

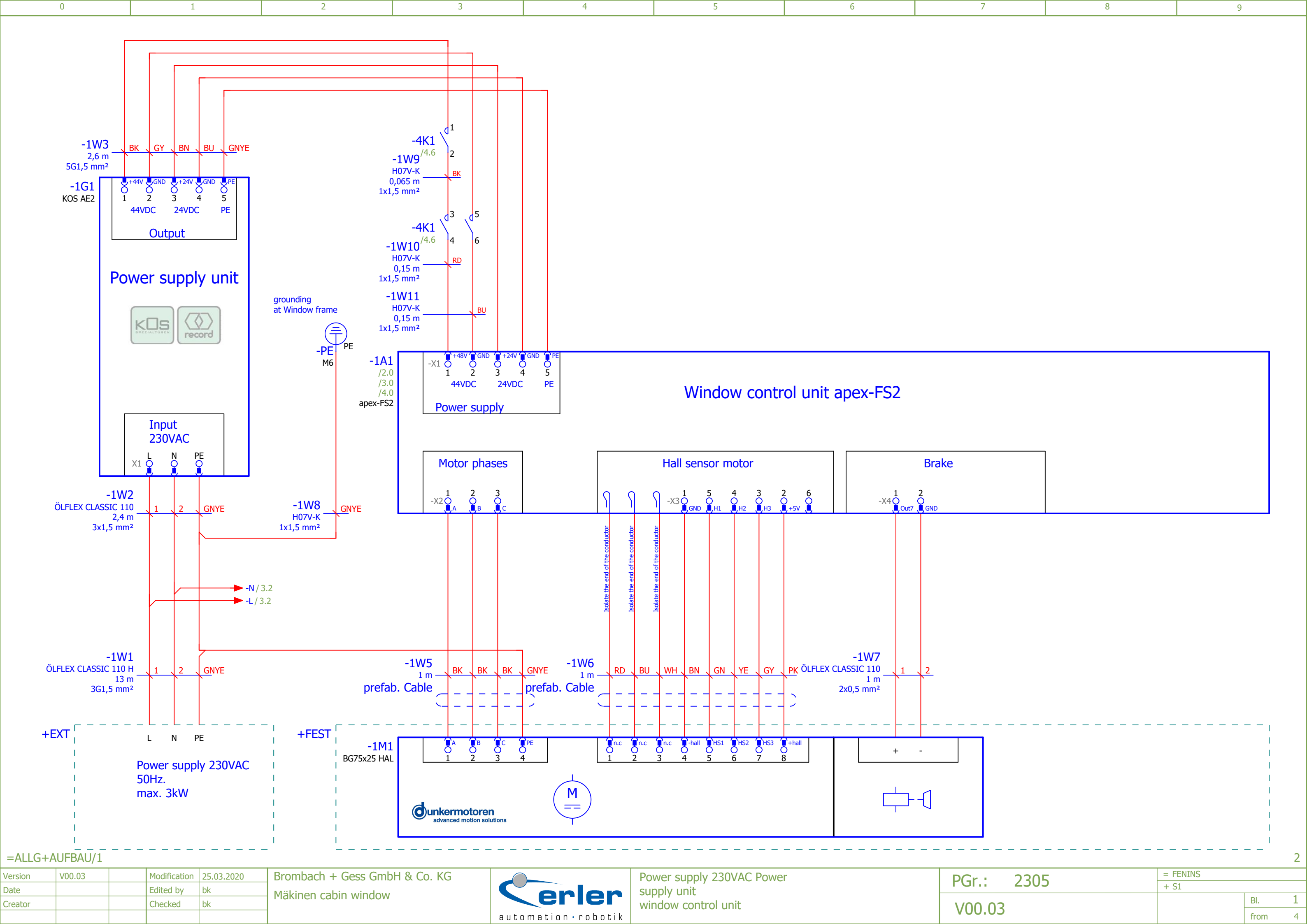
automation • robotik

Version	V00.03		Modification	25.03.2020	Brombach + Gess GmbH & Co. KG Mäkinen cabin window 	Cover sheet	PGr.: 2305		= ALLG	
Date			Edited by	bk					+ DBL	
Creator			Checked	bk						Bl. 1
							V00.03			from 1

