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Circuit diagrams Schaltungsunterlagen

designation: CP Lab
 Bezeichnung: CP Lab
 Customer:
 Kunde:
 Plant identifier S5M0T7CP Lab S7-IM155-6DP, HMI TP700 V6
 Anlagenkennzeichen CP Lab S7-IM155-6DP, HMI TP700 V6
 remark: V6 (HMI V2)
 Bemerkung:
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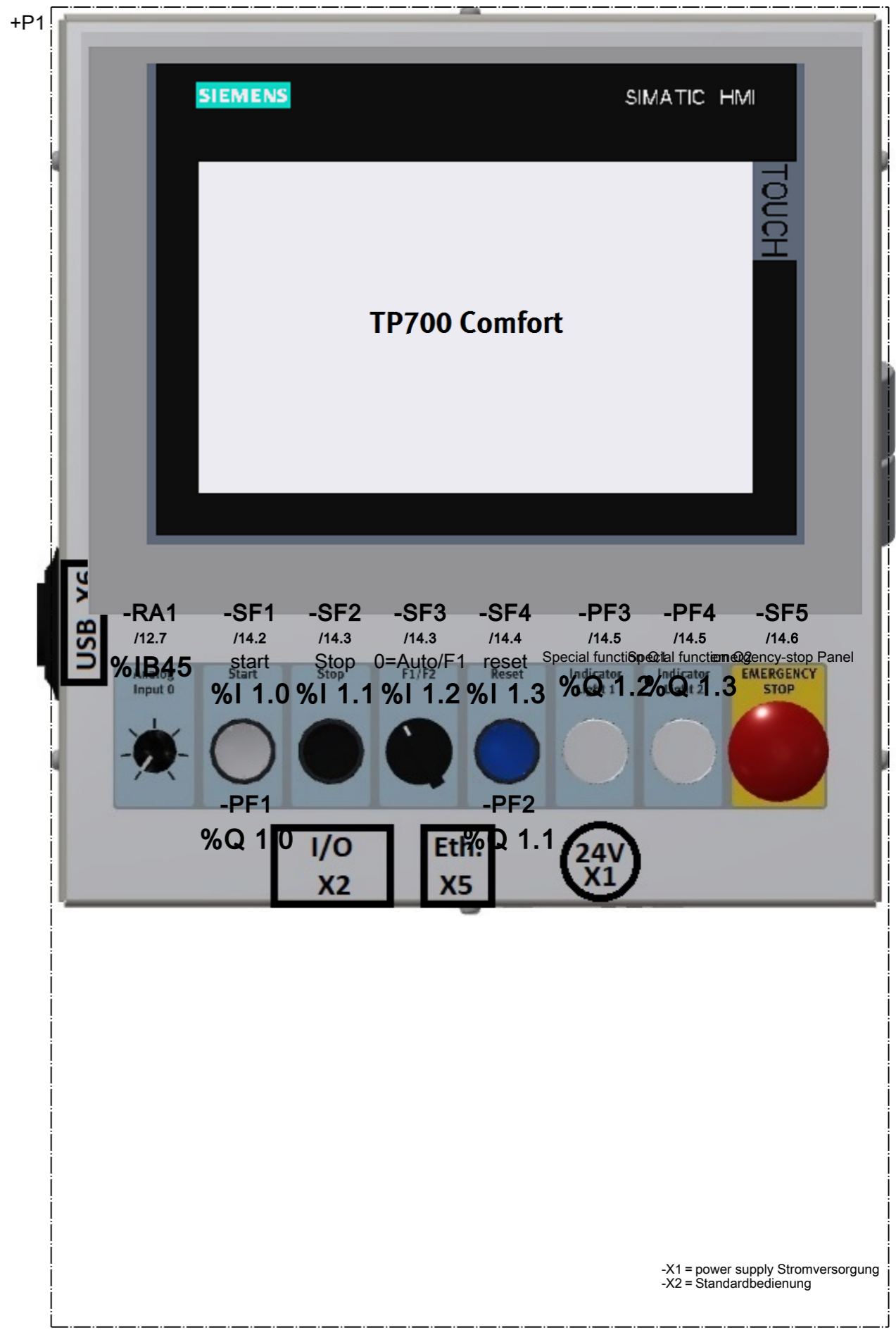
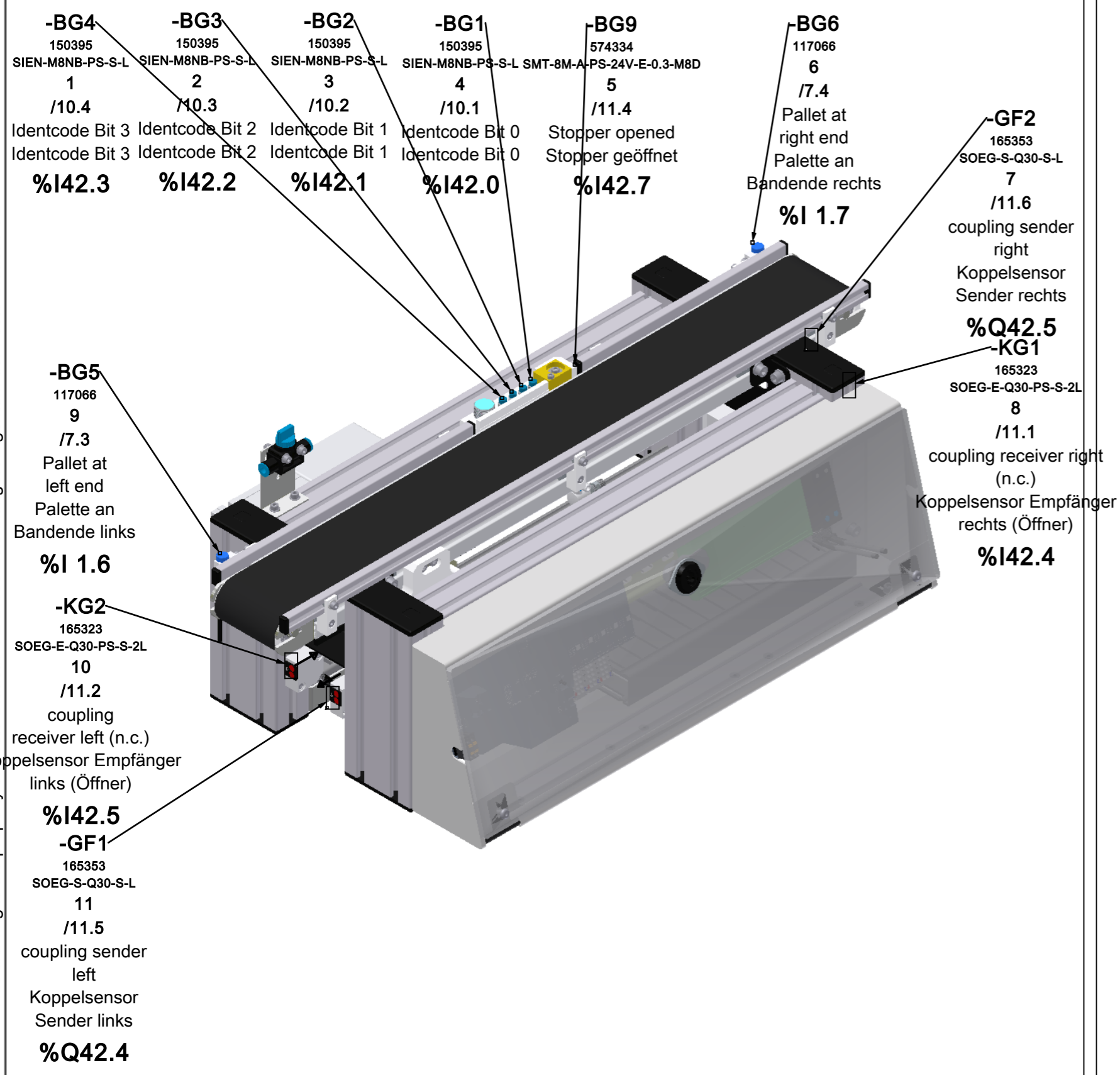
<<S3M0T1X8/16								2 >>		
Date	28.11.2019	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf				Title page/cover sheet		S-Nr.		
Ed. by.	espe					Titel- / Deckblatt		PSP / DPJ VN		
Drw.No.	N:	FFDMD06DE	EPL0VZFG7M	\\festo.net\DFS01\INT\Data\EPLAN\DATA_xx\DE\Projects\Didactic\SC products\24 CP-Lab\V6\CP Lab V6 2019-11-28.elk				= S5M0T7 CP Lab S7-IM155-6DP, HMI TP700		Page1
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-X1 = power supply Stromversorgung
-X2 = Standardbedienung

