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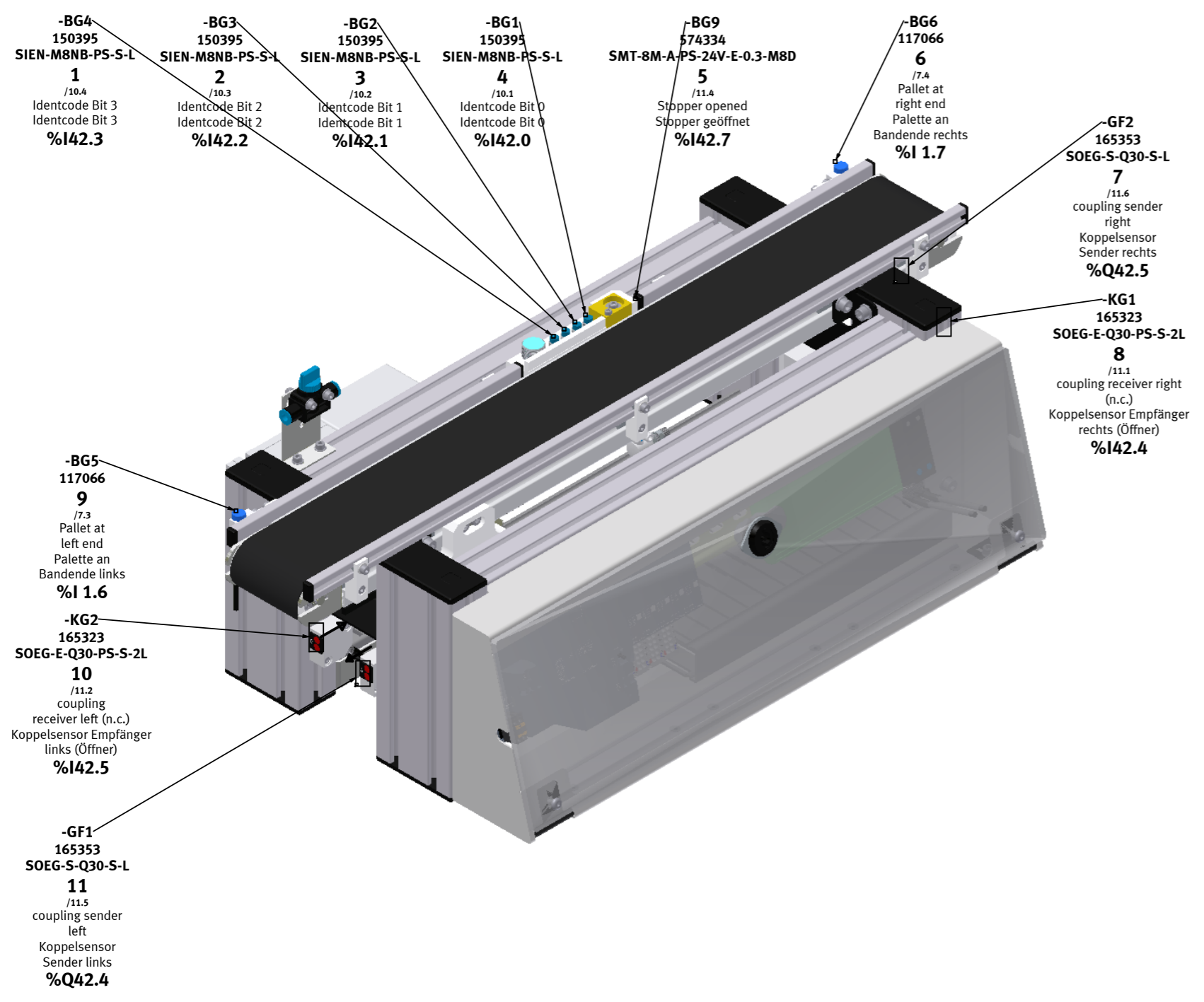


### Circuit diagrams Schaltungsunterlagen

designation: CP Lab  
 Bezeichnung: CP Lab  
 Customer:  
 Kunde:  
 Plant identifier G CP Lab  
 Anlagenkennzeichen  
 remark: V5 (PCB 2017-03)  
 Bemerkung:  
 last Modification: 04.02.2019  
 letzte Änderung:  
 Print date: 04.02.2019  
 Druckdatum:  
 Path: \\festo.net\DFS01\INT\Data\EPLAN\DATA\_27\DE\Projects\Didactic\SC products\24 CP-Lab\V  
 Pfad: 5\CP Lab V5 2019-02-04.elk



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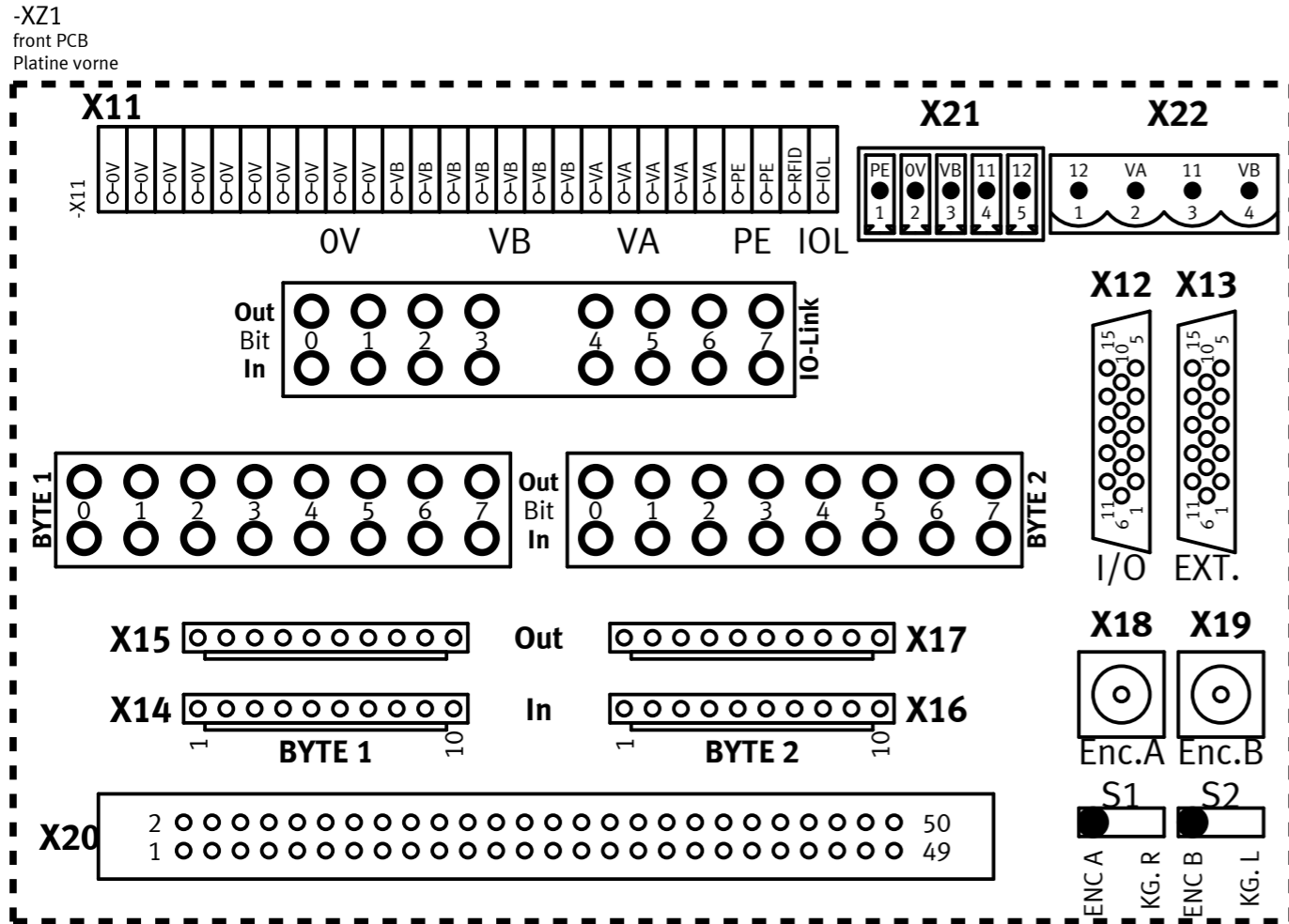
4>>

