



Elektrodokumenta

Electric system documentation
Documentation électrique

Projekt: SMH-510-4

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

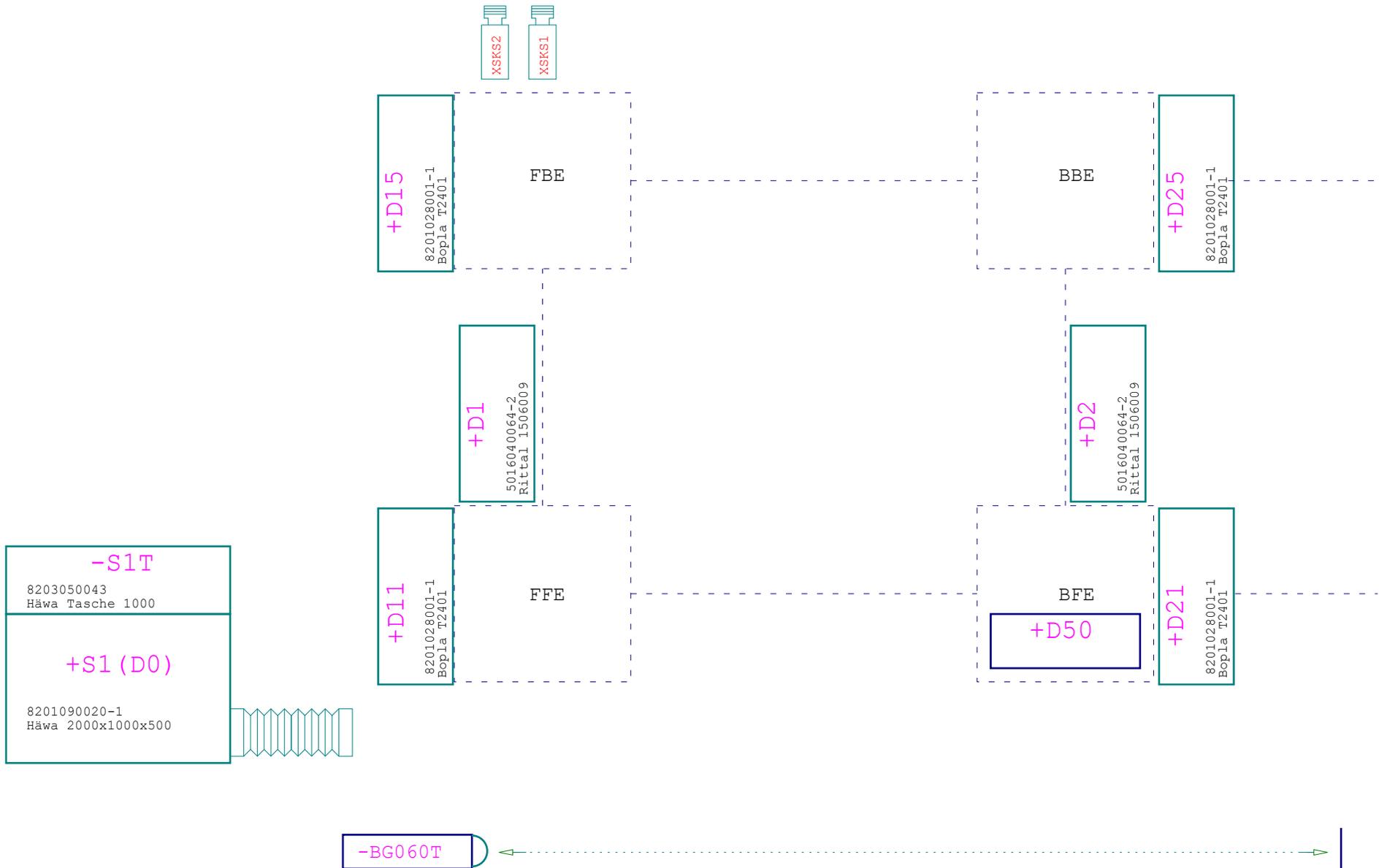
Kunde:	Rotox sp.z.o.o.
Kommission:	Kapica
AB-Nummer:	5010000002-0020
Plannummer:	SMH-510-4-119__5010000002-0020