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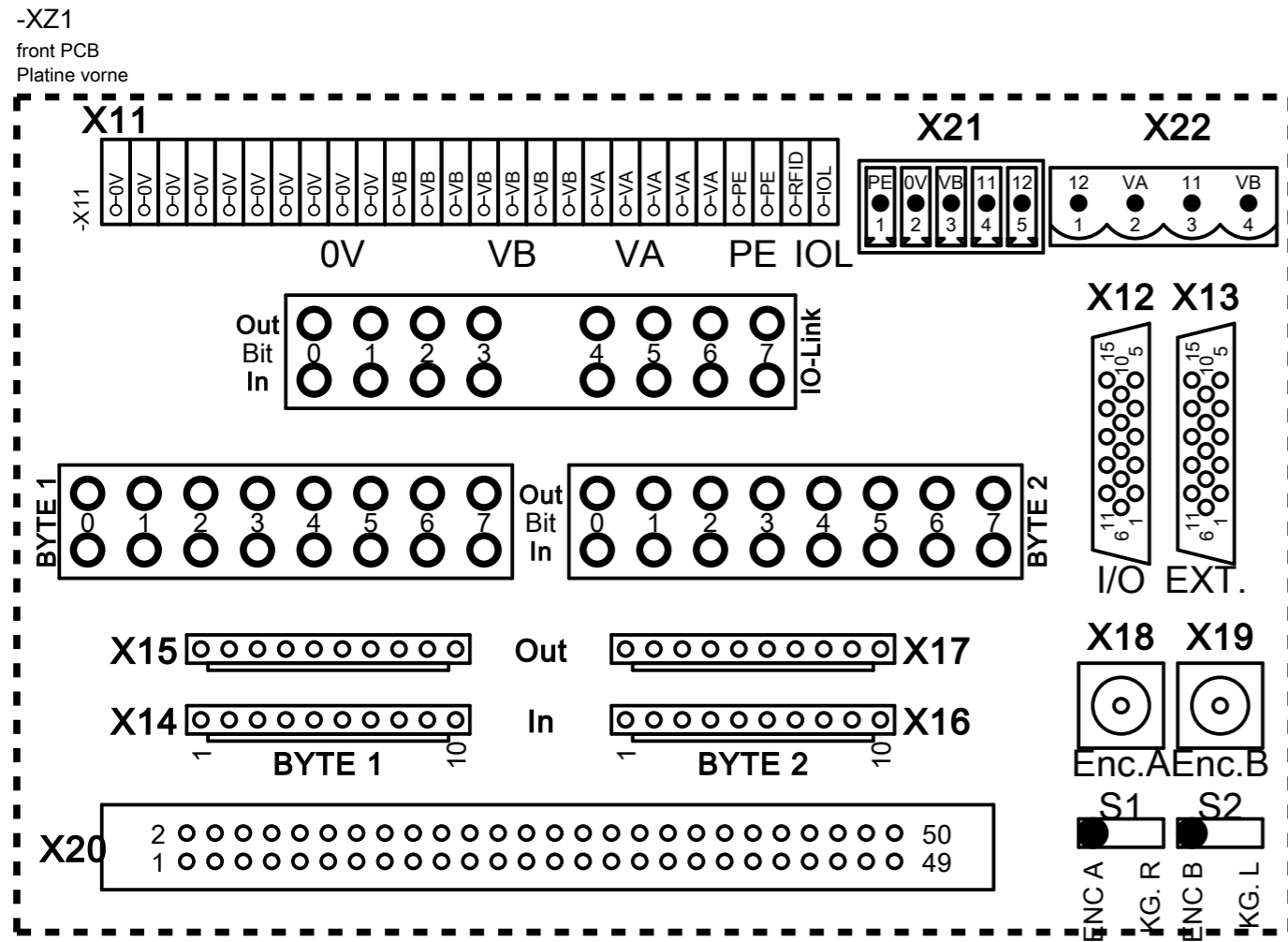
FESTO Assembly Aufbau

EPL0VZFG7M | \Festo.net\DFS01\INTData\EPLAN\DATA_xx\DE\Projects\Didactic\SC products\221CP-Lab\IV6\CP Lab V6 2019-11-28.elk

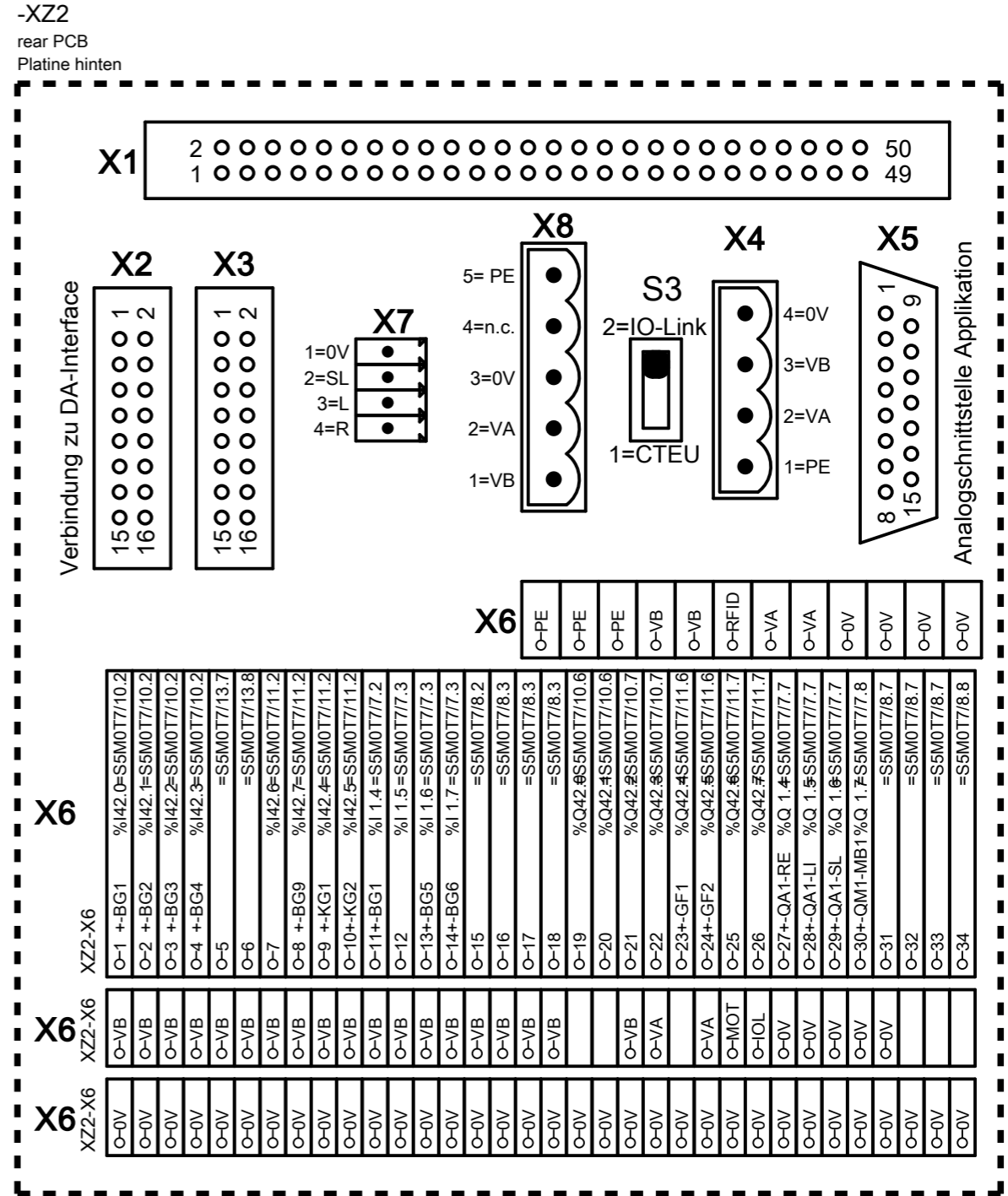
S-Nr.			
PSP / DPJ	VN	= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
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V3
PCB's Rev 2019-01
Platinen Rev 2019-01