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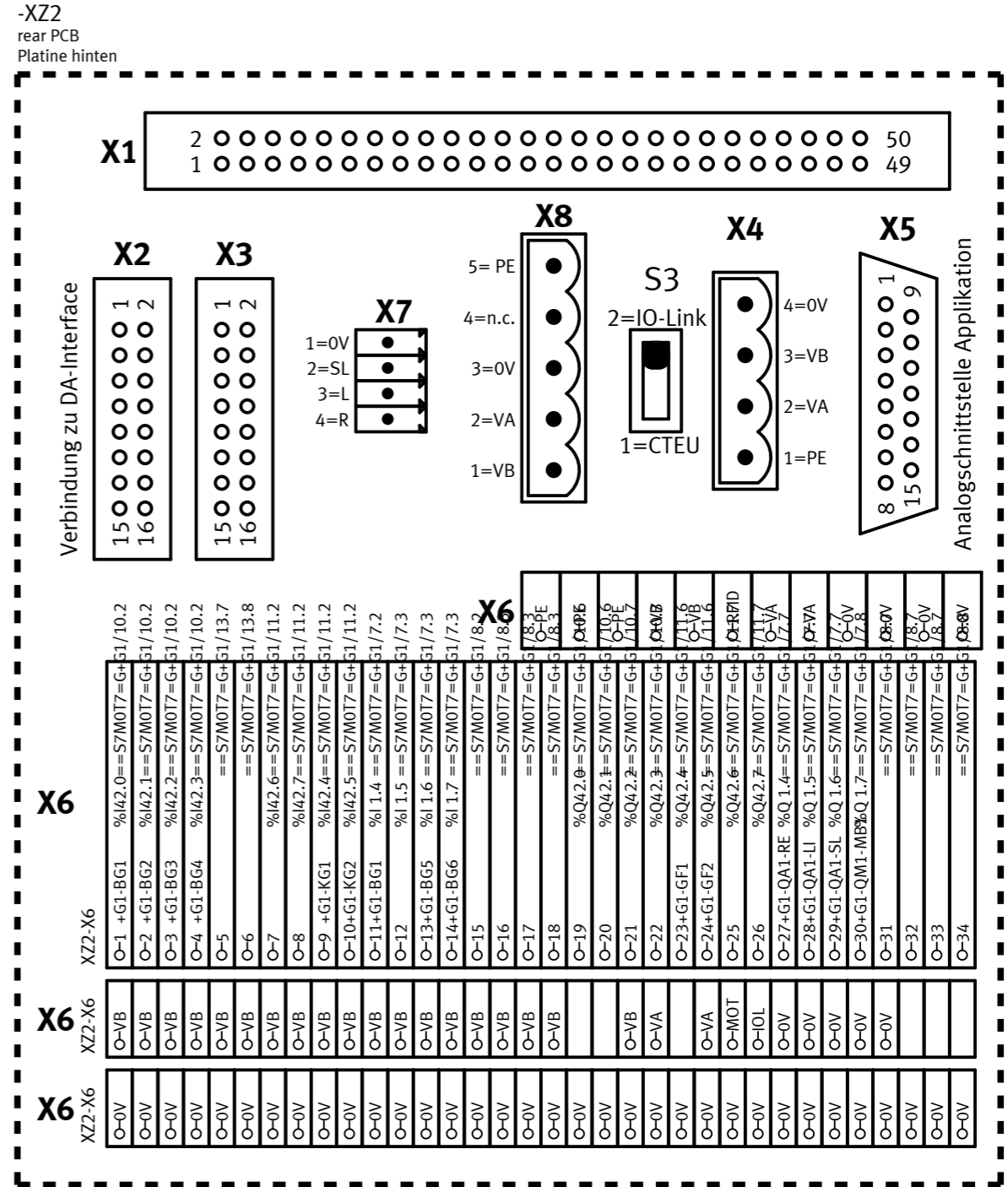
**Assembly Aufbau**  
 \\Festo.net\DFS01\INT\DATA\DATA\_27\DEV\Projects\Didactic\SC products\24 CB\ZAB\VS\CP Lab V5 2019-02-04.elk

S-Nr.			
PSP / DPJ	VN	= G	CP Lab
		+ G1	Conveyor
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**V3**  
**PCB's Rev 2017-03**  
**Platinen Rev 2017-03**



- 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-X21 = Powersupply HMI HMI Stromversorgung
- XZ1-X22 = external Emergency-Stop Connector Not-Halt-Anschluss extern