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

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

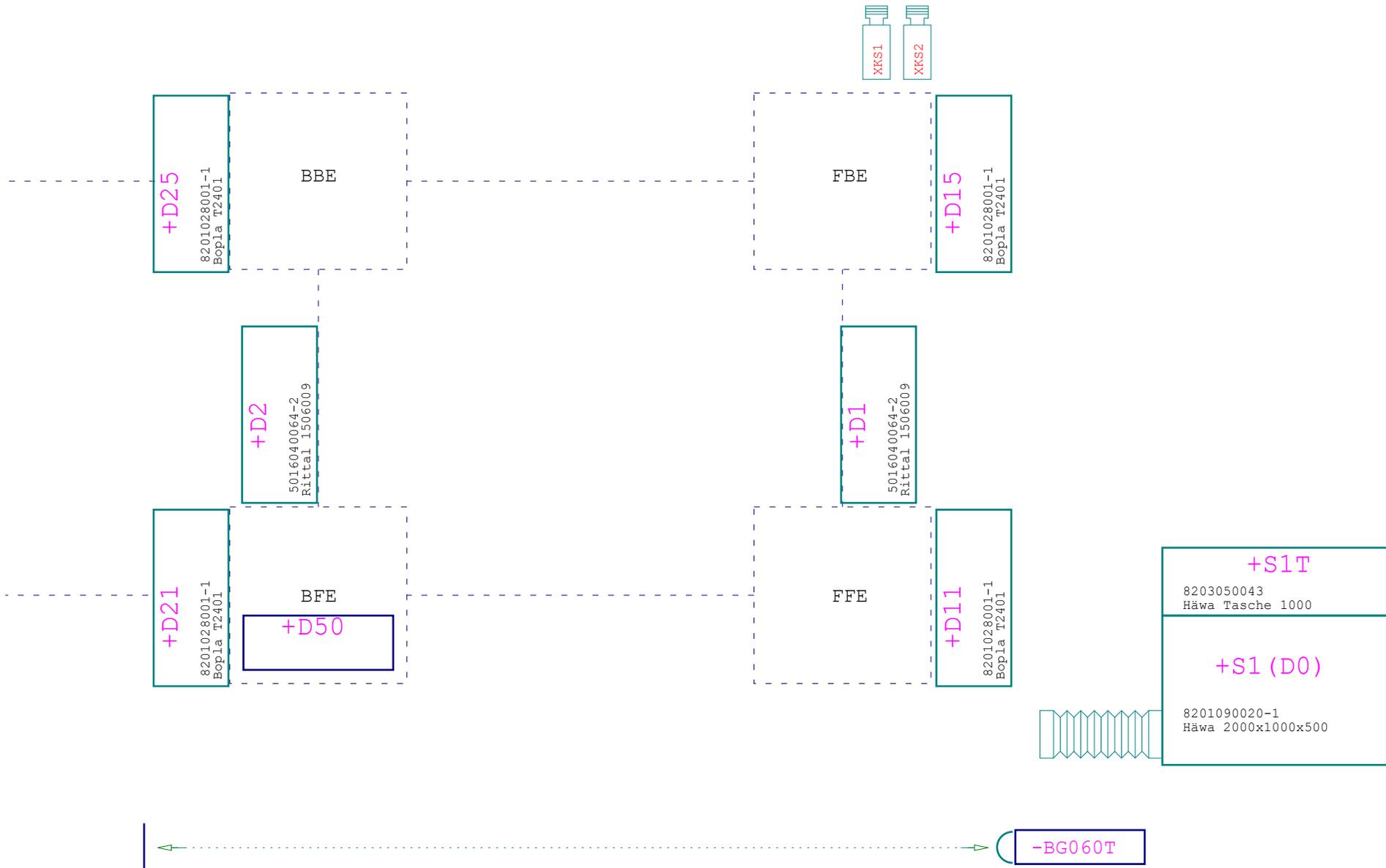
Übersicht der Schaltkästen

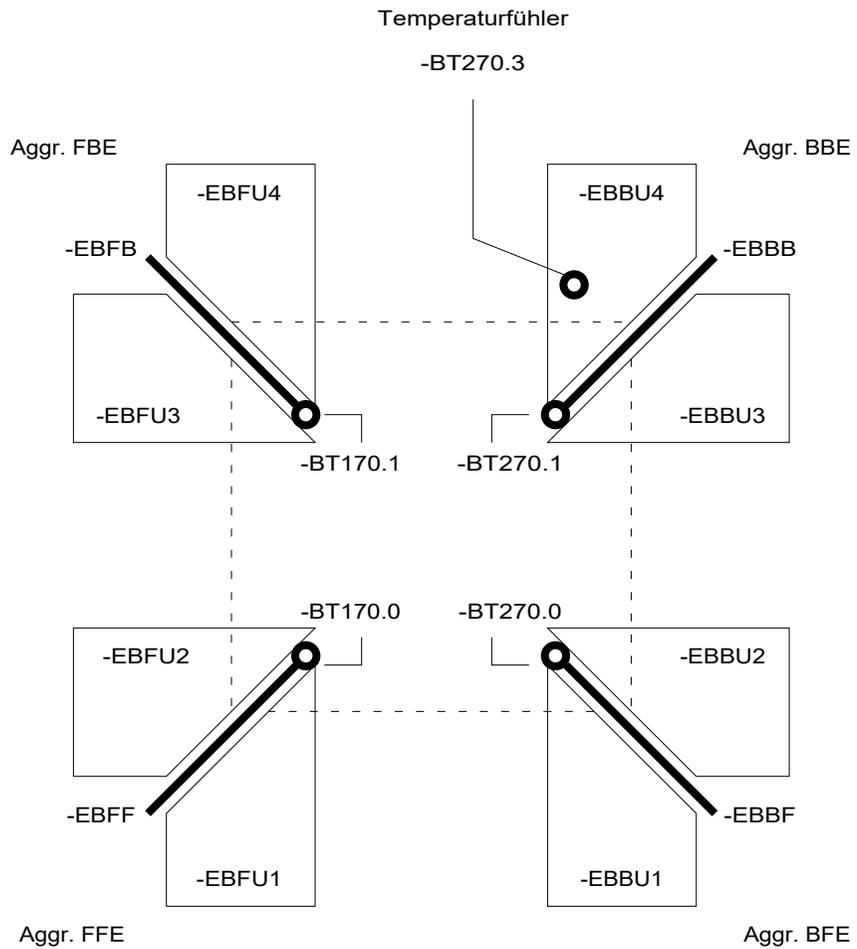
Bei Maschine mit festem Träger links



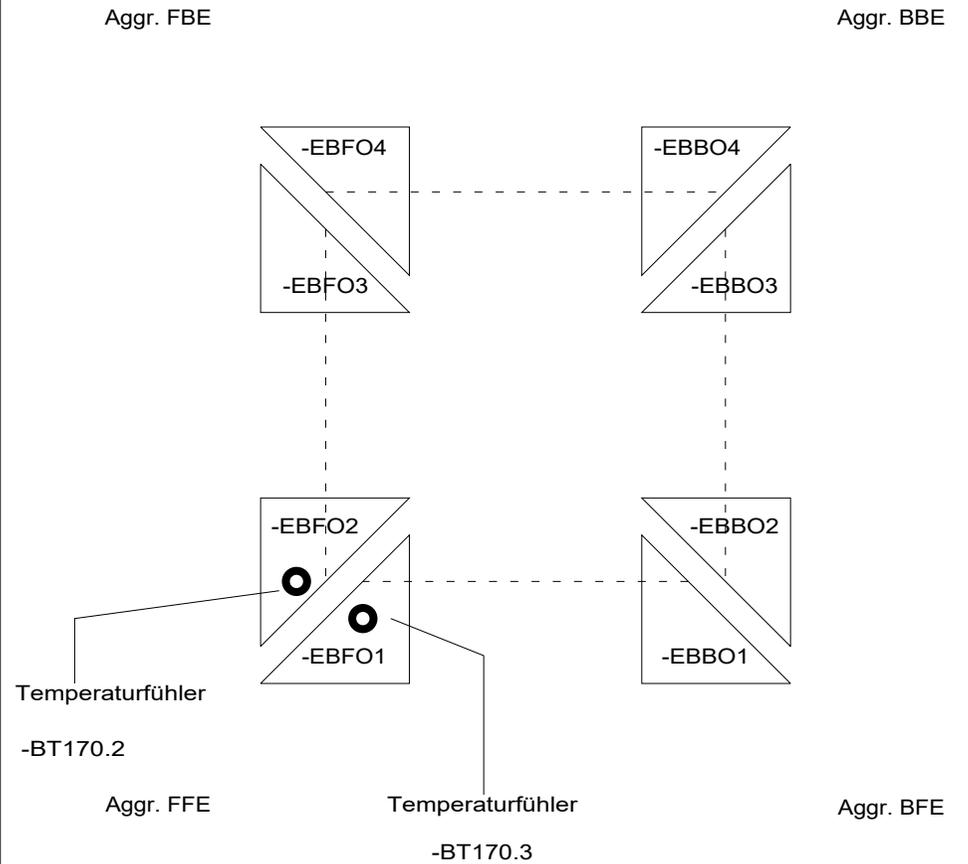
Übersicht der Schaltkästen

Bei Maschine mit festem Träger rechts



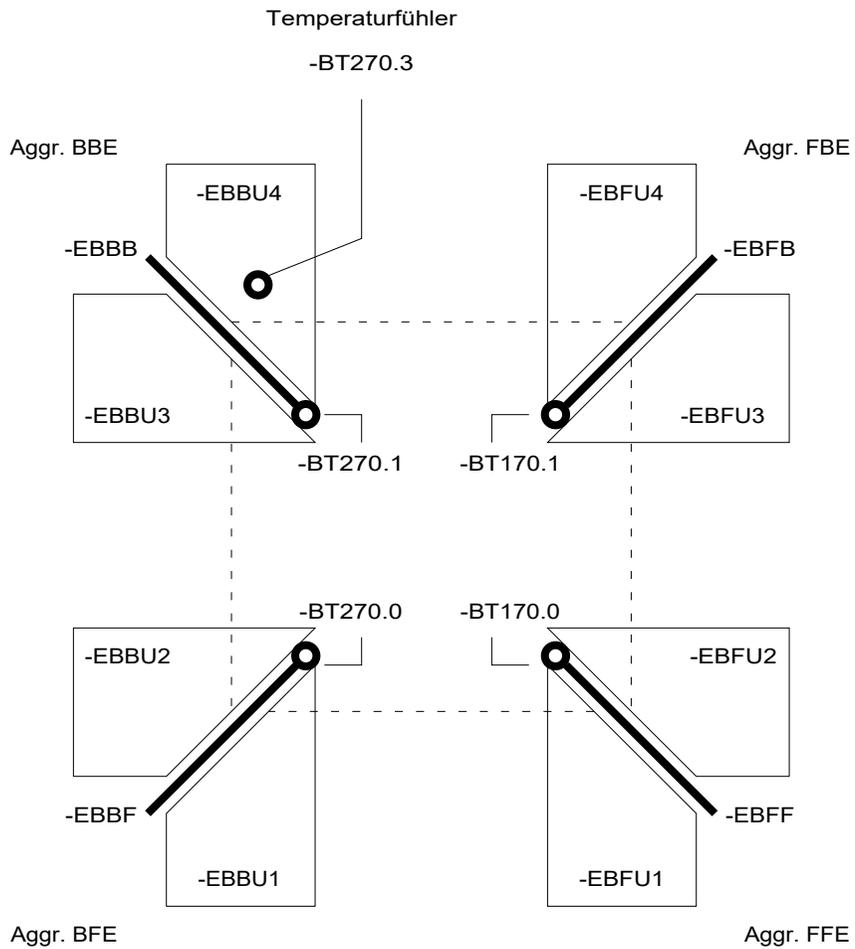


Übersicht Heizung Tischplatten

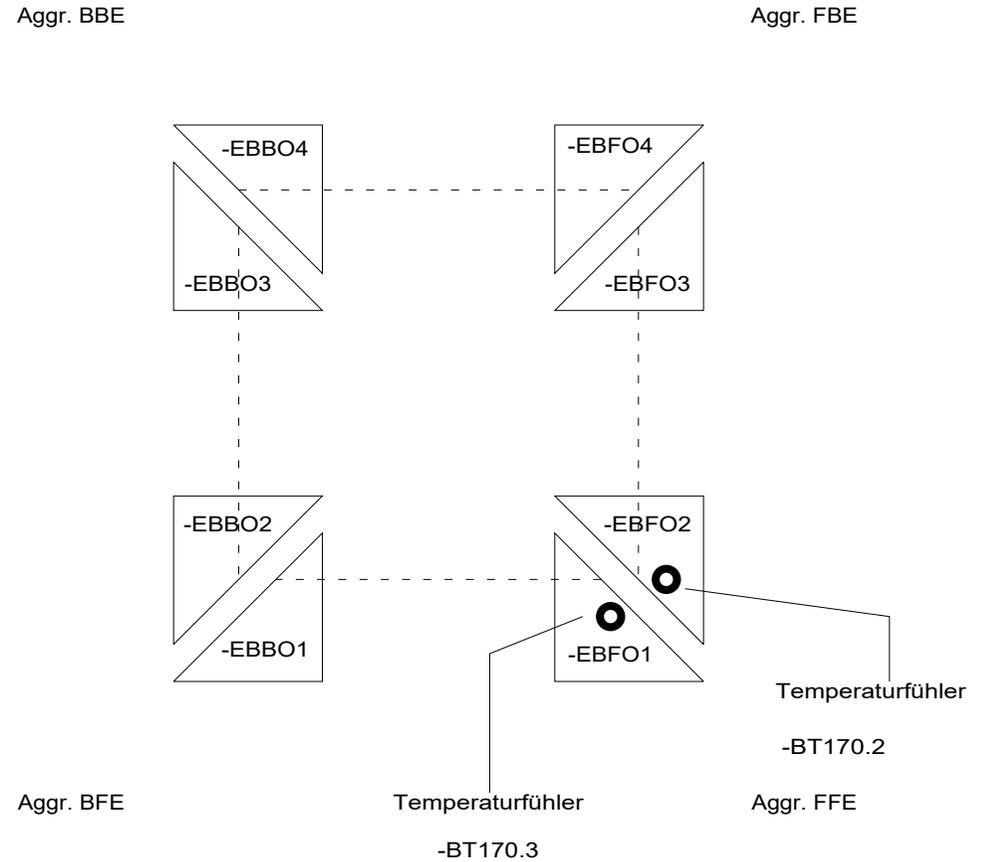


Übersicht Heizung Spannplatten

Bei Maschine mit festem Träger links