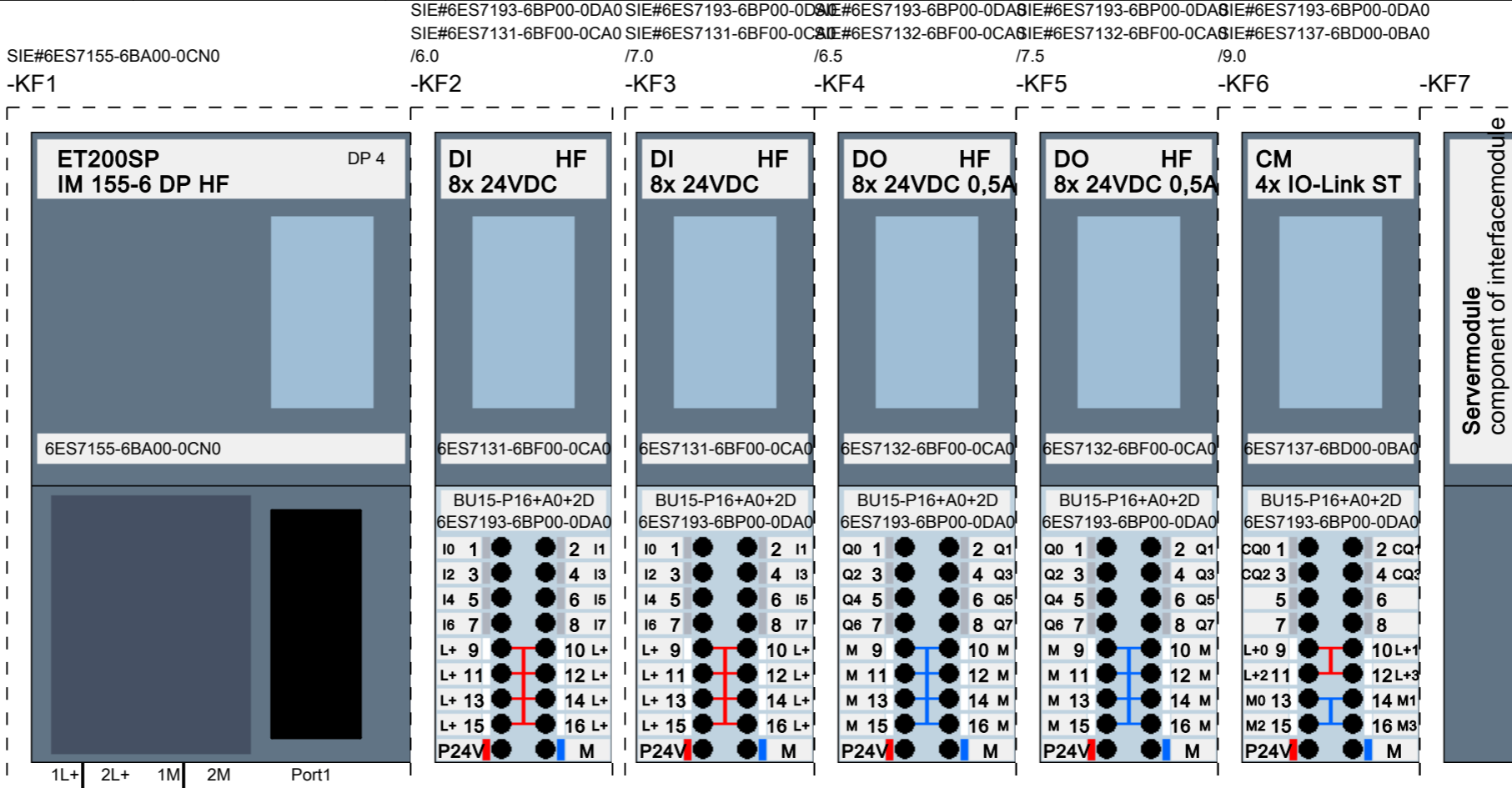
- XZ1-X11 = terminals PCB front side Klemmen Platine vorne
- XZ1-X12 = controlpanel basic functions Bedienfeld Grundfunktionen
- XZ1-X13 = controlpanel additional buttons Bedienfeld Zusatztasten
- XZ1-X14 = Input-Byte 1 Eingangs-Byte 1
- XZ1-X15 = Output-Byte 1 Ausgangs-Byte 1
- XZ1-X16 = Input-Byte 2 Eingangs-Byte 2
- XZ1-X17 = Output-Byte 2 Ausgangs-Byte 2
- XZ1-X18 = incremental encoder BNC-Connector 1 Inkrementalgeber BNC-Anschluss 1
- XZ1-X19 = incremental encoder BNC-Connector 2 Inkrementalgeber BNC-Anschluss 2
- XZ1-X20 = connection to opposite PCB Verbindung zu gegenüberliegender Platine
- XZ1-X21 = Powersupply HMI HMI Stromversorgung
- XZ1-X22 = external Emergency-Stop Connector Not-Halt-Anschluss extern



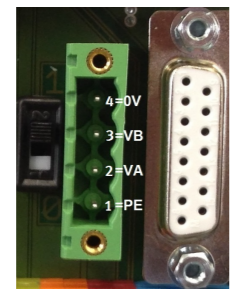
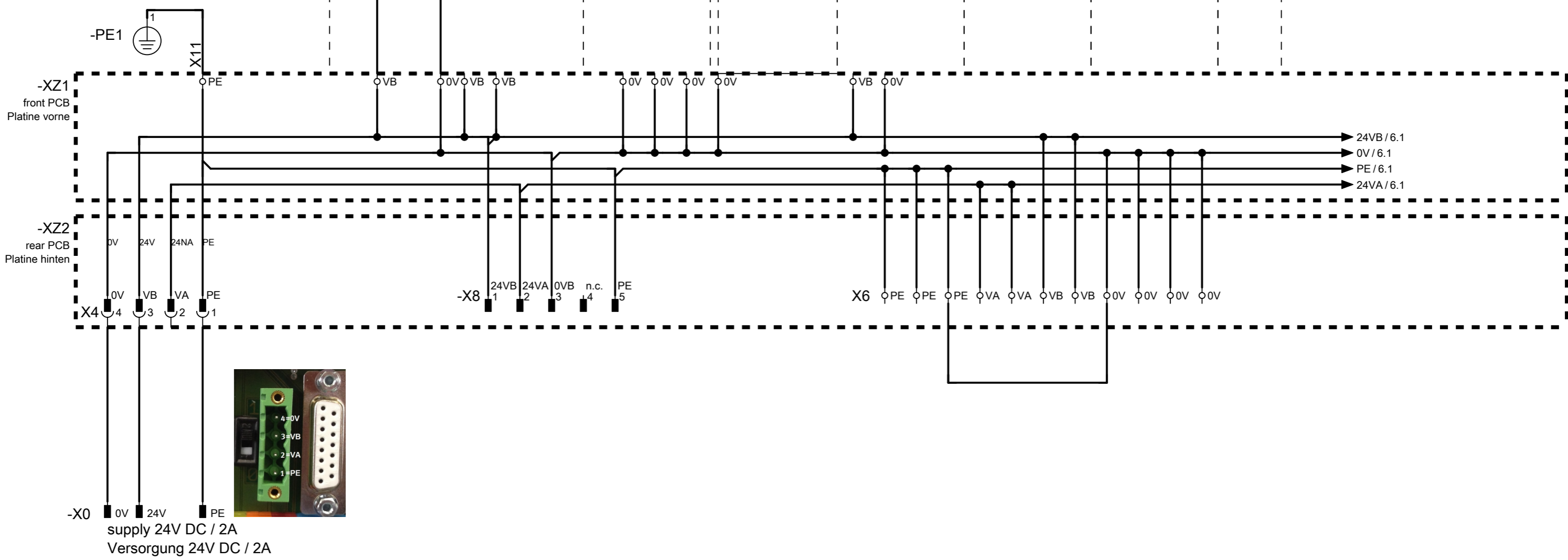
- XZ1-X1 = connection to opposite PCB Verbindung zu gegenüberliegender Platine
- XZ2-X2 = connection 1 to DA-Interface Verbindung 1 zu DA-Interface
- XZ2-X3 = connection 2 to DA-Interface Verbindung 2 zu DA-Interface
- XZ2-X4 = power supply Stromversorgung
- XZ2-X5 = analog signals for application Analsignale Applikationsmodul
- XZ2-X6 = terminals PCB rear side Klemmen Platine hinten
- XZ2-X7 = connection to external Motorcontroller Ansteuerung externer Motorregler
- XZ2-X8 = 24V application modules 24V Applikationsmodule

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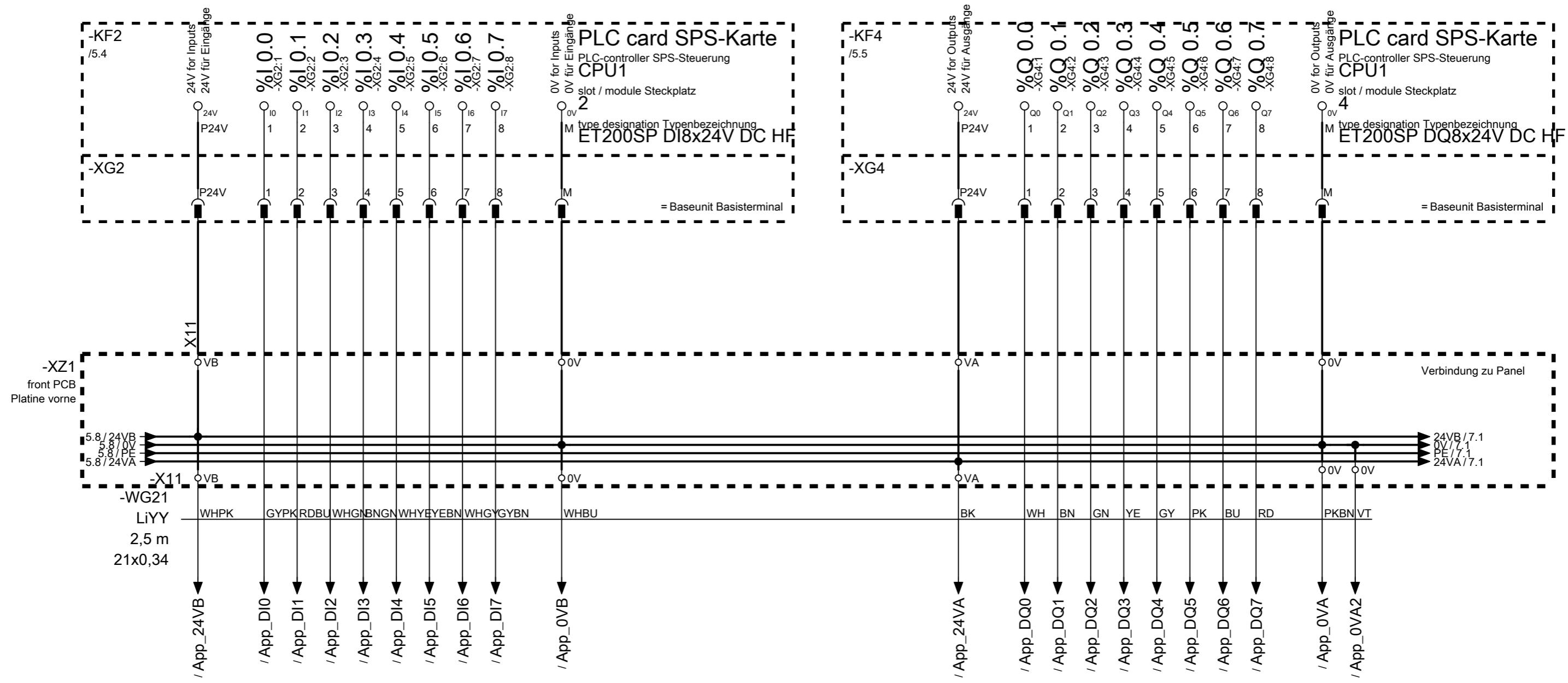
0 1 2 3 4 5 6 7 8 9