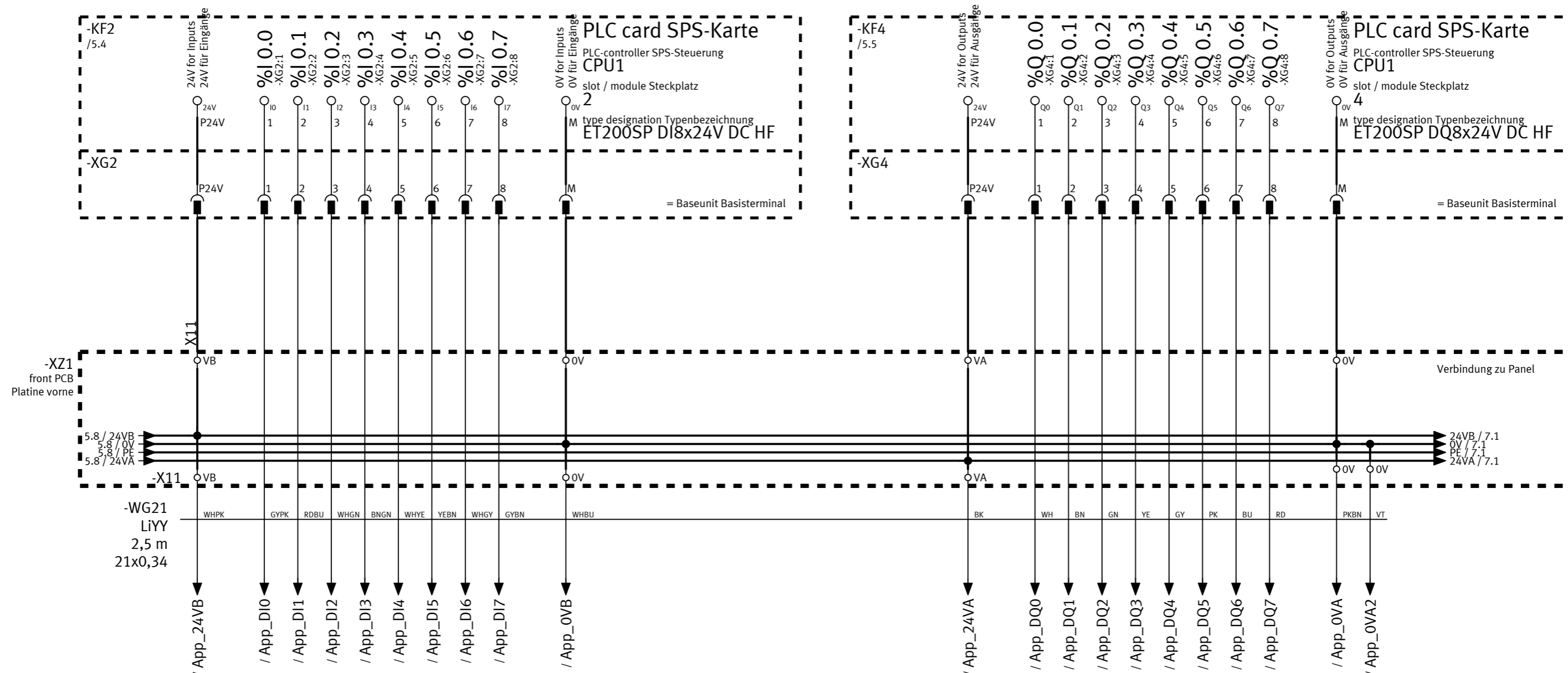


- XZ2-X2 = connection 1 to DA-Interface Verbindung 1 zu DA-Interface
- XZ2-X3 = connection 2 to DA-Interface Verbindung 2 zu DA-Interface
- XZ2-X4 = power supply Stromversorgung
- XZ2-X5 = analog signals for application Analogsignale Applikationsmodul
- XZ2-X6 = terminals PCB rear side Klemmen Platine hinten
- XZ2-X8 = 24V application modules 24V Applikationsmodule

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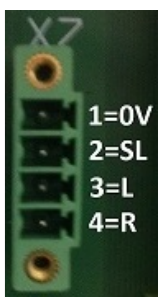
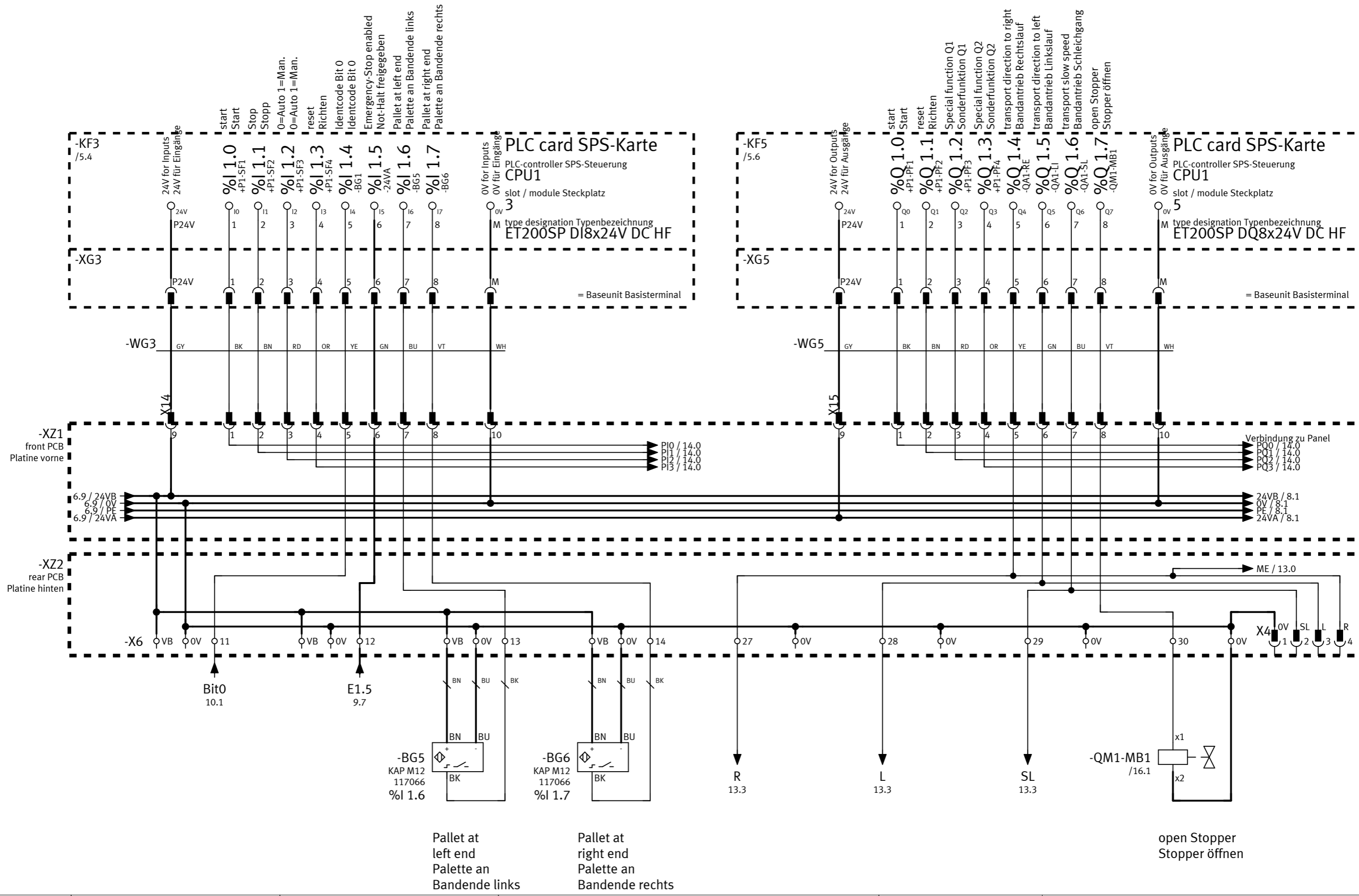
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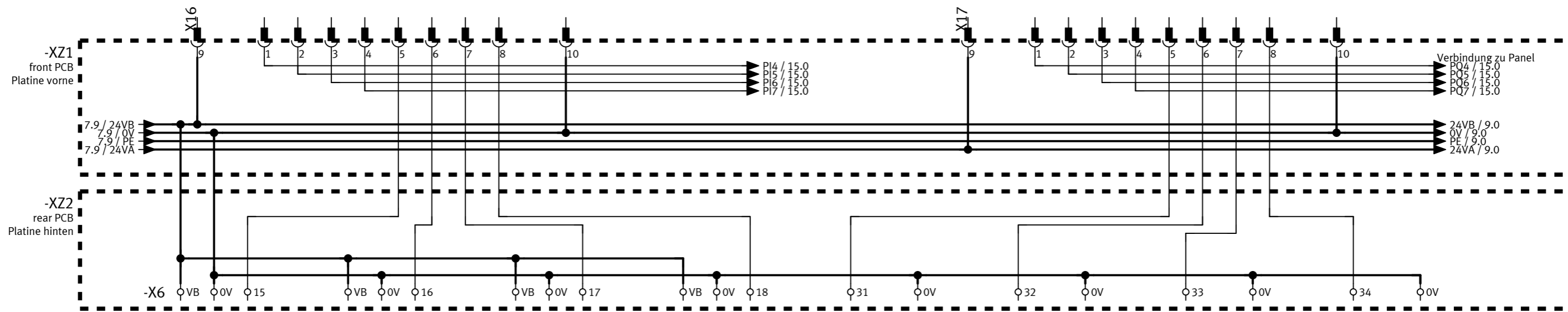
application - Byte 0  
 Applikation - Byte 0

S-Nr.			
PSP / DPJ	VN	= G	CP Lab
		+ G1	Conveyor
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PCB - Byte 2  
Platine - Byte 2

