



Elektrodokumenta

Electric system documentation
Documentation électrique

Projekt: SMH-510-4

Maschinennummer	
Zeichnungsnummer	5010000002-0020
Datum	14.10.2020
Beschreibung	SMH-510-4 Standard

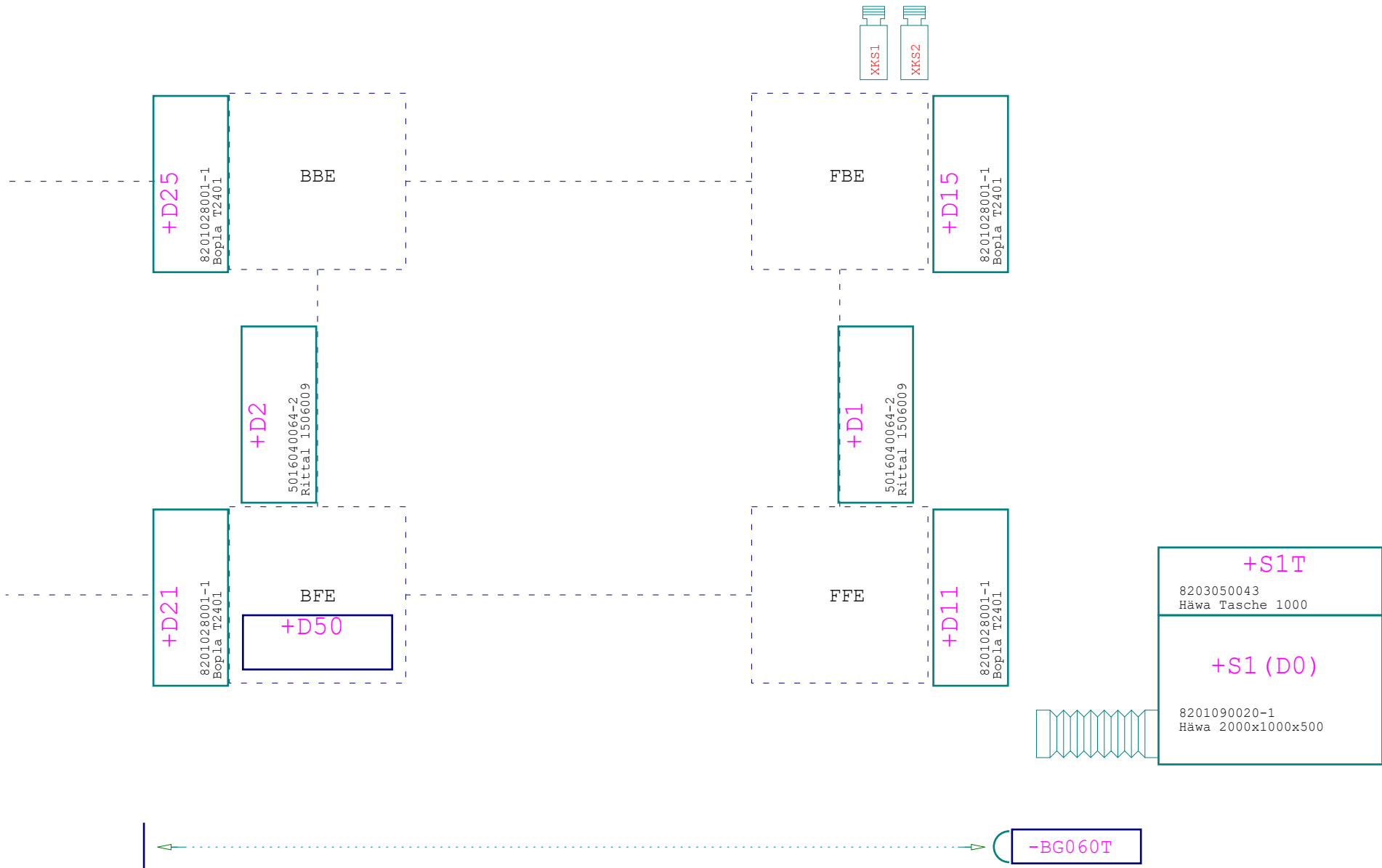
Kunde:	Rotox sp.z.o.o.
Kommission:	Kapica
AB-Nummer:	5010000002-0020
Plannummer:	SMH-510-4-119__5010000002-0020

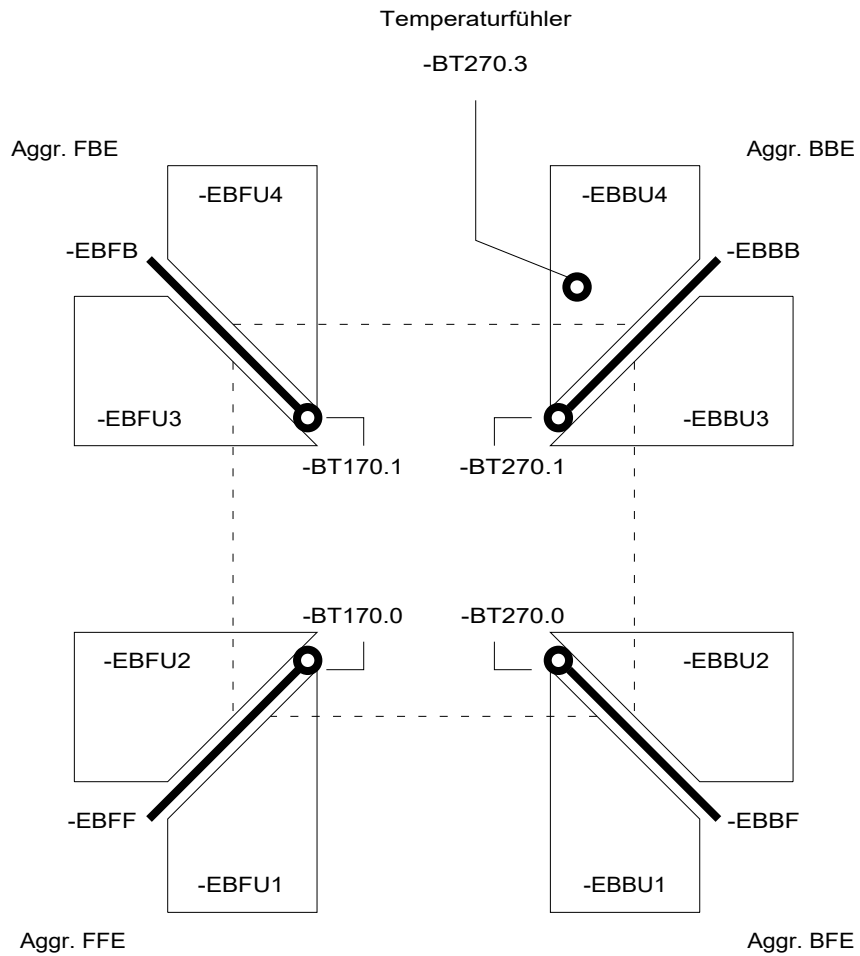
Maschinentyp:	SMH-510-4 Standard
Feste Seite:	links
Kämpfertyp:	

Netzspannung:	3x400V-N-PE
Frequenz:	50Hz
Vorsicherung:	35A
Anschlußwert:	32A

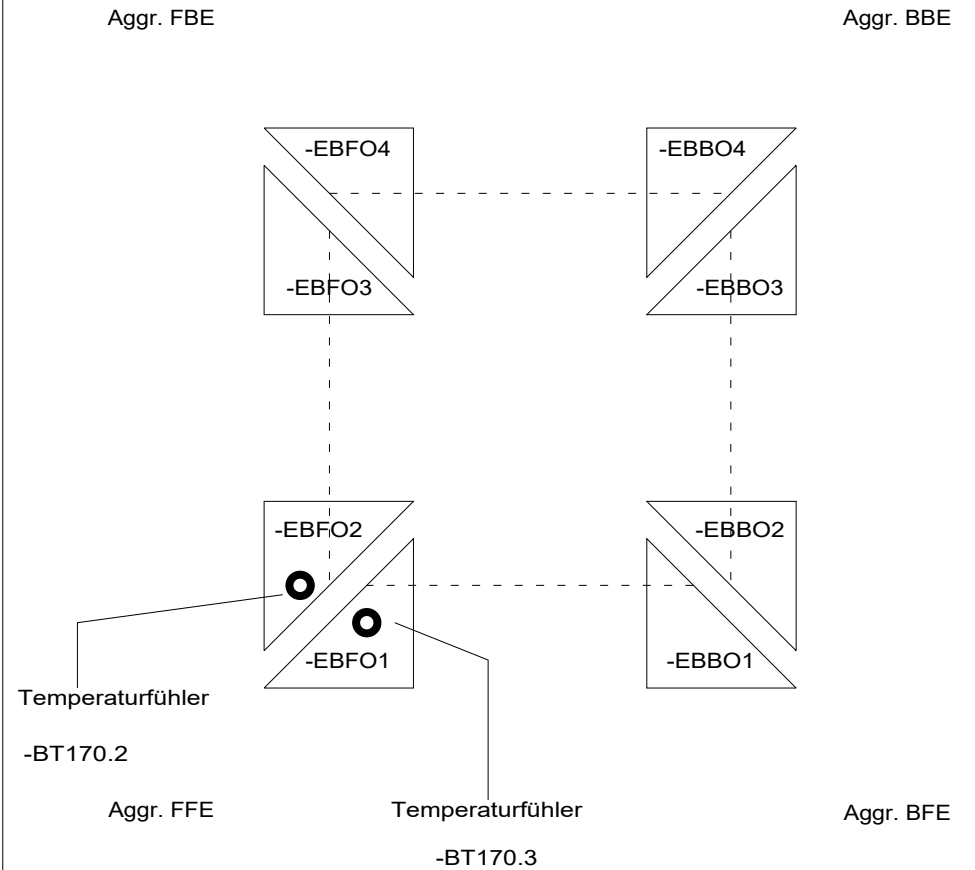
Übersicht der Schaltkästen

Bei Maschine mit festem Träger rechts



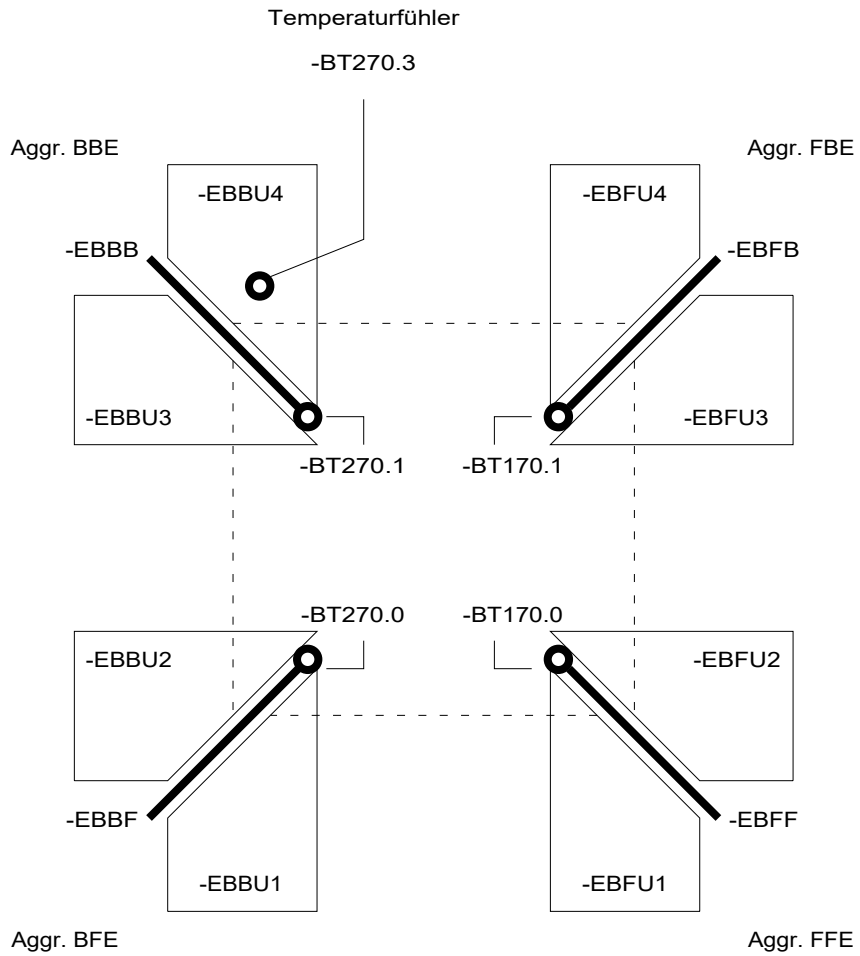


Übersicht Heizung Tischplatten

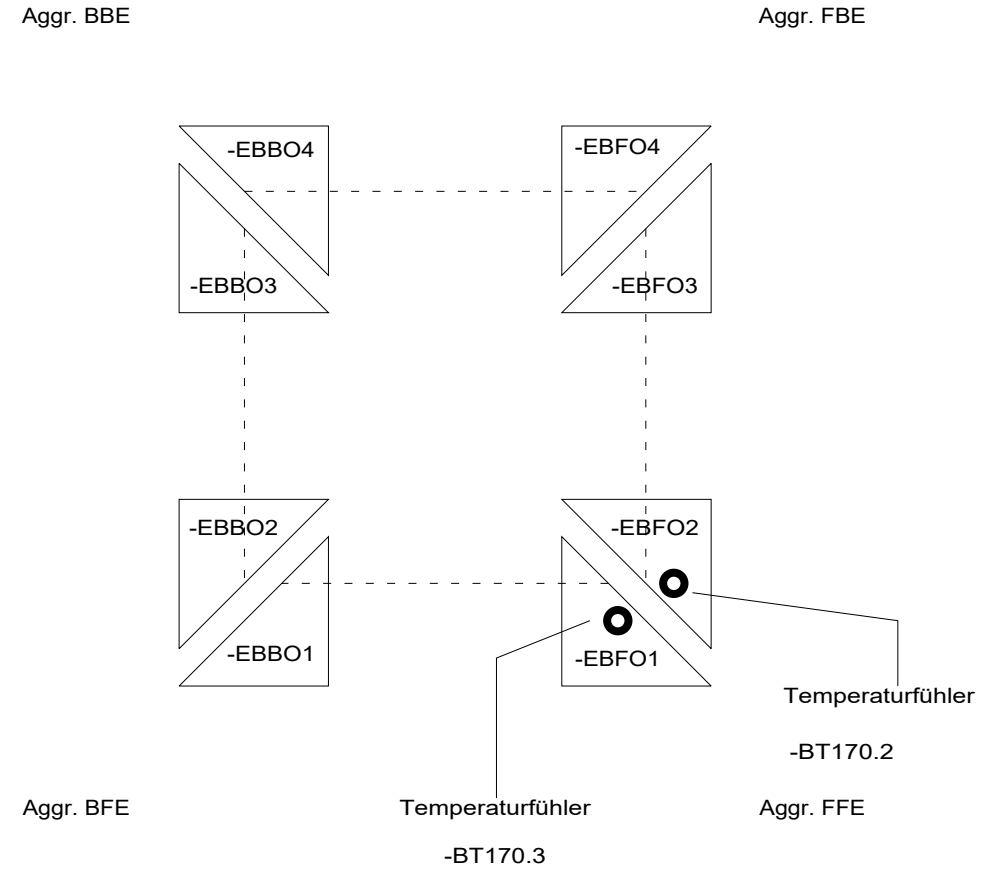


Übersicht Heizung Spannplatten

Bei Maschine mit festem Träger links

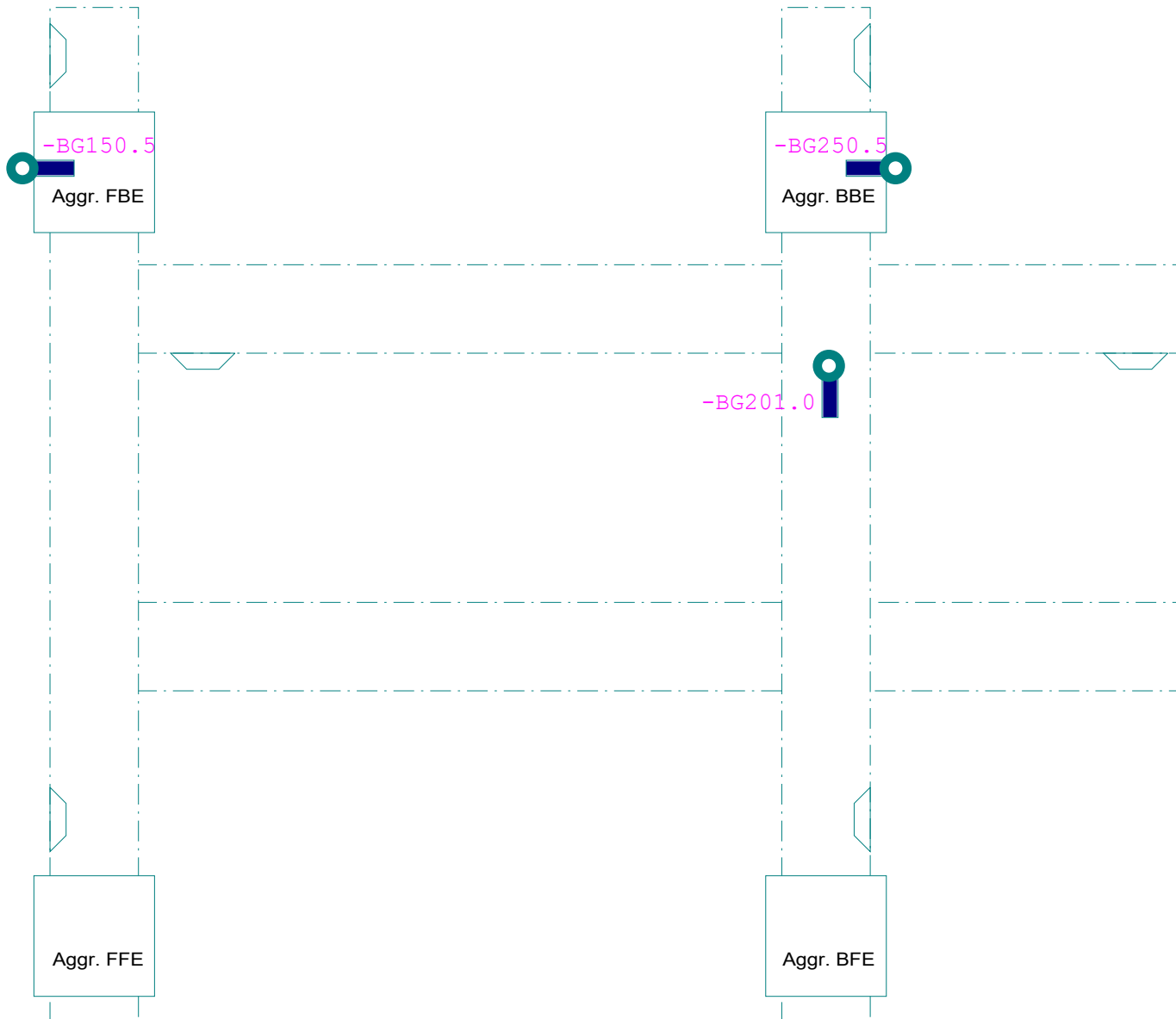


Übersicht Heizung Tischplatten



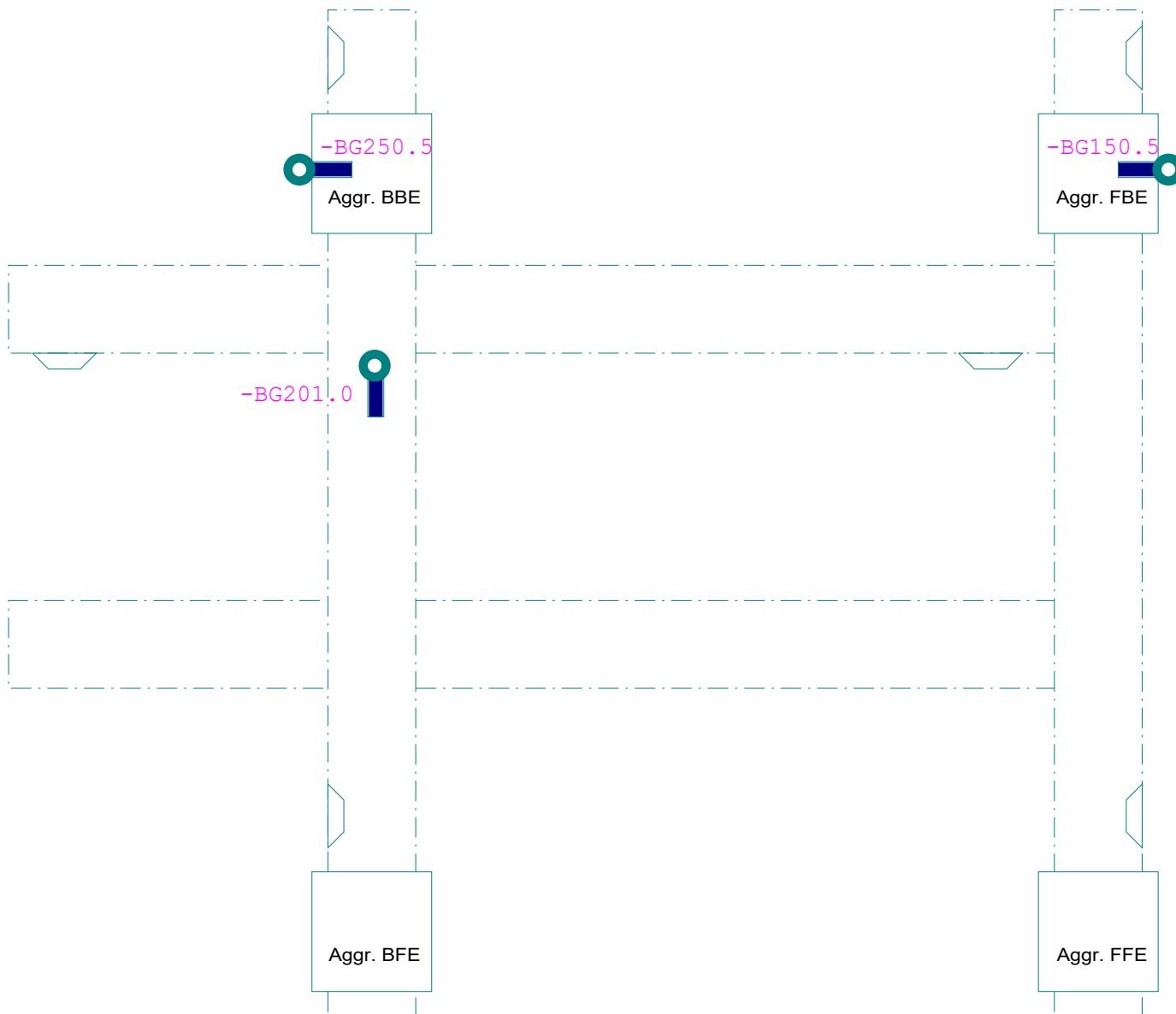
Übersicht Heizung Spannplatten

Bei Maschine mit festem Träger rechts



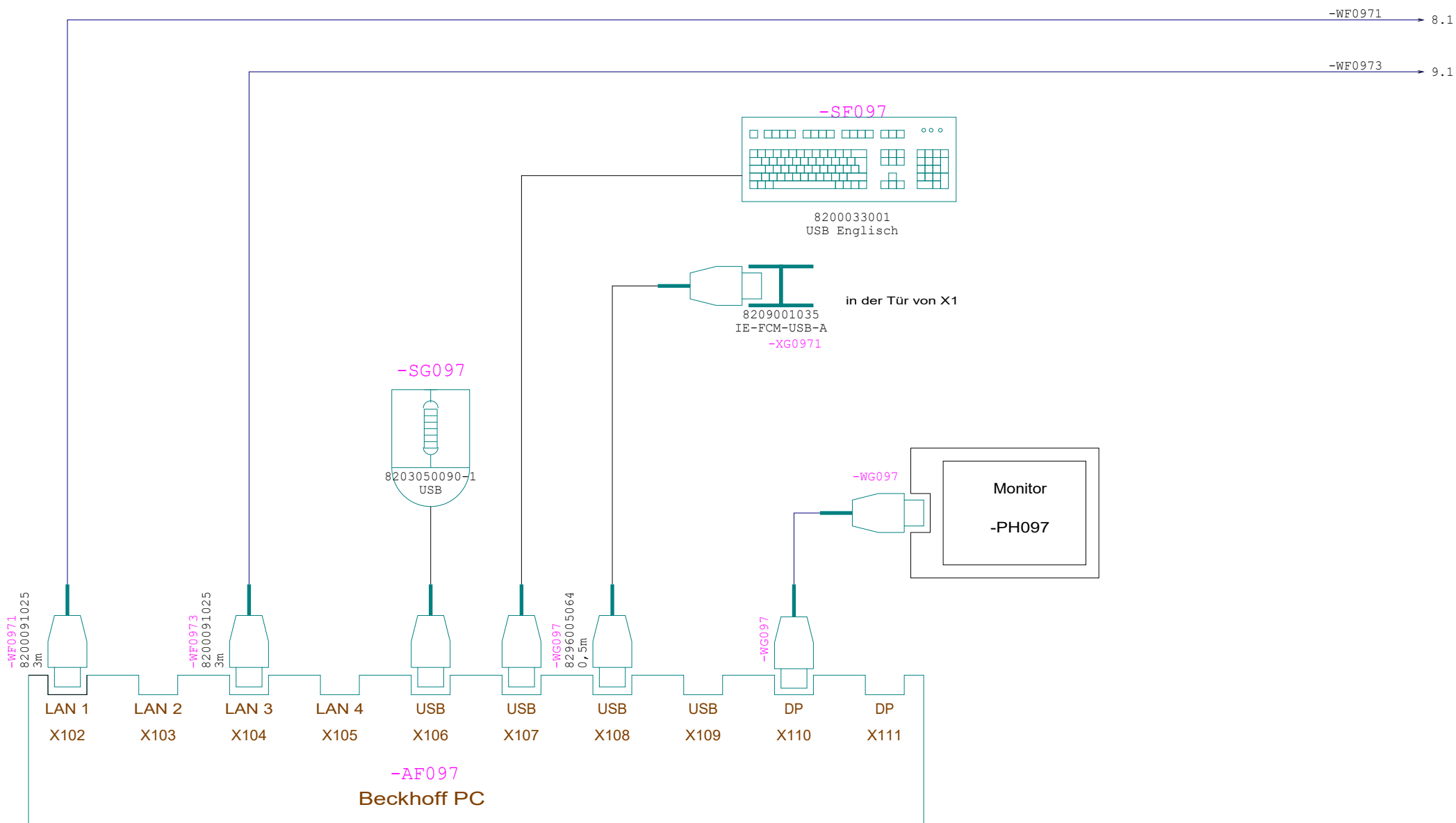
Übersicht Endschalter

Bei Maschine mit festem Träger links

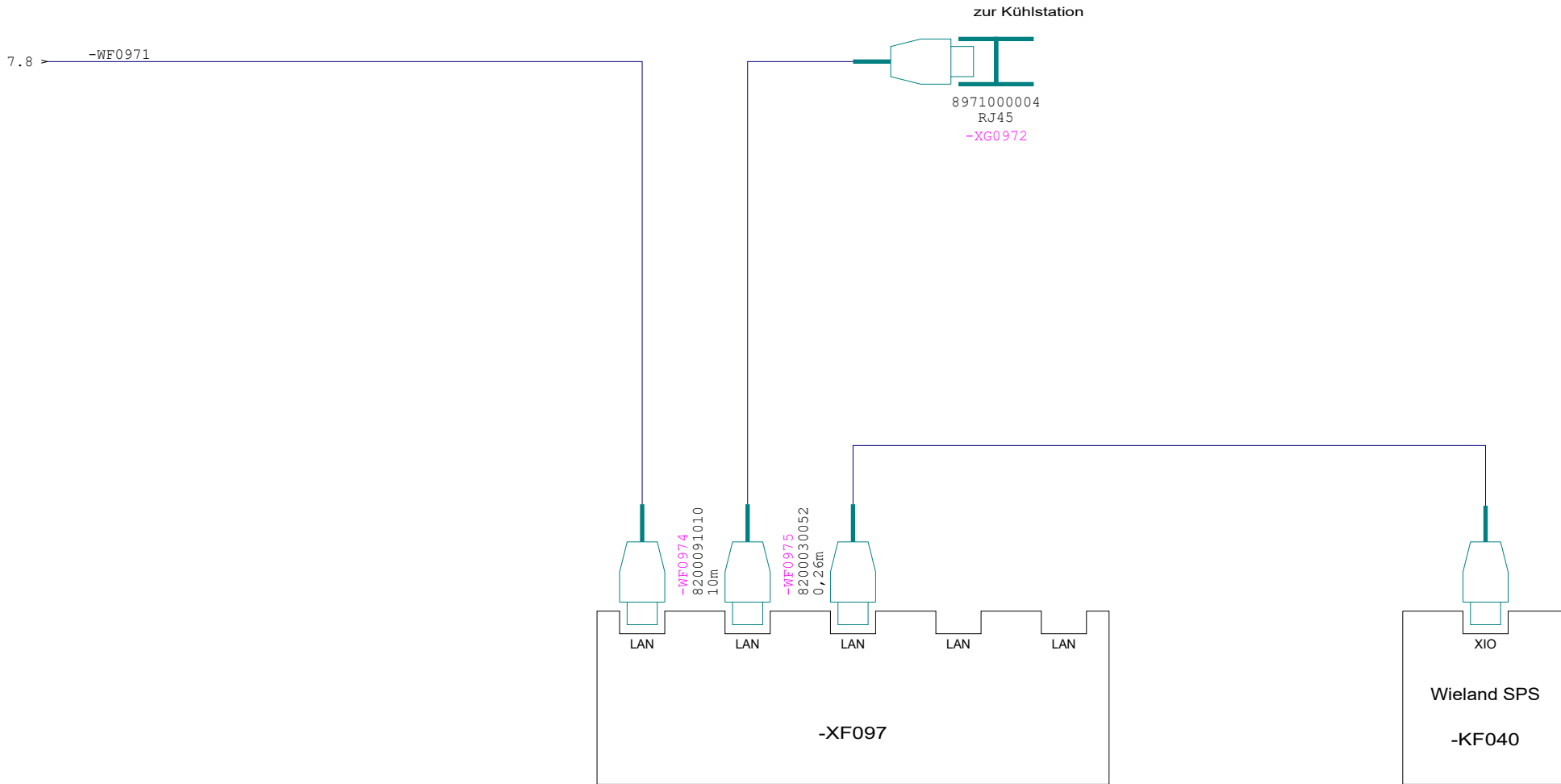


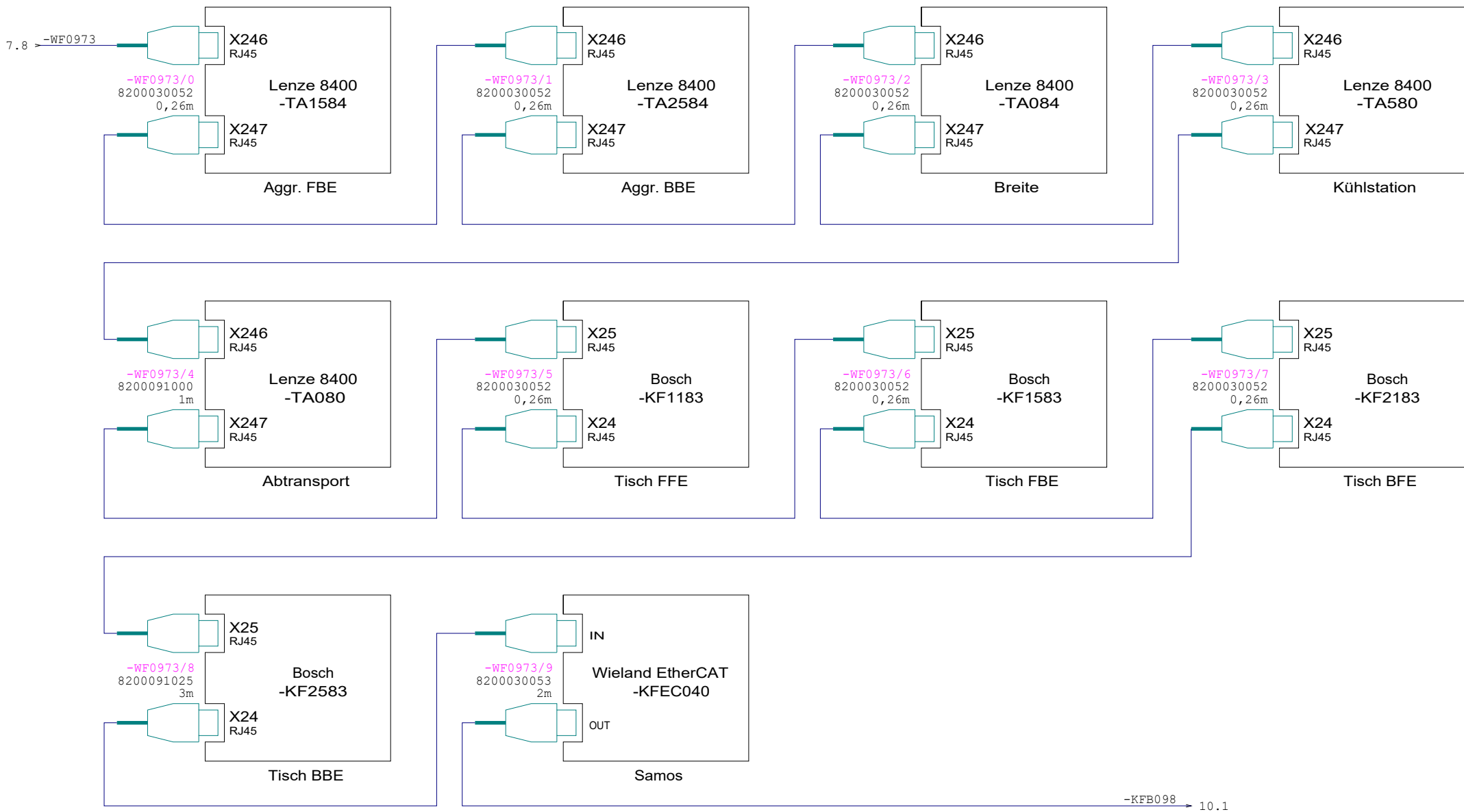
Übersicht Endschalter

Bei Maschine mit festem Träger rechts

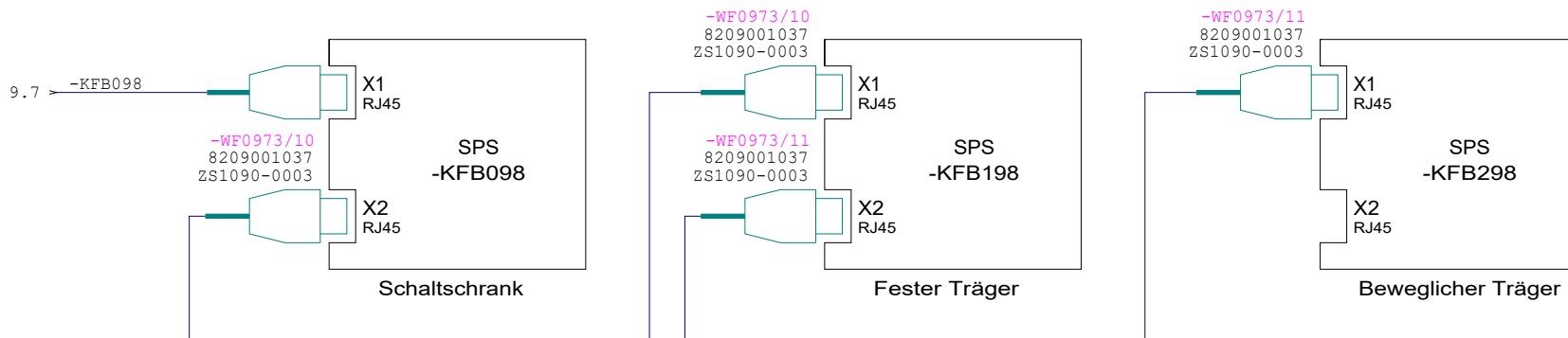


Netzwerk Kabelkreis





Netzwerk Kabelkreis



Bildkennzeichen

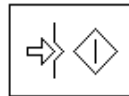
Funktion



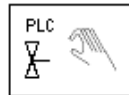
Maschine ein



Maschine aus



Start/Weiterlauf



Ventile manuell



Schrittsteuerung



Reset/Grundstellung

Symbolbedeutung

Übersicht SPS-Bauteile im Schaltschrank X1

Typ	Pin	Adr	Pfad	Funktion
8200090080	0	I0.0	48.2	Taste Ventile manuell
Beckhoff Digital 4xIN -KFDI0	1	I0.1	48.4	Schalter Schrittsteuerung
	2	I0.2		
	3	I0.3	45.3	Not-Aus am Schaltschrank

Digitaleingänge

Typ	Pin	Adr	Pfad	Funktion
8200032103	0	Q10.0	50.2	Heizung Spiegel FFE
Beckhoff Digital 8xOUT -KFDQ10	1	Q10.1	50.3	Heizung Spiegel FBE
	2	Q10.2	50.4	Heizung Spiegel BFE
	3	Q10.3	50.5	Heizung Spiegel BBE
	4	Q10.4	50.6	Spannungsversorgung der Heizspiegel
	5	Q10.5	51.3	Heizung Tische
	6	Q10.6	51.5	Heizung Spanner Stab AC
	7	Q10.7	51.6	Heizung Spanner Stab BD

nach Not-Aus

Typ	Pin	Adr	Pfad	Funktion
8200032103	0	Q0.0		
Beckhoff Digital 8xOUT -KFDQ0	1	Q0.1	47.7	Lampe Taste Start/Weiterlauf
	2	Q0.2	47.1	Lampe Taste Maschine Ein
	3	Q0.3	47.3	Lampe Taste Maschine Aus
	4	Q0.4	47.5	Lampe Taste Rest/Grundstellung
	5	Q0.5	65.2	Posilichtschranke unterbrochen Schmelzen
	6	Q0.6		
	7	Q0.7	55.3	Antrieb Achsen Reglerfreigabe

vor Not-Aus

Digitalausgänge

Typ	Pin	Adr	Pfad	Funktion
8200090081	0	Q11.0	59.4	Abtransport Freigabe FU
Beckhoff Digital 4xOUT -KFDQ11	1	Q11.1	55.5	Antrieb Achsen Quickstop
	2	Q11.2		
	3	Q11.3		

nach Not-Aus oder LS verzögert

Typ	Pin	Adr	Pfad	Funktion
8200090081	0	Q12.0	58.4	Kühlstation Freigabe FU
Beckhoff Digital 4xOUT -KFDQ12	1	Q12.1		
	2	Q12.2		
	3	Q12.3		

nach Not-Aus verzögert

Digitalausgänge

AS = Arbeitsstellung

GS = Grundstellung

Übersicht Wieland samospro Bauteile im Schaltschrank X1

Typ	Pin	Adr	Pfad	Funktion
8231000020-1 -KF040 Wieland samospro	T1	Q40.0S	45.1	Testausgang 1
	T2	Q40.1S	45.2	Testausgang 2
	T3	Q40.2S	46.2	Testausgang 3
	T4	Q40.3S	46.7	Testausgang 4
	I1	I40.0S	45.7	Not-Aus Kanal 1
	I2	I40.1S	45.6	Not-Aus Kanal 2
	I3	I40.2S	66.3	Lichtschanke Posi OSSD1
	I4	I40.3S	66.4	Lichtschanke Posi OSSD2
	I5	I40.4S	46.2	EDM Not-Aus
	I6	I40.5S	46.7	EDM Not-Aus verzögert
	I7	I40.6S	46.5	EDM Not-Aus oder Lichtschanke verzögert
	I8	I40.7S	41.4	EDM Steuerluft feste Seite
	I9	I41.0S	41.8	EDM Steuerluft bew. Seite
	I10	I41.1S	47.2	Taste Maschine ein
	I11	I41.2S	47.4	Taste Maschine aus
	I12	I41.3S	47.6	Taste Reset/Grundstellung
	I13	I41.4S	47.8	Taste Start/Weiterlauf
	I14	I41.5S		
	I15	I41.6S		
	I16	I41.7S		
	Q1	Q41.0S	44.2	Not-Aus Kanal 1
	Q2	Q41.1S	44.6	Not-Aus Kanal 2
	Q3	Q41.2S	49.2	Not-Aus oder Lichtschanke verzögert
	Q4	Q41.3S	49.5	Not-Aus verzögert
	IQ1	Q41.4S		
	IQ2	Q41.5S		
	IQ3	Q41.6S	60.3	STO 1
	IQ4	Q41.7S	60.5	STO 2

Sicherheits SPS

Übersicht SPS-Bauteile im Klemmkasten X F

Option

Typ	Pin	Adr	Pfad	Funktion
8200090080 Beckhoff Digital 4xIN -KFDI100	0	I100.0	81.4	Verputzer Freigabe
	1	I100.1	81.5	Verputzer Anfrage Daten
	2	I100.2	81.6	Verputzer Element eingezogen
	3	I100.3	81.7	Verputzer Signal Kühlband schnell
8200090080 Beckhoff Digital 4xIN -KFDI101	0	I101.0	69.3	Überwachung Eingangsdruck
	1	I101.1	69.2	Lichtschranke Abtransport
	2	I101.2	83.3	Lichtschranke Kühlstation
	3	I101.3		
8200032104 Beckhoff Digital 8xIN -KFDI110	0	I110.0	70.1	Heizspiegelantrieb FFE AS
	1	I110.1	70.3	Heizspiegelantrieb FFE GS
	2	I110.2	70.4	Riegel Kopfverschiebung FFE AS
	3	I110.3	70.5	Riegel Spannerverschiebung Stab A FFE GS
	4	I110.4	70.6	DF Ref FFE
	5	I110.5	69.5	Profilabstützung feste Seite GS
	6	I110.6		
7	I110.7			

Typ	Pin	Adr	Pfad	Funktion
8200032104 Beckhoff Digital 8xIN -KFDI150	0	I150.0	74.1	Heizspiegelantrieb FBE AS
	1	I150.1	74.3	Heizspiegelantrieb FBE GS
	2	I150.2	74.4	Riegel Kopfverschiebung FBE AS
	3	I150.3	74.5	Riegel Spannerverschiebung Stab C FBE GS
	4	I150.4	74.6	DF Ref FBE
	5	I150.5	77.5	Not-Aus Achse FBE
	6	I150.6		
7	I150.7			

Digitaleingänge

AS = Arbeitsstellung

GS = Grundstellung

Übersicht SPS-Bauteile im Klemmkasten X F

Option

Typ	Pin	Adr	Pfad	Funktion
8200090108 Beckhoff Motorklemme -KFAQ180	A	I180.0		
	B	I180.1		
	C	I180.2		
	L	I180.3		
	I1	I180.4		
	I2	I180.5		
	A1	Q180.0	79.1	Motor Difo Wicklung A1 FFE
	A2	Q180.1	79.2	Motor Difo Wicklung A2 FFE
	B1	Q180.2	79.3	Motor Difo Wicklung B1 FFE
	B2	Q180.3	79.4	Motor Difo Wicklung B2 FFE

Option

Typ	Pin	Adr	Pfad	Funktion
8200090108 Beckhoff Motorklemme -KFAQ181	A	I181.0		
	B	I181.1		
	C	I181.2		
	L	I181.3		
	I1	I181.4		
	I2	I181.5		
	A1	Q181.0	79.5	Motor Difo Wicklung A1 FBE
	A2	Q181.1	79.6	Motor Difo Wicklung A2 FBE
	B1	Q181.2	79.7	Motor Difo Wicklung B1 FBE
	B2	Q181.3	79.8	Motor Difo Wicklung B2 FBE

Motorsteuerung
nach Not-Aus

Typ	Pin	Adr	Pfad	Funktion
8200091032 Beckhoff Encoder 1 Kanal -KFDI160	A	I160.0	78.2	Kopfverschiebung Spur A FFE
	B	I160.1	78.3	Kopfverschiebung Spur B FFE
	C	I160.2		
	G	I160.3		
8200091032 Beckhoff Encoder 1 Kanal -KFDI161	A	I161.0	78.6	Kopfverschiebung Spur A FBE
	B	I161.1	78.7	Kopfverschiebung Spur B FBE
	C	I161.2		
	G	I161.3		

Encodereingänge

Typ	Pin	Adr	Pfad	Funktion
8200032102 Beckhoff Thermo 4xIN FeCuNi -KFAI170	+TC1	I170.0	80.2	Thermofühler Heizspiegel FFE
	-TC1			
	+TC2	I170.1	80.7	Thermofühler Heizspiegel FBE
	-TC2			
	+TC3	I170.2	80.3	Thermofühler Spanner BD FFE
	-TC3			
	+TC4	I170.3	80.5	Thermofühler Spanner AC FFE
	-TC4			

Temperatureingänge

AS = Arbeitsstellung
GS = Grundstellung

Übersicht SPS-Bauteile im Klemmkasten X F

Option

Typ	Pin	Adr	Pfad	Funktion
8200090081	0	Q100.0	82.1	Verputzer Start, Band, EPA
Beckhoff Digital 4xOUT -KFDQ100	1	Q100.1	82.4	Verputzer Grenzmaß überschritten
	2	Q100.2	82.6	Verputzer Vorschub Stop
	3	Q100.3	82.7	Verputzer Element bei SMK bereit

Digitalausgänge
vor Not-Aus

Typ	Pin	Adr	Pfad	Funktion
8200032105 Beckhoff IO-Link 4xIN -KFIO190	1	I190.1	72.3	-KH11.1 Ventilplatte FFE
	2	+24V		
	10	0V		
	3	I190.2	73.3	-KH11.2 Ventilplatte FFE
	4	+24V		
	12	0V		
	5	I190.3	75.3	-KH15.1 Ventilplatte FBE
	6	+24V		
	14	0V		
	7	I190.4	76.3	-KH15.2 Ventilplatte FBE
	8	+24V		
	16	0V		

IO-Link

AS = Arbeitsstellung

GS = Grundstellung

Übersicht SPS-Bauteile im Klemmkasten X B

Typ	Pin	Adr	Pfad	Funktion
8200090080 Beckhoff Digital 4xIN -KFDI201	0	I201.0	94.7	Not-Aus Achse Breite
	1	I201.1	45.6	Not-Aus am bew Träger
	2	I201.2		
	3	I201.3		
8200032104 Beckhoff Digital 8xIN -KFDI210	0	I210.0	87.1	Heizspiegelantrieb BFE AS
	1	I210.1	87.3	Heizspiegelantrieb BFE GS
	2	I210.2	87.4	Riegel Kopfverschiebung BFE AS
	3	I210.3	87.5	Riegel Spannerschiebung Stab A BFE GS
	4	I210.4	87.6	DF Ref BFE
	5	I210.5	86.3	Profilabstützung bew. Träger GS
	6	I210.6		
7	I210.7			

Typ	Pin	Adr	Pfad	Funktion
8200032104 Beckhoff Digital 8xIN -KFDI250	0	I250.0	91.2	Heizspiegelantrieb BBE AS
	1	I250.1	91.3	Heizspiegelantrieb BBE GS
	2	I250.2	91.4	Riegel Kopfverschiebung BBE AS
	3	I250.3	91.5	Riegel Spannerschiebung Stab C BBE GS
	4	I250.4	91.7	DF Ref BBE
	5	I250.5	94.4	Not-Aus Achse BBE
	6	I250.6		
7	I250.7			

Digitaleingänge

AS = Arbeitsstellung

GS = Grundstellung

Übersicht SPS-Bauteile im Klemmkasten X B

Option

Typ	Pin	Adr	Pfad	Funktion
8200090108 Beckhoff Motorklemme -KFAQ280	A	I280.0		
	B	I280.1		
	C	I280.2		
	L	I280.3		
	I1	I280.4		
	I2	I280.5		
	A1	Q280.0	96.1	Motor Difo Wicklung A1 BFE
	A2	Q280.1	96.2	Motor Difo Wicklung A2 BFE
	B1	Q280.2	96.3	Motor Difo Wicklung B1 BFE
	B2	Q280.3	96.4	Motor Difo Wicklung B2 BFE

Option

Typ	Pin	Adr	Pfad	Funktion
8200090108 Beckhoff Motorklemme -KFAQ281	A	I281.0		
	B	I281.1		
	C	I281.2		
	L	I281.3		
	I1	I281.4		
	I2	I281.5		
	A1	Q281.0	96.5	Motor Difo Wicklung A1 BBE
	A2	Q281.1	96.6	Motor Difo Wicklung A2 BBE
	B1	Q281.2	96.7	Motor Difo Wicklung B1 BBE
	B2	Q281.3	96.8	Motor Difo Wicklung B2 BBE

Motorsteuerung
nach Not-Aus

Typ	Pin	Adr	Pfad	Funktion
8200091032 Beckhoff Encoder 1 Kanal -KFDI260	A	I260.0	95.2	Kopfverschiebung Spur A BFE
	B	I260.1	95.3	Kopfverschiebung Spur B BFE
	C	I260.2		
	G	I260.3		
8200091032 Beckhoff Encoder 1 Kanal -KFDI261	A	I261.0	95.6	Kopfverschiebung Spur A BBE
	B	I261.1	95.7	Kopfverschiebung Spur B BBE
	C	I261.2		
	G	I261.3		

Encodereingänge

Typ	Pin	Adr	Pfad	Funktion
8200032102 Beckhoff Thermo 4xIN FeCuNi -KFAI270	+TC1	I270.0	97.2	Thermofühler Heizspiegel BFE
	-TC1			
	+TC2	I270.1	97.5	Thermofühler Heizspiegel BBE
	-TC2			
	+TC3	I270.2		
	-TC3			
	+TC4	I270.3	97.7	Thermofühler Tisch BBE
	-TC4			

