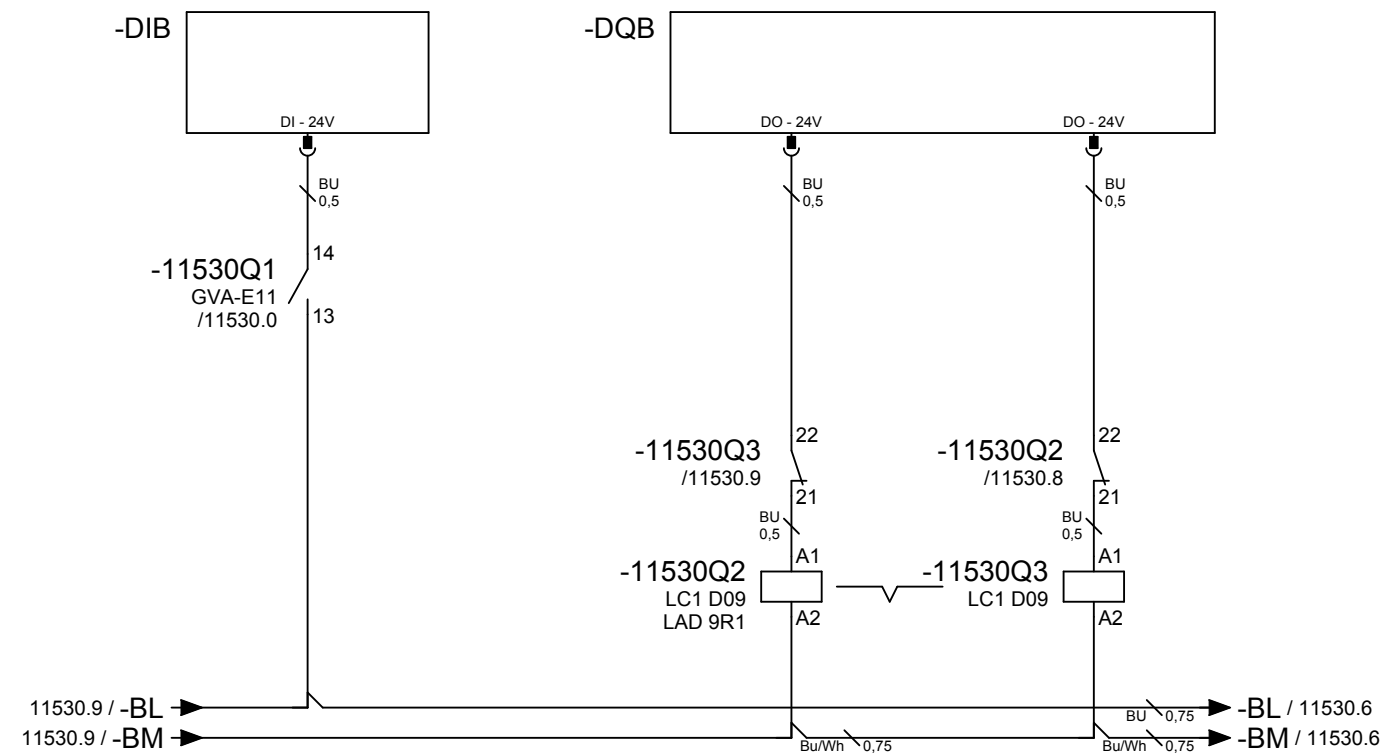
= GV2P_C2

+ R_60_Reverz 11000

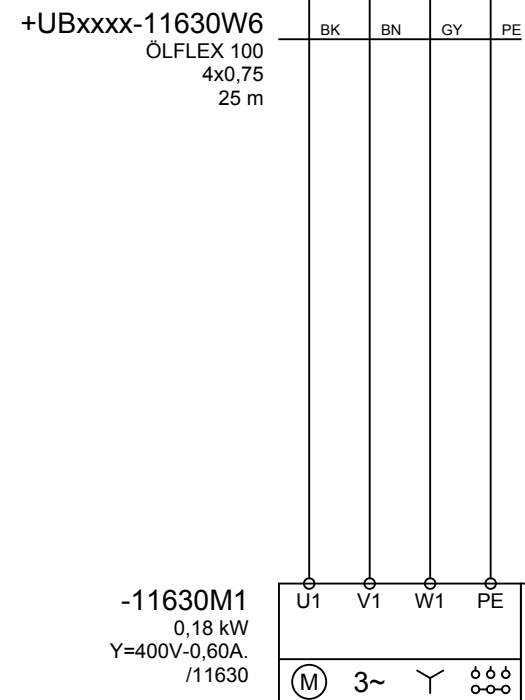
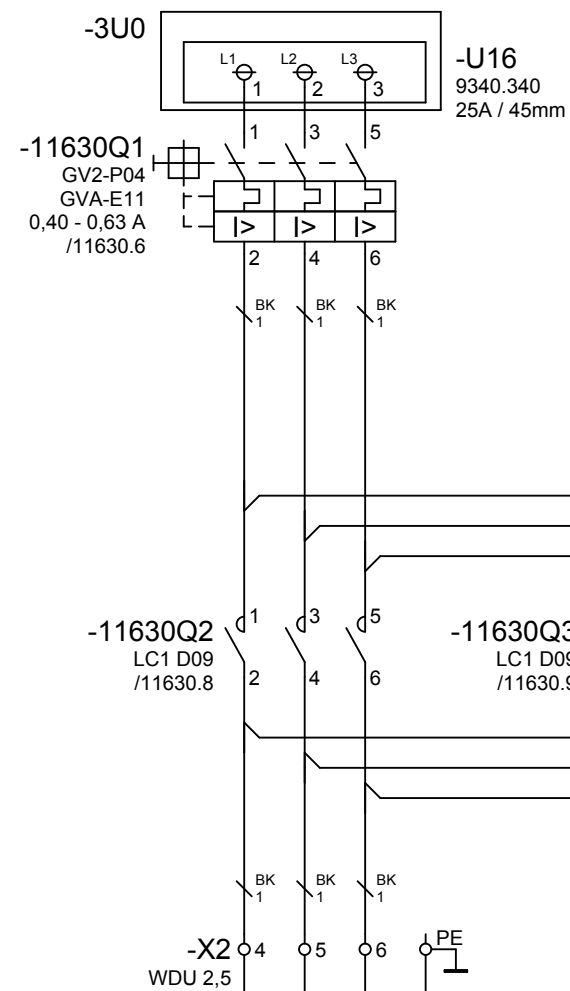


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,41A = 4,0%)
loss U at In	0,02V
loss U at 5xIn	0,10V
heat losses at In	0,03W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,41A = 4,6%)
loss U at In	0,23V
loss U at 5xIn	1,16V
heat losses at In	0,3W (L=3x25m)
...	...
...	...

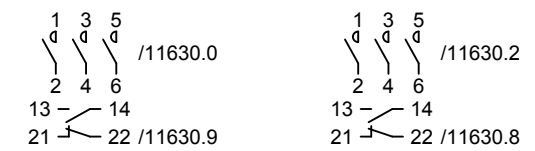
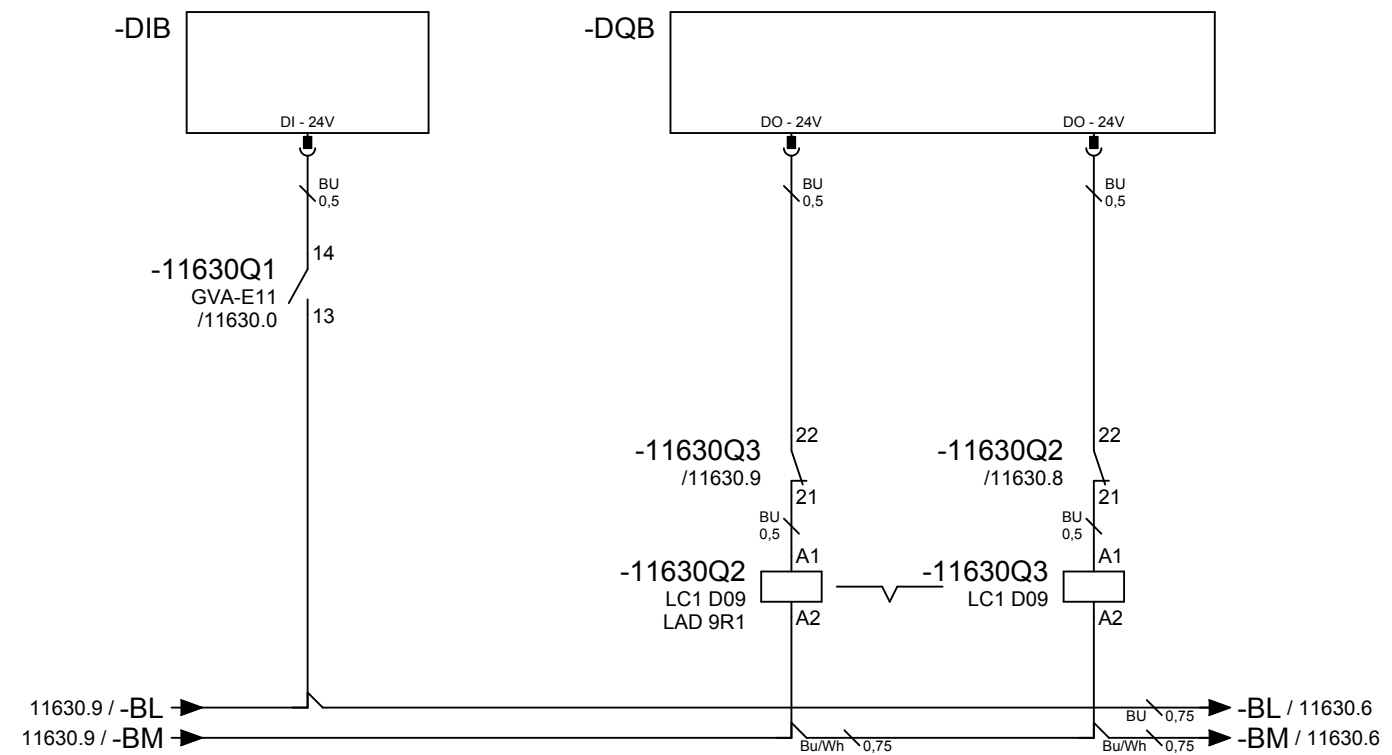


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

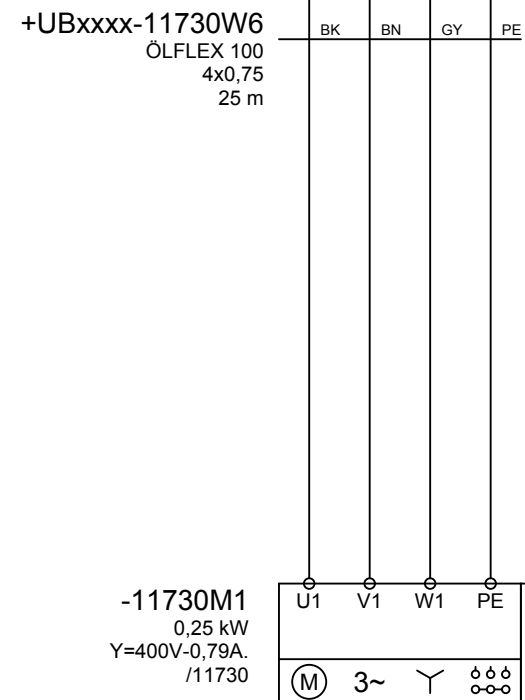
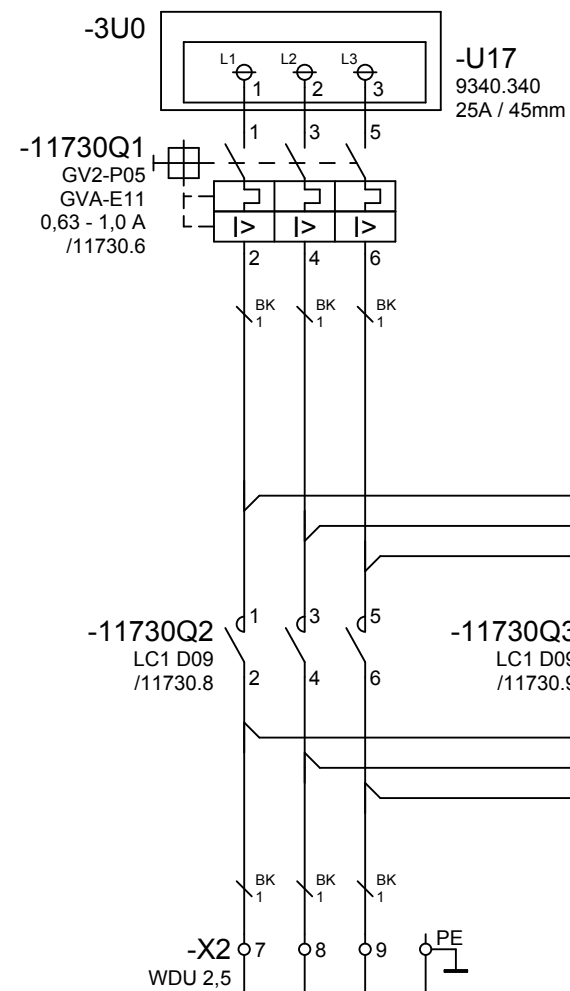


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (0,6A = 5,8%)
loss U at In	0,03V
loss U at 5xIn	0,15V
heat losses at In	0,06W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (0,6A = 6,7%)
loss U at In	0,34V
loss U at 5xIn	1,70V
heat losses at In	0,6W (L=3x25m)
...	...
...	...



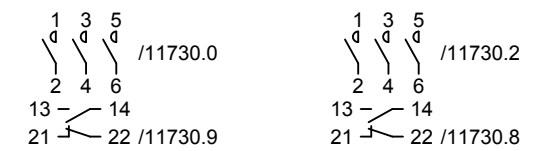
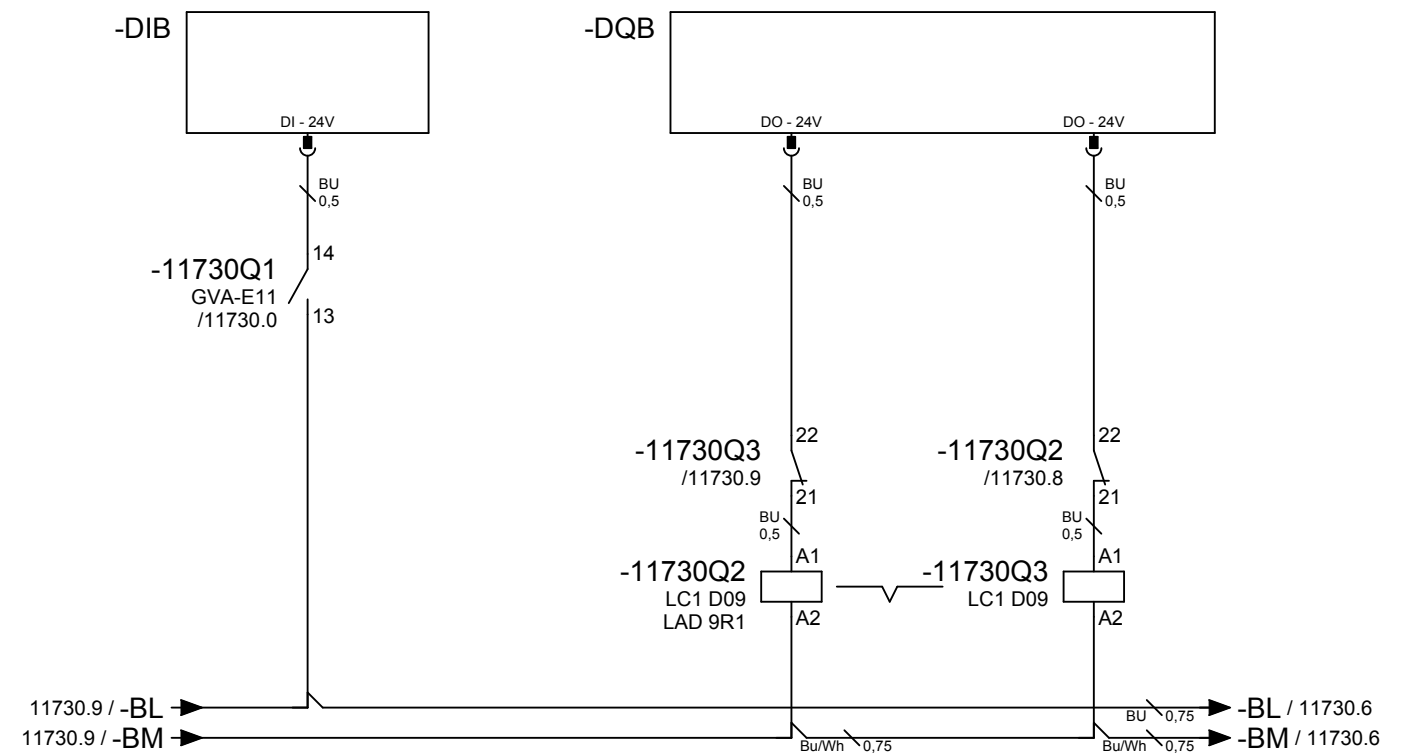
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



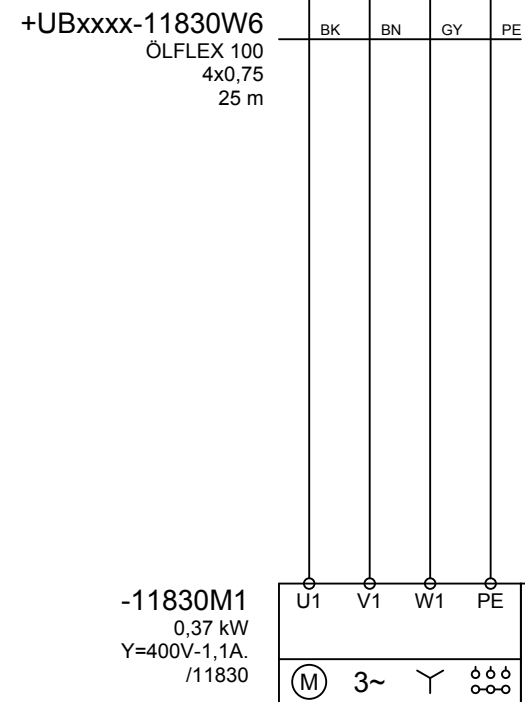
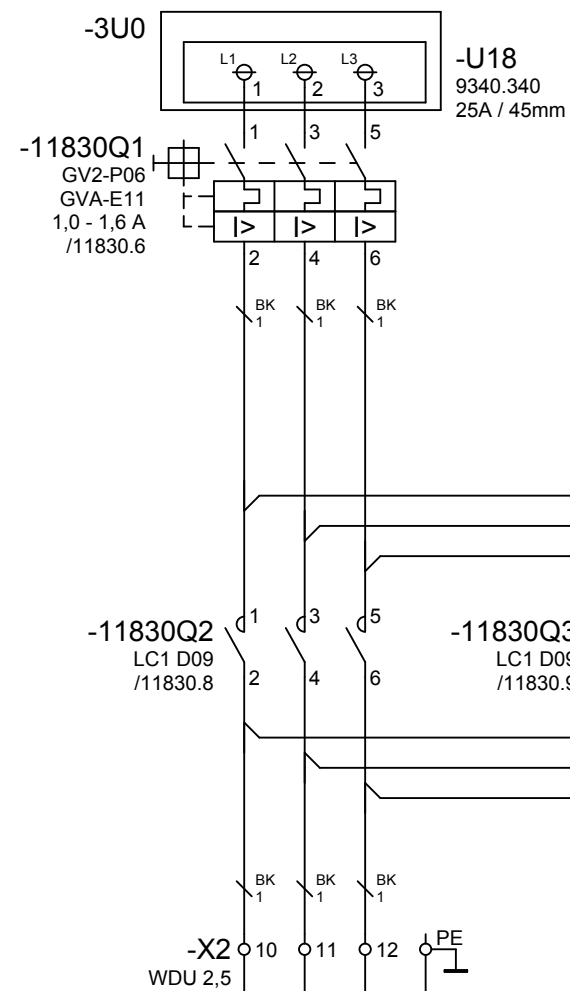
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (0,8A = 7,7%)
loss U at In 0,04V
loss U at 5xIn 0,20V
heat losses at In 0,10W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 0,75mm² = cca 9,0A; (0,8A = 8,9%)
loss U at In 0,45V
loss U at 5xIn 2,27V
heat losses at In 1,1W (L=3x25m)
... ..
... ..

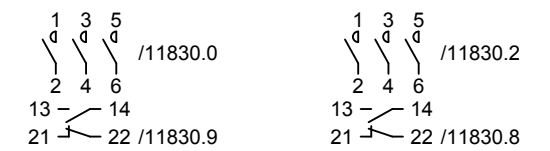
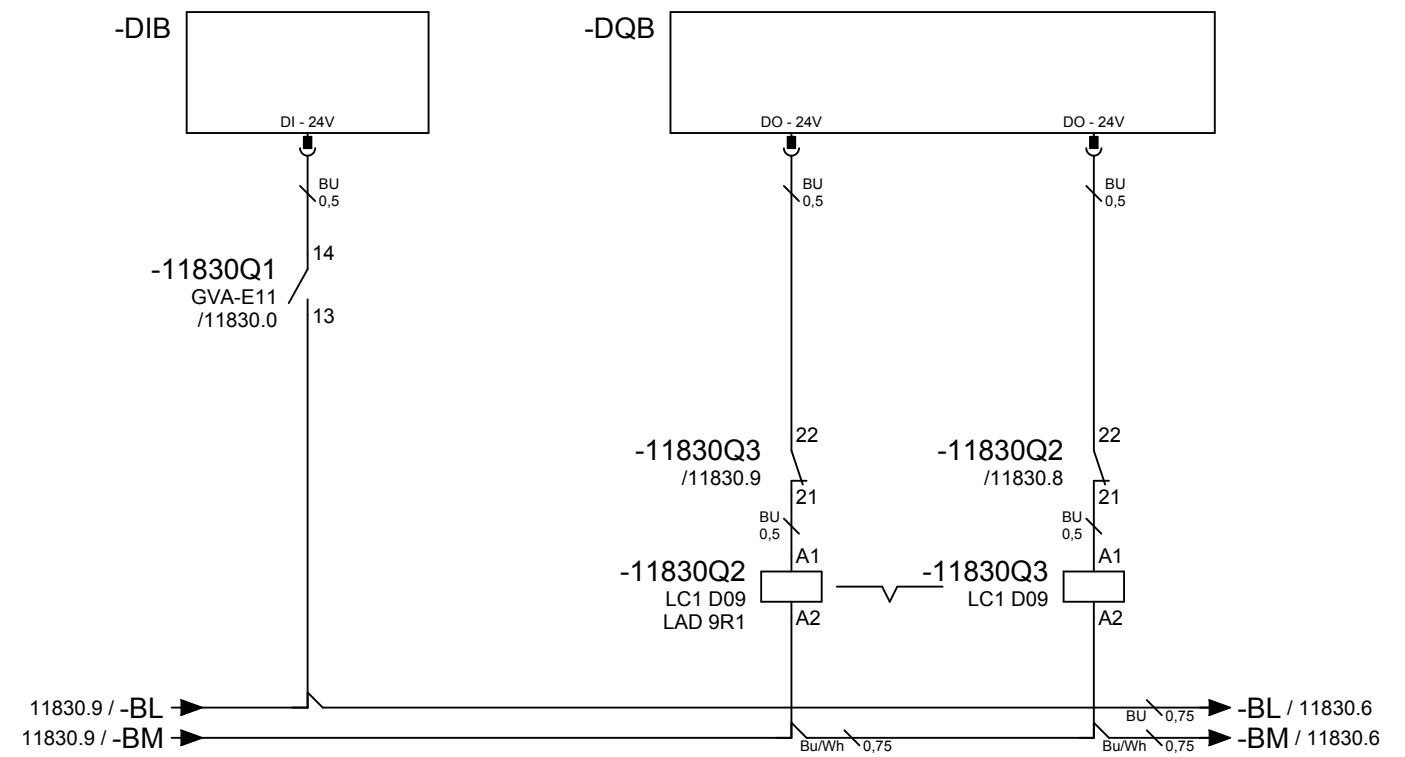


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

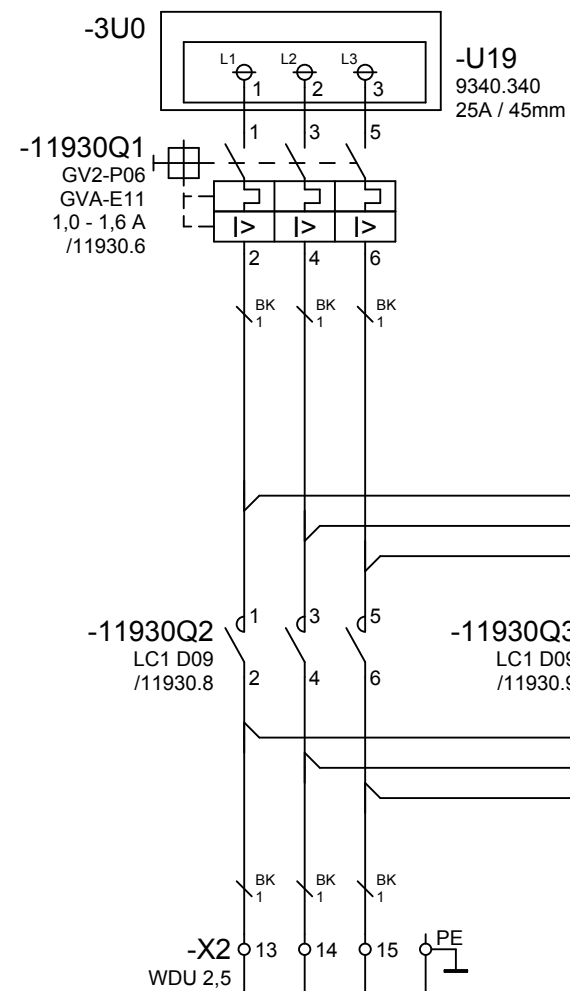


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,1A = 10,6%)
loss U at In	0,06V
loss U at 5xIn	0,28V
heat losses at In	0,19W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	0,75mm ² = cca 9,0A; (1,1A = 12,2%)
loss U at In	0,62V
loss U at 5xIn	3,12V
heat losses at In	2,1W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

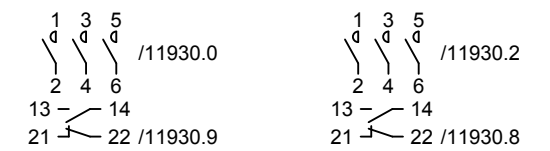
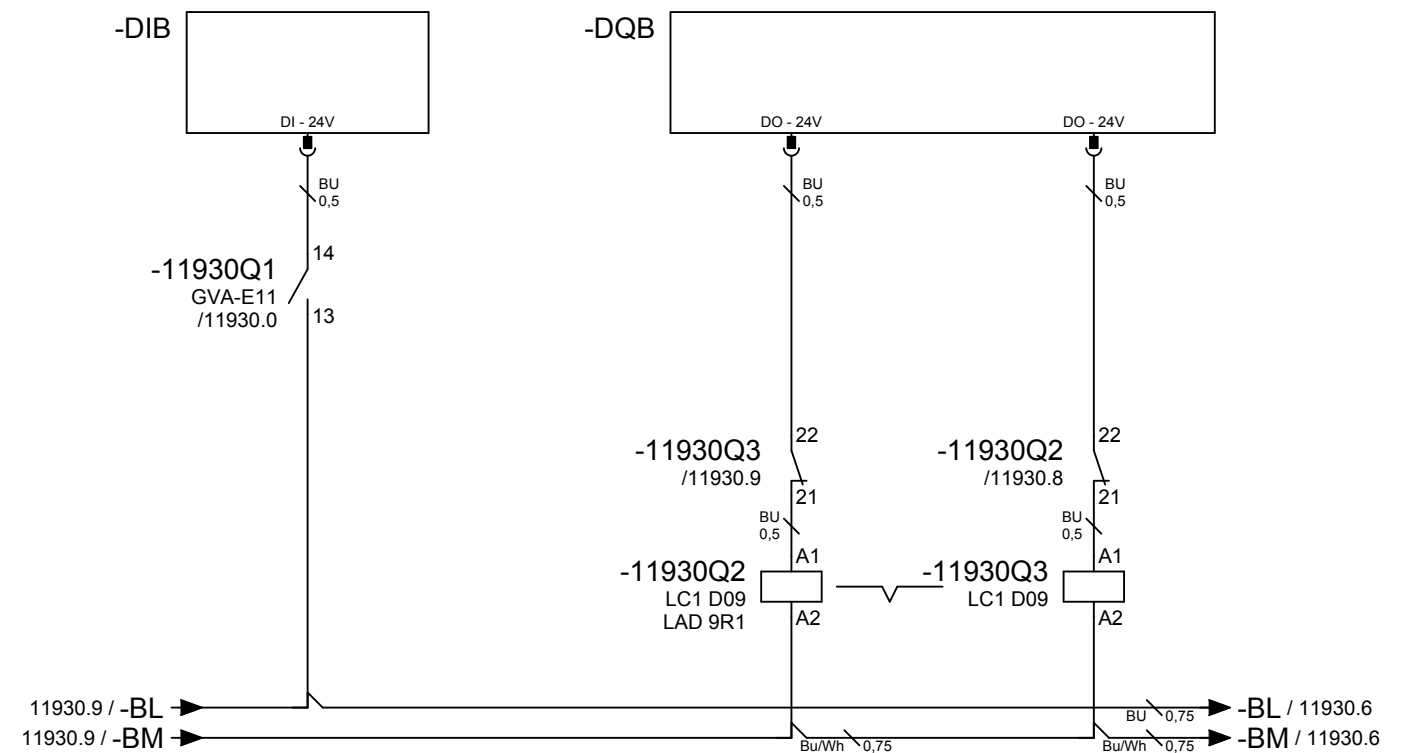


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 1mm² = cca 10,4A; (1,5A = 14,4%)
 loss U at In 0,08V
 loss U at 5xIn 0,38V
 heat losses at In 0,34W (L=3x3m)

 short circuit resistance 130kA at 415V

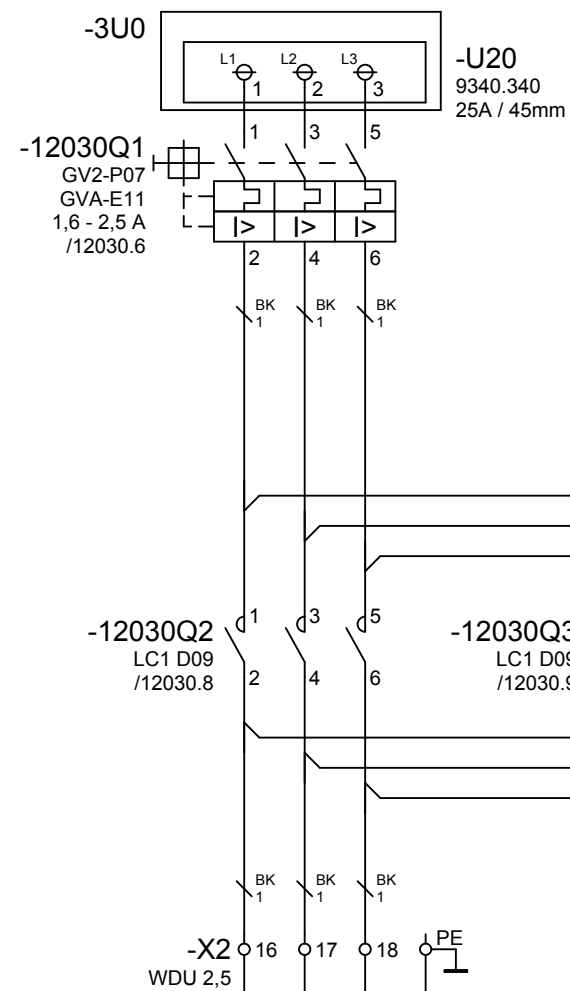
Cable route E
 load 0,75mm² = cca 9,0A; (1,5A = 16,7%)
 loss U at In 0,85V
 loss U at 5xIn 4,25V
 heat losses at In 3,8W (L=3x25m)



Circuit breaker. 0=Failure.

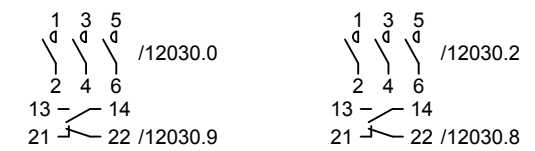
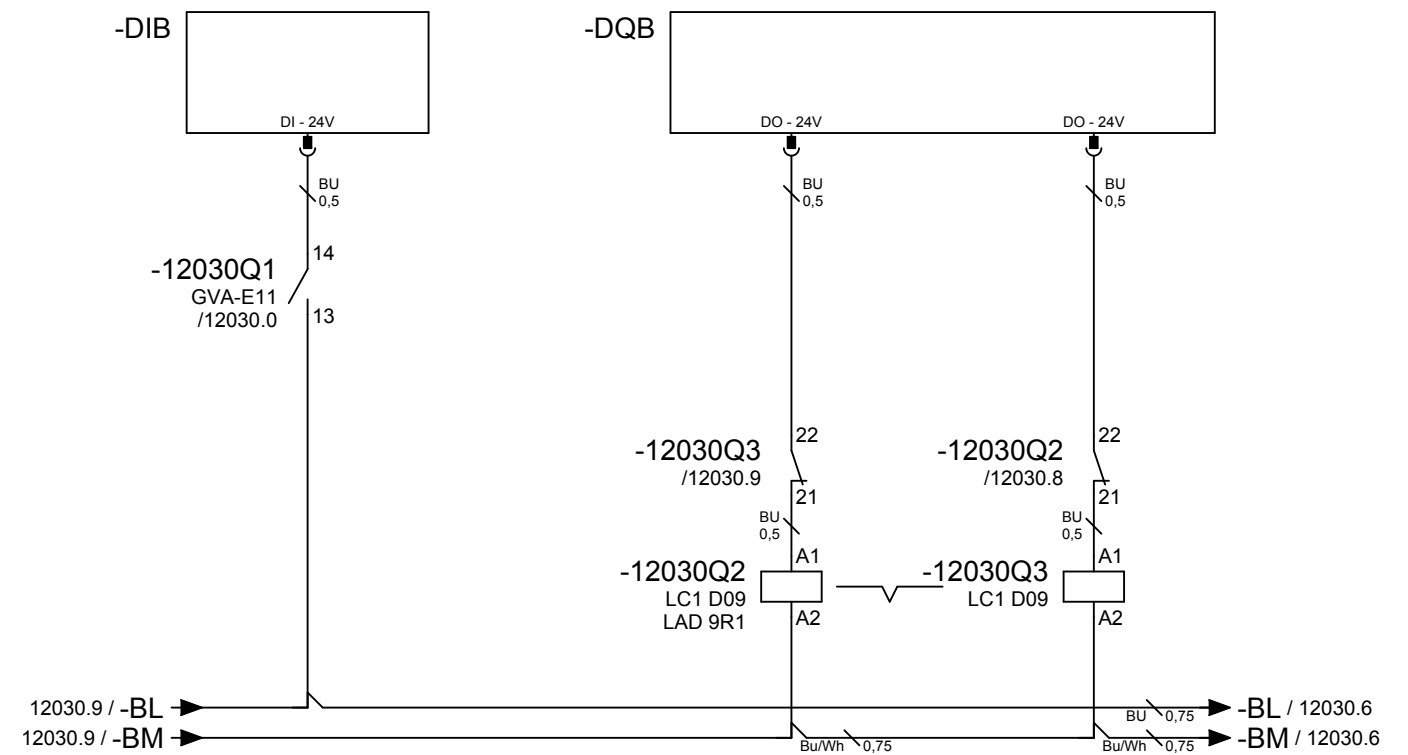
Motor. Contactor.

Motor. Contactor.

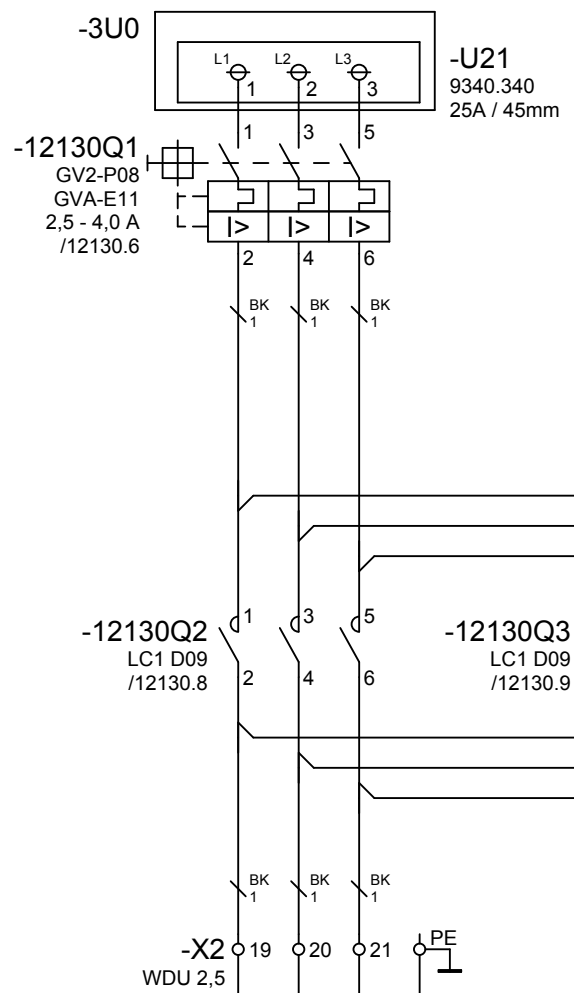


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (1,9A = 18,3%)
loss U at In	0,10V
loss U at 5xIn	0,48V
heat losses at In	0,55W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (1,9A = 14,6%)
loss U at In	0,81V
loss U at 5xIn	4,04V
heat losses at In	4,6W (L=3x25m)
...	...
...	...

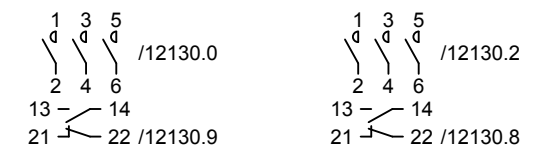
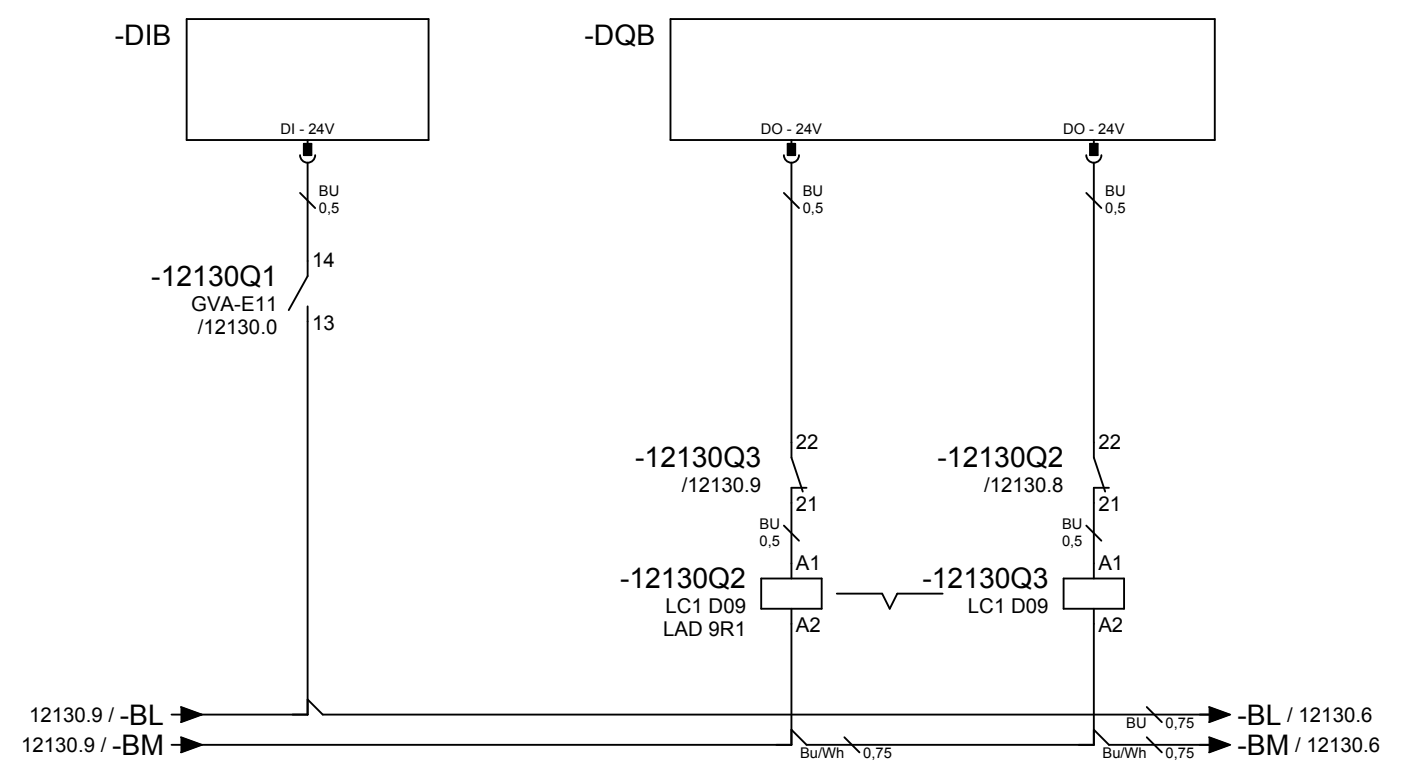


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

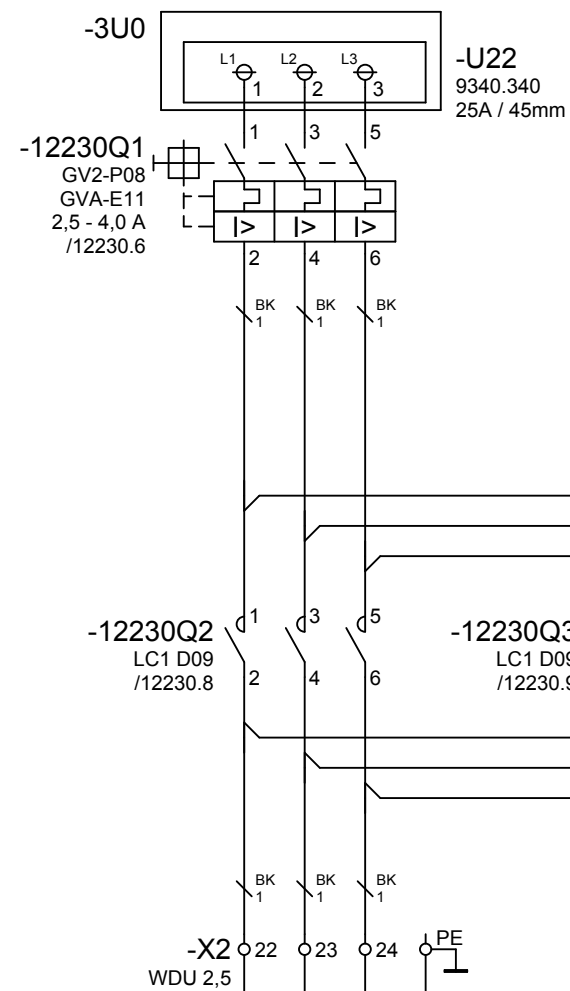


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1mm ² = cca 10,4A; (2,7A = 26,0%)
loss U at In	0,14V
loss U at 5xIn	0,69V
heat losses at In	1,12W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1mm ² = cca 13,0A; (2,7A = 20,8%)
loss U at In	1,15V
loss U at 5xIn	5,74V
heat losses at In	9,3W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

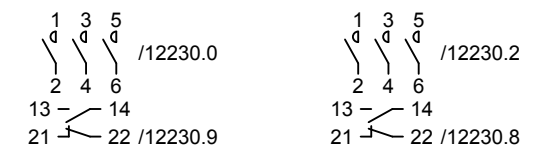
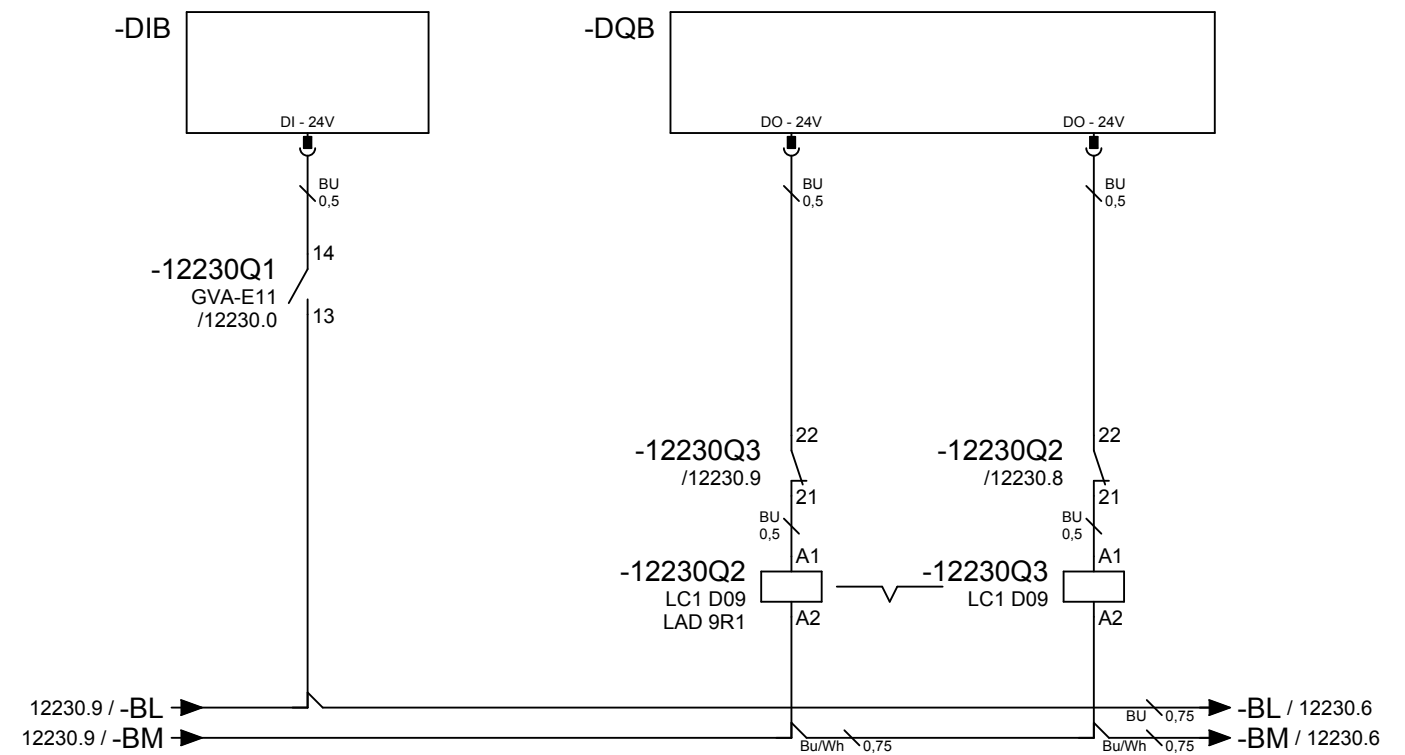
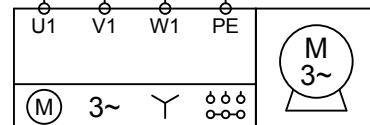


+UBxxxx-12230W6
ÖLFLEX 100
4x1
25 m

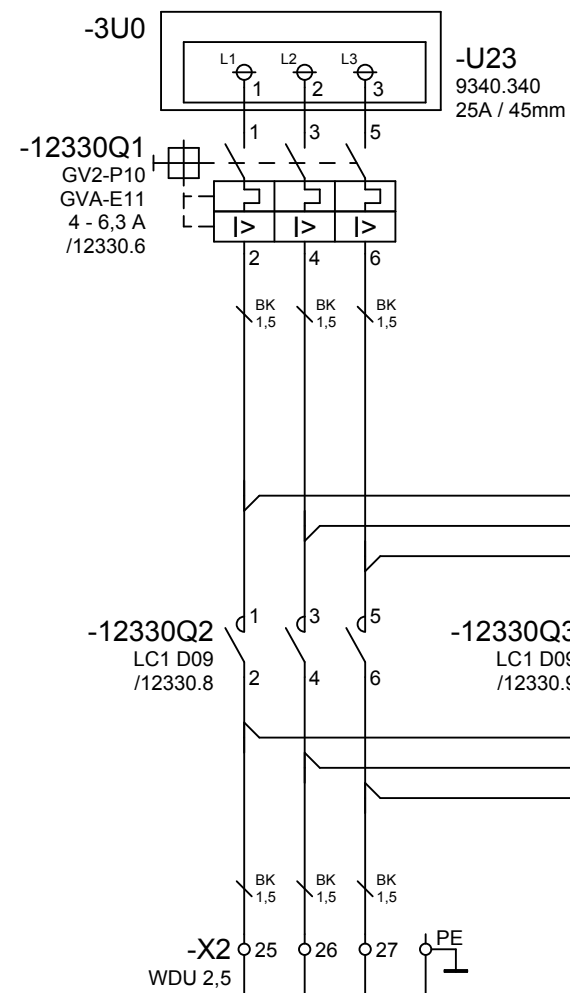
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 1mm² = cca 10,4A; (3,5A = 33,7%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 1,87W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 1mm² = cca 13,0A; (3,5A = 27,0%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 15,6W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

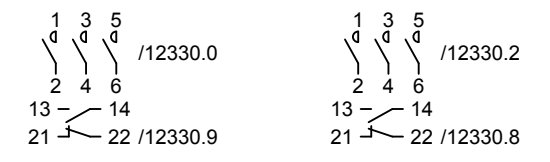
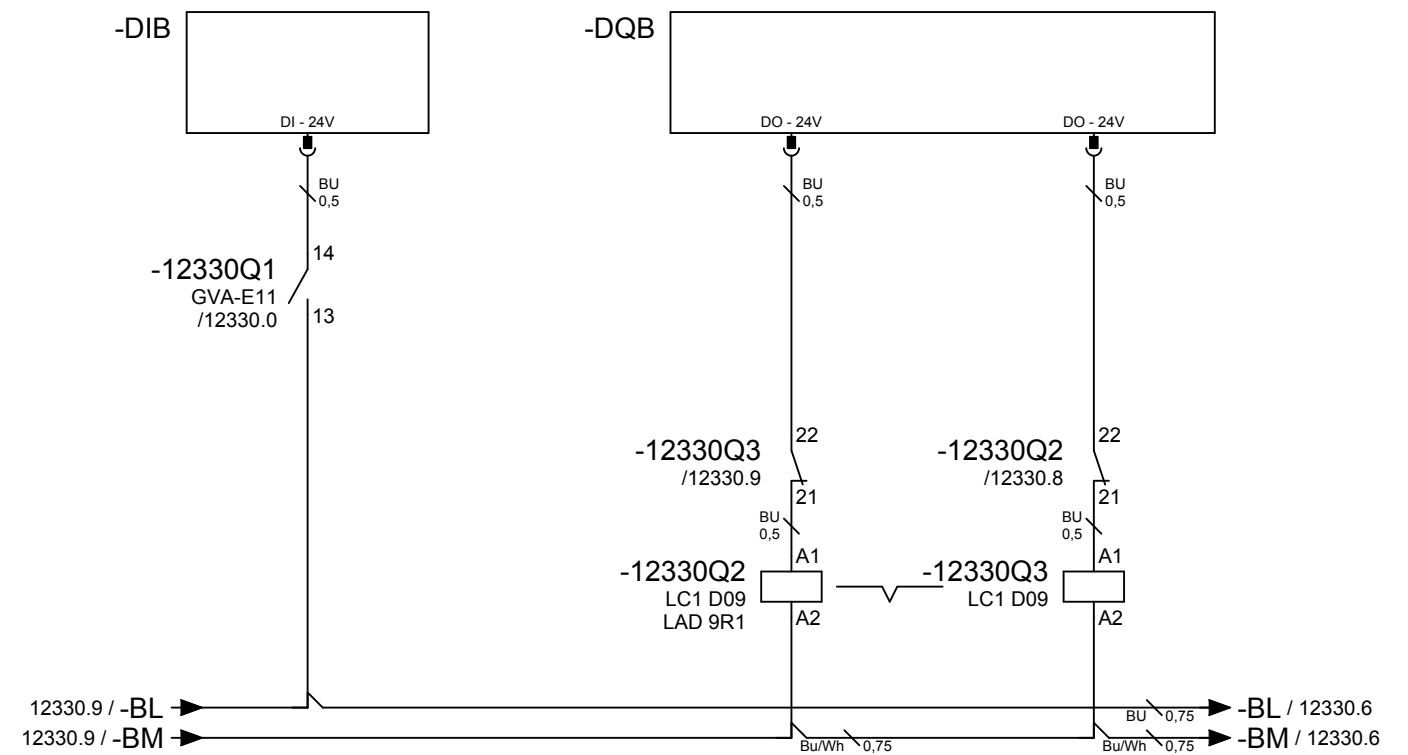


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

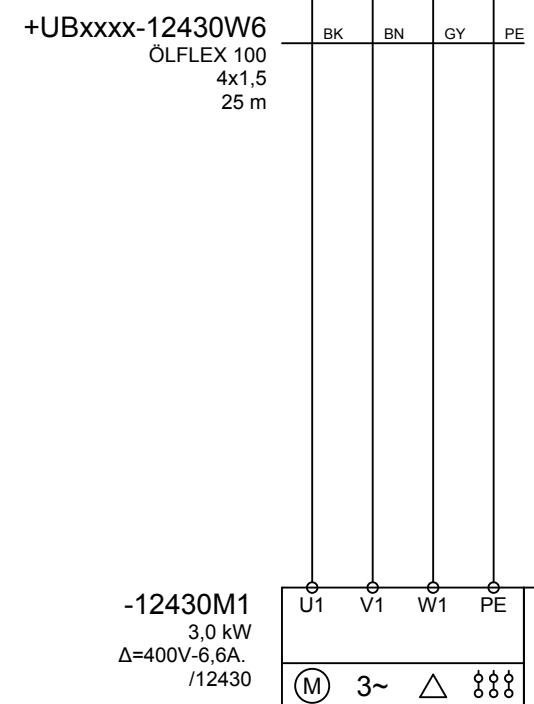
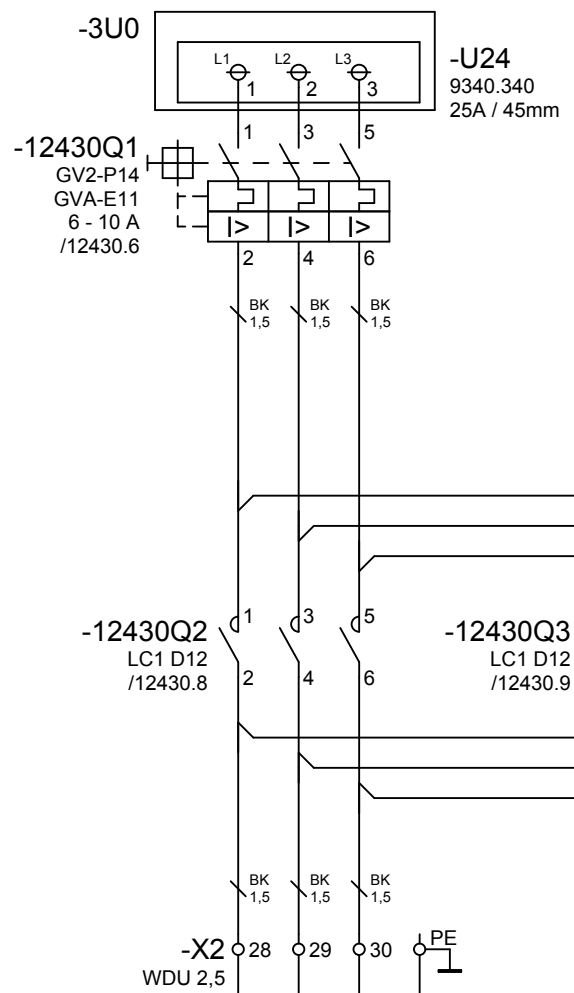
Enclosure B1
 load 1,5mm² = cca 13,5A; (5A = 37,0%)
 loss U at In 0,17V
 loss U at 5xIn 0,85V
 heat losses at In 2,55W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 1,5mm² = cca 18,5A; (5A = 27,0%)
 loss U at In 1,42V
 loss U at 5xIn 7,08V
 heat losses at In 21,3W (L=3x25m)

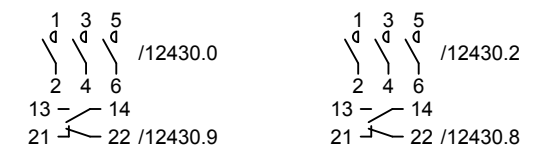
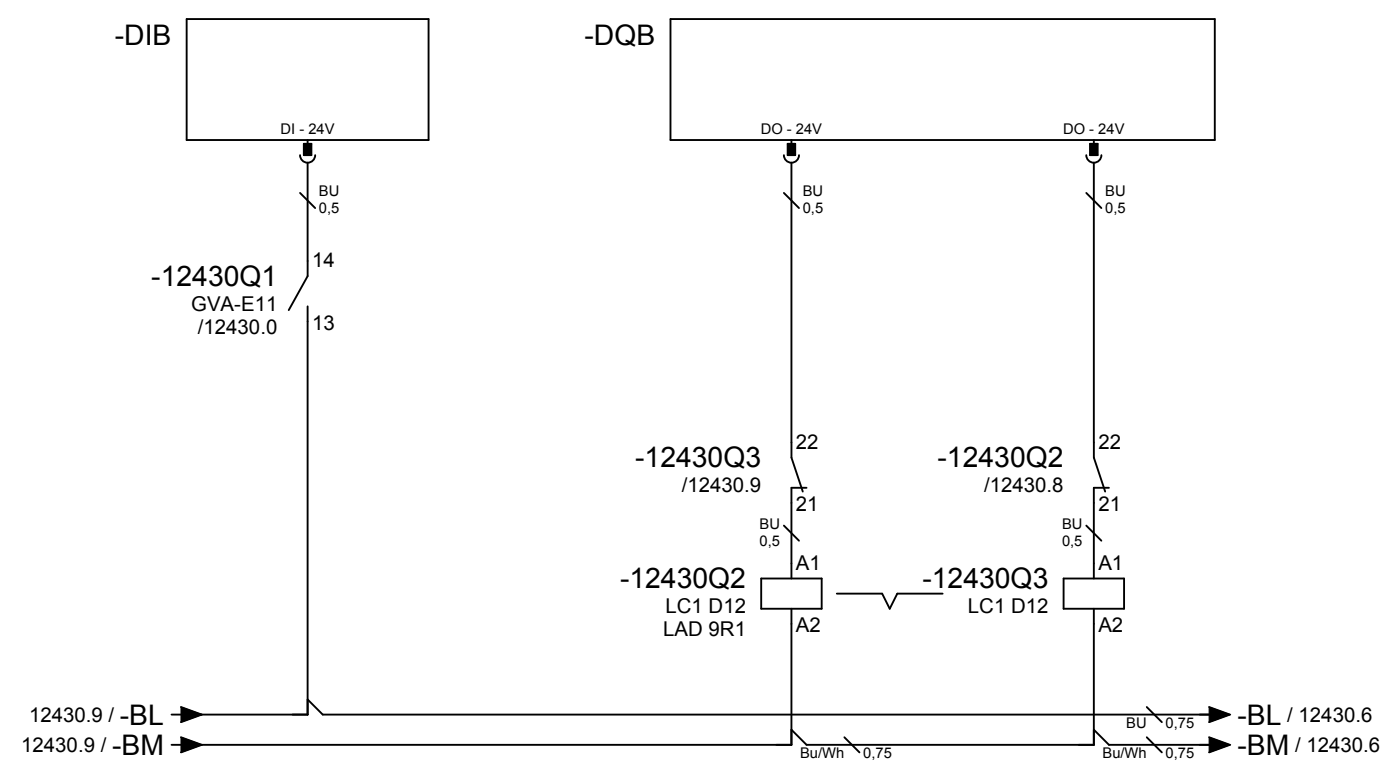


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

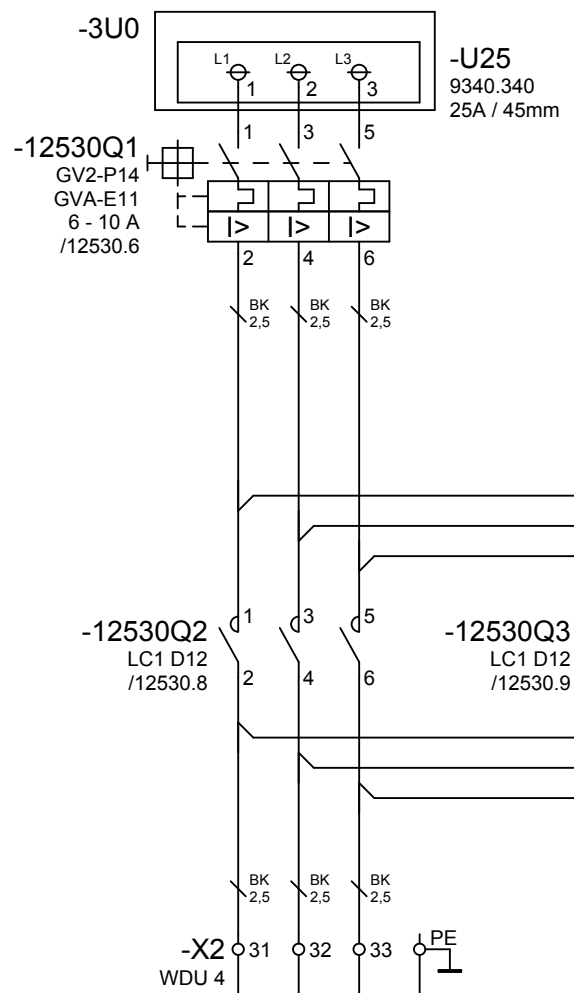


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	1,5mm ² = cca 13,5A; (7A = 51,8%)
loss U at In	0,24V
loss U at 5xIn	1,19V
heat losses at In	5,00W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (7A = 37,8%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	41,7W (L=3x25m)
...	...
...	...

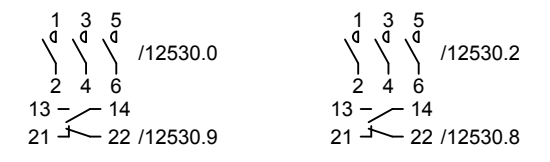
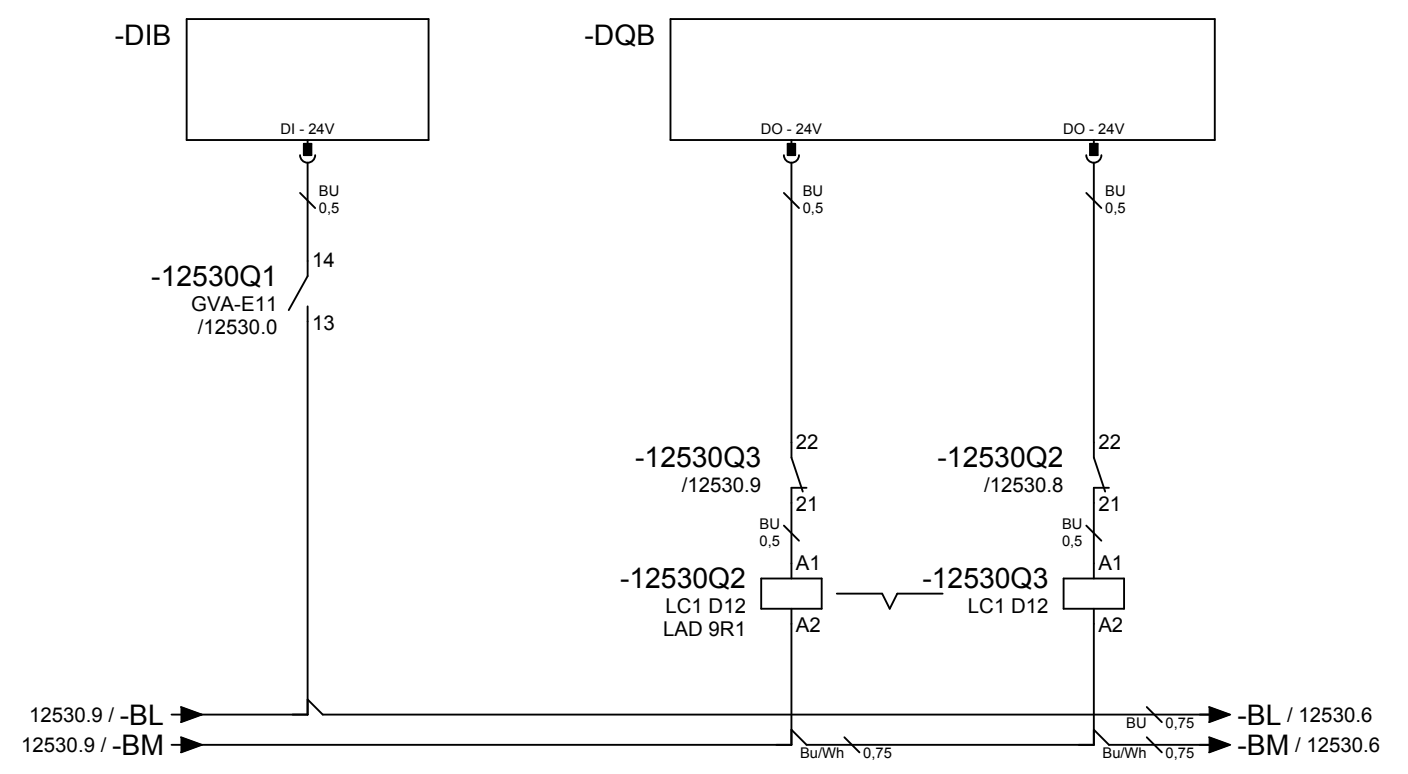
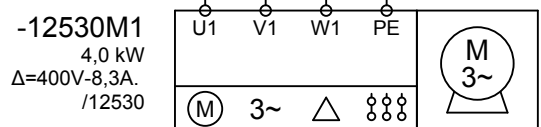


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

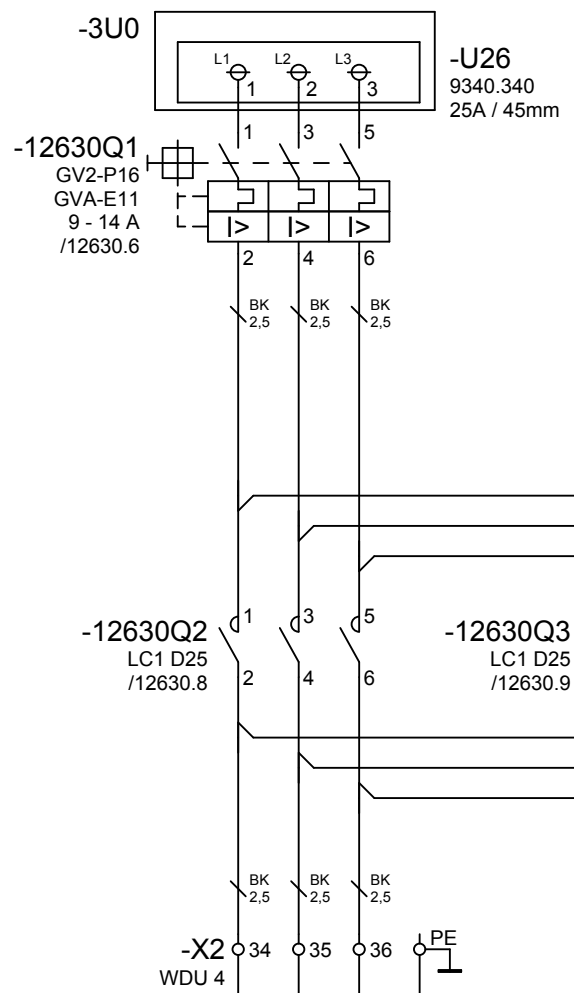


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (8,5A = 46,4%)
loss U at In	0,17V
loss U at 5xIn	0,87V
heat losses at In	4,42W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	1,5mm ² = cca 18,5A; (8,5A = 45,9%)
loss U at In	2,41V
loss U at 5xIn	12,04V
heat losses at In	61,4W (L=3x25m)
...	...
...	...