Structure identifier overview

Designation	Type	Description
=ALLG	plant	General information
=FENINS	plant	Window control unit with Insects louvre
=AWT	plant	Reports
+DBL	Mounting location	Cover sheet
+INH	Mounting location	Table of contents
+INFO	Mounting location	Plant informations
+AUFBAU	Mounting location	Layout plan
+S1	Mounting location	Control unit
+KLPLA	Mounting location	Terminal diagram
+KLARP	Mounting location	Terminal line-up diagram
+ARTLST	Mounting location	Bill of materials
+KABUEB	Mounting location	Cable overview
+EXT	Mounting location	Side of the customer
+FEST	Mounting location	Window frame
+KABST	Mounting location	Cabin control unit
+ARTSUM	Mounting location	Summarized parts list

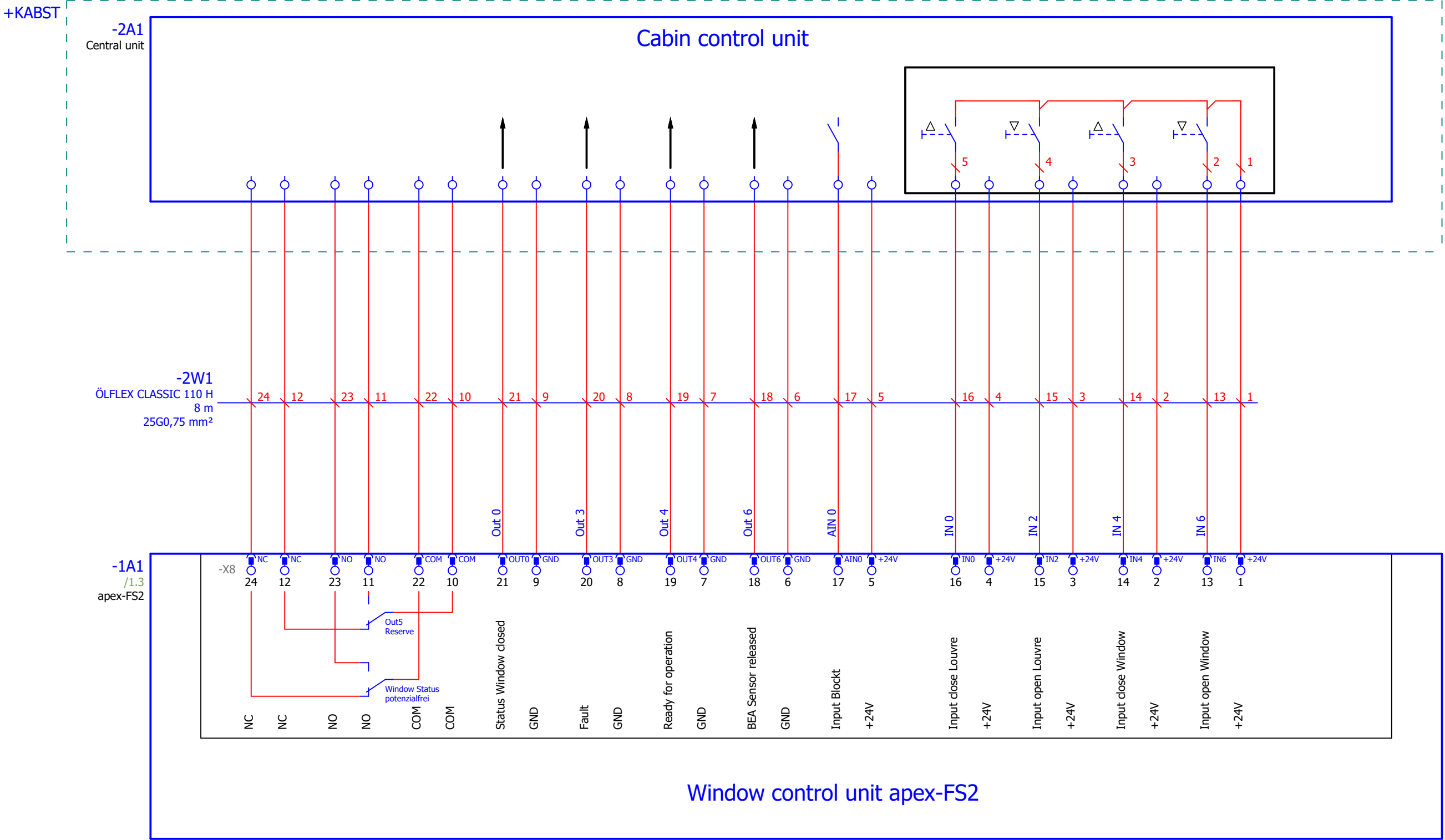




=ALLG+AUFBAU/1

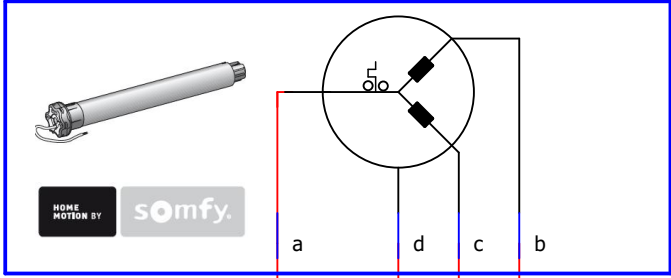
2

Version	V00.03		Modification	25.03.2020	Brombach + Gess GmbH & Co. KG Mäkinen cabin window		Power supply 230VAC Power supply unit window control unit	PGr.: 2305 V00.03	= FENINS + S1	
Date			Edited by	bk						Bl. 1
Creator			Checked	bk						from 4