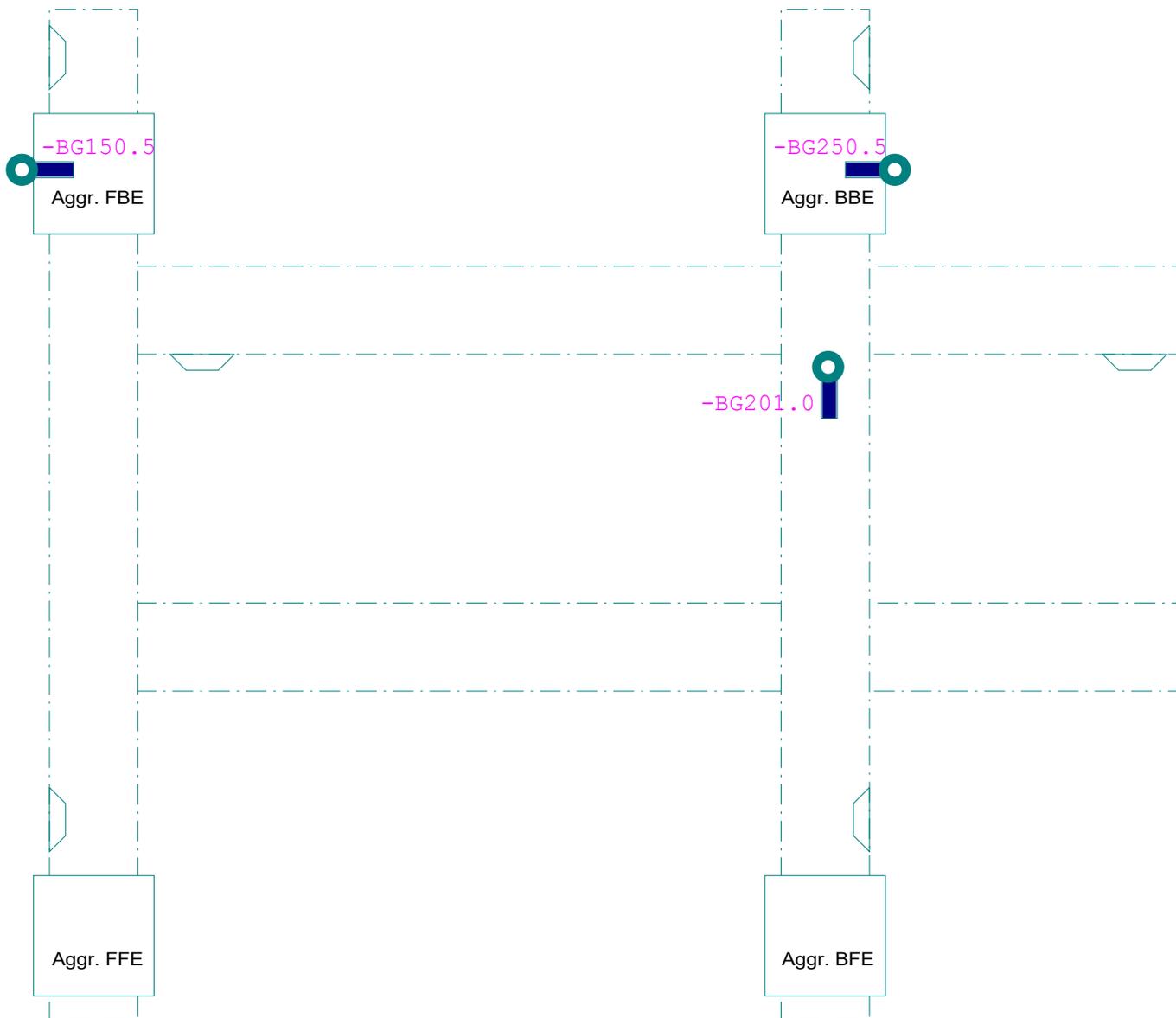


Übersicht Heizung Tischplatten



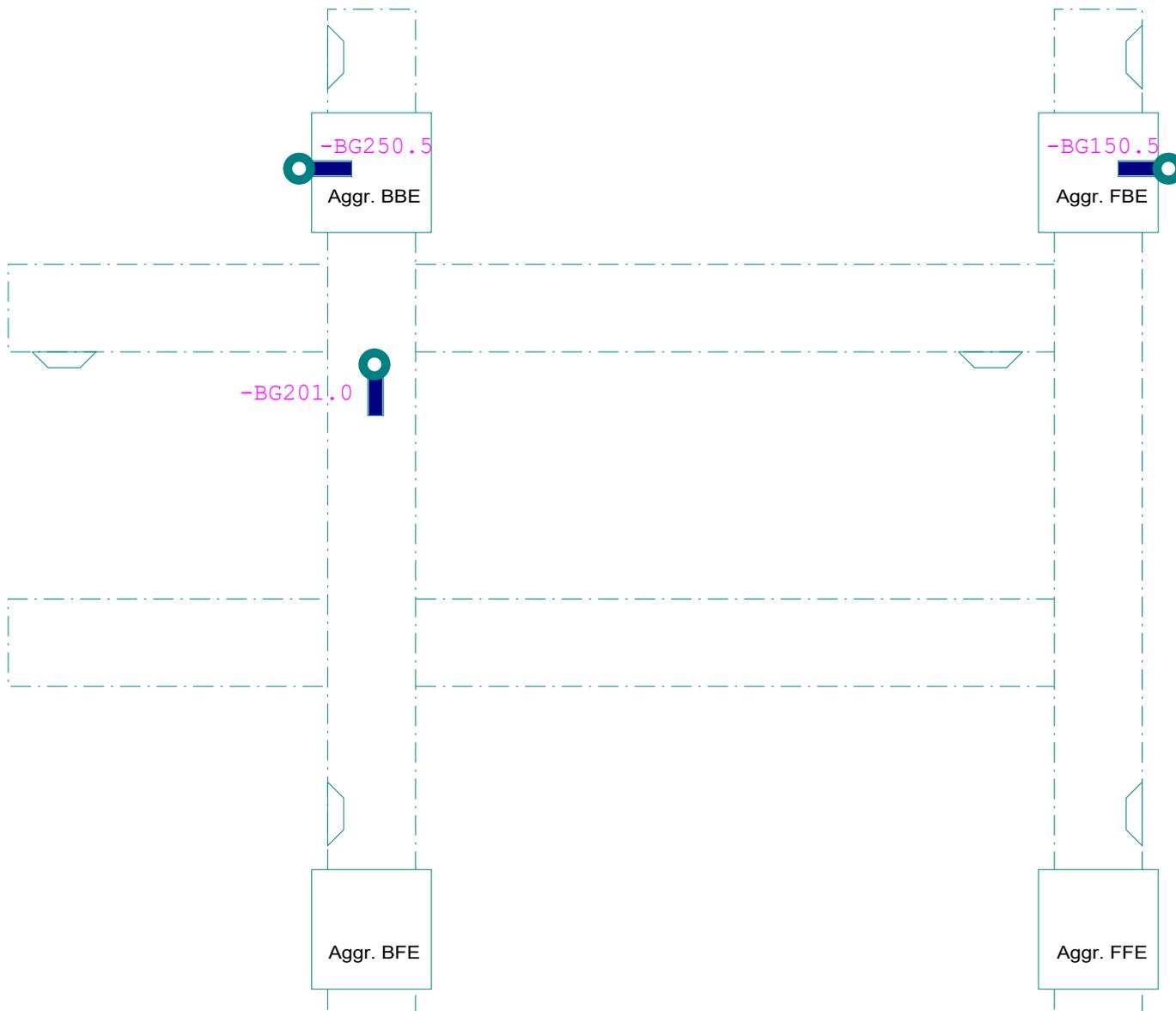
Übersicht Heizung Spannplatten

Bei Maschine mit festem Träger rechts



Übersicht Endschalter

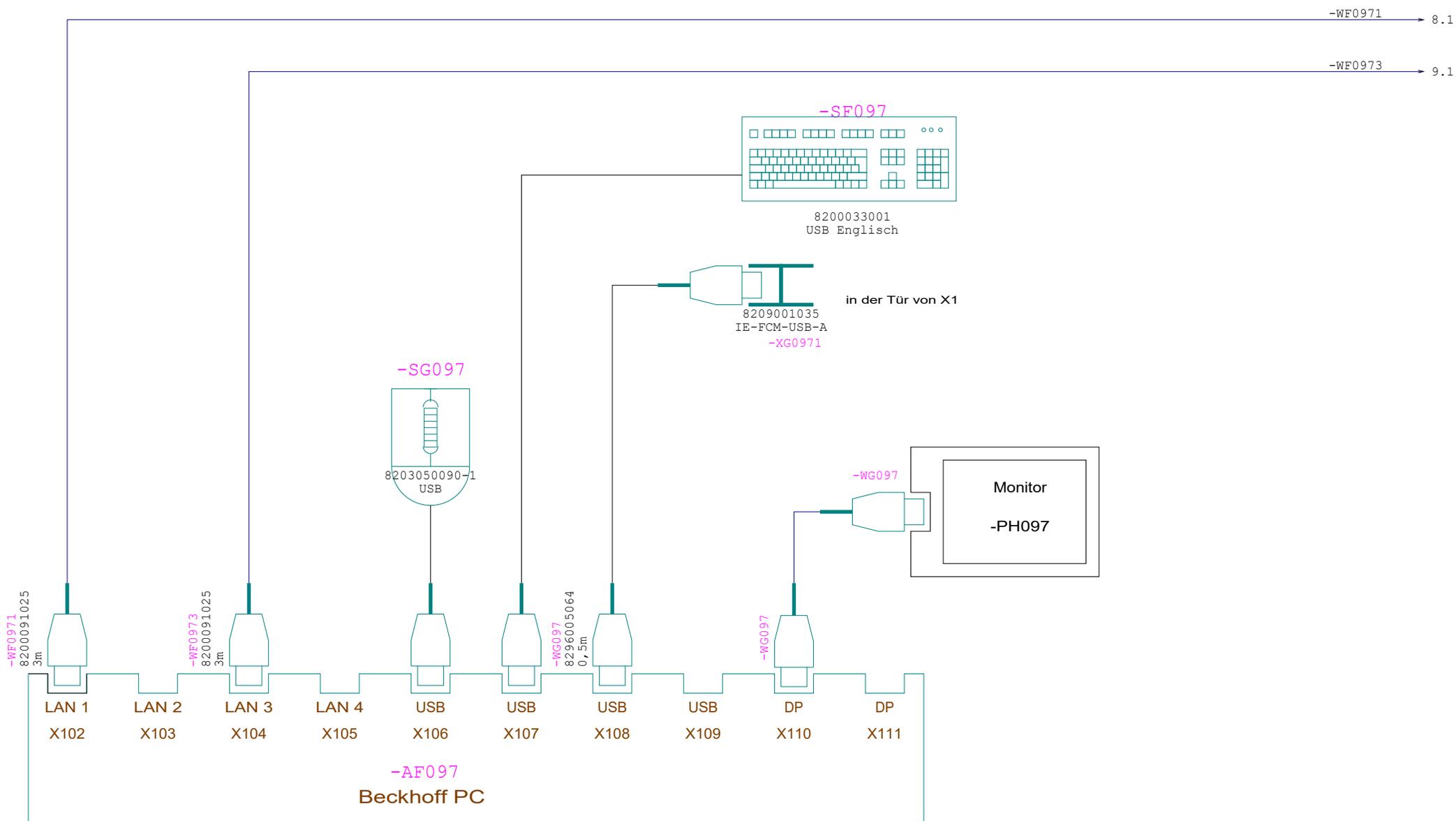
Bei Maschine mit festem Träger links



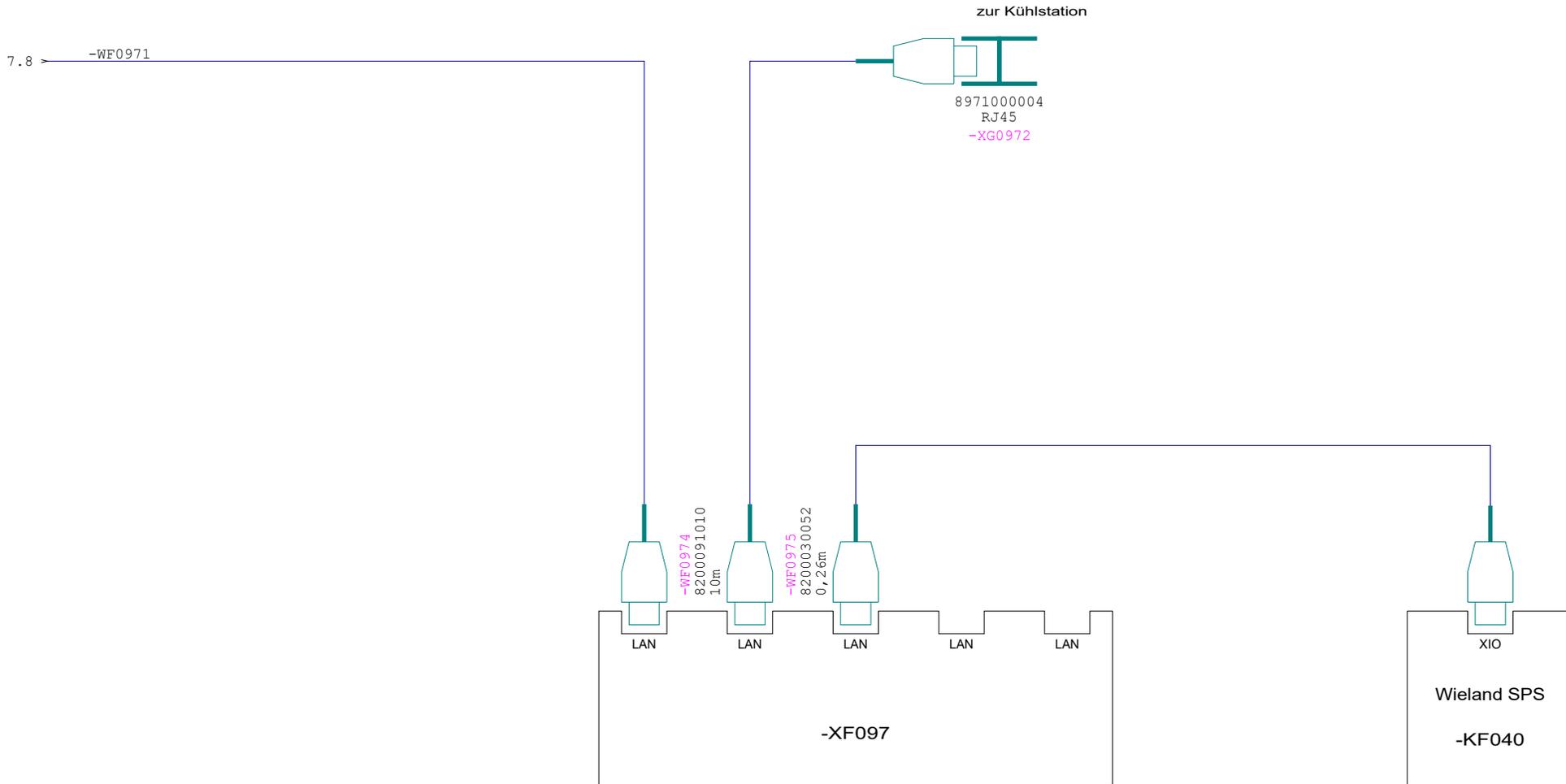
Übersicht Endschalter

Bei Maschine mit festem Träger rechts

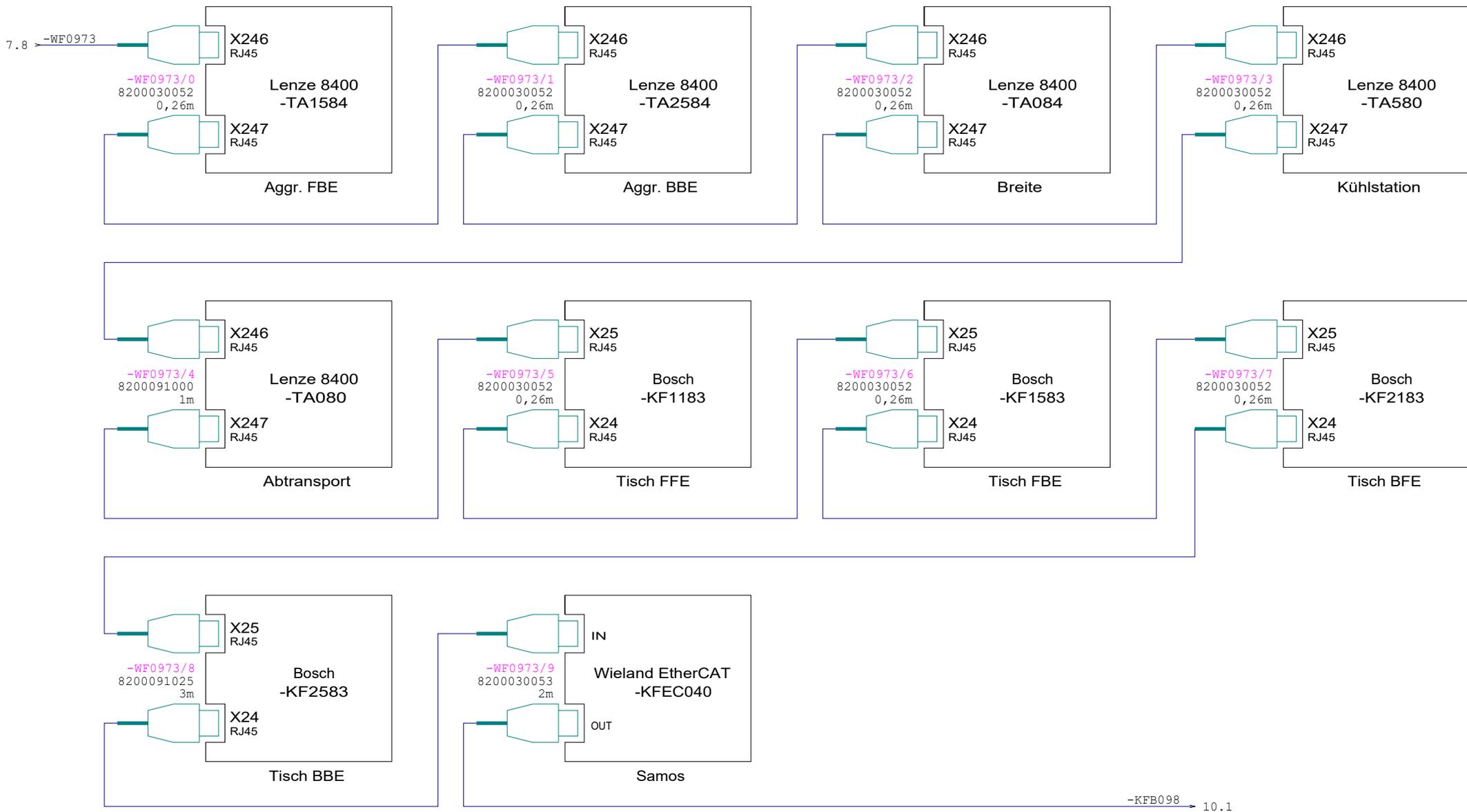
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Feste Seite: links	Plan Nr: SMH-510-4-119_5010000002-0020		Geprüft:	von: 131