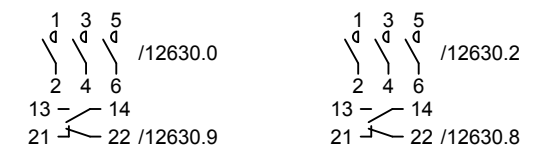
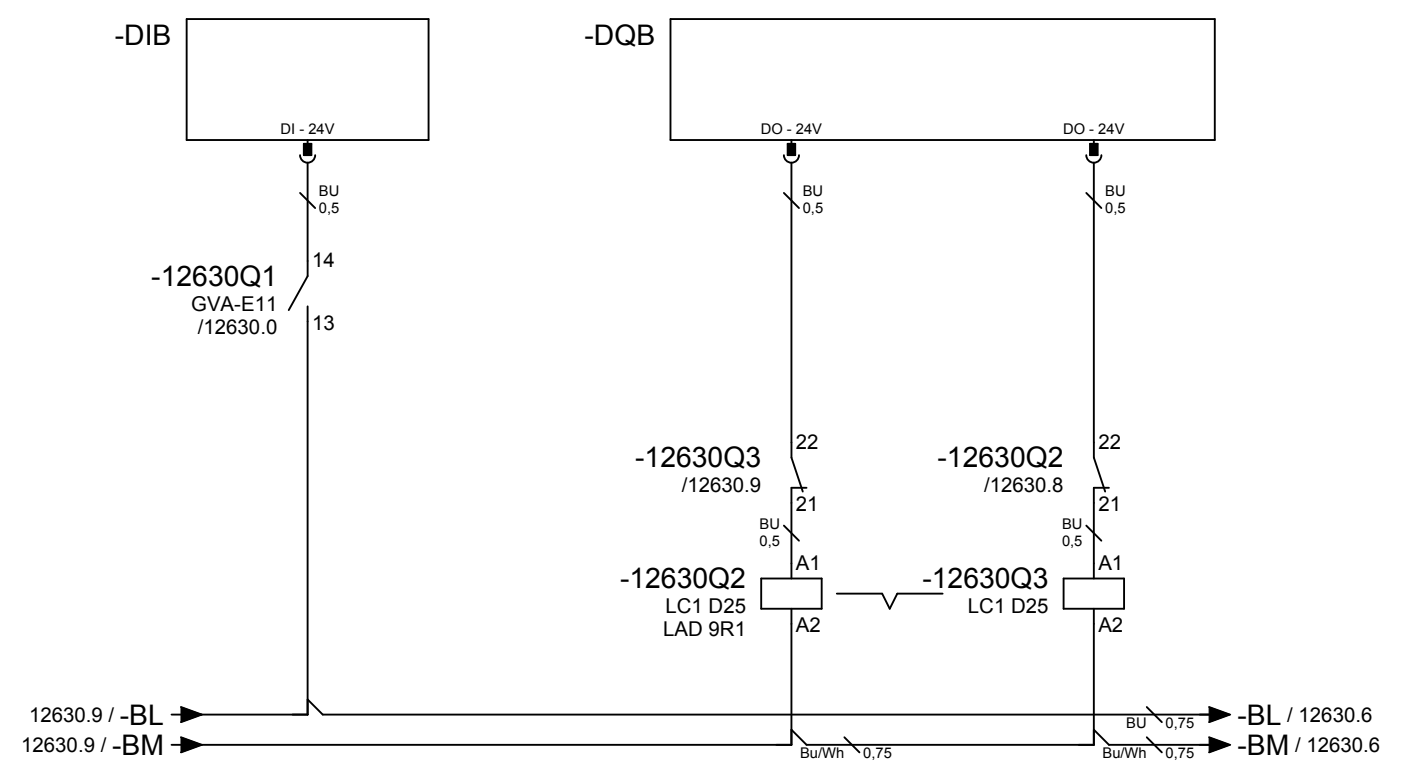


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

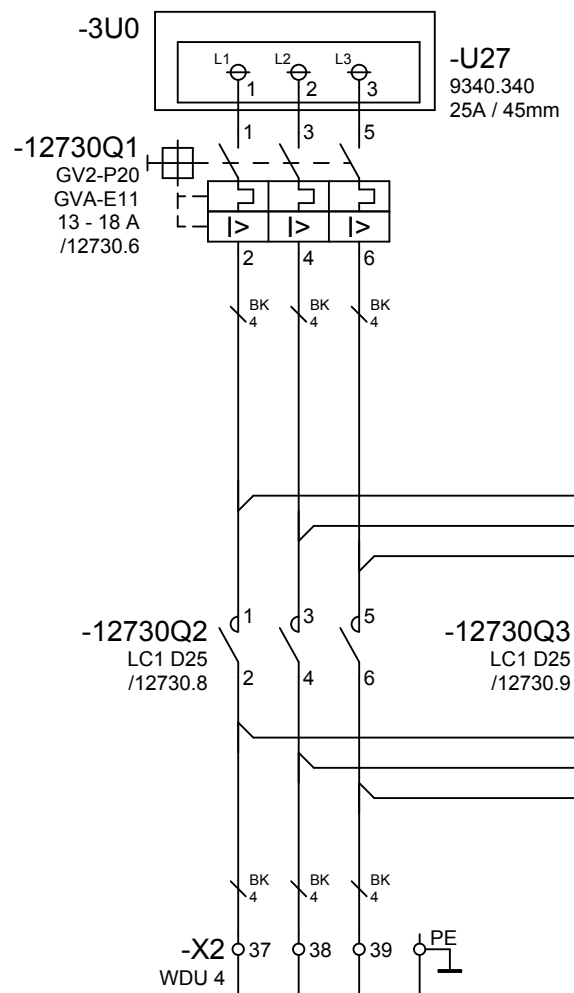


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	2,5mm ² = cca 18,3A; (11A = 60,1%)
loss U at In	0,22V
loss U at 5xIn	1,12V
heat losses at In	7,41W (L=3x3m)
...	...
short circuit resistance	130kA at 415V
Cable route	E
load	2,5mm ² = cca 25,0A; (11A = 44,0%)
loss U at In	1,87V
loss U at 5xIn	9,35V
heat losses at In	61,7W (L=3x25m)
...	...
...	...

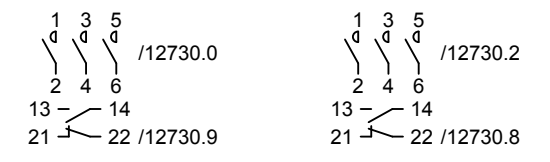
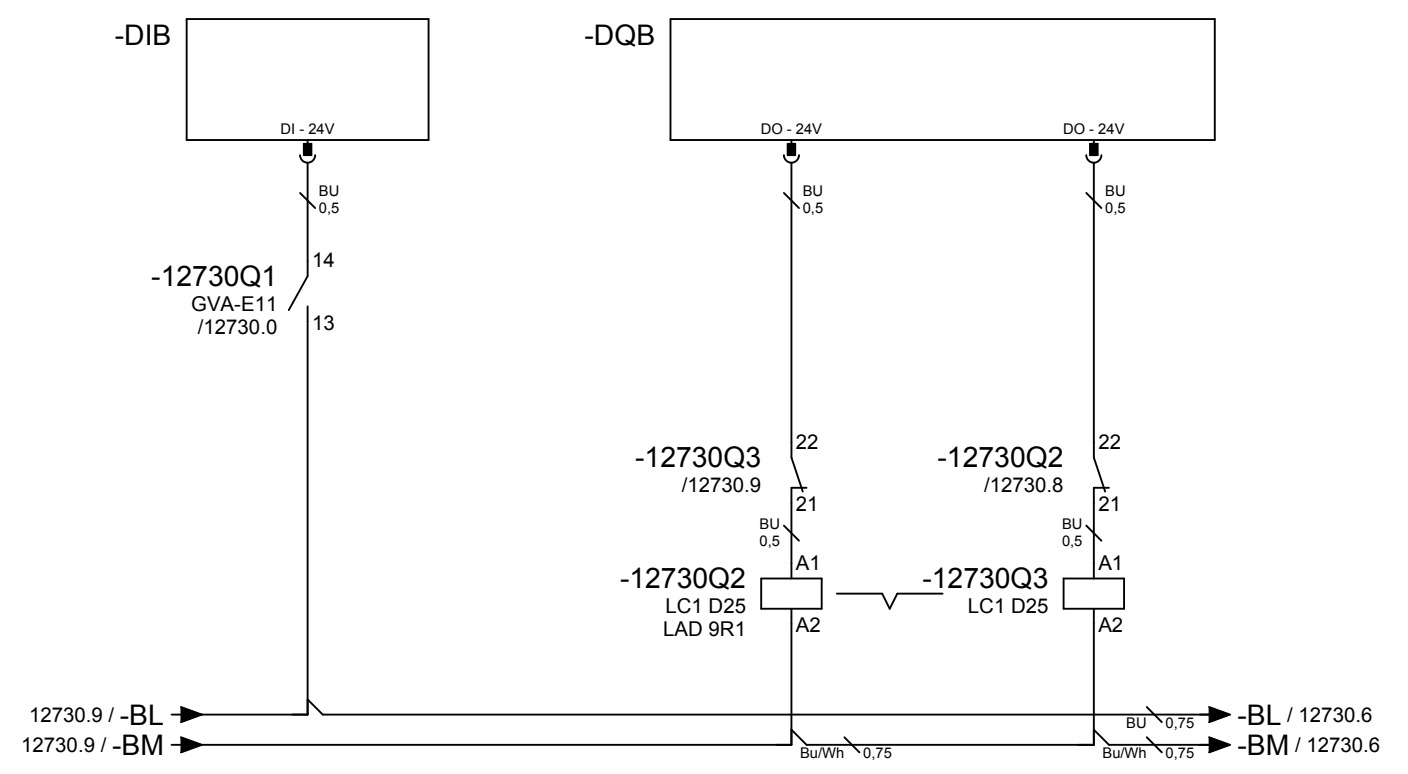


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

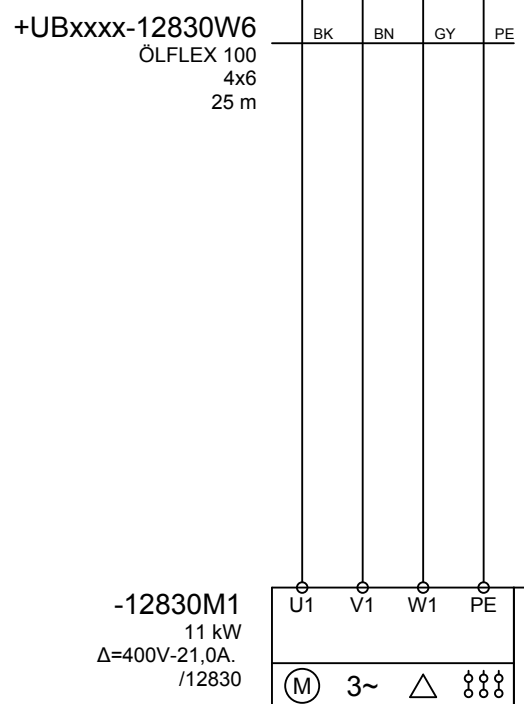
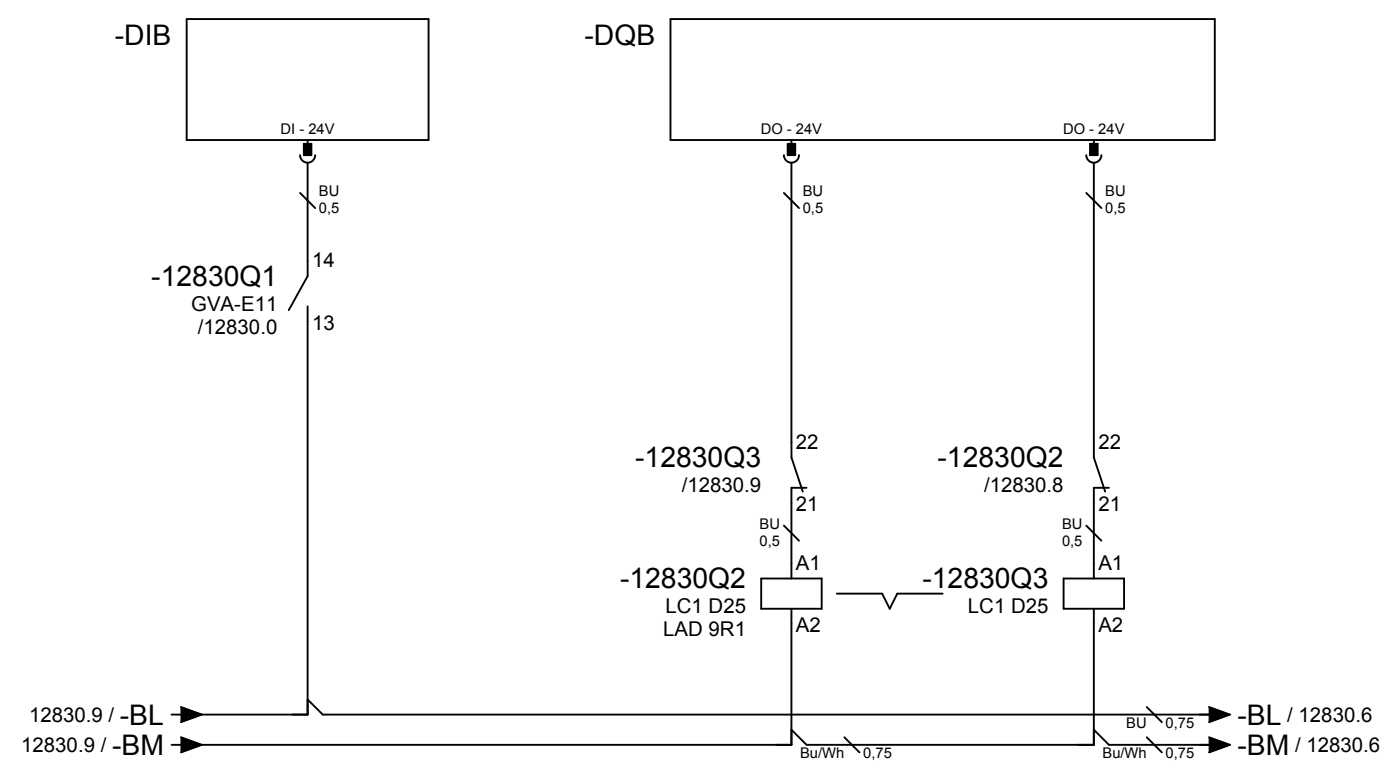
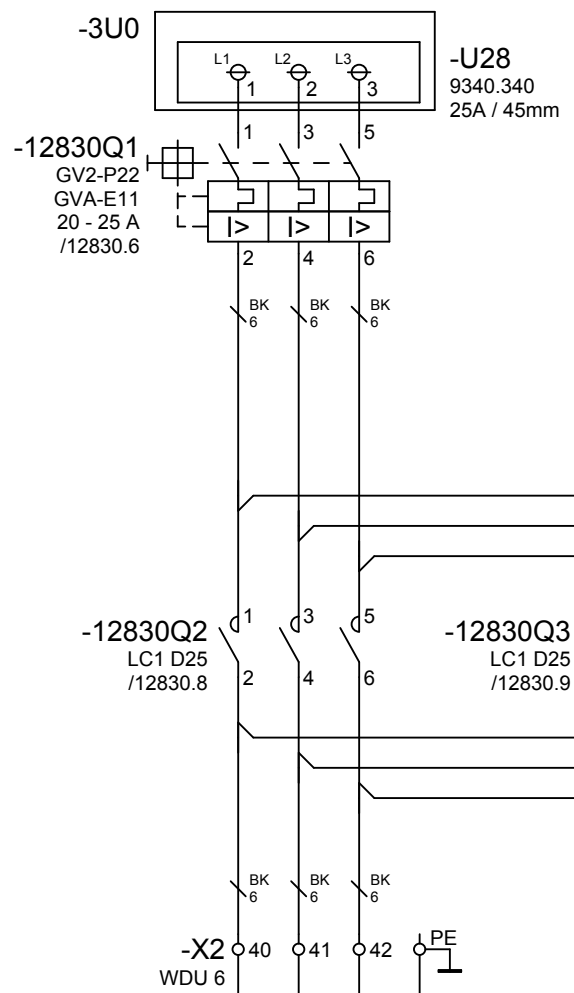


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	4mm ² = cca 25A; (15A = 60,0%)
loss U at In	0,19V
loss U at 5xIn	0,96V
heat losses at In	8,61W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	4mm ² = cca 34A; (15A = 44,1%)
loss U at In	1,59V
loss U at 5xIn	7,97V
heat losses at In	71,7W (L=3x25m)
...	...
...	...

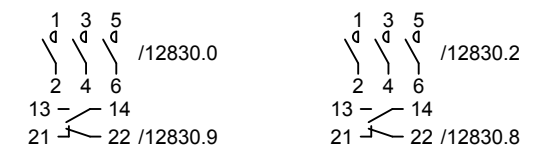


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

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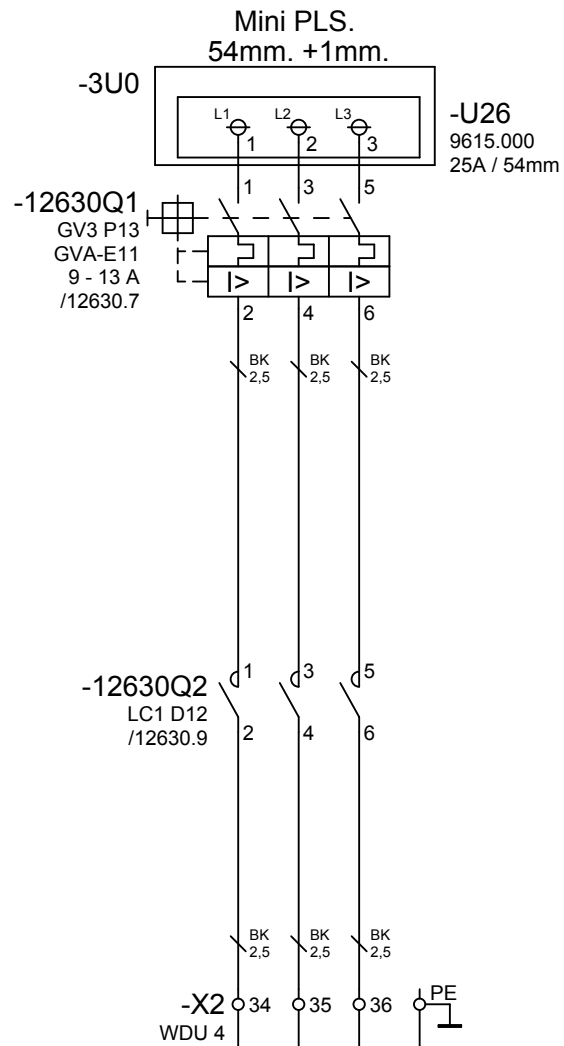
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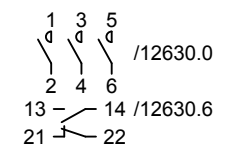
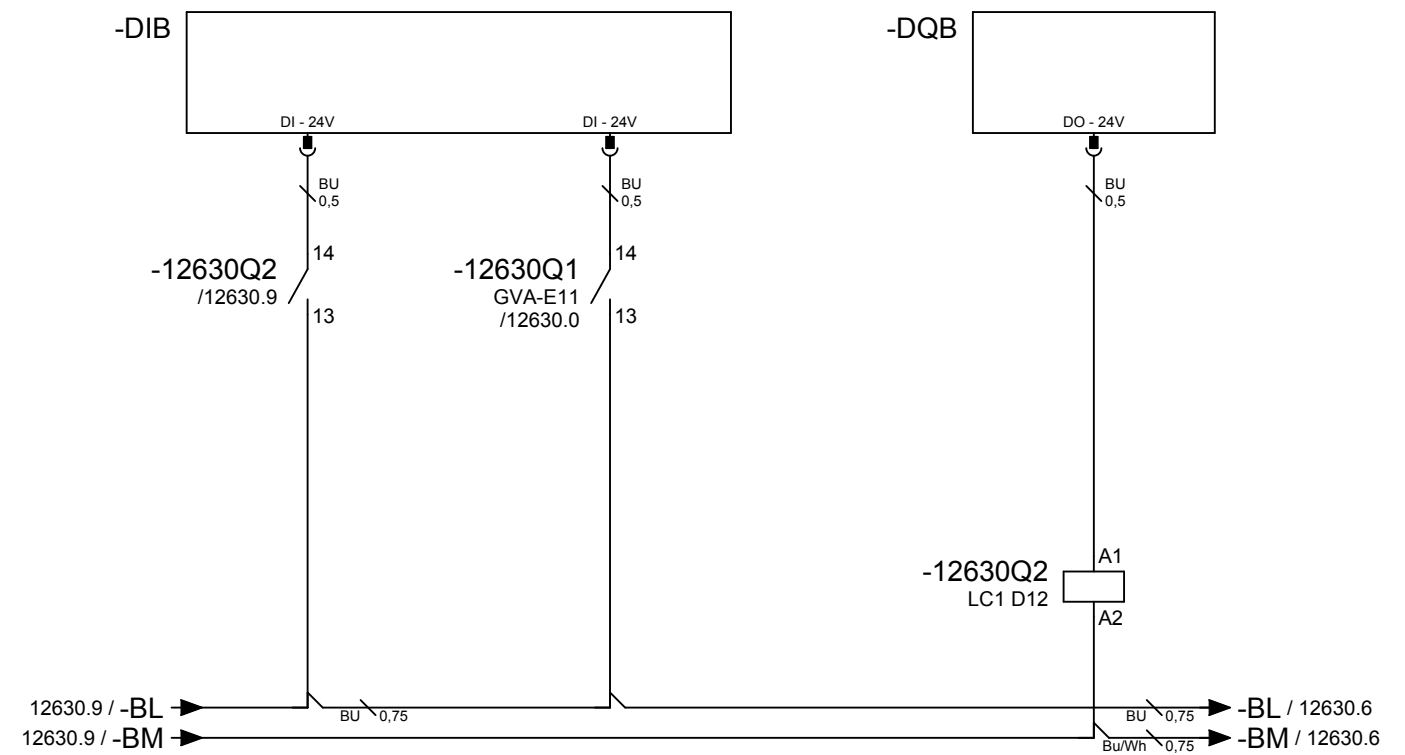


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 50kA at 415V

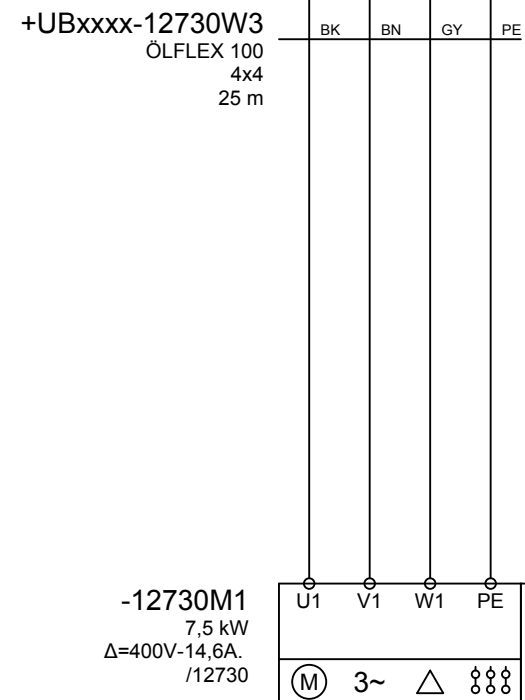
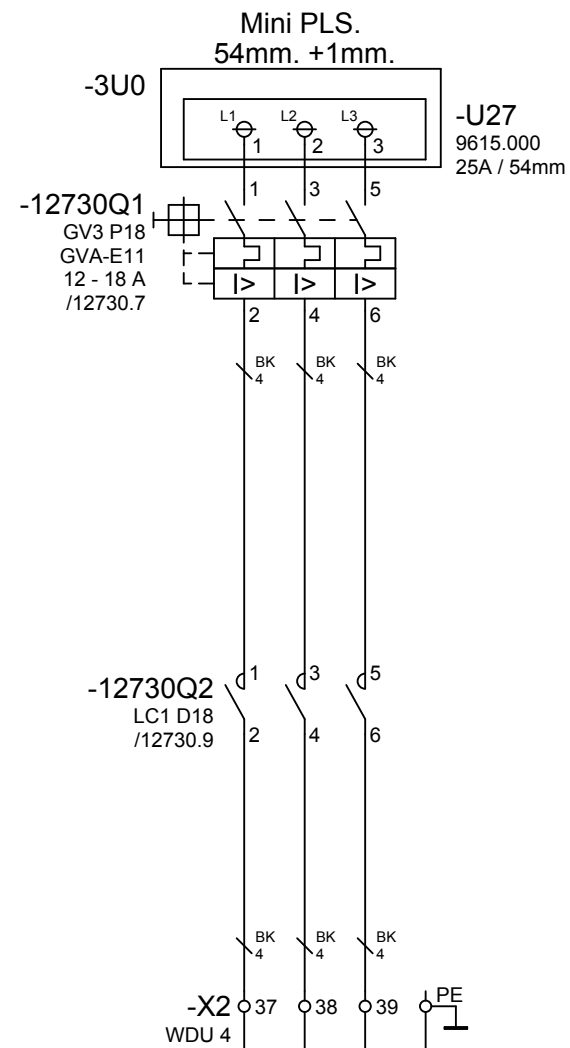
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

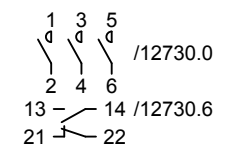
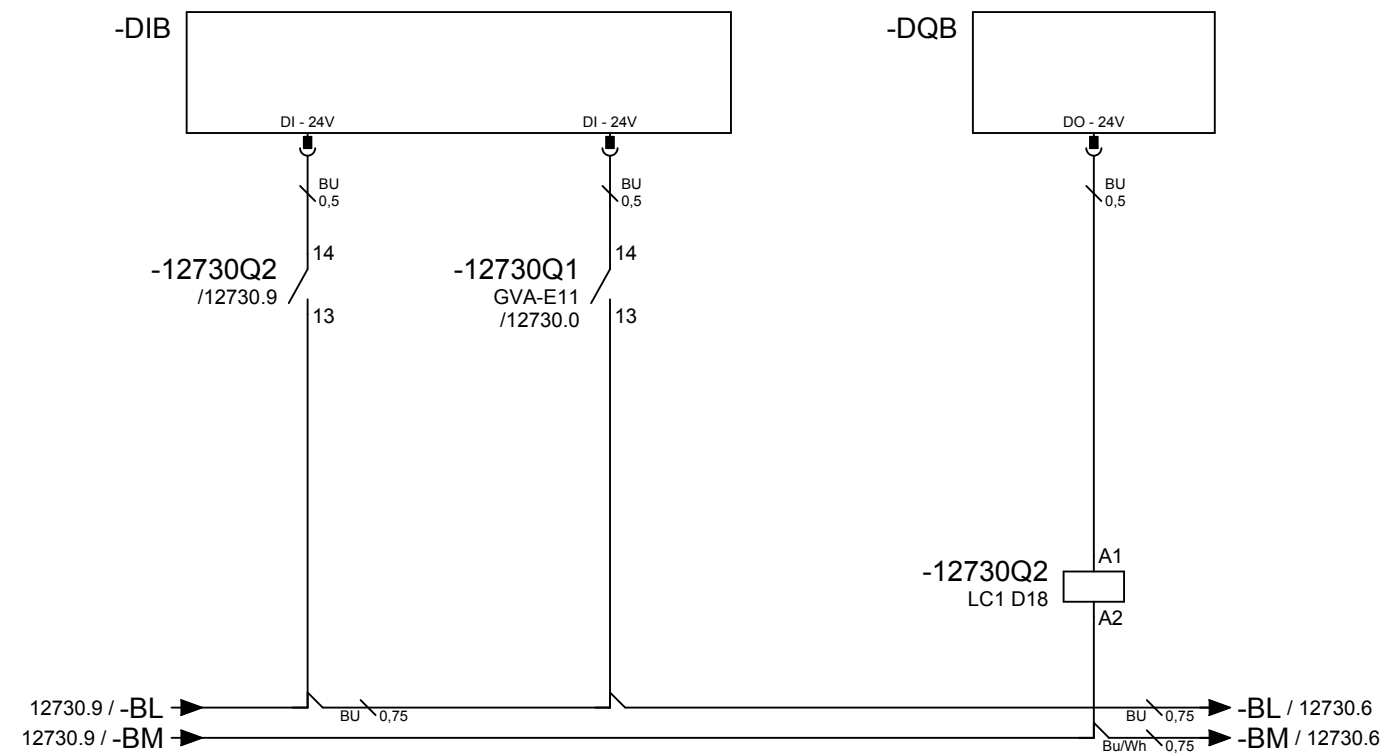


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

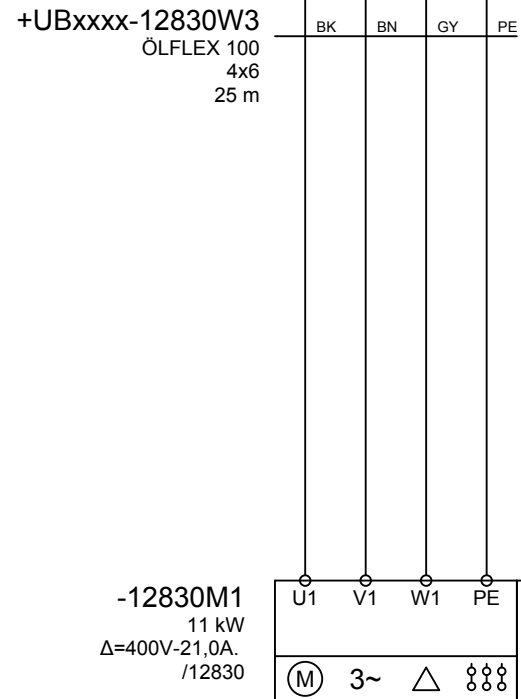
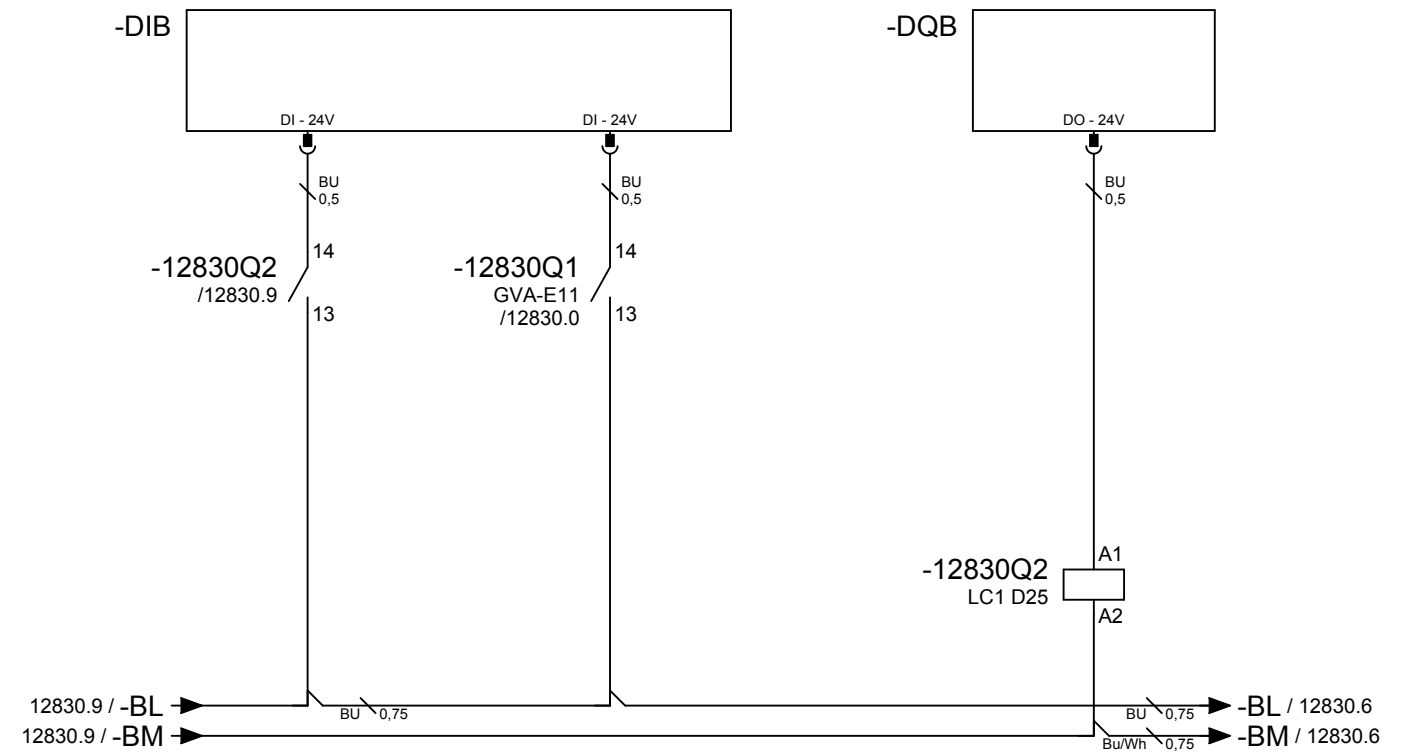
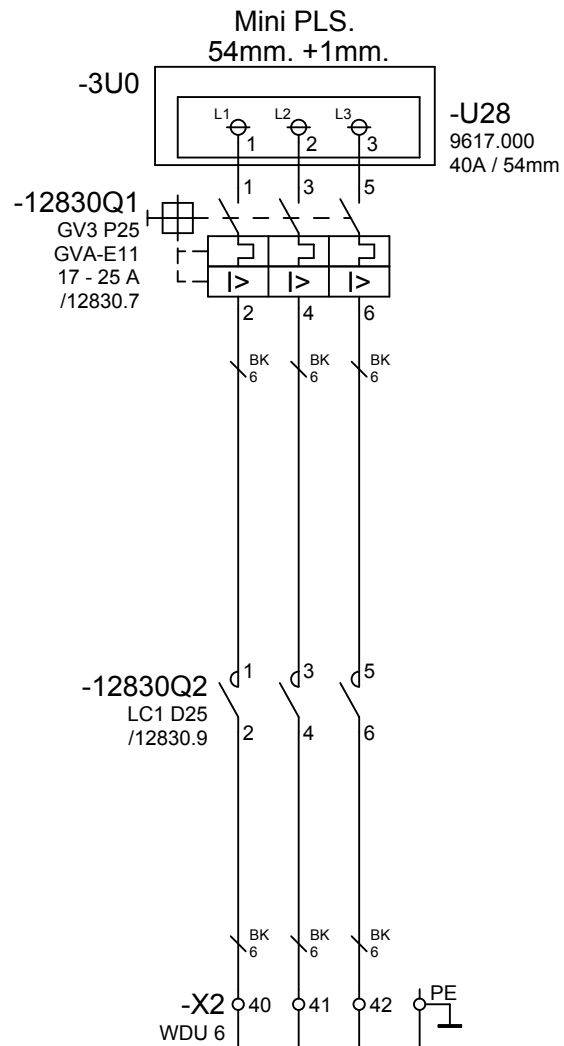
Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

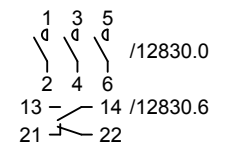
Motor.
Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 6mm² = cca 32A; (21A = 65,6%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 11,25W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

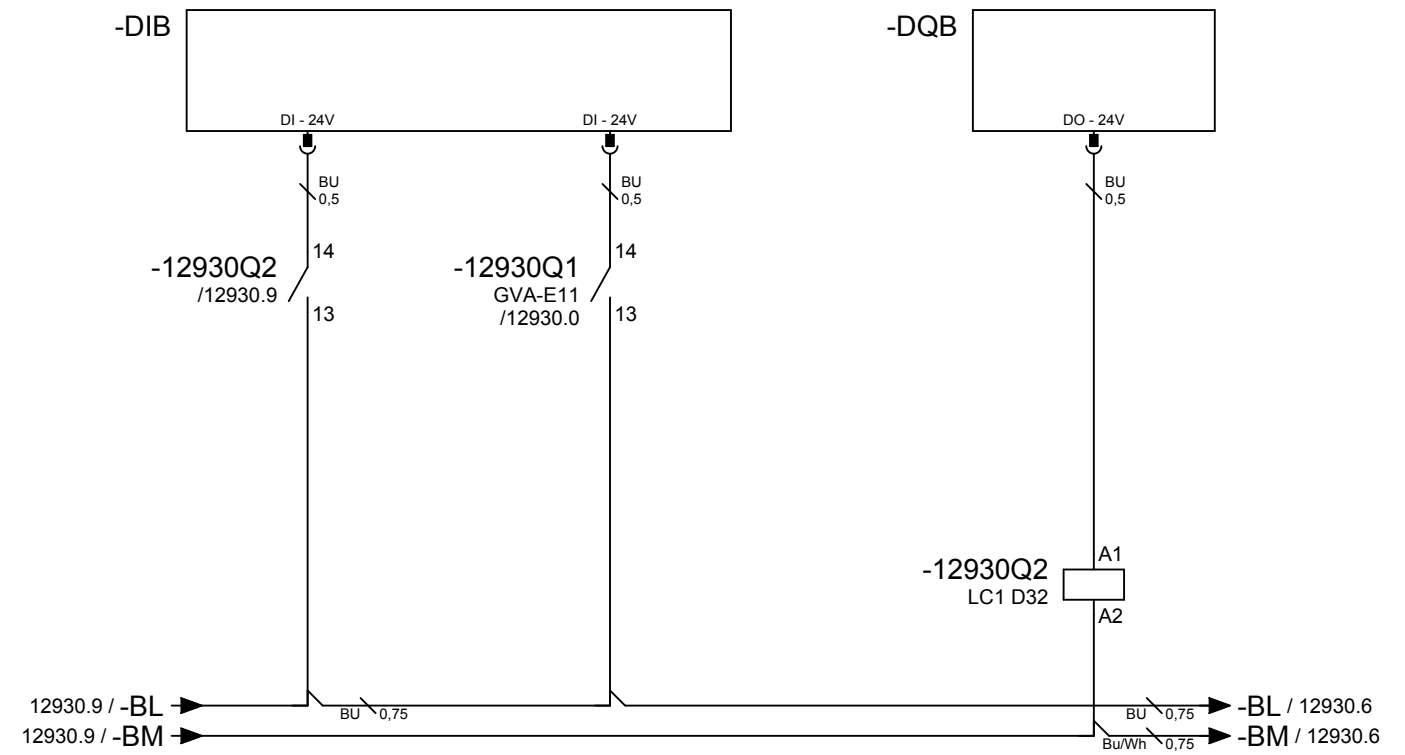
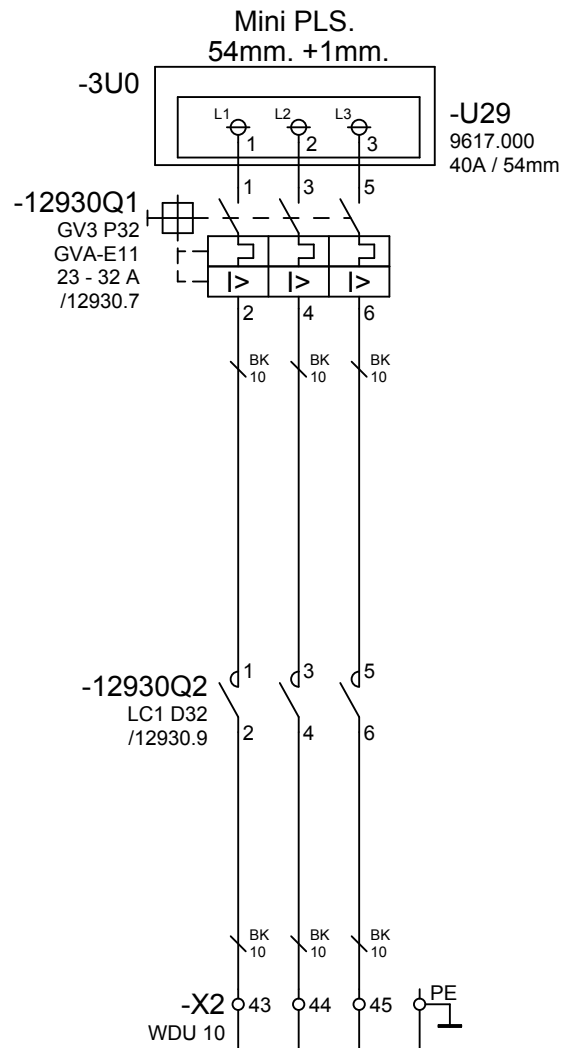
Cable route E
load 6mm² = cca 43A; (21A = 48,8%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 93,7W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

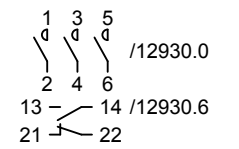


+UBxxxx-12930W3
ÖLFLEX 100
4x6
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 10mm² = cca 44A; (28A = 63,6%)
loss U at In 0,14V
loss U at 5xIn 0,71V
heat losses at In 12,00W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

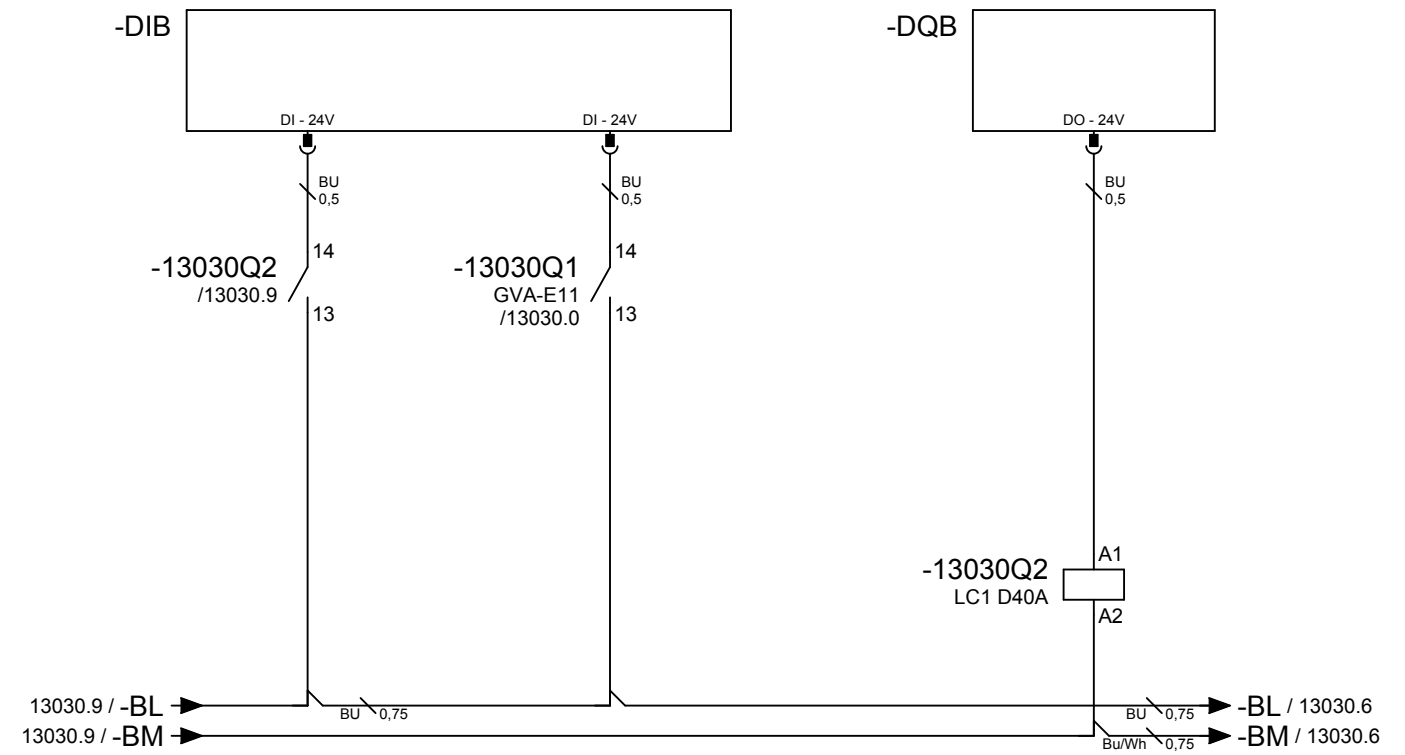
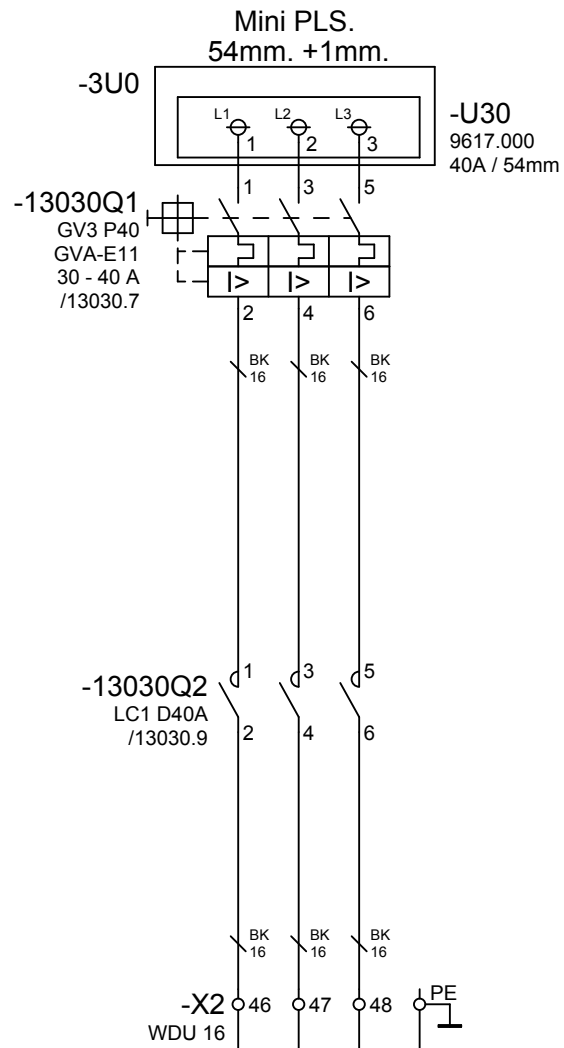
Cable route E
load 6mm² = cca 43A; (28A = 65,1%)
loss U at In 1,98V
loss U at 5xIn 9,92V
heat losses at In 166,6W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

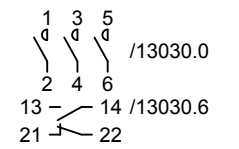
Motor.
Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 16mm² = cca 60A; (33A = 55,0%)
loss U at In 0,11V
loss U at 5xIn 0,53V
heat losses at In 10,41W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 10mm² = cca 60A; (33A = 55,0%)
loss U at In 1,40V
loss U at 5xIn 7,01V
heat losses at In 138,8W (L=3x25m)
... ..
... ..



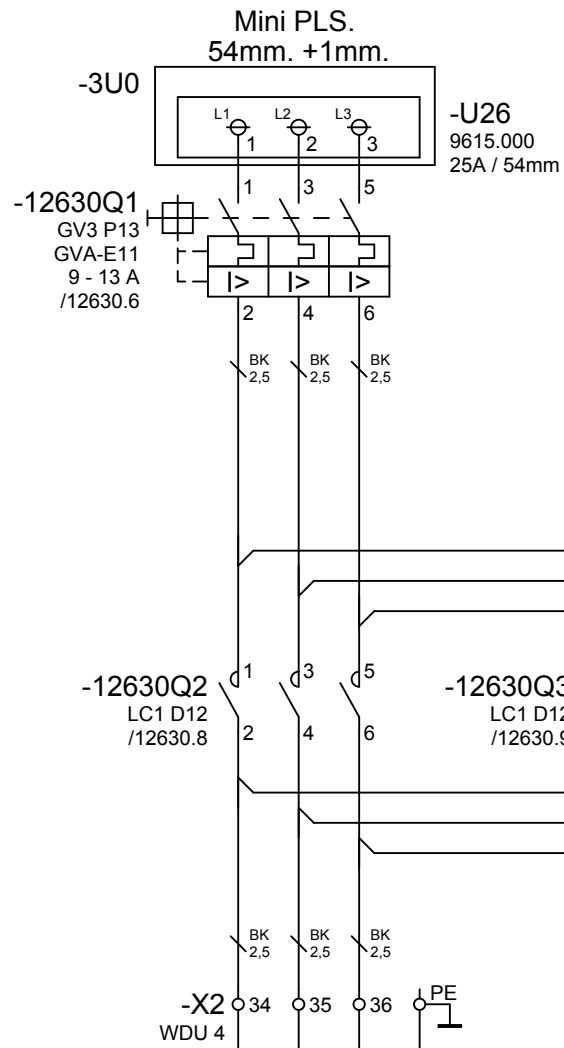
Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

0 1 2 3 4 5 6 7 8 9

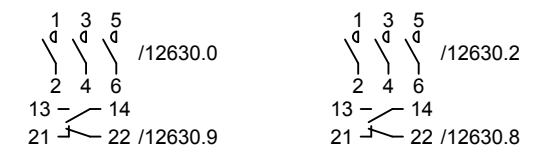
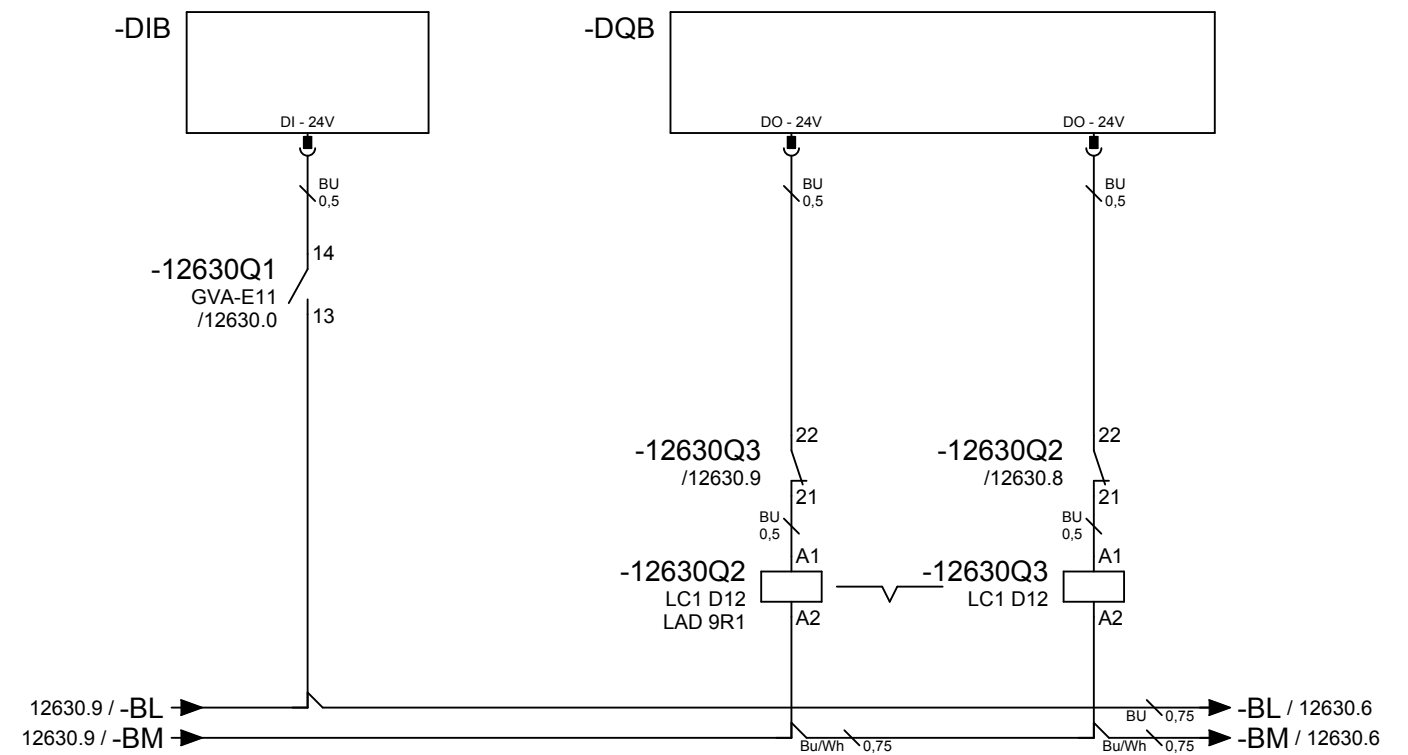
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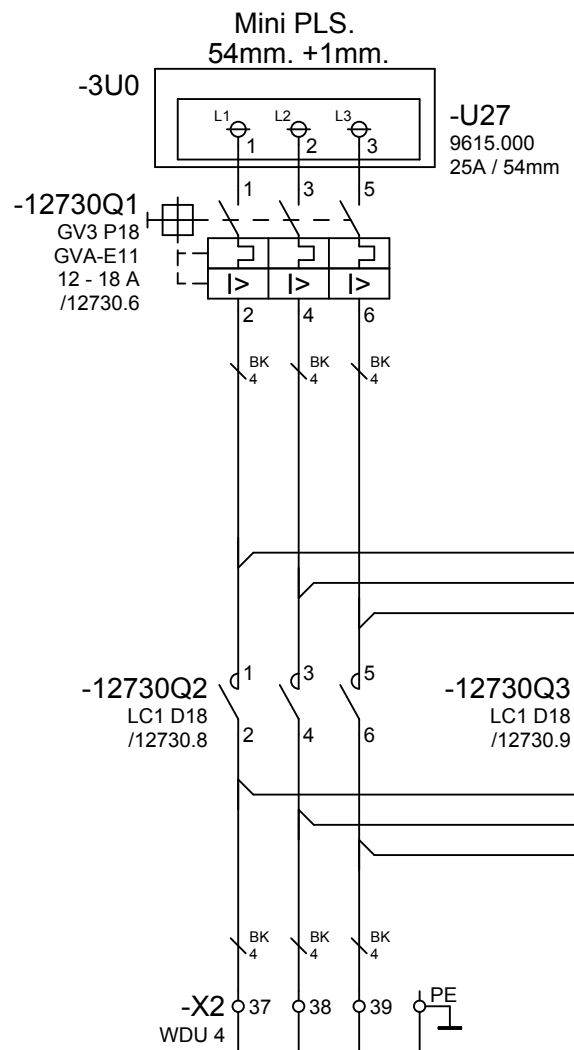
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)
 ...
 ...



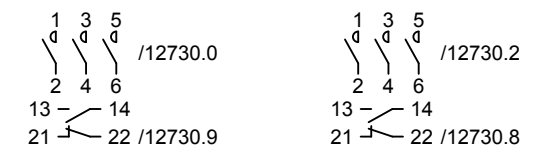
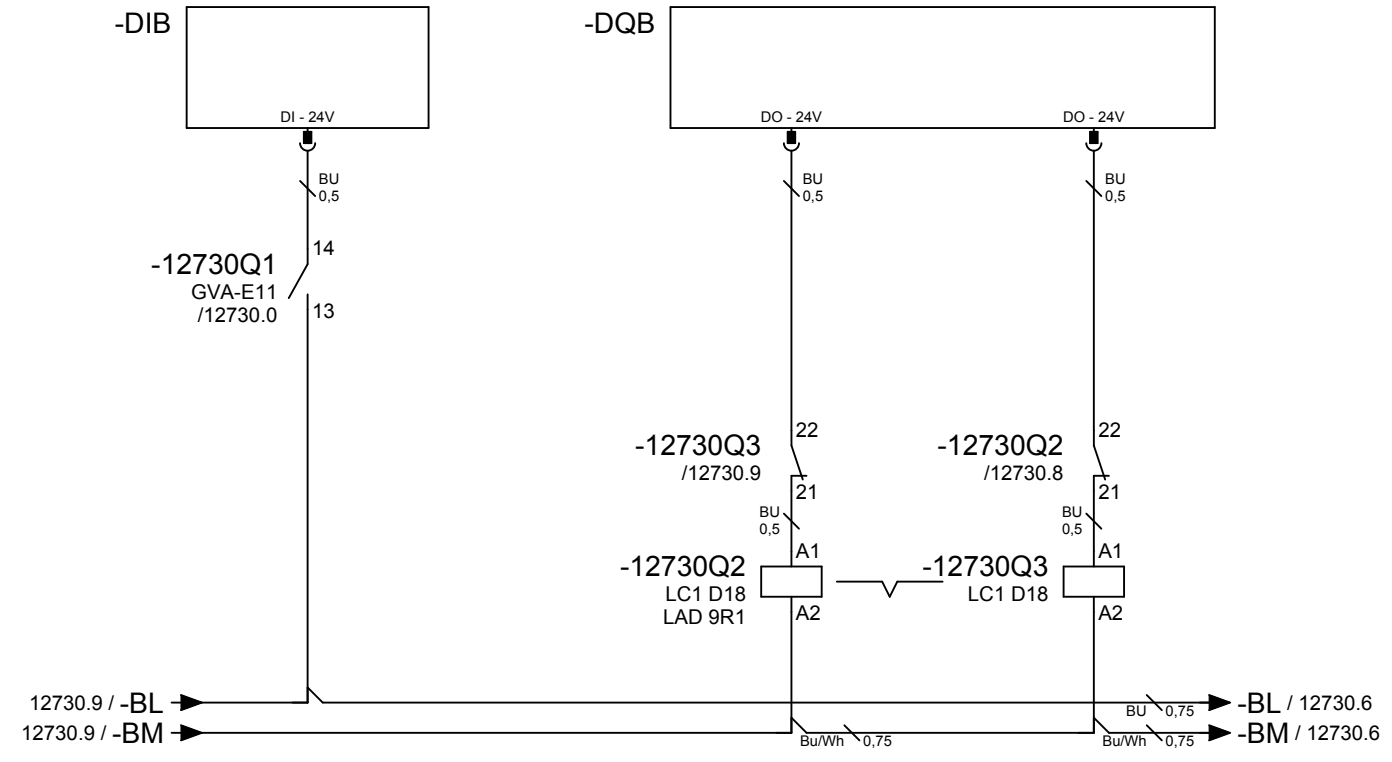
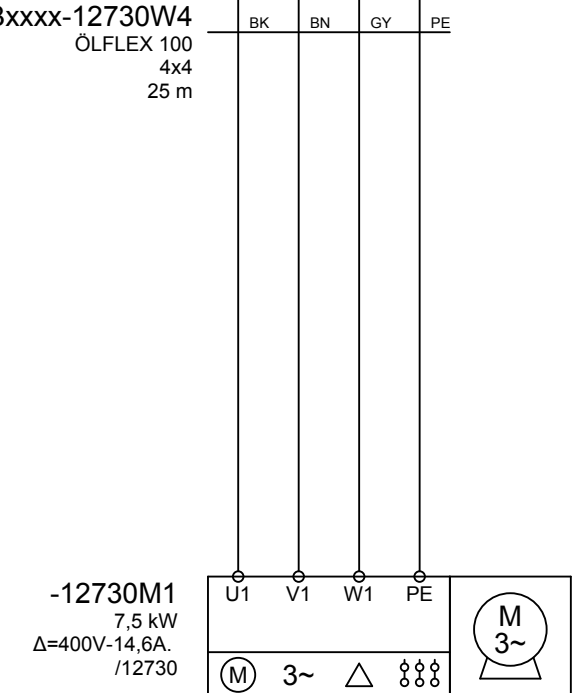
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



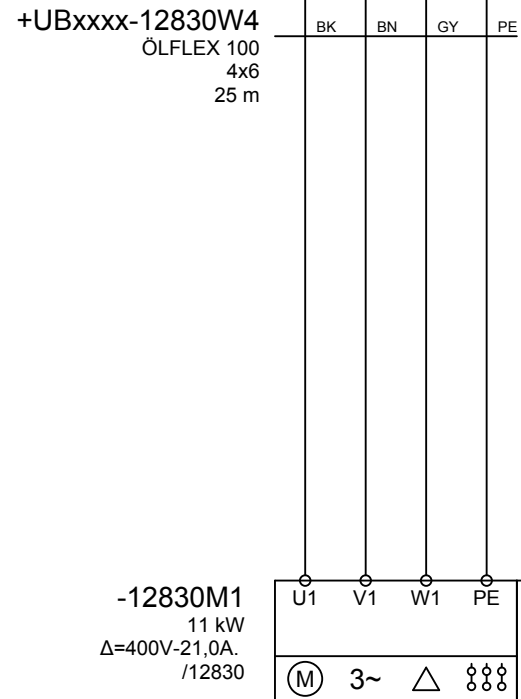
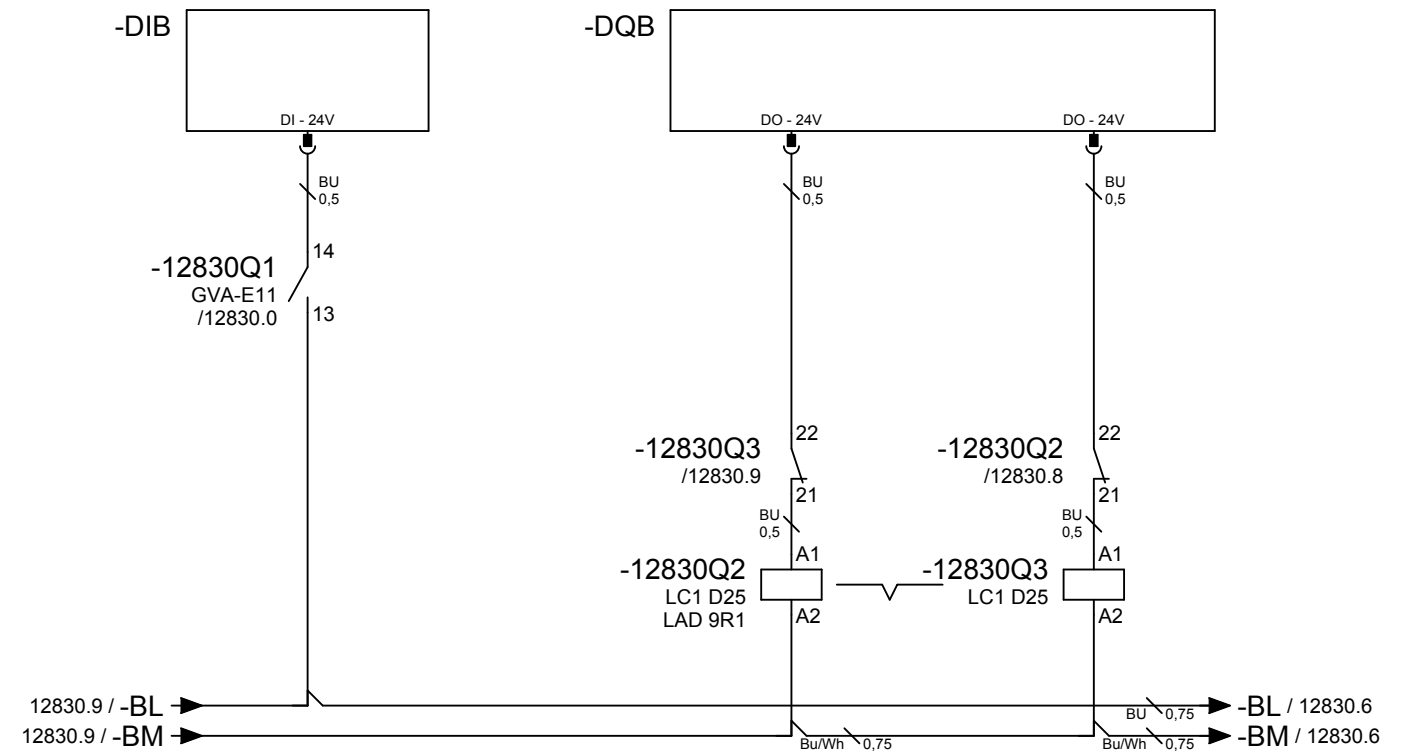
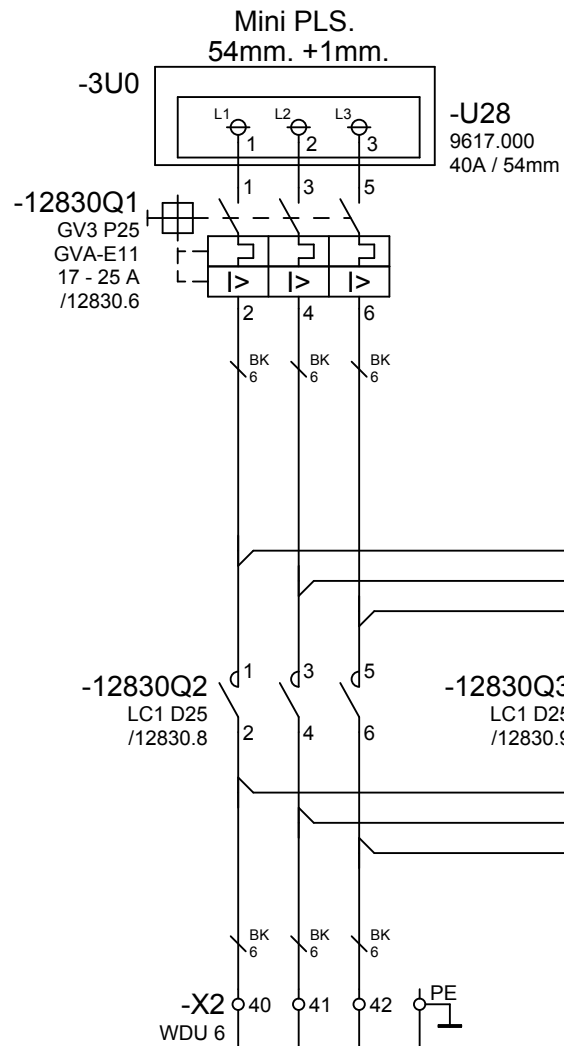
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

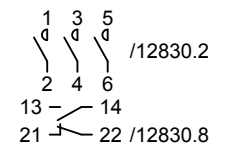
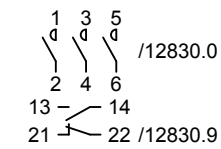


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

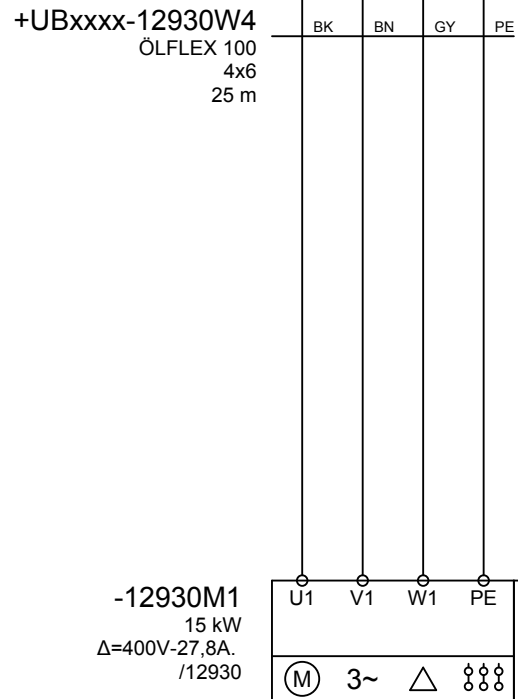
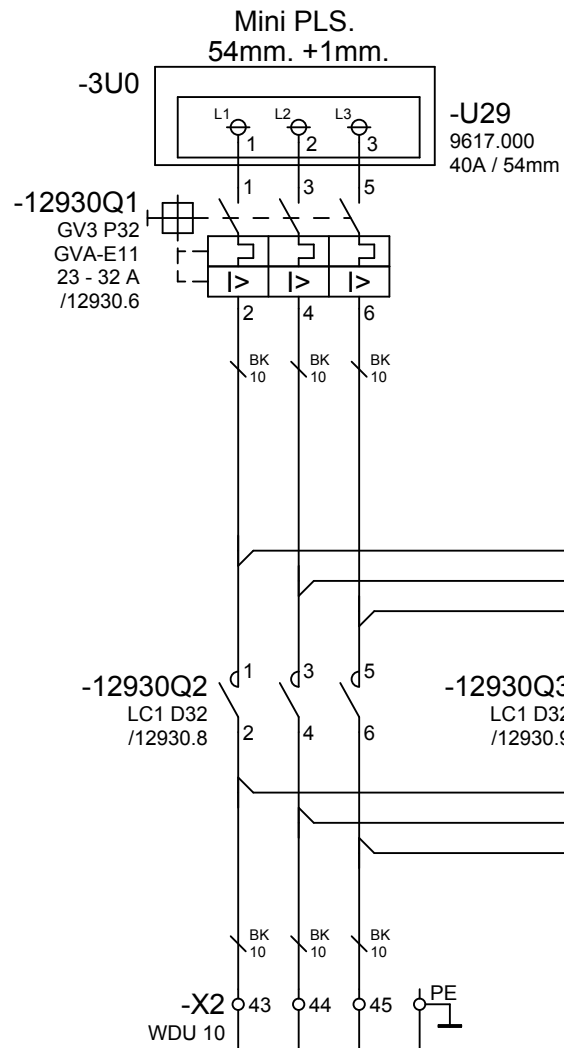
Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Circuit breaker. 0=Failure.