Servermodule
component of interfacemodule



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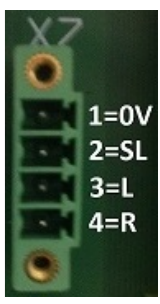
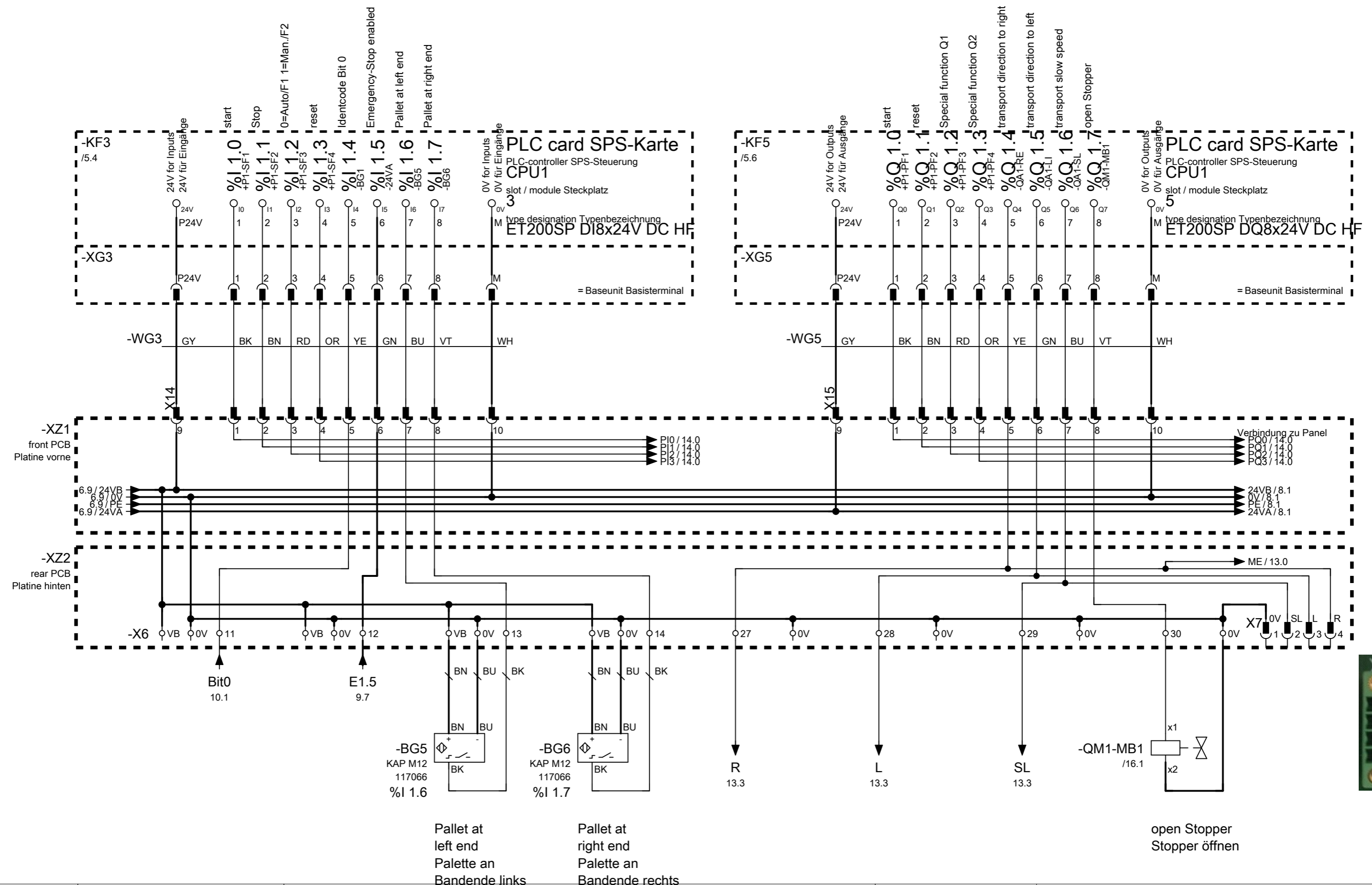
application - Byte 0
 Applikation - Byte 0

S-Nr.	
PSP / DPJ	VN

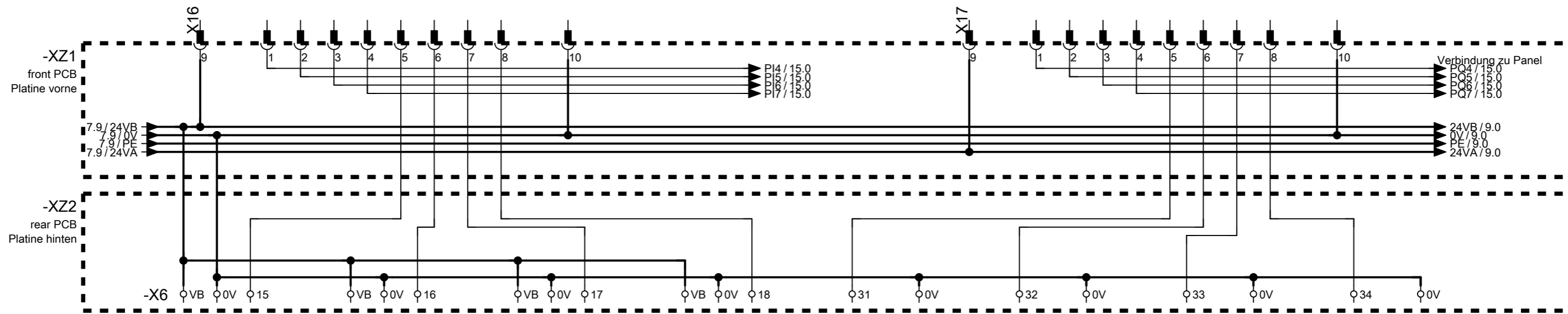
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0 1 2 3 4 5 6 7 8 9