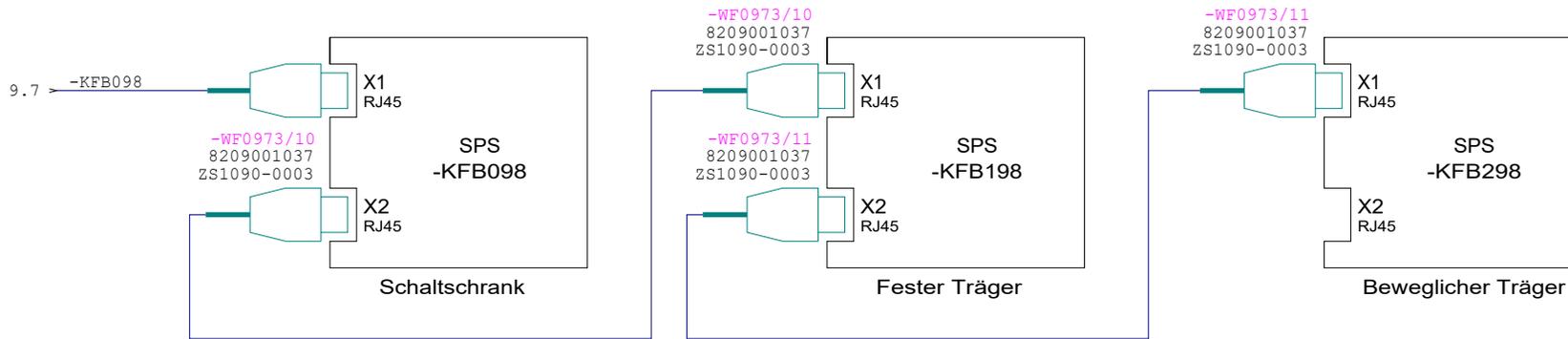
Netzwerk Kabelkreis



Netzwerk Kabelkreis



Netzwerk Kabelkreis



Bildkennzeichen

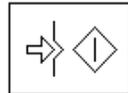
Funktion



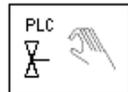
Maschine ein



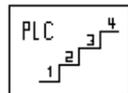
Maschine aus



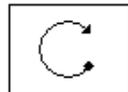
Start/Weiterlauf



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

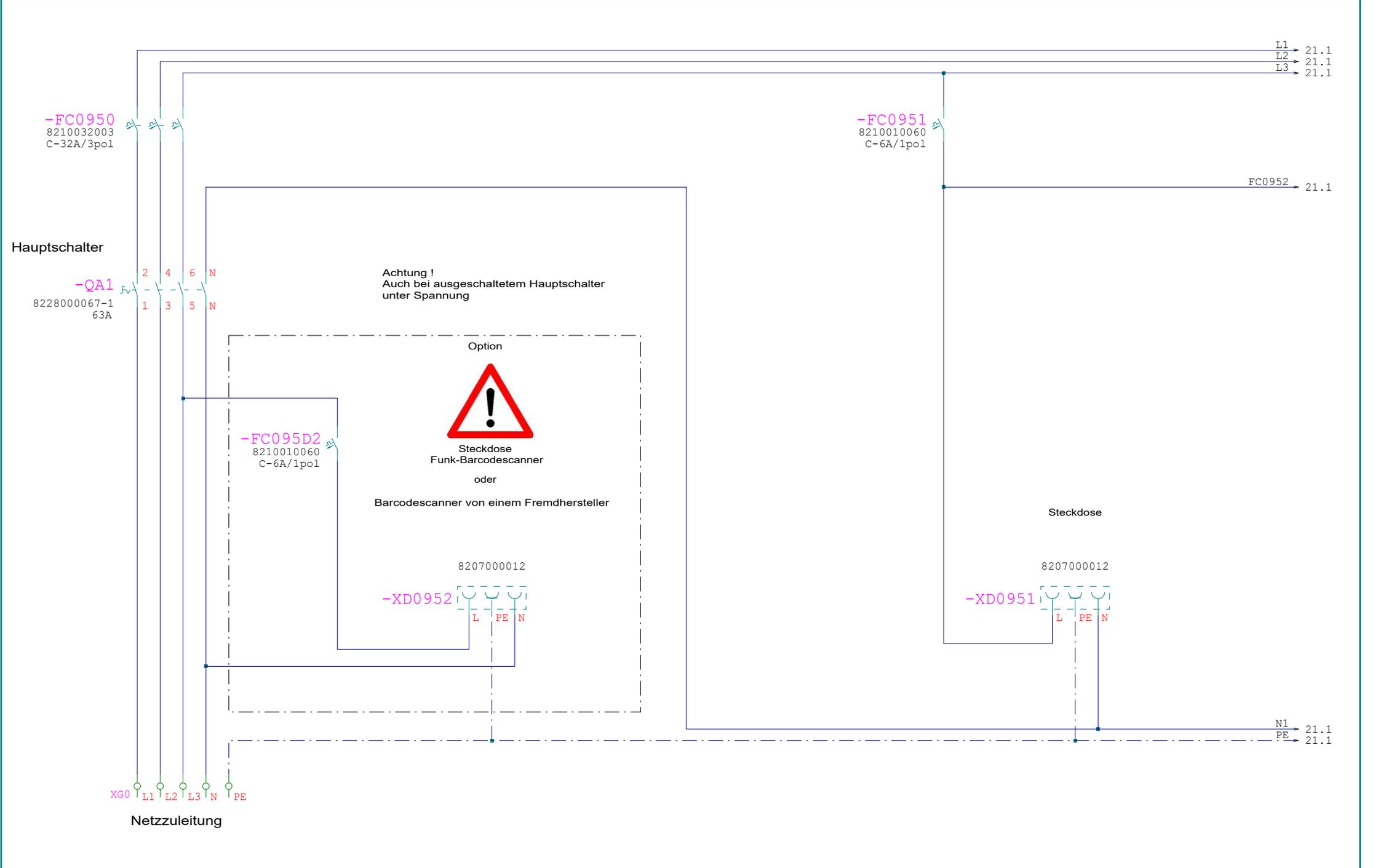
Übersicht SPS-Bauteile im Klemmkasten X B