+FEST

-3M1
Altus 50WT



-3W1
3 m
prefab. Cable

1.1/-N
1.1/-L

-PE



PE1

3W2
WH 1,5mm² 0,6m

3W4
BK 1,5mm² 0,6m

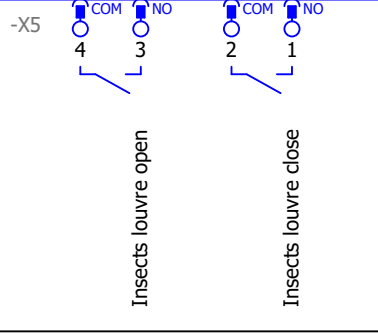
3W3
GY 1,5mm² 0,6m

3W5
BN 1,5mm² 0,6m

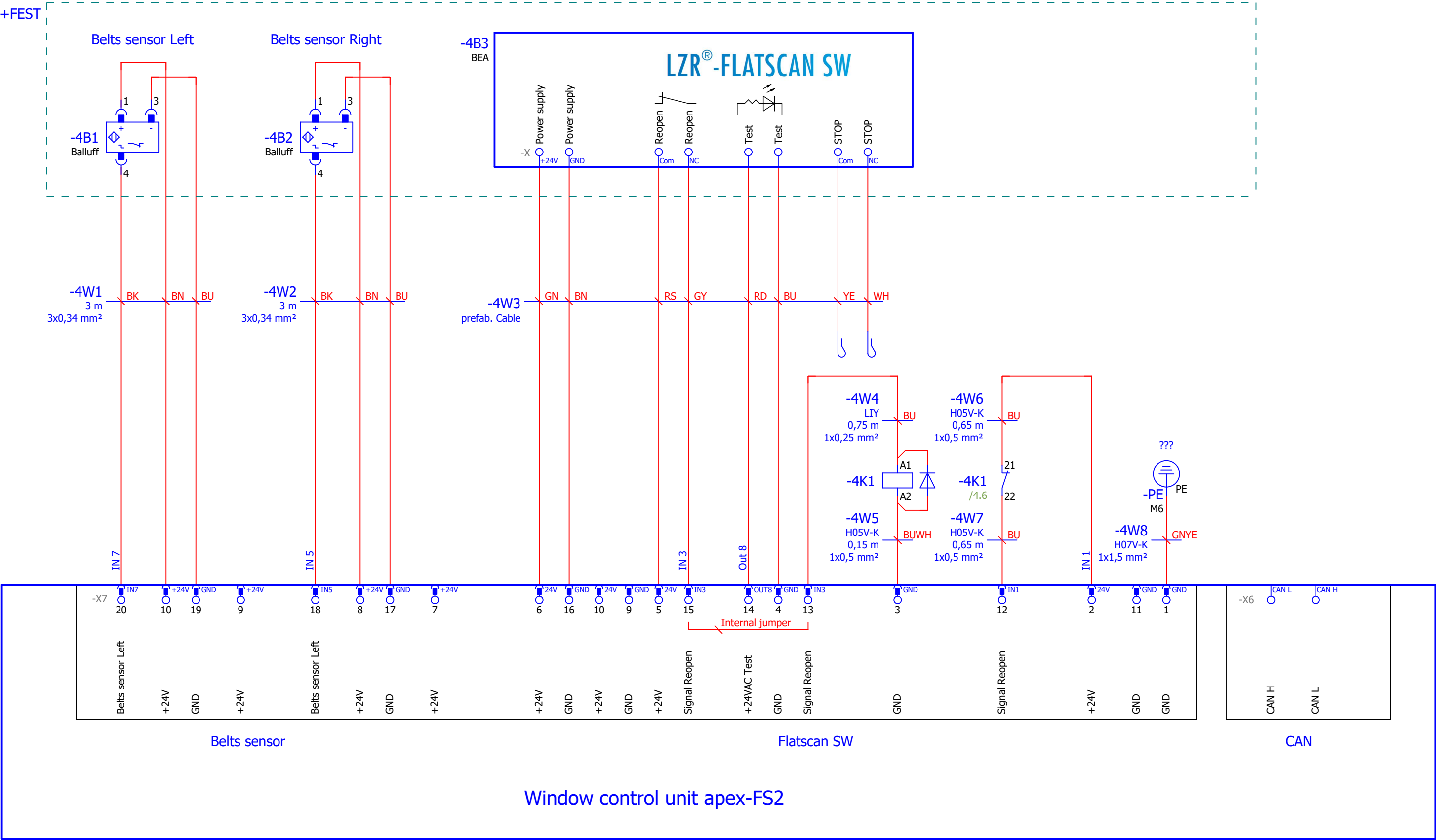
-1A1

/1.3

apex-FS2



Window control unit apex-FS2



601492
601503
1 2 /1.3
3 4 /1.3
5 6 /1.3
21 22 /4.7

Parts list

Device Designation	Type Dash number	Designation	Manufacturer	Certification
=FENINS+S1-1A1 =FENINS+S1/1.3	601418	Window control unit		
=FENINS+S1-1G1 =FENINS+S1/1.0	601388	Power supply unit		
=FENINS+S1-1W1 =FENINS+S1/1.1	ÖLFLEX CLASSIC 110H 3G1,5 601455	ÖLFLEX® CLASSIC 110 H	Lapp	
=FENINS+S1-1W2 =FENINS+S1/1.1	ÖLFLEX® CLASSIC 110 3 G 601468	ÖLFLEX® CLASSIC 110	Lapp	
=FENINS+S1-1W3 =FENINS+S1/1.0				
=FENINS+S1-1W5 =FENINS+S1/1.3	Power 4pol. 601458	Z_Cable KPL BG75 1000G G	Dunkermotoren	
=FENINS+S1-1W6 =FENINS+S1/1.4	8pol. AMPH 601459	Z_Cable KPL BG65 1500G WD	Dunkermotoren	
=FENINS+S1-1W7 =FENINS+S1/1.6	ÖLFLEX® CLASSIC 110 2 X 601470	ÖLFLEX® CLASSIC 110	Lapp	
=FENINS+S1-1W7 =FENINS+S1/1.6	0,5-1mm² 601490	Isolated push connector 0,5-1mm²²	Klauke	
=FENINS+S1-1W8 =FENINS+S1/1.2	H07V-K gnye 601471	Connection-Control line Single conductor H07V-K green/yellow 0,5mm²	Lapp	
=FENINS+S1-1W8 =FENINS+S1/1.2	6306 601484	pinch cable lug isol., 1,5-2,5mm², M6, blue	Klauke	