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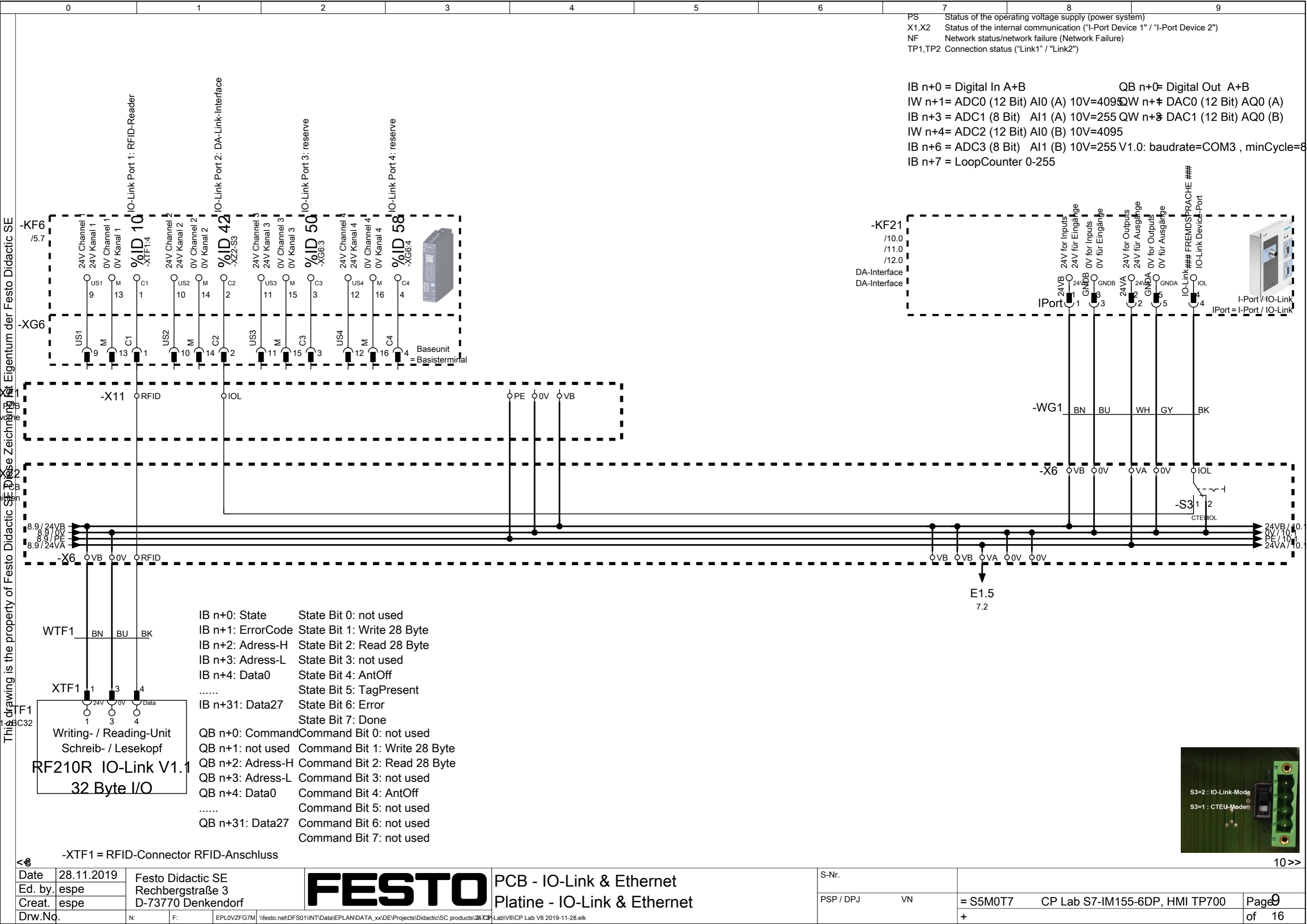
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N:	
F:	



PCB - Byte 2
Platine - Byte 2

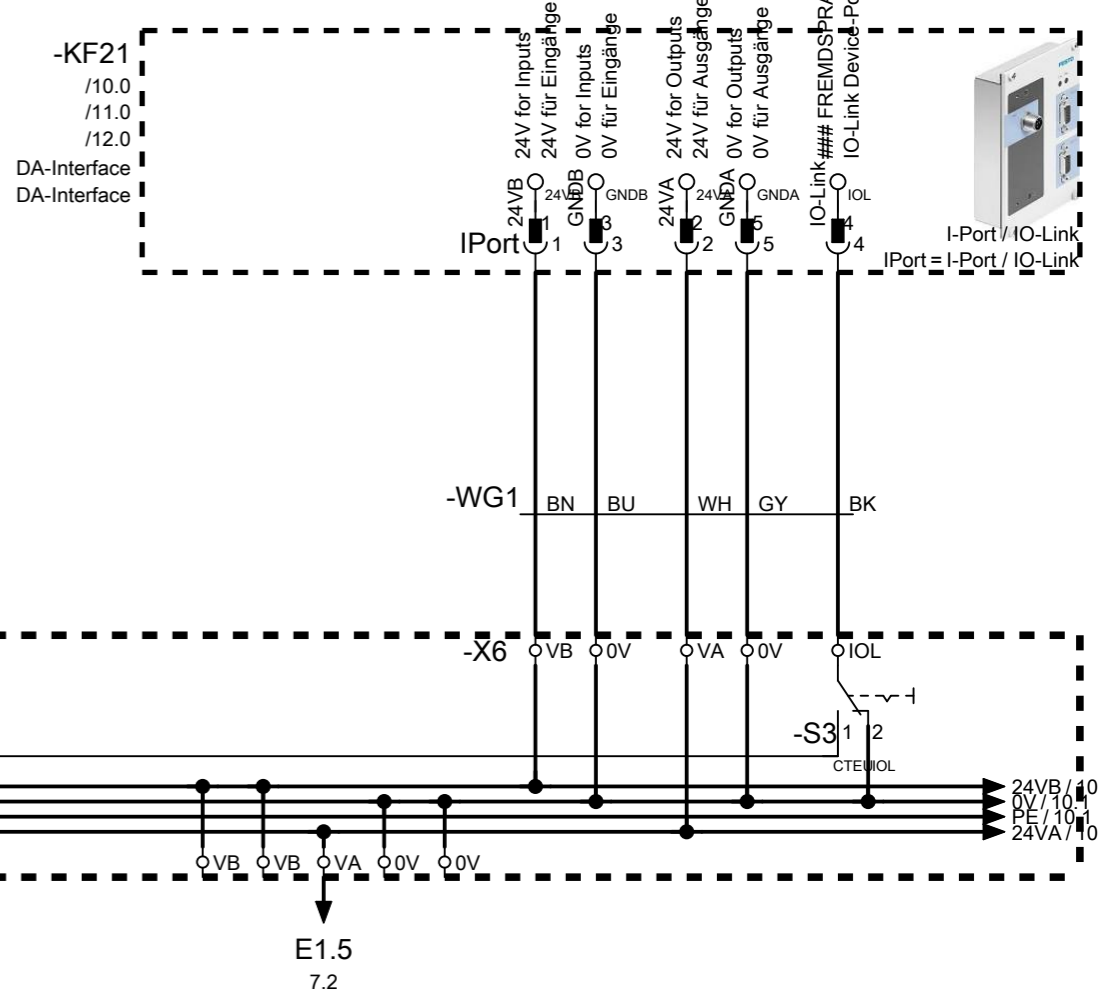
S-Nr.	
PSP / DPJ	VN

= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
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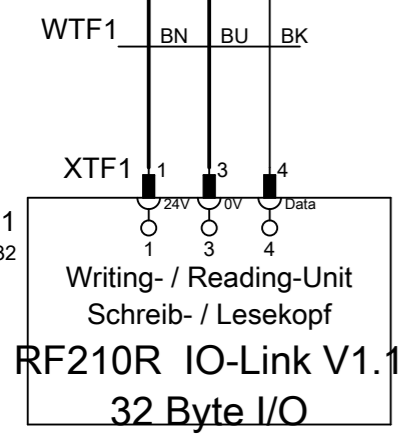


PS Status of the operating voltage supply (power system)
 X1,X2 Status of the internal communication ("I-Port Device 1" / "I-Port Device 2")
 NF Network status/network failure (Network Failure)
 TP1,TP2 Connection status ("Link1" / "Link2")