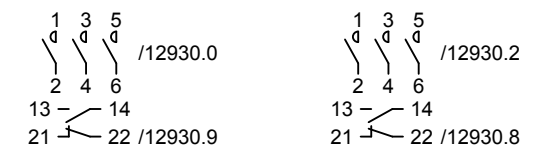
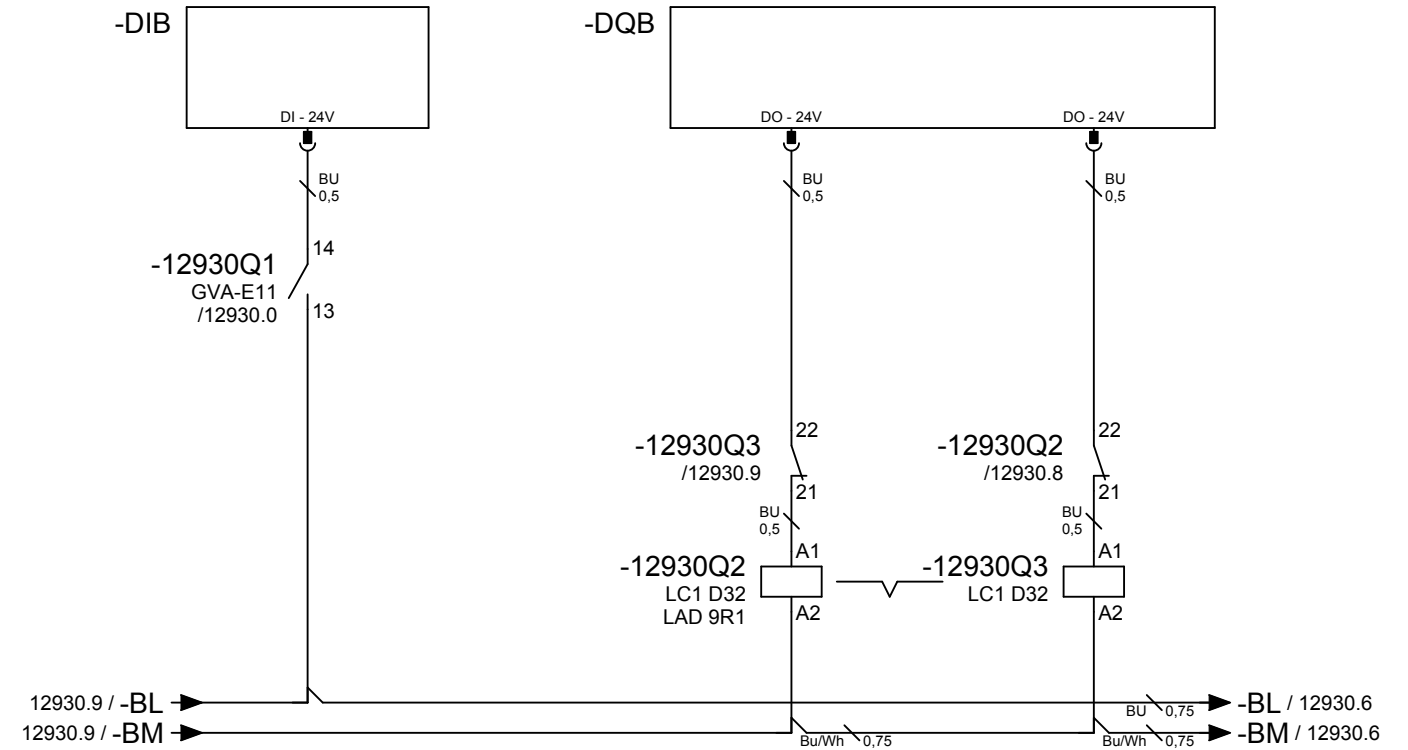
Motor. Contactor.

Motor. Contactor.

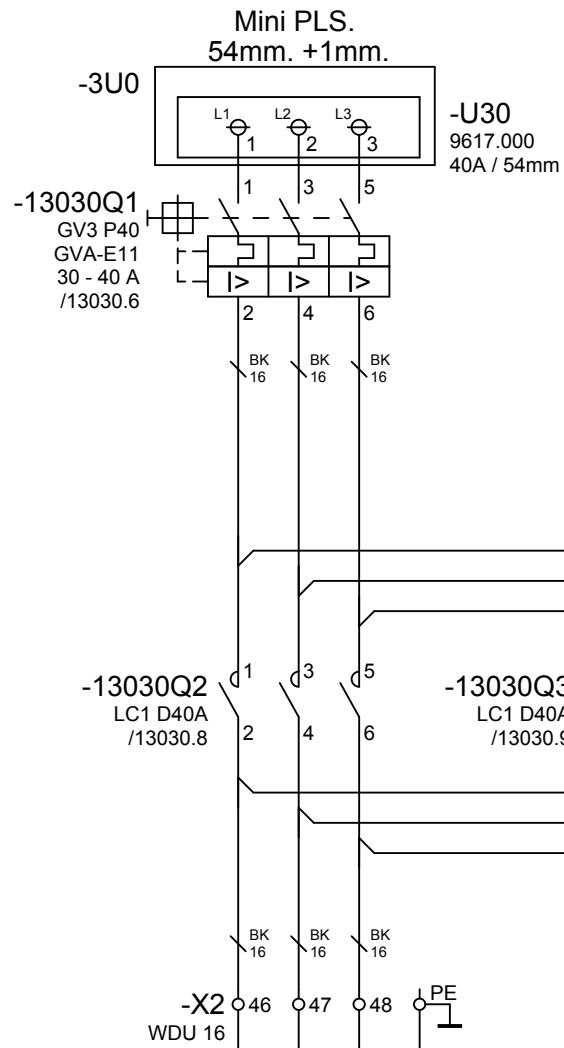


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	10mm ² = cca 44A; (28A = 63,6%)
loss U at In	0,14V
loss U at 5xIn	0,71V
heat losses at In	12,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (28A = 65,1%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	166,6W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

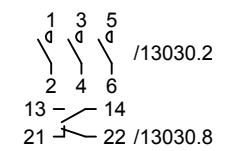
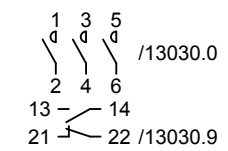
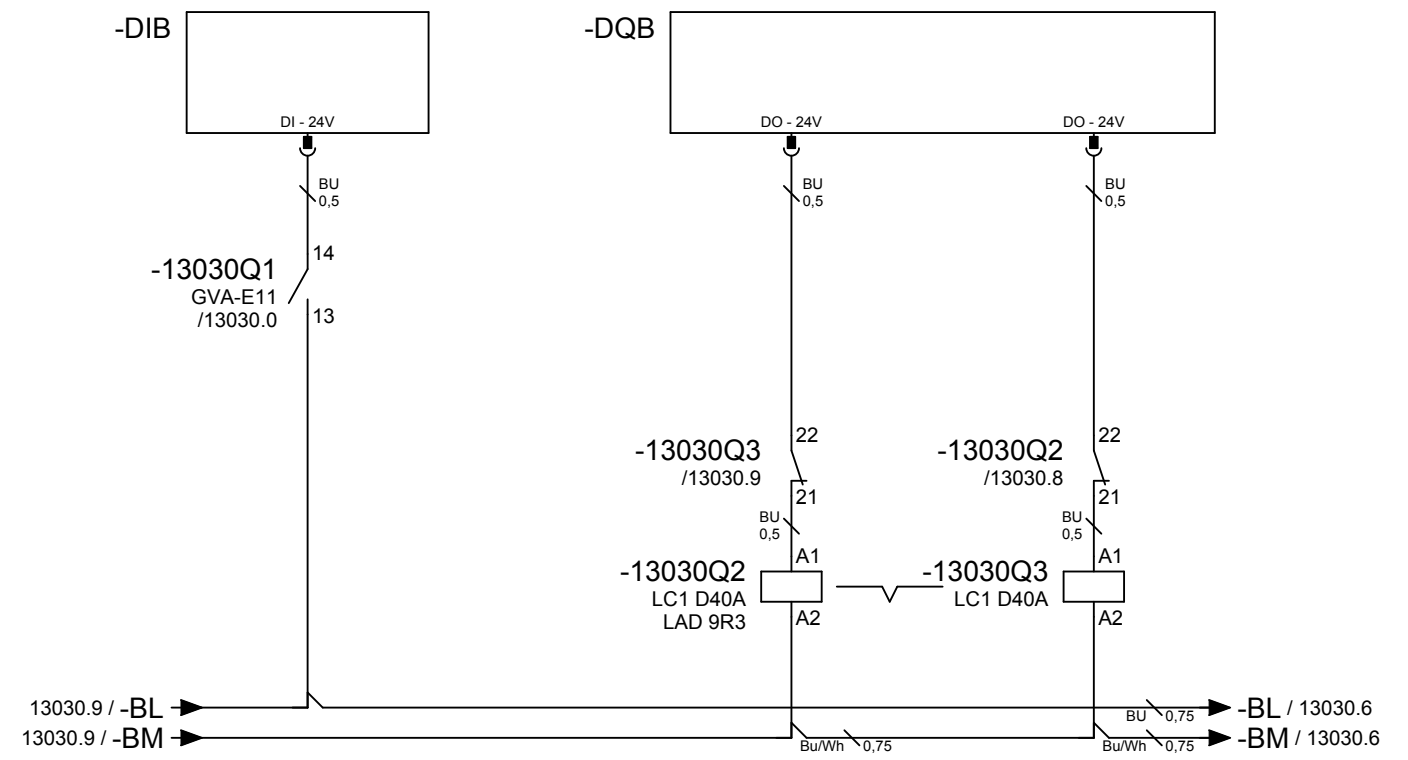


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
 loss U at In 1,40V
 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

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+PLS_Reverz/99999

TISKO
elektrotechnická
konštrukčná kancelária
SLOVAKIA (SK) - BA
www.tisko.sk

PACK 31. Motors.
TISKO spol. s r. o.

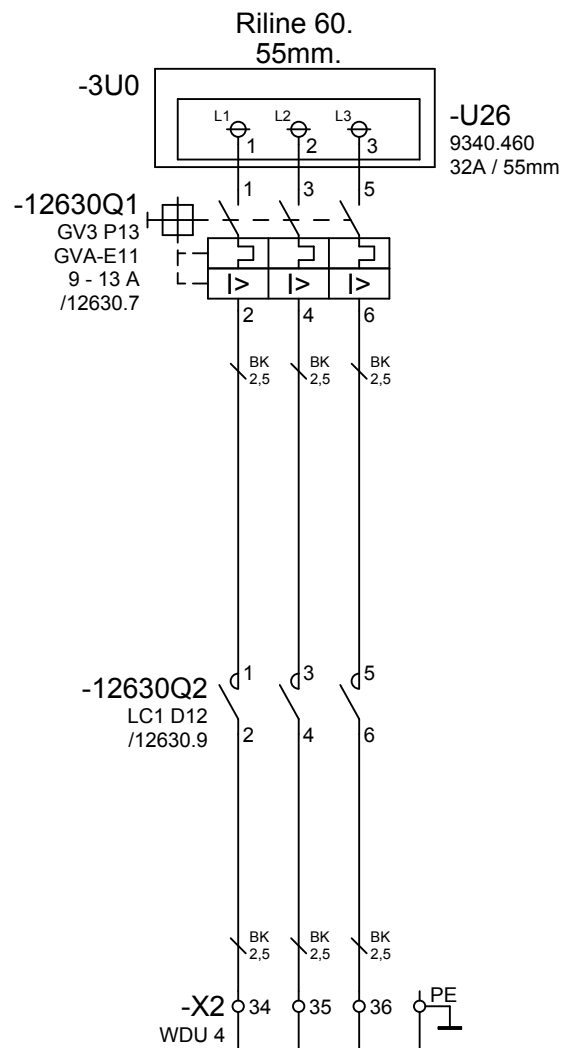
Type 1 coordination.
2018

Creator	V00	01.02.2012	Ing. Tisovčík Ivan
Last revision of project			
Last revision of page			
M = 1 : 1	Grafika	21.10.2018	WUP0U34409

= GV3P_C1

+ R_60

11000



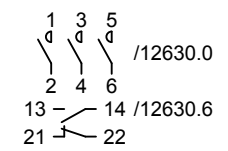
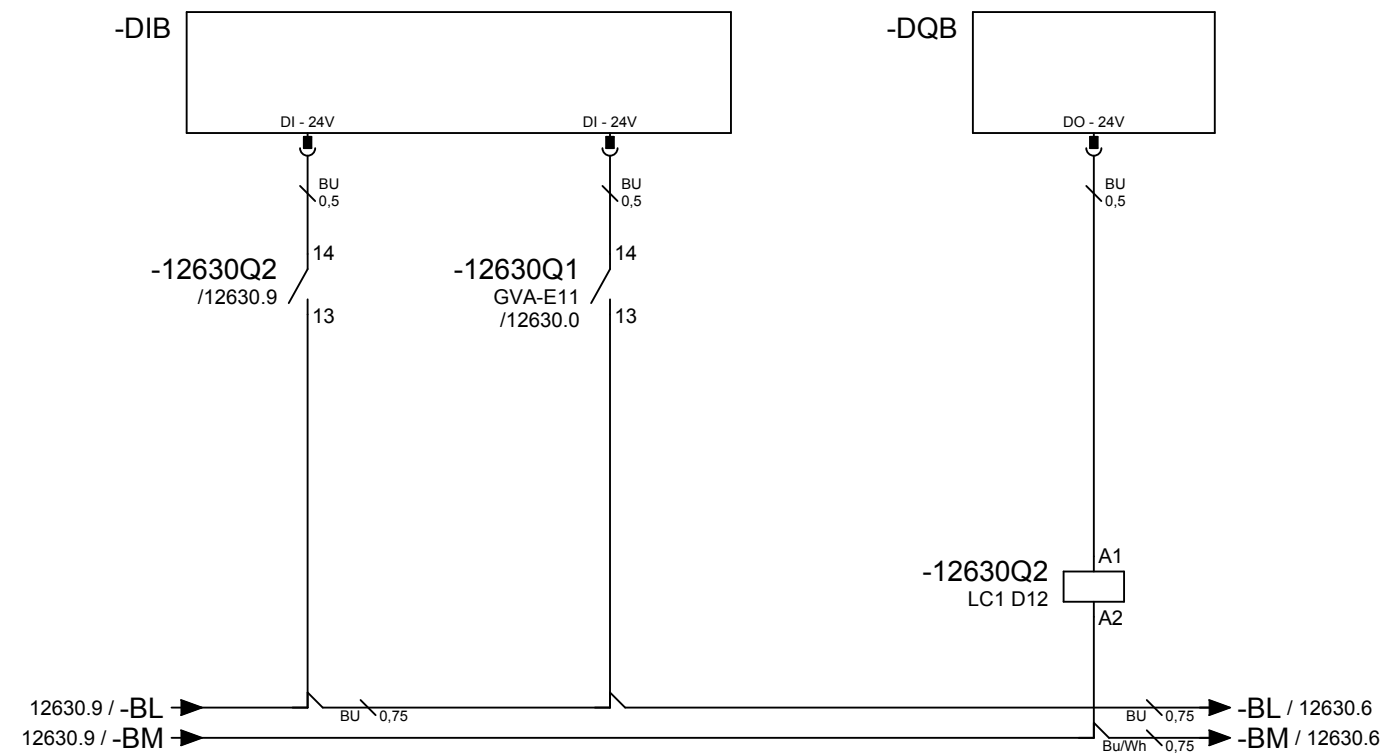
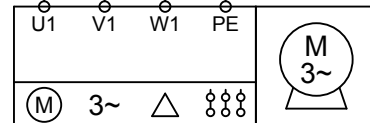
+UBxxx-12630W5
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

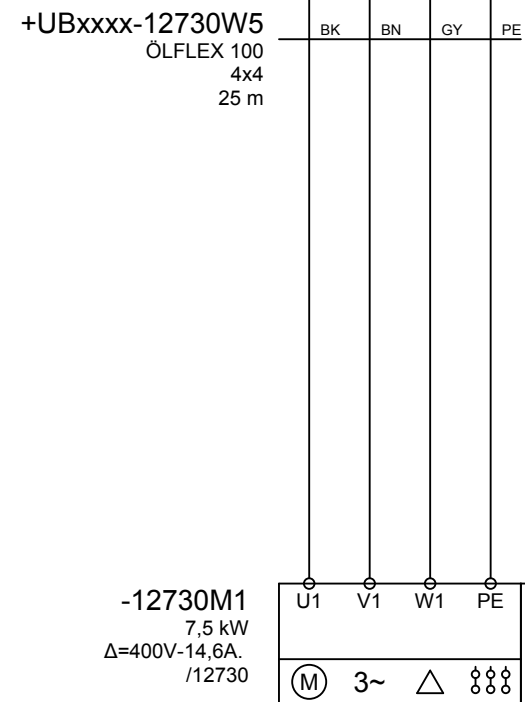
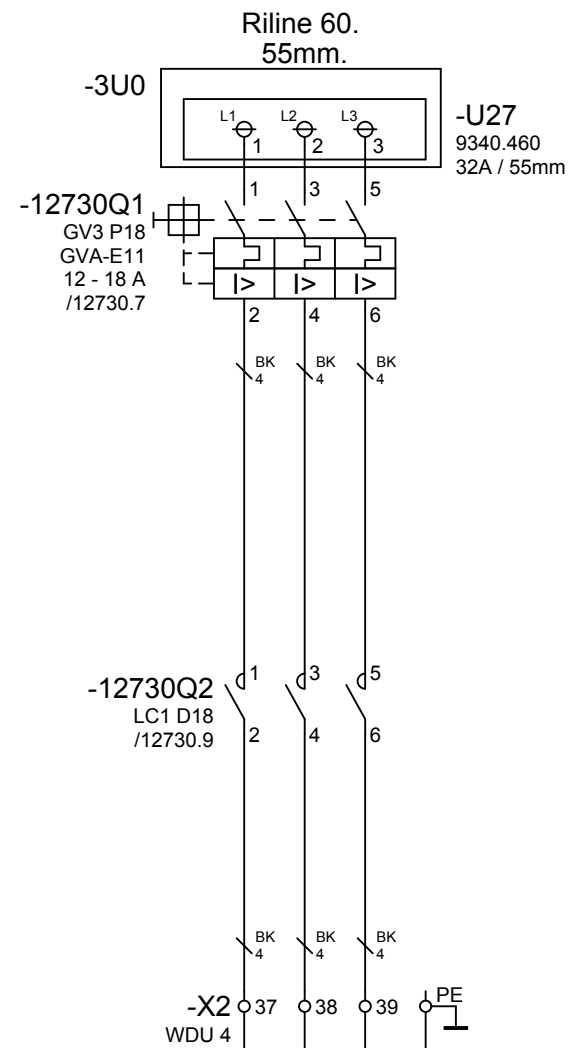
Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..

-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

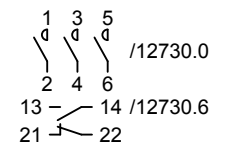
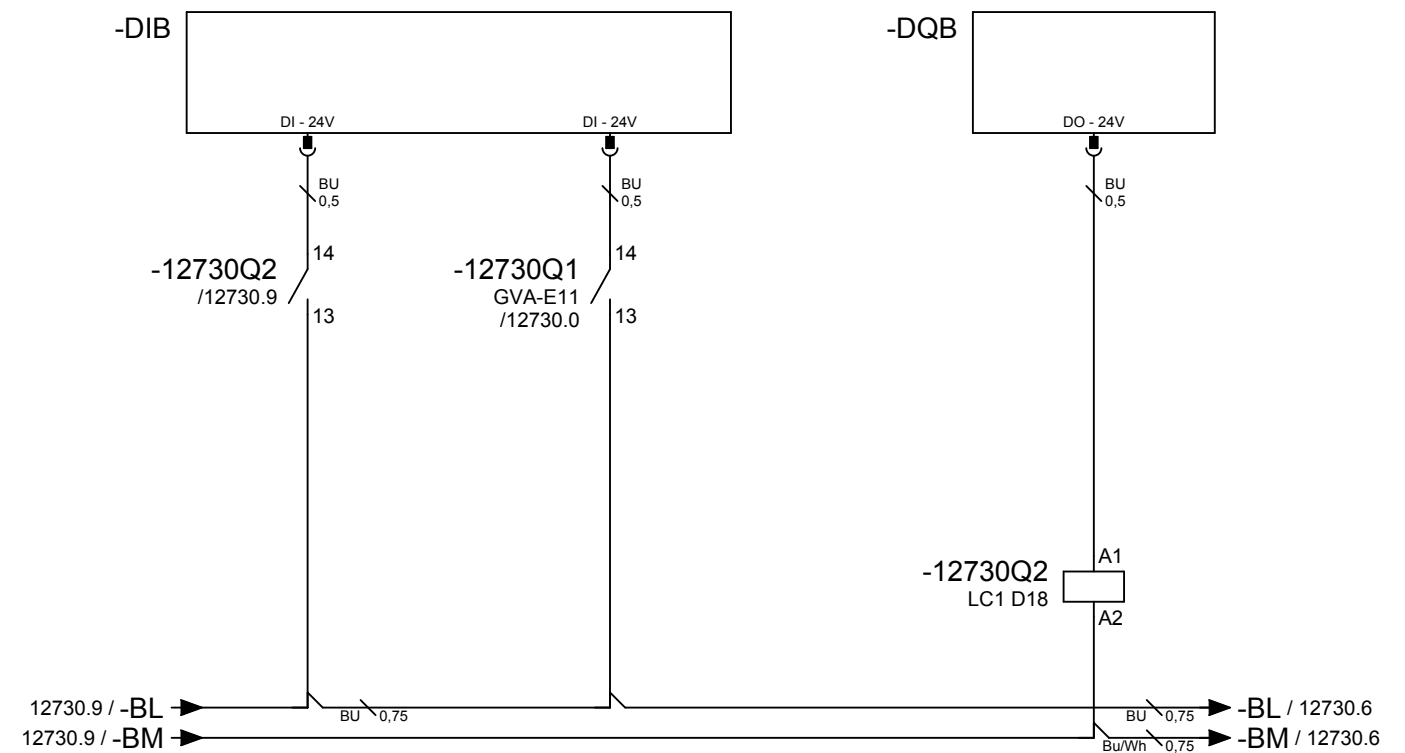


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

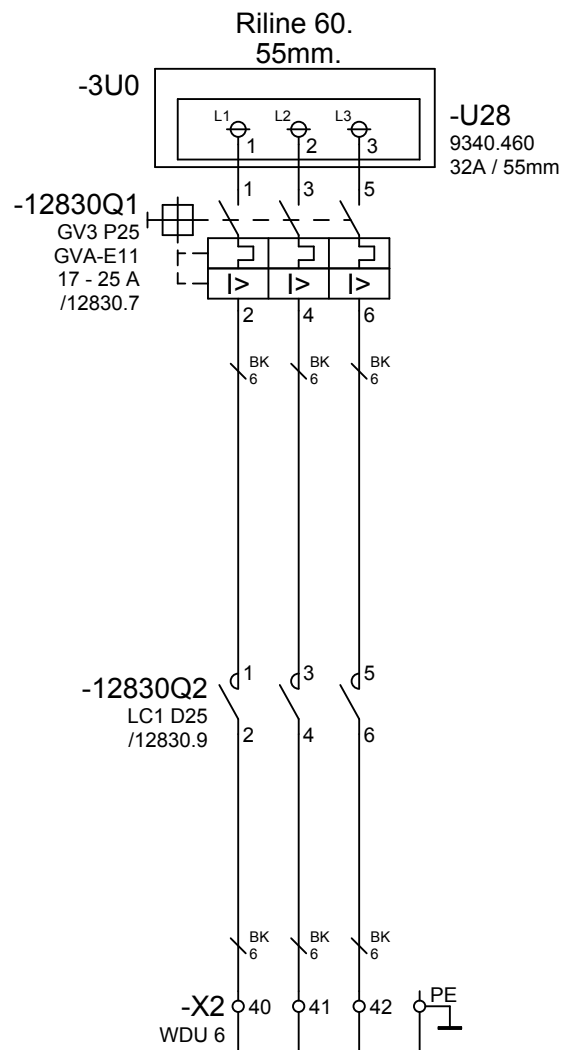
Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

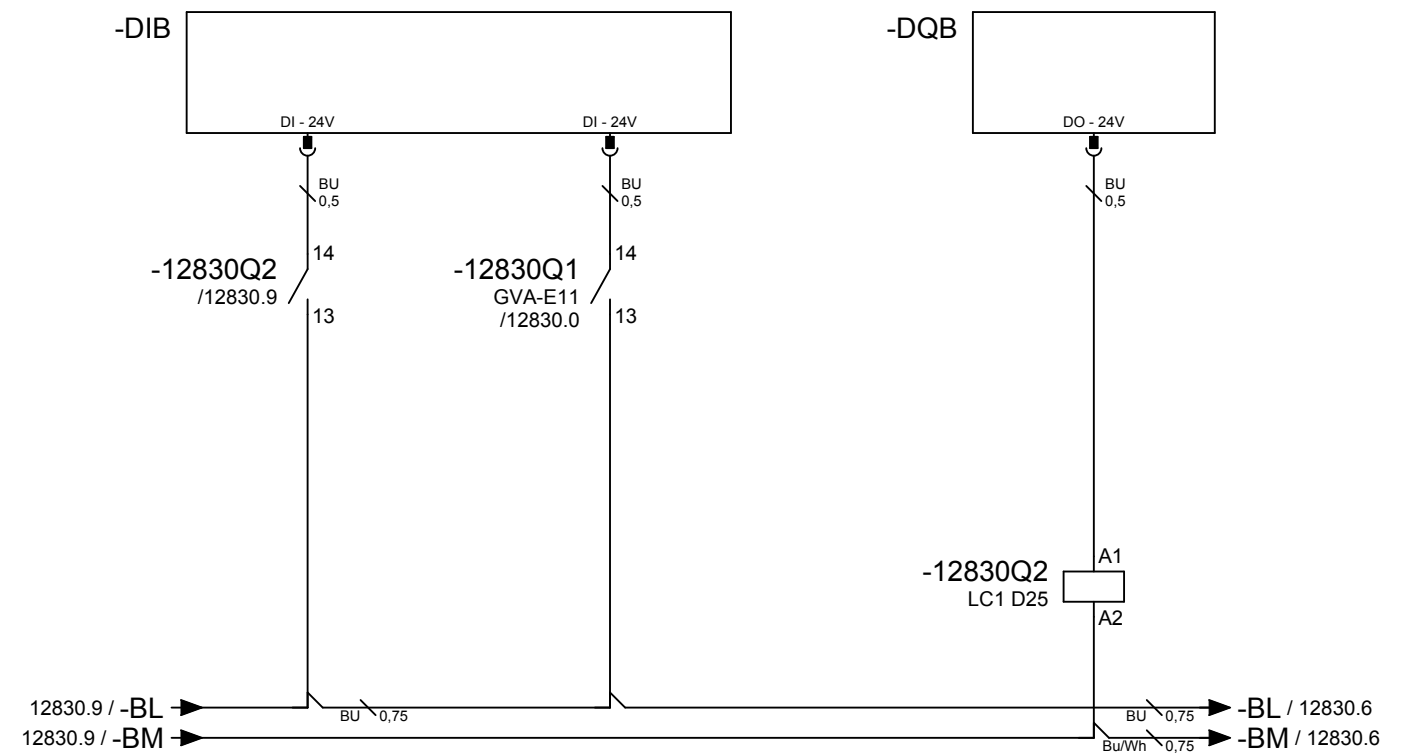


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

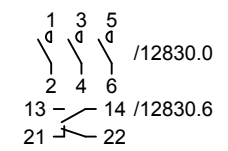
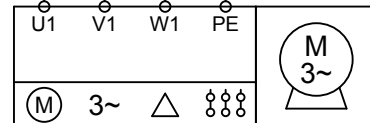
 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)

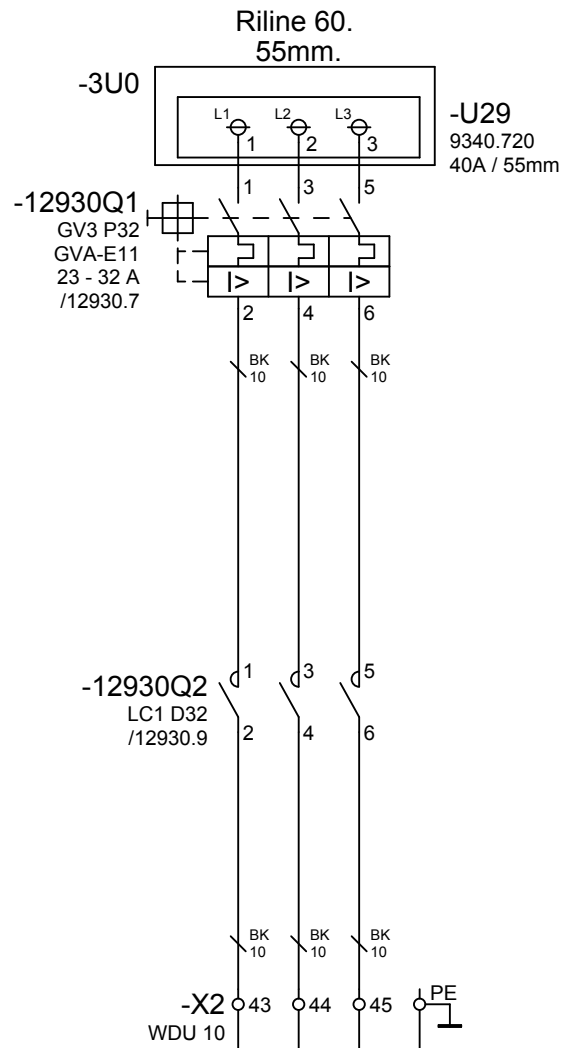


+UBxxx-12830W5
 ÖLFLEX 100
 4x6
 25 m

-12830M1
 11 kW
 Δ=400V-21,0A.
 /12830



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



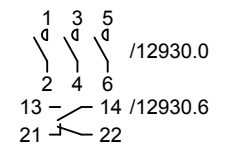
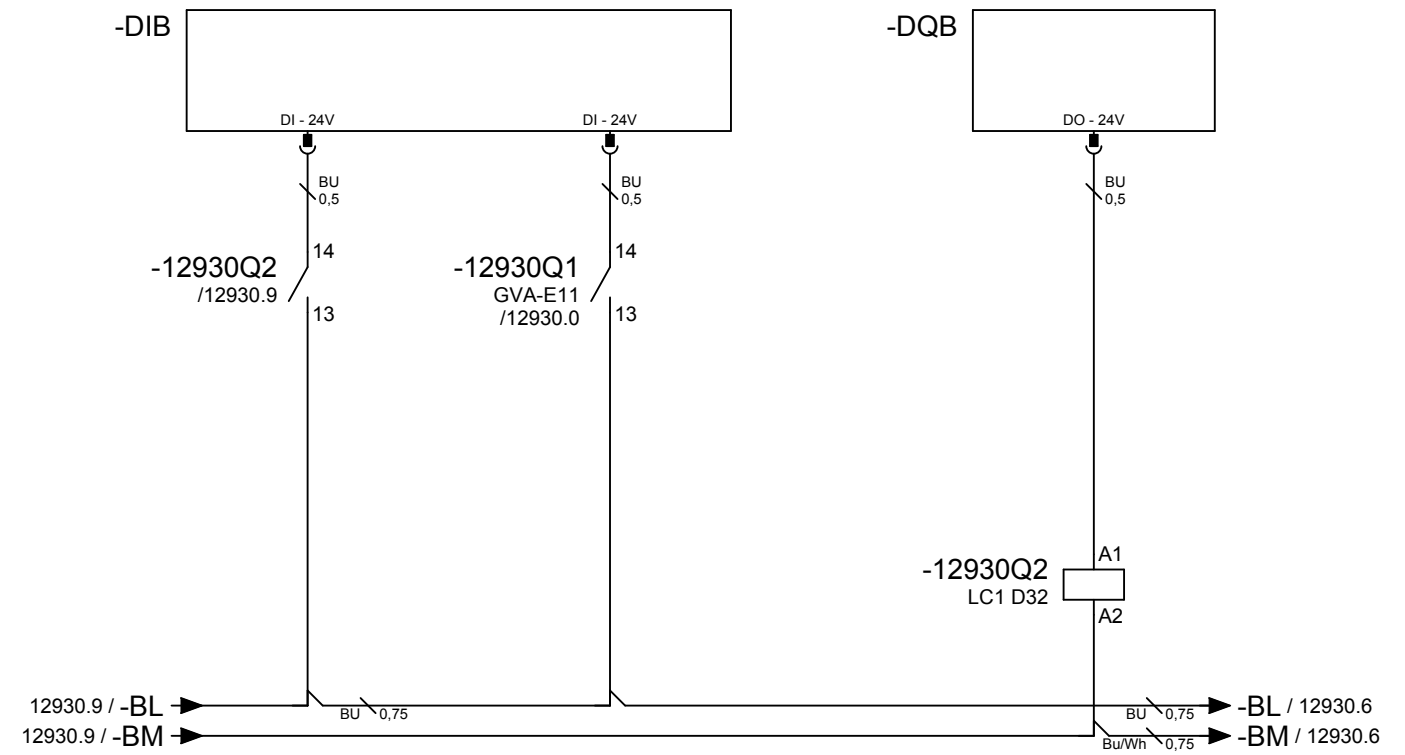
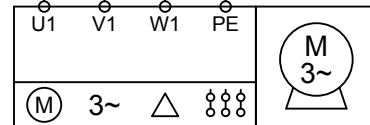
+UBxxxx-12930W5
ÖLFLEX 100
4x6
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)

 short circuit resistance 50kA at 415V

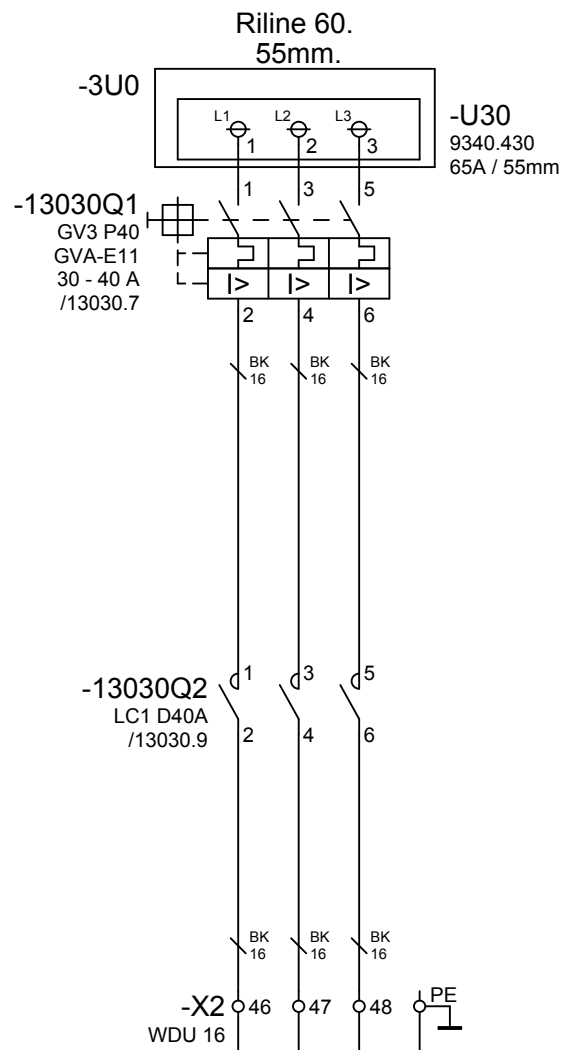
Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

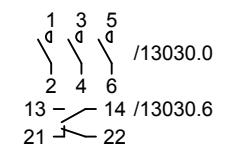
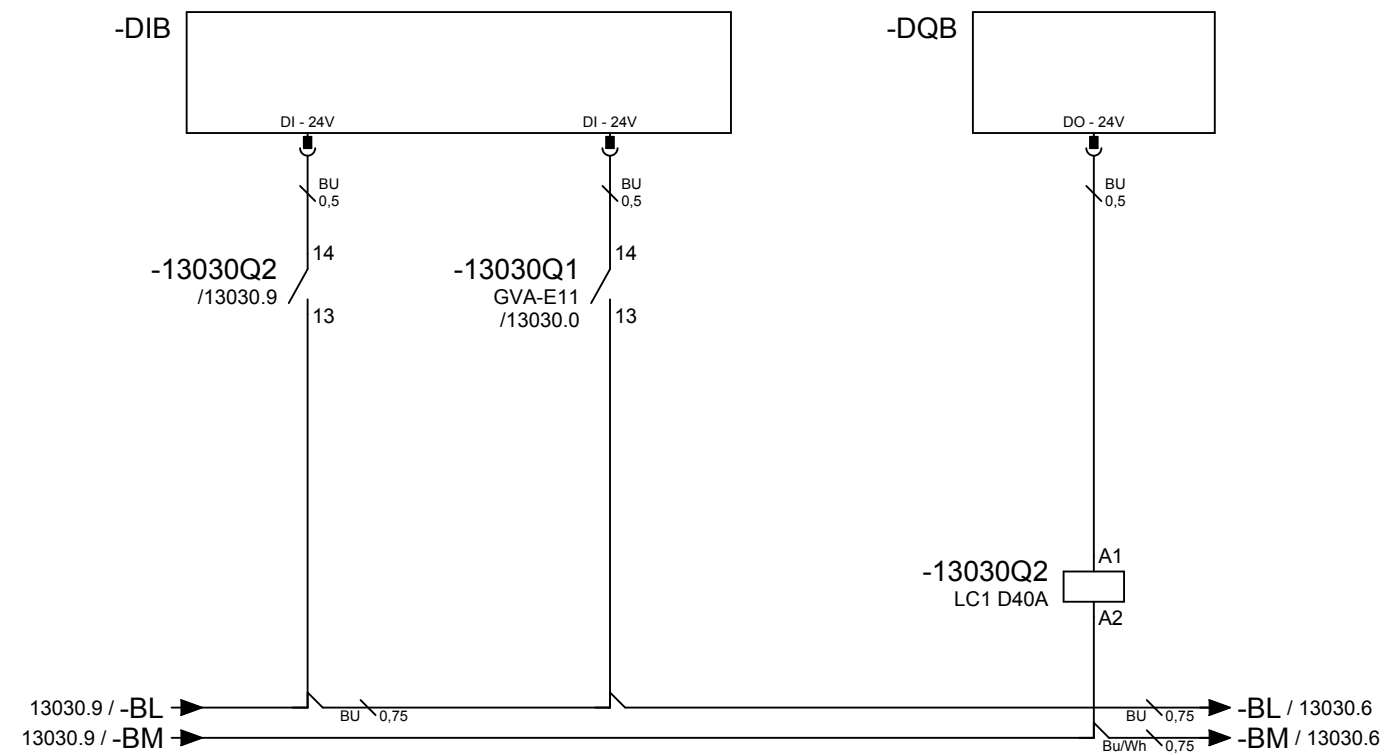


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)

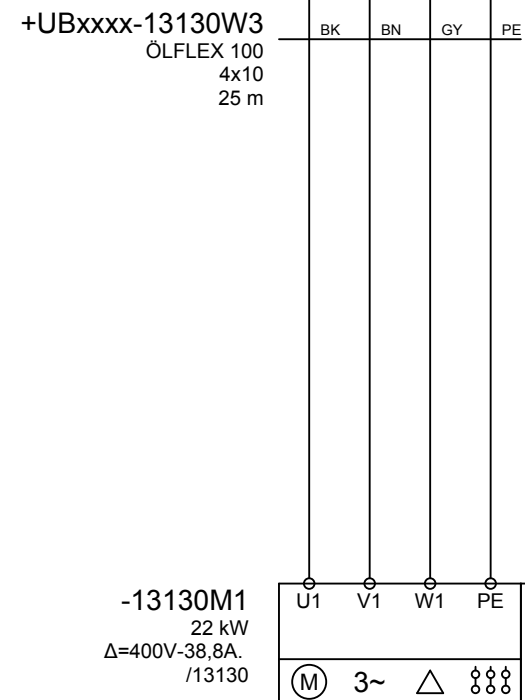
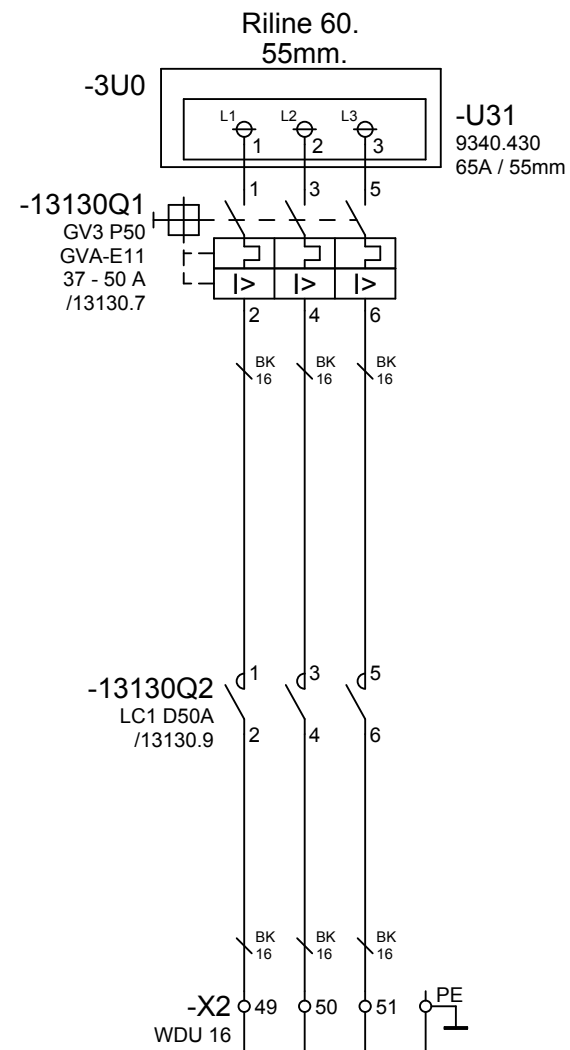
 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
 loss U at In 1,40V
 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>TISKO elektrotechnická konštrukčná kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>18,5kW. 2018</p>	<p>Creator V00 01.02.2012 Ing. Tisovčík Ivan Last revision of project Last revision of page M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409</p>	<p>= GV3P_C1 + R_60 13030</p>
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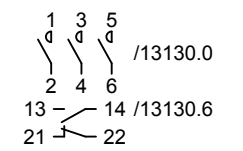
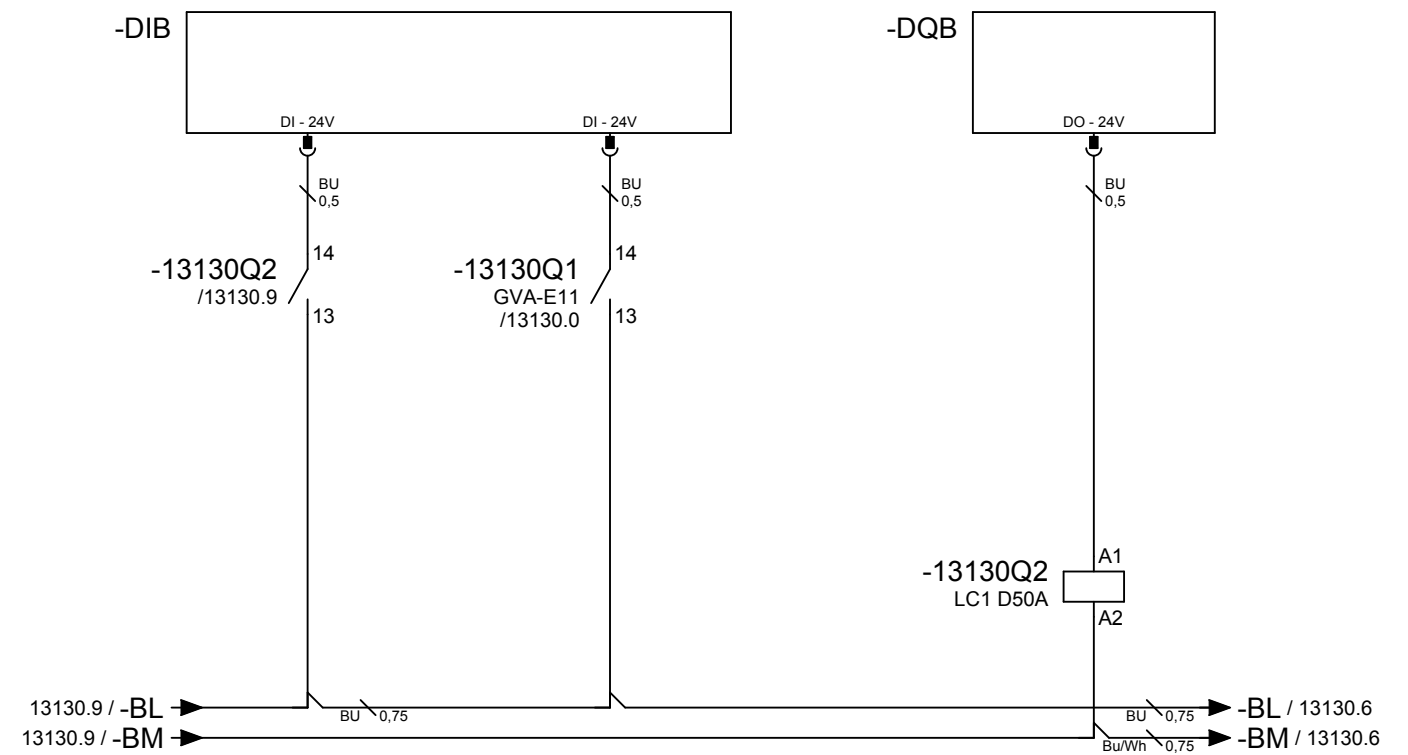


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

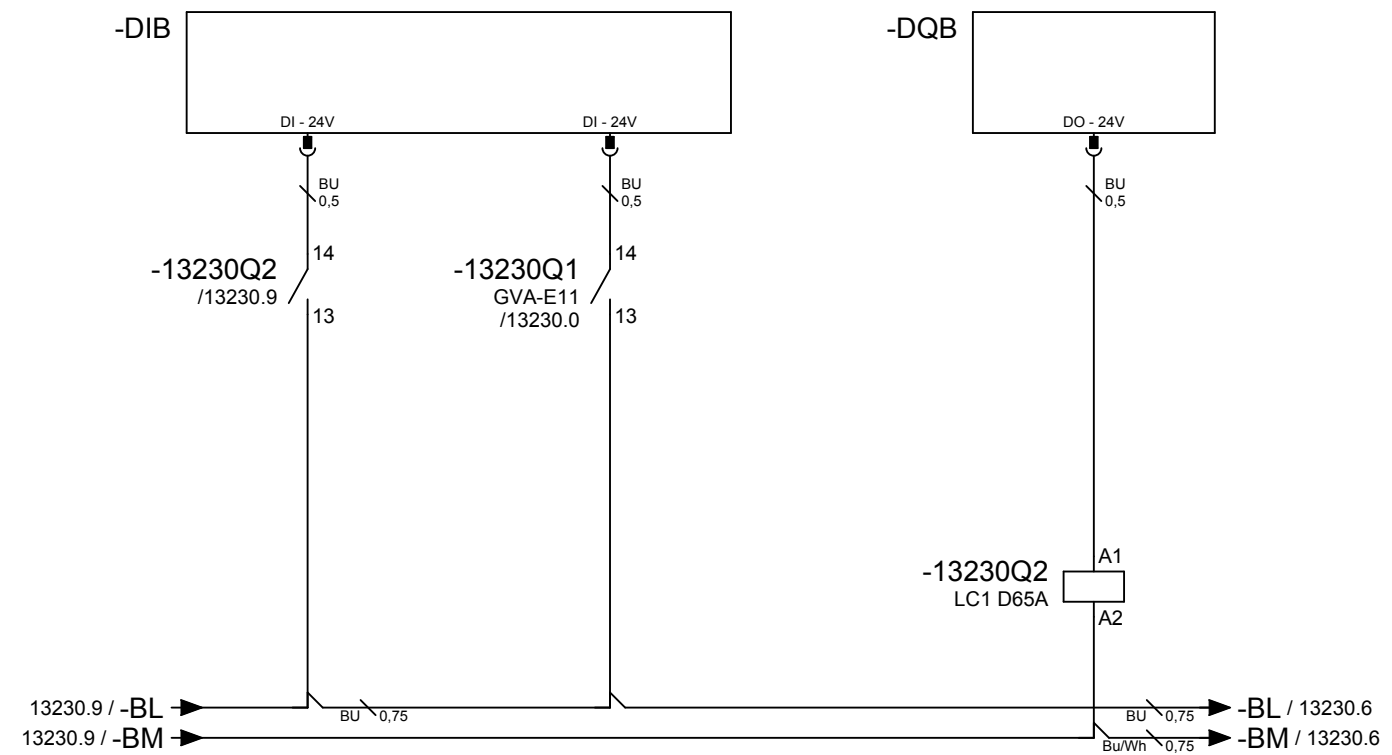
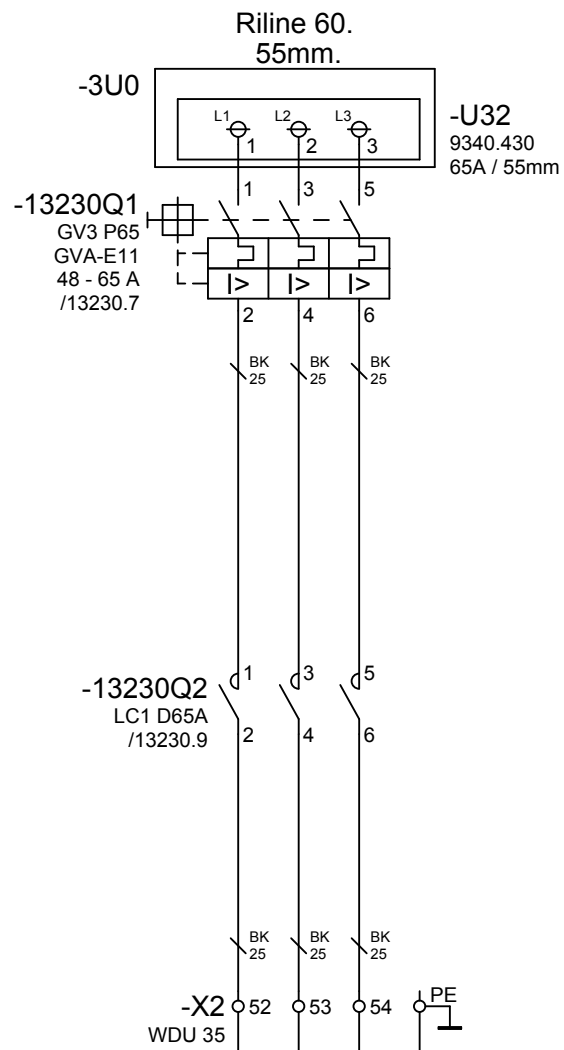
Enclosure B1
 load 16mm² = cca 60A; (39A = 65,0%)
 loss U at In 0,12V
 loss U at 5xIn 0,62V
 heat losses at In 14,54W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (39A = 65,0%)
 loss U at In 1,66V
 loss U at 5xIn 8,29V
 heat losses at In 194,0W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

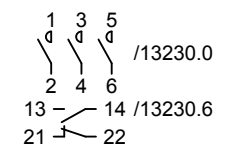
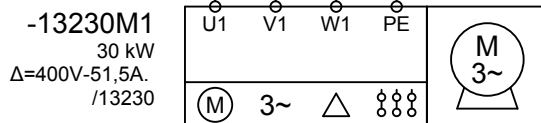


+UBxxx-13230W3
ÖLFLEX 100
4x16
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

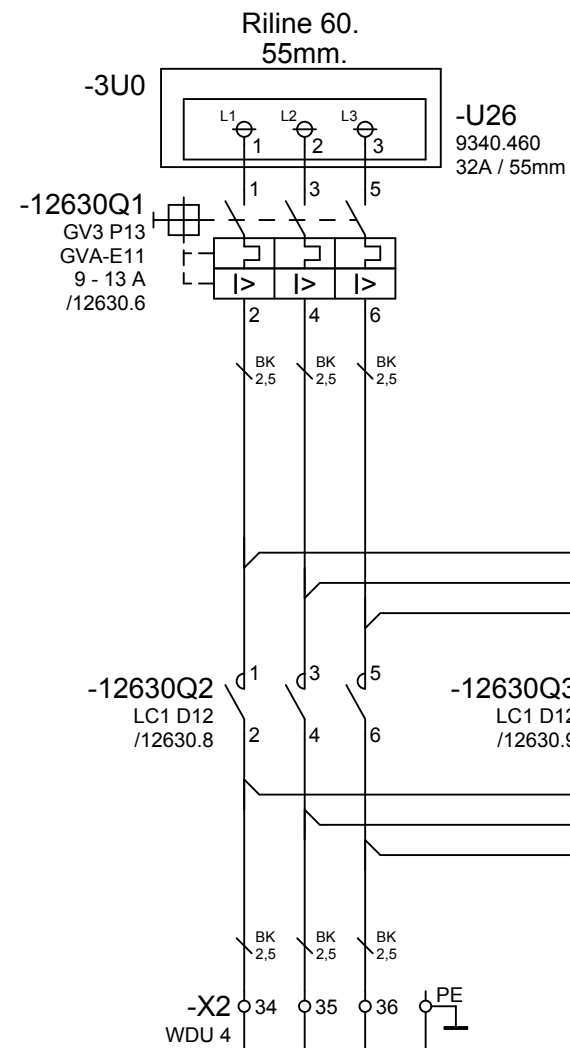
Enclosure B1
load 25mm² = cca 77A; (52A = 67,5%)
loss U at In 0,11V
loss U at 5xIn 0,53V
heat losses at In 16,55W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 16mm² = cca 80A; (52A = 65,0%)
loss U at In 1,38V
loss U at 5xIn 6,91V
heat losses at In 215,5W (L=3x25m)
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Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

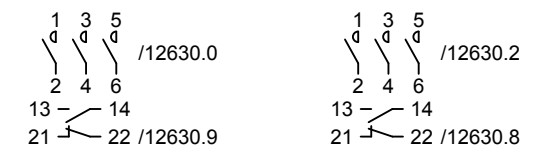
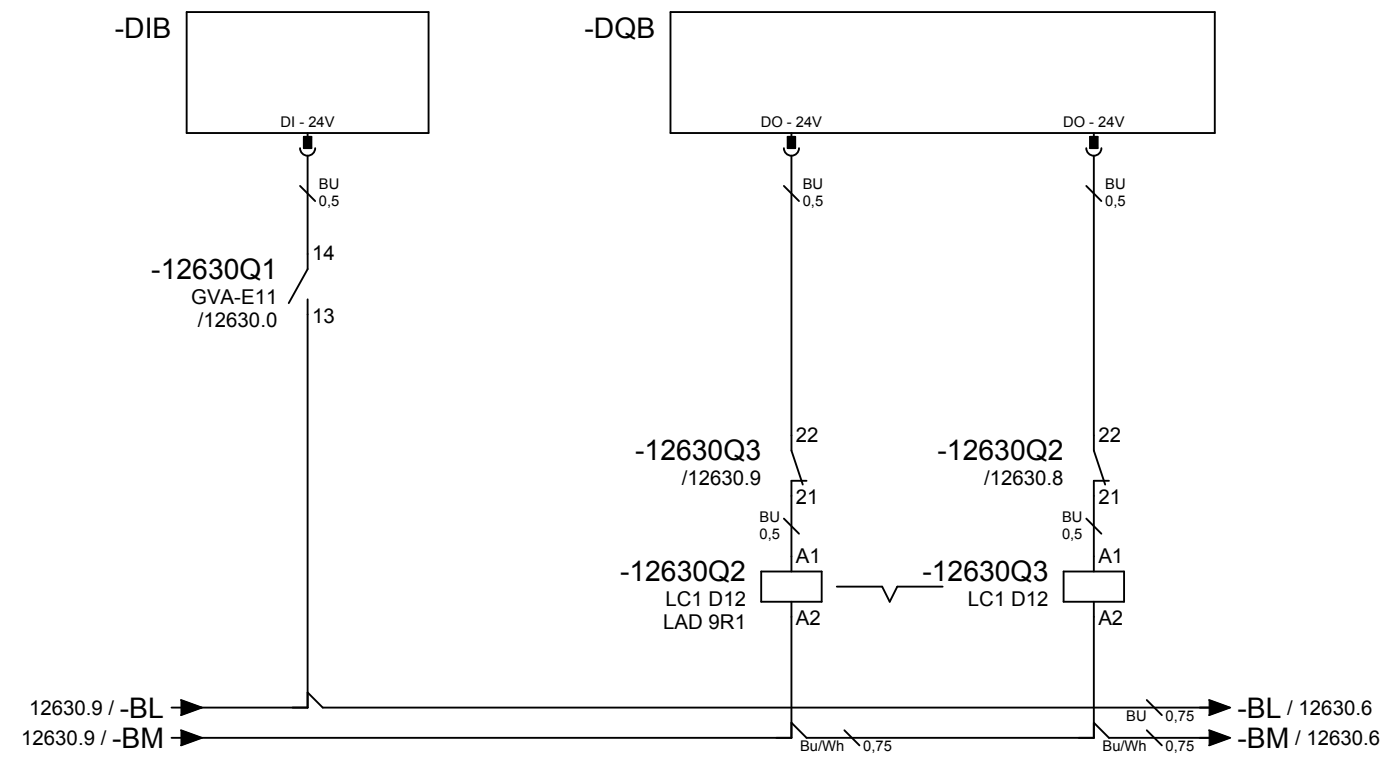
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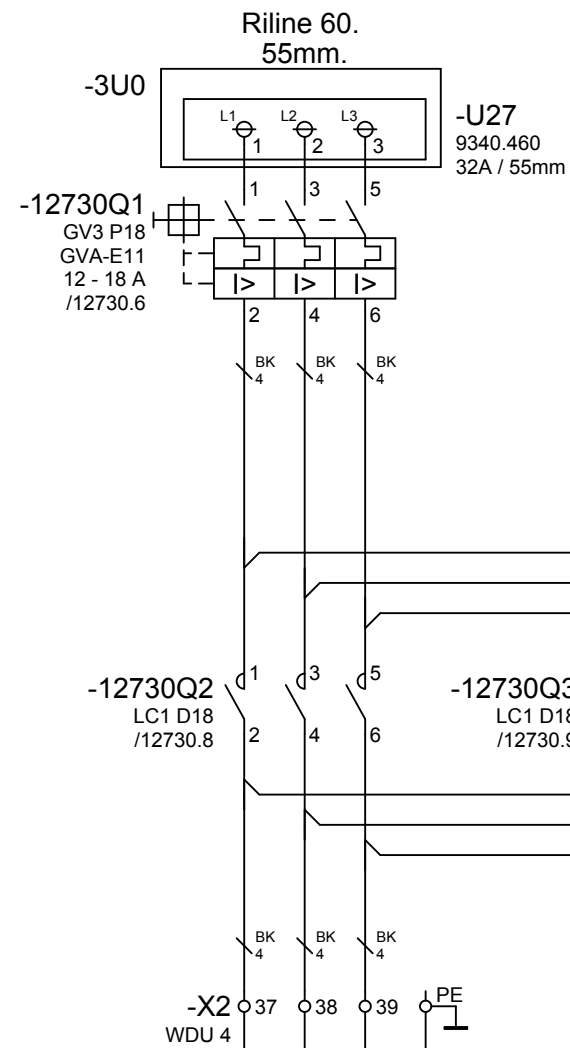
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

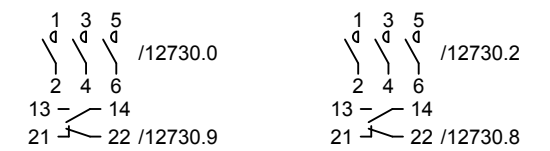
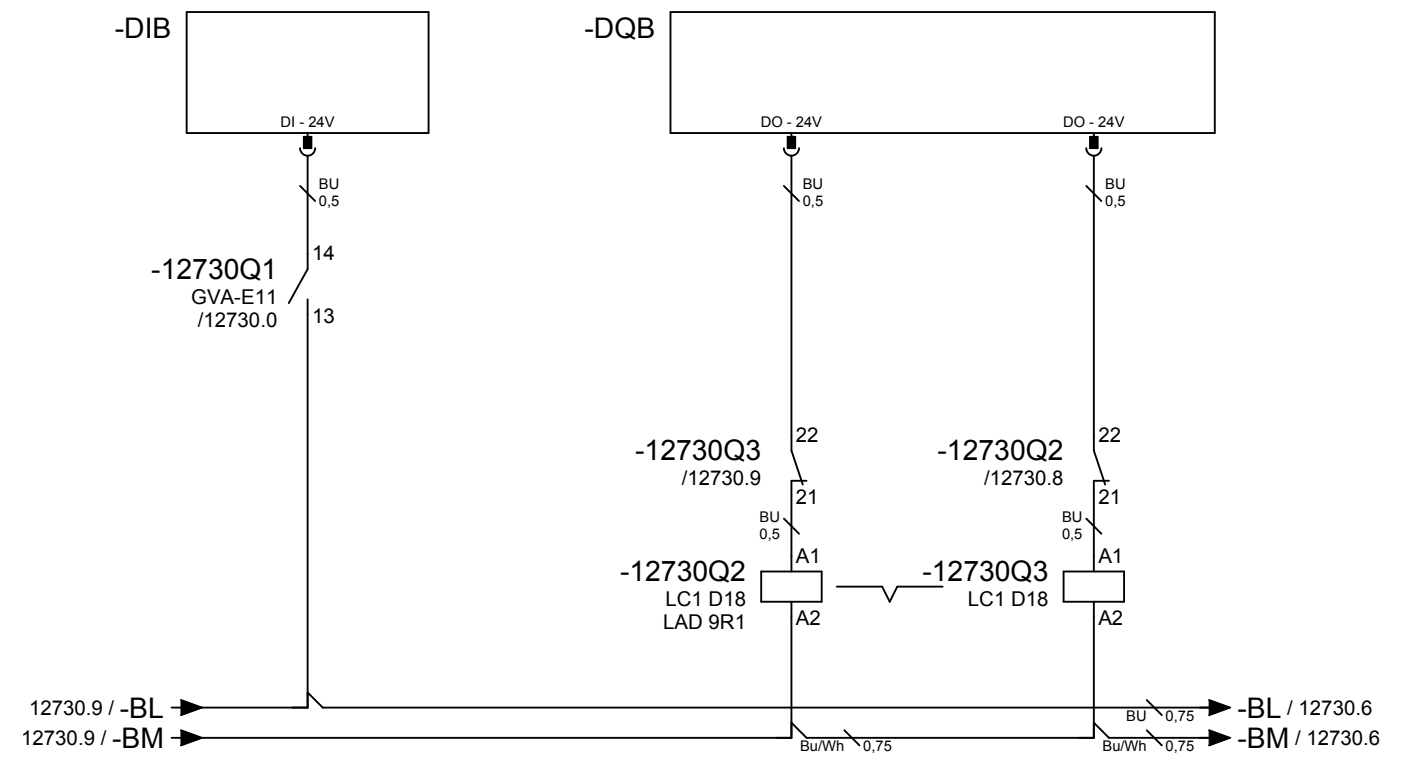


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

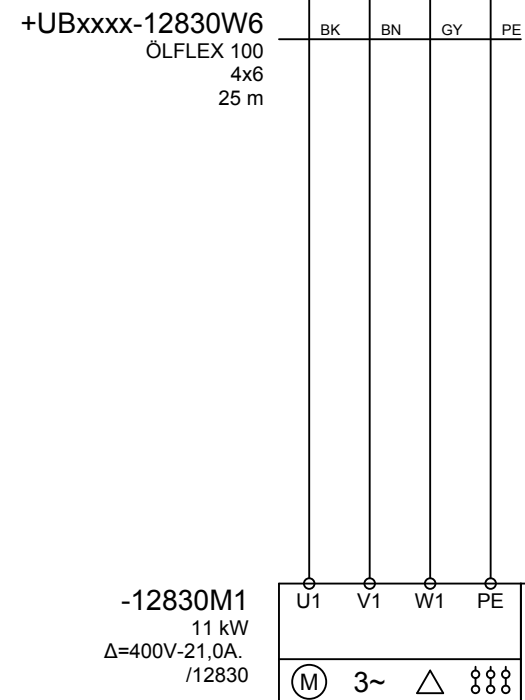
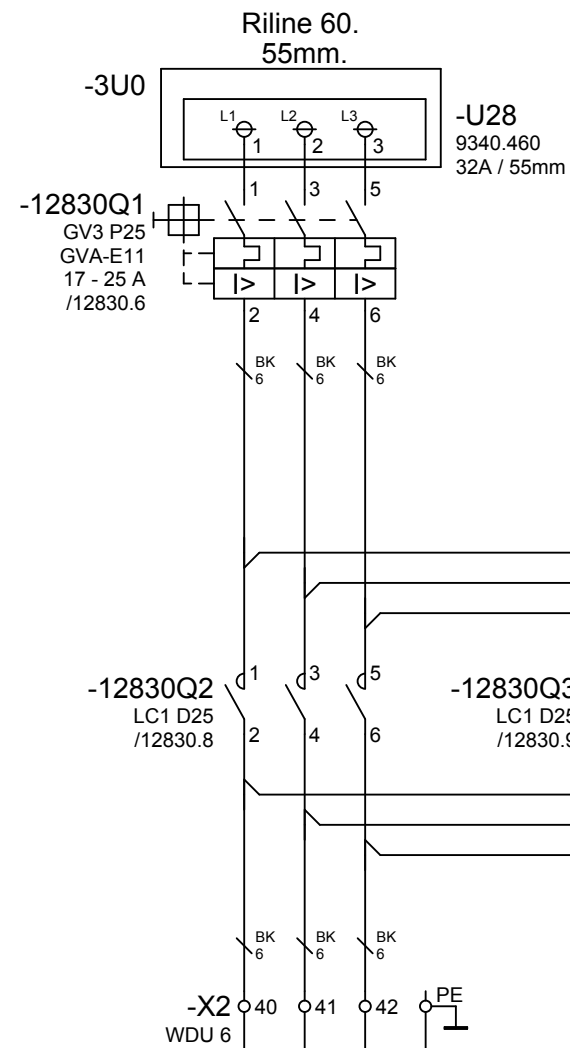
Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



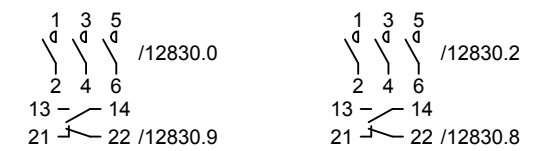
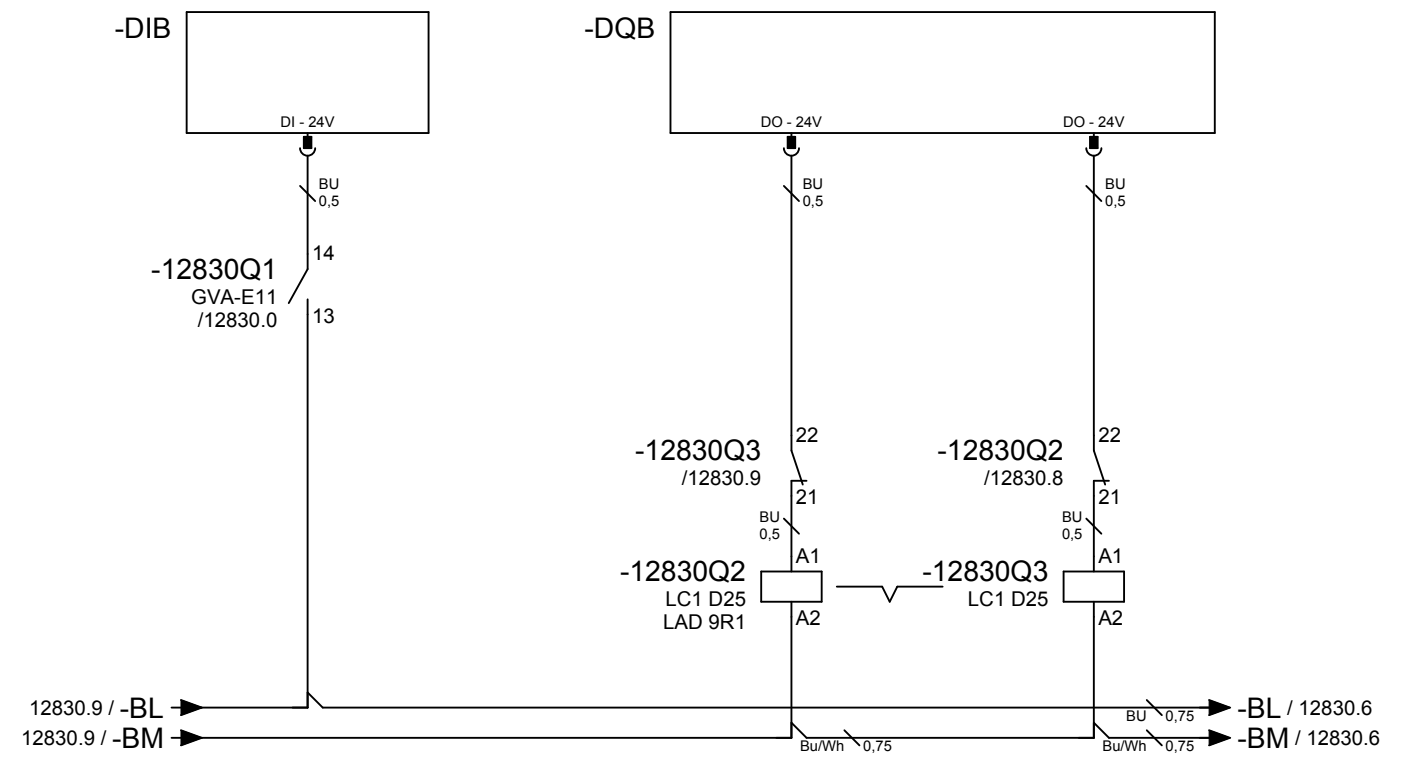
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