S-Nr.	
PSP / DPJ	VN

= G	CP Lab	Page 8
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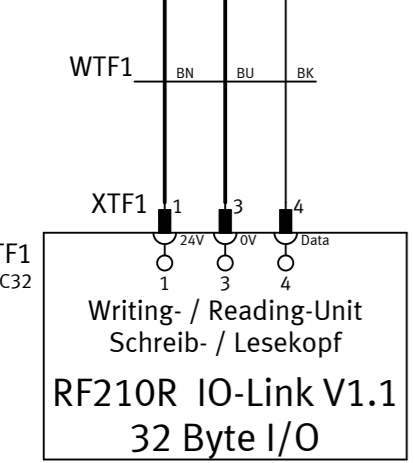
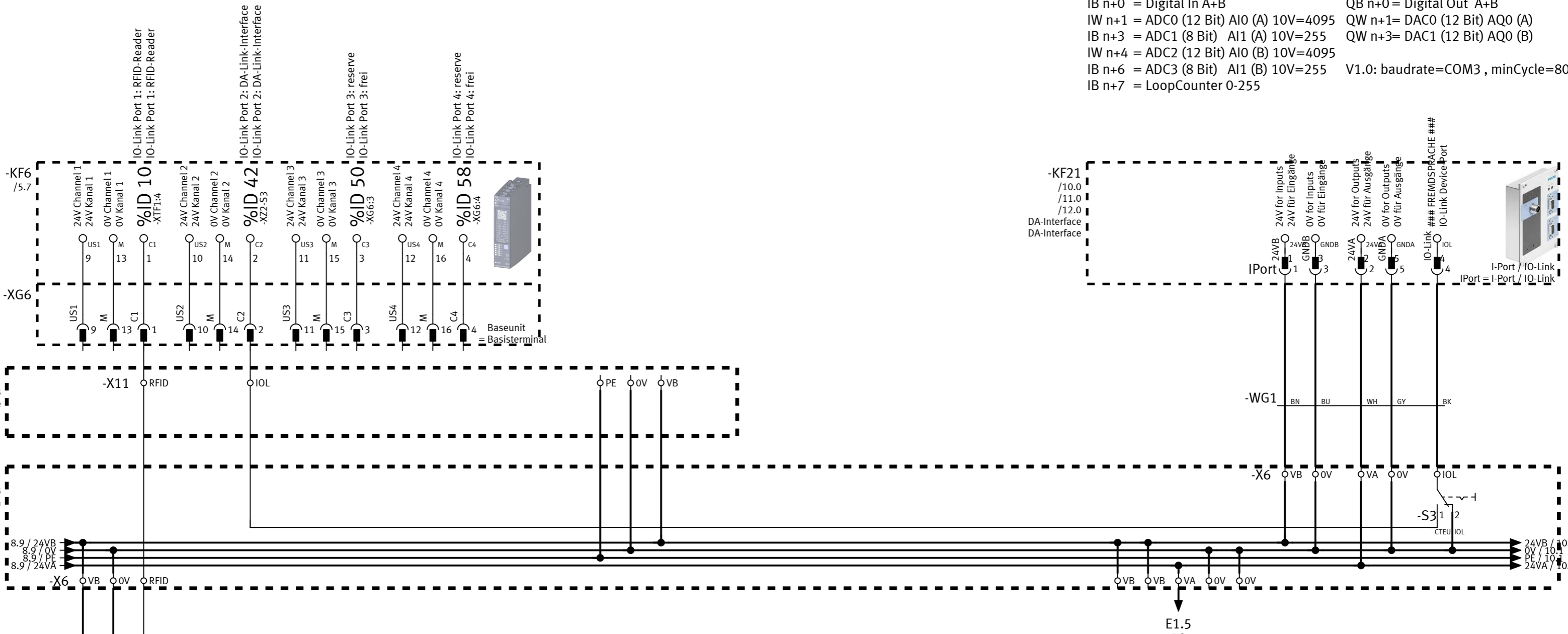


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PS Status of the operating voltage supply (power system)  
 X1,X2 Status of the internal communication ("I-Port Device 1" / "I-Port Device 2")  
 NF Network status/network failure (Network Failure)  
 TP1,TP2 Connection status ("Link1" / "Link2")

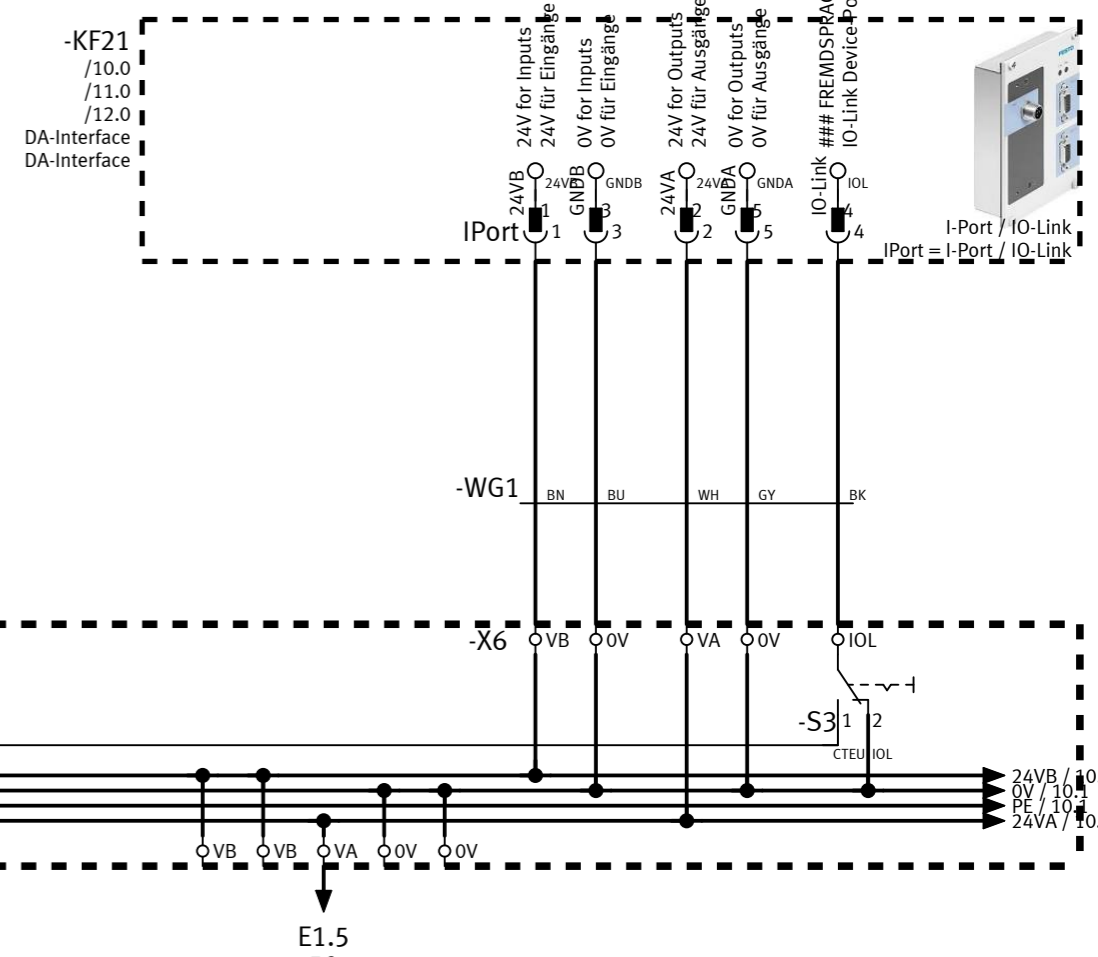
IB n+0 = Digital In A+B  
 IW n+1 = ADC0 (12 Bit) AI0 (A) 10V=4095  
 IB n+3 = ADC1 (8 Bit) AI1 (A) 10V=255  
 IW n+4 = ADC2 (12 Bit) AI0 (B) 10V=4095  
 IB n+6 = ADC3 (8 Bit) AI1 (B) 10V=255  
 IB n+7 = LoopCounter 0-255

