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Circuit diagrams Schaltungsunterlagen

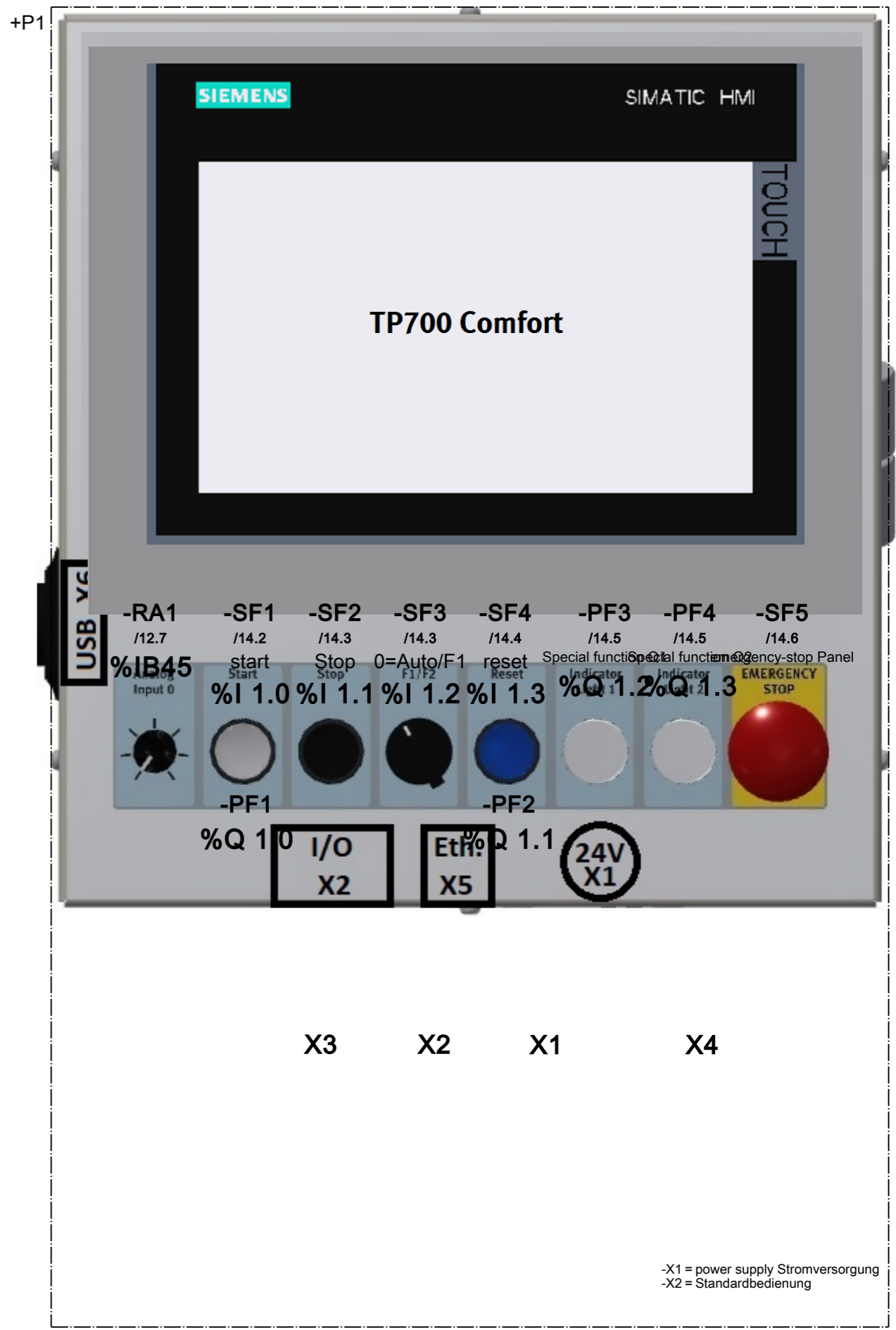
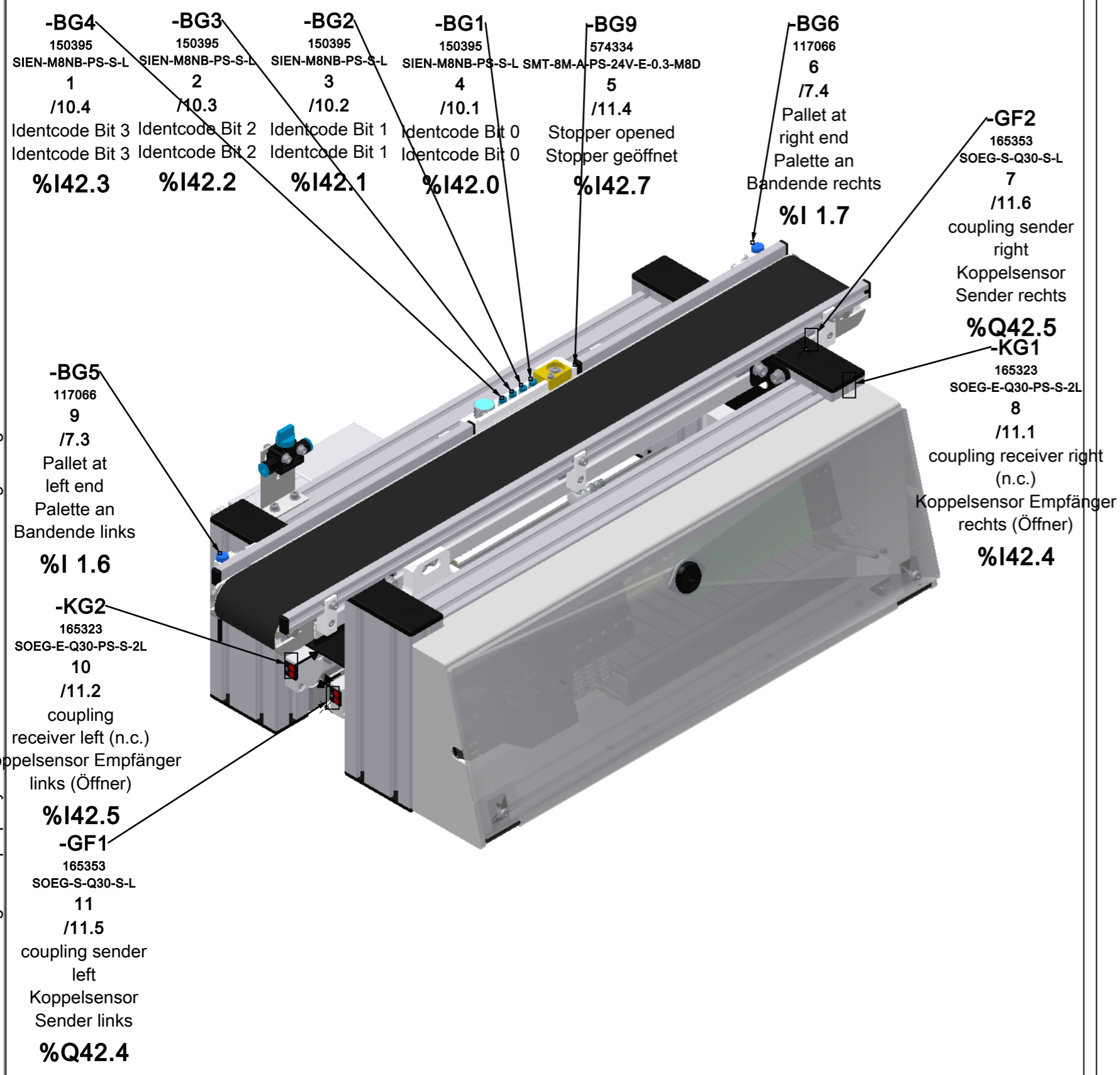
designation: CP Lab
 Bezeichnung: CP Lab
 Customer:
 Kunde:
 Plant identifier S5M0T7CP Lab S7-IM155-6DP, HMI TP700 V6
 Anlagenkennzeichen CP Lab S7-IM155-6DP, HMI TP700 V6
 remark: V6 (HMI V2)
 Bemerkung:
 last Modification: 2022-05-31
 letzte Änderung:
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<<S3M0T1X8/16

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Date	2020-12-03	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf		Title page/cover sheet Titel- / Deckblatt	S-Nr.			
Ed. by.	espe				PSP / DPJ	VN	= S5M0T7 CP Lab S7-IM155-6DP, HMI TP700	Page 1
Drw.No.	N:				FFDMD06DE	EPL0VZFG7M	+ G1	Conveyor