Temperatureingänge

AS = Arbeitsstellung
GS = Grundstellung

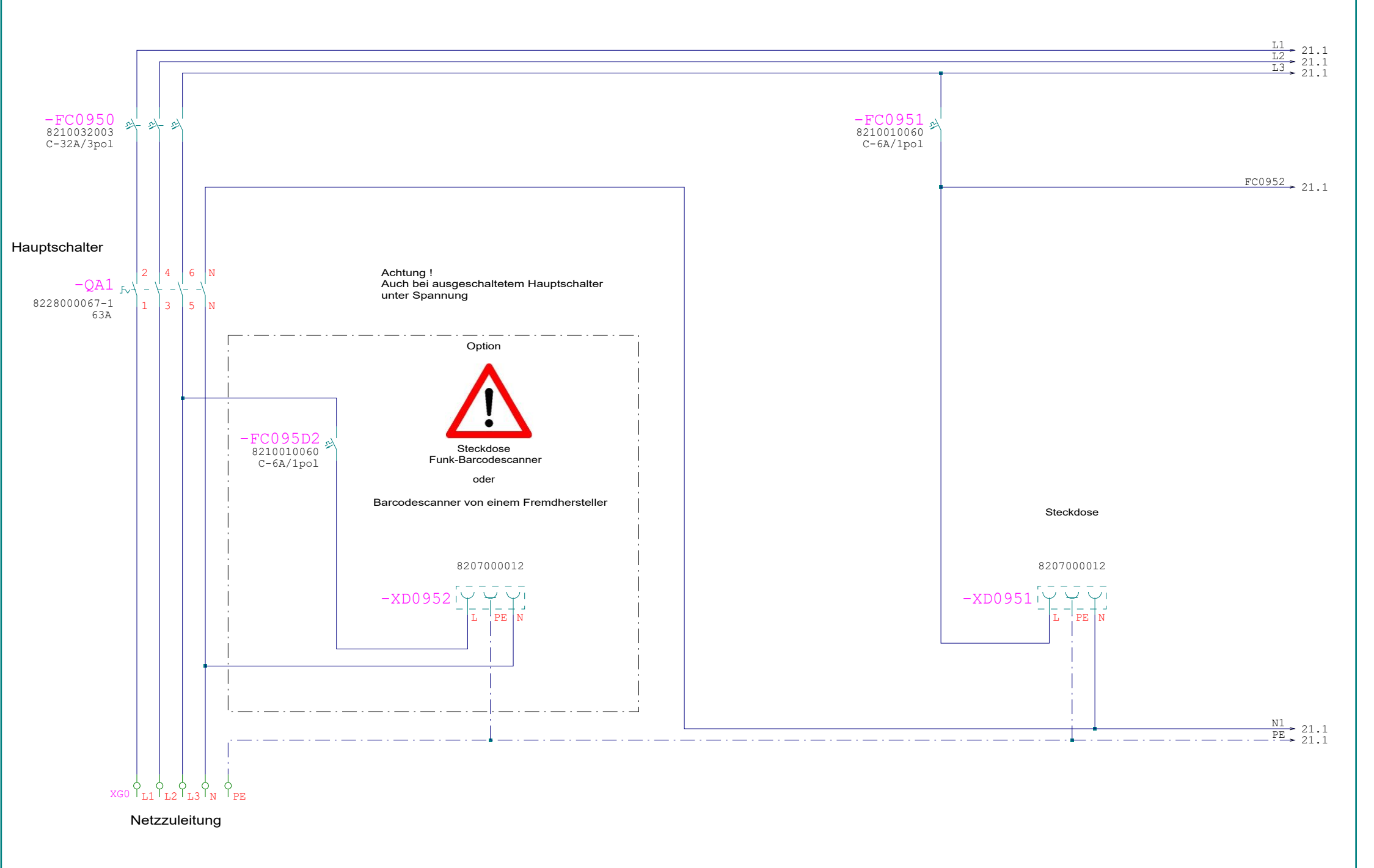
Übersicht SPS-Bauteile im Klemmkasten X B

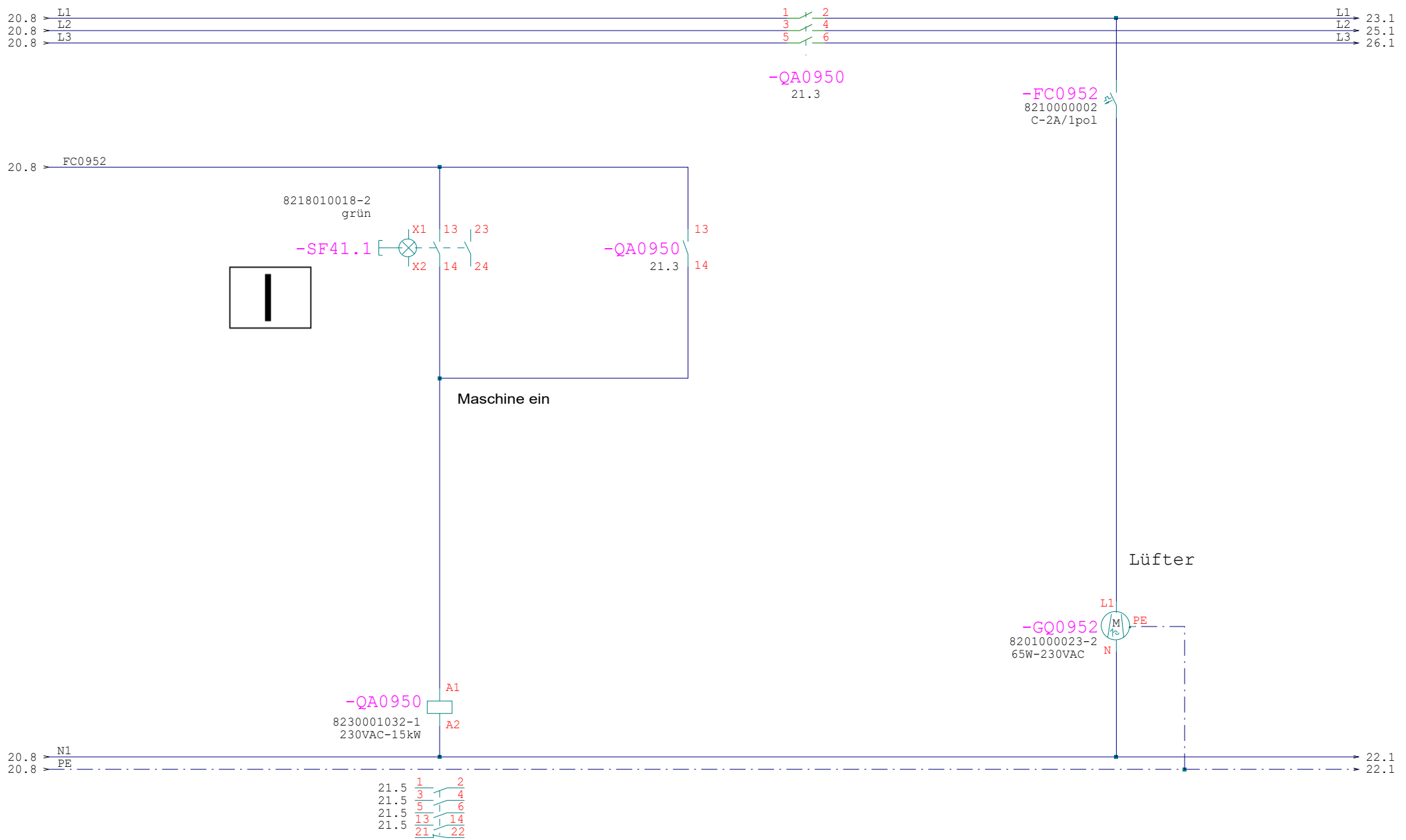
Typ	Pin	Adr	Pfad	Funktion
<div style="border: 1px solid black; display: inline-block; padding: 2px;">8200032105</div> Beckhoff IO-Link 4xIN -KFIO290	1	I290.1	89.3	-KH21.1 Ventilplatte BFE
	2	+24V		
	10	0V		
	3	I290.2	90.3	-KH21.2 Ventilplatte BFE
	4	+24V		
	12	0V		
	5	I290.3	92.3	-KH25.1 Ventilplatte BBE
	6	+24V		
	14	0V		
	7	I290.4	93.3	-KH25.2 Ventilplatte BBE
	8	+24V		
	16	0V		

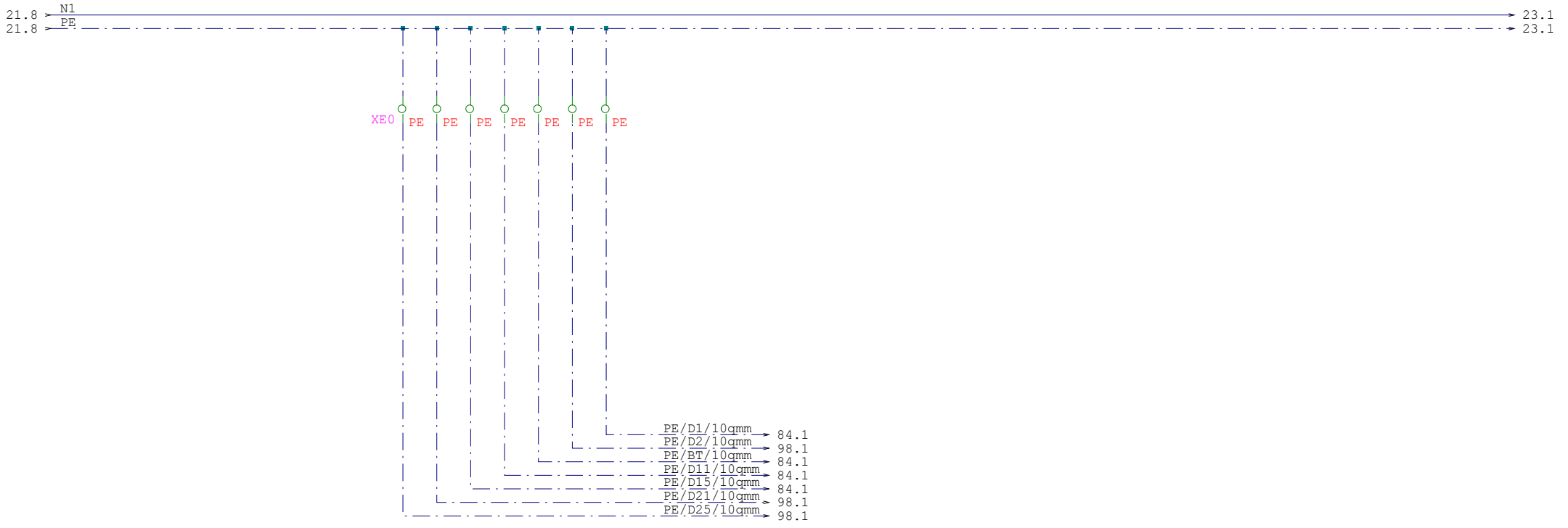
IO-Link

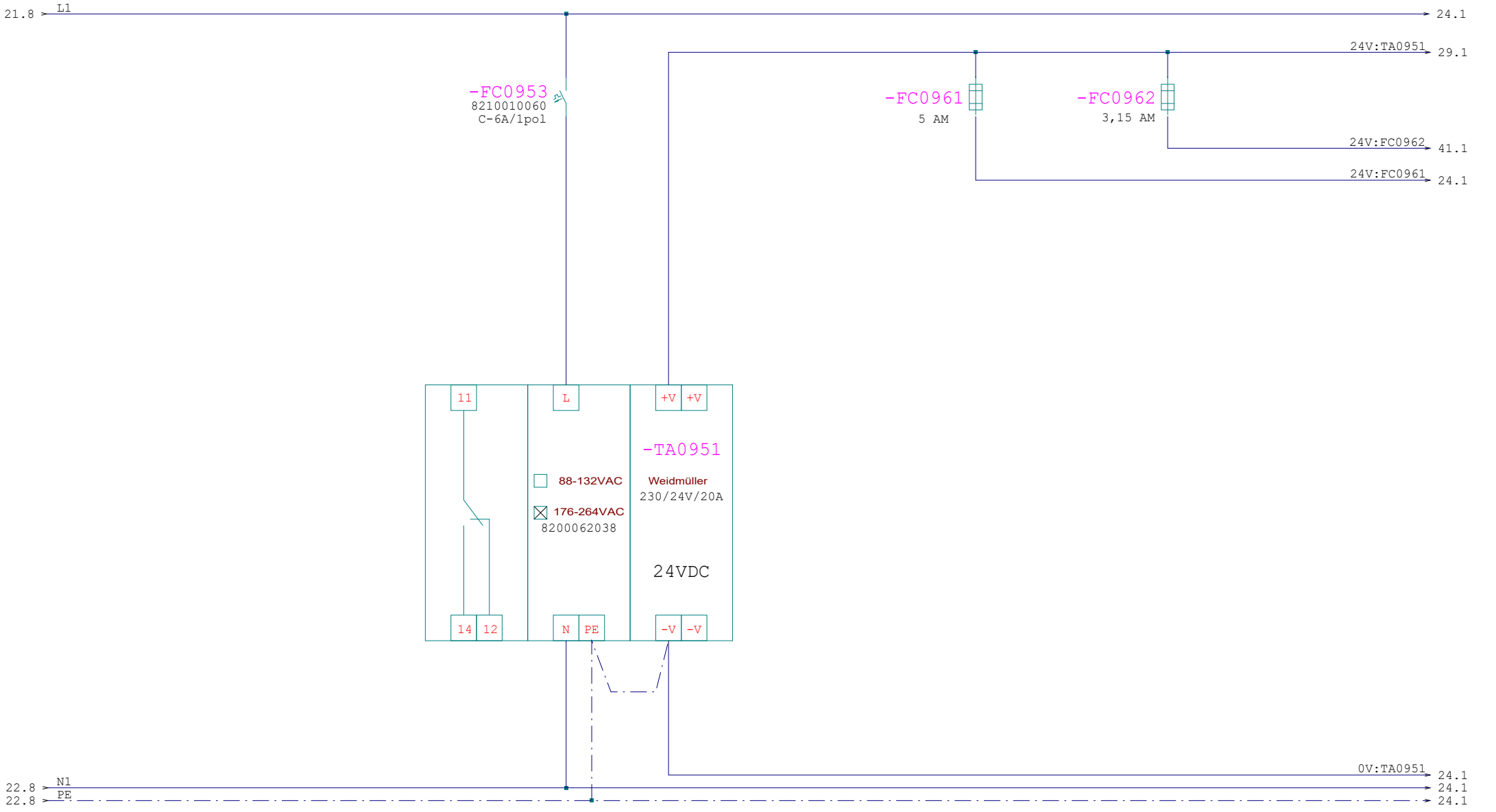
AS = Arbeitsstellung

GS = Grundstellung

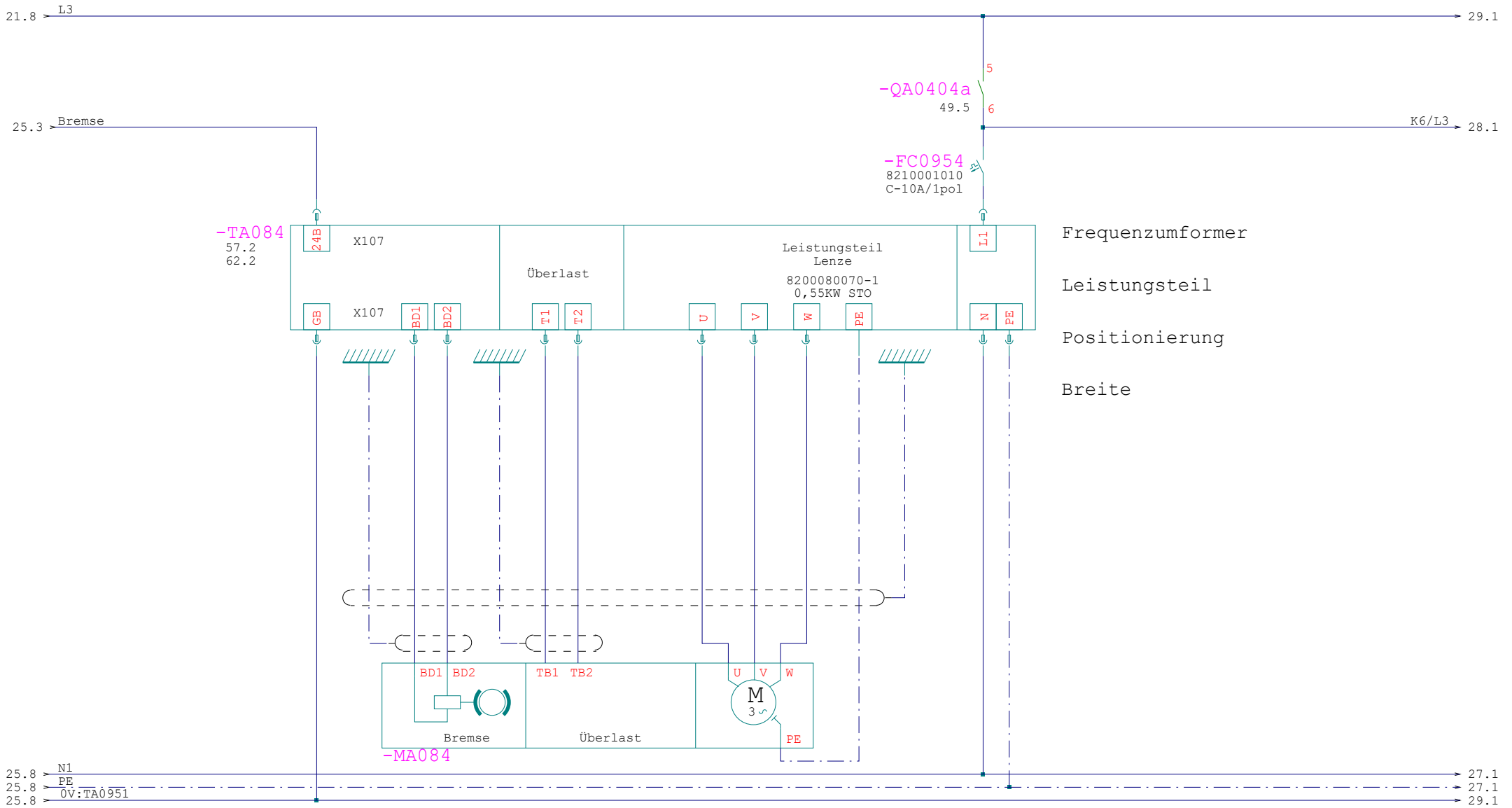


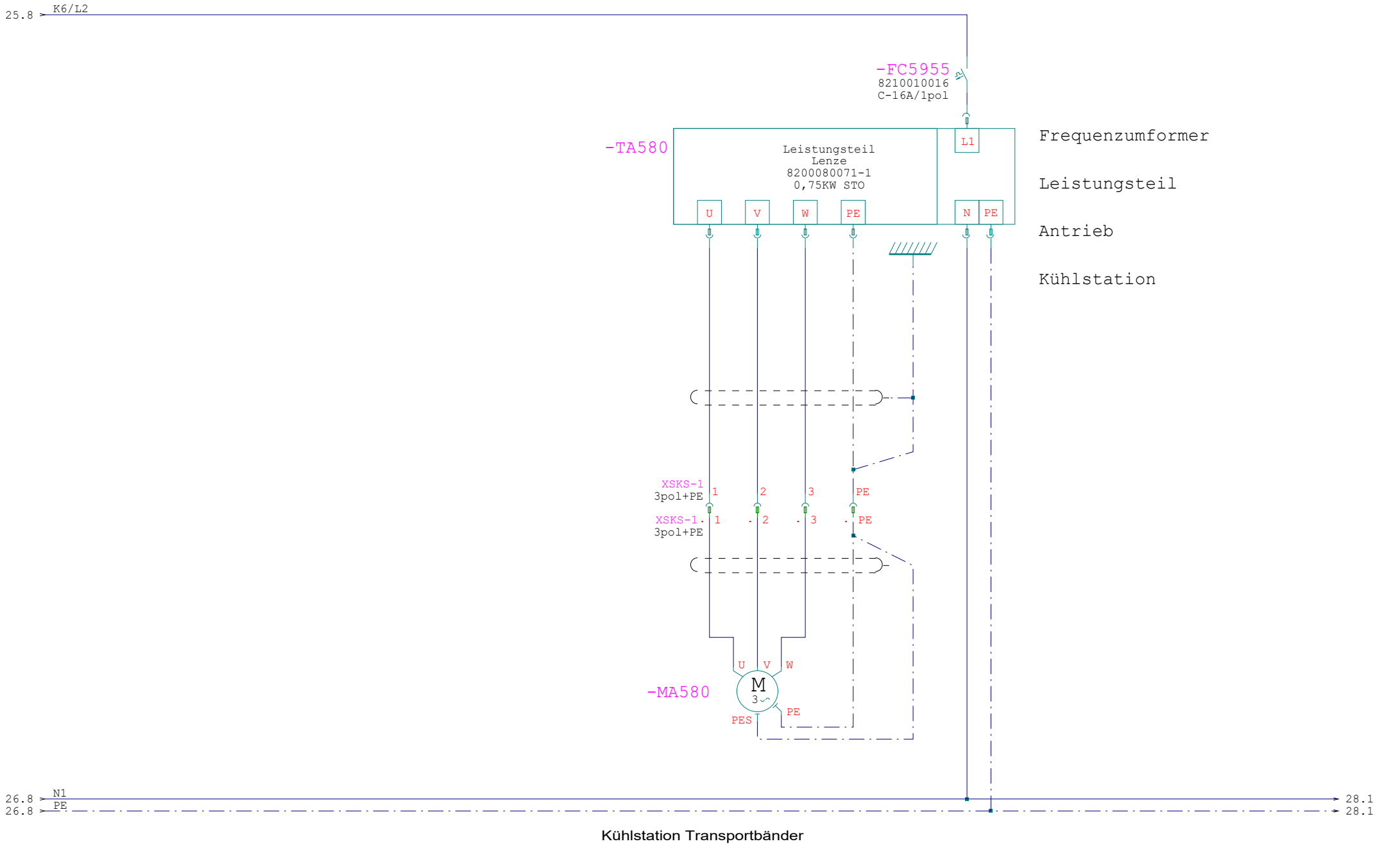


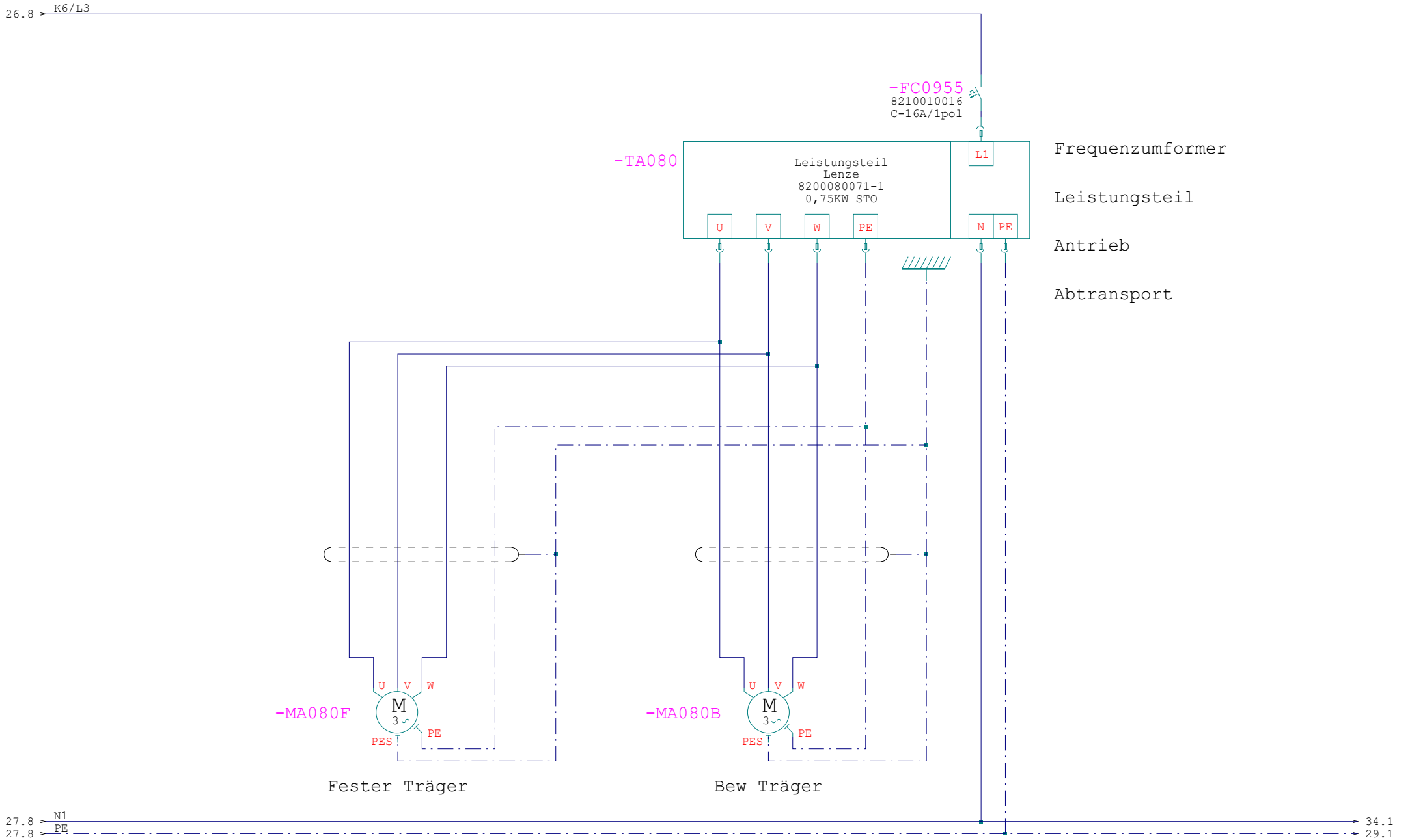


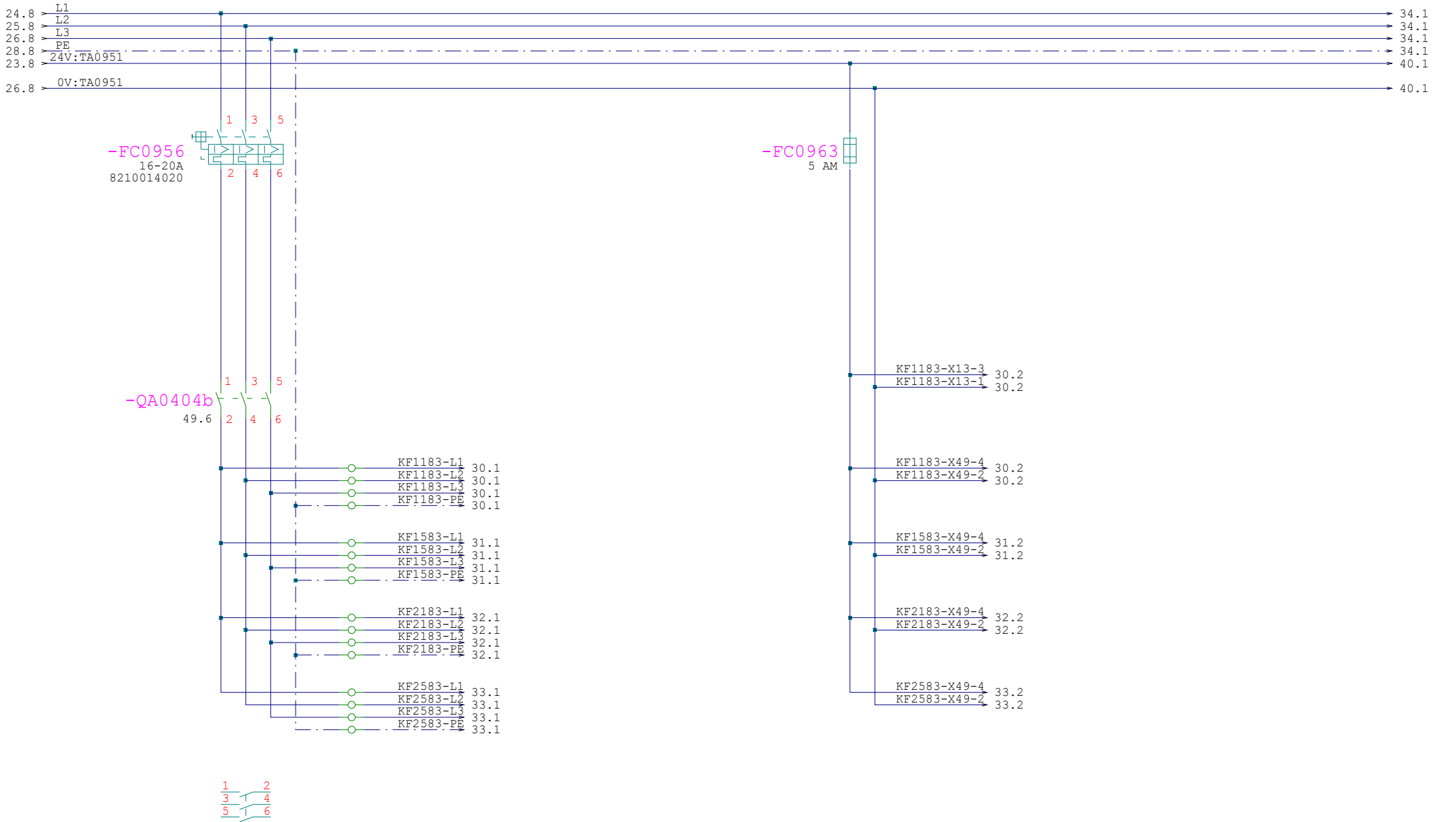


Netzteil allgemein

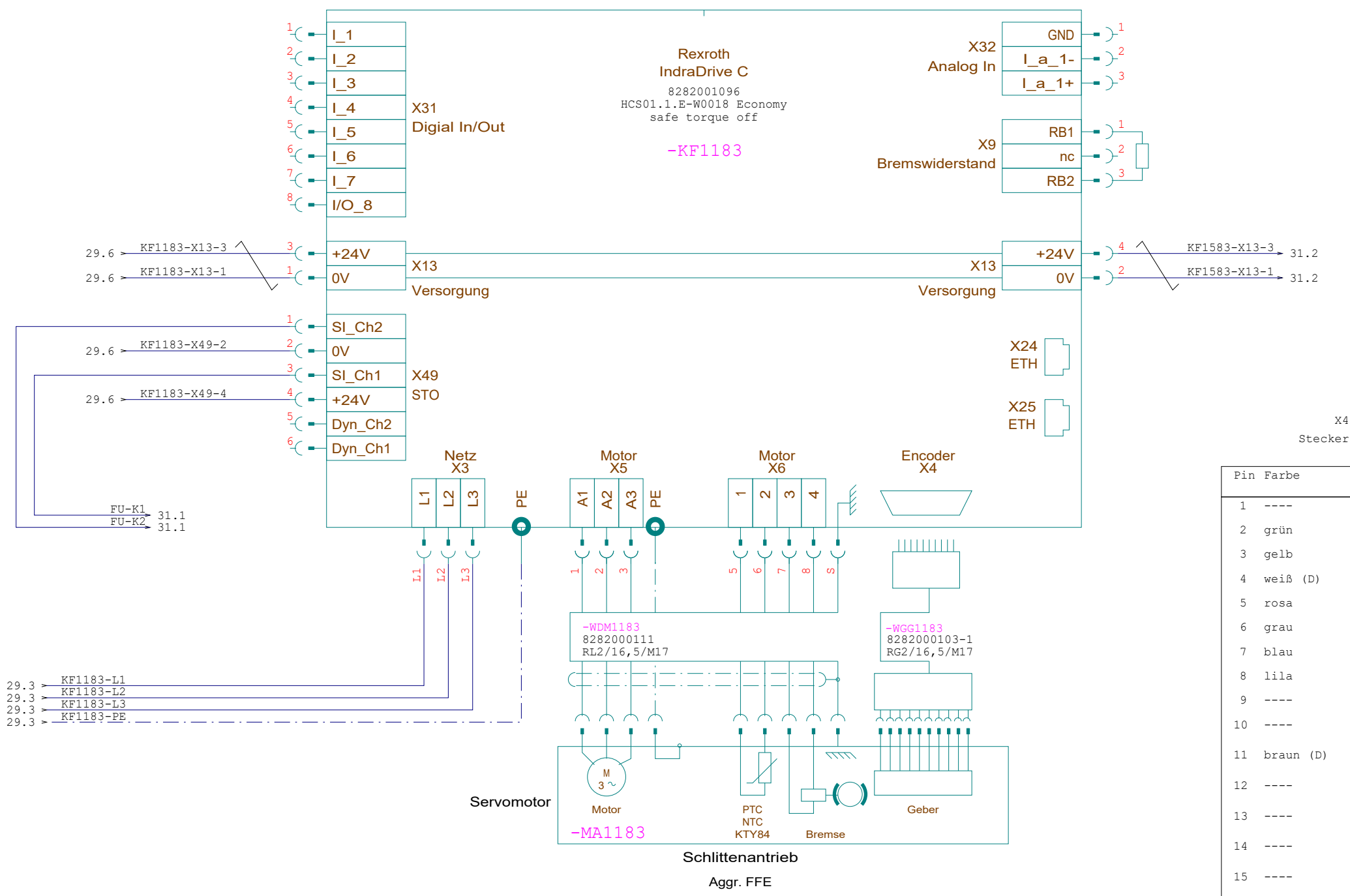


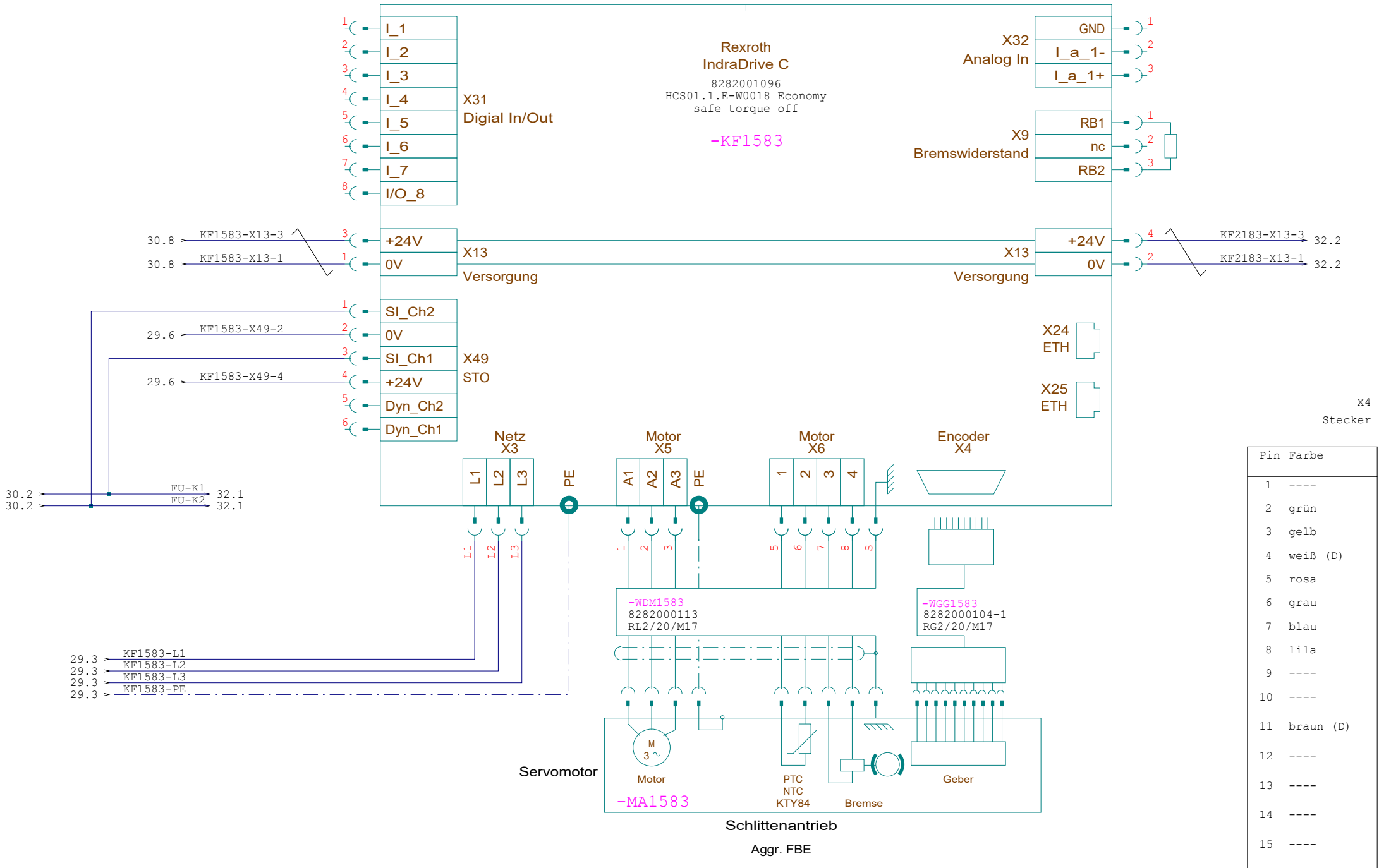


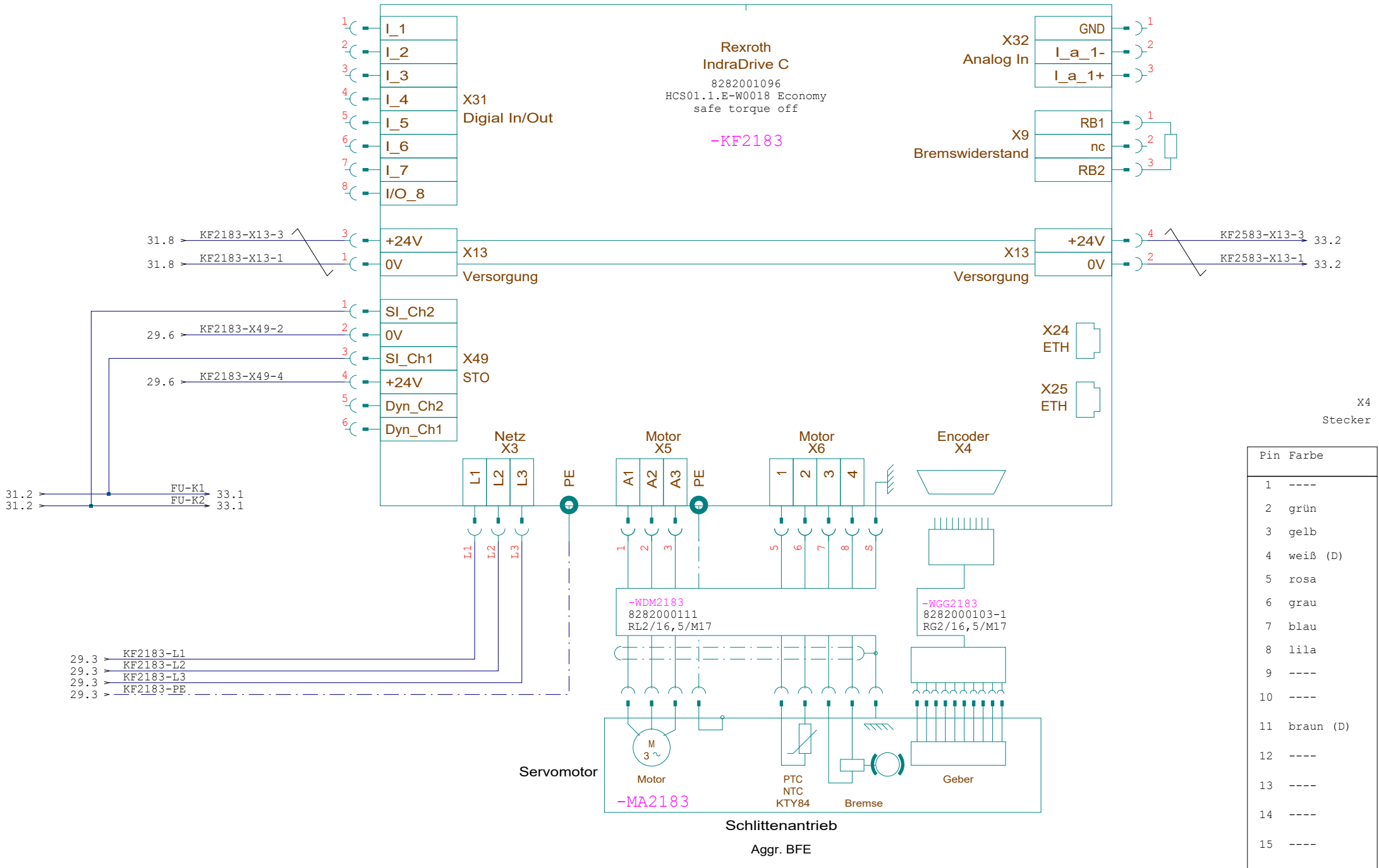


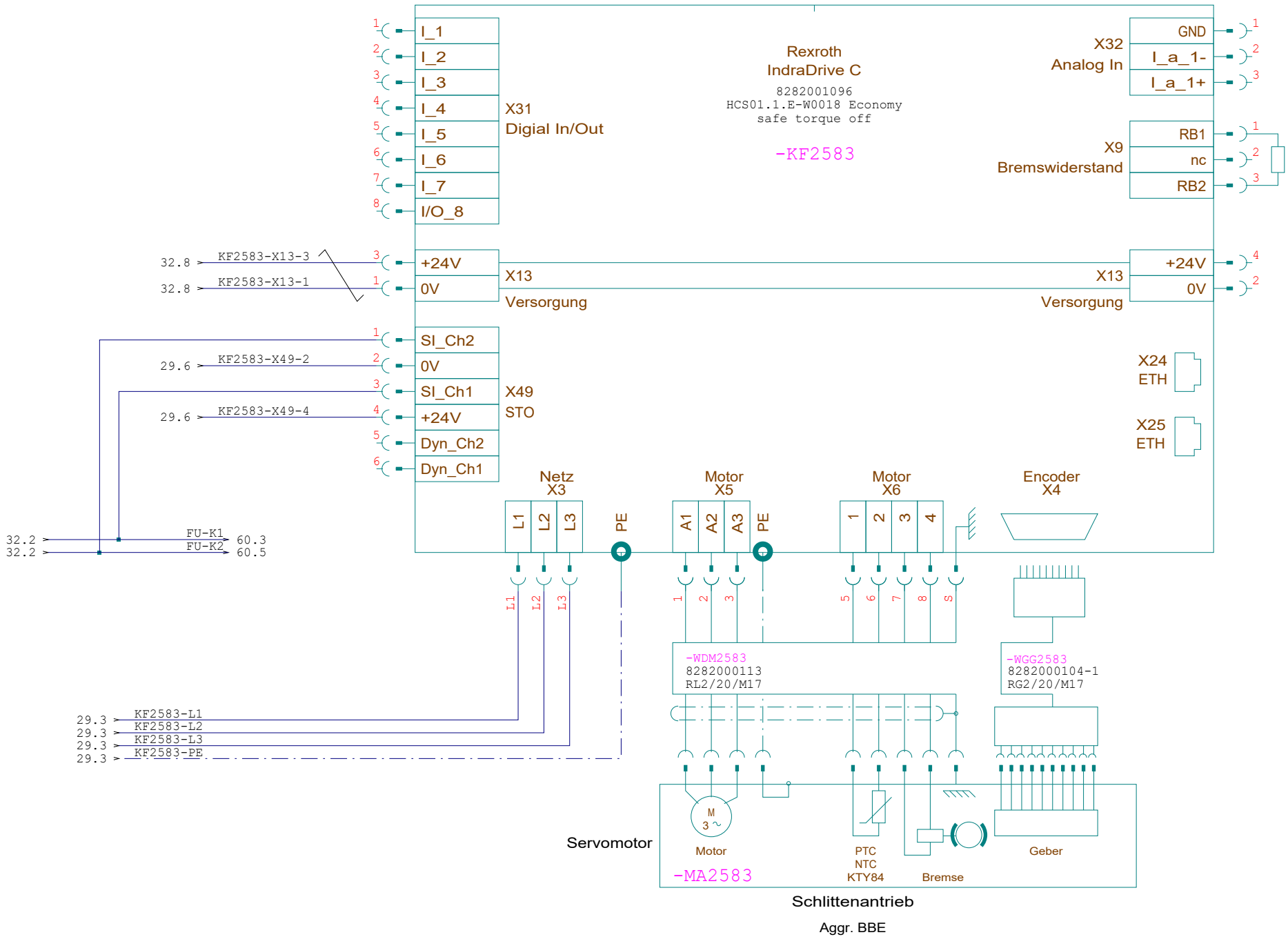


Spannungsversorgung
 zu den Servoreglern



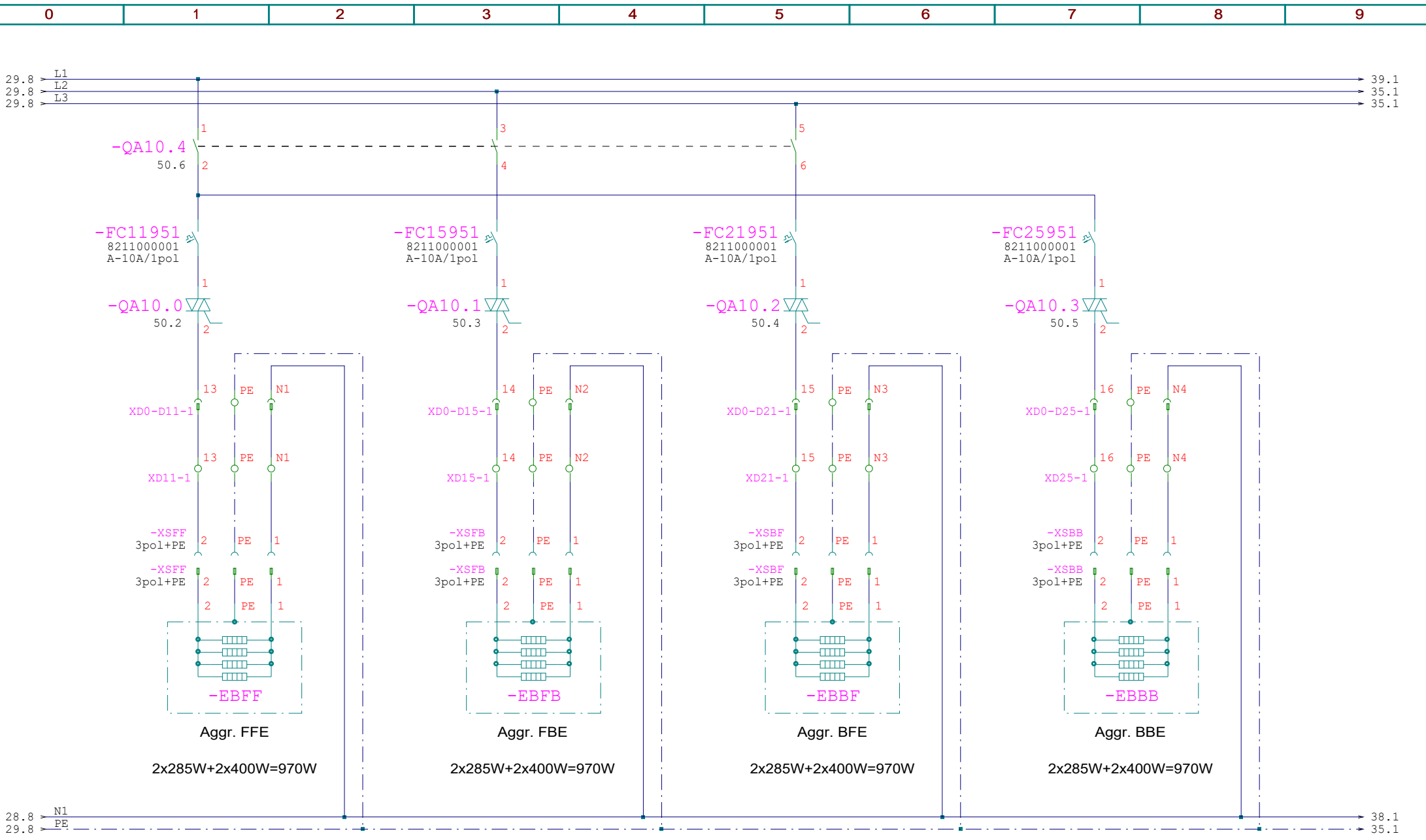




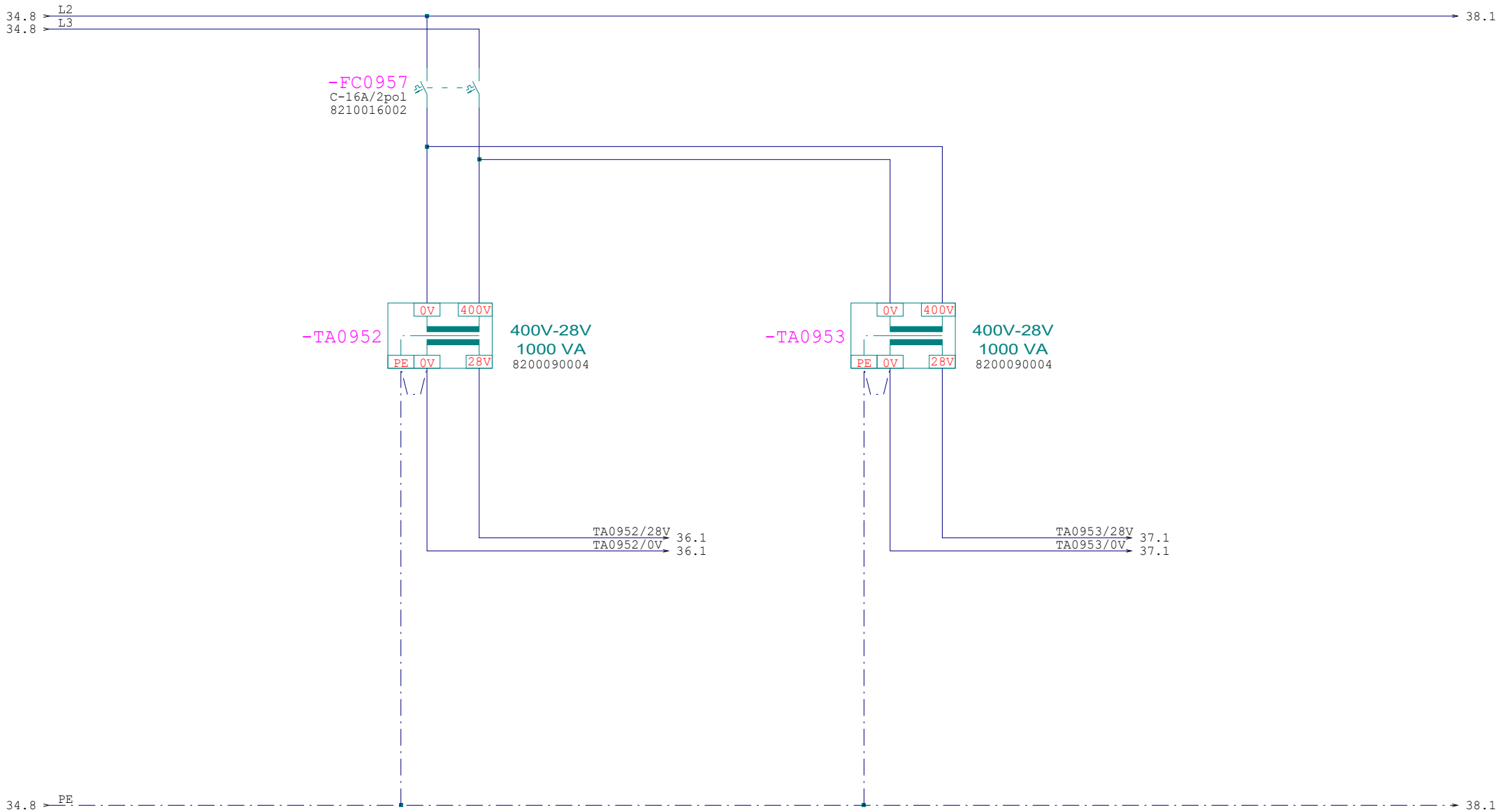


X4 Stecker

Pin	Farbe
1	----
2	grün
3	gelb
4	weiß (D)
5	rosa
6	grau
7	blau
8	lila
9	----
10	----
11	braun (D)
12	----
13	----
14	----
15	----