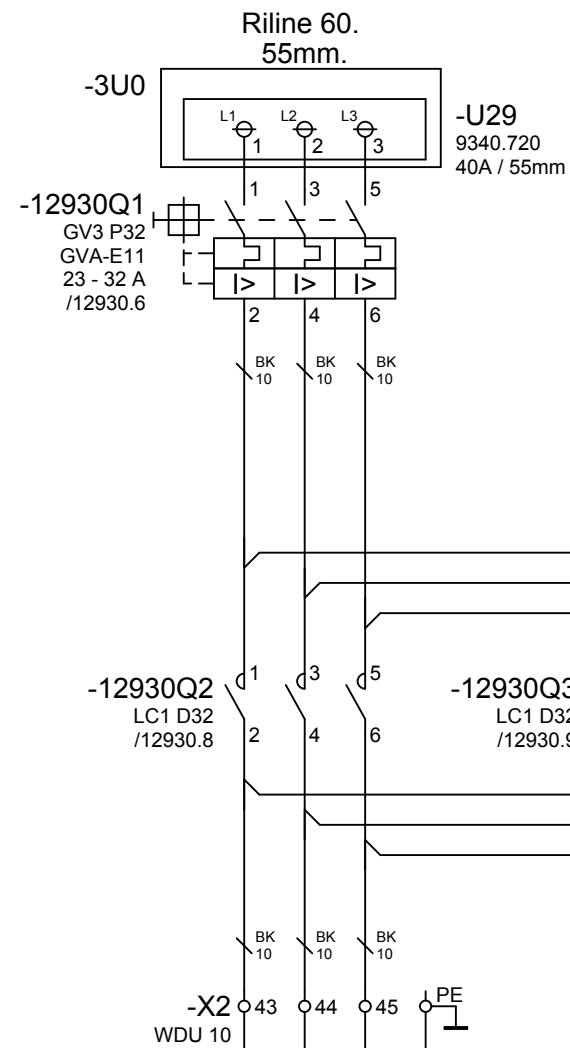
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



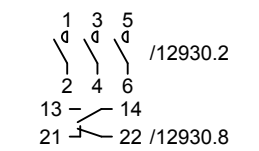
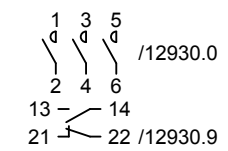
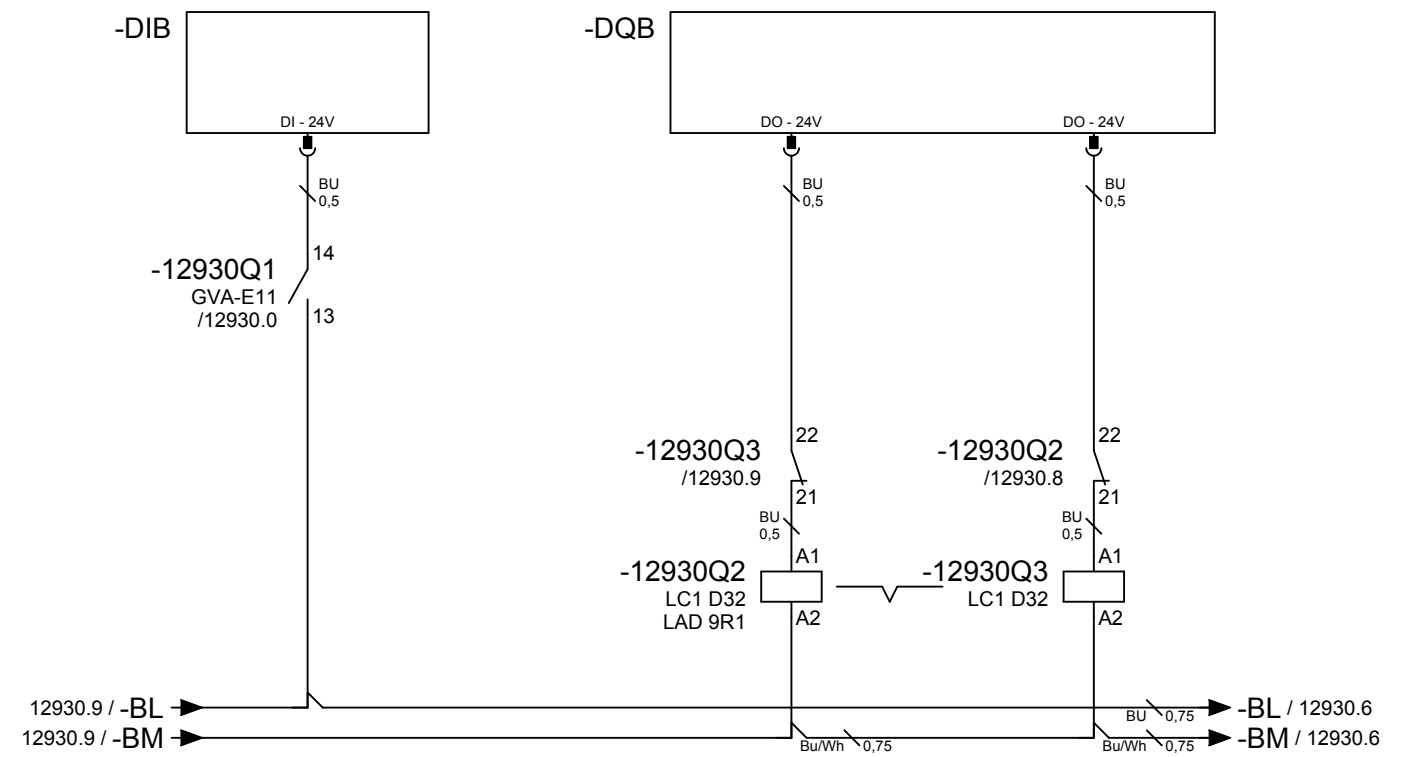
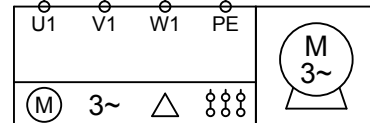
+UBxxx-12930W6
ÖLFLEX 100
4x6
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)

 short circuit resistance 50kA at 415V

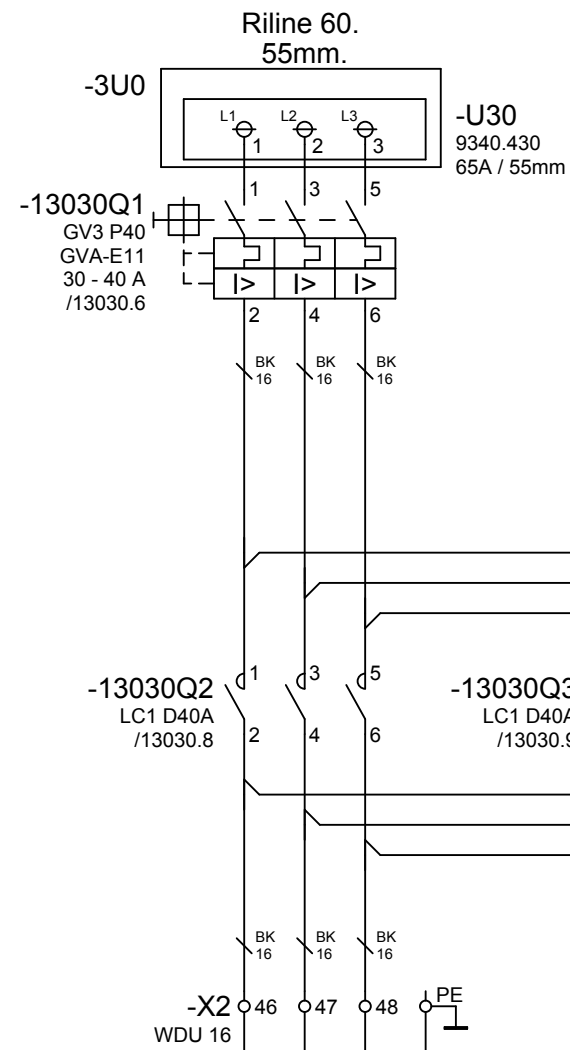
Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

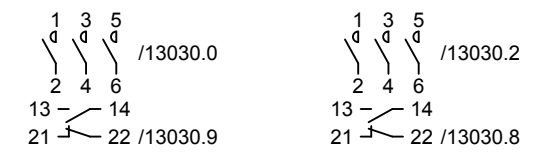
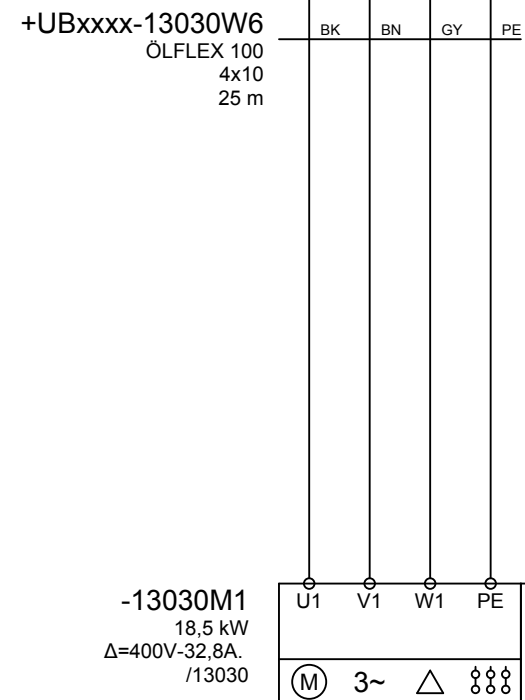
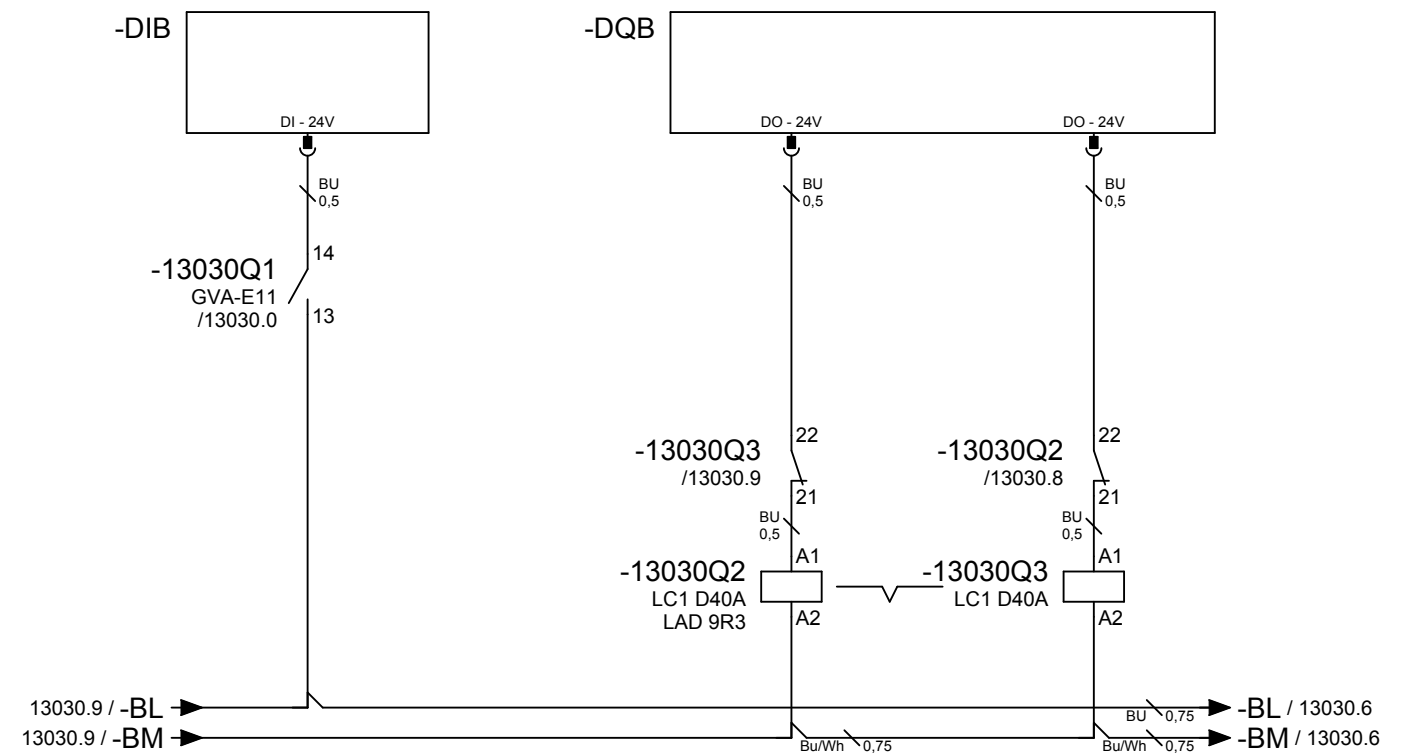


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

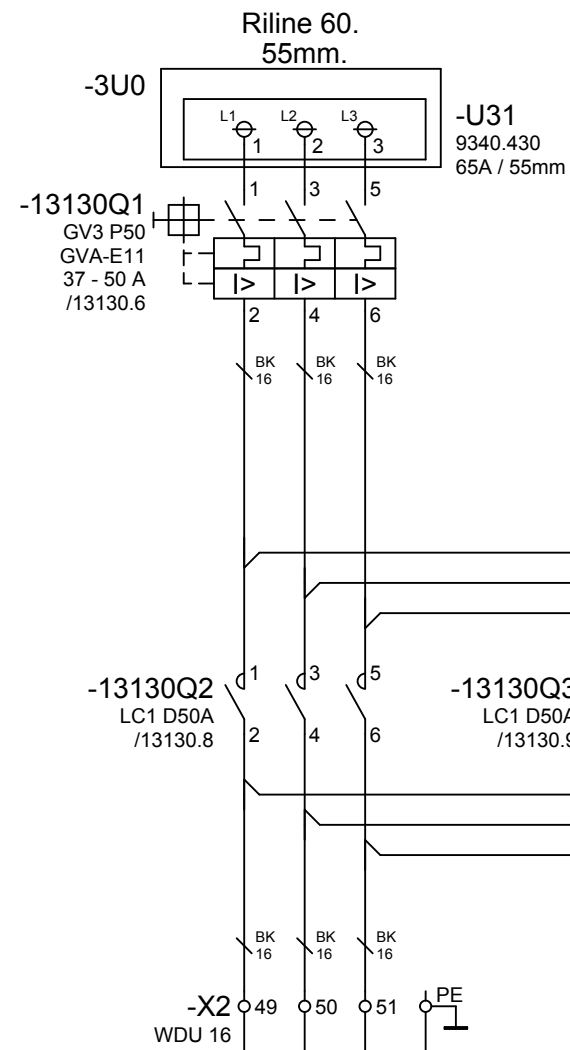
Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
 loss U at In 1,40V
 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

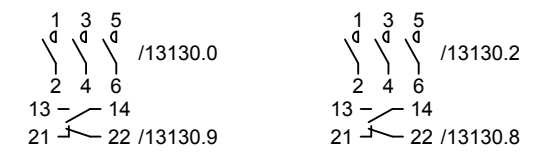
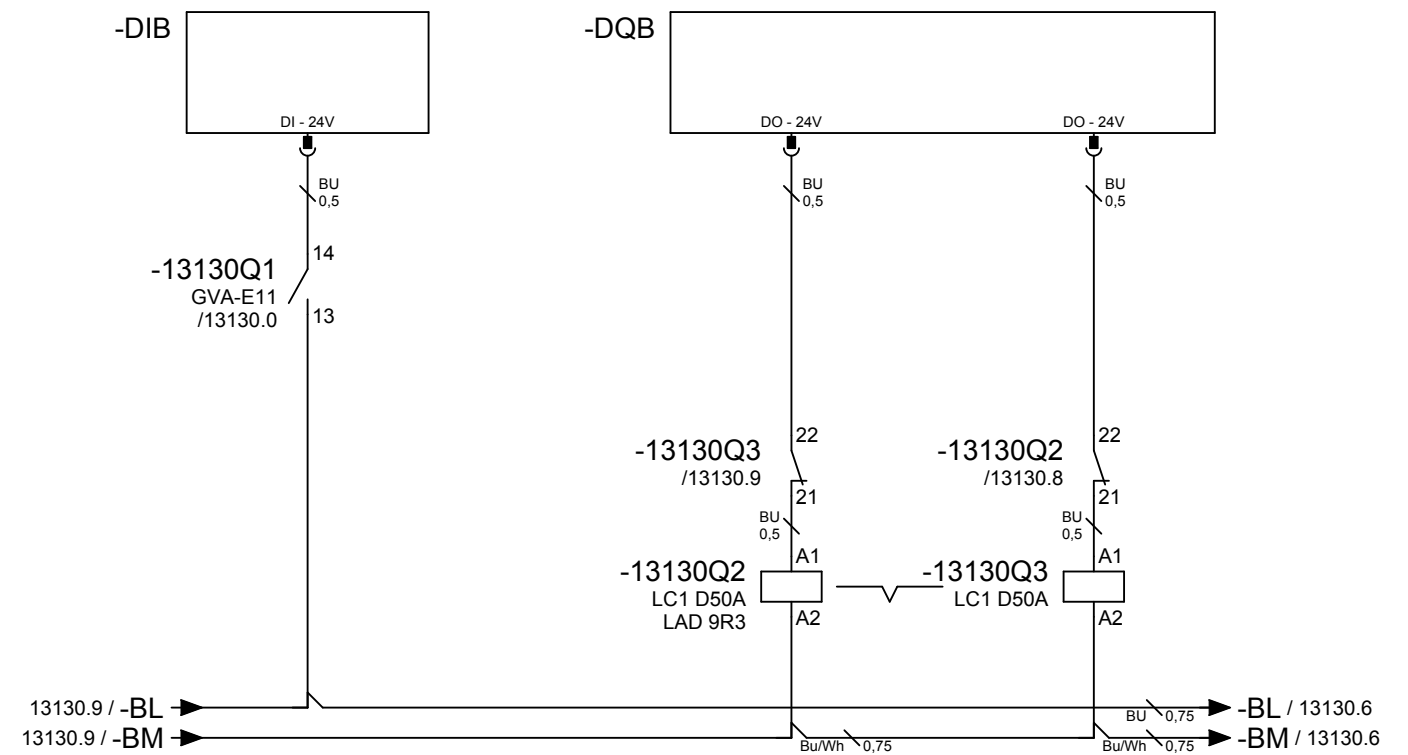


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

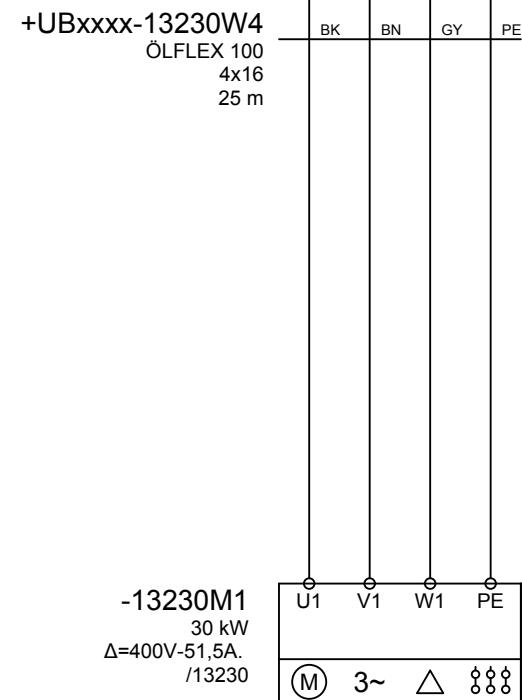
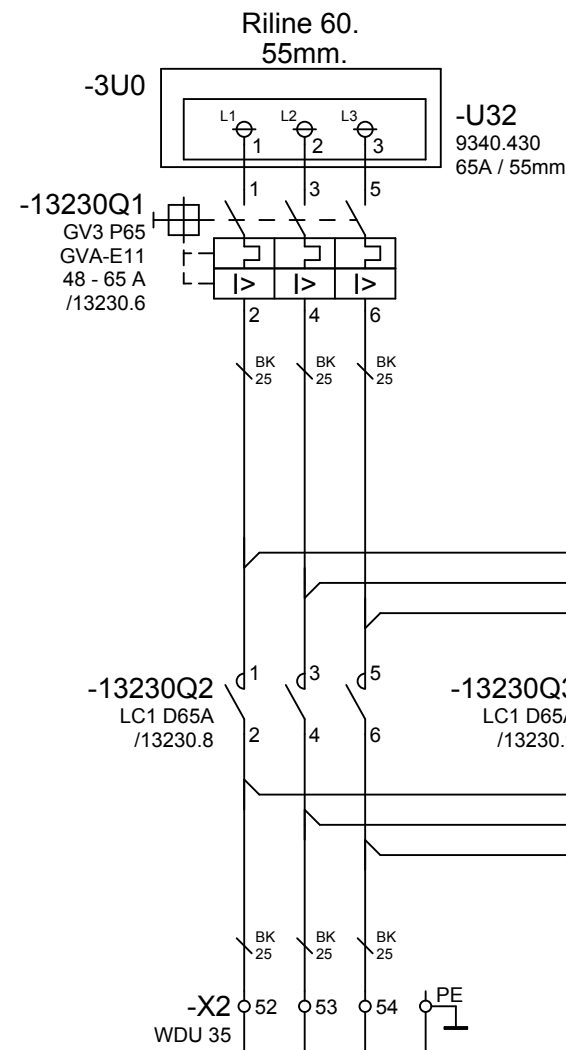
Enclosure B1
 load 16mm² = cca 60A; (39A = 65,0%)
 loss U at In 0,12V
 loss U at 5xIn 0,62V
 heat losses at In 14,54W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (39A = 65,0%)
 loss U at In 1,66V
 loss U at 5xIn 8,29V
 heat losses at In 194,0W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

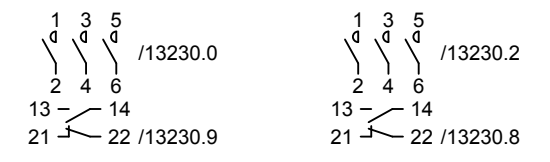
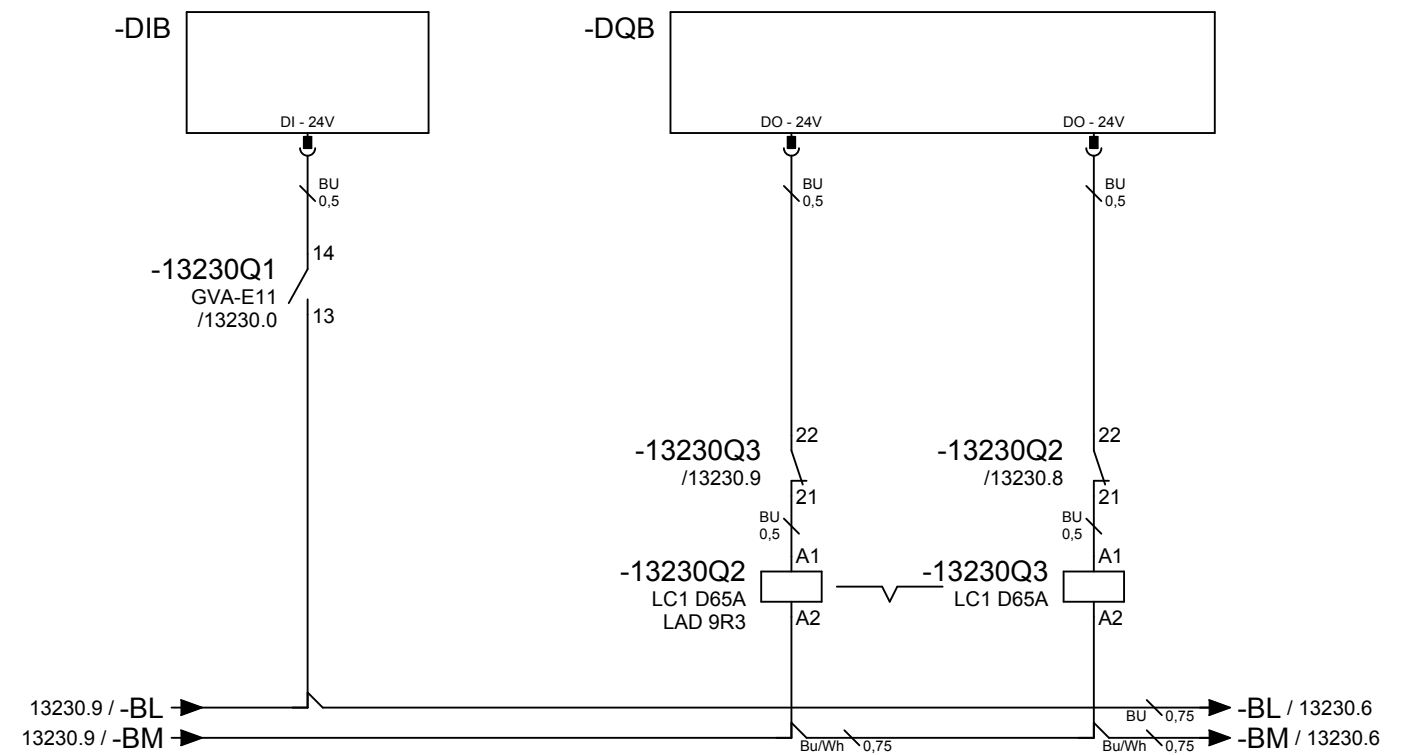


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

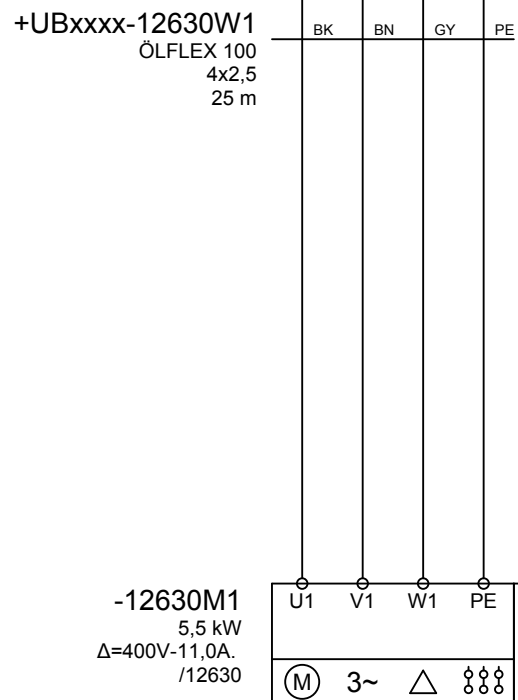
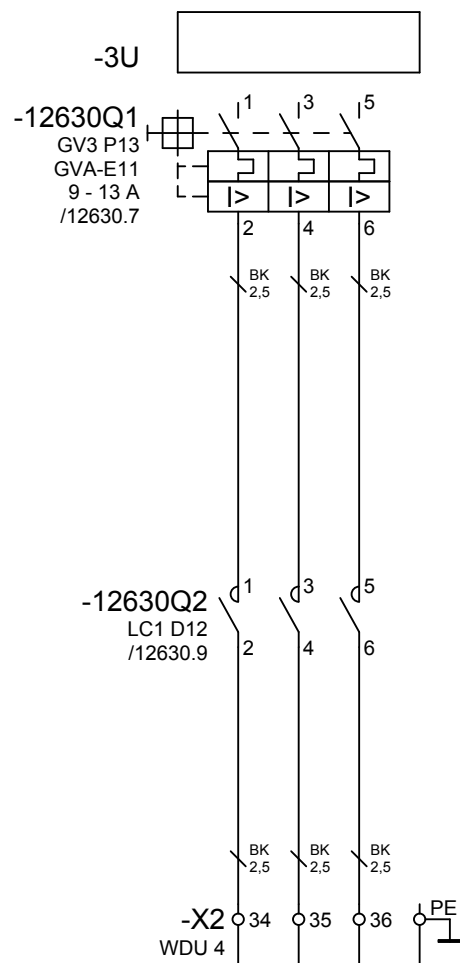
Enclosure B1
 load 25mm² = cca 77A; (52A = 67,5%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 16,55W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 16mm² = cca 80A; (52A = 65,0%)
 loss U at In 1,38V
 loss U at 5xIn 6,91V
 heat losses at In 215,5W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

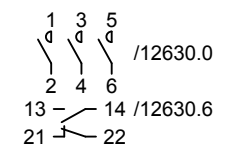
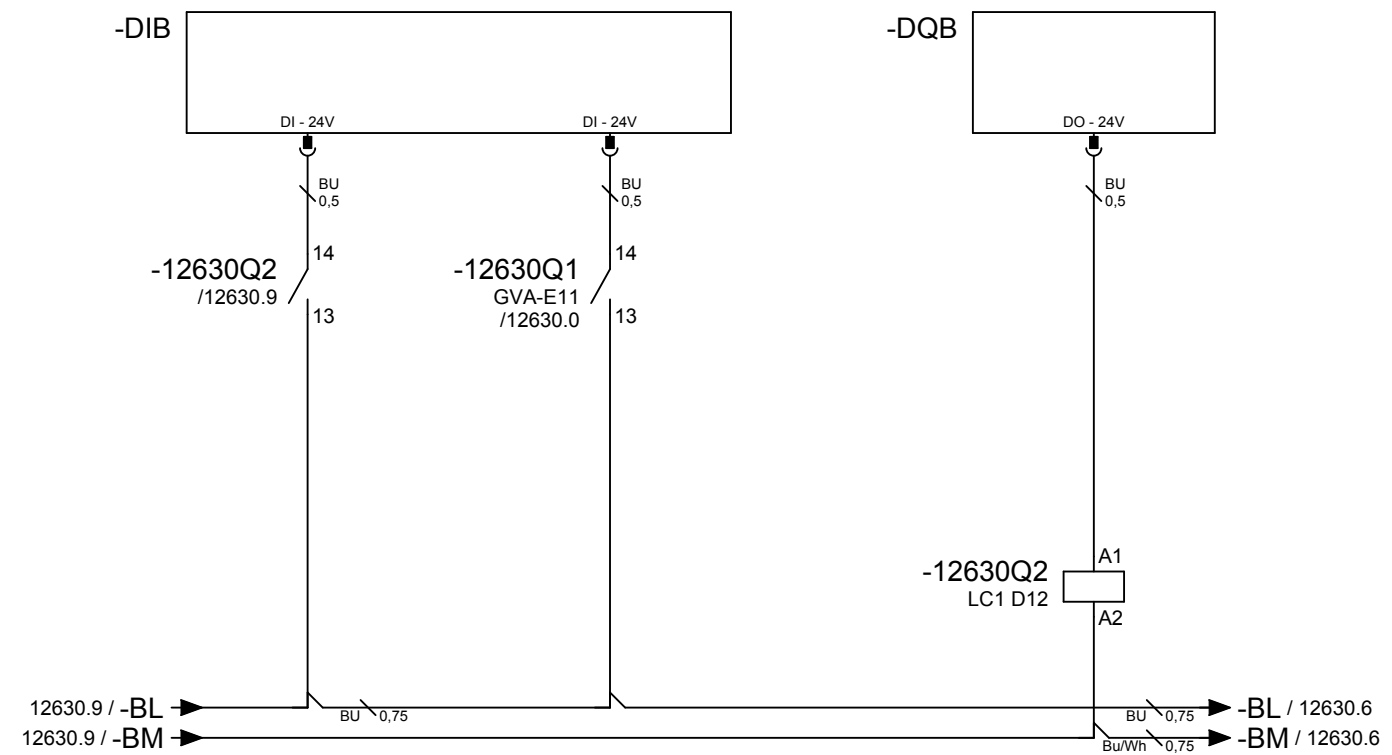


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

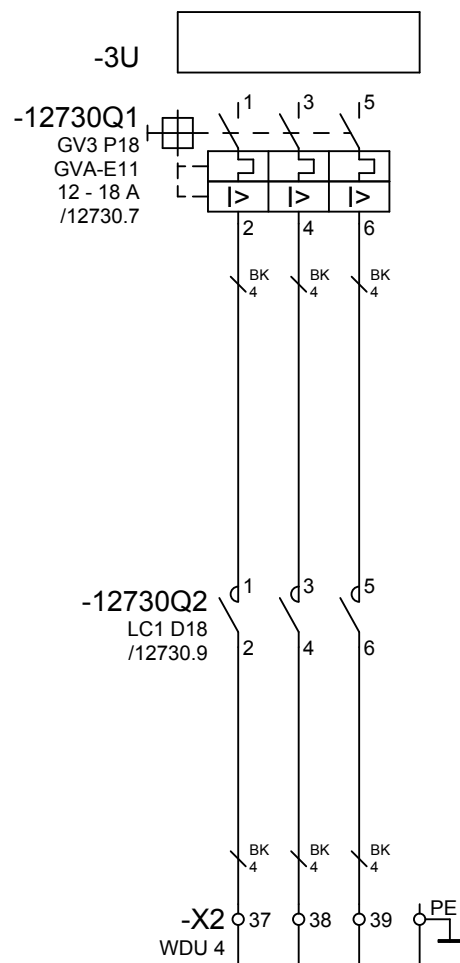
Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



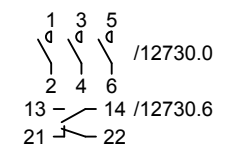
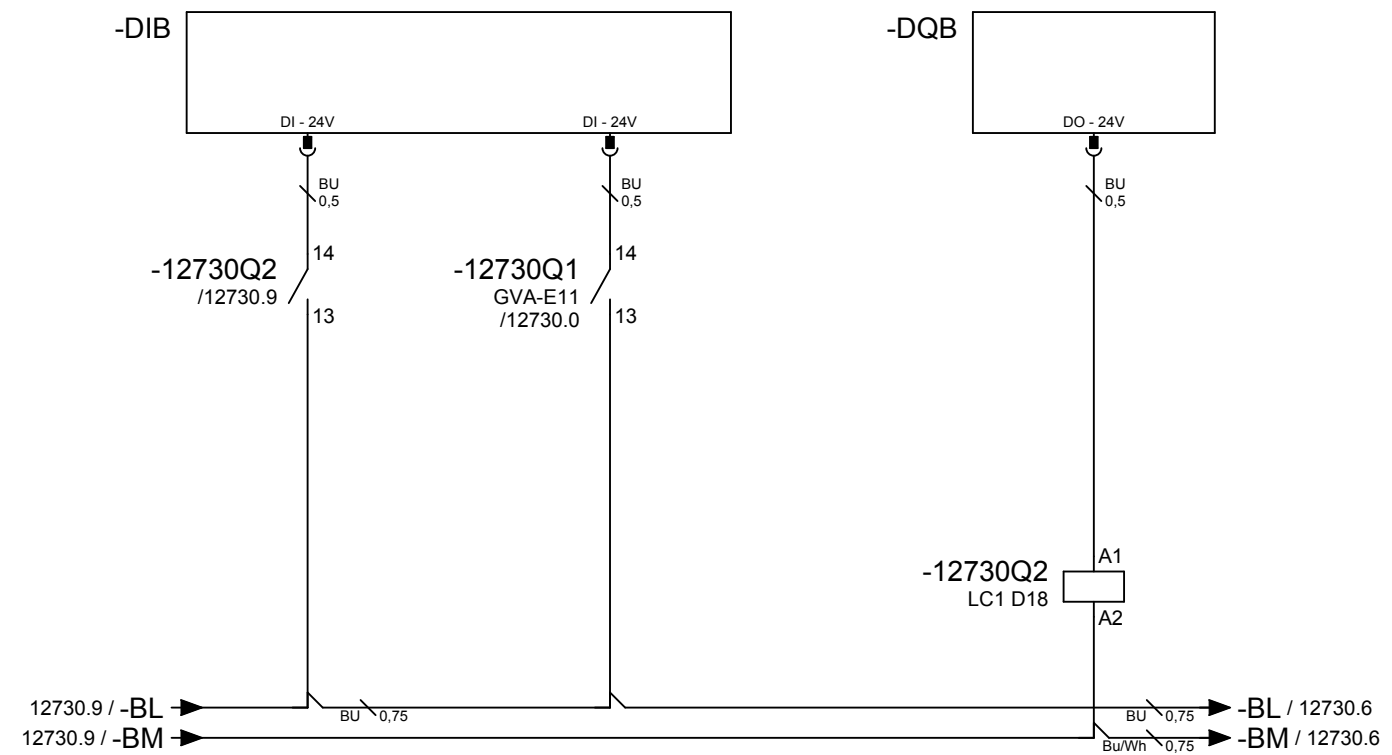
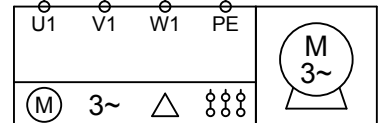
+UBxxx-12730W1
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

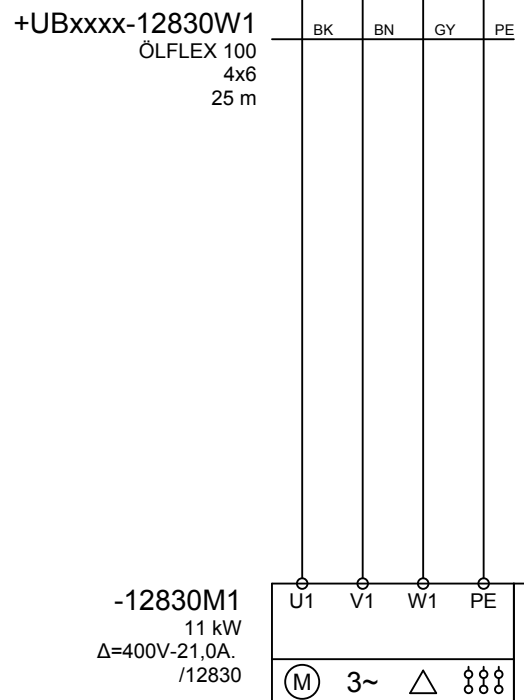
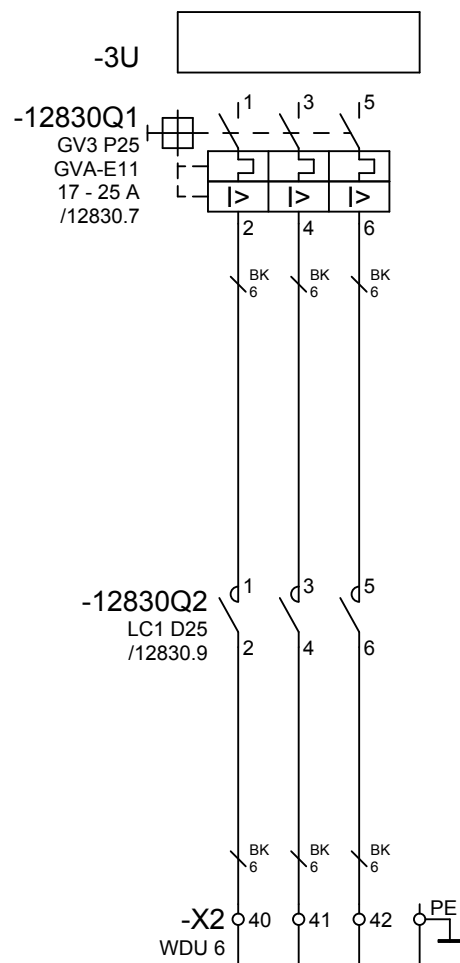
Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..

-12730M1
7,5 kW
Δ=400V-14,6A.
/12730

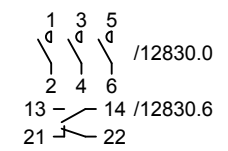
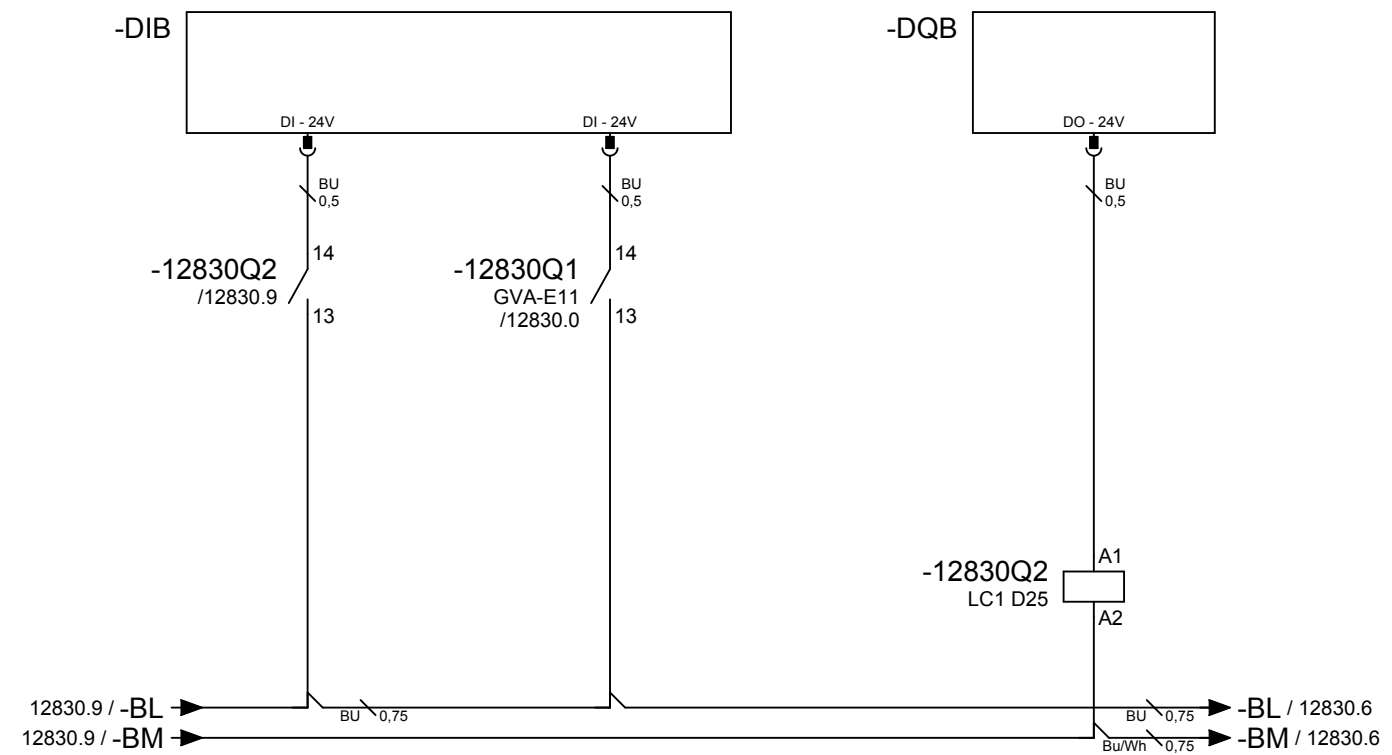


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

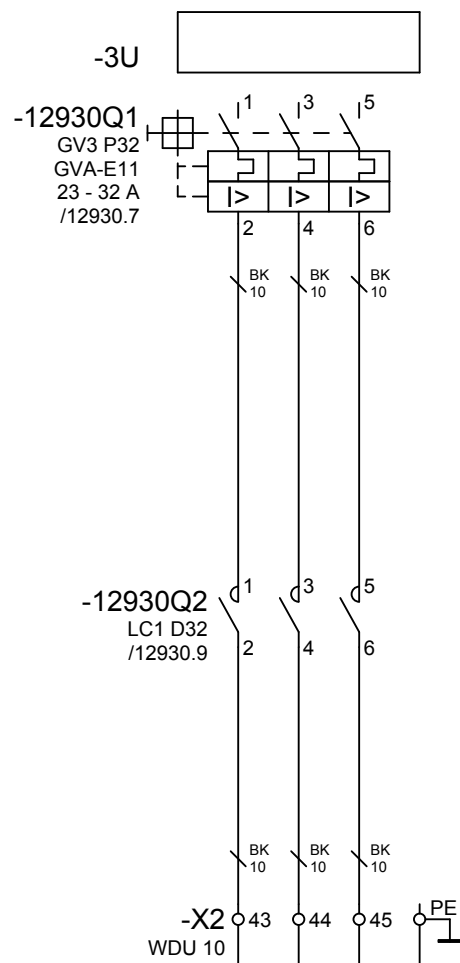


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

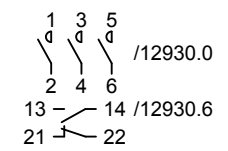
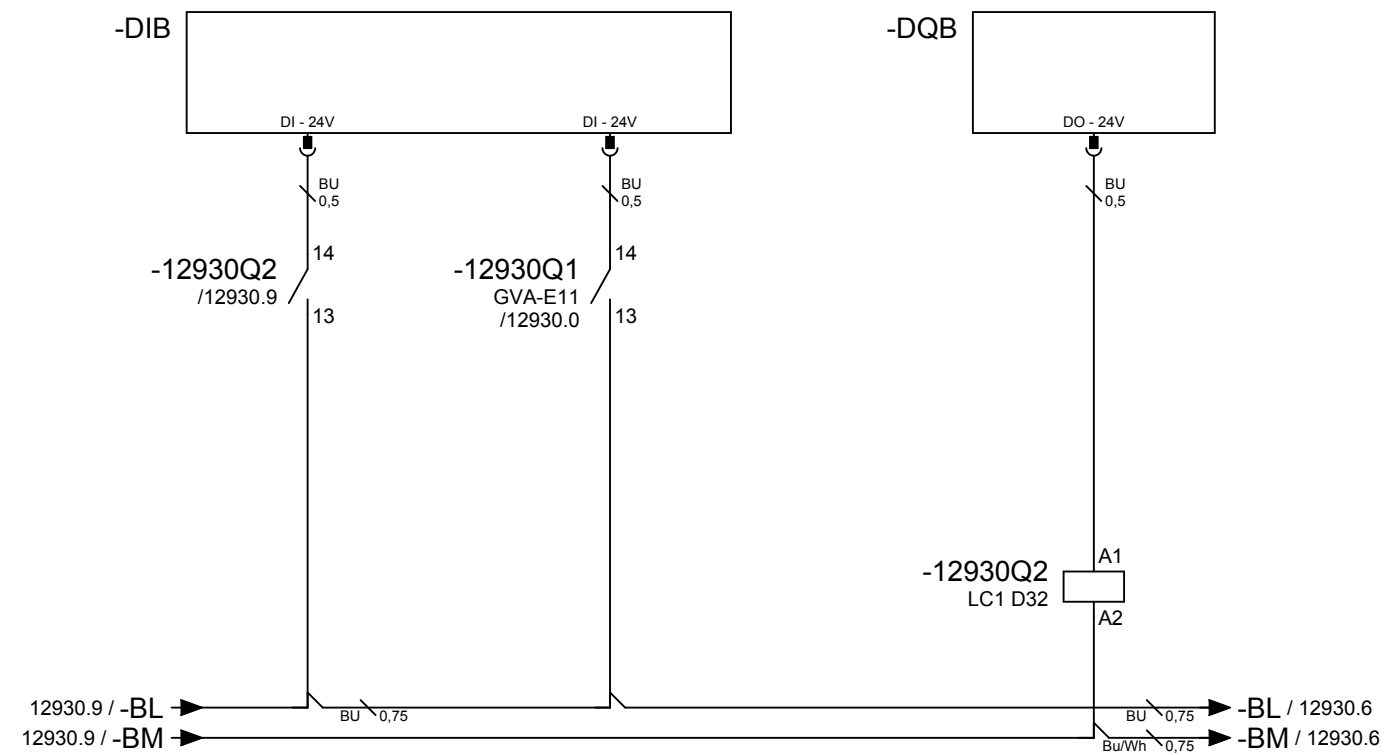
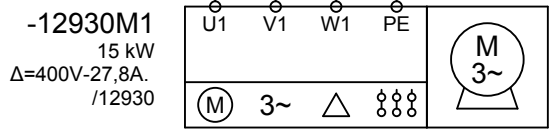


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

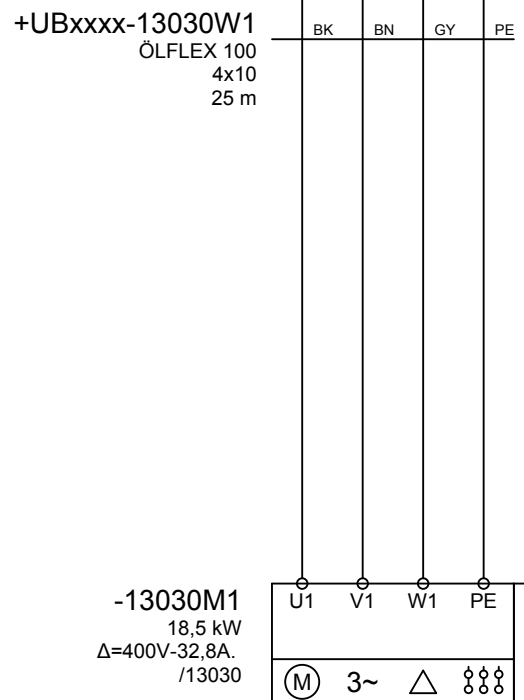
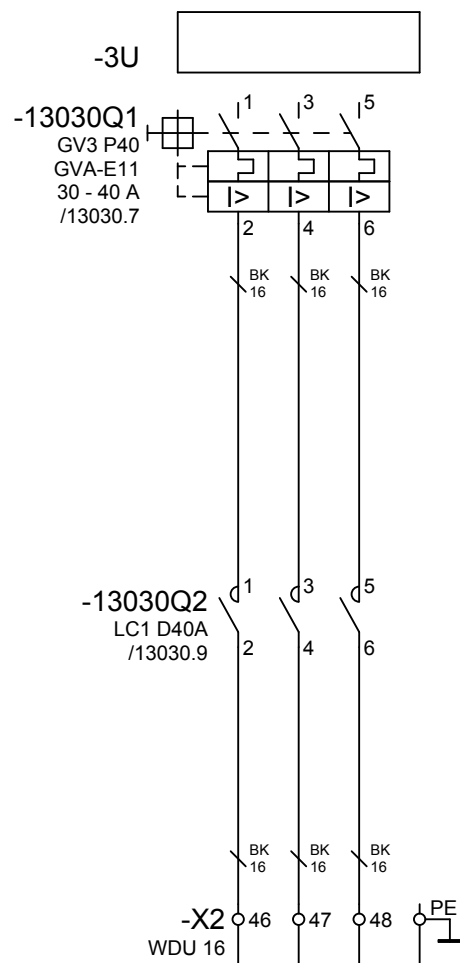
Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

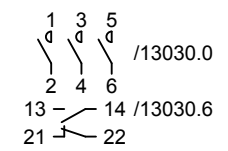
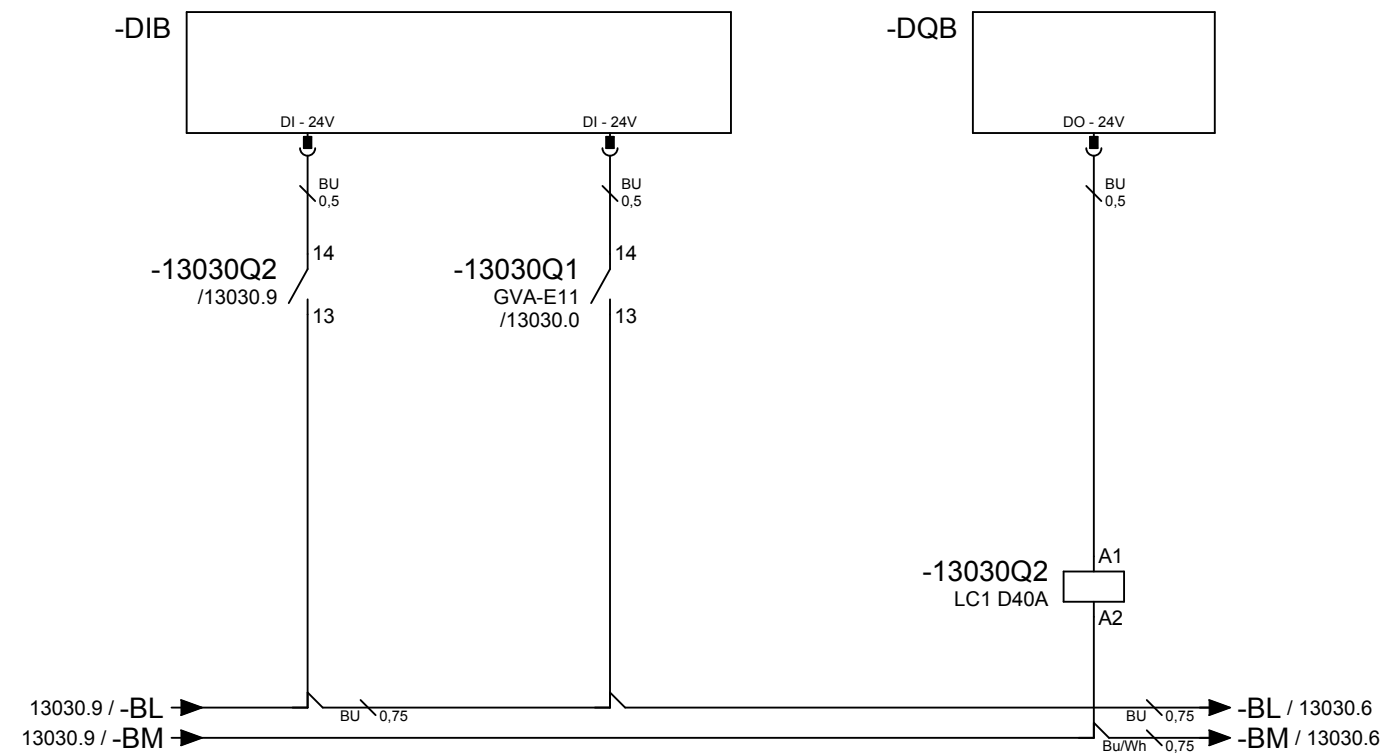


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

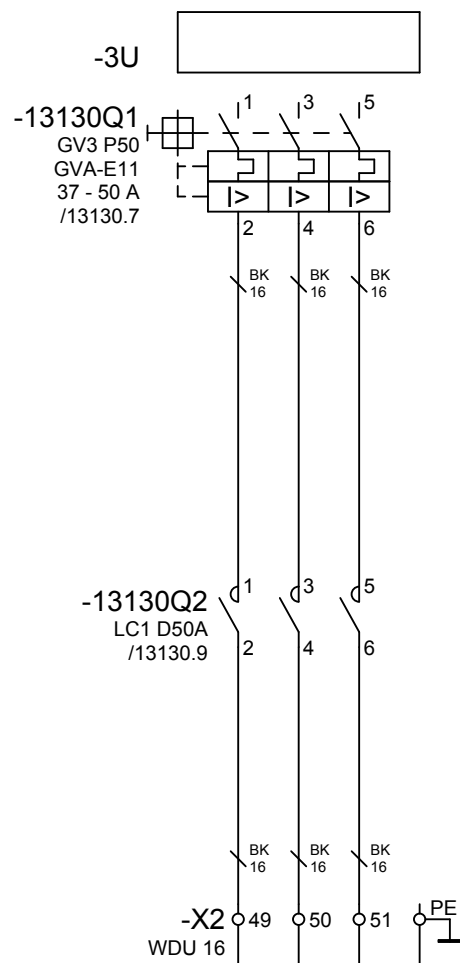
Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
 loss U at In 1,40V
 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



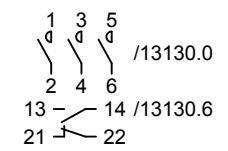
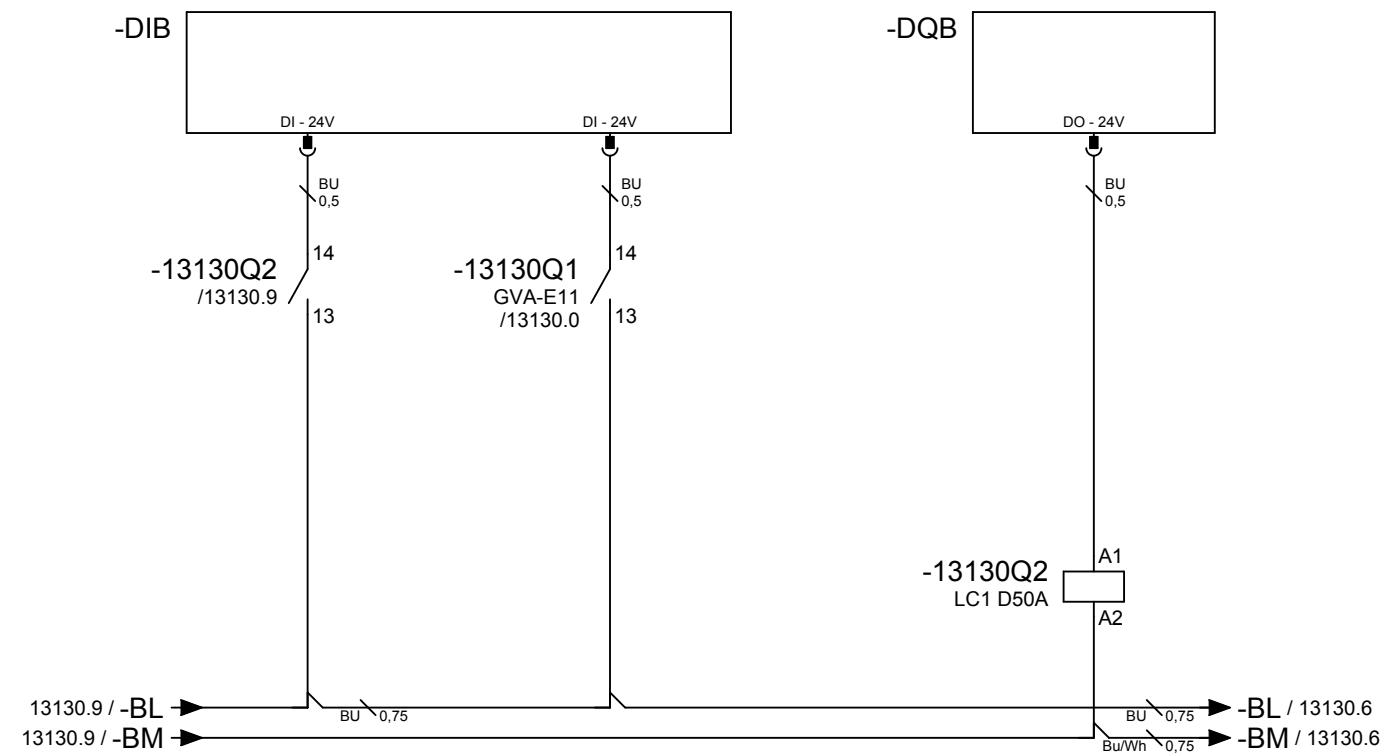
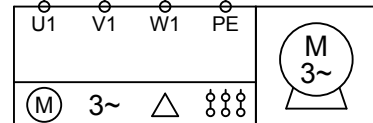
+UBxxxx-13130W1
ÖLFLEX 100
4x10
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

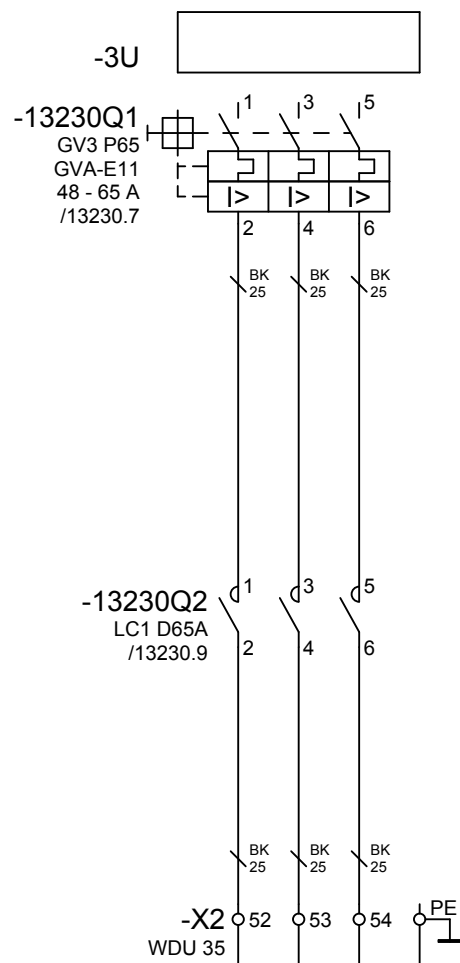
Enclosure B1
load 16mm² = cca 60A; (39A = 65,0%)
loss U at In 0,12V
loss U at 5xIn 0,62V
heat losses at In 14,54W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 10mm² = cca 60A; (39A = 65,0%)
loss U at In 1,66V
loss U at 5xIn 8,29V
heat losses at In 194,0W (L=3x25m)
... ..
... ..

-13130M1
22 kW
Δ=400V-38,8A.
/13130



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



+UBxxx-13230W1
ÖLFLEX 100
4x16
25 m

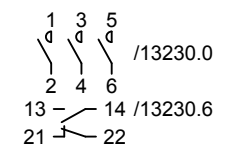
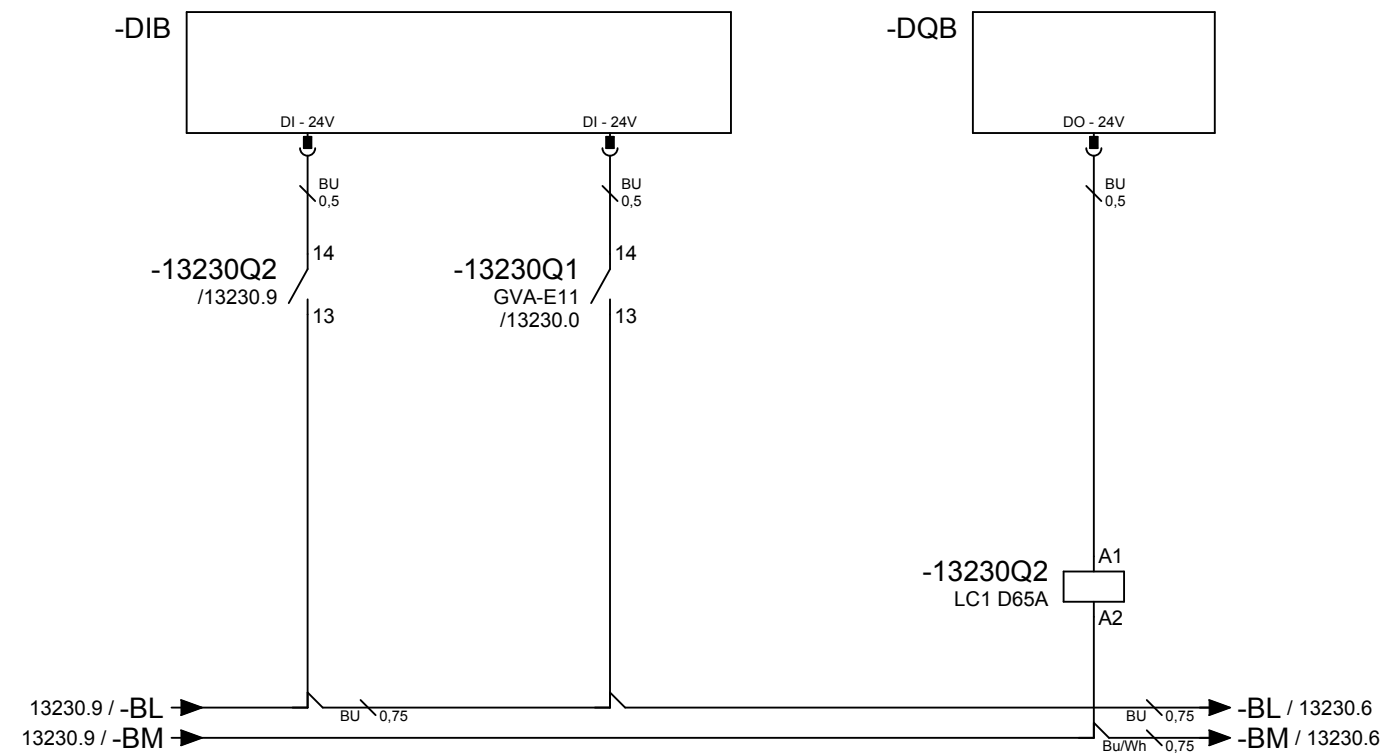
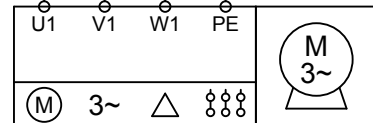
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 25mm² = cca 77A; (52A = 67,5%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 16,55W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 16mm² = cca 80A; (52A = 65,0%)
 loss U at In 1,38V
 loss U at 5xIn 6,91V
 heat losses at In 215,5W (L=3x25m)

-13230M1
30 kW
Δ=400V-51,5A.
/13230



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

0	1	2	3	4	5	6	7	8	9
...	...								
...	...								
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+GV3/99999

11099

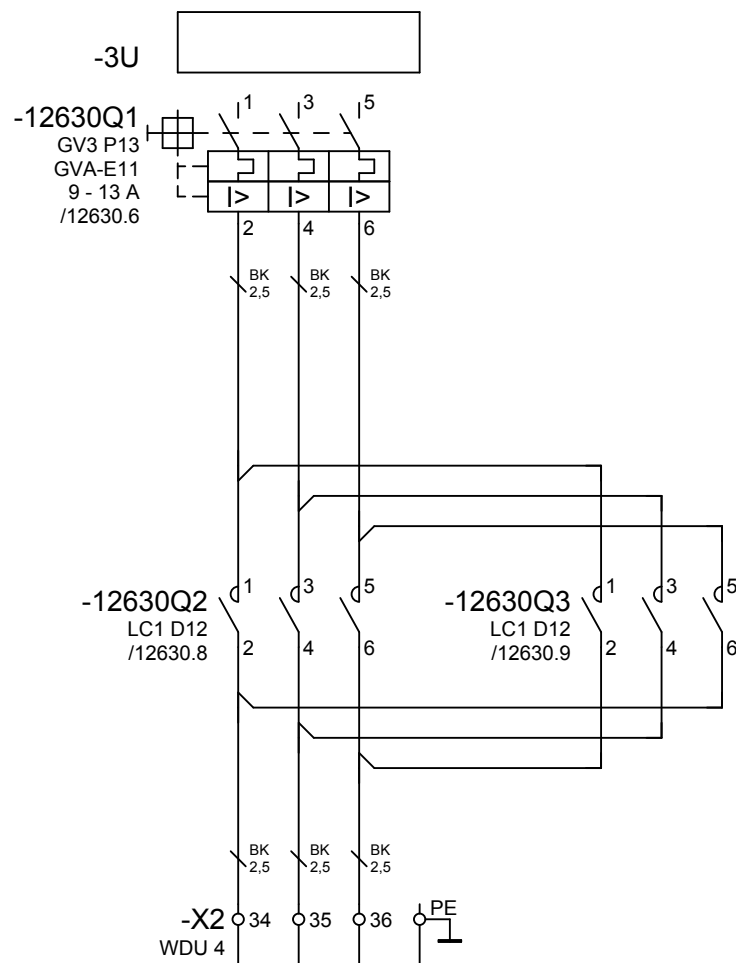


PACK 31. Motors.
TISKO spol. s r. o.

Type 1 coordination.
2018

Creator	V00	01.02.2012	Ing. Tisovčík Ivan
Last revision of project			
Last revision of page			
M = 1 : 1	Grafika	21.10.2018	WUP0U34409

= GV3P_C1	
+ GV3_Reverse	11000



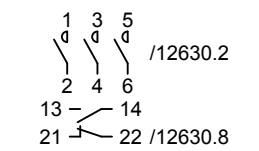
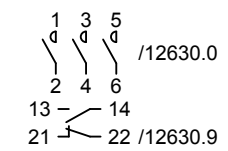
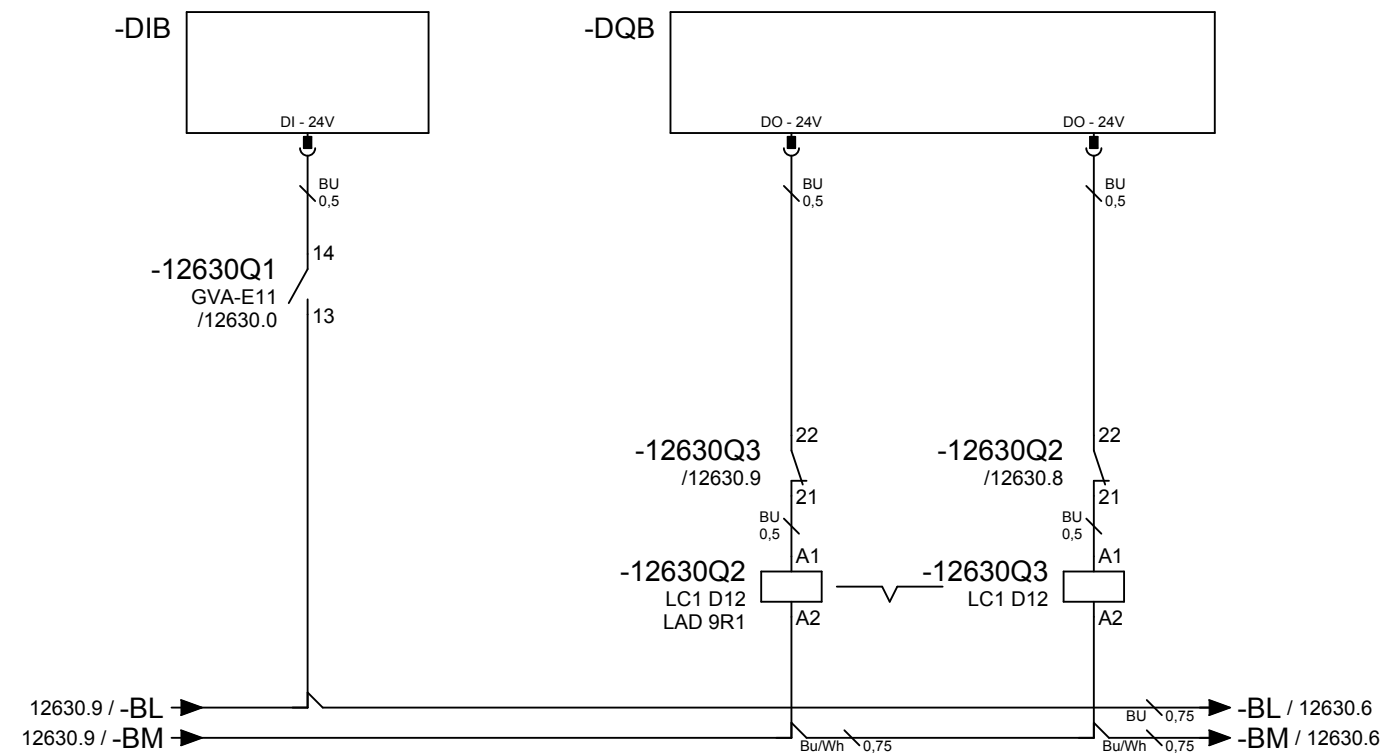
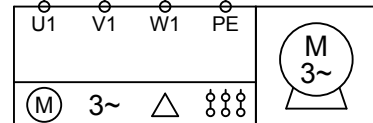
+UBxxx-12630W2
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
...
short circuit resistance 50kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
...
...
...