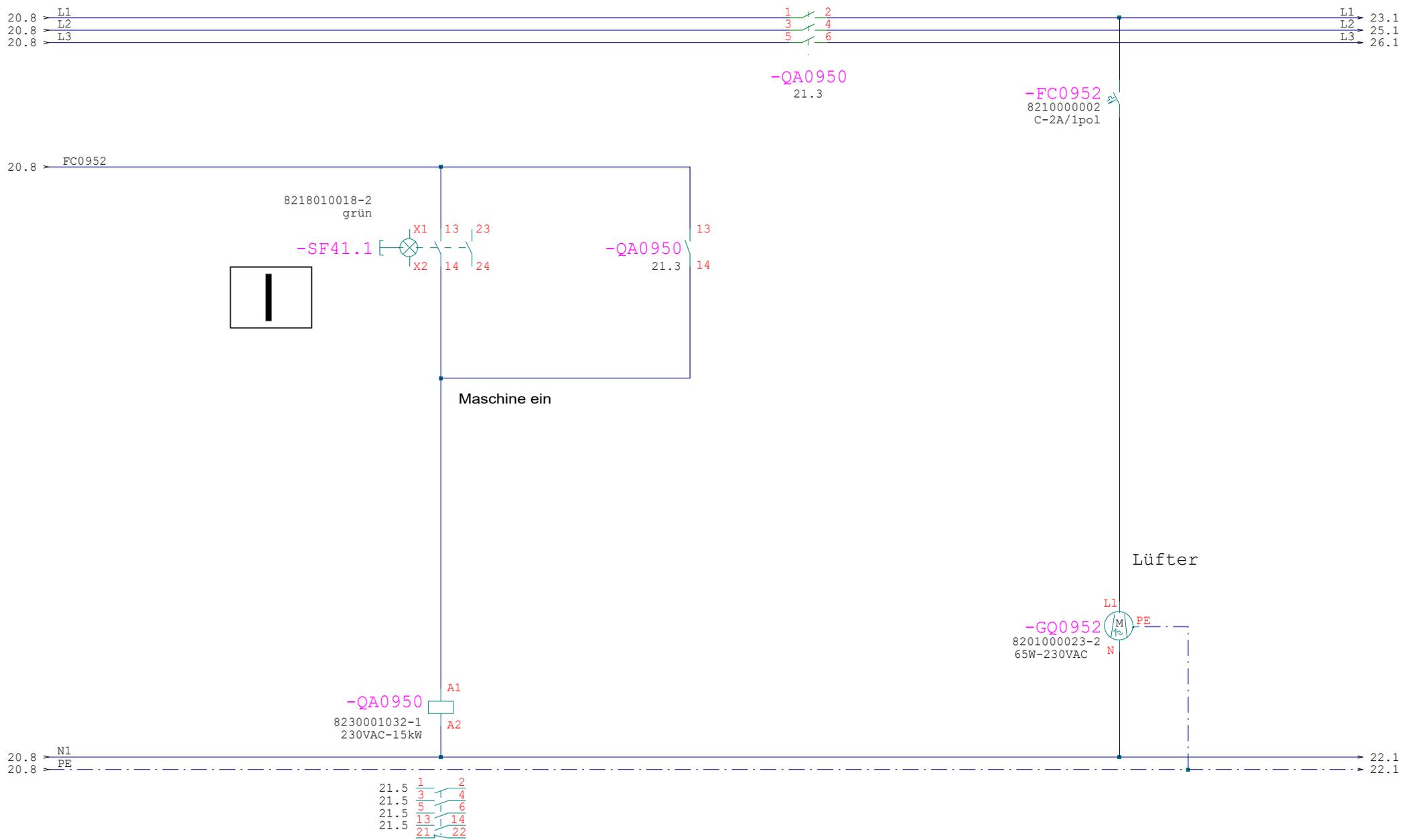
Typ	Pin	Adr	Pfad	Funktion
<div style="border: 1px solid black; display: inline-block; padding: 2px;">8200032105</div> Beckhoff IO-Link 4xIN -KFIO290	1	I290.1	89.3	-KH21.1 Ventilplatte BFE
	2	+24V		
	10	0V		
	3	I290.2	90.3	-KH21.2 Ventilplatte BFE
	4	+24V		
	12	0V		
	5	I290.3	92.3	-KH25.1 Ventilplatte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