=FENINS+S1-1W9 =FENINS+S1/1.3	H07V-K bk 1,5mm² 601485	Connection control line Single conductor H07V-K black 0,065m	Lapp	
=FENINS+S1-1W10 =FENINS+S1/1.3	H07V-K rd 1,5mm² 601496	Connection control line Single conductor H07V-K red 0,15m	Lapp	
=FENINS+S1-1W11 =FENINS+S1/1.3	H07V-K bu 1,5mm² 601497	Connection control line Single conductor H07V-K blue 0,15m	Lapp	
=FENINS+S1-2W1 =FENINS+S1/2.1	ÖLFLEX CLASSIC 110H 601456	ÖLFLEX® CLASSIC 110 H	Lapp	
=FENINS+S1-3W1 =FENINS+S1/3.2				
=FENINS+S1-3W2 =FENINS+S1/3.2	H07V-K wh 1,5mm² 601501	Connection control line Single conductor H07V-K white 0,6mm²	Lapp	
=FENINS+S1-3W3 =FENINS+S1/3.3	H07V-K gy 1,5mm² 601502	Connection control line Single conductor H07V-K grey 0,6mm²	Lapp	
=FENINS+S1-3W4 =FENINS+S1/3.3	H07V-K bk 1,5mm² 601472	Connection control line Single conductor H07V-K black 0,6mm²	Lapp	

=FENINS+S1/4

2

Parts list

Device Designation	Type Dash number	Designation	Manufacturer	Certification
=FENINS+S1-3W5 =FENINS+S1/3.3	H07V-K bn 1,5mm² 601483	Connection control line Single conductor H07V-K brown 0,6m	Lapp	
=FENINS+S1-4K1 =FENINS+S1/4.6	601492	safety contactor	ABB	
=FENINS+S1-4K1 =FENINS+S1/4.6	BA 159 601503	Rectifier diode, DO5, 1000V, 0,5A		
=FENINS+S1-4K1 =FENINS+S1/4.6	0,5-1,0mm² 2,8x0,8 601495	Isolated flat plug sleeves 0,5-1,0mm² 2,8x0,8		