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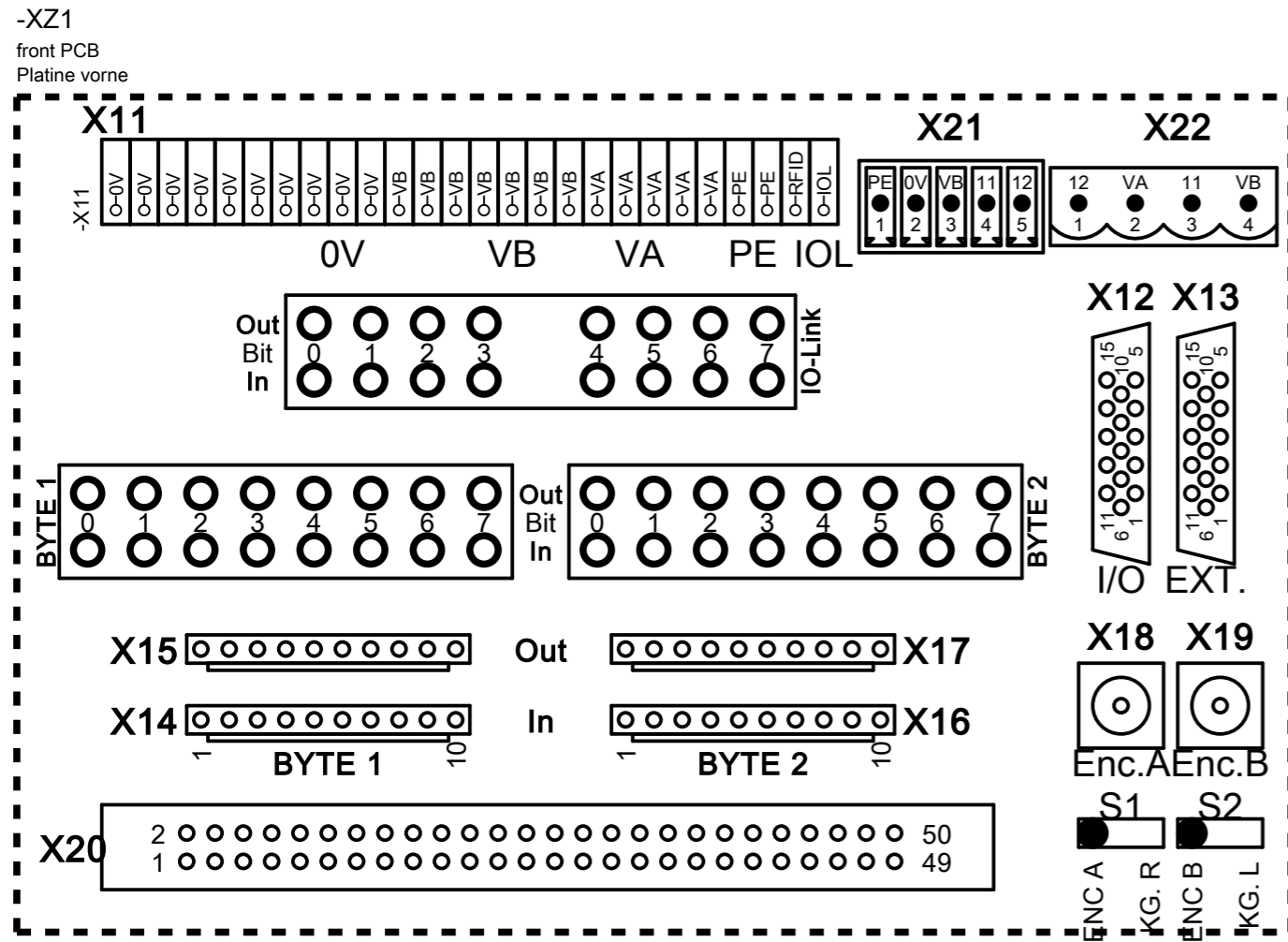
FESTO Assembly Aufbau

EPL0VZFG7M | \Festo.net\DFS01\INTData\EPLAN\DATA_xx\DE\Projects\Didactic\Products\24 CP Lab V6 2022-05-31.elk

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		+ G1	Conveyor
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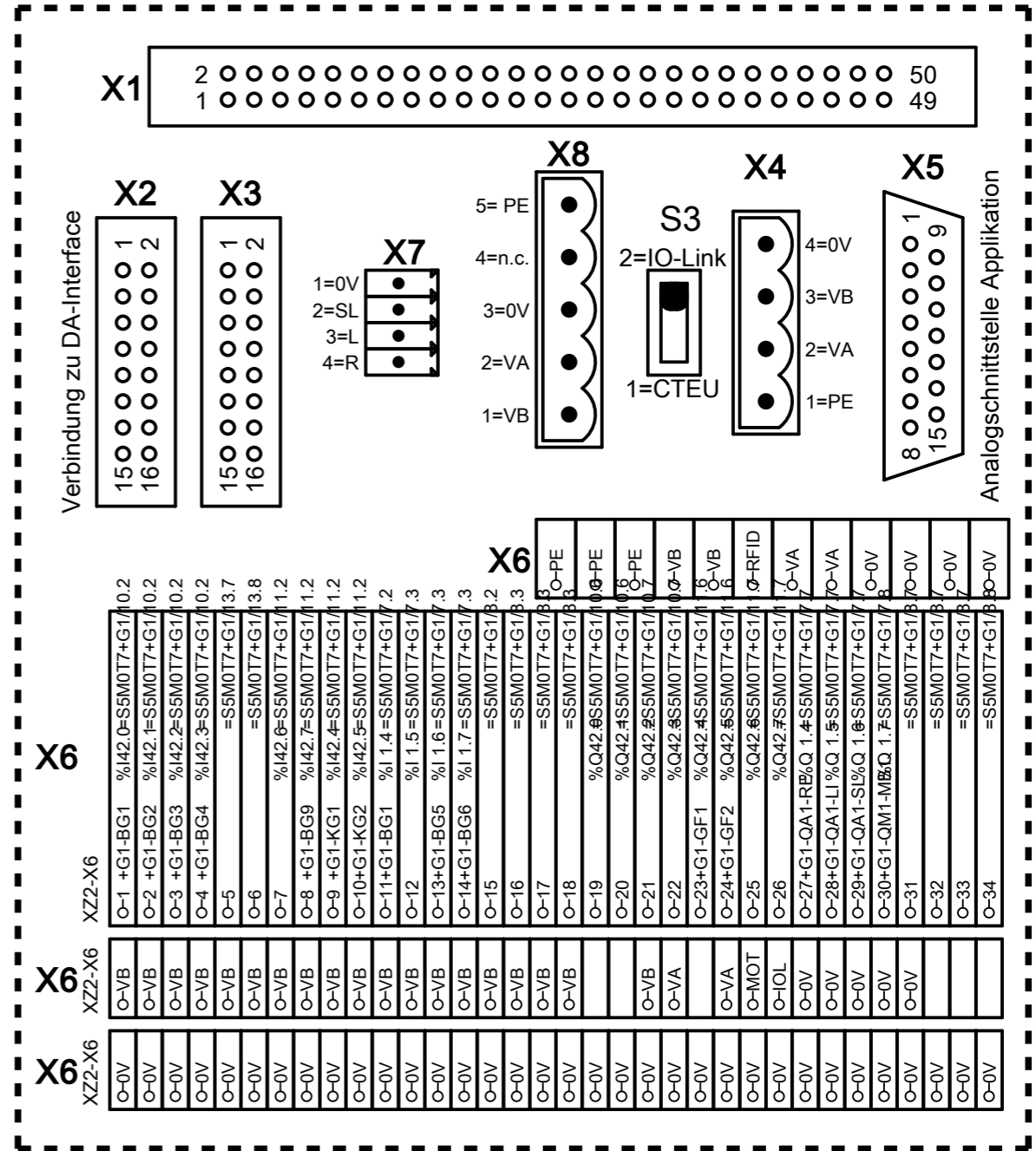
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V3
PCB's Rev 2019-01
Platinen Rev 2019-01



- 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

-XZ2
rear PCB
Platine hinten



- 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 Analogsignale 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