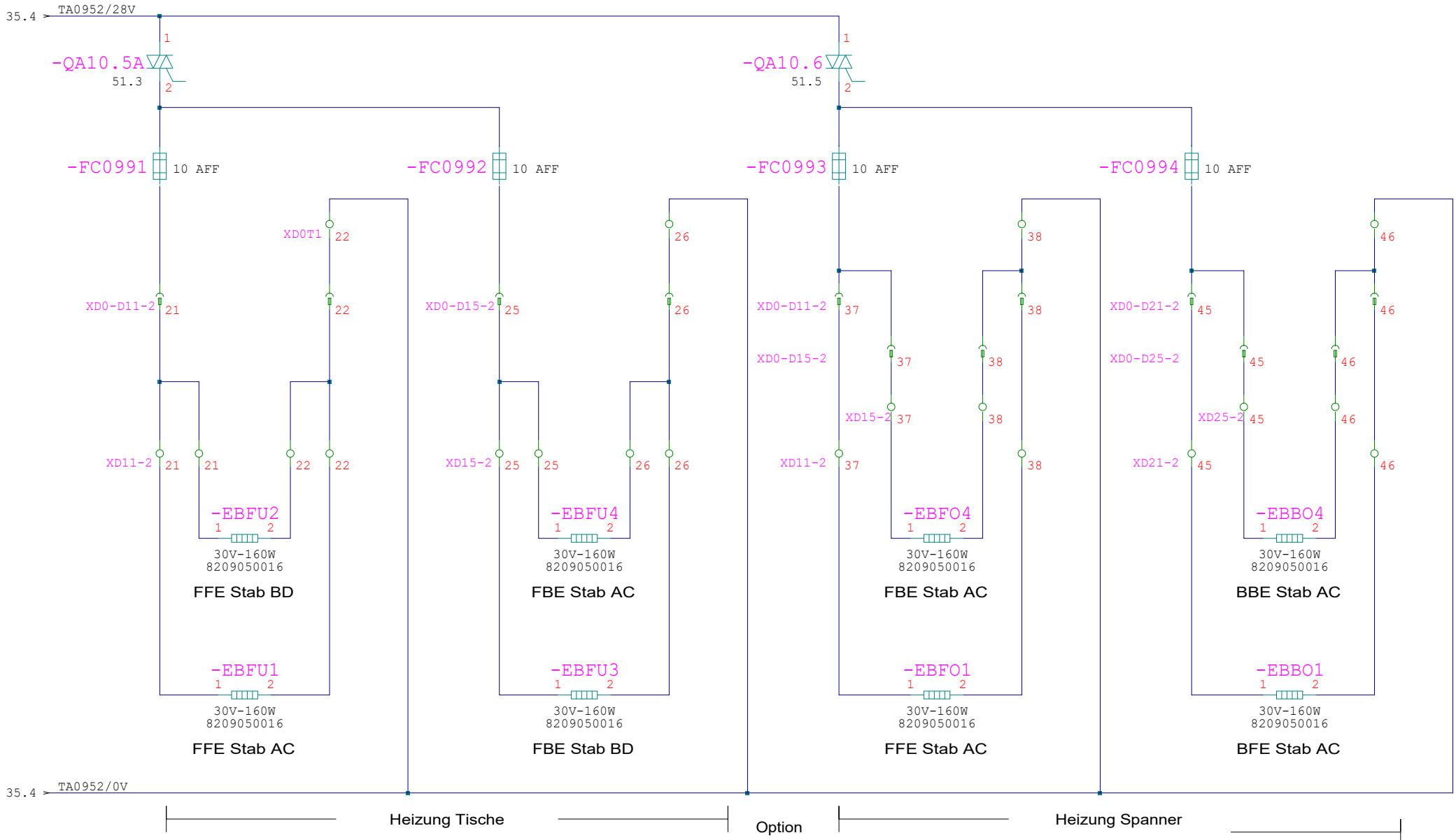


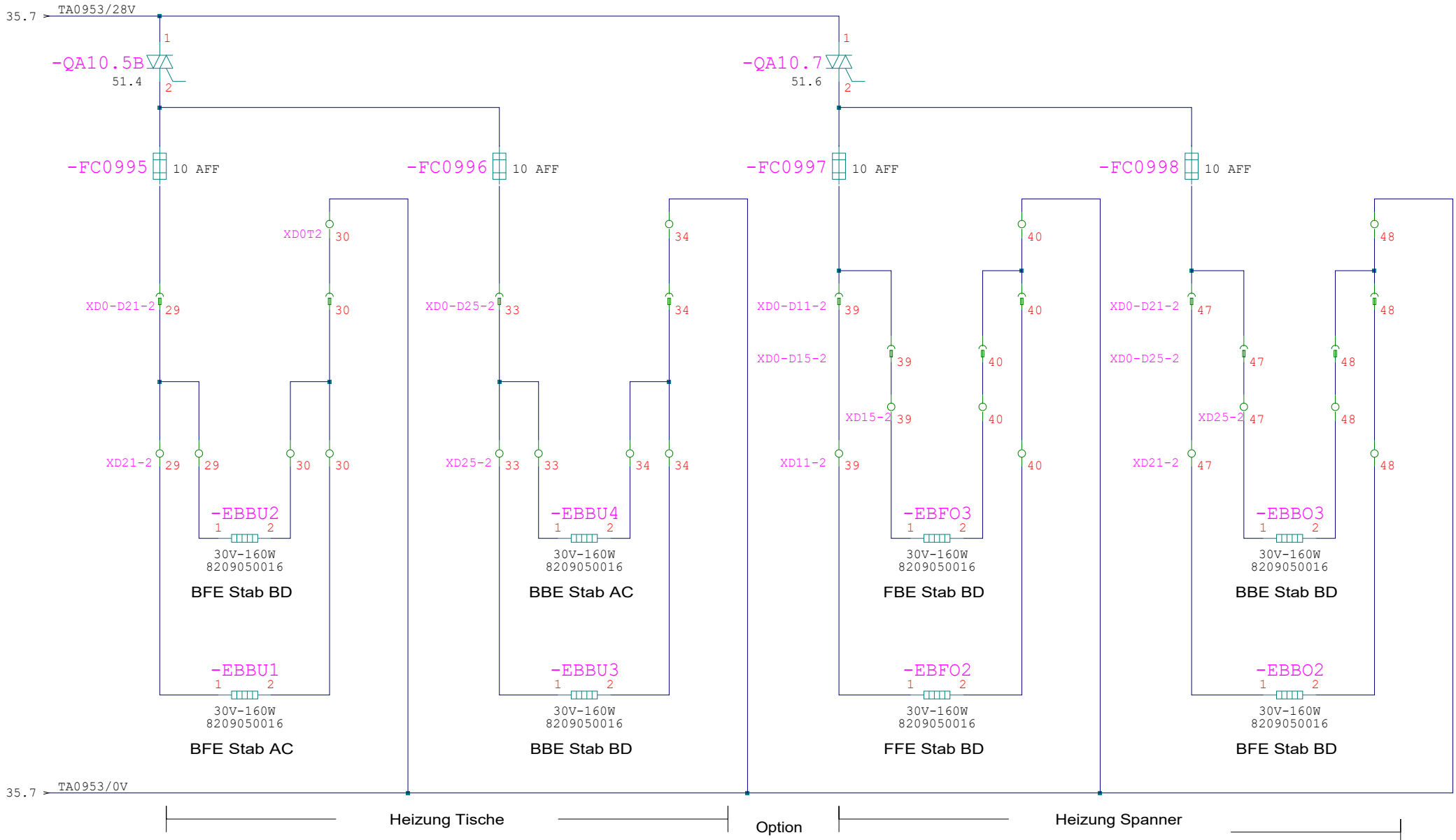
Heizspiegel

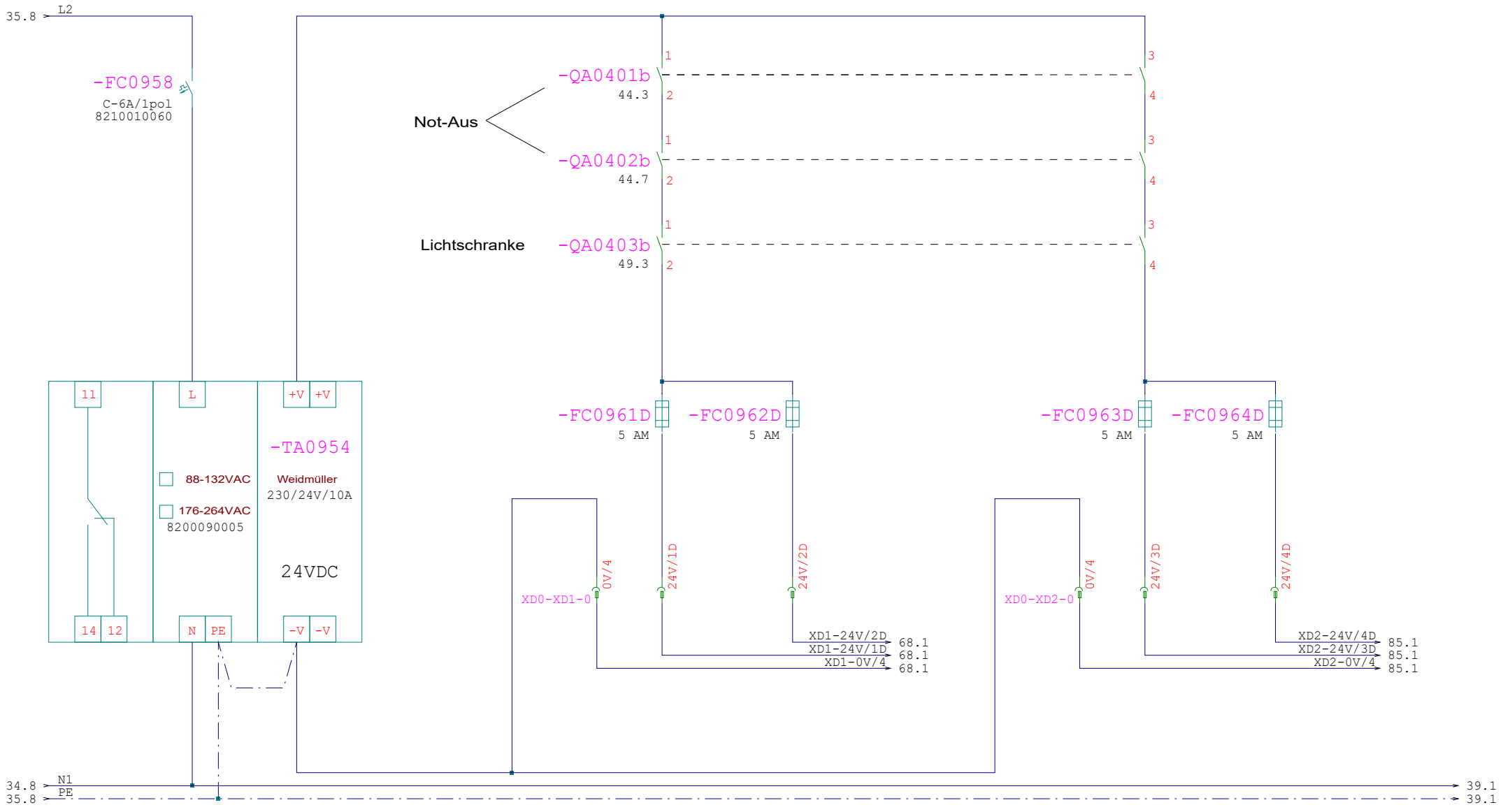


Trafos für Messerheizung

Option

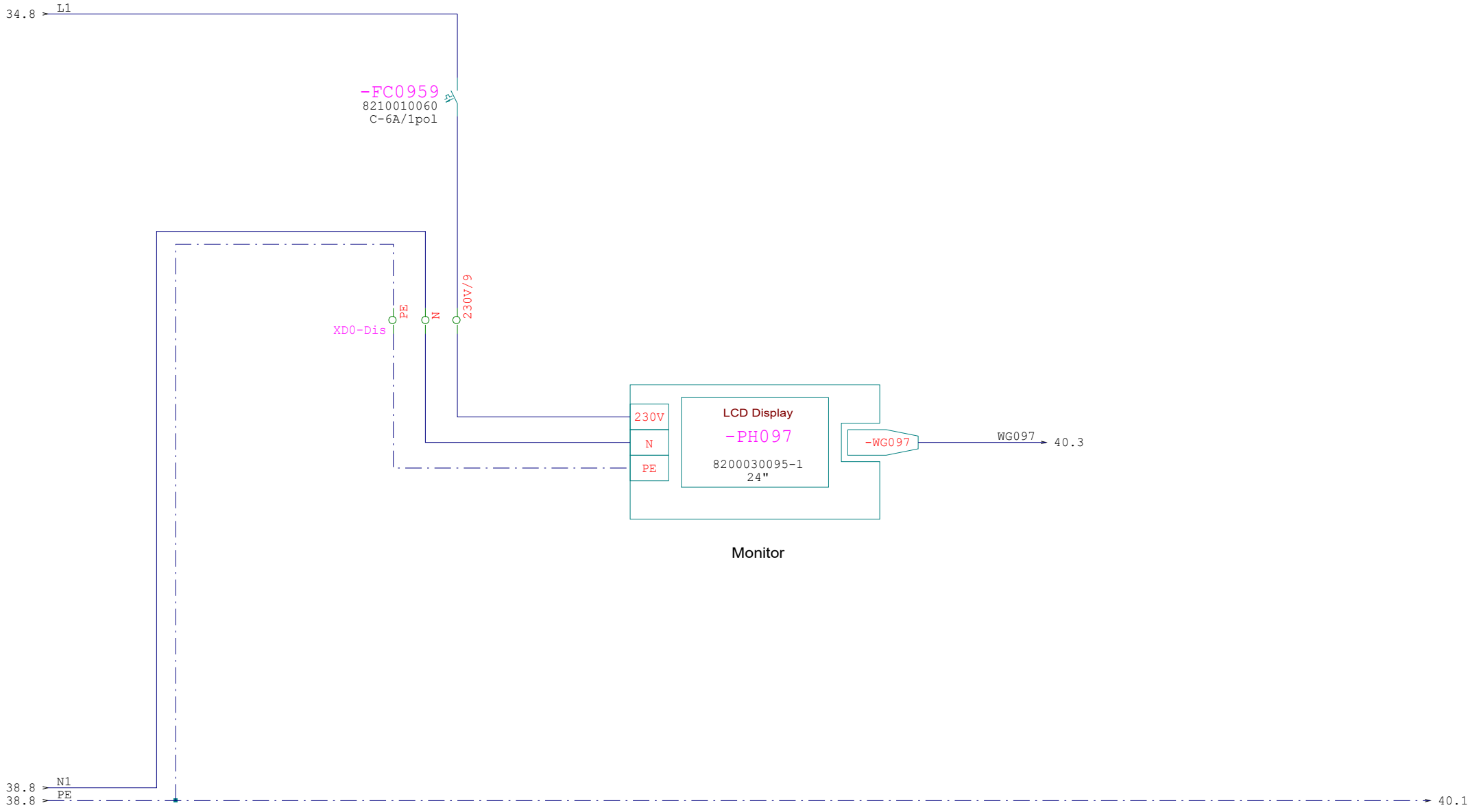


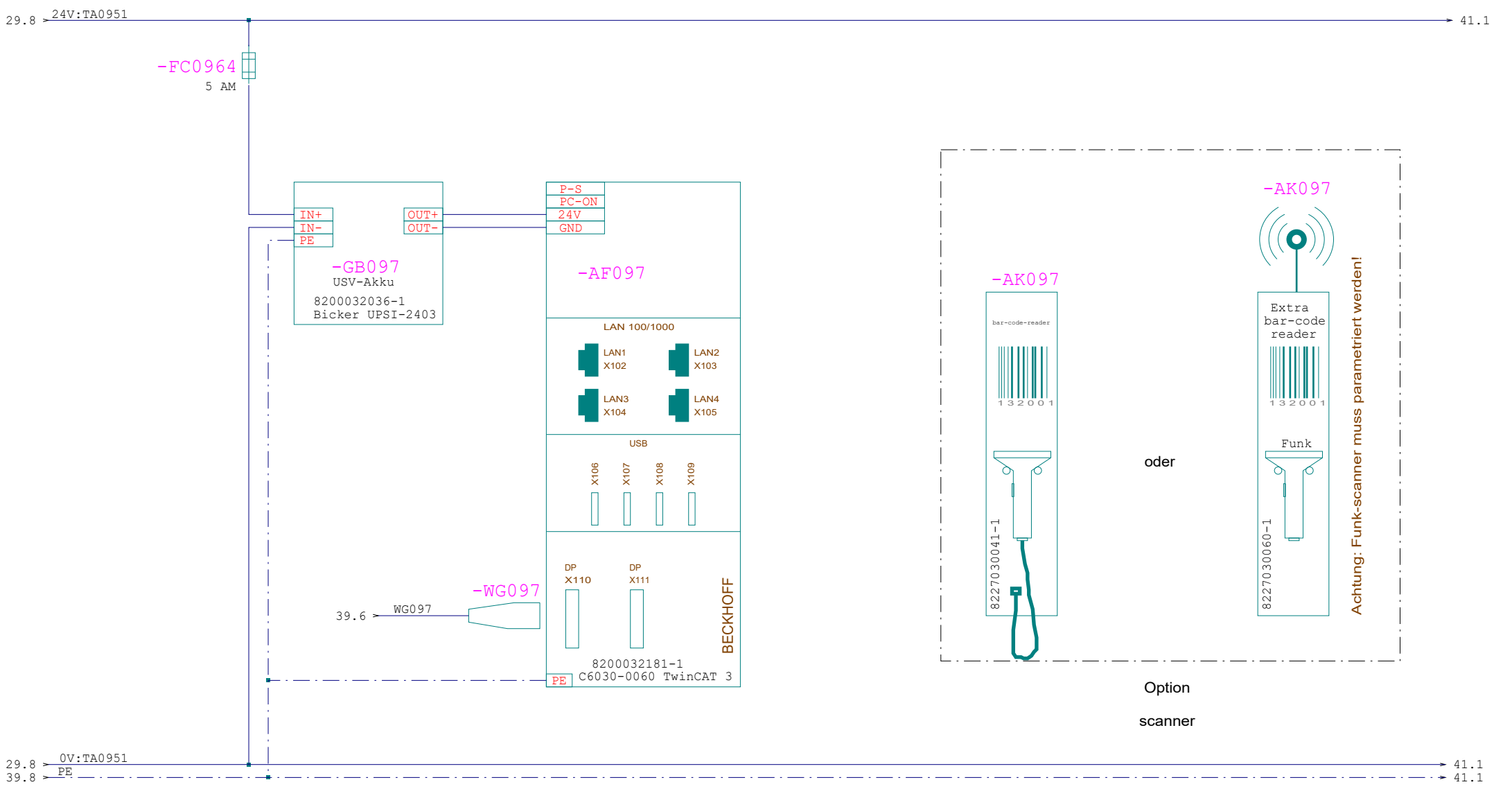


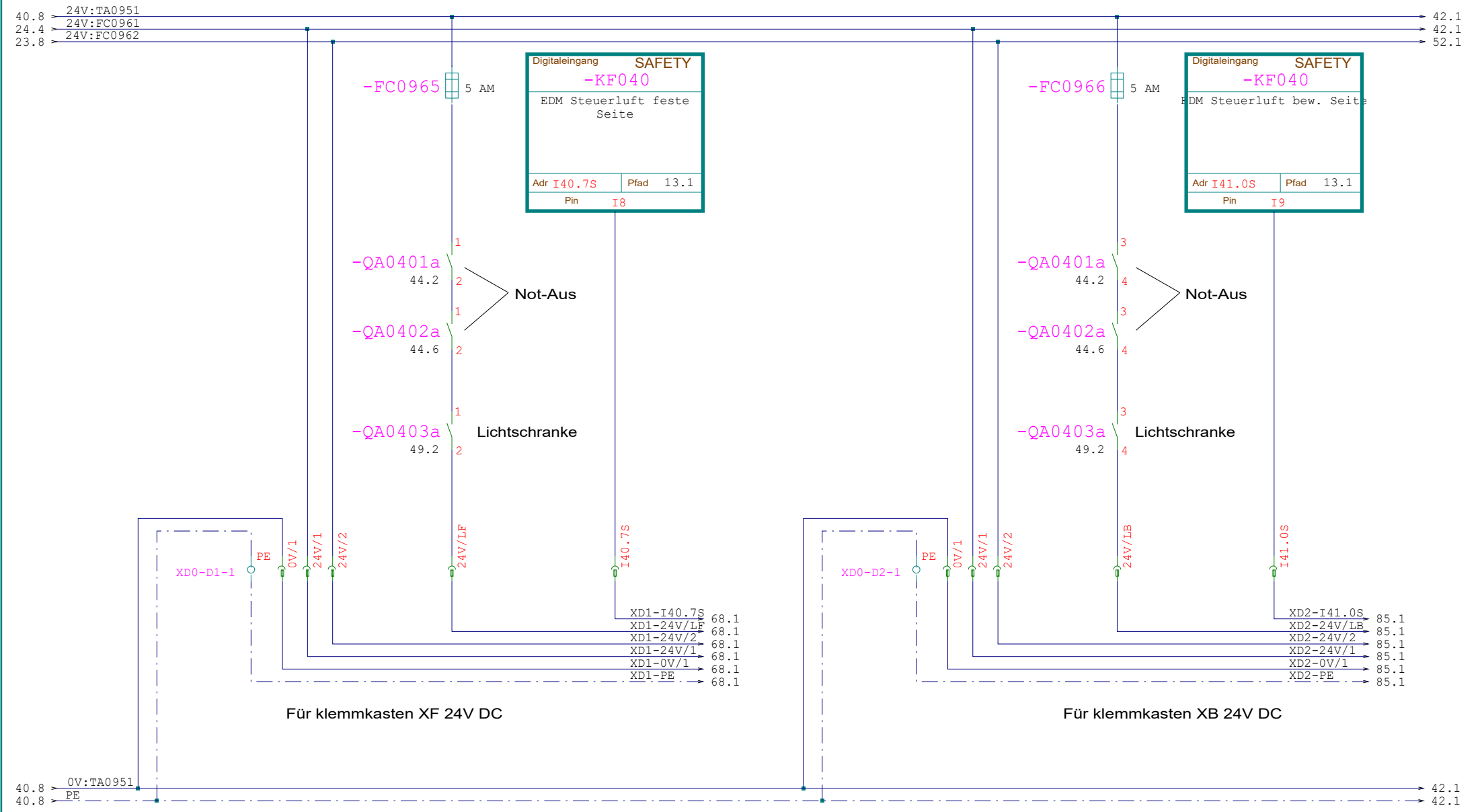


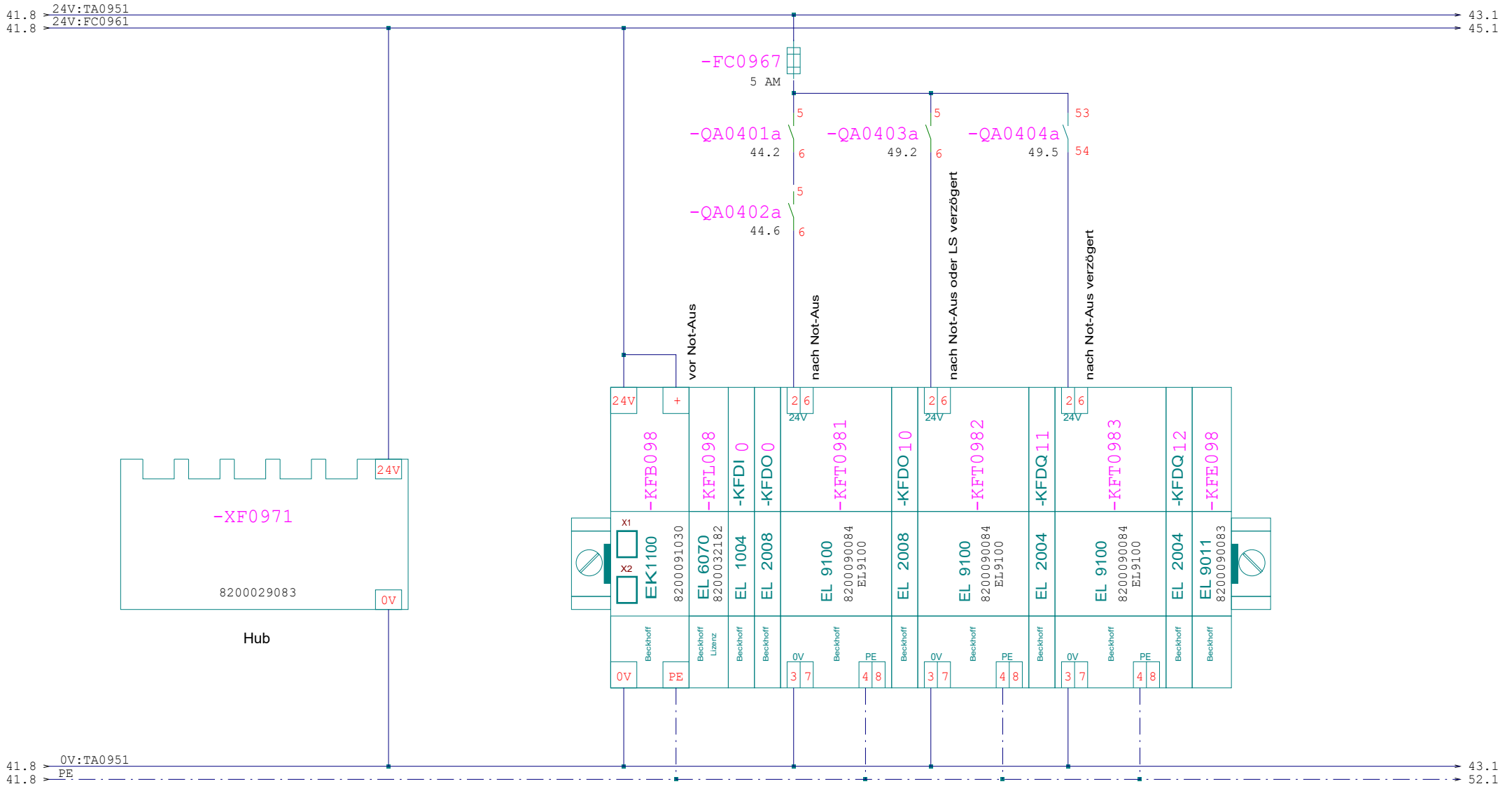
Dichtungsformer Netzteil

Option

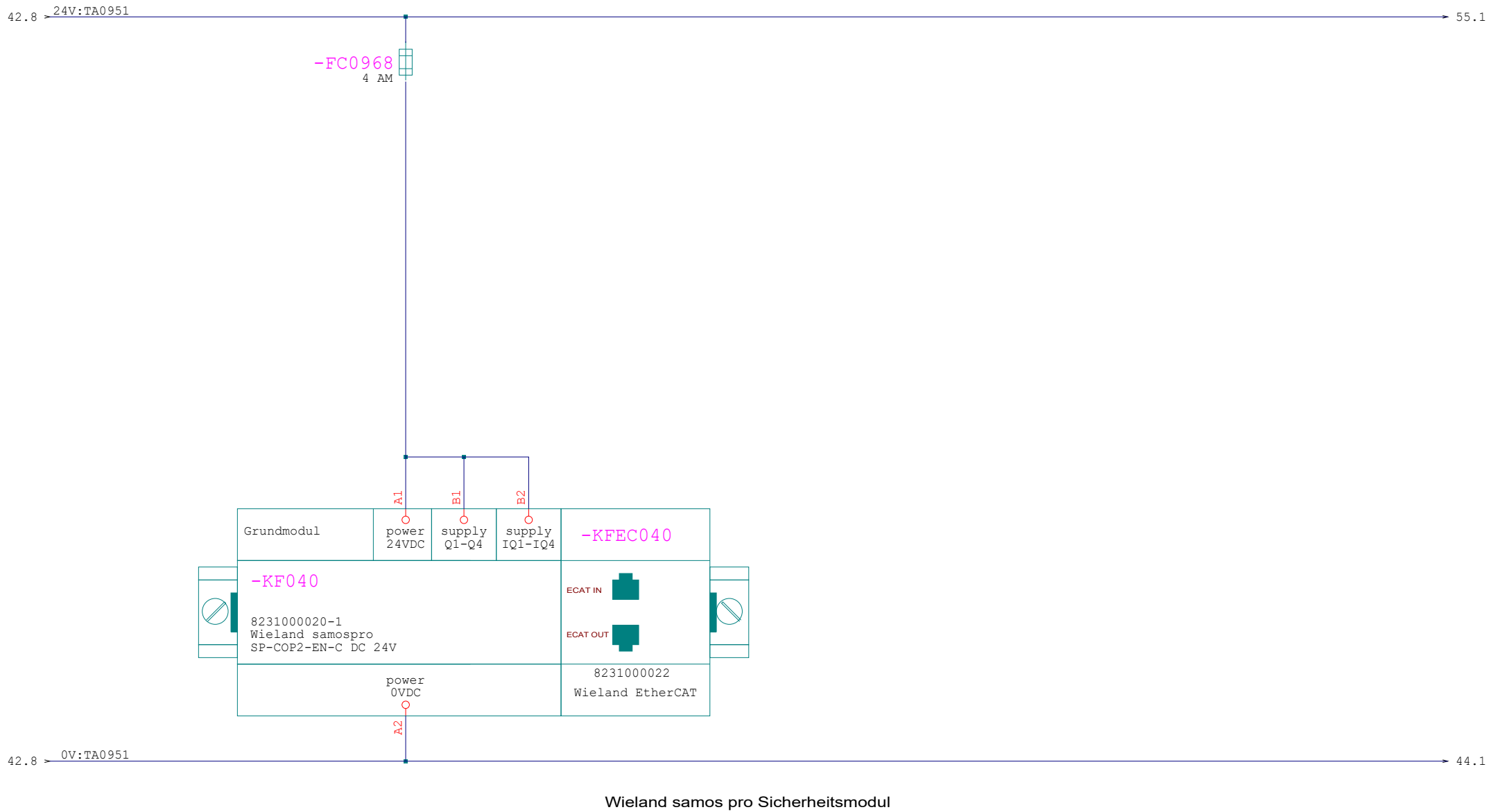


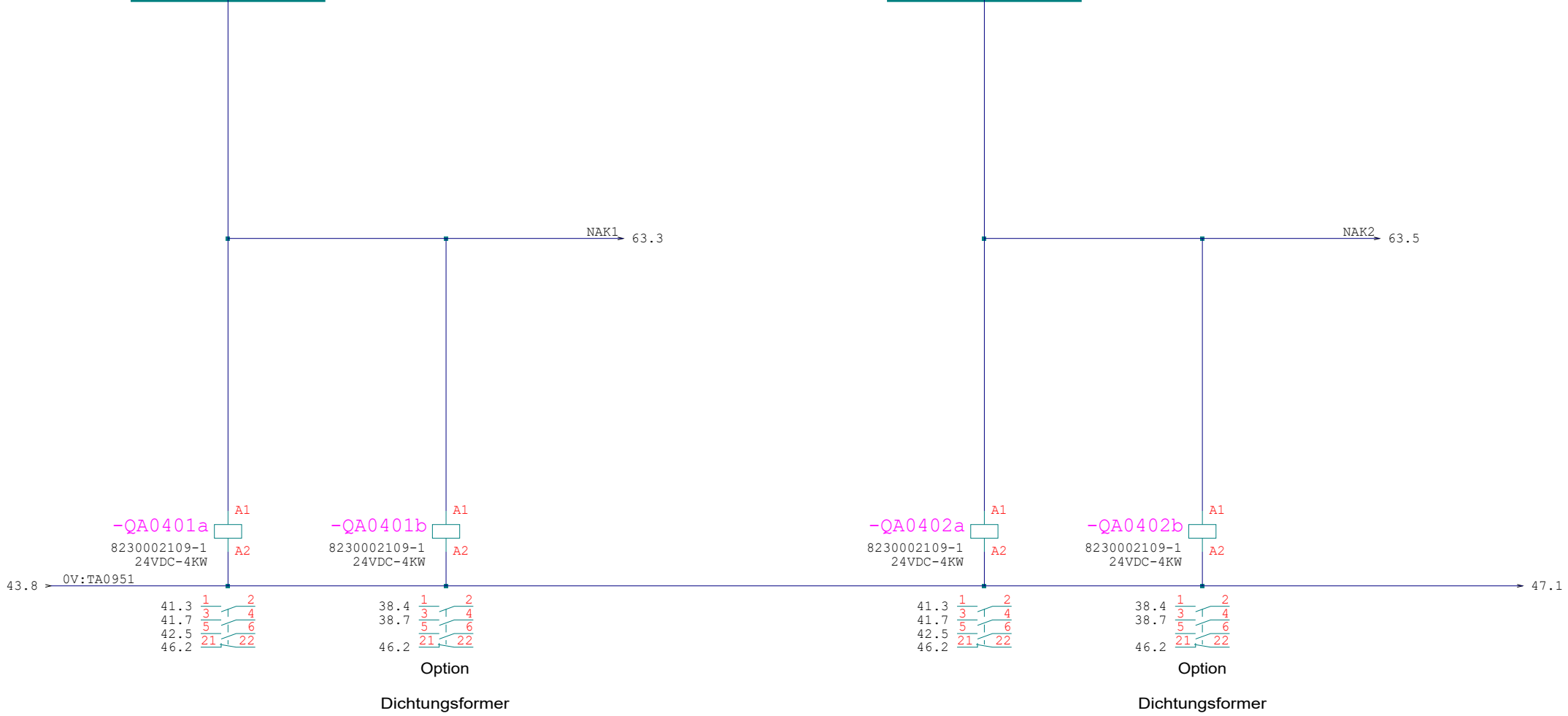
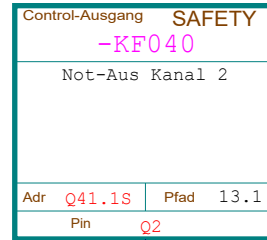
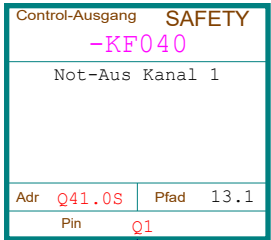






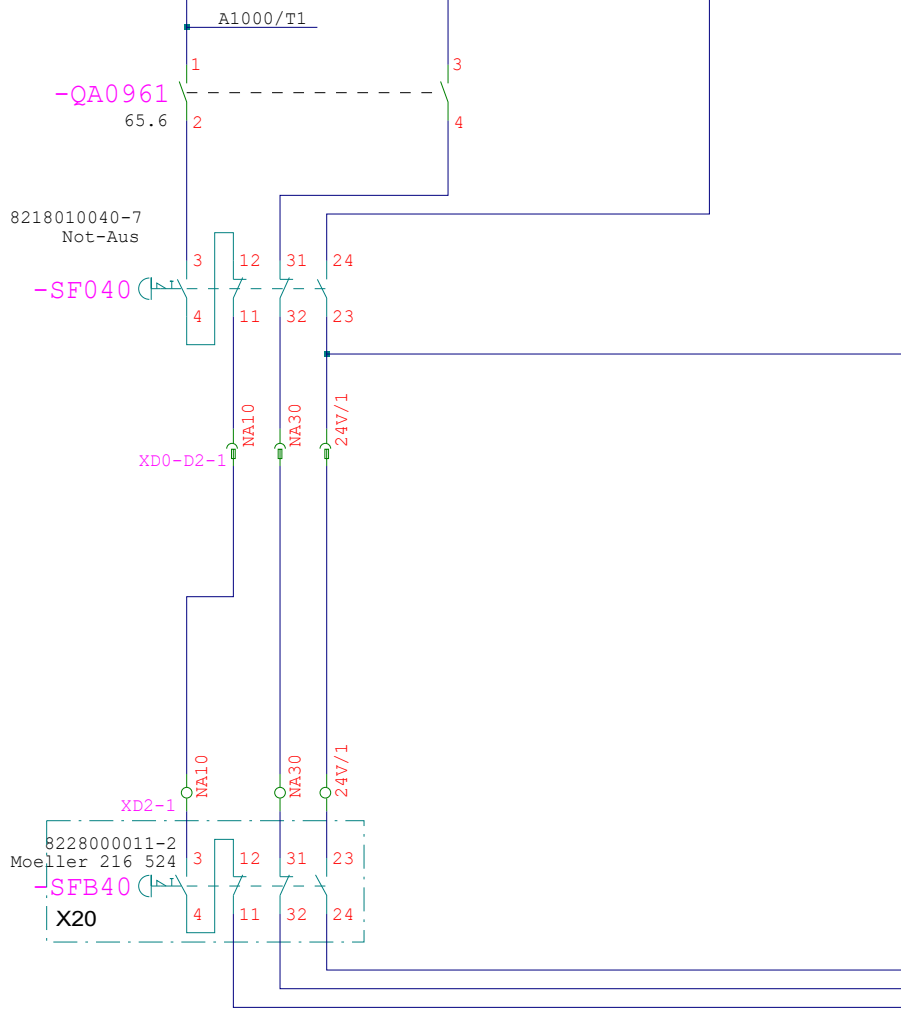
SPS-Steuerung
Modul-Reihenfolge



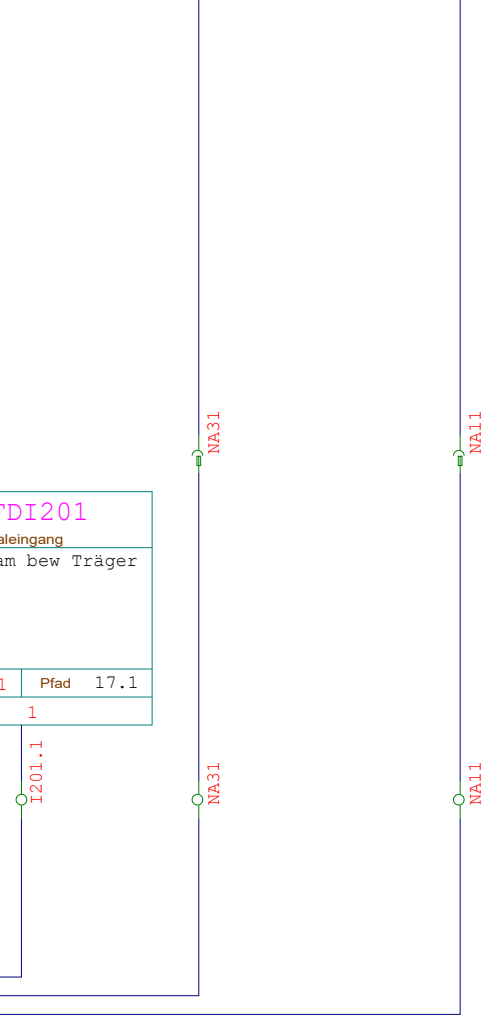


Control-Ausgang -KF040 SAFETY	Control-Ausgang -KF040 SAFETY	-KFDI0 Digitaleingang	
Testausgang 1	Testausgang 2	Not-Aus am Schaltschrank	
Adr Q40.0S Pfad 13.1	Adr Q40.1S Pfad 13.1	Adr I0.3 Pfad 12.1	
Pin T1	Pin T2	Pin 3	

Control Eingang -KF040 SAFETY	Control Eingang -KF040 SAFETY
Not-Aus Kanal 2	Not-Aus Kanal 1
Adr I40.1S Pfad 13.1	Adr I40.0S Pfad 13.1
Pin I2	Pin I1

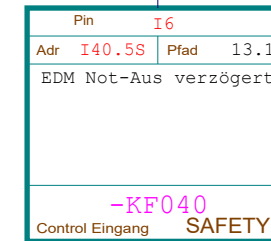
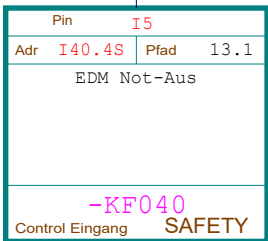
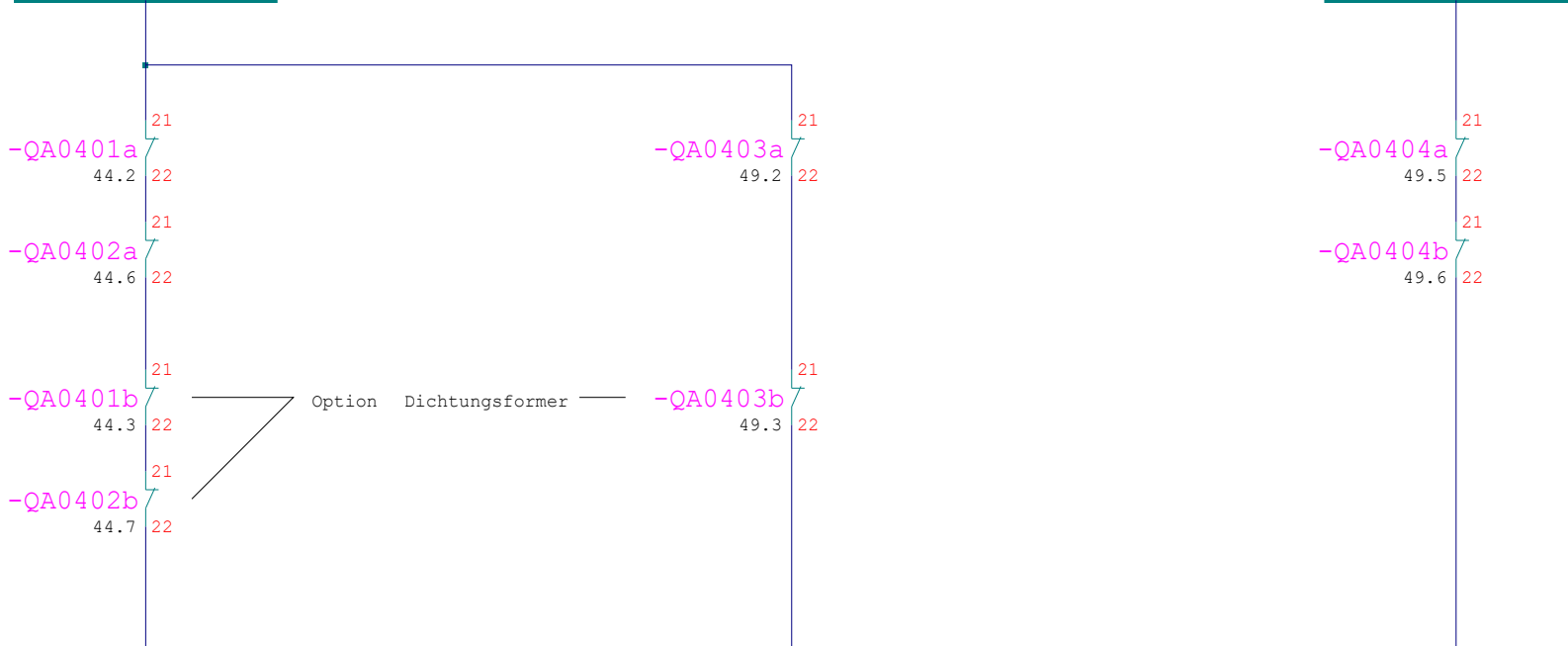
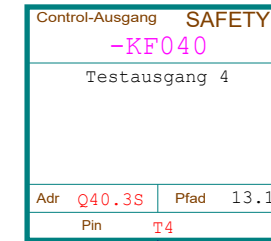
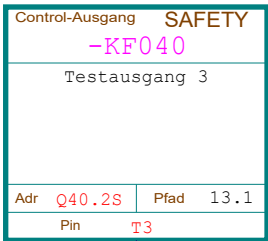


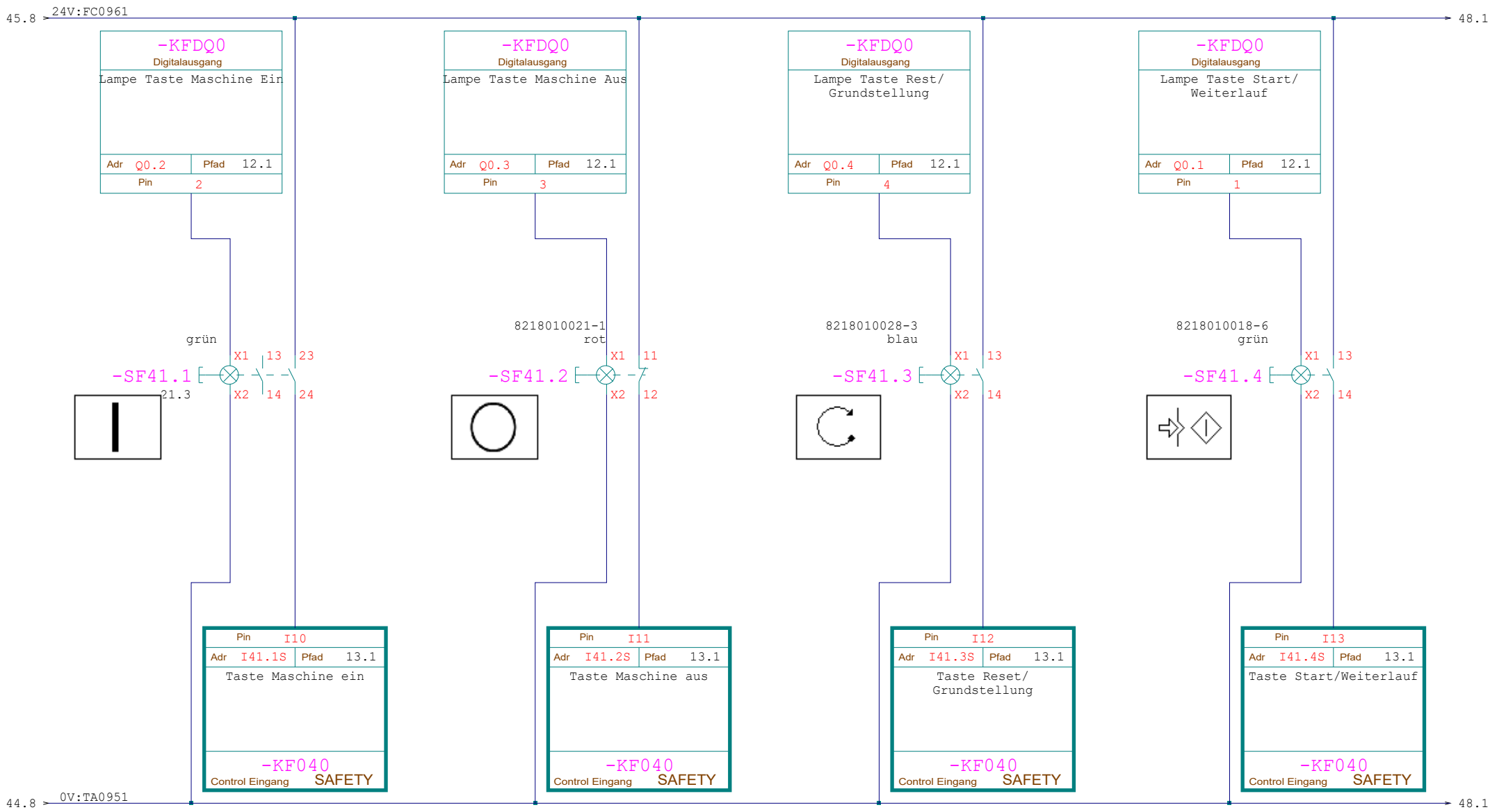
-KFDI201 Digitaleingang	
Not-Aus am bew Träger	
Adr I201.1 Pfad 17.1	
Pin 1	