=FENINS+S1-4K1 =FENINS+S1/4.6	0,5-1,0mm² 2,8x0,8 601504	Isolated flat plug sleeves 0,5-1,0mm² 2,8x0,8		
=FENINS+S1-4K1 =FENINS+S1/4.6	0,5-1,0mm² 6,3x0,8 601505	Isolated flat plug sleeves 0,5-1,0mm² 6,3x0,8		
=FENINS+S1-4W1 =FENINS+S1/4.1	601460	Connector/Connection cable	Balluff	
=FENINS+S1-4W2 =FENINS+S1/4.2	601460	Connector/Connection cable	Balluff	
=FENINS+S1-4W3 =FENINS+S1/4.4				
=FENINS+S1-4W4 =FENINS+S1/4.6	LIY dbu. 0,5mm² 601507	Connection control line Single conductor H05V-K dark blue 0,55m	Lapp	
=FENINS+S1-4W5 =FENINS+S1/4.6	H05V-K dbuws. 0,5mm² 601488	Connection control line Single conductor H05V-K dark blue/white 0,15m	Lapp	
=FENINS+S1-4W6 =FENINS+S1/4.6	H05V-K dbu. 0,5mm² 601499	Connection control line Single conductor H05V-K dark blue 0,65m	Lapp	
=FENINS+S1-4W7 =FENINS+S1/4.6	H05V-K dbu. 0,5mm² 601499	Connection control line Single conductor H05V-K dark blue 0,65m	Lapp	
=FENINS+S1-4W8 =FENINS+S1/4.8	H07V-K gnye 601471	Connection-Control line Single conductor H07V-K green/yellow 0,5mm²	Lapp	
=FENINS+S1-4W8 =FENINS+S1/4.8	6306 601484	pinch cable lug isol., 1,5-2,5mm², M6, blue	Klauke	
=FENINS+FEST-1M1 =FENINS+S1/1.3	601373	Drive unit	Dunkermotoren	
=FENINS+FEST-3M1 =FENINS+S1/3.1	601509	Insects louvre pipe motor with connection cable 3m		
=FENINS+FEST-4B1 =FENINS+S1/4.1	600973	Proximity switch		
=FENINS+FEST-4B2 =FENINS+S1/4.2	600973	Proximity switch		

