



EUROPEAN  
SPALLATION  
SOURCE

Designation: Target system control system cabinet

Functional Location (FBS): =ESS.TS.SSS.E01.UH01


Highest physical Location (LBS): +ESS.D02.115.4005.003

└→ physical Location (LBS): +

FBS Structure

LBS Structure

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:
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			CHECKED BY EVAN		DATE		Functional location (FBS) Description		Functional location (FBS): =	
			APPROVED BY RAN		DATE		Physical location (LBS) Description		Physical location (LBS): +	
			Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS		Page Description		CHESS Doc. NR: ESS-1090724	Document: &AA2
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# SYMBOLS AND INFORMATION





## SYMBOLS

PROTECTIVE EARTH, PE

FUNCTIONAL EARTH, FE

PROTECTIVE BONDING, PB

FUNCTIONAL BONDING, FB



## INFORMATION

SHIELDED EXTERNAL CABLES MUST BE CONNECTED TO THE EARTH-RAIL WHITH SHIELD TERMINAL CLAMPS.

MINIMUM CONDUCTOR CROSS SECTION AREA FOR CONTROL CIRCUITS: 0,5mm<sup>2</sup>

MINIMUM CONDUCTOR CROSS SECTION AREA FOR POWER CIRCUITS: 1,5mm<sup>2</sup>

TERMINATION SLEEVES MUST BE USED ON INTERNAL CONDUCTORS.

ALL CABLES SHALL BE HALOGEN FREE

SS-EN 60204	
Conductors for:	Colour:
Neutral Conductors	Light blue (BU) [EN 60204-1:2006 clause 13.2.3]
Earth conductors	Green-and-Yellow [EN 60204-1:2006 clause 13.2.2]
AC Power Circuits <sup>1)</sup> DC Power Circuits with a voltage exceeding 50VDC.	Black
Control circuits AC, 230VAC.	Red
Control circuits and DC power circuits below 50VDC, e.g. PLC digital input (DI) & Digital output (DO) signals.	Dark Blue (DBU) <sup>2)</sup>
Analog control circuits, PLC analog input (AI) and output (AO) signals	Violet <sup>2)</sup>
Excepted circuits <sup>3)</sup> Foreign Power / Alien Power	Orange
<div>1. Circuit that supplies power from the supply network to units of equipment used for productive operation and to transformers supplying control circuits.</div> <div>2. Conductors carrying negative (0V/L-) potential may be provided with a white stripe along its full length, if not available instead a white ring may be provided in both ends of the conductor.  Optionally a asterisk (*) can be included in front of the letter code to further highlight this fact in reports.</div> <div>3. All conductors in circuits not disconnected by the supply disconnecting device shall be colored orange, see EN 60204-1:2006 clause 5.3.5.</div>	

IEC 60757	
Colour	Letter Code
Black	BK
Brown	BN
Red	RD
Orange	OG
Yellow	YE
Green	GN
Blue	BU
Dark Blue	DBU
Violet	VT
Grey	GY
White	WH
Pink	PK
Gold	GD
Turquoise	TQ
Silver	SR
Green-and-Yellow	GNYE



# EUROPEAN SPALLATION SOURCE

Designation:

Functional Location (FBS):

Physical Location (LBS):

Target system control system cabinet

=ESS.TS.SSS.E01.UH01

+ESS.D02.115.4005.003

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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:
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MB/14	107	Cable diagram	Cable diagram:WG05 :WG06		2021-07-08	MLN
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MB/16	109	Cable diagram	Cable diagram:WG09 :WG10 :WG11		2021-07-08	MLN
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MB/22	115	Cable diagram	Cable diagram:1WG08		2021-07-08	MLN
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MB/34	127	Cable diagram	Cable diagram:1WG21		2021-07-08	MLN
MB/35	128	Cable diagram	Cable diagram:1W2		2021-07-08	MLN

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MA/9	159	Terminal diagram	-UH01-XD01 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
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1	WEI.1020000000	124	Feed-through terminal block	WDU 2.5 1020000000	Weidmueller Weidmueller	ESS-2606195				
2	RIT.4116000	1	PS Wiring plan pockets, for TS, CM, SE, PC, TP pedestal, sheet steel	TS.4116000 4116000	Rittal GmbH Rittal GmbH	ESS-2605477				
3	RIT.8620007	1	VX Base/plinth with trim panel, front/rear, H: 100 mm, for W: 1200 mm	VX.8620007 8620007	Rittal GmbH Rittal GmbH					
4	RIT.8606000	2	VX Baying enclosure system, WHD: 600x2000x600 mm, single door	VX.8606000 8606000	Rittal GmbH Rittal GmbH	ESS-2605920				
5	RIT.3586005	1	SV Busbar E-Cu, WH: 30x10 mm, L: 2400 mm	SV.3586005 3586005	Rittal GmbH Rittal GmbH	ESS-2605487				
6	WEI.2584650000	1	Cable Sealing Elements / Grommets - Cabtite SE	CABTITE SE 8-9 SML GY 2584650000	Weidmueller Weidmueller					
7	RIT.2500490	2	VX Mounting kit magnet, LED system light	SZ.2500490 2500490	Rittal GmbH Rittal GmbH					
8	RIT.1014600	1	AE Compact enclosure, WHD: 760x760x300 mm, Stainless steel 1.4301	AE.1014600 1014600	Rittal GmbH Rittal GmbH	ESS-3394341				
9	PXC.1201730	2	DIN rail perforated	NS 35/15 PERF 2000MM 1201730	Phoenix Contact Phoenix Contact	ESS-3389874				
10	ABB.1SDA067095R1	1	XT2N 160 Ekip LS/I In=160A 4pFF InN=100%	XT2N 160 Ekip LS/I In=160A 4pFF InN=100% 1SDA067095R1	ABB ABB	ESS-2589449				
11	BEC.CX5130-0130	2	Basic CPU module CX5130, Windows Embedded St 7P, 64 bit	CX5130-0130 CX5130-0130	Beckhoff Automation GmbH & Beckhoff Automation GmbH &					
12	BEC.EL3214	5	4-channel input terminal PT100 (RTD)	EL3214 EL3214	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161915				
13	BEC.EL1809	4	16-channel digital input terminal 24 V DC, filter 3.0 ms, type 3	EL1809 EL1809	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161833				
14	BEC.EL2819	4	HD EtherCAT Terminal, 16-channel digital output 24 V DC, 0.5 A, with diagnostics	EL2819 EL2819	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161857				
15	BEC.EL1252-0050	1	2-channel digital input terminal 5 V DC, filter 1 µs, with time stamp	EL1252-0050 EL1252-0050	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161829				
16	BEC.EL9410	4	Power supply terminal for E-bus, 24 V DC, 2 A with diagnostics	EL9410 EL9410	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161984				
17	BEC.EL1252	2	2-channel digital input terminal with time stamp	EL1252 EL1252	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161828				
18	BEC.EL7201	3	Servomotor terminal 50 V DC, 2.8 ARMS/4 A (peak value), 1 resolver input, 1 digital outp ut for a motor brake 24 V DC	EL7201 EL7201	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161974				
19	BEC.EL6695	1								

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20	BEC.EL2032	1	2-channel digital output terminal 24 V DC, 2 A, with diagnostics, 4-wire system	EL2032 EL2032	Beckhoff Automation GmbH & Beckhoff Automation GmbH &					
21	BEC.EL3742	1	2-channel analog input terminal 0...20 mA, differential inputs, 16 bit, oversampling	EL3742 EL3742	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161933				
22	BEC.EK1110	2	EtherCAT extension	EK1110 EK1110	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161817				
23	BEC.EK1100	1	EtherCAT Coupler for E-bus terminals (ELxxxx)	EK1100 EK1100	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161815				
24	BEC.EL9505	1	Power supply unit terminal 24 V DC, output 5 V DC, 0.5 A	EL9505 EL9505	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161985				
25	BEC.ZK1090-9191-6020	2	Ethernet patch cable. CAT5, PUR, highly flexible. 2.0m	ZK1090-9191-6020 ZK1090-9191-6020	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3243444				
26	BEC.ZK1090-9191-0010	1	Ethernet patch cable. CAT5, PUR, 1.0m	ZK1090-9191-0010 ZK1090-9191-0010	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3243440				
27	BEC.ZK1090-9191-5023	2	Ethernet patch cable. CAT5, PUR, 0.23m	ZK1090-9191-5023 ZK1090-9191-5023	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3243441				
28	WEI.1010000000	16	WPE 2.5 PE terminal	WPE 2.5 1010000000	Weidmueller Weidmueller	ESS-2606185				
29	RIT.2506100	5	SZ Socket for mounting on support rails, Schuko, CEE 7/4	SZ.2506100 2506100	Rittal GmbH Rittal GmbH					
30	WEI.1061200000	8	End bracket	WEW 35/2 1061200000	Weidmueller Weidmueller	ESS-3177295				
31	WEI.1020580000	1	WDU 35 BL Feed-through terminal block	WDU 35 BL 1020580000	Weidmueller Weidmueller	ESS-2606226				
32	BEC.EL9188	2	Potential distribution terminal, 16 x 24 V DC	EL9188 EL9188	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161981				
33	BEC.EL9189	3	HD EtherCAT Terminal, 16-channel potential distribution	EL9189 EL9189	Beckhoff Automation GmbH & Beckhoff Automation GmbH &	ESS-3161982				
34	OMR.E3X-DA41AN-S-2M	4	Infrared LED Digital Fiber Amplifier Unit, Standard model, Pre-wired(2m), Analog output	E3X-DA41AN-S-2M E3X-DA41AN-S-2M	Omron Omron					
35	BOS.R911306773	1								
36	BOS.R911286919	2	Mains filter	NFD03.1-480-030 R911286919	Bosch Rexroth Bosch Rexroth					
37	BOS.R911298374	1	Compact converter HCS02	HCS02.1E-W0028-A-03-NNNN R911298374	Bosch Rexroth Bosch Rexroth					
38	BOS.R911298372	1	IndraDrive compact converter, single axis	HCS02.1E-W0070-A-03-NNNN R911298372	Bosch Rexroth Bosch Rexroth					

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58	LEG.OK11-4	1	Optocoupler 24VDC – 500 kHz, input current: < 2mA	OK11 OK11-4	LEG Industrie-Elektronik Gmb LEG Industrie-Elektronik Gmb					
59	HEL.19557	1	PUR Control Cable UNIPUR®-CP 25G1,5 mm² GY	UNIPUR-CP 19557	Helukabel Helukabel	ESS-3243536				
60	HEL.19433	3	PUR Control Cable UNIPUR®-CP 18G1 mm² YE	UNIPUR-CP 19433	Helukabel Helukabel	ESS-3243530				
61	HEL.19443	1	PUR Control Cable UNIPUR®-CP 25G1 mm² YE	UNIPUR-CP 19443	Helukabel Helukabel	ESS-3243532				
62	WEI.1020400000	1	WDU 16 Feed-through terminal block	WDU 16 1020400000	Weidmueller Weidmueller	ESS-2606163				
63	PXC.3240351	12	Cable duct	CD-HF 40X100 3240351	Phoenix Contact Phoenix Contact	ESS-3389960				
64	PXC.3240349	1	Cable duct	CD-HF 40X60 3240349	Phoenix Contact Phoenix Contact	ESS-3389956				
65	PXC.3240353	4	Cable duct	CD-HF 60X60 3240353	Phoenix Contact Phoenix Contact	ESS-3389962				
66	WEI.2583760000	9	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET 2583760000	Weidmueller Weidmueller					
67	WEI.2584180000	3	M32 Cable Gland	CABTITE CGS 2584180000	Weidmueller Weidmueller					
68	RIT.2500310	2	System Light LED, 1200 Lumen, length 437 mm, 100-240 V, with integral motion detector , with earthing-pin socket	SZ.2500310 2500310	Rittal GmbH Rittal GmbH					
69	RIT.2500500	1	Infeed, 3-pole (with socket, without connector), Input voltage: 100 V - 240 V, 1~, 50 Hz/ 60 Hz, UL	SZ.2500500 2500500	Rittal GmbH Rittal GmbH	ESS-3243526				
70	RIT.2500530	1	Through-wiring, 2-pole (with socket and connector), Input voltage: 100 V - 240 V, 1~, 50 Hz/60 Hz, UL	SZ.2500530 2500530	Rittal GmbH Rittal GmbH	ESS-2605462				
71	RIT.3241100	4	SK TopTherm fan-and-filter unit, 230/250 m³/h, 230 V, 1~, 50/60 Hz	SK.3241100 3241100	Rittal GmbH Rittal GmbH					
72	OBO.5095333	2	Combination arrester V20-3+NPE+FS-280 V with remote signalling	5095333 5095333	OBO Bettermann OBO Bettermann					
73	ABB.2CSF202001R1250	1	F202 AC-25/0,03 Residual Current Dev.	F202 AC-25/0,03 2CSF202001R1250	ABB ABB					
74	ABB.2CCS893001R0321	1	36kA High performance circuit breaker, 3-pole, 32A, max. 690V AC, 375V DC, Char. D	S803N-D32 kpl. 2CCS893001R0321	ABB ABB	ESS-2603687				
75	ABB.2CCS800900R0011	2	S800 Accessory - Auxiliary contact	S800-AUX kpl. 2CCS800900R0011	ABB ABB	ESS-2589485				
76	ABB.2CDS271001R0064	6	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6 2CDS271001R0064	ABB ABB	ESS-2603757				

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77	ABB.2CDS273001R0064	1	Miniature Circuit Breaker - S200M - 3P - C - 6 A	S203M-C6 2CDS273001R0064	ABB ABB	ESS-2603785				
78	ABB.2CDS200922R0001	6	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R 2CDS200922R0001	ABB ABB	ESS-2603747				
79	PXC.2905744	2	Electronic device circuit breaker	CBM E8 24DC/0.5-10A NO-R 2905744	Phoenix Contact Phoenix Contact					
80	ABB.2CCS861001R0105	1	50kA High performance circuit breaker, 1-pole, 10A, max. 400V AC, 125V DC, Char. B	S801S-B10 2CCS861001R0105	ABB ABB	ESS-2603643				
81	ABB.2CDS271001R0105	2	Miniature Circuit Breaker - S200M - 1P - B - 10 A	S201M-B10 2CDS271001R0105	ABB ABB	ESS-3523886				
82	ABB.2CDS271001R0065	3	Miniature Circuit Breaker - S200M - 1P - B - 6 A	S201M-B6 2CDS271001R0065	ABB ABB	ESS-2603737				
83	RIT.3110000	1	SK Enclosure internal thermostat, 24 V, 48 V, 60 V, 115 V, 230 V, 1~	SK.3110000 3110000	Rittal GmbH Rittal GmbH	ESS-2605464				
84	WEI.1010500000	1	WPE 35 PE terminal	WPE 35 1010500000	Weidmueller Weidmueller	ESS-2606187				
85	WEI.1010100000	4	WPE 4 PE terminal	WPE 4 1010100000	Weidmueller Weidmueller	ESS-2606179				
86	ABB.1SCA105798R1001	1	OT80F3 switch-disconnector	OT80F3 1SCA105798R1001	ABB ABB	ESS-2589422				
87	ABB.1SCA105457R1001	1	Neutral Terminal	OTPN80FP 1SCA105457R1001	ABB ABB	ESS-3477026				
88	ABB.1SCA108599R1001	1	OHRS2/1 Handle for power circuit breaker	OHRS2/1 Handle 1SCA108599R1001	ABB ABB	ESS-2589424				
89	ABB.1SCA105365R1001	1	OT63F4N2 switch-disconnector	OT63F4N2 1SCA105332R1001	ABB ABB	ESS-2596052				
90	RIT.2500460	2	Door-Operated Switch, Input voltage: 230 V AC, 24 V DC, - 240 V, 1~, 50 Hz/60 Hz,	SZ.2500460 2500460	Rittal GmbH Rittal GmbH	ESS-2605470				
91	PULS.CP10.241-R2	2	Redundant power supply, 24V, 10A	CP10.241-R2 CP10.241-R2	PULS PULS	ESS-2605329				
92	PULS.XT40.721	2	Semi-regulated Power Supply, 3AC, Output 72V 13.3A	XT40.721 XT40.721	PULS PULS					
93	RIT.8614660	1	TS Partial mounting plate, for TS, SE, W/DH: 500x500 mm	TS.8614660 8614660	Rittal GmbH Rittal GmbH	ESS-3477102				
94	NEX.15143598	1	FXQJ-EMC 4x16+16	FXQJ-EMC 0054175	Nexans Nexans	ESS-2605219				
95	NEX.0345415	1	Halogen free Grounding Cable, 16 mm²	H07Z1-K 0345415	Nexans Nexans	ESS-2253679				

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96	PILZ.750 103	1	PNOZsigma Safety relay 2n/o	PNOZ s3 24VDC 750 103	Pilz Pilz																																	
97	PILZ.750108	1	Expansion module 2 NO	PNOZ S8 Series 750108	Pilz Pilz																																	
98	PILZ.400 620	1																																				
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SPALLATION  
SOURCE

Designation: Target system control system cabinet

Functional Location (FBS): =ESS.TS.SSS.E01.UH01

Highest physical Location (LBS): +ESS.D02.115.4005.003

└→ physical Location (LBS): +

FBS Structure

ESS  
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ESS.TS.SSS  
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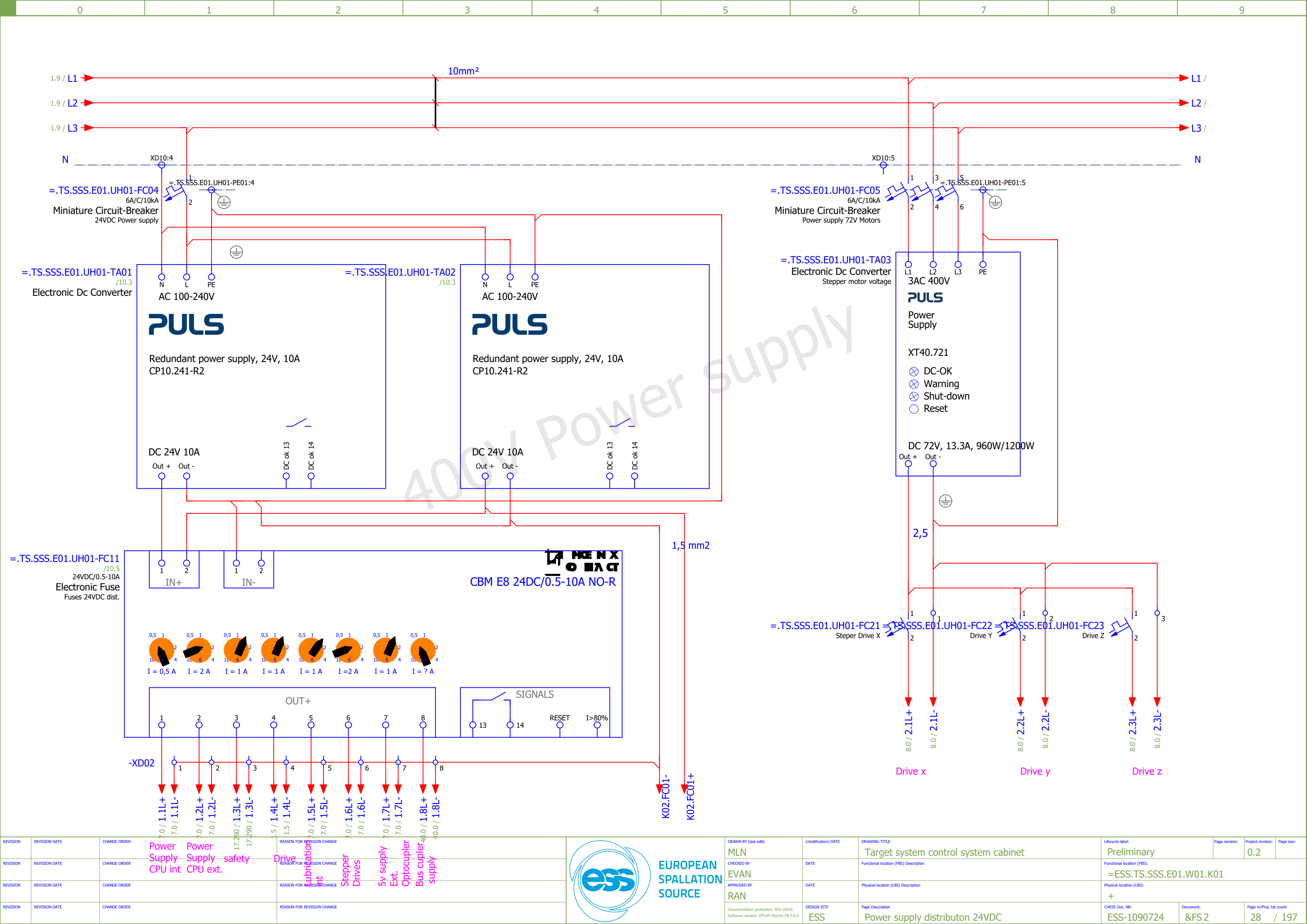
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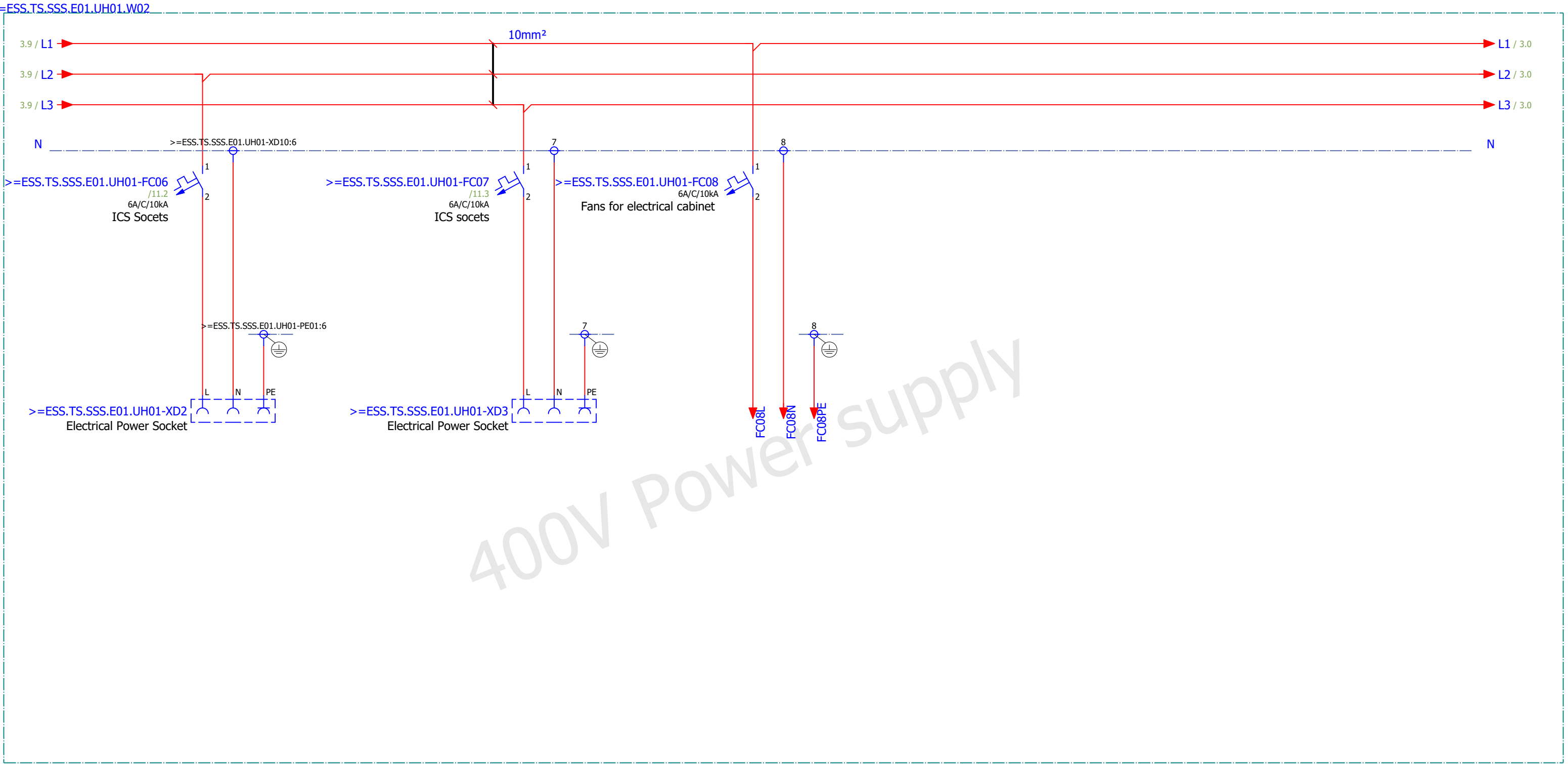
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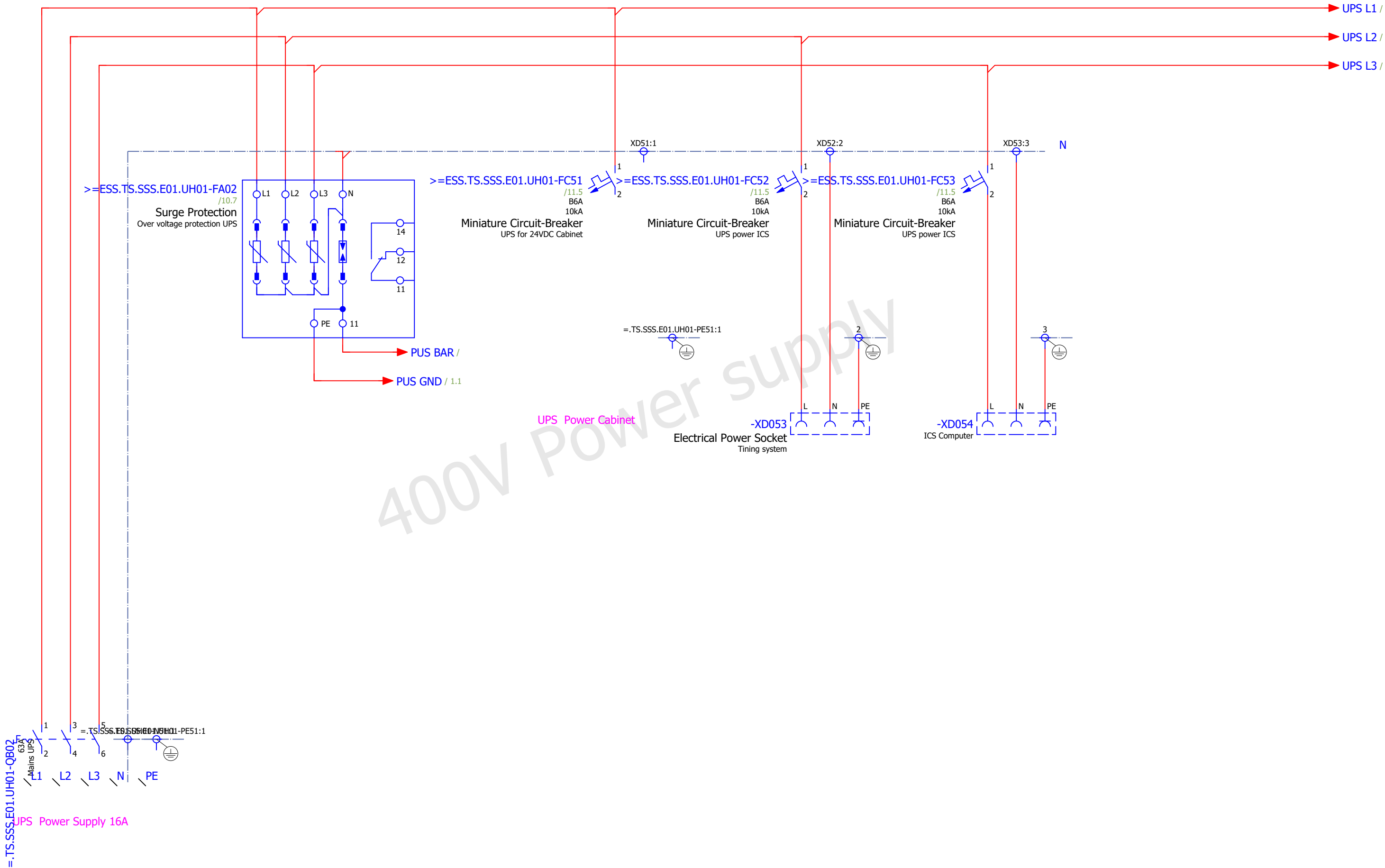
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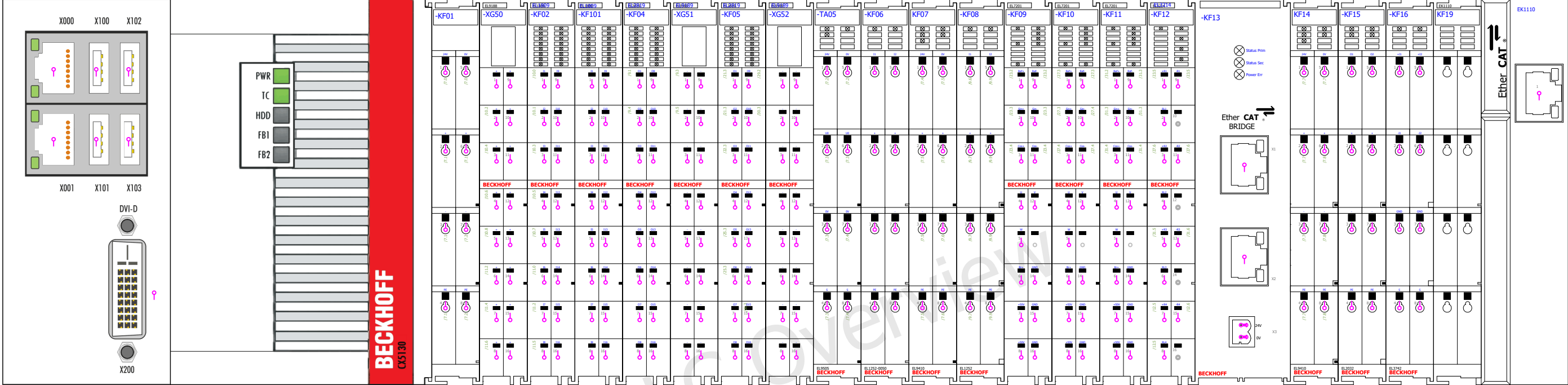




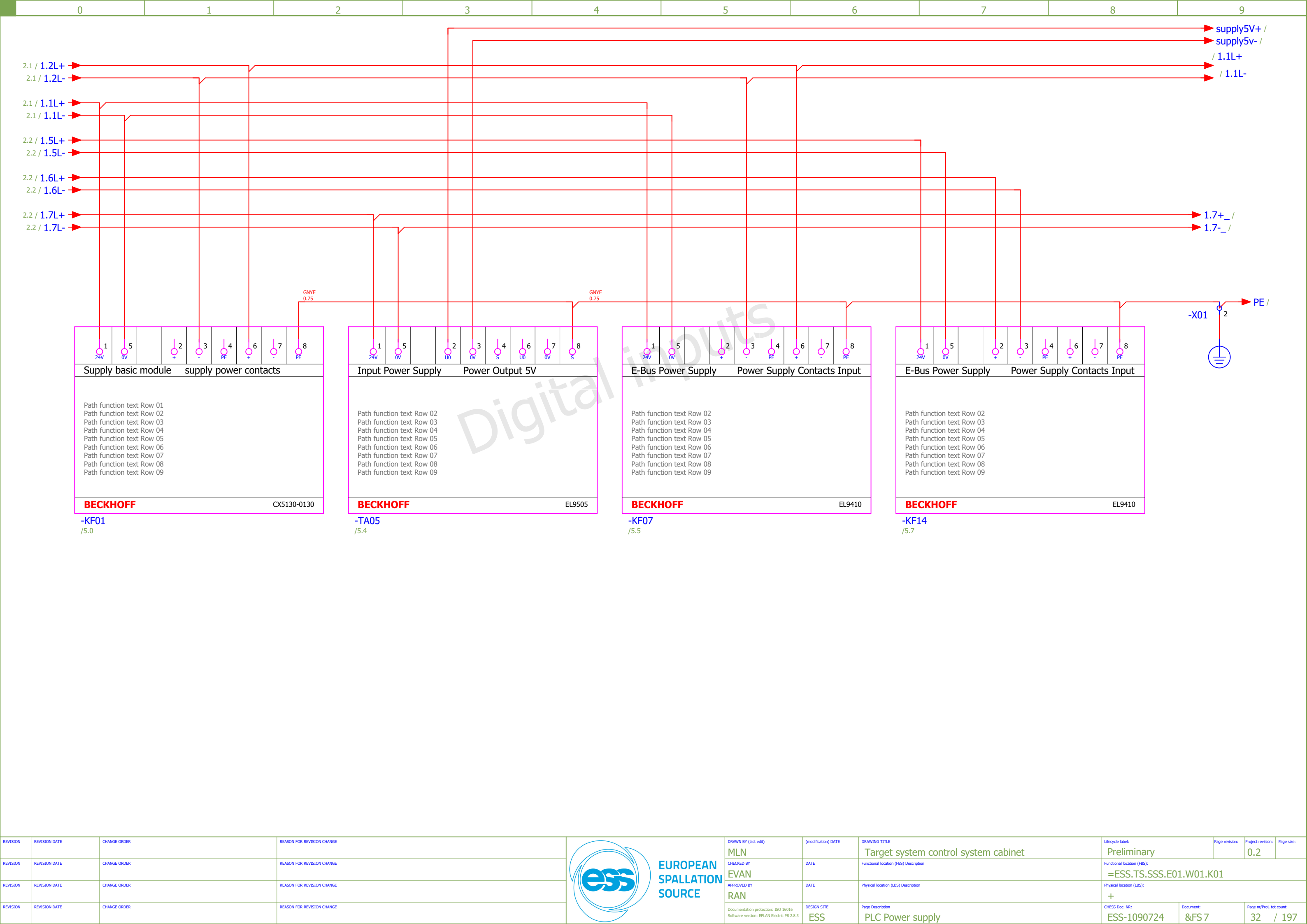




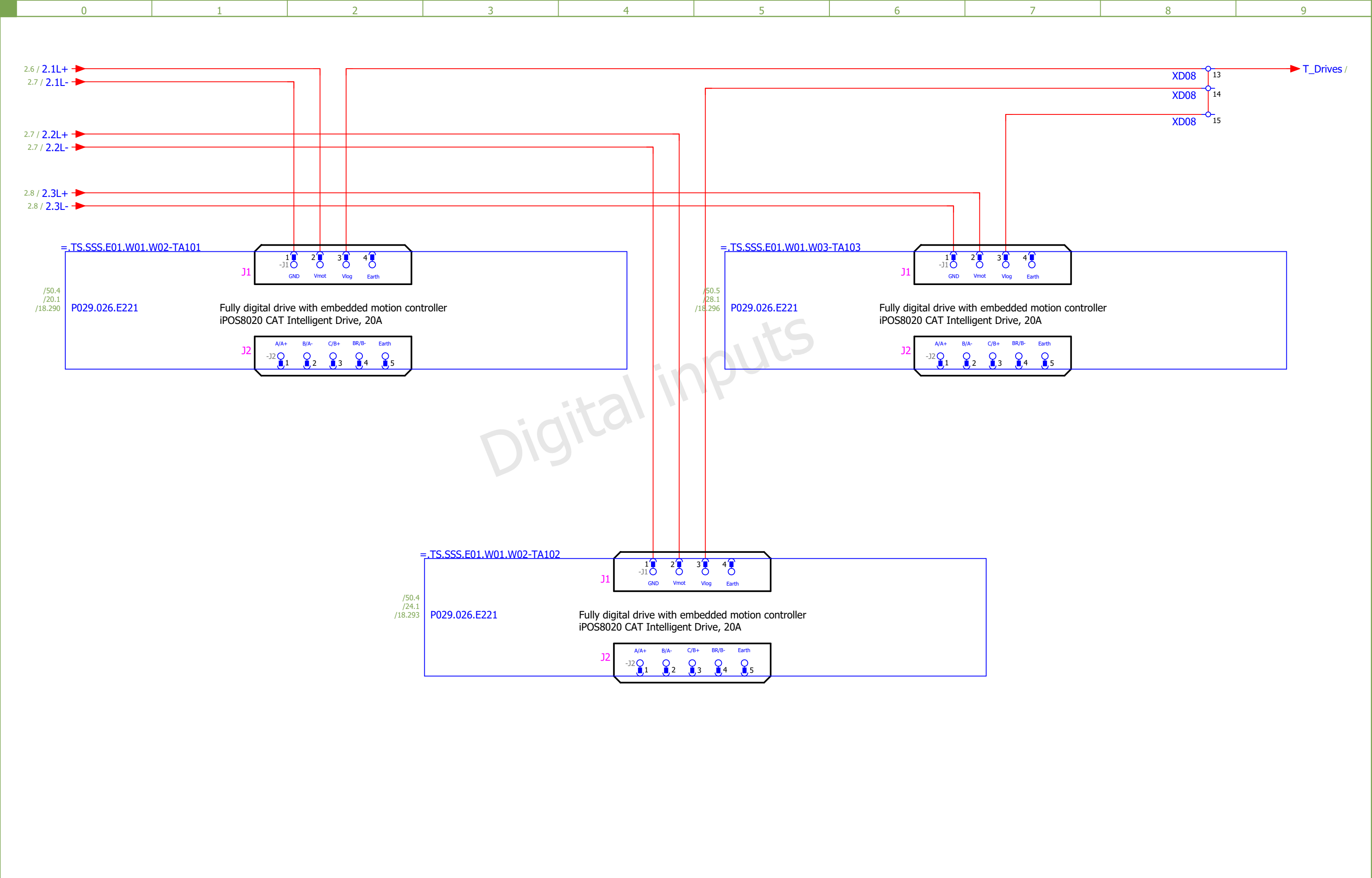
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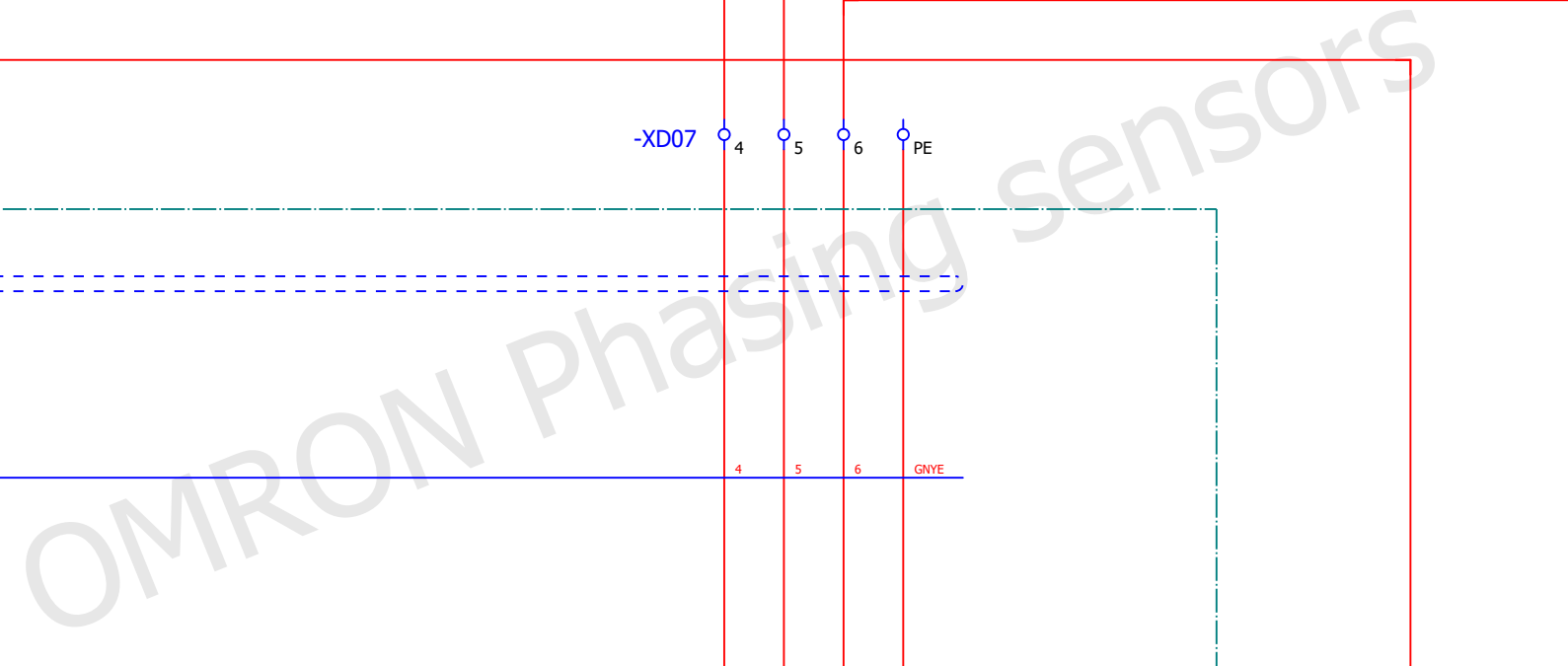



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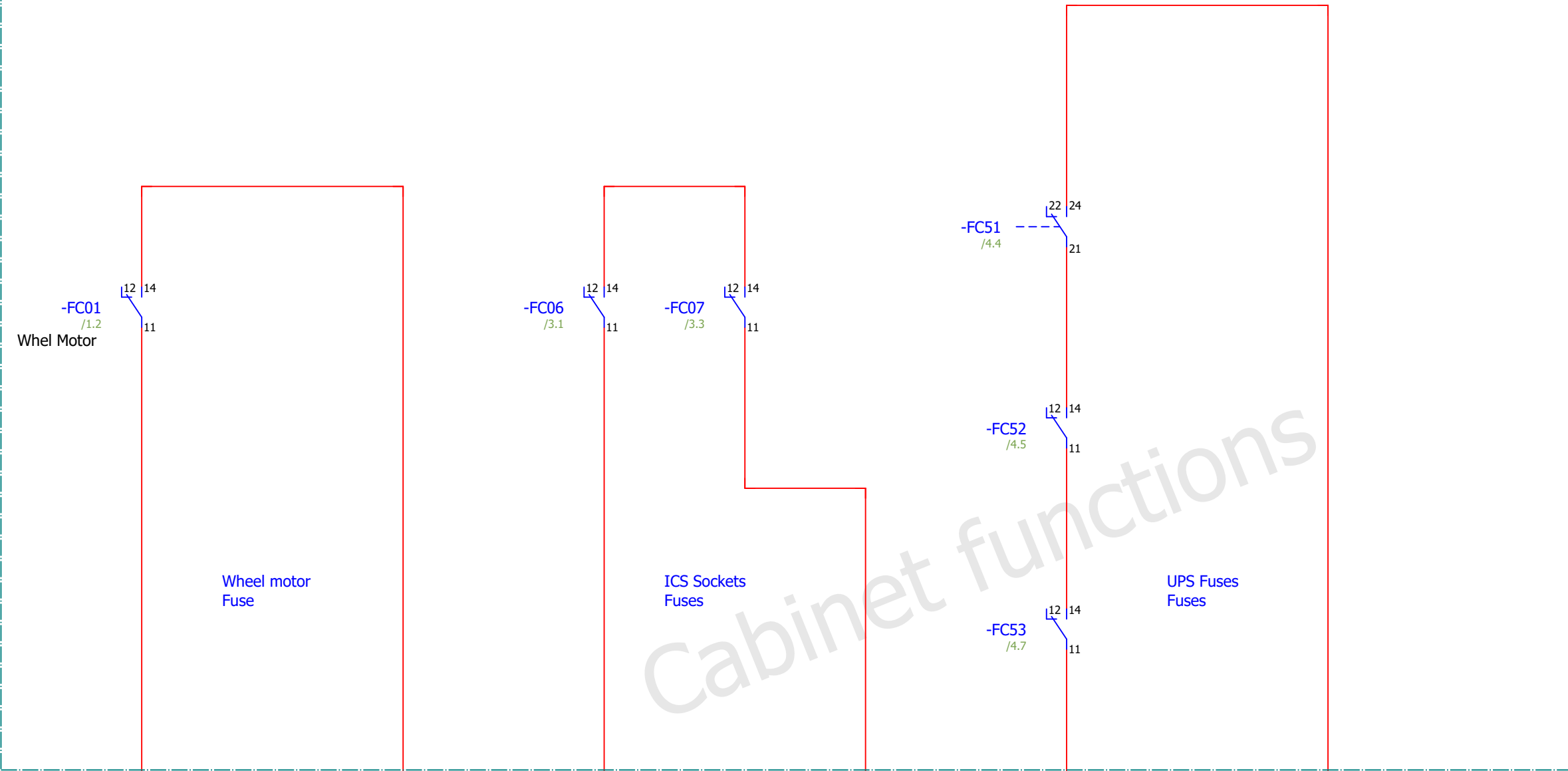





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	6			
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Fuse Wheel Motor				
Path function text Row 02				
Path function text Row 03				
Path function text Row 04				
Path function text Row 05				
Path function text Row 06				
Path function text Row 07				
Path function text Row 08				
Path function text Row 09				
BECKHOFF		EL1809		

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/5.3

6					
Path function text Row 02					
Path function text Row 03					
Path function text Row 04					
Path function text Row 05					
Path function text Row 06					
Path function text Row 07					
Path function text Row 08					
Path function text Row 09					
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XG50  
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Path function text Row 02			
Path function text Row 03			
Path function text Row 04			
Path function text Row 05			
Path function text Row 06			
Path function text Row 07			
Path function text Row 08			
Path function text Row 09			
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7					
Path function text Row 02					
Path function text Row 03					
Path function text Row 04					
Path function text Row 05					
Path function text Row 06					
Path function text Row 07					
Path function text Row 08					
Path function text Row 09					
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Path function text Row 03				
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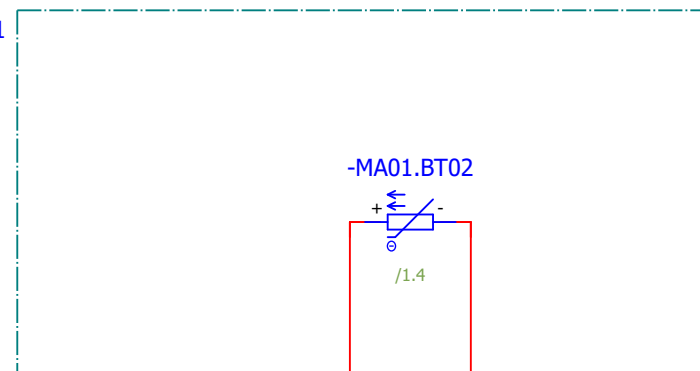
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Path function text Row 03					
Path function text Row 04					
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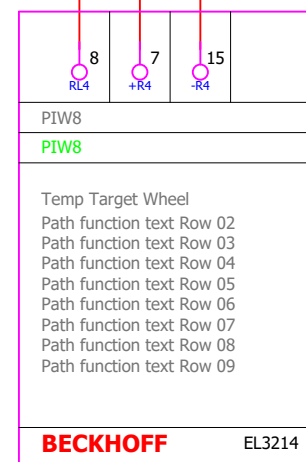
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XD06



XD06

2



PIW8

PIW8

### Temp Target Wheel

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Path	function	text	Row 04
Path	function	text	Row 05
Path	function	text	Row 06
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Path	function	text	Row 08
Path	function	text	Row 09

**BECKHOFF**

EL3214

KF12

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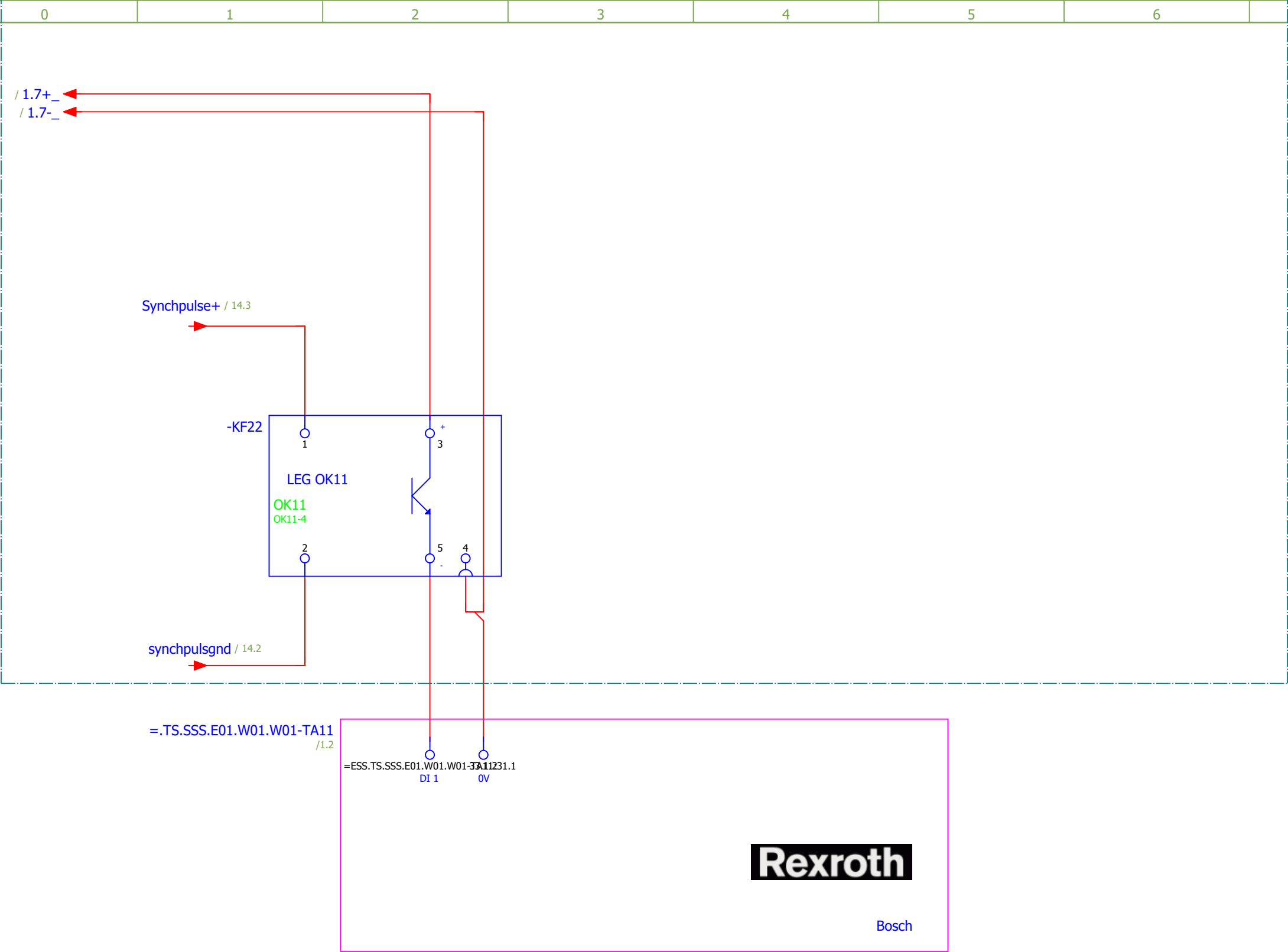
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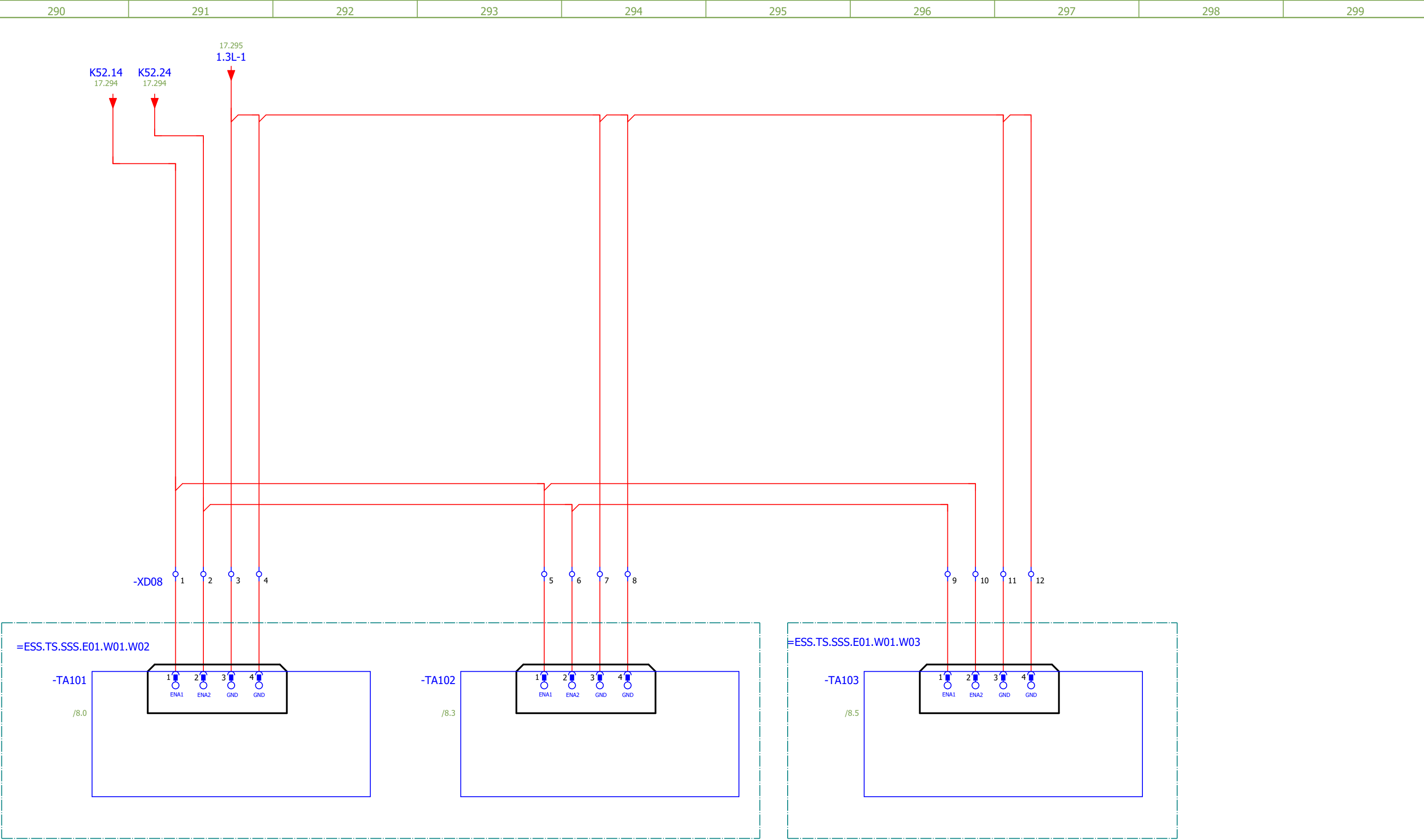