<3

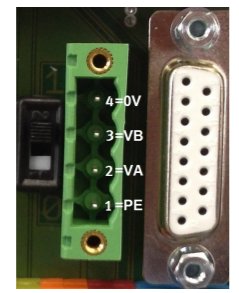
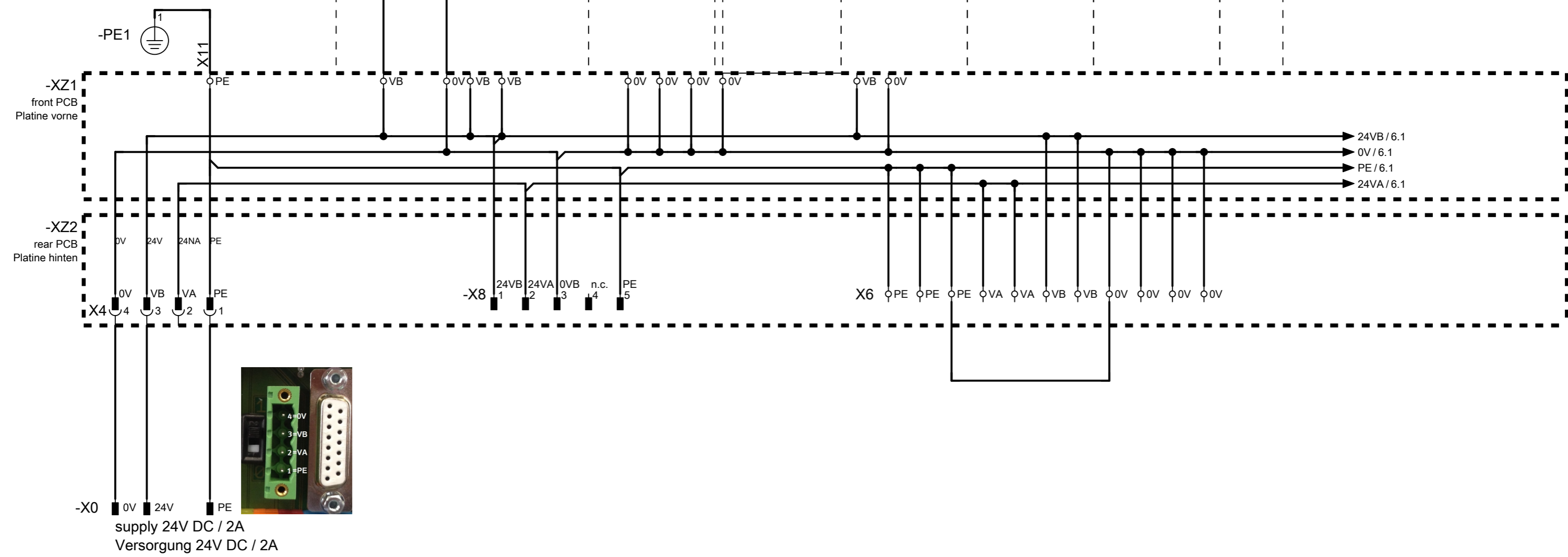
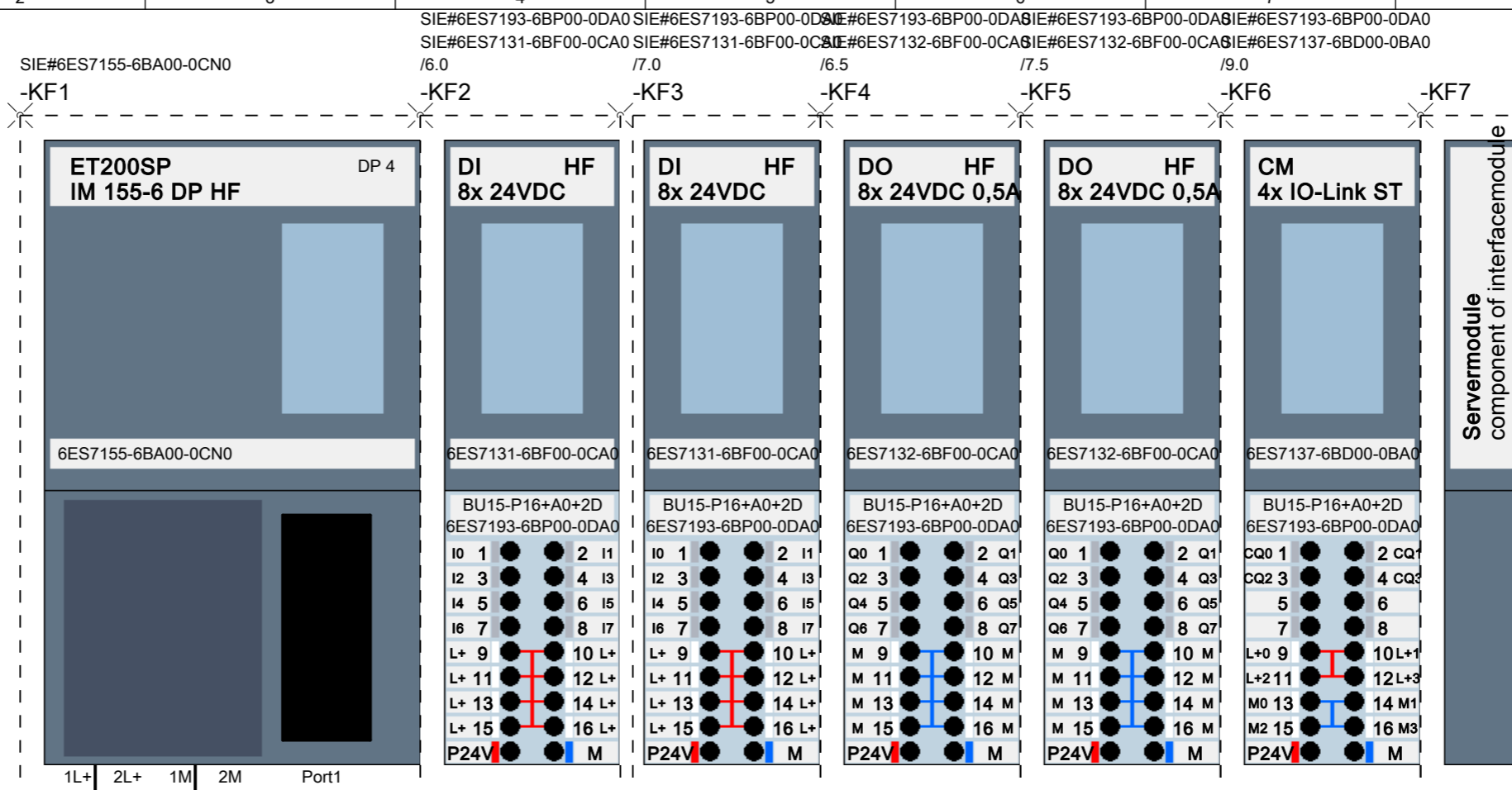
5>>

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S-Nr.			
PSP / DPJ	VN	= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
		+ G1	Conveyor
			Page 4 of 16