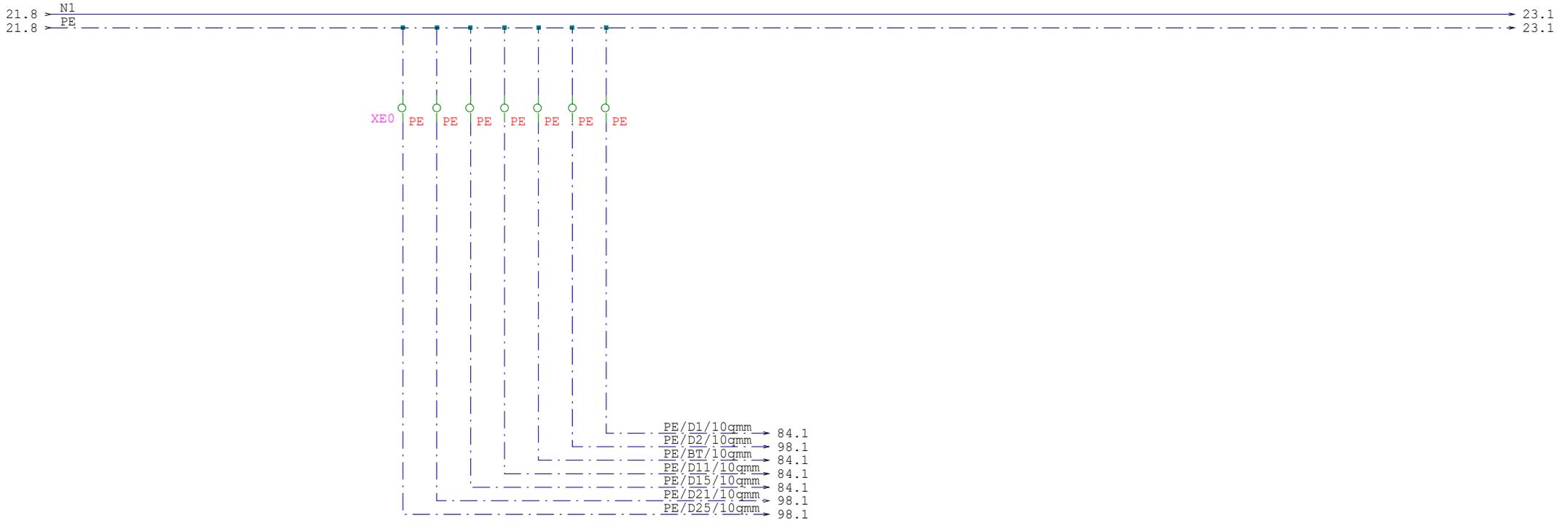
IO-Link

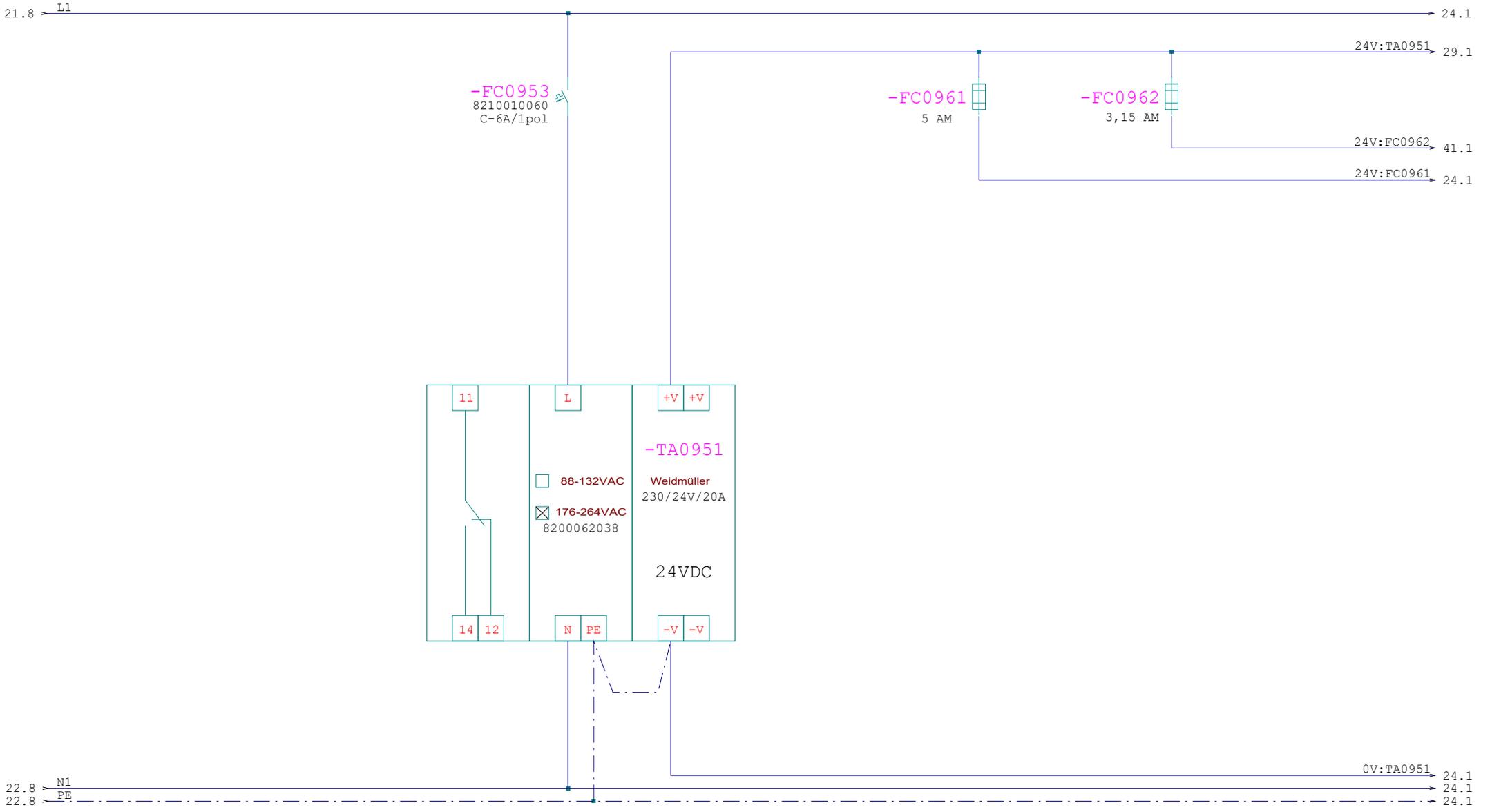
AS = Arbeitsstellung

GS = Grundstellung

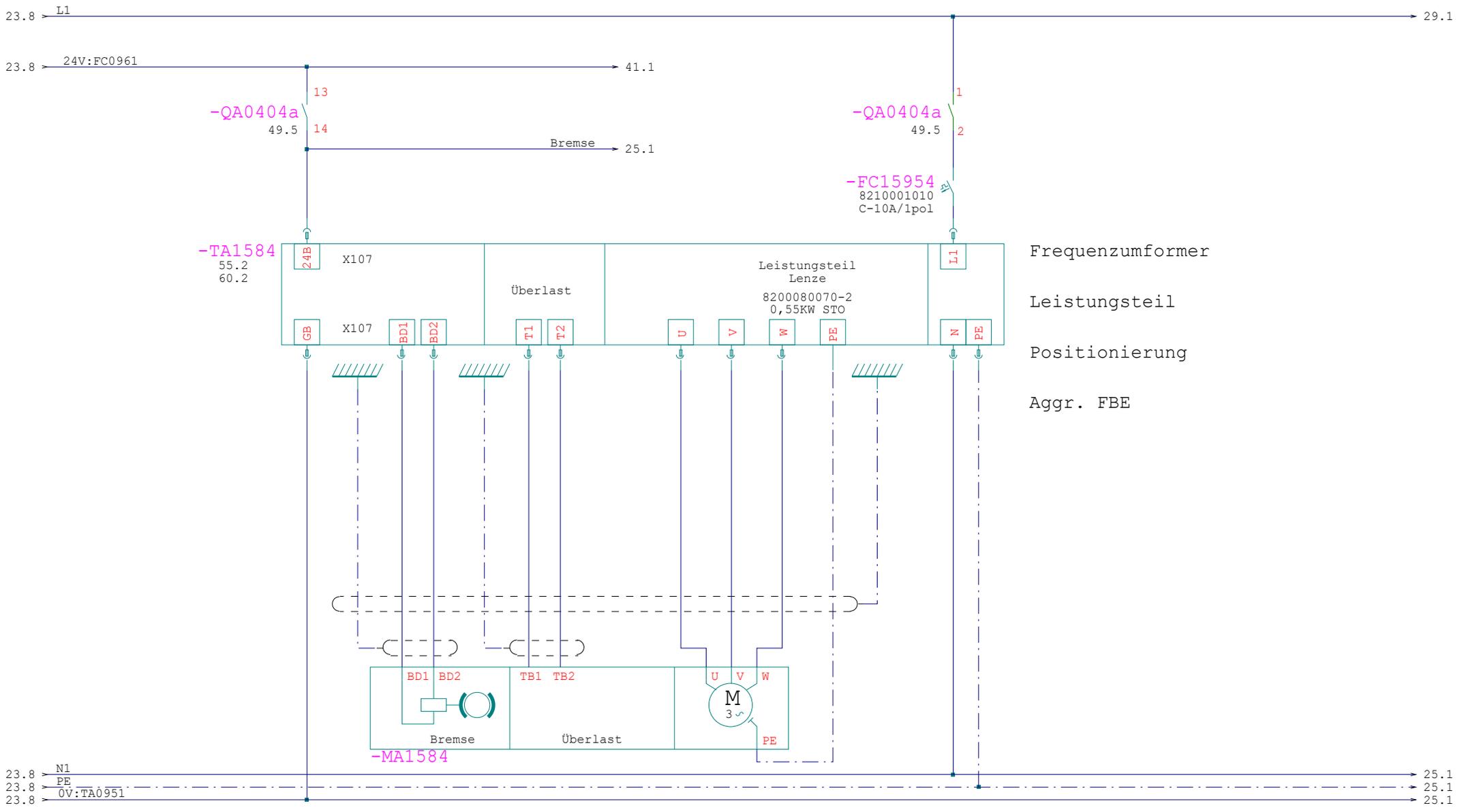