Cable overview

=FENINS+S1							
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Device Designation	Source (from)	Target (to)	Type	Quantity Conductrs	Cross-section [mm]	Length [m]	Function text
=FENINS+S1-1W1	=+	=FENINS+S1-1A1	ÖLFLEX CLASSIC	3G	1,5	13	Power supply 230VAC
=FENINS+S1-1W2	=FENINS+S1-1G1	=+	ÖLFLEX CLASSIC	3	1,5	2,4	Power supply 230VAC at Power supply unit
=FENINS+S1-1W3	=FENINS+S1-1G1	=FENINS+S1-4K1		5G	1,5	2,6	Power supply at Window control unit
=FENINS+S1-1W5	=FENINS+S1-1A1	=FENINS+FEST-1M1				1	motor Window drive
=FENINS+S1-1W6	=FENINS+S1-1A1-1W4	=FENINS+FEST-1M1				1	Hall sensors Window drive
=FENINS+S1-1W7	=FENINS+S1-1A1	=FENINS+FEST-1M1	ÖLFLEX CLASSIC	2	0,5	1	Brake Window drive
=FENINS+S1-1W8			H07V-K	1	1,5	0,5	grounding Enclosure
=FENINS+S1-1W9	=FENINS+S1-4K1	=FENINS+S1-4K1	H07V-K	1	1,5	0,065	safety contactor
=FENINS+S1-1W10	=FENINS+S1-1A1	=FENINS+S1-4K1	H07V-K	1	1,5	0,15	safety contactor at Window control unit
=FENINS+S1-1W11	=FENINS+S1-1A1	=FENINS+S1-4K1	H07V-K	1	1,5	0,15	safety contactor at Window control unit
=FENINS+S1-2W1	=FENINS+S1-1A1	=FENINS+KABST-2A1	ÖLFLEX CLASSIC	25G	0,75	8	Signal exchange Window control unit - Cabin control unit
=FENINS+S1-3W1	=FENINS+S1-PE	=FENINS+FEST-3M1				3	Motor drive Insects louvre
=FENINS+S1-3W2	=FENINS+S1-1A1	=FENINS+S1-1A1					Cable 230V at Window control unit
=FENINS+S1-3W3							Cable 230V at Window control unit
=FENINS+S1-3W4							Cable 230V at Window control unit
=FENINS+S1-3W5							Cable 230V at Window control unit
=FENINS+S1-4W1	=FENINS+S1-1A1	=FENINS+FEST-4B1		3	0,34	3	INI Reference sensor

+ARTLST/3

2

0

1

2

3

4

5

6

7

8

9

Cable overview

=FENINS+S1

Device Designation	Source (from)	Target (to)	Type	Quantity Conductrs	Cross-section [mm]	Length [m]	Function text
=FENINS+S1-4W2	=FENINS+S1-1A1	=FENINS+FEST-4B2		3	0,34	3	INI Belts sensor Left
=FENINS+S1-4W3	=FENINS+S1-1A1	=FENINS+FEST-4B3					Control line BEA Sensor 2
=FENINS+S1-4W4	=FENINS+S1-1A1	=FENINS+S1-4K1	LIY	1	0,25	0,75	safety contactor
=FENINS+S1-4W5	=FENINS+S1-1A1	=FENINS+S1-4K1	H05V-K	1	0,5	0,15	safety contactor
=FENINS+S1-4W6	=FENINS+S1-1A1	=FENINS+S1-4K1	H05V-K	1	0,5	0,65	safety contactor
=FENINS+S1-4W7	=FENINS+S1-1A1	=FENINS+S1-4K1	H05V-K	1	0,5	0,65	safety contactor
=FENINS+S1-4W8	=FENINS+S1-1A1	=FENINS+S1-PE	H07V-K	1	1,5	0,5	Earthing switch cabinet