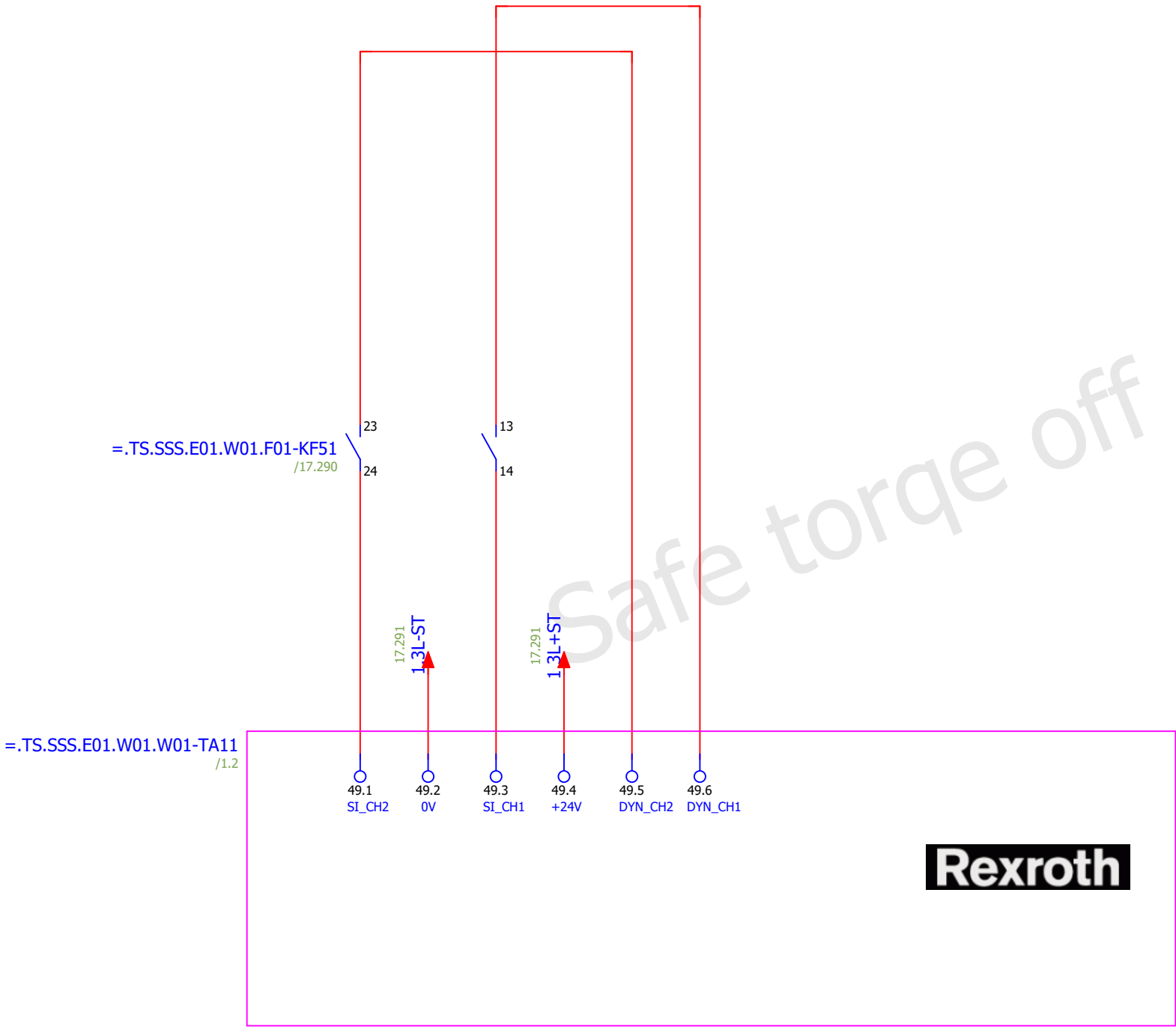




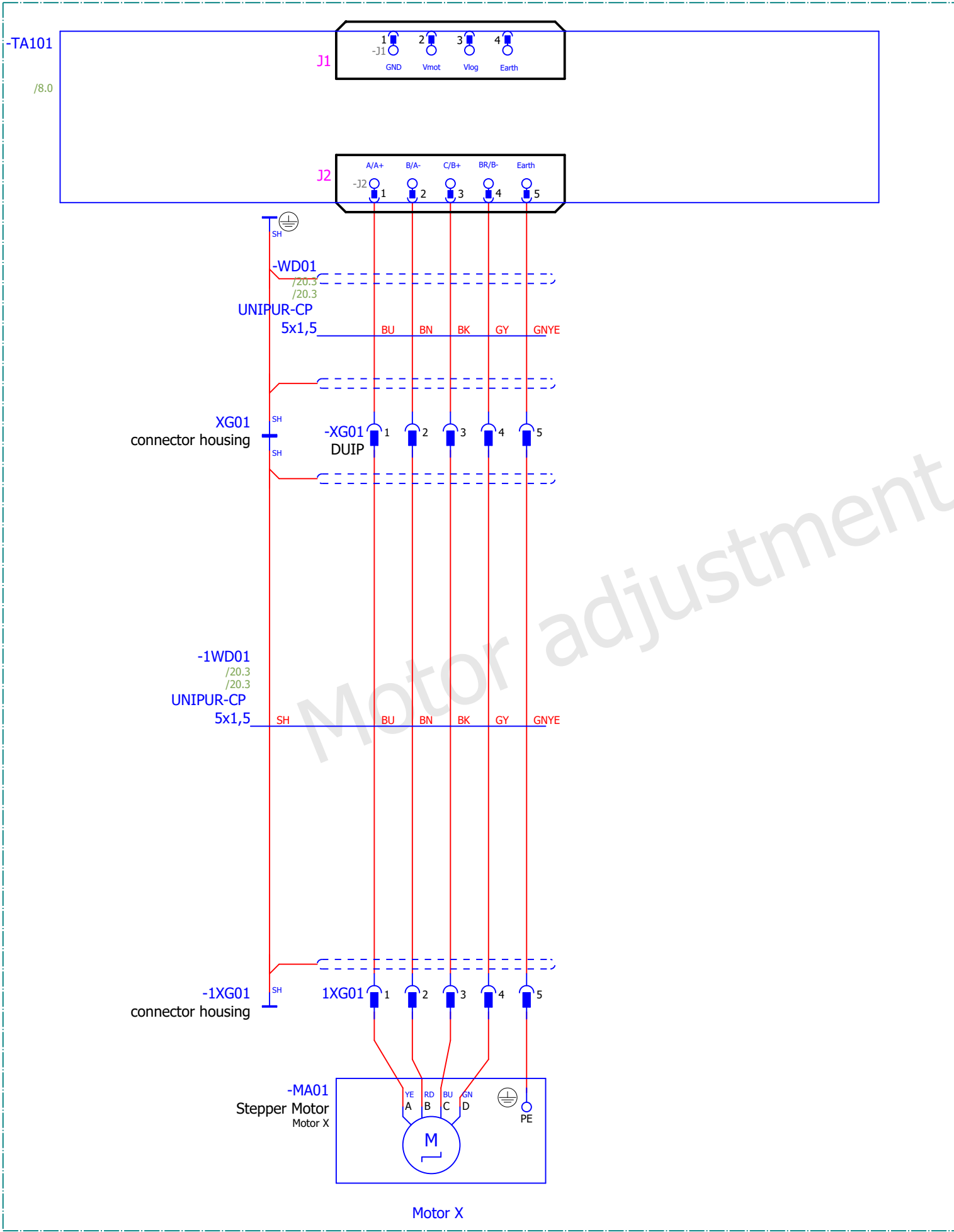
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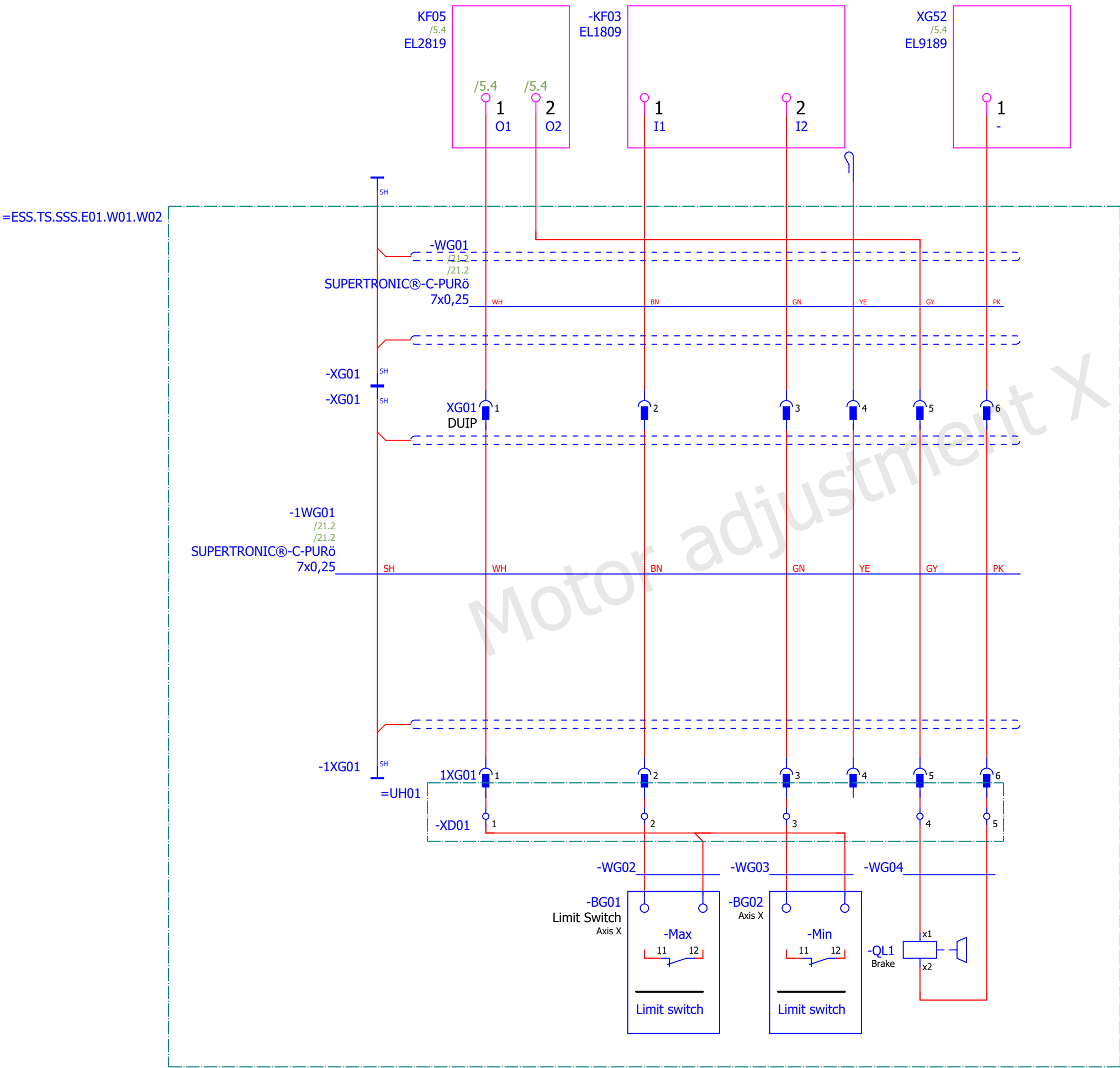


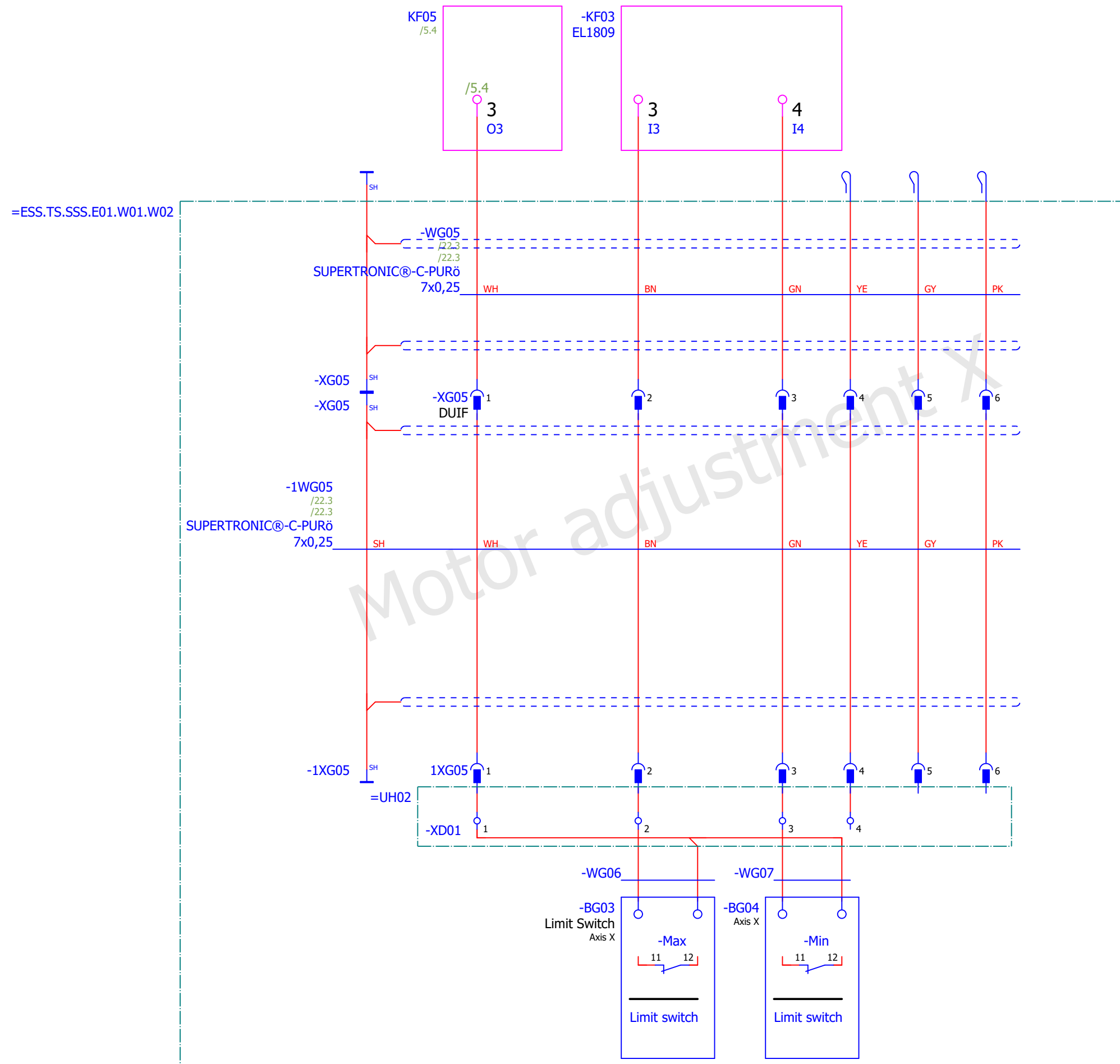




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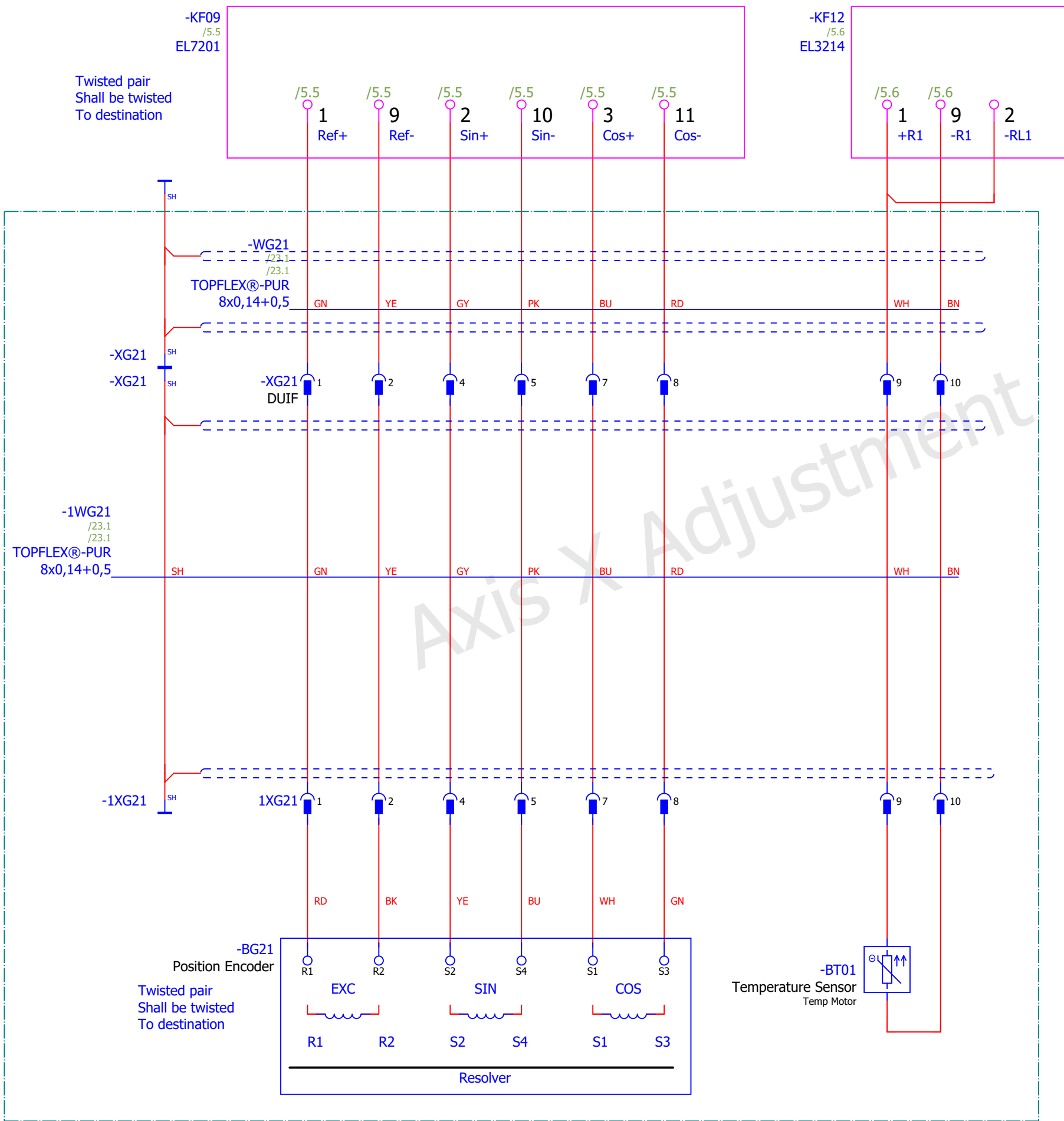






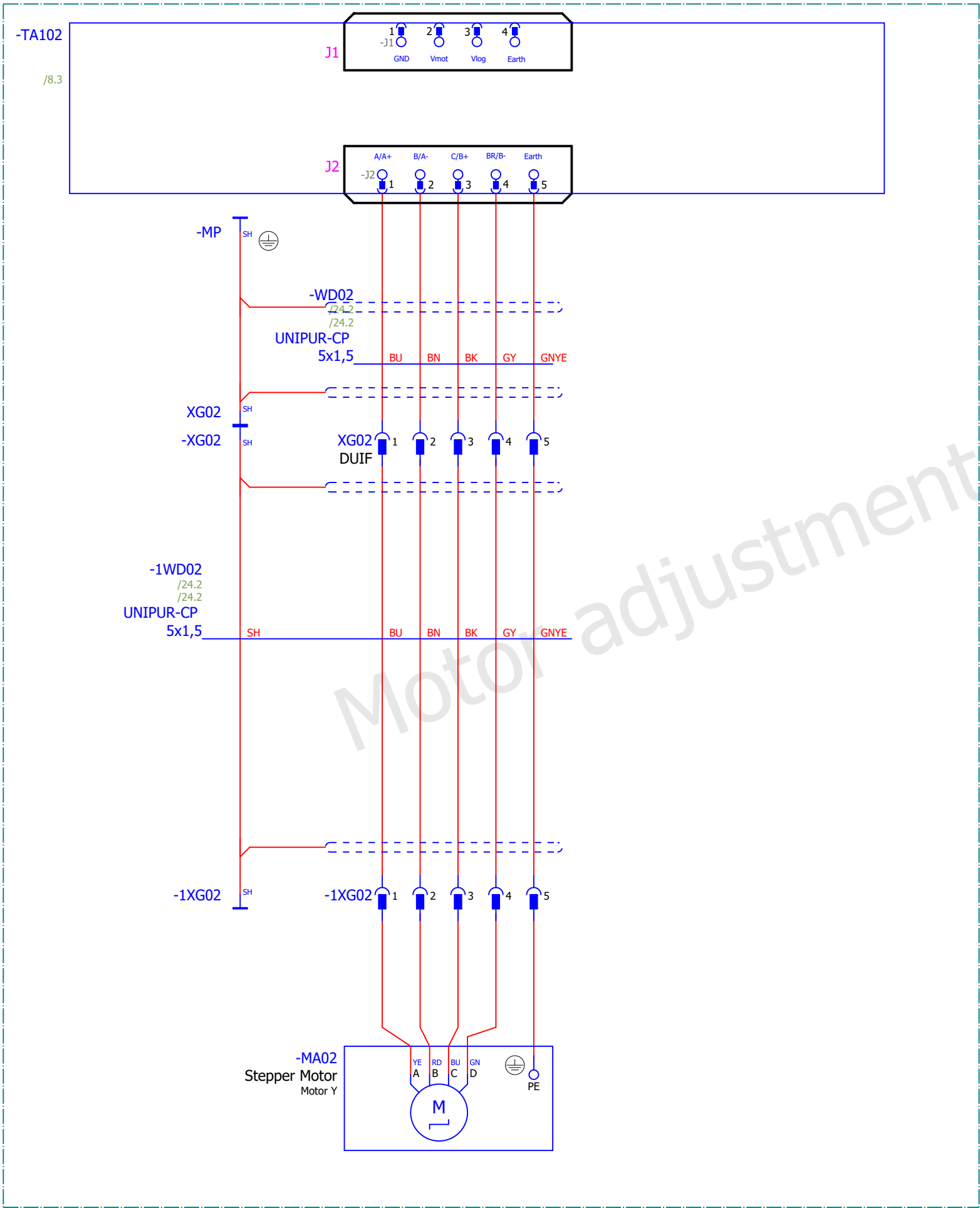
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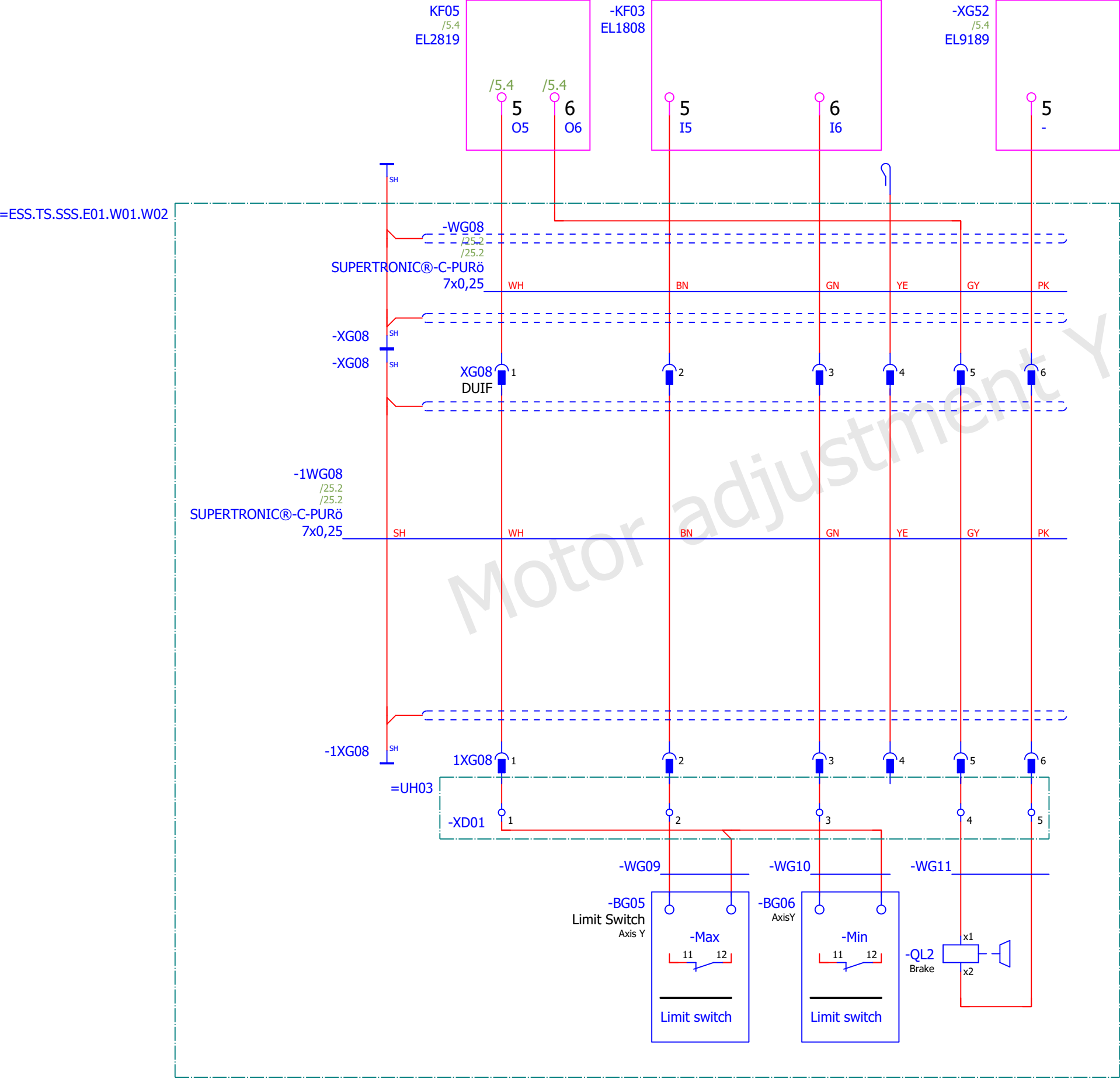


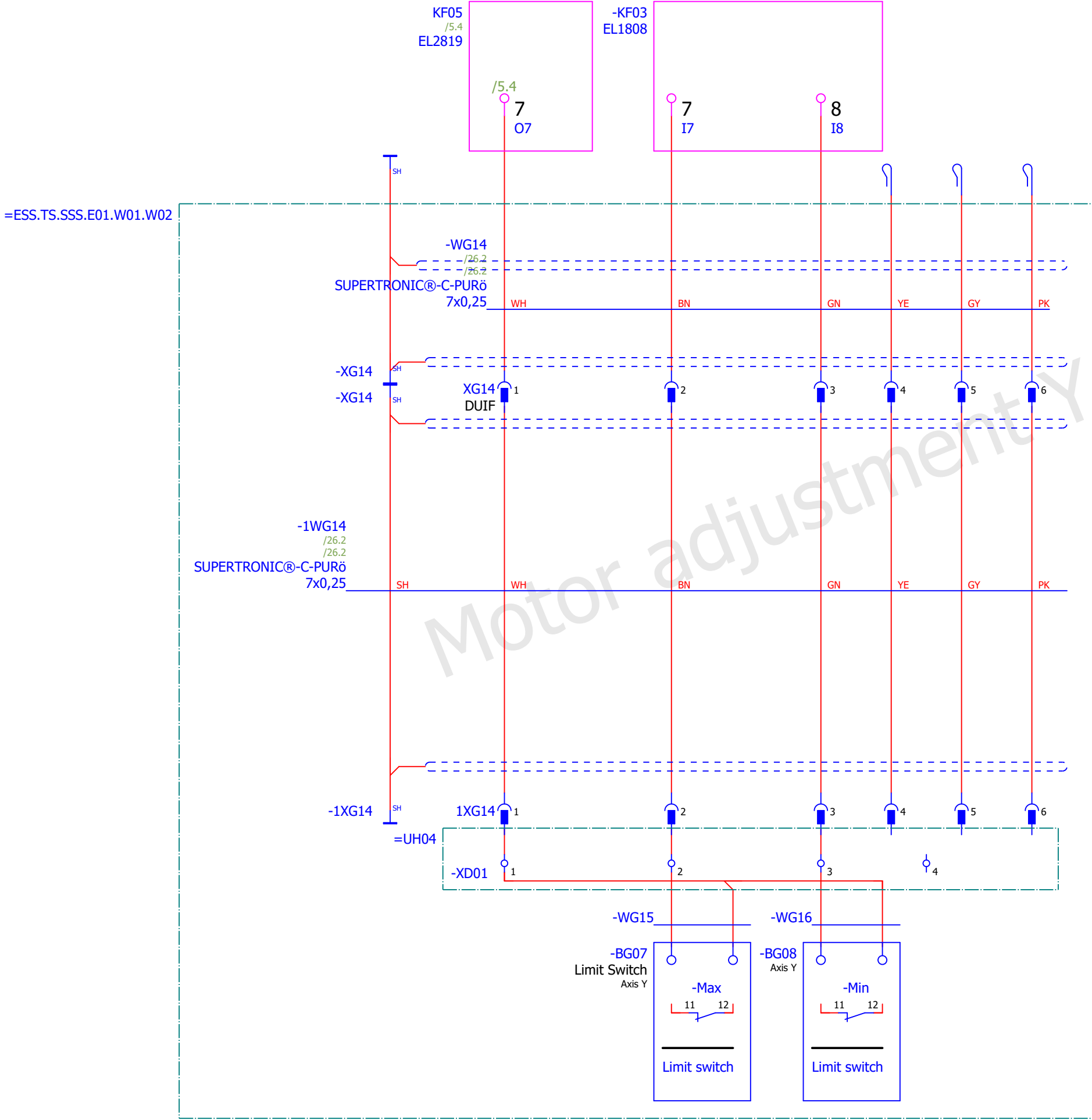


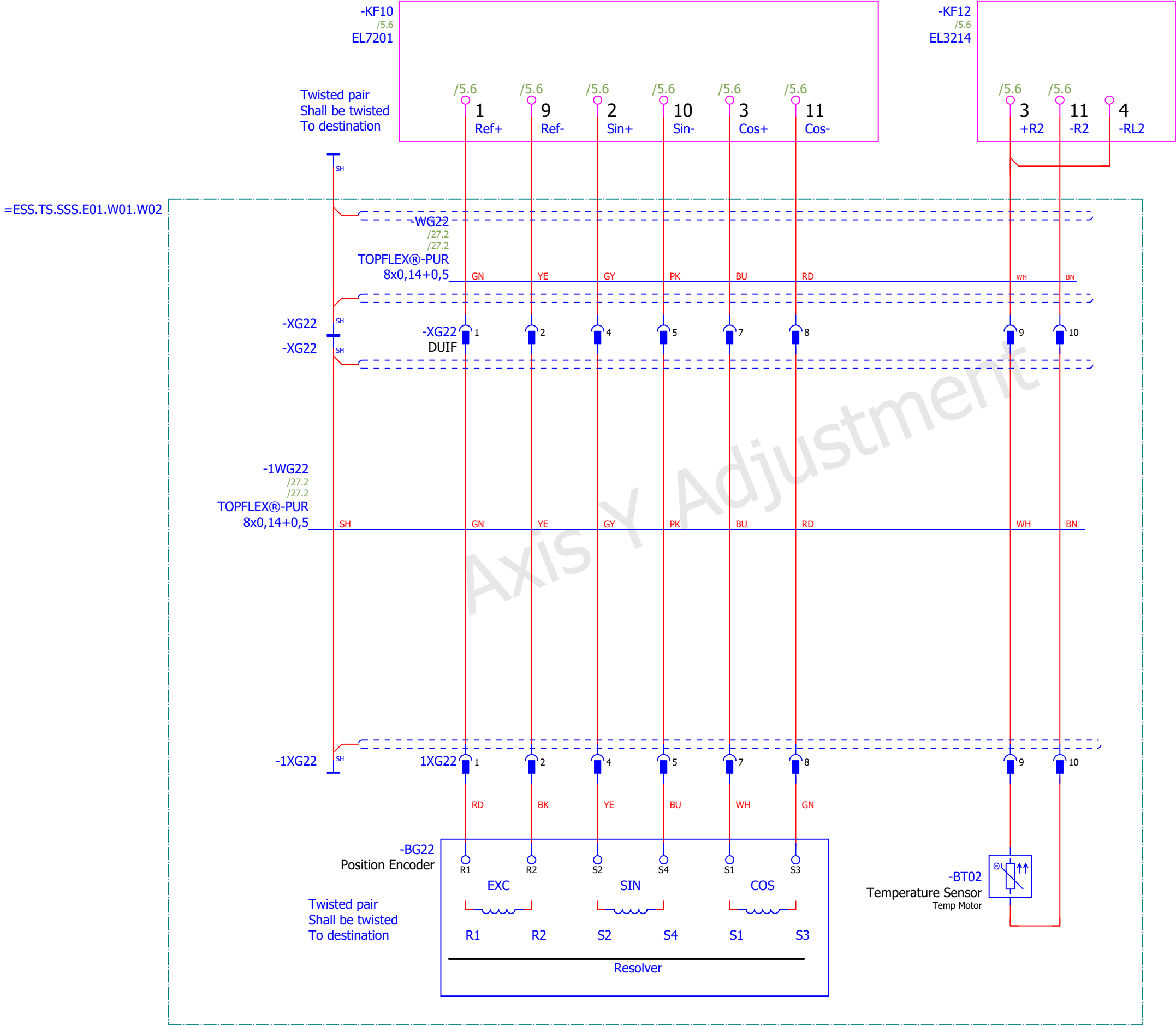
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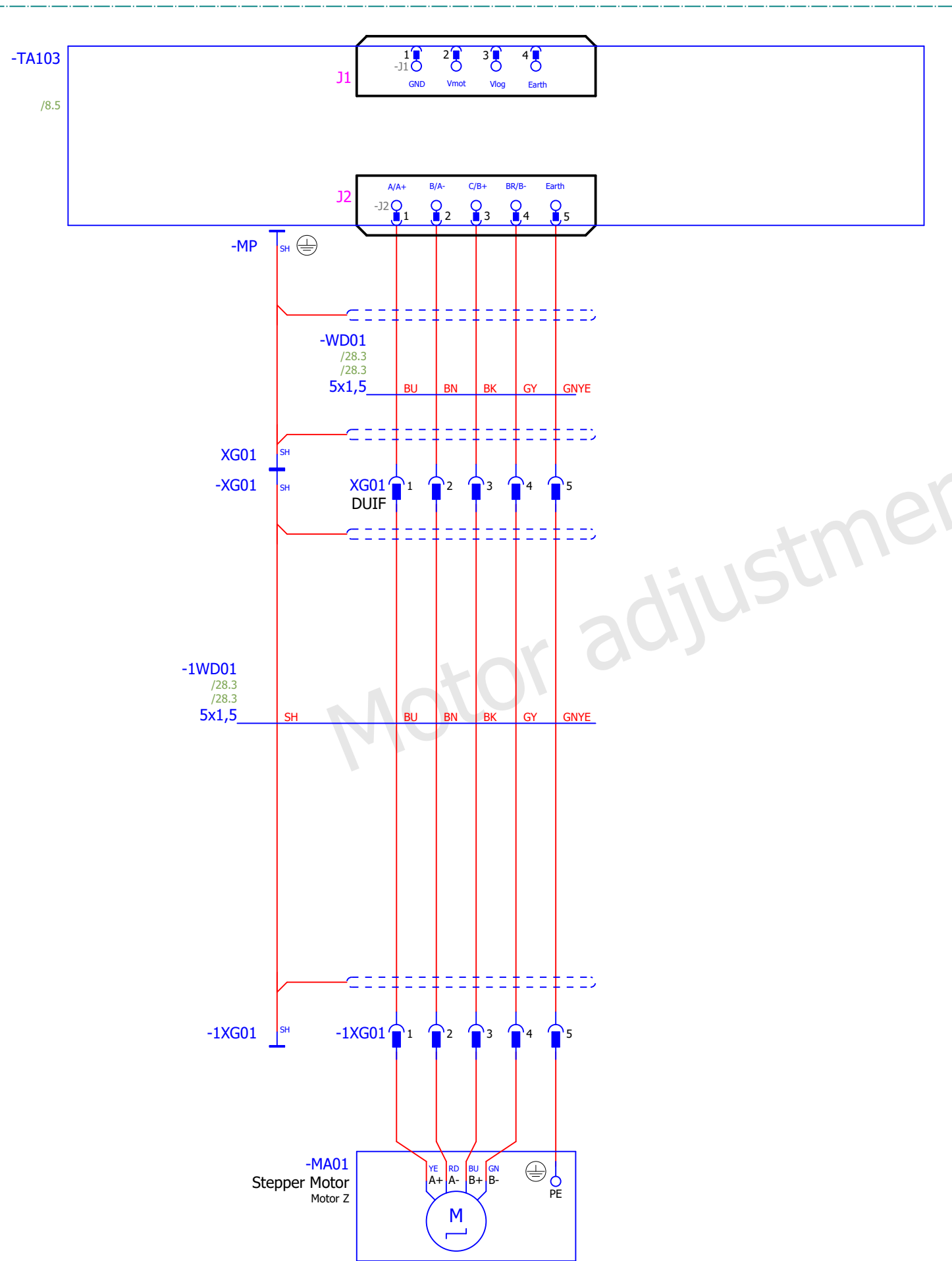
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Preliminary			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	=ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
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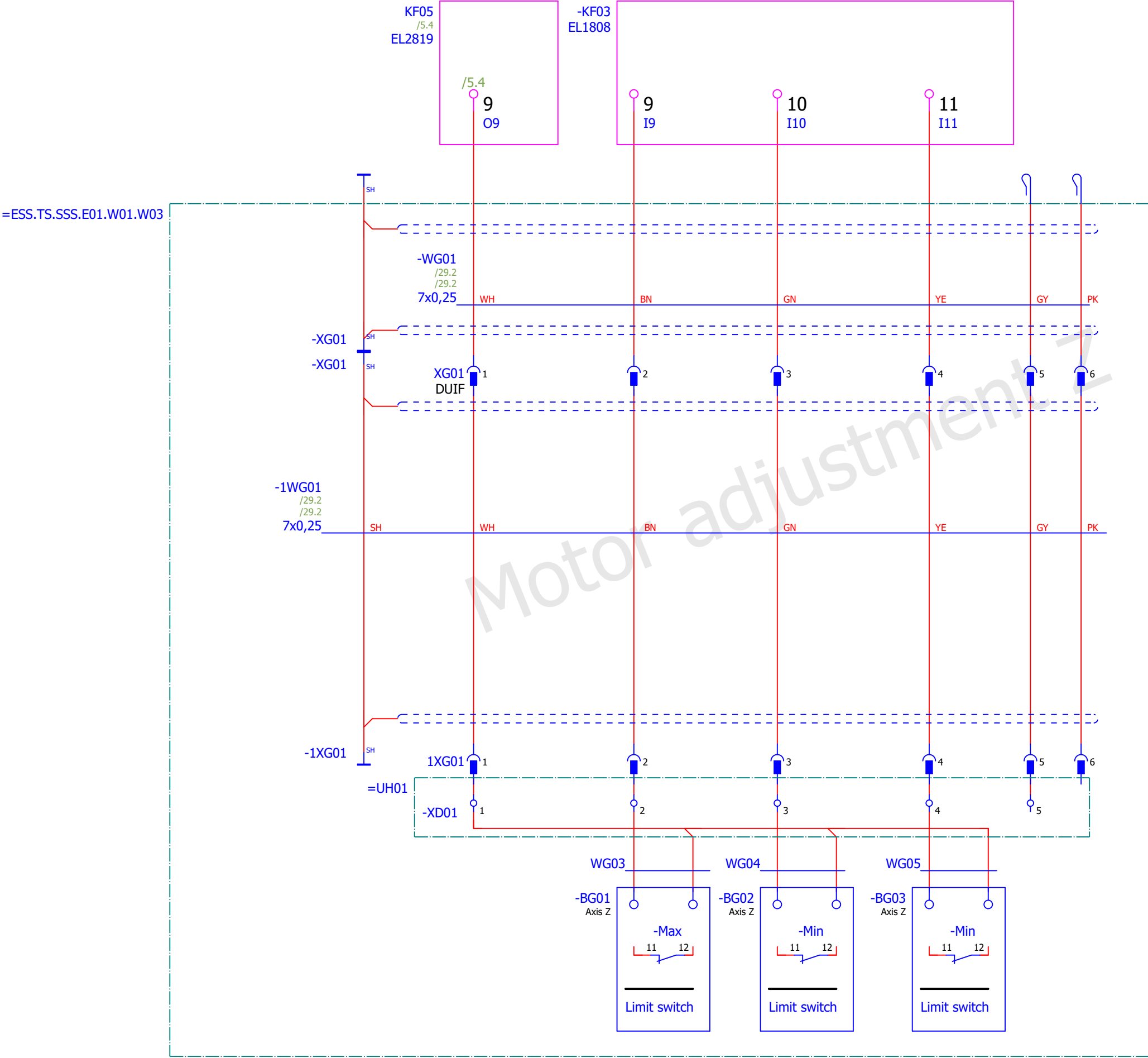


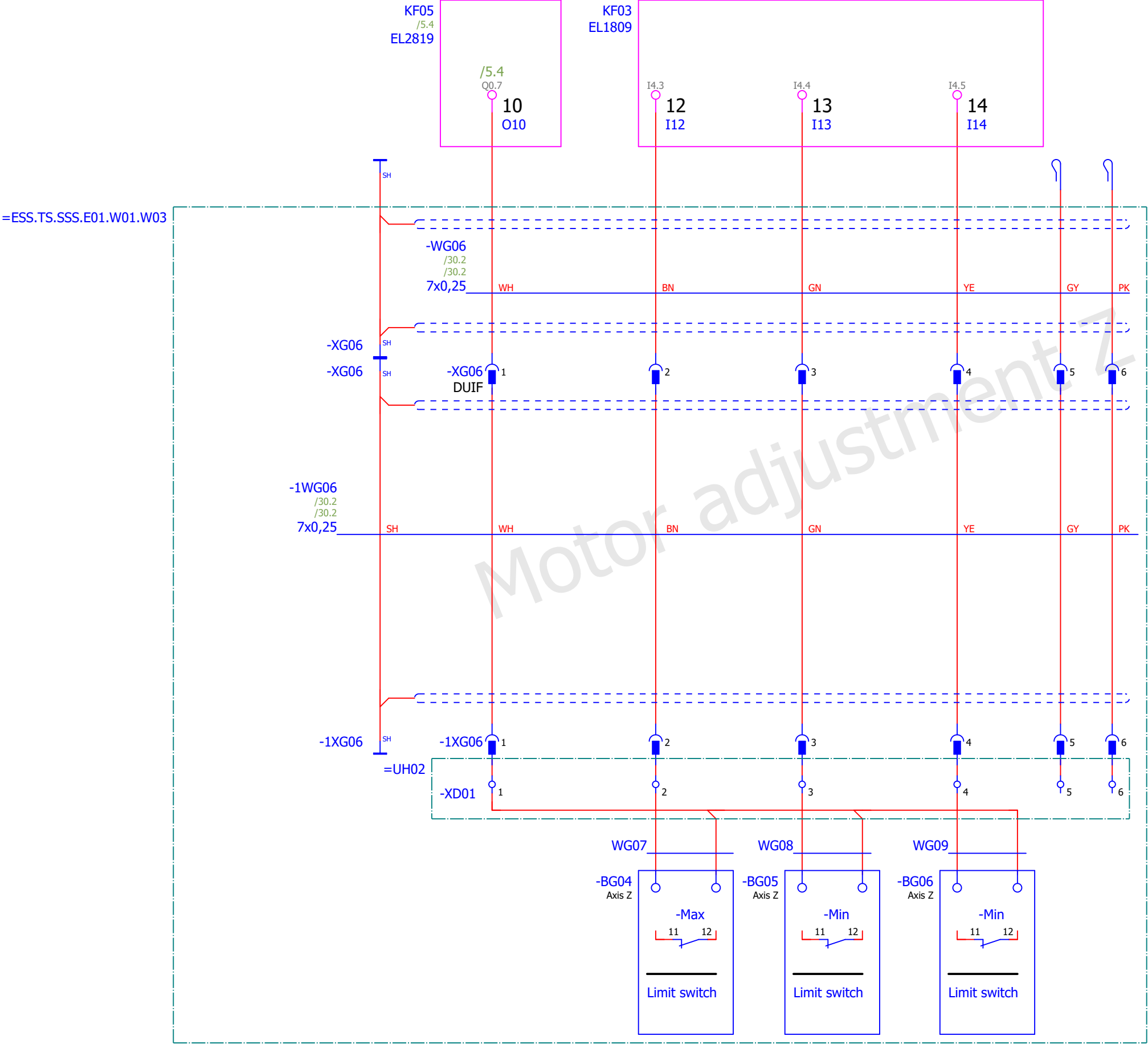


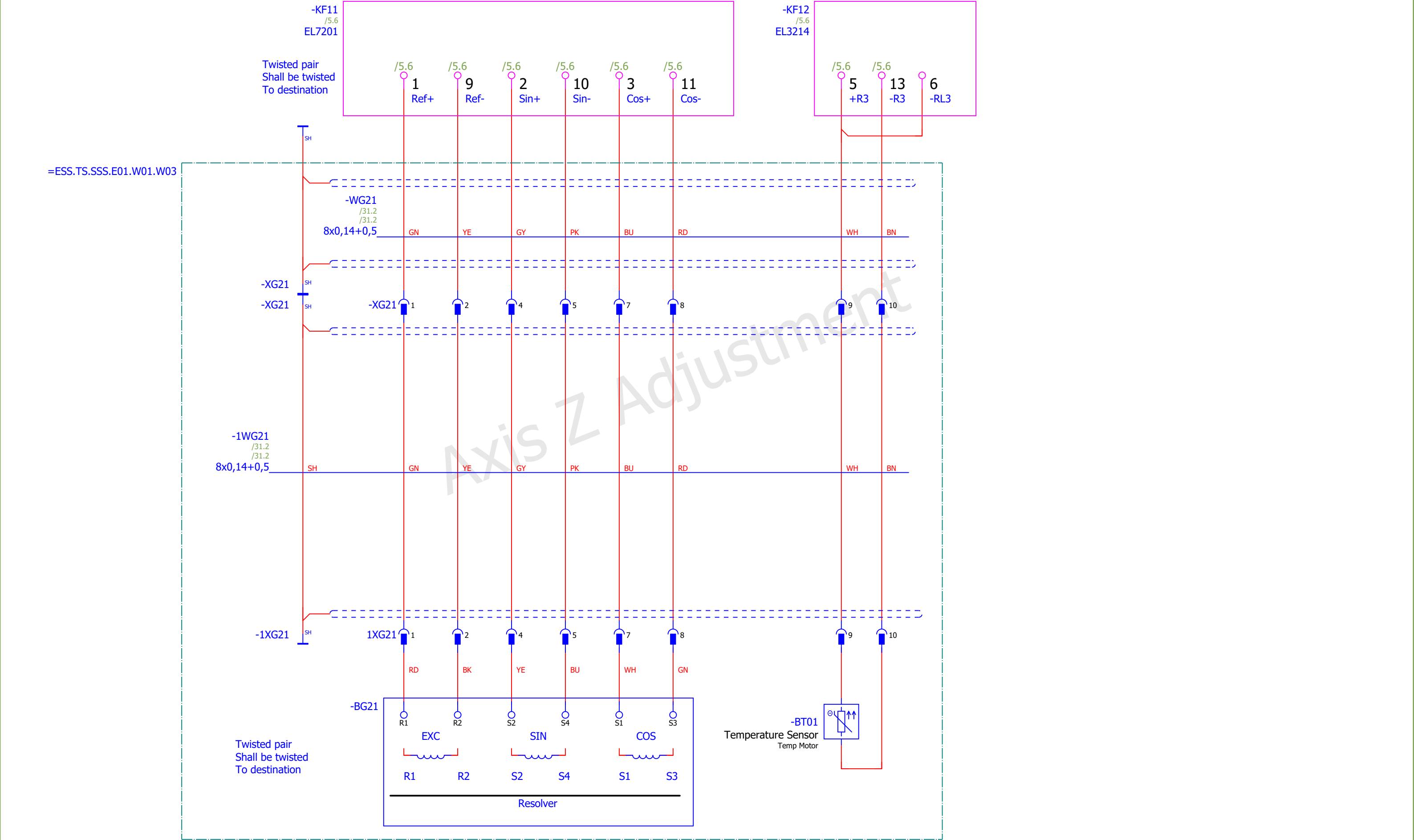
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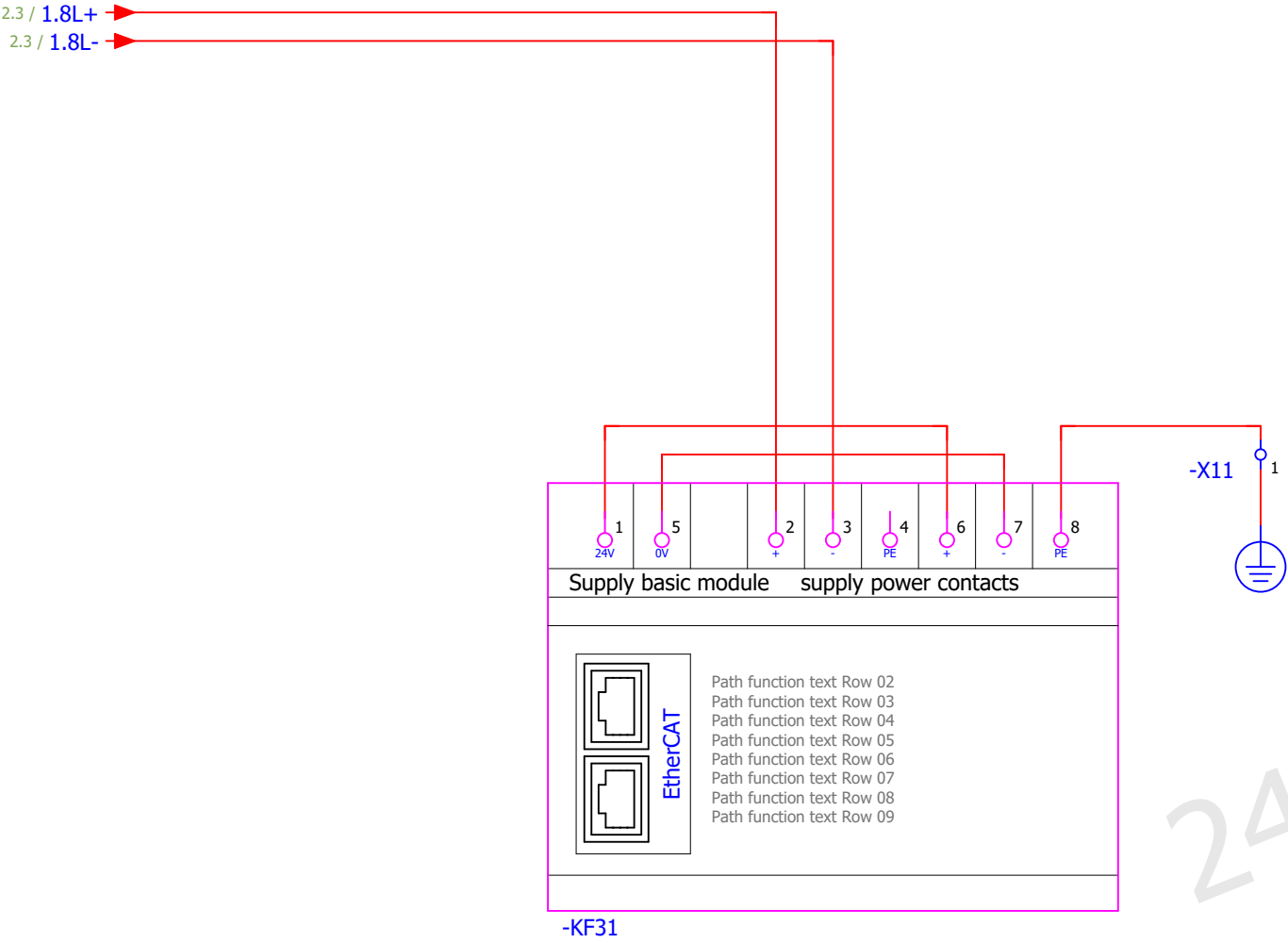
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY EVAN	DATE	Functional location (FBS) Description =ESS.TS.SSS.E01.W01.K01	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description Motor Z	CHES Doc. NR: ESS-1090724	Document: &FS 28	Page nr/Proj. tot count: 53 / 197	




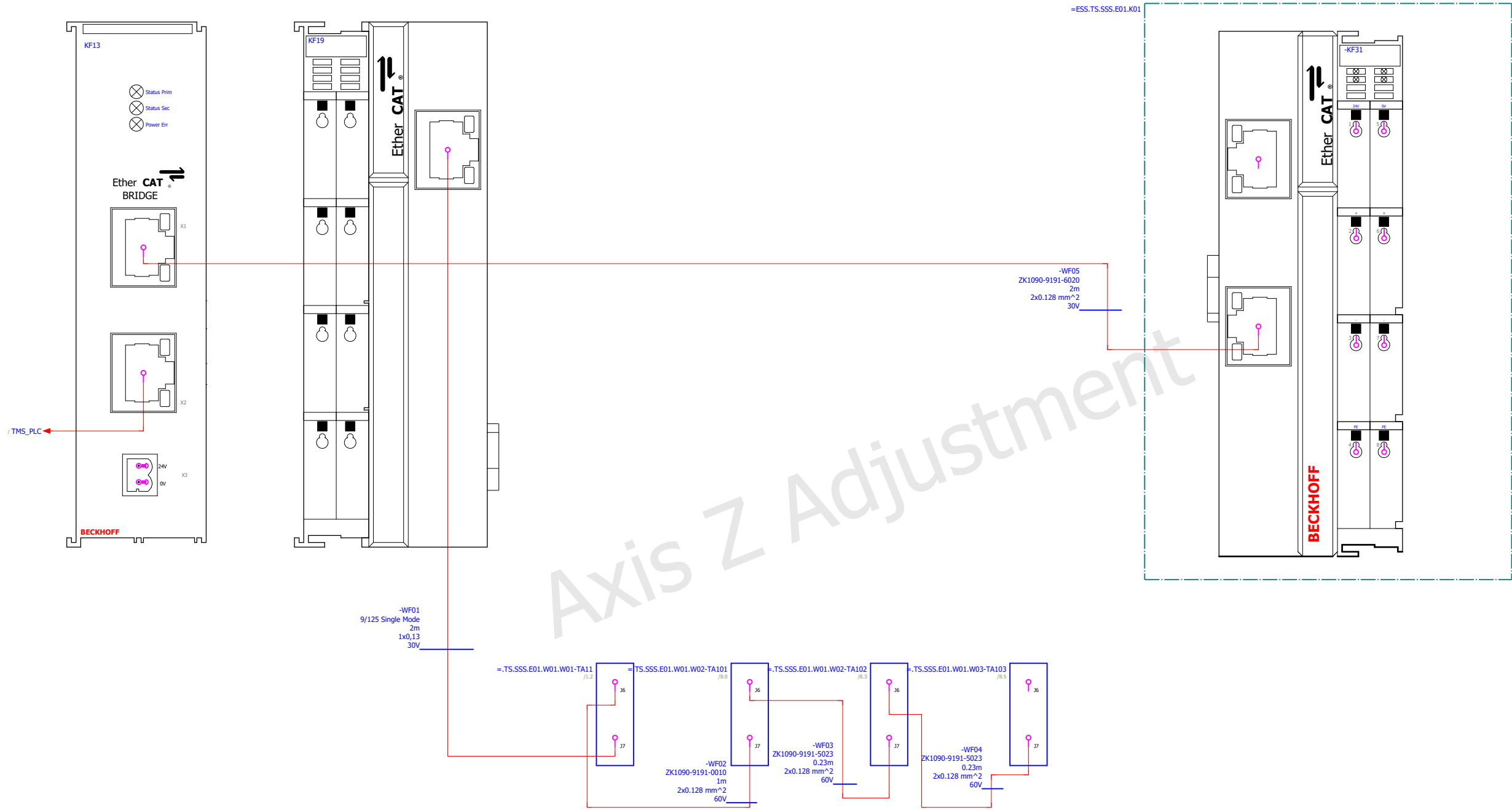




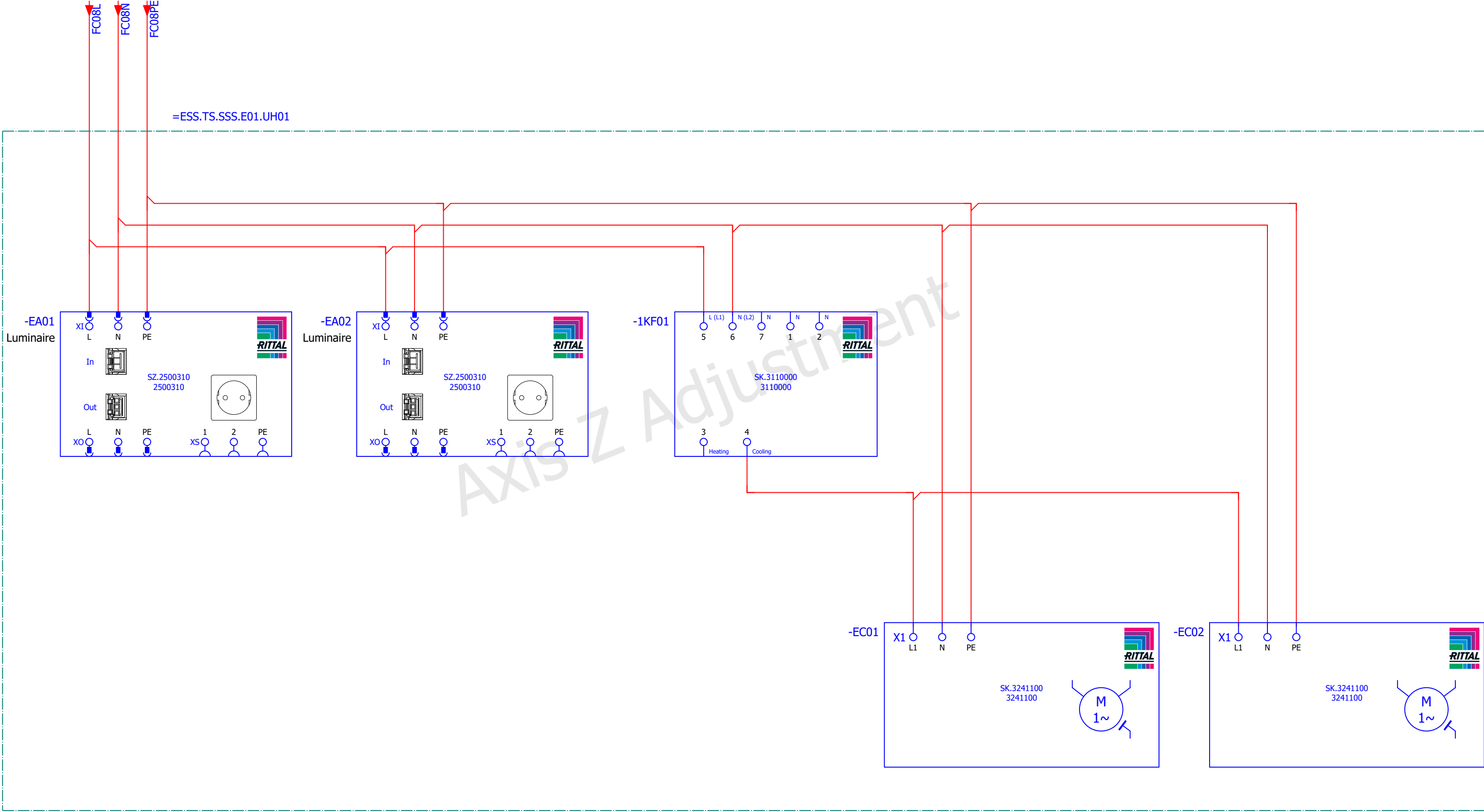




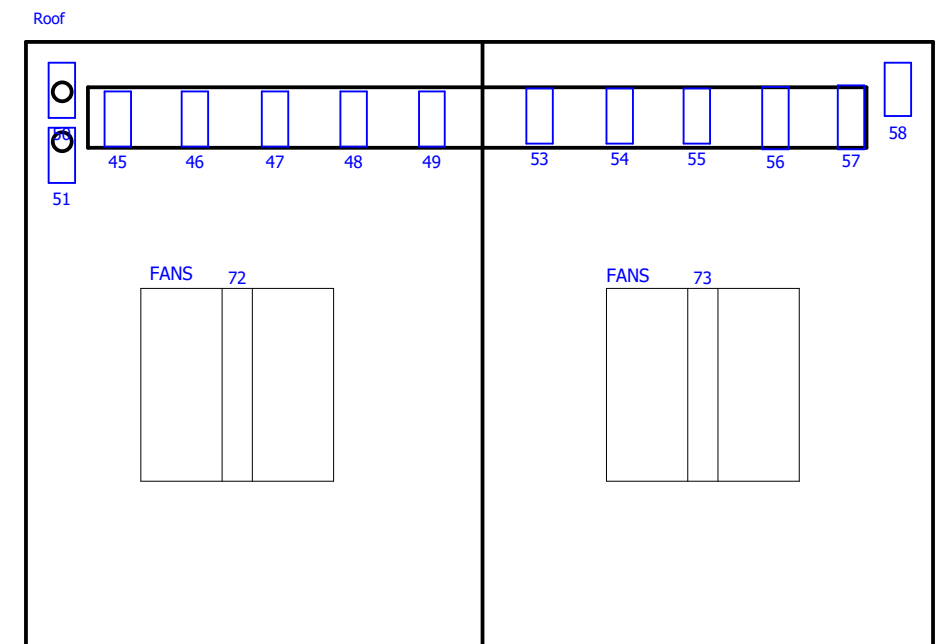
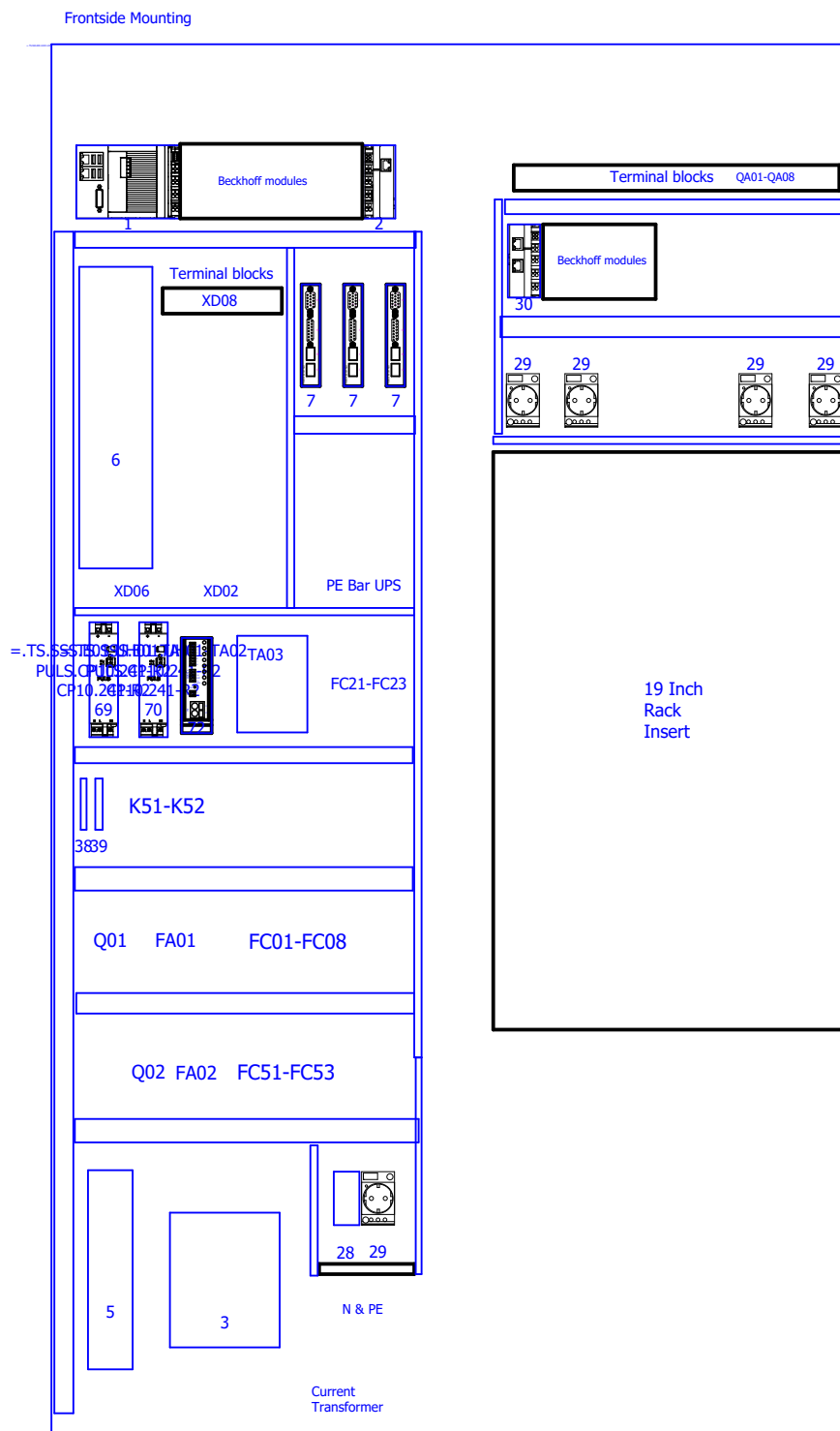
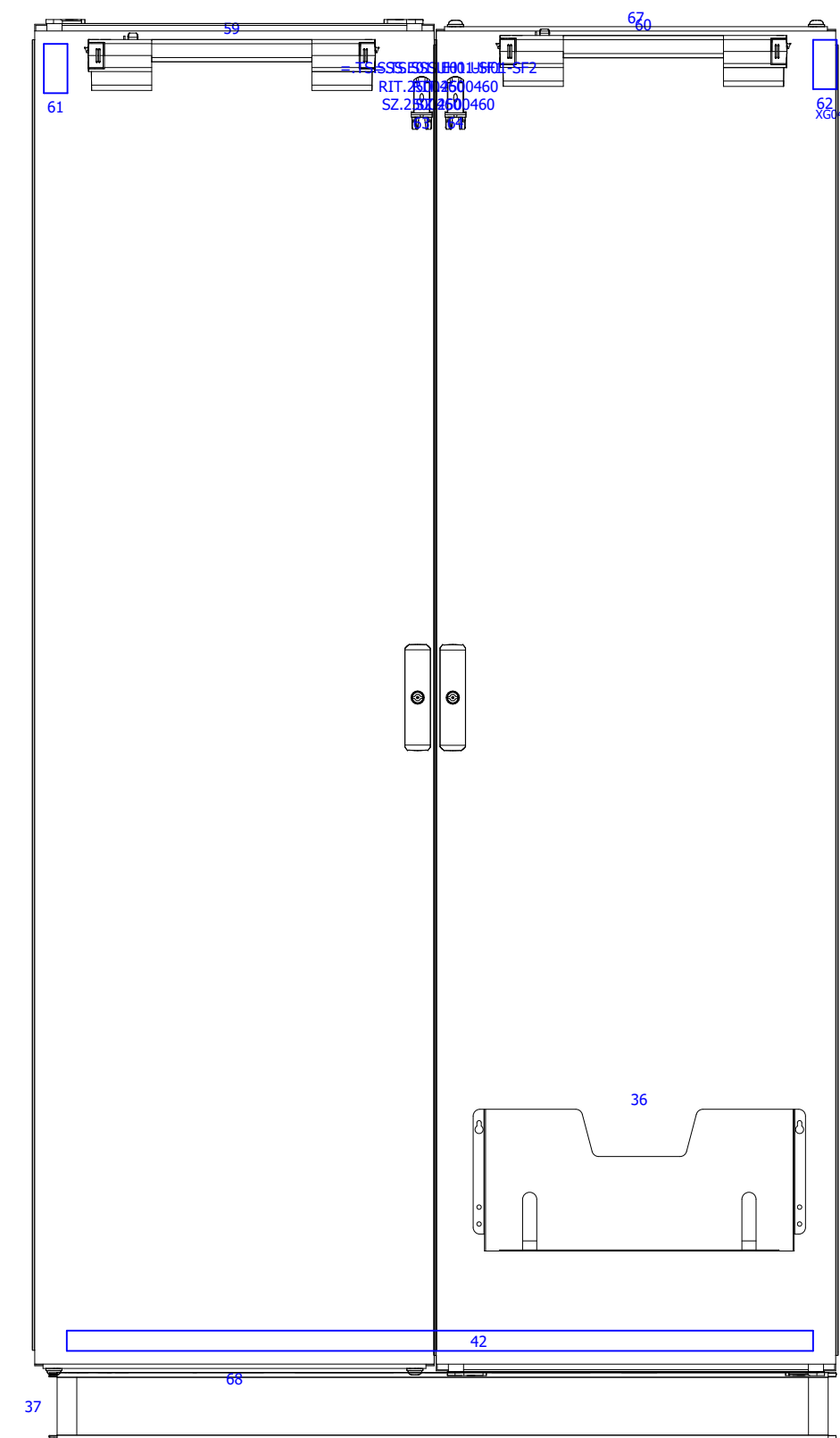
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Axis Z Adjustment										
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			CHECKED BY EVAN		DATE		Functional location (FBS) Description		Functional location (FBS): =ESS.TS.SSS.E01.W01.K01	
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			Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS		Page Description Current slip ring		CHESS Doc. NR: ESS-1090724	
									Document: &FS 41	
									Page nr/Proj. tot count: 58 / 197	



REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div></div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
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Side view CU



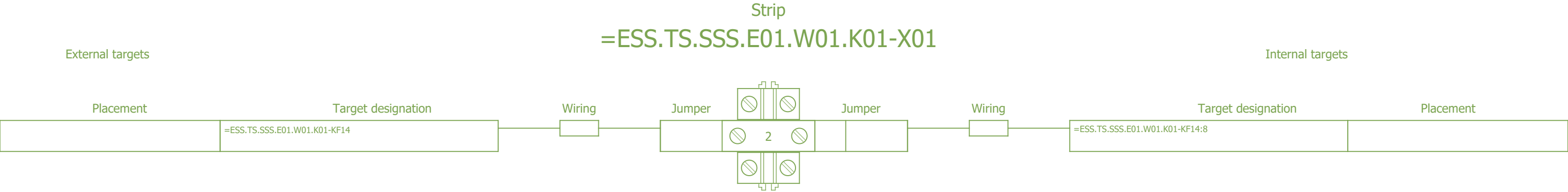
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY EVAN	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div><div>ess</div></div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		RAN			+			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
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Fuse Table											
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1	=ESS.TS.SSS.E01.UH01-FB01		25A/30mA	F202 AC-25/0,03 Residual Current Dev.							
2	=ESS.TS.SSS.E01.UH01-FC01	Target Wheel Motor	32A/D/36kA	36kA High performance circuit breaker, 3-pole, 32A, max. 690V AC, 375V DC, Char. D							
3	=ESS.TS.SSS.E01.UH01-FC02	spare	6A/C/10kA	Miniature Circuit Breaker - S200M - 1P - C - 6 A							
4	=ESS.TS.SSS.E01.UH01-FC03	PC charge socet	6A/C/10kA	Miniature Circuit Breaker - S200M - 1P - C - 6 A							
5	=ESS.TS.SSS.E01.UH01-FC04	24VDC Power supply	6A/C/10kA	Miniature Circuit Breaker - S200M - 1P - C - 6 A							
6	=ESS.TS.SSS.E01.UH01-FC05	Power supply 72V Motors	6A/C/10kA	Miniature Circuit Breaker - S200M - 3P - C - 6 A							
7	=ESS.TS.SSS.E01.UH01-FC06		6A/C/10kA	Miniature Circuit Breaker - S200M - 1P - C - 6 A							
8	=ESS.TS.SSS.E01.UH01-FC07		6A/C/10kA	Miniature Circuit Breaker - S200M - 1P - C - 6 A							
9	=ESS.TS.SSS.E01.UH01-FC08		6A/C/10kA	Miniature Circuit Breaker - S200M - 1P - C - 6 A							
10	=ESS.TS.SSS.E01.UH01-FC11	Fuses 24VDC dist.	24VDC/0.5-10A	Electronic device circuit breaker							
11	=ESS.TS.SSS.E01.UH01-FC21	Steper Drive X	Icu = 50kA @ 240/415V a.c.	50kA High performance circuit breaker, 1-pole, 10A, max. 400V AC, 125V DC, Char. B							
12	=ESS.TS.SSS.E01.UH01-FC22	Drive Y	B8A 10kA	Miniature Circuit Breaker - S200M - 1P - B - 10 A							
13	=ESS.TS.SSS.E01.UH01-FC23	Drive Z	B8A 10kA	Miniature Circuit Breaker - S200M - 1P - B - 10 A							
14	=ESS.TS.SSS.E01.UH01-FC51	UPS for 24VDC Cabinet	B6A 10kA	Miniature Circuit Breaker - S200M - 1P - B - 6 A							
15	=ESS.TS.SSS.E01.UH01-FC52	UPS power ICS	B6A 10kA	Miniature Circuit Breaker - S200M - 1P - B - 6 A							
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 EUROPEAN SPALLATION SOURCE	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHES5 Doc. NR:	Document:	Page nr/Proj. tot count:	
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# Terminal diagram

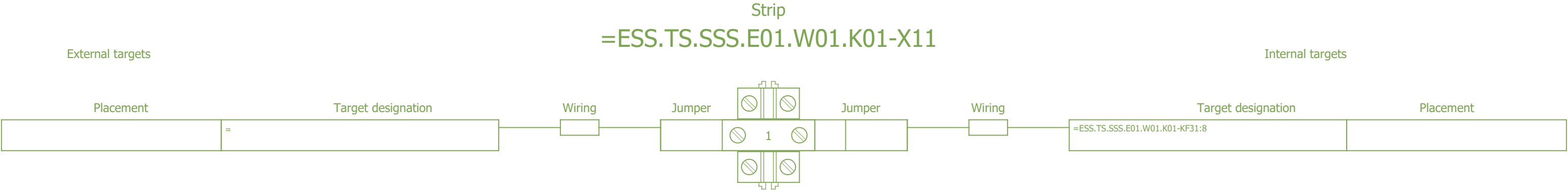
ESS\_Terminal\_diagram





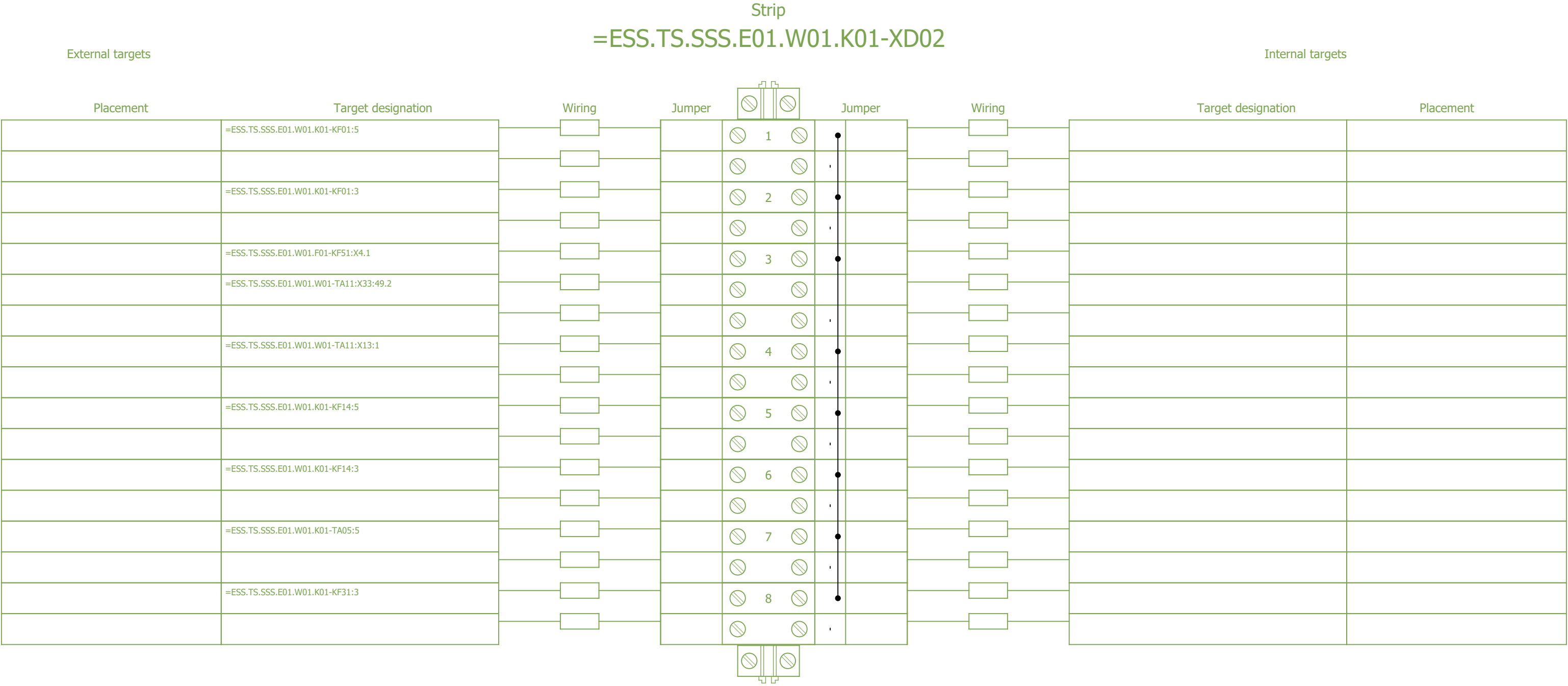
# Terminal diagram

ESS\_Terminal\_diagram



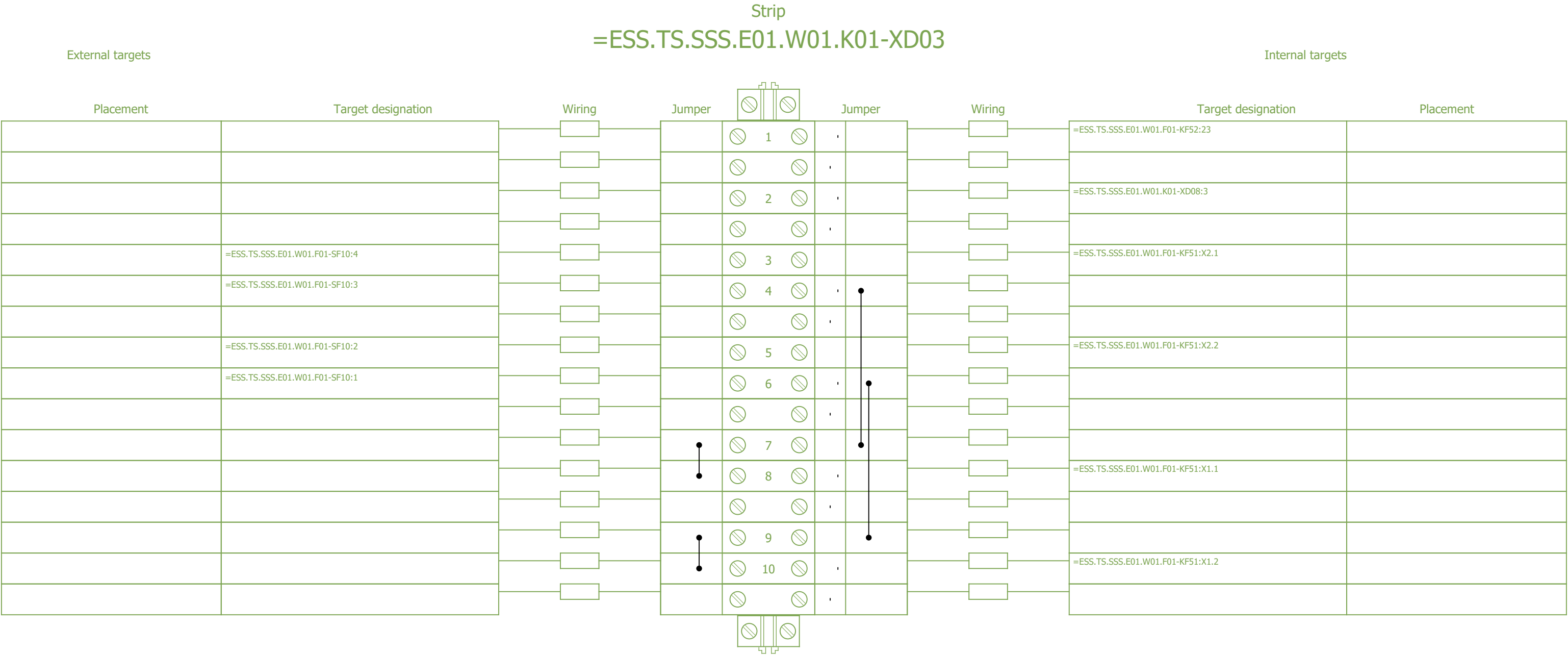
Terminal diagram

ESS\_Terminal\_diagram



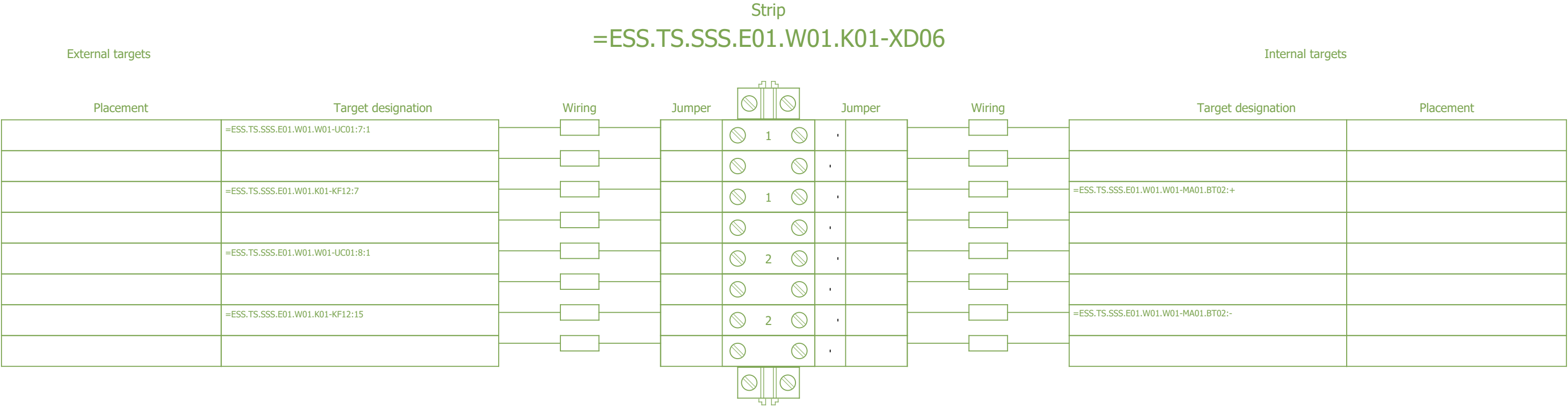
Terminal diagram

ESS\_Terminal\_diagram



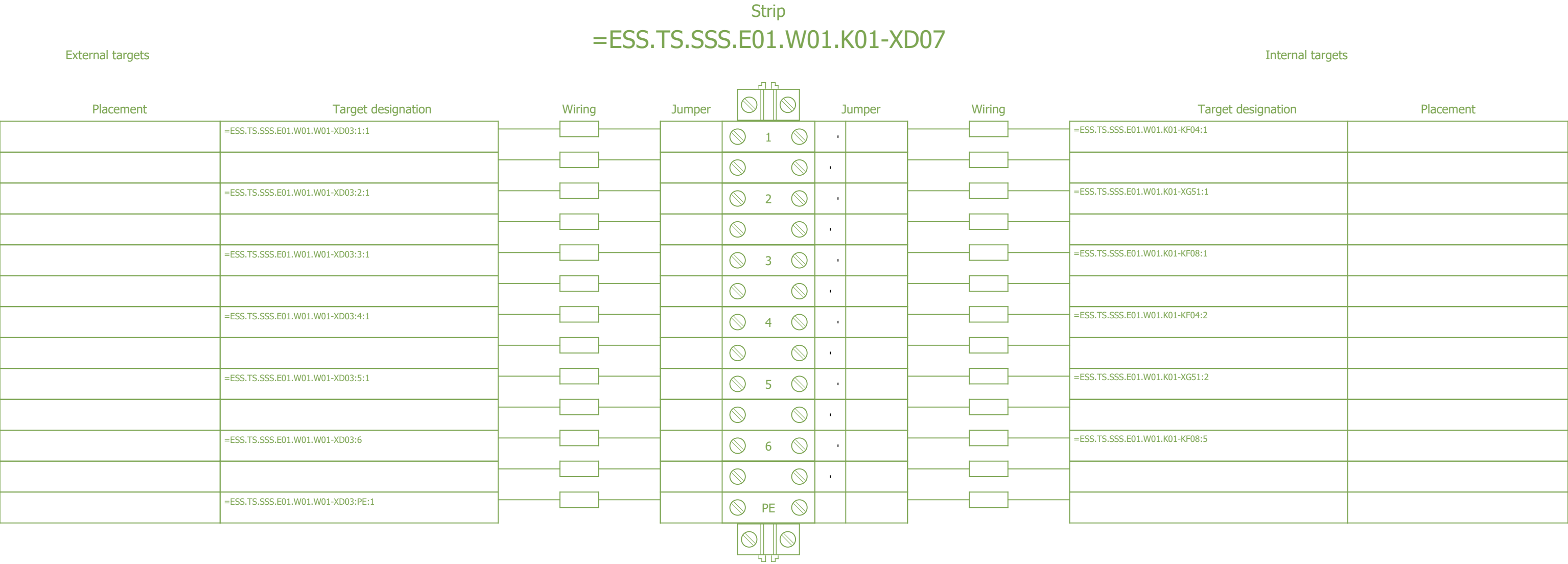
Terminal diagram

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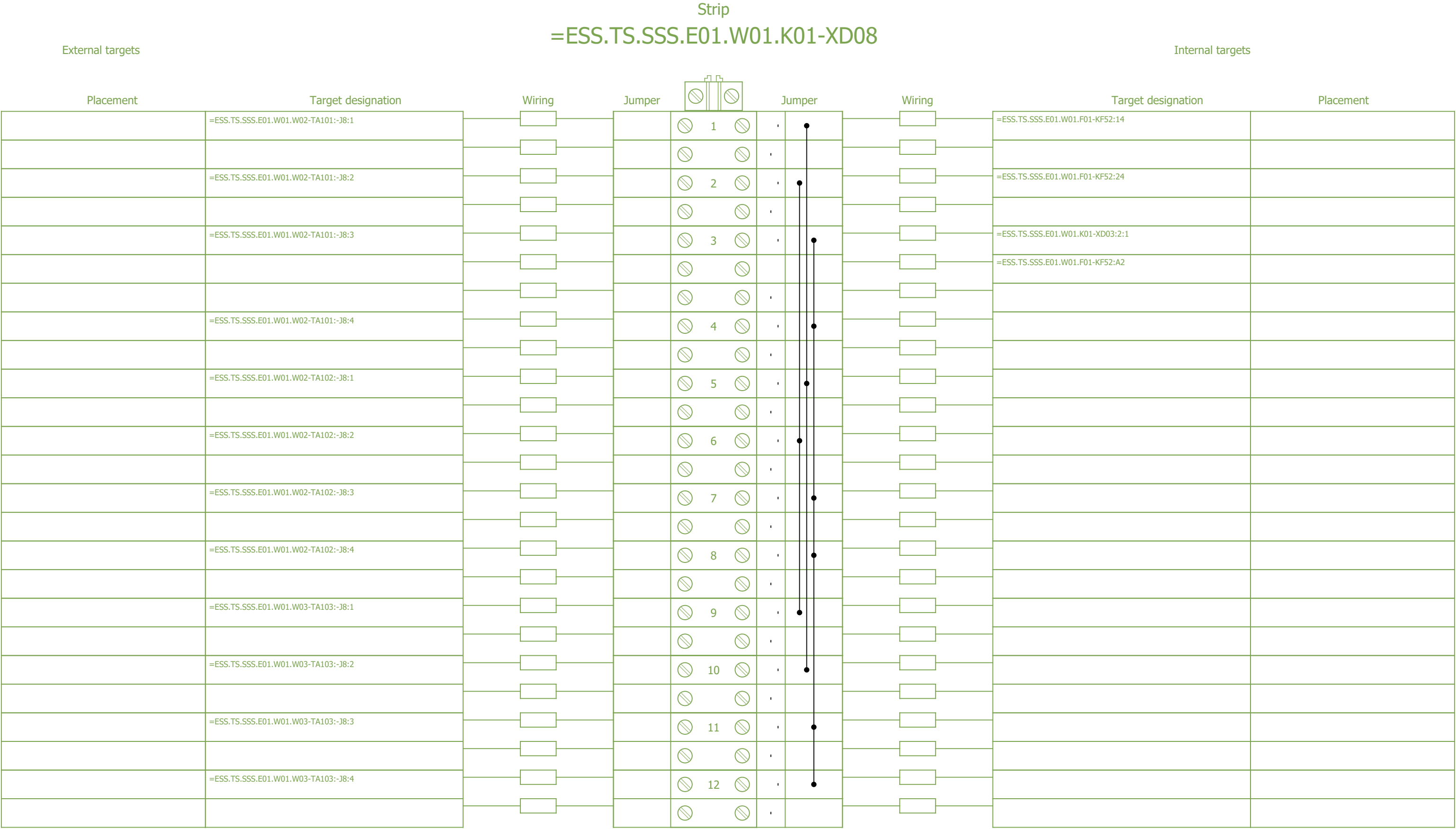
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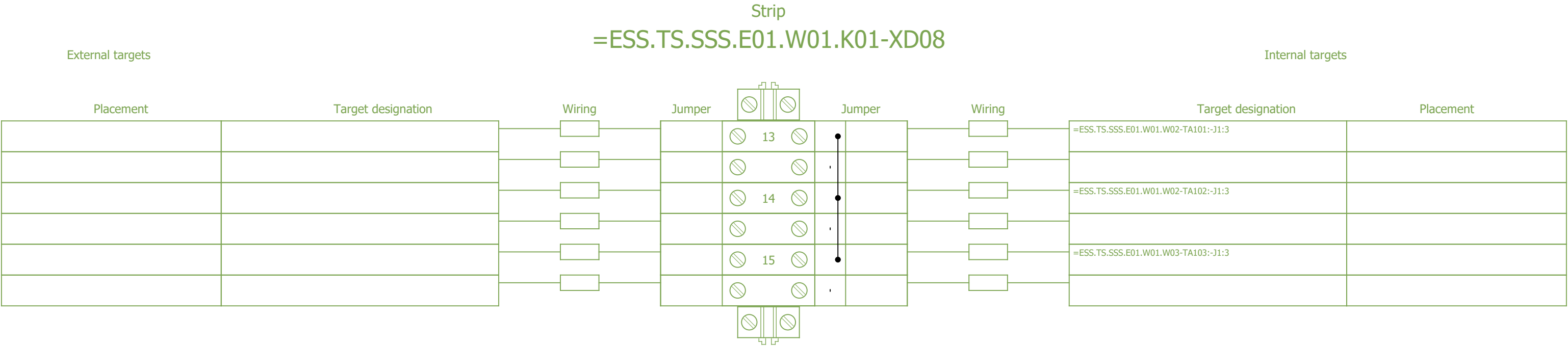
Terminal diagram

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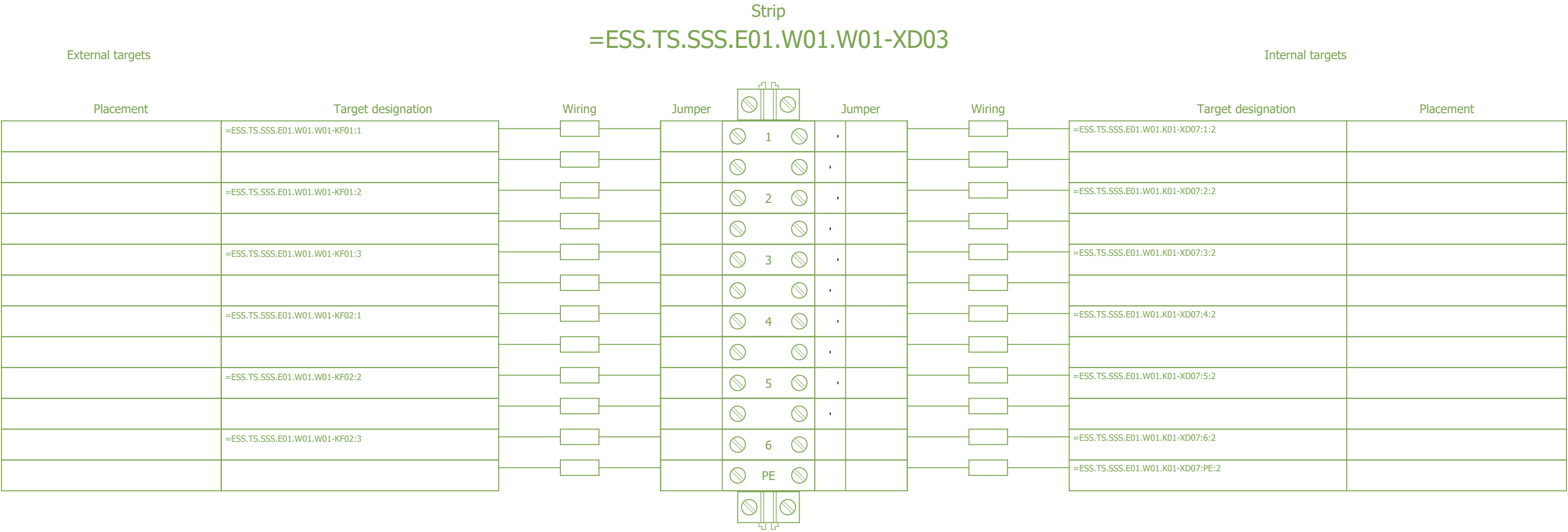
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Terminal diagram

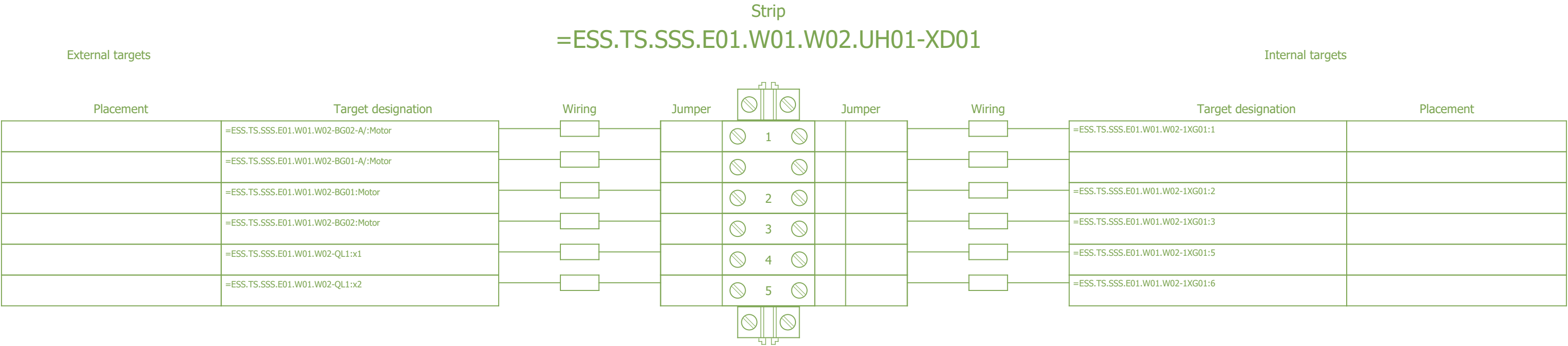
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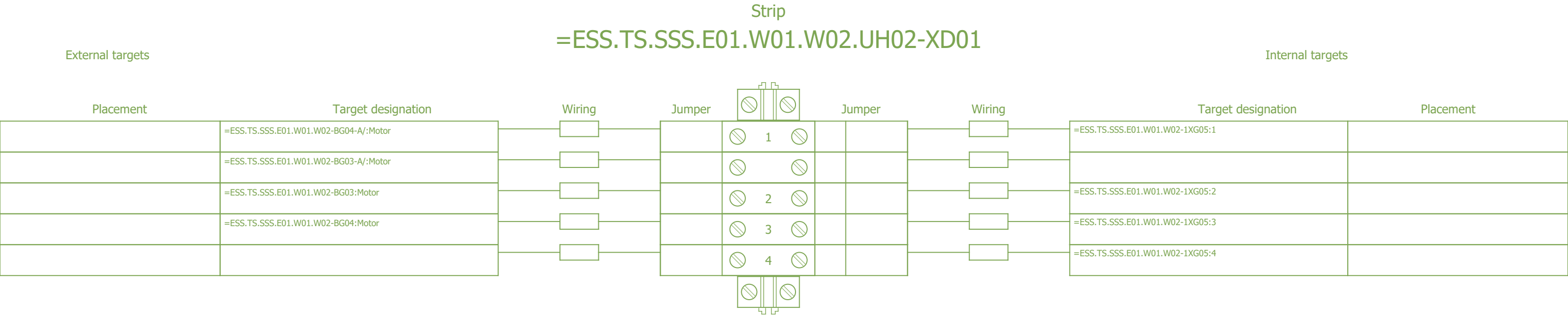
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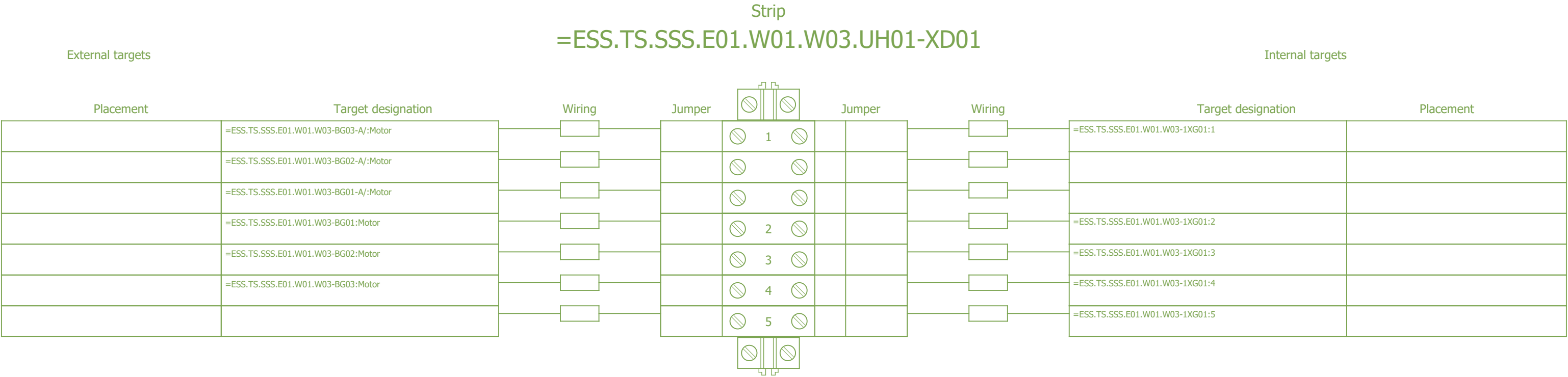
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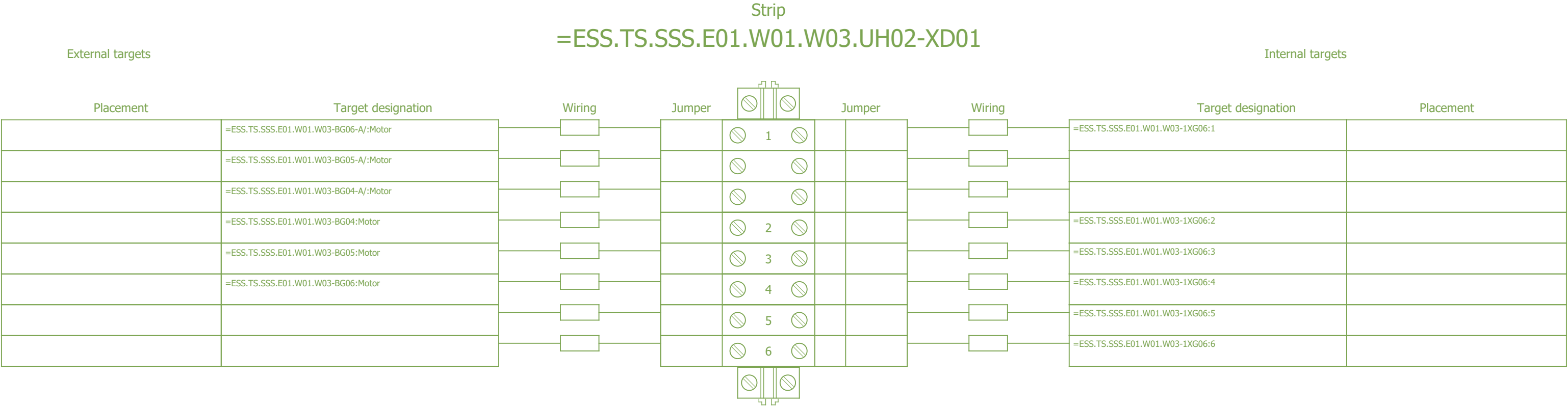
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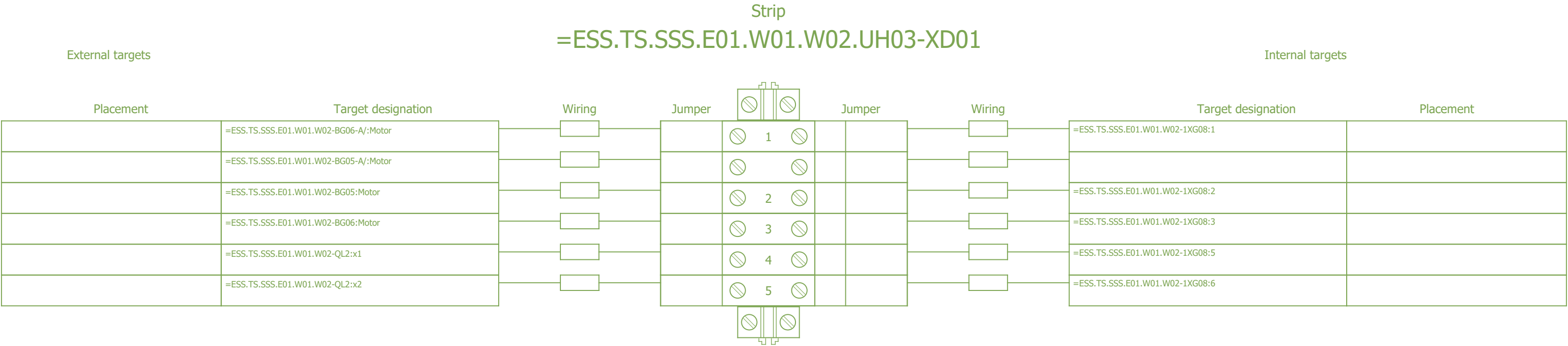
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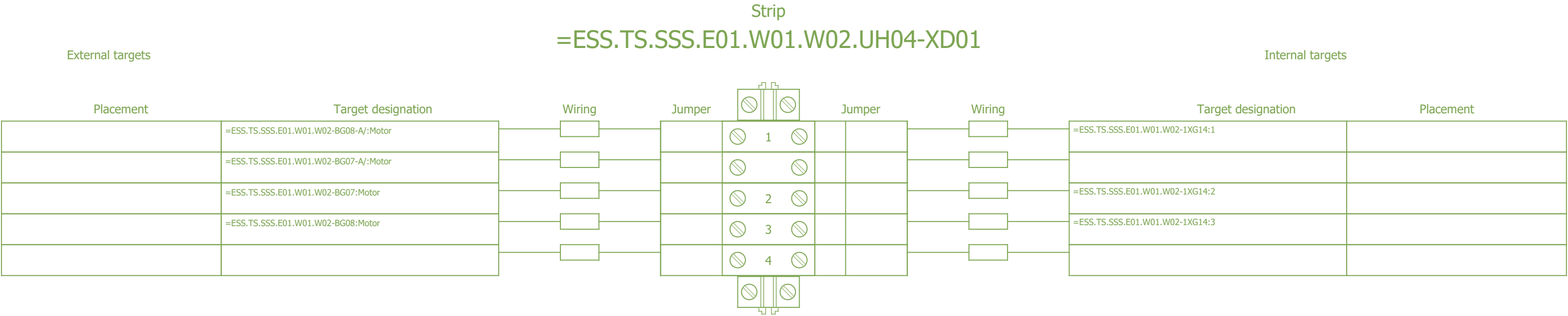
Terminal diagram

ESS\_Terminal\_diagram



Terminal diagram

ESS\_Terminal\_diagram



Connection list

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2		=ESS.TS.SSS.E01.UH01-FA01:L1	=ESS.TS.SSS.E01.UH01-FC01:1			=ESS.TS.SSS.E01.UH01&FS/1.1:
3		=ESS.TS.SSS.E01.UH01-FC01:1	=ESS.TS.SSS.E01.UH01-FC02:1			=ESS.TS.SSS.E01.UH01&FS/1.2:
4		=ESS.TS.SSS.E01.UH01-FC02:1	=ESS.TS.SSS.E01.UH01-FC05:1		10	=ESS.TS.SSS.E01.UH01&FS/1.8:
5		=ESS.TS.SSS.E01.UH01-FA01:L2	=ESS.TS.SSS.E01.UH01-QB01:3		16	=ESS.TS.SSS.E01.UH01&FS/1.1:
6		=ESS.TS.SSS.E01.UH01-FA01:L2	=ESS.TS.SSS.E01.UH01-FC01:3			=ESS.TS.SSS.E01.UH01&FS/1.1:
7		=ESS.TS.SSS.E01.UH01-FC01:3	=ESS.TS.SSS.E01.UH01-FC03:1			=ESS.TS.SSS.E01.UH01&FS/1.2:
8		=ESS.TS.SSS.E01.UH01-FC03:1	=ESS.TS.SSS.E01.UH01-FC05:3		16	=ESS.TS.SSS.E01.UH01&FS/1.9:
9		=ESS.TS.SSS.E01.UH01-FA01:L3	=ESS.TS.SSS.E01.UH01-QB01:5		10	=ESS.TS.SSS.E01.UH01&FS/1.1:
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11		=ESS.TS.SSS.E01.UH01-FC01:5	=ESS.TS.SSS.E01.UH01-FC04:1			=ESS.TS.SSS.E01.UH01&FS/1.2:
12		=ESS.TS.SSS.E01.UH01-FC04:1	=ESS.TS.SSS.E01.UH01-FC05:5		16	=ESS.TS.SSS.E01.UH01&FS/2.1:
13		=ESS.TS.SSS.E01.UH01-FA01:3	=ESS.TS.SSS.E01.UH01-FA01:19			=ESS.TS.SSS.E01.UH01&FS/1.1:
14		=ESS.TS.SSS.E01.UH01-FA01:19	=ESS.TS.SSS.E01.UH01-FA01:20			=ESS.TS.SSS.E01.UH01&FS/1.1:
15		=ESS.TS.SSS.E01.UH01-FA01:15	=ESS.TS.SSS.E01.UH01-FA01:20			=ESS.TS.SSS.E01.UH01&FS/1.1:
16		=ESS.TS.SSS.E01.UH01-FA01	=ESS.TS.SSS.E01.UH01-FA01:3			=ESS.TS.SSS.E01.UH01&FS/1.1:
17		=ESS.TS.SSS.E01.UH01-FA01	=ESS.TS.SSS.E01.UH01-FA01:2			=ESS.TS.SSS.E01.UH01&FS/1.1:
18		=ESS.TS.SSS.E01.UH01-FA01	=ESS.TS.SSS.E01.UH01-FA01:19			=ESS.TS.SSS.E01.UH01&FS/1.1:
19		=ESS.TS.SSS.E01.UH01-FA01	=ESS.TS.SSS.E01.UH01-FA01:17			=ESS.TS.SSS.E01.UH01&FS/1.1:
20		=ESS.TS.SSS.E01.UH01-FA01:PE	=ESS.TS.SSS.E01.UH01-FA02:PE			=ESS.TS.SSS.E01.UH01&FS/1.1:
21		=ESS.TS.SSS.E01.UH01-FA01	=ESS.TS.SSS.E01.UH01-FA01:20			=ESS.TS.SSS.E01.UH01&FS/1.1:
22		=ESS.TS.SSS.E01.UH01-FA01	=ESS.TS.SSS.E01.UH01-FA01:18			=ESS.TS.SSS.E01.UH01&FS/1.1:
23		=ESS.TS.SSS.E01.W01.W01-MA01:U1	=ESS.TS.SSS.E01.W01.W01-UC01:1:2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
24		=ESS.TS.SSS.E01.W01.W01-RF02:L1.1	=ESS.TS.SSS.E01.W01.W01-TA11:X3:L1			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
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26		=ESS.TS.SSS.E01.W01.W01-RF01:U1	=ESS.TS.SSS.E01.UH01-FC01:2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
27		=ESS.TS.SSS.E01.W01.W01-MA01:V1	=ESS.TS.SSS.E01.W01.W01-UC01:2:2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
28		=ESS.TS.SSS.E01.W01.W01-RF02:L2.1	=ESS.TS.SSS.E01.W01.W01-TA11:X3:L2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
29		=ESS.TS.SSS.E01.W01.W01-RF01:V2	=ESS.TS.SSS.E01.W01.W01-RF02:L2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:

ESS\_Connection List [FBS]

30		=ESS.TS.SSS.E01.W01.W01-RF01:V1	=ESS.TS.SSS.E01.UH01-FC01:4			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
31		=ESS.TS.SSS.E01.W01.W01-MA01:W1	=ESS.TS.SSS.E01.W01.W01-UC01:3:2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
32		=ESS.TS.SSS.E01.W01.W01-RF02:L3.1	=ESS.TS.SSS.E01.W01.W01-TA11:X3:L3			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
33		=ESS.TS.SSS.E01.W01.W01-RF01:W2	=ESS.TS.SSS.E01.W01.W01-RF02:L3			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
34		=ESS.TS.SSS.E01.W01.W01-RF01:W1	=ESS.TS.SSS.E01.UH01-FC01:6			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
35		=ESS.TS.SSS.E01.W01.W01-MA01:PE	=ESS.TS.SSS.E01.W01.W01-UC01:4:2			=ESS.TS.SSS.E01.W01.W01&FS/1.2:
36		=ESS.TS.SSS.E01.W01.W01-RF02:PE.1	=ESS.TS.SSS.E01.W01.W01-TA11:X3:PE			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
37		=ESS.TS.SSS.E01.W01.W01-RF01:PE	=ESS.TS.SSS.E01.W01.W01-RF02:PE			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
38		=ESS.TS.SSS.E01.W01.W01-MA01.BT01:+	=ESS.TS.SSS.E01.W01.W01-UC01:5:2			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
39		=ESS.TS.SSS.E01.W01.W01-MA01.BT01:-	=ESS.TS.SSS.E01.W01.W01-UC01:6:2			=ESS.TS.SSS.E01.W01.W01&FS/1.3:
40		=ESS.TS.SSS.E01.W01.W01-MA01.BT02:+	=ESS.TS.SSS.E01.W01.W01-UC01:7:2			=ESS.TS.SSS.E01.W01.W01&FS/1.4:
41		=ESS.TS.SSS.E01.W01.W01-MA01.BT02:-	=ESS.TS.SSS.E01.W01.W01-UC01:8:2			=ESS.TS.SSS.E01.W01.W01&FS/1.4:
42		=ESS.TS.SSS.E01.W01.W01-TA11:X13:3	=ESS.TS.SSS.E01.UH01-FC11:OUT+:4			=ESS.TS.SSS.E01.W01.W01&FS/1.5:
43		=ESS.TS.SSS.E01.W01.K01-XD1:L	=ESS.TS.SSS.E01.UH01-FB01:2/1			=ESS.TS.SSS.E01.W01.K01&FS/1.9:
44		=ESS.TS.SSS.E01.UH01-FB01:1/2	=ESS.TS.SSS.E01.UH01-FC03:2			=ESS.TS.SSS.E01.UH01&FS/1.9:
45		=ESS.TS.SSS.E01.W01.K01-XD1:N	=ESS.TS.SSS.E01.UH01-FB01:4/3			=ESS.TS.SSS.E01.W01.K01&FS/1.9:
46		=ESS.TS.SSS.E01.W01.K01-XD10:3	=ESS.TS.SSS.E01.UH01-FB01:3/4			=ESS.TS.SSS.E01.W01.K01&FS/1.9:
47		=ESS.TS.SSS.E01.W01.K01-XD1:PE	=ESS.TS.SSS.E01.UH01-PE01:3			=ESS.TS.SSS.E01.W01.K01&FS/1.9:
48		=ESS.TS.SSS.E01.W01.K01-KF01:1	=ESS.TS.SSS.E01.UH01-FC11:OUT+:1			=ESS.TS.SSS.E01.W01.K01&FS/7.0:
49		=ESS.TS.SSS.E01.W01.K01-KF01:1	=ESS.TS.SSS.E01.W01.K01-KF07:1			=ESS.TS.SSS.E01.W01.K01&FS/7.0:
50		=ESS.TS.SSS.E01.UH01-FC11:IN+:1	=ESS.TS.SSS.E01.UH01-TA01:Out +			=ESS.TS.SSS.E01.UH01&FS/2.1:
51		=ESS.TS.SSS.E01.W01.K01-XD10:4	=ESS.TS.SSS.E01.UH01-TA01:N			=ESS.TS.SSS.E01.W01.K01&FS/2.1:
52		=ESS.TS.SSS.E01.UH01-TA01:N	=ESS.TS.SSS.E01.UH01-TA02:N			=ESS.TS.SSS.E01.UH01&FS/2.1:
53		=ESS.TS.SSS.E01.W01.K01-KF01:5	=ESS.TS.SSS.E01.W01.K01-XD02:1:2			=ESS.TS.SSS.E01.W01.K01&FS/7.0:
54		=ESS.TS.SSS.E01.W01.K01-KF01:5	=ESS.TS.SSS.E01.W01.K01-KF07:5			=ESS.TS.SSS.E01.W01.K01&FS/7.0:
55		=ESS.TS.SSS.E01.W01.K01-XD02:1	=ESS.TS.SSS.E01.W01.K01-XD02:2			=ESS.TS.SSS.E01.W01.K01&FS/2.1:
56		=ESS.TS.SSS.E01.UH01-FC11:IN+:2	=ESS.TS.SSS.E01.UH01-TA02:Out +			=ESS.TS.SSS.E01.UH01&FS/2.1:
57		=ESS.TS.SSS.E01.UH01-TA01:Out -	=ESS.TS.SSS.E01.UH01-TA02:Out -			=ESS.TS.SSS.E01.UH01&FS/2.1:
58		=ESS.TS.SSS.E01.UH01-TA01:Out -	=ESS.TS.SSS.E01.UH01-TA02:PE			=ESS.TS.SSS.E01.UH01&FS/2.1:
59		=ESS.TS.SSS.E01.UH01-PE01:4	=ESS.TS.SSS.E01.UH01-TA02:PE			=ESS.TS.SSS.E01.UH01&FS/2.1:

Connection list

	Connection	Source	Target	Color	Cr-sect.	Page
60		=ESS.TS.SSS.E01.UH01-PE01:4	=ESS.TS.SSS.E01.UH01-TA01:PE			=ESS.TS.SSS.E01.UH01&FS/2.1:
61		=ESS.TS.SSS.E01.UH01-FC04:2	=ESS.TS.SSS.E01.UH01-TA01:L			=ESS.TS.SSS.E01.UH01&FS/2.1:
62		=ESS.TS.SSS.E01.UH01-TA01:L	=ESS.TS.SSS.E01.UH01-TA02:L			=ESS.TS.SSS.E01.UH01&FS/2.1:
63		=ESS.TS.SSS.E01.W01.K01-KF01:6	=ESS.TS.SSS.E01.UH01-FC11:OUT+:2			=ESS.TS.SSS.E01.W01.K01&FS/7.1:
64		=ESS.TS.SSS.E01.W01.K01-KF01:6	=ESS.TS.SSS.E01.W01.K01-KF07:6			=ESS.TS.SSS.E01.W01.K01&FS/7.1:
65		=ESS.TS.SSS.E01.W01.K01-KF01:3	=ESS.TS.SSS.E01.W01.K01-XD02:2:2			=ESS.TS.SSS.E01.W01.K01&FS/7.1:
66		=ESS.TS.SSS.E01.W01.K01-KF01:3	=ESS.TS.SSS.E01.W01.K01-KF07:3			=ESS.TS.SSS.E01.W01.K01&FS/7.1:
67		=ESS.TS.SSS.E01.W01.K01-XD02:2	=ESS.TS.SSS.E01.W01.K01-XD02:3			=ESS.TS.SSS.E01.W01.K01&FS/2.1:
68		=ESS.TS.SSS.E01.UH01-FC11:IN -:1	=ESS.TS.SSS.E01.UH01-TA01:Out -			=ESS.TS.SSS.E01.UH01&FS/2.1:
69		=ESS.TS.SSS.E01.W01.K01-XD02:3	=ESS.TS.SSS.E01.W01.K01-XD02:4			=ESS.TS.SSS.E01.W01.K01&FS/2.1:
70		=ESS.TS.SSS.E01.W01.K01-XD02:4:2	=ESS.TS.SSS.E01.W01.W01-TA11:X13:1			=ESS.TS.SSS.E01.W01.K01&FS/2.2:
71		=ESS.TS.SSS.E01.W01.K01-XD02:4	=ESS.TS.SSS.E01.W01.K01-XD02:5			=ESS.TS.SSS.E01.W01.K01&FS/2.2:
72		=ESS.TS.SSS.E01.W01.K01-XD02:5	=ESS.TS.SSS.E01.W01.K01-XD02:6			=ESS.TS.SSS.E01.W01.K01&FS/2.2:
73		=ESS.TS.SSS.E01.W01.K01-XD02:6	=ESS.TS.SSS.E01.W01.K01-XD02:7			=ESS.TS.SSS.E01.W01.K01&FS/2.2:
74		=ESS.TS.SSS.E01.W01.K01-XD02:7	=ESS.TS.SSS.E01.W01.K01-XD02:8			=ESS.TS.SSS.E01.W01.K01&FS/2.2:
75		=ESS.TS.SSS.E01.UH01-FC21:1	=ESS.TS.SSS.E01.UH01-TA03:Out +		2,5	=ESS.TS.SSS.E01.UH01&FS/2.6:
76		=ESS.TS.SSS.E01.UH01-FC21:1	=ESS.TS.SSS.E01.UH01-FC22:1			=ESS.TS.SSS.E01.UH01&FS/2.6:
77		=ESS.TS.SSS.E01.UH01-FC22:1	=ESS.TS.SSS.E01.UH01-FC23:1			=ESS.TS.SSS.E01.UH01&FS/2.7:
78		=ESS.TS.SSS.E01.UH01-FC05:2	=ESS.TS.SSS.E01.UH01-TA03:L1			=ESS.TS.SSS.E01.UH01&FS/2.6:
79		=:1:2	=ESS.TS.SSS.E01.W01.W02-TA101:-J1:1			&FS/2.7:
80		=ESS.TS.SSS.E01.UH01-FC05:4	=ESS.TS.SSS.E01.UH01-TA03:L2			=ESS.TS.SSS.E01.UH01&FS/2.6:
81		=ESS.TS.SSS.E01.UH01-FC05:6	=ESS.TS.SSS.E01.UH01-TA03:L3			=ESS.TS.SSS.E01.UH01&FS/2.6:
82		=ESS.TS.SSS.E01.UH01-PE01:5	=ESS.TS.SSS.E01.UH01-TA03:PE			=ESS.TS.SSS.E01.UH01&FS/2.7:
83		=ESS.TS.SSS.E01.UH01-PE01:5	=ESS.TS.SSS.E01.UH01-TA03:Out -			=ESS.TS.SSS.E01.UH01&FS/2.7:
84		=:1:1	=ESS.TS.SSS.E01.UH01-TA03:Out -			&FS/2.7:
85		=:1:1	=:2:1			&FS/2.7:
86		=:2:1	=:3:1			&FS/2.7:
87		=:2:2	=ESS.TS.SSS.E01.W01.W02-TA102:-J1:1			&FS/2.7:
88		=:3:2	=ESS.TS.SSS.E01.W01.W03-TA103:-J1:1			&FS/2.8:

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89		=ESS.TS.SSS.E01.UH01-FC06:2	=ESS.TS.SSS.E01.UH01-XD2:L			=ESS.TS.SSS.E01.UH01&FS/3.1:
90		=ESS.TS.SSS.E01.UH01-FC06:1	=ESS.TS.SSS.E01.UH01-FC06:1		16	=ESS.TS.SSS.E01.UH01&FS/3.1:
91		=ESS.TS.SSS.E01.UH01-XD2:N	=ESS.TS.SSS.E01.UH01-XD10:6			=ESS.TS.SSS.E01.UH01&FS/3.1:
92		=ESS.TS.SSS.E01.UH01-PE01:6	=ESS.TS.SSS.E01.UH01-XD2:PE			=ESS.TS.SSS.E01.UH01&FS/3.1:
93		=ESS.TS.SSS.E01.UH01-FC07:2	=ESS.TS.SSS.E01.UH01-XD3:L			=ESS.TS.SSS.E01.UH01&FS/3.3:
94		=ESS.TS.SSS.E01.UH01-FC07:1	=ESS.TS.SSS.E01.UH01-FC07:1		16	=ESS.TS.SSS.E01.UH01&FS/3.3:
95		=ESS.TS.SSS.E01.UH01-XD3:N	=ESS.TS.SSS.E01.UH01-XD10:7			=ESS.TS.SSS.E01.UH01&FS/3.3:
96		=ESS.TS.SSS.E01.UH01-PE01:7	=ESS.TS.SSS.E01.UH01-XD3:PE			=ESS.TS.SSS.E01.UH01&FS/3.3:
97		=ESS.TS.SSS.E01.UH01-FC08:1	=ESS.TS.SSS.E01.UH01-FC08:1		10	=ESS.TS.SSS.E01.UH01&FS/3.4:
98		=ESS.TS.SSS.E01.UH01-FA02:L1	=ESS.TS.SSS.E01.UH01-QB02:1			=ESS.TS.SSS.E01.UH01&FS/4.2:
99		=ESS.TS.SSS.E01.UH01-FA02:L1	=ESS.TS.SSS.E01.UH01-FC51:1			=ESS.TS.SSS.E01.UH01&FS/4.2:
100		=ESS.TS.SSS.E01.UH01-FA02:L2	=ESS.TS.SSS.E01.UH01-QB02:3			=ESS.TS.SSS.E01.UH01&FS/4.2:
101		=ESS.TS.SSS.E01.UH01-FA02:L2	=ESS.TS.SSS.E01.UH01-FC52:1			=ESS.TS.SSS.E01.UH01&FS/4.2:
102		=ESS.TS.SSS.E01.UH01-FA02:L3	=ESS.TS.SSS.E01.UH01-QB02:5			=ESS.TS.SSS.E01.UH01&FS/4.2:
103		=ESS.TS.SSS.E01.UH01-FA02:L3	=ESS.TS.SSS.E01.UH01-FC53:1			=ESS.TS.SSS.E01.UH01&FS/4.2:
104		=ESS.TS.SSS.E01.UH01-FA02:3	=ESS.TS.SSS.E01.UH01-FA02:19			=ESS.TS.SSS.E01.UH01&FS/4.2:
105		=ESS.TS.SSS.E01.UH01-FA02:19	=ESS.TS.SSS.E01.UH01-FA02:20			=ESS.TS.SSS.E01.UH01&FS/4.2:
106		=ESS.TS.SSS.E01.UH01-FA02:15	=ESS.TS.SSS.E01.UH01-FA02:20			=ESS.TS.SSS.E01.UH01&FS/4.2:
107		=ESS.TS.SSS.E01.UH01-FA02	=ESS.TS.SSS.E01.UH01-FA02:3			=ESS.TS.SSS.E01.UH01&FS/4.2:
108		=ESS.TS.SSS.E01.UH01-FA02	=ESS.TS.SSS.E01.UH01-FA02:2			=ESS.TS.SSS.E01.UH01&FS/4.2:
109		=ESS.TS.SSS.E01.UH01-FA02	=ESS.TS.SSS.E01.UH01-FA02:19			=ESS.TS.SSS.E01.UH01&FS/4.2:
110		=ESS.TS.SSS.E01.UH01-FA02	=ESS.TS.SSS.E01.UH01-FA02:17			=ESS.TS.SSS.E01.UH01&FS/4.2:
111		=ESS.TS.SSS.E01.UH01-FA02	=ESS.TS.SSS.E01.UH01-FA02:20			=ESS.TS.SSS.E01.UH01&FS/4.2:
112		=ESS.TS.SSS.E01.UH01-FA02	=ESS.TS.SSS.E01.UH01-FA02:18			=ESS.TS.SSS.E01.UH01&FS/4.2:
113		=ESS.TS.SSS.E01.W01.K01-XD053:L	=ESS.TS.SSS.E01.UH01-FC52:2			=ESS.TS.SSS.E01.W01.K01&FS/4.5:
114		=ESS.TS.SSS.E01.W01.K01-XD52:2	=ESS.TS.SSS.E01.W01.K01-XD053:N			=ESS.TS.SSS.E01.W01.K01&FS/4.6:
115		=ESS.TS.SSS.E01.W01.K01-XD053:PE	=ESS.TS.SSS.E01.UH01-PE51:2			=ESS.TS.SSS.E01.W01.K01&FS/4.5:
116		=ESS.TS.SSS.E01.W01.K01-XD054:L	=ESS.TS.SSS.E01.UH01-FC53:2			=ESS.TS.SSS.E01.W01.K01&FS/4.7:
117		=ESS.TS.SSS.E01.W01.K01-XD53:3	=ESS.TS.SSS.E01.W01.K01-XD054:N			=ESS.TS.SSS.E01.W01.K01&FS/4.7:
118		=ESS.TS.SSS.E01.W01.K01-XD054:PE	=ESS.TS.SSS.E01.UH01-PE51:3			=ESS.TS.SSS.E01.W01.K01&FS/4.7:



Connection list

	Connection	Source	Target	Color	Cr-sect.	Page
119		=ESS.TS.SSS.E01.W01.K01-KF01:8	=ESS.TS.SSS.E01.W01.K01-TA05:8	GNYE	0.75	=ESS.TS.SSS.E01.W01.K01&FS/7.2:
120		=ESS.TS.SSS.E01.W01.K01-KF07:8	=ESS.TS.SSS.E01.W01.K01-TA05:8	GNYE	0.75	=ESS.TS.SSS.E01.W01.K01&FS/7.6:
121		=ESS.TS.SSS.E01.W01.K01-KF07:8	=ESS.TS.SSS.E01.W01.K01-KF14:8			=ESS.TS.SSS.E01.W01.K01&FS/7.6:
122		=ESS.TS.SSS.E01.W01.K01-KF14:8	=ESS.TS.SSS.E01.W01.K01-X01:2:1			=ESS.TS.SSS.E01.W01.K01&FS/7.8:
123		=ESS.TS.SSS.E01.W01.K01-TA05:1	=ESS.TS.SSS.E01.UH01-FC11:OUT+:7			=ESS.TS.SSS.E01.W01.K01&FS/7.2:
124		=ESS.TS.SSS.E01.W01.K01-TA05:5	=ESS.TS.SSS.E01.W01.K01-XD02:7:2			=ESS.TS.SSS.E01.W01.K01&FS/7.2:
125		=ESS.TS.SSS.E01.W01.K01-KF14:1	=ESS.TS.SSS.E01.UH01-FC11:OUT+:5			=ESS.TS.SSS.E01.W01.K01&FS/7.7:
126		=ESS.TS.SSS.E01.W01.K01-KF14:5	=ESS.TS.SSS.E01.W01.K01-XD02:5:2			=ESS.TS.SSS.E01.W01.K01&FS/7.7:
127		=ESS.TS.SSS.E01.W01.K01-KF14:2	=ESS.TS.SSS.E01.UH01-FC11:OUT+:6			=ESS.TS.SSS.E01.W01.K01&FS/7.7:
128		=ESS.TS.SSS.E01.W01.K01-KF14:3	=ESS.TS.SSS.E01.W01.K01-XD02:6:2			=ESS.TS.SSS.E01.W01.K01&FS/7.7:
129		=ESS.TS.SSS.E01.W01.K01-KF14	=ESS.TS.SSS.E01.W01.K01-X01:2:2			=ESS.TS.SSS.E01.W01.K01&FS/7.9:
130		=ESS.TS.SSS.E01.W01.W02-TA101:-J1:2	=ESS.TS.SSS.E01.UH01-FC21:2			=ESS.TS.SSS.E01.W01.W02&FS/8.2:
131		=ESS.TS.SSS.E01.W01.W02-TA102:-J1:2	=ESS.TS.SSS.E01.UH01-FC22:2			=ESS.TS.SSS.E01.W01.W02&FS/8.4:
132		=ESS.TS.SSS.E01.W01.W03-TA103:-J1:2	=ESS.TS.SSS.E01.UH01-FC23:2			=ESS.TS.SSS.E01.W01.W03&FS/8.7:
133		=ESS.TS.SSS.E01.W01.K01-XD08:15:1	=ESS.TS.SSS.E01.W01.W03-TA103:-J1:3			=ESS.TS.SSS.E01.W01.K01&FS/8.8:
134		=ESS.TS.SSS.E01.W01.K01-XD08:14:1	=ESS.TS.SSS.E01.W01.W02-TA102:-J1:3			=ESS.TS.SSS.E01.W01.K01&FS/8.8:
135		=ESS.TS.SSS.E01.W01.K01-XD08:13:1	=ESS.TS.SSS.E01.W01.W02-TA101:-J1:3			=ESS.TS.SSS.E01.W01.K01&FS/8.8:
136		=ESS.TS.SSS.E01.W01.K01-XD08:14	=ESS.TS.SSS.E01.W01.K01-XD08:15			=ESS.TS.SSS.E01.W01.K01&FS/8.8:
137		=ESS.TS.SSS.E01.W01.K01-XD08:13	=ESS.TS.SSS.E01.W01.K01-XD08:14			=ESS.TS.SSS.E01.W01.K01&FS/8.8:
138		=	=:PE			&FS/9.1:
139		=ESS.TS.SSS.E01.W01.K01-KF04:1	=ESS.TS.SSS.E01.W01.K01-XD07:1:1			=ESS.TS.SSS.E01.W01.K01&FS/9.1:
140		=ESS.TS.SSS.E01.W01.K01-XD07:2:1	=ESS.TS.SSS.E01.W01.K01-XG51:1			=ESS.TS.SSS.E01.W01.K01&FS/9.2:
141		=ESS.TS.SSS.E01.W01.K01-KF04:2	=ESS.TS.SSS.E01.W01.K01-XD07:4:1			=ESS.TS.SSS.E01.W01.K01&FS/9.4:
142		=ESS.TS.SSS.E01.W01.K01-XD07:5:1	=ESS.TS.SSS.E01.W01.K01-XG51:2			=ESS.TS.SSS.E01.W01.K01&FS/9.4:
143		=ESS.TS.SSS.E01.W01.K01-KF08:1	=ESS.TS.SSS.E01.W01.K01-XD07:3:1			=ESS.TS.SSS.E01.W01.K01&FS/9.6:
144		=ESS.TS.SSS.E01.W01.K01-KF08:5	=ESS.TS.SSS.E01.W01.K01-XD07:6:1			=ESS.TS.SSS.E01.W01.K01&FS/9.9:
145		=ESS.TS.SSS.E01.W01.K01-KF02:1	=ESS.TS.SSS.E01.W01.F01-KF52:14			=ESS.TS.SSS.E01.W01.K01&FS/10.0:
146		=ESS.TS.SSS.E01.W01.K01-XD08:1	=ESS.TS.SSS.E01.W01.F01-KF52:14			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
147		=ESS.TS.SSS.E01.W01.K01-XD08:1	=ESS.TS.SSS.E01.W01.K01-XD08:5			=ESS.TS.SSS.E01.W01.K01&FS/18.291:

ESS\_Connection List [FBS]

148		=ESS.TS.SSS.E01.W01.K01-XD08:5	=ESS.TS.SSS.E01.W01.K01-XD08:10			=ESS.TS.SSS.E01.W01.K01&FS/18.293:
149		=ESS.TS.SSS.E01.W01.K01-KF02:2	=ESS.TS.SSS.E01.W01.W01-RF02:b			=ESS.TS.SSS.E01.W01.K01&FS/10.1:
150		=ESS.TS.SSS.E01.W01.K01-XG50:2	=ESS.TS.SSS.E01.W01.W01-RF02:a			=ESS.TS.SSS.E01.W01.K01&FS/10.2:
151		=ESS.TS.SSS.E01.W01.K01-KF02:3	=ESS.TS.SSS.E01.UH01-TA02:14			=ESS.TS.SSS.E01.W01.K01&FS/10.3:
152		=ESS.TS.SSS.E01.UH01-TA01:14	=ESS.TS.SSS.E01.UH01-TA02:13			=ESS.TS.SSS.E01.UH01&FS/10.3:
153		=ESS.TS.SSS.E01.W01.K01-XG50:3	=ESS.TS.SSS.E01.UH01-TA01:13			=ESS.TS.SSS.E01.W01.K01&FS/10.4:
154		=ESS.TS.SSS.E01.W01.K01-KF02:4	=ESS.TS.SSS.E01.UH01-FC11:14			=ESS.TS.SSS.E01.W01.K01&FS/10.5:
155		=ESS.TS.SSS.E01.W01.K01-XG50:4	=ESS.TS.SSS.E01.UH01-FC11:13			=ESS.TS.SSS.E01.W01.K01&FS/10.6:
156		=ESS.TS.SSS.E01.W01.K01-KF02:5	=ESS.TS.SSS.E01.UH01-FA02:11			=ESS.TS.SSS.E01.W01.K01&FS/10.7:
157		=ESS.TS.SSS.E01.UH01-FA01:11	=ESS.TS.SSS.E01.UH01-FA02:12			=ESS.TS.SSS.E01.UH01&FS/10.7:
158		=ESS.TS.SSS.E01.W01.K01-XG50:5	=ESS.TS.SSS.E01.UH01-FA01:12			=ESS.TS.SSS.E01.W01.K01&FS/10.8:
159		=ESS.TS.SSS.E01.W01.K01-KF02:6	=ESS.TS.SSS.E01.UH01-FC01:11			=ESS.TS.SSS.E01.W01.K01&FS/11.0:
160		=ESS.TS.SSS.E01.W01.K01-XG50:6	=ESS.TS.SSS.E01.UH01-FC01:14			=ESS.TS.SSS.E01.W01.K01&FS/11.2:
161		=ESS.TS.SSS.E01.W01.K01-KF02:7	=ESS.TS.SSS.E01.UH01-FC06:11			=ESS.TS.SSS.E01.W01.K01&FS/11.2:
162		=ESS.TS.SSS.E01.UH01-FC06:14	=ESS.TS.SSS.E01.UH01-FC07:14			=ESS.TS.SSS.E01.UH01&FS/11.2:
163		=ESS.TS.SSS.E01.W01.K01-XG50:7	=ESS.TS.SSS.E01.UH01-FC07:11			=ESS.TS.SSS.E01.W01.K01&FS/11.4:
164		=ESS.TS.SSS.E01.W01.K01-KF02:8	=ESS.TS.SSS.E01.UH01-FC53:11			=ESS.TS.SSS.E01.W01.K01&FS/11.5:
165		=ESS.TS.SSS.E01.UH01-FC52:11	=ESS.TS.SSS.E01.UH01-FC53:14			=ESS.TS.SSS.E01.UH01&FS/11.5:
166		=ESS.TS.SSS.E01.UH01-FC51:21	=ESS.TS.SSS.E01.UH01-FC52:14			=ESS.TS.SSS.E01.UH01&FS/11.5:
167		=ESS.TS.SSS.E01.W01.K01-XG50:8	=ESS.TS.SSS.E01.UH01-FC51:24			=ESS.TS.SSS.E01.W01.K01&FS/11.6:
168		=ESS.TS.SSS.E01.W01.K01-KF12:7	=ESS.TS.SSS.E01.W01.K01-KF12:8			=ESS.TS.SSS.E01.W01.K01&FS/12.5:
169		=ESS.TS.SSS.E01.W01.K01-KF12:7	=ESS.TS.SSS.E01.W01.K01-XD06:1:2			=ESS.TS.SSS.E01.W01.K01&FS/12.5:
170		=ESS.TS.SSS.E01.W01.K01-XD06:1:1	=ESS.TS.SSS.E01.W01.W01-MA01.BT02:+			=ESS.TS.SSS.E01.W01.K01&FS/12.5:
171		=ESS.TS.SSS.E01.W01.K01-KF12:15	=ESS.TS.SSS.E01.W01.K01-XD06:2:2			=ESS.TS.SSS.E01.W01.K01&FS/12.6:
172		=ESS.TS.SSS.E01.W01.K01-XD06:2:1	=ESS.TS.SSS.E01.W01.W01-MA01.BT02:-			=ESS.TS.SSS.E01.W01.K01&FS/12.6:
173		=ESS.TS.SSS.E01.W01.W01-1XG01:5	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.3:
174		=ESS.TS.SSS.E01.W01.K01-XG11:2	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.2			=ESS.TS.SSS.E01.W01.K01&FS/13.3:
175		=ESS.TS.SSS.E01.W01.W01-1XG01:6	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.3:
176		=ESS.TS.SSS.E01.W01.K01-XG11:3	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.3			=ESS.TS.SSS.E01.W01.K01&FS/13.3:
177		=ESS.TS.SSS.E01.W01.W01-1XG01:8	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.4:

Connection list

	Connection	Source	Target	Color	Cr-sect.	Page
178		=ESS.TS.SSS.E01.W01.K01-XG11:5	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.5			=ESS.TS.SSS.E01.W01.K01&FS/13.4:
179		=ESS.TS.SSS.E01.W01.W01-1XG01:1	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.4:
180		=ESS.TS.SSS.E01.W01.K01-XG11:6	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.6			=ESS.TS.SSS.E01.W01.K01&FS/13.4:
181		=ESS.TS.SSS.E01.W01.W01-1XG01:3	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.4:
182		=ESS.TS.SSS.E01.W01.K01-XG11:9	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.9			=ESS.TS.SSS.E01.W01.K01&FS/13.4:
183		=ESS.TS.SSS.E01.W01.W01-1XG01:4	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.5:
184		=ESS.TS.SSS.E01.W01.K01-XG11:10	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.10			=ESS.TS.SSS.E01.W01.K01&FS/13.5:
185		=ESS.TS.SSS.E01.W01.W01-1XG01:10	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.5:
186		=ESS.TS.SSS.E01.W01.K01-XG11:4	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.4			=ESS.TS.SSS.E01.W01.K01&FS/13.5:
187		=ESS.TS.SSS.E01.W01.W01-1XG01:12	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.6:
188		=ESS.TS.SSS.E01.W01.K01-XG11:12	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.12			=ESS.TS.SSS.E01.W01.K01&FS/13.6:
189		=ESS.TS.SSS.E01.W01.W01-1XG01:11	=ESS.TS.SSS.E01.W01.W01-2XG101			=ESS.TS.SSS.E01.W01.W01&FS/13.6:
190		=ESS.TS.SSS.E01.W01.K01-XG11:15	=ESS.TS.SSS.E01.W01.W01-TA11:X33:41.15			=ESS.TS.SSS.E01.W01.K01&FS/13.6:
191		=:1	=ESS.TS.SSS.E01.K02-KF21:4			&FS/14.1:
192		=ESS.TS.SSS.E01.K02-KF21:5	=ESS.TS.SSS.E01.K02-X100:1			=ESS.TS.SSS.E01.K02&FS/14.8:
193		=ESS.TS.SSS.E01.K02-KF22:1	=ESS.TS.SSS.E01.K02-X100:1			=ESS.TS.SSS.E01.K02&FS/16.1:
194		=ESS.TS.SSS.E01.W01.W01-TA11:X33:31.1	=ESS.TS.SSS.E01.K02-KF22:5			=ESS.TS.SSS.E01.W01.W01&FS/16.2:
195		=ESS.TS.SSS.E01.W01.W01-TA11:X33:33.1.2	=ESS.TS.SSS.E01.K02-KF22:4			=ESS.TS.SSS.E01.W01.W01&FS/16.2:
196		=ESS.TS.SSS.E01.W01.K01-XD08:2	=ESS.TS.SSS.E01.W01.F01-KF52:24			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
197		=ESS.TS.SSS.E01.W01.K01-XD08:2	=ESS.TS.SSS.E01.W01.K01-XD08:6			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
198		=ESS.TS.SSS.E01.W01.K01-XD08:6	=ESS.TS.SSS.E01.W01.K01-XD08:9			=ESS.TS.SSS.E01.W01.K01&FS/18.294:
199		=ESS.TS.SSS.E01.W01.K01-XD03:1:1	=ESS.TS.SSS.E01.W01.F01-KF52:23			=ESS.TS.SSS.E01.W01.K01&FS/17.295:
200		=ESS.TS.SSS.E01.W01.F01-KF52:13	=ESS.TS.SSS.E01.W01.F01-KF52:23			=ESS.TS.SSS.E01.W01.F01&FS/17.294:
201		=ESS.TS.SSS.E01.W01.F01-KF52:13	=ESS.TS.SSS.E01.W01.F01-KF52:A1			=ESS.TS.SSS.E01.W01.F01&FS/17.294:
202		=ESS.TS.SSS.E01.W01.F01-KF51:X1.3	=ESS.TS.SSS.E01.W01.F01-KF52:A1			=ESS.TS.SSS.E01.W01.F01&FS/17.292:
203		=ESS.TS.SSS.E01.W01.F01-KF51:X1.3	=ESS.TS.SSS.E01.W01.F01-KF51:X3.1			=ESS.TS.SSS.E01.W01.F01&FS/17.292:
204		=ESS.TS.SSS.E01.UH01-FC11:OUT+:3	=ESS.TS.SSS.E01.W01.F01-KF51:X3.1			=ESS.TS.SSS.E01.UH01&FS/2.1:
205		=ESS.TS.SSS.E01.W01.W01-TA11:X33:49.4	=ESS.TS.SSS.E01.UH01-FC11:OUT+:3			=ESS.TS.SSS.E01.W01.W01&FS/19.3:
206		=ESS.TS.SSS.E01.W01.K01-XD03:10:1	=ESS.TS.SSS.E01.W01.F01-KF51:X1.2			=ESS.TS.SSS.E01.W01.K01&FS/17.296:

ESS\_Connection List [FBS]

207		=ESS.TS.SSS.E01.W01.K01-XD03:8:1	=ESS.TS.SSS.E01.W01.F01-KF51:X1.1			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
208		=ESS.TS.SSS.E01.W01.K01-XD03:6:1	=ESS.TS.SSS.E01.W01.K01-XD03:9			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
209		=ESS.TS.SSS.E01.W01.K01-XD03:5	=ESS.TS.SSS.E01.W01.F01-KF51:X2.2			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
210		=ESS.TS.SSS.E01.W01.K01-XD03:4:1	=ESS.TS.SSS.E01.W01.K01-XD03:7			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
211		=ESS.TS.SSS.E01.W01.K01-XD03:3	=ESS.TS.SSS.E01.W01.F01-KF51:X2.1			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
212		=ESS.TS.SSS.E01.W01.K01-XD03:9	=ESS.TS.SSS.E01.W01.K01-XD03:10:2			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
213		=ESS.TS.SSS.E01.W01.K01-XD03:7	=ESS.TS.SSS.E01.W01.K01-XD03:8:2			=ESS.TS.SSS.E01.W01.K01&FS/17.296:
214		=ESS.TS.SSS.E01.W01.K01-XD03:2:1	=ESS.TS.SSS.E01.W01.K01-XD08:3			=ESS.TS.SSS.E01.W01.K01&FS/17.297:
215		=ESS.TS.SSS.E01.W01.K01-XD08:1	=ESS.TS.SSS.E01.W01.W02-TA101:-J8:1			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
216		=ESS.TS.SSS.E01.W01.K01-XD08:2	=ESS.TS.SSS.E01.W01.W02-TA101:-J8:2			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
217		=ESS.TS.SSS.E01.W01.K01-XD08:3	=ESS.TS.SSS.E01.W01.W02-TA101:-J8:3			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
218		=ESS.TS.SSS.E01.W01.K01-XD08:3	=ESS.TS.SSS.E01.W01.F01-KF52:A2			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
219		=ESS.TS.SSS.E01.W01.F01-KF51:X2.3	=ESS.TS.SSS.E01.W01.F01-KF52:A2			=ESS.TS.SSS.E01.W01.F01&FS/17.292:
220		=ESS.TS.SSS.E01.W01.F01-KF51:X2.3	=ESS.TS.SSS.E01.W01.F01-KF51:X4.1			=ESS.TS.SSS.E01.W01.F01&FS/17.292:
221		=ESS.TS.SSS.E01.W01.K01-XD02:3:2	=ESS.TS.SSS.E01.W01.F01-KF51:X4.1			=ESS.TS.SSS.E01.W01.K01&FS/2.1:
222		=ESS.TS.SSS.E01.W01.K01-XD02:3:2	=ESS.TS.SSS.E01.W01.W01-TA11:X33:49.2			=ESS.TS.SSS.E01.W01.K01&FS/2.1:
223		=ESS.TS.SSS.E01.W01.K01-XD08:3	=ESS.TS.SSS.E01.W01.K01-XD08:4			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
224		=ESS.TS.SSS.E01.W01.K01-XD08:4	=ESS.TS.SSS.E01.W01.K01-XD08:7			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
225		=ESS.TS.SSS.E01.W01.K01-XD08:7	=ESS.TS.SSS.E01.W01.K01-XD08:8			=ESS.TS.SSS.E01.W01.K01&FS/18.294:
226		=ESS.TS.SSS.E01.W01.K01-XD08:8	=ESS.TS.SSS.E01.W01.K01-XD08:11			=ESS.TS.SSS.E01.W01.K01&FS/18.294:
227		=ESS.TS.SSS.E01.W01.K01-XD08:11	=ESS.TS.SSS.E01.W01.K01-XD08:12			=ESS.TS.SSS.E01.W01.K01&FS/18.297:
228		=ESS.TS.SSS.E01.W01.K01-XD08:4	=ESS.TS.SSS.E01.W01.W02-TA101:-J8:4			=ESS.TS.SSS.E01.W01.K01&FS/18.291:
229		=ESS.TS.SSS.E01.W01.K01-XD08:5	=ESS.TS.SSS.E01.W01.W02-TA102:-J8:1			=ESS.TS.SSS.E01.W01.K01&FS/18.293:
230		=ESS.TS.SSS.E01.W01.K01-XD08:6	=ESS.TS.SSS.E01.W01.W02-TA102:-J8:2			=ESS.TS.SSS.E01.W01.K01&FS/18.294:
231		=ESS.TS.SSS.E01.W01.K01-XD08:7	=ESS.TS.SSS.E01.W01.W02-TA102:-J8:3			=ESS.TS.SSS.E01.W01.K01&FS/18.294:
232		=ESS.TS.SSS.E01.W01.K01-XD08:8	=ESS.TS.SSS.E01.W01.W02-TA102:-J8:4			=ESS.TS.SSS.E01.W01.K01&FS/18.294:
233		=ESS.TS.SSS.E01.W01.K01-XD08:9	=ESS.TS.SSS.E01.W01.W03-TA103:-J8:1			=ESS.TS.SSS.E01.W01.K01&FS/18.296:
234		=ESS.TS.SSS.E01.W01.K01-XD08:10	=ESS.TS.SSS.E01.W01.W03-TA103:-J8:2			=ESS.TS.SSS.E01.W01.K01&FS/18.296:
235		=ESS.TS.SSS.E01.W01.K01-XD08:11	=ESS.TS.SSS.E01.W01.W03-TA103:-J8:3			=ESS.TS.SSS.E01.W01.K01&FS/18.297:
236		=ESS.TS.SSS.E01.W01.K01-XD08:12	=ESS.TS.SSS.E01.W01.W03-TA103:-J8:4			=ESS.TS.SSS.E01.W01.K01&FS/18.297:

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	Connection	Source	Target	Color	Cr-sect.	Page
237		=ESS.TS.SSS.E01.W01.W01-TA11:X33:49.1	=ESS.TS.SSS.E01.W01.F01-KF51:24			=ESS.TS.SSS.E01.W01.W01&FS/19.2:
238		=ESS.TS.SSS.E01.W01.W01-TA11:X33:49.3	=ESS.TS.SSS.E01.W01.F01-KF51:14			=ESS.TS.SSS.E01.W01.W01&FS/19.3:
239		=ESS.TS.SSS.E01.W01.W01-TA11:X33:49.5	=ESS.TS.SSS.E01.W01.F01-KF51:23			=ESS.TS.SSS.E01.W01.W01&FS/19.3:
240		=ESS.TS.SSS.E01.W01.W01-TA11:X33:49.6	=ESS.TS.SSS.E01.W01.F01-KF51:13			=ESS.TS.SSS.E01.W01.W01&FS/19.4:
241		=ESS.TS.SSS.E01.W01.W02-MA01:A	=ESS.TS.SSS.E01.W01.W02-1XG01:1			=ESS.TS.SSS.E01.W01.W02&FS/20.3:
242		=ESS.TS.SSS.E01.W01.W02-MA01:B	=ESS.TS.SSS.E01.W01.W02-1XG01:2			=ESS.TS.SSS.E01.W01.W02&FS/20.3:
243		=ESS.TS.SSS.E01.W01.W02-MA01:C	=ESS.TS.SSS.E01.W01.W02-1XG01:3			=ESS.TS.SSS.E01.W01.W02&FS/20.3:
244		=ESS.TS.SSS.E01.W01.W02-MA01:D	=ESS.TS.SSS.E01.W01.W02-1XG01:4			=ESS.TS.SSS.E01.W01.W02&FS/20.3:
245		=ESS.TS.SSS.E01.W01.W02-MA01:PE	=ESS.TS.SSS.E01.W01.W02-1XG01:5			=ESS.TS.SSS.E01.W01.W02&FS/20.4:
246		=	=ESS.TS.SSS.E01.W01.W02-XG01			&FS/21.2:
247		=ESS.TS.SSS.E01.W01.W02-1XG01:1	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:1			=ESS.TS.SSS.E01.W01.W02&FS/21.3:
248		=ESS.TS.SSS.E01.W01.W02-1XG01:2	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:2			=ESS.TS.SSS.E01.W01.W02&FS/21.3:
249		=ESS.TS.SSS.E01.W01.W02-1XG01:3	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:3			=ESS.TS.SSS.E01.W01.W02&FS/21.4:
250		=ESS.TS.SSS.E01.W01.W02-1XG01:5	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:4			=ESS.TS.SSS.E01.W01.W02&FS/21.5:
251		=ESS.TS.SSS.E01.W01.W02-1XG01:6	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:5			=ESS.TS.SSS.E01.W01.W02&FS/21.5:
252		=	=ESS.TS.SSS.E01.W01.W02-XG05			&FS/22.3:
253		=ESS.TS.SSS.E01.W01.W02-1XG05:1	=ESS.TS.SSS.E01.W01.W02.UH02-XD01:1			=ESS.TS.SSS.E01.W01.W02&FS/22.3:
254		=ESS.TS.SSS.E01.W01.W02-1XG05:2	=ESS.TS.SSS.E01.W01.W02.UH02-XD01:2			=ESS.TS.SSS.E01.W01.W02&FS/22.4:
255		=ESS.TS.SSS.E01.W01.W02-1XG05:3	=ESS.TS.SSS.E01.W01.W02.UH02-XD01:3			=ESS.TS.SSS.E01.W01.W02&FS/22.5:
256		=ESS.TS.SSS.E01.W01.W02-1XG05:4	=ESS.TS.SSS.E01.W01.W02.UH02-XD01:4			=ESS.TS.SSS.E01.W01.W02&FS/22.5:
257		=	=ESS.TS.SSS.E01.W01.W02-XG21			&FS/23.1:
258		=ESS.TS.SSS.E01.W01.K01-KF12:1	=ESS.TS.SSS.E01.W01.K01-KF12:2			=ESS.TS.SSS.E01.W01.K01&FS/23.5:
259		=ESS.TS.SSS.E01.W01.W02-MA02:A	=ESS.TS.SSS.E01.W01.W02-1XG02:1			=ESS.TS.SSS.E01.W01.W02&FS/24.3:
260		=ESS.TS.SSS.E01.W01.W02-MA02:B	=ESS.TS.SSS.E01.W01.W02-1XG02:2			=ESS.TS.SSS.E01.W01.W02&FS/24.3:
261		=ESS.TS.SSS.E01.W01.W02-MA02:C	=ESS.TS.SSS.E01.W01.W02-1XG02:3			=ESS.TS.SSS.E01.W01.W02&FS/24.3:
262		=ESS.TS.SSS.E01.W01.W02-MA02:D	=ESS.TS.SSS.E01.W01.W02-1XG02:4			=ESS.TS.SSS.E01.W01.W02&FS/24.3:
263		=ESS.TS.SSS.E01.W01.W02-MA02:PE	=ESS.TS.SSS.E01.W01.W02-1XG02:5			=ESS.TS.SSS.E01.W01.W02&FS/24.3:
264		=	=ESS.TS.SSS.E01.W01.W02-XG08			&FS/25.2:
265		=ESS.TS.SSS.E01.W01.W02-1XG08:1	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:1			=ESS.TS.SSS.E01.W01.W02&FS/25.3:

ESS\_Connection List [FBS]

266		=ESS.TS.SSS.E01.W01.W02-1XG08:2	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:2			=ESS.TS.SSS.E01.W01.W02&FS/25.4:
267		=ESS.TS.SSS.E01.W01.W02-1XG08:3	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:3			=ESS.TS.SSS.E01.W01.W02&FS/25.4:
268		=ESS.TS.SSS.E01.W01.W02-1XG08:5	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:4			=ESS.TS.SSS.E01.W01.W02&FS/25.5:
269		=ESS.TS.SSS.E01.W01.W02-1XG08:6	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:5			=ESS.TS.SSS.E01.W01.W02&FS/25.6:
270		=	=ESS.TS.SSS.E01.W01.W02-XG14			&FS/26.2:
271		=ESS.TS.SSS.E01.W01.W02-1XG14:1	=ESS.TS.SSS.E01.W01.W02.UH04-XD01:1			=ESS.TS.SSS.E01.W01.W02&FS/26.3:
272		=ESS.TS.SSS.E01.W01.W02-1XG14:2	=ESS.TS.SSS.E01.W01.W02.UH04-XD01:2			=ESS.TS.SSS.E01.W01.W02&FS/26.4:
273		=ESS.TS.SSS.E01.W01.W02-1XG14:3	=ESS.TS.SSS.E01.W01.W02.UH04-XD01:3			=ESS.TS.SSS.E01.W01.W02&FS/26.5:
274		=	=ESS.TS.SSS.E01.W01.W02-XG22			&FS/27.2:
275		=ESS.TS.SSS.E01.W01.K01-KF12:3	=ESS.TS.SSS.E01.W01.K01-KF12:4			=ESS.TS.SSS.E01.W01.K01&FS/27.6:
276		=ESS.TS.SSS.E01.W01.W03-MA01:A+	=ESS.TS.SSS.E01.W01.W03-1XG01:1			=ESS.TS.SSS.E01.W01.W03&FS/28.3:
277		=ESS.TS.SSS.E01.W01.W03-MA01:A-	=ESS.TS.SSS.E01.W01.W03-1XG01:2			=ESS.TS.SSS.E01.W01.W03&FS/28.3:
278		=ESS.TS.SSS.E01.W01.W03-MA01:B+	=ESS.TS.SSS.E01.W01.W03-1XG01:3			=ESS.TS.SSS.E01.W01.W03&FS/28.3:
279		=ESS.TS.SSS.E01.W01.W03-MA01:B-	=ESS.TS.SSS.E01.W01.W03-1XG01:4			=ESS.TS.SSS.E01.W01.W03&FS/28.3:
280		=	=ESS.TS.SSS.E01.W01.W03-XG01			&FS/29.2:
281		=ESS.TS.SSS.E01.W01.W03-1XG01:1	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:1			=ESS.TS.SSS.E01.W01.W03&FS/29.2:
282		=ESS.TS.SSS.E01.W01.W03-1XG01:2	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:2			=ESS.TS.SSS.E01.W01.W03&FS/29.3:
283		=ESS.TS.SSS.E01.W01.W03-1XG01:3	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:3			=ESS.TS.SSS.E01.W01.W03&FS/29.4:
284		=ESS.TS.SSS.E01.W01.W03-1XG01:4	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:4			=ESS.TS.SSS.E01.W01.W03&FS/29.5:
285		=ESS.TS.SSS.E01.W01.W03-1XG01:5	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:5			=ESS.TS.SSS.E01.W01.W03&FS/29.6:
286		=	=ESS.TS.SSS.E01.W01.W03-XG06			&FS/30.2:
287		=ESS.TS.SSS.E01.W01.W03-1XG06:1	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:1			=ESS.TS.SSS.E01.W01.W03&FS/30.3:
288		=ESS.TS.SSS.E01.W01.W03-1XG06:2	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:2			=ESS.TS.SSS.E01.W01.W03&FS/30.3:
289		=ESS.TS.SSS.E01.W01.W03-1XG06:3	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:3			=ESS.TS.SSS.E01.W01.W03&FS/30.4:
290		=ESS.TS.SSS.E01.W01.W03-1XG06:4	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:4			=ESS.TS.SSS.E01.W01.W03&FS/30.5:
291		=ESS.TS.SSS.E01.W01.W03-1XG06:5	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:5			=ESS.TS.SSS.E01.W01.W03&FS/30.6:
292		=ESS.TS.SSS.E01.W01.W03-1XG06:6	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:6			=ESS.TS.SSS.E01.W01.W03&FS/30.6:
293		=	=ESS.TS.SSS.E01.W01.W03-XG21			&FS/31.2:
294		=ESS.TS.SSS.E01.W01.K01-KF12:5	=ESS.TS.SSS.E01.W01.K01-KF12:6			=ESS.TS.SSS.E01.W01.K01&FS/31.5:
295		=ESS.TS.SSS.E01.W01.K01-KF31:1	=ESS.TS.SSS.E01.W01.K01-KF31:6			=ESS.TS.SSS.E01.W01.K01&FS/40.2:

Connection list

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	Connection	Source	Target	Color	Cr-sect.	Page
296		=ESS.TS.SSS.E01.W01.K01-KF31:5	=ESS.TS.SSS.E01.W01.K01-KF31:7			=ESS.TS.SSS.E01.W01.K01&FS/40.2:
297		=ESS.TS.SSS.E01.W01.K01-KF31:2	=ESS.TS.SSS.E01.UH01-FC11:OUT+:8			=ESS.TS.SSS.E01.W01.K01&FS/40.2:
298		=ESS.TS.SSS.E01.W01.K01-KF31:3	=ESS.TS.SSS.E01.W01.K01-XD02:8:2			=ESS.TS.SSS.E01.W01.K01&FS/40.2:
299		=ESS.TS.SSS.E01.W01.K01-KF31:8	=ESS.TS.SSS.E01.W01.K01-X11:1:1			=ESS.TS.SSS.E01.W01.K01&FS/40.3:
300		=	=ESS.TS.SSS.E01.W01.K01-X11:1:2			&FS/40.4:
301		=ESS.TS.SSS.E01.UH01-EA02:XI:L	=ESS.TS.SSS.E01.UH01-1KF01:5			=ESS.TS.SSS.E01.UH01&FS/52.2:
302		=ESS.TS.SSS.E01.UH01-EA02:XI:N	=ESS.TS.SSS.E01.UH01-1KF01:6			=ESS.TS.SSS.E01.UH01&FS/52.2:
303		=ESS.TS.SSS.E01.UH01-EC01:X1:N	=ESS.TS.SSS.E01.UH01-1KF01:6			=ESS.TS.SSS.E01.UH01&FS/52.6:
304		=ESS.TS.SSS.E01.UH01-EC01:X1:N	=ESS.TS.SSS.E01.UH01-EC02:X1:N			=ESS.TS.SSS.E01.UH01&FS/52.6:
305		=ESS.TS.SSS.E01.UH01-EA02:XI:PE	=ESS.TS.SSS.E01.UH01-EC01:X1:PE			=ESS.TS.SSS.E01.UH01&FS/52.2:
306		=ESS.TS.SSS.E01.UH01-EC01:X1:PE	=ESS.TS.SSS.E01.UH01-EC02:X1:PE			=ESS.TS.SSS.E01.UH01&FS/52.6:
307		=ESS.TS.SSS.E01.UH01-EC01:X1:L1	=ESS.TS.SSS.E01.UH01-1KF01:4			=ESS.TS.SSS.E01.UH01&FS/52.6:
308		=ESS.TS.SSS.E01.UH01-EC01:X1:L1	=ESS.TS.SSS.E01.UH01-EC02:X1:L1			=ESS.TS.SSS.E01.UH01&FS/52.6:

	0	1	2	3	4	5	6	7	8	9
<div>Parts list<div>ESS_Parts_list [FBS]</div></div>										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
1		3	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
2		1	PS Wiring plan pockets, for TS, CM, SE, PC, TP pedestal, sheet steel	TS.4116000	Rittal GmbH	RIT.4116000	ESS-2605477			
3		1	VX Base/plinth with trim panel, front/rear, H: 100 mm, for W: 1200 mm	VX.8620007	Rittal GmbH	RIT.8620007				
4		2	VX Baying enclosure system, WHD: 600x2000x600 mm, single door	VX.8606000	Rittal GmbH	RIT.8606000	ESS-2605920			
5		1	SV Busbar E-Cu, WH: 30x10 mm, L: 2400 mm	SV.3586005	Rittal GmbH	RIT.3586005	ESS-2605487			
6		1	Cable Sealing Elements / Grommets - Cabtite SE	CABTITE SE 8-9 SML GY	Weidmueller	WEI.2584650000				
7		2	VX Mounting kit magnet, LED system light	SZ.2500490	Rittal GmbH	RIT.2500490				
8	=ESS.TS.SSS.E01.W01.K01-KF01	1	Basic CPU module CX5130, Windows Embedded St 7P, 64 bit	CX5130-0130	Beckhoff Automation GmbH & Co. KG	BEC.CX5130-0130				
9	=ESS.TS.SSS.E01.W01.K01-KF02	1	4-channel input terminal PT100 (RTD)	EL3214	Beckhoff Automation GmbH & Co. KG	BEC.EL3214	ESS-3161915			
10	=ESS.TS.SSS.E01.W01.K01-KF02	1	16-channel digital input terminal 24 V DC, filter 3.0 ms, type 3	EL1809	Beckhoff Automation GmbH & Co. KG	BEC.EL1809	ESS-3161833			
11	=ESS.TS.SSS.E01.W01.K01-KF04	1	HD EtherCAT Terminal, 16-channel digital output 24 V DC, 0.5 A, with diagnostics	EL2819	Beckhoff Automation GmbH & Co. KG	BEC.EL2819	ESS-3161857			
12	=ESS.TS.SSS.E01.W01.K01-KF05	1	HD EtherCAT Terminal, 16-channel digital output 24 V DC, 0.5 A, with diagnostics	EL2819	Beckhoff Automation GmbH & Co. KG	BEC.EL2819	ESS-3161857			
13	=ESS.TS.SSS.E01.W01.K01-KF06	1	2-channel digital input terminal 5 V DC, filter 1 µs, with time stamp	EL1252-0050	Beckhoff Automation GmbH & Co. KG	BEC.EL1252-0050	ESS-3161829			
14	=ESS.TS.SSS.E01.W01.K01-KF07	1	Power supply terminal for E-bus, 24 V DC, 2 A with diagnostics	EL9410	Beckhoff Automation GmbH & Co. KG	BEC.EL9410	ESS-3161984			
15	=ESS.TS.SSS.E01.W01.K01-KF08	2	2-channel digital input terminal with time stamp	EL1252	Beckhoff Automation GmbH & Co. KG	BEC.EL1252	ESS-3161828			
16	=ESS.TS.SSS.E01.W01.K01-KF09	1	Servomotor terminal 50 V DC, 2.8 ARMS/4 A (peak value), 1 resolver input, 1 digital output for a motor brake 24 V DC	EL7201	Beckhoff Automation GmbH & Co. KG	BEC.EL7201	ESS-3161974			
17	=ESS.TS.SSS.E01.W01.K01-KF10	1	Servomotor terminal 50 V DC, 2.8 ARMS/4 A (peak value), 1 resolver input, 1 digital output for a motor brake 24 V DC	EL7201	Beckhoff Automation GmbH & Co. KG	BEC.EL7201	ESS-3161974			
18	=ESS.TS.SSS.E01.W01.K01-KF11	1	Servomotor terminal 50 V DC, 2.8 ARMS/4 A (peak value), 1 resolver input, 1 digital output for a motor brake 24 V DC	EL7201	Beckhoff Automation GmbH & Co. KG	BEC.EL7201	ESS-3161974			
19	=ESS.TS.SSS.E01.W01.K01-KF12	1	4-channel input terminal PT100 (RTD)	EL3214	Beckhoff Automation GmbH & Co. KG	BEC.EL3214	ESS-3161915			

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div><div></div></div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
						ESS	+	ESS-1090724	&PC1	85 / 197	

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<div>Parts list</div> <div>ESS_Parts_list [FBS]</div>										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
20	=ESS.TS.SSS.E01.W01.K01-KF13	1				BEC.EL6695				
21	=ESS.TS.SSS.E01.W01.K01-KF14	1	Power supply terminal for E-bus, 24 V DC, 2 A with diagnostics	EL9410	Beckhoff Automation GmbH & Co. KG	BEC.EL9410	ESS-3161984			
22	=ESS.TS.SSS.E01.W01.K01-KF15	1	2-channel digital output terminal 24 V DC, 2 A, with diagnostics, 4-wire system	EL2032	Beckhoff Automation GmbH & Co. KG	BEC.EL2032				
23	=ESS.TS.SSS.E01.W01.K01-KF16	1	2-channel analog input terminal 0...20 mA, differential inputs, 16 bit, oversampling	EL3742	Beckhoff Automation GmbH & Co. KG	BEC.EL3742	ESS-3161933			
24	=ESS.TS.SSS.E01.W01.K01-KF19	1	EtherCAT extension	EK1110	Beckhoff Automation GmbH & Co. KG	BEC.EK1110	ESS-3161817			
25	=ESS.TS.SSS.E01.W01.K01-KF31	1	EtherCAT Coupler for E-bus terminals (ELxxxx)	EK1100	Beckhoff Automation GmbH & Co. KG	BEC.EK1100	ESS-3161815			
26	=ESS.TS.SSS.E01.W01.K01-KF101	1	16-channel digital input terminal 24 V DC, filter 3.0 ms, type 3	EL1809	Beckhoff Automation GmbH & Co. KG	BEC.EL1809	ESS-3161833			
27	=ESS.TS.SSS.E01.W01.K01-TA05	1	Power supply unit terminal 24 V DC, output 5 V DC, 0.5 A	EL9505	Beckhoff Automation GmbH & Co. KG	BEC.EL9505	ESS-3161985			
28	=ESS.TS.SSS.E01.W01.K01-WF01	1	Ethernet patch cable. CAT5, PUR, highly flexible. 2.0m	ZK1090-9191-6020	Beckhoff Automation GmbH & Co. KG	BEC.ZK1090-9191-6020	ESS-3243444			
29	=ESS.TS.SSS.E01.W01.K01-WF02	1	Ethernet patch cable. CAT5, PUR, 1.0m	ZK1090-9191-0010	Beckhoff Automation GmbH & Co. KG	BEC.ZK1090-9191-0010	ESS-3243440			
30	=ESS.TS.SSS.E01.W01.K01-WF03	1	Ethernet patch cable. CAT5, PUR, 0.23m	ZK1090-9191-5023	Beckhoff Automation GmbH & Co. KG	BEC.ZK1090-9191-5023	ESS-3243441			
31	=ESS.TS.SSS.E01.W01.K01-WF04	1	Ethernet patch cable. CAT5, PUR, 0.23m	ZK1090-9191-5023	Beckhoff Automation GmbH & Co. KG	BEC.ZK1090-9191-5023	ESS-3243441			
32	=ESS.TS.SSS.E01.W01.K01-WF05	1	Ethernet patch cable. CAT5, PUR, highly flexible. 2.0m	ZK1090-9191-6020	Beckhoff Automation GmbH & Co. KG	BEC.ZK1090-9191-6020	ESS-3243444			
33	=ESS.TS.SSS.E01.W01.K01-X01	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
34	=ESS.TS.SSS.E01.W01.K01-X11	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
35	=ESS.TS.SSS.E01.W01.K01-XD1	1	SZ Socket for mounting on support rails, Schuko, CEE 7/4	SZ.2506100	Rittal GmbH	RIT.2506100				
36	=ESS.TS.SSS.E01.W01.K01-XD02	8	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
37	=ESS.TS.SSS.E01.W01.K01-XD03	6	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
38	=ESS.TS.SSS.E01.W01.K01-XD06	4	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div><div></div></div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary	0.2		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):	=ESS.TS.SSS.E01.W01.K01		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):	+		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
					ESS	+		ESS-1090724	&PC2	86 / 197	



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<div>Parts list<div>ESS_Parts_list [FBS]</div></div>										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
39	=ESS.TS.SSS.E01.W01.K01-XD07	6	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
40	=ESS.TS.SSS.E01.W01.K01-XD07	2	End bracket	WEW 35/2	Weidmueller	WEI.1061200000	ESS-3177295			
41	=ESS.TS.SSS.E01.W01.K01-XD07	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
42	=ESS.TS.SSS.E01.W01.K01-XD08	15	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
43	=ESS.TS.SSS.E01.W01.K01-XD10	1	WDU 35 BL Feed-through terminal block	WDU 35 BL	Weidmueller	WEI.1020580000	ESS-2606226			
44	=ESS.TS.SSS.E01.W01.K01-XD053	1	SZ Socket for mounting on support rails, Schuko, CEE 7/4	SZ.2506100	Rittal GmbH	RIT.2506100				
45	=ESS.TS.SSS.E01.W01.K01-XD054	1	SZ Socket for mounting on support rails, Schuko, CEE 7/4	SZ.2506100	Rittal GmbH	RIT.2506100				
46	=ESS.TS.SSS.E01.W01.K01-XG50	1	Potential distribution terminal, 16 x 24 V DC	EL9188	Beckhoff Automation GmbH & Co. KG	BEC.EL9188	ESS-3161981			
47	=ESS.TS.SSS.E01.W01.K01-XG51	1	HD EtherCAT Terminal, 16-channel potential distribution	EL9189	Beckhoff Automation GmbH & Co. KG	BEC.EL9189	ESS-3161982			
48	=ESS.TS.SSS.E01.W01.K01-XG52	1	HD EtherCAT Terminal, 16-channel potential distribution	EL9189	Beckhoff Automation GmbH & Co. KG	BEC.EL9189	ESS-3161982			
49	=ESS.TS.SSS.E01.W01.W01-BG01	1	Infrared LED Digital Fiber Amplifier Unit, Standard model, Pre-wired(2m), Analog output	E3X-DA41AN-S-2M	Omron	OMR.E3X-DA41AN-S-2M				
50	=ESS.TS.SSS.E01.W01.W01-BG02	1	Infrared LED Digital Fiber Amplifier Unit, Standard model, Pre-wired(2m), Analog output	E3X-DA41AN-S-2M	Omron	OMR.E3X-DA41AN-S-2M				
51	=ESS.TS.SSS.E01.W01.W01-KF01	1	Infrared LED Digital Fiber Amplifier Unit, Standard model, Pre-wired(2m), Analog output	E3X-DA41AN-S-2M	Omron	OMR.E3X-DA41AN-S-2M				
52	=ESS.TS.SSS.E01.W01.W01-KF02	1	Infrared LED Digital Fiber Amplifier Unit, Standard model, Pre-wired(2m), Analog output	E3X-DA41AN-S-2M	Omron	OMR.E3X-DA41AN-S-2M				
53	=ESS.TS.SSS.E01.W01.W01-RF01	1				BOS.R911306773				
54	=ESS.TS.SSS.E01.W01.W01-RF02	2	Mains filter	NFD03.1-480-030	Bosch Rexroth	BOS.R911286919				
55	=ESS.TS.SSS.E01.W01.W01-TA11	1	Compact converter HCS02	HCS02.1E-W0028-A-03-NNNN	Bosch Rexroth	BOS.R911298374				
56	=ESS.TS.SSS.E01.W01.W01-TA11	1	IndraDrive compact converter, single axis	HCS02.1E-W0070-A-03-NNNN	Bosch Rexroth	BOS.R911298372				
57	=ESS.TS.SSS.E01.W01.W01-TA11	1	IndraDrive control unit BASIC, single axis	CSB02.1A-ET-EC-NN-L3-NN-NN-FW	Bosch Rexroth	BOS.R911339883				

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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC3	Page nr/Proj. tot count: 87 / 197	

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<div>Parts list<div>ESS_Parts_list [FBS]</div></div>										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
58	=ESS.TS.SSS.E01.W01.W01-TA11	1	IndraDrive Firmware	FWA-INDRV*-MPB-18VRS-D5-1-NNN-NN	Bosch Rexroth	BOS.R911339321				
59	=ESS.TS.SSS.E01.W01.W01-TA11	1				BOS.R911306106				
60	=ESS.TS.SSS.E01.W01.W01-UC01	3	WDU 6 Feed-through terminal block	WDU 6	Weidmueller	WEI.1020200000	ESS-2606159			
61	=ESS.TS.SSS.E01.W01.W01-UC01	1	WPE 6 PE terminal	WPE 6	Weidmueller	WEI.1010200000	ESS-2606183			
62	=ESS.TS.SSS.E01.W01.W01-UC01	4	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
63	=ESS.TS.SSS.E01.W01.W01-WD01	1	Power Cable - RKL4710/020,0	R911321060	Bosch Rexroth	BOS.R911321060	ESS-3243445			
64	=ESS.TS.SSS.E01.W01.W01-WG03	1	PUR Control Cable UNIPUR®-CP 7G1,5 mm² YE	UNIPUR-CP	Helukabel	HEL.19523	ESS-3243533			
65	=ESS.TS.SSS.E01.W01.W01-XD03	5	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
66	=ESS.TS.SSS.E01.W01.W01-XD03	2	End bracket	WEW 35/2	Weidmueller	WEI.1061200000	ESS-3177295			
67	=ESS.TS.SSS.E01.W01.W01-XD03	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
68	=ESS.TS.SSS.E01.W01.W02-TA101	1	Fully digital drive with embedded motion controller	P029.026.E221	Technosoft	TEC.P029.026.E221				
69	=ESS.TS.SSS.E01.W01.W02-TA102	1	Fully digital drive with embedded motion controller	P029.026.E221	Technosoft	TEC.P029.026.E221				
70	=ESS.TS.SSS.E01.W01.W02-WD01	1	PUR Control Cable UNIPUR®-CP 5G1,5 mm² OG	UNIPUR-CP	Helukabel	HEL.19505	ESS-3243534			
71	=ESS.TS.SSS.E01.W01.W02-WD02	1	PUR Control Cable UNIPUR®-CP 5G1,5 mm² OG	UNIPUR-CP	Helukabel	HEL.19505	ESS-3243534			
72	=ESS.TS.SSS.E01.W01.W02-1WD01	1	PUR Control Cable UNIPUR®-CP 5G1,5 mm² OG	UNIPUR-CP	Helukabel	HEL.19505	ESS-3243534			
73	=ESS.TS.SSS.E01.W01.W02-1WD02	1	PUR Control Cable UNIPUR®-CP 5G1,5 mm² OG	UNIPUR-CP	Helukabel	HEL.19505	ESS-3243534			
74	=ESS.TS.SSS.E01.W01.W02-WG01	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537			
75	=ESS.TS.SSS.E01.W01.W02-WG02	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531			
76	=ESS.TS.SSS.E01.W01.W02-WG03	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531			

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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):	=ESS.TS.SSS.E01.W01.K01		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):	+		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
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<div> <div>Parts list</div> <div>ESS_Parts_list [FBS]</div> </div>											
	<div> <div>FBS-Tag</div> <div>LBS-Tag</div> <div>ESS-Name</div> </div>	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number				
77	=ESS.TS.SSS.E01.W01.W02-WG04	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
78	=ESS.TS.SSS.E01.W01.W02-WG05	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
79	=ESS.TS.SSS.E01.W01.W02-WG06	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
80	=ESS.TS.SSS.E01.W01.W02-WG07	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
81	=ESS.TS.SSS.E01.W01.W02-WG08	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
82	=ESS.TS.SSS.E01.W01.W02-WG09	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
83	=ESS.TS.SSS.E01.W01.W02-WG10	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
84	=ESS.TS.SSS.E01.W01.W02-WG11	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
85	=ESS.TS.SSS.E01.W01.W02-WG14	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
86	=ESS.TS.SSS.E01.W01.W02-WG15	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
87	=ESS.TS.SSS.E01.W01.W02-WG16	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
88	=ESS.TS.SSS.E01.W01.W02-WG21	1	TOPFLEX®-PUR (3 x (2 x 0,14) + (2 x 0,5)) GY	TOPFLEX®-PUR	Helukabel	HEL.22847	ESS-3243478				
89	=ESS.TS.SSS.E01.W01.W02-WG22	1	TOPFLEX®-PUR (3 x (2 x 0,14) + (2 x 0,5)) GY	TOPFLEX®-PUR	Helukabel	HEL.22847	ESS-3243478				
90	=ESS.TS.SSS.E01.W01.W02-1WG01	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
91	=ESS.TS.SSS.E01.W01.W02-1WG05	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
92	=ESS.TS.SSS.E01.W01.W02-1WG08	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
93	=ESS.TS.SSS.E01.W01.W02-1WG14	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
94	=ESS.TS.SSS.E01.W01.W02-1WG21	1	TOPFLEX®-PUR (3 x (2 x 0,14) + (2 x 0,5)) GY	TOPFLEX®-PUR	Helukabel	HEL.22847	ESS-3243478				
95	=ESS.TS.SSS.E01.W01.W02-1WG22	1	TOPFLEX®-PUR (3 x (2 x 0,14) + (2 x 0,5)) GY	TOPFLEX®-PUR	Helukabel	HEL.22847	ESS-3243478				
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):	=ESS.TS.SSS.E01.W01.K01		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):	+		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
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	<div> <div>FBS-Tag</div> <div>LBS-Tag</div> <div>ESS-Name</div> </div>	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number				
96	=ESS.TS.SSS.E01.W01.W03-TA103	1	Fully digital drive with embedded motion controller	P029.026.E221	Technosoft	TEC.P029.026.E221					
97	=ESS.TS.SSS.E01.W01.W03-WD01	1	PUR Control Cable UNIPUR®-CP 5G1,5 mm² OG	UNIPUR-CP	Helukabel	HEL.19505	ESS-3243534				
98	=ESS.TS.SSS.E01.W01.W03-1WD01	1	PUR Control Cable UNIPUR®-CP 5G1,5 mm² OG	UNIPUR-CP	Helukabel	HEL.19505	ESS-3243534				
99	=ESS.TS.SSS.E01.W01.W03-WG01	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
100	=ESS.TS.SSS.E01.W01.W03-WG03	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
101	=ESS.TS.SSS.E01.W01.W03-WG04	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
102	=ESS.TS.SSS.E01.W01.W03-WG05	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
103	=ESS.TS.SSS.E01.W01.W03-WG06	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
104	=ESS.TS.SSS.E01.W01.W03-WG07	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
105	=ESS.TS.SSS.E01.W01.W03-WG08	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
106	=ESS.TS.SSS.E01.W01.W03-WG09	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531				
107	=ESS.TS.SSS.E01.W01.W03-WG21	1	TOPFLEX®-PUR (3 x (2 x 0,14) + (2 x 0,5)) GY	TOPFLEX®-PUR	Helukabel	HEL.22847	ESS-3243478				
108	=ESS.TS.SSS.E01.W01.W03-1WG01	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
109	=ESS.TS.SSS.E01.W01.W03-1WG06	1	PUR Cable for Drag Chains SUPERTRONIC®-C-PURö 7x0,25 m m² GY	SUPERTRONIC®-C-PURö	Helukabel	HEL.49668	ESS-3243537				
110	=ESS.TS.SSS.E01.W01.W03-1WG21	1	TOPFLEX®-PUR (3 x (2 x 0,14) + (2 x 0,5)) GY	TOPFLEX®-PUR	Helukabel	HEL.22847	ESS-3243478				
111	=ESS.TS.SSS.E01.K02-KF21	1	Optocoupler 5VDC – 500 kHz Input Current < 2mA	OK21	LEG Industrie-Elektronik GmbH	LEG.OK21-1					
112	=ESS.TS.SSS.E01.K02-KF22	1	Optocoupler 24VDC – 500 kHz, input current: < 2mA	OK11	LEG Industrie-Elektronik GmbH	LEG.OK11-4					
113	=ESS.TS.SSS.E01.UH01-1	8	Cable duct	CD-HF 40X100	Phoenix Contact	PXC.3240351	ESS-3389960				
114	=ESS.TS.SSS.E01.UH01-2	1	Cable duct	CD-HF 40X60	Phoenix Contact	PXC.3240349	ESS-3389956				
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC6	Page nr/Proj. tot count: 90 / 197	