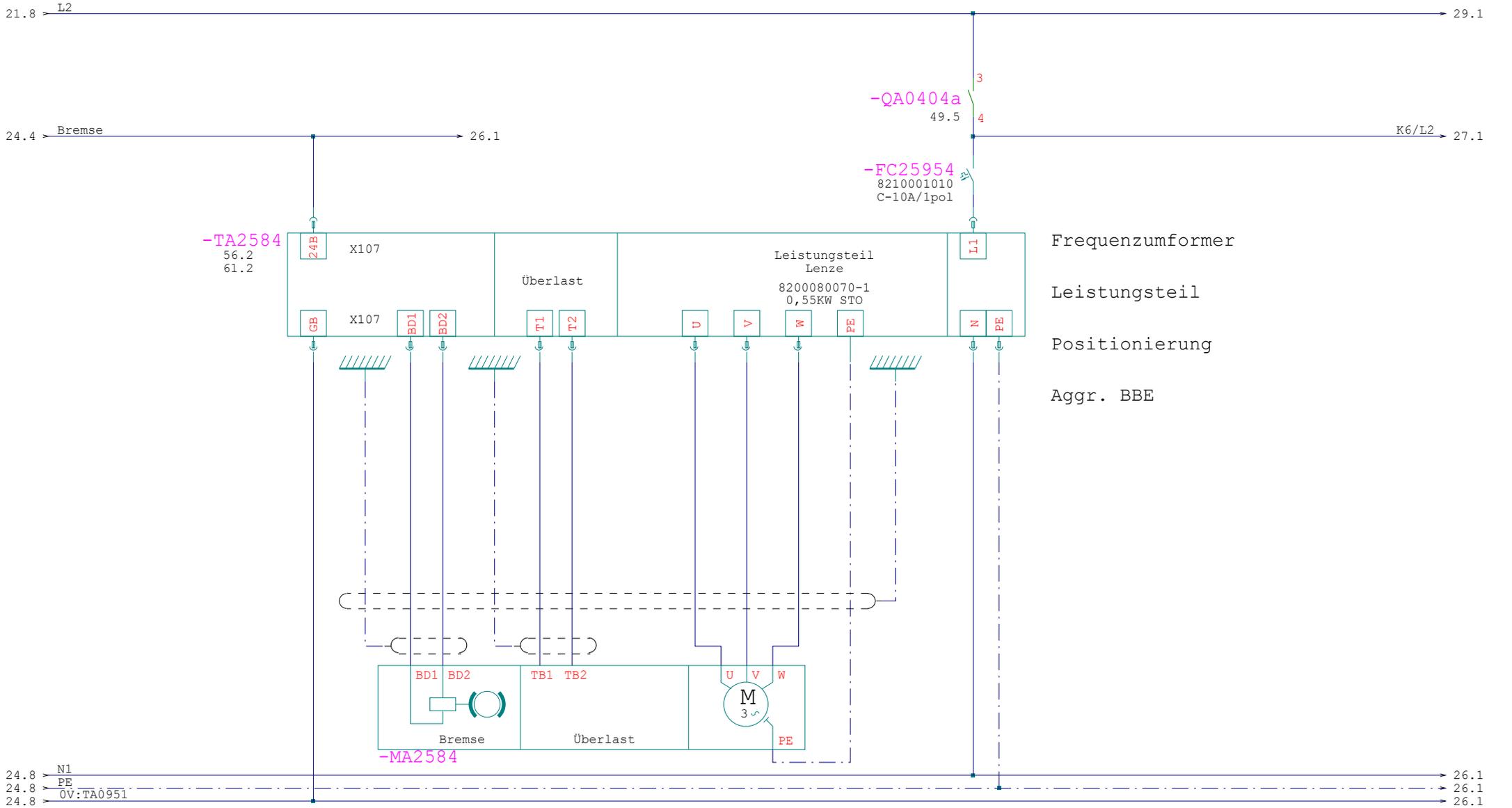


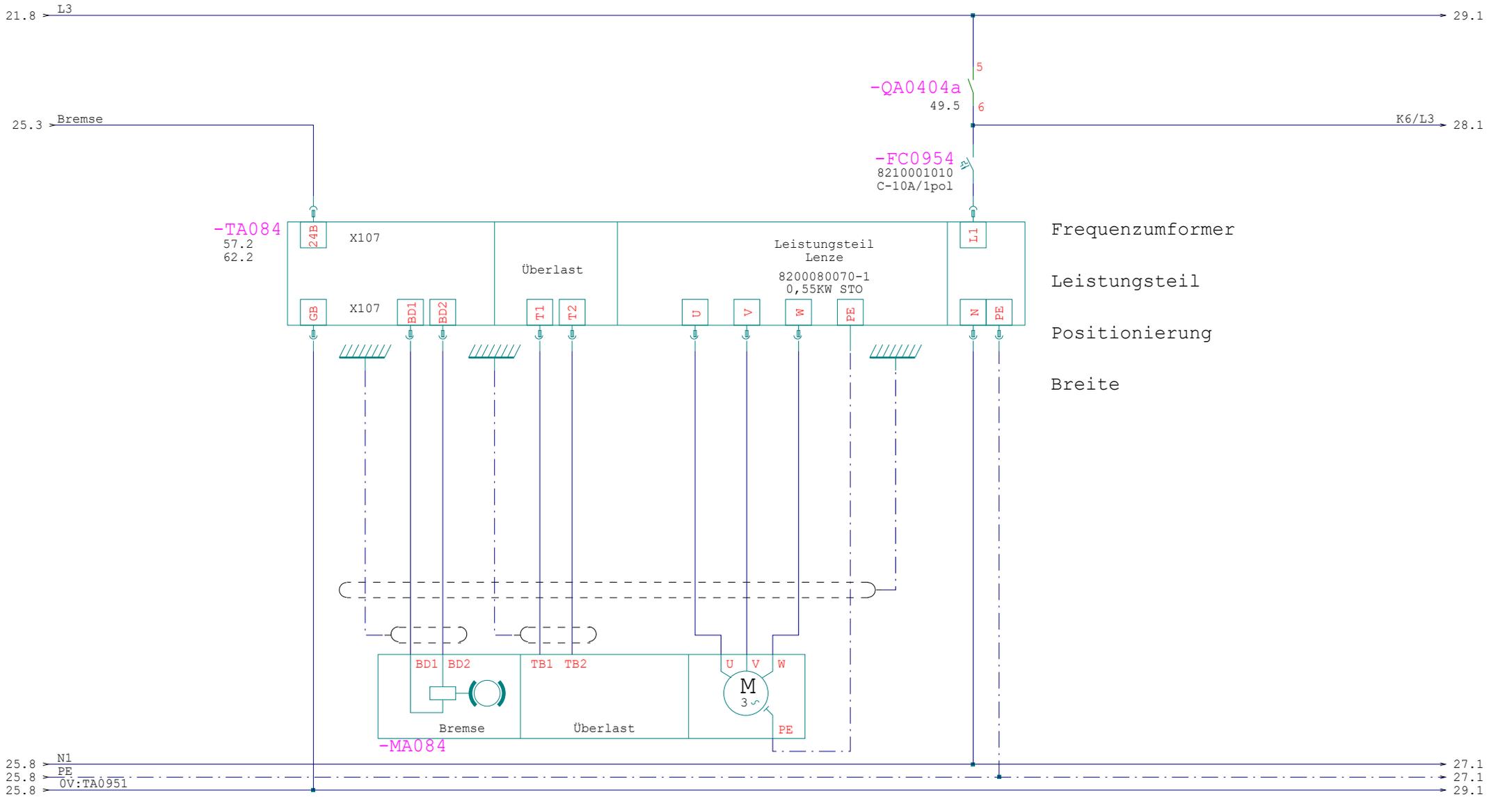


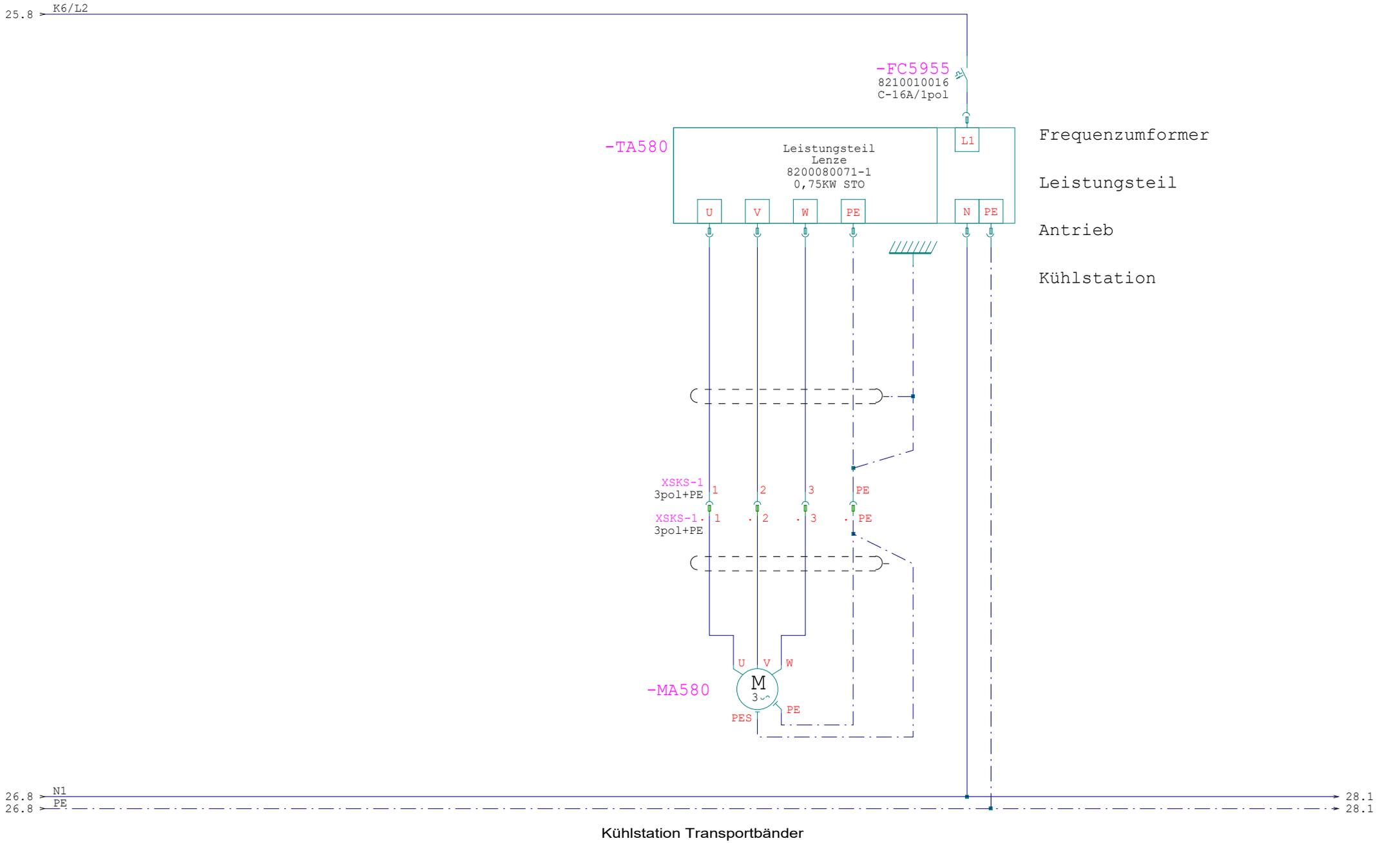


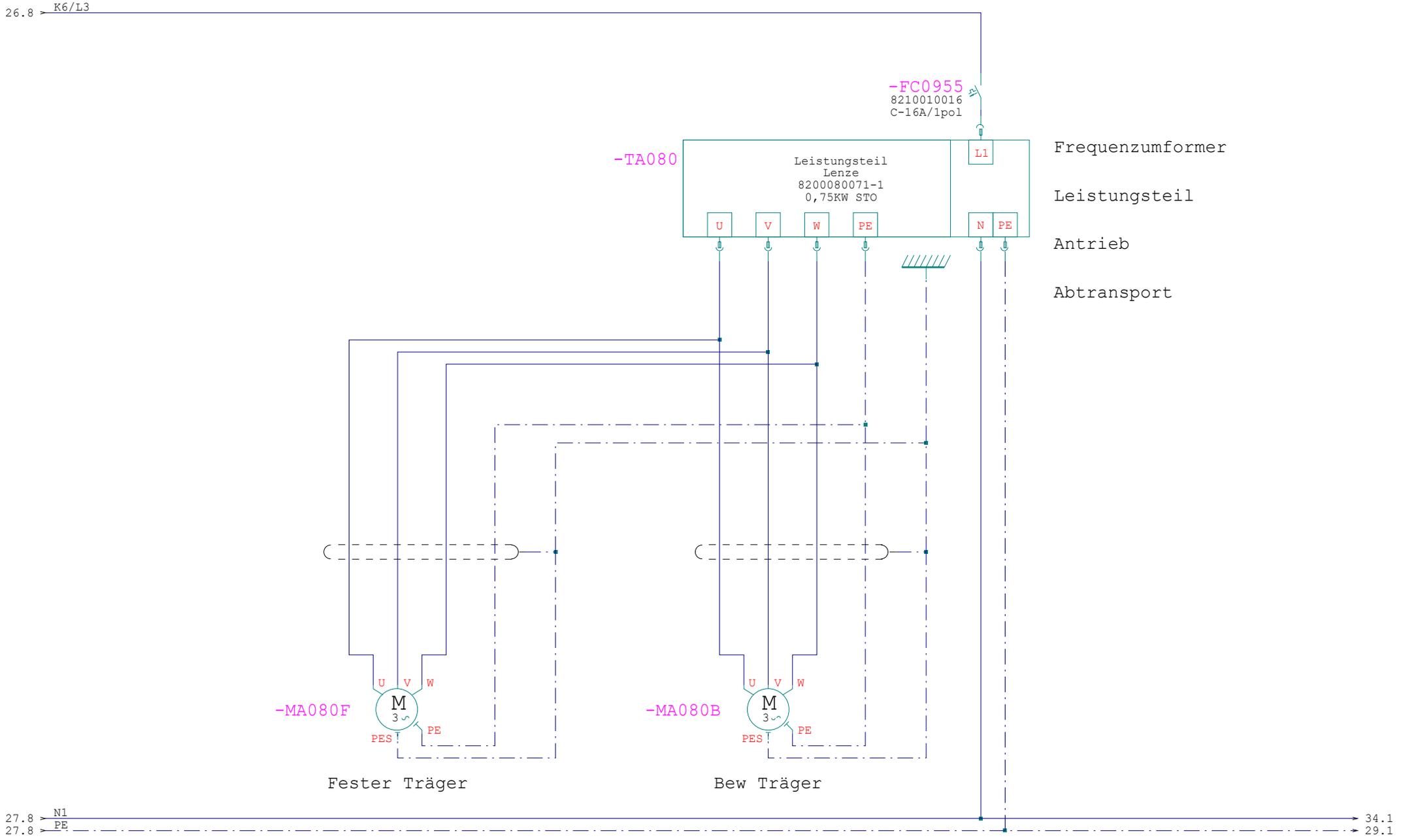