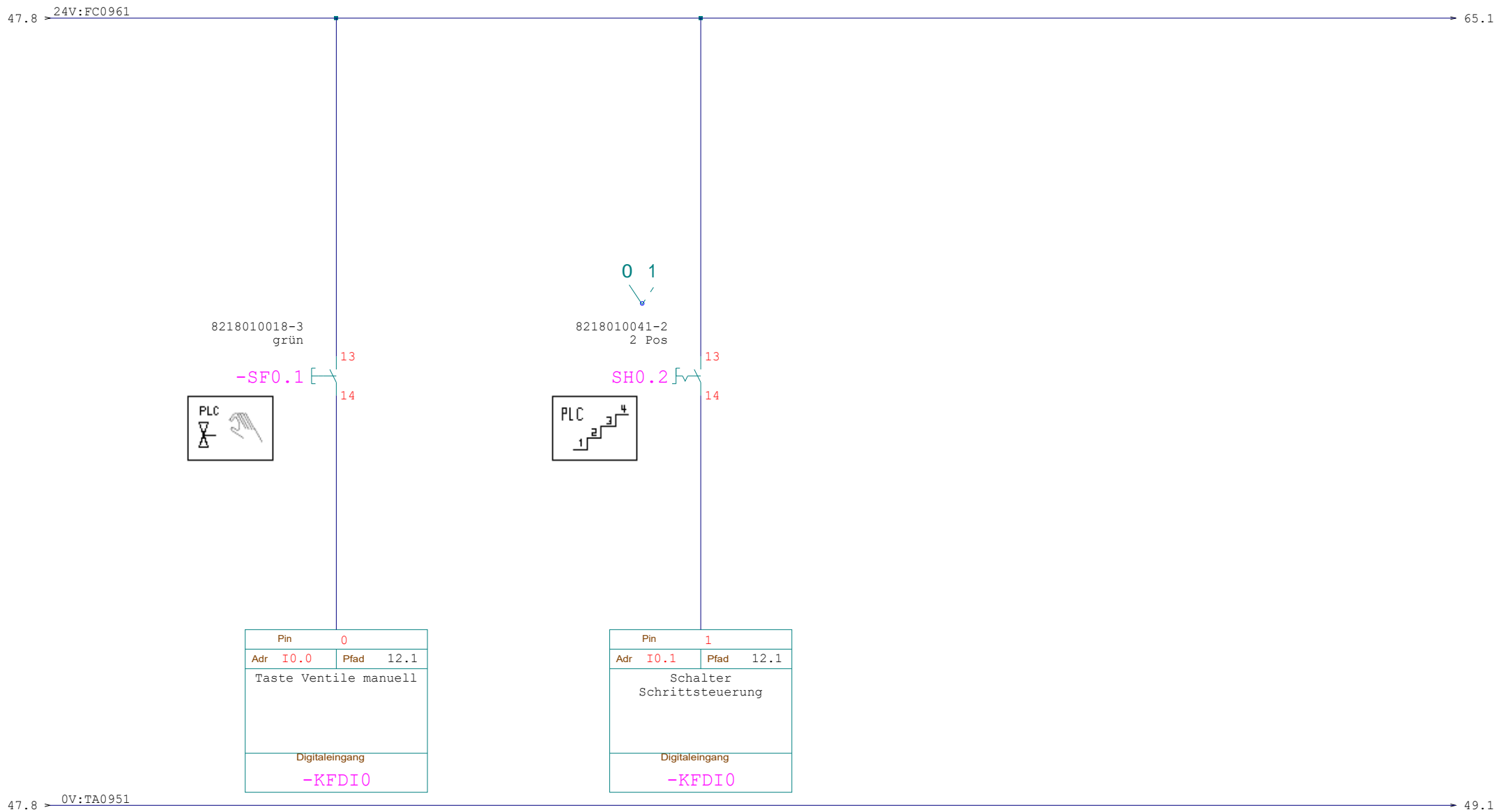


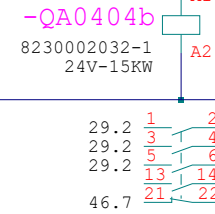
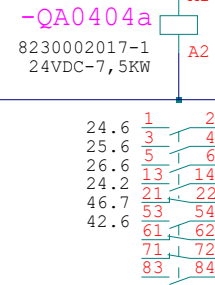
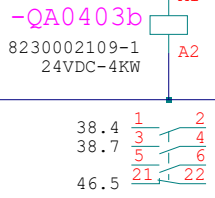
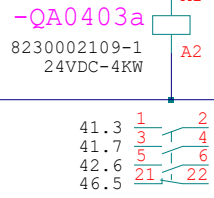
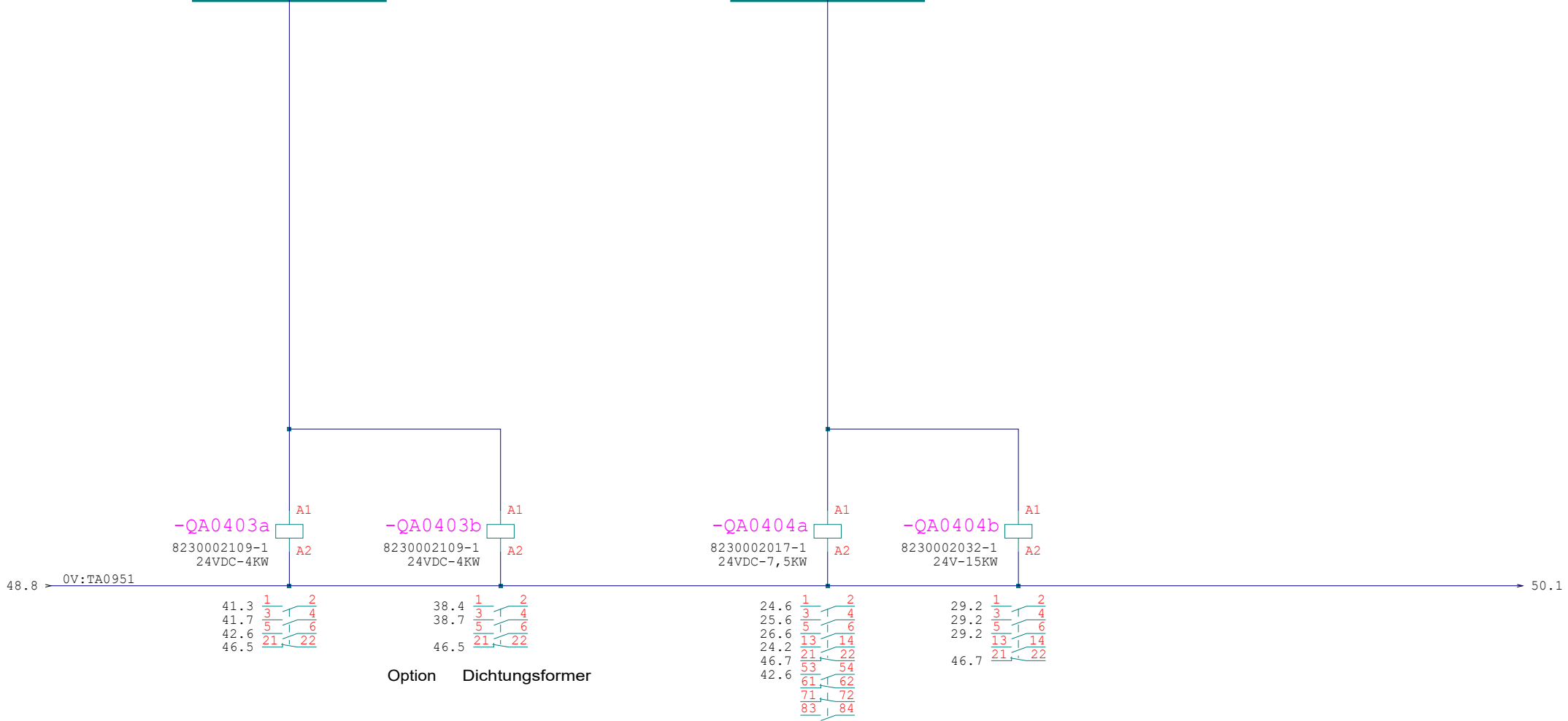
Not-Aus Kreis





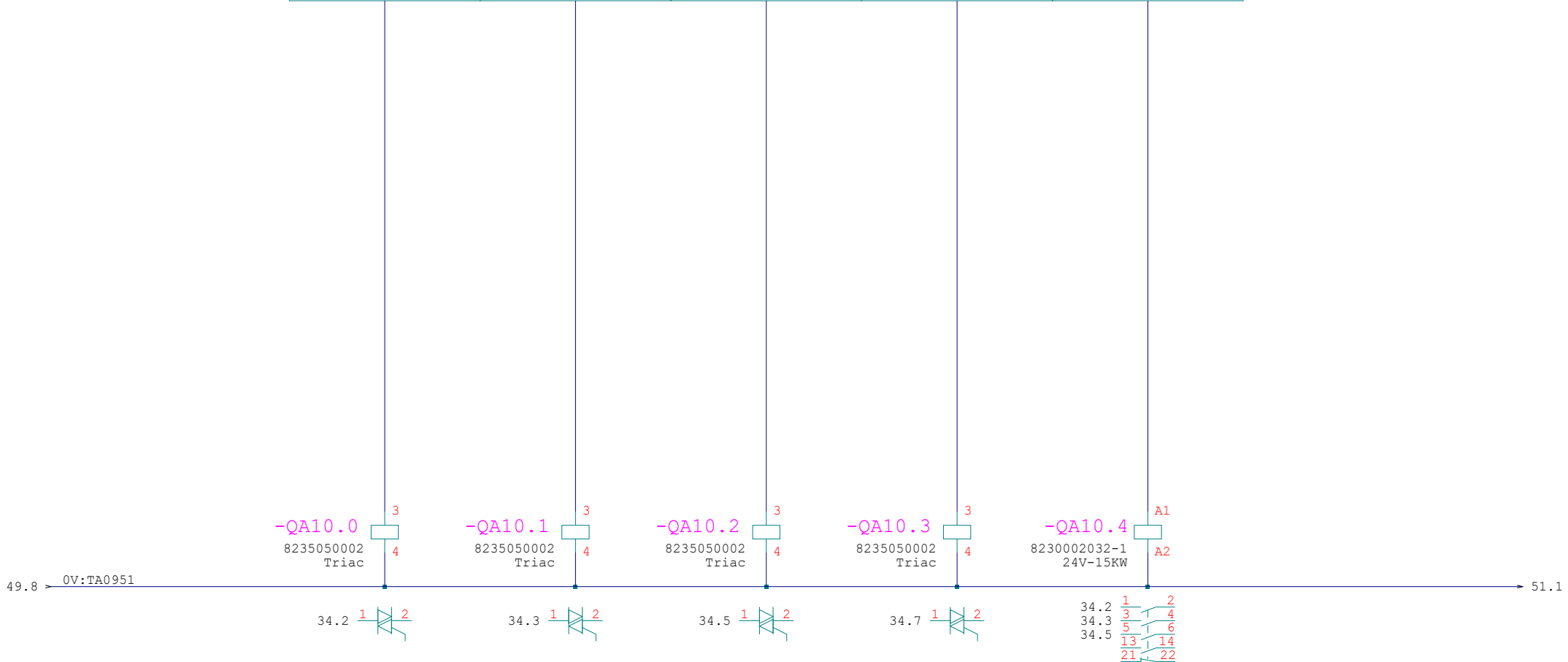


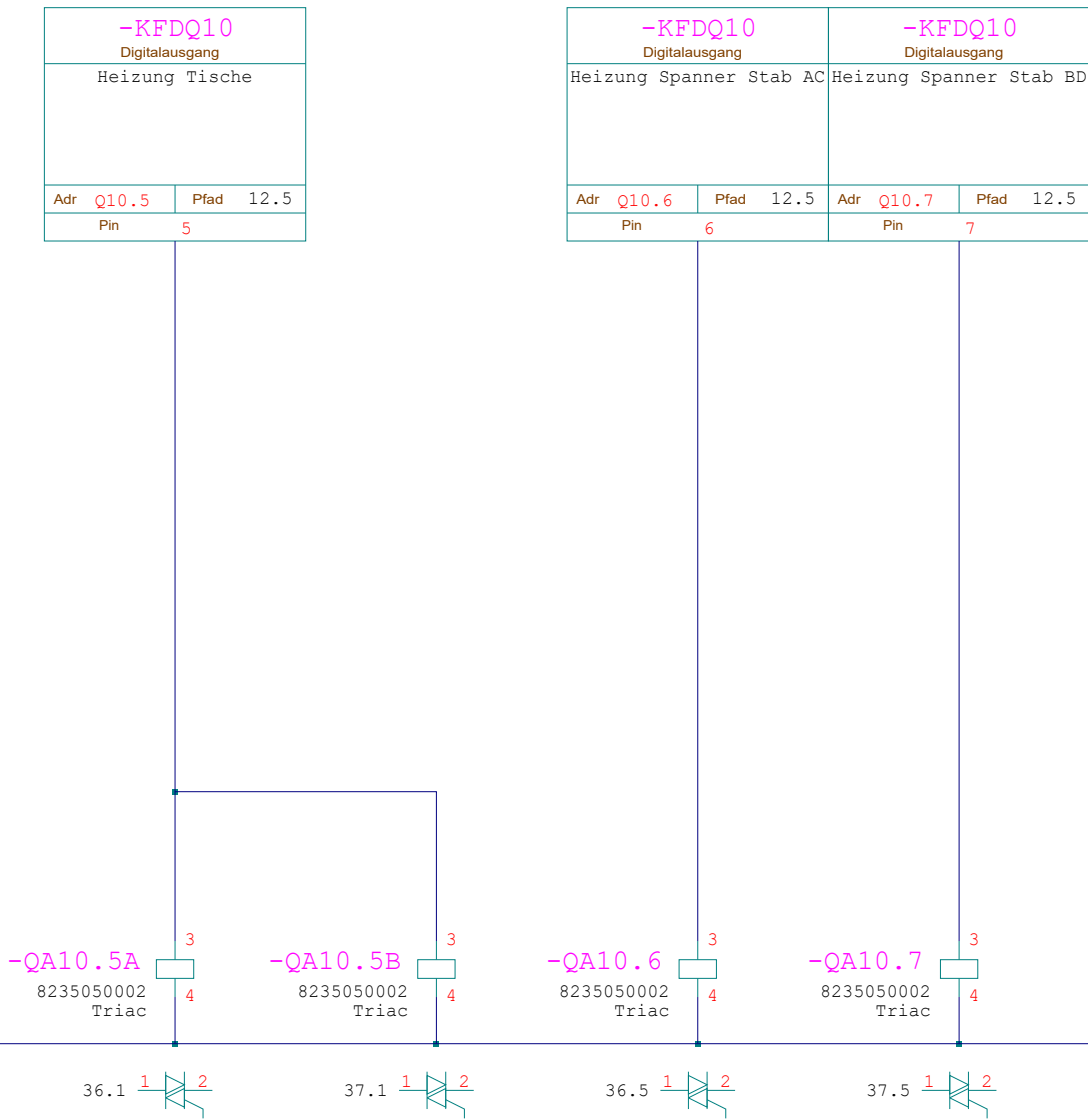




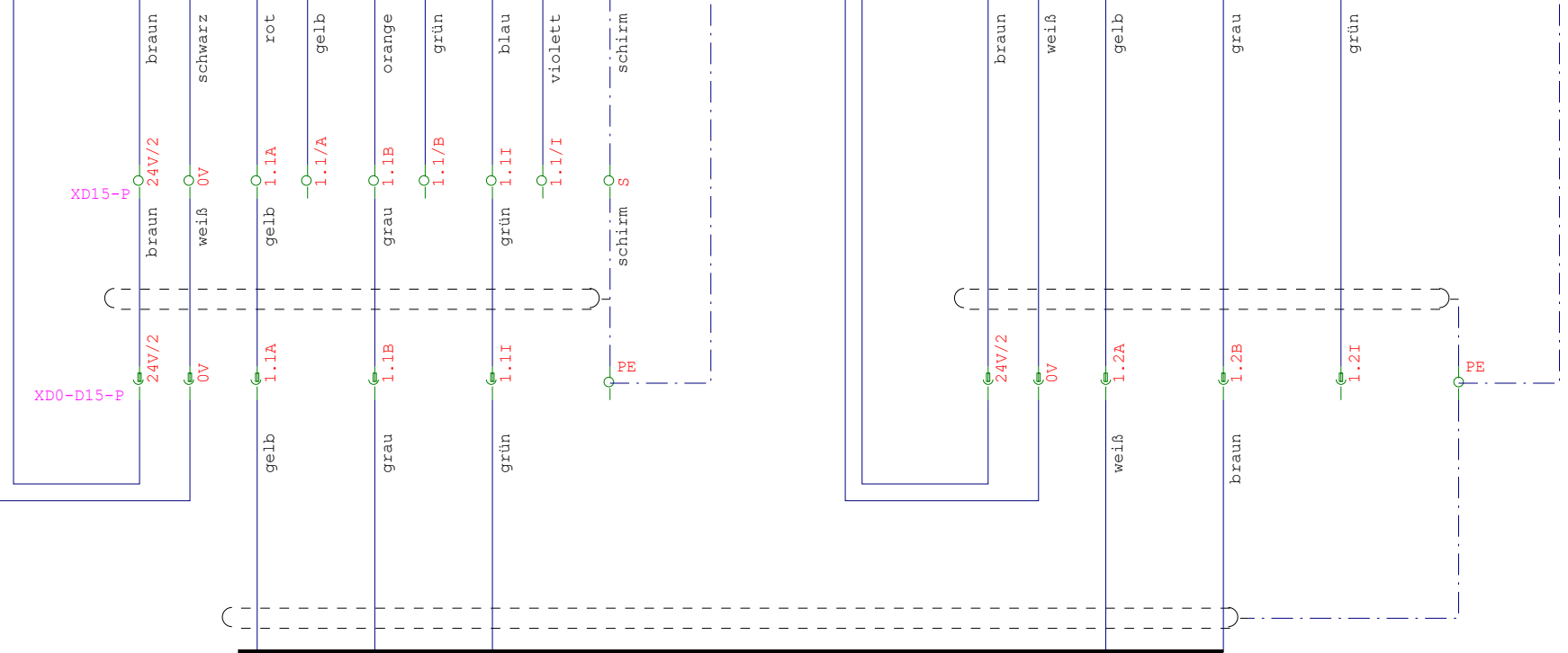
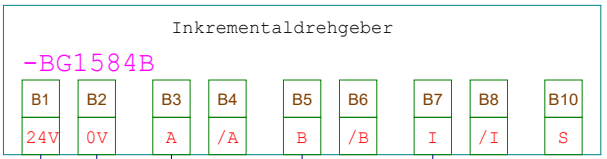
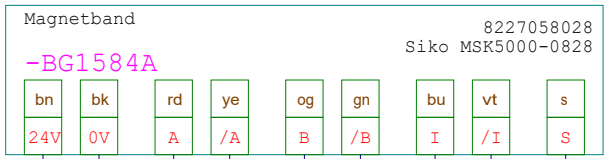
Option Dichtungsformer

-KFDQ10 Digitalausgang		-KFDQ10 Digitalausgang		-KFDQ10 Digitalausgang		-KFDQ10 Digitalausgang		-KFDQ10 Digitalausgang	
Heizung Spiegel FFE		Heizung Spiegel FBE		Heizung Spiegel BFE		Heizung Spiegel BBE		Spannungsversorgung der Heizspiegel	
Adr Q10.0	Pfad 12.5	Adr Q10.1	Pfad 12.5	Adr Q10.2	Pfad 12.5	Adr Q10.3	Pfad 12.5	Adr Q10.4	Pfad 12.5
Pin 0		Pin 1		Pin 2		Pin 3		Pin 4	





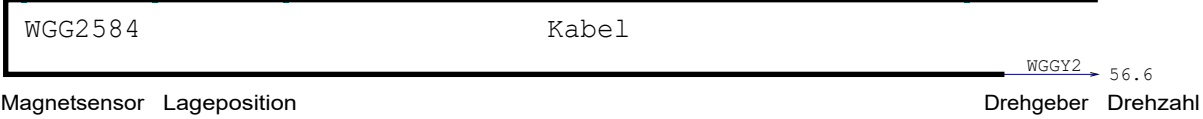
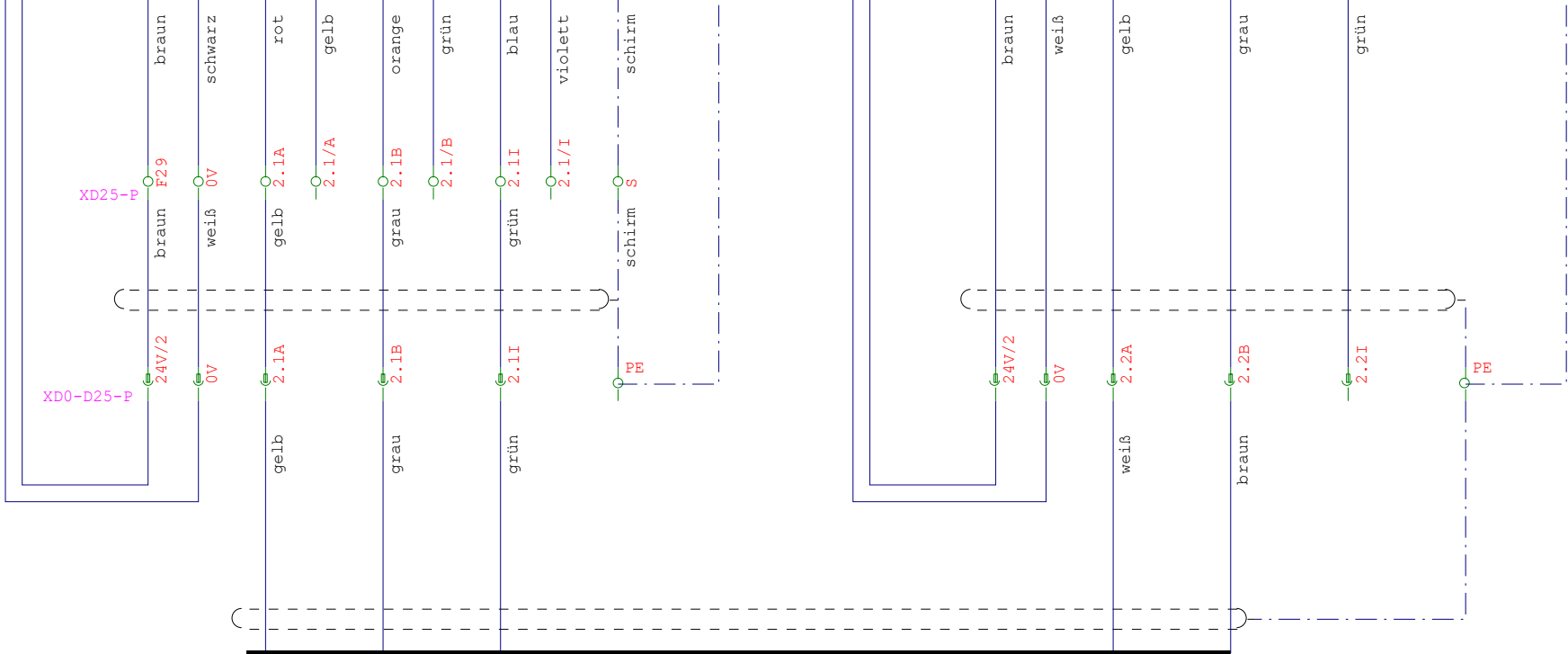
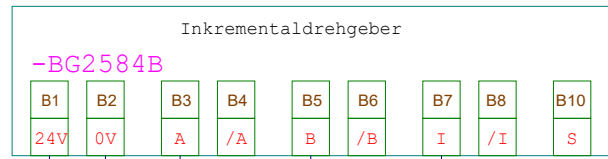
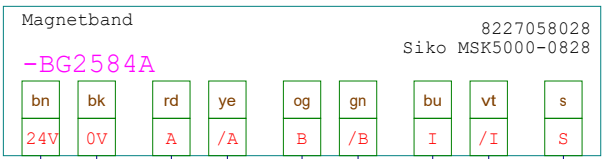
Option Messerheizung



-WGG1584 Kabel
Magnetsensor Lageposition
Drehgeber Drehzahl
WGGY1 55.6

im Motorgehäuse

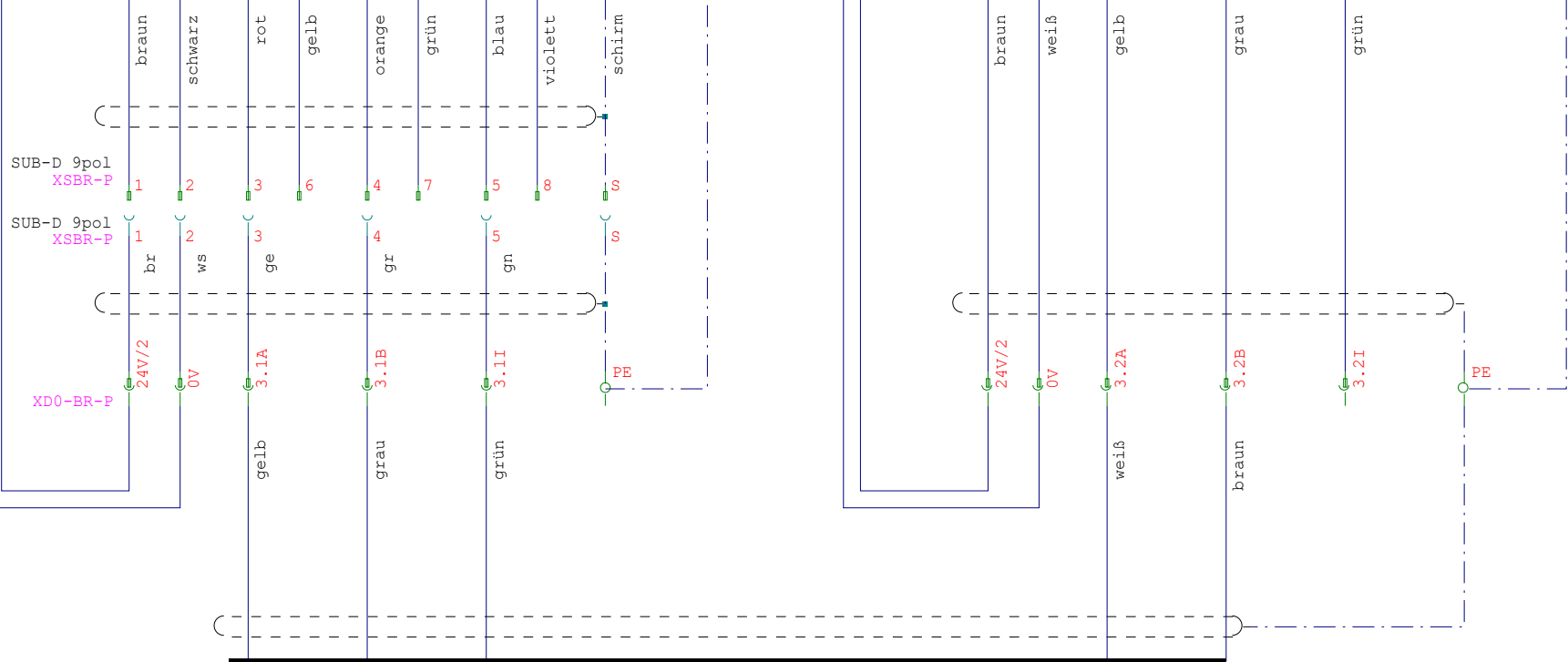
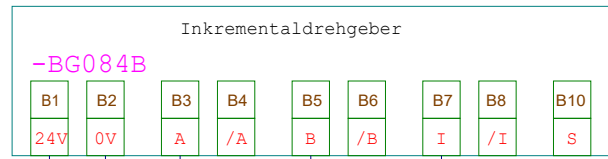
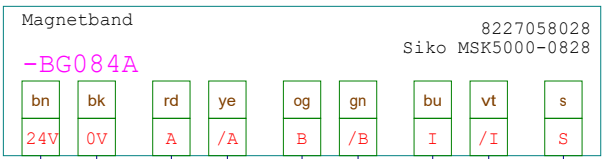
Positionierung Aggr. FBE



im Motorgehäuse

Positionierung Aggr. BBE

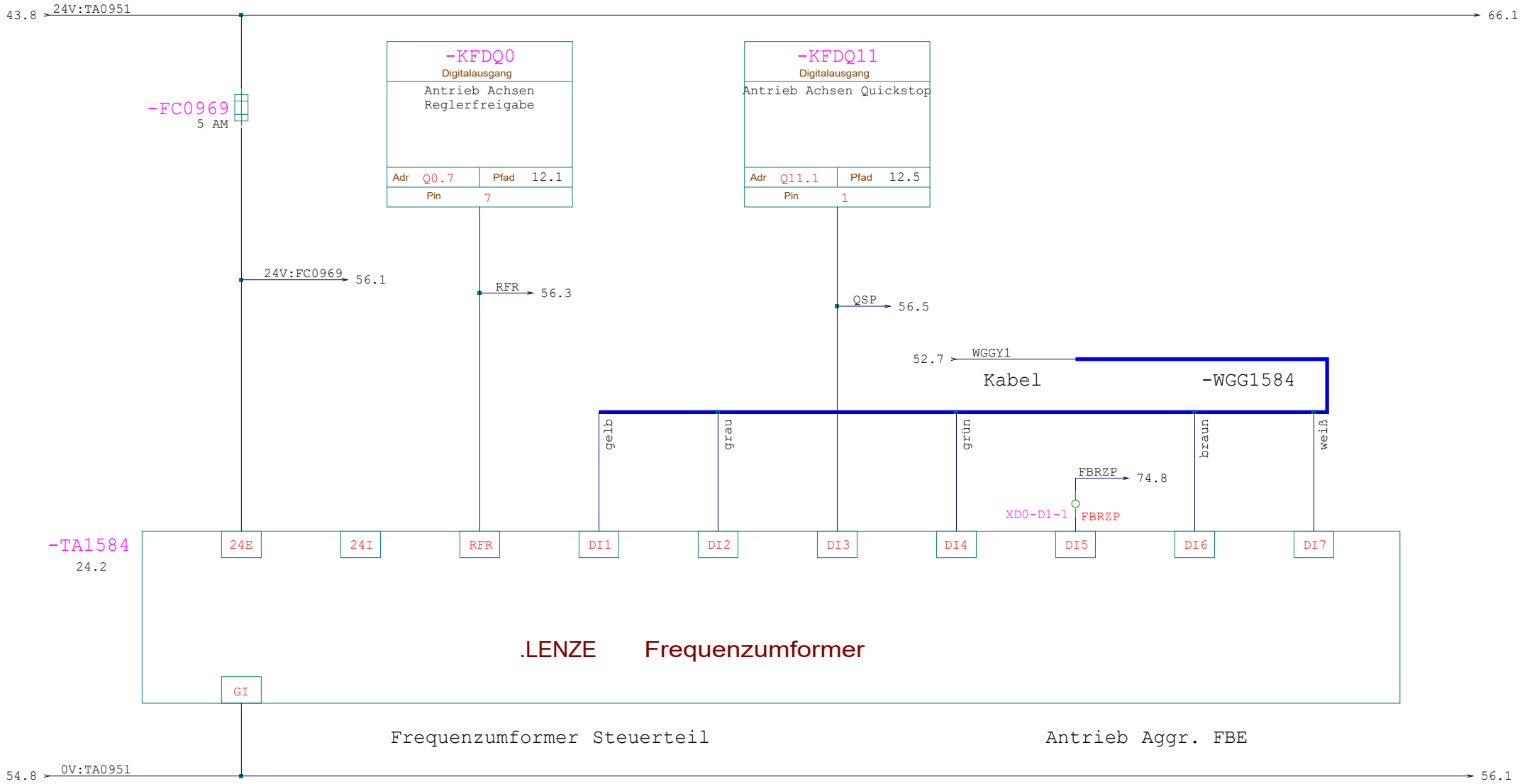
53.8 24V:FC0962
 53.8 0V:TA0951
 53.8 PE → 55.1



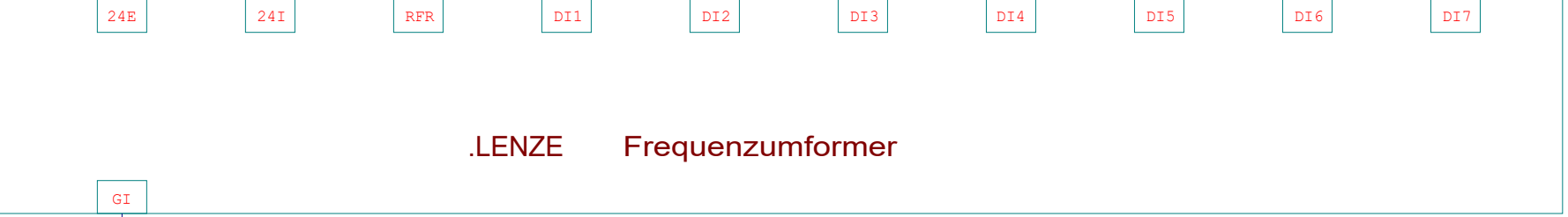
WGG084 Kabel → WGGX → 57.6
 Magnetsensor Lageposition Drehgeber Drehzahl

im Motorgehäuse

Positionierung Breite



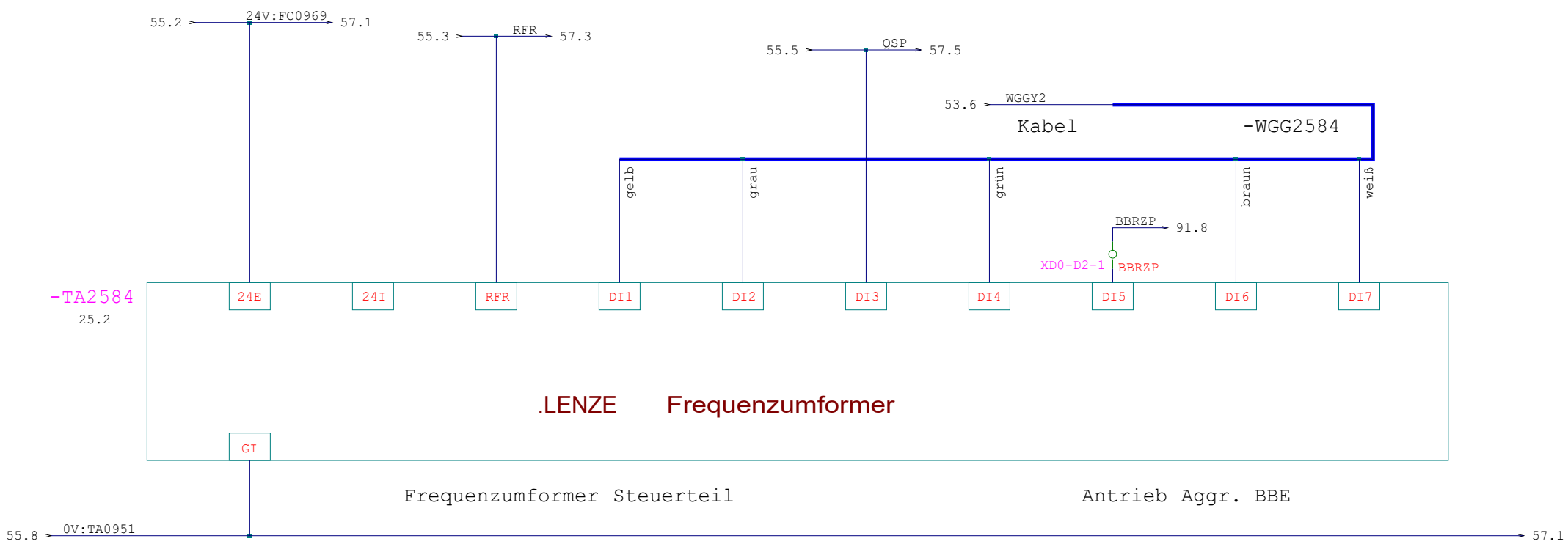
-TA1584
24.2



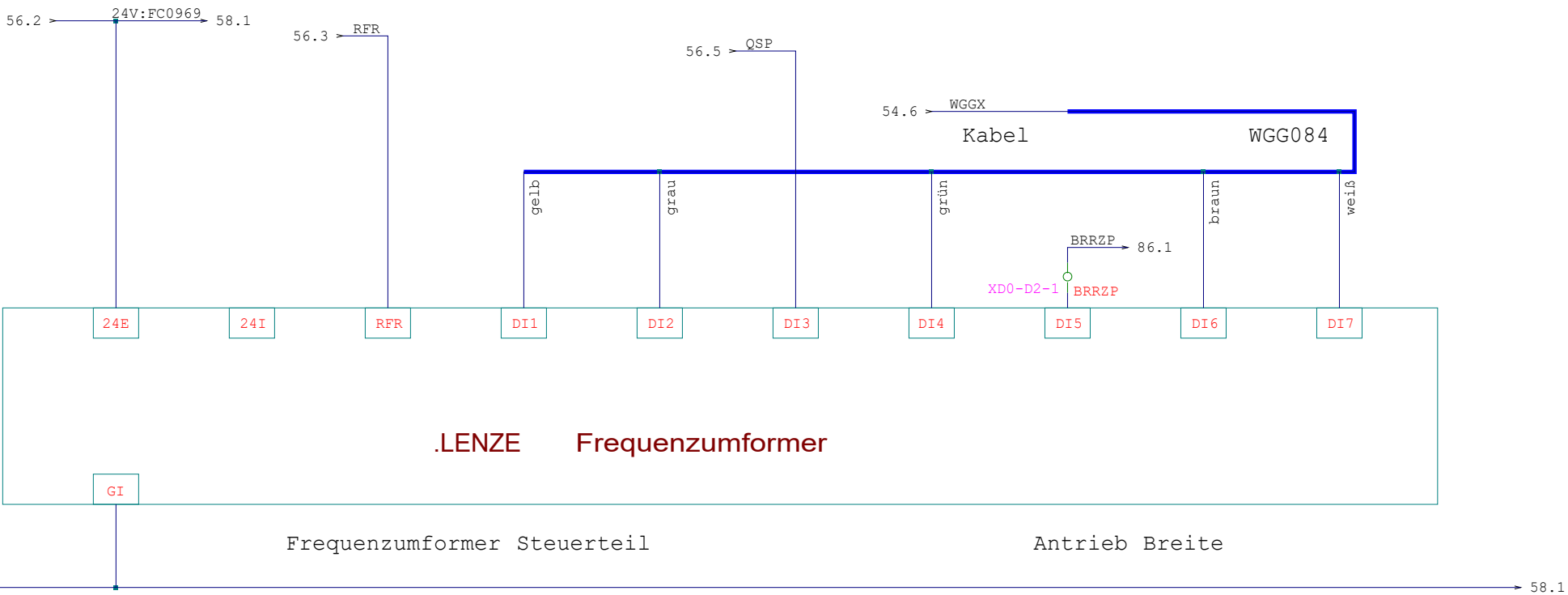
.LENZE Frequenzumformer

Frequenzumformer Steuerteil

Antrieb Aggr. FBE



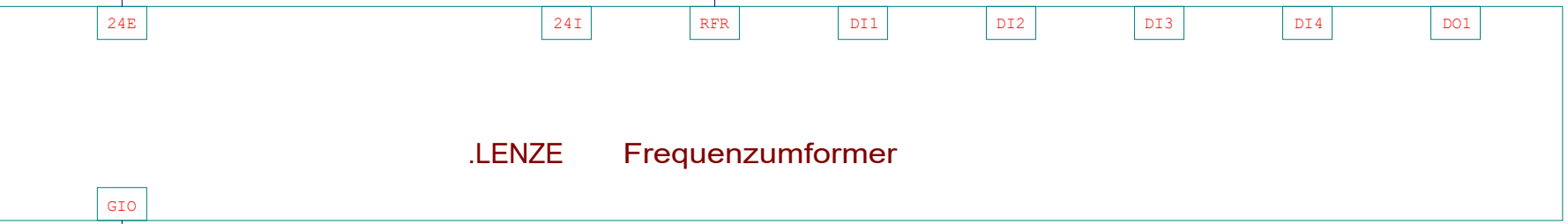
-TA2584
25.2



-KFDQ12	
Digitalausgang	
Kühlstation Freigabe FU	
Adr	Q12.0
Pfad	12.5
Pin	0

57.2 → 24V:FC0969 → 59.1

-TA580
???



.LENZE Frequenzumformer

Frequenzumformer Steuerteil

Antrieb Kühlstation

57.8 → 0V:TA0951 → 59.1

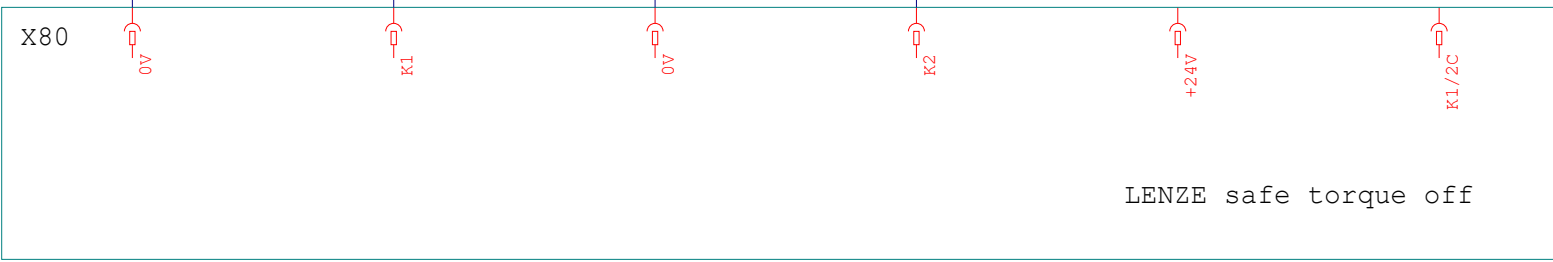
59.8 → 0V:TA0951 → 61.1

Control-Ausgang SAFETY	
-KF040	
STO 1	
Adr	Q41.6S
Pfad	13.1
Pin	IQ3

Control-Ausgang SAFETY	
-KF040	
STO 2	
Adr	Q41.7S
Pfad	13.1
Pin	IQ4

33.2 → FU-K1 → 61.3

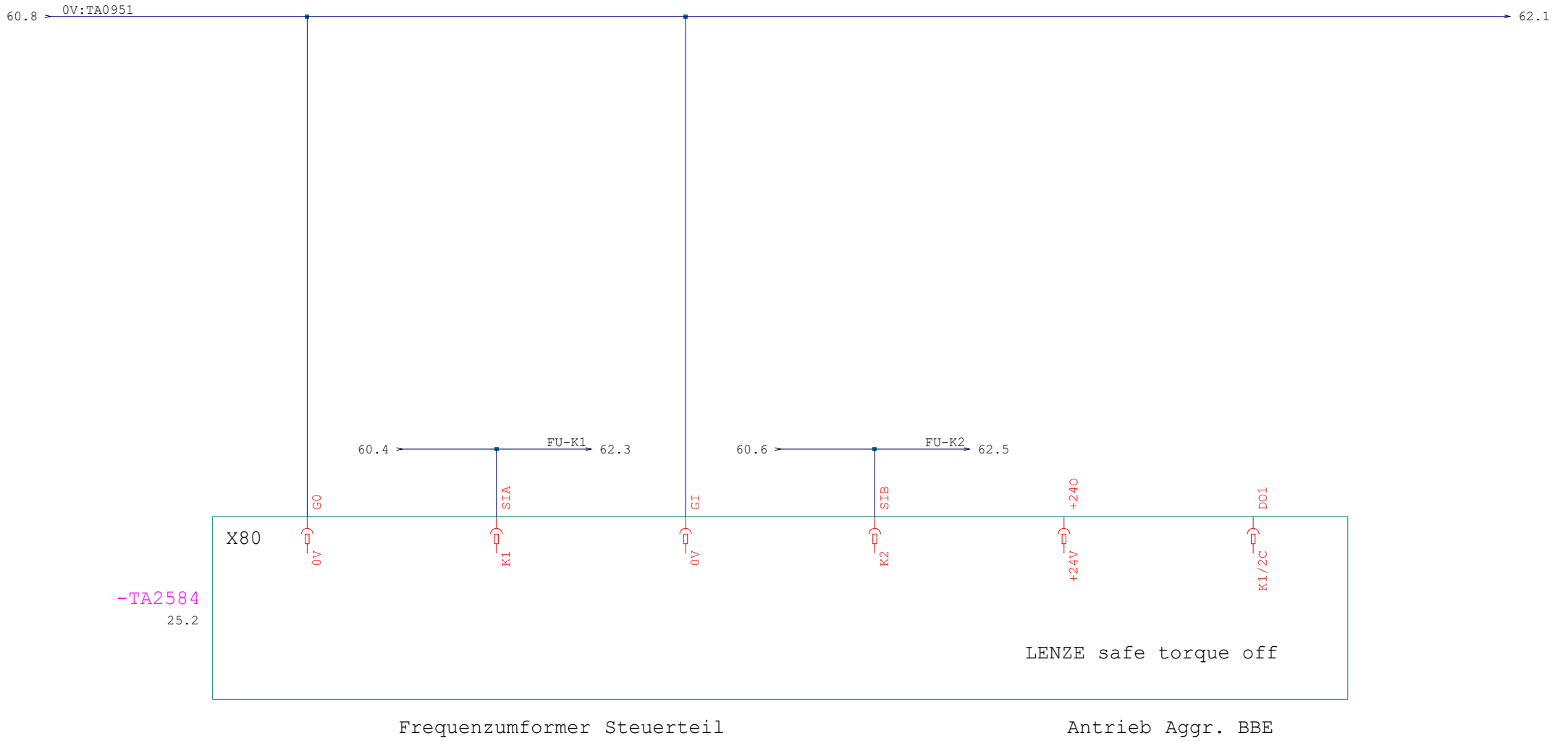
33.2 → FU-K2 → 61.5



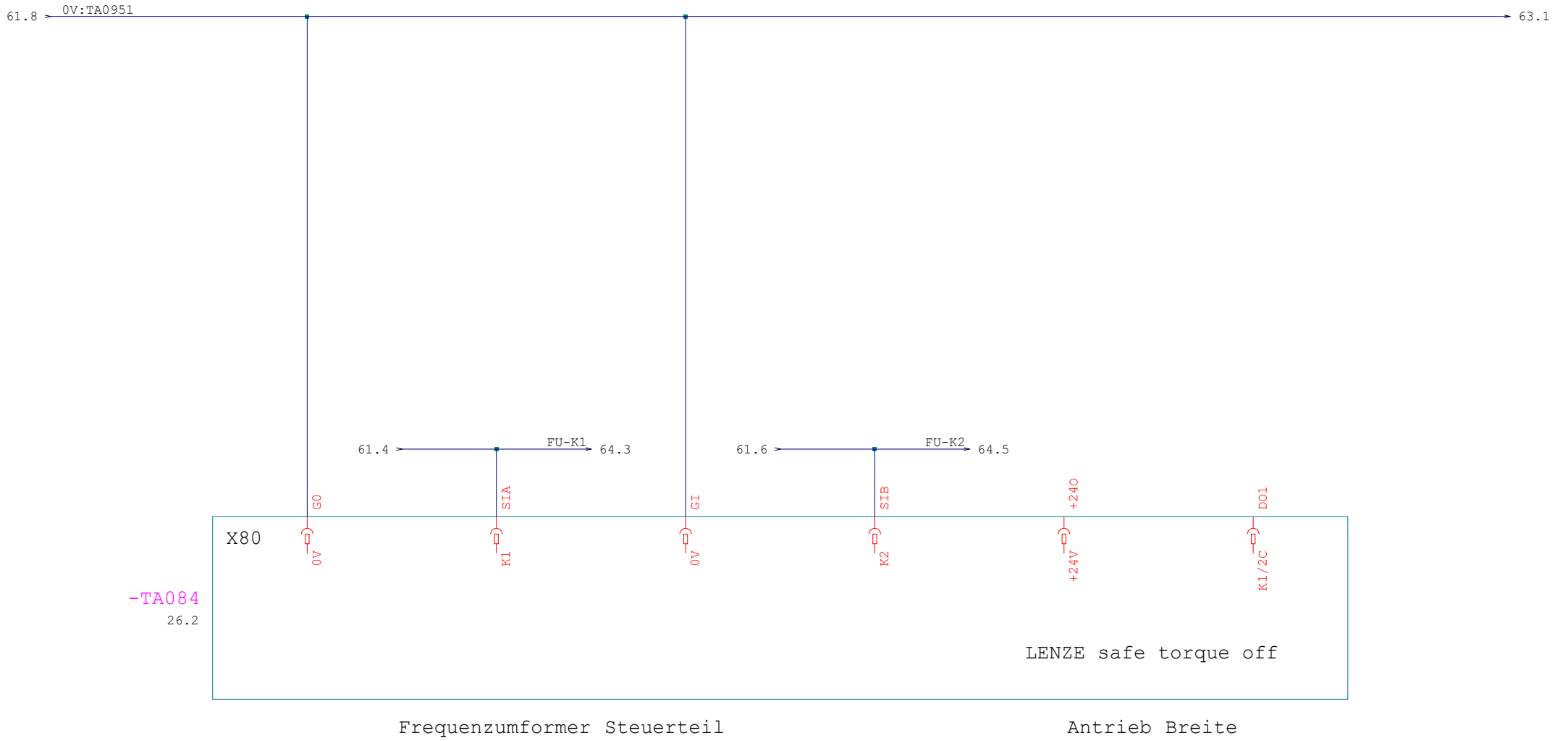
-TA1584
24.2

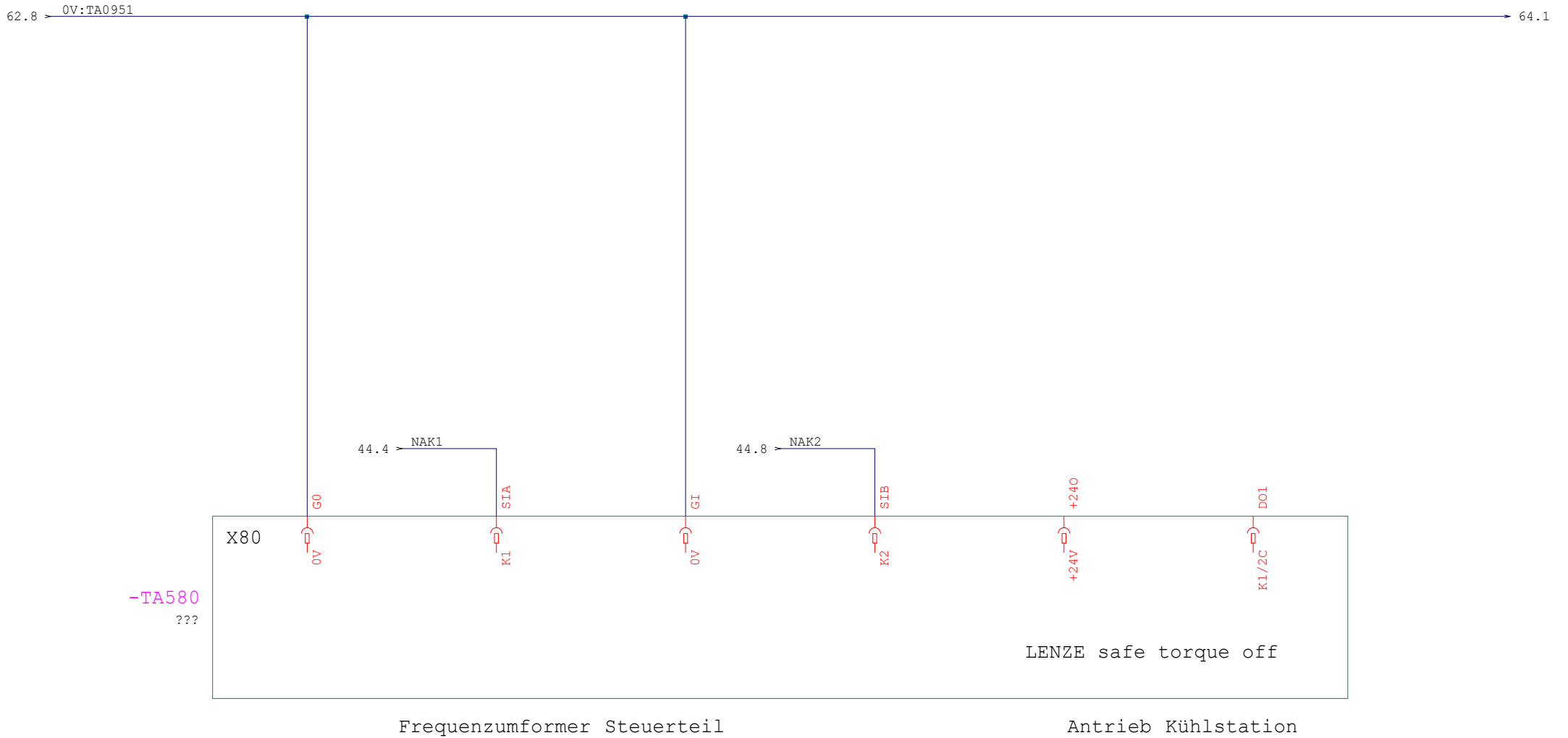
Frequenzumformer Steuerteil

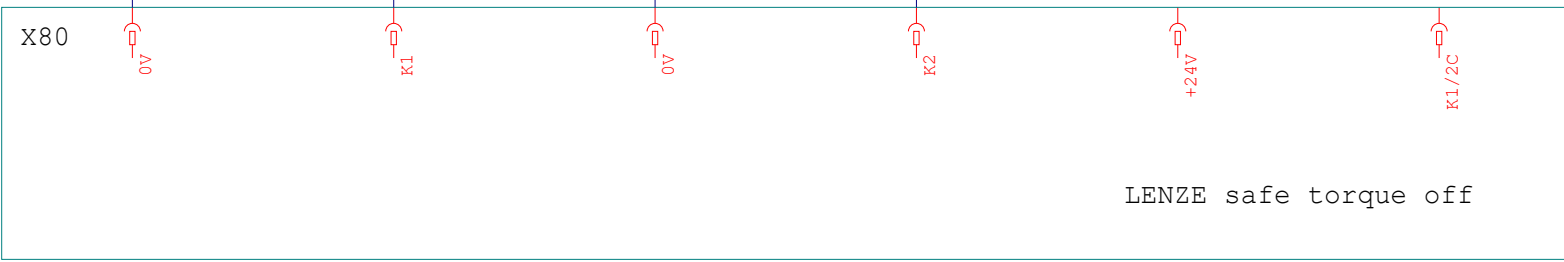
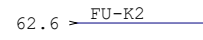
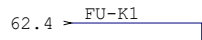
Antrieb Aggr. FBE



-TA2584
25.2



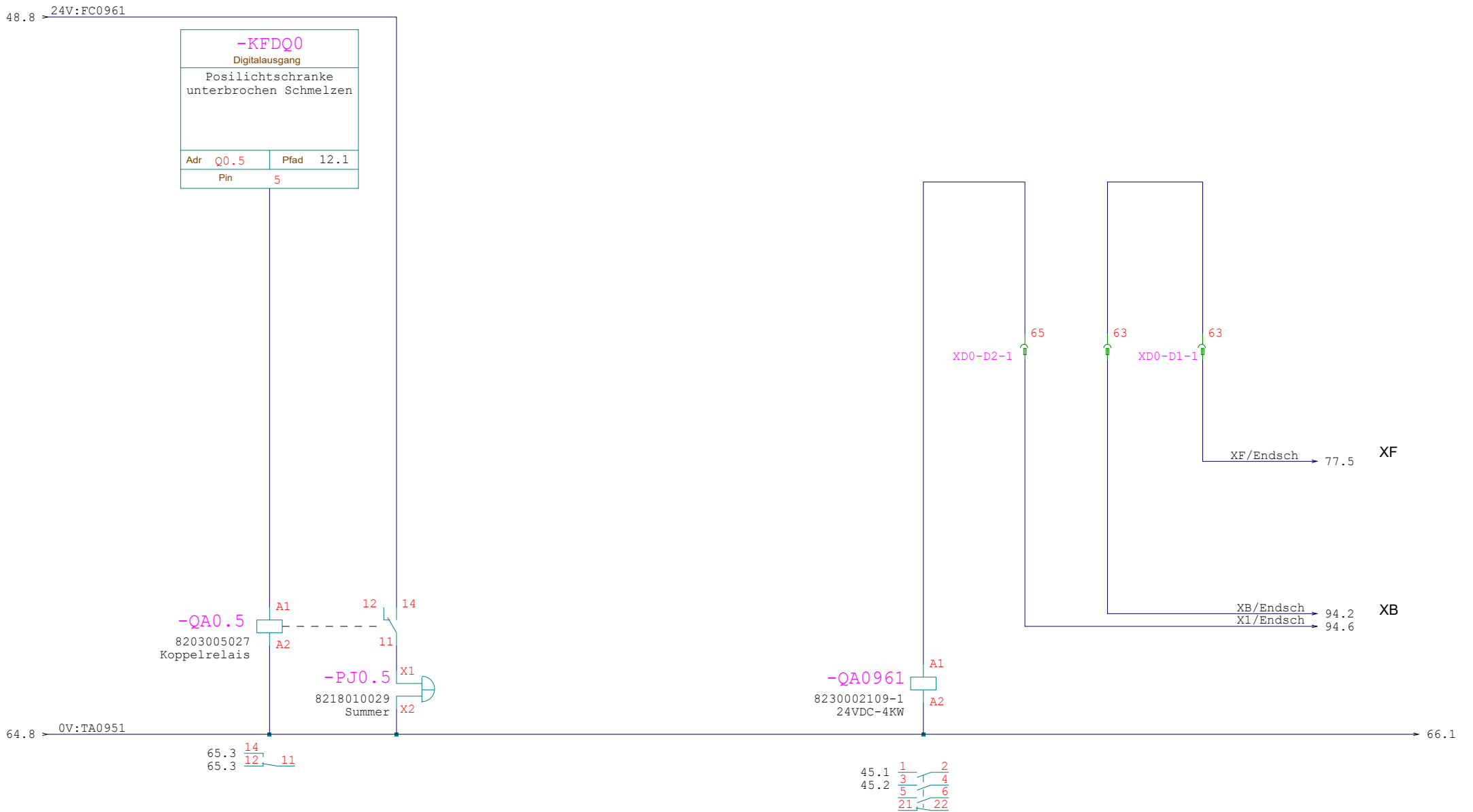




Frequenzumformer Steuerteil

Antrieb Abtransport

-TA080
???