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<div> <div>Parts list</div> <div>ESS_Parts_list [FBS]</div> </div>											
	<div> <div>FBS-Tag</div> <div>LBS-Tag</div> <div>ESS-Name</div> </div>	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number				
115	=ESS.TS.SSS.E01.UH01-2	4	Cable duct	CD-HF 40X100	Phoenix Contact	PXC.3240351	ESS-3389960				
116	=ESS.TS.SSS.E01.UH01-3	4	Cable duct	CD-HF 60X60	Phoenix Contact	PXC.3240353	ESS-3389962				
117	=ESS.TS.SSS.E01.UH01-4	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
118	=ESS.TS.SSS.E01.UH01-5	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
119	=ESS.TS.SSS.E01.UH01-6	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
120	=ESS.TS.SSS.E01.UH01-7	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
121	=ESS.TS.SSS.E01.UH01-8	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
122	=ESS.TS.SSS.E01.UH01-9	1	M32 Cable Gland	CABTITE CGS	Weidmueller	WEI.2584180000					
123	=ESS.TS.SSS.E01.UH01-10	1	M32 Cable Gland	CABTITE CGS	Weidmueller	WEI.2584180000					
124	=ESS.TS.SSS.E01.UH01-11	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
125	=ESS.TS.SSS.E01.UH01-12	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
126	=ESS.TS.SSS.E01.UH01-13	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
127	=ESS.TS.SSS.E01.UH01-14	1	CABTITE FR 10/6 BK SET	CABTITE FR 10/6 BK SET	Weidmueller	WEI.2583760000					
128	=ESS.TS.SSS.E01.UH01-15	1	M32 Cable Gland	CABTITE CGS	Weidmueller	WEI.2584180000					
129	=ESS.TS.SSS.E01.UH01-EA01	1	System Light LED, 1200 Lumen, length 437 mm, 100-240 V, with integral motion detector, with earthing-pin socket	SZ.2500310	Rittal GmbH	RIT.2500310					
130	=ESS.TS.SSS.E01.UH01-EA01	1	Infeed, 3-pole (with socket, without connector), Input voltage: 100 V - 240 V, 1~, 50 Hz/60 Hz, UL	SZ.2500500	Rittal GmbH	RIT.2500500	ESS-3243526				
131	=ESS.TS.SSS.E01.UH01-EA01	1	Through-wiring, 2-pole (with socket and connector), Input voltage: 100 V - 240 V, 1~, 50 Hz/60 Hz, UL	SZ.2500530	Rittal GmbH	RIT.2500530	ESS-2605462				
132	=ESS.TS.SSS.E01.UH01-EA02	1	System Light LED, 1200 Lumen, length 437 mm, 100-240 V, with integral motion detector, with earthing-pin socket	SZ.2500310	Rittal GmbH	RIT.2500310					
133	=ESS.TS.SSS.E01.UH01-EC01	2	SK TopTherm fan-and-filter unit, 230/250 m³/h, 230 V, 1~, 50 /60 Hz	SK.3241100	Rittal GmbH	RIT.3241100					
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC7	Page nr/Proj. tot count: 91 / 197	

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	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number
134	=ESS.TS.SSS.E01.UH01-EC02	2	SK TopTherm fan-and-filter unit, 230/250 m³/h, 230 V, 1~, 50 /60 Hz	SK.3241100	Rittal GmbH	RIT.3241100	
135	=ESS.TS.SSS.E01.UH01-FA01	1	Combination arrestor V20-3+NPE+FS-280 V with remote signal ling	5095333	OBO Bettermann	OBO.5095333	
136	=ESS.TS.SSS.E01.UH01-FA02	1	Combination arrestor V20-3+NPE+FS-280 V with remote signal ling	5095333	OBO Bettermann	OBO.5095333	
137	=ESS.TS.SSS.E01.UH01-FB01	1	F202 AC-25/0,03 Residual Current Dev.	F202 AC-25/0,03	ABB	ABB.2CSF202001R1250	
138	=ESS.TS.SSS.E01.UH01-FC01	1	36kA High performance circuit breaker, 3-pole, 32A, max. 690 V AC, 375V DC, Char. D	S803N-D32 kpl.	ABB	ABB.2CCS893001R0321	ESS-2603687
139	=ESS.TS.SSS.E01.UH01-FC01	1	S800 Accessory - Auxiliary contact	S800-AUX kpl.	ABB	ABB.2CCS800900R0011	ESS-2589485
140	=ESS.TS.SSS.E01.UH01-FC02	1	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6	ABB	ABB.2CDS271001R0064	ESS-2603757
141	=ESS.TS.SSS.E01.UH01-FC03	1	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6	ABB	ABB.2CDS271001R0064	ESS-2603757
142	=ESS.TS.SSS.E01.UH01-FC04	1	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6	ABB	ABB.2CDS271001R0064	ESS-2603757
143	=ESS.TS.SSS.E01.UH01-FC05	1	Miniature Circuit Breaker - S200M - 3P - C - 6 A	S203M-C6	ABB	ABB.2CDS273001R0064	ESS-2603785
144	=ESS.TS.SSS.E01.UH01-FC05	1	S800 Accessory - Auxiliary contact	S800-AUX kpl.	ABB	ABB.2CCS800900R0011	ESS-2589485
145	=ESS.TS.SSS.E01.UH01-FC06	1	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6	ABB	ABB.2CDS271001R0064	ESS-2603757
146	=ESS.TS.SSS.E01.UH01-FC06	1	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R	ABB	ABB.2CDS200922R0001	ESS-2603747
147	=ESS.TS.SSS.E01.UH01-FC07	1	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6	ABB	ABB.2CDS271001R0064	ESS-2603757
148	=ESS.TS.SSS.E01.UH01-FC07	1	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R	ABB	ABB.2CDS200922R0001	ESS-2603747
149	=ESS.TS.SSS.E01.UH01-FC08	1	Miniature Circuit Breaker - S200M - 1P - C - 6 A	S201M-C6	ABB	ABB.2CDS271001R0064	ESS-2603757
150	=ESS.TS.SSS.E01.UH01-FC08	1	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R	ABB	ABB.2CDS200922R0001	ESS-2603747
151	=ESS.TS.SSS.E01.UH01-FC11	1	Electronic device circuit breaker	CBM E8 24DC/0.5-10A NO-R	Phoenix Contact	PXC.2905744	
152	=ESS.TS.SSS.E01.UH01-FC21	1	50kA High performance circuit breaker, 1-pole, 10A, max. 400 V AC, 125V DC, Char. B	S801S-B10	ABB	ABB.2CCS861001R0105	ESS-2603643

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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC8	Page nr/Proj. tot count: 92 / 197	

Parts list

ESS\_Parts\_list [FBS]

	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number
153	=ESS.TS.SSS.E01.UH01-FC22	1	Miniature Circuit Breaker - S200M - 1P - B - 10 A	S201M-B10	ABB	ABB.2CDS271001R0105	ESS-3523886
154	=ESS.TS.SSS.E01.UH01-FC23	1	Miniature Circuit Breaker - S200M - 1P - B - 10 A	S201M-B10	ABB	ABB.2CDS271001R0105	ESS-3523886
155	=ESS.TS.SSS.E01.UH01-FC51	1	Miniature Circuit Breaker - S200M - 1P - B - 6 A	S201M-B6	ABB	ABB.2CDS271001R0065	ESS-2603737
156	=ESS.TS.SSS.E01.UH01-FC51	1	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R	ABB	ABB.2CDS200922R0001	ESS-2603747
157	=ESS.TS.SSS.E01.UH01-FC52	1	Miniature Circuit Breaker - S200M - 1P - B - 6 A	S201M-B6	ABB	ABB.2CDS271001R0065	ESS-2603737
158	=ESS.TS.SSS.E01.UH01-FC52	1	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R	ABB	ABB.2CDS200922R0001	ESS-2603747
159	=ESS.TS.SSS.E01.UH01-FC53	1	Miniature Circuit Breaker - S200M - 1P - B - 6 A	S201M-B6	ABB	ABB.2CDS271001R0065	ESS-2603737
160	=ESS.TS.SSS.E01.UH01-FC53	1	S2C-S/H6R - Signal / Auxiliary Contact	S2C-S/H6R	ABB	ABB.2CDS200922R0001	ESS-2603747
161	=ESS.TS.SSS.E01.UH01-1KF01	1	SK Enclosure internal thermostat, 24 V, 48 V, 60 V, 115 V, 230 V, 1~	SK.3110000	Rittal GmbH	RIT.3110000	ESS-2605464
162	=ESS.TS.SSS.E01.UH01-PE1	1	WPE 35 PE terminal	WPE 35	Weidmueller	WEI.1010500000	ESS-2606187
163	=ESS.TS.SSS.E01.UH01-PE1	1	WPE 6 PE terminal	WPE 6	Weidmueller	WEI.1010200000	ESS-2606183
164	=ESS.TS.SSS.E01.UH01-PE01	7	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185
165	=ESS.TS.SSS.E01.UH01-PE51	4	WPE 4 PE terminal	WPE 4	Weidmueller	WEI.1010100000	ESS-2606179
166	=ESS.TS.SSS.E01.UH01-QB01	1	OT80F3 switch-disconnector	OT80F3	ABB	ABB.1SCA105798R1001	ESS-2589422
167	=ESS.TS.SSS.E01.UH01-QB01	1	Neutral Terminal	OTPN80FP	ABB	ABB.1SCA105457R1001	ESS-3477026
168	=ESS.TS.SSS.E01.UH01-QB01	1	OHR52/1 Handle for power circuit breaker	OHR52/1 Handle	ABB	ABB.1SCA108599R1001	ESS-2589424
169	=ESS.TS.SSS.E01.UH01-QB02	1	OT63F4N2 switch-disconnector	OT63F4N2	ABB	ABB.1SCA105365R1001	ESS-2596052
170	=ESS.TS.SSS.E01.UH01-SF1	1	Door-Operated Switch, Input voltage: 230 V AC, 24 V DC, - 24 0 V, 1~, 50 Hz/60 Hz,	SZ.2500460	Rittal GmbH	RIT.2500460	ESS-2605470
171	=ESS.TS.SSS.E01.UH01-SF2	1	Door-Operated Switch, Input voltage: 230 V AC, 24 V DC, - 24 0 V, 1~, 50 Hz/60 Hz,	SZ.2500460	Rittal GmbH	RIT.2500460	ESS-2605470

Parts list

ESS\_Parts\_list [FBS]

	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number
172	=ESS.TS.SSS.E01.UH01-TA01	1	Redundant power supply, 24V, 10A	CP10.241-R2	PULS	PULS.CP10.241-R2	ESS-2605329
173	=ESS.TS.SSS.E01.UH01-TA02	1	Redundant power supply, 24V, 10A	CP10.241-R2	PULS	PULS.CP10.241-R2	ESS-2605329
174	=ESS.TS.SSS.E01.UH01-TA03	2	Semi-regulated Power Supply, 3AC, Output 72V 13.3A	XT40.721	PULS	PULS.XT40.721	
175	=ESS.TS.SSS.E01.UH01-U8	1	TS Partial mounting plate, for TS, SE, W/DH: 500x500 mm	TS.8614660	Rittal GmbH	RIT.8614660	ESS-3477102
176	=ESS.TS.SSS.E01.UH01-XD2	1	SZ Socket for mounting on support rails, Schuko, CEE 7/4	SZ.2506100	Rittal GmbH	RIT.2506100	
177	=ESS.TS.SSS.E01.UH01-XD3	1	SZ Socket for mounting on support rails, Schuko, CEE 7/4	SZ.2506100	Rittal GmbH	RIT.2506100	
178	=ESS.TS.SSS.E01.W01.F01-KF51	1	PNOZsigma Safety relay 2n/o	PNOZ s3 24VDC	Pilz	PILZ.750 103	
179	=ESS.TS.SSS.E01.W01.F01-KF52	1	Expansion module 2 NO	PNOZ S8 Series	Pilz	PILZ.750108	
180	=ESS.TS.SSS.E01.W01.F01-SF10 PIT es Set1s-5ns	1				PILZ.400 620	

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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC10	Page nr/Proj. tot count: 94 / 197	



Cable overview

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1	=ESS.TS.SSS.E01.W01.K01-WF01	=ESS.TS.SSS.E01.W01.K01-KF19:1	=ESS.TS.SSS.E01.W01.W01-TA11:J7	9/125 Single Mode	1x0,13mm²	1	=ESS.TS.SSS.E01.W01.K01&FS/50.2
2	=ESS.TS.SSS.E01.W01.K01-WF02	=ESS.TS.SSS.E01.W01.W01-TA11:J6	=ESS.TS.SSS.E01.W01.W02-TA101:J7	ZK1090-9191-0010	2x0.128 mm^2 mm²	1	=ESS.TS.SSS.E01.W01.W01&FS/50.3
3	=ESS.TS.SSS.E01.W01.K01-WF03			ZK1090-9191-5023	2x0.128 mm^2 mm²	0	50.4
4	=ESS.TS.SSS.E01.W01.K01-WF04	=ESS.TS.SSS.E01.W01.W02-TA102:J6	=ESS.TS.SSS.E01.W01.W03-TA103:J7	ZK1090-9191-5023	2x0.128 mm^2 mm²	1	=ESS.TS.SSS.E01.W01.W02&FS/50.5
5	=ESS.TS.SSS.E01.W01.K01-WF05	=ESS.TS.SSS.E01.W01.K01-KF13:2	=ESS.TS.SSS.E01.K01-KF31:3	ZK1090-9191-6020	2x0.128 mm^2 mm²	1	=ESS.TS.SSS.E01.W01.K01&FS/50.5
6	=ESS.TS.SSS.E01.W01.W01-WD01	=ESS.TS.SSS.E01.W01.W01-UC01:1	=ESS.TS.SSS.E01.W01.W01-TA11:A1			8	=ESS.TS.SSS.E01.W01.W01&FS/1.2
7			=ESS.TS.SSS.E01.W01.K01-XD06:1				
8	=ESS.TS.SSS.E01.W01.W01-WG01	=ESS.TS.SSS.E01.W01.K01-XG11:2	=ESS.TS.SSS.E01.W01.W01-1XG01:5			10	=ESS.TS.SSS.E01.W01.K01&FS/13.2
9		=					13.2
10	=ESS.TS.SSS.E01.W01.W01-WG03	=ESS.TS.SSS.E01.W01.K01-XD07:1	=ESS.TS.SSS.E01.W01.W01-XD03:1	UNIPUR-CP	7x1,5mm²	7	=ESS.TS.SSS.E01.W01.K01&FS/9.1
11		=					9.1
12	=ESS.TS.SSS.E01.W01.W01-WG05	=ESS.TS.SSS.E01.W01.W01-XD03:1	=ESS.TS.SSS.E01.W01.W01-KF01			3	=ESS.TS.SSS.E01.W01.W01&FS/9.1
13	=ESS.TS.SSS.E01.W01.W01-WG06	=ESS.TS.SSS.E01.W01.W01-XD03:4	=ESS.TS.SSS.E01.W01.W01-KF02			3	=ESS.TS.SSS.E01.W01.W01&FS/9.4
14	=ESS.TS.SSS.E01.W01.W01-1WG01	=ESS.TS.SSS.E01.W01.W01-2XG101	=ESS.TS.SSS.E01.W01.W01-BG01-A+:Motor			9	=ESS.TS.SSS.E01.W01.W01&FS/13.3
15			=ESS.TS.SSS.E01.W01.W01-BG01-A -:Motor				
16			=ESS.TS.SSS.E01.W01.W01-BG01-B+:Motor				
17			=ESS.TS.SSS.E01.W01.W01-BG01-B -:Motor				
18			=ESS.TS.SSS.E01.W01.W01-BG01-R+				

0	1	2	3	4	5	6	7	8	9			
<div><div>Cable overview</div><div>ESS_Cable_overview</div></div>												
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19			=ESS.TS.SSS.E01.W01.W01-BG01-R-									
20			=ESS.TS.SSS.E01.W01.W01-BG01-VCC-									
21			=ESS.TS.SSS.E01.W01.W01-BG01-VCC+:Motor									
22			=ESS.TS.SSS.E01.W01.W01-BG01-sence-									
23	=ESS.TS.SSS.E01.W01.W02-WD01	=ESS.TS.SSS.E01.W01.W02-XG01:1	=ESS.TS.SSS.E01.W01.W02-TA101:1	UNIPUR-CP	5x1,5mm²	5	=ESS.TS.SSS.E01.W01.W02&FS/20.3					
24		=					20.3					
25	=ESS.TS.SSS.E01.W01.W02-WD02	=ESS.TS.SSS.E01.W01.W02-XG02:1	=ESS.TS.SSS.E01.W01.W02-TA102:1	UNIPUR-CP	5x1,5mm²	5	=ESS.TS.SSS.E01.W01.W02&FS/24.3					
26		=ESS.TS.SSS.E01.W01.W02-MP					=ESS.TS.SSS.E01.W01.W02&FS/24.3					
27	=ESS.TS.SSS.E01.W01.W02-1WD01	=ESS.TS.SSS.E01.W01.W02-XG01:1	=ESS.TS.SSS.E01.W01.W02-1XG01:1	UNIPUR-CP	5x1,5mm²	6	=ESS.TS.SSS.E01.W01.W02&FS/20.2					
28		=					20.2					
29	=ESS.TS.SSS.E01.W01.W02-1WD02		=ESS.TS.SSS.E01.W01.W02-XG02:1	UNIPUR-CP	5x1,5mm²	6	24.2					
30			=ESS.TS.SSS.E01.W01.W02-1XG02:1									
31	=ESS.TS.SSS.E01.W01.W02-WG01	=ESS.TS.SSS.E01.W01.W02-XG01:1	=ESS.TS.SSS.E01.W01.K01-KF05:1	SUPERTRONIC®-C-PURö	7x0,25mm²	6	=ESS.TS.SSS.E01.W01.W02&FS/21.2					
32		=	=ESS.TS.SSS.E01.W01.K01-KF03:1				21.2					
33			=ESS.TS.SSS.E01.W01.K01-XG52:1									
34	=ESS.TS.SSS.E01.W01.W02-WG02	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG01-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH01&FS/21.3					
35			=ESS.TS.SSS.E01.W01.W02-BG01:Motor									
36	=ESS.TS.SSS.E01.W01.W02-WG03	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG02-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH01&FS/21.4					
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet		Preliminary	0.2		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description		Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description		Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description -1WG01...-WG03		CHESS Doc. NR: ESS-1090724	Document: &MB2	Page nr/Proj. tot count: 96 / 197	



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	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
37			=ESS.TS.SSS.E01.W01.W02-BG02:Motor				
38	=ESS.TS.SSS.E01.W01.W02-WG04	=ESS.TS.SSS.E01.W01.W02.UH01-XD01:4	=ESS.TS.SSS.E01.W01.W02-QL1	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH01&FS/21.5
39	=ESS.TS.SSS.E01.W01.W02-WG05	=ESS.TS.SSS.E01.W01.W02-XG05:1	=ESS.TS.SSS.E01.W01.K01-KF05:3	SUPERTRONIC®-C-PURö	7x0,25mm²	6	=ESS.TS.SSS.E01.W01.W02&FS/22.3
40		=	=ESS.TS.SSS.E01.W01.K01-KF03:3				22.3
41	=ESS.TS.SSS.E01.W01.W02-WG06	=ESS.TS.SSS.E01.W01.W02.UH02-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG03-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH02&FS/22.4
42			=ESS.TS.SSS.E01.W01.W02-BG03:Motor				
43	=ESS.TS.SSS.E01.W01.W02-WG07	=ESS.TS.SSS.E01.W01.W02.UH02-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG04-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH02&FS/22.5
44			=ESS.TS.SSS.E01.W01.W02-BG04:Motor				
45	=ESS.TS.SSS.E01.W01.W02-WG08	=ESS.TS.SSS.E01.W01.W02-XG08:1	=ESS.TS.SSS.E01.W01.K01-KF05:5	SUPERTRONIC®-C-PURö	7x0,25mm²	6	=ESS.TS.SSS.E01.W01.W02&FS/25.3
46		=	=ESS.TS.SSS.E01.W01.K01-KF03:5				25.3
47			=ESS.TS.SSS.E01.W01.K01-XG52:5				
48	=ESS.TS.SSS.E01.W01.W02-WG09	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG05-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH03&FS/25.4
49			=ESS.TS.SSS.E01.W01.W02-BG05:Motor				
50	=ESS.TS.SSS.E01.W01.W02-WG10	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG06-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH03&FS/25.4
51			=ESS.TS.SSS.E01.W01.W02-BG06:Motor				
52	=ESS.TS.SSS.E01.W01.W02-WG11	=ESS.TS.SSS.E01.W01.W02.UH03-XD01:4	=ESS.TS.SSS.E01.W01.W02-QL2	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH03&FS/25.5
53	=ESS.TS.SSS.E01.W01.W02-WG14	=ESS.TS.SSS.E01.W01.W02-XG14:1	=ESS.TS.SSS.E01.W01.K01-KF05:7	SUPERTRONIC®-C-PURö	7x0,25mm²	6	=ESS.TS.SSS.E01.W01.W02&FS/26.3
54		=	=ESS.TS.SSS.E01.W01.K01-KF03:7				26.3

Cable overview

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	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
55	=ESS.TS.SSS.E01.W01.W02-WG15	=ESS.TS.SSS.E01.W01.W02.UH04-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG07-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH04&FS/26.4
56			=ESS.TS.SSS.E01.W01.W02-BG07:Motor				
57	=ESS.TS.SSS.E01.W01.W02-WG16	=ESS.TS.SSS.E01.W01.W02.UH04-XD01:1	=ESS.TS.SSS.E01.W01.W02-BG08-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W02.UH04&FS/26.5
58			=ESS.TS.SSS.E01.W01.W02-BG08:Motor				
59	=ESS.TS.SSS.E01.W01.W02-WG21	=ESS.TS.SSS.E01.W01.W02-XG21:1	=ESS.TS.SSS.E01.W01.K01-KF09:1	TOPFLEX®-PUR	8x0,14+0,5mm <sub>2</sub>	8	=ESS.TS.SSS.E01.W01.W02&FS/23.2
60		=	=ESS.TS.SSS.E01.W01.K01-KF12:1				23.2
61	=ESS.TS.SSS.E01.W01.W02-WG22	=ESS.TS.SSS.E01.W01.W02-XG22:1	=ESS.TS.SSS.E01.W01.K01-KF10:1	TOPFLEX®-PUR	8x0,14+0,5mm <sub>2</sub>	8	=ESS.TS.SSS.E01.W01.W02&FS/27.2
62		=	=ESS.TS.SSS.E01.W01.K01-KF12:3				27.2
63	=ESS.TS.SSS.E01.W01.W02-1WG01		=ESS.TS.SSS.E01.W01.W02-XG01:1	SUPERTRONIC®-C-PURö	7x0,25mm²	7	21.2
64			=ESS.TS.SSS.E01.W01.W02-1XG01:1				
65	=ESS.TS.SSS.E01.W01.W02-1WG05		=ESS.TS.SSS.E01.W01.W02-XG05:1	SUPERTRONIC®-C-PURö	7x0,25mm²	7	22.2
66			=ESS.TS.SSS.E01.W01.W02-1XG05:1				
67	=ESS.TS.SSS.E01.W01.W02-1WG08		=ESS.TS.SSS.E01.W01.W02-XG08:1	SUPERTRONIC®-C-PURö	7x0,25mm²	7	25.2
68			=ESS.TS.SSS.E01.W01.W02-1XG08:1				
69	=ESS.TS.SSS.E01.W01.W02-1WG14		=ESS.TS.SSS.E01.W01.W02-XG14:1	SUPERTRONIC®-C-PURö	7x0,25mm²	7	26.2
70			=ESS.TS.SSS.E01.W01.W02-1XG14:1				
71	=ESS.TS.SSS.E01.W01.W02-1WG21		=ESS.TS.SSS.E01.W01.W02-XG21:1	TOPFLEX®-PUR	8x0,14+0,5mm <sub>2</sub>	9	23.1
72			=ESS.TS.SSS.E01.W01.W02-1XG21:1				

Cable overview

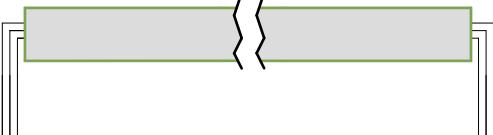
ESS\_Cable\_overview

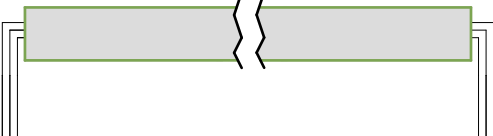
	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
73	=ESS.TS.SSS.E01.W01.W02-1WG22		=ESS.TS.SSS.E01.W01.W02-XG22:1	TOPFLEX®-PUR	8x0,14+0,5mm <sub>2</sub>	9	27.2
74			=ESS.TS.SSS.E01.W01.W02-1XG22:1				
75	=ESS.TS.SSS.E01.W01.W03-WD01	=ESS.TS.SSS.E01.W01.W03-XG01:1	=ESS.TS.SSS.E01.W01.W03-TA103:1	UNIPUR-CP	5x1,5mm <sup>2</sup>	5	=ESS.TS.SSS.E01.W01.W03&FS/28.3
76		=ESS.TS.SSS.E01.W01.W03-MP					=ESS.TS.SSS.E01.W01.W03&FS/28.3
77	=ESS.TS.SSS.E01.W01.W03-1WD01		=ESS.TS.SSS.E01.W01.W03-XG01:1	UNIPUR-CP	5x1,5mm <sup>2</sup>	6	28.2
78			=ESS.TS.SSS.E01.W01.W03-1XG01:1				
79	=ESS.TS.SSS.E01.W01.W03-WG01	=ESS.TS.SSS.E01.W01.W03-XG01:1	=ESS.TS.SSS.E01.W01.K01-KF05:9	SUPERTRONIC®-C-PURö	7x0,25mm <sup>2</sup>	6	=ESS.TS.SSS.E01.W01.W03&FS/29.2
80		=	=ESS.TS.SSS.E01.W01.K01-KF03:9				29.2
81	=ESS.TS.SSS.E01.W01.W03-WG03	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:1	=ESS.TS.SSS.E01.W01.W03-BG01-A/:Motor	Unipur	2x0,75mm <sup>2</sup>	2	=ESS.TS.SSS.E01.W01.W03.UH01&FS/29.3
82			=ESS.TS.SSS.E01.W01.W03-BG01:Motor				
83	=ESS.TS.SSS.E01.W01.W03-WG04	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:1	=ESS.TS.SSS.E01.W01.W03-BG02-A/:Motor	Unipur	2x0,75mm <sup>2</sup>	2	=ESS.TS.SSS.E01.W01.W03.UH01&FS/29.4
84			=ESS.TS.SSS.E01.W01.W03-BG02:Motor				
85	=ESS.TS.SSS.E01.W01.W03-WG05	=ESS.TS.SSS.E01.W01.W03.UH01-XD01:1	=ESS.TS.SSS.E01.W01.W03-BG03-A/:Motor	Unipur	2x0,75mm <sup>2</sup>	2	=ESS.TS.SSS.E01.W01.W03.UH01&FS/29.5
86			=ESS.TS.SSS.E01.W01.W03-BG03:Motor				
87	=ESS.TS.SSS.E01.W01.W03-WG06	=ESS.TS.SSS.E01.W01.W03-XG06:1	=ESS.TS.SSS.E01.W01.K01-KF05:10	SUPERTRONIC®-C-PURö	7x0,25mm <sup>2</sup>	6	=ESS.TS.SSS.E01.W01.W03&FS/30.2
88		=	=ESS.TS.SSS.E01.W01.K01-KF03:12				30.2
89	=ESS.TS.SSS.E01.W01.W03-WG07	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:1	=ESS.TS.SSS.E01.W01.W03-BG04-A/:Motor	Unipur	2x0,75mm <sup>2</sup>	2	=ESS.TS.SSS.E01.W01.W03.UH02&FS/30.3
90			=ESS.TS.SSS.E01.W01.W03-BG04:Motor				

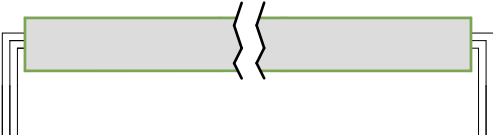
# Cable overview

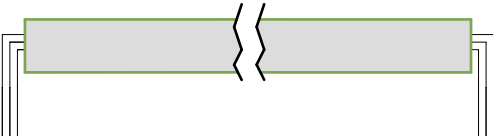
ESS\_Cable\_overview

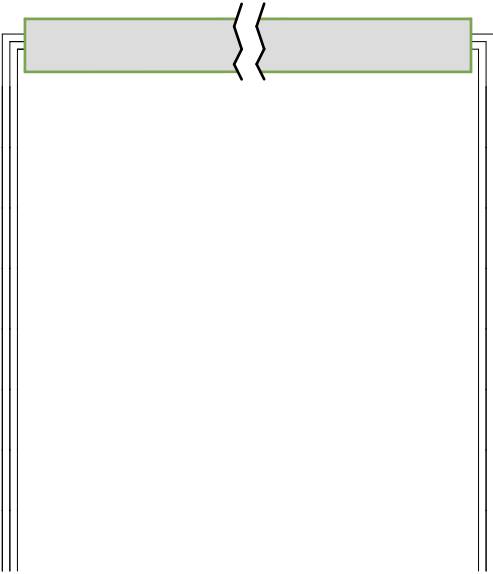
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91	=ESS.TS.SSS.E01.W01.W03-WG08	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:1	=ESS.TS.SSS.E01.W01.W03-BG05-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W03.UH02&FS/30.4
92			=ESS.TS.SSS.E01.W01.W03-BG05:Motor				
93	=ESS.TS.SSS.E01.W01.W03-WG09	=ESS.TS.SSS.E01.W01.W03.UH02-XD01:1	=ESS.TS.SSS.E01.W01.W03-BG06-A/:Motor	Unipur	2x0,75mm²	2	=ESS.TS.SSS.E01.W01.W03.UH02&FS/30.5
94			=ESS.TS.SSS.E01.W01.W03-BG06:Motor				
95	=ESS.TS.SSS.E01.W01.W03-WG21	=ESS.TS.SSS.E01.W01.W03-XG21:1	=ESS.TS.SSS.E01.W01.K01-KF11:1	TOPFLEX®-PUR	8x0,14+0,5mm <sub>2</sub>	8	=ESS.TS.SSS.E01.W01.W03&FS/31.2
96		=	=ESS.TS.SSS.E01.W01.K01-KF12:5				31.2
97	=ESS.TS.SSS.E01.W01.W03-1WG01		=ESS.TS.SSS.E01.W01.W03-XG01:1	SUPERTRONIC®-C-PURö	7x0,25mm²	7	29.2
98			=ESS.TS.SSS.E01.W01.W03-1XG01:1				
99	=ESS.TS.SSS.E01.W01.W03-1WG06		=ESS.TS.SSS.E01.W01.W03-XG06:1	SUPERTRONIC®-C-PURö	7x0,25mm²	7	30.2
100			=ESS.TS.SSS.E01.W01.W03-1XG06:1				
101	=ESS.TS.SSS.E01.W01.W03-1WG21		=ESS.TS.SSS.E01.W01.W03-XG21:1	TOPFLEX®-PUR	8x0,14+0,5mm <sub>2</sub>	9	31.1
102			=ESS.TS.SSS.E01.W01.W03-1XG21:1				
103	=ESS.TS.SSS.E01.W01.F01-1W2	=ESS.TS.SSS.E01.W01.F01-SF10:4	=ESS.TS.SSS.E01.W01.K01-XD03:3	PSEN op cable axial M12 5-pole	5x0,25mm²mm <sub>2</sub>	4	=ESS.TS.SSS.E01.W01.F01&FS/17.298

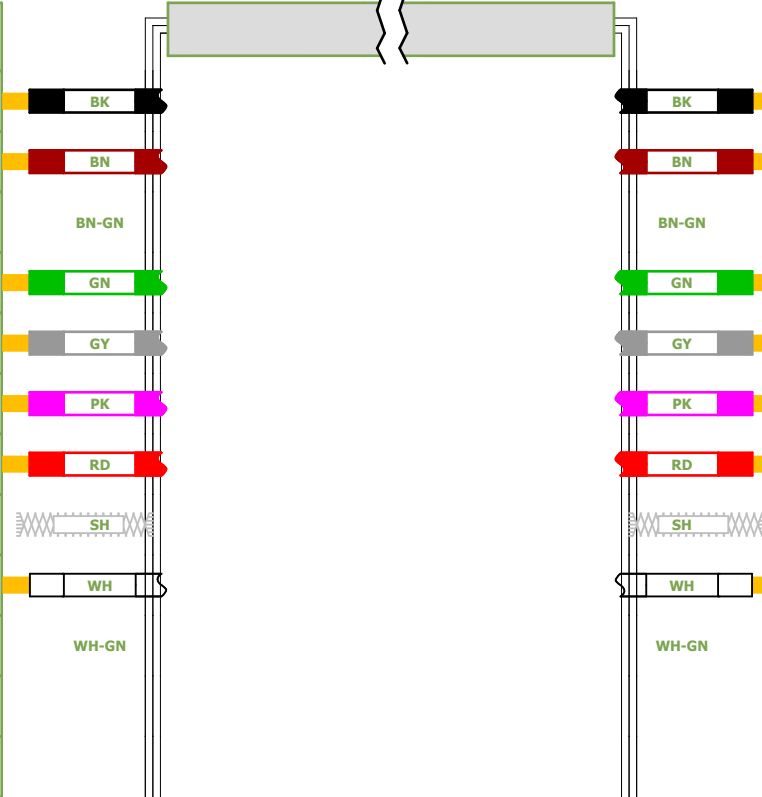
0	1	2	3	4	5	6	7	8	9
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<div><div><div><div><div></div><div>Page / column</div></div><div><div>Source designation from</div><div></div></div><div><div>Connect. point</div><div></div></div></div><div></div><div>=ESS.TS.SSS.E01.W01.K01-WF01</div><div></div><div><div><div>Connect. point</div><div>-J7:J7</div></div><div><div>Target designation from</div><div>=ESS.TS.SSS.E01.W01.W01-TA11</div></div><div><div>Page / column</div><div></div></div></div></div></div>									
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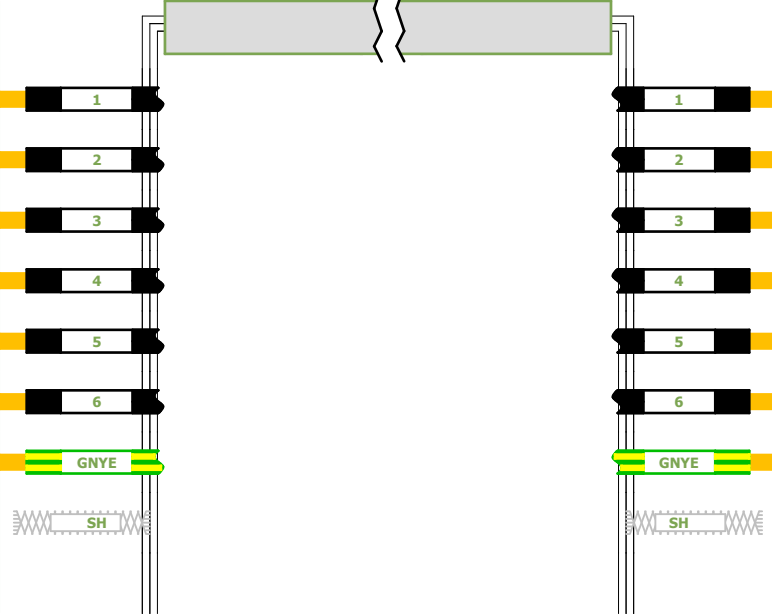
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<div><div><div><div><div></div><div>Page / column</div></div><div><div>Source designation from</div><div></div></div><div><div>Connect. point</div><div></div></div></div><div></div><div>=ESS.TS.SSS.E01.W01.K01-WF02</div><div></div><div><div><div>Connect. point</div><div>-J7:J7</div></div><div><div>Target designation from</div><div>=ESS.TS.SSS.E01.W01.W02-TA101</div></div><div><div>Page / column</div><div></div></div></div></div></div>									
2			=ESS.TS.SSS.E01.W01.W01-TA11	-J6:J6					

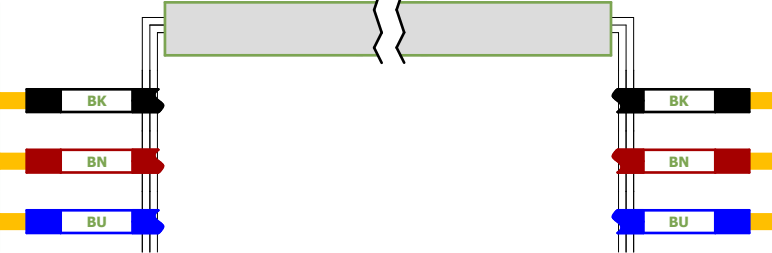
<div><div><div><div><div>Cable name</div><div>=ESS.TS.SSS.E01.W01.K01-WF04</div></div><div><div>Database name</div><div></div></div><div><div>Cable type</div><div>ZK1090-9191-5023 2x0.128 mm²2mm²</div></div></div><div></div><div>ESS_Cable_diagram(Graphical)</div></div></div>									
<div><div><div><div><div></div><div>Page / column</div></div><div><div>Source designation from</div><div></div></div><div><div>Connect. point</div><div></div></div></div><div></div><div>=ESS.TS.SSS.E01.W01.K01-WF04</div><div></div><div><div><div>Connect. point</div><div>-J7:J7</div></div><div><div>Target designation from</div><div>=ESS.TS.SSS.E01.W01.W03-TA103</div></div><div><div>Page / column</div><div></div></div></div></div></div>									
3			=ESS.TS.SSS.E01.W01.W02-TA102	-J6:J6					

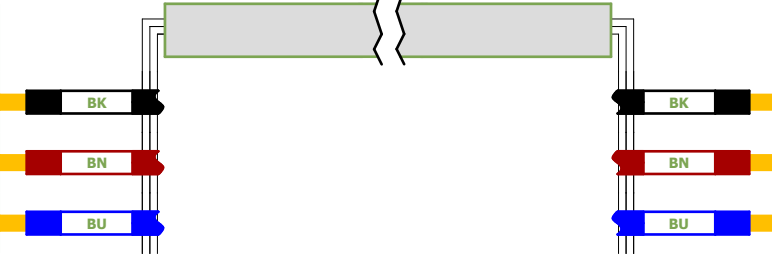
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<div><div><div><div><div></div><div>Page / column</div></div><div><div>Source designation from</div><div></div></div><div><div>Connect. point</div><div></div></div></div><div></div><div>=ESS.TS.SSS.E01.W01.K01-WF05</div><div></div><div><div><div>Connect. point</div><div>X2 OUT:3</div></div><div><div>Target designation from</div><div>=ESS.TS.SSS.E01.K01-KF31</div></div><div><div>Page / column</div><div></div></div></div></div></div>									
4			=ESS.TS.SSS.E01.W01.K01-KF13	X1:2					

<div><div>Cable name</div><div>Database name</div><div>Cable type</div></div> <div>=ESS.TS.SSS.E01.W01.W01-WD01</div>				ESS_Cable_diagram(Graphical)			
	Page / column	Source designation from	Connect. point	<div>=ESS.TS.SSS.E01.W01.W01-WD01</div> 			
1		=ESS.TS.SSS.E01.W01.W01-UC01	1:1	Connect. point	Target designation from	Page / column	
2		=ESS.TS.SSS.E01.W01.W01-UC01	2:1	X5:A1	=ESS.TS.SSS.E01.W01.W01-TA11		
3		=ESS.TS.SSS.E01.W01.W01-UC01	3:1	X5:A2	=ESS.TS.SSS.E01.W01.W01-TA11		
4		=ESS.TS.SSS.E01.W01.W01-UC01	4:1	X5:A3	=ESS.TS.SSS.E01.W01.W01-TA11		
5		=ESS.TS.SSS.E01.W01.W01-UC01	5:1	X5:PE	=ESS.TS.SSS.E01.W01.W01-TA11		
6		=ESS.TS.SSS.E01.W01.W01-UC01	6:1	X6:1	=ESS.TS.SSS.E01.W01.W01-TA11		
7		=ESS.TS.SSS.E01.W01.W01-UC01	7:1	X6:2	=ESS.TS.SSS.E01.W01.W01-TA11		
8		=ESS.TS.SSS.E01.W01.W01-UC01	8:1	1:2	=ESS.TS.SSS.E01.W01.K01-XD06		
				2:2	=ESS.TS.SSS.E01.W01.K01-XD06		

<div><div>Cable name</div><div>Database name</div><div>Cable type</div></div> <div>=ESS.TS.SSS.E01.W01.W01-WG01</div>				ESS_Cable_diagram(Graphical)			
	Page / column	Source designation from	Connect. point	<div>=ESS.TS.SSS.E01.W01.W01-WG01</div> 			
9		=ESS.TS.SSS.E01.W01.K01-XG11	10	Connect. point	Target designation from	Page / column	
10		=ESS.TS.SSS.E01.W01.K01-XG11	2	4	=ESS.TS.SSS.E01.W01.W01-1XG01		
11		=ESS.TS.SSS.E01.W01.K01-XG11	12	5	=ESS.TS.SSS.E01.W01.W01-1XG01		
12		=ESS.TS.SSS.E01.W01.K01-XG11	3	12	=ESS.TS.SSS.E01.W01.W01-1XG01		
13		=ESS.TS.SSS.E01.W01.K01-XG11	5	6	=ESS.TS.SSS.E01.W01.W01-1XG01		
14		=ESS.TS.SSS.E01.W01.K01-XG11	6	8	=ESS.TS.SSS.E01.W01.W01-1XG01		
15		=ESS.TS.SSS.E01.W01.K01-XG11	9	1	=ESS.TS.SSS.E01.W01.W01-1XG01		
16				3	=ESS.TS.SSS.E01.W01.W01-1XG01		
17		=ESS.TS.SSS.E01.W01.K01-XG11	15		=ESS.TS.SSS.E01.W01.W01-1XG01		
18		=ESS.TS.SSS.E01.W01.K01-XG11	4	11	=ESS.TS.SSS.E01.W01.W01-1XG01		
19				10	=ESS.TS.SSS.E01.W01.W01-1XG01		
20		=ESS.TS.SSS.E01.W01.W01-1XG01			=ESS.TS.SSS.E01.W01.W01-WG01		
					=ESS.TS.SSS.E01.W01.W01-WG01		













Cable name		=ESS.TS.SSS.E01.W01.W01-WG03					
Database name		ESS_Cable_diagram(Graphical)					
Cable type		UNIPUR-CP 7x1,5mm²					
	Page / column	Source designation from	Connect. point	<div>=ESS.TS.SSS.E01.W01.W01-WG03</div> 			
1		=ESS.TS.SSS.E01.W01.K01-XD07	1:2	1	1:1	=ESS.TS.SSS.E01.W01.W01-XD03	
2		=ESS.TS.SSS.E01.W01.K01-XD07	2:2	2	2:1	=ESS.TS.SSS.E01.W01.W01-XD03	
3		=ESS.TS.SSS.E01.W01.K01-XD07	3:2	3	3:1	=ESS.TS.SSS.E01.W01.W01-XD03	
4		=ESS.TS.SSS.E01.W01.K01-XD07	4:2	4	4:1	=ESS.TS.SSS.E01.W01.W01-XD03	
5		=ESS.TS.SSS.E01.W01.K01-XD07	5:2	5	5:1	=ESS.TS.SSS.E01.W01.W01-XD03	
6		=ESS.TS.SSS.E01.W01.K01-XD07	6:2	6	6	=ESS.TS.SSS.E01.W01.W01-XD03	
7		=ESS.TS.SSS.E01.W01.K01-XD07	PE:2	GNYE	PE:1	=ESS.TS.SSS.E01.W01.W01-XD03	
8				SH			
9						=ESS.TS.SSS.E01.W01.W01-WG03	

















Cable name		=ESS.TS.SSS.E01.W01.W01-WG05					
Database name		ESS_Cable_diagram(Graphical)					
Cable type							
	Page / column	Source designation from	Connect. point	<div>=ESS.TS.SSS.E01.W01.W01-WG05</div> 			
10		=ESS.TS.SSS.E01.W01.W01-XD03	3:2	BK	3	=ESS.TS.SSS.E01.W01.W01-KF01	
11		=ESS.TS.SSS.E01.W01.W01-XD03	1:2	BN	1	=ESS.TS.SSS.E01.W01.W01-KF01	
12		=ESS.TS.SSS.E01.W01.W01-XD03	2:2	BU	2	=ESS.TS.SSS.E01.W01.W01-KF01	

Cable name		=ESS.TS.SSS.E01.W01.W01-WG06					
Database name		ESS_Cable_diagram(Graphical)					
Cable type							
	Page / column	Source designation from	Connect. point	<div>=ESS.TS.SSS.E01.W01.W01-WG06</div> 			
13		=ESS.TS.SSS.E01.W01.W01-XD03	6	BK	3	=ESS.TS.SSS.E01.W01.W01-KF02	
14		=ESS.TS.SSS.E01.W01.W01-XD03	4:2	BN	1	=ESS.TS.SSS.E01.W01.W01-KF02	
15		=ESS.TS.SSS.E01.W01.W01-XD03	5:2	BU	2	=ESS.TS.SSS.E01.W01.W01-KF02	





Cable name =ESS.TS.SSS.E01.W01.W02-WD02		ESS_Cable_diagram(Graphical)					
Database name							
Cable type UNIPUR-CP 5x1,5mm²							
		=ESS.TS.SSS.E01.W01.W02-WD02					
	Page / column	Source designation from	Connect. point				
1		=ESS.TS.SSS.E01.W01.W02-XG02	5			-J2:5	=ESS.TS.SSS.E01.W01.W02-TA102
2		=ESS.TS.SSS.E01.W01.W02-XG02	1			-J2:1	=ESS.TS.SSS.E01.W01.W02-TA102
3		=ESS.TS.SSS.E01.W01.W02-XG02	2			-J2:2	=ESS.TS.SSS.E01.W01.W02-TA102
4		=ESS.TS.SSS.E01.W01.W02-XG02	3			-J2:3	=ESS.TS.SSS.E01.W01.W02-TA102
5		=ESS.TS.SSS.E01.W01.W02-XG02	4			-J2:4	=ESS.TS.SSS.E01.W01.W02-TA102
6							
7		=ESS.TS.SSS.E01.W01.W02-MP					=ESS.TS.SSS.E01.W01.W02-WD02
8		=ESS.TS.SSS.E01.W01.W02-XG02					=ESS.TS.SSS.E01.W01.W02-WD02

Cable name =ESS.TS.SSS.E01.W01.W02-1WD01		ESS_Cable_diagram(Graphical)					
Database name							
Cable type UNIPUR-CP 5x1,5mm²							
		=ESS.TS.SSS.E01.W01.W02-1WD01					
	Page / column	Source designation from	Connect. point				
9							
10		=ESS.TS.SSS.E01.W01.W02-XG01	1			1	=ESS.TS.SSS.E01.W01.W02-1XG01
11		=ESS.TS.SSS.E01.W01.W02-XG01	2			2	=ESS.TS.SSS.E01.W01.W02-1XG01
12		=ESS.TS.SSS.E01.W01.W02-XG01	3			3	=ESS.TS.SSS.E01.W01.W02-1XG01
13		=ESS.TS.SSS.E01.W01.W02-XG01	4			4	=ESS.TS.SSS.E01.W01.W02-1XG01
14							
15		=ESS.TS.SSS.E01.W01.W02-XG01	5			5	=ESS.TS.SSS.E01.W01.W02-1XG01
16							=ESS.TS.SSS.E01.W01.W02-1XG01
17							=ESS.TS.SSS.E01.W01.W02-1WD01
18		=ESS.TS.SSS.E01.W01.W02-1WD01					=ESS.TS.SSS.E01.W01.W02-1XG01

Cable name		=ESS.TS.SSS.E01.W01.W02-1WD02					
Database name		ESS_Cable_diagram(Graphical)					
Cable type		UNIPUR-CP 5x1,5mm²					
	Page / column	Source designation from	Connect. point	=ESS.TS.SSS.E01.W01.W02-1WD02			
1							
2		=ESS.TS.SSS.E01.W01.W02-1XG02	1				
3		=ESS.TS.SSS.E01.W01.W02-1XG02	2				
4		=ESS.TS.SSS.E01.W01.W02-1XG02	3				
5		=ESS.TS.SSS.E01.W01.W02-1XG02	4				
6							
7		=ESS.TS.SSS.E01.W01.W02-1XG02	5				
8		=ESS.TS.SSS.E01.W01.W02-1XG02					
9		=ESS.TS.SSS.E01.W01.W02-1WD02					
10		=ESS.TS.SSS.E01.W01.W02-1WD02					

Cable name		=ESS.TS.SSS.E01.W01.W02-WG01					
Database name		ESS_Cable_diagram(Graphical)					
Cable type		SUPERTRONIC®-C-PURö 7x0,25mm²					
	Page / column	Source designation from	Connect. point	=ESS.TS.SSS.E01.W01.W02-WG01			
11		=ESS.TS.SSS.E01.W01.W02-XG01	1				
12		=ESS.TS.SSS.E01.W01.W02-XG01	2				
13		=ESS.TS.SSS.E01.W01.W02-XG01	3				
14		=ESS.TS.SSS.E01.W01.W02-XG01	4				
15		=ESS.TS.SSS.E01.W01.W02-XG01	5				
16		=ESS.TS.SSS.E01.W01.W02-XG01	6				
17							
18							
19							
20		=ESS.TS.SSS.E01.W01.W02-XG01					

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG02

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
1			
2			
3		=ESS.TS.SSS.E01.W01.W02.UH01-XD01	1
4		=ESS.TS.SSS.E01.W01.W02.UH01-XD01	2

=ESS.TS.SSS.E01.W01.W02-WG02

BN

BU

BN

BU

Connect. point	Target designation from	Page / column
Motor	=ESS.TS.SSS.E01.W01.W02-BG01-A/	
Motor	=ESS.TS.SSS.E01.W01.W02-BG01	

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG03

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
5			
6			
7		=ESS.TS.SSS.E01.W01.W02.UH01-XD01	1
8		=ESS.TS.SSS.E01.W01.W02.UH01-XD01	3

=ESS.TS.SSS.E01.W01.W02-WG03

BN

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BN

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Connect. point	Target designation from	Page / column
Motor	=ESS.TS.SSS.E01.W01.W02-BG02-A/	
Motor	=ESS.TS.SSS.E01.W01.W02-BG02	

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG04

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
9			
10			
11		=ESS.TS.SSS.E01.W01.W02.UH01-XD01	4
12		=ESS.TS.SSS.E01.W01.W02.UH01-XD01	5

=ESS.TS.SSS.E01.W01.W02-WG04

BN

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BN

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Connect. point	Target designation from	Page / column
x1	=ESS.TS.SSS.E01.W01.W02-QL1	
x2	=ESS.TS.SSS.E01.W01.W02-QL1	



Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG07

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect. point

1

2

3

=ESS.TS.SSS.E01.W01.W02.UH02-XD01

1

4

=ESS.TS.SSS.E01.W01.W02.UH02-XD01

3

BN

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BU

Connect. point

Target designation from

Page / column

Motor

=ESS.TS.SSS.E01.W01.W02-BG04-A/

Motor

=ESS.TS.SSS.E01.W01.W02-BG04

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG08

SUPERTRONIC®-C-PURö 7x0,25mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect. point

5

=ESS.TS.SSS.E01.W01.W02-XG08

1

6

=ESS.TS.SSS.E01.W01.W02-XG08

2

7

=ESS.TS.SSS.E01.W01.W02-XG08

3

8

=ESS.TS.SSS.E01.W01.W02-XG08

4

9

=ESS.TS.SSS.E01.W01.W02-XG08

5

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=ESS.TS.SSS.E01.W01.W02-XG08

6

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12

13

14

=ESS.TS.SSS.E01.W01.W02-XG08

WH

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Connect. point

Target designation from

Page / column

5

=ESS.TS.SSS.E01.W01.K01-KF05

5

=ESS.TS.SSS.E01.W01.K01-KF03

6

=ESS.TS.SSS.E01.W01.K01-KF03

6

=ESS.TS.SSS.E01.W01.K01-KF05

5

=ESS.TS.SSS.E01.W01.K01-XG52

=ESS.TS.SSS.E01.W01.W02-WG08

=ESS.TS.SSS.E01.W01.W02-WG08

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG09

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
1			
2			
3		=ESS.TS.SSS.E01.W01.W02.UH03-XD01	1
4		=ESS.TS.SSS.E01.W01.W02.UH03-XD01	2

BN

BU

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Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG10

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
5			
6			
7		=ESS.TS.SSS.E01.W01.W02.UH03-XD01	1
8		=ESS.TS.SSS.E01.W01.W02.UH03-XD01	3

BN

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Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG11

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
9			
10			
11		=ESS.TS.SSS.E01.W01.W02.UH03-XD01	4
12		=ESS.TS.SSS.E01.W01.W02.UH03-XD01	5

BN

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**Cable name** =ESS.TS.SSS.E01.W01.W02-WG14

### Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** SUPERTRONIC®-C-PURö 7x0,25mm<sup>2</sup>





	Page / column	Source designation from	Connect. point			Connect. point	Target designation from		Page / column
1		=ESS.TS.SSS.E01.W01.W02-XG14	1				7	=ESS.TS.SSS.E01.W01.K01-KF05	
2		=ESS.TS.SSS.E01.W01.W02-XG14	2				7	=ESS.TS.SSS.E01.W01.K01-KF03	
3		=ESS.TS.SSS.E01.W01.W02-XG14	3				8	=ESS.TS.SSS.E01.W01.K01-KF03	
4		=ESS.TS.SSS.E01.W01.W02-XG14	4						
5		=ESS.TS.SSS.E01.W01.W02-XG14	5						
6		=ESS.TS.SSS.E01.W01.W02-XG14	6						
7									
8									
9								=ESS.TS.SSS.E01.W01.W02-WG14	
10		=ESS.TS.SSS.E01.W01.W02-XG14						=ESS.TS.SSS.E01.W01.W02-WG14	

**Cable name** =ESS.TS.SSS.E01.W01.W02-WG15

### Database name

ESS\_Cable\_diagram(Graphical)

**Cable type** Unipur 2x0,75mm<sup>2</sup>

	Page / column	Source designation from	Connect. point			Connect. point	Target designation from	Page / column
11								
12								
13		=ESS.TS.SSS.E01.W01.W02.UH04-XD01	1			Motor	=ESS.TS.SSS.E01.W01.W02-BG07-A/	
14		=ESS.TS.SSS.E01.W01.W02.UH04-XD01	2			Motor	=ESS.TS.SSS.E01.W01.W02-BG07	

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description =ESS.TS.SSS.E01.W01.K01	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description +	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description Cable diagram:WG14 ;WG15	CHES Doc. NR: ESS-1090724	Document: &MB17	Page nr/Proj. tot count: 111 / 197	

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Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG16

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect. point

1

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=ESS.TS.SSS.E01.W01.W02.UH04-XD01

=ESS.TS.SSS.E01.W01.W02.UH04-XD01

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Connect. point

Target designation from

Page / column

Motor

Motor

=ESS.TS.SSS.E01.W01.W02-BG08-A/

=ESS.TS.SSS.E01.W01.W02-BG08

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W02-WG21

TOPFLEX®-PUR 8x0,14+0,5mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect. point

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Connect. point

Target designation from

Page / column

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9

=ESS.TS.SSS.E01.W01.K01-KF12

=ESS.TS.SSS.E01.W01.K01-KF09

=ESS.TS.SSS.E01.W01.K01-KF09

=ESS.TS.SSS.E01.W01.K01-KF09

=ESS.TS.SSS.E01.W01.K01-KF09

=ESS.TS.SSS.E01.W01.K01-KF09

=ESS.TS.SSS.E01.W01.K01-KF12

=ESS.TS.SSS.E01.W01.K01-KF09

=ESS.TS.SSS.E01.W01.W02-WG21

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

ess

EUROPEAN  
SPALLATION  
SOURCE

DRAWN BY (last edit)

MLN

CHECKED BY

APPROVED BY

Documentation protection: ISO 16016  
Software version: EPLAN Electric P8 2.8.3

(modification) DATE

DESIGN SITE

ESS

DRAWING TITLE

Target system control system cabinet

Functional location (FBS) Description

Physical location (LBS) Description

Page Description

Cable diagram:WG16 :WG21

Lifecycle label:

Preliminary

Page revision:

0.2

Project revision:

Page size:

Functional location (FBS):

=ESS.TS.SSS.E01.W01.K01

Physical location (LBS):

+

CHESS Doc. NR:

ESS-1090724

Document:

&MB18

Page nr/Proj. tot count:

112 / 197



<div><div><div><div>Cable name</div><div>Database name</div><div>Cable type</div></div><div>=ESS.TS.SSS.E01.W01.W02-WG21</div><div>TOPFLEX®-PUR 8x0,14+0,5mm²</div></div><div>ESS_Cable_diagram(Graphical)</div></div>																							
<div><div><div></div><div></div><div></div></div><div>=ESS.TS.SSS.E01.W01.W02-WG21</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div></div>																							
<table><tr><td></td><td>Page / column</td><td>Source designation from</td><td>Connect. point</td></tr><tr><td>23</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG21</td><td></td></tr></table> <table><tr><td>Connect. point</td><td>Target designation from</td><td>Page / column</td></tr><tr><td></td><td>=ESS.TS.SSS.E01.W01.W02-WG21</td><td></td></tr></table>											Page / column	Source designation from	Connect. point	23		=ESS.TS.SSS.E01.W01.W02-XG21		Connect. point	Target designation from	Page / column		=ESS.TS.SSS.E01.W01.W02-WG21	
	Page / column	Source designation from	Connect. point																				
23		=ESS.TS.SSS.E01.W01.W02-XG21																					
Connect. point	Target designation from	Page / column																					
	=ESS.TS.SSS.E01.W01.W02-WG21																						