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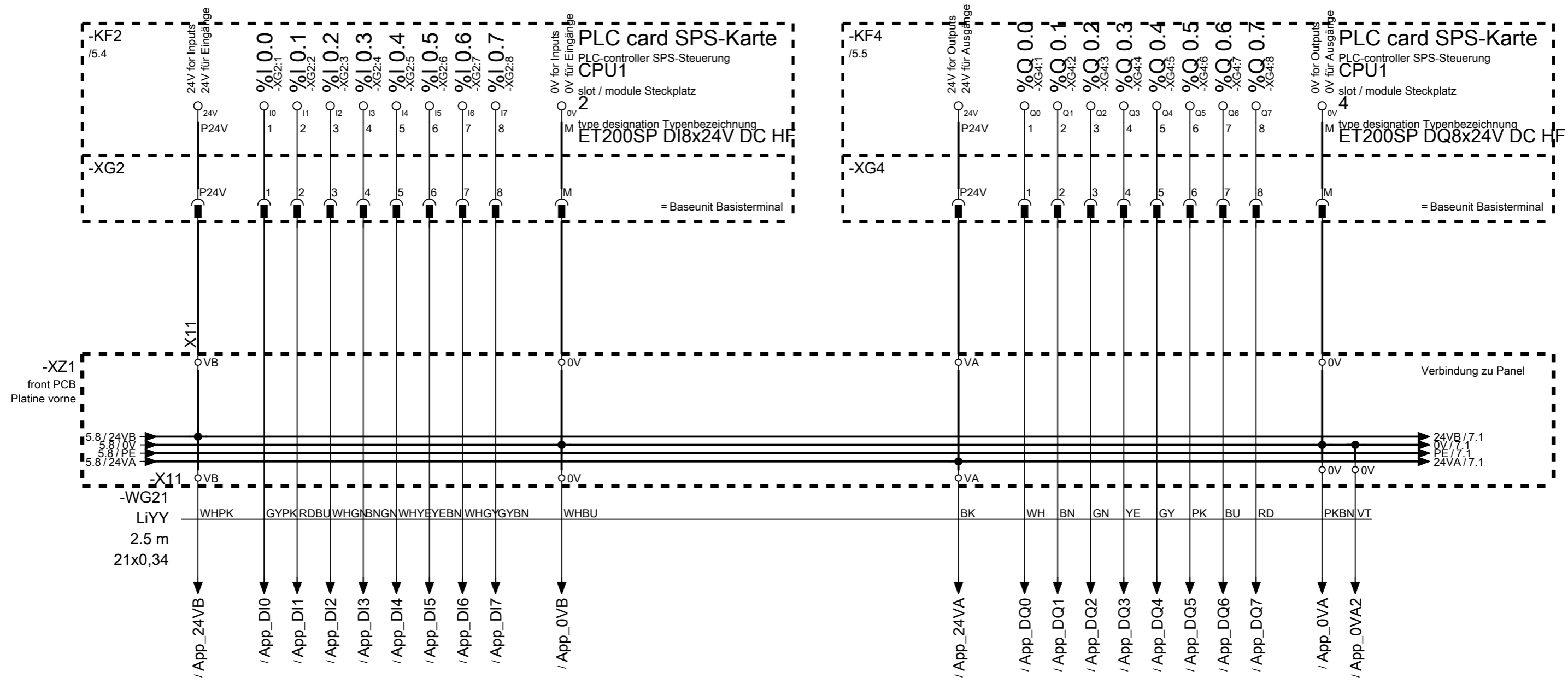
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FESTO assembly PLC
Aufbauplan SPS

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		+ G1	Conveyor
			Page 5 of 16

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0 1 2 3 4 5 6 7 8 9



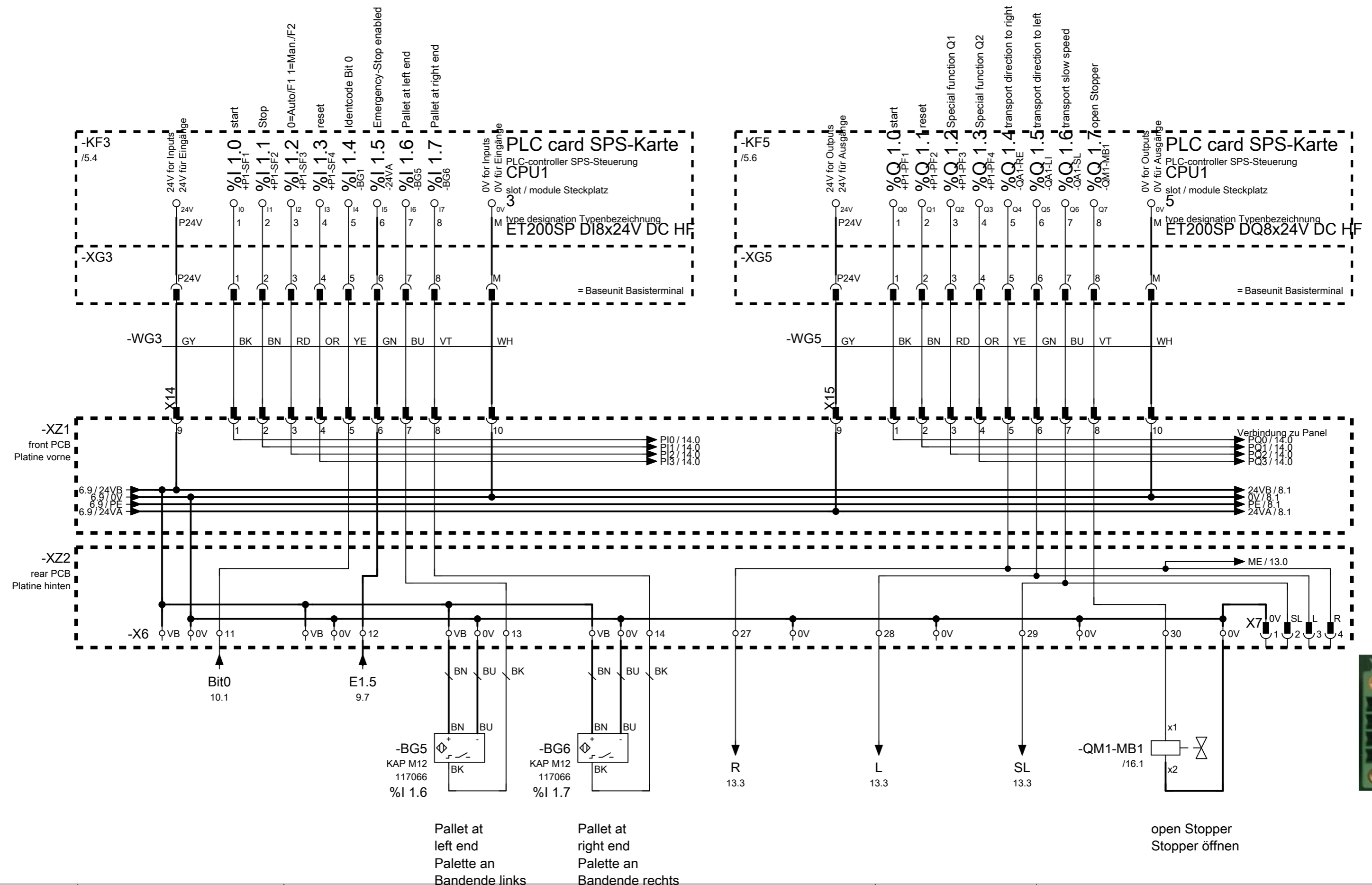
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Date	2020-12-03	FESTO application - Byte 0 Applikation - Byte 0	S-Nr.			
Ed. by.	espe		PSP / DPJ	VN		
Creat.	espe		= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700	Page 6	
Drw.Nr.	N:	F:	EPL0VZFG7M	+ G1	Conveyor	of 16

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0 1 2 3 4 5 6 7 8 9



<6

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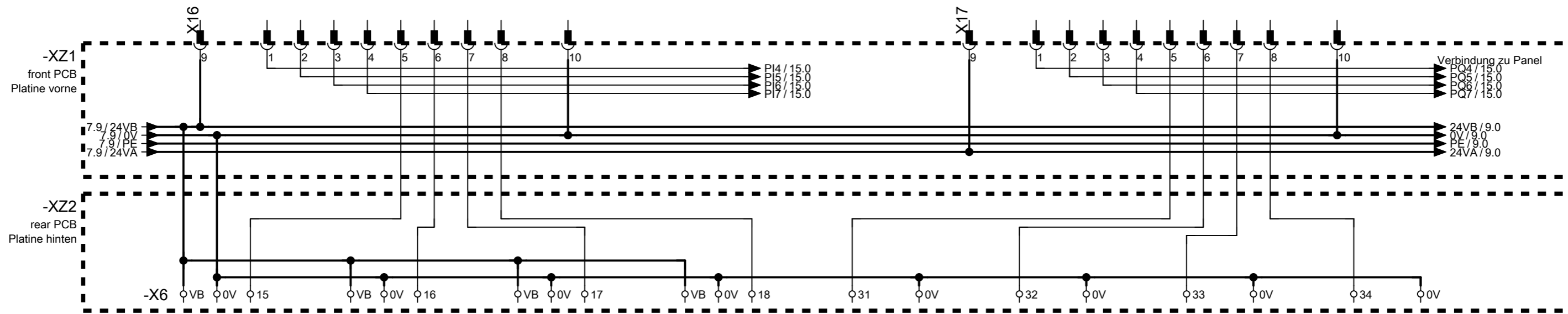
PCB - Byte 1
 Platine - Byte 1

S-Nr.	
PSP / DPJ	VN

= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700	Page 7
+ G1	Conveyor	of 16