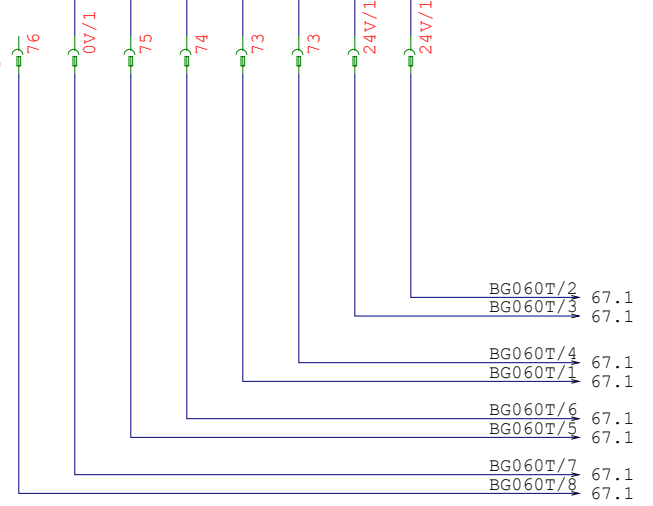
55.8 - 24V:TA0951

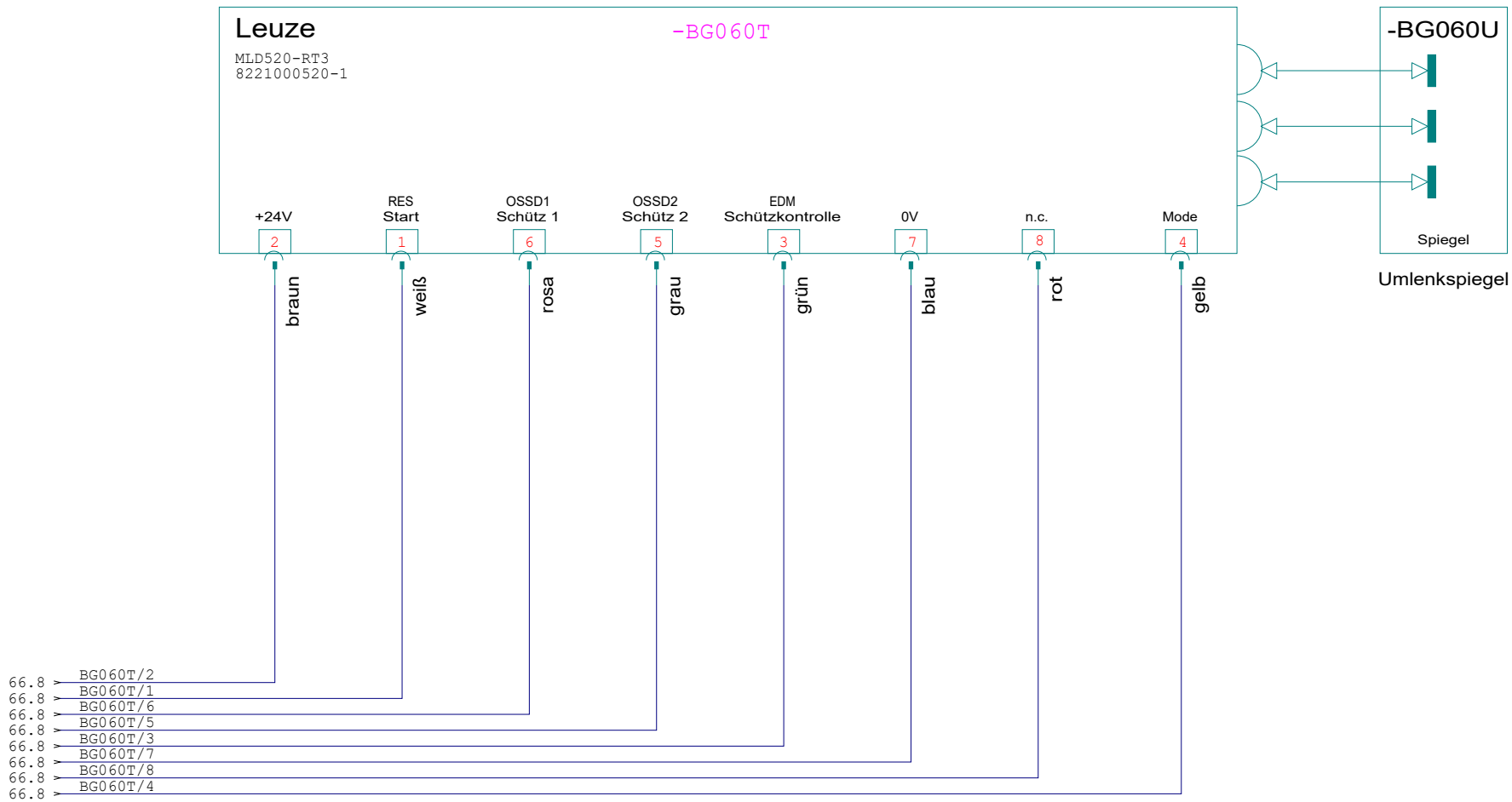
65.8 - 0V:TA0951

-FC09610 5 AM

Pin	I3	Pin	I4
Adr I40.2S	Pfad 13.1	Adr I40.3S	Pfad 13.1
Lichtschranke Posi OSSD1		Lichtschranke Posi OSSD2	
-KF040		-KF040	
Control Eingang	SAFETY	Control Eingang	SAFETY

XD0-060T





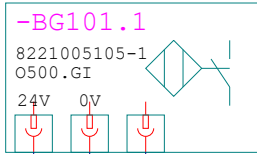
Sicherheitslichtschranke

Option

24V/1:D1 → 70.1

68.8

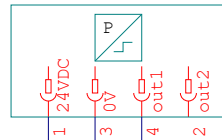
Lichttaster



XD1-1

24V/1

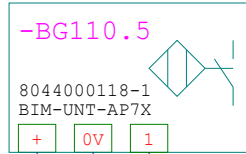
0V/1

1-10bar
8220018036
-BP101.0

24V/1

0V/1

Zylindersensor



24V/1

0V/1

Pin 1

Adr I101.1 Pfad 14.1

Lichtschranke
Abtransport

Digitaleingang

-KFDI101

Pin 0

Adr I101.0 Pfad 14.1

Überwachung
Eingangsdruck

Digitaleingang

-KFDI101

Pin 5

Adr I110.5 Pfad 14.1

Profilabstützung feste
Seite GS

Digitaleingang

-KFDI110

0V/1:D1 → 70.1

68.8

Option Option

69.8 → 24V/1:D1 → 71.1

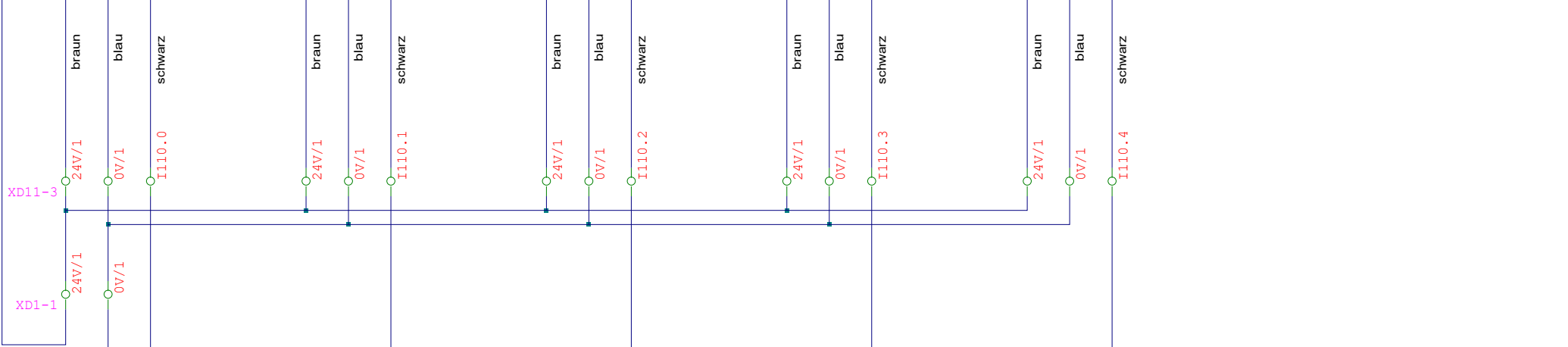
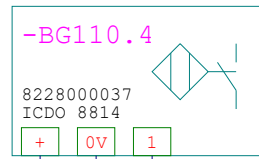
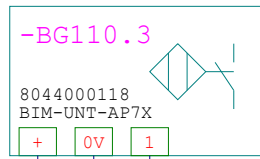
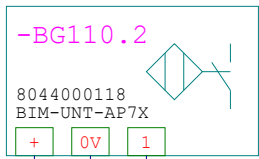
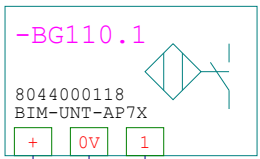
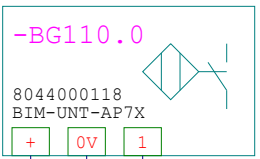
Zylindersensor

Zylindersensor

Zylindersensor

Zylindersensor

Initiator



Pin	0
Adr	I110.0
Pfad	14.1
Heizspiegelantrieb FFE AS	
Digitaleingang	
-KFDI110	

Pin	1
Adr	I110.1
Pfad	14.1
Heizspiegelantrieb FFE GS	
Digitaleingang	
-KFDI110	

Pin	2
Adr	I110.2
Pfad	14.1
Riegel Kopfverschiebung FFE AS	
Digitaleingang	
-KFDI110	

Pin	3
Adr	I110.3
Pfad	14.1
Riegel Spannerschiebung Stab A FFE GS	
Digitaleingang	
-KFDI110	

Pin	4
Adr	I110.4
Pfad	14.1
DF Ref FFE	
Digitaleingang	
-KFDI110	

69.8 → 0V/1:D1 → 71.1

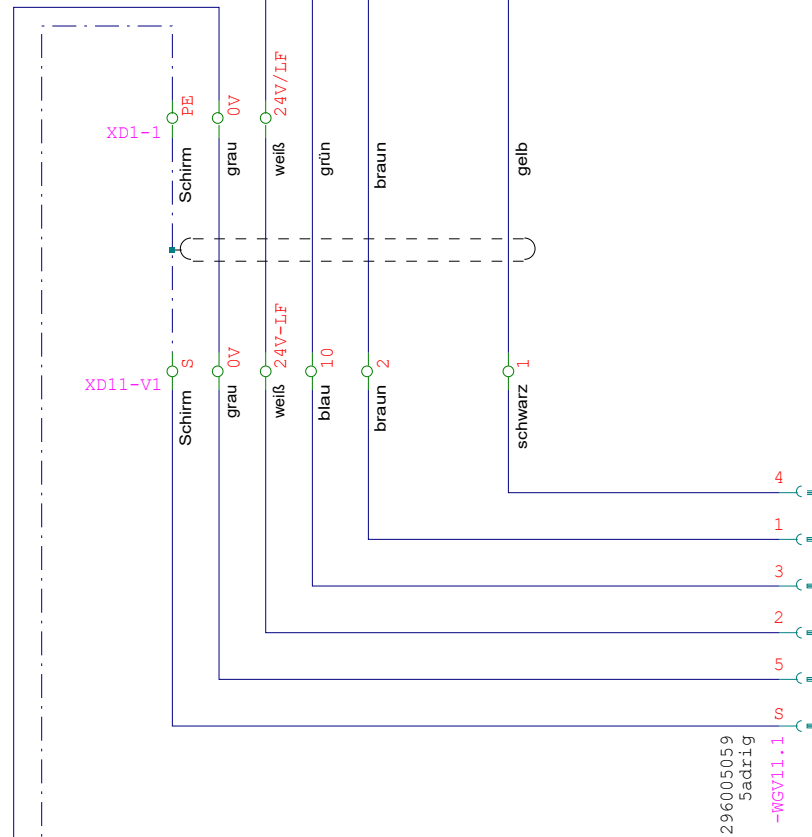
AS = Arbeitsstellung
GS = Grundstellung

Aggr. FFE

71.8 → 24V/LF:D1 → 73.1

-KFIO190
IO-Link Eingang
-KH11.1 Ventilplatte FFE

Adr	I190.1	Pfad	16.5
0V	+24V	Pin	1
10	2		



Nr.	Name	Funktion	14	12
1	-QM1	Profilanschlag	AS	GS
2	-QM8	Heizspiegelantrieb	AS	GS
3	-QM10	Spannerverschiebung Stab BD	AS	GS
4	-QM203	Riegel Kopfverschiebung	AS	GS
5	-QM204	Bremse Kopfverschiebung	AS	GS
6	-QM29	Dichtungsformer auf/ab	AS	GS
7	-QM30	Dichtungsformer Riegel	AS	GS
8	-QM55	Dichtungsformer Mittelstellung	AS	GS
9				
10	QM44	Druckumschaltung Spanner A	AS	GS
11	-QM16A	Spanner AS Stab A	AS	GS
12	QM16B	Spanner GS Stab A	AS	GS

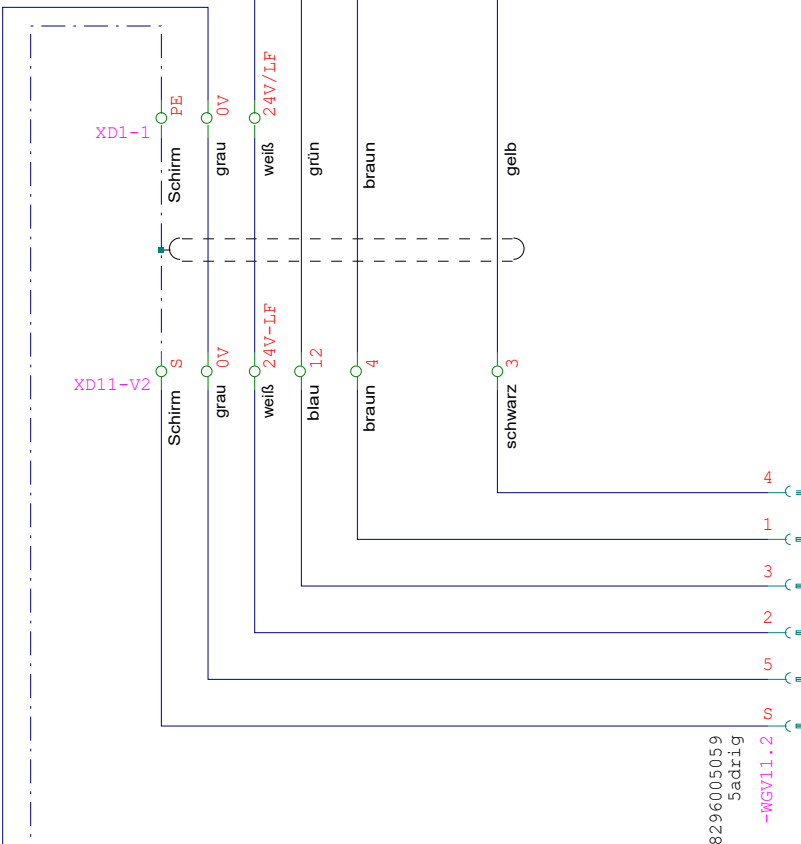
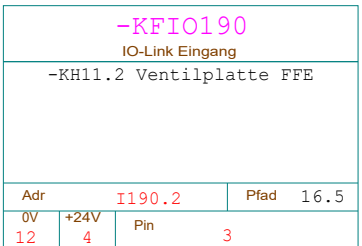
IO-Link Ventilplatte **-KH11.1 FFE** VAEM-L1-S-12-PT

71.8 → 0V/1:D1 → 73.1
68.8 → PE:D1 → 73.1

AS = Arbeitsstellung
GS = Grundstellung

Aggr. FFE

72.8 → 24V/LF:D1 → 75.1



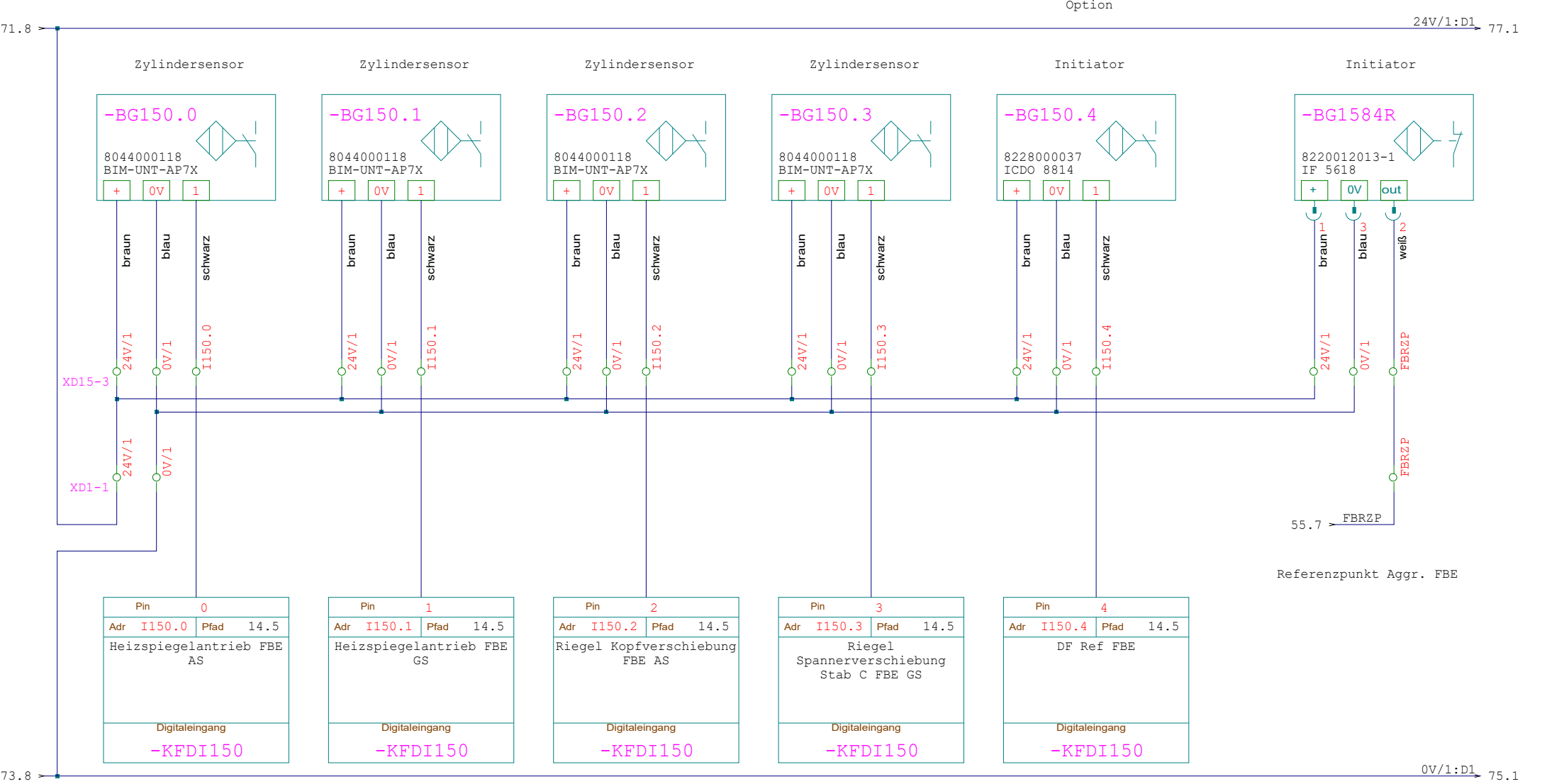
Nr.	Name	Funktion	14	12
1	-QM110	Spannerverschiebung Stab A	AS	GS
2	-QM38	Riegel Spannerverschiebung Stab A	AS	GS
3	-QM12	Abtransport Ausheber	AS	GS
4	-QM33	Werkzeugausheber	AS	GS
5	-QM82	Profilabstützung	AS	GS
6				
7	-QM205	Druckumschaltung Kopfverschiebung	AS	GS
8	-QM45	Druckumschaltung Spanner BD	AS	GS
9				
10	QM201	Kopfverschiebung	AS	GS
11	-QM17A	Spanner AS Stab BD	AS	GS
12	QM17B	Spanner GS Stab BD	AS	GS

IO-Link Ventilplatte -KH11.2 FFE VAEM-L1-S-12-PT

72.8 → 0V/1:D1 → 74.1
72.8 → PE:D1 → 75.1

AS = Arbeitsstellung
GS = Grundstellung

Aggr. FFE



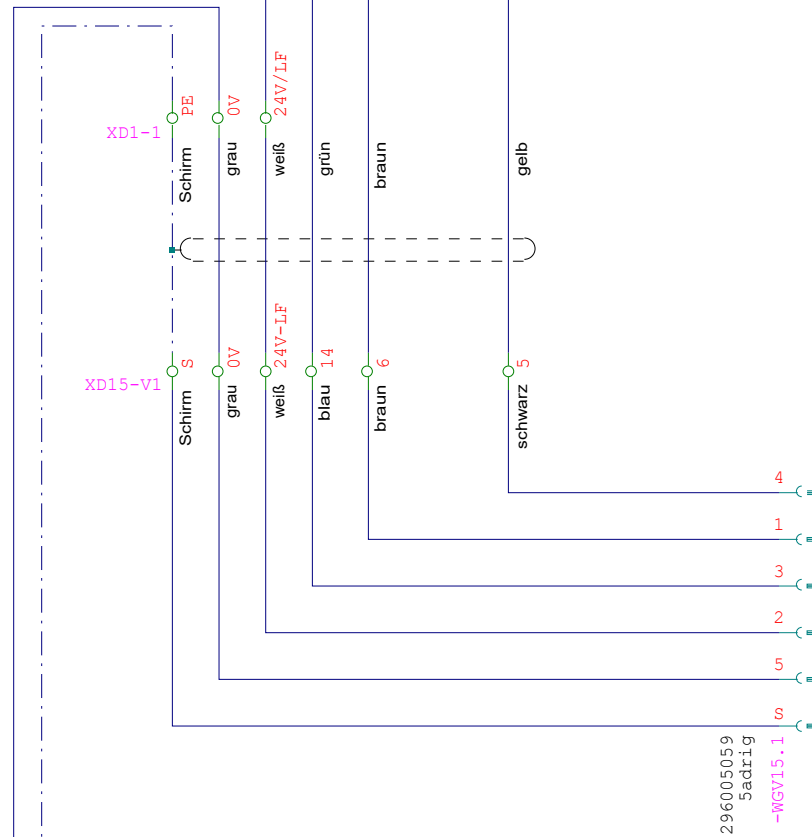
AS = Arbeitsstellung
GS = Grundstellung

Aggr. FBE

73.8 → 24V/LF:D1 → 76.1

-KFIO190
IO-Link Eingang
-KH15.1 Ventilplatte FBE

Adr	I190.3	Pfad	16.5
0V	+24V	Pin	5
14	6		



Nr.	Name	Funktion	14	12
1	-QM1	Profilanschlag	AS	GS
2	-QM8	Heizspiegelantrieb	AS	GS
3	-QM10	Spannerverschiebung Stab BD	AS	GS
4	-QM203	Riegel Kopfverschiebung	AS	GS
5	-QM204	Bremse Kopfverschiebung	AS	GS
6	-QM29	Dichtungsformer auf/ab	AS	GS
7	-QM30	Dichtungsformer Riegel	AS	GS
8	-QM55	Dichtungsformer Mittelstellung	AS	GS
9	-QM34	Bremse für Aggr FB	AS	GS
10	-QM44	Druckumschaltung Spanner C	AS	GS
11	-QM16A	Spanner AS Stab C	AS	GS
12	-QM16B	Spanner GS Stab C	AS	GS

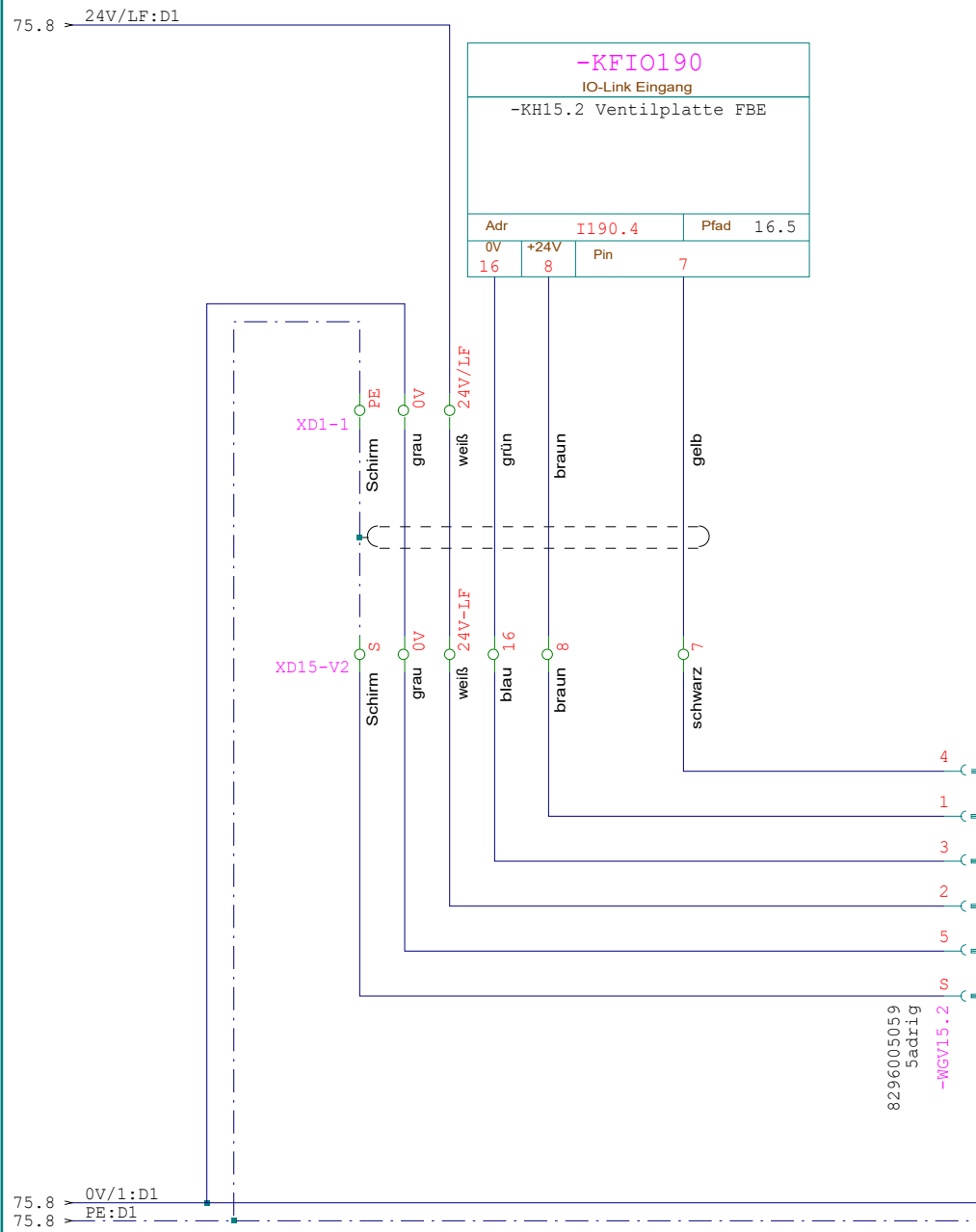
8296005059
Sadrigrig
-WGV15.1

IO-Link Ventilplatte **-KH15.1 FBE** VAEM-L1-S-12-PT

74.8 → 0V/1:D1 → 76.1
73.8 → PE:D1 → 76.1

AS = Arbeitsstellung
GS = Grundstellung

Aggr. FBE



-KFIO190		
IO-Link Eingang		
-KH15.2 Ventilplatte FBE		
Adr	I190.4	Pfad 16.5
0V 16	+24V 8	Pin 7

Nr.	Name	Funktion	14	12
1	-QM110	Spannerverschiebung Stab C	AS	GS
2	-QM38	Riegel Spannerverschiebung Stab C	AS	GS
3				
4	-QM33	Werkzeugausheber	AS	GS
5	-QM205	Druckumschaltung Kopfverschiebung	AS	GS
6	-QM45	Druckumschaltung Spanner BD	AS	GS
7				
8	-QM201	Kopfverschiebung	AS	GS
9	-QM17A	Spanner AS Stab BD	AS	GS
10	QM17B	Spanner GS Stab BD	AS	GS

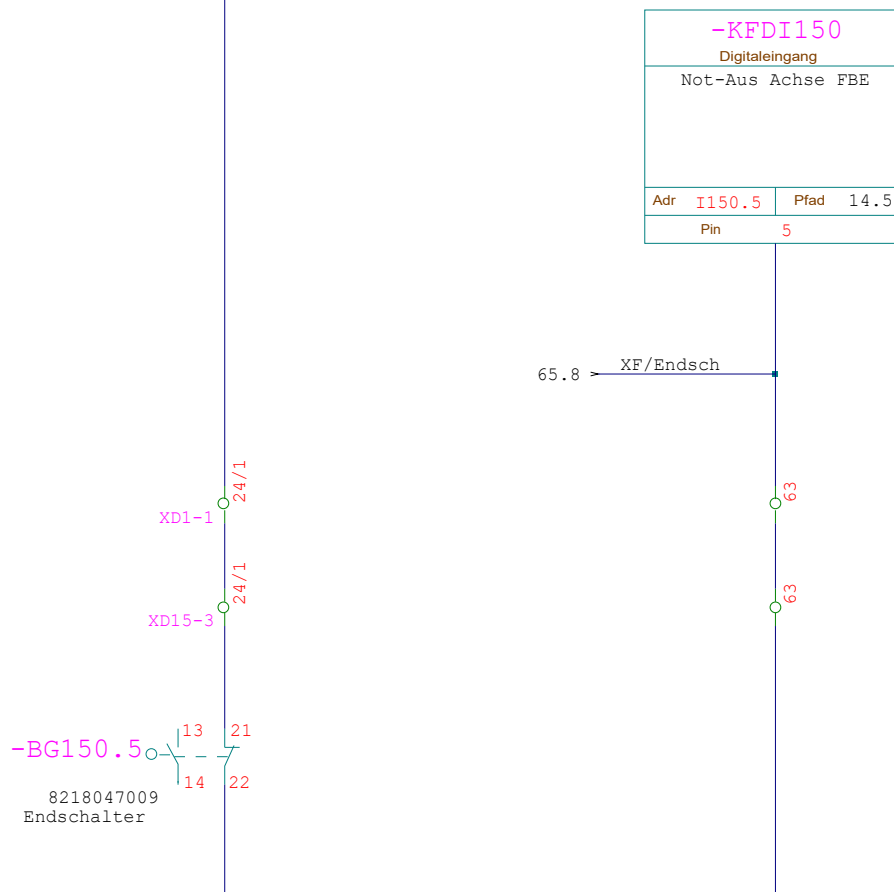
IO-Link Ventilplatte **-KH15.2 FBE** VAEM-L1-S-10-PT

8296005059
Sadrigrig
-WGV15.2

AS = Arbeitsstellung
GS = Grundstellung

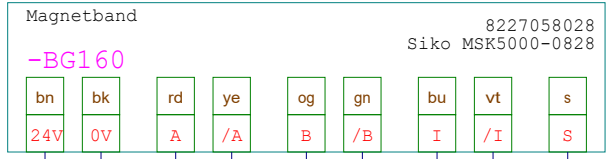
Aggr. FBE

74.8 $\xrightarrow{24V/1:D1}$ 81.1

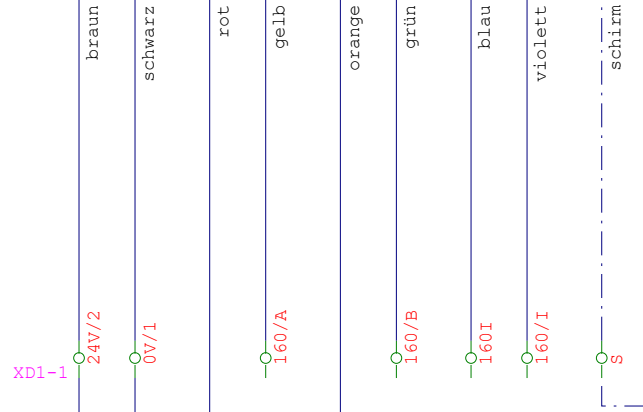


68.8

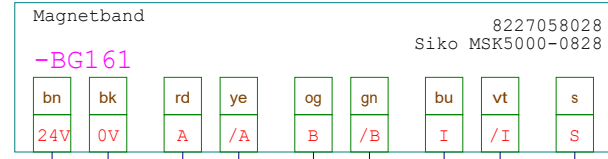
24V/2:D1



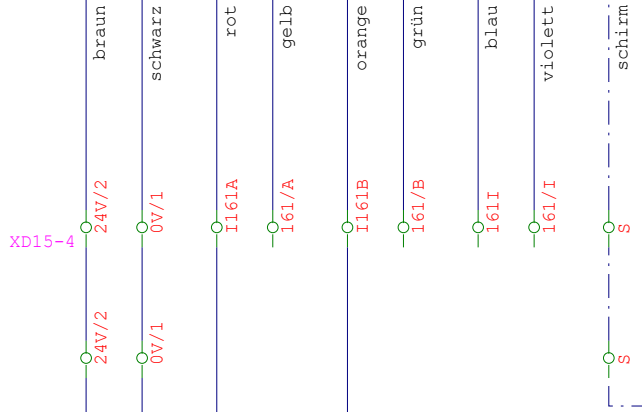
8227058028
Siko MSK5000-0828



Pin	A	Pin	B
Adr I160.0	Pfad 15.5	Adr I160.1	Pfad 15.5
Kopferschiebung Spur A FFE		Kopferschiebung Spur B FFE	
Digitaleingang -KFDI160		Digitaleingang -KFDI160	



8227058028
Siko MSK5000-0828

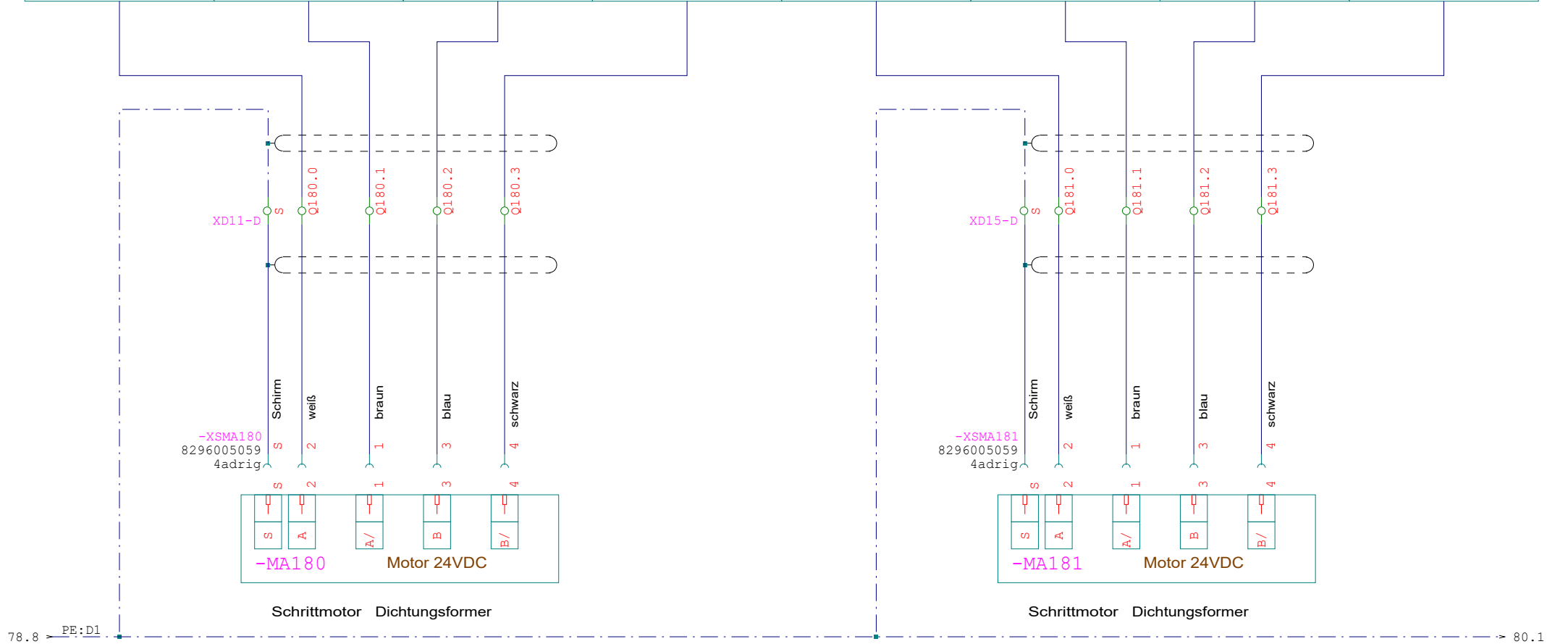


Pin	A	Pin	B
Adr I161.0	Pfad 15.5	Adr I161.1	Pfad 15.5
Kopferschiebung Spur A FBE		Kopferschiebung Spur B FBE	
Digitaleingang -KFDI161		Digitaleingang -KFDI161	

76.8

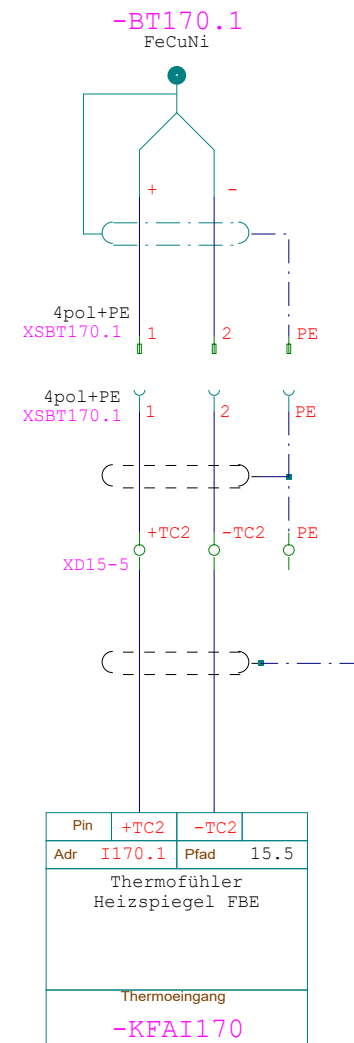
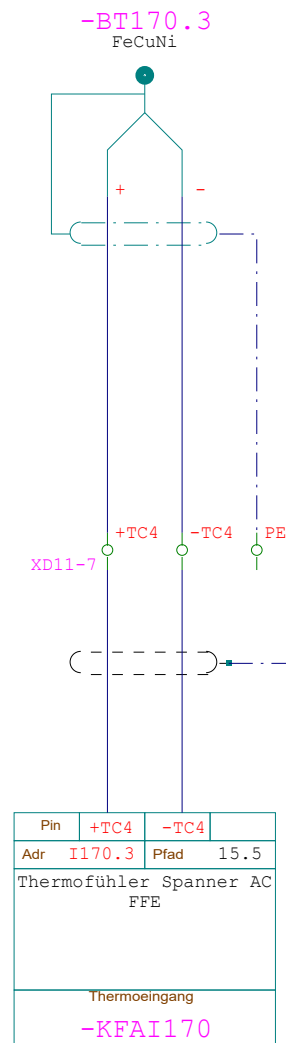
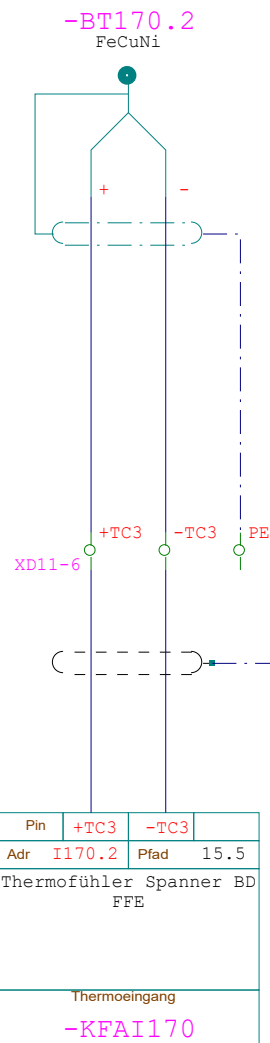
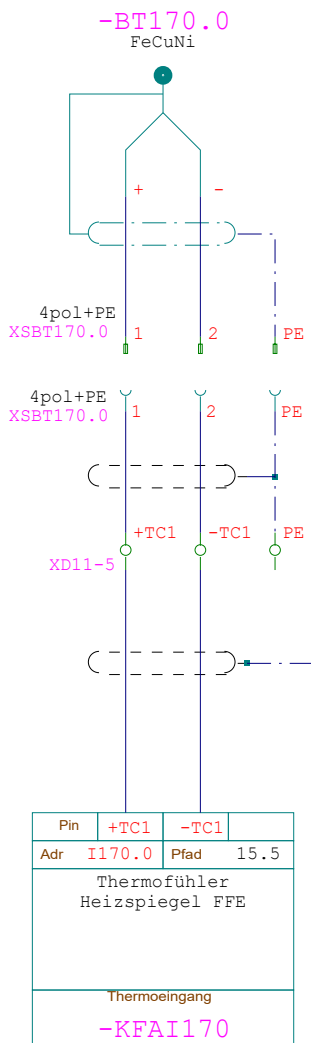
0V/1:D1 81.1
PE:D1 79.1

Motorausgang		Motorausgang		Motorausgang		Motorausgang		Motorausgang		Motorausgang		Motorausgang		Motorausgang																	
-KFAQ180		-KFAQ180		-KFAQ180		-KFAQ180		-KFAQ181		-KFAQ181		-KFAQ181		-KFAQ181																	
Motor Difo Wicklung A1 FBE		Motor Difo Wicklung A2 FBE		Motor Difo Wicklung B1 FBE		Motor Difo Wicklung B2 FBE		Motor Difo Wicklung A1 FBE		Motor Difo Wicklung A2 FBE		Motor Difo Wicklung B1 FBE		Motor Difo Wicklung B2 FBE																	
Adr	Q180.0	Pfad	15.1	Adr	Q180.1	Pfad	15.1	Adr	Q180.2	Pfad	15.1	Adr	Q180.3	Pfad	15.1	Adr	Q181.0	Pfad	15.1	Adr	Q181.1	Pfad	15.1	Adr	Q181.2	Pfad	15.1	Adr	Q181.3	Pfad	15.1
Pin	A1			Pin	A2			Pin	B1			Pin	B2			Pin	A1			Pin	A2			Pin	B1			Pin	B2		