Summarized parts list

Type Dash number	Quantity	Designation	Manufacturer	Certification
	0			
600973	2	Proximity switch		
601373	1	Drive unit	Dunkermotoren	
601388	1	Power supply unit		
601418	1	Window control unit		
LZR_Flatscan_SW 601427	1	protection sensor _LZR_Flatscan_SW	BEA	
ÖLFLEX CLASSIC 110H 3G1,5 601455	13,00	ÖLFLEX® CLASSIC 110 H	Lapp	
ÖLFLEX CLASSIC 110H 25G0,75 601456	8,00	ÖLFLEX® CLASSIC 110 H	Lapp	
Power 4pol. 601458	1,00	Z_Cable KPL BG75 1000G G	Dunkermotoren	
8pol. AMPH 601459	1,00	Z_Cable KPL BG65 1500G WD	Dunkermotoren	
601460	6,00	Connector/Connection cable	Balluff	
ÖLFLEX® CLASSIC 110 3 G 1,5 601468	2,40	ÖLFLEX® CLASSIC 110	Lapp	
ÖLFLEX® CLASSIC 110 2 X 0,5 601470	1,00	ÖLFLEX® CLASSIC 110	Lapp	
H07V-K gnye 601471	1,00	Connection-Control line Single conductor H07V-K green/yellow 0,5mm²	Lapp	
H07V-K bk 1,5mm² 601472	1	Connection control line Single conductor H07V-K black 0,6mm²	Lapp	
H07V-K bn 1,5mm² 601483	1	Connection control line Single conductor H07V-K brown 0,6m	Lapp	
6306 601484	2	pinch cable lug isol., 1,5-2,5mm², M6, blue	Klauke	
H07V-K bk 1,5mm² 601485	0,06	Connection control line Single conductor H07V-K black 0,065m	Lapp	
H05V-K dbuws. 0,5mm² 601488	0,15	Connection control line Single conductor H05V-K dark blue/white 0,15m	Lapp	

+KABUEB/2

Summarized parts list

Type Dash number	Quantity	Designation	Manufacturer	Certification
0,5-1mm² 601490	1,00	Isolated push connector 0,5-1mm²²	Klauke	
601492	1	safety contactor	ABB	
0,5-1,0mm² 2,8x0,8 601495	2	Isolated flat plug sleeves 0,5-1,0mm² 2,8x0,8		
H07V-K rd 1,5mm² 601496	0,15	Connection control line Single conductor H07V-K red 0,15m	Lapp	
H07V-K bu 1,5mm² 601497	0,15	Connection control line Single conductor H07V-K blue 0,15m	Lapp	
H05V-K dbu. 0,5mm² 601499	1,30	Connection control line Single conductor H05V-K dark blue 0,65m	Lapp	
H07V-K wh 1,5mm² 601501	1	Connection control line Single conductor H07V-K white 0,6mm²	Lapp	
H07V-K gy 1,5mm² 601502	1	Connection control line Single conductor H07V-K grey 0,6mm²	Lapp	
BA 159 601503	1	Rectifier diode, DO5, 1000V, 0,5A		
0,5-1,0mm² 2,8x0,8 601504	3	Isolated flat plug sleeves 0,5-1,0mm² 2,8x0,8		
0,5-1,0mm² 6,3x0,8 601505	4	Isolated flat plug sleeves 0,5-1,0mm² 6,3x0,8		
LIY dbu. 0,5mm² 601507	1	Connection control line Single conductor H05V-K dark blue 0,55m	Lapp	
601509	1	Insects louvre pipe motor with connection cable 3m		