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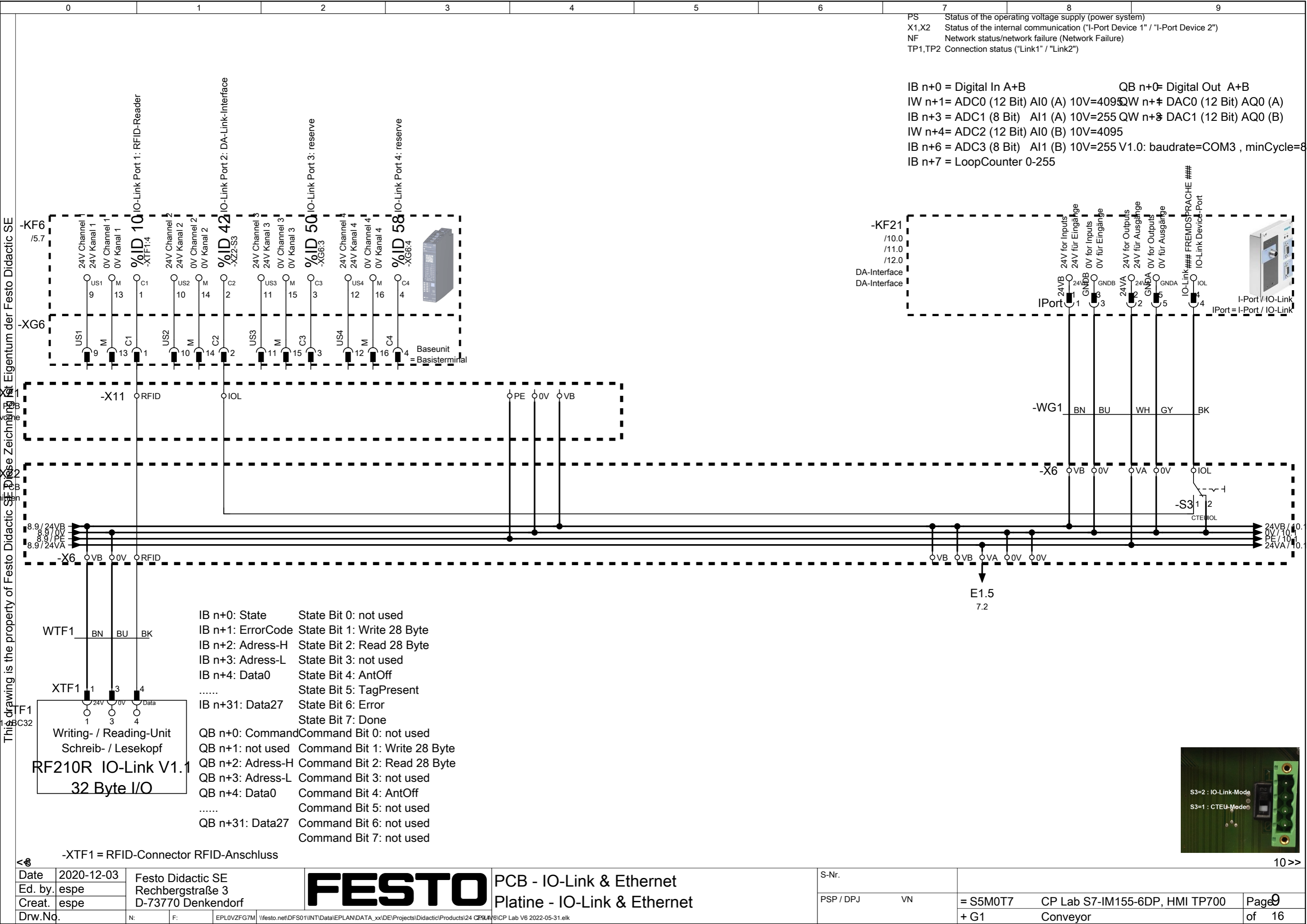
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N:	
F:	



PCB - Byte 2
Platine - Byte 2

S-Nr.	
PSP / DPJ	VN

= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
+ G1	Conveyor



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)
 QB n+3= DAC1 (12 Bit) AQ0 (B)

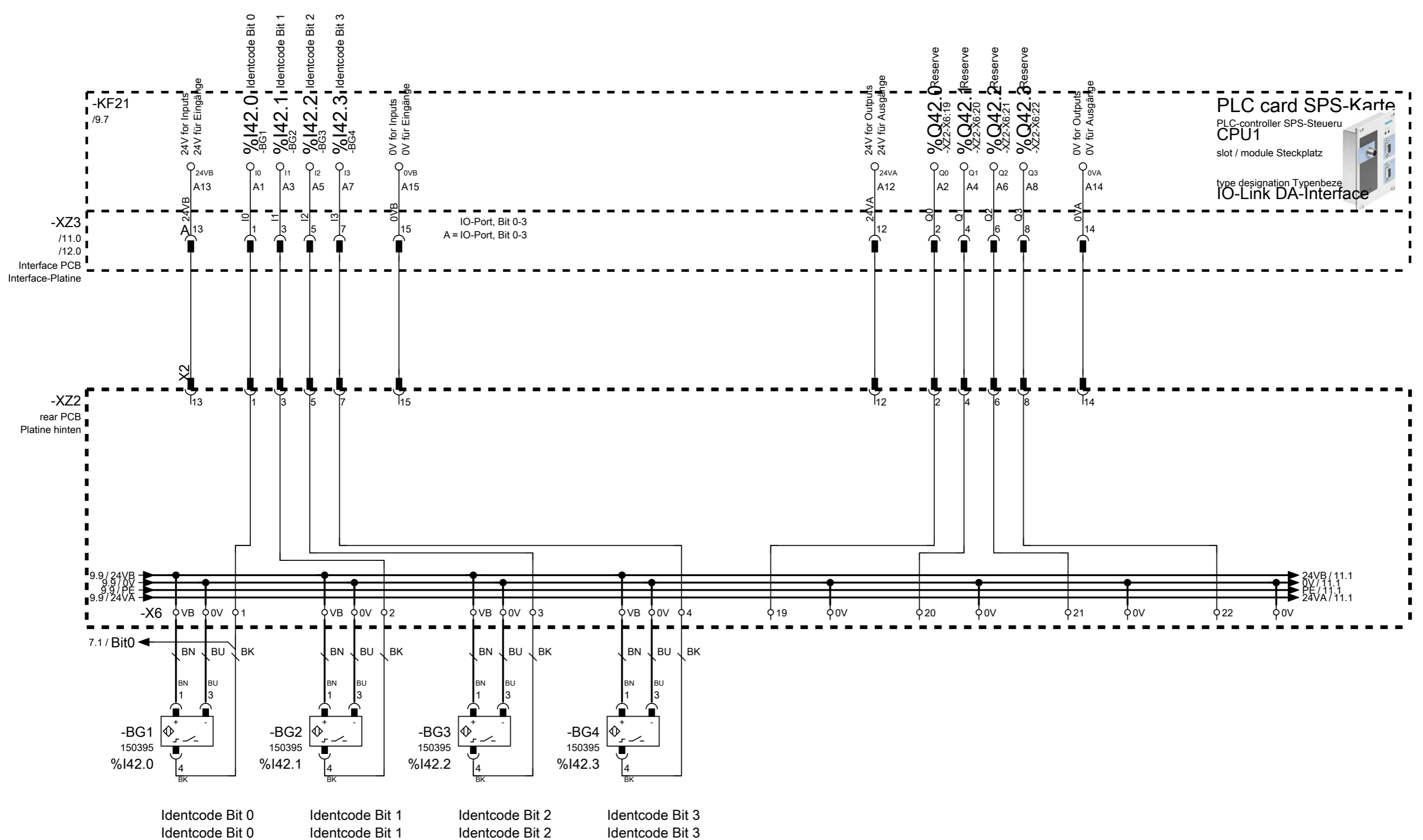
V1.0: baudrate=COM3 , minCycle=8

IB n+0: State	State Bit 0: not used
IB n+1: Error	State Bit 1: Write 28 Byte
IB n+2: Address-H	State Bit 2: Read 28 Byte
IB n+3: Address-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: Address-H	Command Bit 2: Read 28 Byte
QB n+3: Address-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