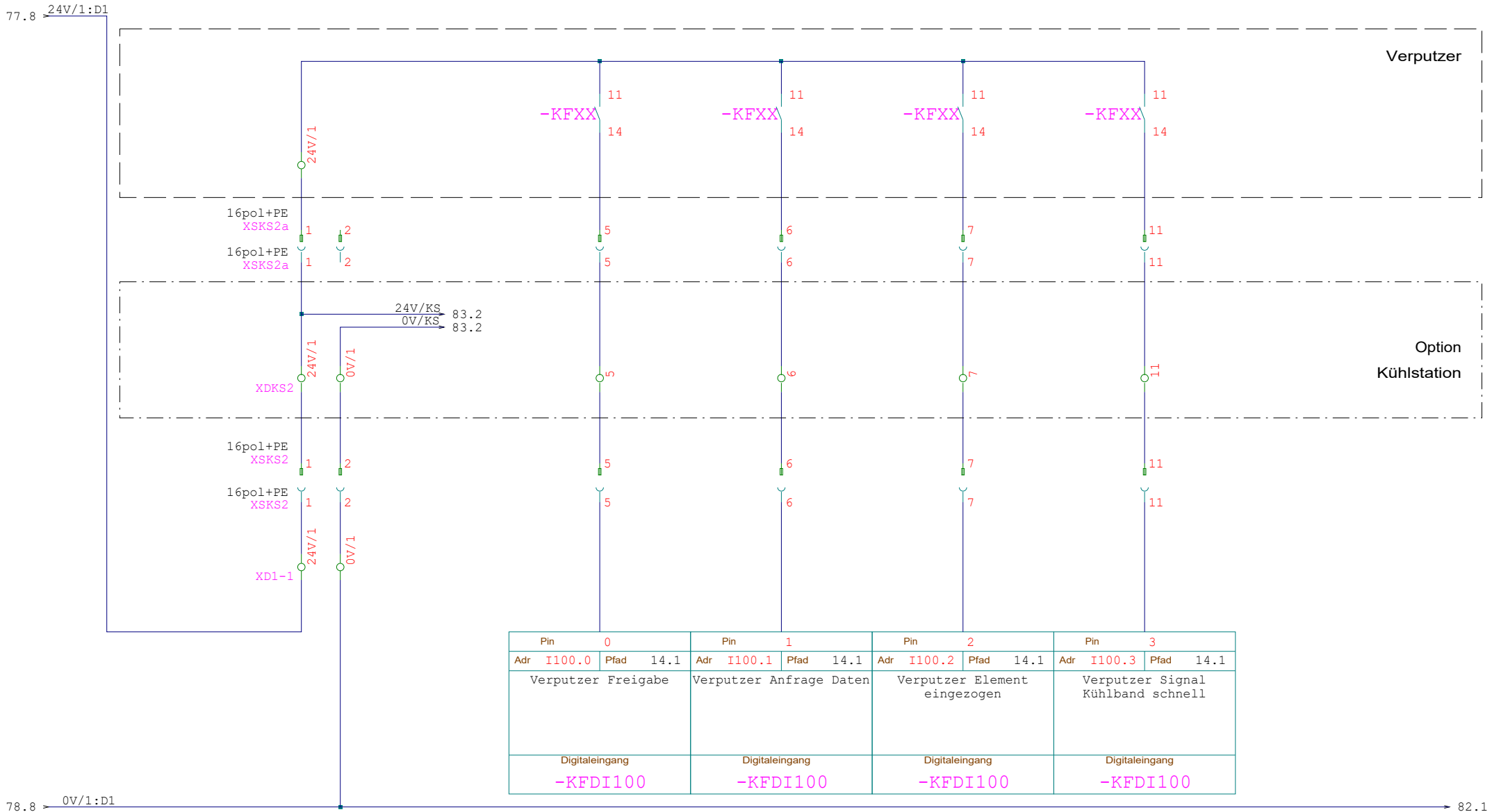


Option

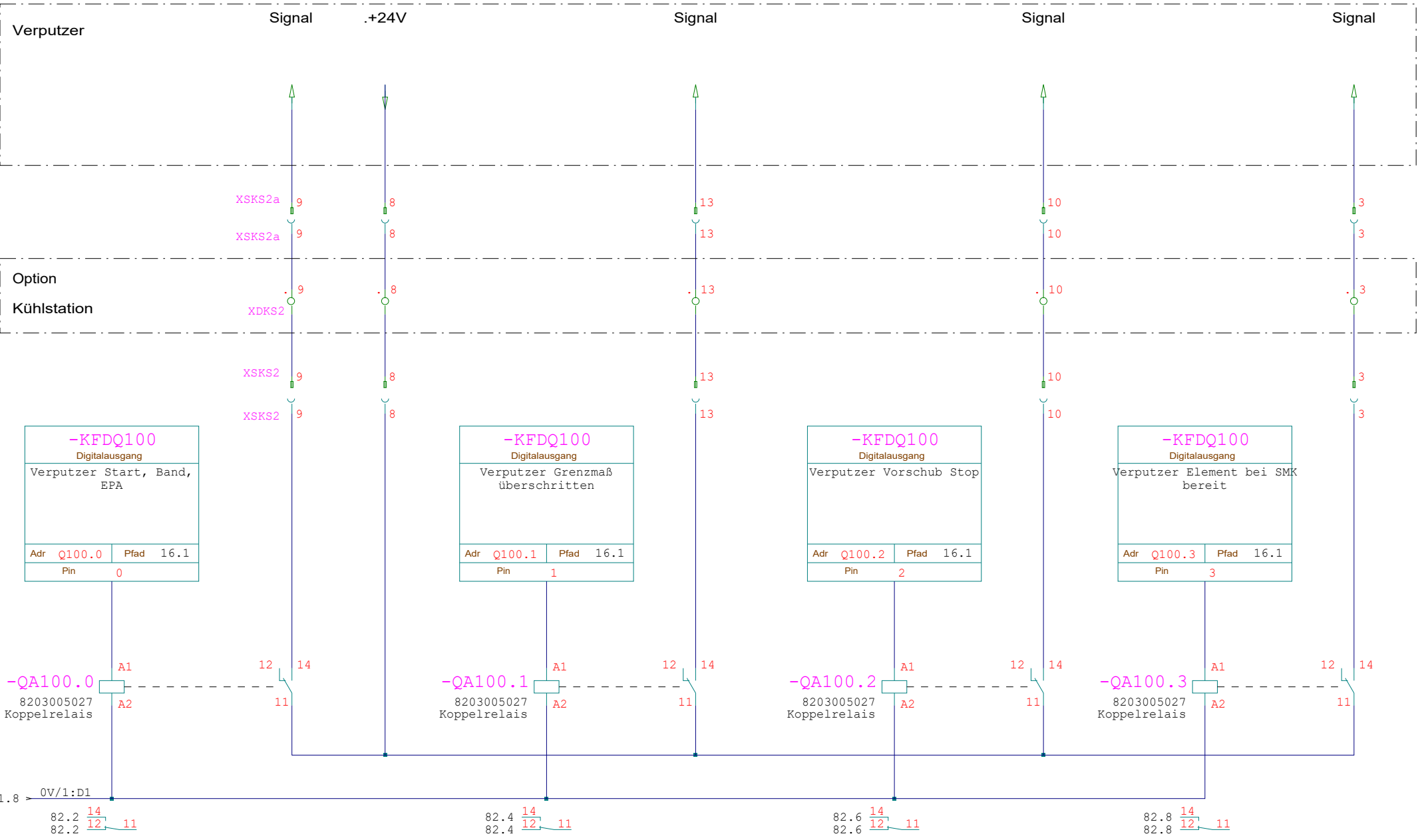
Option



79.8 PE:D1

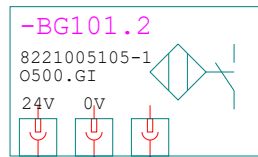


Option EPA Signalaustausch mit Relais



Option EPA Signalaustausch mit Relais

Lichttaster



1

braun

3

blau

4

schwarz

Option

Kühlstation

81.3 → 24V/KS
81.3 → 0V/KS

XDKS2

24V

0V

4

XSKS2

4

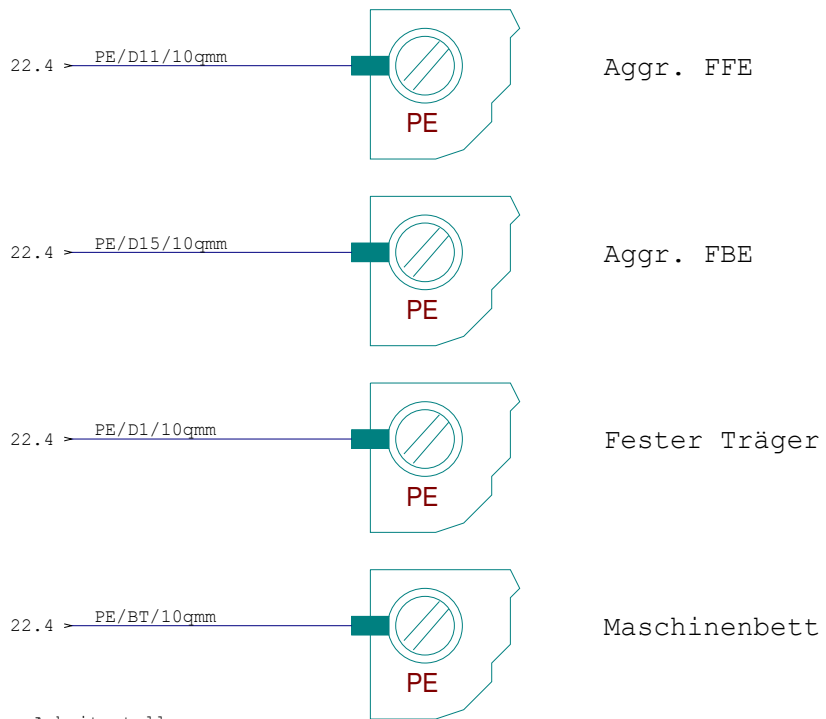
XSKS2

4

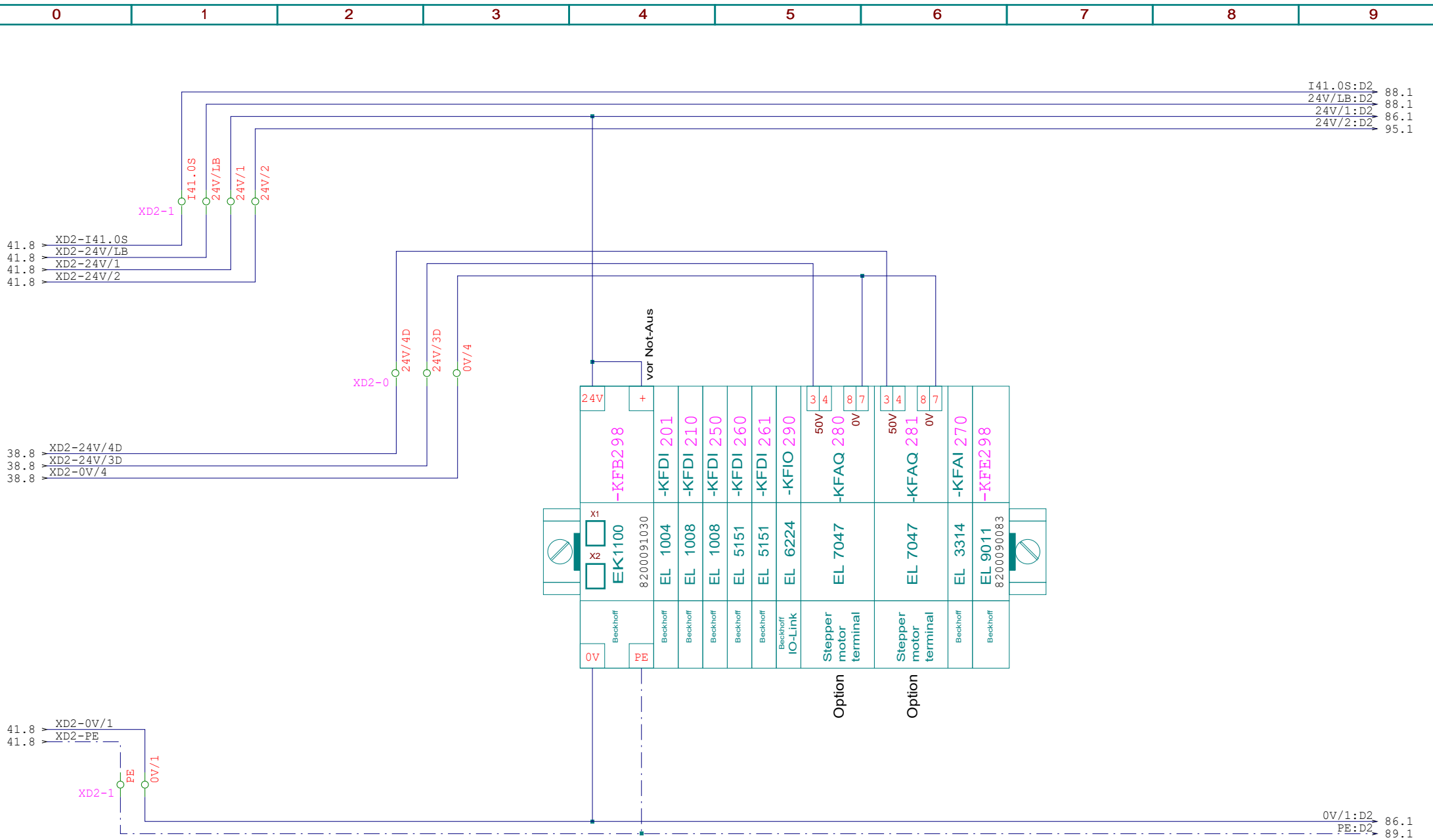
Pin 2

Adr	I101.2	Pfad	14.1
Lichtschranke Kühlstation			
Digitaleingang -KFDI101			

Erdung



AS = Arbeitsstellung
GS = Grundstellung



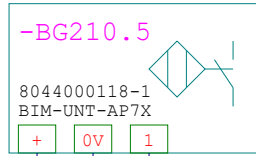
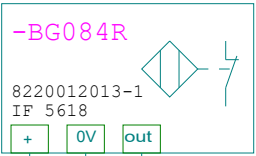
SPS-Steuerung

Option

24V/1:D2 → 87.1

Initiator

Zylindersensor



braun⁺
blau^{0V}
weiß^N

braun
blau
schwarz

XD2-1

24V/1

0V/1

57.7

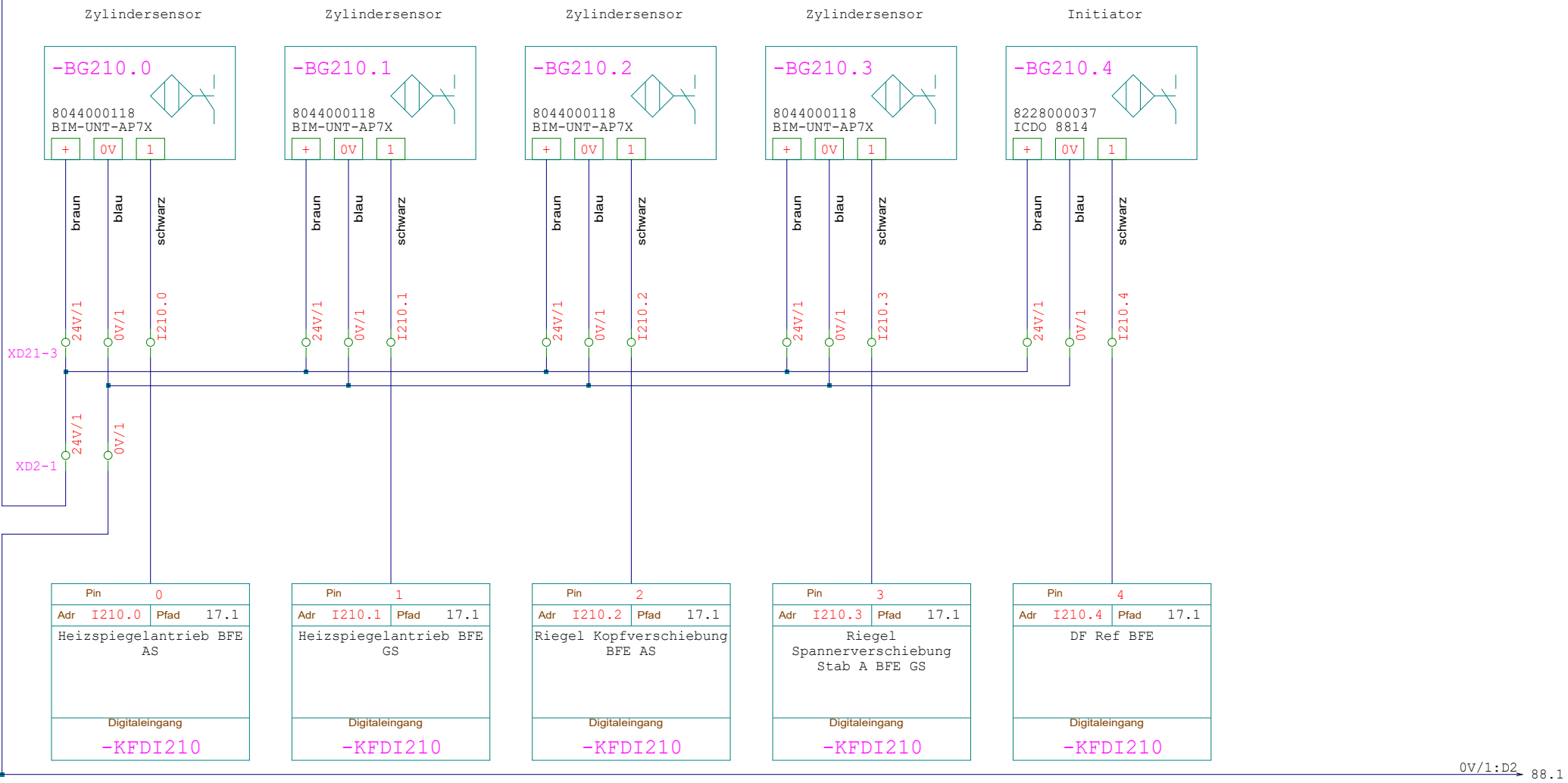
BRRZP

Referenzpunkt Breite

Pin	5		
Adr	I210.5	Pfad	17.1
Profilabstützung bew. Träger GS			
Digitaleingang			
-KFDI210			

0V/1:D2 → 87.1

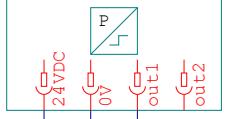
86.8 → Option → Option → 24V/1:D2 → 88.1



AS = Arbeitsstellung
GS = Grundstellung

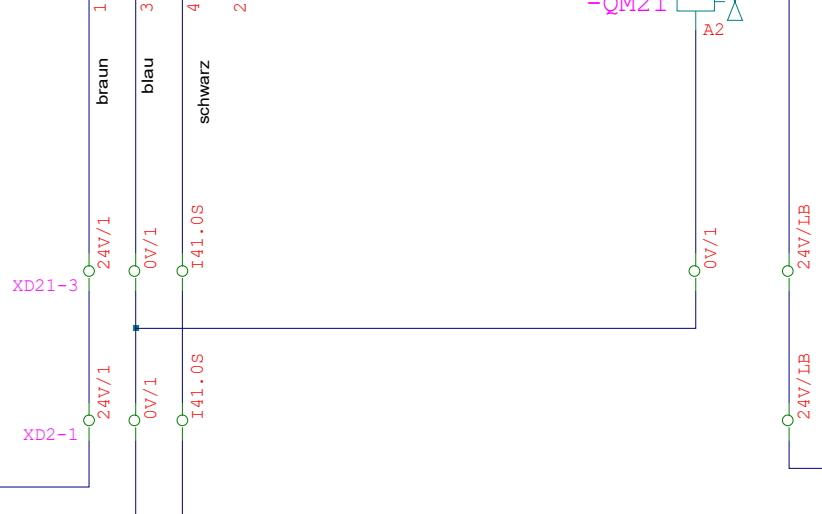


-BP41.0S
1-10bar
8220018036-1



Steuerluft Ventil

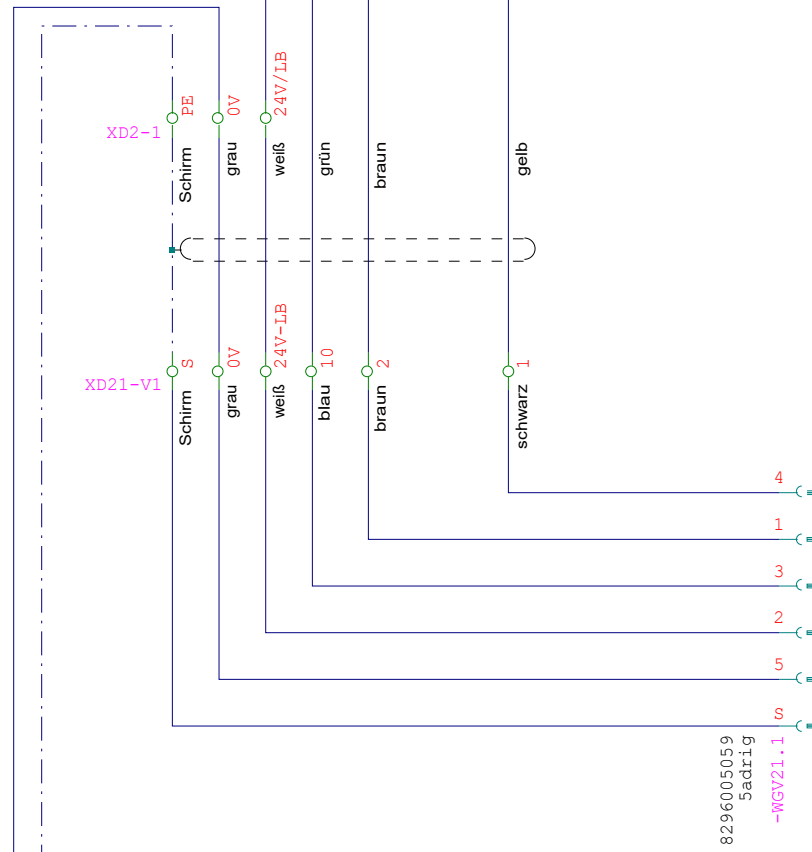
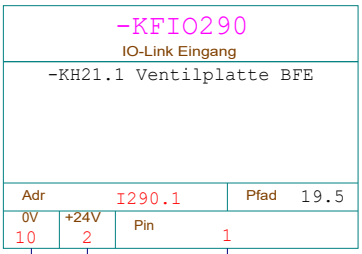
-QM21



Aggr. BFE

Bearb: Justus	Typ: SMH-510-4	ROTOX [®]	Datum: 14.10.2020	Blatt: 88
Feste Seite: links	Plan Nr: SMH-510-4-119_5010000002-0020		Geprüft:	von: 131

88.8 → 24V/LB:D2 → 90.1



Nr.	Name	Funktion	14	12
1	-QM1	Profilanschlag	AS	GS
2	-QM8	Heizspiegelantrieb	AS	GS
3	-QM10	Spannerverschiebung Stab BD	AS	GS
4	-QM203	Riegel Kopfverschiebung	AS	GS
5	-QM204	Bremse Kopfverschiebung	AS	GS
6	-QM29	Dichtungsformer auf/ab	AS	GS
7	-QM30	Dichtungsformer Riegel	AS	GS
8	-QM55	Dichtungsformer Mittelstellung	AS	GS
9	-QM15	Bremse Breite	AS	GS
10	-QM44	Druckumschaltung Spanner A	AS	GS
11	-QM16A	Spanner AS Stab A	AS	GS
12	-QM16B	Spanner GS Stab A	AS	GS

8296005059
Sadrigrig
-WGV21.1

IO-Link Ventilplatte -KH21.1 BFE VAEM-L1-S-12-PT

88.8 → 0V/1:D2 → 90.1
85.8 → PE:D2 → 90.1

AS = Arbeitsstellung
GS = Grundstellung

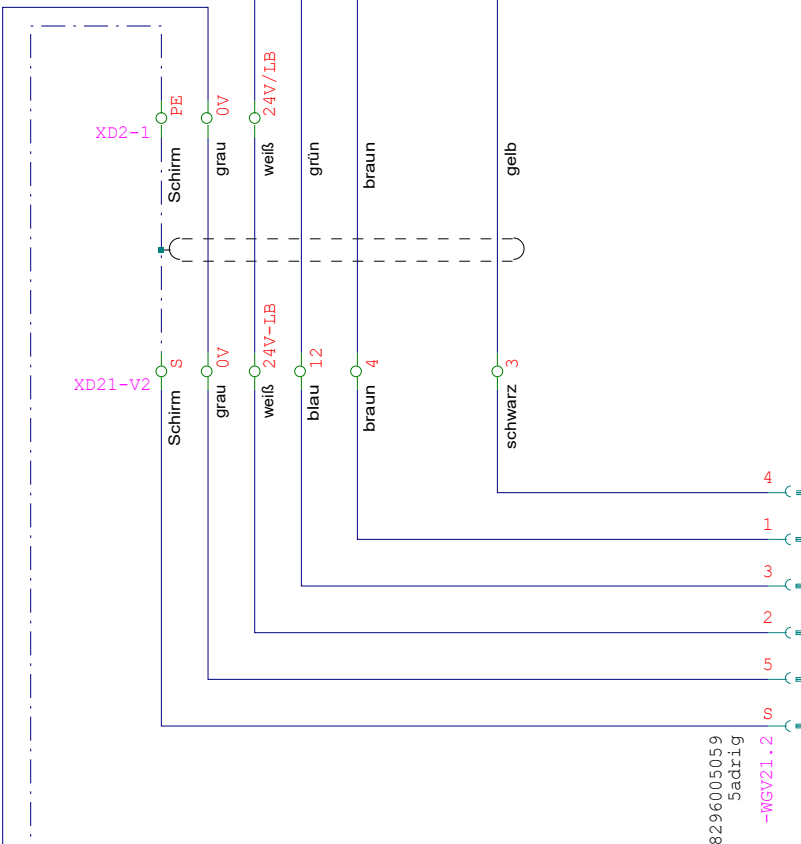
Aggr. BFE

89.8 → 24V/LB:D2 → 92.1

-KFIO290
IO-Link Eingang

-KH21.2 Ventilplatte BFE

Adr		I290.2	Pfad		19.5
0V	+24V	Pin			
12	4	3			



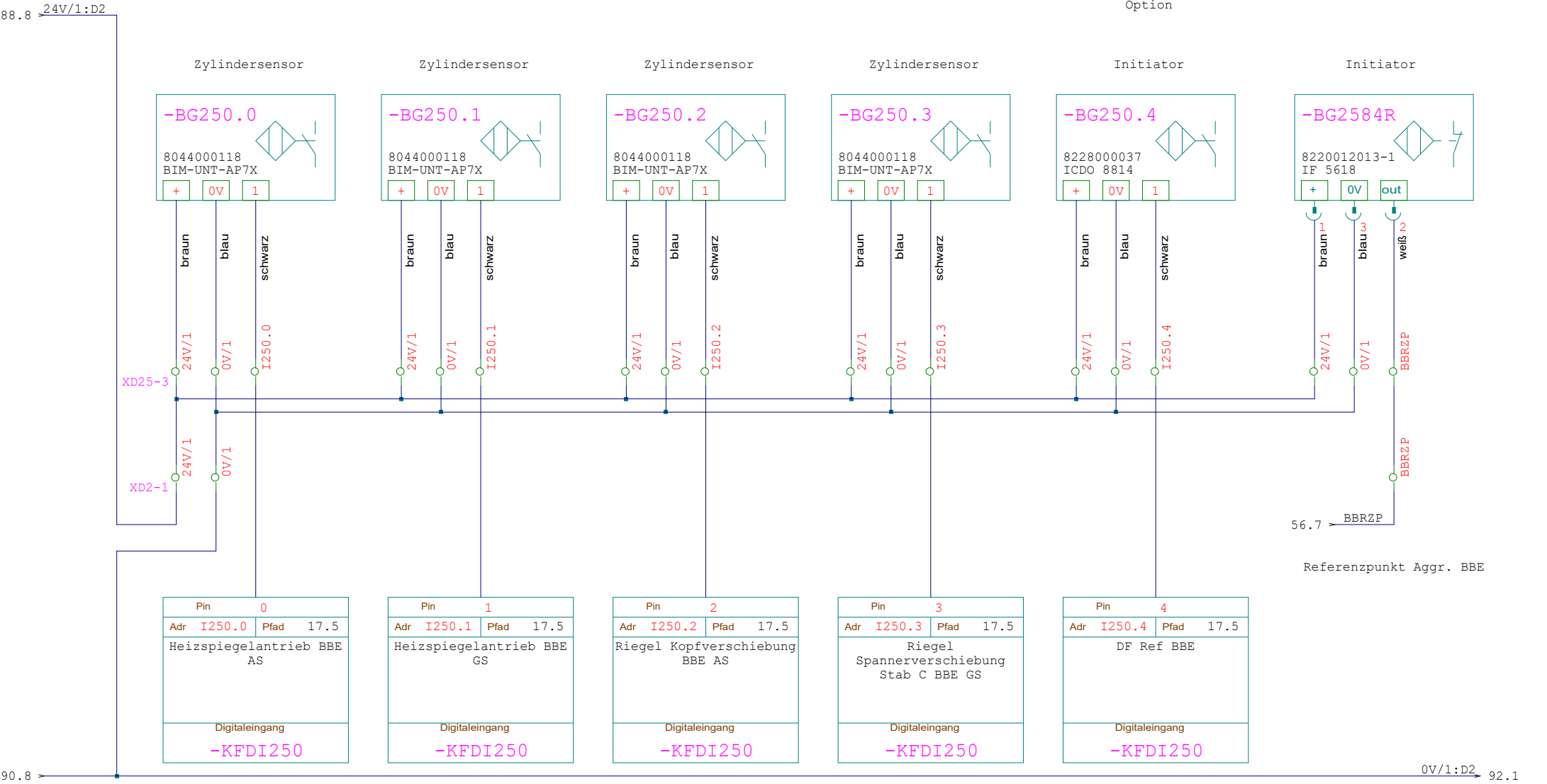
Nr.	Name	Funktion	14	12
1	-QM110	Spannerverschiebung Stab A	AS	GS
2	-QM38	Riegel Spannerverschiebung Stab A	AS	GS
3	-QM12	Abtransport Ausheber	AS	GS
4	-QM33	Werkzeugausheber	AS	GS
5	-QM82	Profilabstützung	AS	GS
6				
7	-QM205	Druckumschaltung Kopfverschiebung	AS	GS
8	-QM45	Druckumschaltung Spanner BD	AS	GS
9				
10	QM201	Kopfverschiebung	AS	GS
11	-QM17A	Spanner AS Stab BD	AS	GS
12	QM17B	Spanner GS Stab BD	AS	GS

IO-Link Ventilplatte -KH21.2 BFE VAEM-L1-S-12-PT

89.8 → 0V/1:D2 → 91.1
89.8 → PE:D2 → 92.1

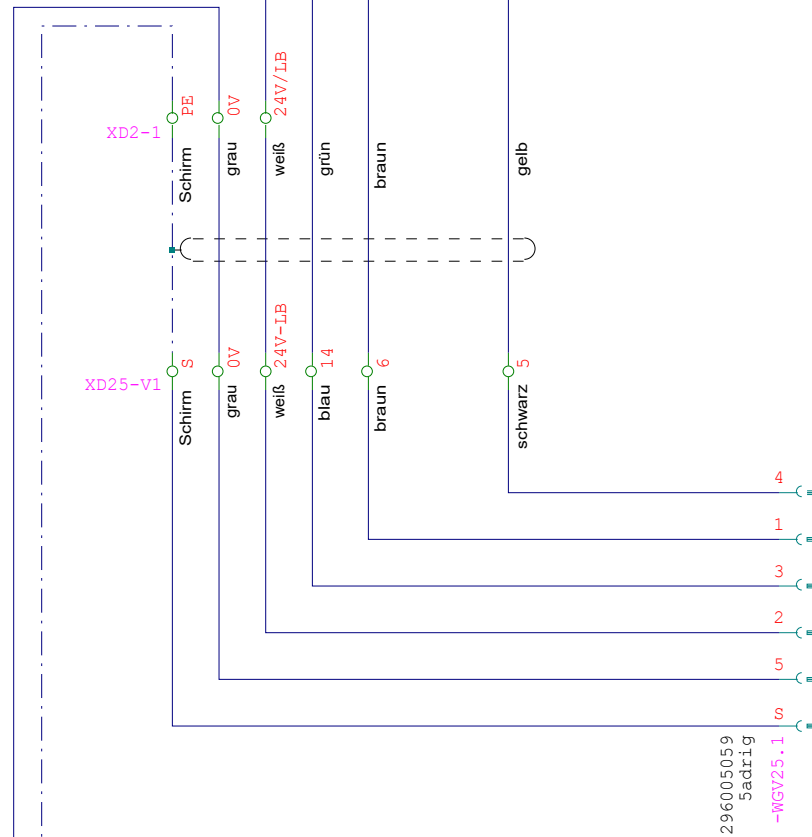
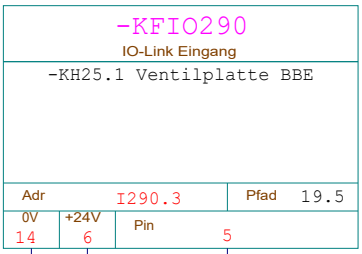
AS = Arbeitsstellung
GS = Grundstellung

Aggr. BFE



AS = Arbeitsstellung
GS = Grundstellung

90.8 → 24V/LB:D2 → 93.1



Nr.	Name	Funktion	14	12
1	-QM1	Profilanschlag	AS	GS
2	-QM8	Heizspiegelantrieb	AS	GS
3	-QM10	Spannerverschiebung Stab BD	AS	GS
4	-QM203	Riegel Kopfverschiebung	AS	GS
5	-QM204	Bremse Kopfverschiebung	AS	GS
6	-QM29	Dichtungsformer auf/ab	AS	GS
7	-QM30	Dichtungsformer Riegel	AS	GS
8	-QM55	Dichtungsformer Mittelstellung	AS	GS
9	-QM34	Bremse für Aggr BB	AS	GS
10	-QM44	Druckumschaltung Spanner C	AS	GS
11	-QM16A	Spanner AS Stab C	AS	GS
12	-QM16B	Spanner GS Stab C	AS	GS

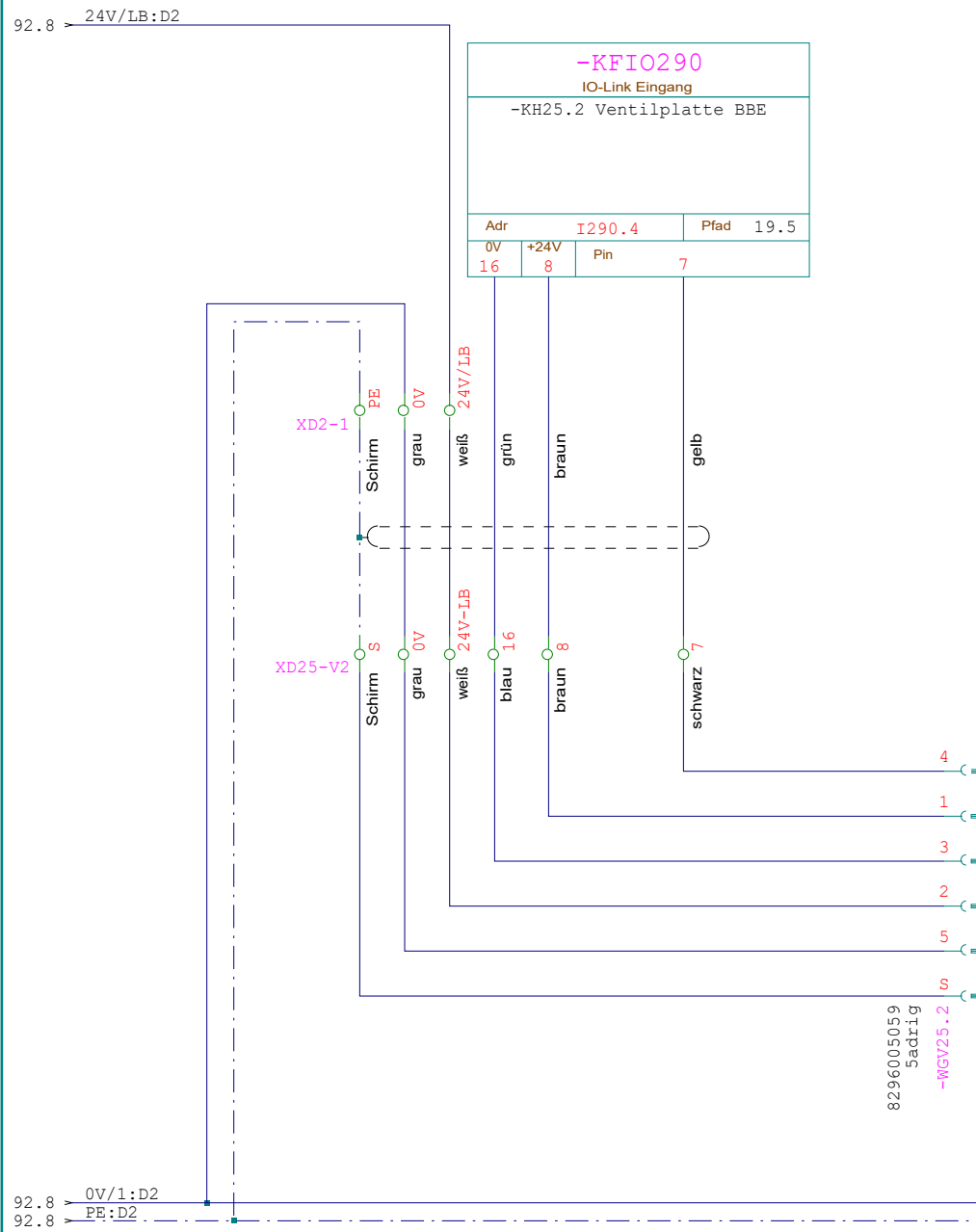
8296005059
Sadrigrig
-WGV25.1

IO-Link Ventilplatte **-KH25.1 BBE** VAEM-L1-S-12-PT

91.8 → 0V/1:D2 → 93.1
90.8 → PE:D2 → 93.1

AS = Arbeitsstellung
GS = Grundstellung

Aggr. BBE

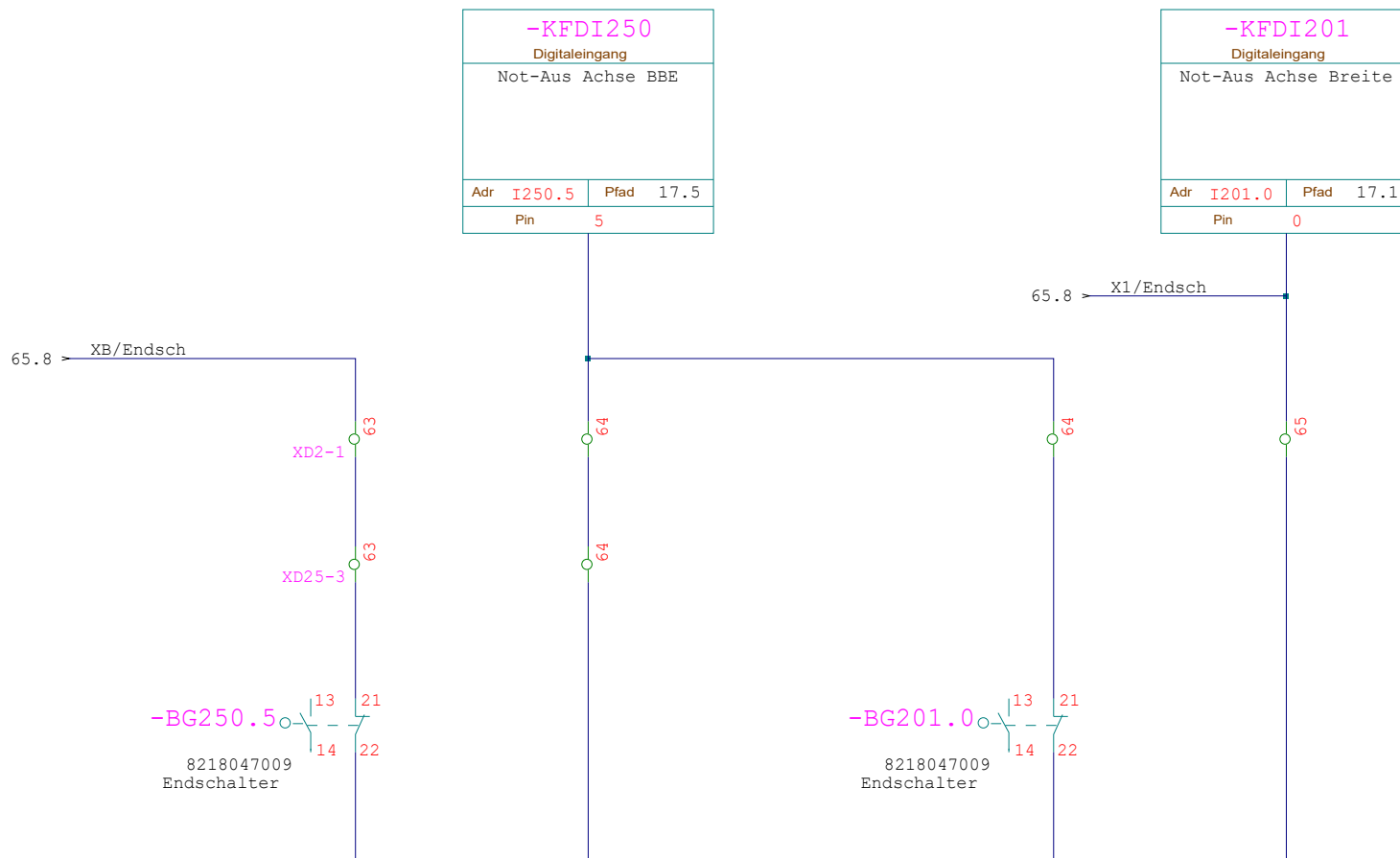


-KFIO290		
IO-Link Eingang		
-KH25.2 Ventilplatte BBE		
Adr	I290.4	Pfad 19.5
0V 16	+24V 8	Pin 7

Nr.	Name	Funktion	14	12
1	-QM110	Spannerverschiebung Stab C	AS	GS
2	-QM38	Riegel Spannerverschiebung Stab C	AS	GS
3				
4	-QM33	Werkzeugausheber	AS	GS
5	-QM205	Druckumschaltung Kopfverschiebung	AS	GS
6	-QM45	Druckumschaltung Spanner BD	AS	GS
7				
8	-QM201	Kopfverschiebung	AS	GS
9	-QM17A	Spanner AS Stab BD	AS	GS
10	QM17B	Spanner GS Stab BD	AS	GS

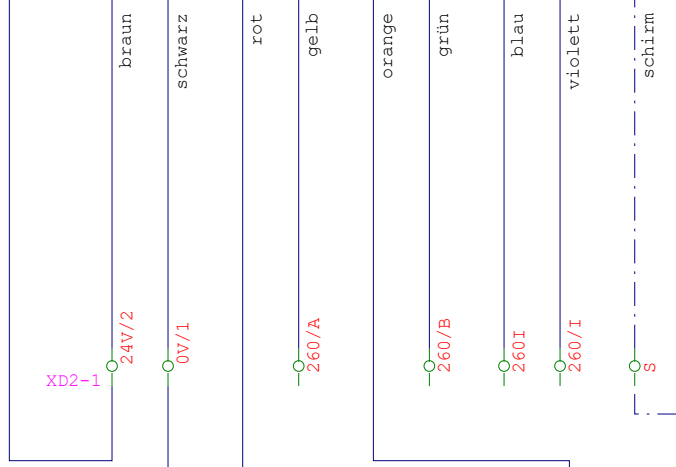
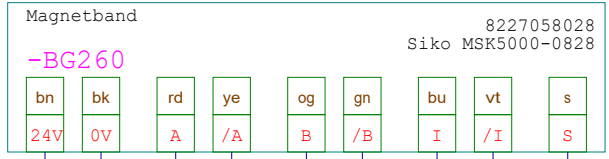
IO-Link Ventilplatte **-KH25.2 BBE** VAEM-L1-S-10-PT

Aggr. BBE



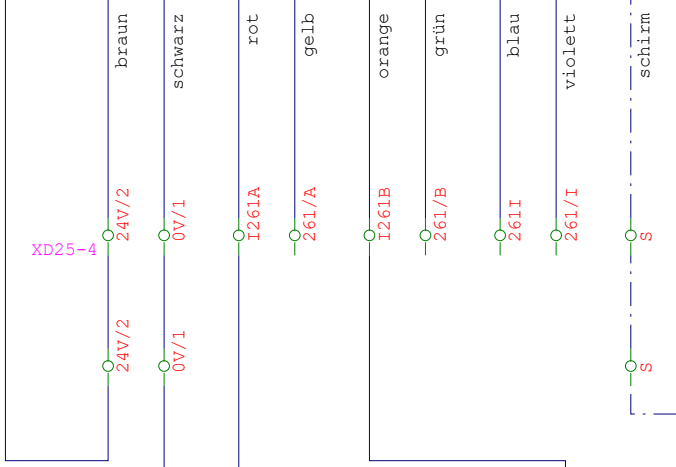
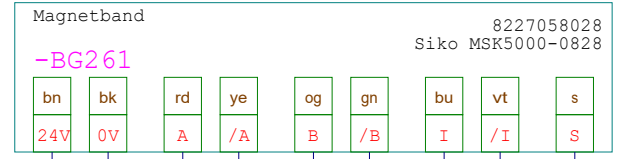
85.8

24V/2:D2



Pin	A	Pin	B				
Adr	I260.0	Pfad	18.5	Adr	I260.1	Pfad	18.5
Kopferschiebung Spur A BFE				Kopferschiebung Spur B BFE			
Digitaleingang				Digitaleingang			
-KFDI260				-KFDI260			

XD25-4

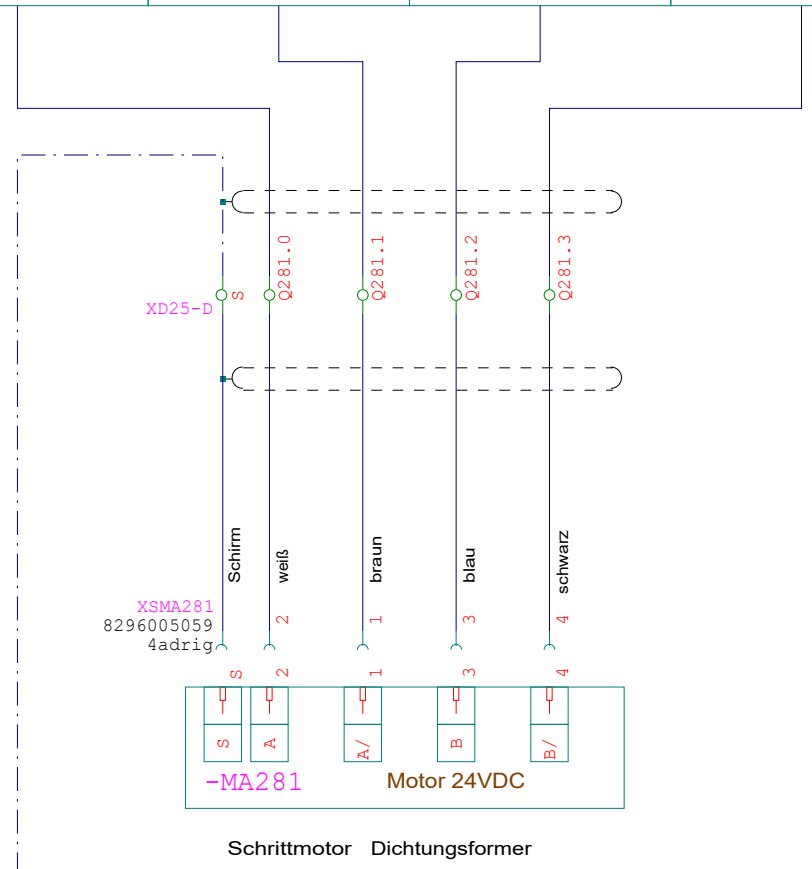
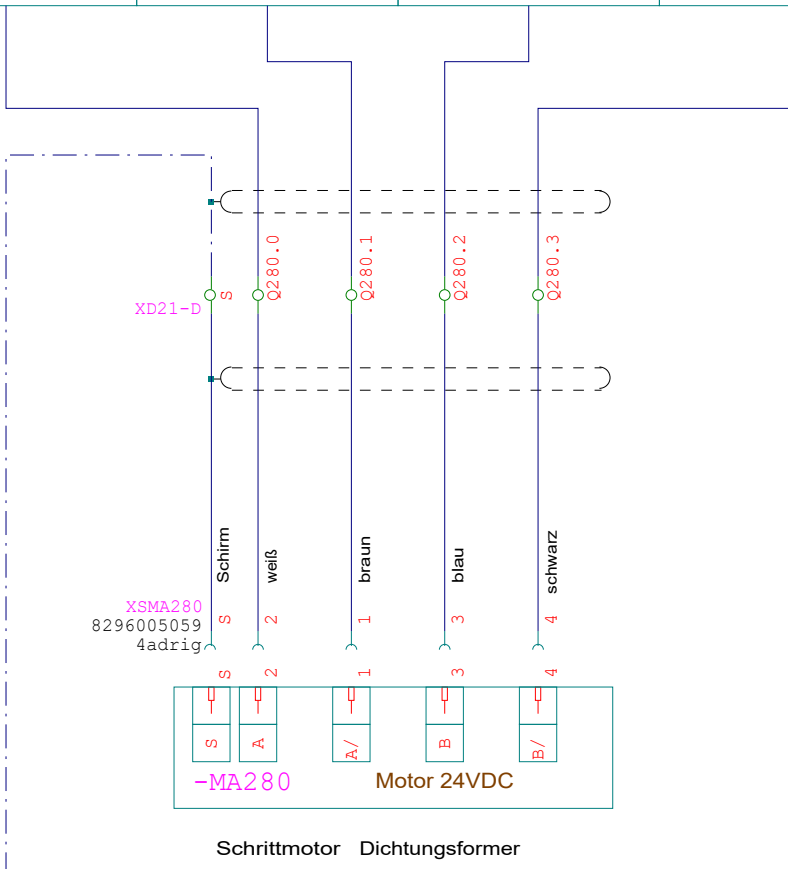


Pin	A	Pin	B				
Adr	I261.0	Pfad	18.5	Adr	I261.1	Pfad	18.5
Kopferschiebung Spur A BBE				Kopferschiebung Spur B BBE			
Digitaleingang				Digitaleingang			
-KFDI261				-KFDI261			

93.8 0V/1:D2 PE:D2

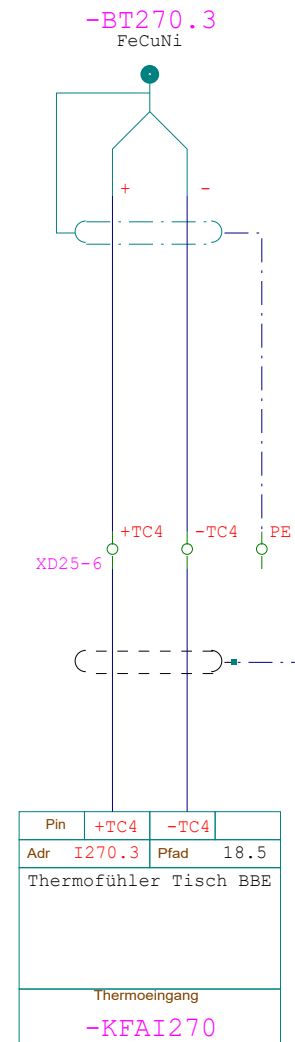
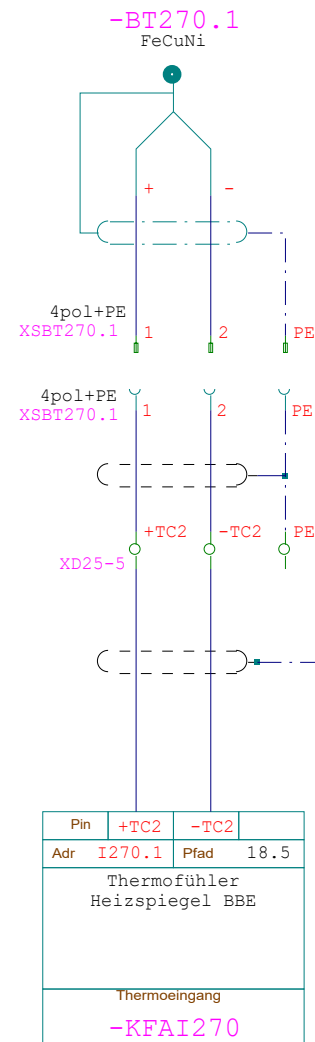
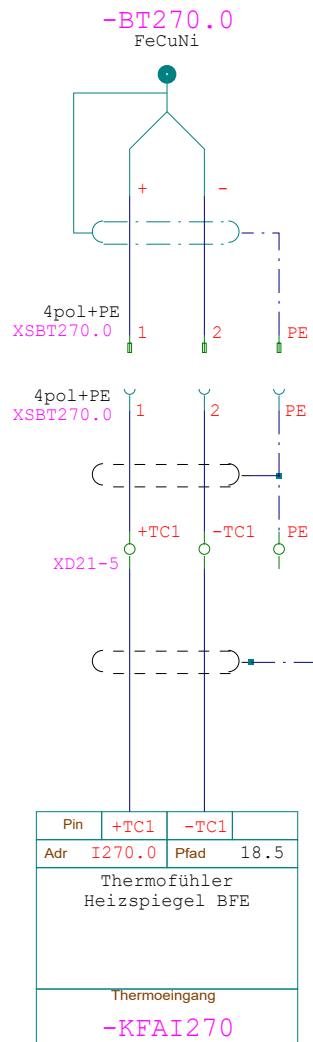
96.1

Motorausgang -KFAQ280		Motorausgang -KFAQ280		Motorausgang -KFAQ280		Motorausgang -KFAQ280		Motorausgang -KFAQ281		Motorausgang -KFAQ281		Motorausgang -KFAQ281		Motorausgang -KFAQ281																	
Motor Difo Wicklung A1 BEE		Motor Difo Wicklung A2 BEE		Motor Difo Wicklung B1 BEE		Motor Difo Wicklung B2 BEE		Motor Difo Wicklung A1 BEE		Motor Difo Wicklung A2 BEE		Motor Difo Wicklung B1 BEE		Motor Difo Wicklung B2 BEE																	
Adr	Q280.0	Pfad	18.1	Adr	Q280.1	Pfad	18.1	Adr	Q280.2	Pfad	18.1	Adr	Q280.3	Pfad	18.1	Adr	Q281.0	Pfad	18.1	Adr	Q281.1	Pfad	18.1	Adr	Q281.2	Pfad	18.1	Adr	Q281.3	Pfad	18.1
Pin	A1			Pin	A2			Pin	B1			Pin	B2			Pin	A1			Pin	A2			Pin	B1			Pin	B2		