<div><div><div>Cable name</div><div>Database name</div><div>Cable type</div></div><div>=ESS.TS.SSS.E01.W01.W02-WG22</div><div>TOPFLEX®-PUR 8x0,14+0,5mm²</div></div> <div>ESS_Cable_diagram(Graphical)</div>																																																																																																																																																																																																																	
<div><div><div></div><div></div><div></div></div><div>=ESS.TS.SSS.E01.W01.W02-WG22</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div></div>																																																																																																																																																																																																																	
<table><tr><td></td><td>Page / column</td><td>Source designation from</td><td>Connect. point</td><td></td><td></td><td></td><td>Connect. point</td><td>Target designation from</td><td>Page / column</td></tr><tr><td>24</td><td></td><td></td><td></td><td><div>WH</div></td><td></td><td><div>WH</div></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td><div>BN</div></td><td></td><td><div>BN</div></td><td></td><td></td><td></td></tr><tr><td>26</td><td></td><td></td><td></td><td><div>GN</div></td><td></td><td><div>GN</div></td><td></td><td></td><td></td></tr><tr><td>27</td><td></td><td></td><td></td><td><div>YEW</div></td><td></td><td><div>YEW</div></td><td></td><td></td><td></td></tr><tr><td>28</td><td></td><td></td><td></td><td><div>GY</div></td><td></td><td><div>GY</div></td><td></td><td></td><td></td></tr><tr><td>29</td><td></td><td></td><td></td><td><div>PK</div></td><td></td><td><div>PK</div></td><td></td><td></td><td></td></tr><tr><td>30</td><td></td><td></td><td></td><td><div>BU</div></td><td></td><td><div>BU</div></td><td></td><td></td><td></td></tr><tr><td>31</td><td></td><td></td><td></td><td><div>RD</div></td><td></td><td><div>RD</div></td><td></td><td></td><td></td></tr><tr><td>32</td><td></td><td></td><td></td><td><div>SH</div></td><td></td><td><div>SH</div></td><td></td><td></td><td></td></tr><tr><td>33</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>10</td><td><div>BN</div></td><td></td><td><div>BN</div></td><td>11</td><td>=ESS.TS.SSS.E01.W01.K01-KF12</td><td></td></tr><tr><td>34</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>7</td><td><div>BU</div></td><td></td><td><div>BU</div></td><td>3</td><td>=ESS.TS.SSS.E01.W01.K01-KF10</td><td></td></tr><tr><td>35</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>1</td><td><div>GN</div></td><td></td><td><div>GN</div></td><td>1</td><td>=ESS.TS.SSS.E01.W01.K01-KF10</td><td></td></tr><tr><td>36</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>4</td><td><div>GY</div></td><td></td><td><div>GY</div></td><td>2</td><td>=ESS.TS.SSS.E01.W01.K01-KF10</td><td></td></tr><tr><td>37</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>5</td><td><div>PK</div></td><td></td><td><div>PK</div></td><td>10</td><td>=ESS.TS.SSS.E01.W01.K01-KF10</td><td></td></tr><tr><td>38</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>8</td><td><div>RD</div></td><td></td><td><div>RD</div></td><td>11</td><td>=ESS.TS.SSS.E01.W01.K01-KF10</td><td></td></tr><tr><td>39</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>9</td><td><div>WH</div></td><td></td><td><div>WH</div></td><td>3</td><td>=ESS.TS.SSS.E01.W01.K01-KF12</td><td></td></tr><tr><td>40</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td>2</td><td><div>YE</div></td><td></td><td><div>YE</div></td><td>9</td><td>=ESS.TS.SSS.E01.W01.K01-KF10</td><td></td></tr><tr><td>41</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>=ESS.TS.SSS.E01.W01.W02-WG22</td><td></td></tr><tr><td>42</td><td></td><td>=ESS.TS.SSS.E01.W01.W02-XG22</td><td></td><td></td><td></td><td></td><td></td><td>=ESS.TS.SSS.E01.W01.W02-WG22</td><td></td></tr></table>											Page / column	Source designation from	Connect. point				Connect. point	Target designation from	Page / column	24				<div>WH</div>		<div>WH</div>				25				<div>BN</div>		<div>BN</div>				26				<div>GN</div>		<div>GN</div>				27				<div>YEW</div>		<div>YEW</div>				28				<div>GY</div>		<div>GY</div>				29				<div>PK</div>		<div>PK</div>				30				<div>BU</div>		<div>BU</div>				31				<div>RD</div>		<div>RD</div>				32				<div>SH</div>		<div>SH</div>				33		=ESS.TS.SSS.E01.W01.W02-XG22	10	<div>BN</div>		<div>BN</div>	11	=ESS.TS.SSS.E01.W01.K01-KF12		34		=ESS.TS.SSS.E01.W01.W02-XG22	7	<div>BU</div>		<div>BU</div>	3	=ESS.TS.SSS.E01.W01.K01-KF10		35		=ESS.TS.SSS.E01.W01.W02-XG22	1	<div>GN</div>		<div>GN</div>	1	=ESS.TS.SSS.E01.W01.K01-KF10		36		=ESS.TS.SSS.E01.W01.W02-XG22	4	<div>GY</div>		<div>GY</div>	2	=ESS.TS.SSS.E01.W01.K01-KF10		37		=ESS.TS.SSS.E01.W01.W02-XG22	5	<div>PK</div>		<div>PK</div>	10	=ESS.TS.SSS.E01.W01.K01-KF10		38		=ESS.TS.SSS.E01.W01.W02-XG22	8	<div>RD</div>		<div>RD</div>	11	=ESS.TS.SSS.E01.W01.K01-KF10		39		=ESS.TS.SSS.E01.W01.W02-XG22	9	<div>WH</div>		<div>WH</div>	3	=ESS.TS.SSS.E01.W01.K01-KF12		40		=ESS.TS.SSS.E01.W01.W02-XG22	2	<div>YE</div>		<div>YE</div>	9	=ESS.TS.SSS.E01.W01.K01-KF10		41								=ESS.TS.SSS.E01.W01.W02-WG22		42		=ESS.TS.SSS.E01.W01.W02-XG22						=ESS.TS.SSS.E01.W01.W02-WG22	
	Page / column	Source designation from	Connect. point				Connect. point	Target designation from	Page / column																																																																																																																																																																																																								
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34		=ESS.TS.SSS.E01.W01.W02-XG22	7	<div>BU</div>		<div>BU</div>	3	=ESS.TS.SSS.E01.W01.K01-KF10																																																																																																																																																																																																									
35		=ESS.TS.SSS.E01.W01.W02-XG22	1	<div>GN</div>		<div>GN</div>	1	=ESS.TS.SSS.E01.W01.K01-KF10																																																																																																																																																																																																									
36		=ESS.TS.SSS.E01.W01.W02-XG22	4	<div>GY</div>		<div>GY</div>	2	=ESS.TS.SSS.E01.W01.K01-KF10																																																																																																																																																																																																									
37		=ESS.TS.SSS.E01.W01.W02-XG22	5	<div>PK</div>		<div>PK</div>	10	=ESS.TS.SSS.E01.W01.K01-KF10																																																																																																																																																																																																									
38		=ESS.TS.SSS.E01.W01.W02-XG22	8	<div>RD</div>		<div>RD</div>	11	=ESS.TS.SSS.E01.W01.K01-KF10																																																																																																																																																																																																									
39		=ESS.TS.SSS.E01.W01.W02-XG22	9	<div>WH</div>		<div>WH</div>	3	=ESS.TS.SSS.E01.W01.K01-KF12																																																																																																																																																																																																									
40		=ESS.TS.SSS.E01.W01.W02-XG22	2	<div>YE</div>		<div>YE</div>	9	=ESS.TS.SSS.E01.W01.K01-KF10																																																																																																																																																																																																									
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div><div></div><div></div><div></div></div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description Cable diagram:WG21 :WG22	CHESS Doc. NR: ESS-1090724	Document: &MB19	Page nr/Proj. tot count: 113 / 197	

























**Cable name** =ESS.TS.SSS.E01.W01.W02-1WG08

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** SUPERTRONIC®-C-PURö 7x0,25mm²

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26		=ESS.TS.SSS.E01.W01.W02-1XG08	4				4	=ESS.TS.SSS.E01.W01.W02-XG08	
27		=ESS.TS.SSS.E01.W01.W02-1XG08	5				5	=ESS.TS.SSS.E01.W01.W02-XG08	
28		=ESS.TS.SSS.E01.W01.W02-1XG08	6				6	=ESS.TS.SSS.E01.W01.W02-XG08	
29									
30									
31		=ESS.TS.SSS.E01.W01.W02-1XG08						=ESS.TS.SSS.E01.W01.W02-XG08	
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33		=ESS.TS.SSS.E01.W01.W02-1WG08					=ESS.TS.SSS.E01.W01.W02-1XG08		
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cable diagram:1WG08	CHESSE Doc. NR: ESS-1090724	Document: &MB22	Page nr/Proj. tot count: 116 / 19



**Cable name** =ESS.TS.SSS.E01.W01.W02-1WG21

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** TOPFLEX®-PUR 8x0,14+0,5mm²

**=ESS.TS.SSS.E01.W01.W02-1WG21**

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9												
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description =ESS.TS.SSS.E01.W01.K01	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description +	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description Cable diagram:1WG21	CHESS Doc. NR: ESS-1090724	Document: &MB24	Page nr/Proj. tot count: 118 / 19	


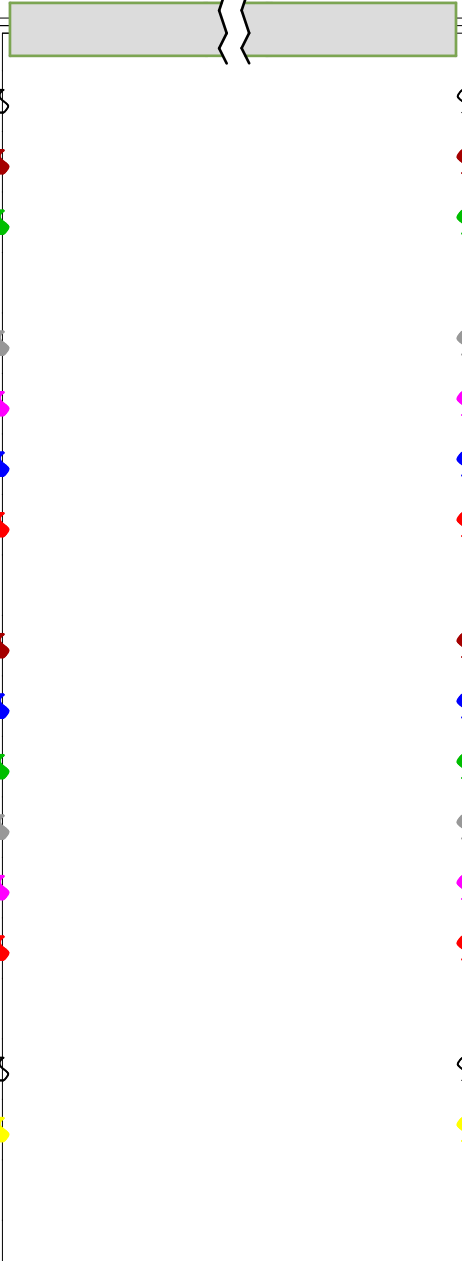









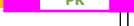



















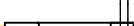
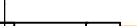




**Cable name** =ESS.TS.SSS.E01.W01.W02-1WG22

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** TOPFLEX®-PUR 8x0,14+0,5mm<sup>2</sup>

**=ESS.TS.SSS.E01.W01.W02-1WG22**

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10		=ESS.TS.SSS.E01.W01.W02-1XG22	10				10	=ESS.TS.SSS.E01.W01.W02-XG22	
11		=ESS.TS.SSS.E01.W01.W02-1XG22	7				7	=ESS.TS.SSS.E01.W01.W02-XG22	
12		=ESS.TS.SSS.E01.W01.W02-1XG22	1				1	=ESS.TS.SSS.E01.W01.W02-XG22	
13		=ESS.TS.SSS.E01.W01.W02-1XG22	4				4	=ESS.TS.SSS.E01.W01.W02-XG22	
14		=ESS.TS.SSS.E01.W01.W02-1XG22	5				5	=ESS.TS.SSS.E01.W01.W02-XG22	
15		=ESS.TS.SSS.E01.W01.W02-1XG22	8				8	=ESS.TS.SSS.E01.W01.W02-XG22	
16		=ESS.TS.SSS.E01.W01.W02-1XG22						=ESS.TS.SSS.E01.W01.W02-XG22	
17		=ESS.TS.SSS.E01.W01.W02-1XG22	9				9	=ESS.TS.SSS.E01.W01.W02-XG22	
18		=ESS.TS.SSS.E01.W01.W02-1XG22	2				2	=ESS.TS.SSS.E01.W01.W02-XG22	
19		=ESS.TS.SSS.E01.W01.W02-1WG22						=ESS.TS.SSS.E01.W01.W02-XG22	
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.W01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cable diagram:1WG22	CHESS Doc. NR: ESS-1090724	Document: &MB25	Page nr/Proj. tot count: 119 / 197

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Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W03-WG01

SUPERTRONIC®-C-PURö 7x0,25mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect. point

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Connect. point

Target designation from

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Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W03-WG03

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

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Source designation from

Connect. point

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=ESS.TS.SSS.E01.W01.W03.UH01-XD01

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Connect. point

Target designation from

Page / column

Motor

=ESS.TS.SSS.E01.W01.W03-BG01-A/

Motor

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Cable name

=ESS.TS.SSS.E01.W01.W03-WG04

Database name

Cable type

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

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Source designation from

Connect.  
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Cable name

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Cable type

Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

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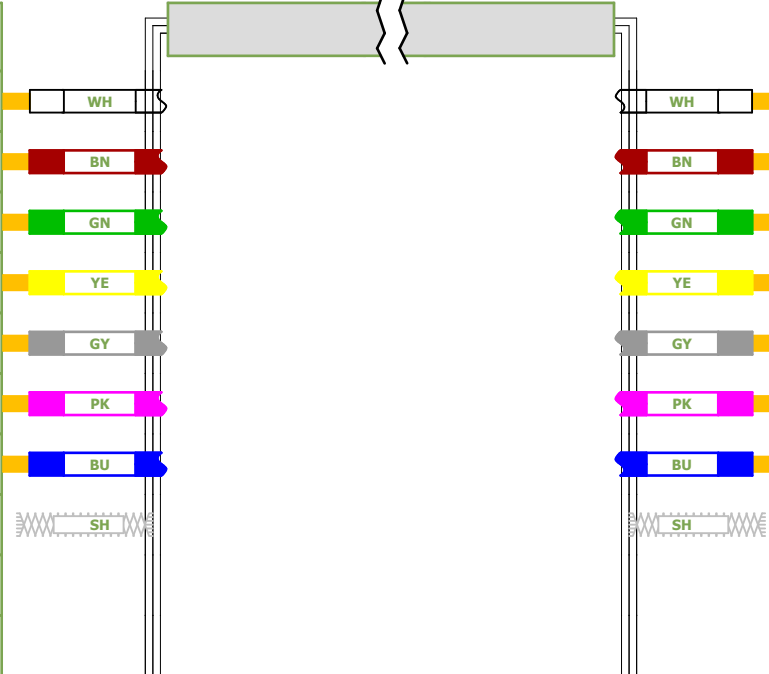
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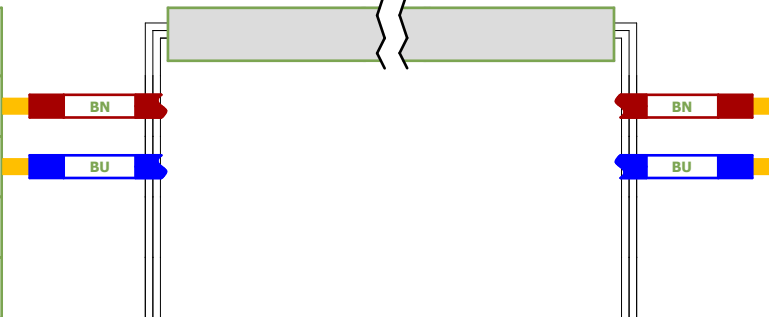
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Cable name		=ESS.TS.SSS.E01.W01.W03-WG07									
Database name		ESS_Cable_diagram(Graphical)									
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12											
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Cable name

Database name

Cable type

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Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect.  
point

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2

3

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1

4

=ESS.TS.SSS.E01.W01.W03.UH02-XD01

3

BN

BU

BN

BU

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Connect.  
point

Target designation from

Page / column

Motor

=ESS.TS.SSS.E01.W01.W03-BG05-A/

Motor

=ESS.TS.SSS.E01.W01.W03-BG05

Cable name

Database name

Cable type

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Unipur 2x0,75mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect.  
point

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6

7

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BN

BU

BN

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Connect.  
point

Target designation from

Page / column

Motor

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Motor

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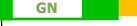



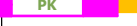






**Cable name** =ESS.TS.SSS.E01.W01.W03-WG21

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** TOPFLEX®-PUR 8x0,14+0,5mm²

**=ESS.TS.SSS.E01.W01.W03-WG21**

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3								
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7								
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15		=ESS.TS.SSS.E01.W01.W03-XG21	8			11	=ESS.TS.SSS.E01.W01.K01-KF11	
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
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**Cable name** =ESS.TS.SSS.E01.W01.W03-1WG21

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** TOPFLEX®-PUR 8x0,14+0,5mm²

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# EUROPEAN SPALLATION SOURCE

Designation:Target system control system cabinet

Functional Location (FBS):=ESS.TS.SSS.E01.UH01

Highest physical Location (LBS):+ESS.D02.115.4005.003

└→ physical Location (LBS): +

## FBS Structure

ESS  
ESS.TS  
ESS.TS.SSS  
ESS.TS.SSS.E01  
ESS.TS.SSS.E01.K01

## LBS Structure

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AB/2	131	Table of contents	Table of contents		2021-07-08	MLN
AB/3		Table of contents	Table of contents		2021-07-08	MLN
FS/202	132	Overview	PLC Overview 1 K01		2021-05-27	MLN
FS/203	133	Overview	PLC Overview 2 K01 vibration		2021-05-27	MLN
FS/205	134	Schematic multi-line	Power supply distributon		2020-11-06	MLN
FS/206	135	Schematic multi-line	PLC Power supply		2020-11-06	MLN
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FS/208	137	Schematic multi-line	Lubricating Inputs		2020-11-06	MLN
FS/209	138	Schematic multi-line	Lubricating Inputs		2020-11-24	MLN
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FS/215	143	Schematic multi-line	Lubricating Outputs		2020-11-06	MLN
FS/216	144	Schematic multi-line	Pneumatic sensors		2020-11-24	MLN
FS/217	145	Schematic multi-line	Temperature Inputs		2020-11-23	MLN
FS/218	146	Schematic multi-line	Temperature Inputs		2020-11-23	MLN
FS/219	147	Schematic multi-line	Vibration Inputs		2021-07-08	MLN
FS/220	148	Schematic multi-line	Vibration Inputs		2021-07-08	MLN
FS/230	149	Schematic multi-line	Beam permit / Ready for beam		2021-05-27	MLN
FQ/1	150	Device tag list	=ESS.TS.SSS.E01.UH01		2021-07-08	MLN
MA/1	151	Terminal diagram	-X01 (=ESS.TS.SSS.E01.K01)		2021-07-08	MLN

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MA/3	153	Terminal diagram	-XD05 (=ESS.TS.SSS.E01.K01)		2021-07-08	MLN
MA/4	154	Terminal diagram	-UH01-XD01 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
MA/5	155	Terminal diagram	-UH01-XD01 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
MA/6	156	Terminal diagram	-UH01-XD02 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
MA/7	157	Connection list	Connection list		2021-07-08	MLN
MA/8	158	Connection list	Connection list		2021-07-08	MLN
MA/9	159	Terminal diagram	-UH01-XD01 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
MA/10	160	Terminal diagram	-UH01-XD01 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
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PC/1	162	Parts list	+		2021-07-08	MLN
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MB/1	165	Cable overview	-WG31...-WG07		2021-07-08	MLN
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MB/4	168	Cable diagram	Cable diagram:WG31 :WG32 :WD01		2021-07-08	MLN
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MB/8	172	Cable diagram	Cable diagram:WG04 :WG05 :WG06 :WG07		2021-07-08	MLN
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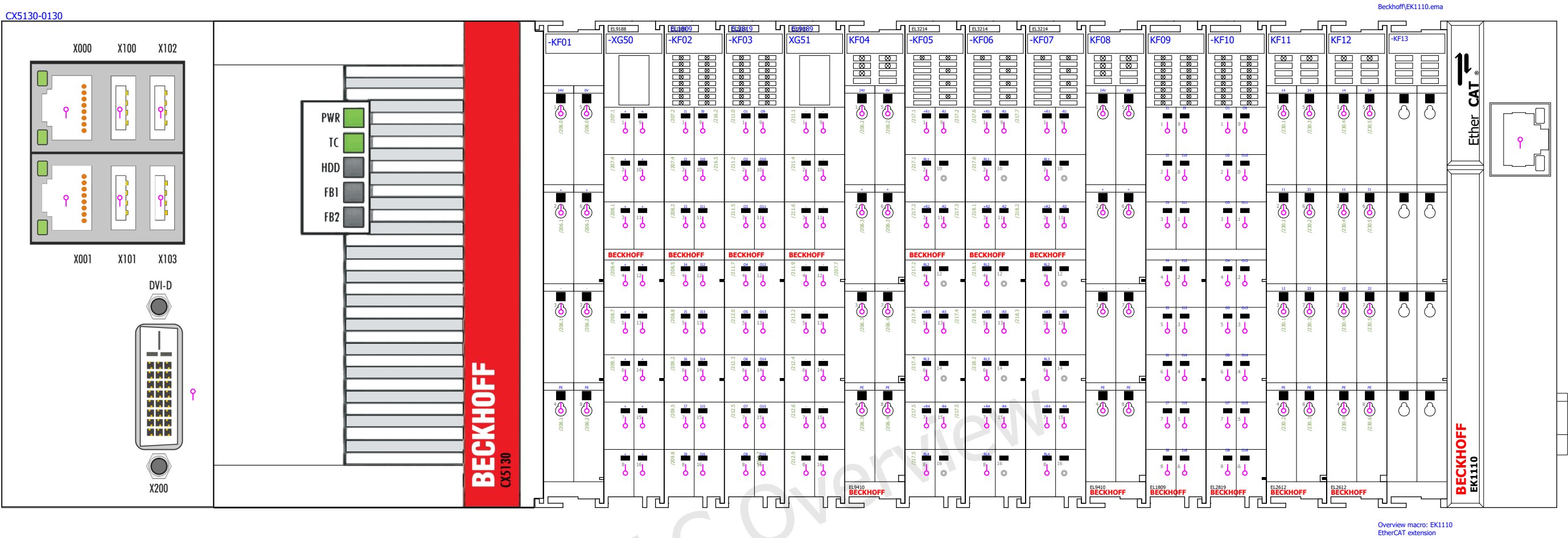
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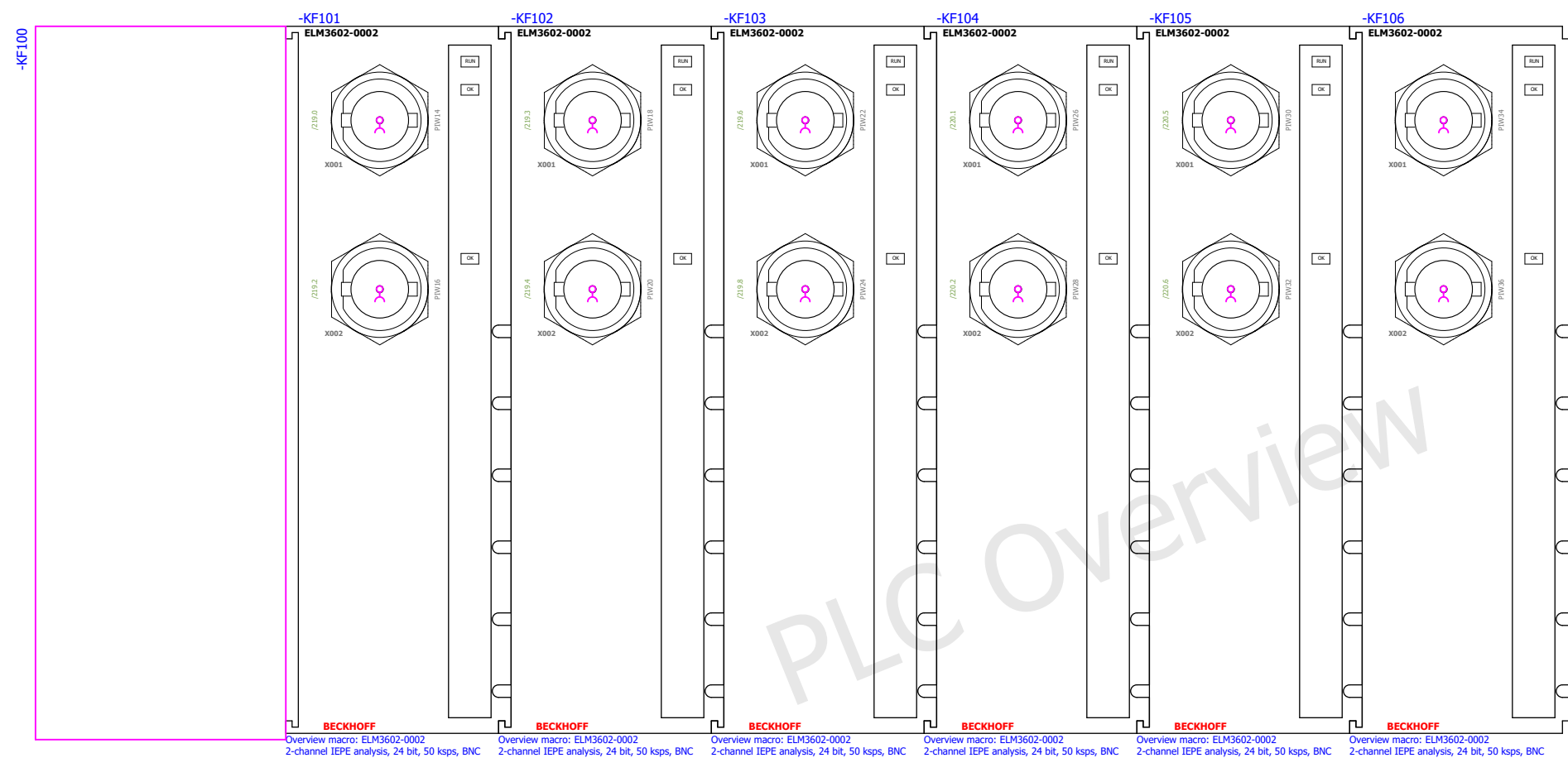
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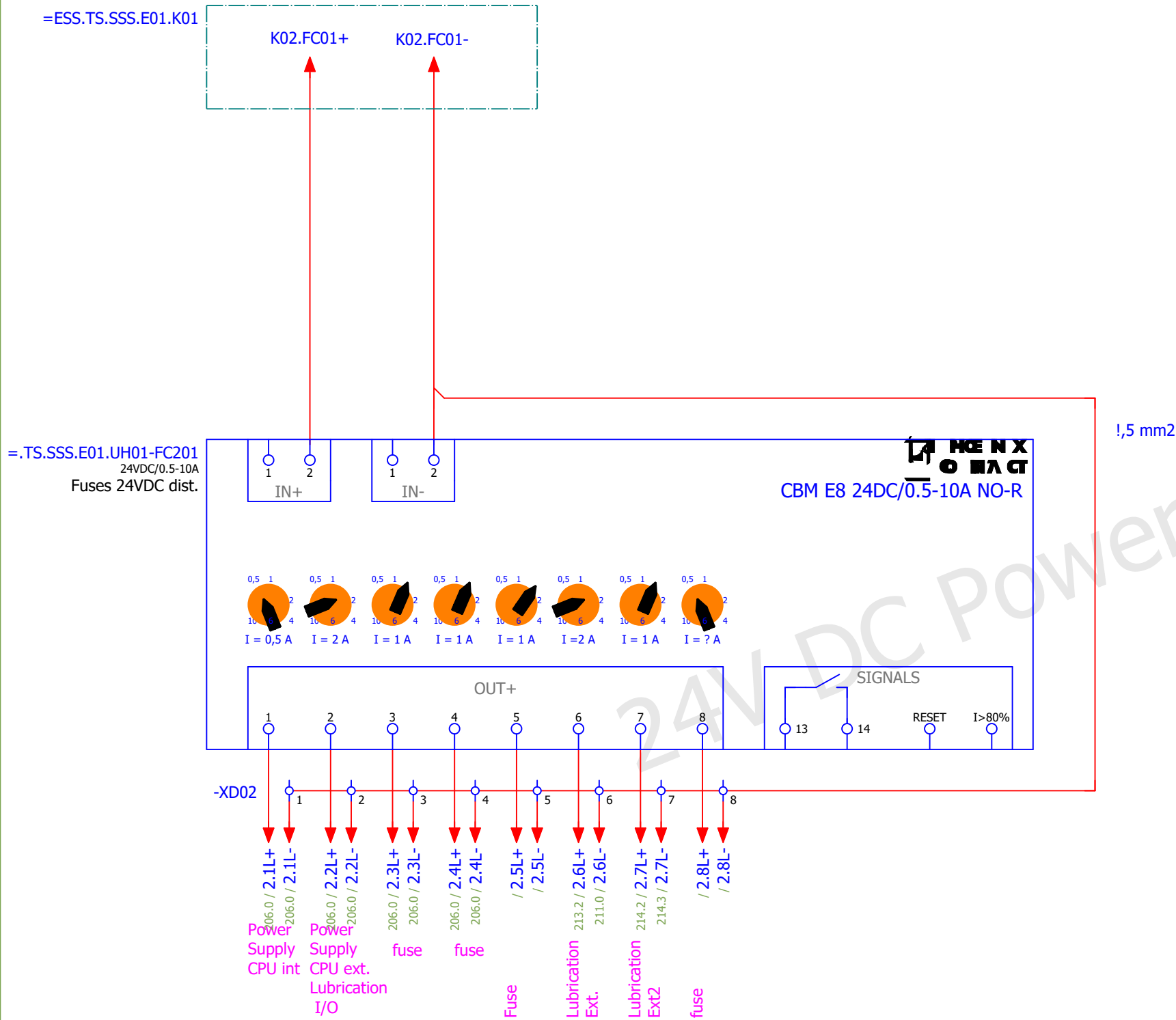
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MB/17	181	Cable overview	-WG03...-WG01		2021-07-08	MLN
MB/18	182	Cable overview	-WG02...-WG04		2021-07-08	MLN
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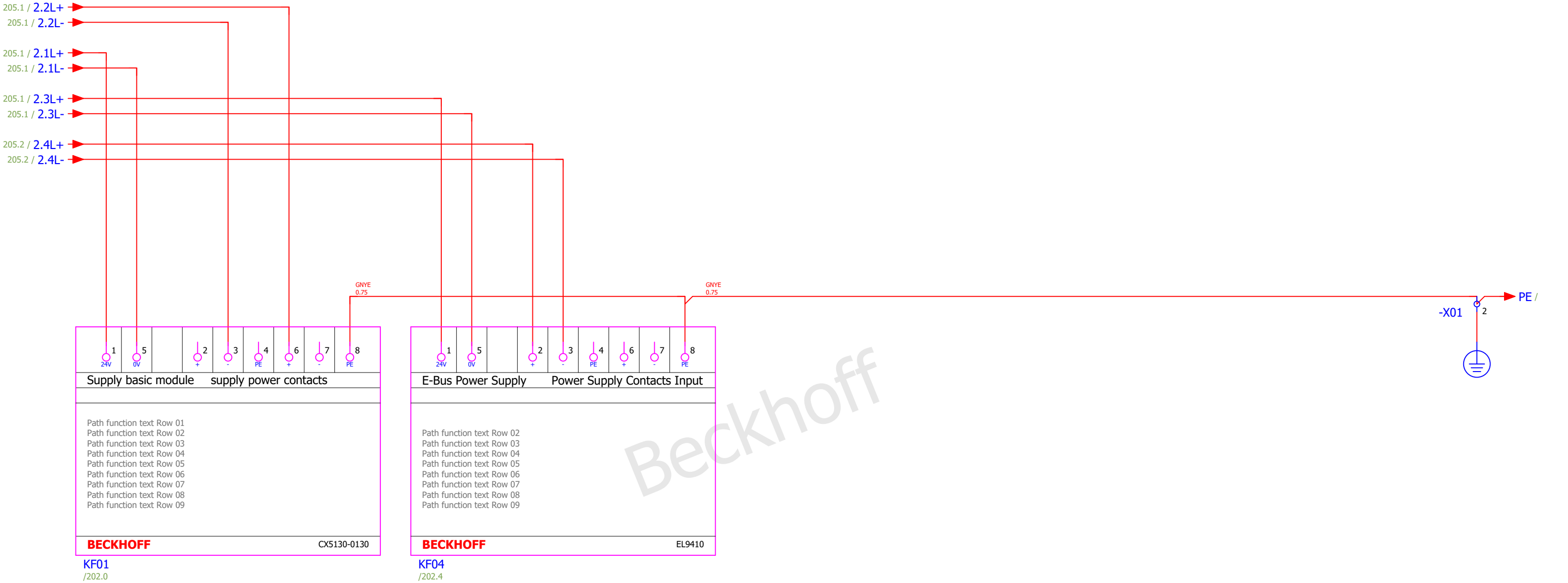
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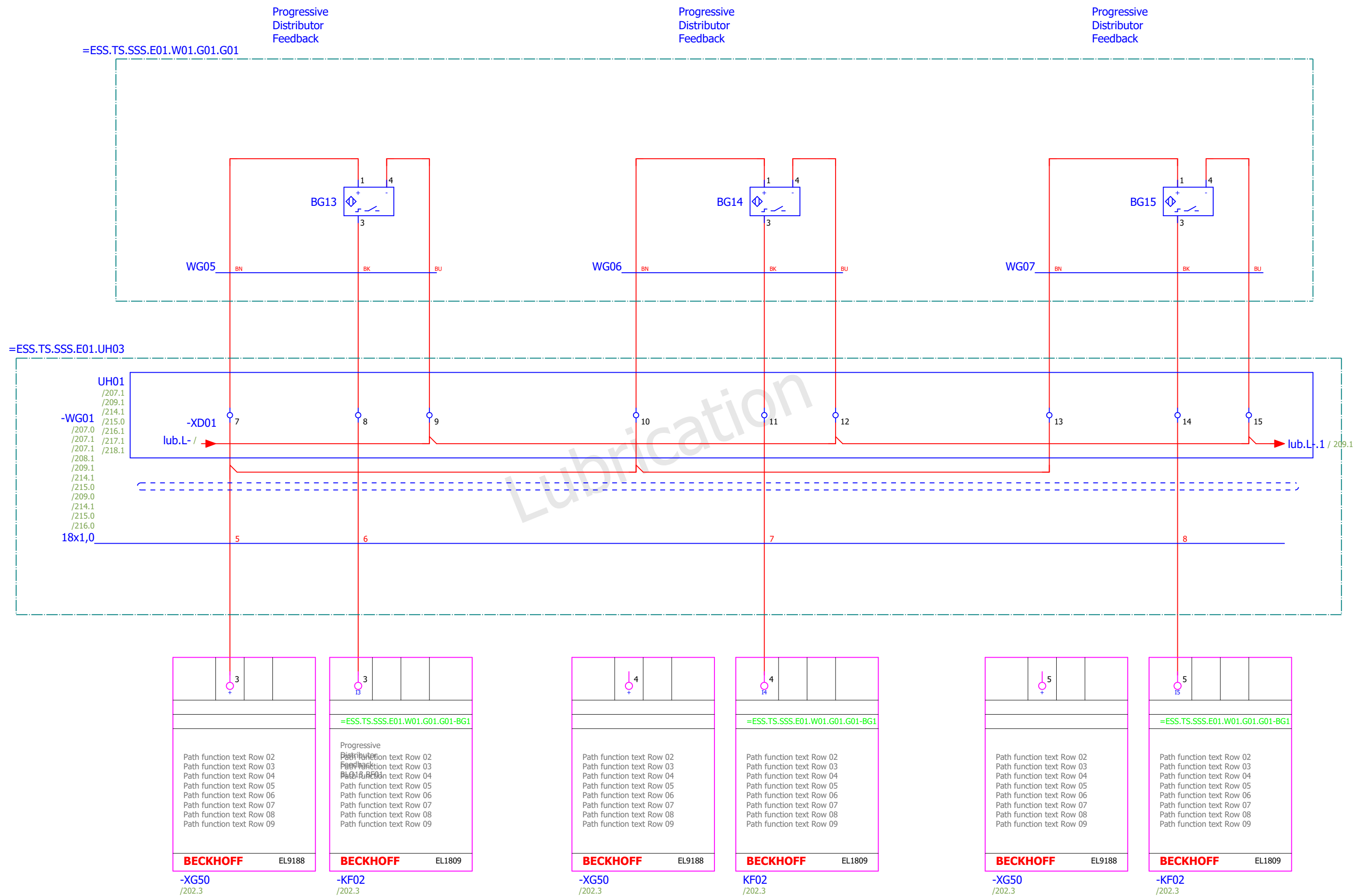






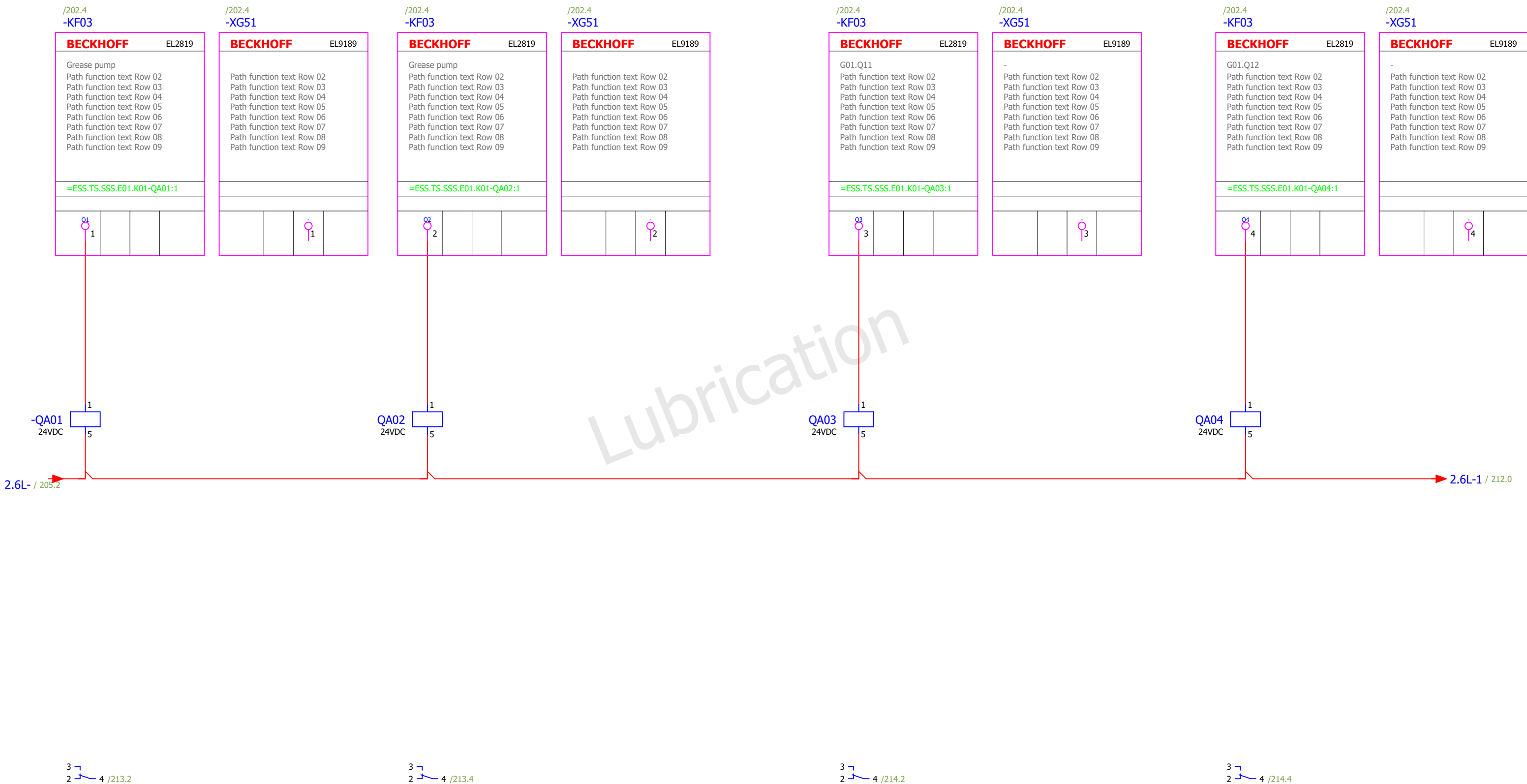


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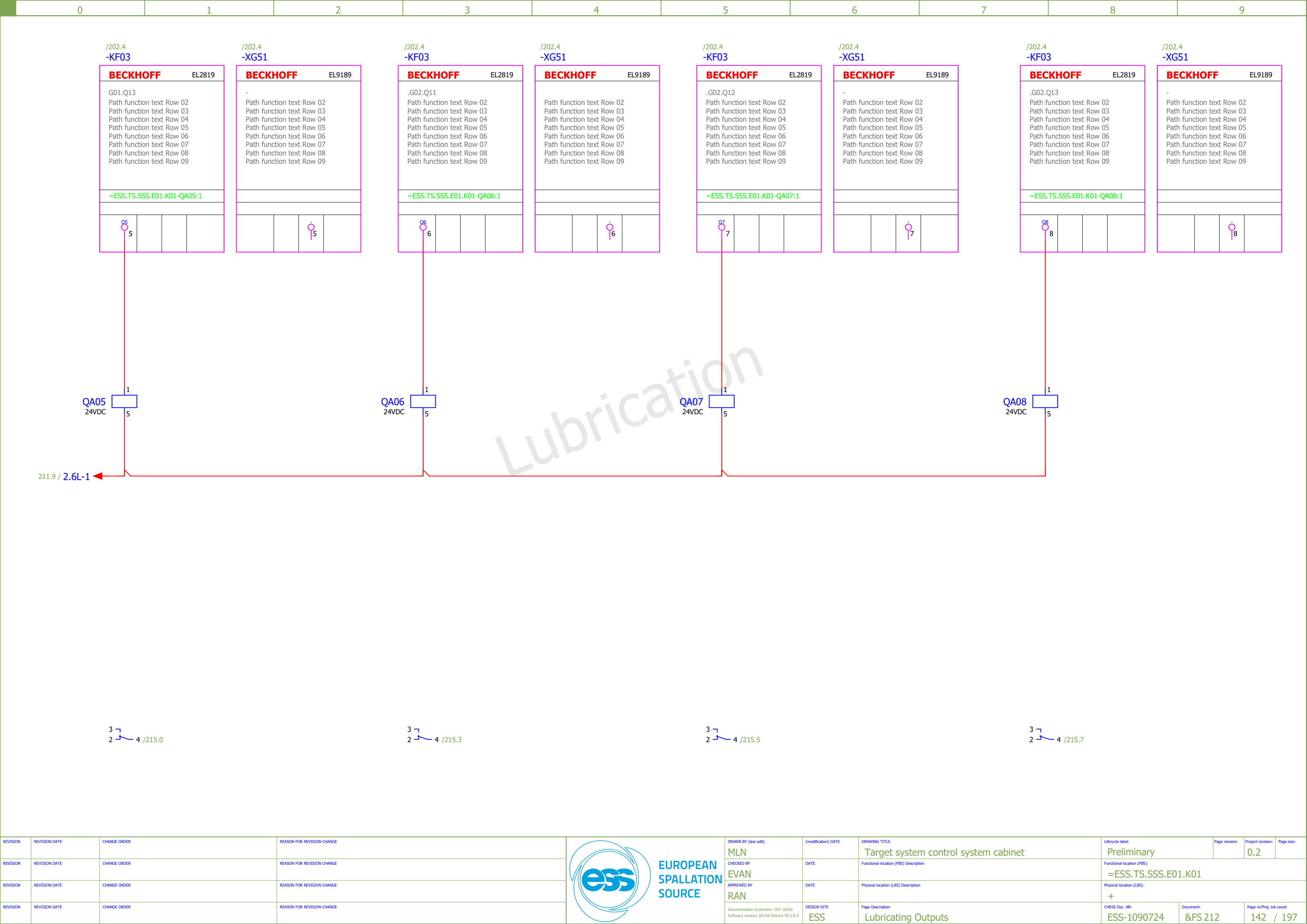


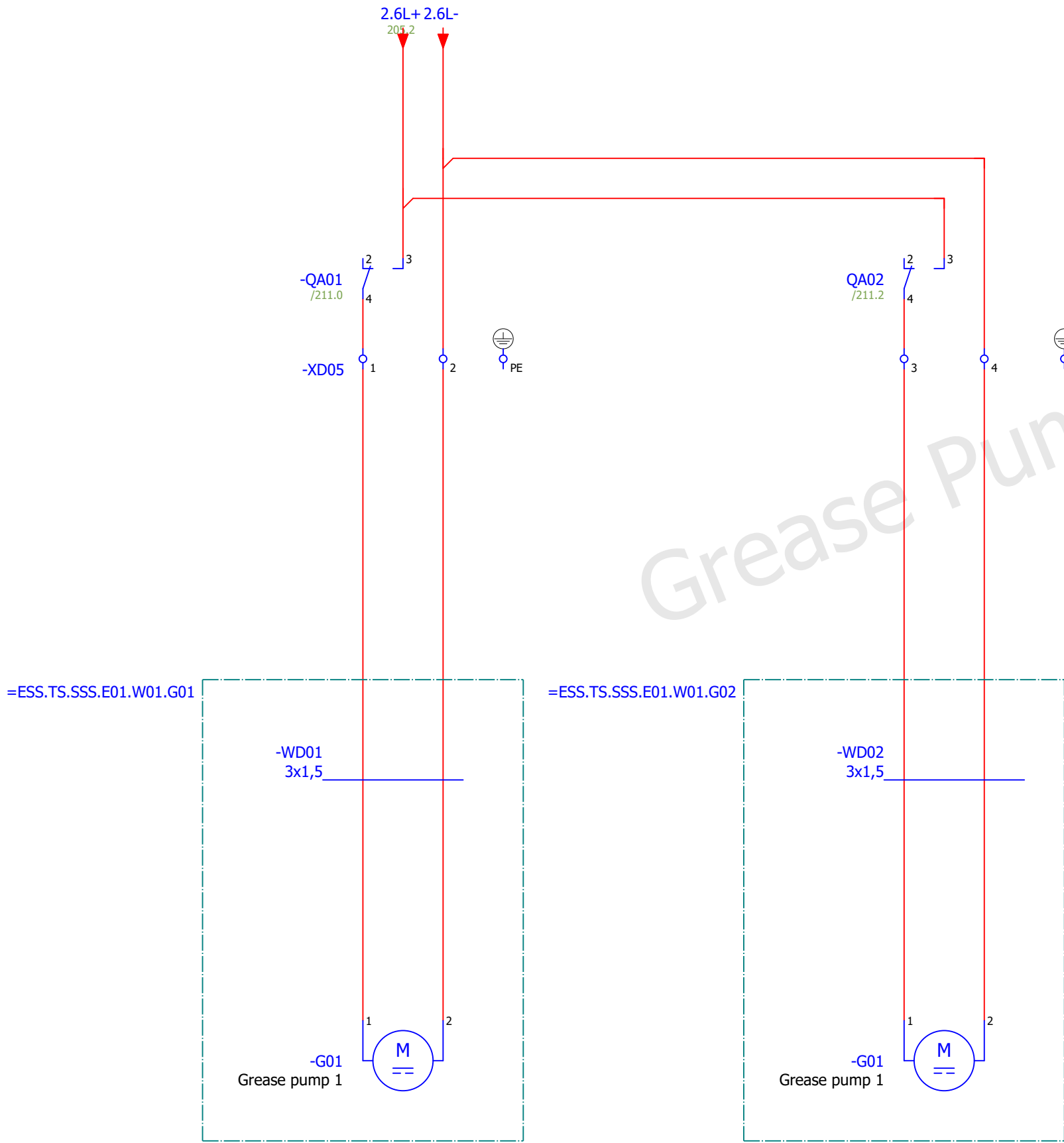
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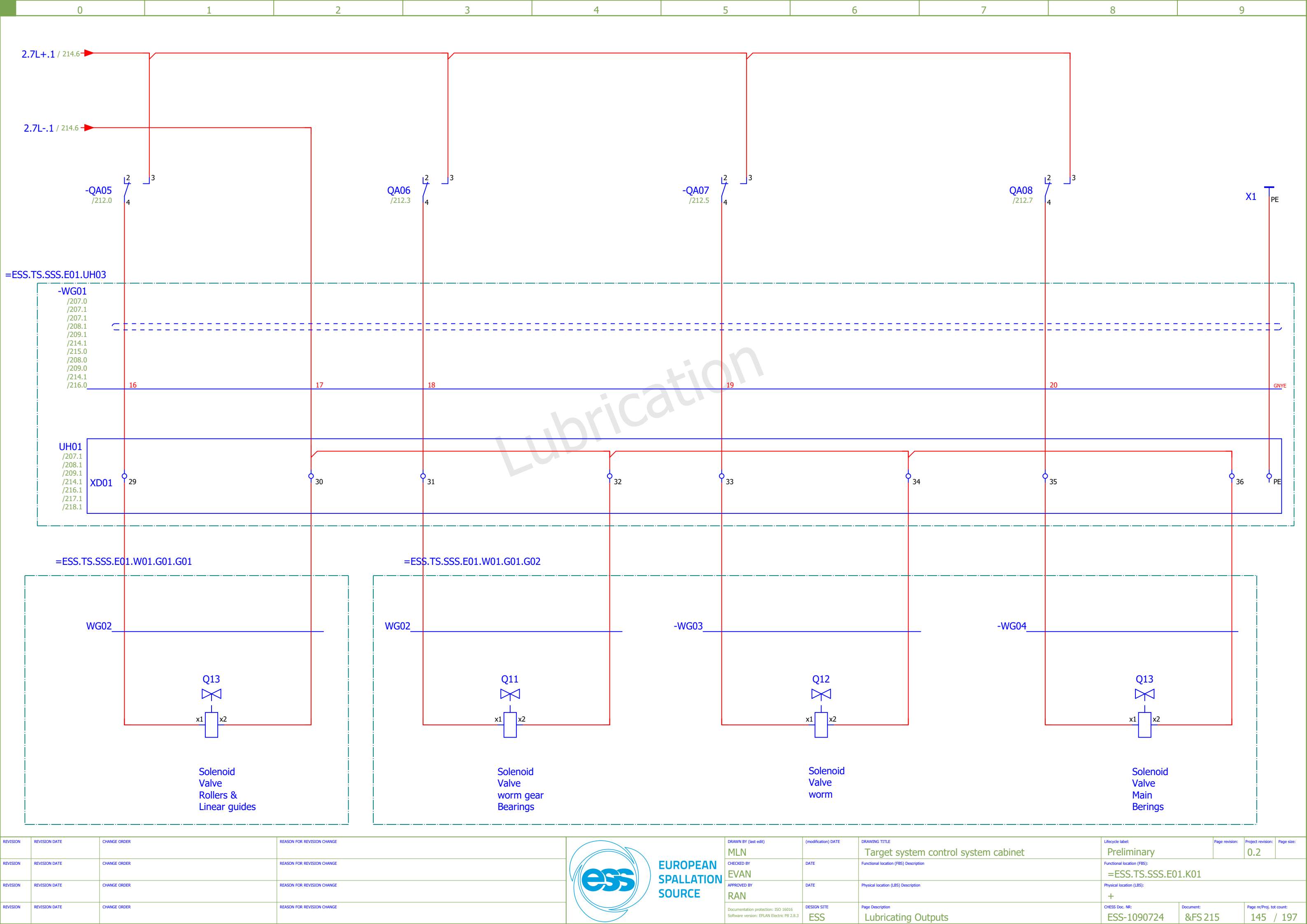
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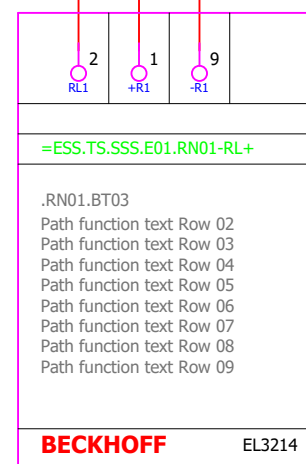
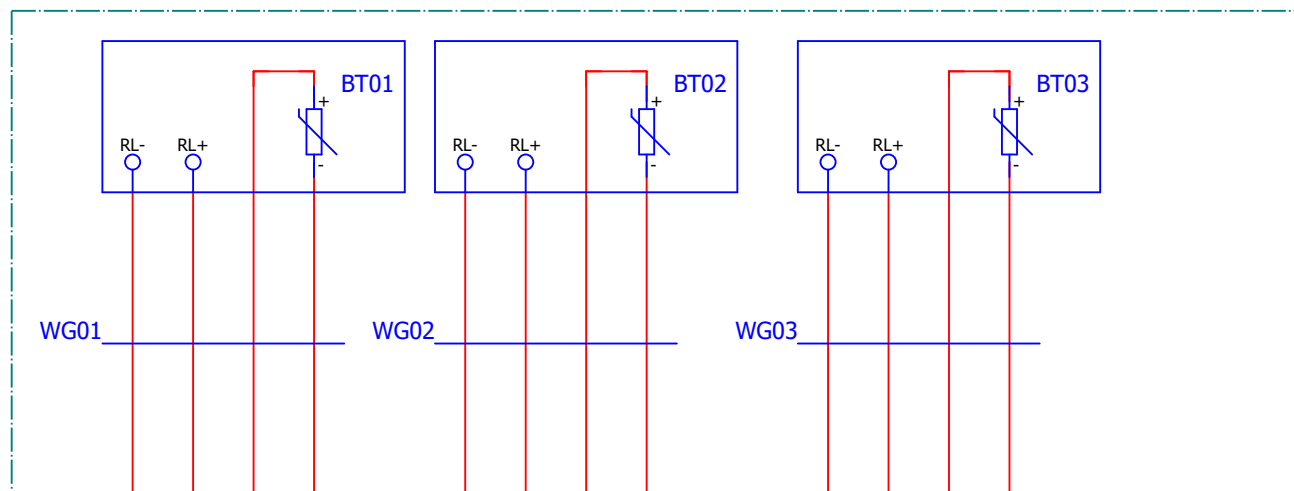




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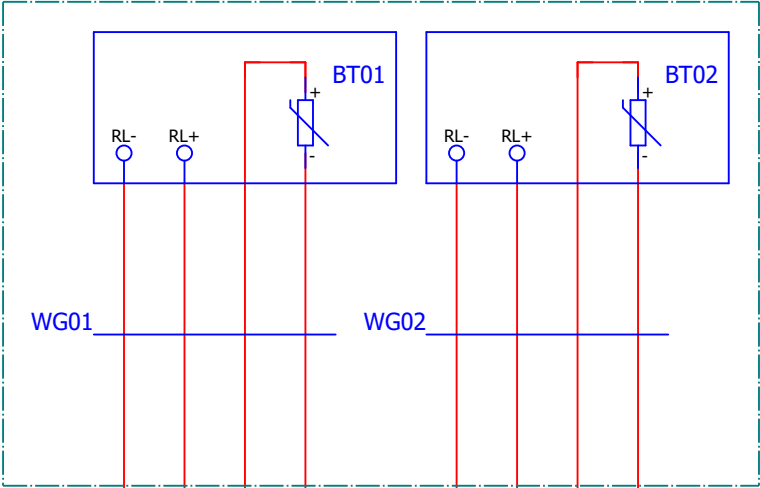


-KF06  
/202.5

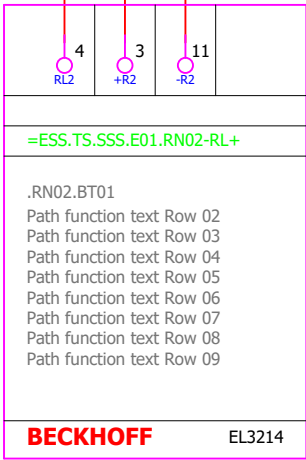
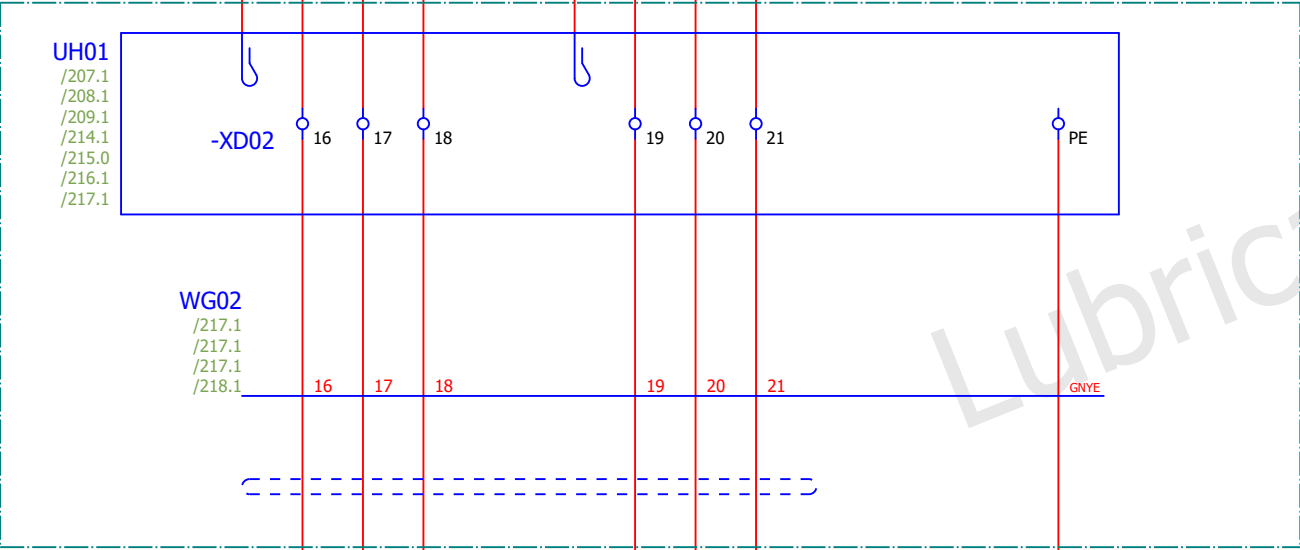
Temperature  
Sensor Lower  
Bearing

Lifecycle label: <b>Preliminary</b>	Page revision: 0.2	Project revision: 0.2	Page size: 100
Functional location (FBS): <b>=ESS.TS.SSS.E01.K01</b>			
Physical location (LBS): <b>+</b>			
CHES Doc. NR: <b>ESS-1090724</b>	Document: <b>&amp;FS 217</b>	Page nr/Proj. tot count: <b>147 / 197</b>	

=ESS.TS.SSS.E01.RN02

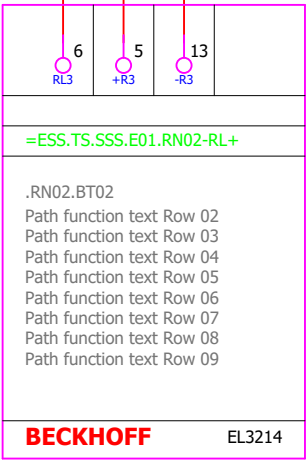


=ESS.TS.SSS.E01.UH03



-KF06  
/202.5

Temperature  
SensorUpper  
Bearing



-KF06  
/202.5

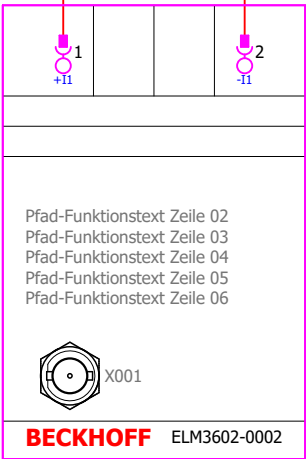
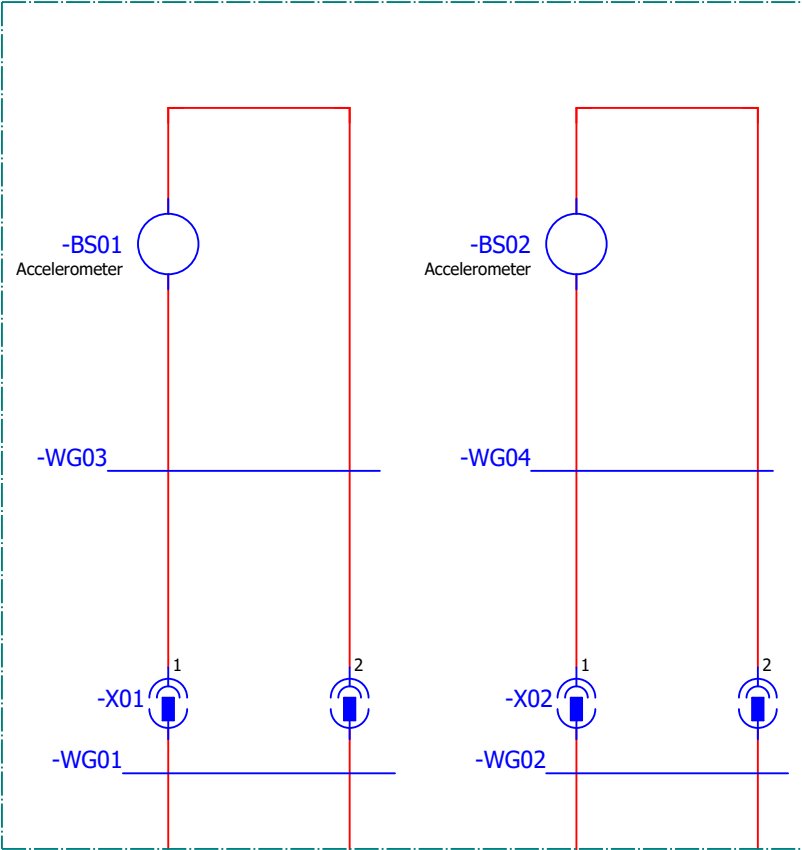
Temperature  
Sensor Lower  
Bearing