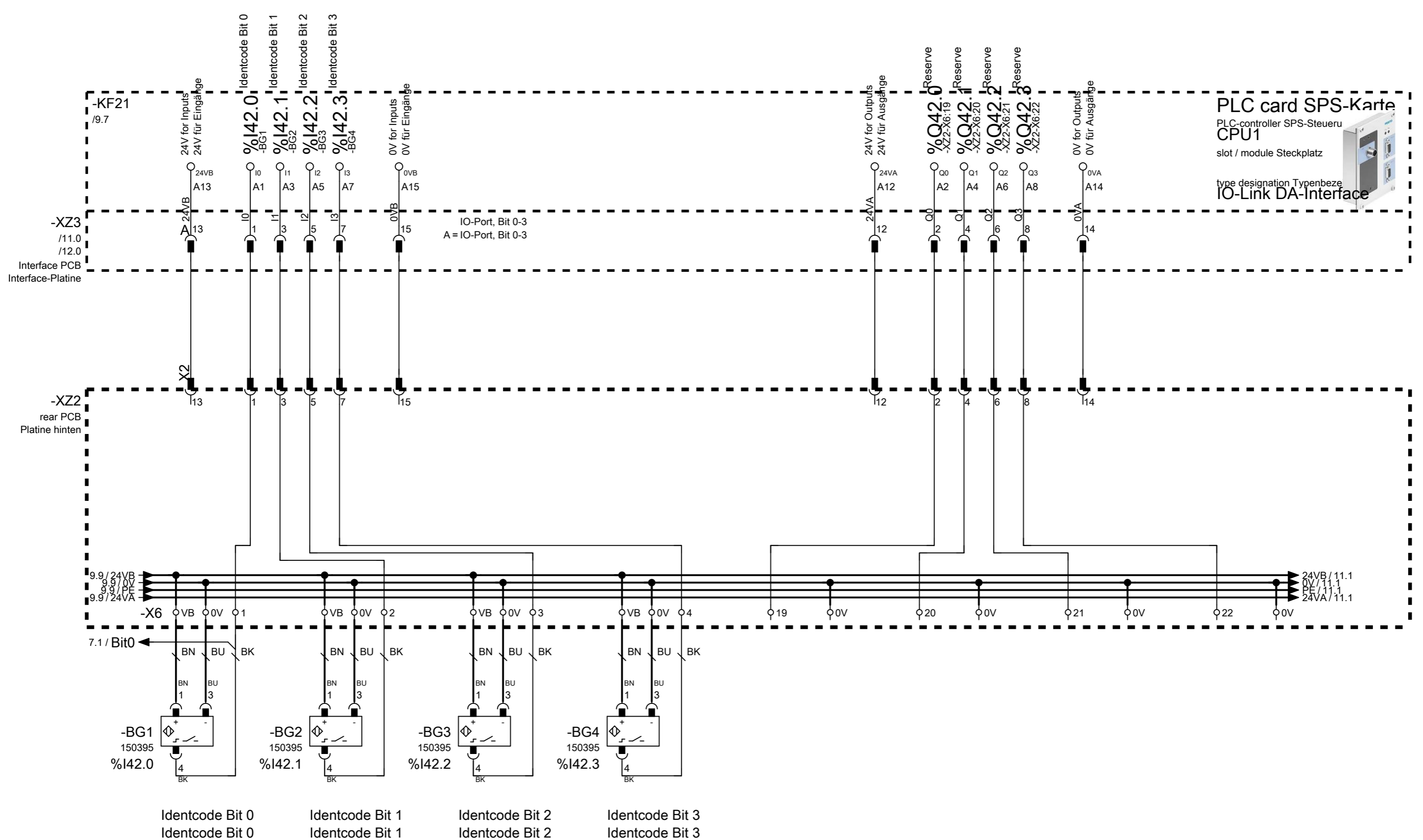
IB n+0 = Digital In A+B
 IW n+1= ADC0 (12 Bit) AI0 (A) 10V=4095
 IB n+3 = ADC1 (8 Bit) AI1 (A) 10V=255
 IW n+4= ADC2 (12 Bit) AI0 (B) 10V=4095
 IB n+6 = ADC3 (8 Bit) AI1 (B) 10V=255
 IB n+7 = LoopCounter 0-255



IB n+0: State State Bit 0: not used
 IB n+1: ErrorCode State Bit 1: Write 28 Byte
 IB n+2: Adress-H State Bit 2: Read 28 Byte
 IB n+3: Adress-L State Bit 3: not used
 IB n+4: Data0 State Bit 4: AntOff
 State Bit 5: TagPresent
 IB n+31: Data27 State Bit 6: Error
 State Bit 7: Done
 QB n+0: Command Command Bit 0: not used
 QB n+1: not used Command Bit 1: Write 28 Byte
 QB n+2: Adress-H Command Bit 2: Read 28 Byte
 QB n+3: Adress-L Command Bit 3: not used
 QB n+4: Data0 Command Bit 4: AntOff
 Command Bit 5: not used
 QB n+31: Data27 Command Bit 6: not used
 Command Bit 7: not used



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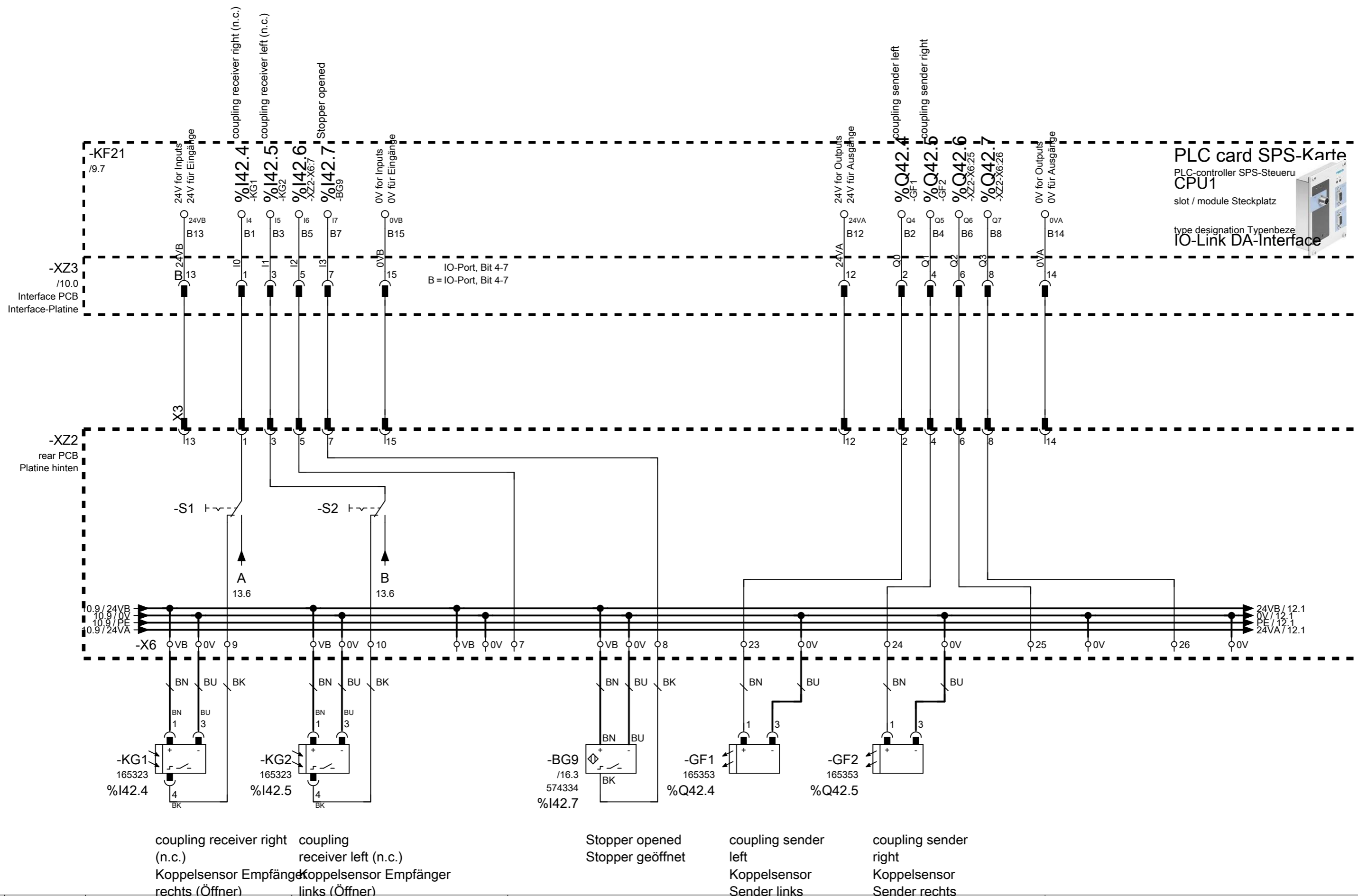


PCB - IO-Link A
 Platine - IO-Link A

S-Nr.	
PSP / DPJ	VN

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coupling receiver right (n.c.)
 Koppelsensor Empfänger rechts (Öffner)

coupling receiver left (n.c.)
 Koppelsensor Empfänger links (Öffner)