QB n+0 = Digital Out A+B  
 QW n+1 = DAC0 (12 Bit) AQ0 (A)  
 QW n+3 = DAC1 (12 Bit) AQ0 (B)  
 V1.0: baudrate=COM3, minCycle=800



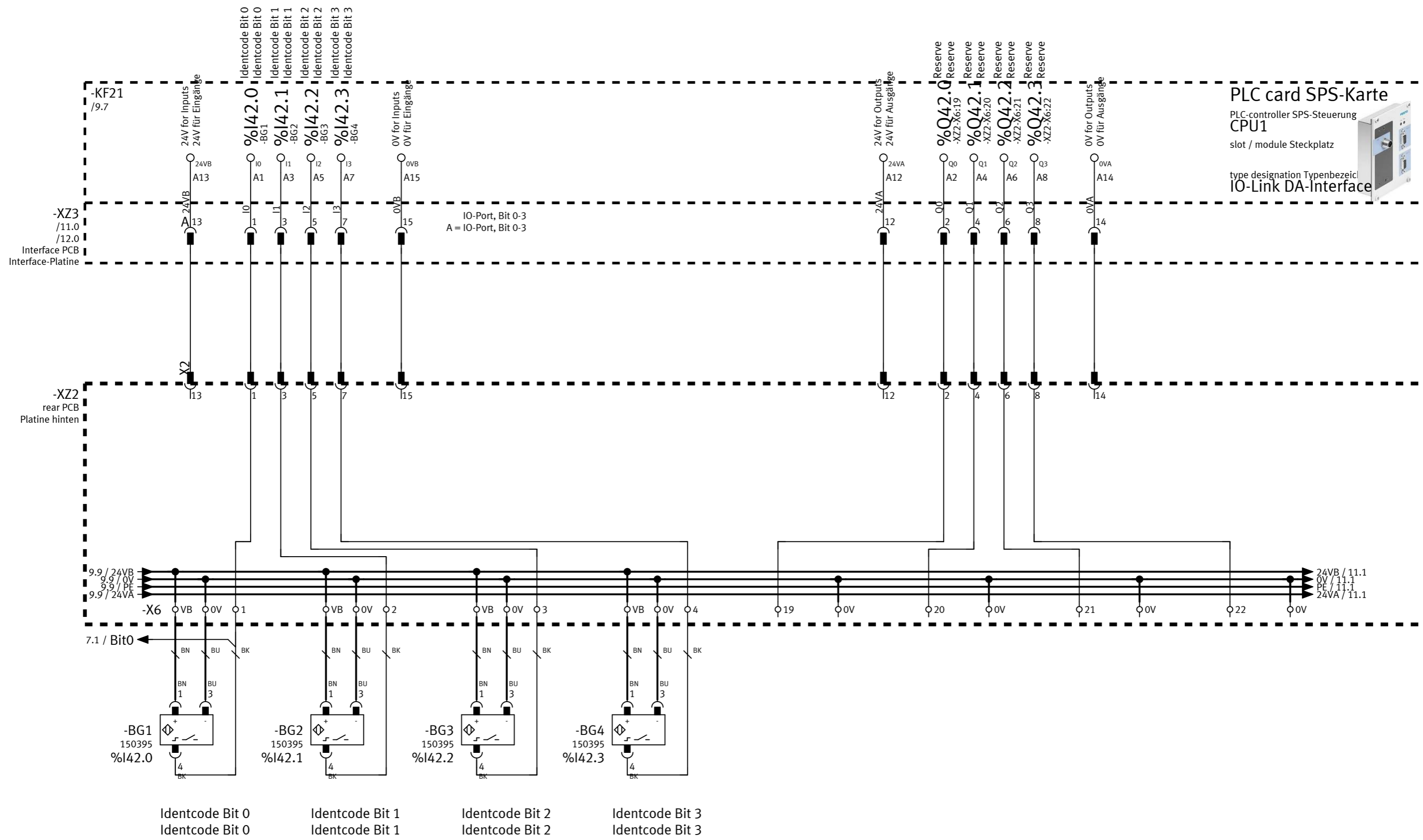
IB n+0: State State Bit 0: not used  
 IB n+1: ErrorCode State Bit 1: Write 28 Byte  
 IB n+2: Adress-H State Bit 2: Read 28 Byte  
 IB n+3: Adress-L State Bit 3: not used  
 IB n+4: Data0 State Bit 4: AntOff  
 ..... State Bit 5: TagPresent  
 IB n+31: Data27 State Bit 6: Error  
 State Bit 7: Done

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



<<8 -XTF1 = RFID-Connector RFID-Anschluss

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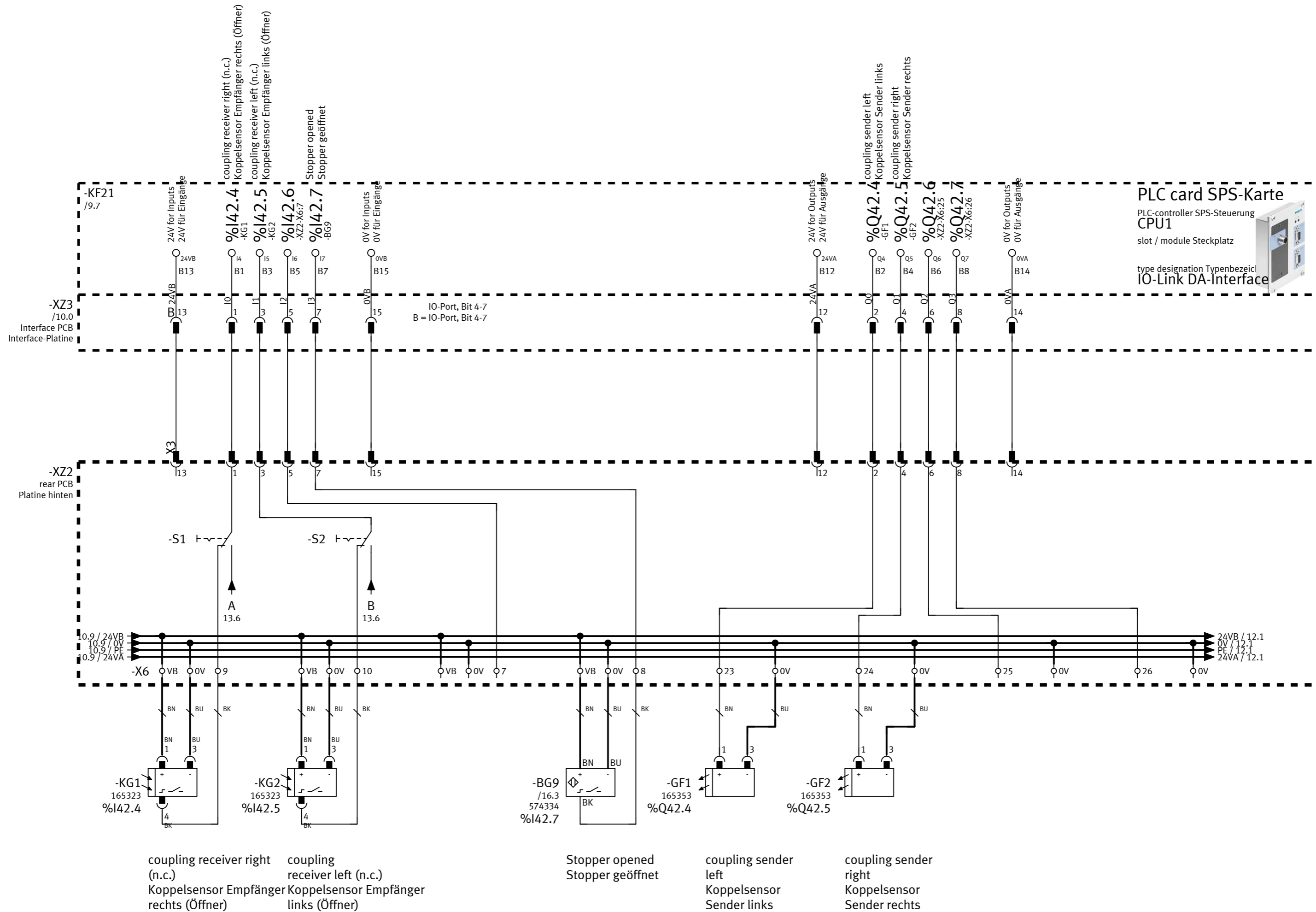