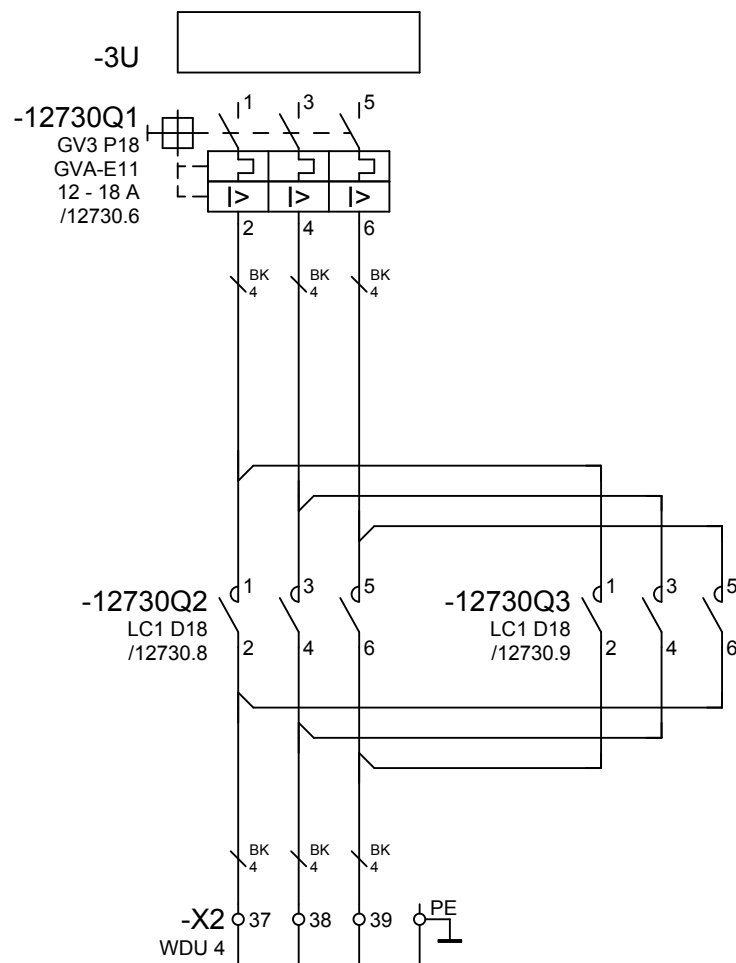
-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.



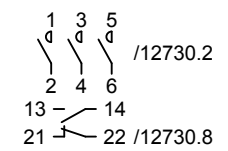
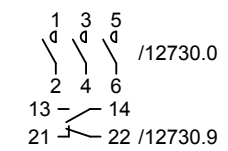
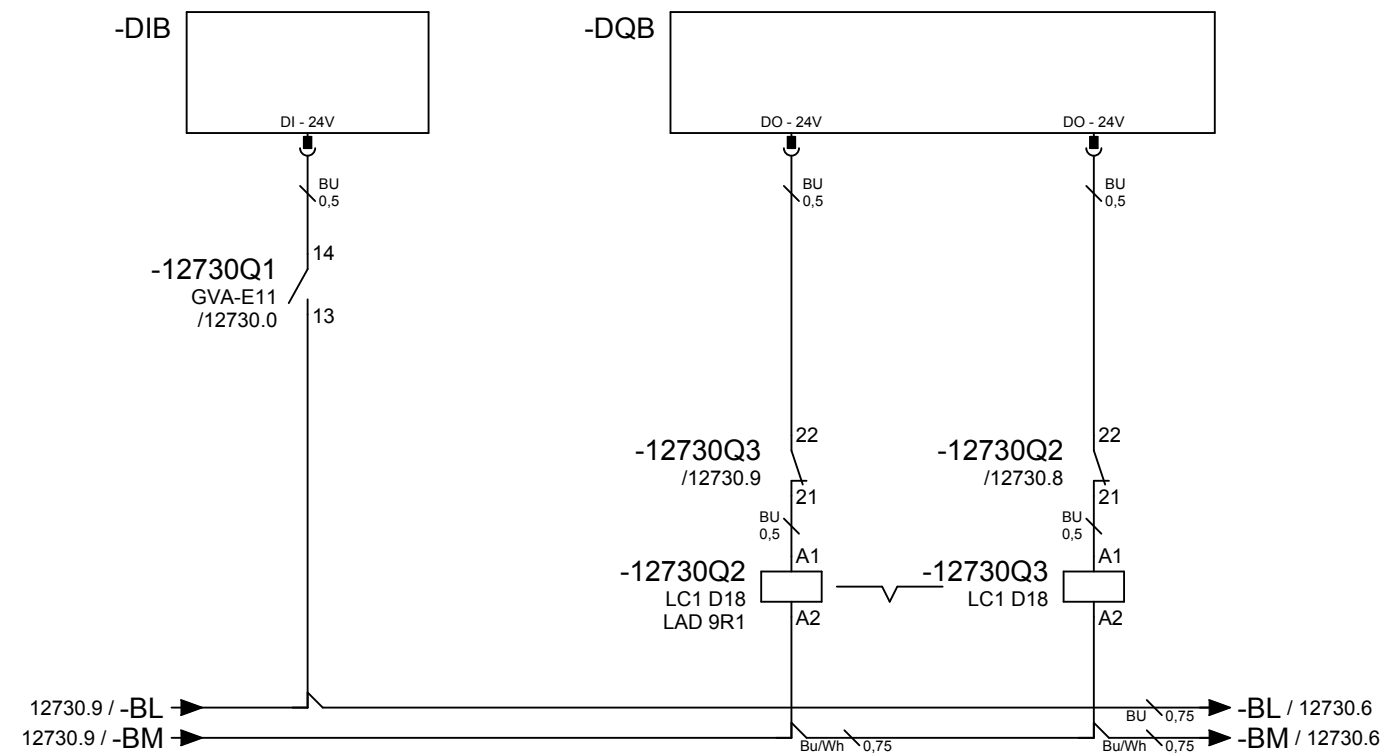
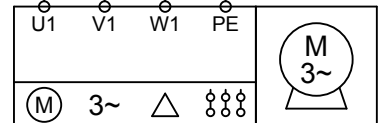
+UBxxx-12730W2
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)
 ...
 ...

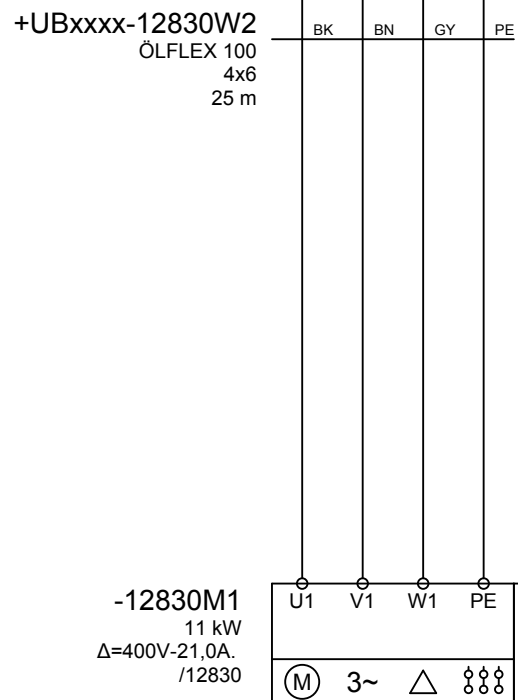
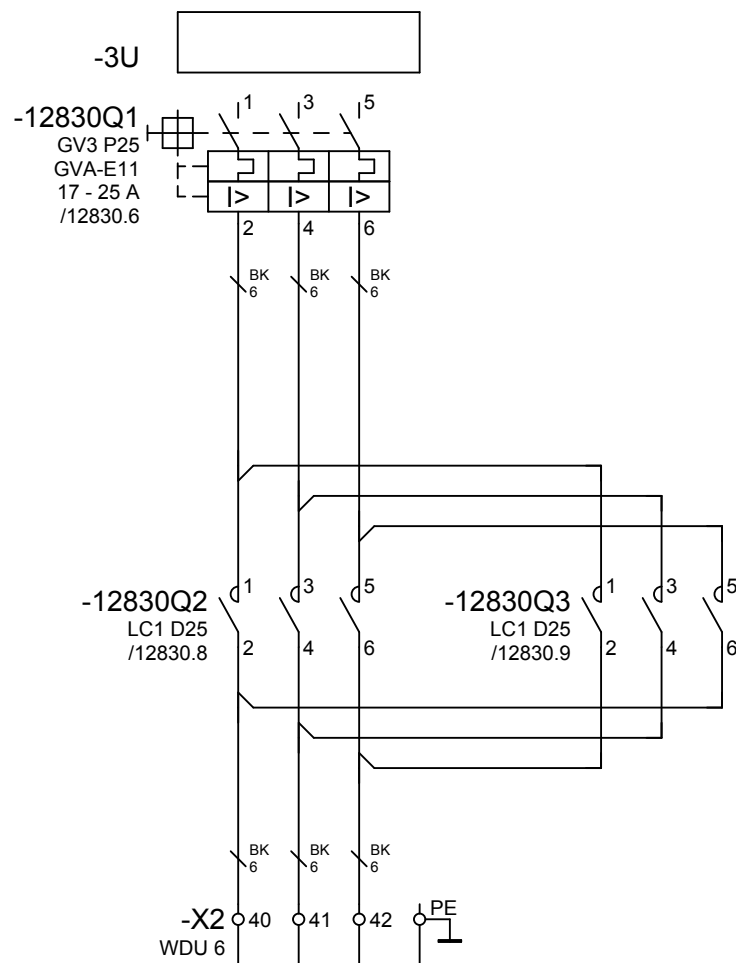
-12730M1
7,5 kW
Δ=400V-14,6A.
/12730



Circuit breaker. 0=Failure.

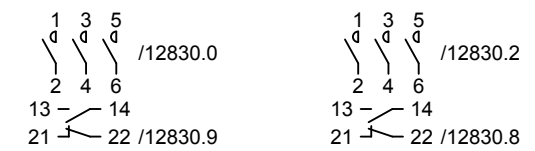
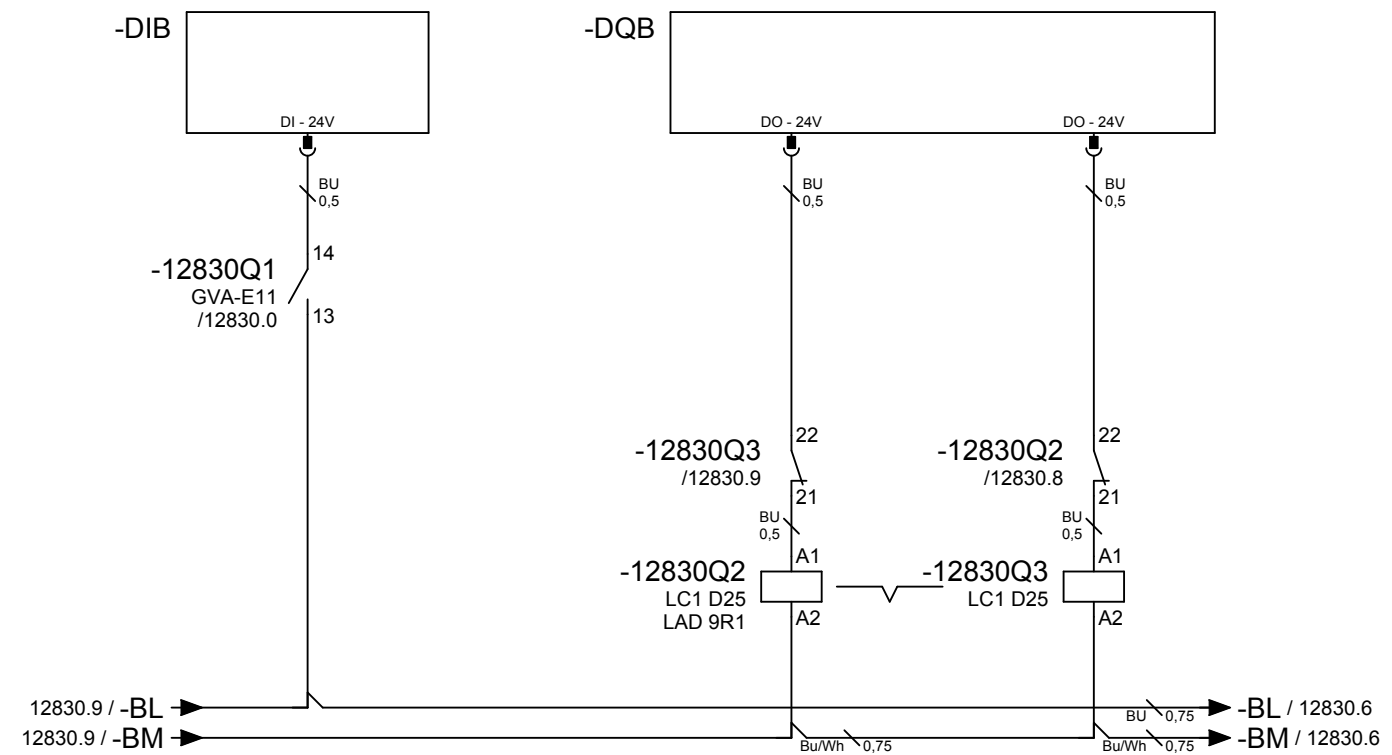
Motor. Contactor.

Motor. Contactor.

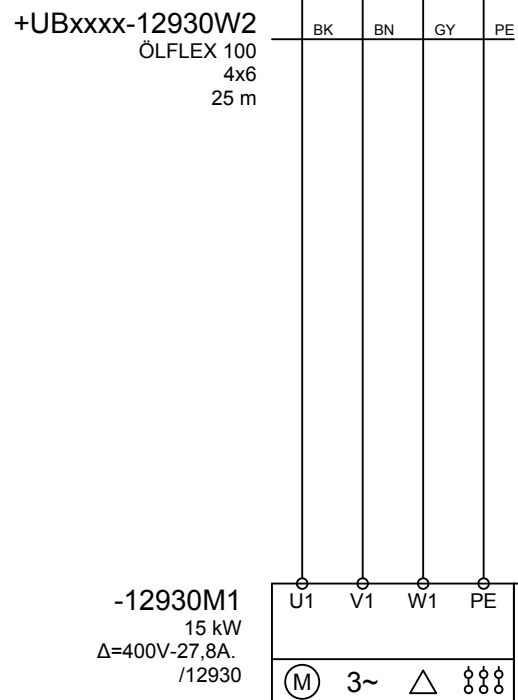
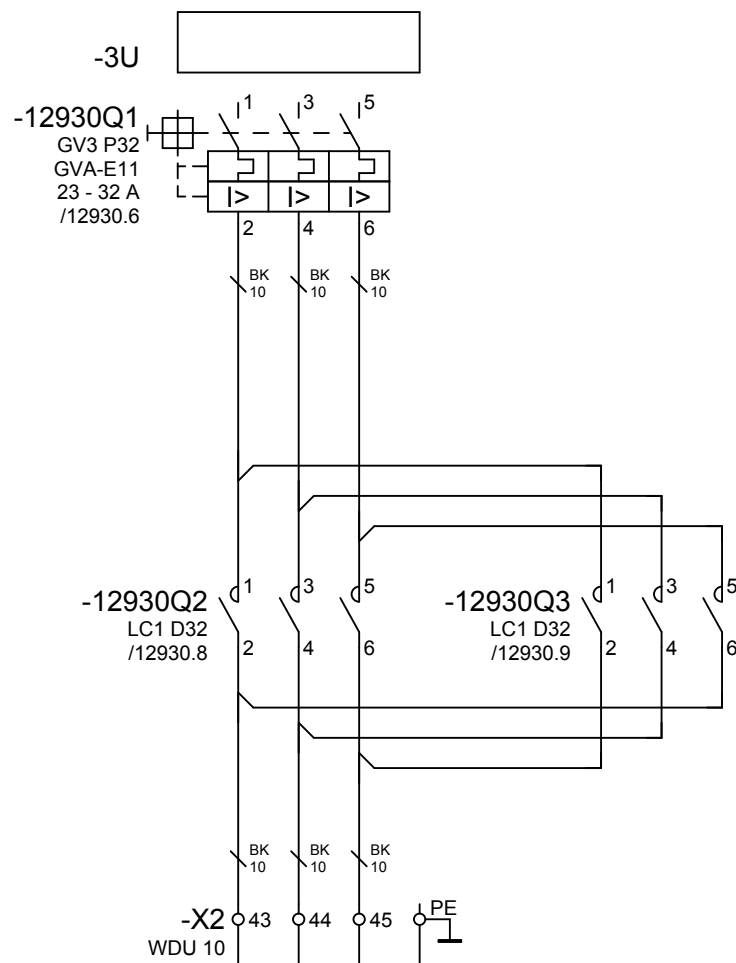


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
loss U at 5xIn	0,89V
heat losses at In	11,25W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...

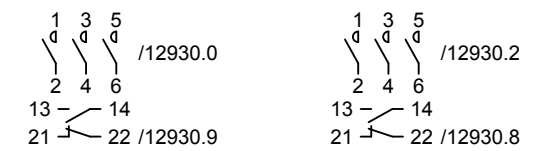
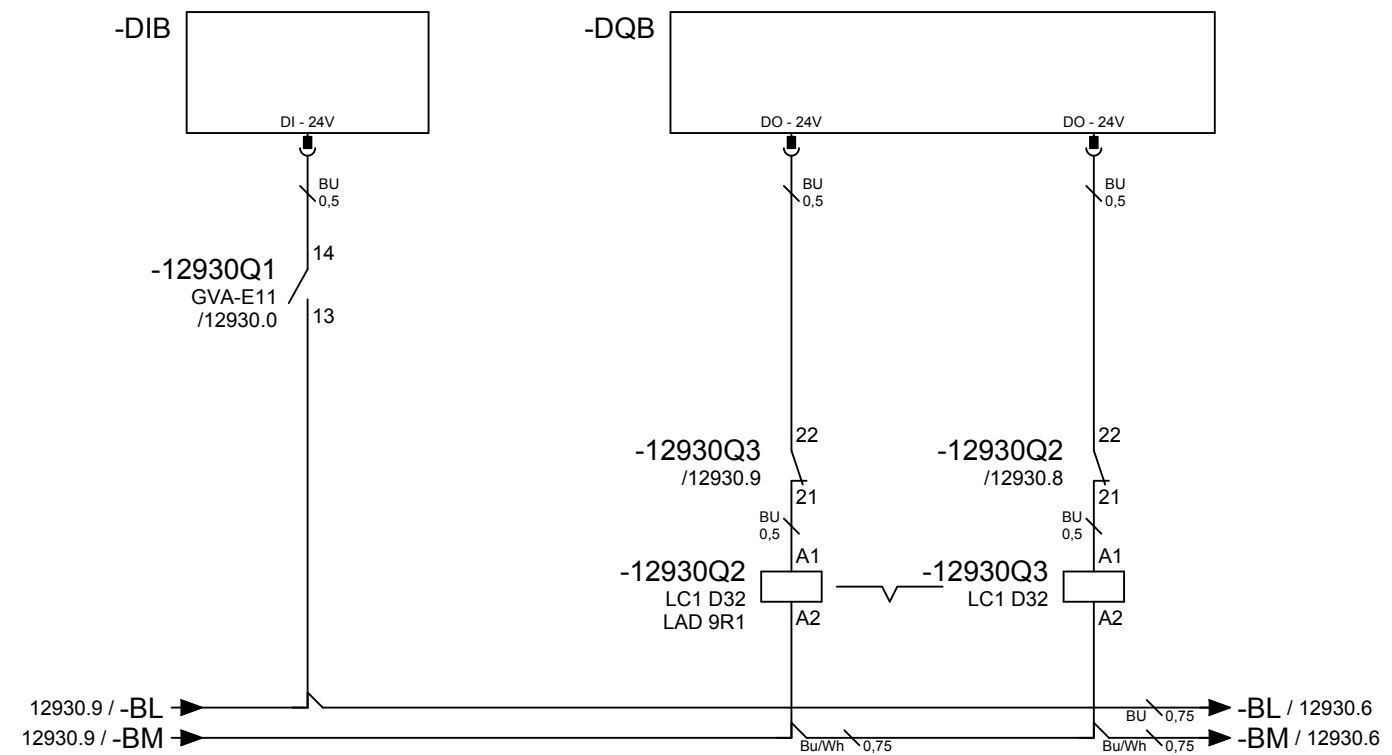


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

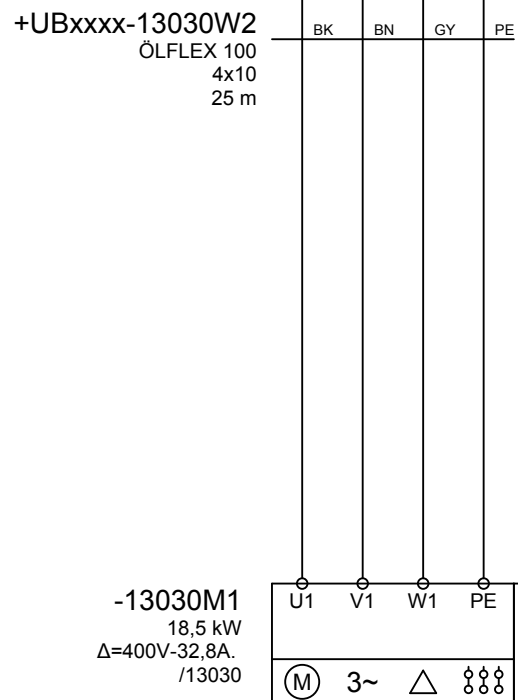
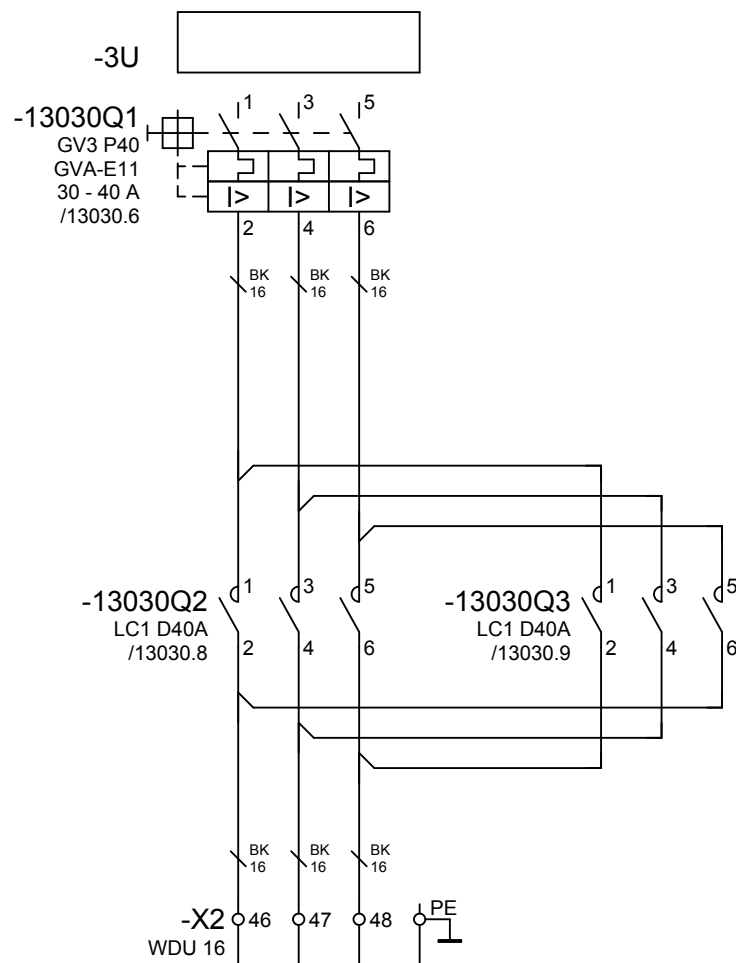


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	10mm ² = cca 44A; (28A = 63,6%)
loss U at In	0,14V
loss U at 5xIn	0,71V
heat losses at In	12,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (28A = 65,1%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	166,6W (L=3x25m)
...	...
...	...

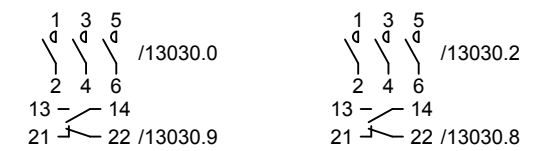
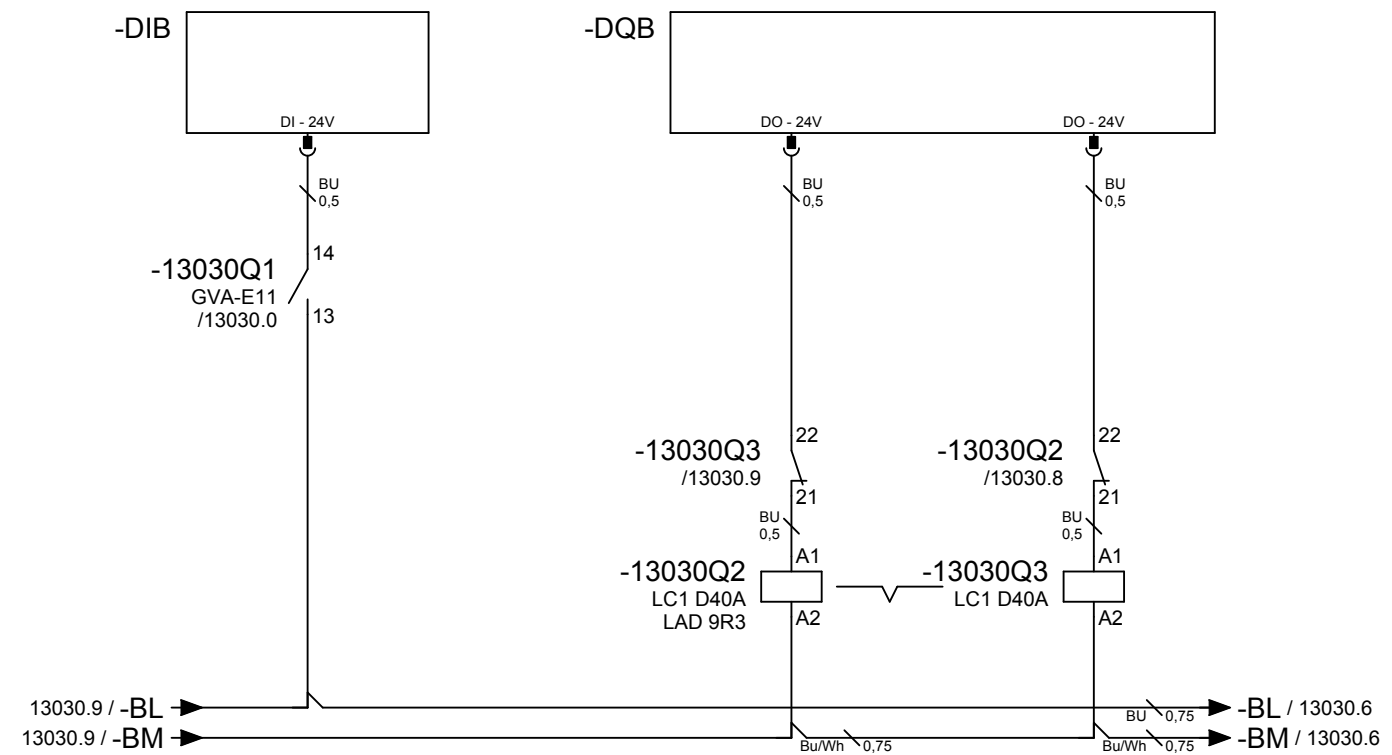


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

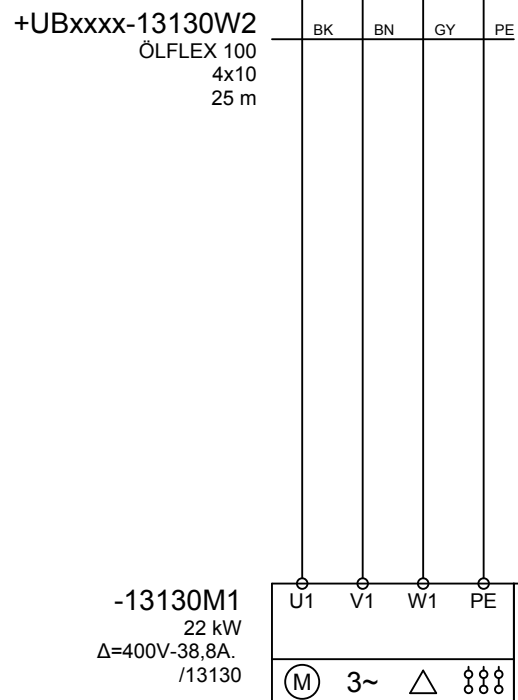
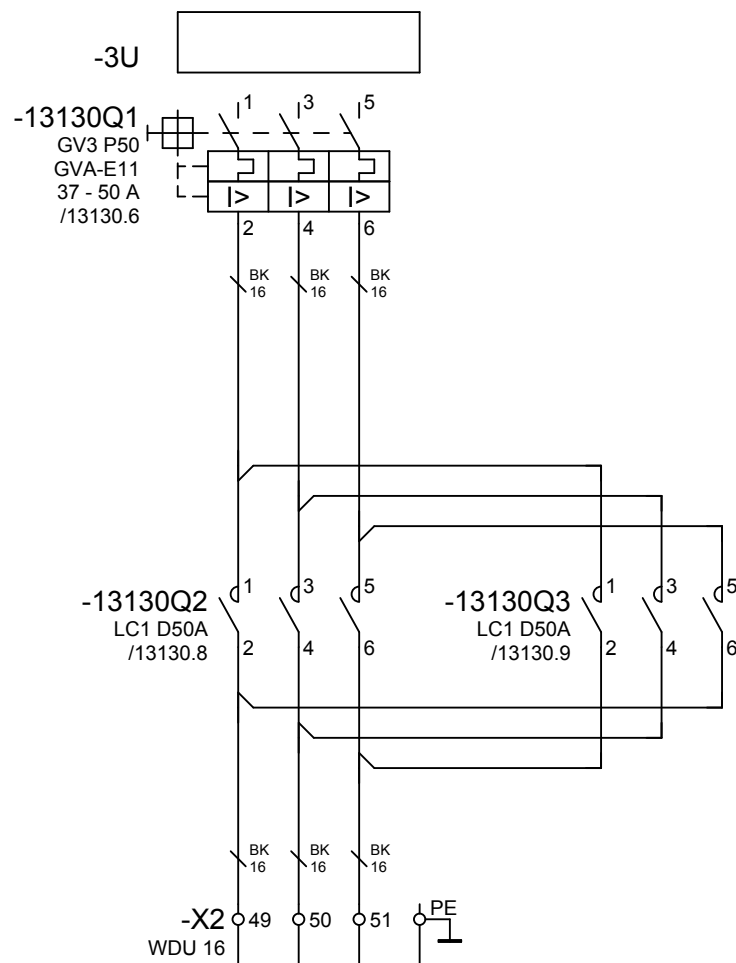


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	16mm ² = cca 60A; (33A = 55,0%)
loss U at In	0,11V
loss U at 5xIn	0,53V
heat losses at In	10,41W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	10mm ² = cca 60A; (33A = 55,0%)
loss U at In	1,40V
loss U at 5xIn	7,01V
heat losses at In	138,8W (L=3x25m)
...	...
...	...

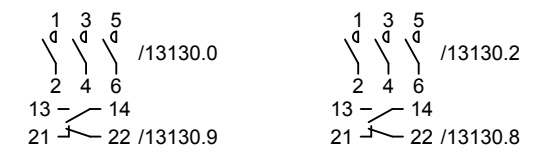
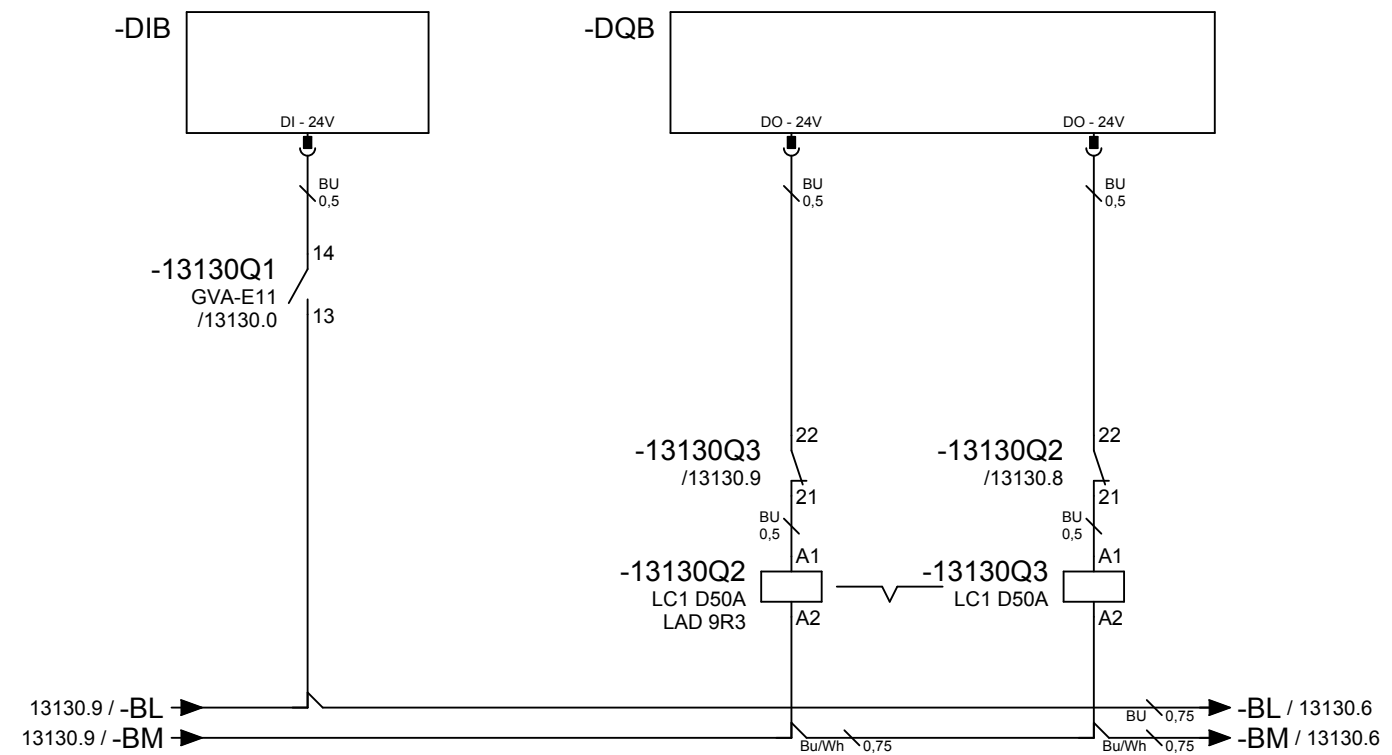


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

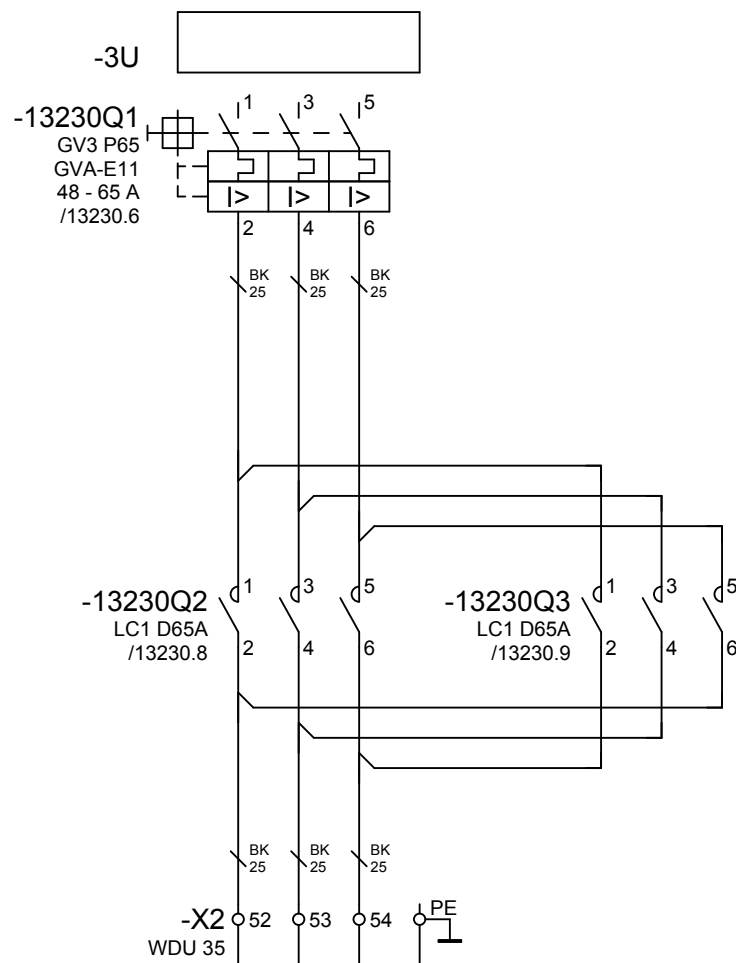


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	16mm ² = cca 60A; (39A = 65,0%)
loss U at In	0,12V
loss U at 5xIn	0,62V
heat losses at In	14,54W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	10mm ² = cca 60A; (39A = 65,0%)
loss U at In	1,66V
loss U at 5xIn	8,29V
heat losses at In	194,0W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



+UBxxx-13230W2
ÖLFLEX 100
4x16
25 m

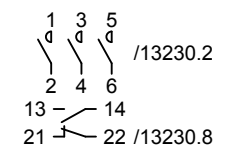
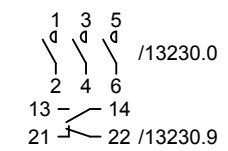
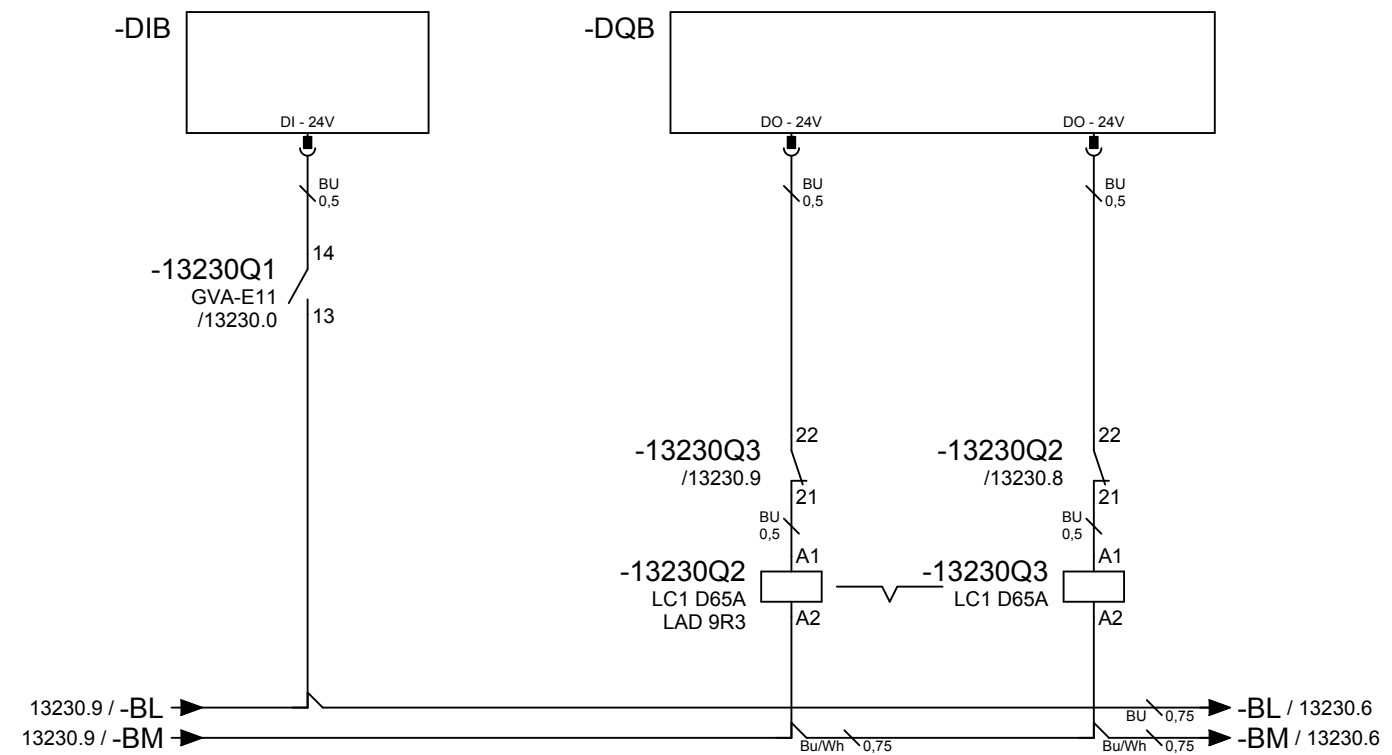
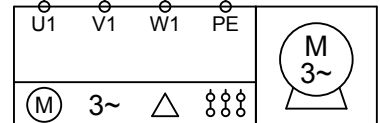
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 25mm² = cca 77A; (52A = 67,5%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 16,55W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 16mm² = cca 80A; (52A = 65,0%)
 loss U at In 1,38V
 loss U at 5xIn 6,91V
 heat losses at In 215,5W (L=3x25m)

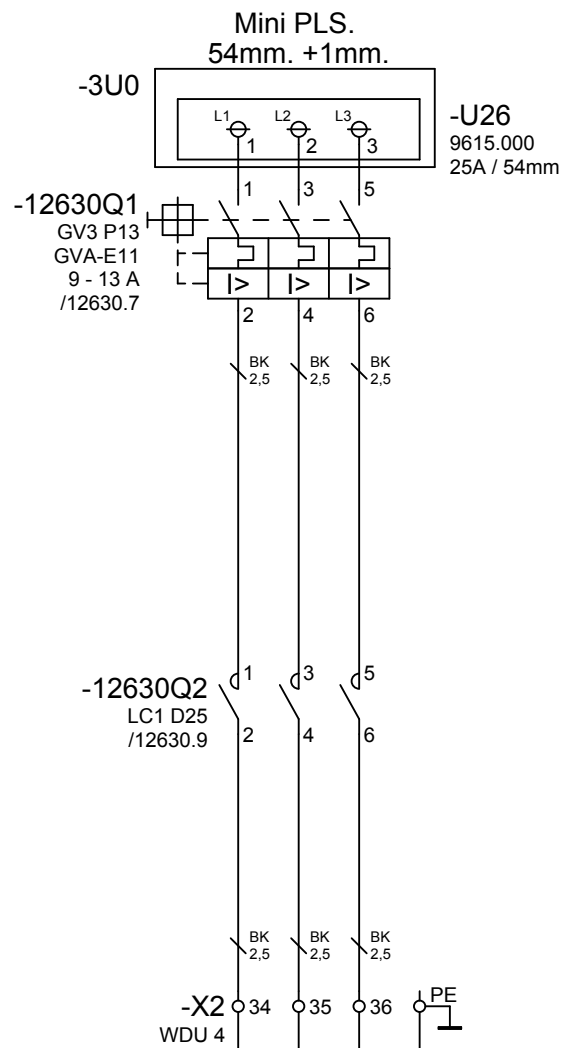
-13230M1
30 kW
Δ=400V-51,5A.
/13230



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

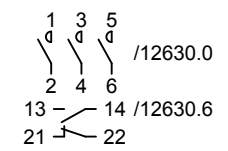
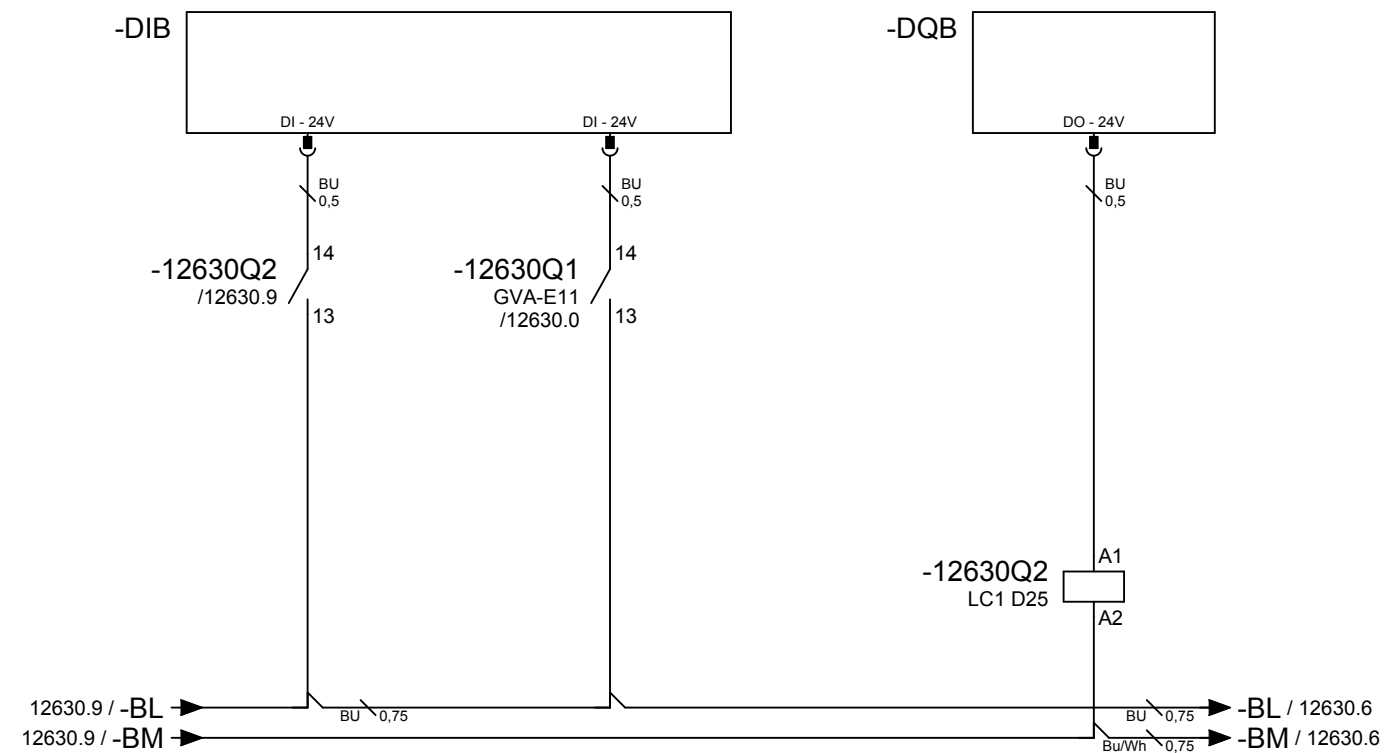


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

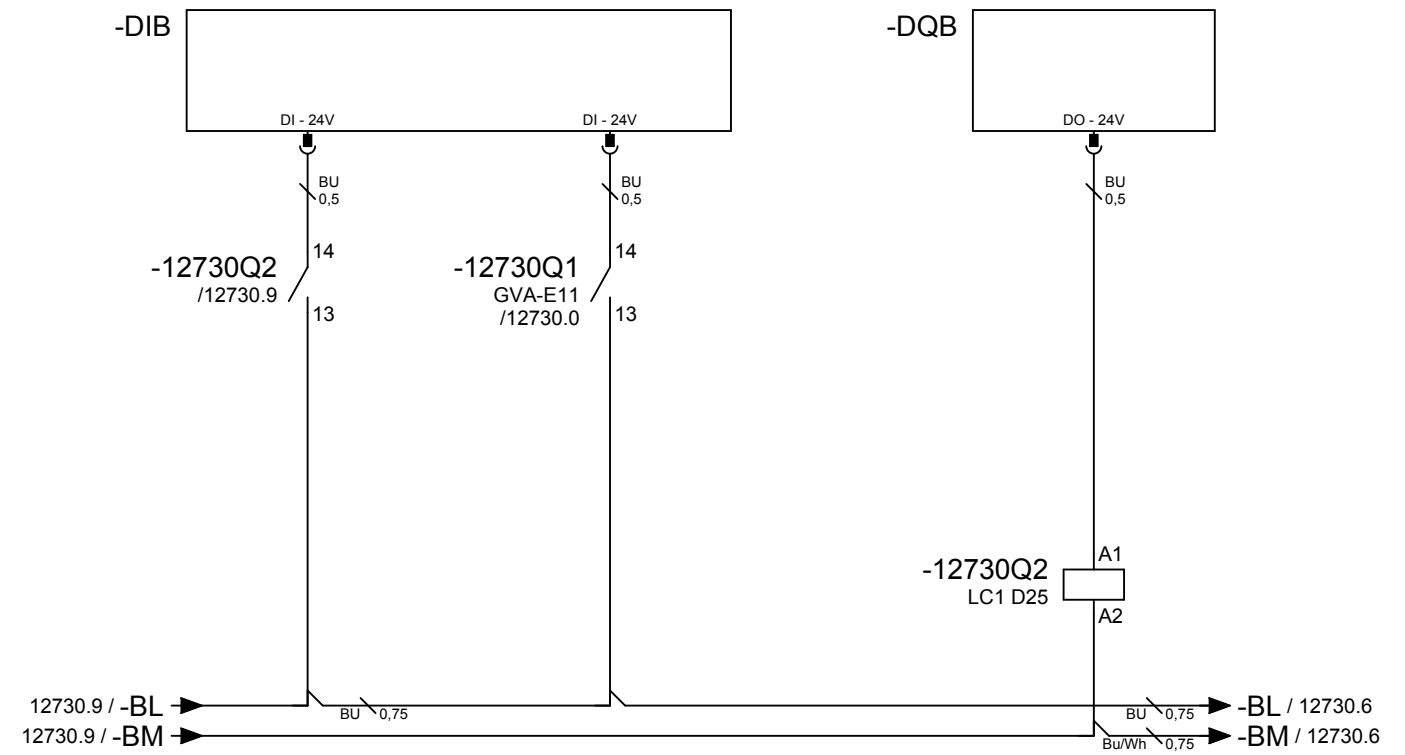
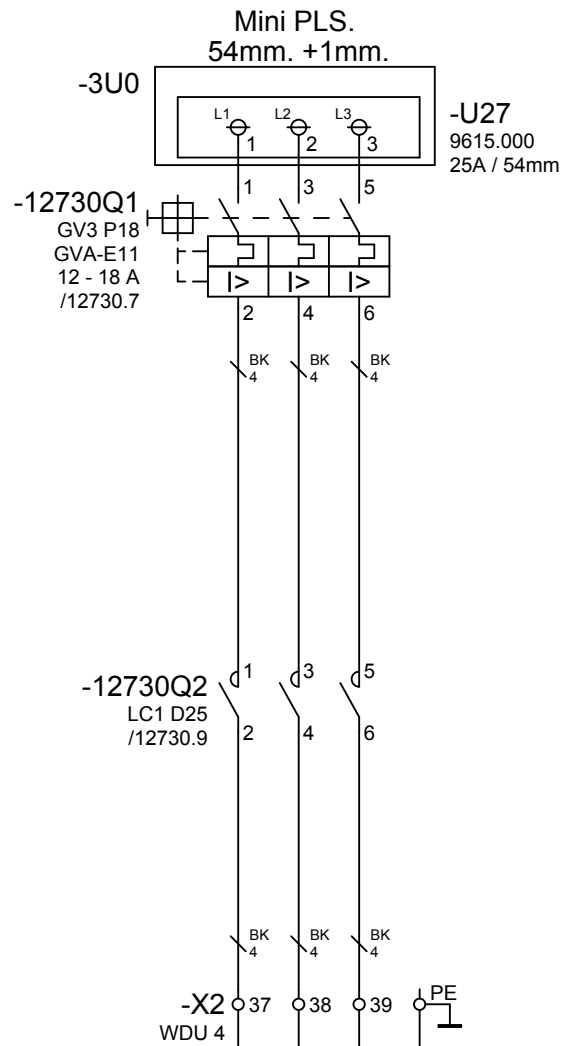
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

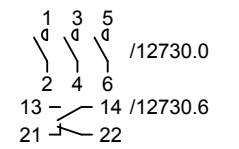
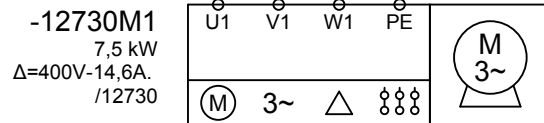


+UBxxxx-12730W3
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

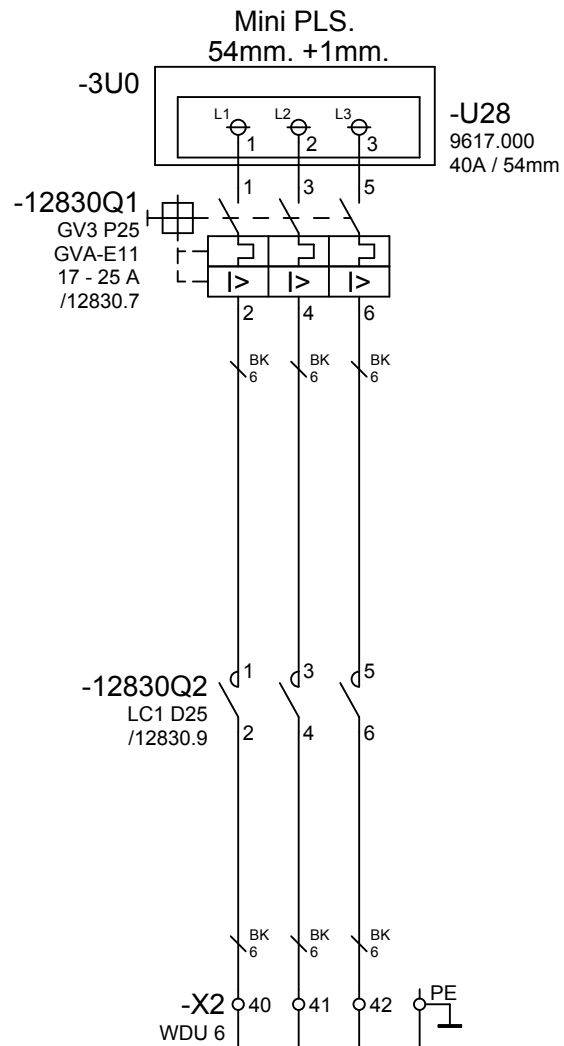
Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

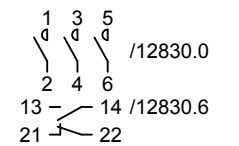
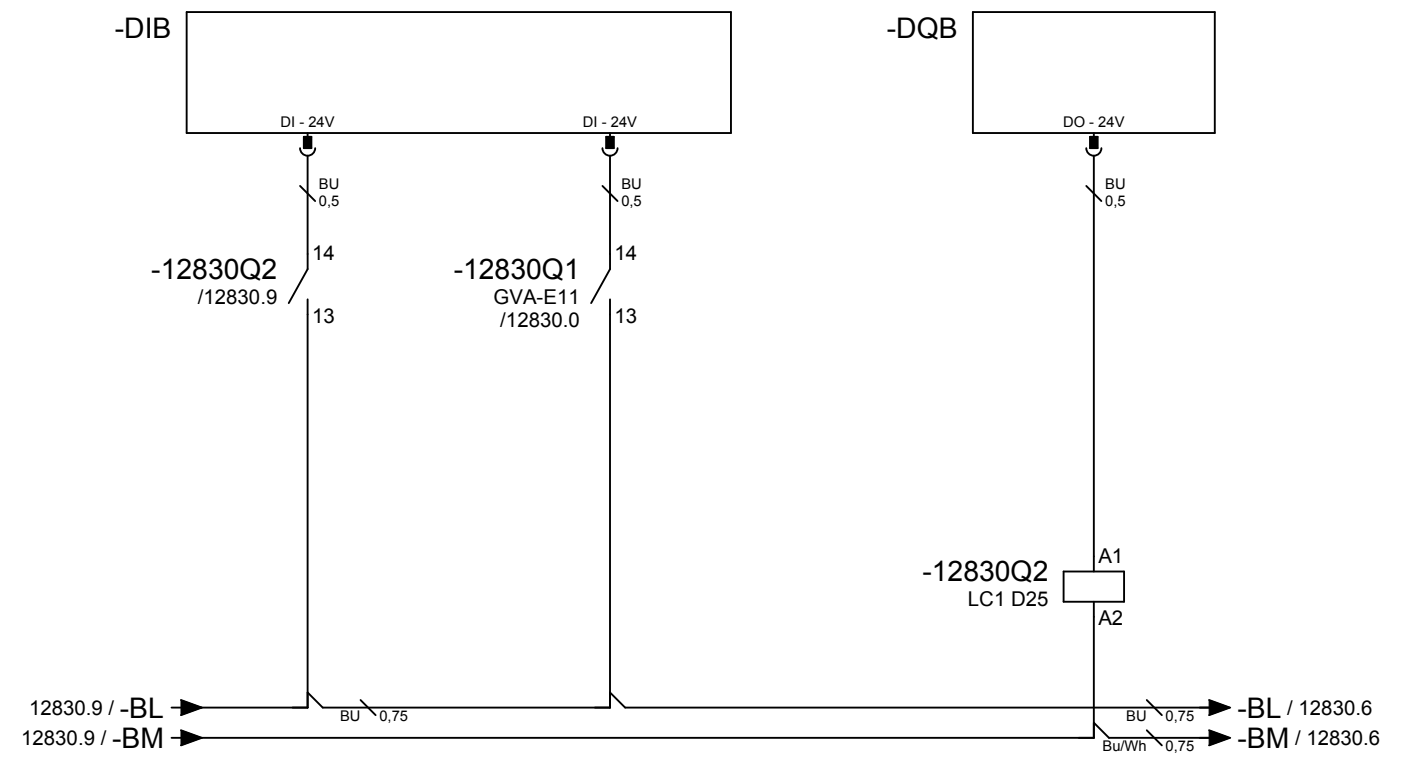


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

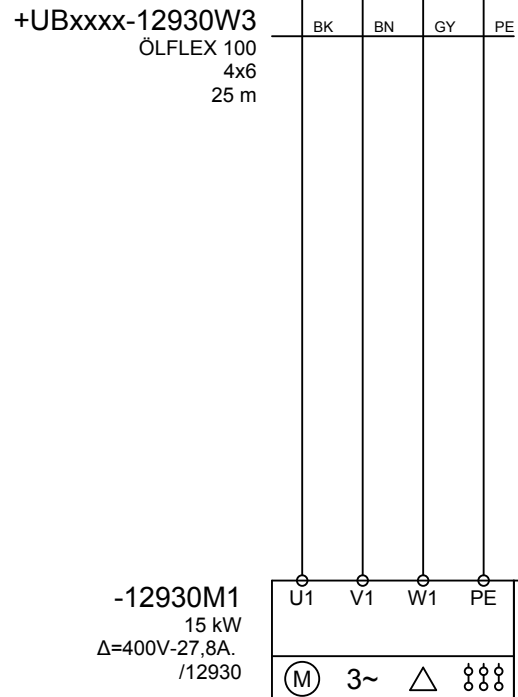
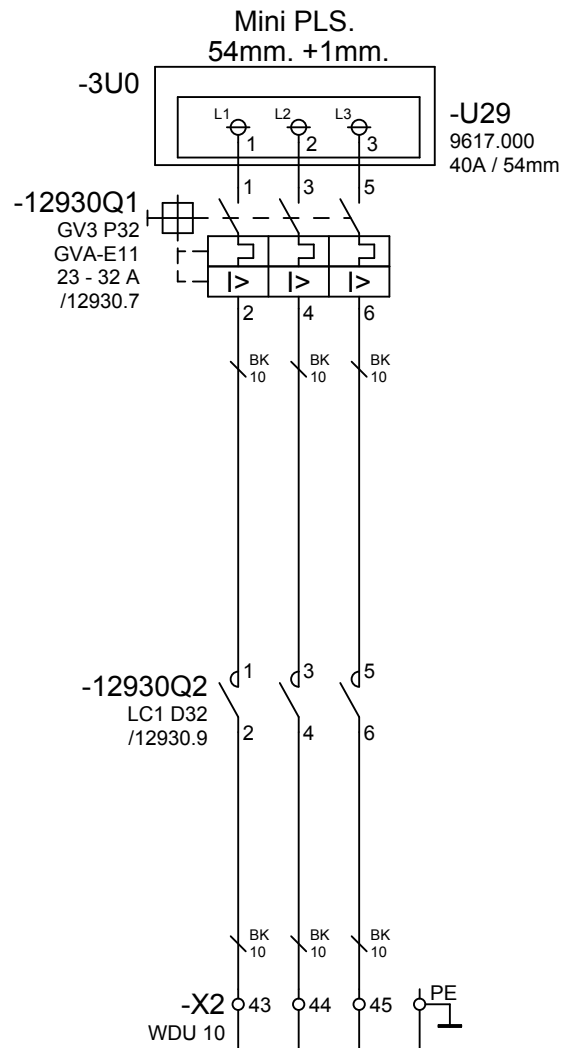
Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

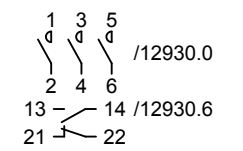
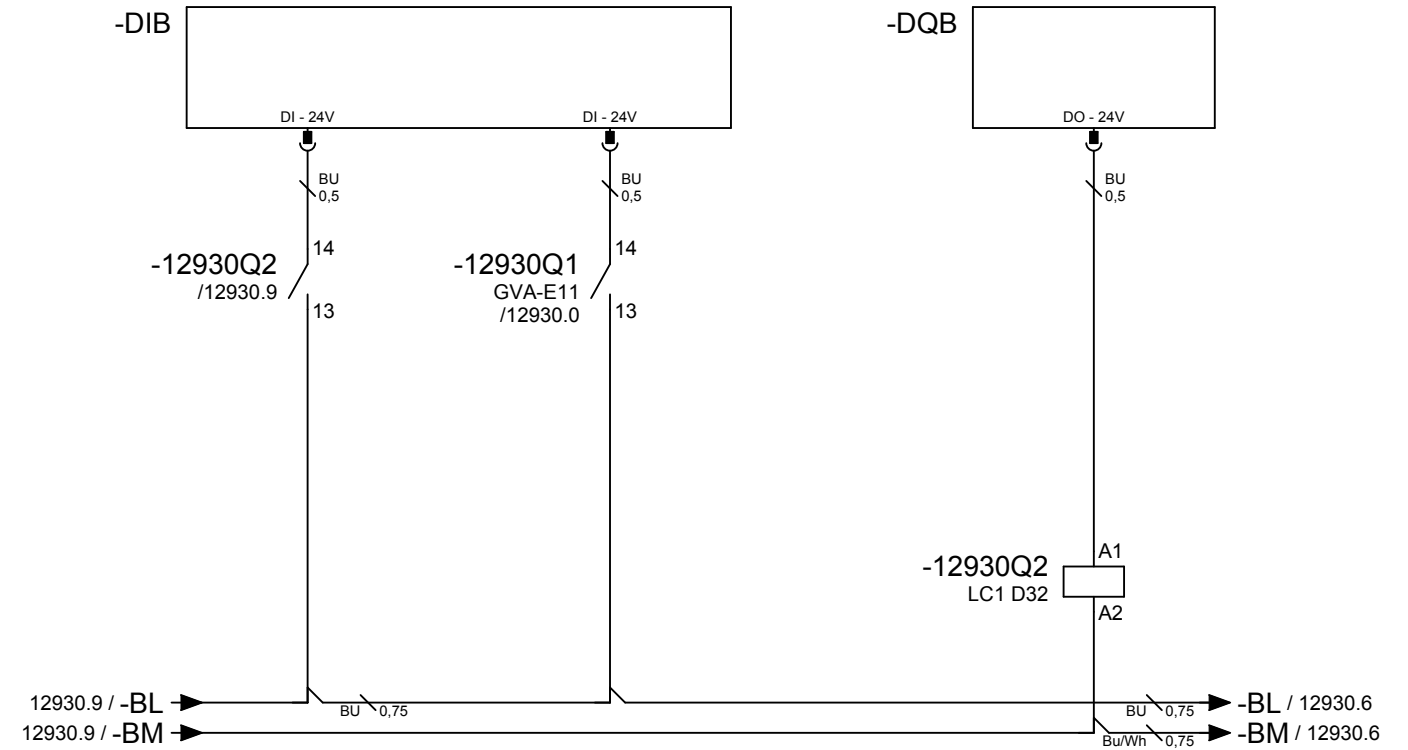


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

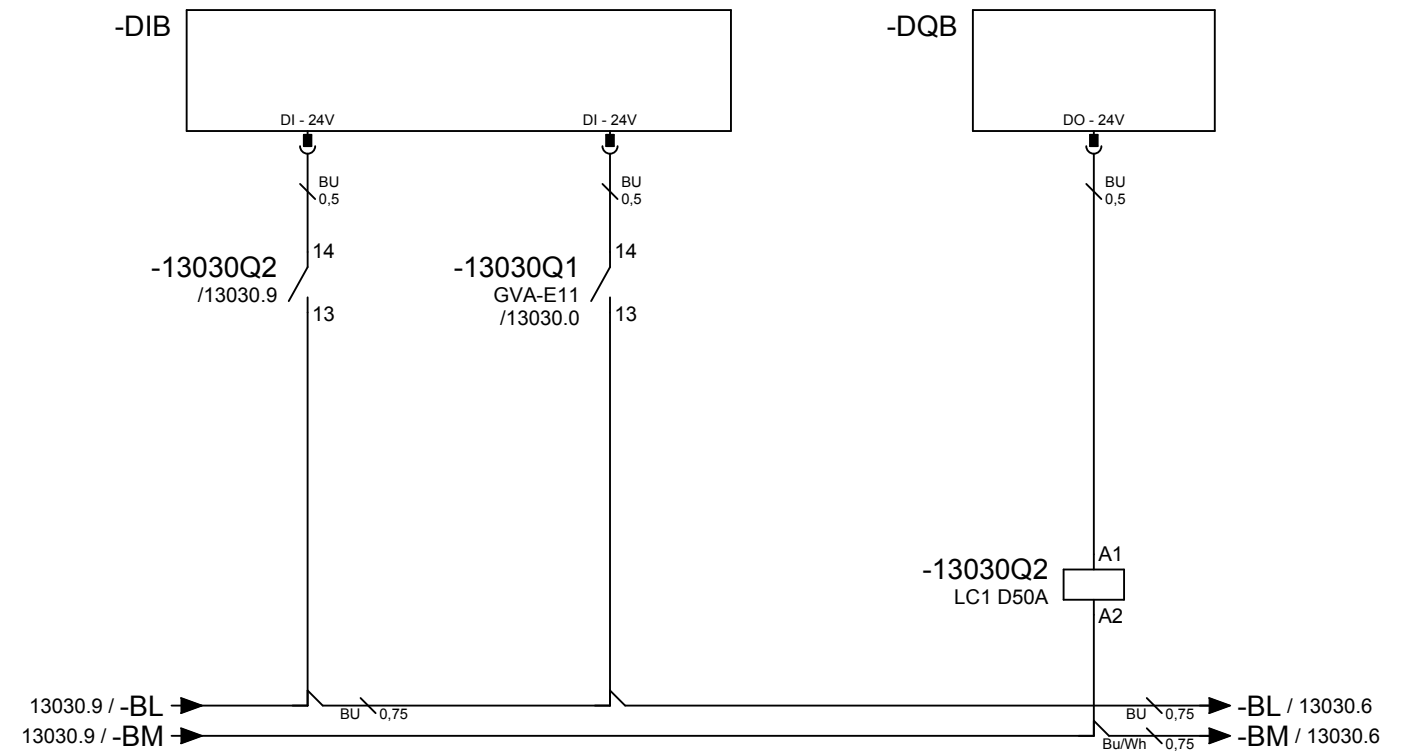
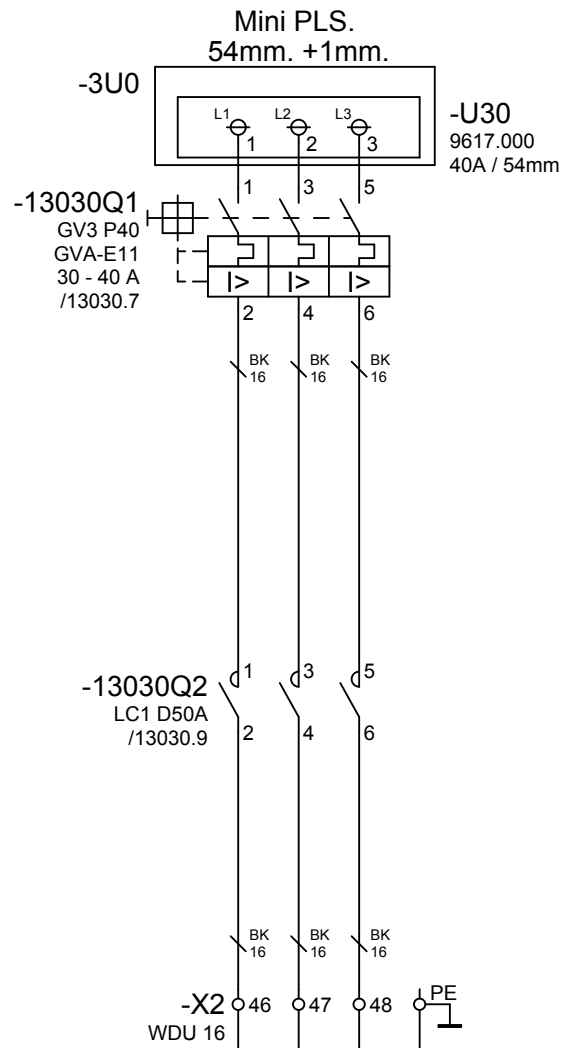
Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)



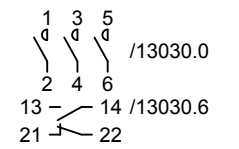
Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 16mm² = cca 60A; (33A = 55,0%)
loss U at In 0,11V
loss U at 5xIn 0,53V
heat losses at In 10,41W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 10mm² = cca 60A; (33A = 55,0%)
loss U at In 1,40V
loss U at 5xIn 7,01V
heat losses at In 138,8W (L=3x25m)
... ..
... ..