Stopper opened
 Stopper geöffnet

coupling sender left
 Koppelsensor Sender links

coupling sender right
 Koppelsensor Sender rechts

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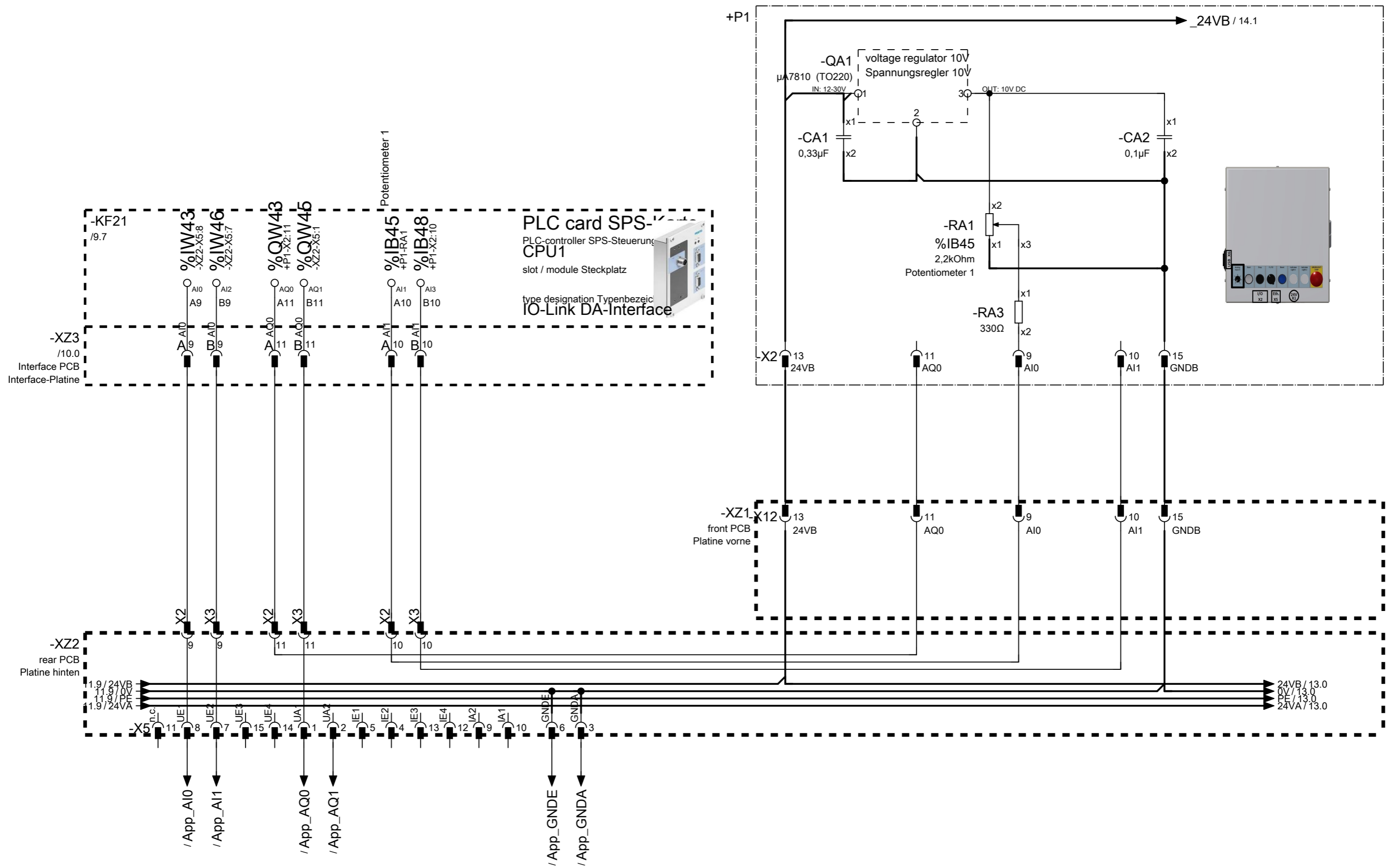


PCB - IO-Link B
 Platine - IO-Link B

S-Nr.	
PSP / DPJ	VN

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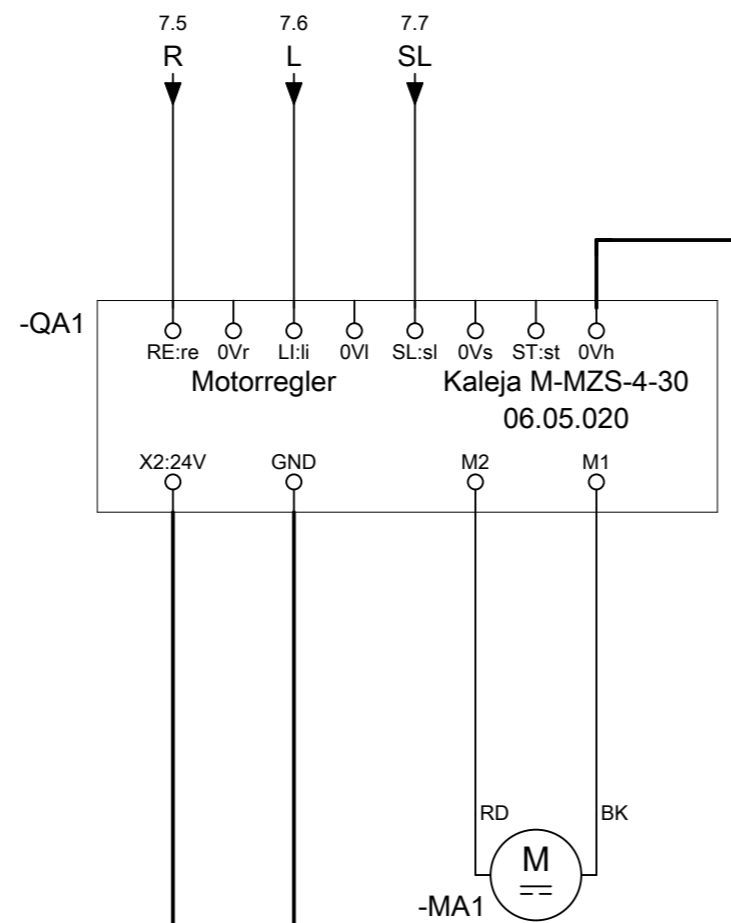


PCB - IO-Link analog
 Platine - IO-Link Analog

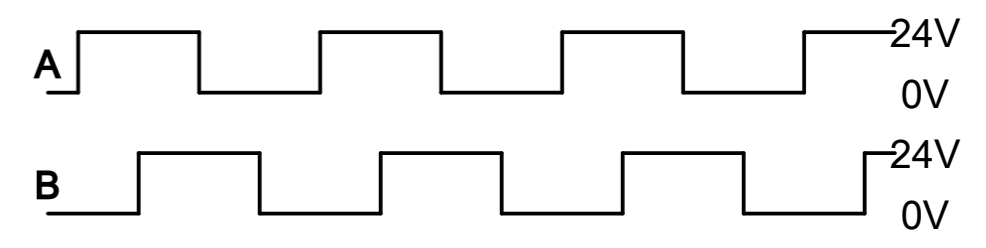
S-Nr.	
PSP / DPJ	VN

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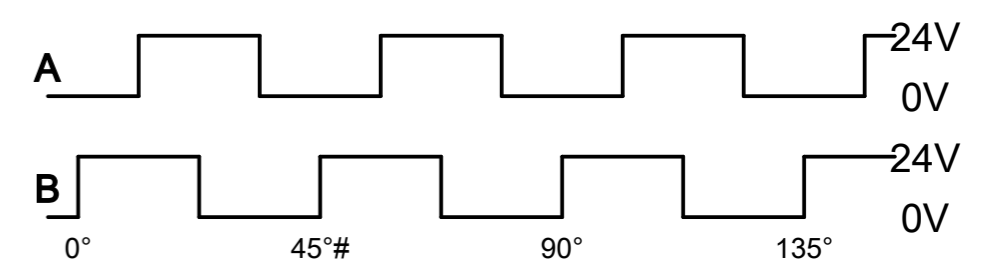
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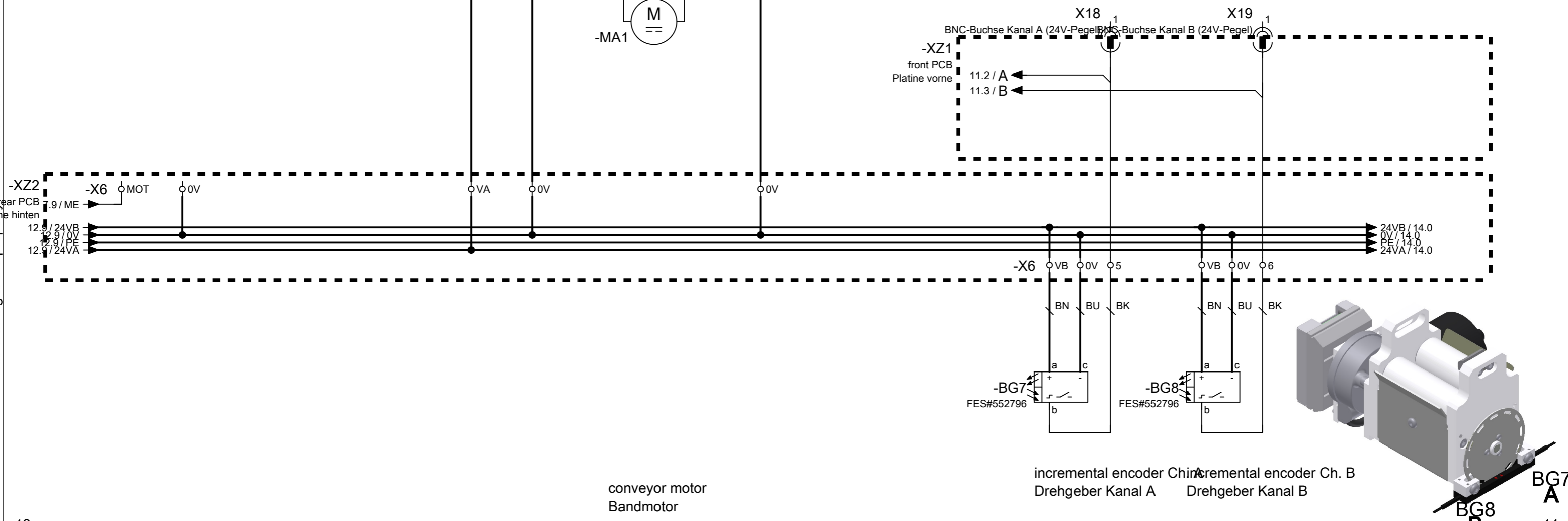
transport direction to right
Bandantrieb Rechtslauf



transport direction to left
Bandantrieb Linkslauf



1 rotation = 8 pulses/channel = $30\text{mm} * \pi = 94,2 \text{ mm}$
1 Umdrehung = 8 Impulse je Kanal = $30\text{mm} * \pi = 94,2 \text{ mm}$