RF210R IO-Link V1.1
 32 Byte I/O

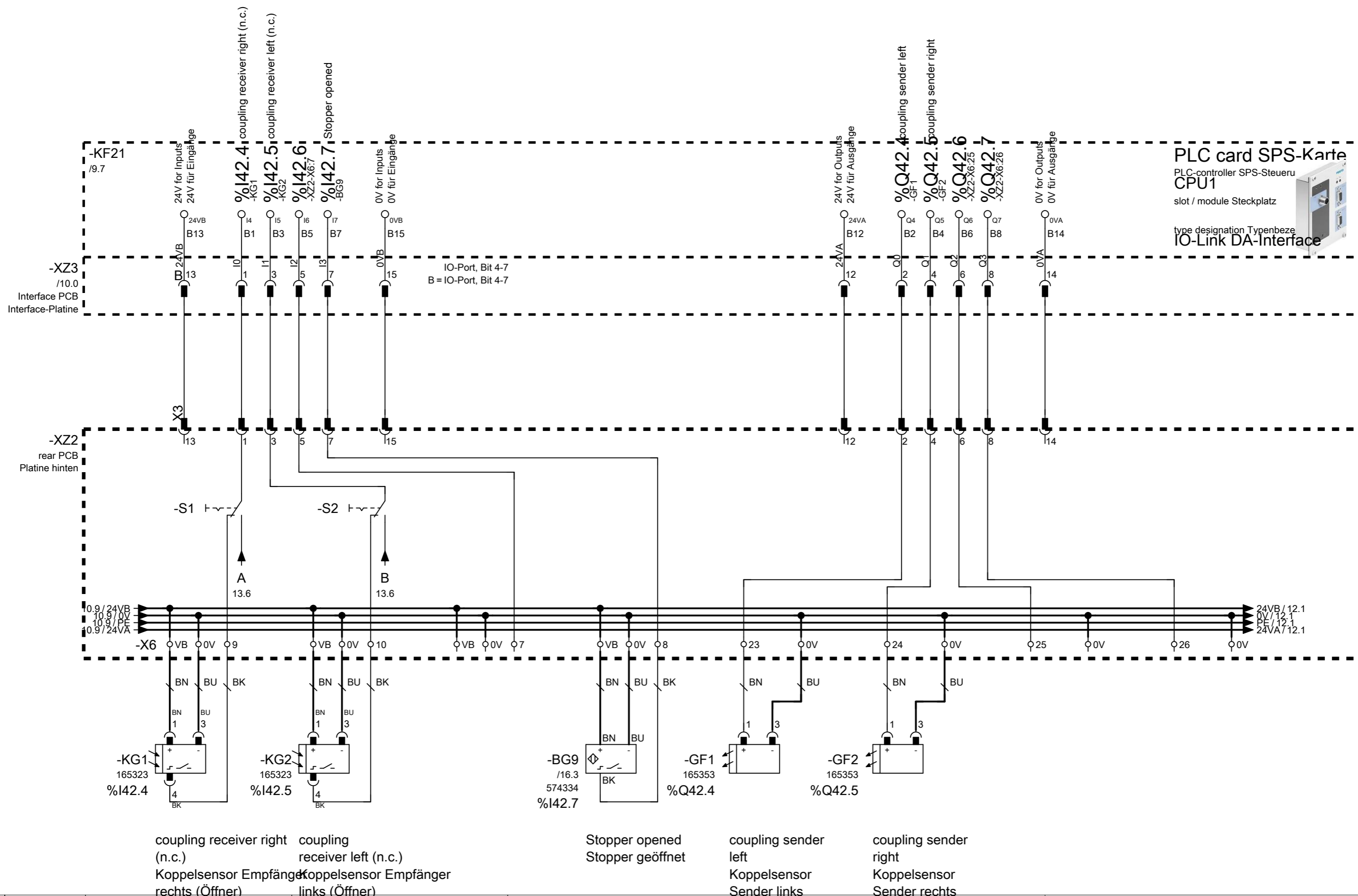
-XTF1 = RFID-Connector RFID-Anschluss

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Date	2020-12-03	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf	FESTO	PCB - IO-Link A Platine - IO-Link A	S-Nr.			
Ed. by.	espe				PSP / DPJ	VN	= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
Drw.Nr.		N:	F:	EPL0VZFG7M festo.net\DFS01\INT\Data\EPLAN\DATA_xx\DE\Projects\Didactic\Products\24 CP Lab V6 2022-05-31.elk	+ G1	Conveyor	of 16	

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PLC card SPS-Karte
 PLC-controller SPS-Steueru
CPU1
 slot / module Steckplatz

type designation Typenbeze
IO-Link DA-Interface



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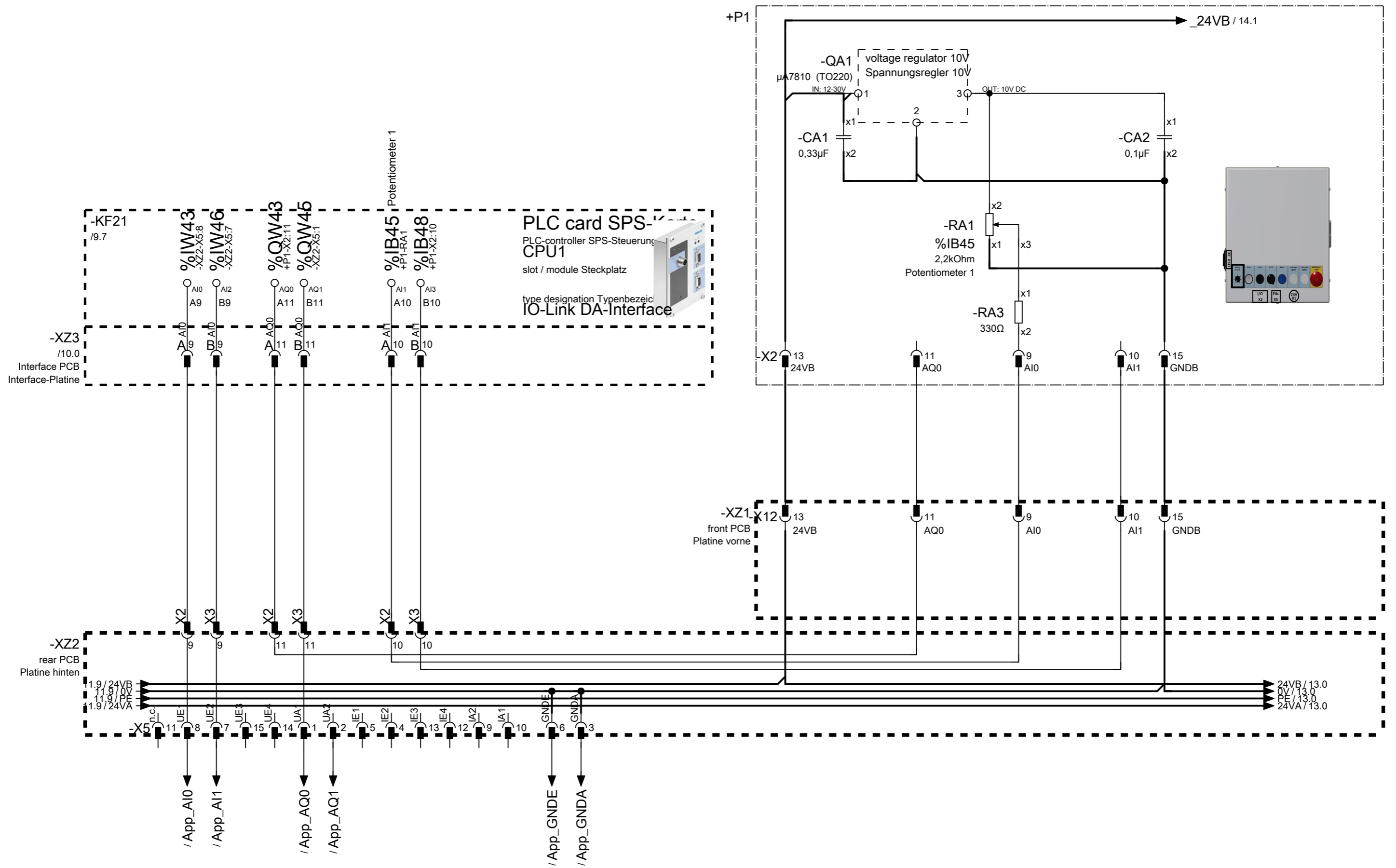