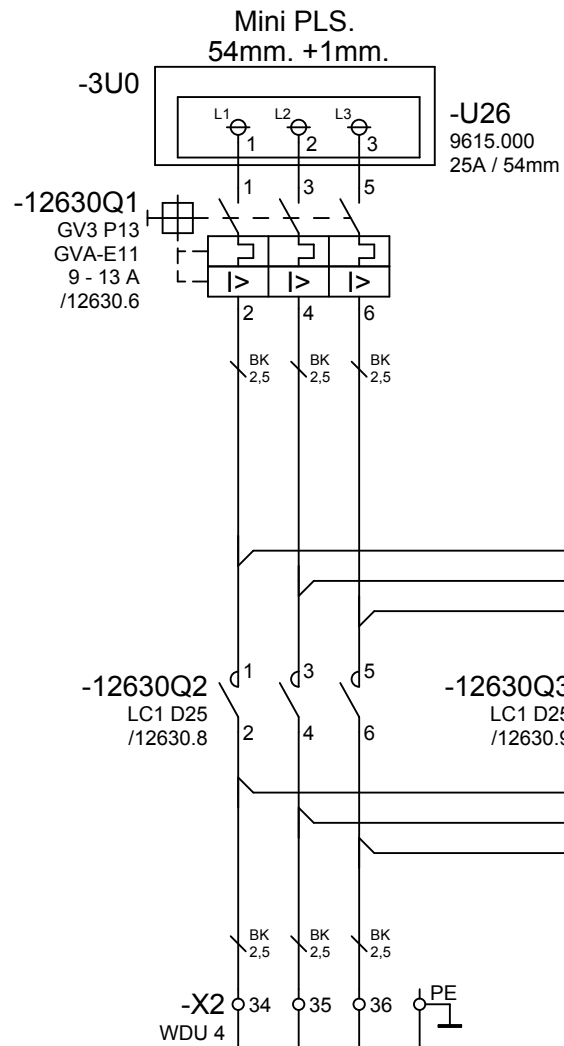


Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

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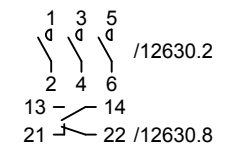
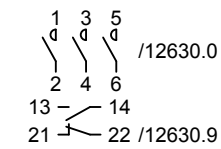
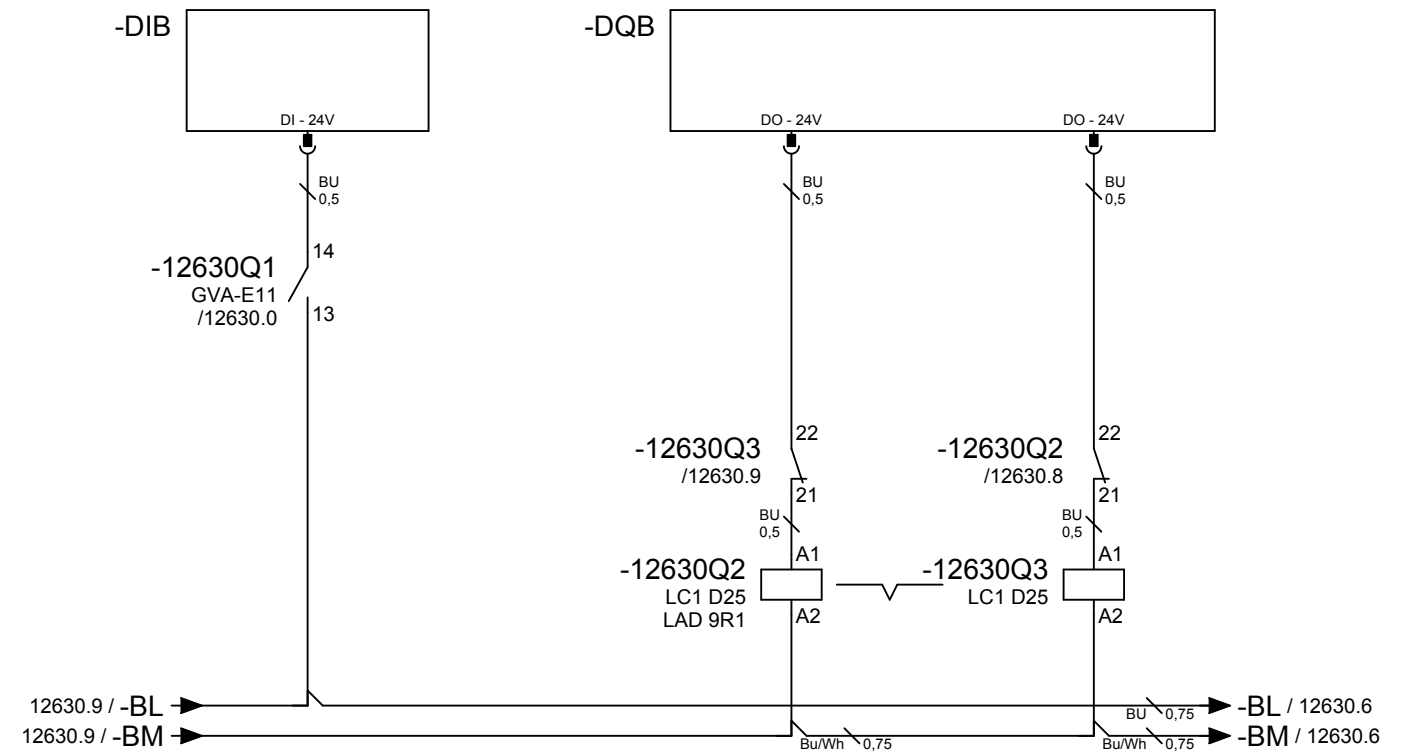
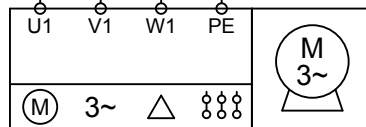


+UBxxx-12630W4
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

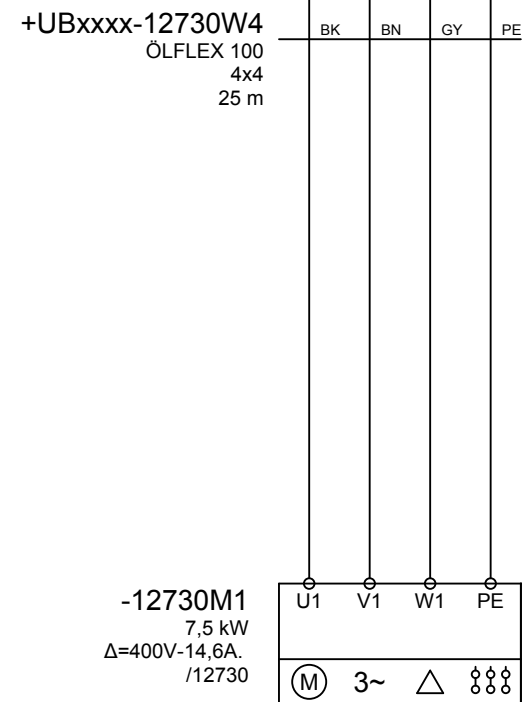
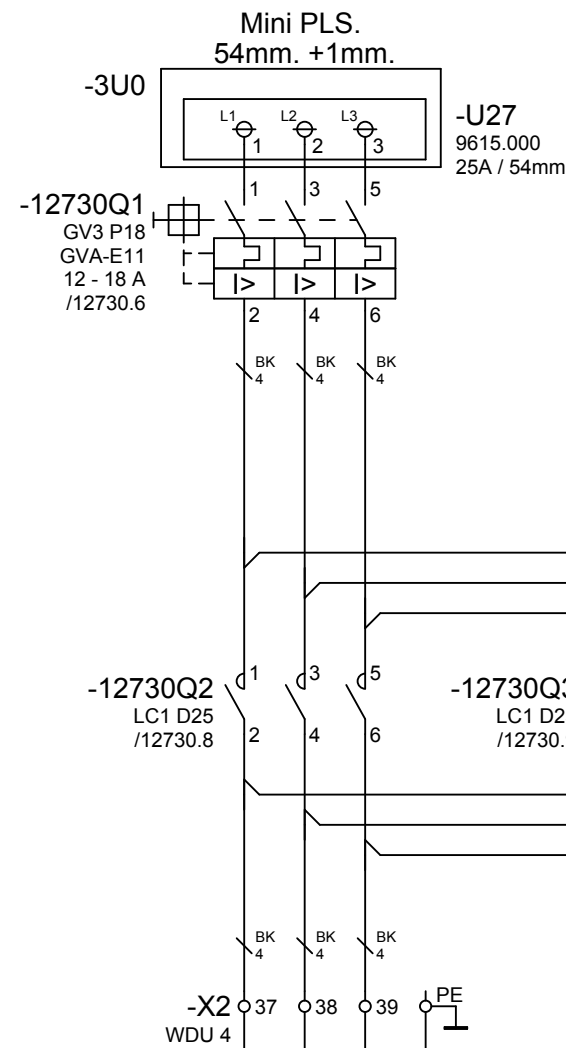
Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure.

Motor. Contactor.

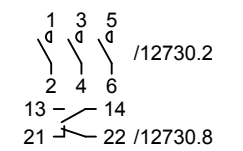
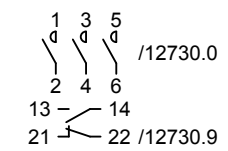
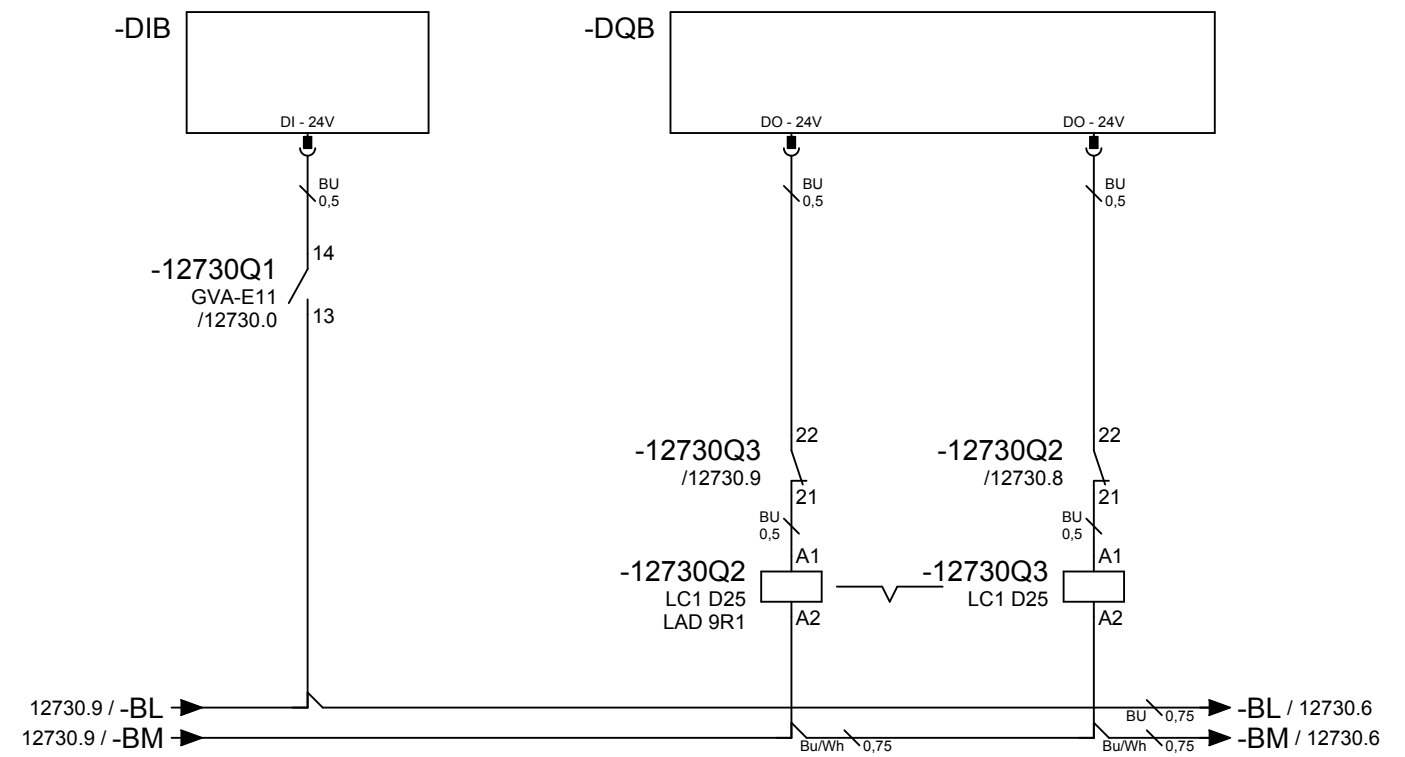
Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
...
short circuit resistance 50kA at 415V

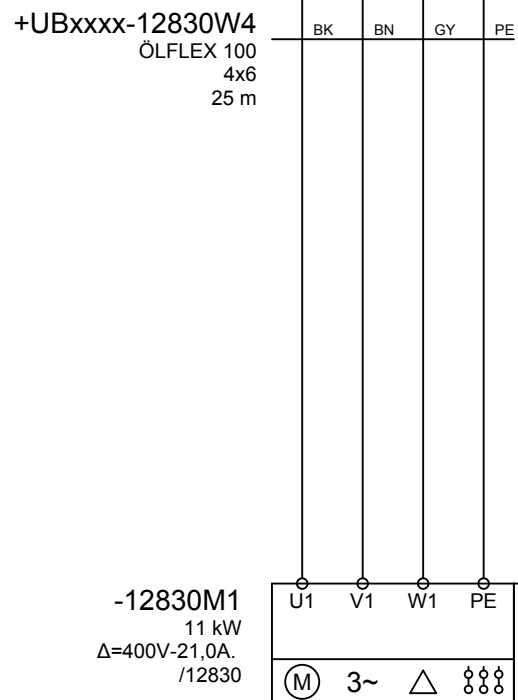
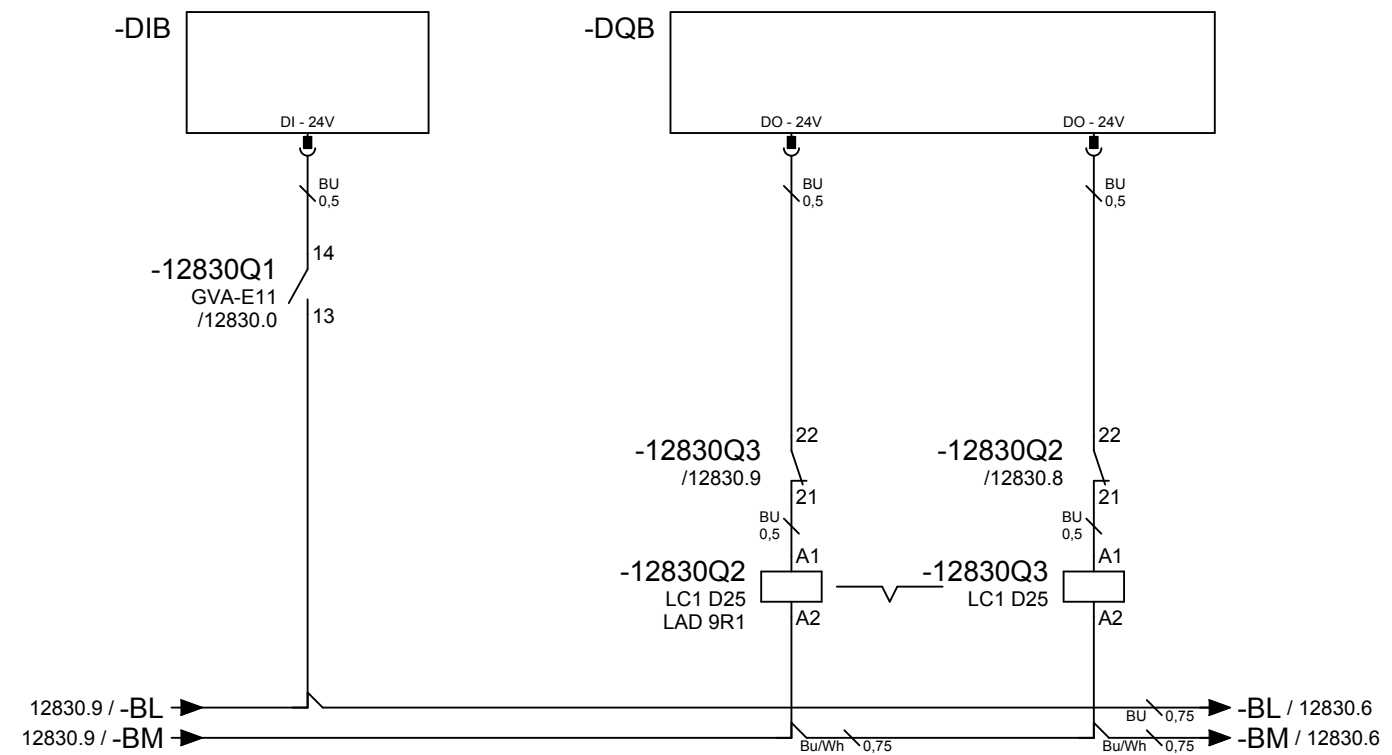
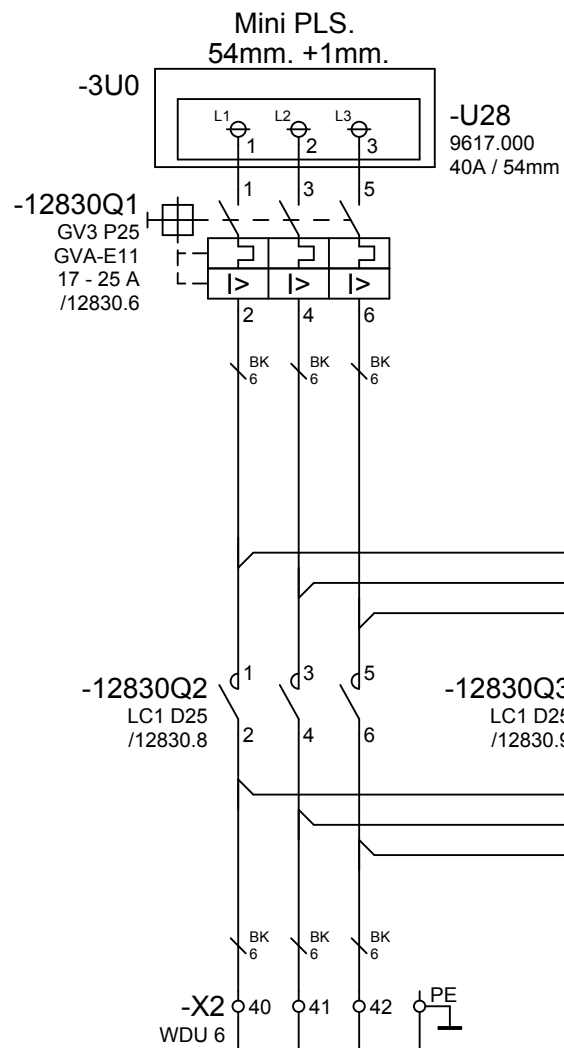
Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
...
... ..



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

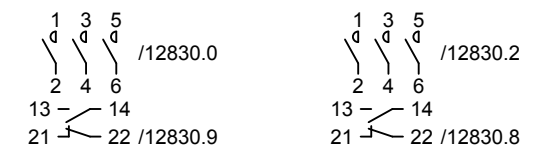


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

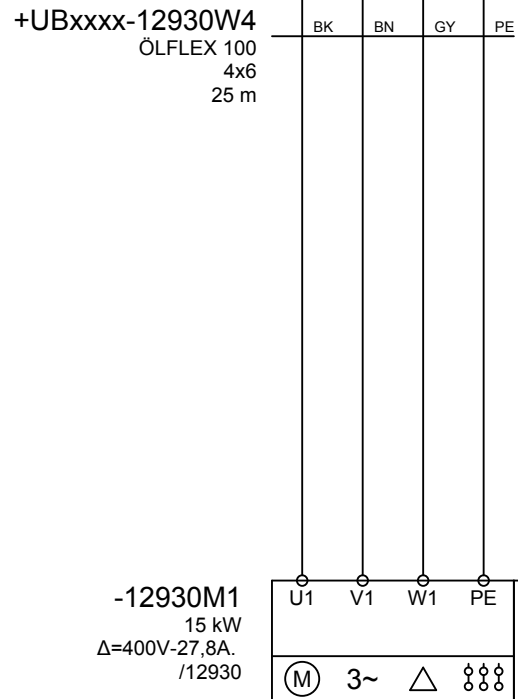
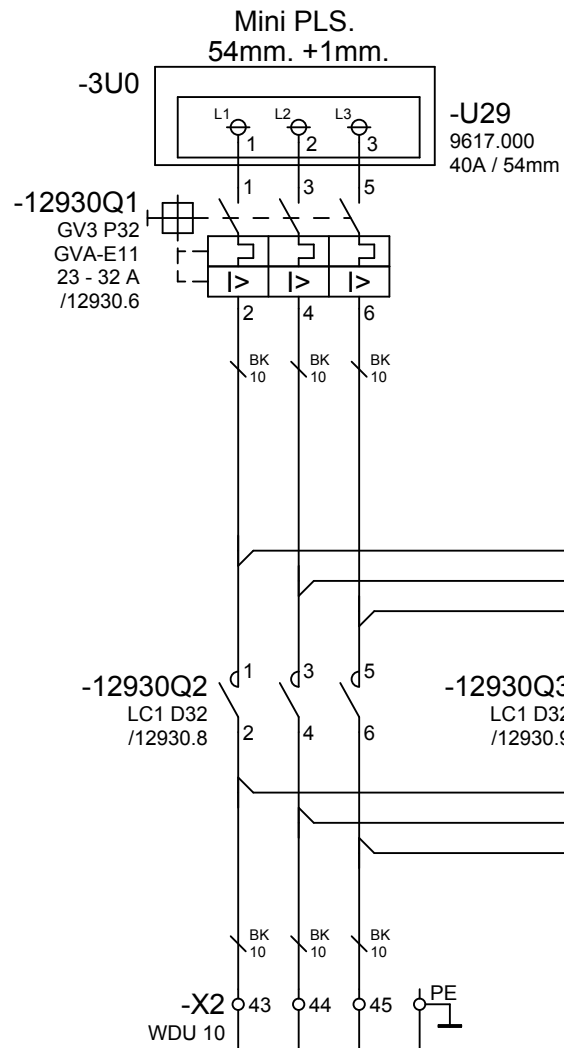
Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



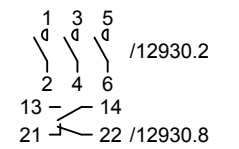
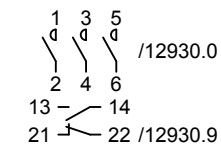
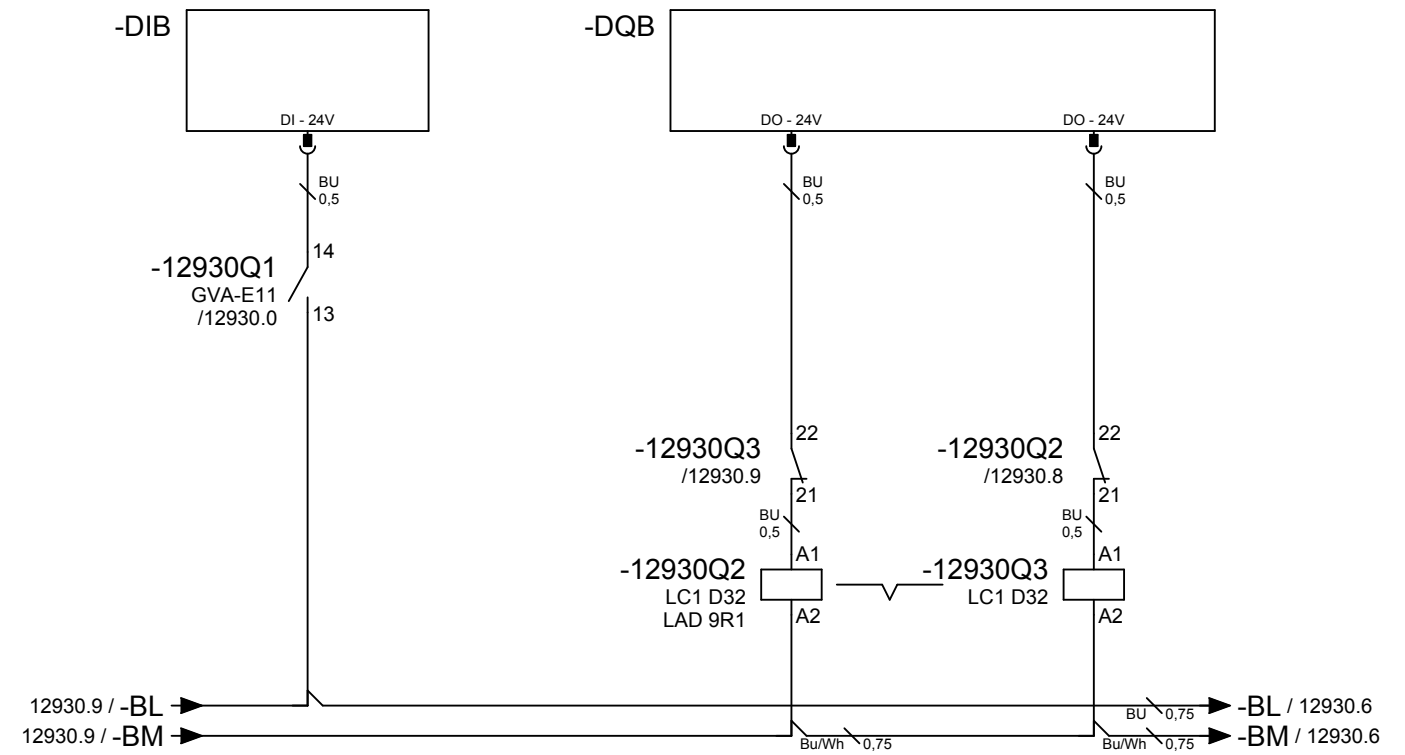
Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

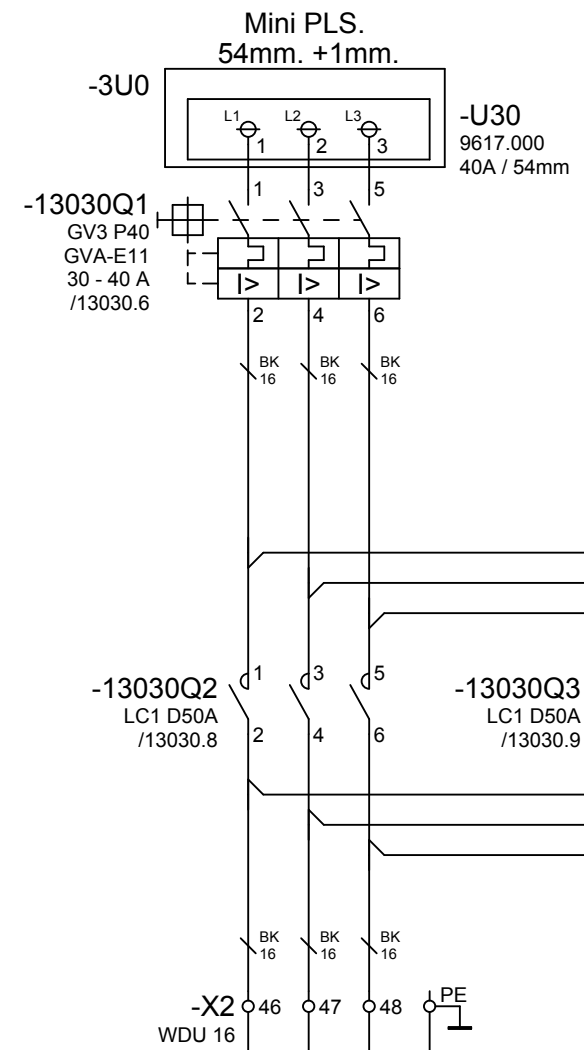
Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)
 ...
 ...



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.



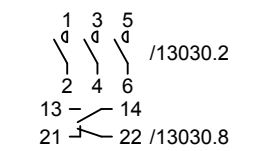
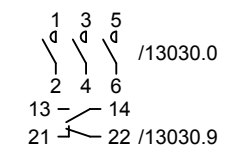
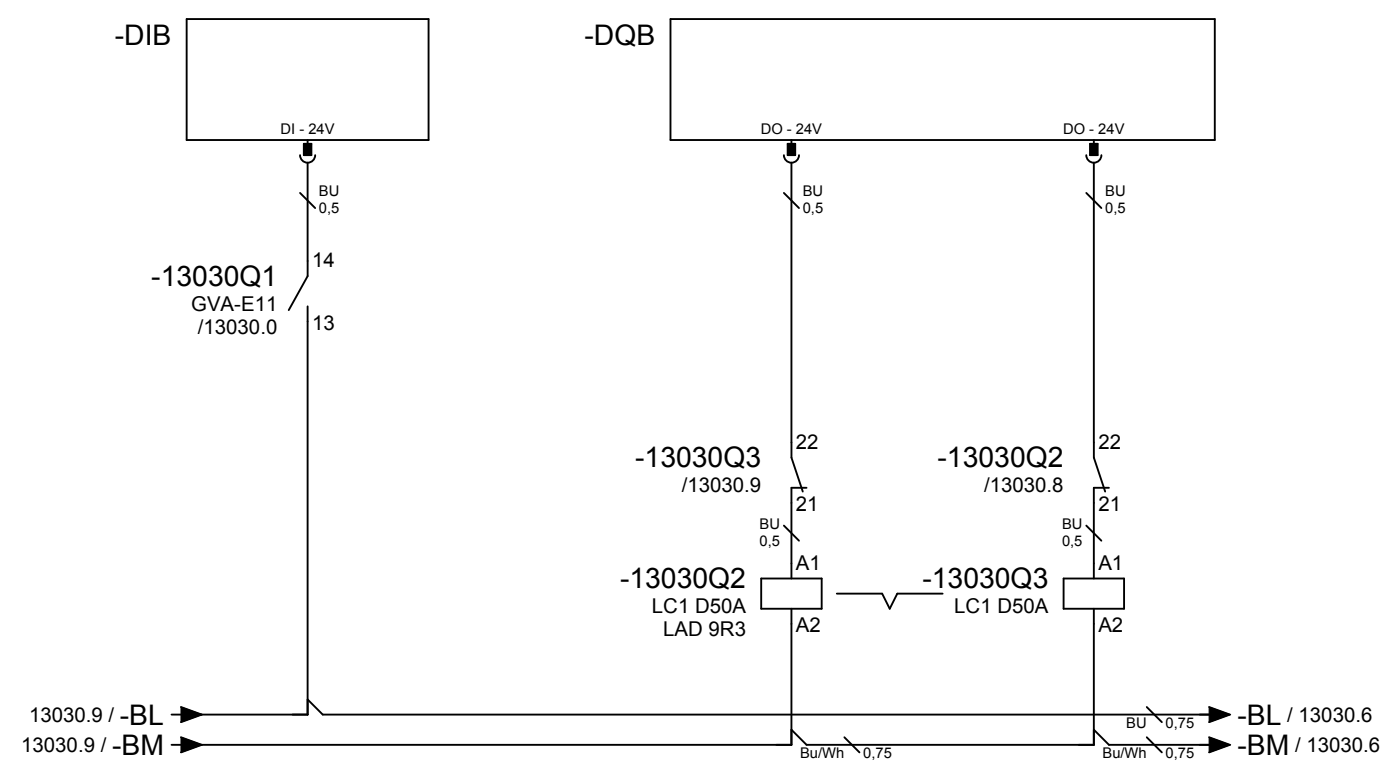
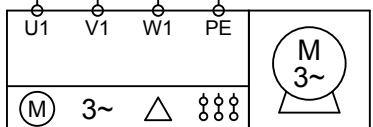
+UBxxx-13030W4
ÖLFLEX 100
4x10
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)
 ...
 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
 loss U at In 1,40V
 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)
 ...
 ...

-13030M1
18,5 kW
Δ=400V-32,8A.
/13030

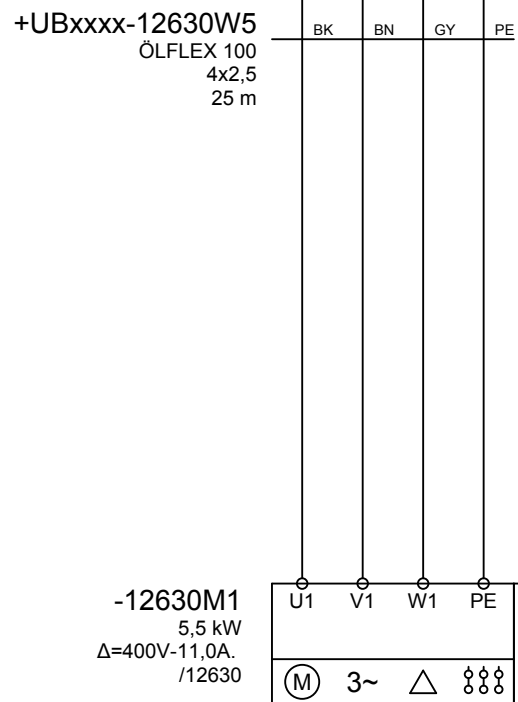
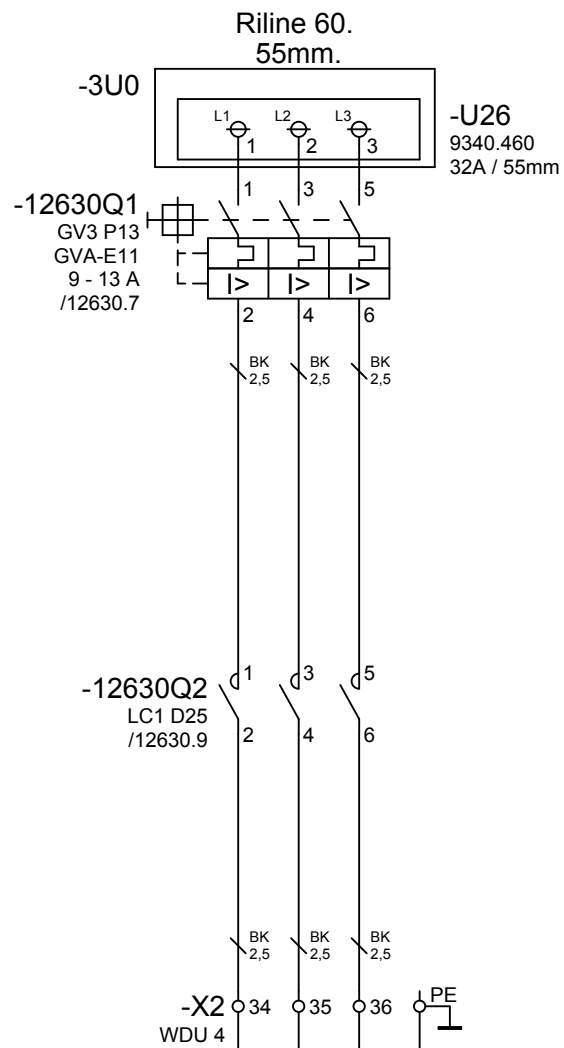


Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

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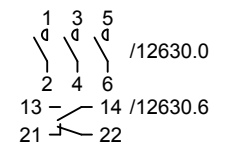
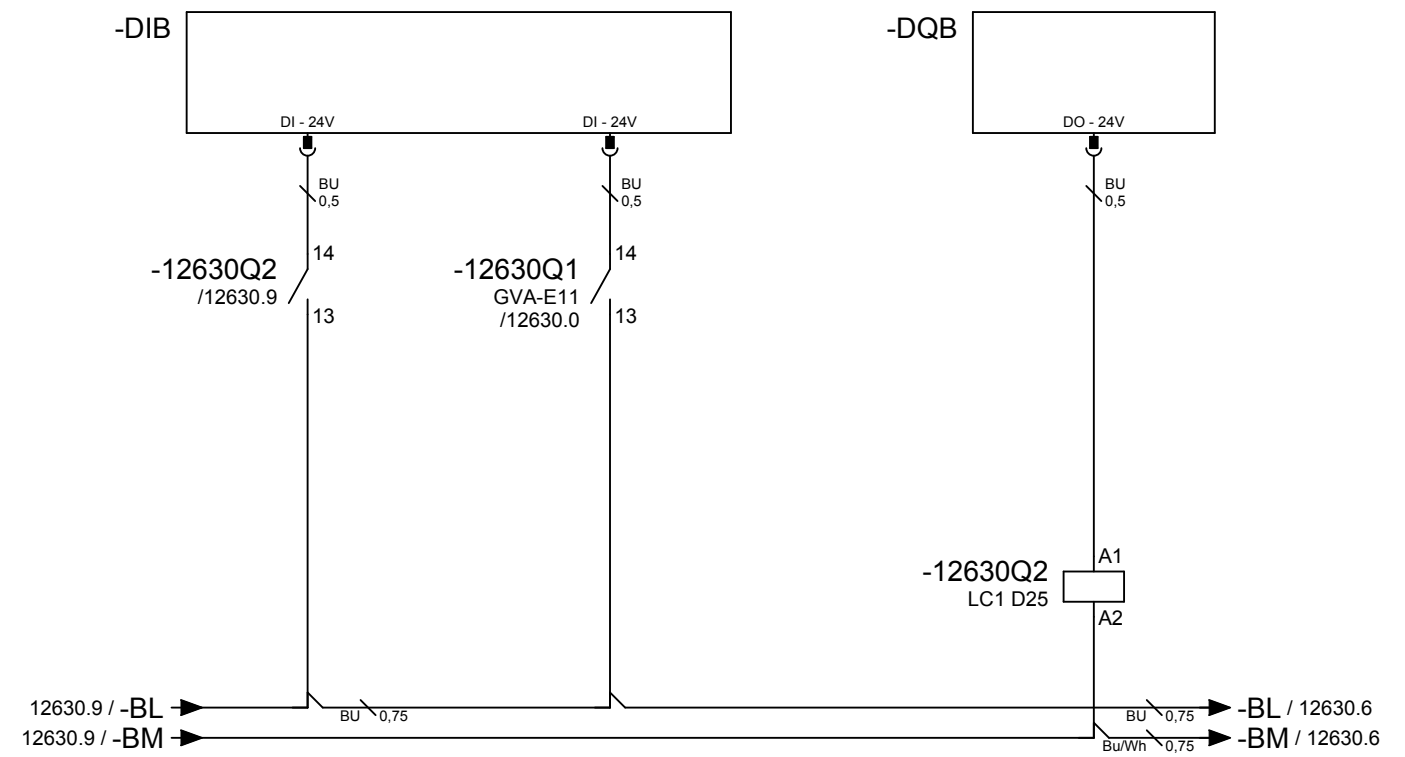


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

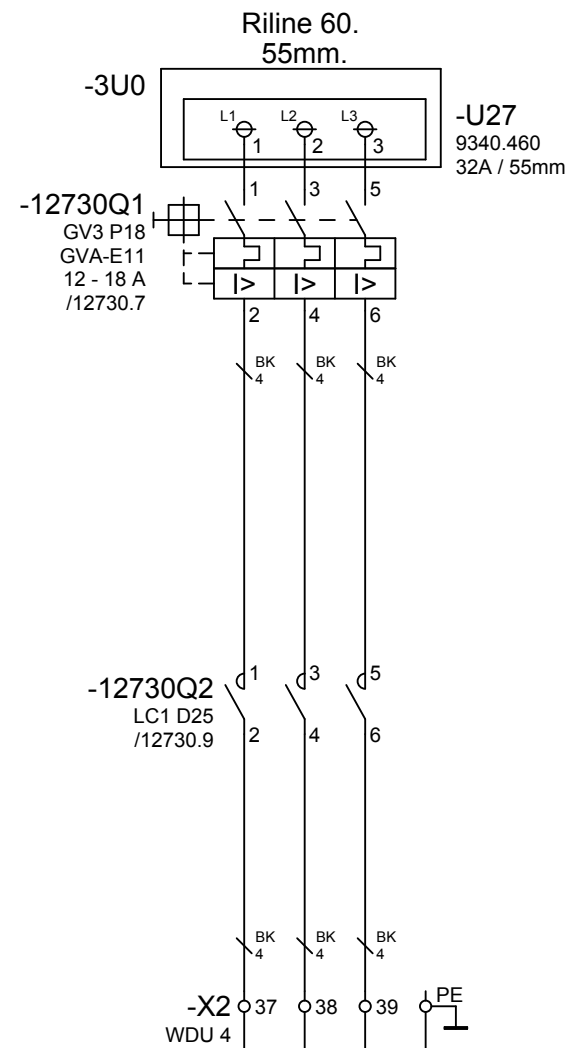
Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit breaker.
0=Failure.

Motor.
Contactor.

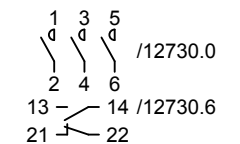
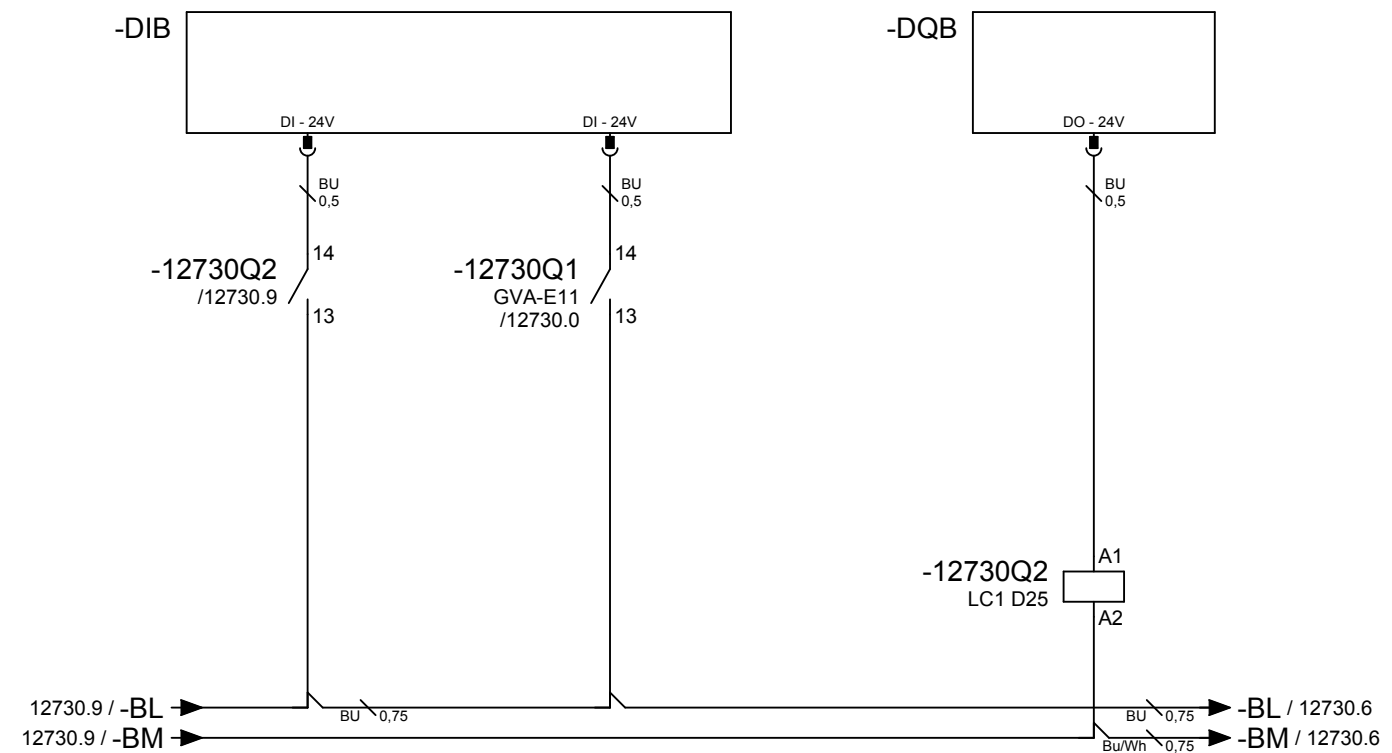
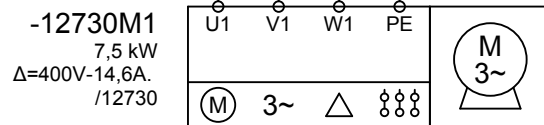


+UBxxx-12730W5
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

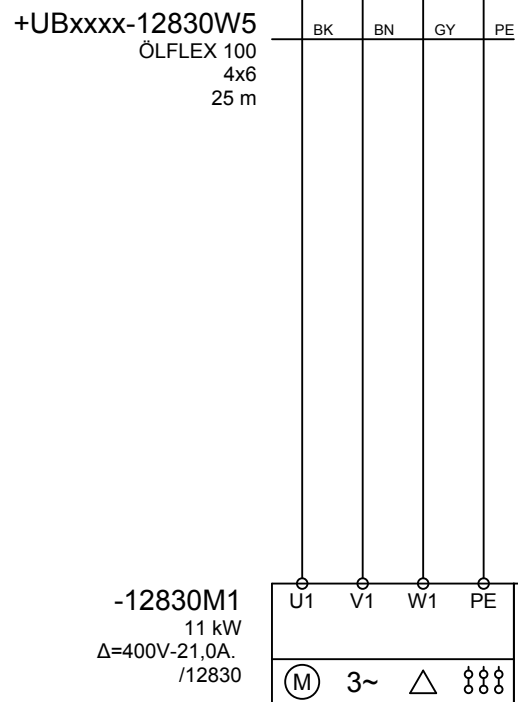
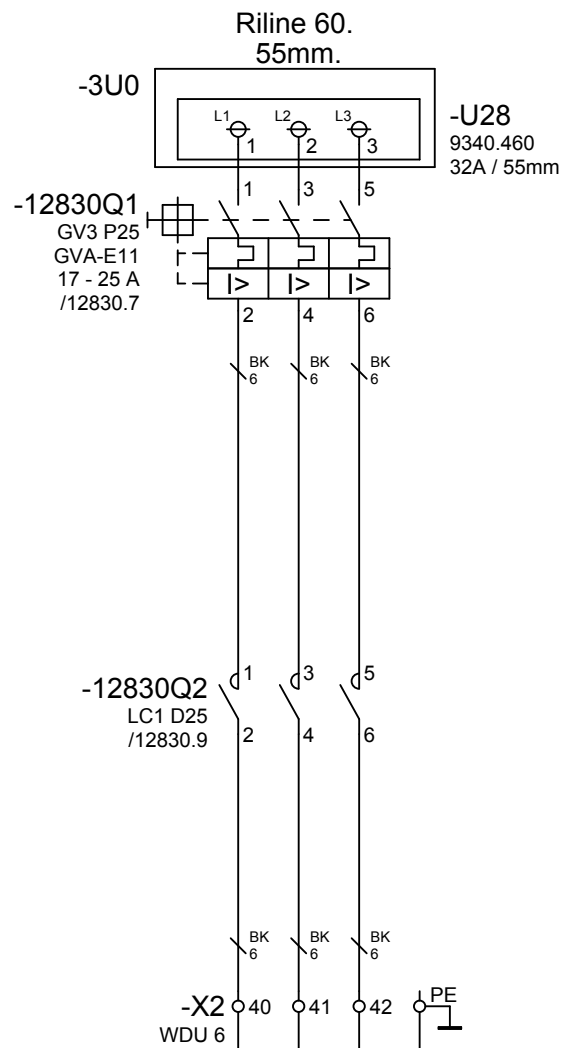
Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

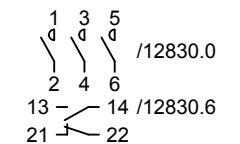
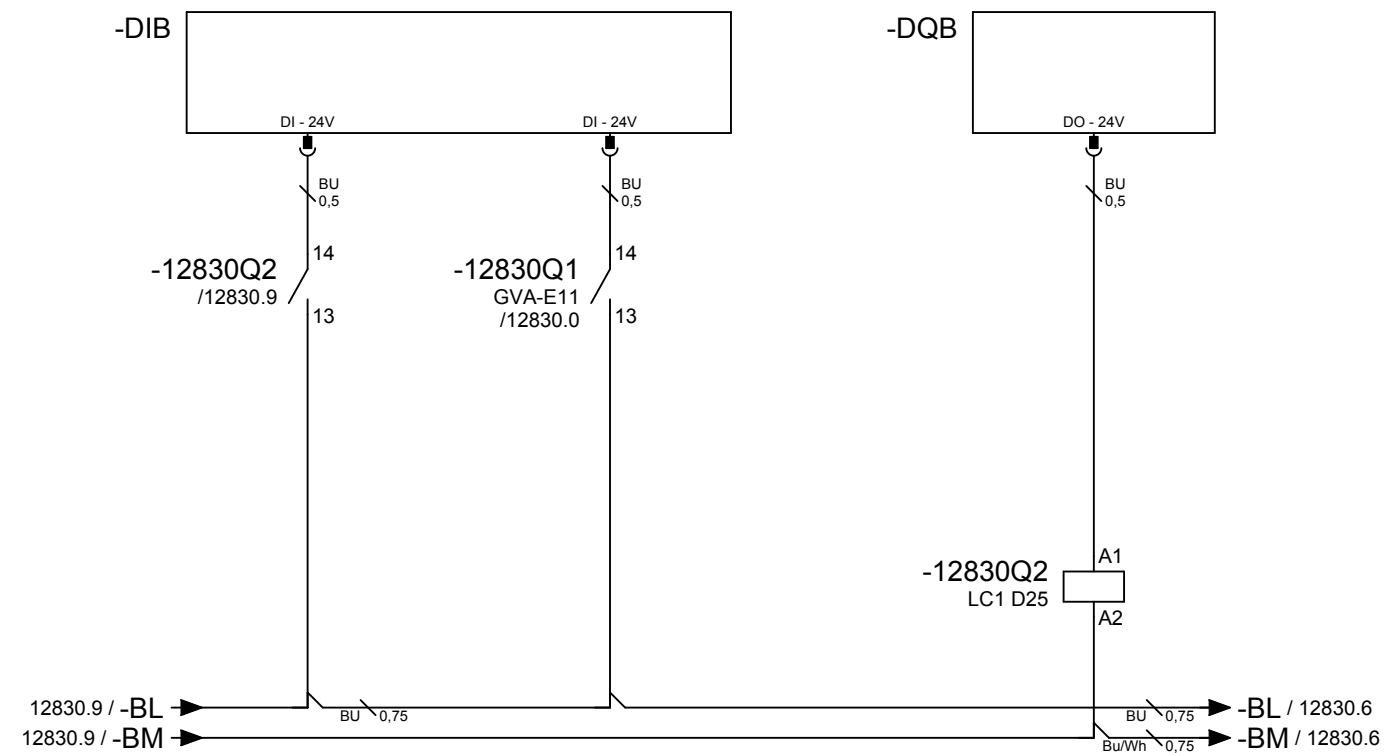


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

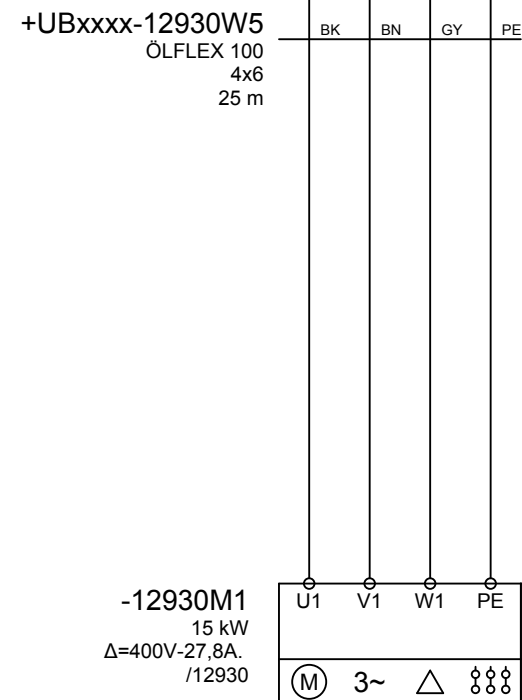
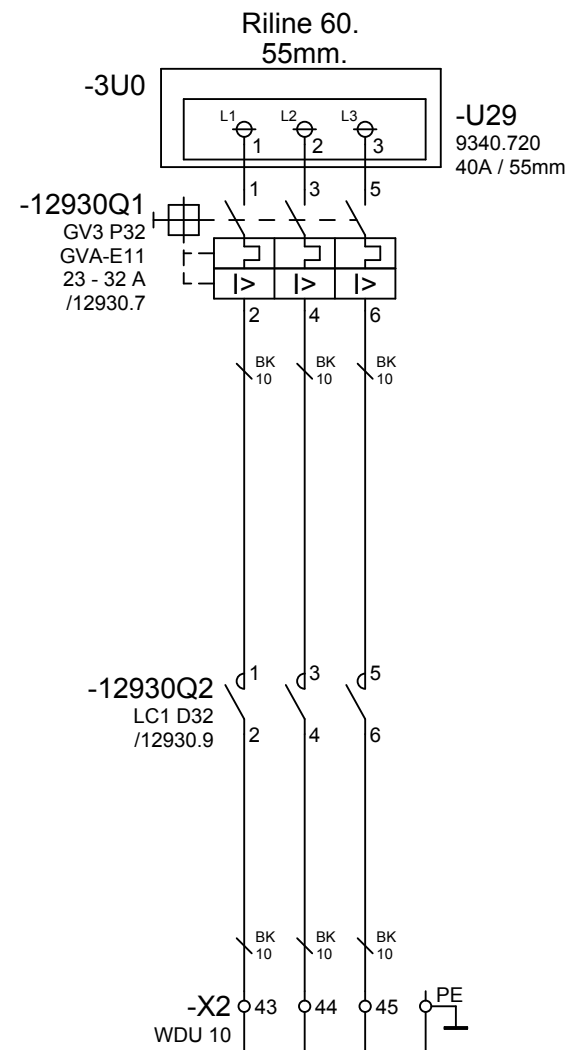
Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Contactor.
1=Switched ON.

Circuit
breaker. 0=Failure.

Motor.
Contactor.

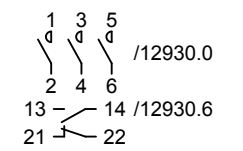
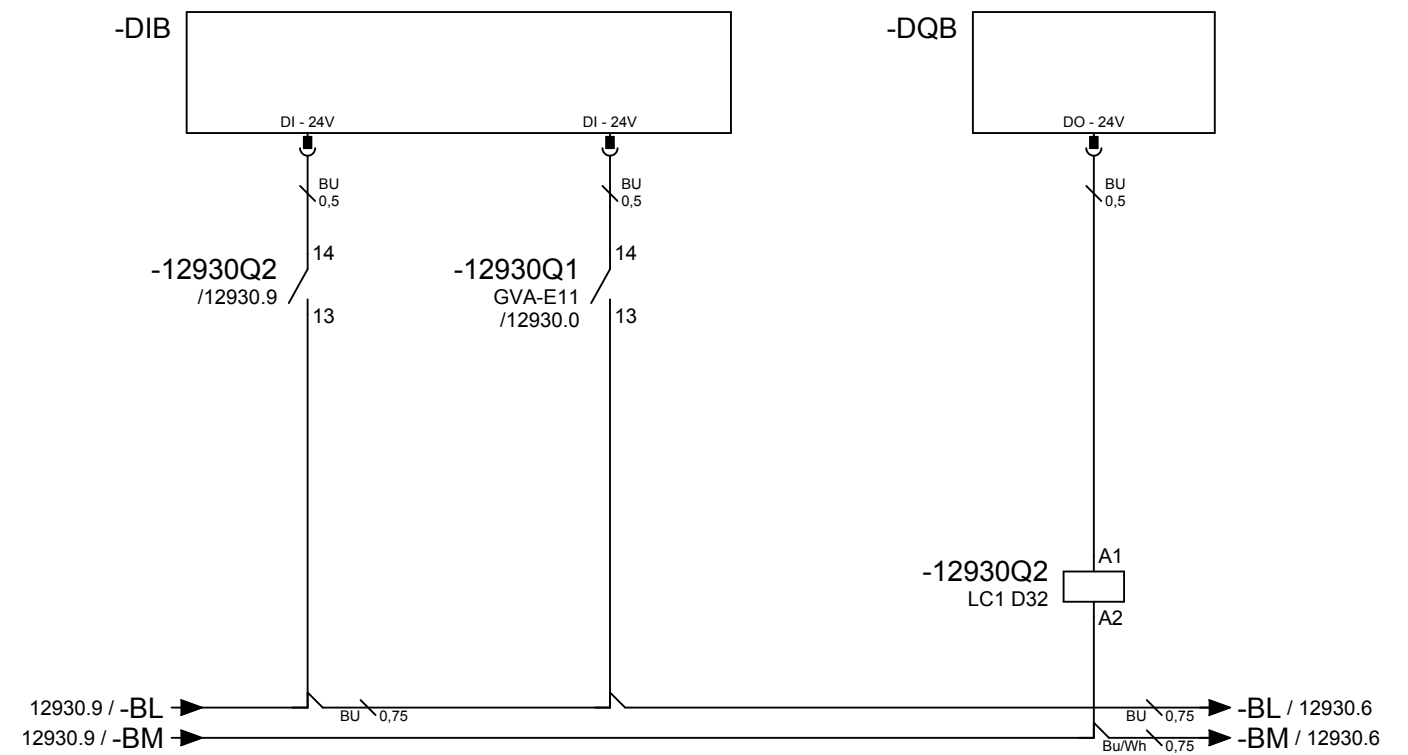


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

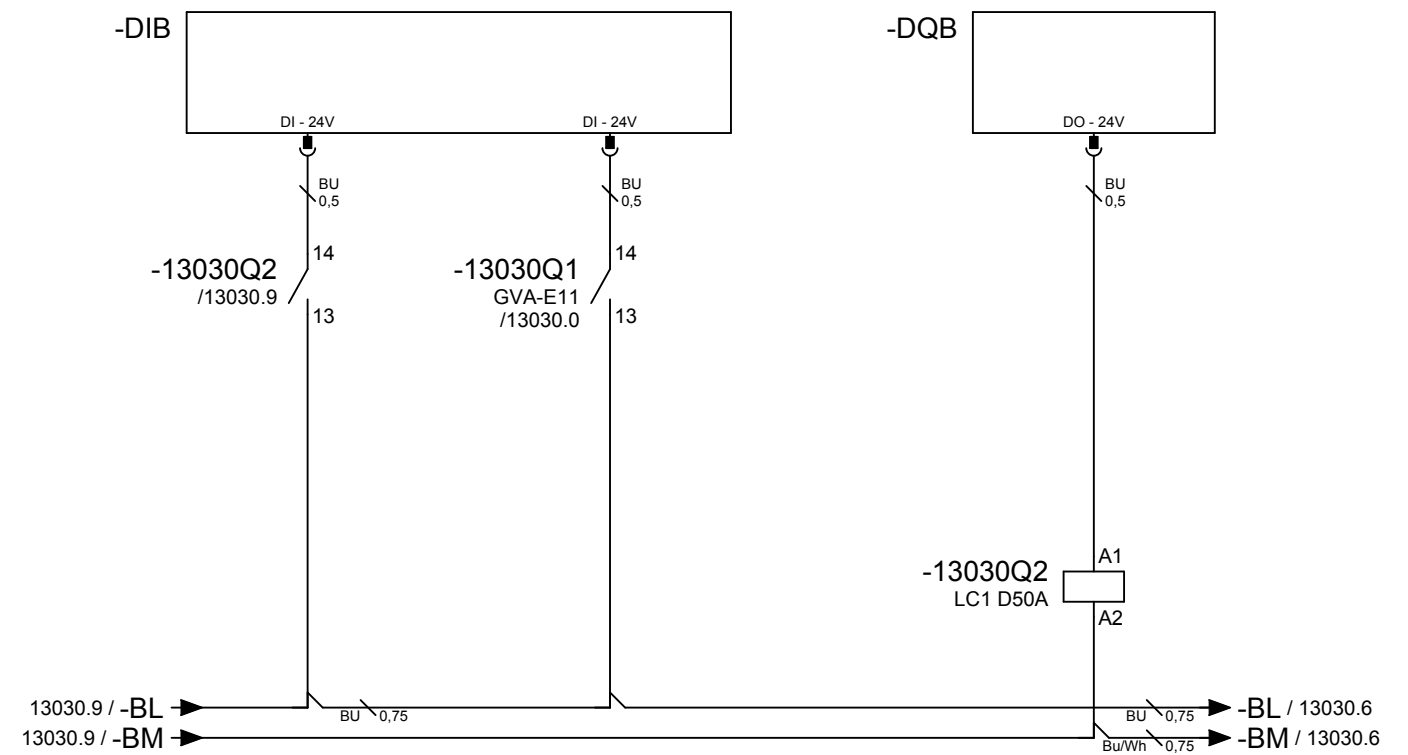
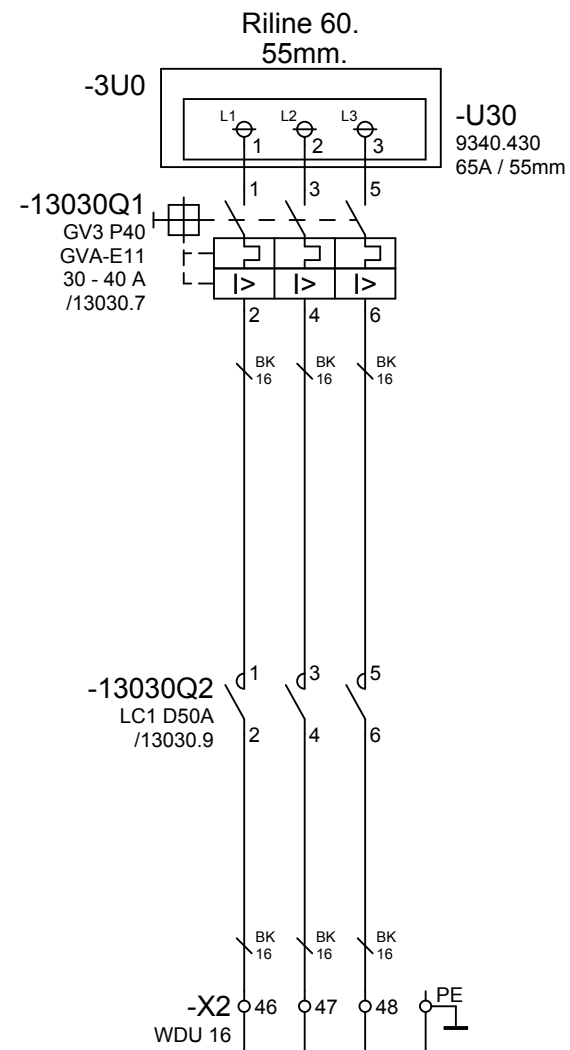
Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

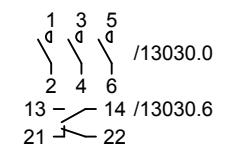


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

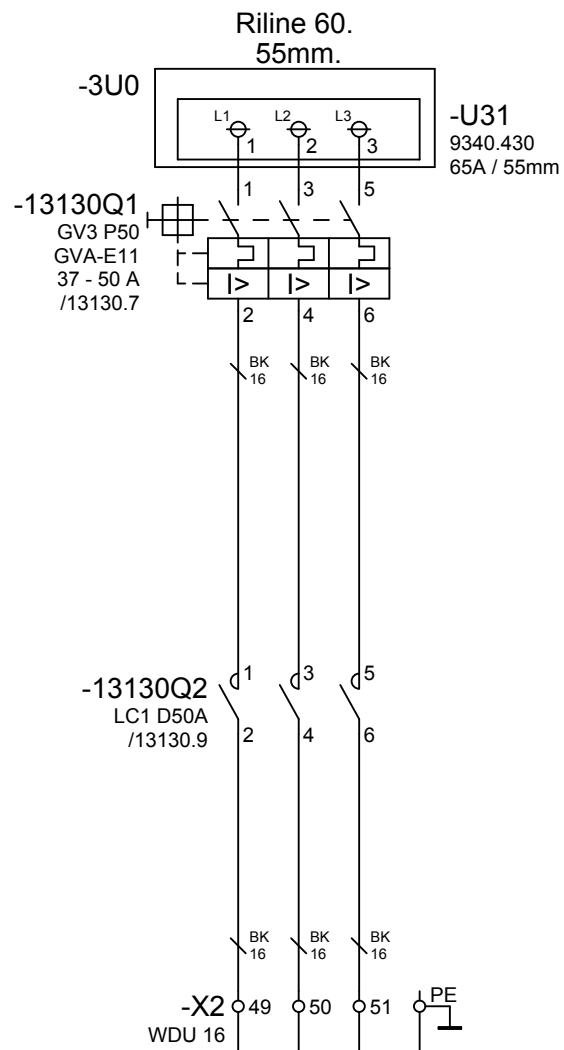
Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
 loss U at In 1,40V
 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

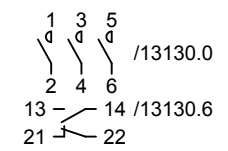
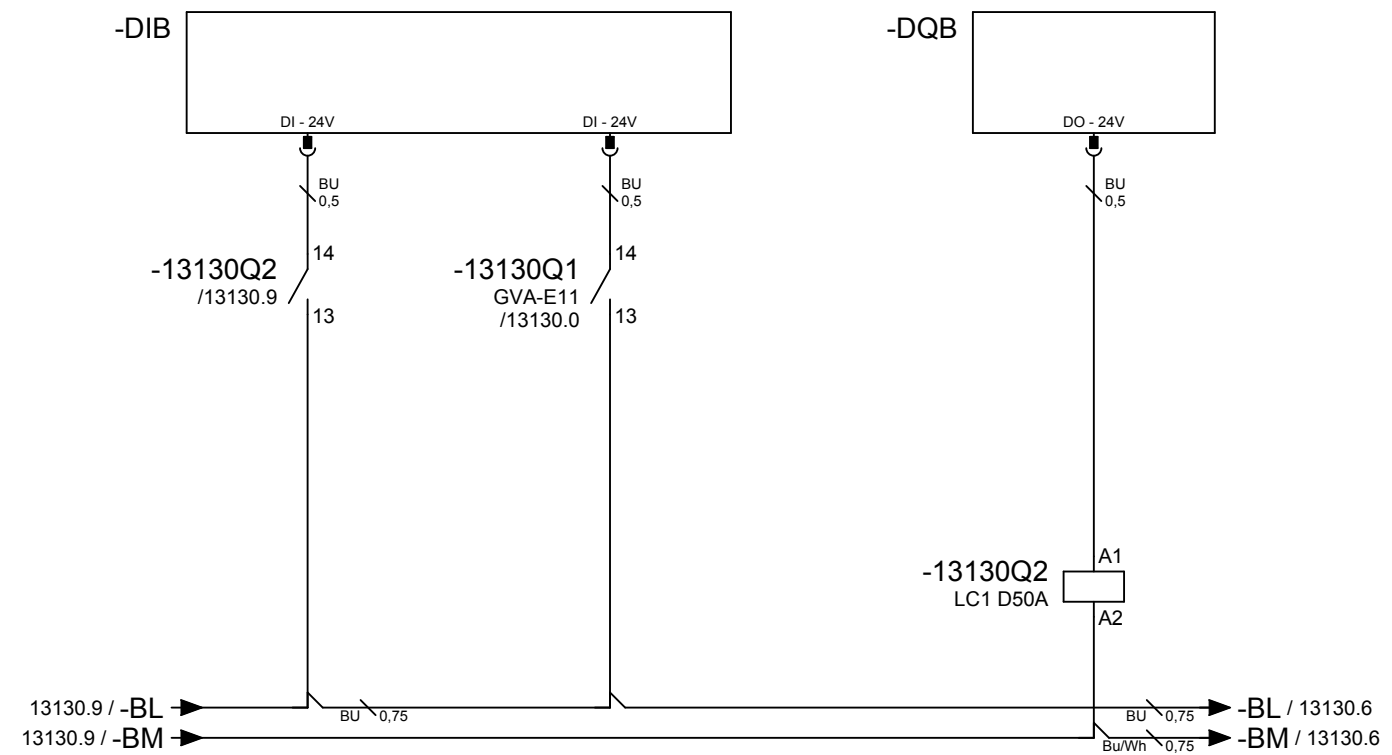