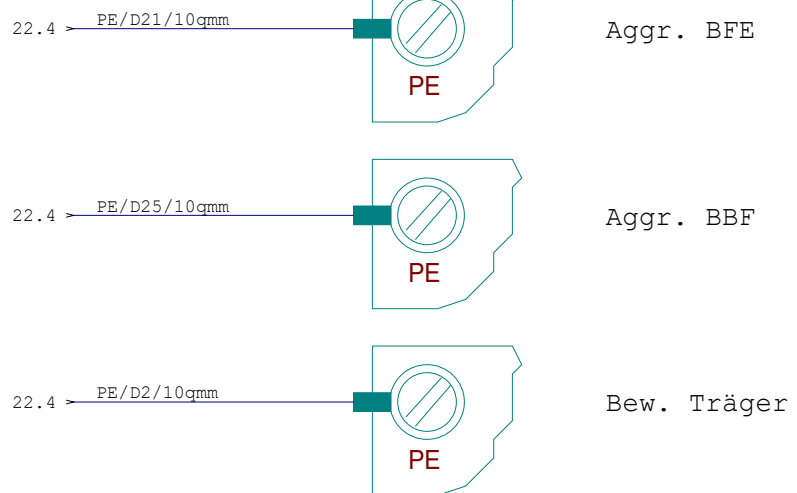
95.8 PE;D2 →

Option



96.8 PE:D2

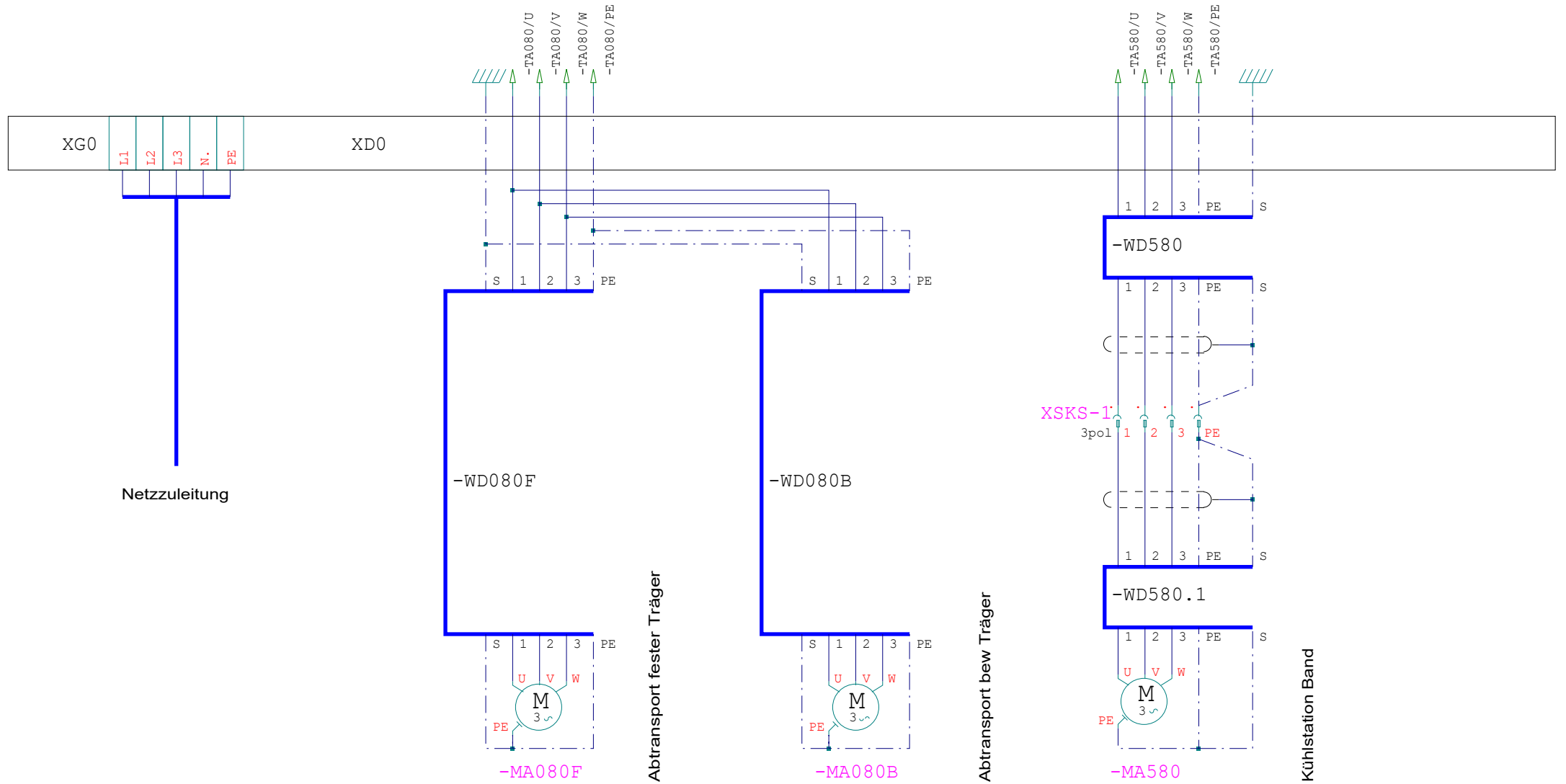
Erdung



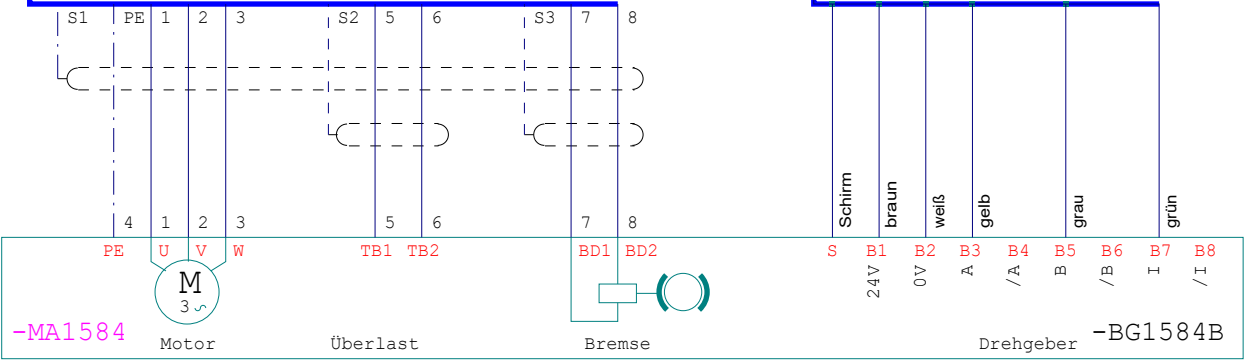
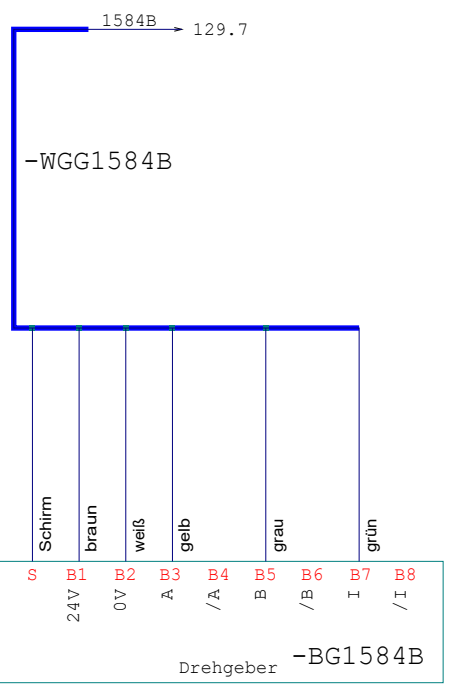
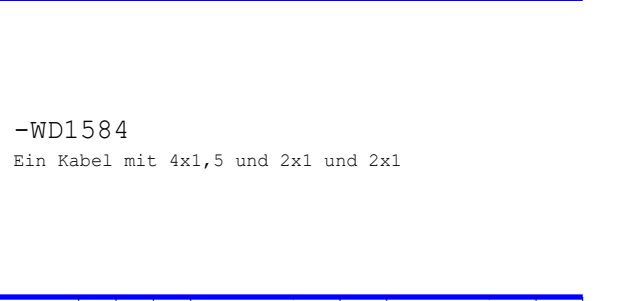
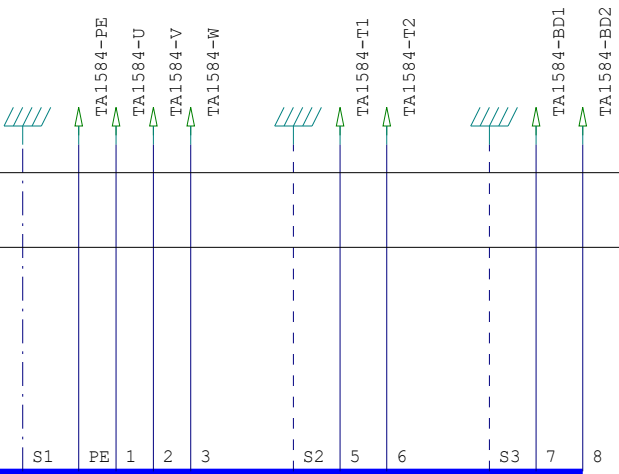
AS = Arbeitsstellung

GS = Grundstellung

Klemmen und Kabelanordnung

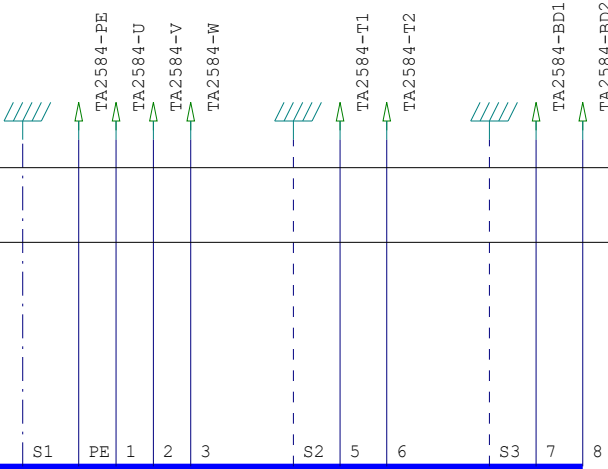


XDO

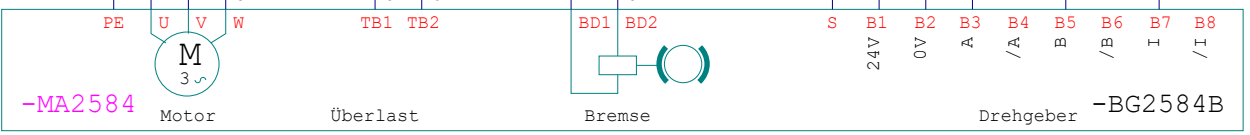
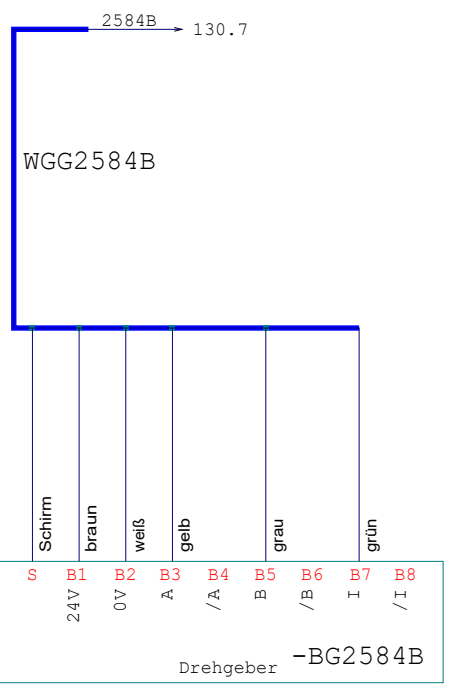


Positionieren
Aggr. FBE

XDO

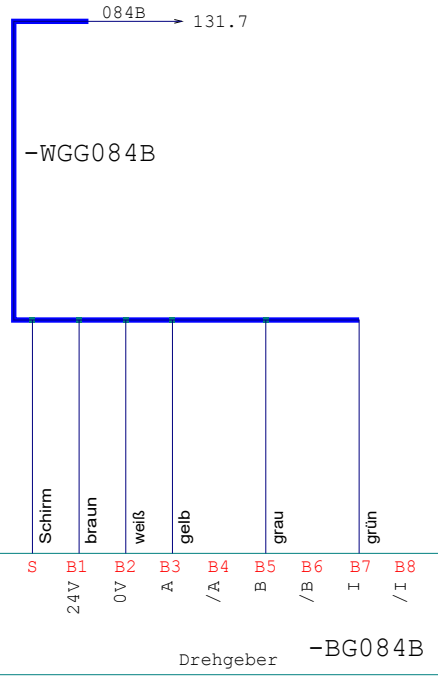
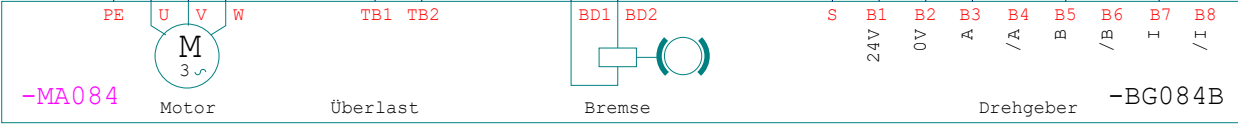
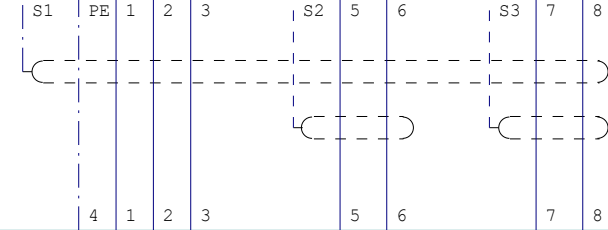
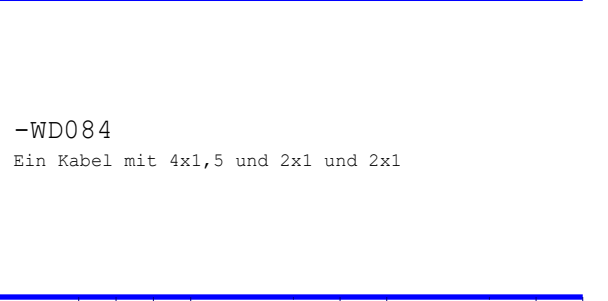
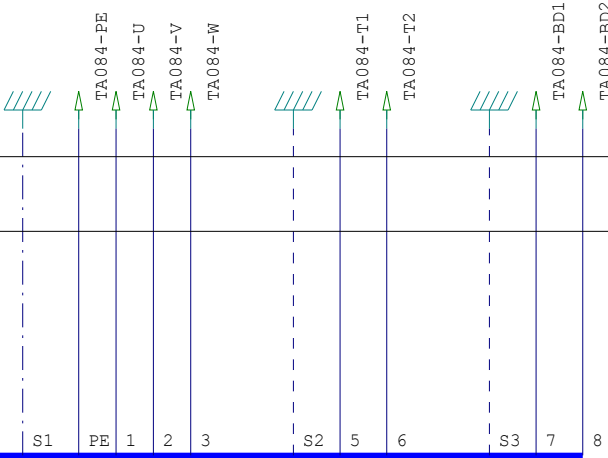


-WD2584
 Ein Kabel mit 4x1,5 und 2x1 und 2x1

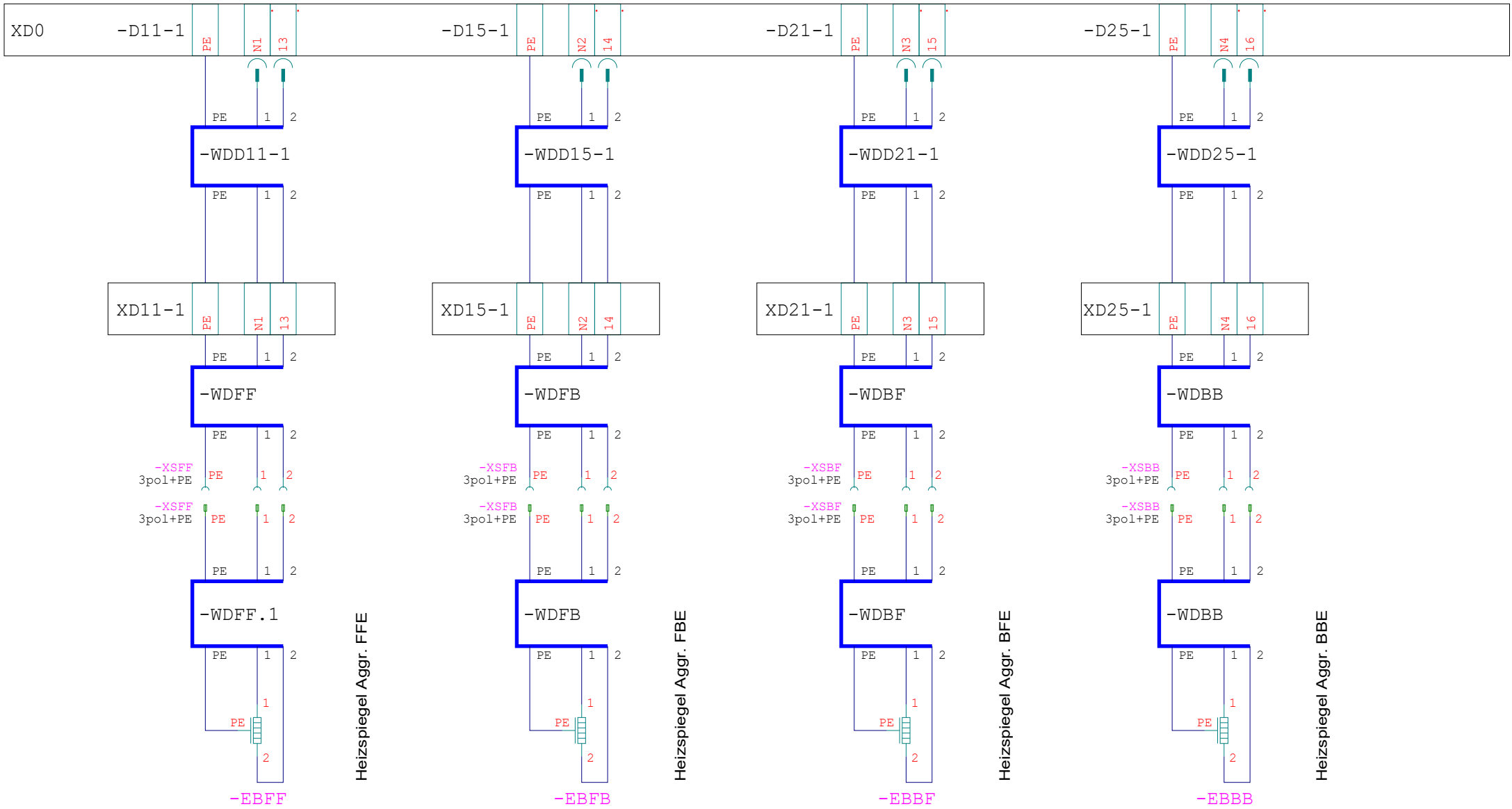


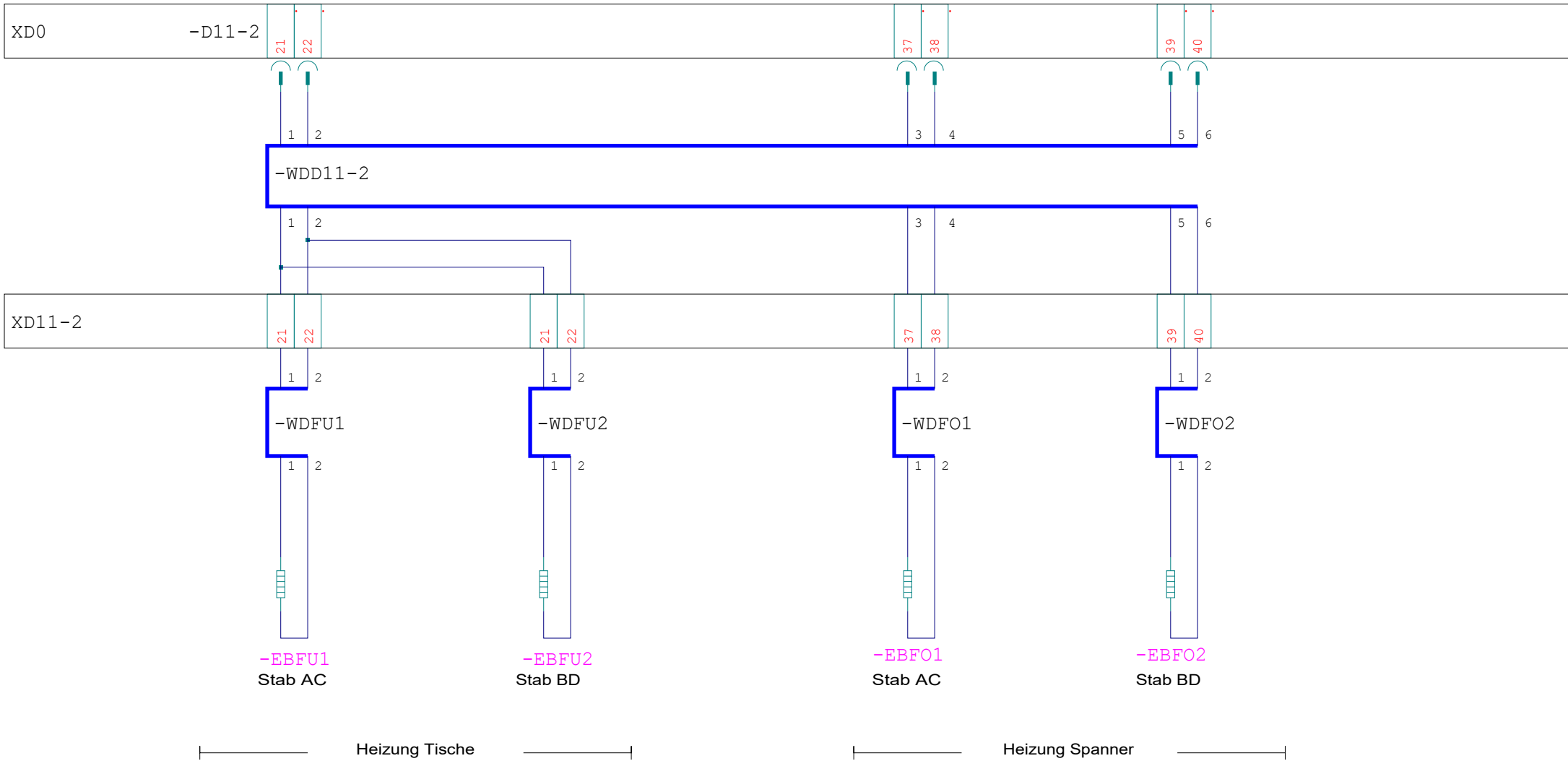
Positionieren
 Aggr. BBE

XDO



Positionieren
Breite

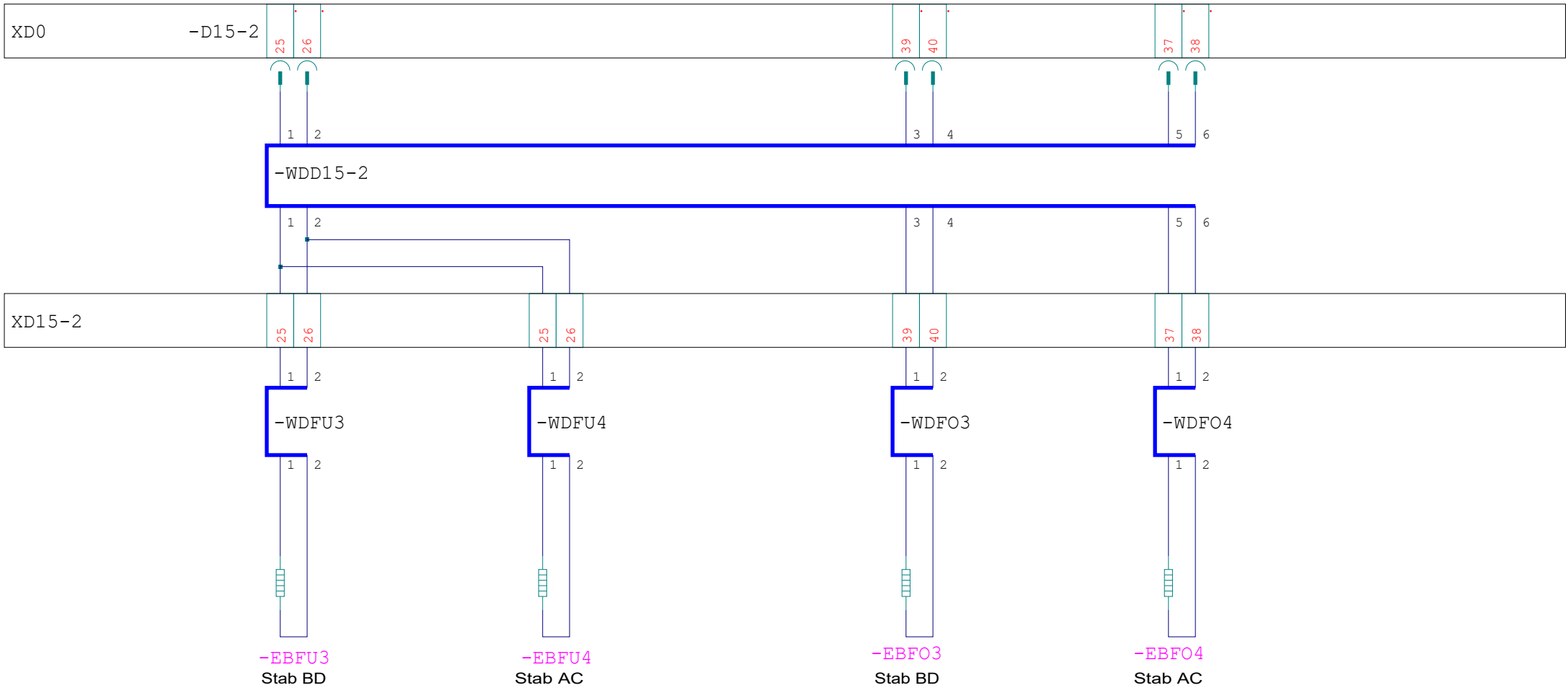




Heizung Tische

Heizung Spanner

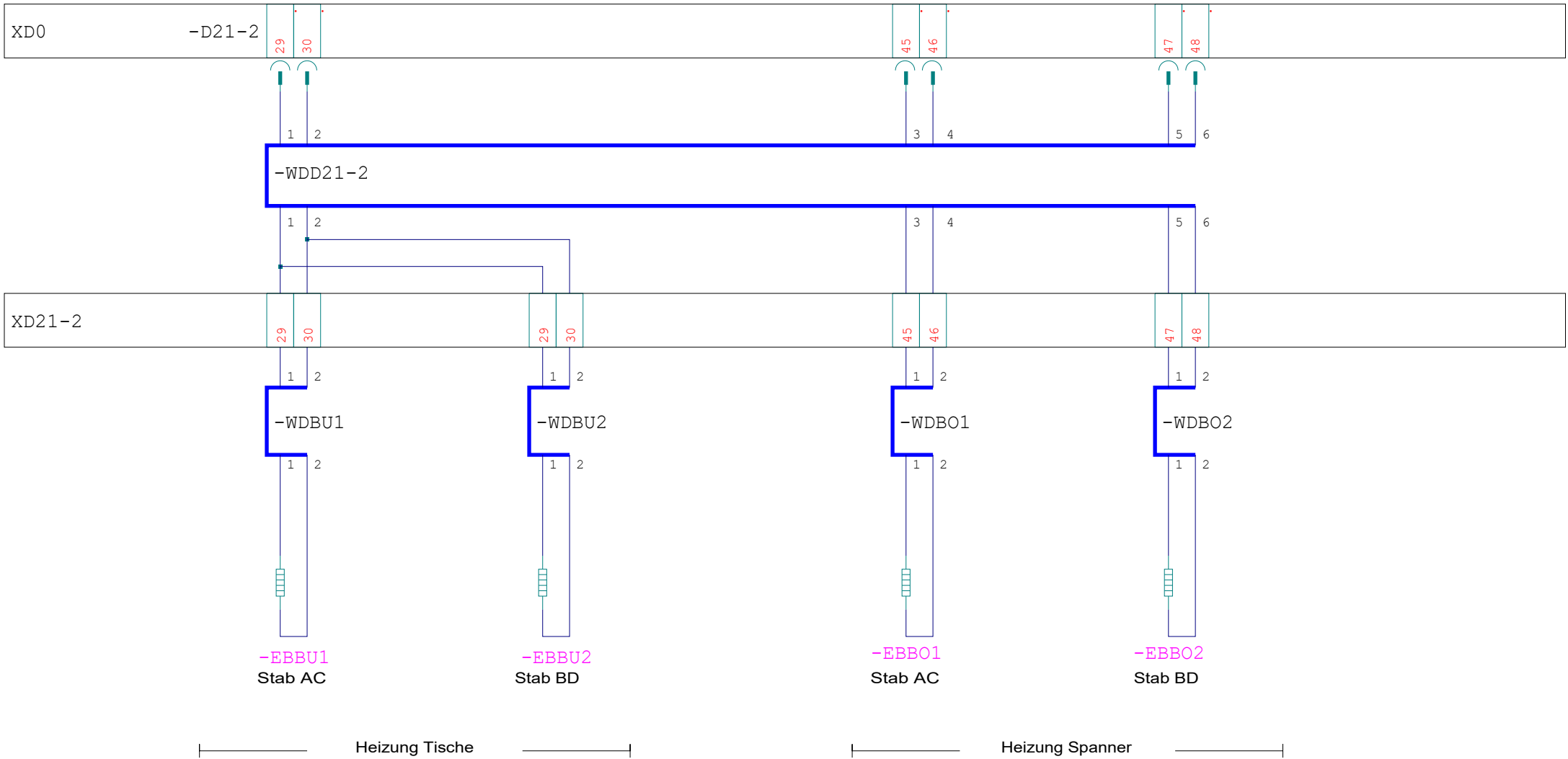
Option



Heizung Tische

Heizung Spanner

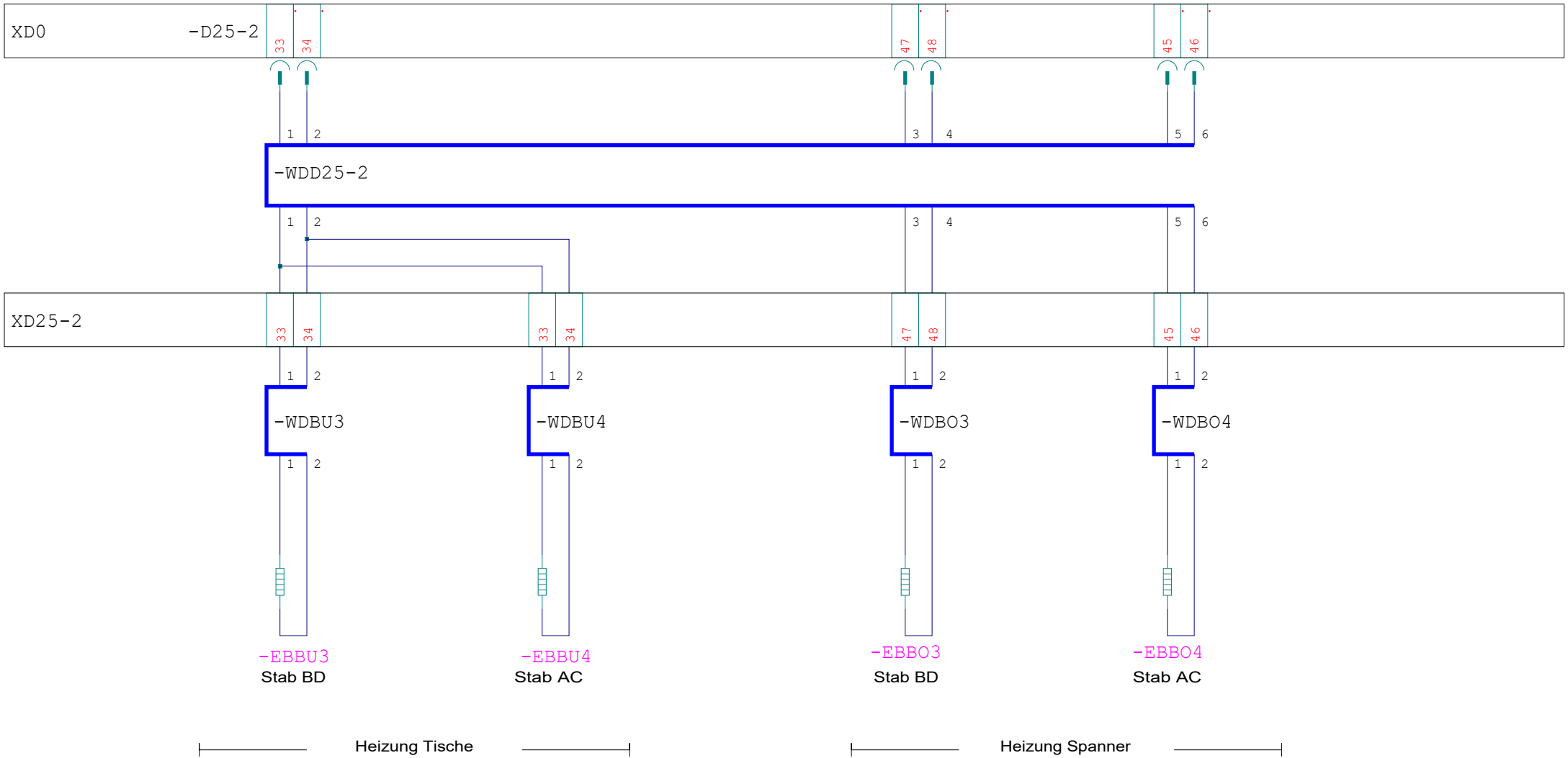
Option



Heizung Tische

Heizung Spanner

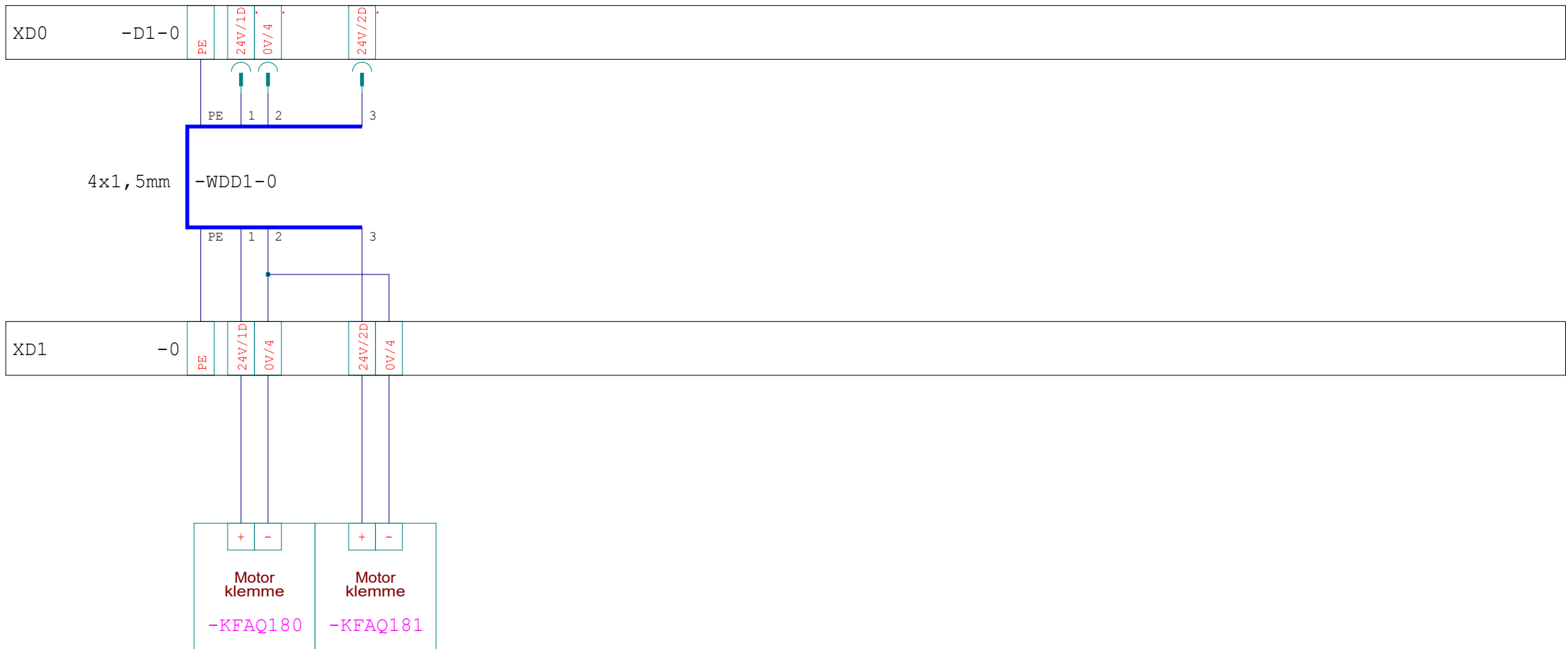
Option

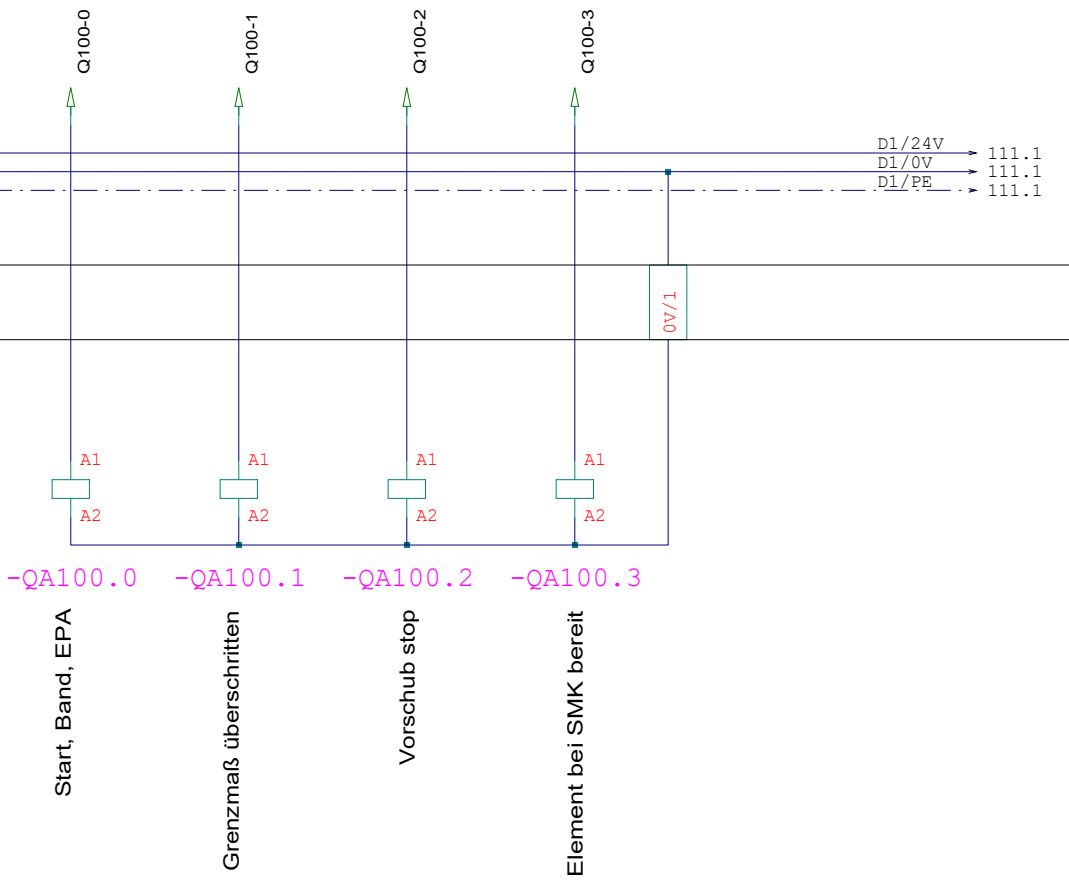
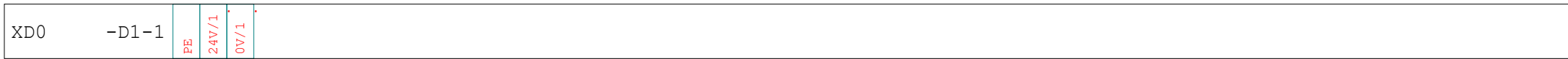


Heizung Tische

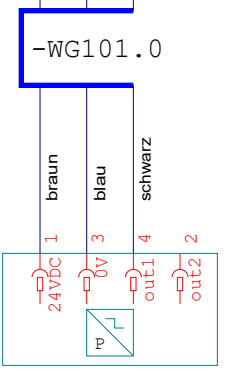
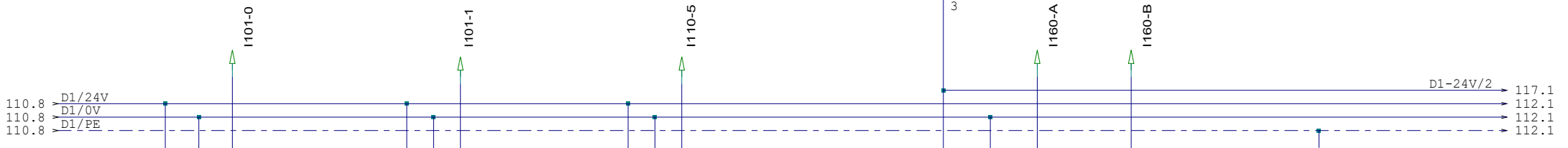
Heizung Spanner

Option

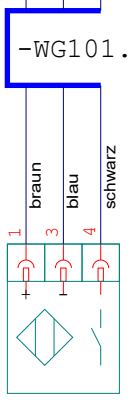




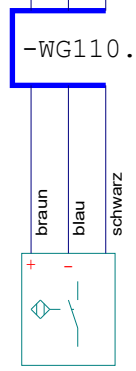
Option EPA Signalaustausch mit Relais



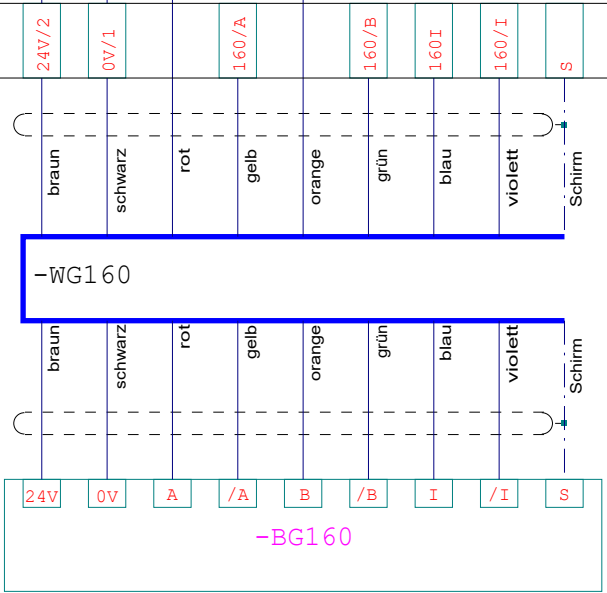
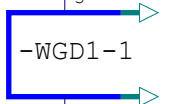
Überwachung Eingangsdruck