PCB - IO-Link A  
 Platine - IO-Link A

S-Nr.	
PSP / DPJ	VN

= G	CP Lab	Page 10
+ G1	Conveyor	of 267

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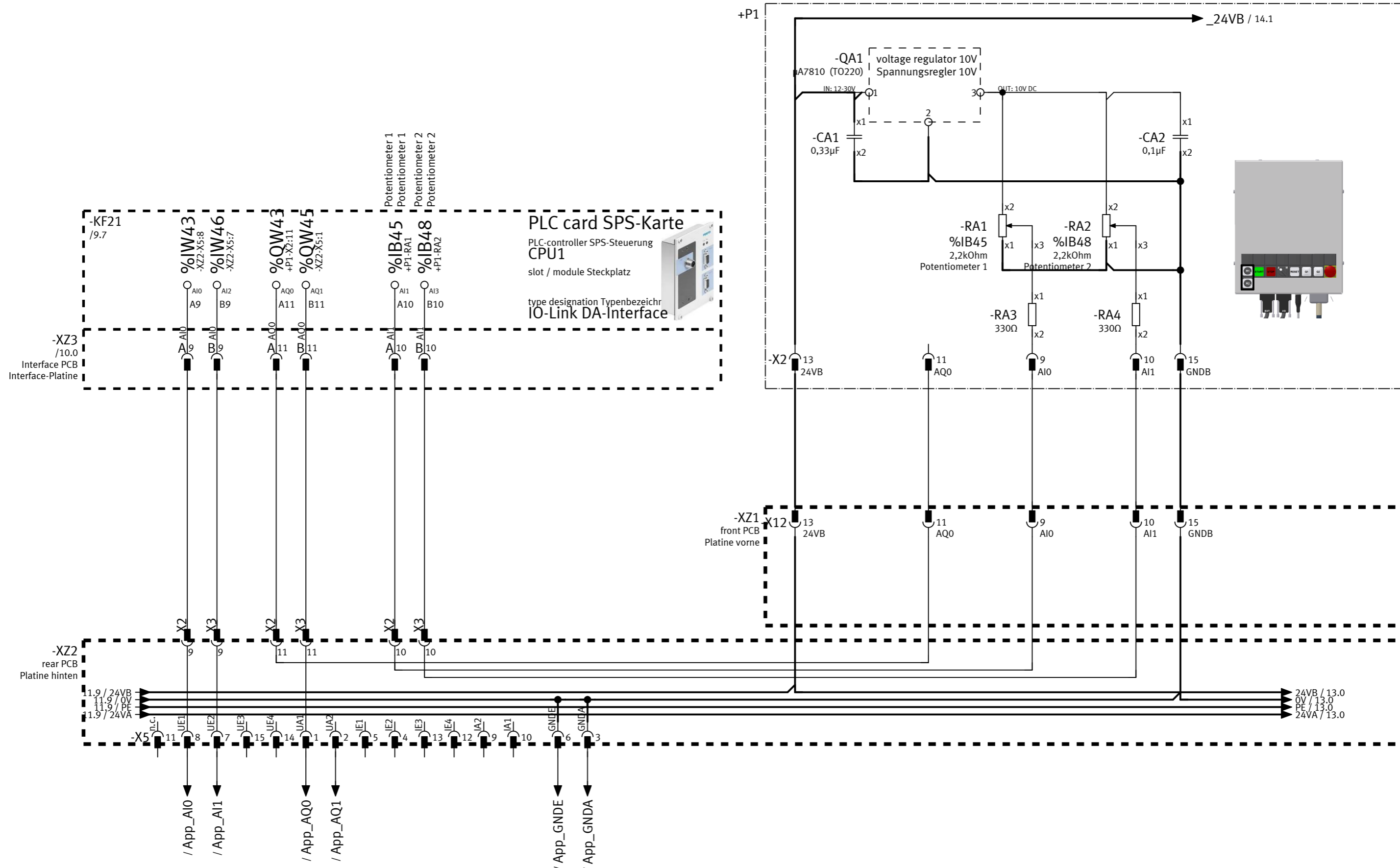


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Date	04.02.2019	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf	<b>FESTO</b>	PCB - IO-Link B Platine - IO-Link B	S-Nr.				
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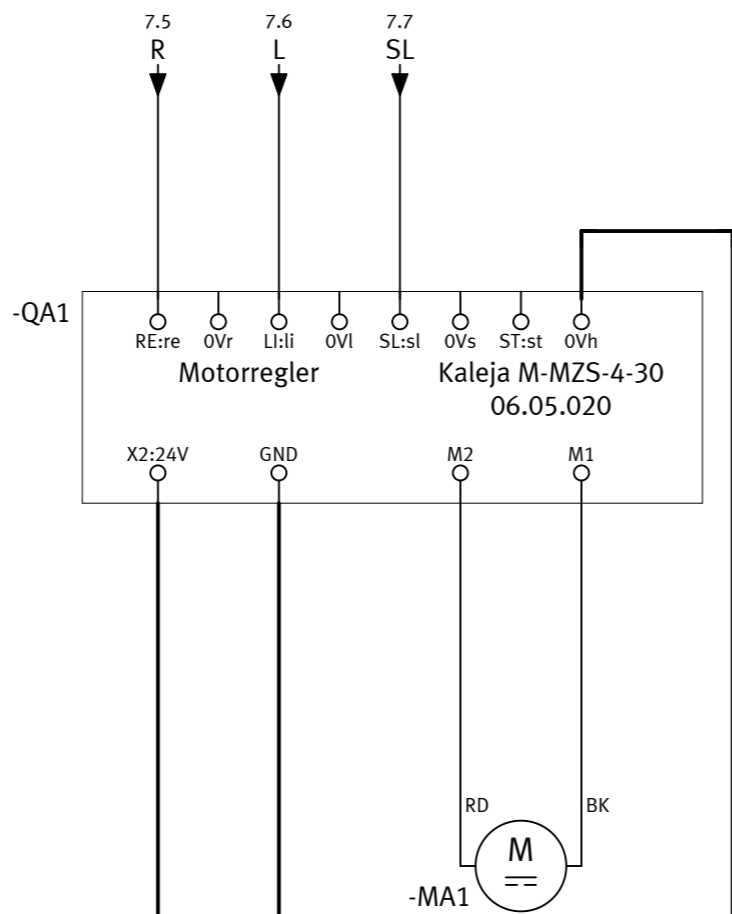
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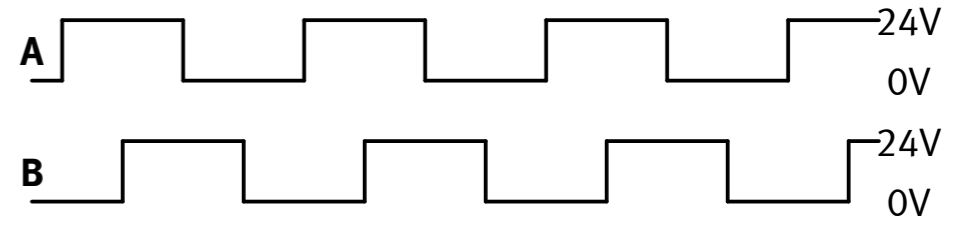
PCB - IO-Link analog  
Platine - IO-Link Analog