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 16mm² = cca 60A; (39A = 65,0%)
 loss U at In 0,12V
 loss U at 5xIn 0,62V
 heat losses at In 14,54W (L=3x3m)

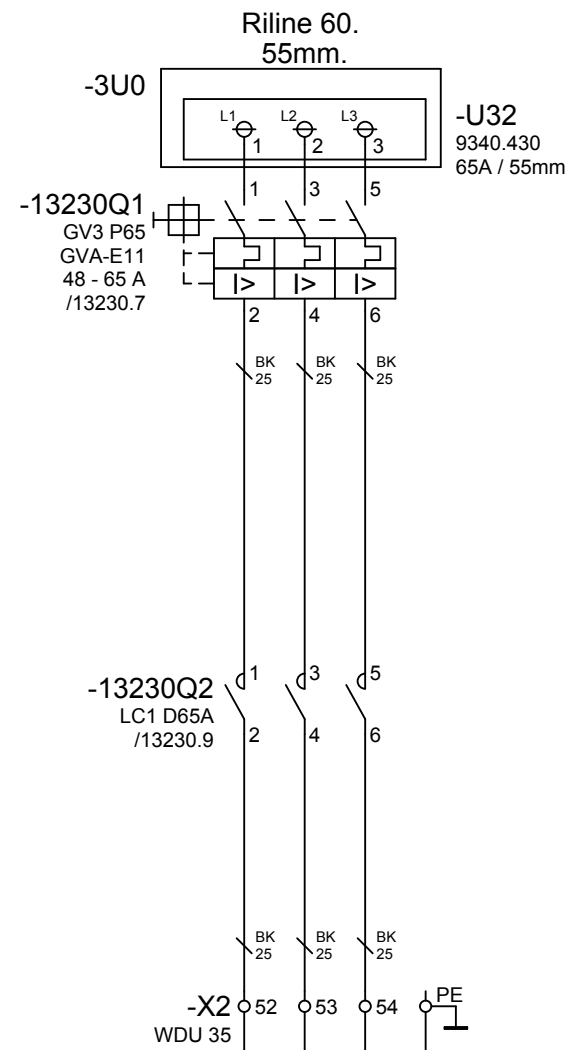
 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (39A = 65,0%)
 loss U at In 1,66V
 loss U at 5xIn 8,29V
 heat losses at In 194,0W (L=3x25m)



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>22kW. 2018</p>	Creator V00 01.02.2012 Ing. Tisovčík Ivan	= GV3P_C2
			Last revision of project	+ R_60
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409	13130

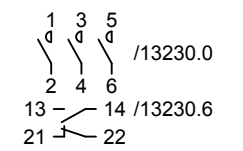
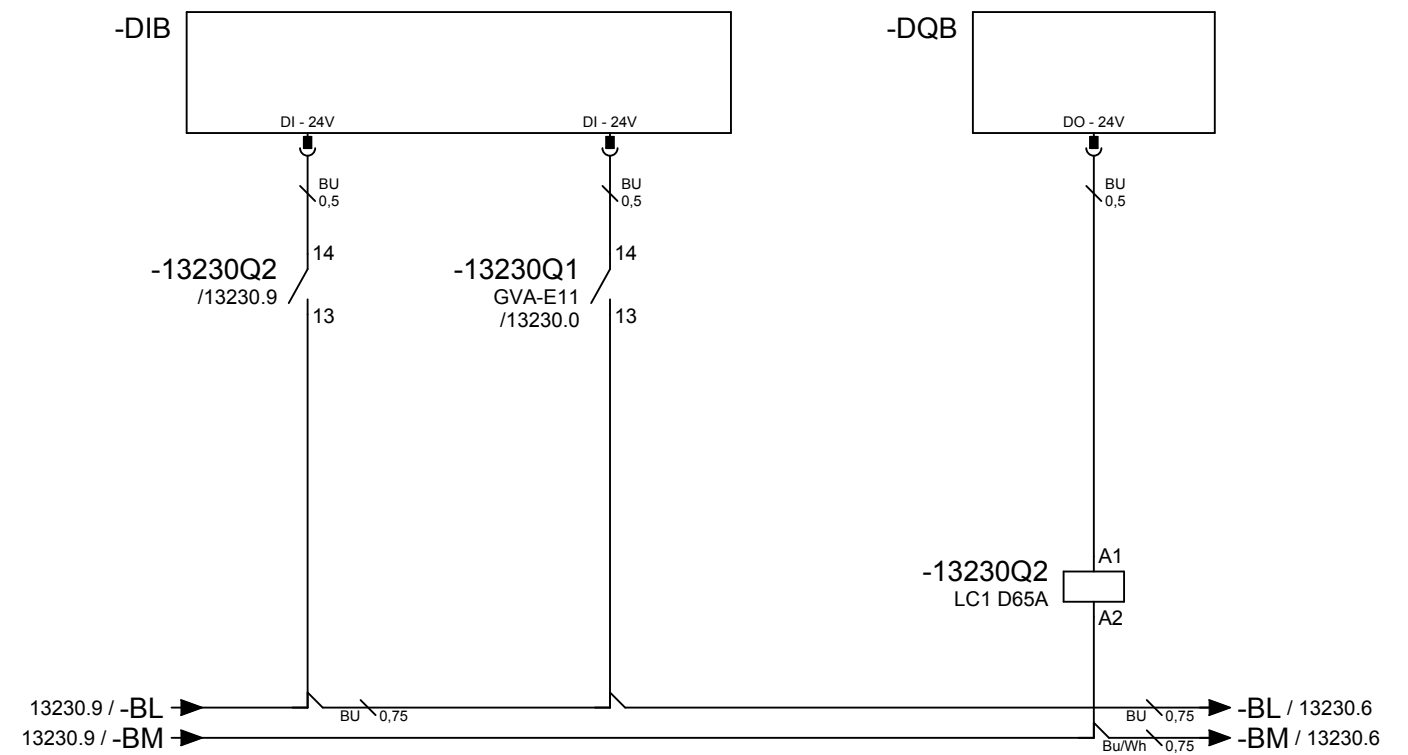
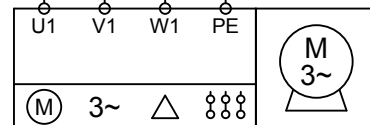


+UBxxx-13230W3
ÖLFLEX 100
4x16
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

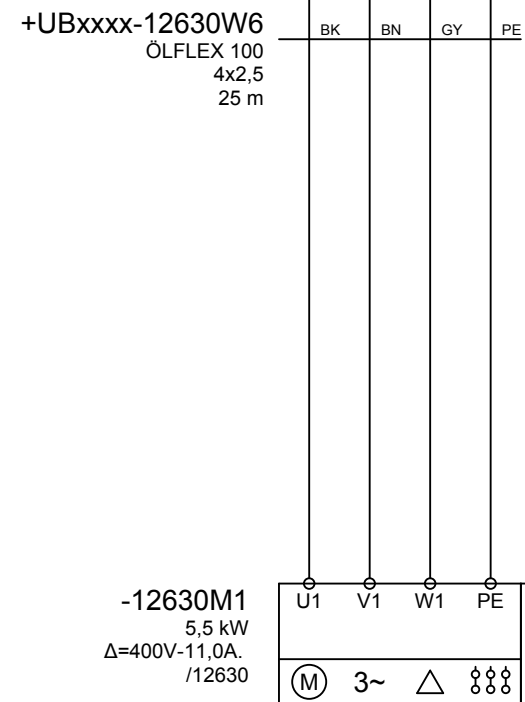
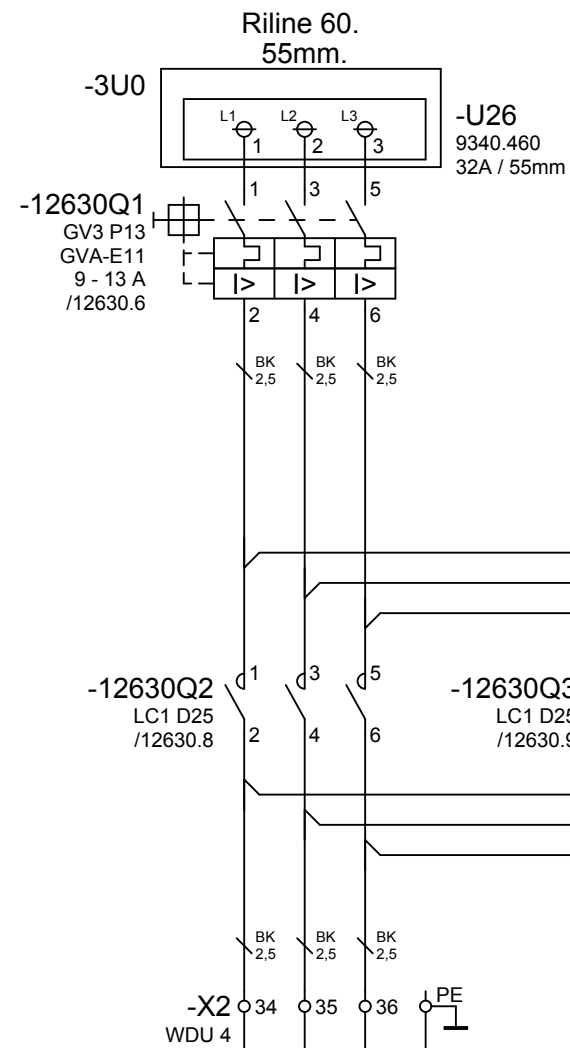
Enclosure B1
load 25mm² = cca 77A; (52A = 67,5%)
loss U at In 0,11V
loss U at 5xIn 0,53V
heat losses at In 16,55W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 16mm² = cca 80A; (52A = 65,0%)
loss U at In 1,38V
loss U at 5xIn 6,91V
heat losses at In 215,5W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

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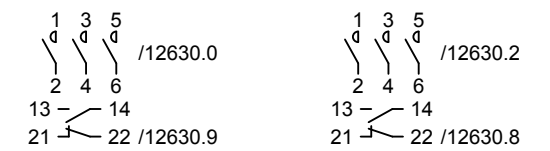
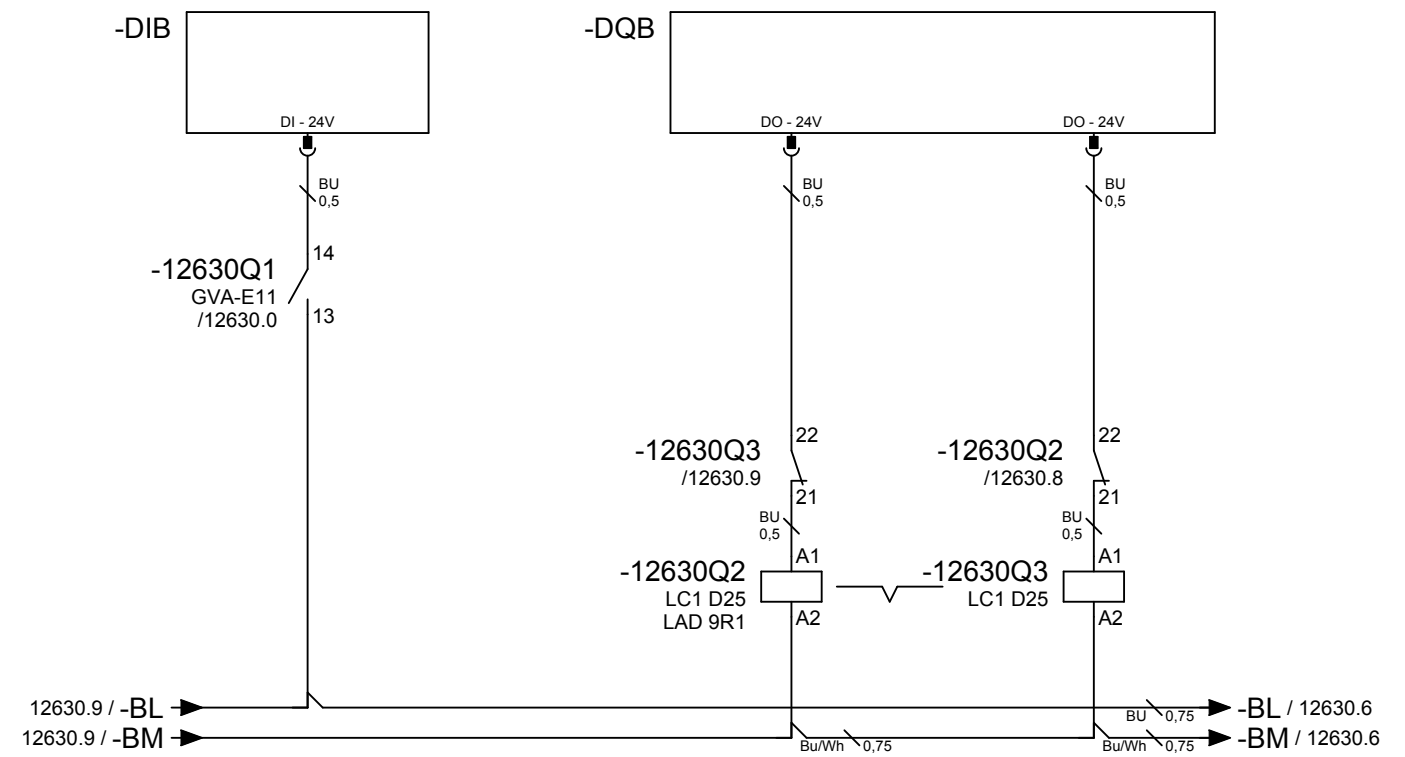


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

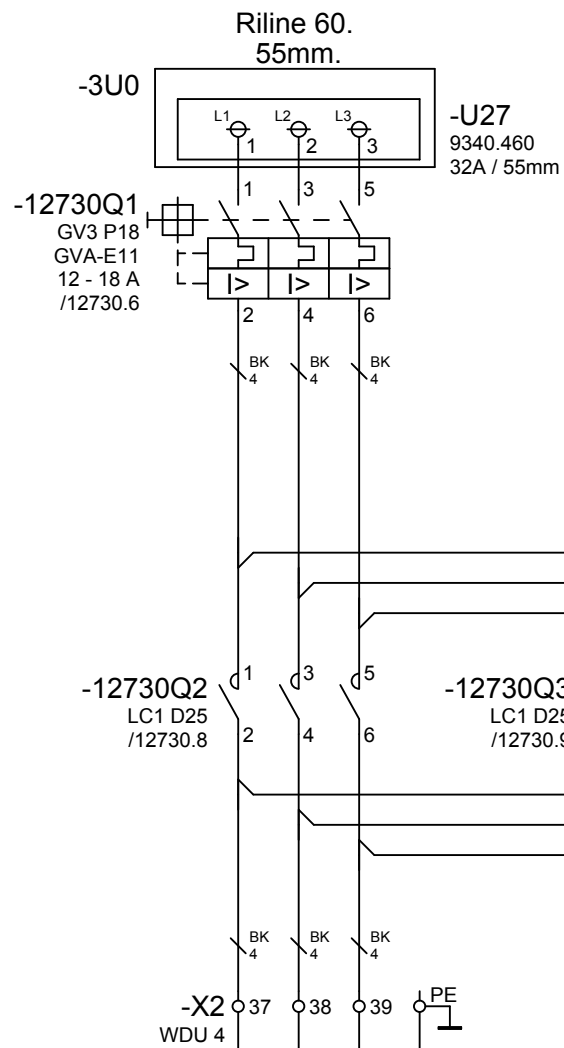
Enclosure B1
 load 2,5mm² = cca 18,3A; (11A = 60,1%)
 loss U at In 0,22V
 loss U at 5xIn 1,12V
 heat losses at In 7,41W (L=3x3m)

 short circuit resistance 130kA at 415V

Cable route E
 load 2,5mm² = cca 25,0A; (11A = 44,0%)
 loss U at In 1,87V
 loss U at 5xIn 9,35V
 heat losses at In 61,7W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

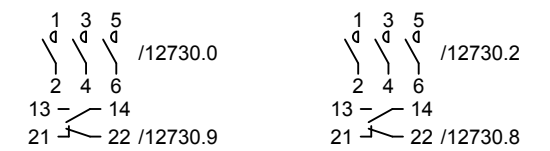
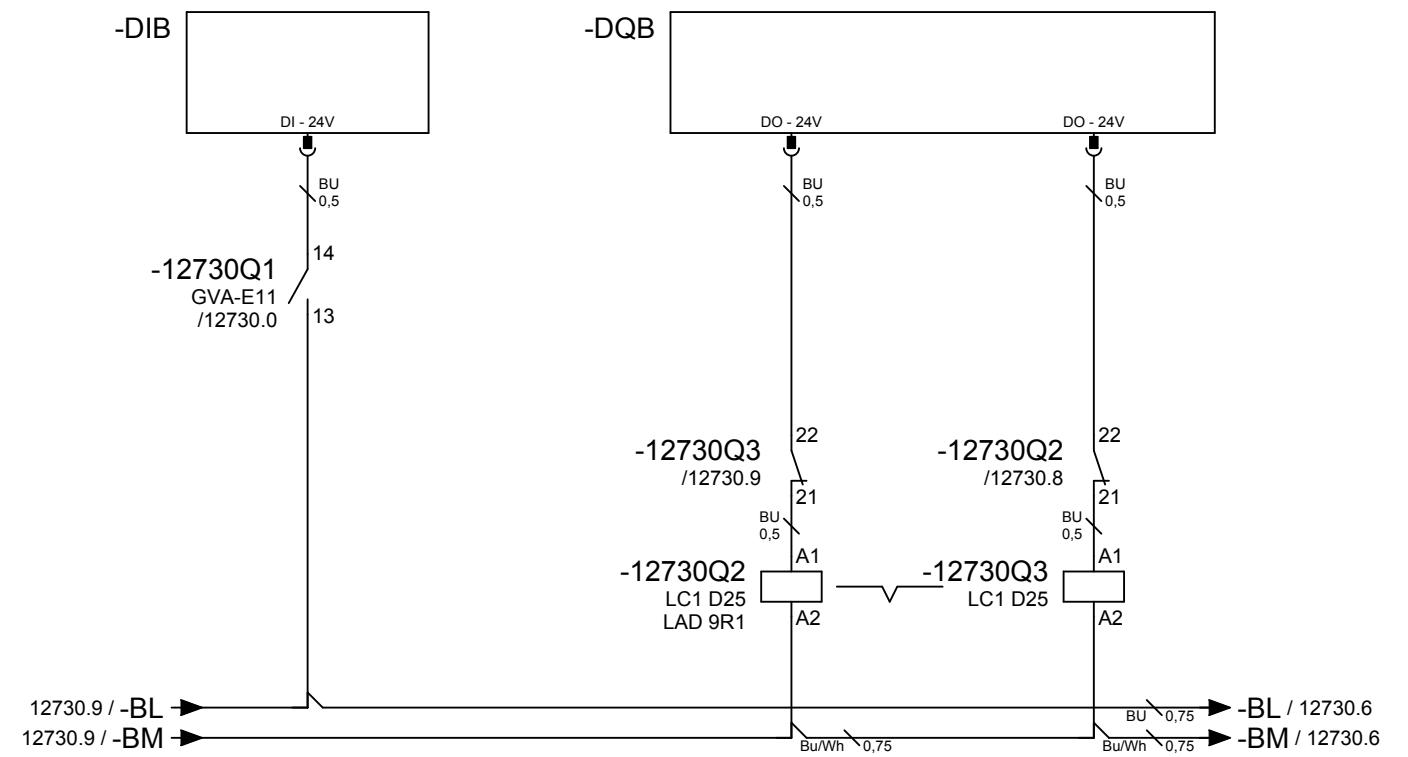


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

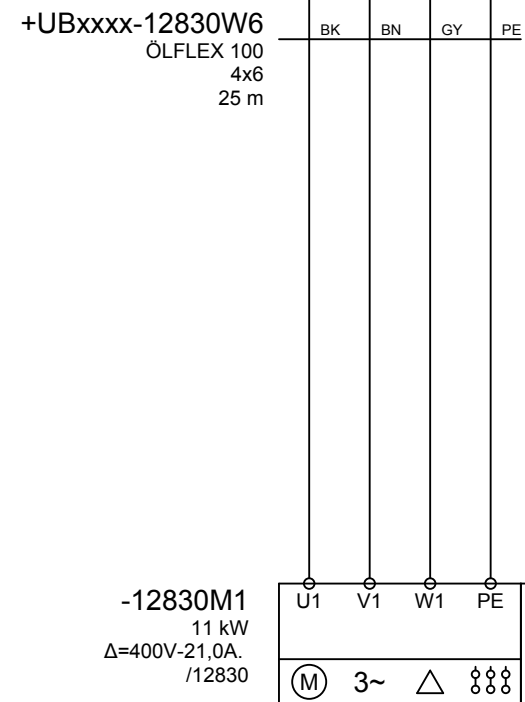
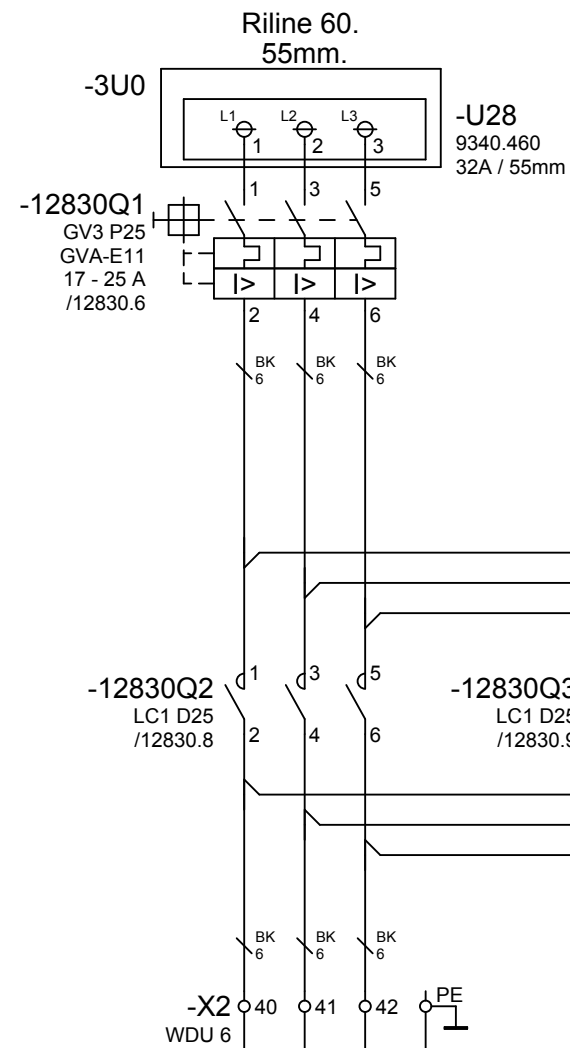
Enclosure B1
 load 4mm² = cca 25A; (15A = 60,0%)
 loss U at In 0,19V
 loss U at 5xIn 0,96V
 heat losses at In 8,61W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 4mm² = cca 34A; (15A = 44,1%)
 loss U at In 1,59V
 loss U at 5xIn 7,97V
 heat losses at In 71,7W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

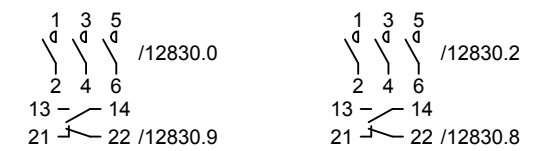
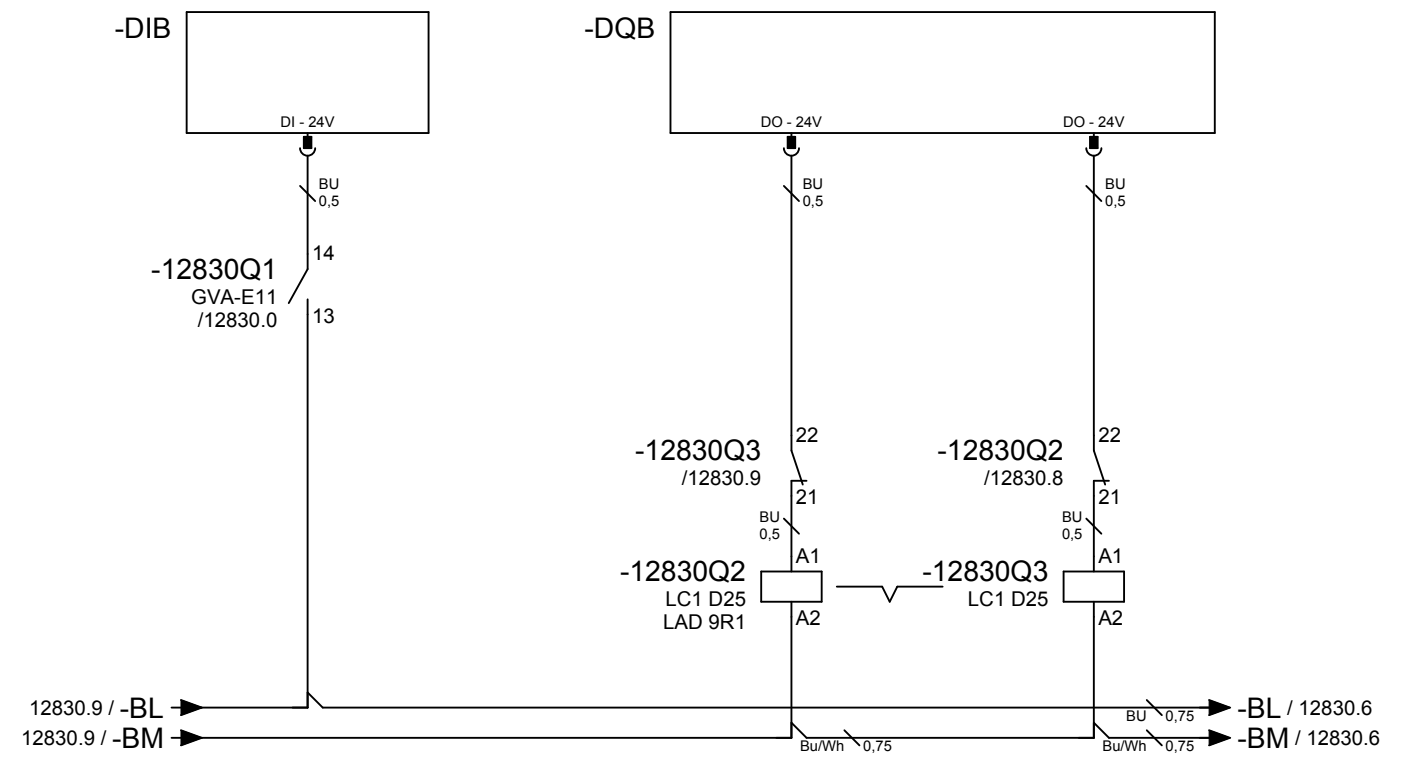


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

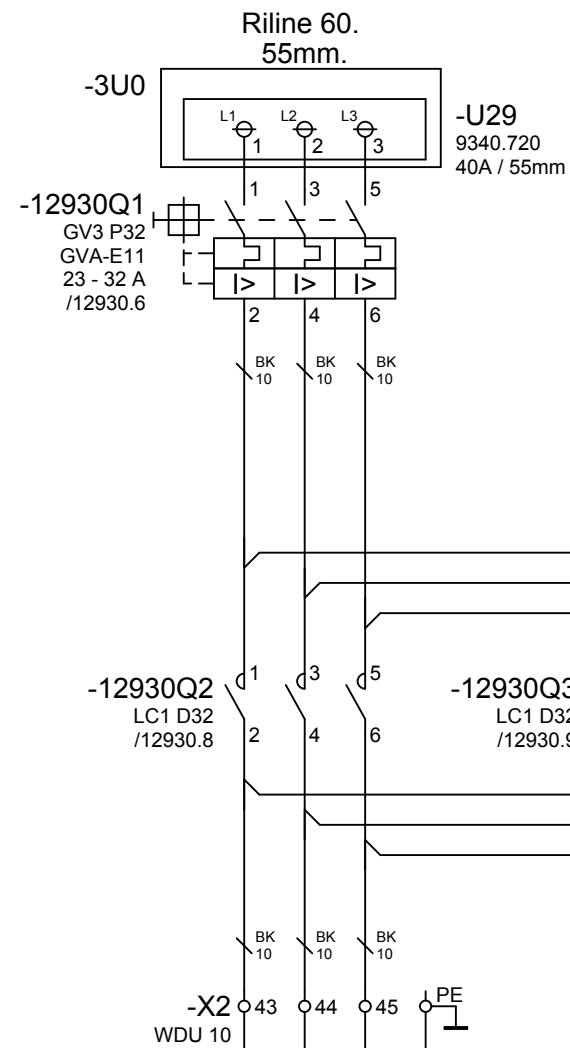
Enclosure B1
 load 6mm² = cca 32A; (21A = 65,6%)
 loss U at In 0,18V
 loss U at 5xIn 0,89V
 heat losses at In 11,25W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 6mm² = cca 43A; (21A = 48,8%)
 loss U at In 1,49V
 loss U at 5xIn 7,44V
 heat losses at In 93,7W (L=3x25m)



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

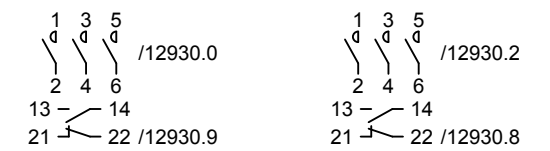
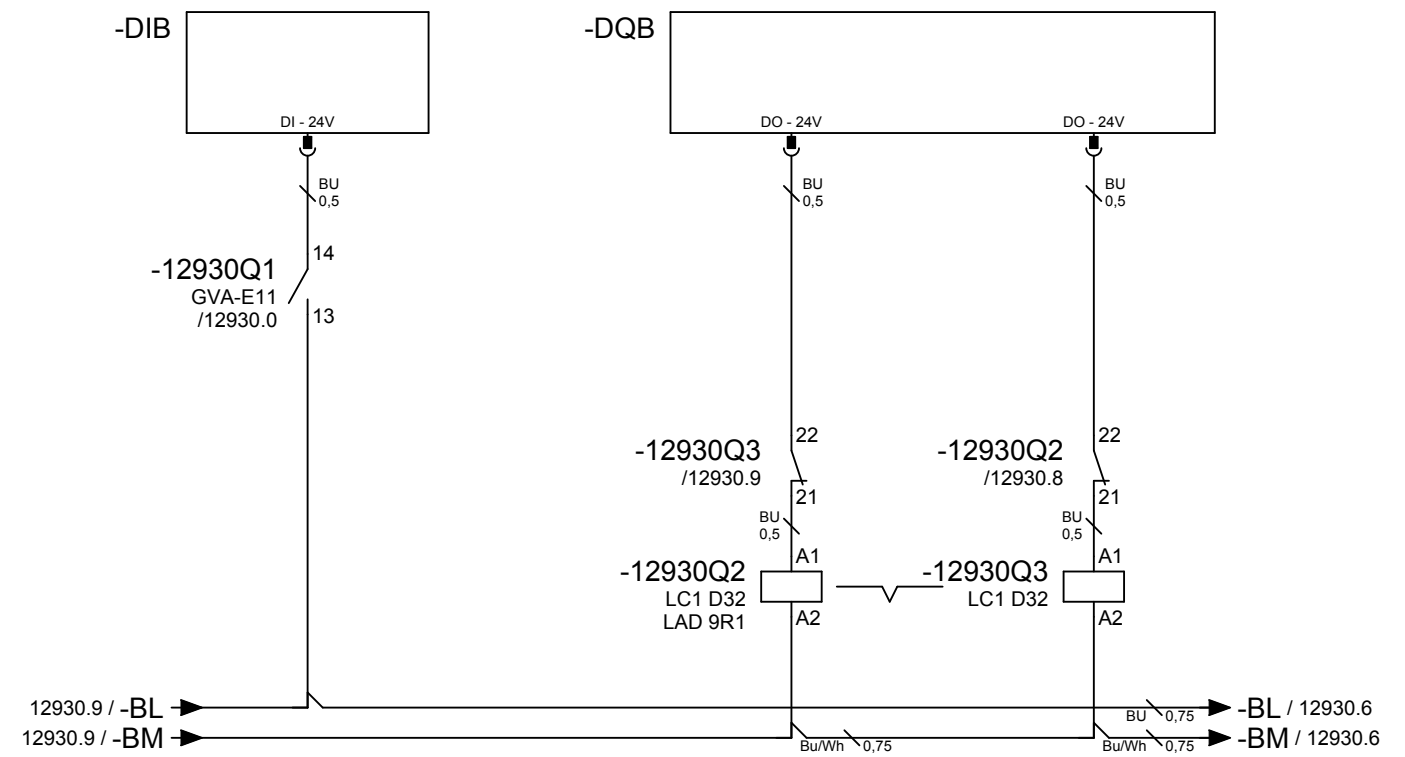


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 10mm² = cca 44A; (28A = 63,6%)
 loss U at In 0,14V
 loss U at 5xIn 0,71V
 heat losses at In 12,00W (L=3x3m)

 short circuit resistance 50kA at 415V

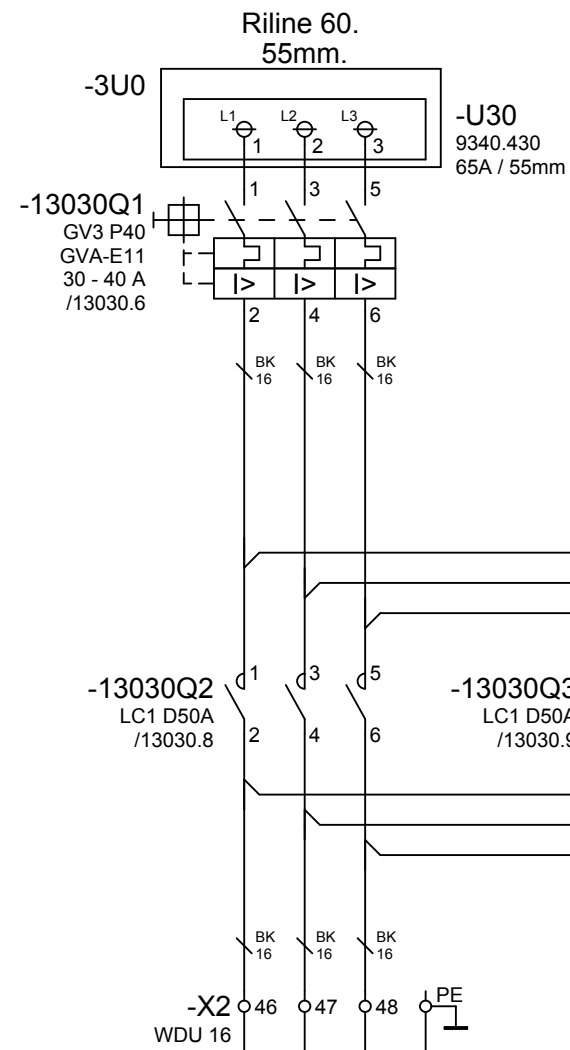
Cable route E
 load 6mm² = cca 43A; (28A = 65,1%)
 loss U at In 1,98V
 loss U at 5xIn 9,92V
 heat losses at In 166,6W (L=3x25m)



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

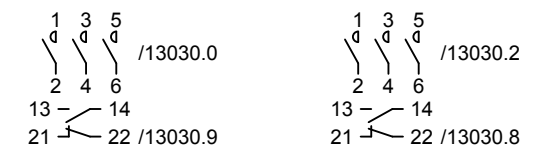
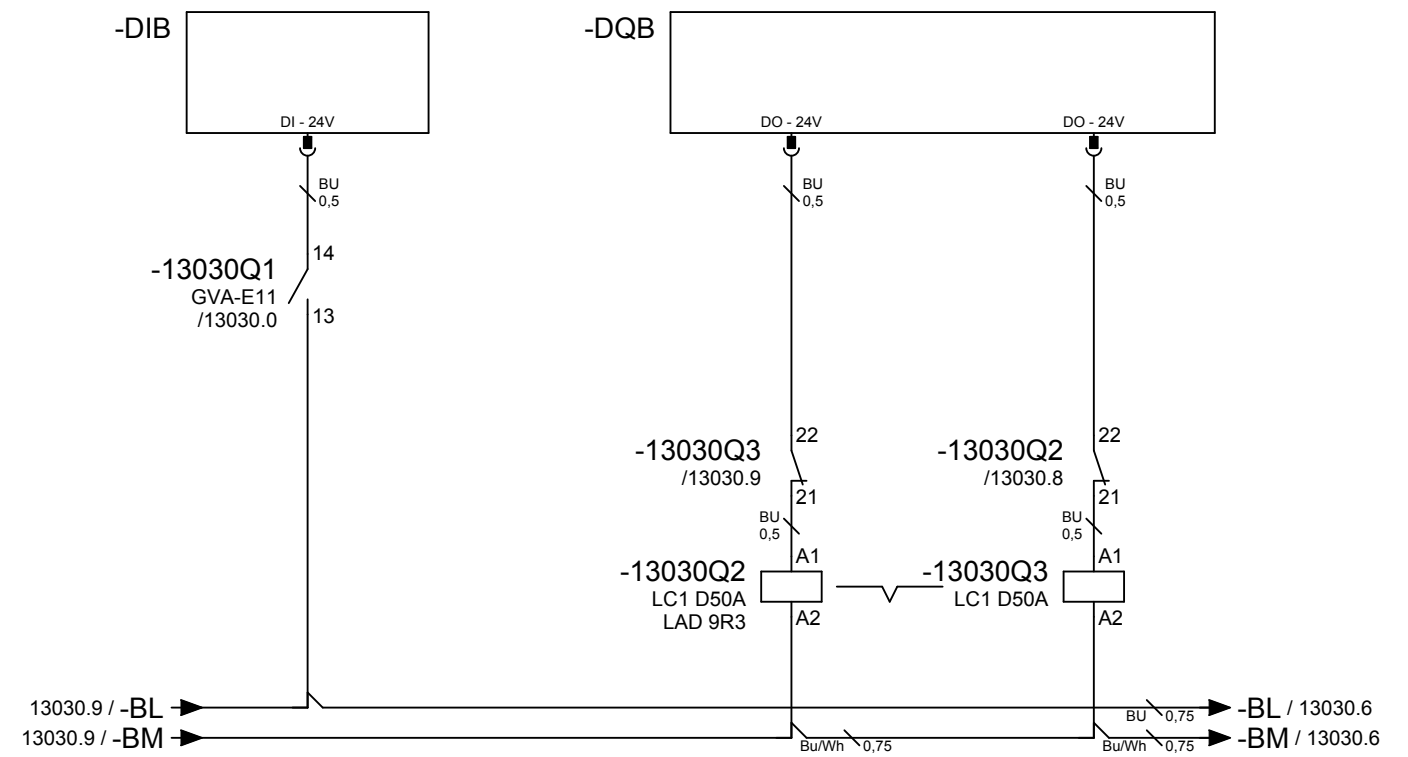


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

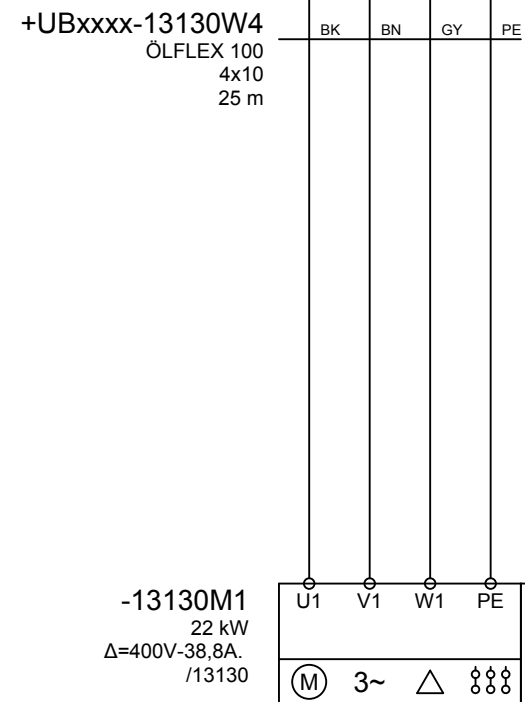
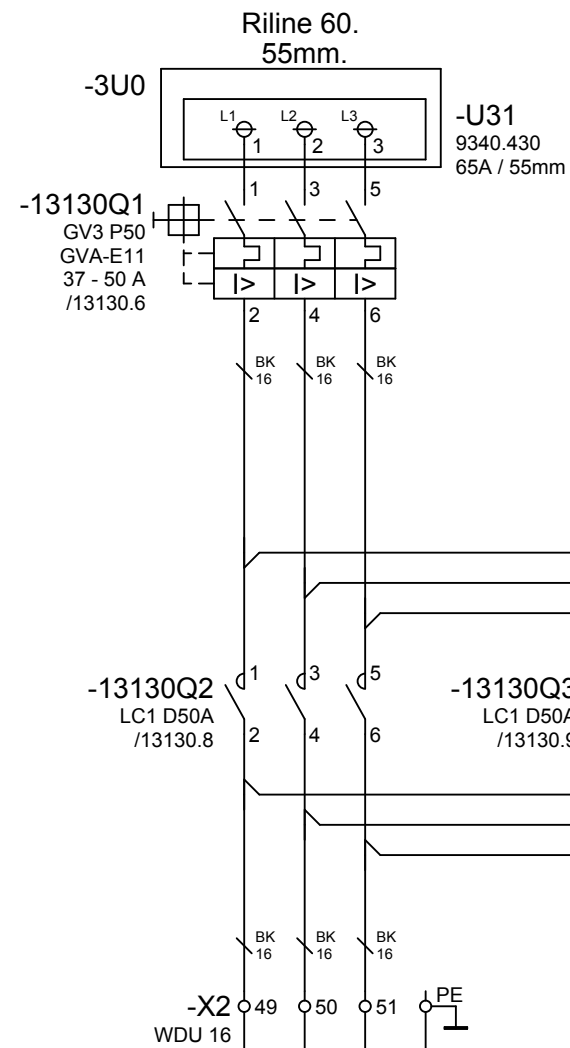
Enclosure B1
 load 16mm² = cca 60A; (33A = 55,0%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 10,41W (L=3x3m)

 short circuit resistance 50kA at 415V

Cable route E
 load 10mm² = cca 60A; (33A = 55,0%)
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 loss U at 5xIn 7,01V
 heat losses at In 138,8W (L=3x25m)

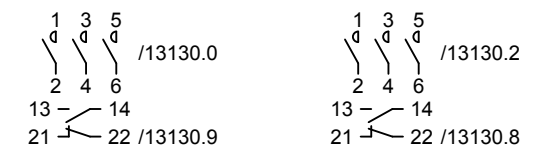
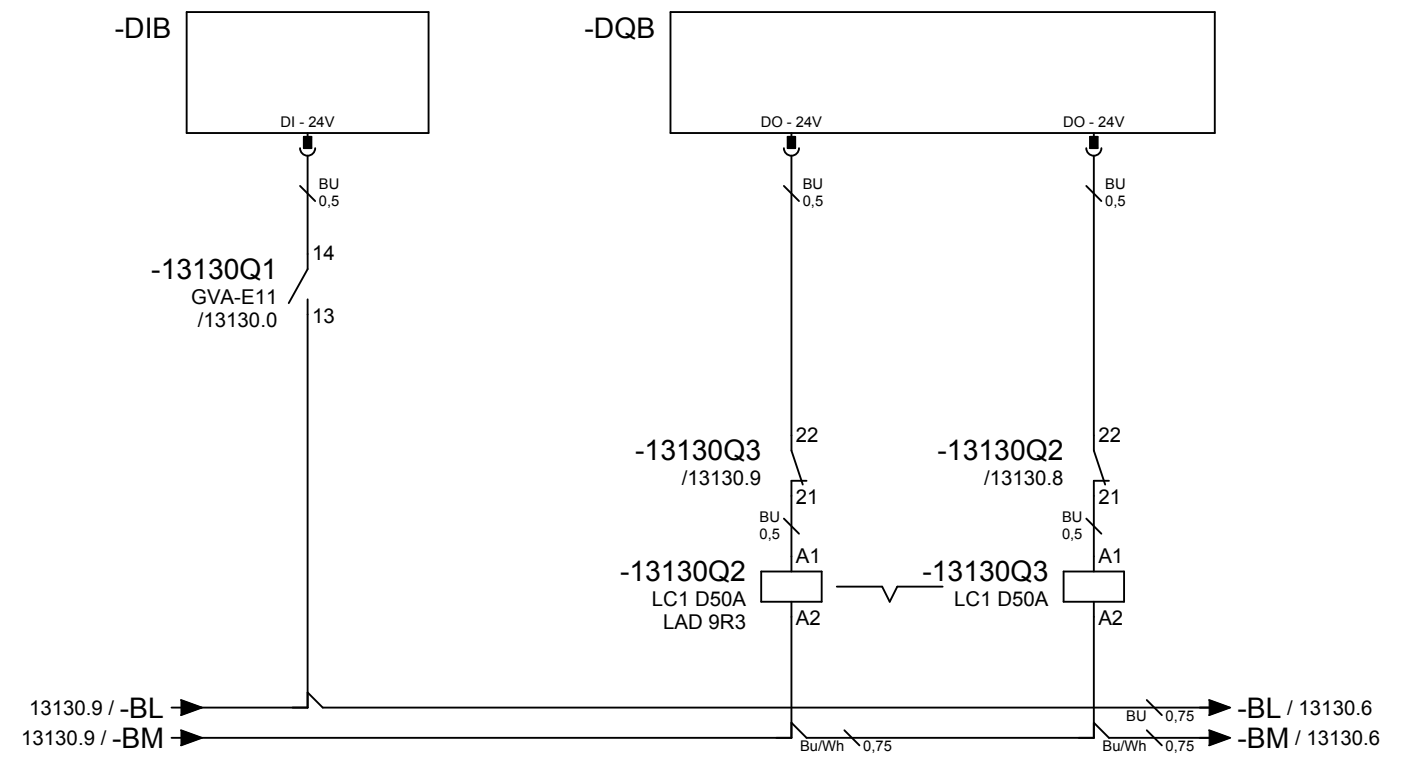


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

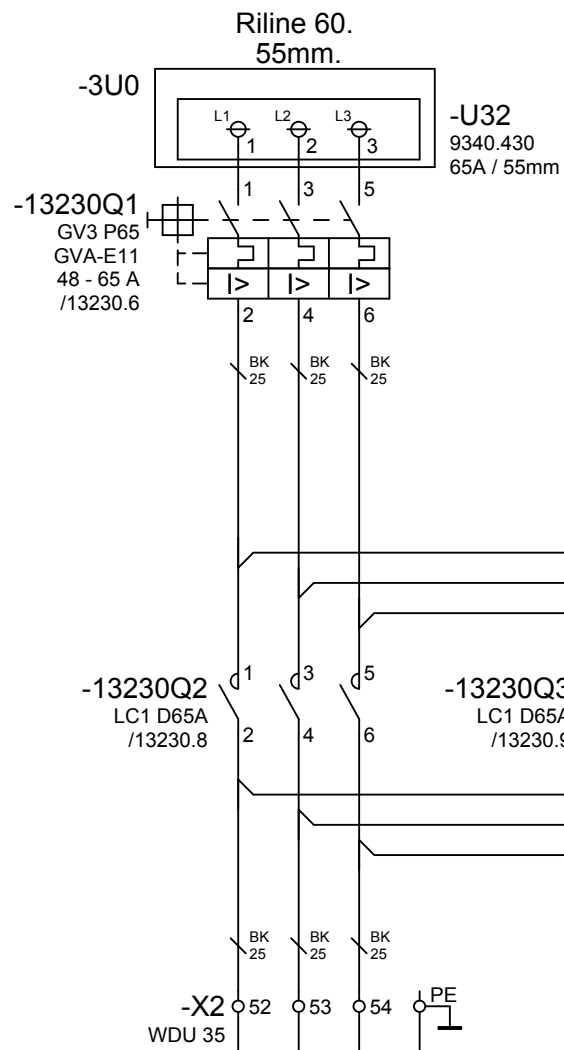


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	16mm ² = cca 60A; (39A = 65,0%)
loss U at In	0,12V
loss U at 5xIn	0,62V
heat losses at In	14,54W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	10mm ² = cca 60A; (39A = 65,0%)
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heat losses at In	194,0W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

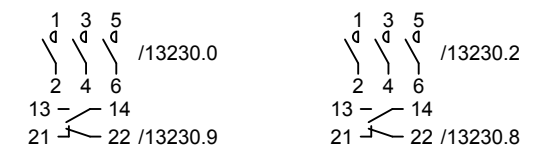
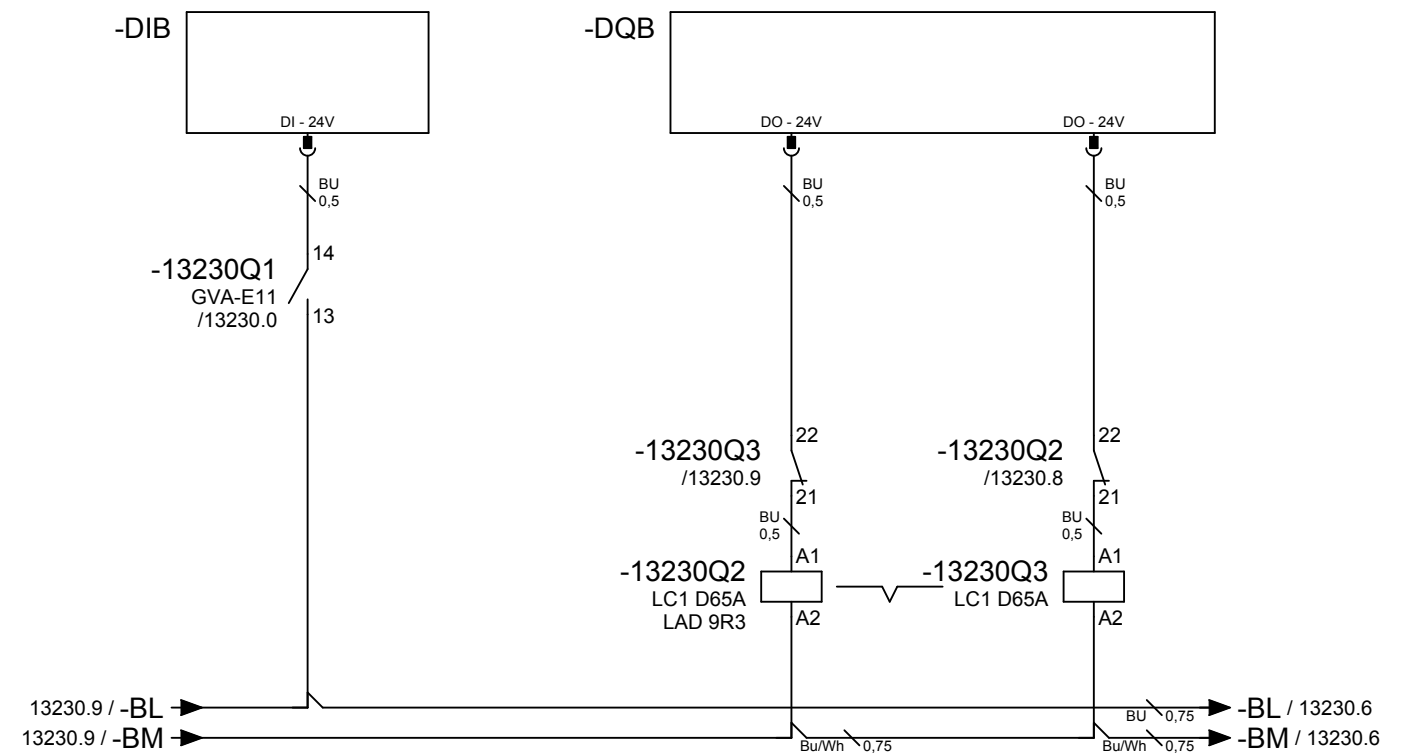


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
 load 25mm² = cca 77A; (52A = 67,5%)
 loss U at In 0,11V
 loss U at 5xIn 0,53V
 heat losses at In 16,55W (L=3x3m)

 short circuit resistance 50kA at 415V

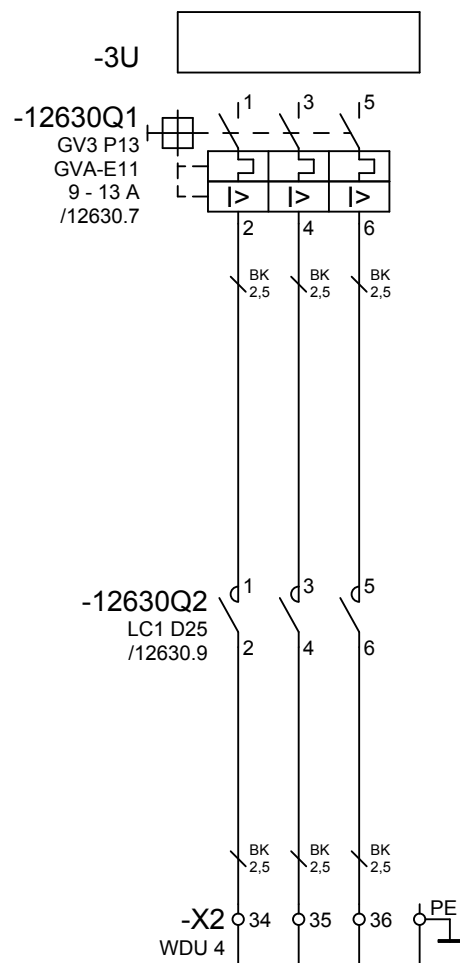
Cable route E
 load 16mm² = cca 80A; (52A = 65,0%)
 loss U at In 1,38V
 loss U at 5xIn 6,91V
 heat losses at In 215,5W (L=3x25m)



Circuit breaker. 0=Failure.
 Motor. Contactor.
 Motor. Contactor.

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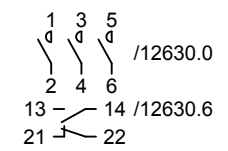
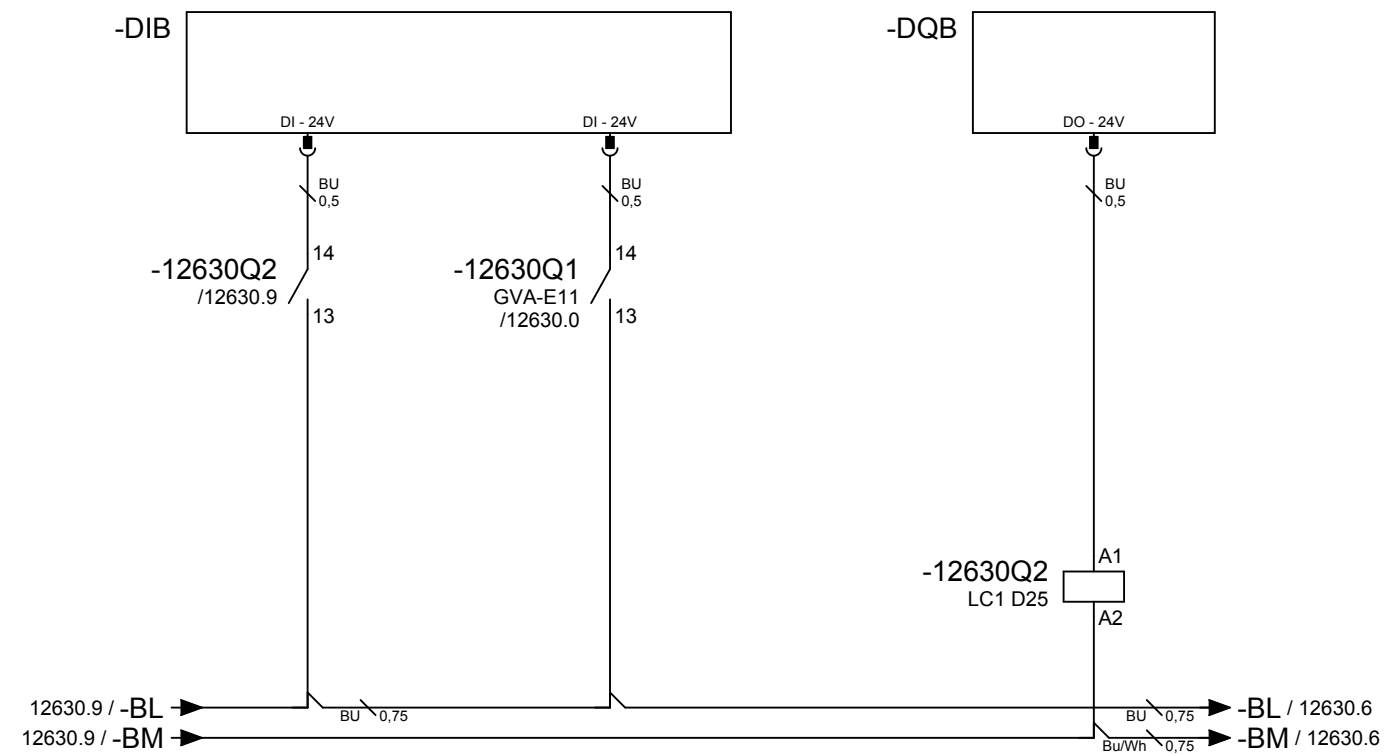
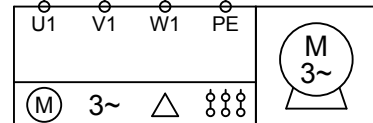
+UBxxx-12630W1
ÖLFLEX 100
4x2,5
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

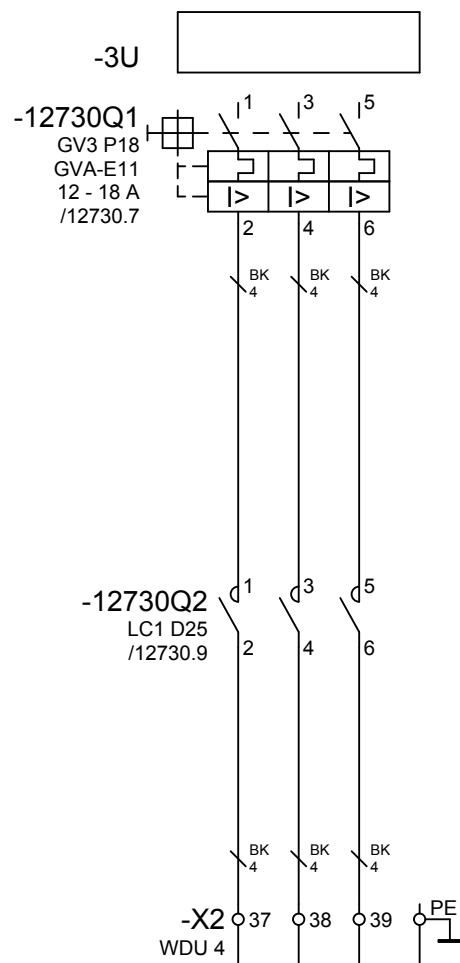
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short circuit resistance 130kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..

-12630M1
5,5 kW
Δ=400V-11,0A.
/12630



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

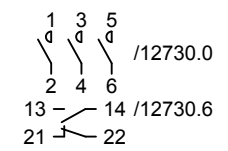
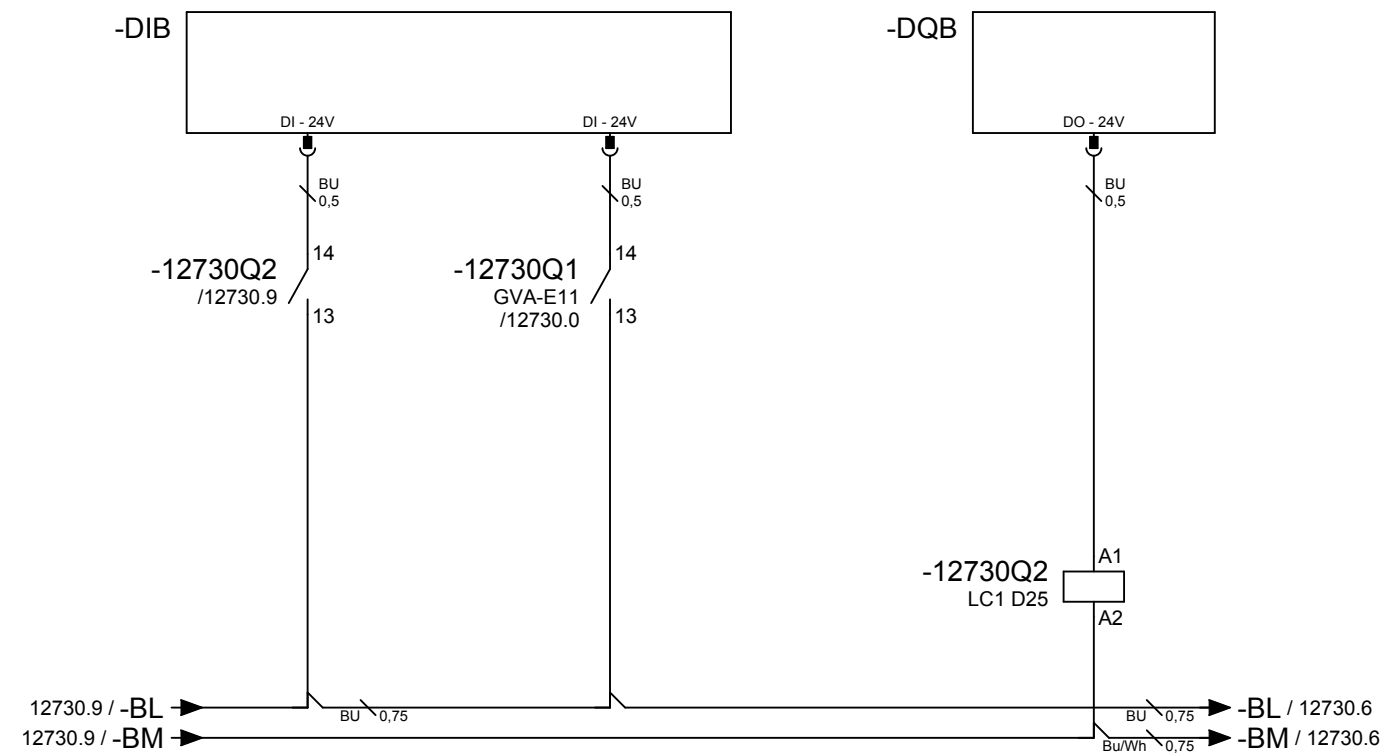


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

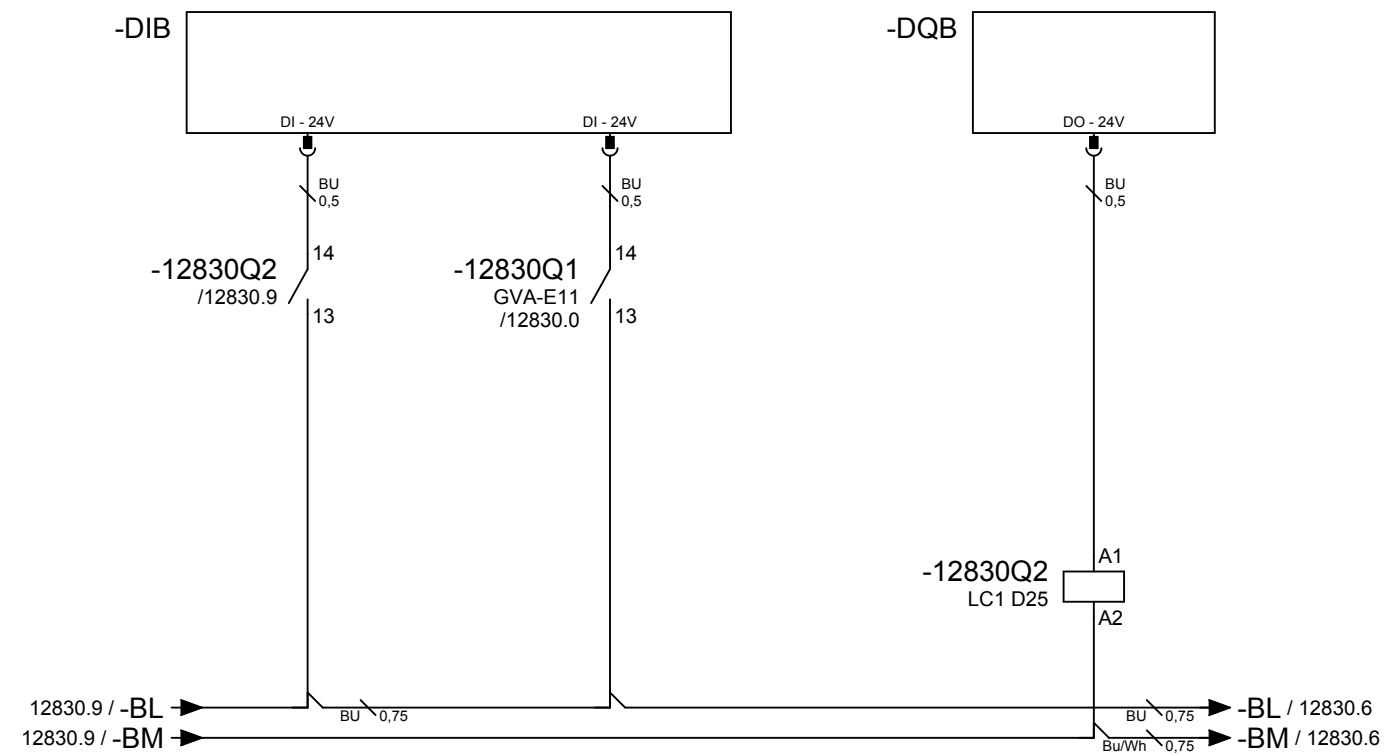
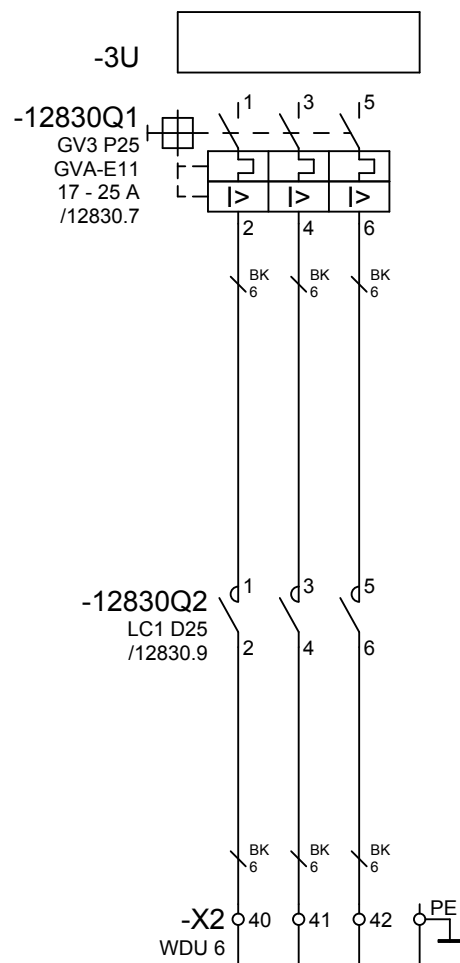
Enclosure B1
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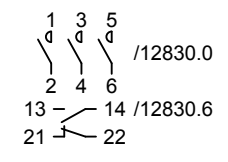


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

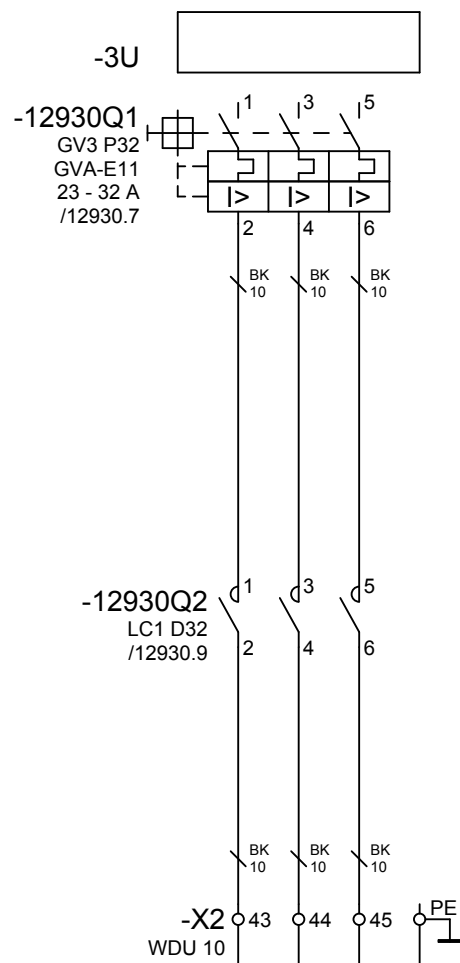


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	6mm ² = cca 32A; (21A = 65,6%)
loss U at In	0,18V
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heat losses at In	11,25W (L=3x3m)
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short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (21A = 48,8%)
loss U at In	1,49V
loss U at 5xIn	7,44V
heat losses at In	93,7W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

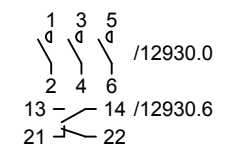
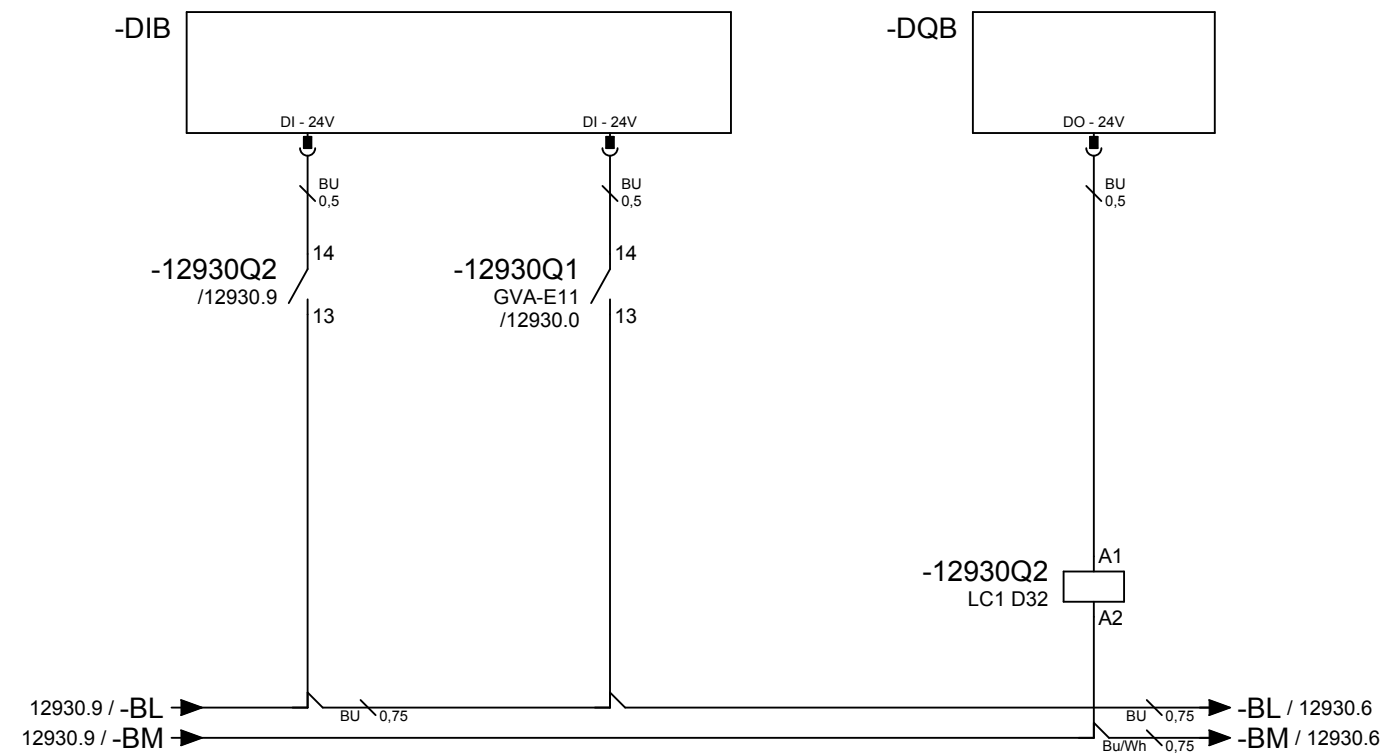
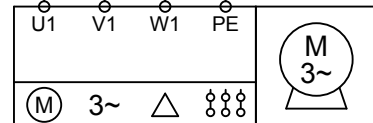


+UBxxx-12930W1
ÖLFLEX 100
4x6
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

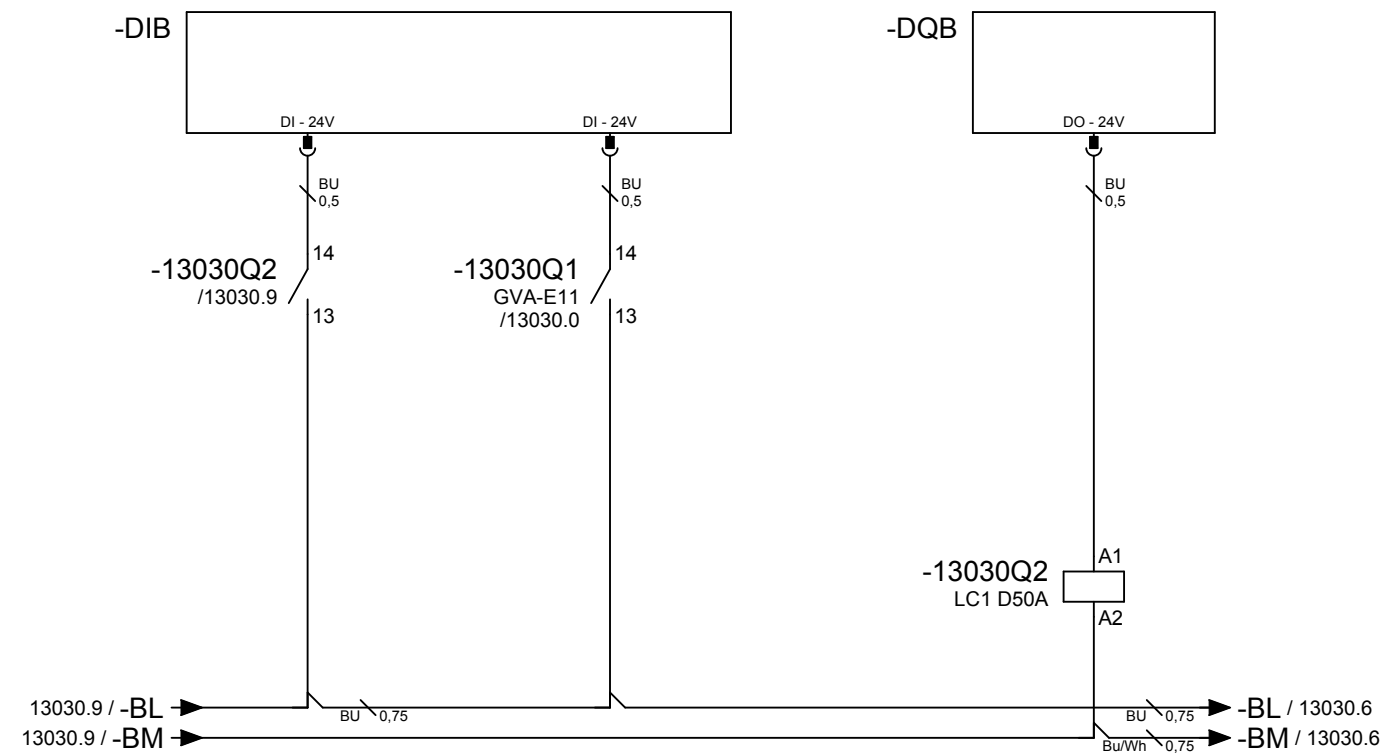
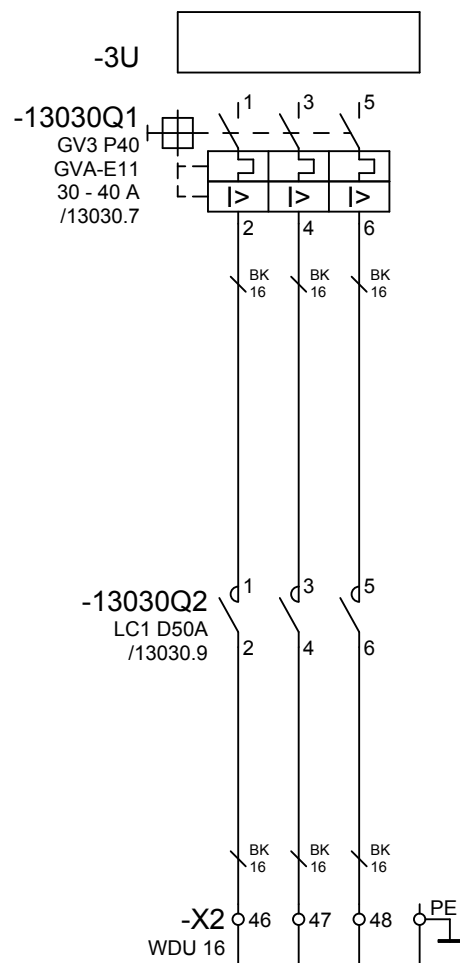
Enclosure B1
load 10mm² = cca 44A; (28A = 63,6%)
loss U at In 0,14V
loss U at 5xIn 0,71V
heat losses at In 12,00W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 6mm² = cca 43A; (28A = 65,1%)
loss U at In 1,98V
loss U at 5xIn 9,92V
heat losses at In 166,6W (L=3x25m)
... ..
... ..