Lichttaster Abtransport

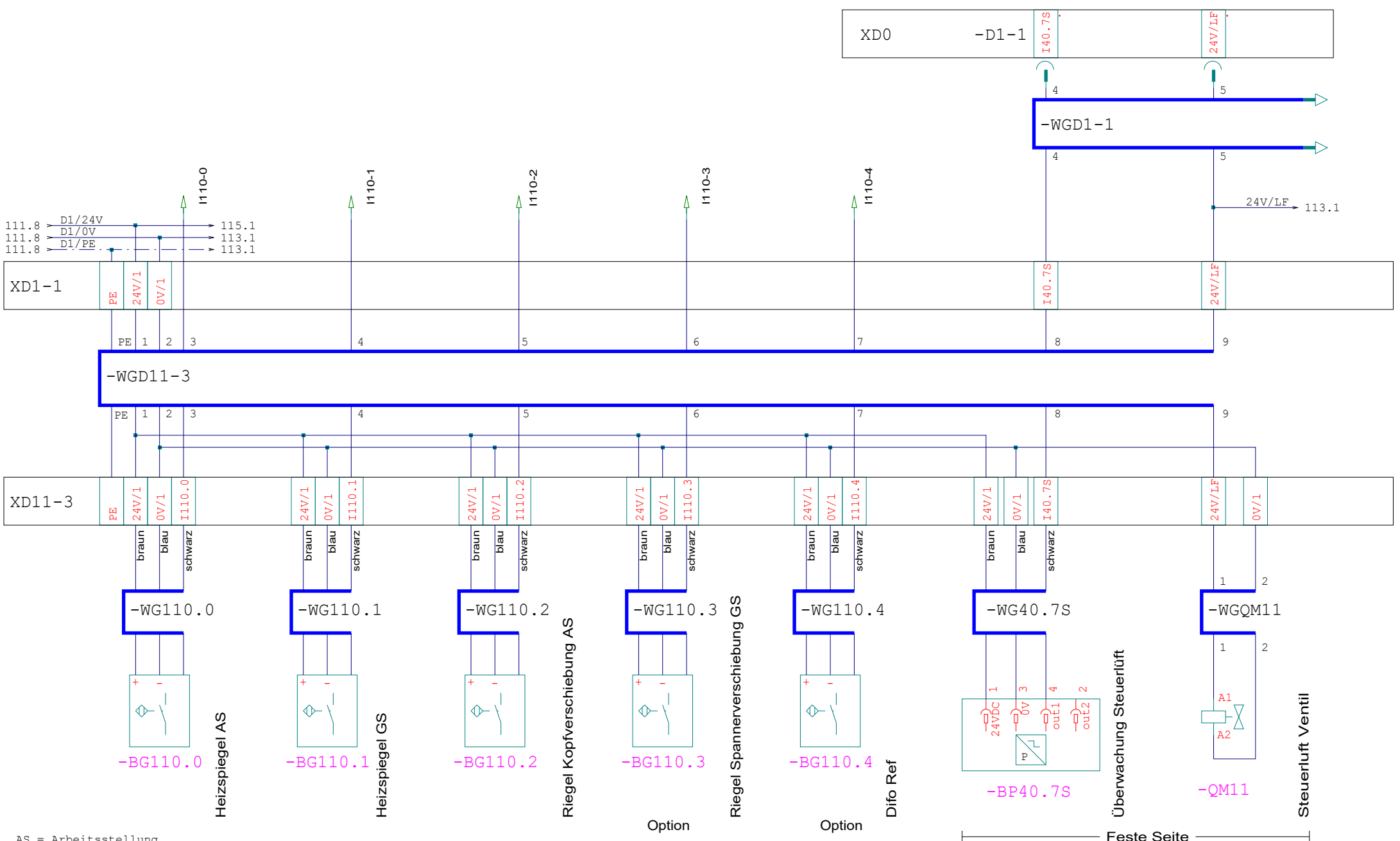


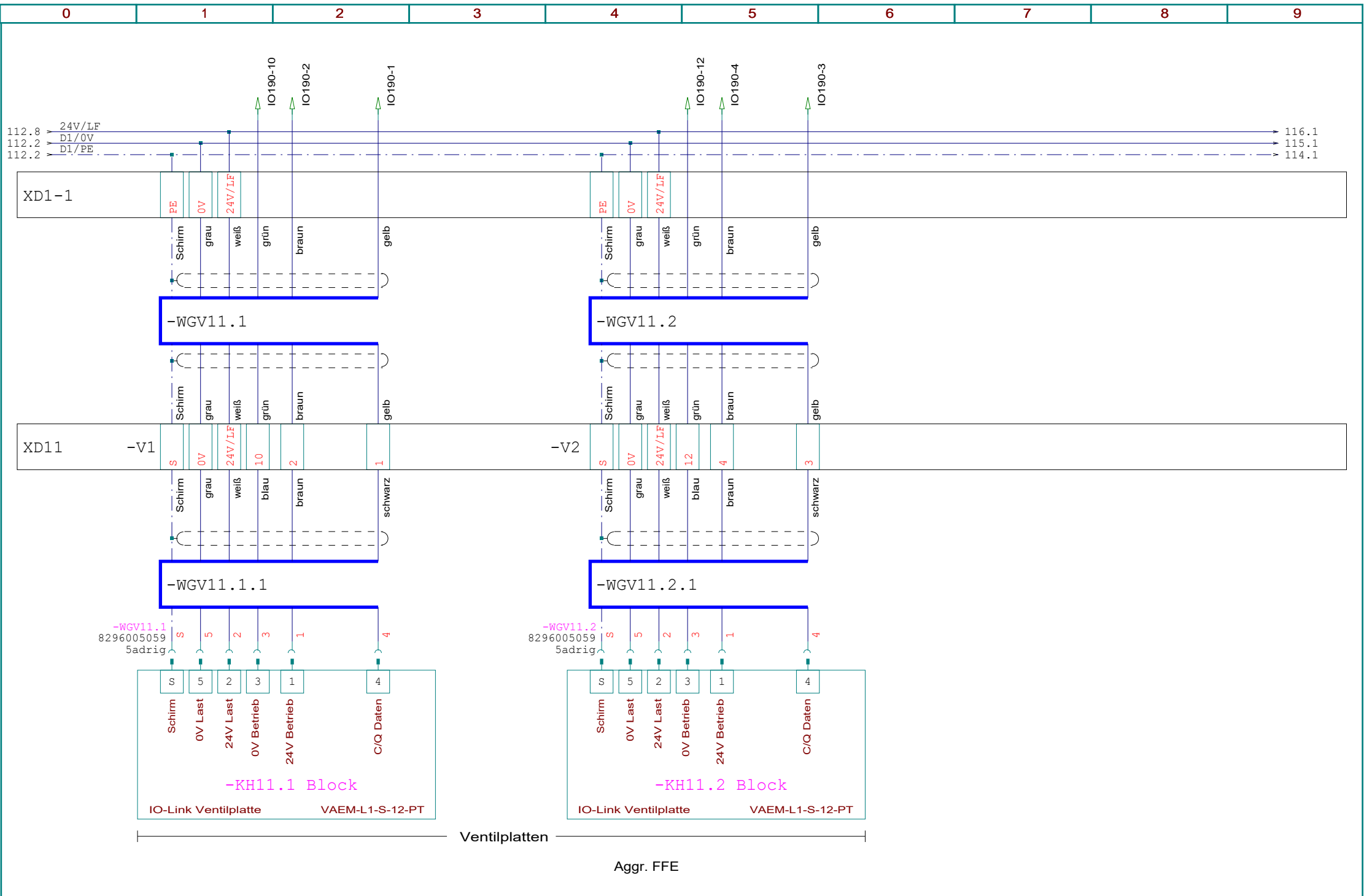
Profilabstützung GS

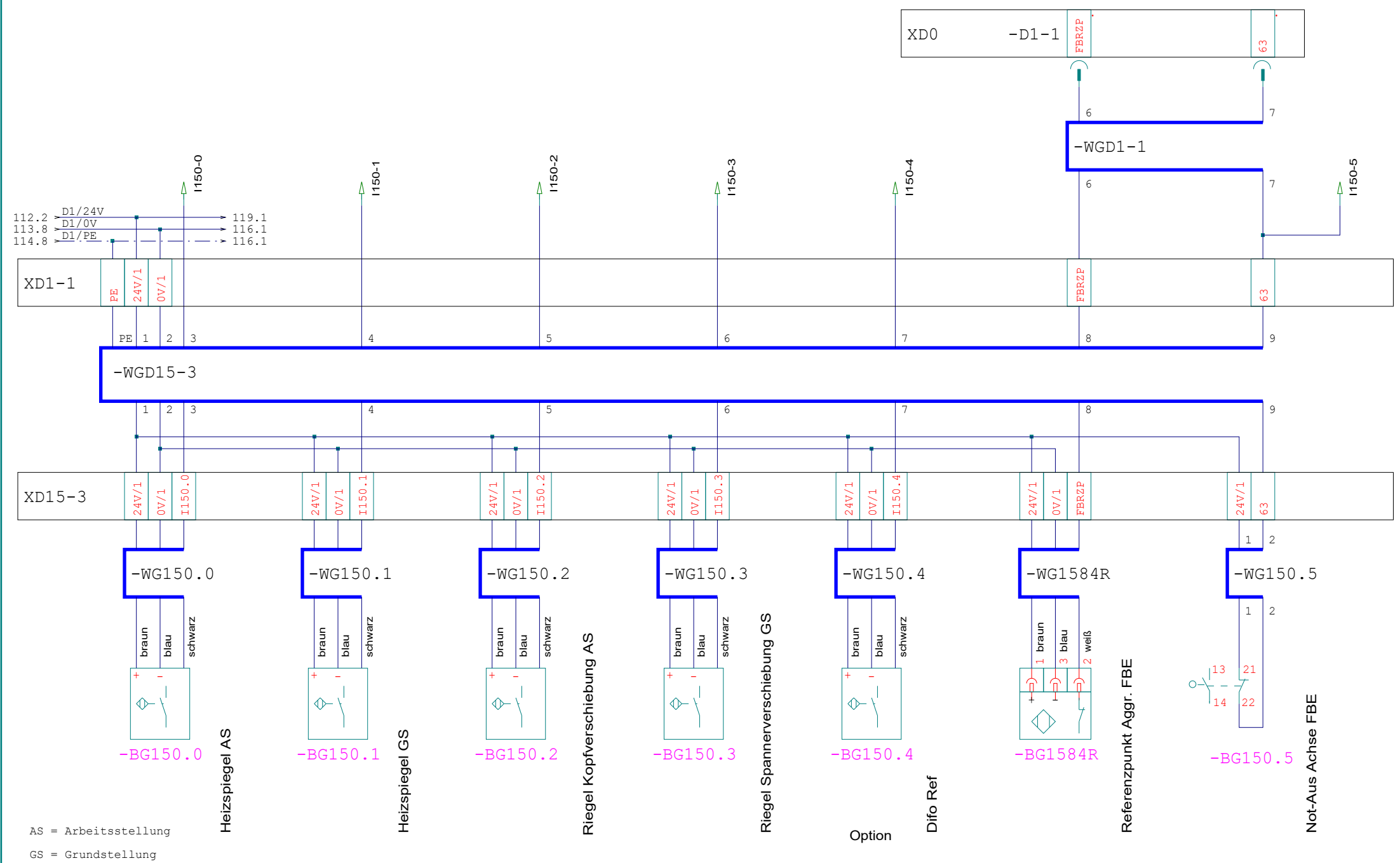


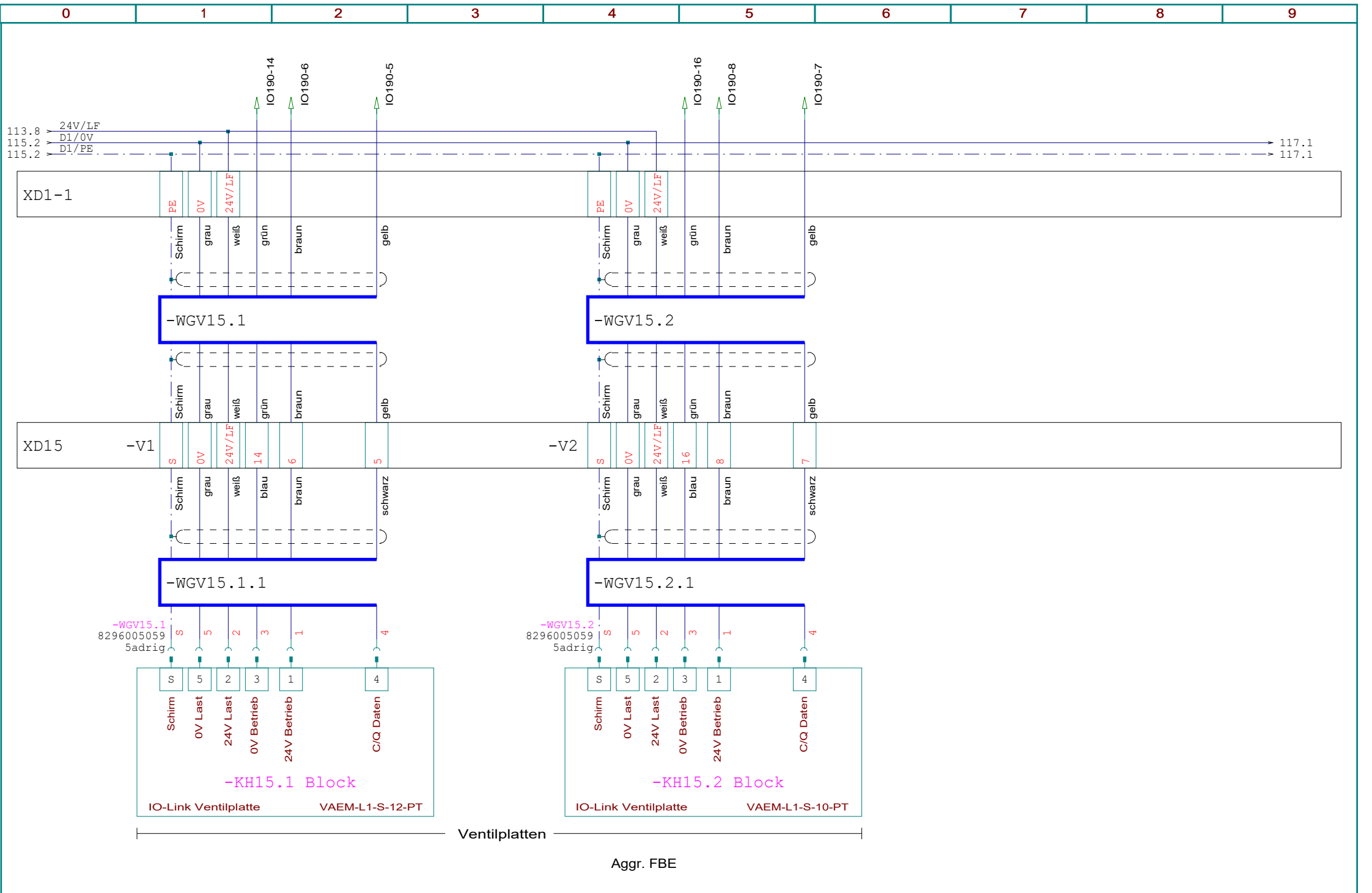
Kopfverschiebung FFE
Magnetband

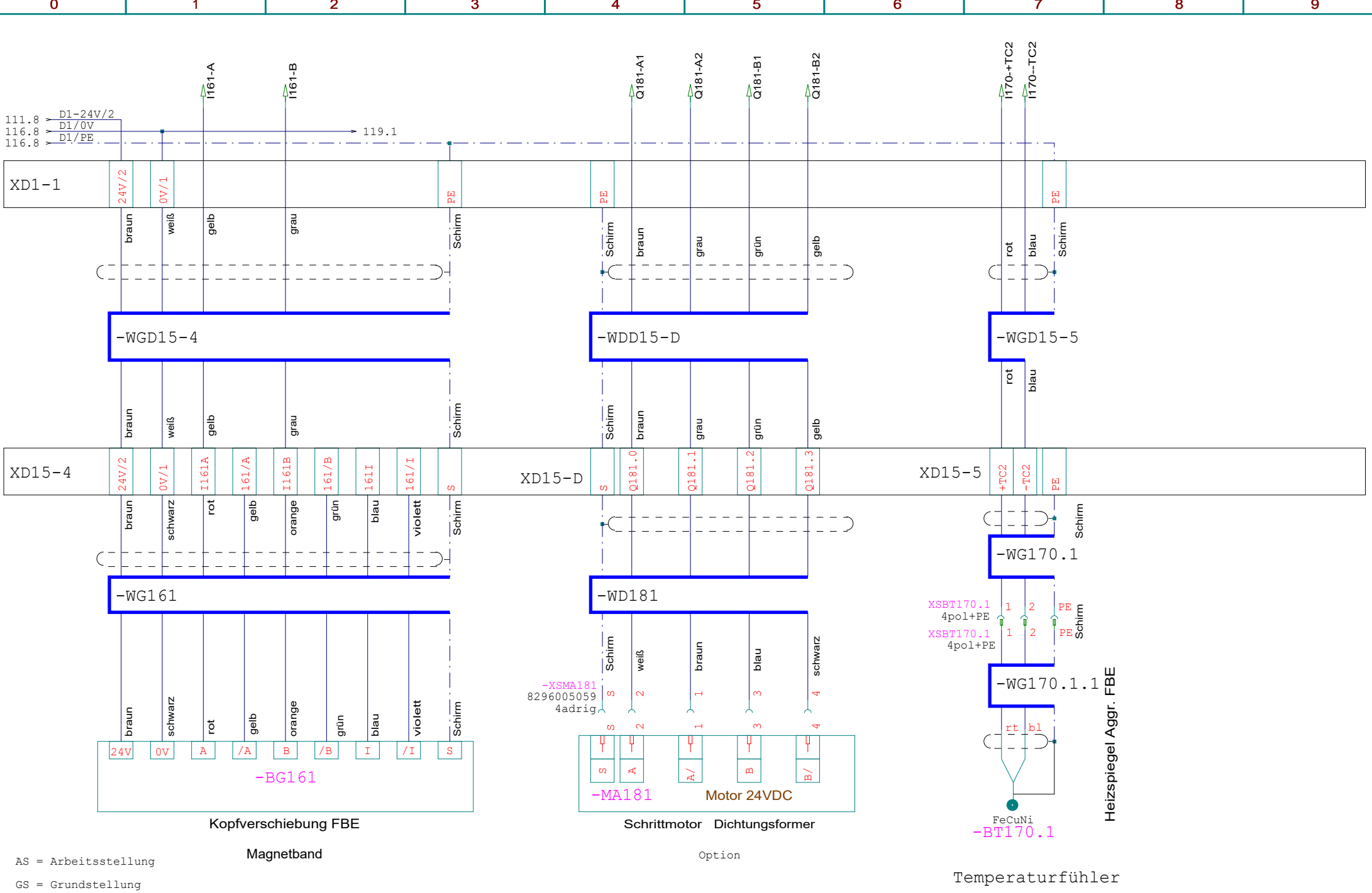
AS = Arbeitsstellung
GS = Grundstellung











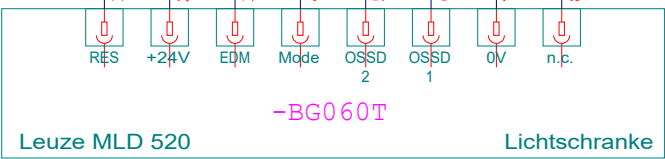
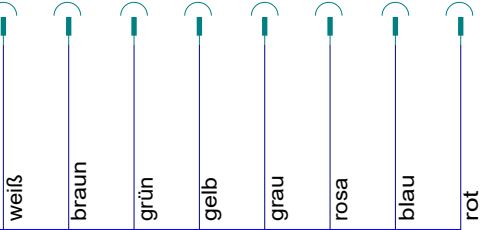
AS = Arbeitsstellung
GS = Grundstellung

Magnetband

Schrittmotor Dichtungsformer

Temperaturfühler

Heizspiegel Aggr. FBE



-BG060T



Lichtschanke Positionieren



Option Dichtungsformer

0

1

2

3

4

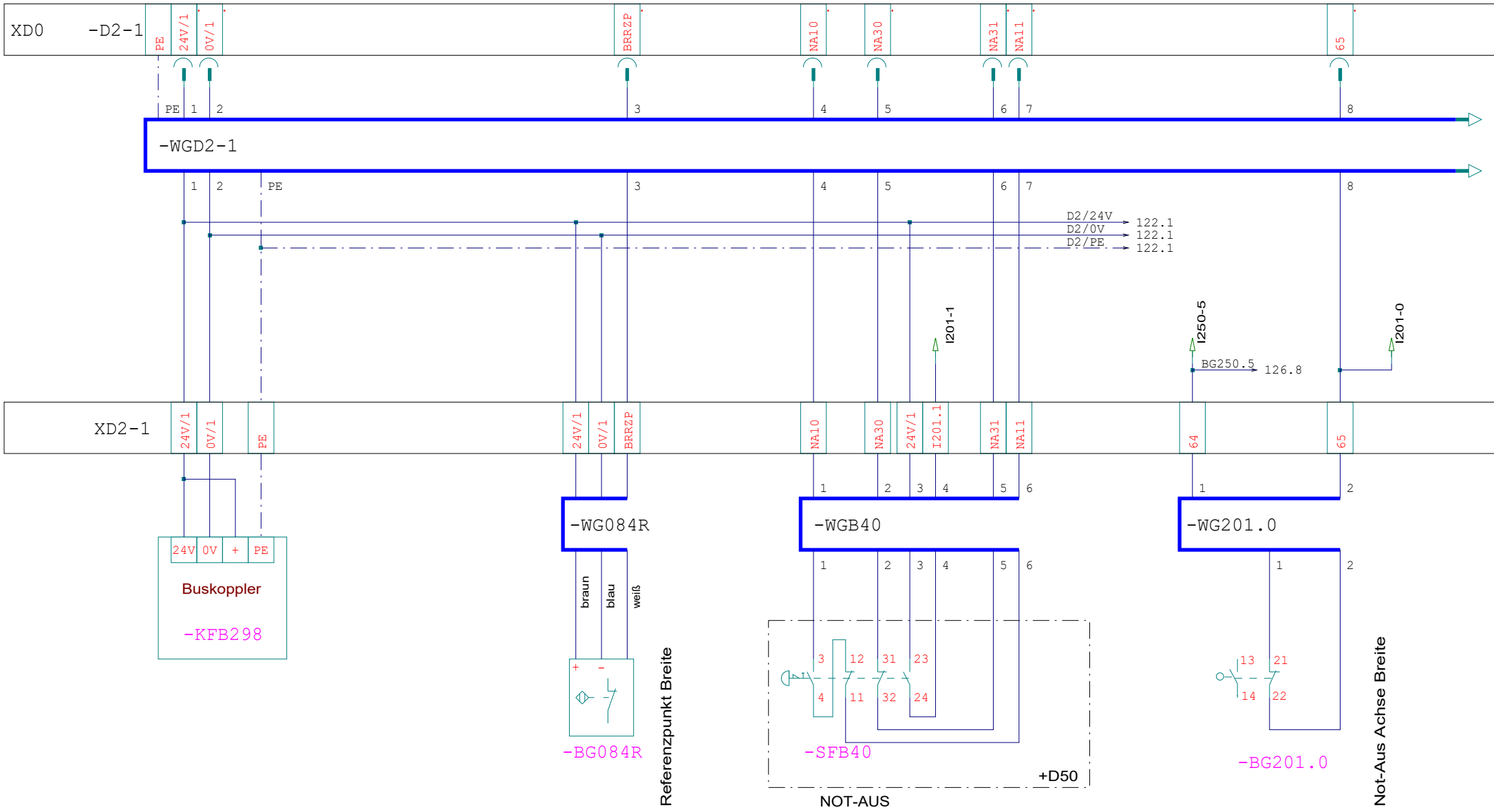
5

6

7

8

9





-D2-1

24V/2

-WGD2-1

121.7 D2/24V
121.7 D2/0V
121.7 D2/PE

D2-24V/2 128.1
123.1
123.1
123.1



24V/1
0V/1

24V/2
0V/1

260/A

260/B

260I

260/I

Schirm

braun
blau
schwarz

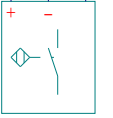
braun
schwarz
rot
gelb
orange
grün
blau
violett
Schirm

-WG210.5

-WG260

braun
blau
schwarz

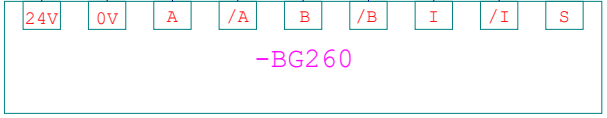
braun
schwarz
rot
gelb
orange
grün
blau
violett
Schirm



-BG210.5

Option

Profilabstützung GS

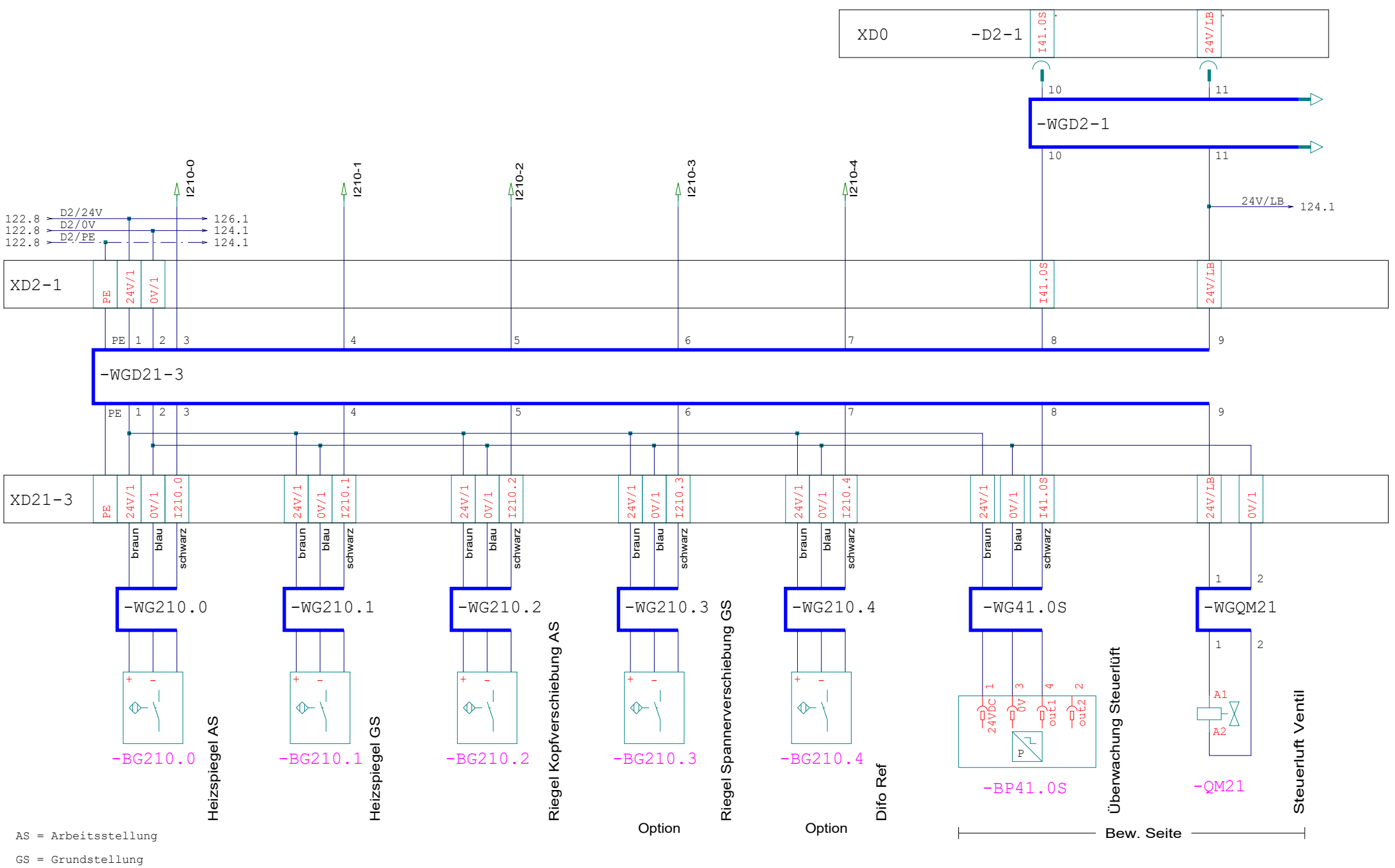


-BG260

Kopfverschiebung BFE

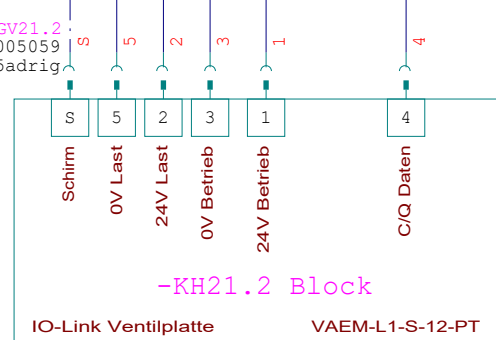
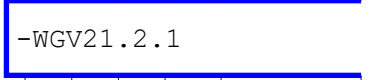
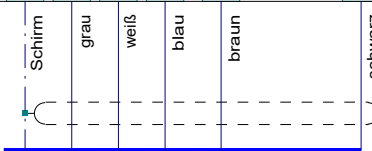
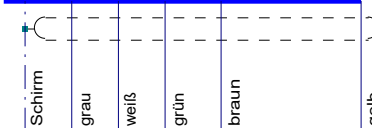
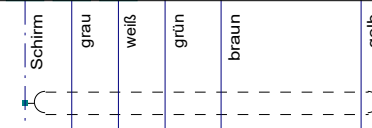
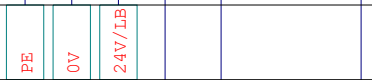
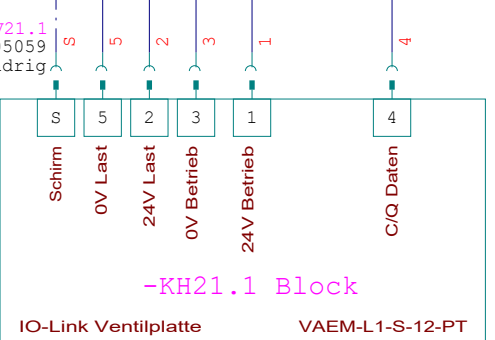
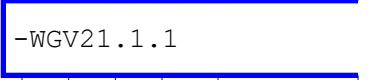
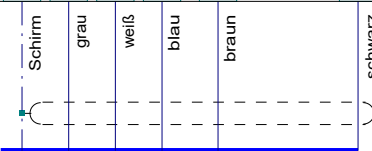
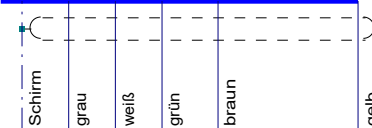
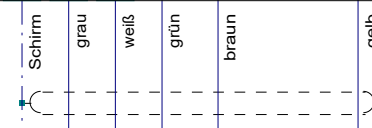
Magnetband

AS = Arbeitsstellung
GS = Grundstellung



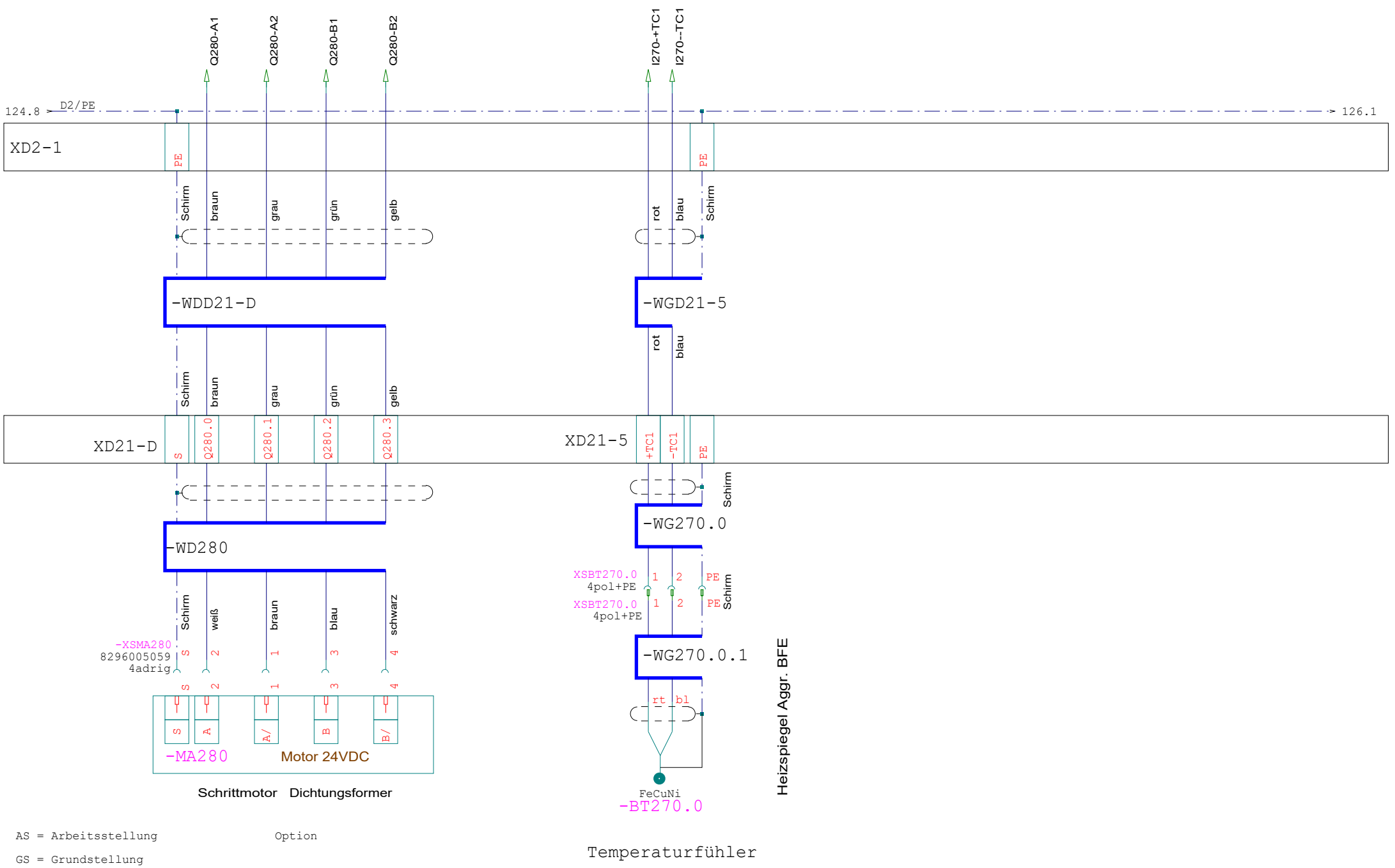
AS = Arbeitsstellung
GS = Grundstellung

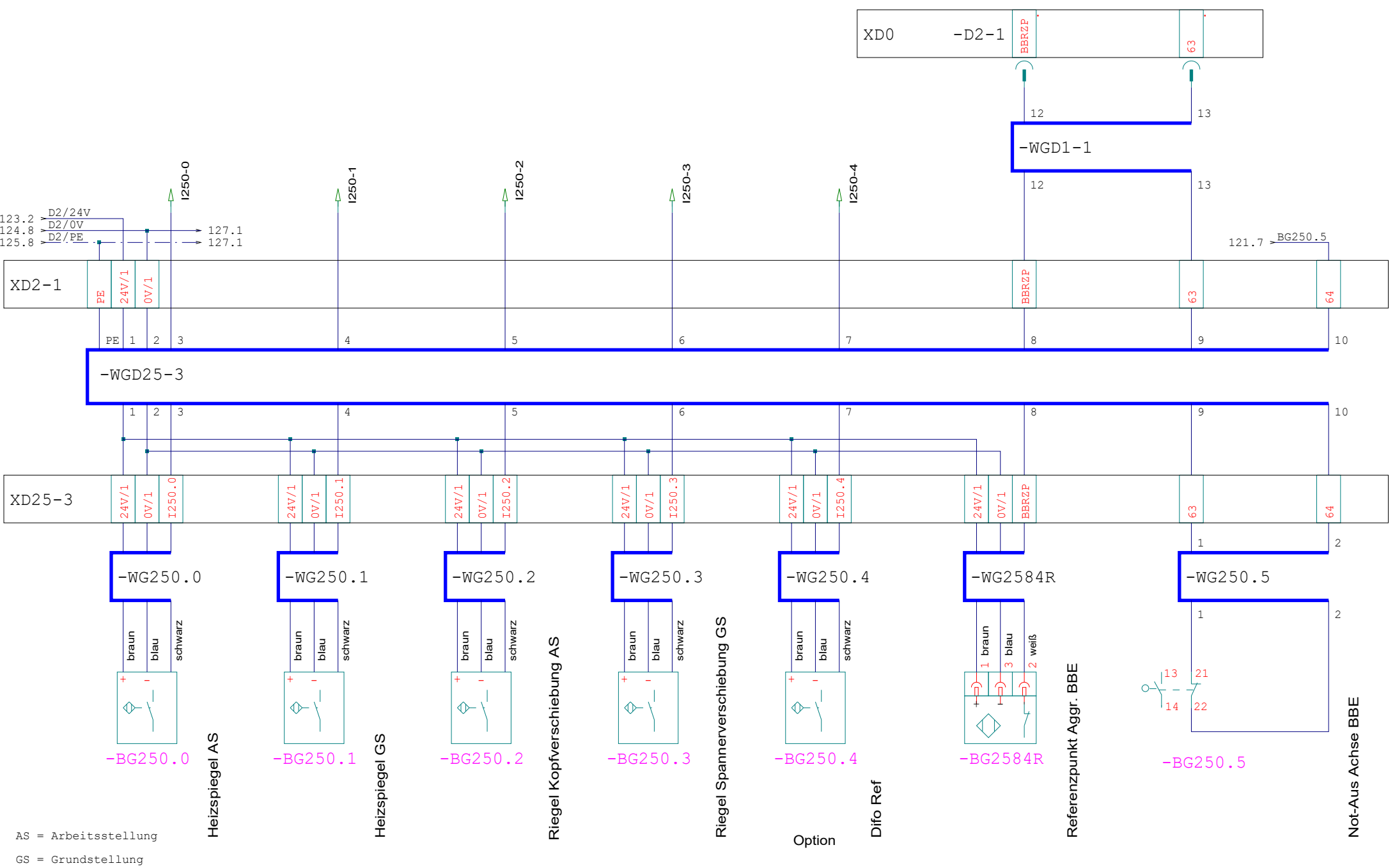
Bew. Seite

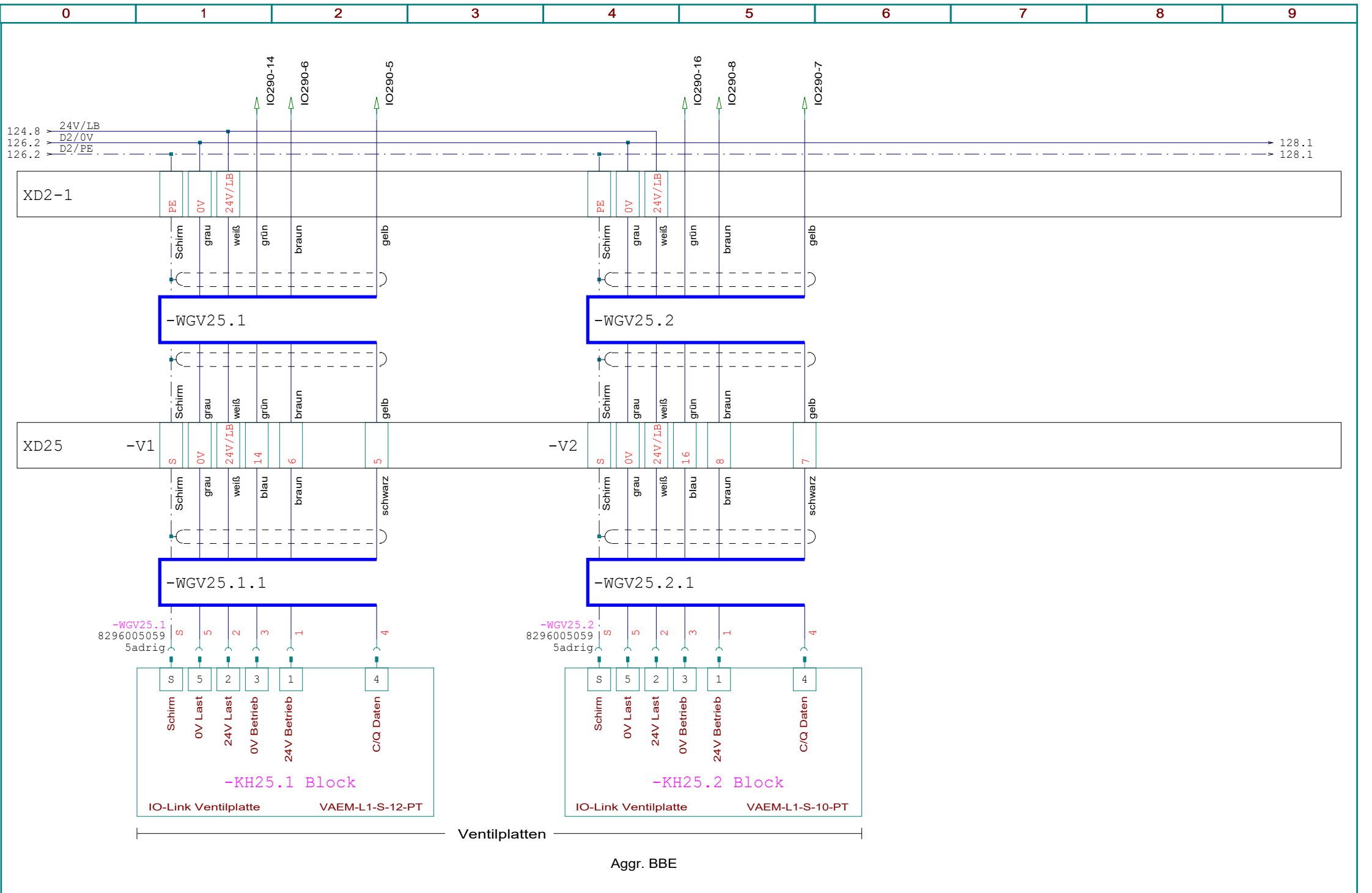


Ventilplatten

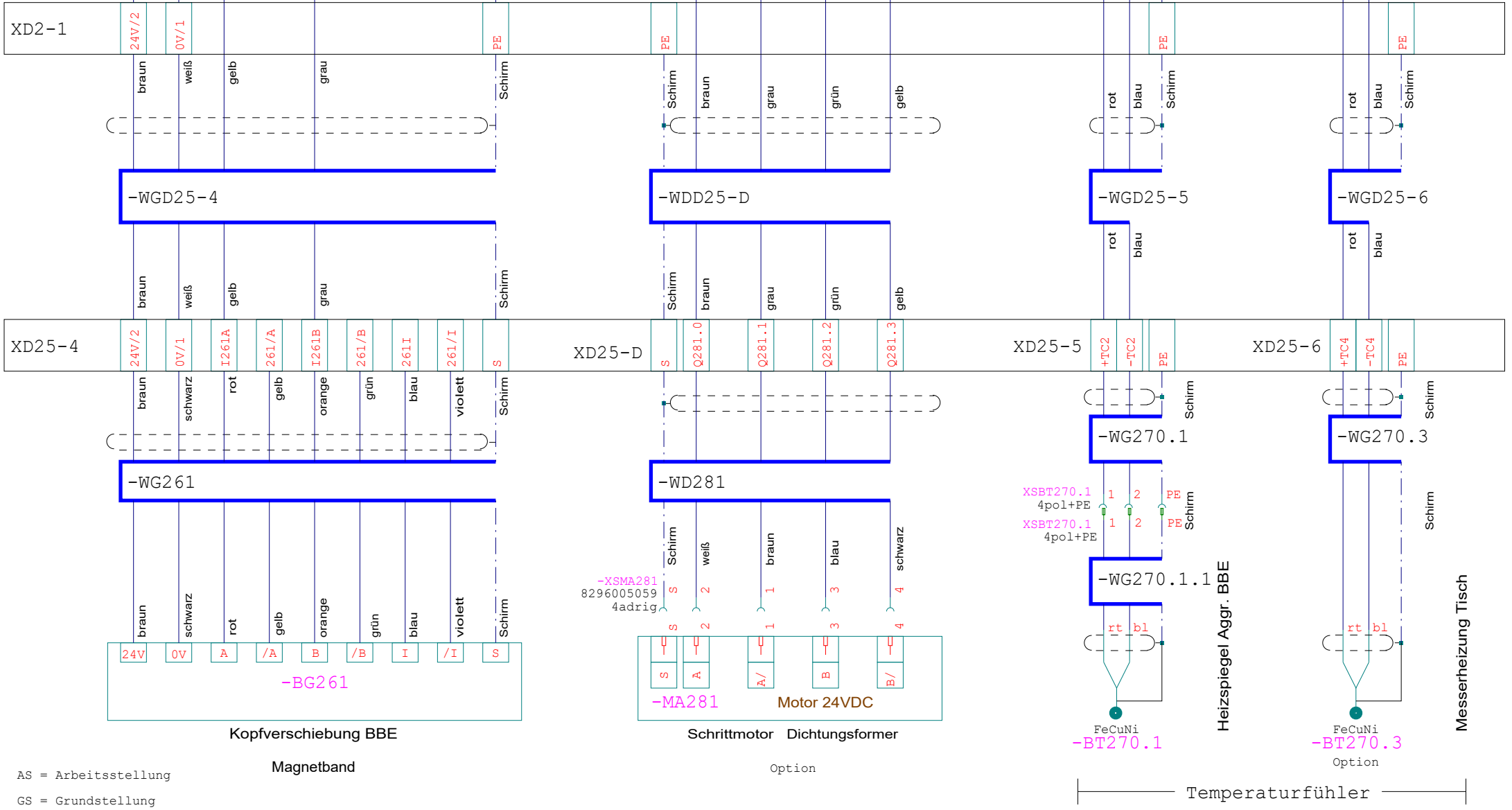
Aggr. BFE

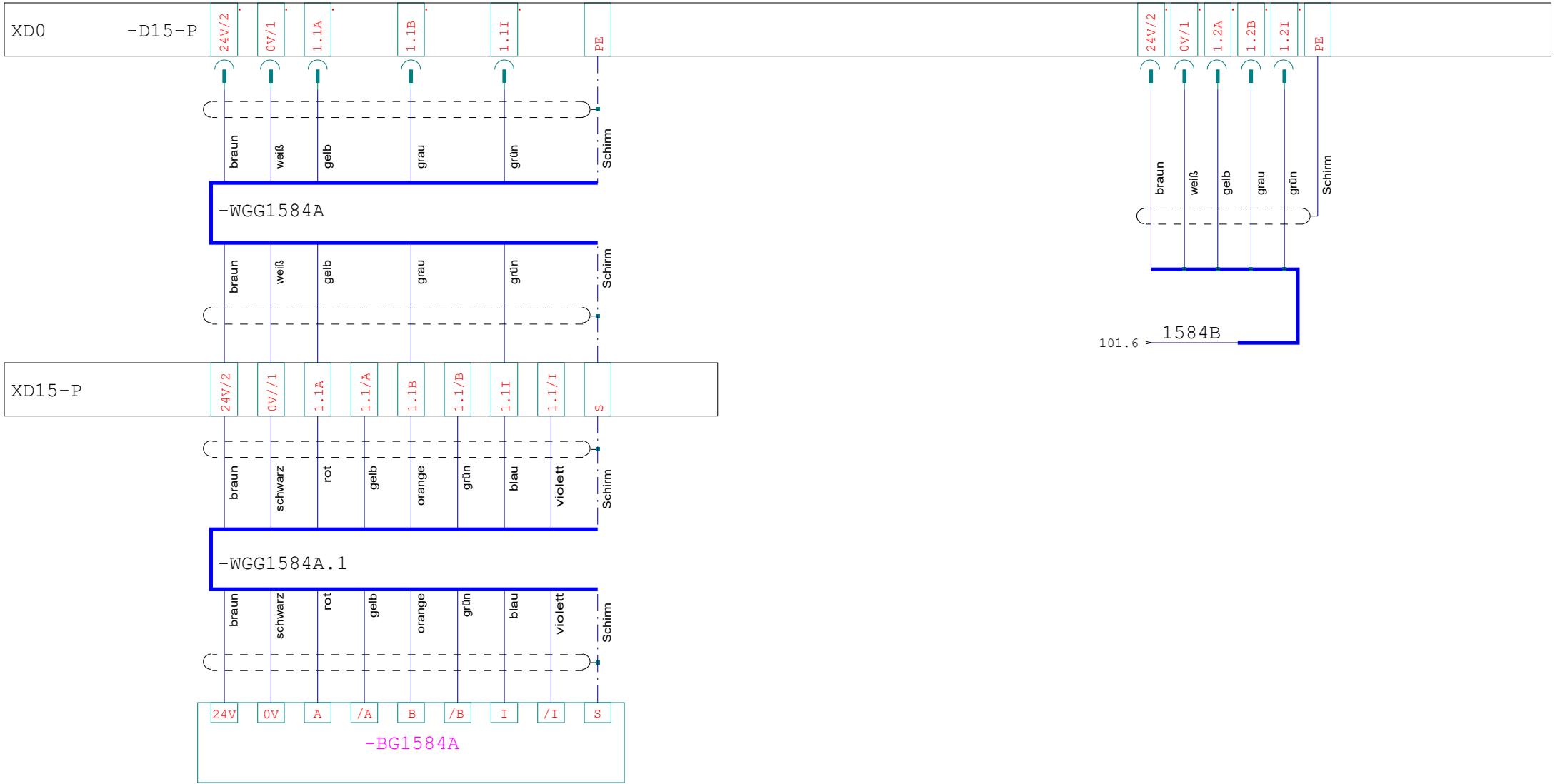






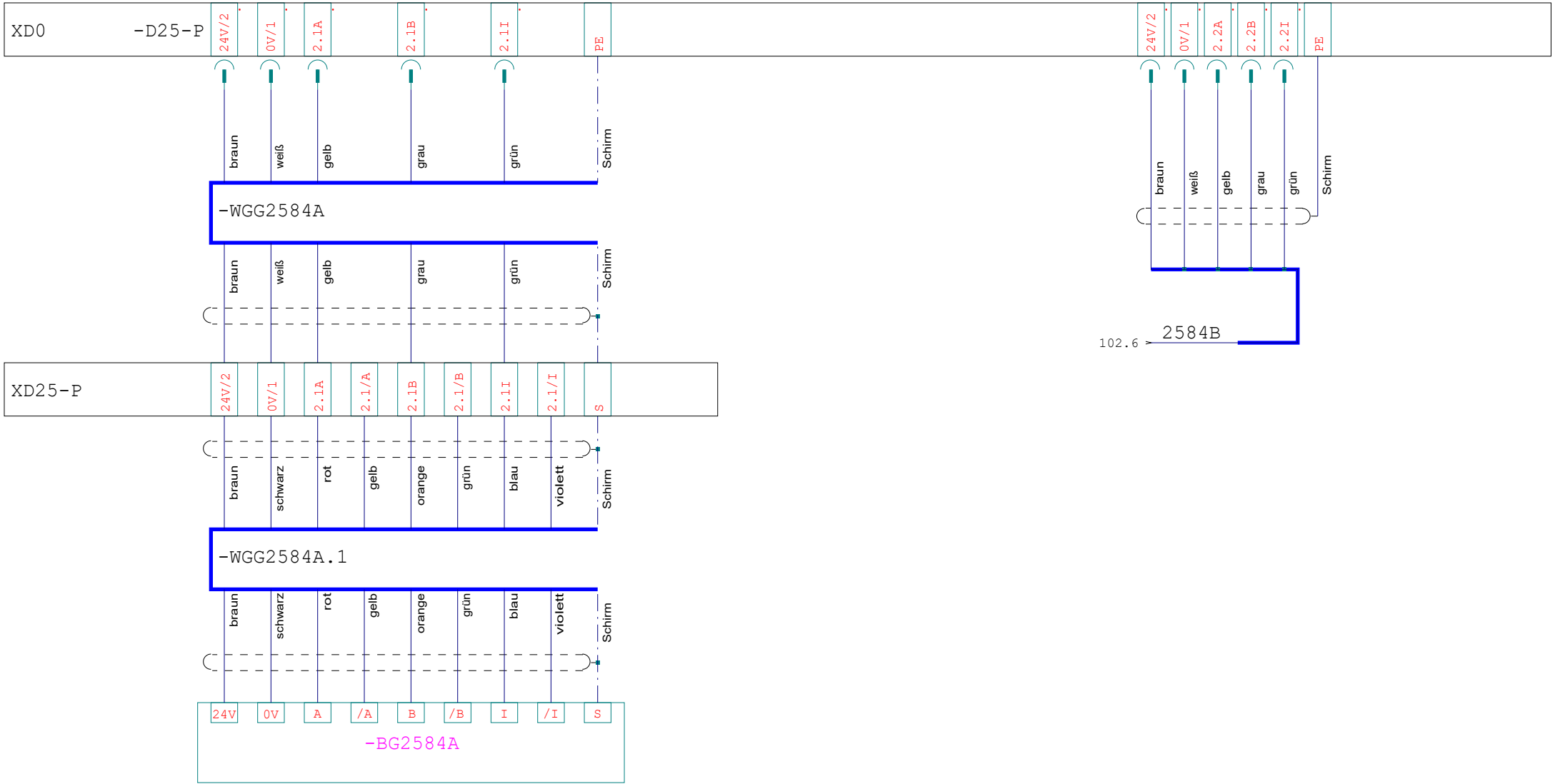
122.8 D2-24V/2
 127.8 D2/0V
 127.8 D2/PE





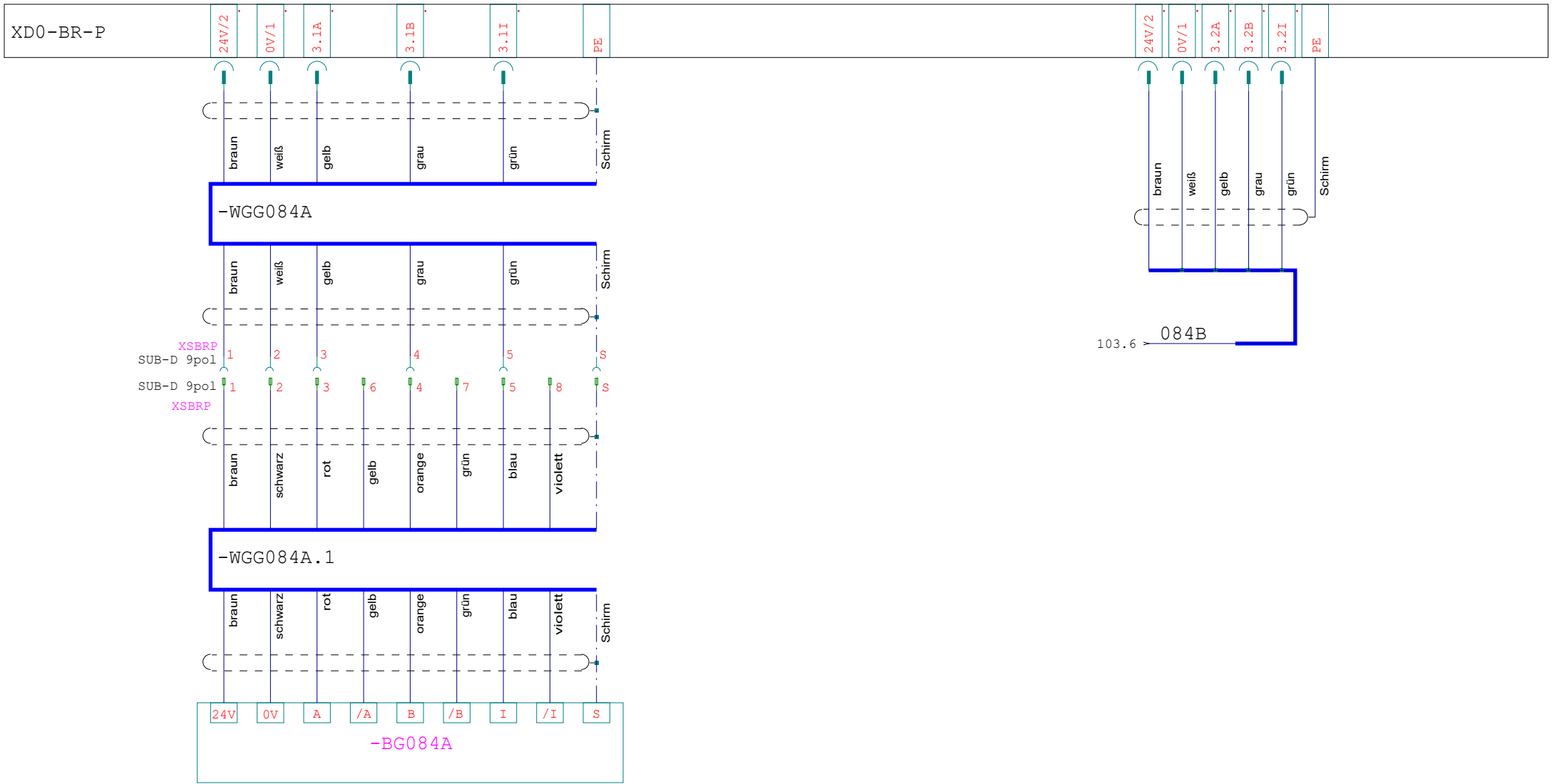
Magnetband

Positionierung Aggr. FBE



Magnetband

Positionierung Aggr. BBE



Magnetband

Positionierung Breite