S-Nr.			
PSP / DPJ	VN	= G	CP Lab
		+ G1	Conveyor
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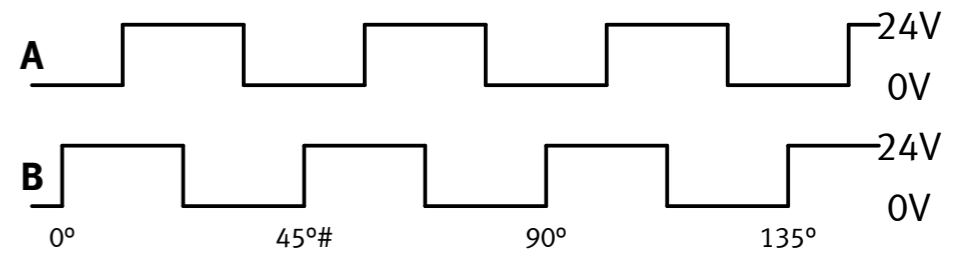
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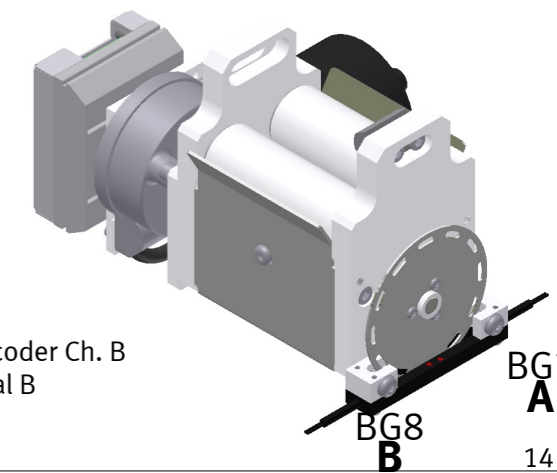
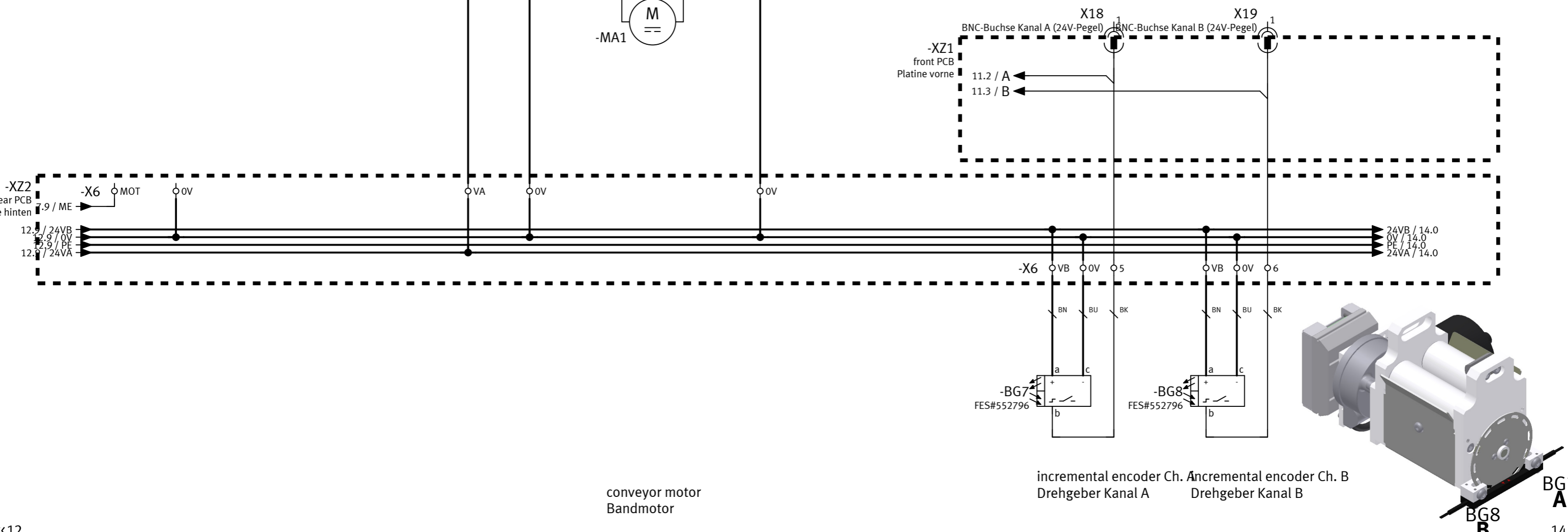
transport direction to right  
Bandantrieb Rechtslauf



transport direction to left  
Bandantrieb Linkslauf



1 rotation = 8 pulses/channel = 30mm \* π = 94,2 mm  
1 Umdrehung = 8 Impulse je Kanal = 30mm \* π = 94,2 mm