PCB - IO-Link B
 Platine - IO-Link B

S-Nr.	
PSP / DPJ	VN

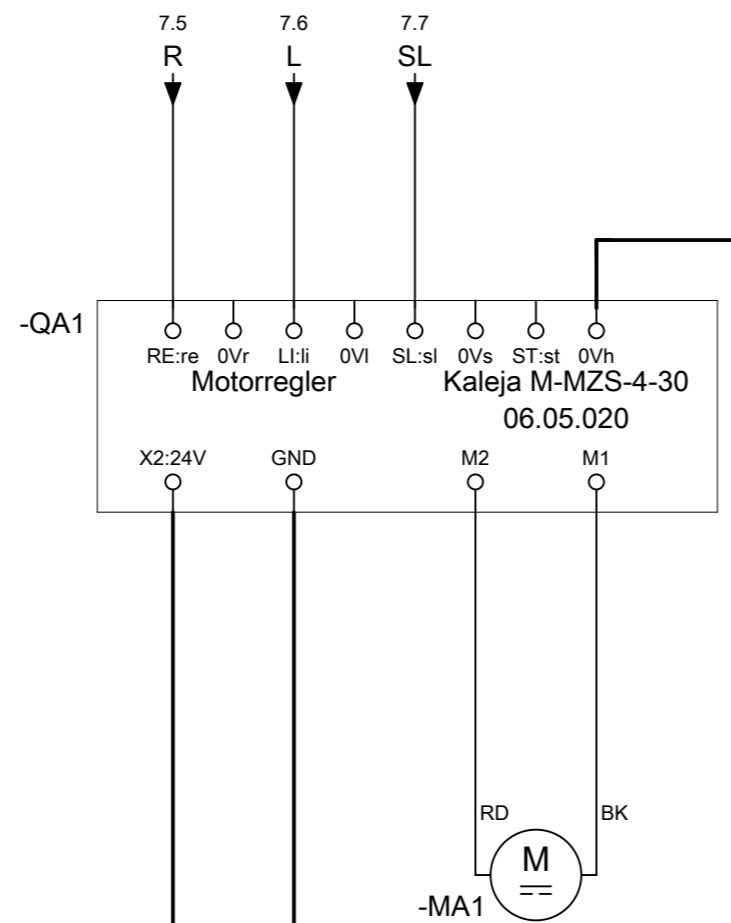
= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700	Page 11
+ G1	Conveyor	of 16

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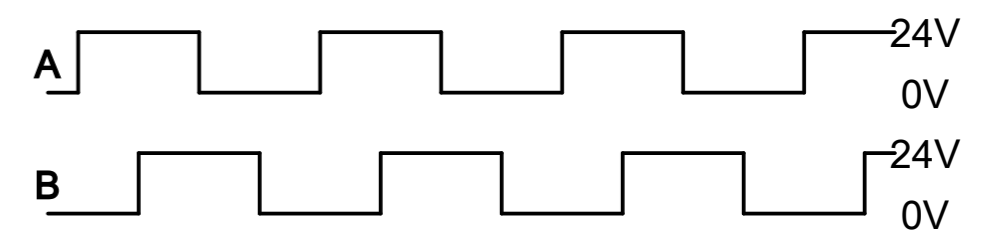


Date	2020-12-03	FESTO PCB - IO-Link analog Platine - IO-Link Analog	S-Nr.	
Ed. by.	espe		PSP / DPJ	VN
Creat.	espe		= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
Drw.Nr.	N:		+ G1	Conveyor

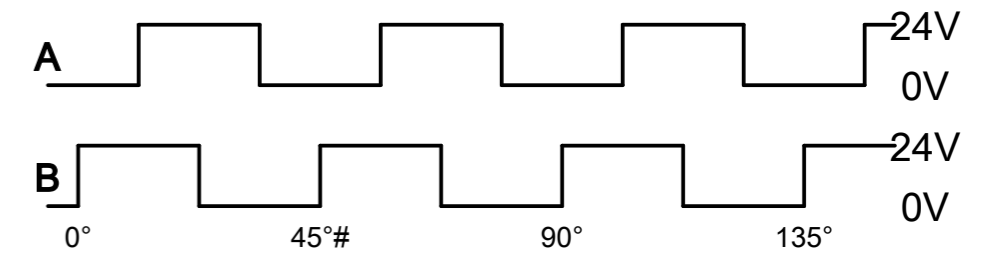
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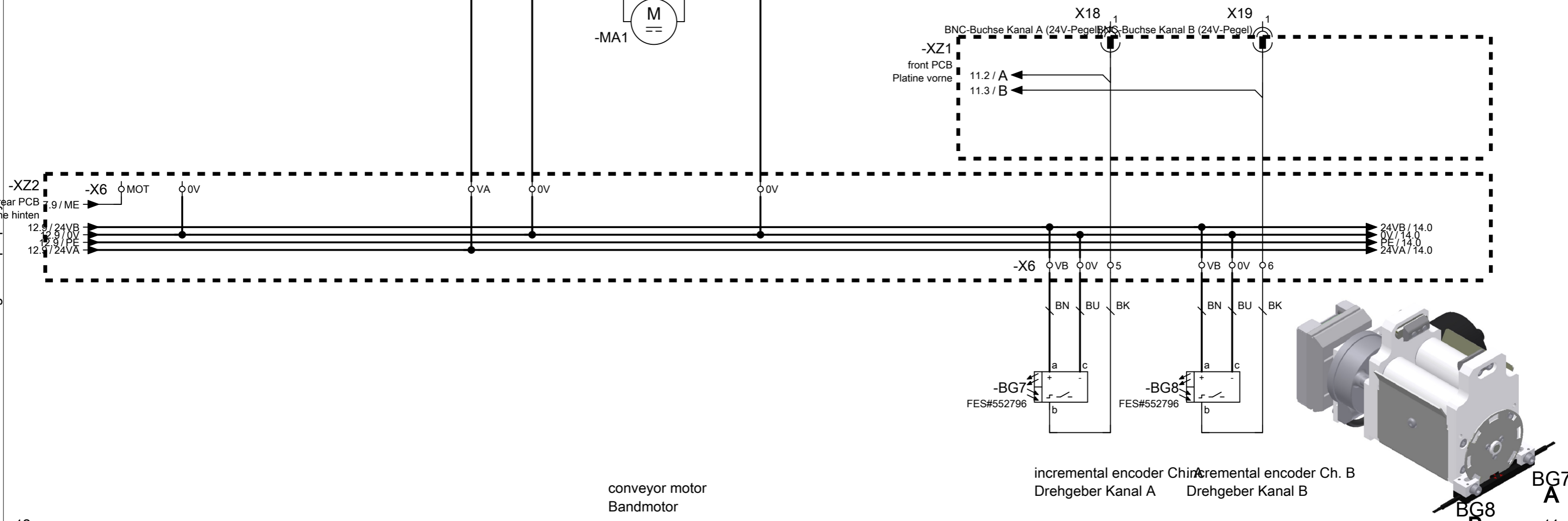
transport direction to right
Bandantrieb Rechtslauf



transport direction to left
Bandantrieb Linkslauf



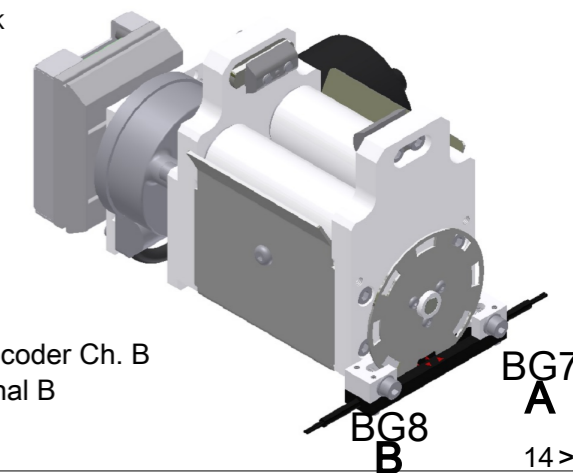
1 rotation = 8 pulses/channel = 30mm * π = 94,2 mm
1 Umdrehung = 8 Impulse je Kanal = 30mm * π = 94,2 mm