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE



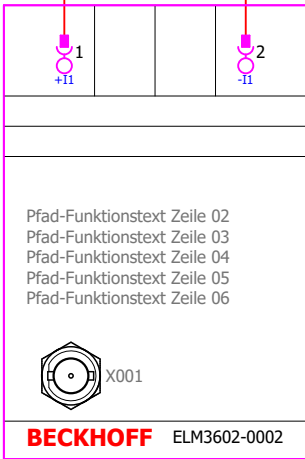
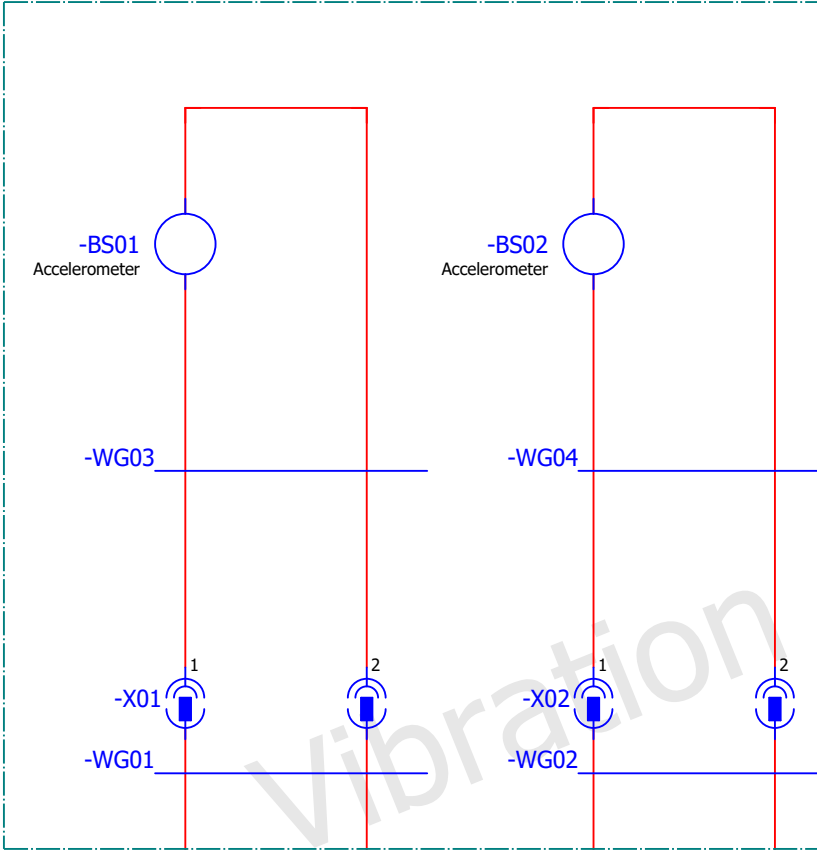
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CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):			
EVAN			=ESS.TS.SSS.E01.K01			
APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):			
RAN			+			
Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
ESS		Temperature Inputs	ESS-1090724	&FS 218	148 / 197	

=ESS.TS.SSS.E01.W01.W01.UP01



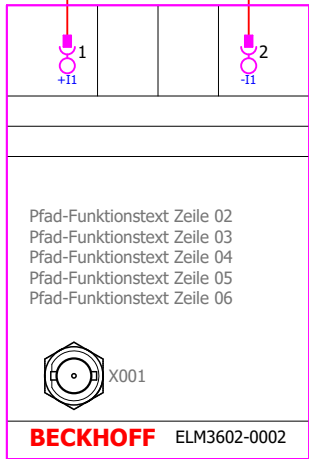
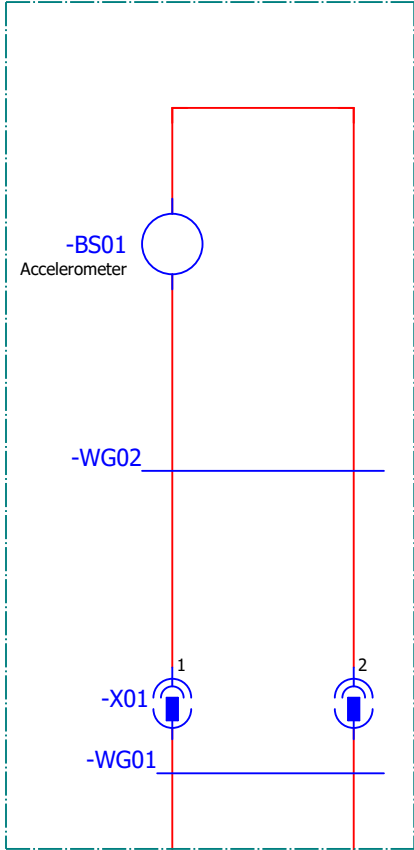
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/203.1  
/219.1  
Accelerometer  
TDU Upper  
Main Bearing  
X-Direction,  
=.BS01  
1000:BA-011x

=ESS.TS.SSS.E01.W01.W01.UP02



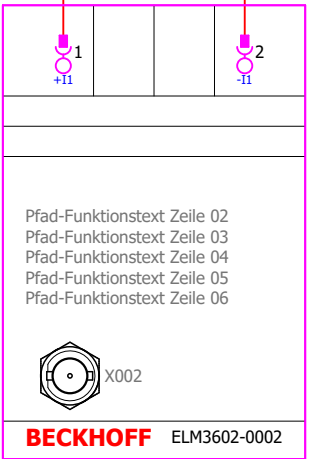
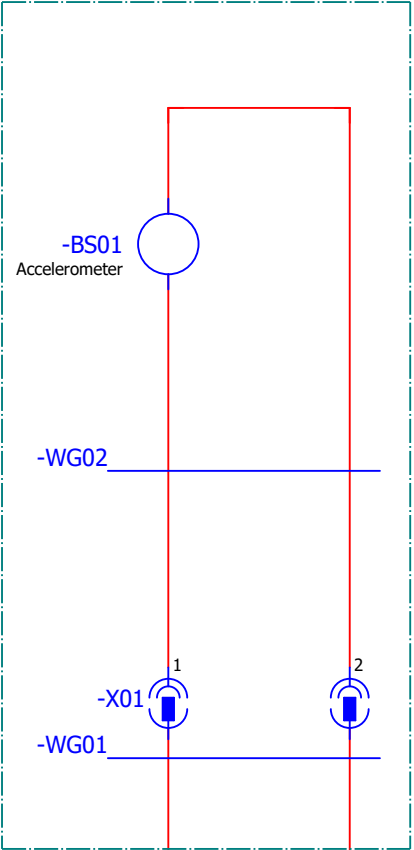
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/203.2  
/219.4  
Accelerometer  
TDU Lower  
Main Bearing  
X-Direction,  
=.BS01  
1000:BA-012x

=ESS.TS.SSS.E01.RN01.UP01



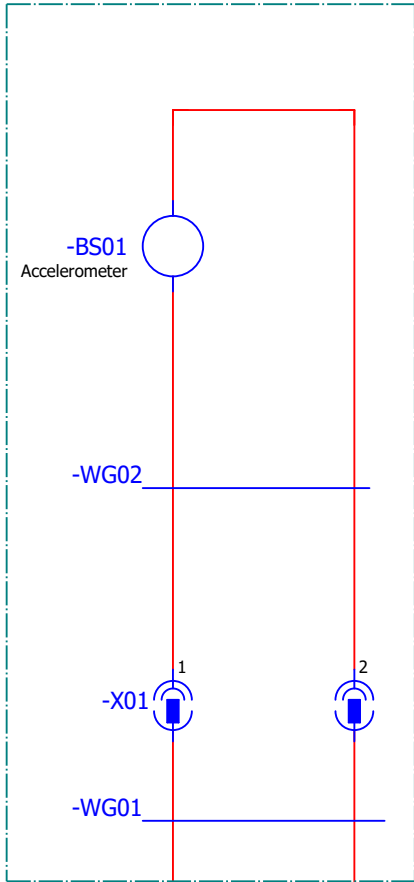
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/203.3  
/219.7  
Accelerometer  
Helium Rotary  
Union Upper  
Bearing,  
=.BS01  
1000:BA-021

=ESS.TS.SSS.E01.RN01.UP02



-KF103  
/203.3  
/219.6  
Accelerometer  
Helium Rotary  
Union Lower  
Bearing,  
=.BS01  
1000:BA-022

=ESS.TS.SSS.E01.RN02.UP01



1

+11

2

-11

Pfad-Funktionstext Zeile 02

Pfad-Funktionstext Zeile 03

Pfad-Funktionstext Zeile 04

Pfad-Funktionstext Zeile 05

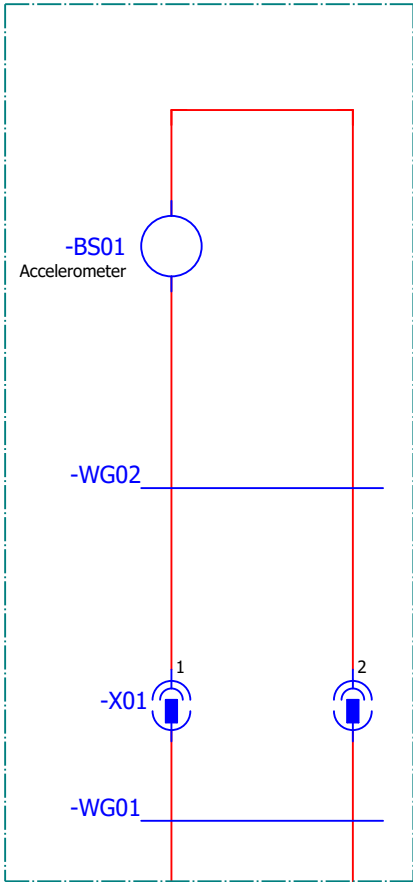
Pfad-Funktionstext Zeile 06

X001

**BECKHOFF** ELM3602-0002

-KF104  
/203.4  
/220.2  
Accelerometer  
Vacuum  
Feedthrough  
Upper Bearing,  
=..BS01  
1000:BA-023

=ESS.TS.SSS.E01.RN02.UP02



1

+11

2

-11

Pfad-Funktionstext Zeile 02

Pfad-Funktionstext Zeile 03

Pfad-Funktionstext Zeile 04

Pfad-Funktionstext Zeile 05

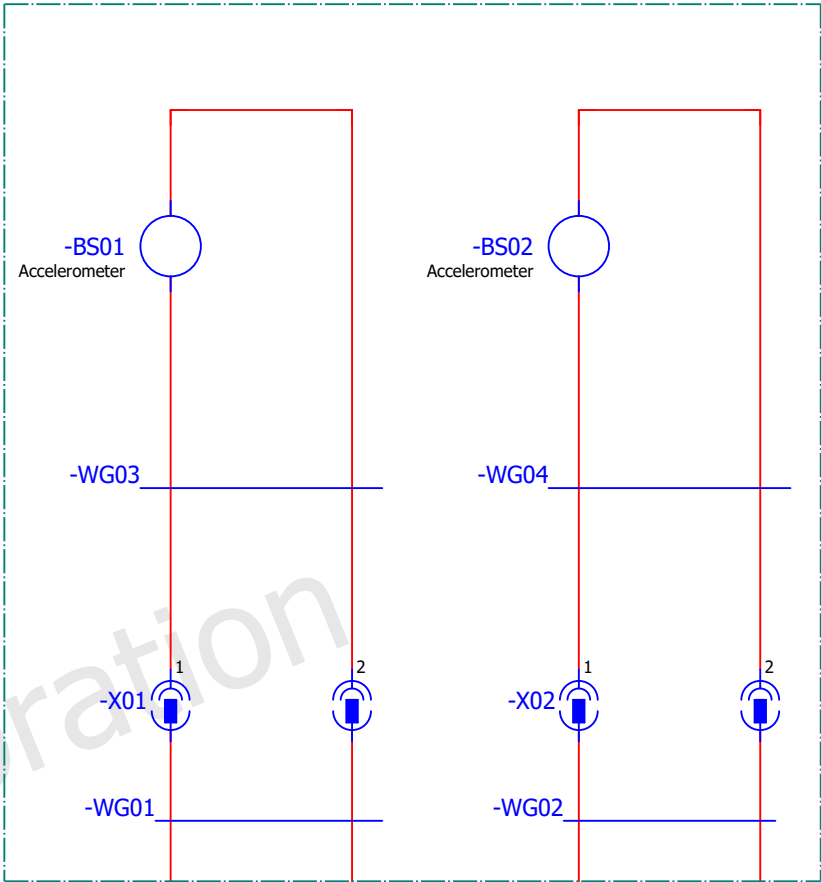
Pfad-Funktionstext Zeile 06

X002

**BECKHOFF** ELM3602-0002

-KF104  
/203.4  
/220.0  
Accelerometer  
Vacuum  
Feedthrough  
Lower Bearing,  
=..BS01  
1000:BA-024

=ESS.TS.SSS.E01.B01.B06



1

+11

2

-11

Pfad-Funktionstext Zeile 02

Pfad-Funktionstext Zeile 03

Pfad-Funktionstext Zeile 04

Pfad-Funktionstext Zeile 05

Pfad-Funktionstext Zeile 06

X001

**BECKHOFF** ELM3602-0002

-KF105  
/203.4  
/220.6  
Microphone  
Target Helium  
Cooling Exit  
Upstream,  
=..BX01  
1063:XE-602

1

+11

2

-11

Pfad-Funktionstext Zeile 02

Pfad-Funktionstext Zeile 03

Pfad-Funktionstext Zeile 04

Pfad-Funktionstext Zeile 05

Pfad-Funktionstext Zeile 06

X002

**BECKHOFF** ELM3602-0002

-KF105  
/203.4  
/220.4  
Microphone  
Target Helium  
Cooling Exit  
Downstream,  
=..BX02  
1063:XE-601

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE



DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
MLN		Target system control system cabinet	Preliminary		0.2	
CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):			
EVAN			=ESS.TS.SSS.E01.K01			
APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):			
RAN			+			
Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:
		ESS	Vibration Inputs	ESS-1090724	&FS 220	150 / 197

Beam Permit

/202.7

-KF11

BECKHOFF

EL2612

Beam Permit

Path function text Row 02

Path function text Row 03

Path function text Row 04

Path function text Row 05

Path function text Row 06

Path function text Row 07

Path function text Row 08

Path function text Row 09

11

2

14

1

12

3

PE

4

Ready for Beam

/202.7

-KF11

BECKHOFF

EL2612

Ready for Beam

Path function text Row 02

Path function text Row 03

Path function text Row 04

Path function text Row 05

Path function text Row 06

Path function text Row 07

Path function text Row 08

Path function text Row 09

21

6

24

5

22

7

PE

8

Beam Permit

/202.7

-KF12

BECKHOFF

EL2612

Beam permit

Path function text Row 02

Path function text Row 03

Path function text Row 04

Path function text Row 05

Path function text Row 06

Path function text Row 07

Path function text Row 08

Path function text Row 09

11

2

14

1

12

3

PE

4

Ready for Beam

/202.7

-KF12

BECKHOFF

EL2612

Ready for Beam

Path function text Row 02

Path function text Row 03

Path function text Row 04

Path function text Row 05

Path function text Row 06

Path function text Row 07

Path function text Row 08

Path function text Row 09

21

6

24

5

22

7

PE

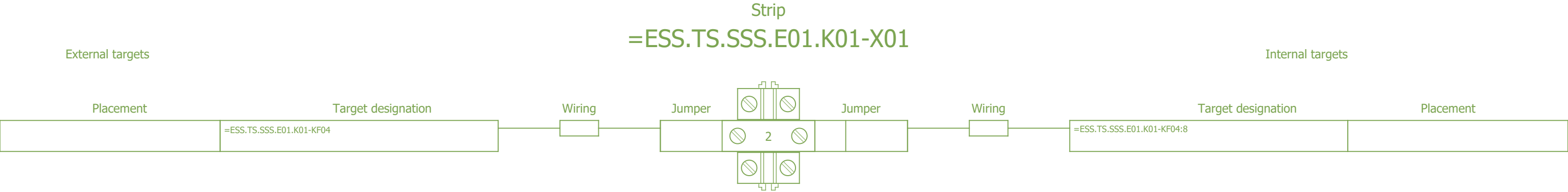
8

	0	1	2	3	4	5	6	7	8	9
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	FBS-Tag ESS-Name		Function	Technical info.		Designation		Project Page counter/Row/Column =FBS/&Document Type/Page +LBS		
1	=ESS.TS.SSS.E01.UH01-FC201			24VDC/0.5-10A		Electronic device circuit breaker				



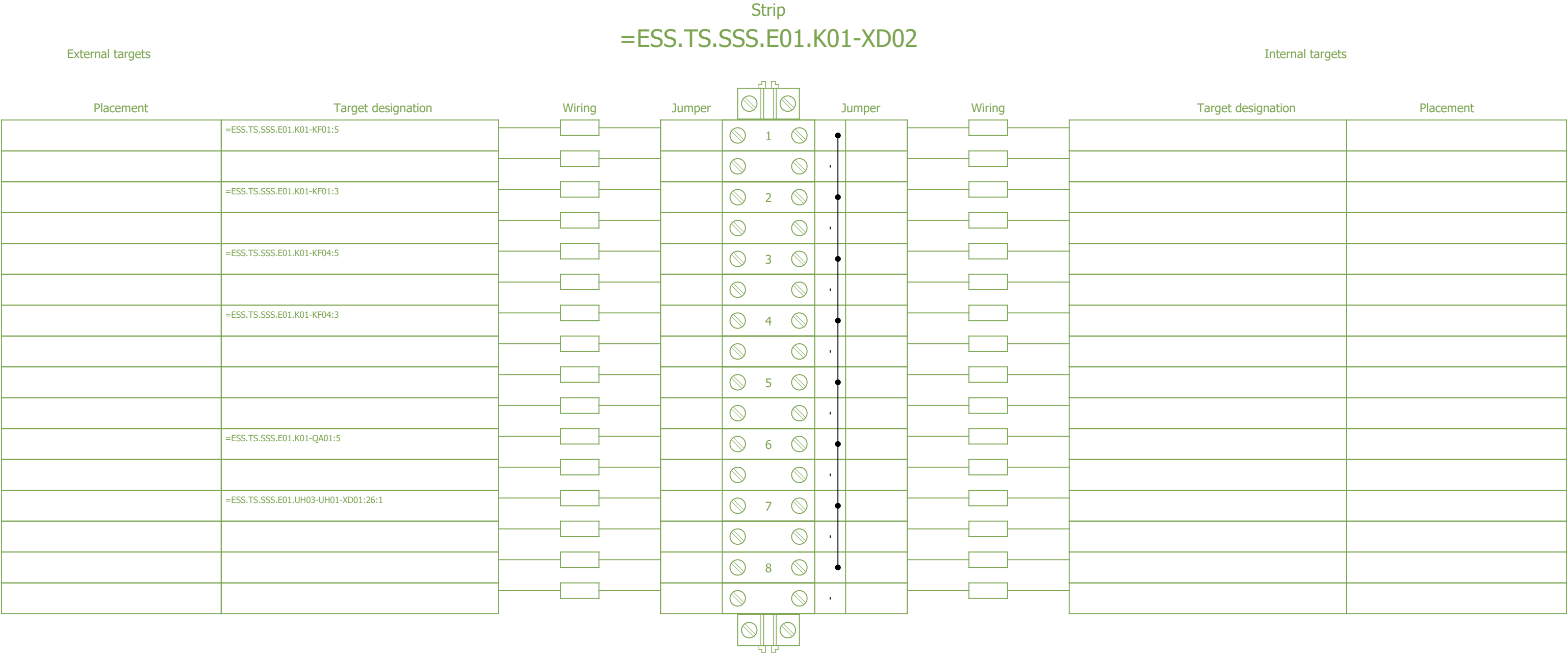
# Terminal diagram

ESS\_Terminal\_diagram



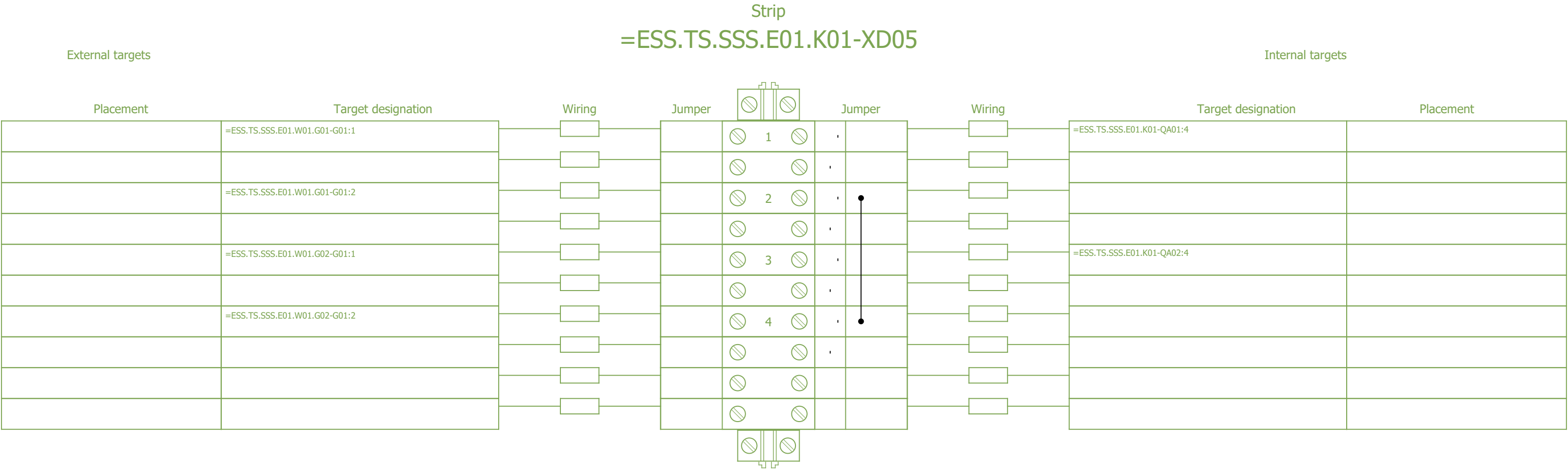
Terminal diagram

ESS\_Terminal\_diagram



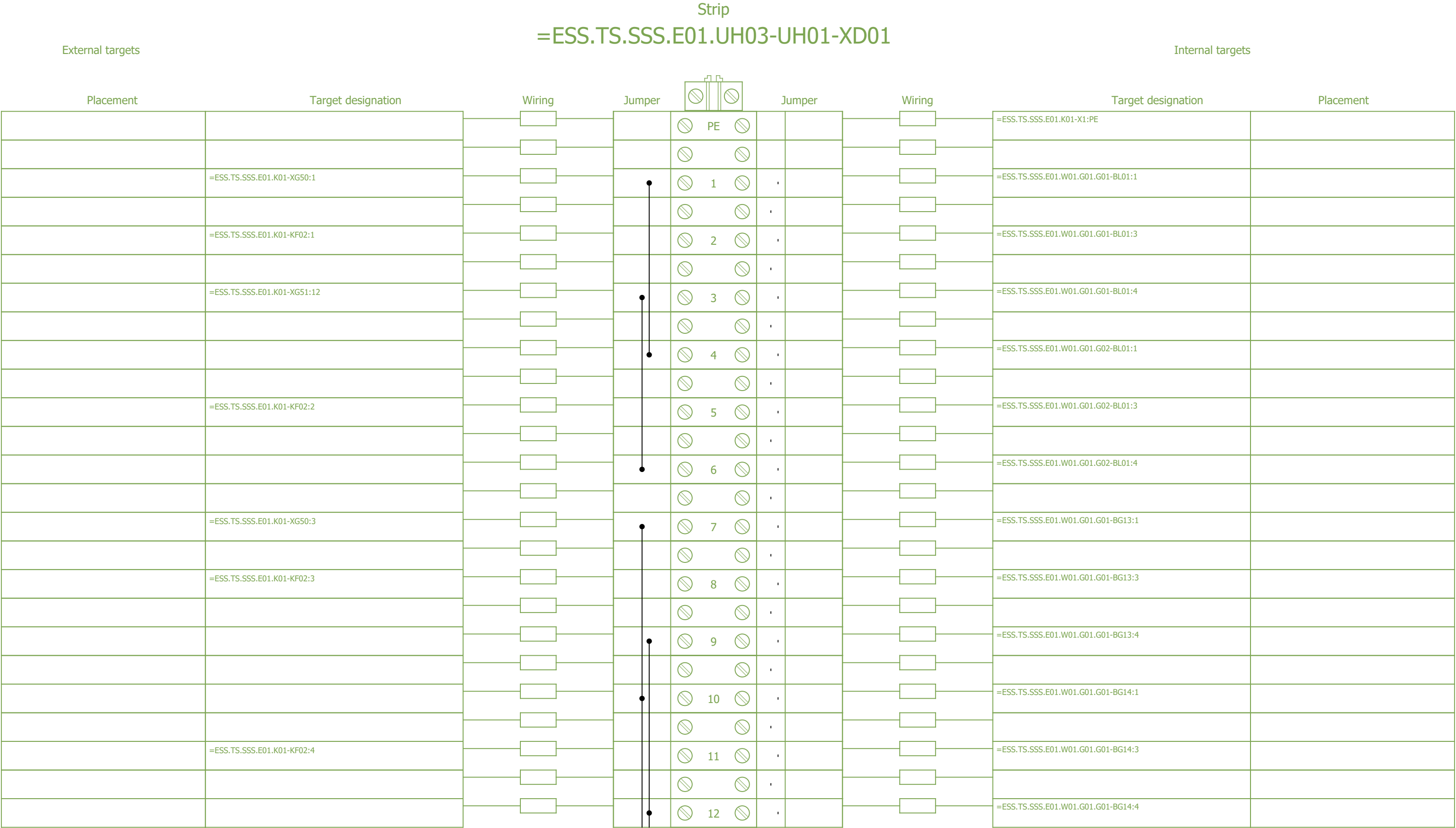
Terminal diagram

ESS\_Terminal\_diagram



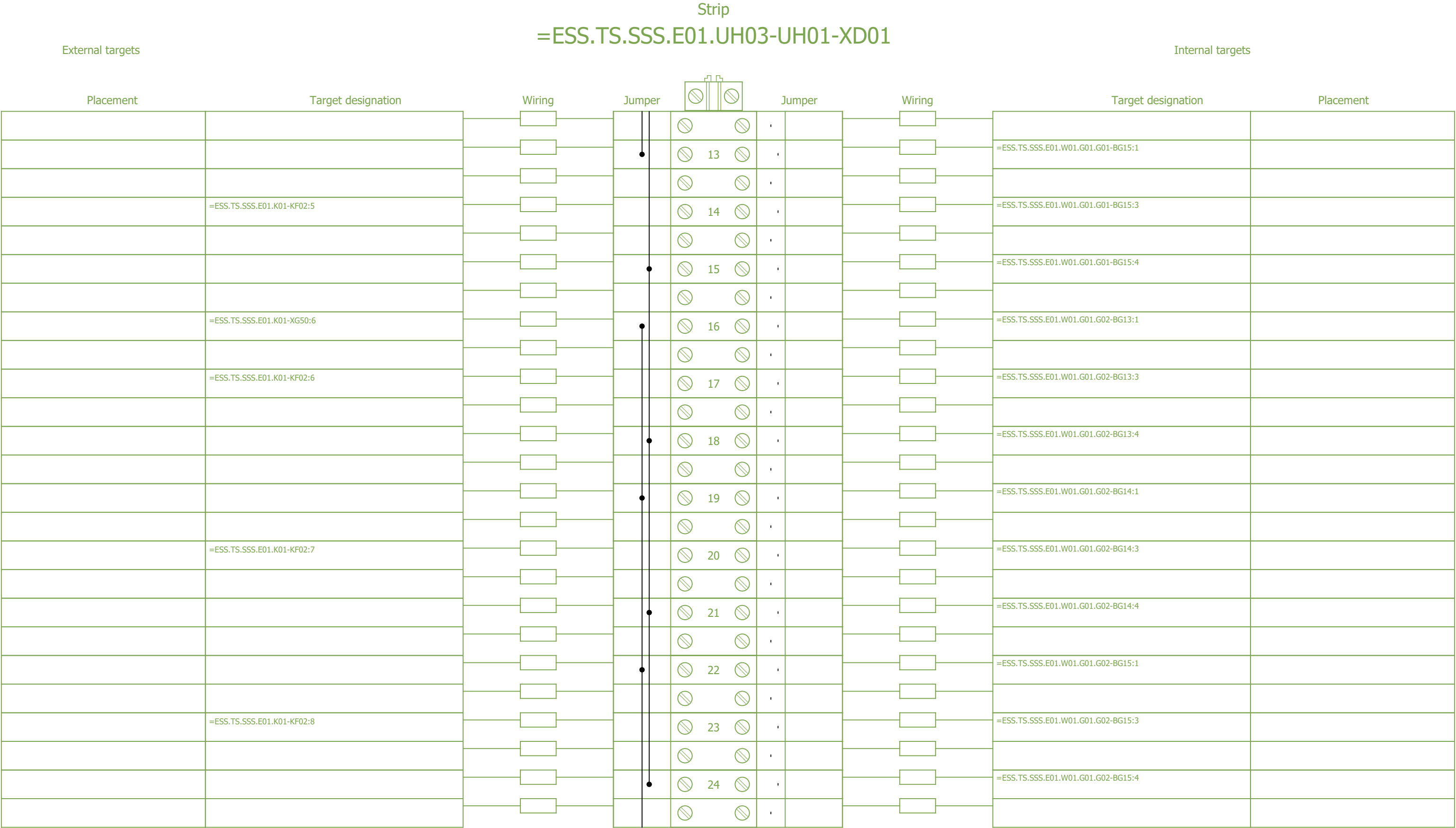
Terminal diagram

ESS\_Terminal\_diagram



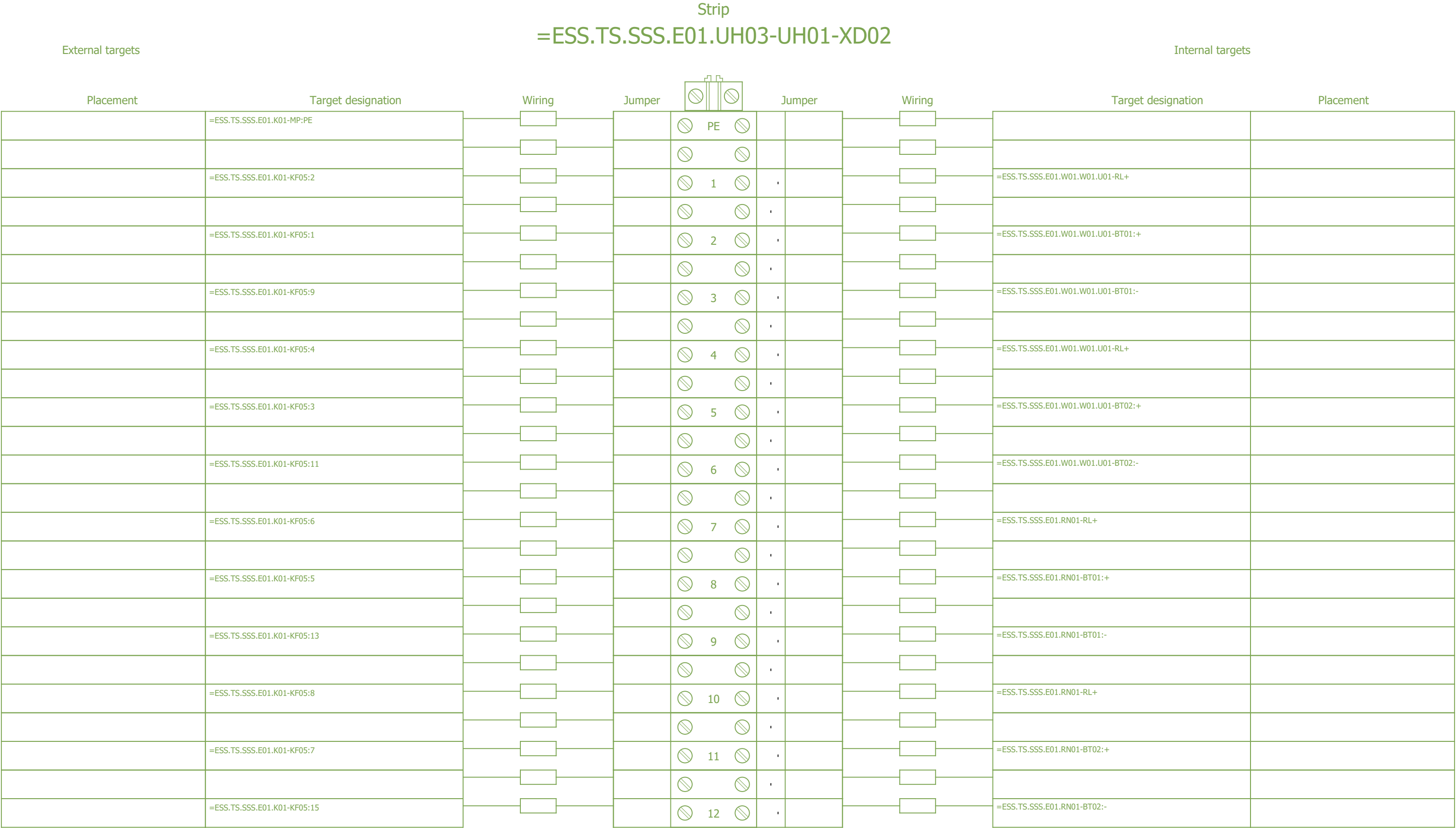
Terminal diagram

ESS\_Terminal\_diagram



Terminal diagram

ESS\_Terminal\_diagram



# Connection list

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2		=ESS.TS.SSS.E01.K01-XD02:2	=ESS.TS.SSS.E01.K01-XD02:3			=ESS.TS.SSS.E01.K01&FS/205.1:
3		=ESS.TS.SSS.E01.K01-XD02:3	=ESS.TS.SSS.E01.K01-XD02:4			=ESS.TS.SSS.E01.K01&FS/205.1:
4		=ESS.TS.SSS.E01.K01-XD02:4	=ESS.TS.SSS.E01.K01-XD02:5			=ESS.TS.SSS.E01.K01&FS/205.2:
5		=ESS.TS.SSS.E01.K01-XD02:5	=ESS.TS.SSS.E01.K01-XD02:6			=ESS.TS.SSS.E01.K01&FS/205.2:
6		=ESS.TS.SSS.E01.K01-QA01:3	=ESS.TS.SSS.E01.UH01-FC201:OUT+:6			=ESS.TS.SSS.E01.K01&FS/213.2:
7		=ESS.TS.SSS.E01.K01-QA01:3	=ESS.TS.SSS.E01.K01-QA02:3			=ESS.TS.SSS.E01.K01&FS/213.2:
8		=ESS.TS.SSS.E01.K01-QA01:5	=ESS.TS.SSS.E01.K01-XD02:6:2			=ESS.TS.SSS.E01.K01&FS/211.0:
9		=ESS.TS.SSS.E01.K01-QA01:5	=ESS.TS.SSS.E01.K01-QA02:5			=ESS.TS.SSS.E01.K01&FS/211.0:
10		=ESS.TS.SSS.E01.K01-QA02:5	=ESS.TS.SSS.E01.K01-QA03:5			=ESS.TS.SSS.E01.K01&FS/211.2:
11		=ESS.TS.SSS.E01.K01-QA03:5	=ESS.TS.SSS.E01.K01-QA04:5			=ESS.TS.SSS.E01.K01&FS/211.5:
12		=ESS.TS.SSS.E01.K01-QA04:5	=ESS.TS.SSS.E01.K01-QA05:5			=ESS.TS.SSS.E01.K01&FS/211.7:
13		=ESS.TS.SSS.E01.K01-QA05:5	=ESS.TS.SSS.E01.K01-QA06:5			=ESS.TS.SSS.E01.K01&FS/212.0:
14		=ESS.TS.SSS.E01.K01-QA06:5	=ESS.TS.SSS.E01.K01-QA07:5			=ESS.TS.SSS.E01.K01&FS/212.3:
15		=ESS.TS.SSS.E01.K01-QA07:5	=ESS.TS.SSS.E01.K01-QA08:5			=ESS.TS.SSS.E01.K01&FS/212.5:
16		=ESS.TS.SSS.E01.K01-XD02:6	=ESS.TS.SSS.E01.K01-XD02:7			=ESS.TS.SSS.E01.K01&FS/205.2:
17		=ESS.TS.SSS.E01.K01-QA03:3	=ESS.TS.SSS.E01.UH01-FC201:OUT+:7			=ESS.TS.SSS.E01.K01&FS/214.2:
18		=ESS.TS.SSS.E01.K01-QA03:3	=ESS.TS.SSS.E01.K01-QA04:3			=ESS.TS.SSS.E01.K01&FS/214.2:
19		=ESS.TS.SSS.E01.K01-QA04:3	=ESS.TS.SSS.E01.K01-QA05:3			=ESS.TS.SSS.E01.K01&FS/214.4:
20		=ESS.TS.SSS.E01.K01-QA05:3	=ESS.TS.SSS.E01.K01-QA06:3			=ESS.TS.SSS.E01.K01&FS/215.0:
21		=ESS.TS.SSS.E01.K01-QA06:3	=ESS.TS.SSS.E01.K01-QA07:3			=ESS.TS.SSS.E01.K01&FS/215.3:
22		=ESS.TS.SSS.E01.K01-QA07:3	=ESS.TS.SSS.E01.K01-QA08:3			=ESS.TS.SSS.E01.K01&FS/215.5:
23		=ESS.TS.SSS.E01.UH03-UH01-XD01:26:1	=ESS.TS.SSS.E01.UH03-UH01-XD01:28:1			=ESS.TS.SSS.E01.UH03&FS/214.3:
24		=ESS.TS.SSS.E01.UH03-UH01-XD01:30:1	=ESS.TS.SSS.E01.UH03-UH01-XD01:32:1			=ESS.TS.SSS.E01.UH03&FS/215.2:
25		=ESS.TS.SSS.E01.UH03-UH01-XD01:32:1	=ESS.TS.SSS.E01.UH03-UH01-XD01:34:1			=ESS.TS.SSS.E01.UH03&FS/215.4:
26		=ESS.TS.SSS.E01.UH03-UH01-XD01:34:1	=ESS.TS.SSS.E01.UH03-UH01-XD01:36:1			=ESS.TS.SSS.E01.UH03&FS/215.6:
27		=ESS.TS.SSS.E01.K01-XD02:7	=ESS.TS.SSS.E01.K01-XD02:8			=ESS.TS.SSS.E01.K01&FS/205.2:
28		=ESS.TS.SSS.E01.K01-KF01:1	=ESS.TS.SSS.E01.UH01-FC201:OUT+:1			=ESS.TS.SSS.E01.K01&FS/206.0:
29		=ESS.TS.SSS.E01.K01-KF01:5	=ESS.TS.SSS.E01.K01-XD02:1:2			=ESS.TS.SSS.E01.K01&FS/206.0:

ESS\_Connection List [FBS]

30		=ESS.TS.SSS.E01.K01-KF01:3	=ESS.TS.SSS.E01.K01-XD02:2:2			=ESS.TS.SSS.E01.K01&FS/206.1:
31		=ESS.TS.SSS.E01.K01-KF01:6	=ESS.TS.SSS.E01.UH01-FC201:OUT+:2			=ESS.TS.SSS.E01.K01&FS/206.1:
32		=ESS.TS.SSS.E01.K01-KF01:8	=ESS.TS.SSS.E01.K01-KF04:8	GNYE	0.75	=ESS.TS.SSS.E01.K01&FS/206.2:
33		=ESS.TS.SSS.E01.K01-KF04:8	=ESS.TS.SSS.E01.K01-X01:2:1	GNYE	0.75	=ESS.TS.SSS.E01.K01&FS/206.4:
34		=ESS.TS.SSS.E01.K01-KF04:1	=ESS.TS.SSS.E01.UH01-FC201:OUT+:3			=ESS.TS.SSS.E01.K01&FS/206.2:
35		=ESS.TS.SSS.E01.K01-KF04:5	=ESS.TS.SSS.E01.K01-XD02:3:2			=ESS.TS.SSS.E01.K01&FS/206.2:
36		=ESS.TS.SSS.E01.K01-KF04:2	=ESS.TS.SSS.E01.UH01-FC201:OUT+:4			=ESS.TS.SSS.E01.K01&FS/206.3:
37		=ESS.TS.SSS.E01.K01-KF04:3	=ESS.TS.SSS.E01.K01-XD02:4:2			=ESS.TS.SSS.E01.K01&FS/206.3:
38		=ESS.TS.SSS.E01.K01-KF04	=ESS.TS.SSS.E01.K01-X01:2:2			=ESS.TS.SSS.E01.K01&FS/206.9:
39		=ESS.TS.SSS.E01.UH03-UH01-XD01:1:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:4:2			=ESS.TS.SSS.E01.UH03&FS/207.1:
40		=ESS.TS.SSS.E01.UH03-UH01-XD01:3:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:6:2			=ESS.TS.SSS.E01.UH03&FS/207.3:
41		=ESS.TS.SSS.E01.UH03-UH01-XD01:7:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:10:2			=ESS.TS.SSS.E01.UH03&FS/208.1:
42		=ESS.TS.SSS.E01.UH03-UH01-XD01:10:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:13:2			=ESS.TS.SSS.E01.UH03&FS/208.4:
43		=ESS.TS.SSS.E01.UH03-UH01-XD01:9:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:12:2			=ESS.TS.SSS.E01.UH03&FS/208.3:
44		=ESS.TS.SSS.E01.UH03-UH01-XD01:12:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:15:2			=ESS.TS.SSS.E01.UH03&FS/208.5:
45		=ESS.TS.SSS.E01.UH03-UH01-XD01:15:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:18:2			=ESS.TS.SSS.E01.UH03&FS/208.8:
46		=ESS.TS.SSS.E01.UH03-UH01-XD01:18:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:21:2			=ESS.TS.SSS.E01.UH03&FS/209.3:
47		=ESS.TS.SSS.E01.UH03-UH01-XD01:21:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:24:2			=ESS.TS.SSS.E01.UH03&FS/209.5:
48		=ESS.TS.SSS.E01.UH03-UH01-XD01:16:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:19:2			=ESS.TS.SSS.E01.UH03&FS/209.1:
49		=ESS.TS.SSS.E01.UH03-UH01-XD01:19:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:22:2			=ESS.TS.SSS.E01.UH03&FS/209.4:
50		=ESS.TS.SSS.E01.UH03-UH01-XD01:22:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:37:2			=ESS.TS.SSS.E01.UH03&FS/209.7:
51		=ESS.TS.SSS.E01.UH03-UH01-XD01:37:2	=ESS.TS.SSS.E01.UH03-UH01-XD01:39:2			=ESS.TS.SSS.E01.UH03&FS/216.1:
52		=ESS.TS.SSS.E01.K01-KF03:1	=ESS.TS.SSS.E01.K01-QA01:1			=ESS.TS.SSS.E01.K01&FS/211.0:
53		=ESS.TS.SSS.E01.K01-KF03:2	=ESS.TS.SSS.E01.K01-QA02:1			=ESS.TS.SSS.E01.K01&FS/211.2:
54		=ESS.TS.SSS.E01.K01-KF03:3	=ESS.TS.SSS.E01.K01-QA03:1			=ESS.TS.SSS.E01.K01&FS/211.5:
55		=ESS.TS.SSS.E01.K01-KF03:4	=ESS.TS.SSS.E01.K01-QA04:1			=ESS.TS.SSS.E01.K01&FS/211.7:
56		=ESS.TS.SSS.E01.K01-KF03:5	=ESS.TS.SSS.E01.K01-QA05:1			=ESS.TS.SSS.E01.K01&FS/212.0:
57		=ESS.TS.SSS.E01.K01-KF03:6	=ESS.TS.SSS.E01.K01-QA06:1			=ESS.TS.SSS.E01.K01&FS/212.3:
58		=ESS.TS.SSS.E01.K01-KF03:7	=ESS.TS.SSS.E01.K01-QA07:1			=ESS.TS.SSS.E01.K01&FS/212.5:
59		=ESS.TS.SSS.E01.K01-KF03:8	=ESS.TS.SSS.E01.K01-QA08:1			=ESS.TS.SSS.E01.K01&FS/212.7:

# Connection list

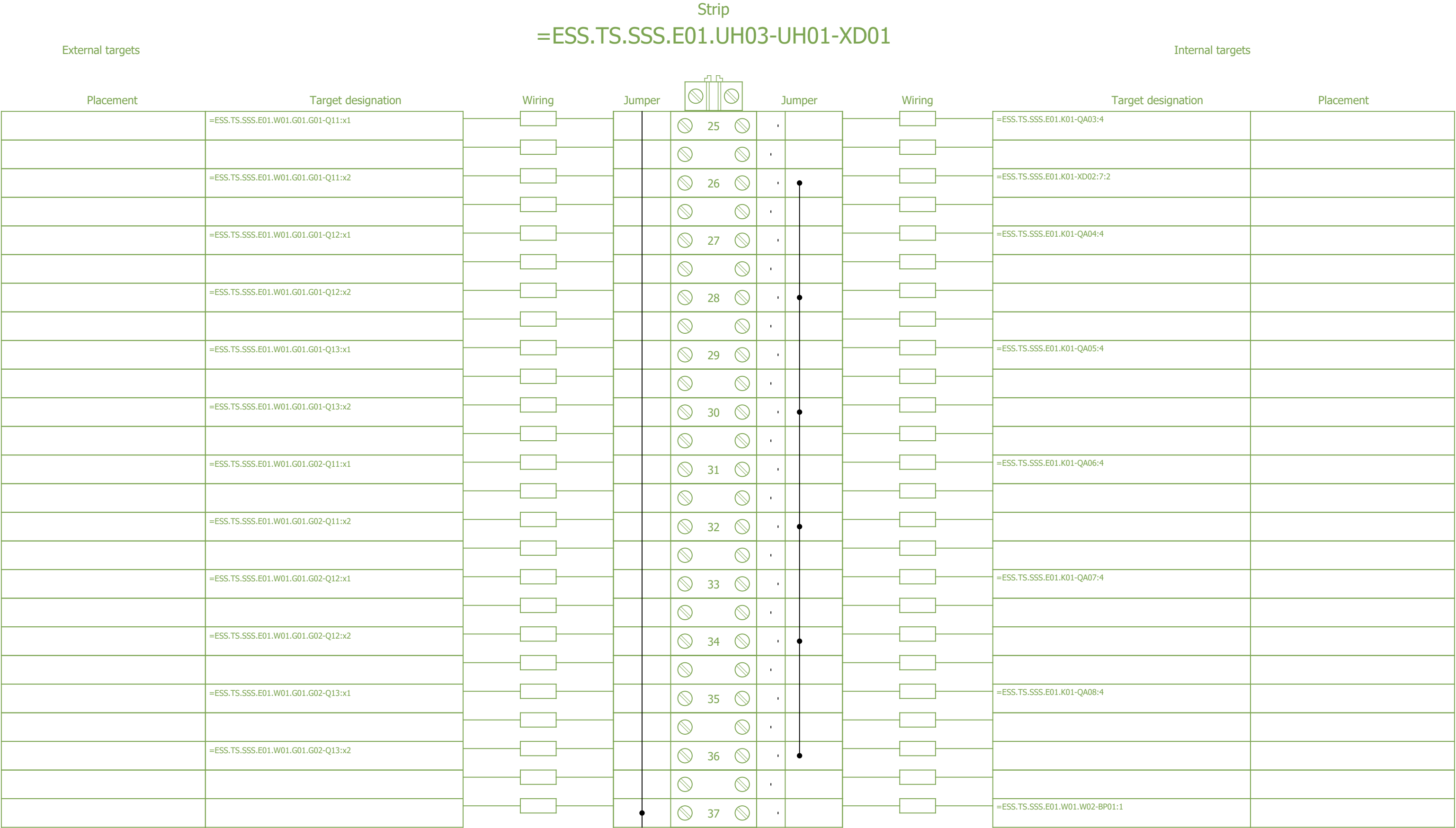
ESS\_Connection List [FBS]

	Connection	Source	Target	Color	Cr-sect.	Page
60		=ESS.TS.SSS.E01.K01-QA01:4	=ESS.TS.SSS.E01.K01-XD05:1:1			=ESS.TS.SSS.E01.K01&FS/213.2:
61		=ESS.TS.SSS.E01.K01-XD05:2:1	=ESS.TS.SSS.E01.K01-XD05:4:1			=ESS.TS.SSS.E01.K01&FS/213.2:
62		=ESS.TS.SSS.E01.K01-QA02:4	=ESS.TS.SSS.E01.K01-XD05:3:1			=ESS.TS.SSS.E01.K01&FS/213.4:
63		=ESS.TS.SSS.E01.K01-X1:MP	=ESS.TS.SSS.E01.UH03-UH01-X1:PE			=ESS.TS.SSS.E01.K01&FS/217.1:



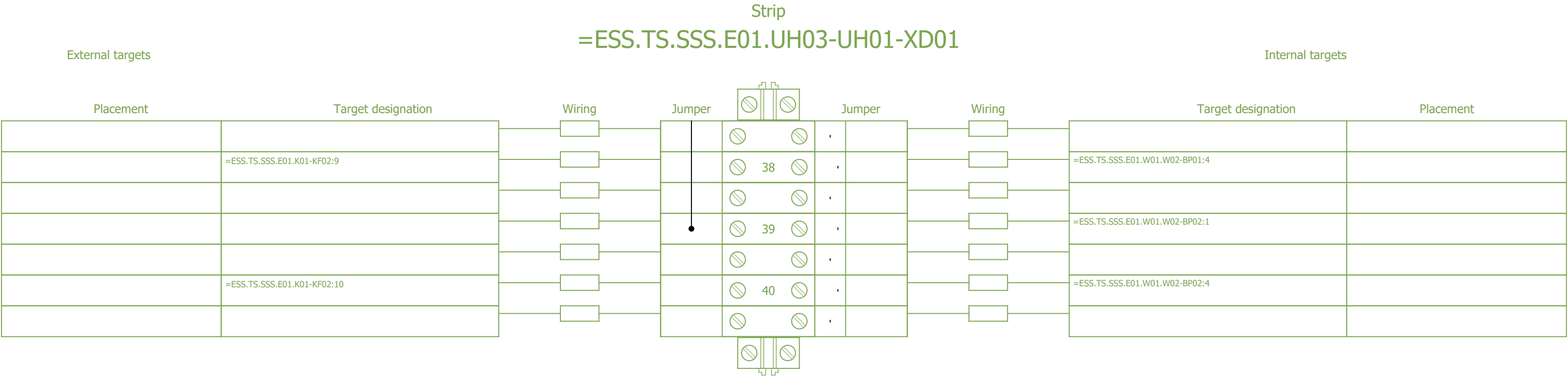
Terminal diagram

ESS\_Terminal\_diagram



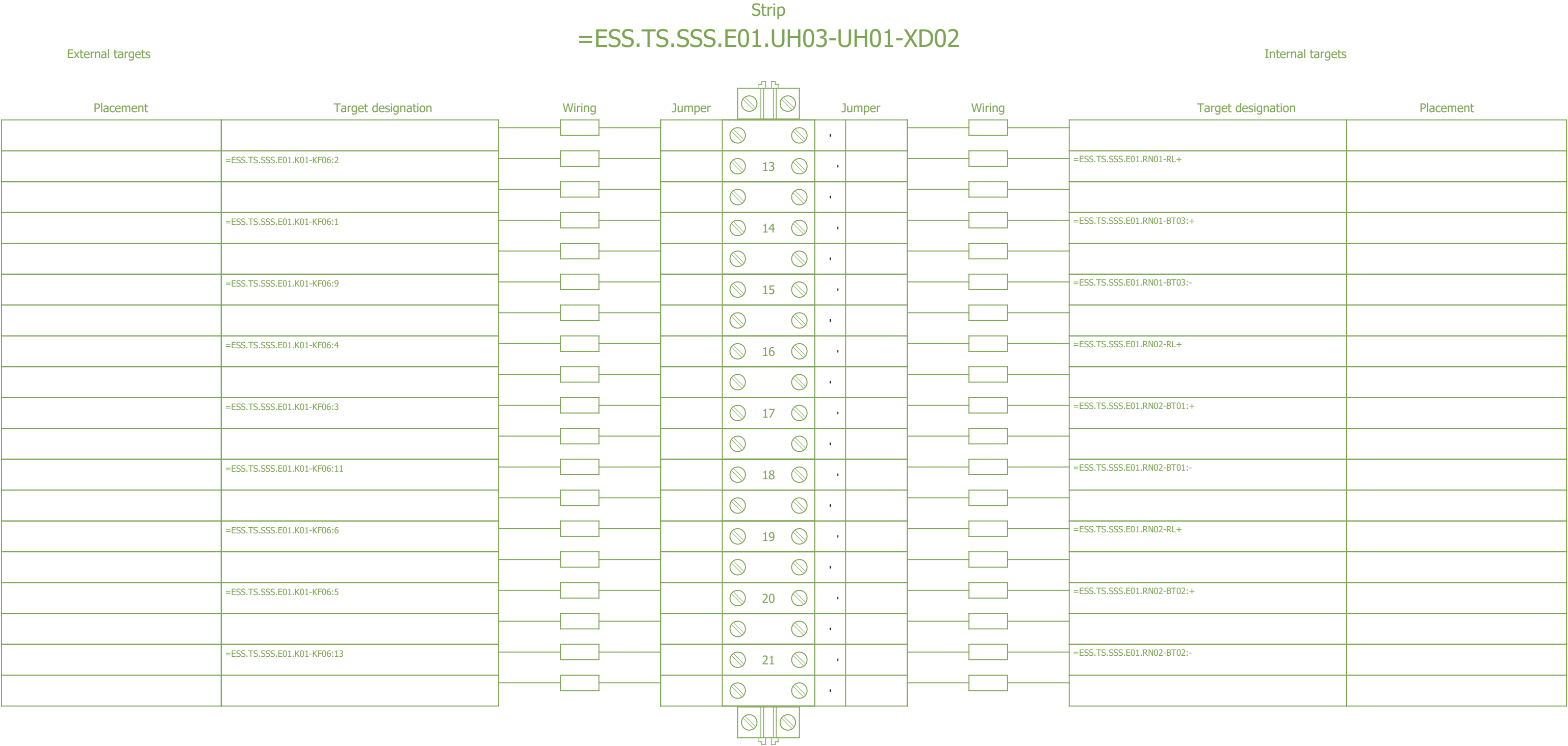
Terminal diagram

ESS\_Terminal\_diagram



Terminal diagram

ESS\_Terminal\_diagram



	0	1	2	3	4	5	6	7	8	9
<div>Parts list<div>ESS_Parts_list [FBS]</div></div>										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
1	=ESS.TS.SSS.E01.W01.W02-WG31	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531			
2	=ESS.TS.SSS.E01.W01.W02-WG32	1	PUR Control Cable UNIPUR® 2x0,75 mm² YE	UNIPUR®	Helukabel	HEL.18223	ESS-3243531			
3	=ESS.TS.SSS.E01.W01.G01-WD01	1	PUR Cable for Drag Chains MULTIFLEX 512®-PUR 3G1,5 mm² GY	MULTIFLEX 512-PUR	Helukabel	HEL.22535	ESS-3243535			
4	=ESS.TS.SSS.E01.K01-KF01	1	Basic CPU module CX5130, Windows Embedded St 7P, 64 bit	CX5130-0130	Beckhoff Automation GmbH & Co. KG	BEC.CX5130-0130				
5	=ESS.TS.SSS.E01.K01-KF02	1	16-channel digital input terminal 24 V DC, filter 3.0 ms, type 3	EL1809	Beckhoff Automation GmbH & Co. KG	BEC.EL1809	ESS-3161833			
6	=ESS.TS.SSS.E01.K01-KF03	1	HD EtherCAT Terminal, 16-channel digital output 24 V DC, 0.5 A, with diagnostics	EL2819	Beckhoff Automation GmbH & Co. KG	BEC.EL2819	ESS-3161857			
7	=ESS.TS.SSS.E01.K01-KF04	1	Power supply terminal for E-bus, 24 V DC, 2 A with diagnostics	EL9410	Beckhoff Automation GmbH & Co. KG	BEC.EL9410	ESS-3161984			
8	=ESS.TS.SSS.E01.K01-KF05	1	4-channel input terminal PT100 (RTD)	EL3214	Beckhoff Automation GmbH & Co. KG	BEC.EL3214	ESS-3161915			
9	=ESS.TS.SSS.E01.K01-KF06	1	4-channel input terminal PT100 (RTD)	EL3214	Beckhoff Automation GmbH & Co. KG	BEC.EL3214	ESS-3161915			
10	=ESS.TS.SSS.E01.K01-KF07	1	4-channel input terminal PT100 (RTD)	EL3214	Beckhoff Automation GmbH & Co. KG	BEC.EL3214	ESS-3161915			
11	=ESS.TS.SSS.E01.K01-KF08	1	Power supply terminal for E-bus, 24 V DC, 2 A with diagnostics	EL9410	Beckhoff Automation GmbH & Co. KG	BEC.EL9410	ESS-3161984			
12	=ESS.TS.SSS.E01.K01-KF09	1	16-channel digital input terminal 24 V DC, filter 3.0 ms, type 3	EL1809	Beckhoff Automation GmbH & Co. KG	BEC.EL1809	ESS-3161833			
13	=ESS.TS.SSS.E01.K01-KF10	1	HD EtherCAT Terminal, 16-channel digital output 24 V DC, 0.5 A, with diagnostics	EL2819	Beckhoff Automation GmbH & Co. KG	BEC.EL2819	ESS-3161857			
14	=ESS.TS.SSS.E01.K01-KF11	1	2-channel relay output terminal 125 V AC/30 V DC	EL2612	Beckhoff Automation GmbH & Co. KG	BEC.EL2612	ESS-3161849			
15	=ESS.TS.SSS.E01.K01-KF12	1	2-channel relay output terminal 125 V AC/30 V DC	EL2612	Beckhoff Automation GmbH & Co. KG	BEC.EL2612	ESS-3161849			
16	=ESS.TS.SSS.E01.K01-KF13	1	EtherCAT extension	EK1110	Beckhoff Automation GmbH & Co. KG	BEC.EK1110	ESS-3161817			
17	=ESS.TS.SSS.E01.K01-KF100	1	EtherCAT Coupler with ID switch and diagnostics for EtherCAT modules (ELMxxxx)	EKM1101	Beckhoff Automation GmbH & Co. KG	BEC.EKM1101	ESS-3161821			
18	=ESS.TS.SSS.E01.K01-KF101	3	2-channel IEPE analysis, 24 bit, 50 ksps, BNC	ELM3602-0002	Beckhoff Automation GmbH & Co. KG	BEC.ELM3602-0002	ESS-3444496			
19	=ESS.TS.SSS.E01.K01-KF102	3	2-channel IEPE analysis, 24 bit, 50 ksps, BNC	ELM3602-0002	Beckhoff Automation GmbH & Co. KG	BEC.ELM3602-0002	ESS-3444496			

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div><div></div></div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:	
						ESS	+	ESS-1090724	&PC1	164 / 197	