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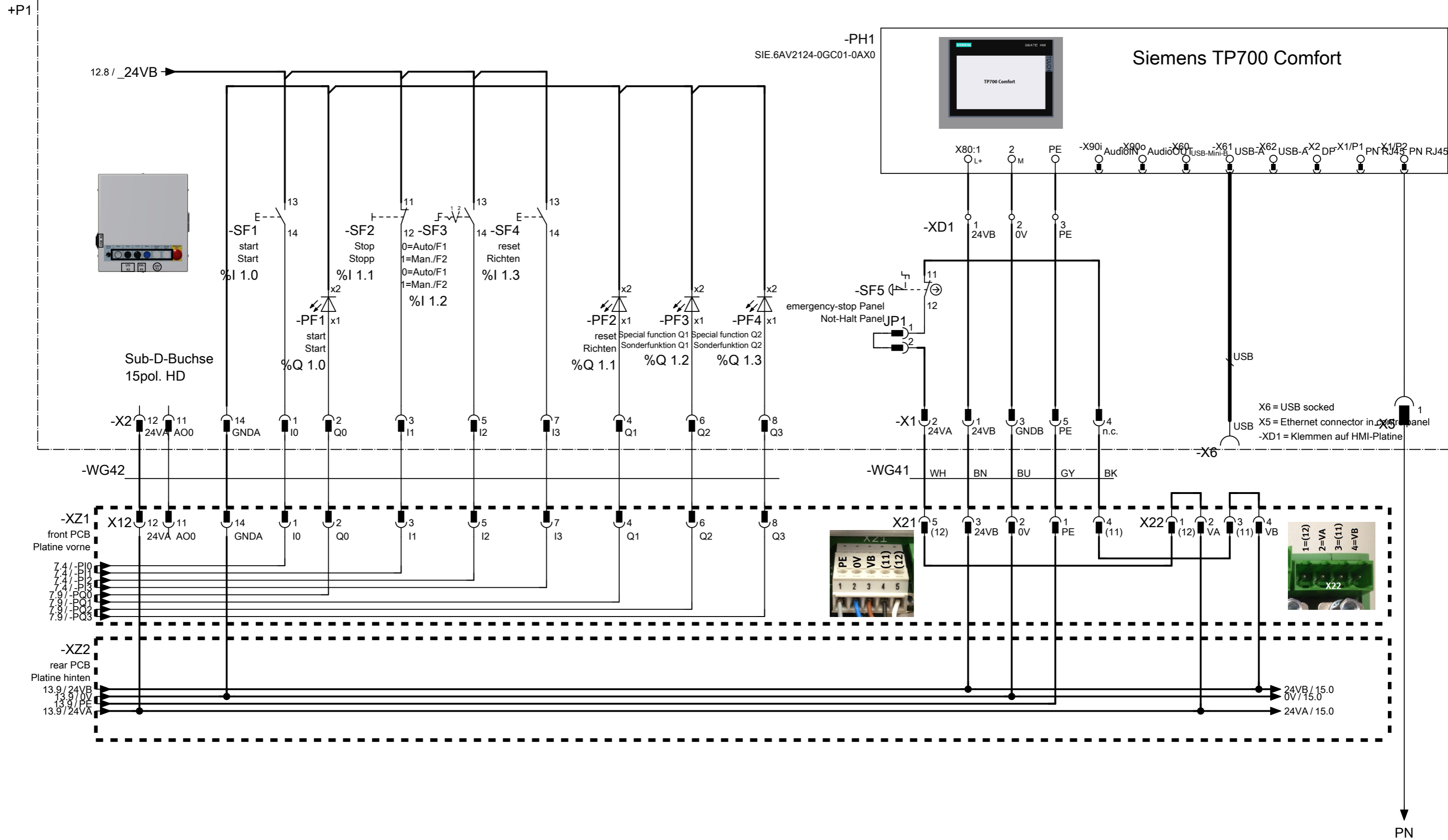
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FESTO PCB - motor + encoder
Platine - Motor + Inkrementalgeber

S-Nr.			
PSP / DPJ	VN	= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
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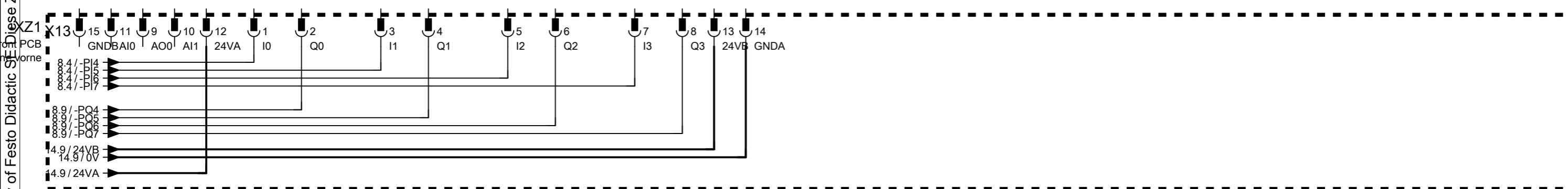
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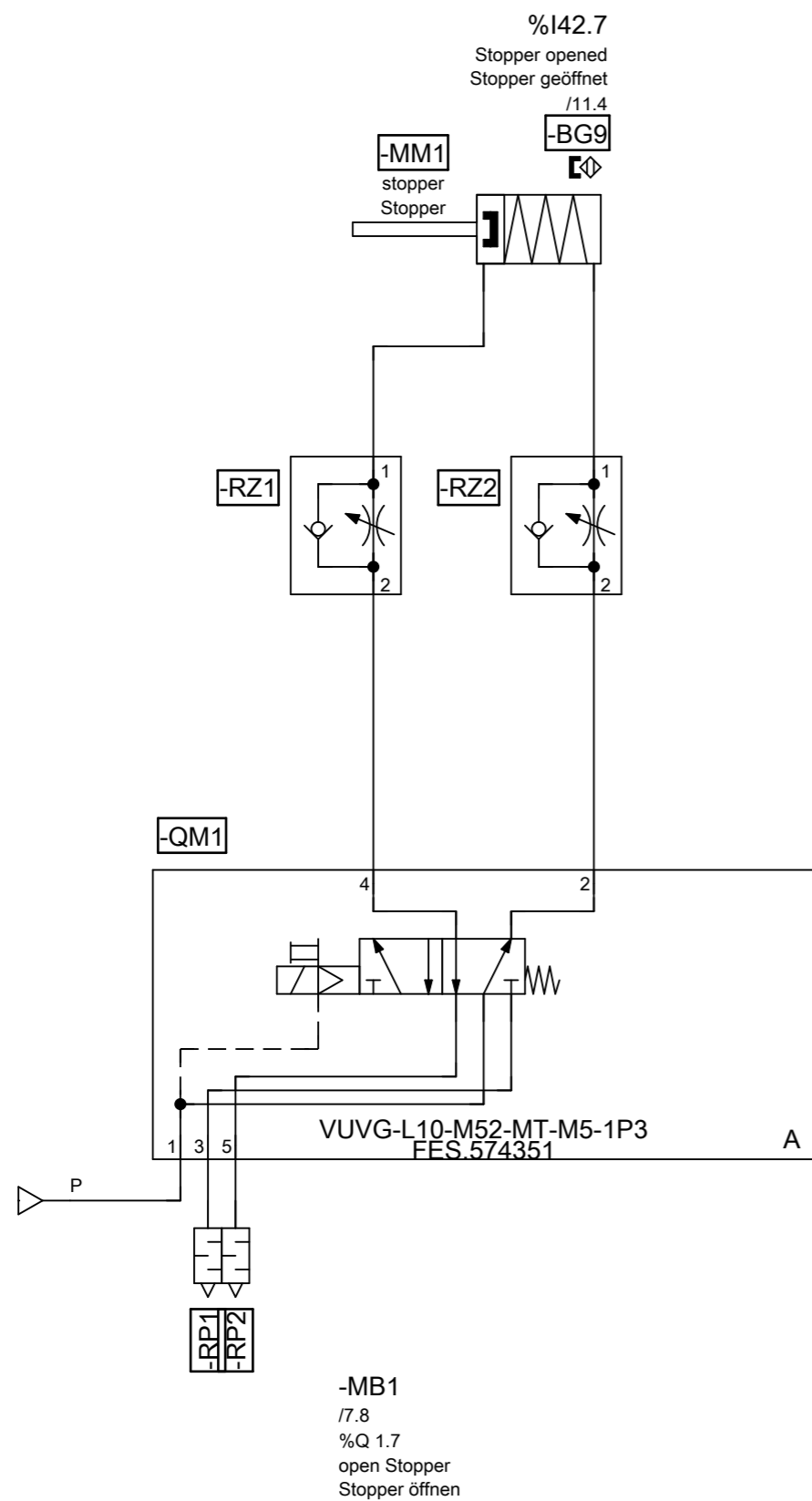


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FESTO pneumatic schematic
Pneumatikplan

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