conveyor motor
Bandmotor

incremental encoder Ch. A
Drehgeber Kanal A

incremental encoder Ch. B
Drehgeber Kanal B



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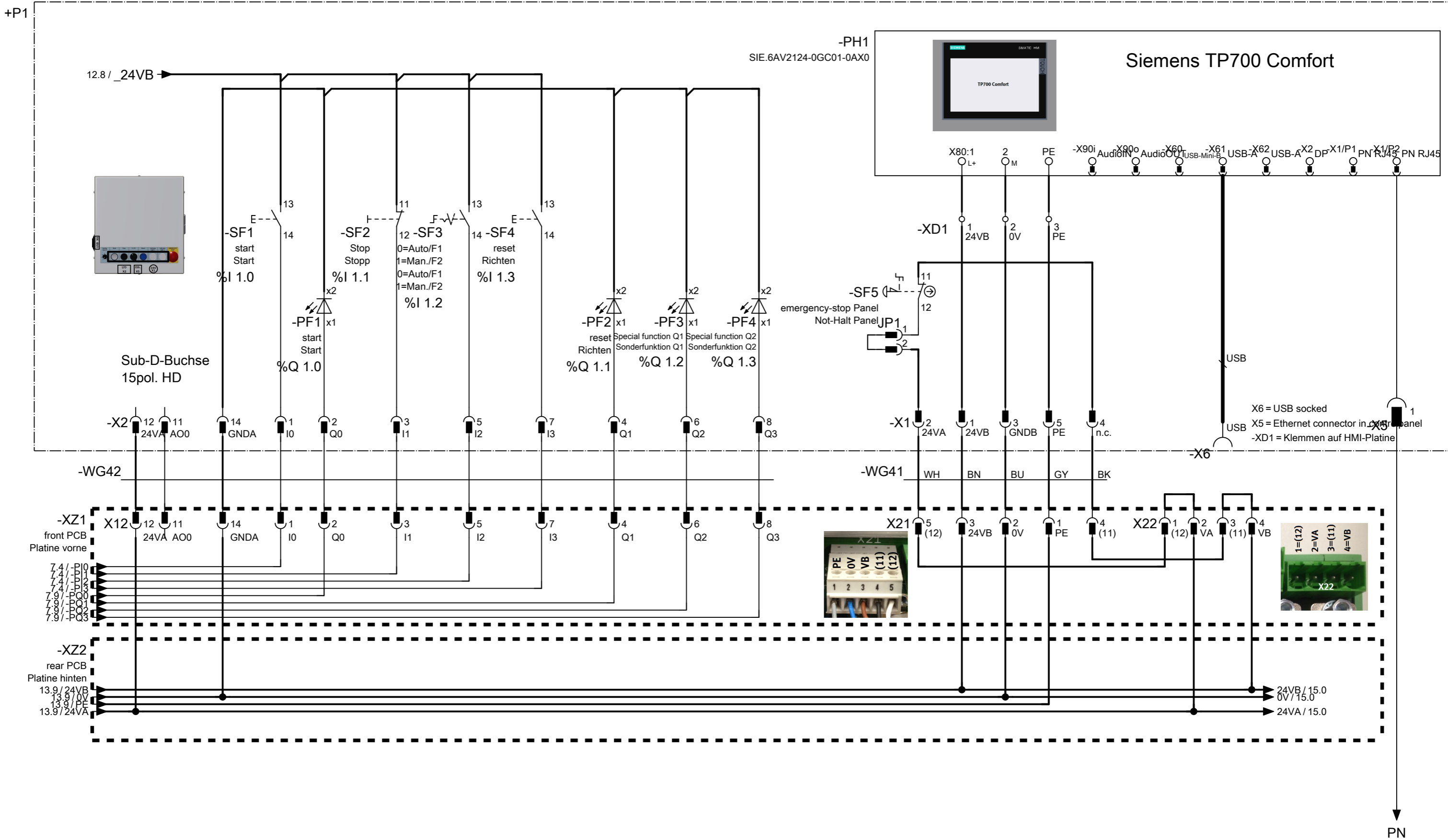
PCB - motor + encoder
Platine - Motor + Inkrementalgeber

S-Nr.	
PSP / DPJ	VN

= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700	Page 13
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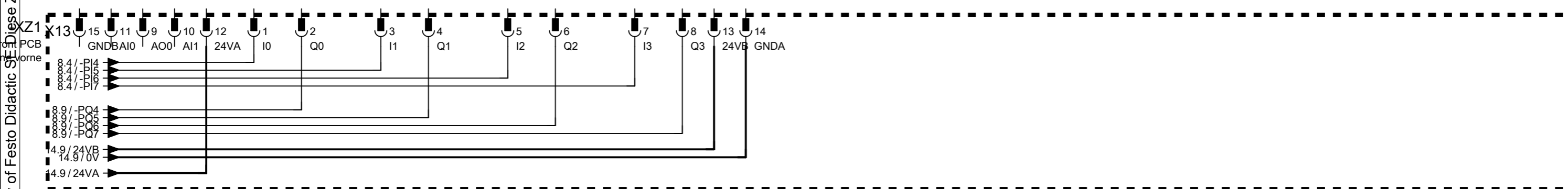
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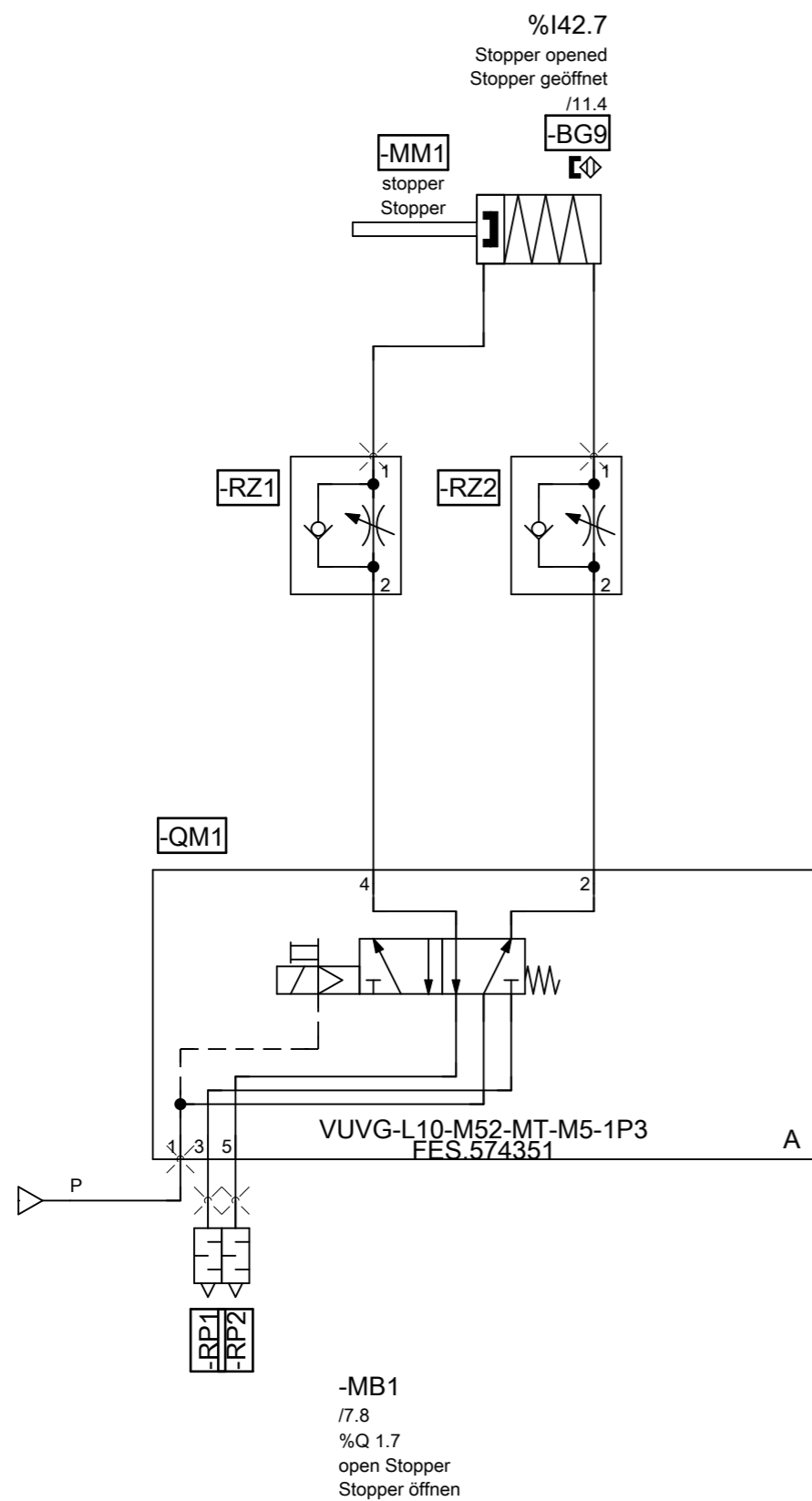
Date	2020-12-03	Festo Didactic SE Rechbergstraße 3 D-73770 Denkendorf	FESTO	controlpanel basic functions & touchpanel Bedienfeld Grundfunktionen & Touchpanel	S-Nr.			
Ed. by.	espe				PSP / DPJ	VN	= S5M0T7	CP Lab S7-IM155-6DP, HMI TP700
Drw.Nr.					+ G1	Conveyor		of 16

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Creat.	espe	
Drw.Nd.	N:	F:

FESTO pneumatic schematic
Pneumatikplan

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		+ G1	Conveyor
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