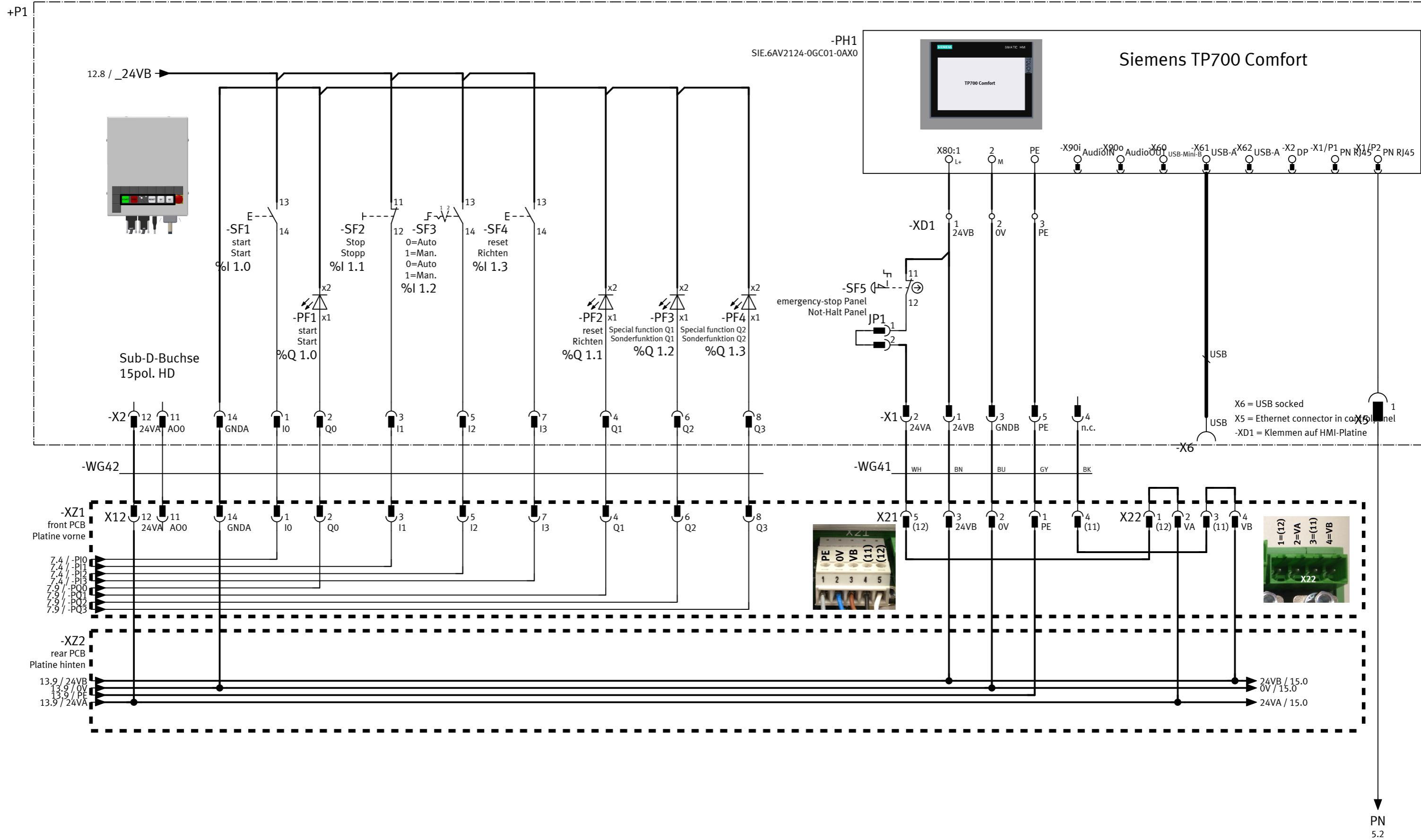


<< 12

Date	04.02.2019	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf	<b>FESTO</b>	PCB - motor + encoder Platine - Motor + Inkrementalgeber	S-Nr.				
Ed. by.	espe					PSP / DPJ	VN	= G	CP Lab
Drw.No		N: F: EPL0VZFG7M \\Festo.net\DFS01\INT\Data\EPLAN\DATA_27\DEV\Projects\Didactic\SC products\24 CBZ\CP Lab V5 2019-02-04.elk					+ G1	Conveyor	Page 13 of 267

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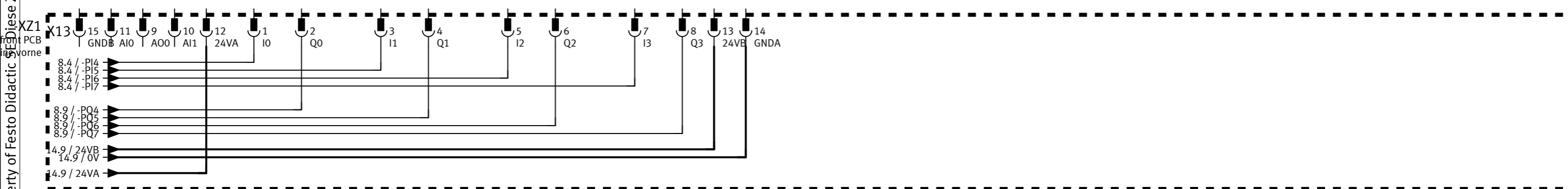


controlpanel basic functions & touchpanel  
Bedienfeld Grundfunktionen & Touchpanel

S-Nr.	
PSP / DPJ	VN

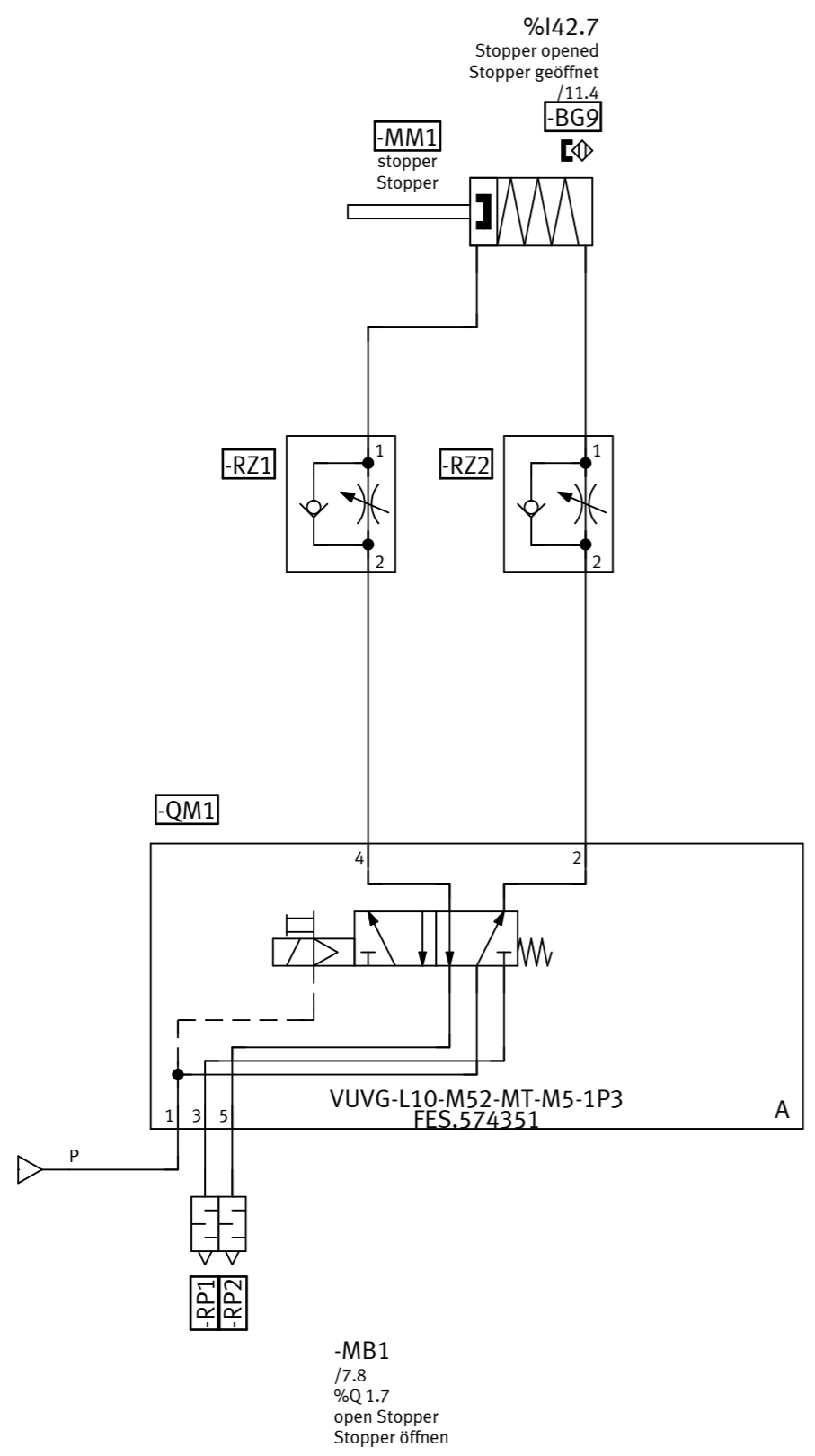
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Date	04.02.2019	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf		<b>FESTO</b> controlpanel options Bedienfeld Optionen	S-Nr.				
Ed. by.	espe				PSP / DPJ	VN	= G	CP Lab	Page 15
Drw.No.		N:	F:	EPL0VZFG7M	\\Festo.net\DFS01\INT\Data\EPLAN\DATA_27\DEV\Projects\Didactic\SC products\24 CP Lab V5 2019-02-04.elk		+ G1	Conveyor	of 267

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F:	



pneumatic schematic  
Pneumatikplan

S-Nr.	
PSP / DPJ	VN

= G	CP Lab	Page 16
+ G1	Conveyor	of 267