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	<p>PACK 31. Motors. TISKO spol. s r. o.</p>	<p>15kW. 2018</p>	Creator V00 01.02.2012 Ing. Tisovčík Ivan	<p>= GV3P_C2</p>		
			Last revision of project		<p>+ GV3</p>	
			Last revision of page			<p>12930</p>
			M = 1 : 1 Schéma vícepólového zapojení 21.10.2018 WUP0U34409			



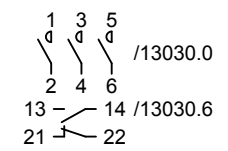
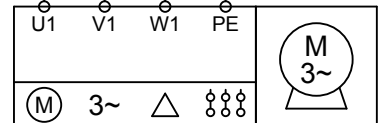
+UBxxx-13030W1
ÖLFLEX 100
4x10
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

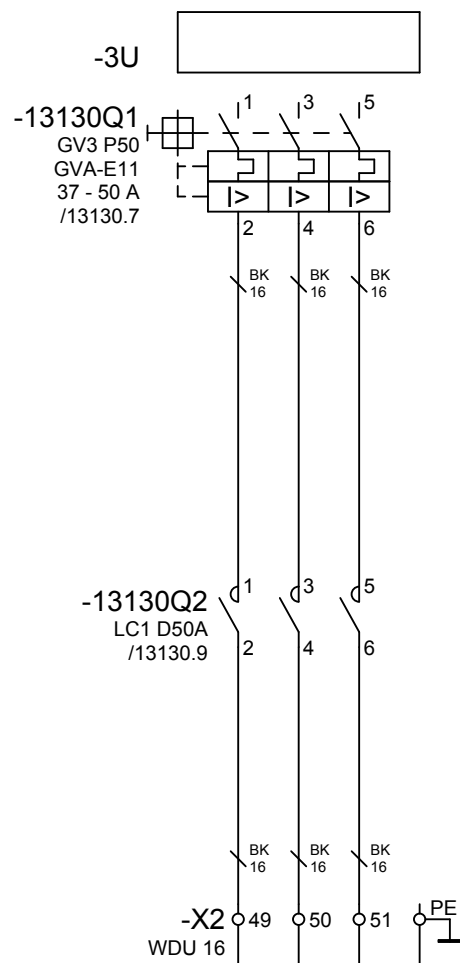
Enclosure B1
load 16mm² = cca 60A; (33A = 55,0%)
loss U at In 0,11V
loss U at 5xIn 0,53V
heat losses at In 10,41W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 10mm² = cca 60A; (33A = 55,0%)
loss U at In 1,40V
loss U at 5xIn 7,01V
heat losses at In 138,8W (L=3x25m)
... ..
... ..

-13030M1
18,5 kW
Δ=400V-32,8A.
/13030

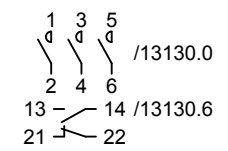
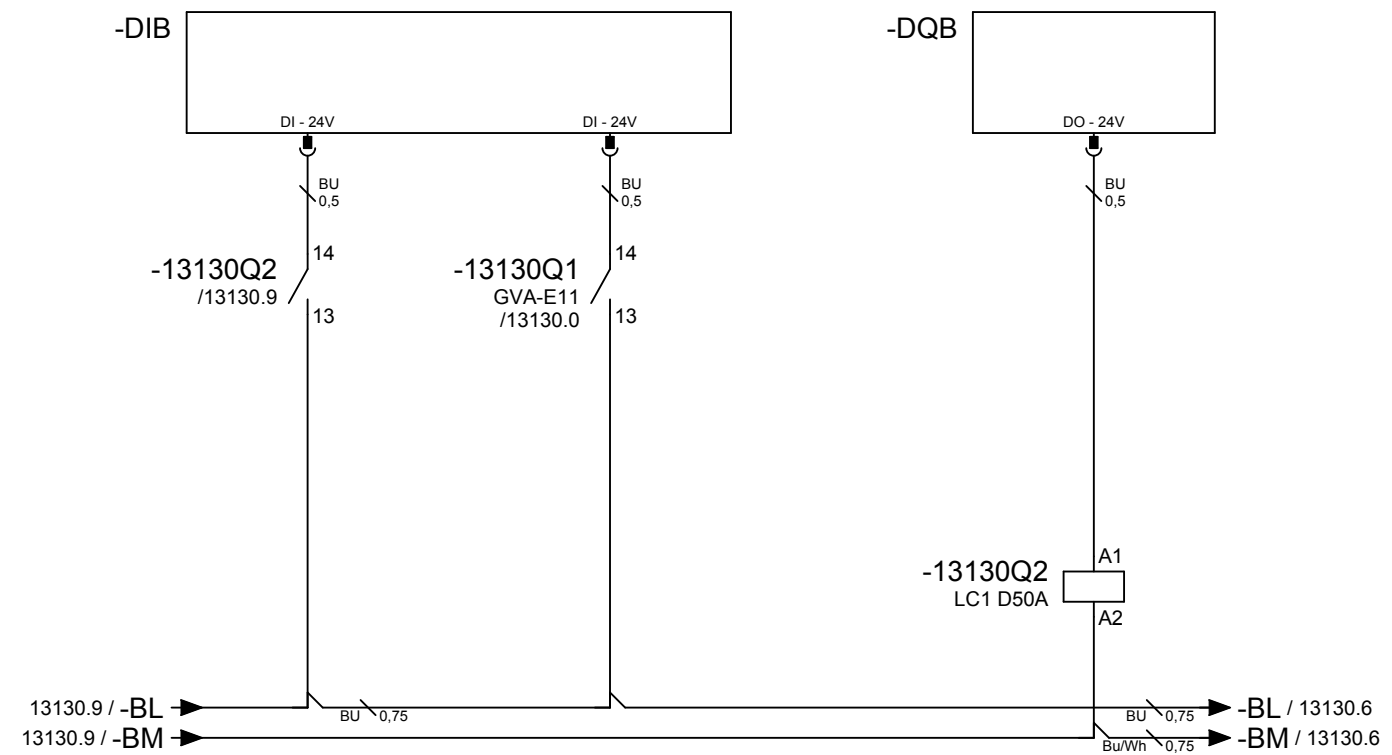


Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.



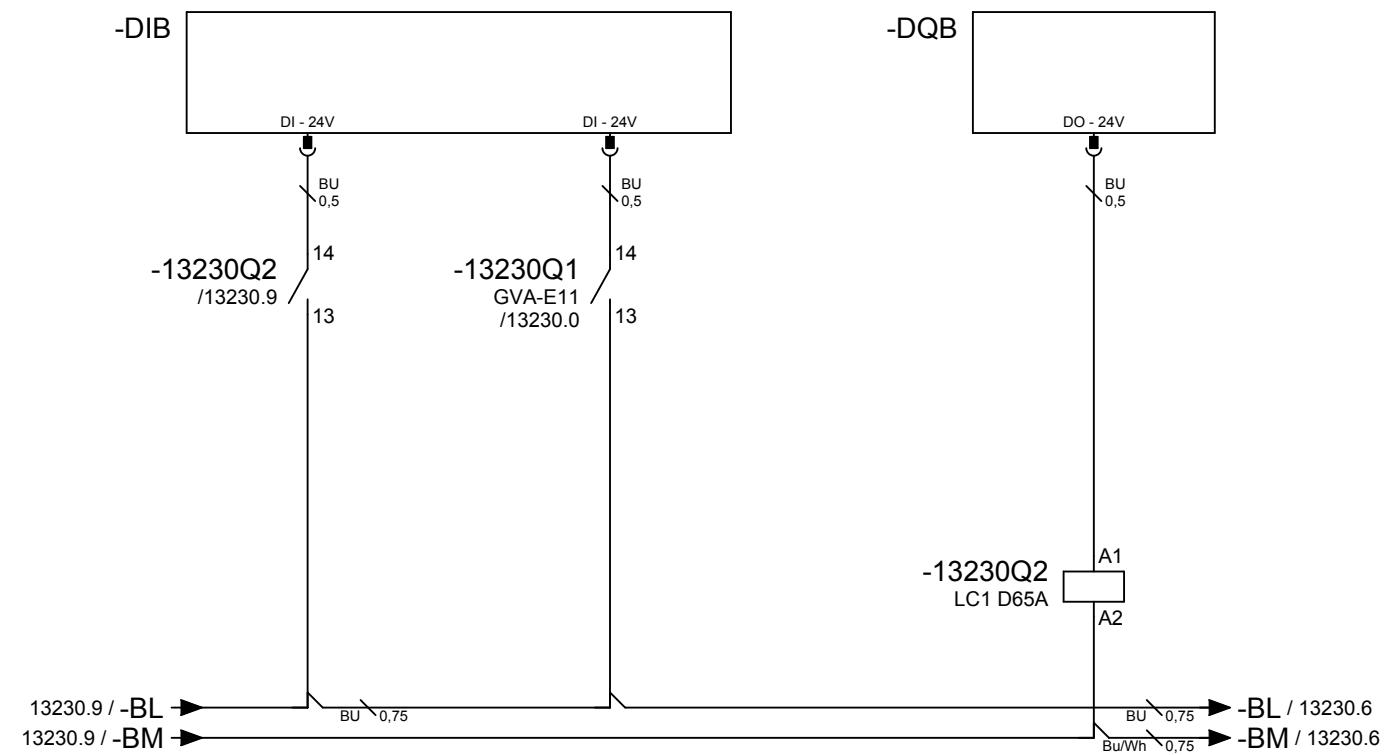
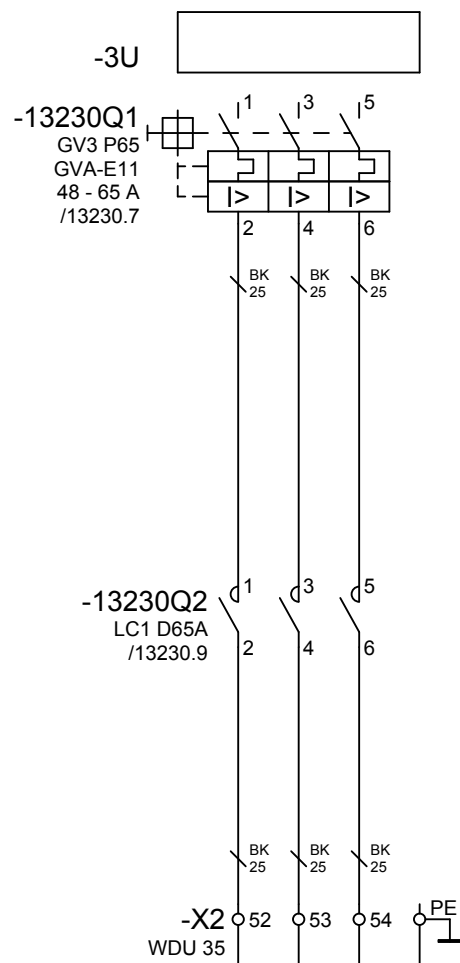
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	16mm ² = cca 60A; (39A = 65,0%)
loss U at In	0,12V
loss U at 5xIn	0,62V
heat losses at In	14,54W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	10mm ² = cca 60A; (39A = 65,0%)
loss U at In	1,66V
loss U at 5xIn	8,29V
heat losses at In	194,0W (L=3x25m)
...	...
...	...



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

<p>elektrotechnická konštruktívna kancelária SLOVAKIA (SK) - BA www.tisko.sk</p>	PACK 31. Motors.	22kW. 2018	Creator	V00	01.02.2012	Ing. Tisovčík Ivan	= GV3P_C2
	TISKO spol. s r. o.		Last revision of project				
			Last revision of page				13130
			M = 1 : 1	Schéma vícepólového zapojení	21.10.2018	WUP0U34409	



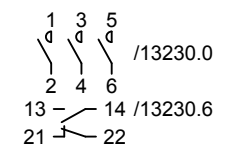
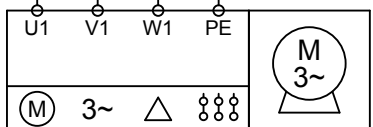
+UBxxx-13230W1
ÖLFLEX 100
4x16
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

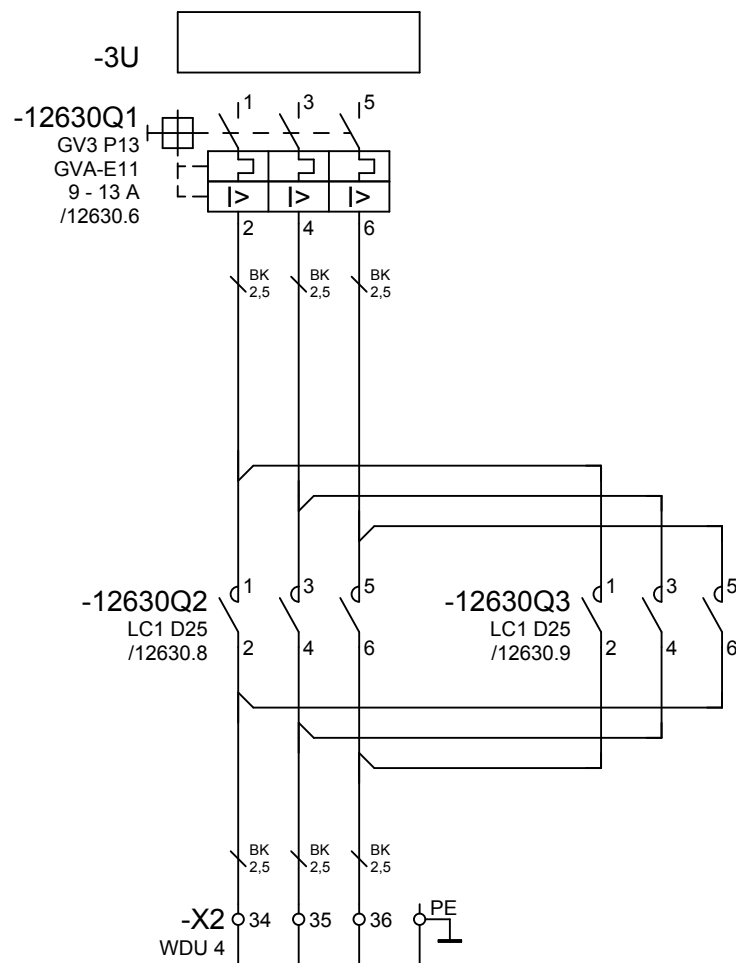
Enclosure B1
load 25mm² = cca 77A; (52A = 67,5%)
loss U at In 0,11V
loss U at 5xIn 0,53V
heat losses at In 16,55W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 16mm² = cca 80A; (52A = 65,0%)
loss U at In 1,38V
loss U at 5xIn 6,91V
heat losses at In 215,5W (L=3x25m)
... ..
... ..

-13230M1
30 kW
Δ=400V-51,5A.
/13230



Contactor. 1=Switched ON. Circuit breaker. 0=Failure. Motor. Contactor.

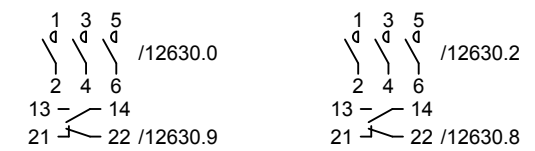
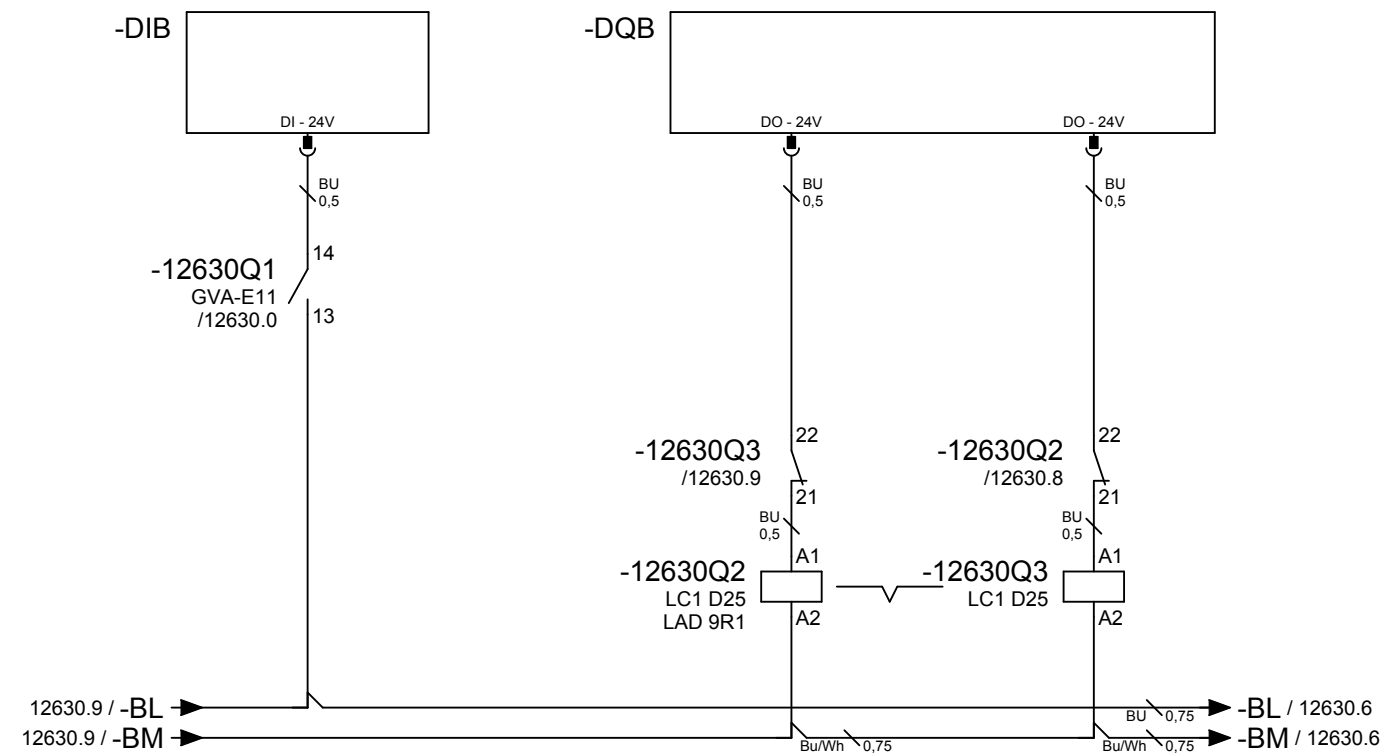
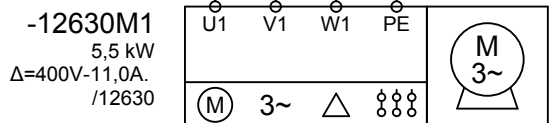


+UBxxx-12630W2
ÖLFLEX 100
4x2,5
25 m

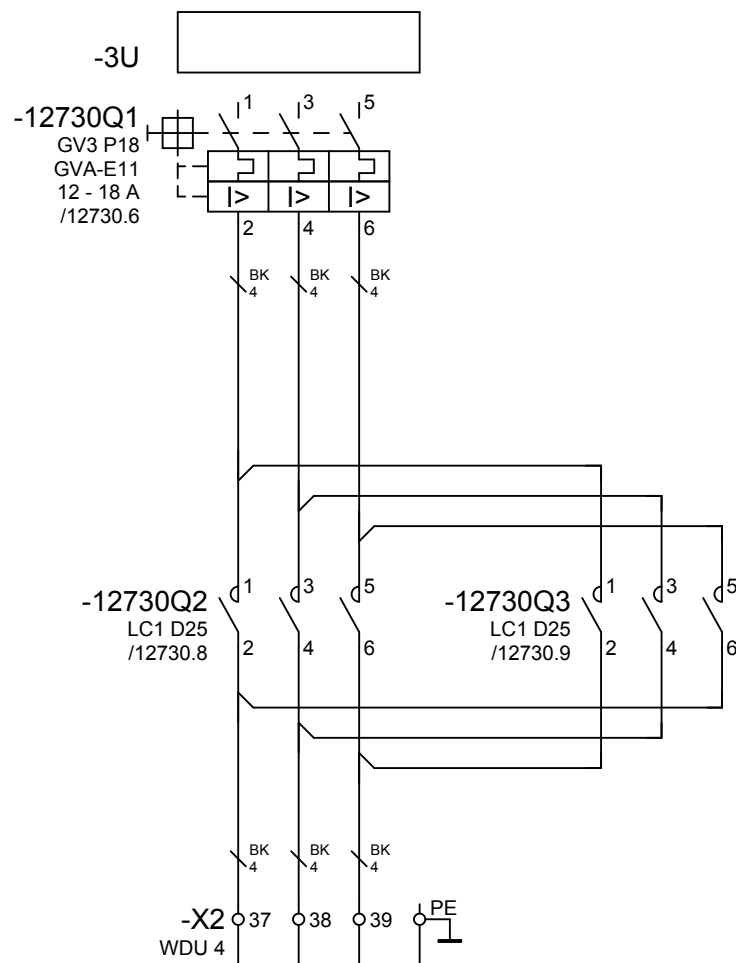
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 2,5mm² = cca 18,3A; (11A = 60,1%)
loss U at In 0,22V
loss U at 5xIn 1,12V
heat losses at In 7,41W (L=3x3m)
... ..
short circuit resistance 130kA at 415V

Cable route E
load 2,5mm² = cca 25,0A; (11A = 44,0%)
loss U at In 1,87V
loss U at 5xIn 9,35V
heat losses at In 61,7W (L=3x25m)
... ..
... ..



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



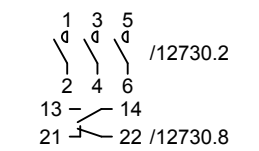
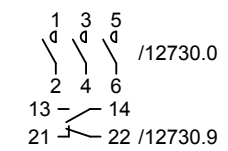
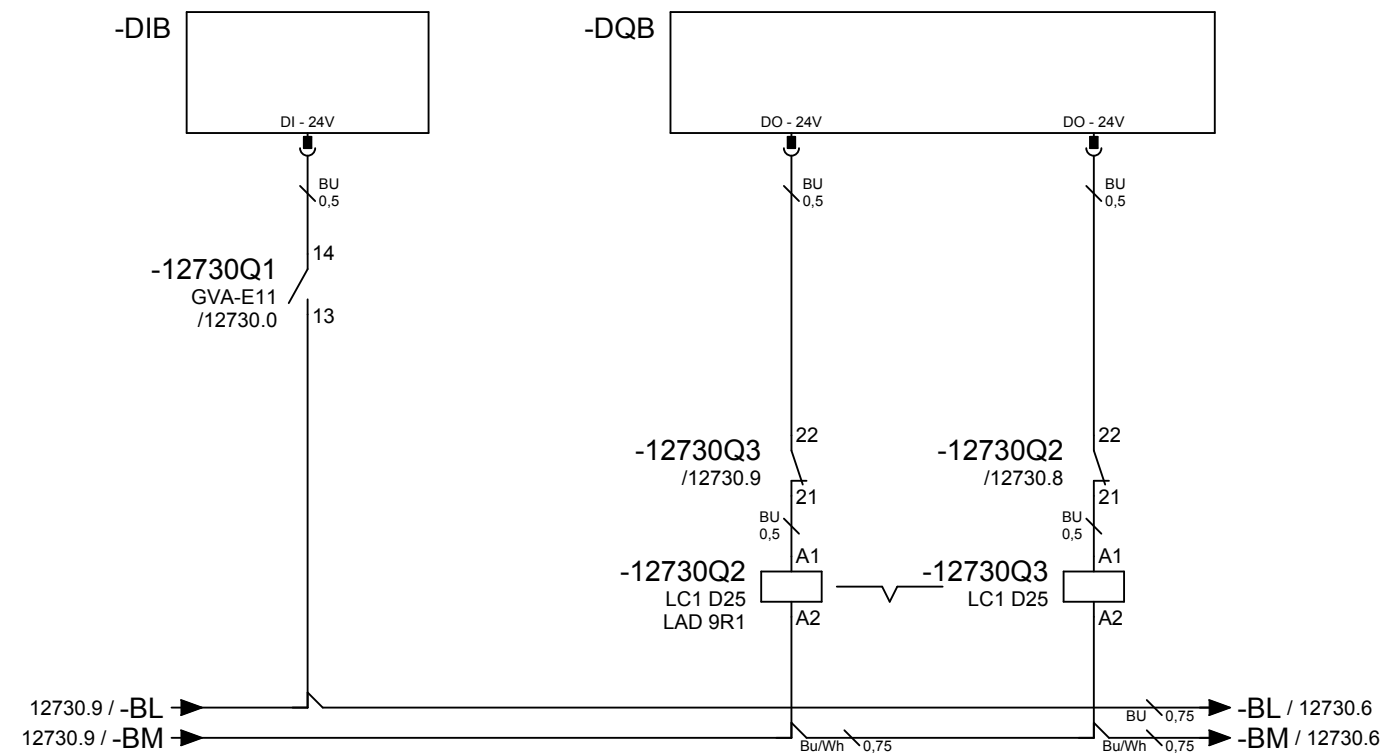
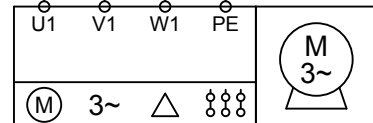
+UBxxxx-12730W2
ÖLFLEX 100
4x4
25 m

3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 4mm² = cca 25A; (15A = 60,0%)
loss U at In 0,19V
loss U at 5xIn 0,96V
heat losses at In 8,61W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 4mm² = cca 34A; (15A = 44,1%)
loss U at In 1,59V
loss U at 5xIn 7,97V
heat losses at In 71,7W (L=3x25m)
... ..
... ..

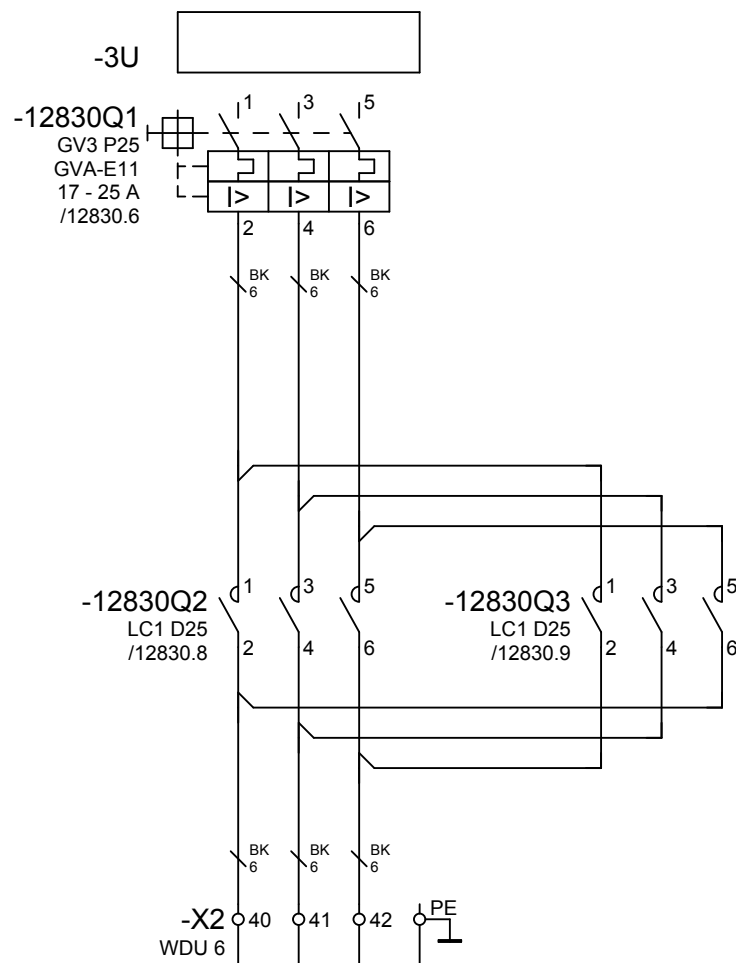
-12730M1
7,5 kW
Δ=400V-14,6A.
/12730



Circuit breaker. 0=Failure.

Motor. Contactor.

Motor. Contactor.

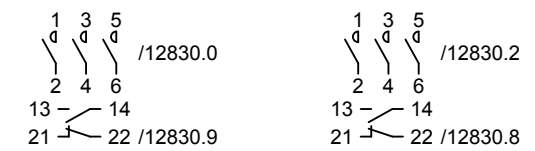
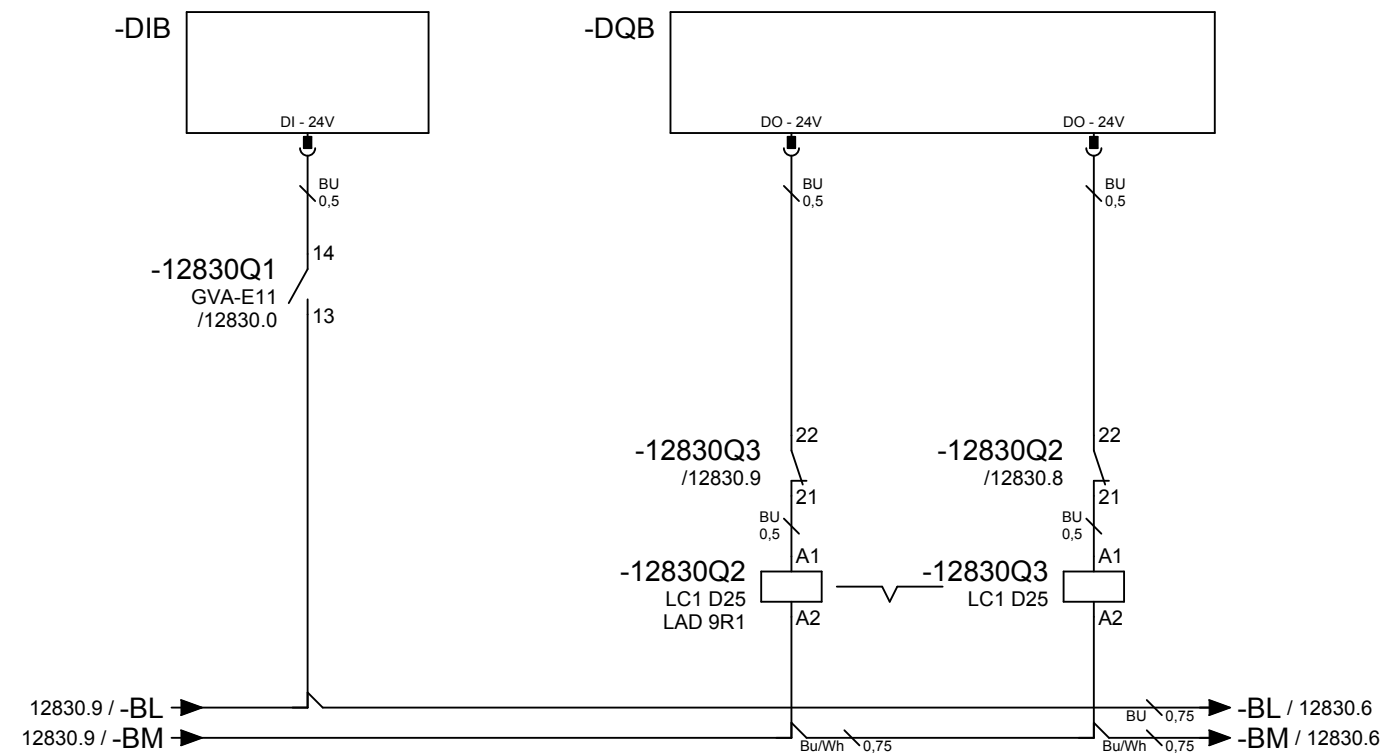
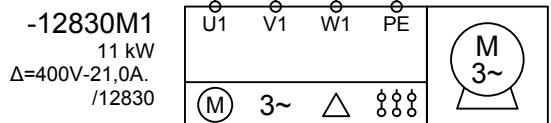


+UBxxx-12830W2
ÖLFLEX 100
4x6
25 m

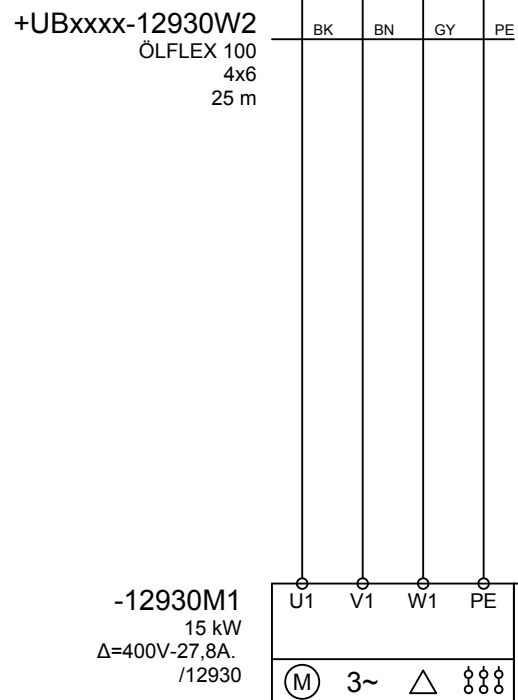
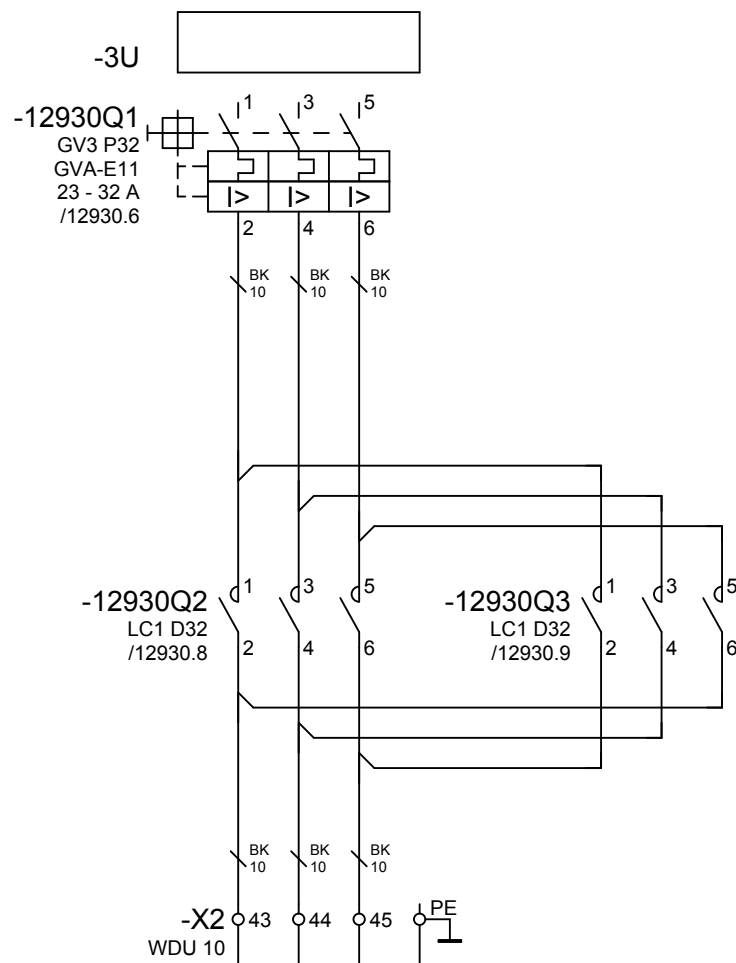
3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure B1
load 6mm² = cca 32A; (21A = 65,6%)
loss U at In 0,18V
loss U at 5xIn 0,89V
heat losses at In 11,25W (L=3x3m)
... ..
short circuit resistance 50kA at 415V

Cable route E
load 6mm² = cca 43A; (21A = 48,8%)
loss U at In 1,49V
loss U at 5xIn 7,44V
heat losses at In 93,7W (L=3x25m)
... ..
... ..

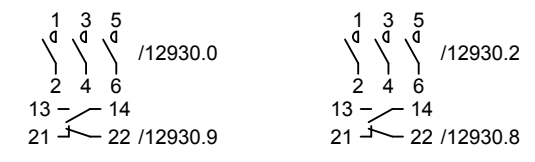
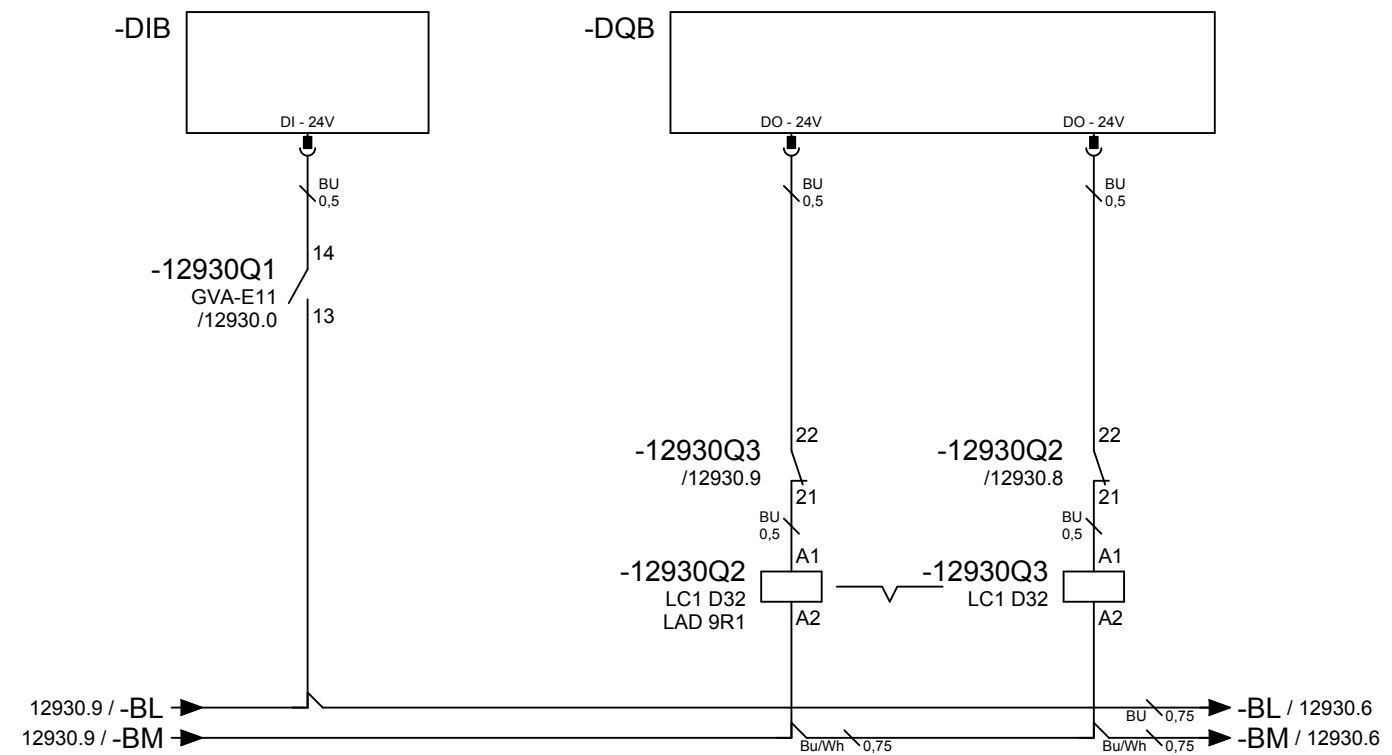


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

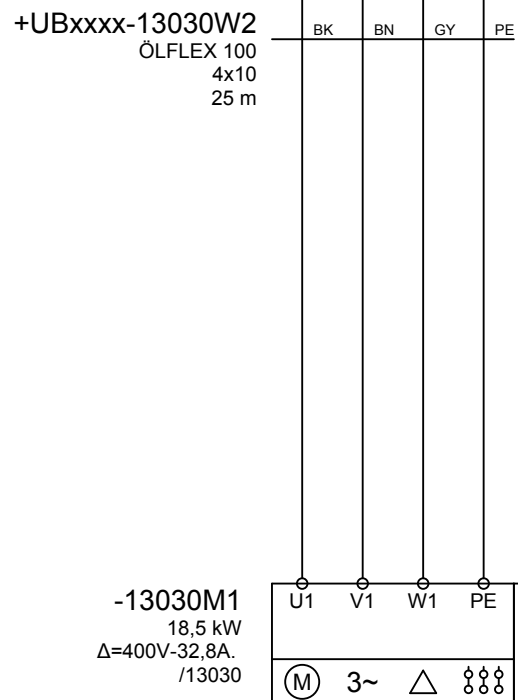
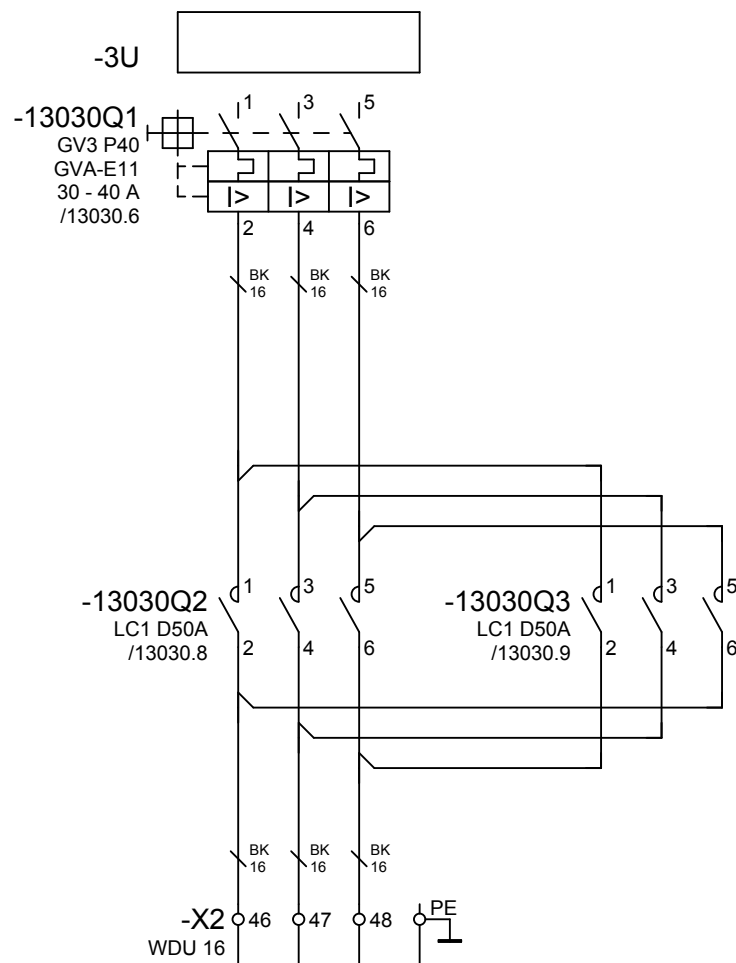


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	10mm ² = cca 44A; (28A = 63,6%)
loss U at In	0,14V
loss U at 5xIn	0,71V
heat losses at In	12,00W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	6mm ² = cca 43A; (28A = 65,1%)
loss U at In	1,98V
loss U at 5xIn	9,92V
heat losses at In	166,6W (L=3x25m)
...	...
...	...

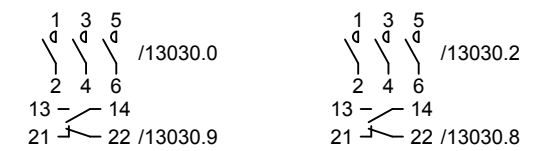
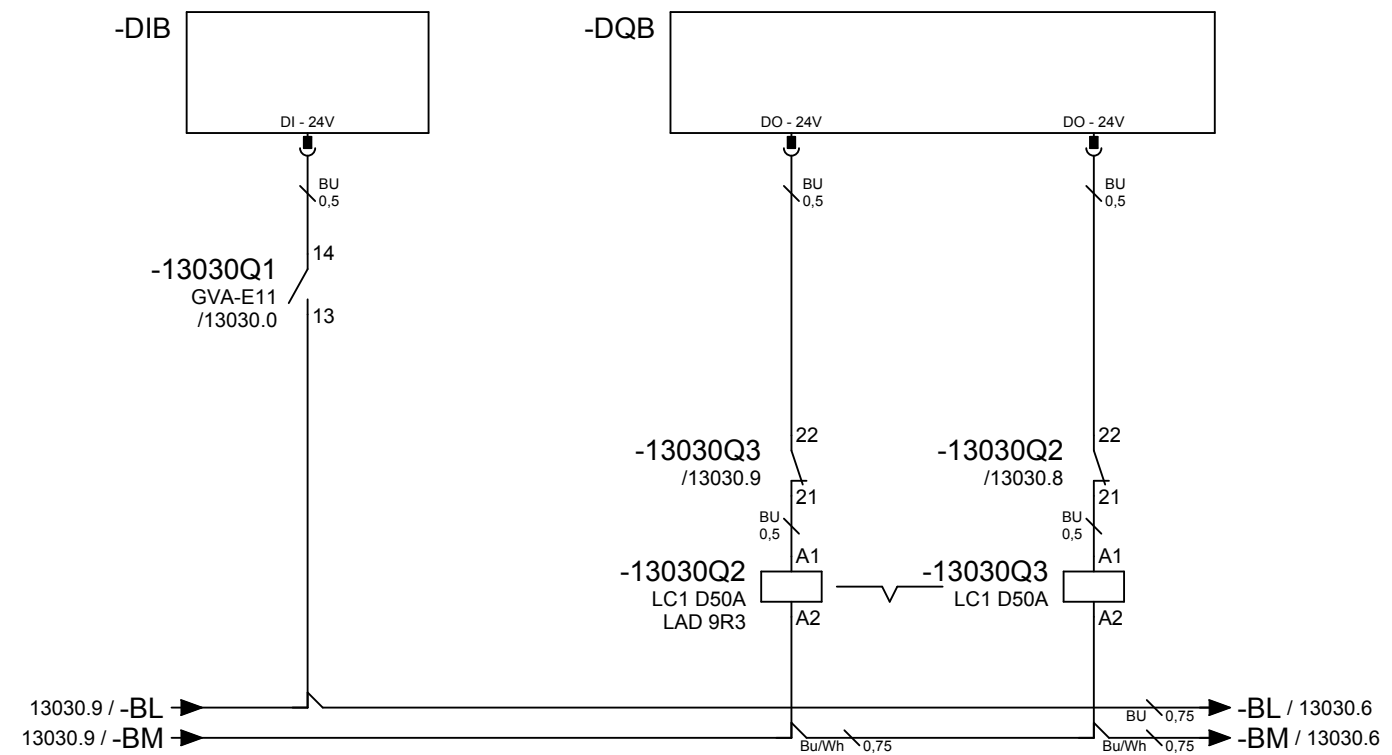


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

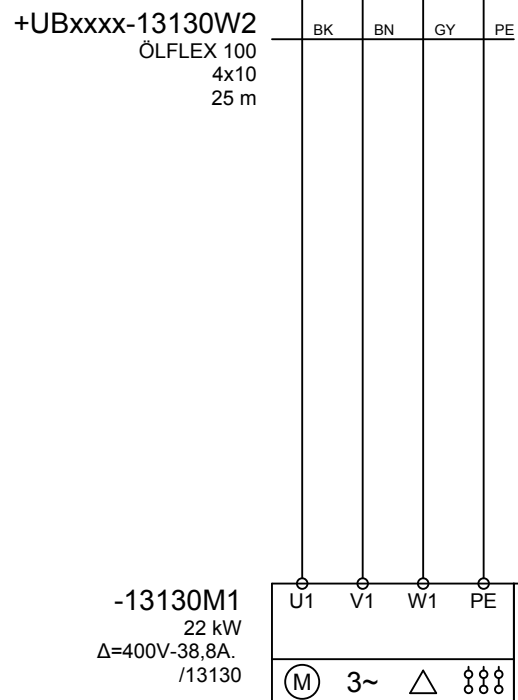
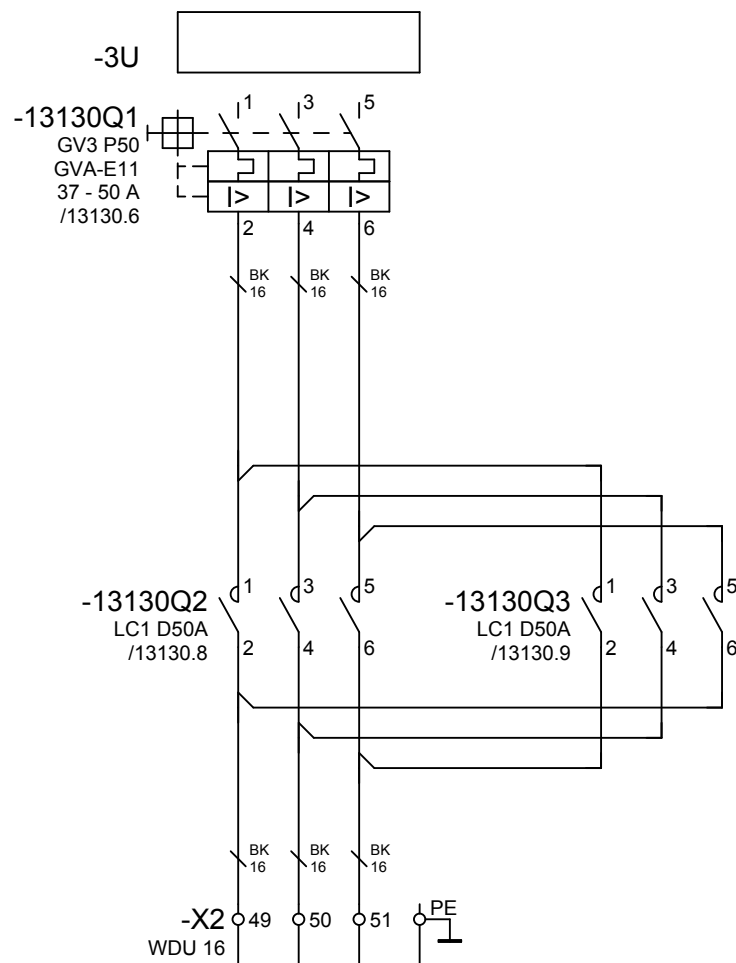


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	16mm ² = cca 60A; (33A = 55,0%)
loss U at In	0,11V
loss U at 5xIn	0,53V
heat losses at In	10,41W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	10mm ² = cca 60A; (33A = 55,0%)
loss U at In	1,40V
loss U at 5xIn	7,01V
heat losses at In	138,8W (L=3x25m)
...	...
...	...

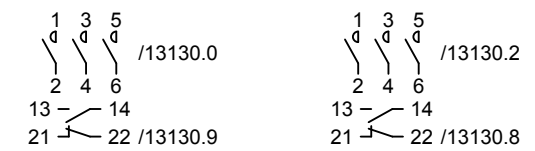
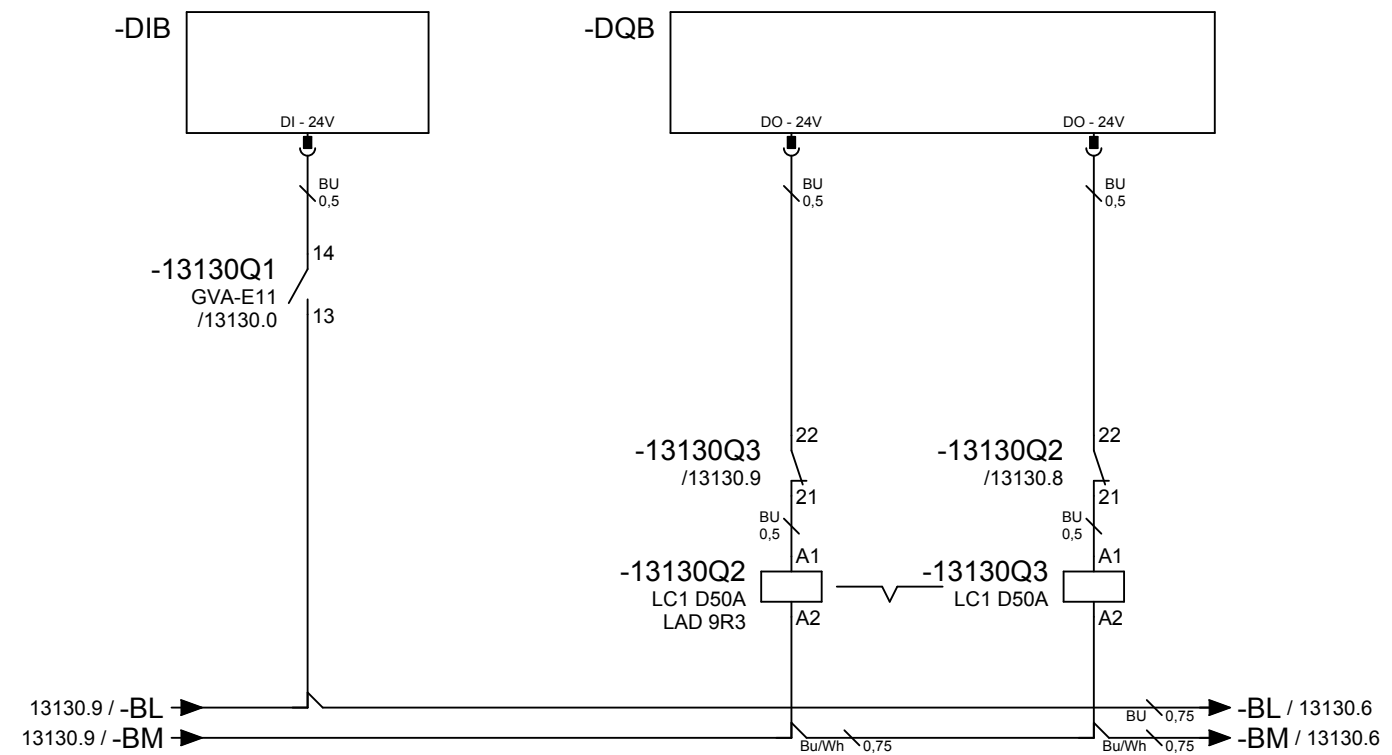


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

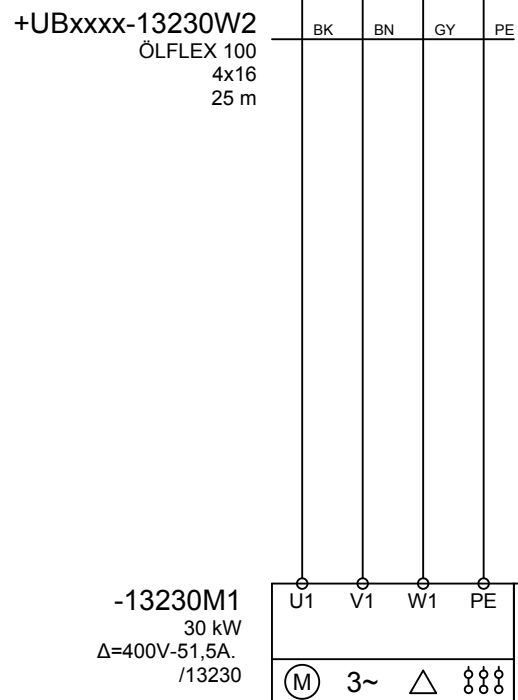
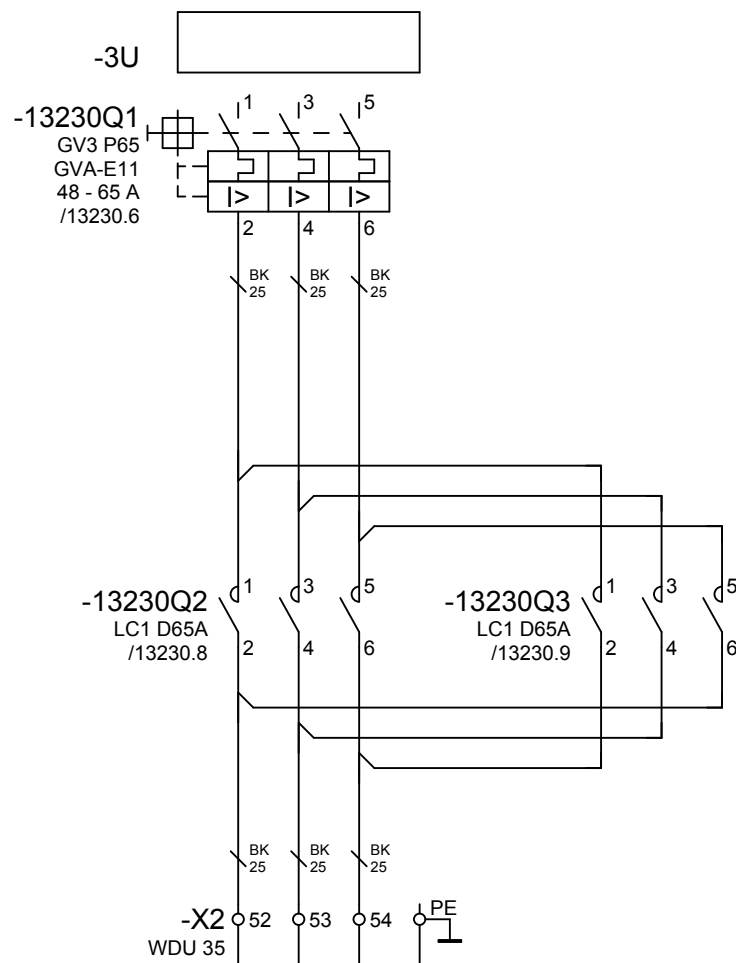


3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	16mm ² = cca 60A; (39A = 65,0%)
loss U at In	0,12V
loss U at 5xIn	0,62V
heat losses at In	14,54W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	10mm ² = cca 60A; (39A = 65,0%)
loss U at In	1,66V
loss U at 5xIn	8,29V
heat losses at In	194,0W (L=3x25m)
...	...
...	...

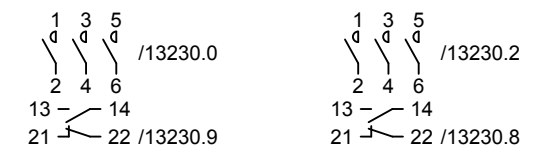
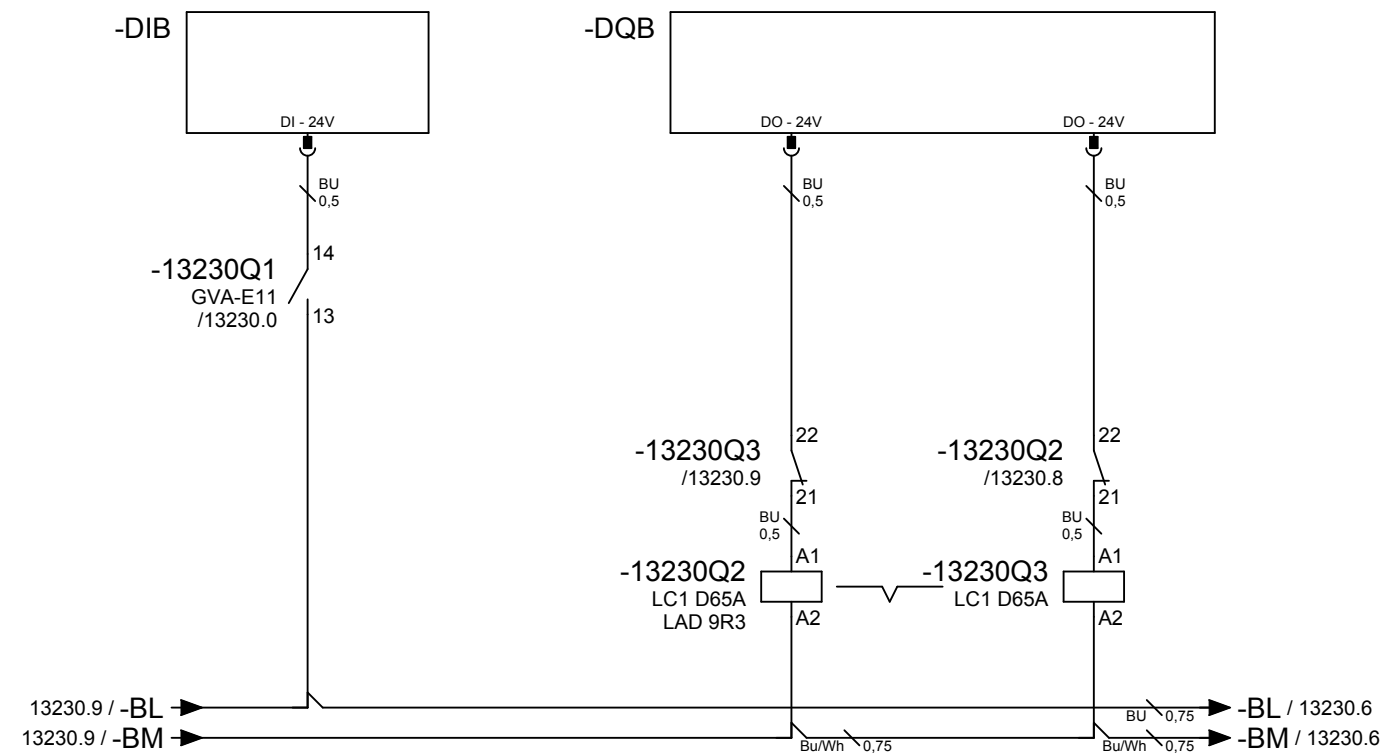


Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.



3-80-91-011 - Výpočty zaťaženia vodičov a káblov

Enclosure	B1
load	25mm ² = cca 77A; (52A = 67,5%)
loss U at In	0,11V
loss U at 5xIn	0,53V
heat losses at In	16,55W (L=3x3m)
...	...
short circuit resistance	50kA at 415V
Cable route	E
load	16mm ² = cca 80A; (52A = 65,0%)
loss U at In	1,38V
loss U at 5xIn	6,91V
heat losses at In	215,5W (L=3x25m)
...	...
...	...



Circuit breaker. 0=Failure. Motor. Contactor. Motor. Contactor.