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<div>Parts list<div>ESS_Parts_list [FBS]</div></div>										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
20	=ESS.TS.SSS.E01.K01-KF103	3	2-channel IEPE analysis, 24 bit, 50 ksps, BNC	ELM3602-0002	Beckhoff Automation GmbH & Co. KG	BEC.ELM3602-0002	ESS-3444496			
21	=ESS.TS.SSS.E01.K01-KF104	3	2-channel IEPE analysis, 24 bit, 50 ksps, BNC	ELM3602-0002	Beckhoff Automation GmbH & Co. KG	BEC.ELM3602-0002	ESS-3444496			
22	=ESS.TS.SSS.E01.K01-KF105	3	2-channel IEPE analysis, 24 bit, 50 ksps, BNC	ELM3602-0002	Beckhoff Automation GmbH & Co. KG	BEC.ELM3602-0002	ESS-3444496			
23	=ESS.TS.SSS.E01.K01-KF106	1	2-channel IEPE analysis, 24 bit, 50 ksps, BNC	ELM3602-0002	Beckhoff Automation GmbH & Co. KG	BEC.ELM3602-0002	ESS-3444496			
24	=ESS.TS.SSS.E01.K01-QA01	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
25	=ESS.TS.SSS.E01.K01-QA01	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
26	=ESS.TS.SSS.E01.K01-QA02	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
27	=ESS.TS.SSS.E01.K01-QA02	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
28	=ESS.TS.SSS.E01.K01-QA03	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
29	=ESS.TS.SSS.E01.K01-QA03	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
30	=ESS.TS.SSS.E01.K01-QA04	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
31	=ESS.TS.SSS.E01.K01-QA04	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
32	=ESS.TS.SSS.E01.K01-QA05	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
33	=ESS.TS.SSS.E01.K01-QA05	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
34	=ESS.TS.SSS.E01.K01-QA06	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
35	=ESS.TS.SSS.E01.K01-QA06	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
36	=ESS.TS.SSS.E01.K01-QA07	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			
37	=ESS.TS.SSS.E01.K01-QA07	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
38	=ESS.TS.SSS.E01.K01-QA08	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	G2R-1-SNDI DC24(S)	Omron	OMR.G2R-1-SNDI-24DC(S)	ESS-2605283			

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div><div>ess</div><div>EUROPEAN SPALLATION SOURCE</div></div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC2	Page nr/Proj. tot count: 165 / 197	

	0	1	2	3	4	5	6	7	8	9
Parts list										
ESS_Parts_list [FBS]										
	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number			
39	=ESS.TS.SSS.E01.K01-QA08	1	Electromechanical relays, Industrial plug-in relays, G2R-_S	P2RF-05-E	Omron	OMR.P2RF-05-E	ESS-2605298			
40	=ESS.TS.SSS.E01.K01-X01	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
41	=ESS.TS.SSS.E01.K01-XD02	8	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
42	=ESS.TS.SSS.E01.K01-XD05	4	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
43	=ESS.TS.SSS.E01.K01-XD05	2	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
44	=ESS.TS.SSS.E01.K01-XG50	1	Potential distribution terminal, 16 x 24 V DC	EL9188	Beckhoff Automation GmbH & Co. KG	BEC.EL9188	ESS-3161981			
45	=ESS.TS.SSS.E01.K01-XG51	1	HD EtherCAT Terminal, 16-channel potential distribution	EL9189	Beckhoff Automation GmbH & Co. KG	BEC.EL9189	ESS-3161982			
46	=ESS.TS.SSS.E01.W01.G02-WD02	1	PUR Cable for Drag Chains MULTIFLEX 512®-PUR 3G1,5 mm² GY	MULTIFLEX 512-PUR	Helukabel	HEL.22535	ESS-3243535			
47	=ESS.TS.SSS.E01.UH03-UH01-XD01	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
48	=ESS.TS.SSS.E01.UH03-UH01-XD01	40	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
49	=ESS.TS.SSS.E01.UH03-UH01-XD01	2	End bracket	WEW 35/2	Weidmueller	WEI.1061200000	ESS-3177295			
50	=ESS.TS.SSS.E01.UH03-UH01-XD02	1	WPE 2.5 PE terminal	WPE 2.5	Weidmueller	WEI.1010000000	ESS-2606185			
51	=ESS.TS.SSS.E01.UH03-UH01-XD02	21	Feed-through terminal block	WDU 2.5	Weidmueller	WEI.1020000000	ESS-2606195			
52	=ESS.TS.SSS.E01.UH03-UH01-XD02	2	End bracket	WEW 35/2	Weidmueller	WEI.1061200000	ESS-3177295			
53	=ESS.TS.SSS.E01.UH03-WG01	1	PUR Control Cable UNIPUR®-CP 25G1,5 mm² GY	UNIPUR-CP	Helukabel	HEL.19557	ESS-3243536			
54	=ESS.TS.SSS.E01.UH03-WG01	3	PUR Control Cable UNIPUR®-CP 18G1 mm² YE	UNIPUR-CP	Helukabel	HEL.19433	ESS-3243530			
55	=ESS.TS.SSS.E01.UH03-WG02	1	PUR Control Cable UNIPUR®-CP 25G1 mm² YE	UNIPUR-CP	Helukabel	HEL.19443	ESS-3243532			
56	=ESS.TS.SSS.E01.UH01-FC201	1	Electronic device circuit breaker	CBM E8 24DC/0.5-10A NO-R	Phoenix Contact	PXC.2905744				

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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description +	CHESS Doc. NR: ESS-1090724	Document: &PC3	Page nr/Proj. tot count: 166 / 197	



Cable overview

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	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
19	=ESS.TS.SSS.E01.W01.W01.U01-WG01	=ESS.TS.SSS.E01.UH03-UH01-XD02:1	=ESS.TS.SSS.E01.W01.W01.U01-RL+			4	=ESS.TS.SSS.E01.UH03&FS/217.1
20		=ESS.TS.SSS.E01.W01.W01.U01-RL-	=ESS.TS.SSS.E01.W01.W01.U01-BT01				=ESS.TS.SSS.E01.W01.W01.U01&FS/217.1
21			=ESS.TS.SSS.E01.UH03-UH01				
22	=ESS.TS.SSS.E01.W01.W01.U01-WG02	=ESS.TS.SSS.E01.UH03-UH01-XD02:4	=ESS.TS.SSS.E01.W01.W01.U01-RL+			4	=ESS.TS.SSS.E01.UH03&FS/217.2
23		=ESS.TS.SSS.E01.W01.W01.U01-RL-	=ESS.TS.SSS.E01.W01.W01.U01-BT02				=ESS.TS.SSS.E01.W01.W01.U01&FS/217.2
24			=ESS.TS.SSS.E01.UH03-UH01				
25	=ESS.TS.SSS.E01.RN01-WG01	=ESS.TS.SSS.E01.UH03-UH01-XD02:7	=ESS.TS.SSS.E01.RN01-RL+			4	=ESS.TS.SSS.E01.UH03&FS/217.4
26		=ESS.TS.SSS.E01.RN01-RL-	=ESS.TS.SSS.E01.RN01-BT01				=ESS.TS.SSS.E01.RN01&FS/217.4
27			=ESS.TS.SSS.E01.UH03-UH01				
28	=ESS.TS.SSS.E01.RN01-WG02	=ESS.TS.SSS.E01.UH03-UH01-XD02:10	=ESS.TS.SSS.E01.RN01-RL+			4	=ESS.TS.SSS.E01.UH03&FS/217.5
29		=ESS.TS.SSS.E01.RN01-RL-	=ESS.TS.SSS.E01.RN01-BT02				=ESS.TS.SSS.E01.RN01&FS/217.5
30			=ESS.TS.SSS.E01.UH03-UH01				
31	=ESS.TS.SSS.E01.RN01-WG03	=ESS.TS.SSS.E01.UH03-UH01-XD02:13	=ESS.TS.SSS.E01.RN01-RL+			4	=ESS.TS.SSS.E01.UH03&FS/217.6
32		=ESS.TS.SSS.E01.RN01-RL-	=ESS.TS.SSS.E01.RN01-BT03				=ESS.TS.SSS.E01.RN01&FS/217.6
33			=ESS.TS.SSS.E01.UH03-UH01				
34	=ESS.TS.SSS.E01.RN02-WG01	=ESS.TS.SSS.E01.UH03-UH01-XD02:16	=ESS.TS.SSS.E01.RN02-RL+			4	=ESS.TS.SSS.E01.UH03&FS/218.1
35		=ESS.TS.SSS.E01.RN02-RL-	=ESS.TS.SSS.E01.RN02-BT01				=ESS.TS.SSS.E01.RN02&FS/218.1
36			=ESS.TS.SSS.E01.UH03-UH01				



Cable overview

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	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
37	=ESS.TS.SSS.E01.RN02-WG02	=ESS.TS.SSS.E01.UH03-UH01-XD02:19	=ESS.TS.SSS.E01.RN02-RL+			4	=ESS.TS.SSS.E01.UH03&FS/218.2
38		=ESS.TS.SSS.E01.RN02-RL-	=ESS.TS.SSS.E01.RN02-BT02				=ESS.TS.SSS.E01.RN02&FS/218.2
39			=ESS.TS.SSS.E01.UH03-UH01				
40	=ESS.TS.SSS.E01.UH03-WG01	=ESS.TS.SSS.E01.K01-XD02:7	=ESS.TS.SSS.E01.UH03-UH01-XD01:26	UNIPUR-CP	25x1,5mm²	24	=ESS.TS.SSS.E01.K01&FS/207.0
41		=ESS.TS.SSS.E01.UH03-UH01-XD01:28	=ESS.TS.SSS.E01.K01-X1:PE				=ESS.TS.SSS.E01.UH03&FS/207.0
42		=:MP	=ESS.TS.SSS.E01.K01-QA05				207.0
43		=ESS.TS.SSS.E01.K01-XG50:1	=ESS.TS.SSS.E01.K01-QA06				=ESS.TS.SSS.E01.K01&FS/207.0
44		=ESS.TS.SSS.E01.K01-KF02:1	=ESS.TS.SSS.E01.K01-QA07				=ESS.TS.SSS.E01.K01&FS/207.0
45		=ESS.TS.SSS.E01.K01-XG51:12	=ESS.TS.SSS.E01.K01-QA08				=ESS.TS.SSS.E01.K01&FS/207.0
46		=ESS.TS.SSS.E01.K01-QA03	=ESS.TS.SSS.E01.UH03-UH01-X1:PE				=ESS.TS.SSS.E01.K01&FS/207.0
47		=ESS.TS.SSS.E01.K01-QA04					=ESS.TS.SSS.E01.K01&FS/207.0
48	=ESS.TS.SSS.E01.UH03-WG02	=ESS.TS.SSS.E01.UH03-UH01-XD02:PE	=ESS.TS.SSS.E01.K01-MP:PE	UNIPUR-CP	25x1,0mm²	22	=ESS.TS.SSS.E01.UH03&FS/217.1
49		=ESS.TS.SSS.E01.UH03-UH01-X1:PE	=ESS.TS.SSS.E01.K01-KF05:2				=ESS.TS.SSS.E01.UH03&FS/217.1
50		=ESS.TS.SSS.E01.K01-X1:MP	=ESS.TS.SSS.E01.K01-KF06:2				=ESS.TS.SSS.E01.K01&FS/217.1
51	=ESS.TS.SSS.E01.W01.W01.UP01-WG01	=ESS.TS.SSS.E01.W01.W01.UP01-X01:1	=ESS.TS.SSS.E01.K01-KF101:1			2	=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.0
52		=ESS.TS.SSS.E01.W01.W01.UP01-X101:2					=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.0
53	=ESS.TS.SSS.E01.W01.W01.UP01-WG02	=ESS.TS.SSS.E01.W01.W01.UP01-X02:1	=ESS.TS.SSS.E01.K01-KF101:1			2	=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.2
54		=ESS.TS.SSS.E01.W01.W01.UP01-X101:2					=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.2

Cable name		=ESS.TS.SSS.E01.W01.W02-WG31									
Database name		ESS_Cable_diagram(Graphical)									
Cable type		UNIPUR® 2x0,75mm²									
=ESS.TS.SSS.E01.W01.W02-WG31											
	Page / column	Source designation from	Connect. point					Connect. point	Target designation from	Page / column	
1											
2											
3		=ESS.TS.SSS.E01.UH03-UH01-XD01	37:1					1	=ESS.TS.SSS.E01.W01.W02-BP01		
4		=ESS.TS.SSS.E01.UH03-UH01-XD01	38:1					4	=ESS.TS.SSS.E01.W01.W02-BP01		

Cable name		=ESS.TS.SSS.E01.W01.W02-WG32							
Database name		ESS_Cable_diagram(Graphical)							
Cable type		UNIPUR® 2x0,75mm²							
		=ESS.TS.SSS.E01.W01.W02-WG32							
	Page / column	Source designation from	Connect. point				Connect. point	Target designation from	Page / column
5									
6									
7		=ESS.TS.SSS.E01.UH03-UH01-XD01	39:1				1	=ESS.TS.SSS.E01.W01.W02-BP02	
8		=ESS.TS.SSS.E01.UH03-UH01-XD01	40:1				4	=ESS.TS.SSS.E01.W01.W02-BP02	

Cable name		=ESS.TS.SSS.E01.W01.G01-WD01						
Database name		ESS_Cable_diagram(Graphical)						
Cable type		MULTIFLEX 512®-PUR 3x1,5mm²						
		=ESS.TS.SSS.E01.W01.G01-WD01						
	Page / column	Source designation from	Connect. point					
9								
10								
11								
12		=ESS.TS.SSS.E01.K01-XD05	1:2					
13		=ESS.TS.SSS.E01.K01-XD05	2:2					

Cable name		=ESS.TS.SSS.E01.W01.G02-WD02						
Database name		ESS_Cable_diagram(Graphical)						
Cable type		MULTIFLEX 512®-PUR 3x1,5mm²						
	Page / column	Source designation from	Connect. point	=ESS.TS.SSS.E01.W01.G02-WD02				
1								
2								
3								
4		=ESS.TS.SSS.E01.K01-XD05	3:2					
5		=ESS.TS.SSS.E01.K01-XD05	4:2					

Cable name		=ESS.TS.SSS.E01.W01.G01.G01-WG01						
Database name		ESS_Cable_diagram(Graphical)						
Cable type								
	Page / column	Source designation from	Connect. point	=ESS.TS.SSS.E01.W01.G01.G01-WG01				
6		=ESS.TS.SSS.E01.UH03-UH01-XD01	2:1					
7		=ESS.TS.SSS.E01.UH03-UH01-XD01	1:1					
8		=ESS.TS.SSS.E01.UH03-UH01-XD01	3:1					

Cable name		=ESS.TS.SSS.E01.W01.G01.G01-WG02						
Database name		ESS_Cable_diagram(Graphical)						
Cable type								
	Page / column	Source designation from	Connect. point	=ESS.TS.SSS.E01.W01.G01.G01-WG02				
9		=ESS.TS.SSS.E01.UH03-UH01-XD01	29:2					
10		=ESS.TS.SSS.E01.UH03-UH01-XD01	30:2					

<b>Cable name</b> =ESS.TS.SSS.E01.W01.G01.G01-WG03			
<b>Database name</b> ESS_Cable_diagram(Graphical)			
<b>Cable type</b>			
	Page / column	Source designation from	Connect. point
11		=ESS.TS.SSS.E01.UH03-UH01-XD01	25:2
12		=ESS.TS.SSS.E01.UH03-UH01-XD01	26:2

**=ESS.TS.SSS.E01.W01.G01.G01-WG03**

Connect. point	Target designation from	Page / column
x1	=ESS.TS.SSS.E01.W01.G01.G01-Q11	
x2	=ESS.TS.SSS.E01.W01.G01.G01-Q11	

Cable name

=ESS.TS.SSS.E01.W01.G01.G01-WG04

Database name

ESS\_Cable\_diagram(Graphical)







Cable type

	Page / column	Source designation from	Connect. point
13		=ESS.TS.SSS.E01.UH03-UH01-XD01	27:2
14		=ESS.TS.SSS.E01.UH03-UH01-XD01	28:2

=ESS.TS.SSS.E01.W01.G01.G01-WG04

Connect. point	Target designation from	Page / column
x1	=ESS.TS.SSS.E01.W01.G01.G01-Q12	
x2	=ESS.TS.SSS.E01.W01.G01.G01-Q12	

<div><div>Cable name</div><div>Database name</div><div>Cable type</div></div> <div>=ESS.TS.SSS.E01.W01.G01.G01-WG05</div> <div>ESS_Cable_diagram(Graphical)</div>						
<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div></div> <div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div> <div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div> <div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div> <div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div> <div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div> <div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div> 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Cable name		=ESS.TS.SSS.E01.W01.G01.G01-WG06						
Database name		ESS_Cable_diagram(Graphical)						
Cable type								
	Page / column	Source designation from	Connect. point	<div>=ESS.TS.SSS.E01.W01.G01.G01-WG06</div>		Connect. point	Target designation from	Page / column
18		=ESS.TS.SSS.E01.UH03-UH01-XD01	11:1			3	=ESS.TS.SSS.E01.W01.G01.G01-BG14	
19		=ESS.TS.SSS.E01.UH03-UH01-XD01	10:1			1	=ESS.TS.SSS.E01.W01.G01.G01-BG14	
20		=ESS.TS.SSS.E01.UH03-UH01-XD01	12:1			4	=ESS.TS.SSS.E01.W01.G01.G01-BG14	

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cable diagram:WG03 :WG04 :WG05 :WG06	CHESSE Doc. NR: ESS-1090724	Document: &MB6	Page nr/Proj. tot count: 172 / 197

Cable name

Database name

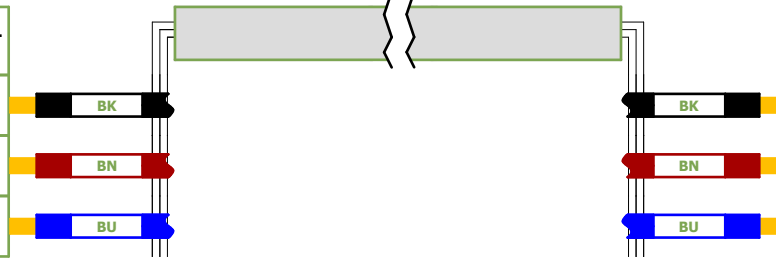
Cable type

=ESS.TS.SSS.E01.W01.G01.G01-WG07

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
1		=ESS.TS.SSS.E01.UH03-UH01-XD01	14:1
2		=ESS.TS.SSS.E01.UH03-UH01-XD01	13:1
3		=ESS.TS.SSS.E01.UH03-UH01-XD01	15:1

=ESS.TS.SSS.E01.W01.G01.G01-WG07



Connect. point	Target designation from	Page / column
3	=ESS.TS.SSS.E01.W01.G01.G01-BG15	
1	=ESS.TS.SSS.E01.W01.G01.G01-BG15	
4	=ESS.TS.SSS.E01.W01.G01.G01-BG15	

Cable name

Database name

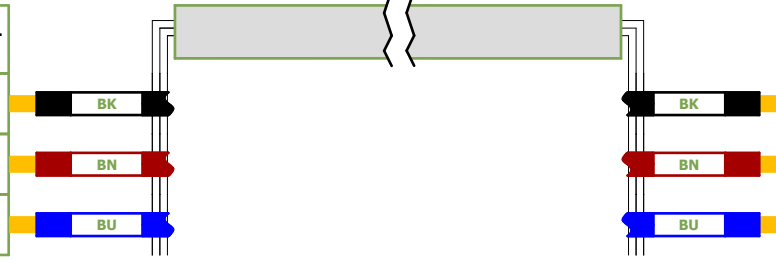
Cable type

=ESS.TS.SSS.E01.W01.G01.G02-WG01

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
4		=ESS.TS.SSS.E01.UH03-UH01-XD01	5:1
5		=ESS.TS.SSS.E01.UH03-UH01-XD01	4:1
6		=ESS.TS.SSS.E01.UH03-UH01-XD01	6:1

=ESS.TS.SSS.E01.W01.G01.G02-WG01



Connect. point	Target designation from	Page / column
3	=ESS.TS.SSS.E01.W01.G01.G02-BL01	
1	=ESS.TS.SSS.E01.W01.G01.G02-BL01	
4	=ESS.TS.SSS.E01.W01.G01.G02-BL01	

Cable name

Database name

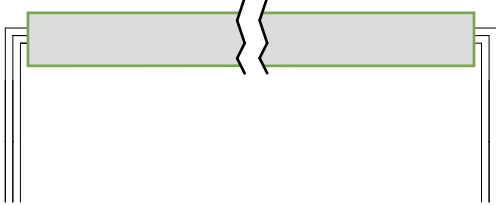
Cable type

=ESS.TS.SSS.E01.W01.G01.G02-WG02

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
7		=ESS.TS.SSS.E01.UH03-UH01-XD01	31:2
8		=ESS.TS.SSS.E01.UH03-UH01-XD01	32:2

=ESS.TS.SSS.E01.W01.G01.G02-WG02



Connect. point	Target designation from	Page / column
x1	=ESS.TS.SSS.E01.W01.G01.G02-Q11	
x2	=ESS.TS.SSS.E01.W01.G01.G02-Q11	

Cable name

Database name

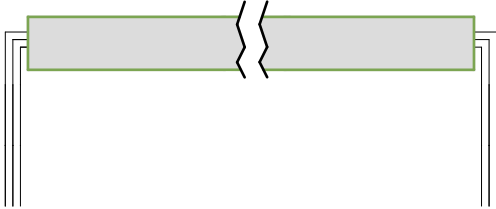
Cable type

=ESS.TS.SSS.E01.W01.G01.G02-WG03

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
9		=ESS.TS.SSS.E01.UH03-UH01-XD01	33:2
10		=ESS.TS.SSS.E01.UH03-UH01-XD01	34:2

=ESS.TS.SSS.E01.W01.G01.G02-WG03



Connect. point	Target designation from	Page / column
x1	=ESS.TS.SSS.E01.W01.G01.G02-Q12	
x2	=ESS.TS.SSS.E01.W01.G01.G02-Q12	

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER


REASON FOR REVISION CHANGE

REVISION

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CHANGE ORDER

REASON FOR REVISION CHANGE



EUROPEAN  
SPALLATION  
SOURCE

DRAWN BY (last edit)

MLN

CHECKED BY

APPROVED BY

Documentation protection: ISO 16016  
Software version: EPLAN Electric P8 2.8.3

(modification) DATE

DATE

DATE

DESIGN SITE

ESS

DRAWING TITLE

Target system control system cabinet

Functional location (FBS) Description

Physical location (LBS) Description

Page Description

Cable diagram:WG07 :WG01 :WG02 :WG03

Lifecycle label:

Preliminary

Functional location (FBS):

=ESS.TS.SSS.E01.K01

Physical location (LBS):

+

CHESS Doc. NR:

ESS-1090724

Document:

&MB7

Page nr/Proj. tot count:

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Cable name

Database name

Cable type

=ESS.TS.SSS.E01.W01.W01.U01-WG01

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
1		=ESS.TS.SSS.E01.W01.W01.U01-RL-	
2		=ESS.TS.SSS.E01.UH03-UH01-XD02	1:1
3		=ESS.TS.SSS.E01.UH03-UH01-XD02	2:1
4		=ESS.TS.SSS.E01.UH03-UH01-XD02	3:1

=ESS.TS.SSS.E01.W01.W01.U01-WG01



Connect. point	Target designation from	Page / column
	=ESS.TS.SSS.E01.UH03-UH01	
	=ESS.TS.SSS.E01.W01.W01.U01-RL+	
+	=ESS.TS.SSS.E01.W01.W01.U01-BT01	
-	=ESS.TS.SSS.E01.W01.W01.U01-BT01	

Cable name

Database name

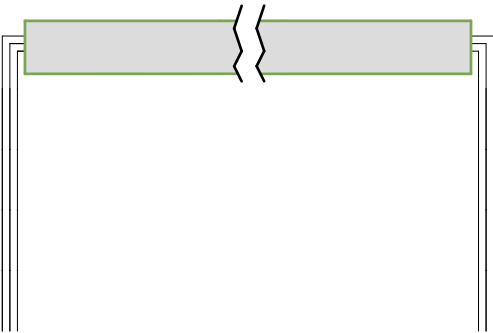
Cable type

=ESS.TS.SSS.E01.W01.W01.U01-WG02

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
5		=ESS.TS.SSS.E01.W01.W01.U01-RL-	
6		=ESS.TS.SSS.E01.UH03-UH01-XD02	4:1
7		=ESS.TS.SSS.E01.UH03-UH01-XD02	5:1
8		=ESS.TS.SSS.E01.UH03-UH01-XD02	6:1

=ESS.TS.SSS.E01.W01.W01.U01-WG02



Connect. point	Target designation from	Page / column
	=ESS.TS.SSS.E01.UH03-UH01	
	=ESS.TS.SSS.E01.W01.W01.U01-RL+	
+	=ESS.TS.SSS.E01.W01.W01.U01-BT02	
-	=ESS.TS.SSS.E01.W01.W01.U01-BT02	

Cable name

Database name

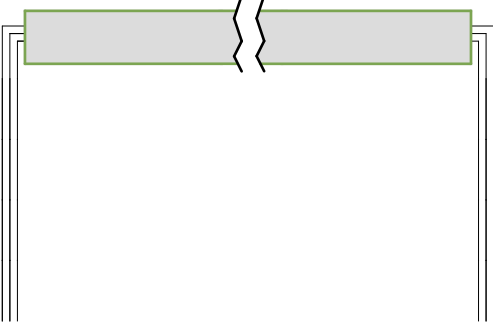
Cable type

=ESS.TS.SSS.E01.RN01-WG01

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
9		=ESS.TS.SSS.E01.RN01-RL-	
10		=ESS.TS.SSS.E01.UH03-UH01-XD02	7:1
11		=ESS.TS.SSS.E01.UH03-UH01-XD02	8:1
12		=ESS.TS.SSS.E01.UH03-UH01-XD02	9:1

=ESS.TS.SSS.E01.RN01-WG01



Connect. point	Target designation from	Page / column
	=ESS.TS.SSS.E01.UH03-UH01	
	=ESS.TS.SSS.E01.RN01-RL+	
+	=ESS.TS.SSS.E01.RN01-BT01	
-	=ESS.TS.SSS.E01.RN01-BT01	

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.RN01-WG02

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
1		=ESS.TS.SSS.E01.RN01-RL-	
2		=ESS.TS.SSS.E01.UH03-UH01-XD02	10:1
3		=ESS.TS.SSS.E01.UH03-UH01-XD02	11:1
4		=ESS.TS.SSS.E01.UH03-UH01-XD02	12:1

=ESS.TS.SSS.E01.RN01-WG02

Connect. point	Target designation from	Page / column
	=ESS.TS.SSS.E01.UH03-UH01	
	=ESS.TS.SSS.E01.RN01-RL+	
+	=ESS.TS.SSS.E01.RN01-BT02	
-	=ESS.TS.SSS.E01.RN01-BT02	

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.RN01-WG03

ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
5		=ESS.TS.SSS.E01.RN01-RL-	
6		=ESS.TS.SSS.E01.UH03-UH01-XD02	13:1
7		=ESS.TS.SSS.E01.UH03-UH01-XD02	14:1
8		=ESS.TS.SSS.E01.UH03-UH01-XD02	15:1

=ESS.TS.SSS.E01.RN01-WG03

Connect. point	Target designation from	Page / column
	=ESS.TS.SSS.E01.UH03-UH01	
	=ESS.TS.SSS.E01.RN01-RL+	
+	=ESS.TS.SSS.E01.RN01-BT03	
-	=ESS.TS.SSS.E01.RN01-BT03	

Cable name

Database name

Cable type

=ESS.TS.SSS.E01.RN02-WG01

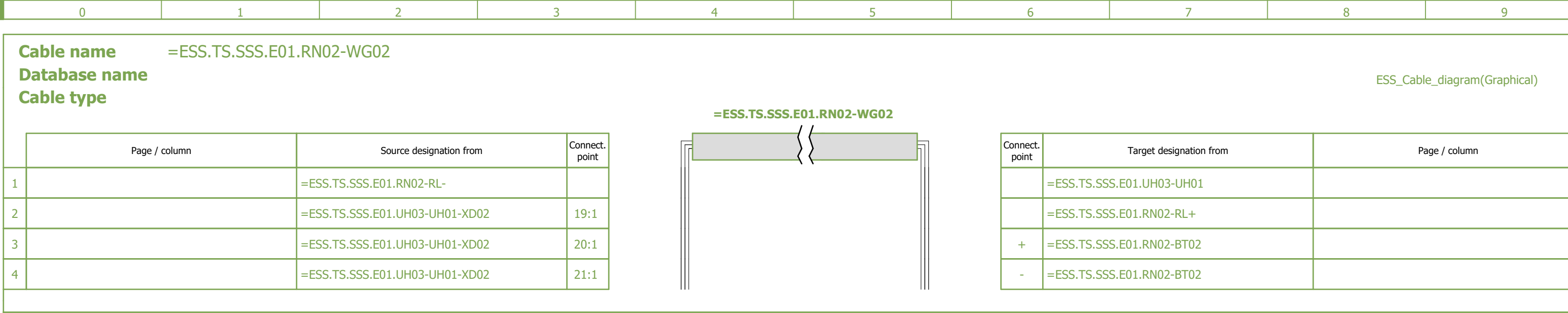
ESS\_Cable\_diagram(Graphical)

	Page / column	Source designation from	Connect. point
9		=ESS.TS.SSS.E01.RN02-RL-	
10		=ESS.TS.SSS.E01.UH03-UH01-XD02	16:1
11		=ESS.TS.SSS.E01.UH03-UH01-XD02	17:1
12		=ESS.TS.SSS.E01.UH03-UH01-XD02	18:1

=ESS.TS.SSS.E01.RN02-WG01

Connect. point	Target designation from	Page / column
	=ESS.TS.SSS.E01.UH03-UH01	
	=ESS.TS.SSS.E01.RN02-RL+	
+	=ESS.TS.SSS.E01.RN02-BT01	
-	=ESS.TS.SSS.E01.RN02-BT01	



























































**Cable name** =ESS.TS.SSS.E01.UH03-WG01

## Database name

**Cable type** UNIPUR-CP 25x1,5mm<sup>2</sup>

### ESS\_Cable\_diagram(Graphical)

**=ESS.TS.SSS.E01.UH03-WG01**

	Page / column	Source designation from	Connect. point				Connect. point	Target designation from	Page / column
23		=ESS.TS.SSS.E01.UH03-UH01-XD01	33:1				4	=ESS.TS.SSS.E01.K01-QA07	
24		=ESS.TS.SSS.E01.UH03-UH01-XD01	35:1				4	=ESS.TS.SSS.E01.K01-QA08	
25		=ESS.TS.SSS.E01.K01-KF02	9				38:2	=ESS.TS.SSS.E01.UH03-UH01-XD01	
26		=ESS.TS.SSS.E01.K01-KF02	10				40:2	=ESS.TS.SSS.E01.UH03-UH01-XD01	
27									
28									
29		=ESS.TS.SSS.E01.UH03-UH01-XD01	PE				PE	=ESS.TS.SSS.E01.K01-X1	
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
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49									

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Life cycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE	Page Description	CHES Doc. NR:	Document:	Page nr/Proj. tot count:
						ESS	Cable diagram:WG01	ESS-1090724	&MB12	178 / 197	























































**Cable name** =ESS.TS.SSS.E01.UH03-WG01

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** UNIPUR-CP 25x1,5mm<sup>2</sup>

**=ESS.TS.SSS.E01.UH03-WG01**

	Page / column	Source designation from	Connect. point				Connect. point	Target designation from	Page / column
50									
51									
52									
53									
54									
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57									
58									
59									
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69									
70									
71									
72									
73									
74									
75									
76									

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cable diagram:WG01	CHESS Doc. NR: ESS-1090724	Document: &MB13	Page nr/Proj. tot count: 179 / 197



























**Cable name** =ESS.TS.SSS.E01.UH03-WG01

## Database name

### ESS\_Cable\_diagram(Graphical)

**Cable type** UNIPUR-CP 25x1,5mm<sup>2</sup>

**=ESS.TS.SSS.E01.UH03-WG01**

	Page / column	Source designation from	Connect. point			Connect. point	Target designation from	Page / column
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88		=ESS.TS.SSS.E01.UH03-UH01-XD01	28:1				30:1 =ESS.TS.SSS.E01.UH03-UH01-XD01	
89			MP				PE =ESS.TS.SSS.E01.UH03-UH01-X1	
90		=ESS.TS.SSS.E01.K01-XD02	7:2				26:1 =ESS.TS.SSS.E01.UH03-UH01-XD01	
91		=ESS.TS.SSS.E01.UH03-WG01					PE =ESS.TS.SSS.E01.UH03-UH01-X1	
92			MP				=ESS.TS.SSS.E01.UH03-WG01	
93								
94								
95								
96								

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	 <div>EUROPEAN SPALLATION SOURCE</div>	DRAWN BY (last edit) MLN	(modification) DATE	DRAWING TITLE Target system control system cabinet	Lifecycle label: Preliminary	Page revision:	Project revision: 0.2	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.K01			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE ESS	Page Description Cable diagram:WG01	CHESS Doc. NR: ESS-1090724	Document: &MB14	Page nr/Proj. tot count: 180 / 191	



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Cable name

=ESS.TS.SSS.E01.UH03-WG02

Database name

Cable type

UNIPUR-CP 25x1,0mm²

ESS\_Cable\_diagram(Graphical)

Page / column

Source designation from

Connect.  
point

28

=ESS.TS.SSS.E01.K01-X1

MP

29

=ESS.TS.SSS.E01.UH03-WG02

Connect.  
point

Target designation from

Page / column

=ESS.TS.SSS.E01.UH03-WG02

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER

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REASON FOR REVISION CHANGE

REVISION

REVISION DATE

CHANGE ORDER

REASON FOR REVISION CHANGE

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EUROPEAN  
SPALLATION  
SOURCE

DRAWN BY (last edit)

MLN

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APPROVED BY

Documentation protection: ISO 16016  
Software version: EPLAN Electric P8 2.8.3

(modification) DATE

DATE

DATE

DESIGN SITE

ESS

DRAWING TITLE

Target system control system cabinet

Functional location (FBS) Description

Physical location (LBS) Description

Page Description

Cable diagram:WG02

Lifecycle label:

Preliminary

Page revision:

0.2

Project revision:

Page size:

Functional location (FBS):

=ESS.TS.SSS.E01.K01

Physical location (LBS):

+

CHESS Doc. NR:

ESS-1090724

Document:

&MB16

Page nr/Proj. tot count:

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Cable overview

ESS\_Cable\_overview

	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
55	=ESS.TS.SSS.E01.W01.W01.UP01-WG03	=ESS.TS.SSS.E01.W01.W01.UP01-X01:1	=ESS.TS.SSS.E01.W01.W01.UP01-BS01			2	=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.0
56		=ESS.TS.SSS.E01.W01.W01.UP01-X101:2					=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.0
57	=ESS.TS.SSS.E01.W01.W01.UP01-WG04	=ESS.TS.SSS.E01.W01.W01.UP01-X02:1	=ESS.TS.SSS.E01.W01.W01.UP01-BS02			2	=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.1
58		=ESS.TS.SSS.E01.W01.W01.UP01-X101:2					=ESS.TS.SSS.E01.W01.W01.UP01&FS/219.1
59	=ESS.TS.SSS.E01.W01.W01.UP02-WG01	=ESS.TS.SSS.E01.W01.W01.UP02-X01:1	=ESS.TS.SSS.E01.K01-KF102:1			2	=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.3
60		=ESS.TS.SSS.E01.W01.W01.UP02-X101:2					=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.3
61	=ESS.TS.SSS.E01.W01.W01.UP02-WG02	=ESS.TS.SSS.E01.W01.W01.UP02-X02:1	=ESS.TS.SSS.E01.K01-KF102:1			2	=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.4
62		=ESS.TS.SSS.E01.W01.W01.UP02-X101:2					=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.4
63	=ESS.TS.SSS.E01.W01.W01.UP02-WG03	=ESS.TS.SSS.E01.W01.W01.UP02-X01:1	=ESS.TS.SSS.E01.W01.W01.UP02-BS01			2	=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.3
64		=ESS.TS.SSS.E01.W01.W01.UP02-X101:2					=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.3
65	=ESS.TS.SSS.E01.W01.W01.UP02-WG04	=ESS.TS.SSS.E01.W01.W01.UP02-X02:1	=ESS.TS.SSS.E01.W01.W01.UP02-BS02			2	=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.4
66		=ESS.TS.SSS.E01.W01.W01.UP02-X101:2					=ESS.TS.SSS.E01.W01.W01.UP02&FS/219.4
67	=ESS.TS.SSS.E01.RN01.UP01-WG01	=ESS.TS.SSS.E01.RN01.UP01-X01:1	=ESS.TS.SSS.E01.K01-KF103:1			2	=ESS.TS.SSS.E01.RN01.UP01&FS/219.6
68		=ESS.TS.SSS.E01.RN01.UP01-X101:2					=ESS.TS.SSS.E01.RN01.UP01&FS/219.6
69	=ESS.TS.SSS.E01.RN01.UP01-WG02	=ESS.TS.SSS.E01.RN01.UP01-X01:1	=ESS.TS.SSS.E01.RN01.UP01-BS01			2	=ESS.TS.SSS.E01.RN01.UP01&FS/219.6
70		=ESS.TS.SSS.E01.RN01.UP01-X101:2					=ESS.TS.SSS.E01.RN01.UP01&FS/219.6
71	=ESS.TS.SSS.E01.RN01.UP02-WG01	=ESS.TS.SSS.E01.RN01.UP02-X01:1	=ESS.TS.SSS.E01.K01-KF103:1			2	=ESS.TS.SSS.E01.RN01.UP02&FS/219.7
72		=ESS.TS.SSS.E01.RN01.UP02-X101:2					=ESS.TS.SSS.E01.RN01.UP02&FS/219.7

# Cable overview

ESS\_Cable\_overview

	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
73	=ESS.TS.SSS.E01.RN01.UP02-WG02	=ESS.TS.SSS.E01.RN01.UP02-X01:1	=ESS.TS.SSS.E01.RN01.UP02-BS01			2	=ESS.TS.SSS.E01.RN01.UP02&FS/219.7
74		=ESS.TS.SSS.E01.RN01.UP02-X101:2					=ESS.TS.SSS.E01.RN01.UP02&FS/219.7
75	=ESS.TS.SSS.E01.RN02.UP01-WG01	=ESS.TS.SSS.E01.RN02.UP01-X01:1	=ESS.TS.SSS.E01.K01-KF104:1			2	=ESS.TS.SSS.E01.RN02.UP01&FS/220.0
76		=ESS.TS.SSS.E01.RN02.UP01-X101:2					=ESS.TS.SSS.E01.RN02.UP01&FS/220.0
77	=ESS.TS.SSS.E01.RN02.UP01-WG02	=ESS.TS.SSS.E01.RN02.UP01-X01:1	=ESS.TS.SSS.E01.RN02.UP01-BS01			2	=ESS.TS.SSS.E01.RN02.UP01&FS/220.0
78		=ESS.TS.SSS.E01.RN02.UP01-X101:2					=ESS.TS.SSS.E01.RN02.UP01&FS/220.0
79	=ESS.TS.SSS.E01.RN02.UP02-WG01	=ESS.TS.SSS.E01.RN02.UP02-X01:1	=ESS.TS.SSS.E01.K01-KF104:1			2	=ESS.TS.SSS.E01.RN02.UP02&FS/220.2
80		=ESS.TS.SSS.E01.RN02.UP02-X101:2					=ESS.TS.SSS.E01.RN02.UP02&FS/220.2
81	=ESS.TS.SSS.E01.RN02.UP02-WG02	=ESS.TS.SSS.E01.RN02.UP02-X01:1	=ESS.TS.SSS.E01.RN02.UP02-BS01			2	=ESS.TS.SSS.E01.RN02.UP02&FS/220.2
82		=ESS.TS.SSS.E01.RN02.UP02-X101:2					=ESS.TS.SSS.E01.RN02.UP02&FS/220.2
83	=ESS.TS.SSS.E01.B01.B06-WG01	=ESS.TS.SSS.E01.B01.B06-X01:1	=ESS.TS.SSS.E01.K01-KF105:1			2	=ESS.TS.SSS.E01.B01.B06&FS/220.4
84		=ESS.TS.SSS.E01.B01.B06-X101:2					=ESS.TS.SSS.E01.B01.B06&FS/220.4
85	=ESS.TS.SSS.E01.B01.B06-WG02	=ESS.TS.SSS.E01.B01.B06-X02:1	=ESS.TS.SSS.E01.K01-KF105:1			2	=ESS.TS.SSS.E01.B01.B06&FS/220.6
86		=ESS.TS.SSS.E01.B01.B06-X101:2					=ESS.TS.SSS.E01.B01.B06&FS/220.6
87	=ESS.TS.SSS.E01.B01.B06-WG03	=ESS.TS.SSS.E01.B01.B06-X01:1	=ESS.TS.SSS.E01.B01.B06-BS01			2	=ESS.TS.SSS.E01.B01.B06&FS/220.4
88		=ESS.TS.SSS.E01.B01.B06-X101:2					=ESS.TS.SSS.E01.B01.B06&FS/220.4
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<div>Cable overview</div> <div>ESS_Cable_overview</div> <table><tr><td></td><td>FBS-Tag LBS-Tag Database Name</td><td>From</td><td>To</td><td>Cable type</td><td>Cond./ Ø</td><td>Used Conductors</td><td>Page</td></tr><tr><td>90</td><td></td><td>=ESS.TS.SSS.E01.B01.B06-X101:2</td><td></td><td></td><td></td><td></td><td>=ESS.TS.SSS.E01.B01.B06&amp;FS/220.6</td></tr></table>												FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page	90		=ESS.TS.SSS.E01.B01.B06-X101:2					=ESS.TS.SSS.E01.B01.B06&FS/220.6
	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page																			
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary	0.2																	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS):																		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS):																		
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3	DESIGN SITE	Page Description	CHESS Doc. NR:	Document:	Page nr/Proj. tot count:																
					ESS		-WG04...-WG04	ESS-1090724	&MB19	185 / 197																



# EUROPEAN SPALLATION SOURCE

Designation:Target system control system cabinet

Functional Location (FBS):=ESS.TS.SSS.E01.UH01

Highest physical Location (LBS):+ESS.D02.115.4005.003

└→ physical Location (LBS): +

## FBS Structure

ESS  
ESS.TS  
ESS.TS.SSS  
ESS.TS.SSS.E01  
ESS.TS.SSS.E01.UH03

## LBS Structure

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		MLN		Target system control system cabinet	Preliminary		0.2	
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description	Functional location (FBS): =ESS.TS.SSS.E01.UH03			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cover Page	CHESS Doc. NR: ESS-1090724	Document: &AA1	Page nr/Proj. tot count: 186 / 197

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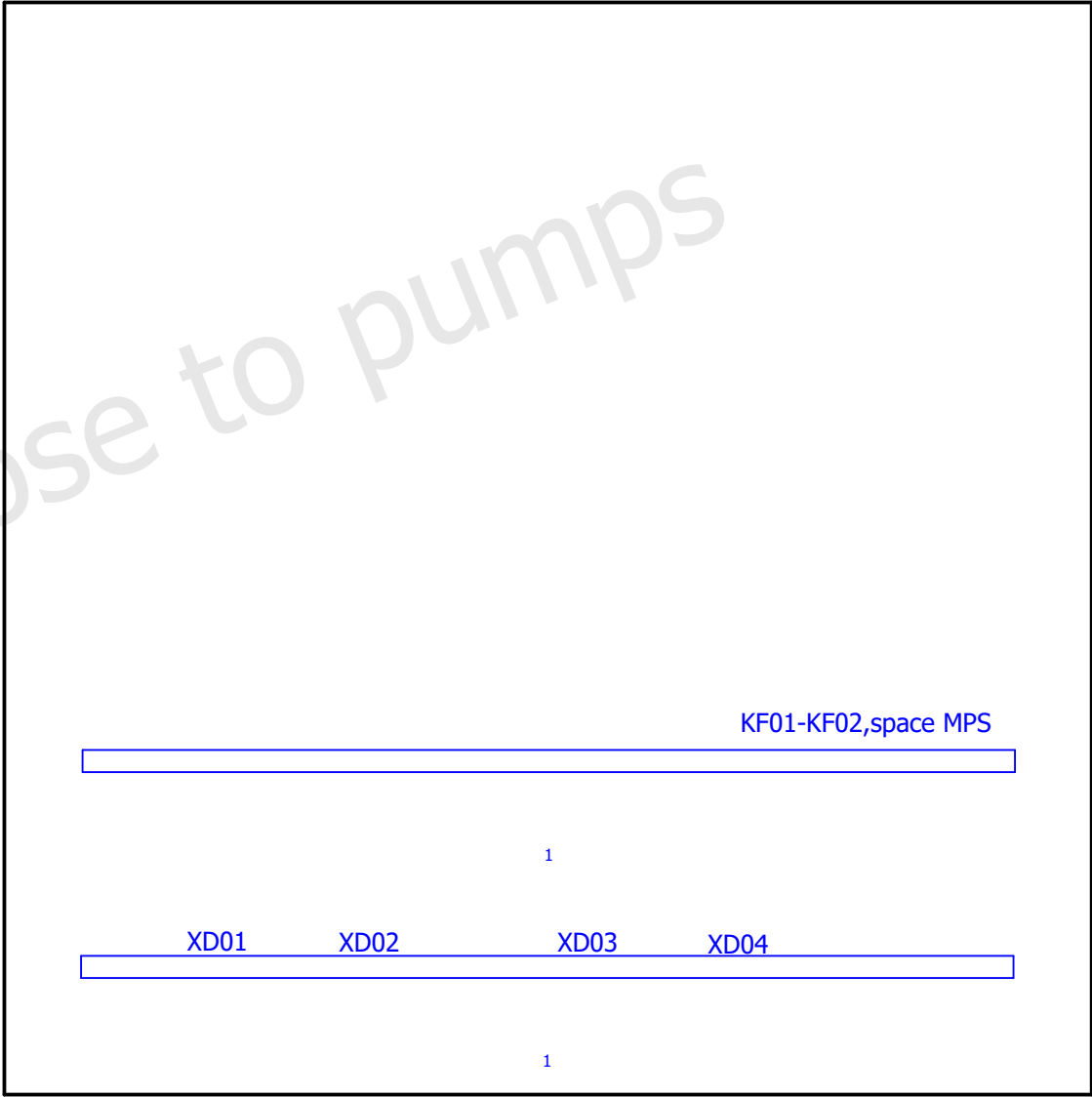
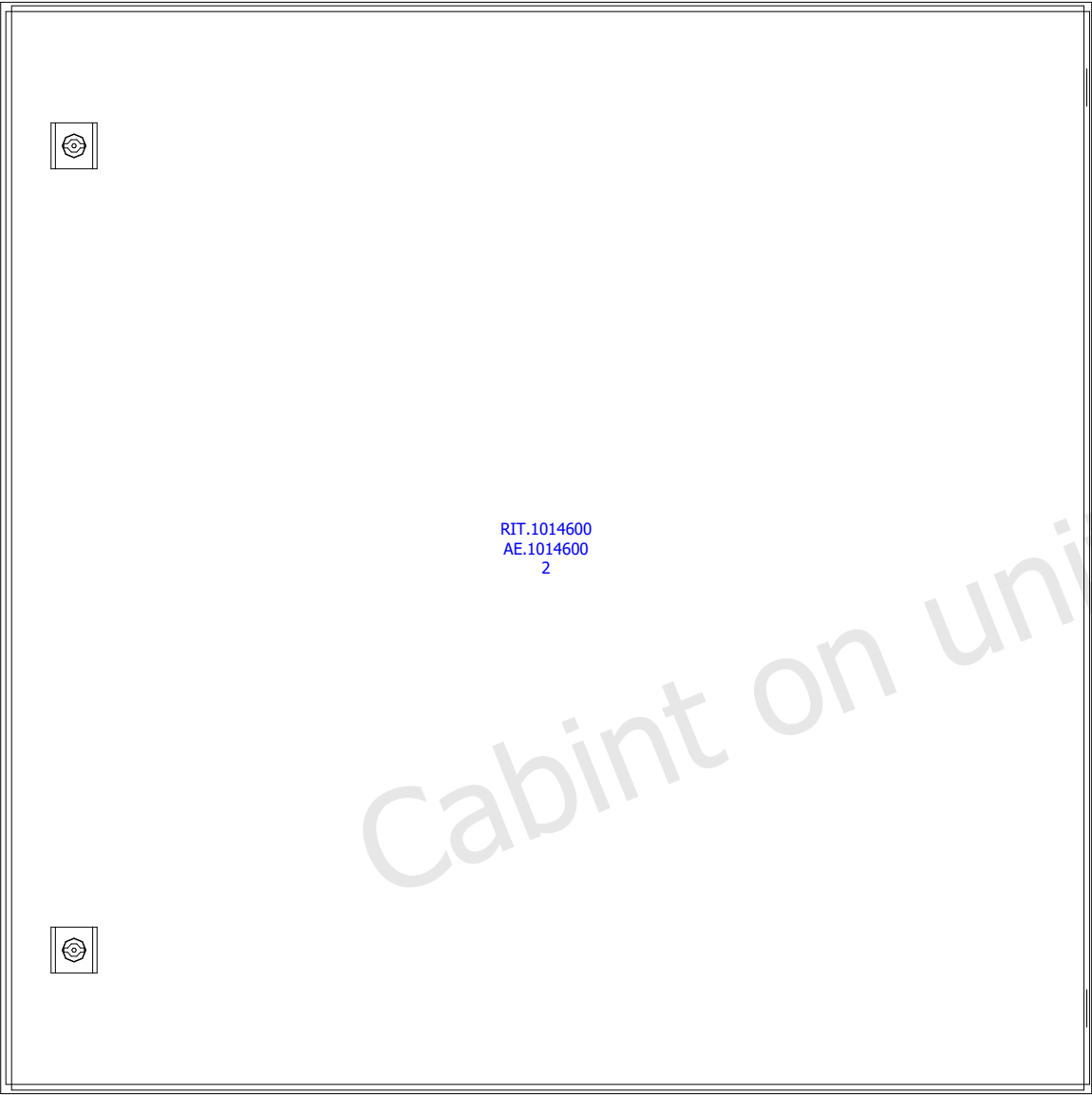
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=ESS.TS.SSS.E01.UH03

AA/1	184	Title page / cover sheet	Cover Page		2021-07-08	MLN
AB/1	185	Table of contents	Table of contents		2021-07-08	MLN
FS/2	186	Panel layout	Layout Cabinet		2020-11-06	MLN
FS/3	187	Schematic multi-line	Current slip ring		2020-11-06	MLN
MA/1	188	Terminal diagram	-XD04 (=ESS.TS.SSS.E01.UH03)		2021-07-08	MLN
PC/1	189	Parts list	+		2021-07-08	MLN

Cabint on unit close to pumps







Parts list

ESS\_Parts\_list [FBS]

	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number
1		1	AE Compact enclosure, WHD: 760x760x300 mm, Stainless steel 1.4301	AE.1014600	Rittal GmbH	RIT.1014600	ESS-3394341
2		2	DIN rail perforated	NS 35/15 PERF 2000MM	Phoenix Contact	PXC.1201730	ESS-3389874
3	=ESS.TS.SSS.E01.UH03-XD04	1	WDU 16 Feed-through terminal block	WDU 16	Weidmueller	WEI.1020400000	ESS-2606163



# EUROPEAN SPALLATION SOURCE

Designation:Target system control system cabinet

Functional Location (FBS):=ESS.TS.SSS.E01.UH01

Highest physical Location (LBS):+ESS.D02.115.4005.003

↳ physical Location (LBS): +

## FBS Structure

ESS  
ESS.TS  
ESS.TS.SSS  
ESS.TS.SSS.E01  
ESS.TS.SSS.E01.UH01

## LBS Structure

REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE	<div><div>EUROPEAN SPALLATION SOURCE</div></div>	DRAWN BY (last edit)	(modification) DATE	DRAWING TITLE	Lifecycle label:	Page revision:	Project revision:	Page size:
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description	Physical location (LBS): +			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cover Page	CHESS Doc. NR: ESS-1090724	Document: &AA1	Page nr/Proj. tot count: 192 / 197



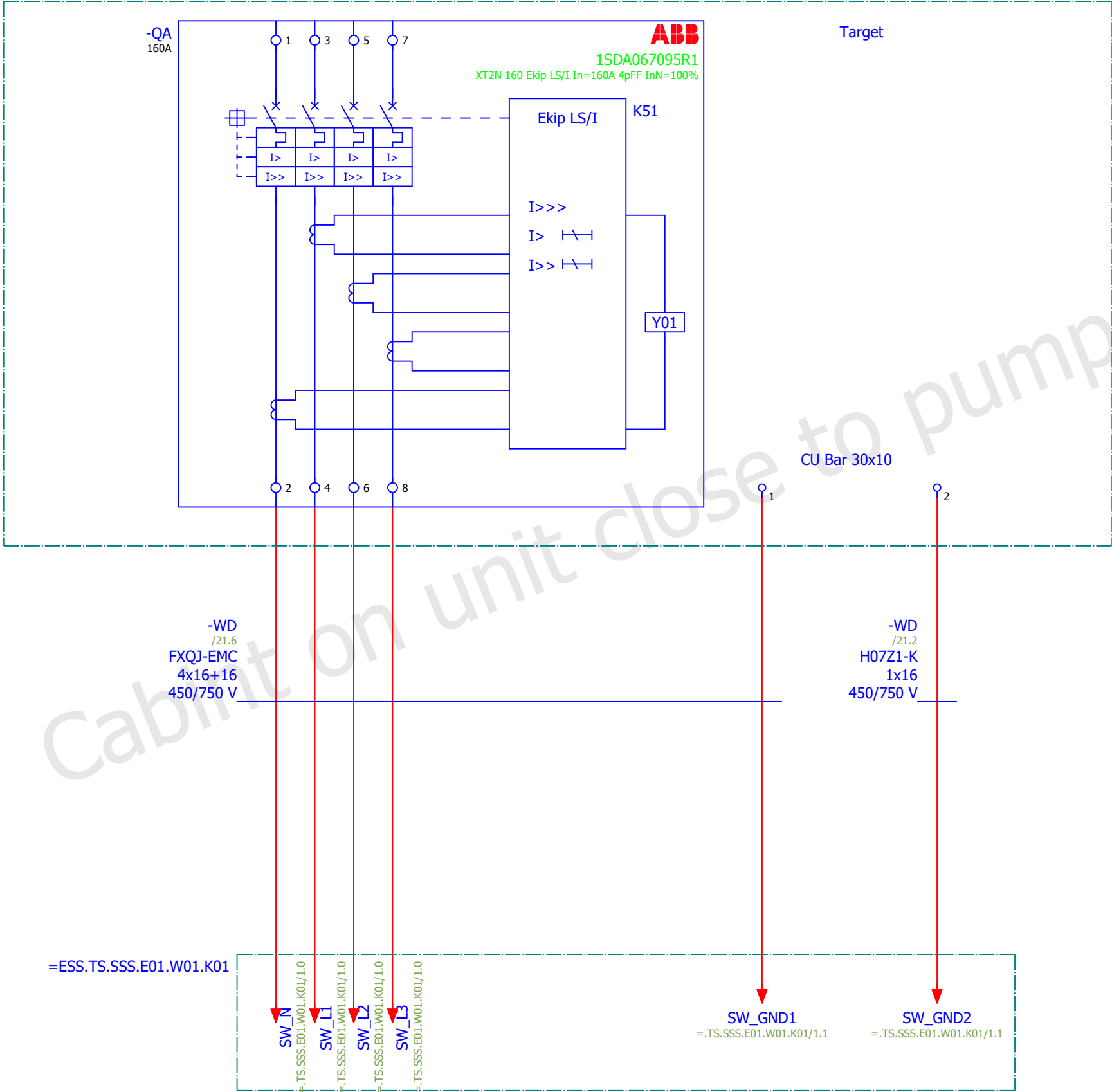
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=ESS.TS.SSS.E01.UH01

AA/1	190	Title page / cover sheet	Cover Page		2021-07-08	MLN
AB/1	191	Table of contents	Table of contents		2021-07-08	MLN
FS/21	192	Schematic multi-line	Power supply feeding line		2020-12-17	MLN
PC/1	193	Parts list	+		2021-07-08	MLN
MB/1	194	Cable overview	-WD...-WD		2021-07-08	MLN
MB/2	195	Cable diagram	Cable diagram:WD		2021-07-08	MLN



Parts list

ESS\_Parts\_list [FBS]

	FBS-Tag LBS-Tag ESS-Name	Quantity	Designation	Type number	Manufacturer	Part number	ESS-Part number
1	-QA	1	XT2N 160 Ekip LS/I In=160A 4pFF InN=100%	XT2N 160 Ekip LS/I In=160A 4pFF InN=100%	ABB	ABB.1SDA067095R1	ESS-2589449
2	=ESS.TS.SSS.E01.UH01-WD	1	FXQJ-EMC 4x16+16	FXQJ-EMC	Nexans	NEX.15143598	ESS-2605219
3	=ESS.TS.SSS.E01.UH01-WD	1	Halogen free Grounding Cable, 16 mm²	H07Z1-K	Nexans	NEX.0345415	ESS-2253679

# Cable overview

ESS\_Cable\_overview

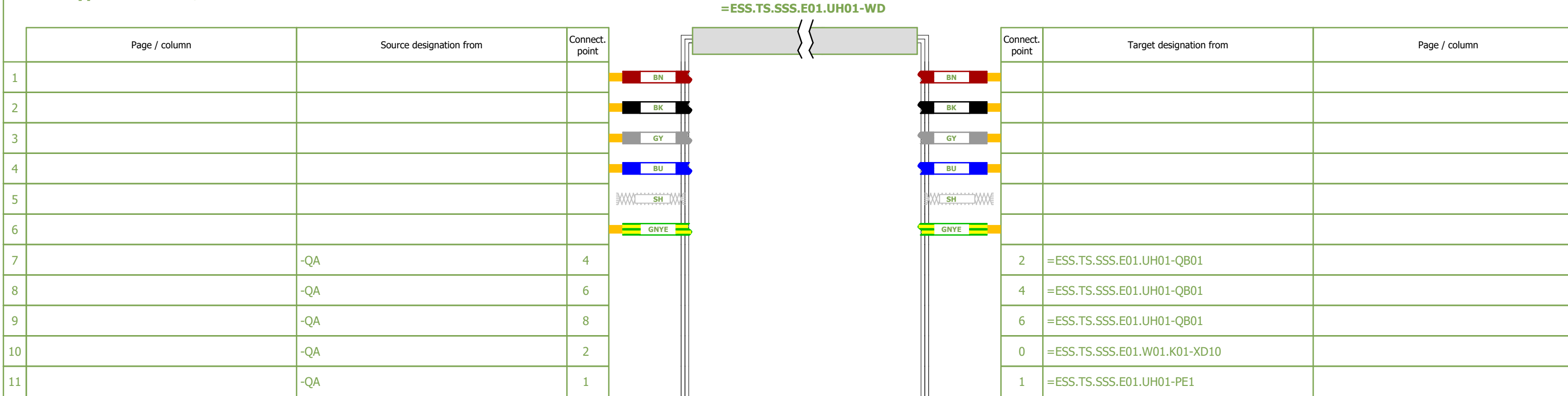
	FBS-Tag LBS-Tag Database Name	From	To	Cable type	Cond./ Ø	Used Conductors	Page
1	=ESS.TS.SSS.E01.UH01-WD	=-QA:1	=ESS.TS.SSS.E01.UH01-PE1	FXQJ-EMC	4x16+16mm²	5	21.2
2			=ESS.TS.SSS.E01.W01.K01-XD10				
3			=ESS.TS.SSS.E01.UH01-QB01				

**Cable name** =ESS.TS.SSS.E01.UH01-WD

## Database name

### ESS\_Cable\_diagram(Graphical)

<b>Cable type</b>	FXQJ-EMC 4x16+16mm <sup>2</sup>
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REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		CHECKED BY	DATE	Functional location (FBS) Description =ESS.TS.SSS.E01.UH01	Functional location (FBS):			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		APPROVED BY	DATE	Physical location (LBS) Description +	Physical location (LBS):			
REVISION	REVISION DATE	CHANGE ORDER	REASON FOR REVISION CHANGE		Documentation protection: ISO 16016 Software version: EPLAN Electric P8 2.8.3		DESIGN SITE ESS	Page Description Cable diagram:WD	CHESS Doc. NR: ESS-1090724	Document: &MB2	Page nr/Proj. tot count: 197 / 197