Netzteil allgemein

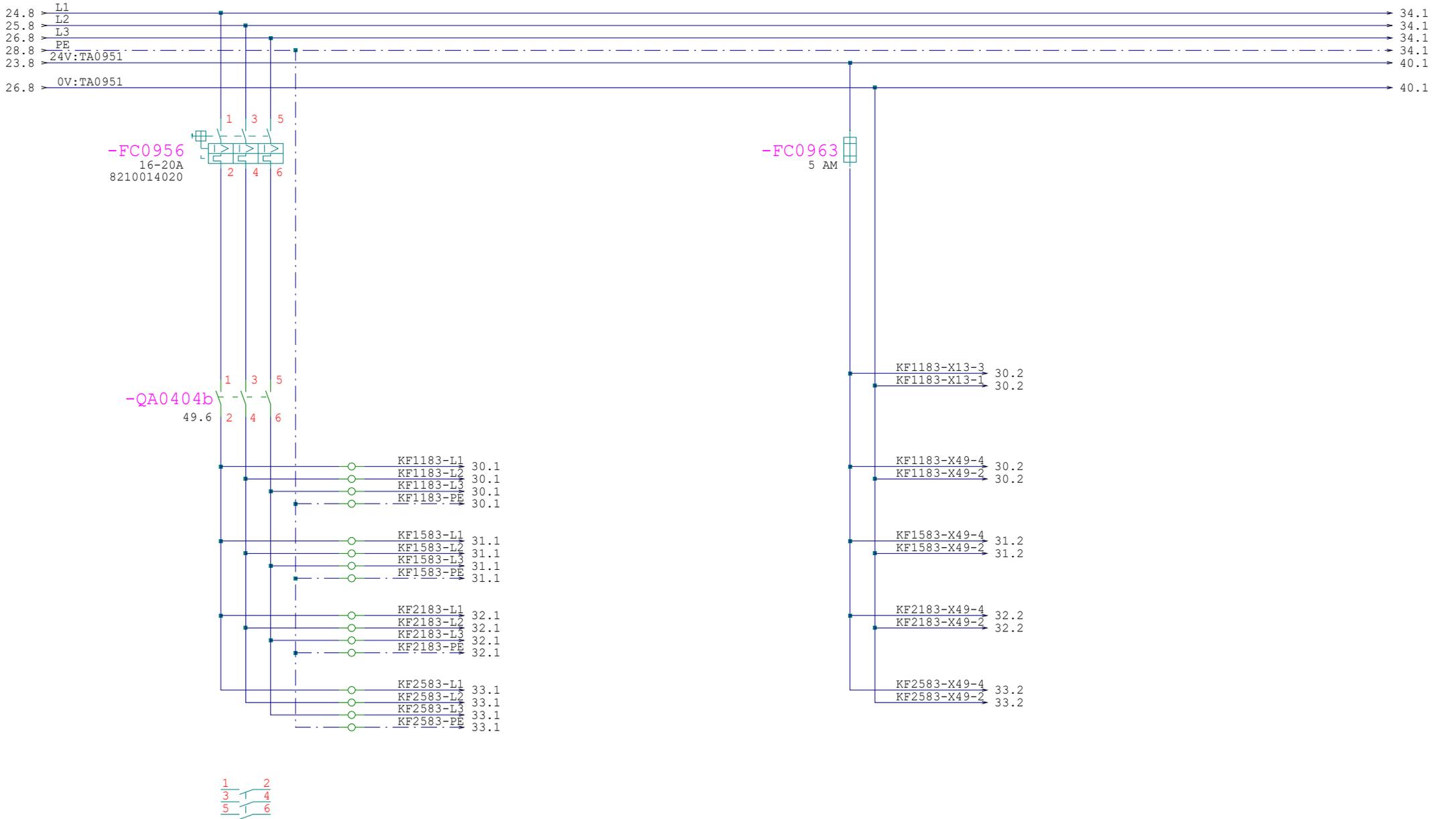




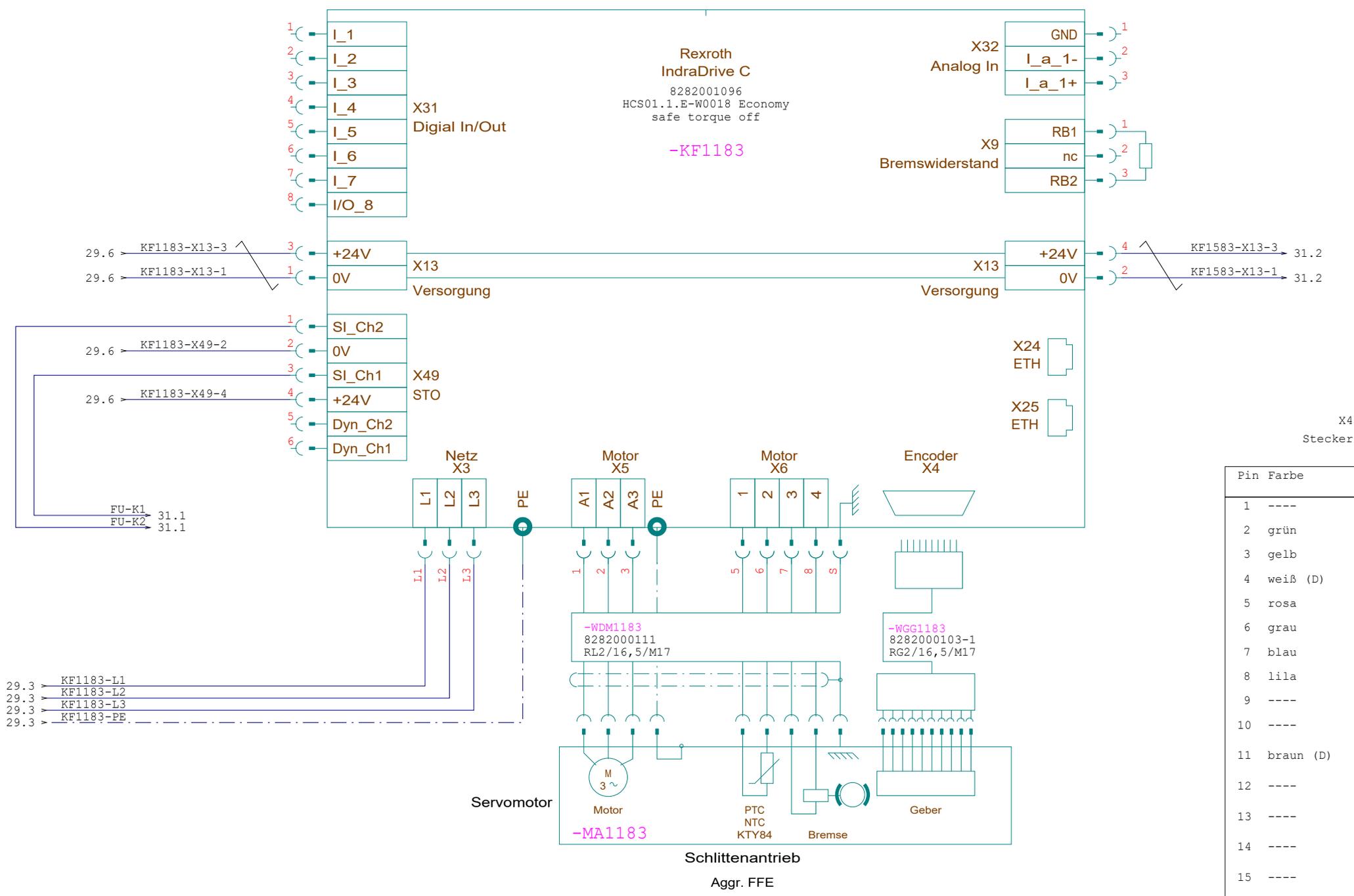




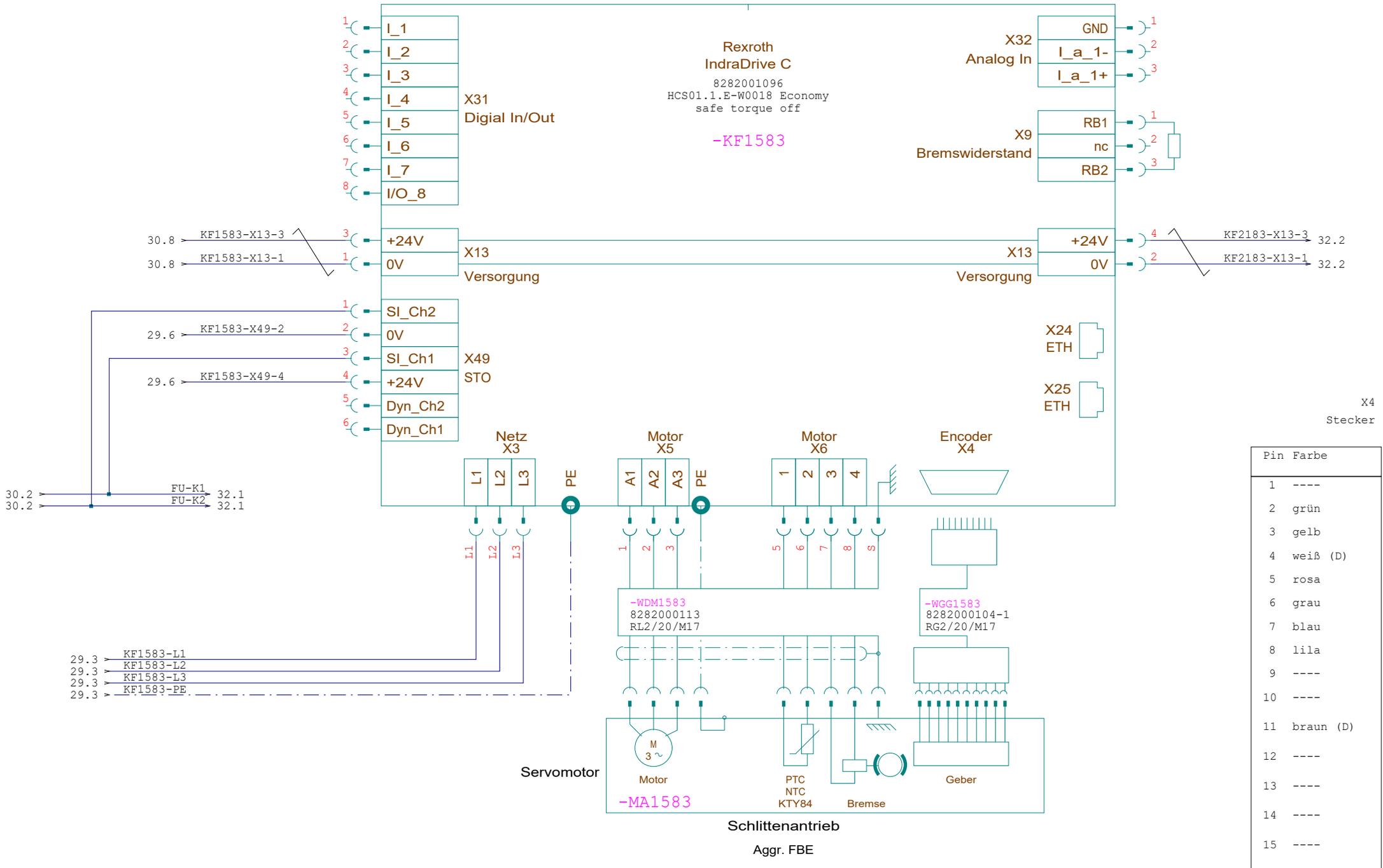


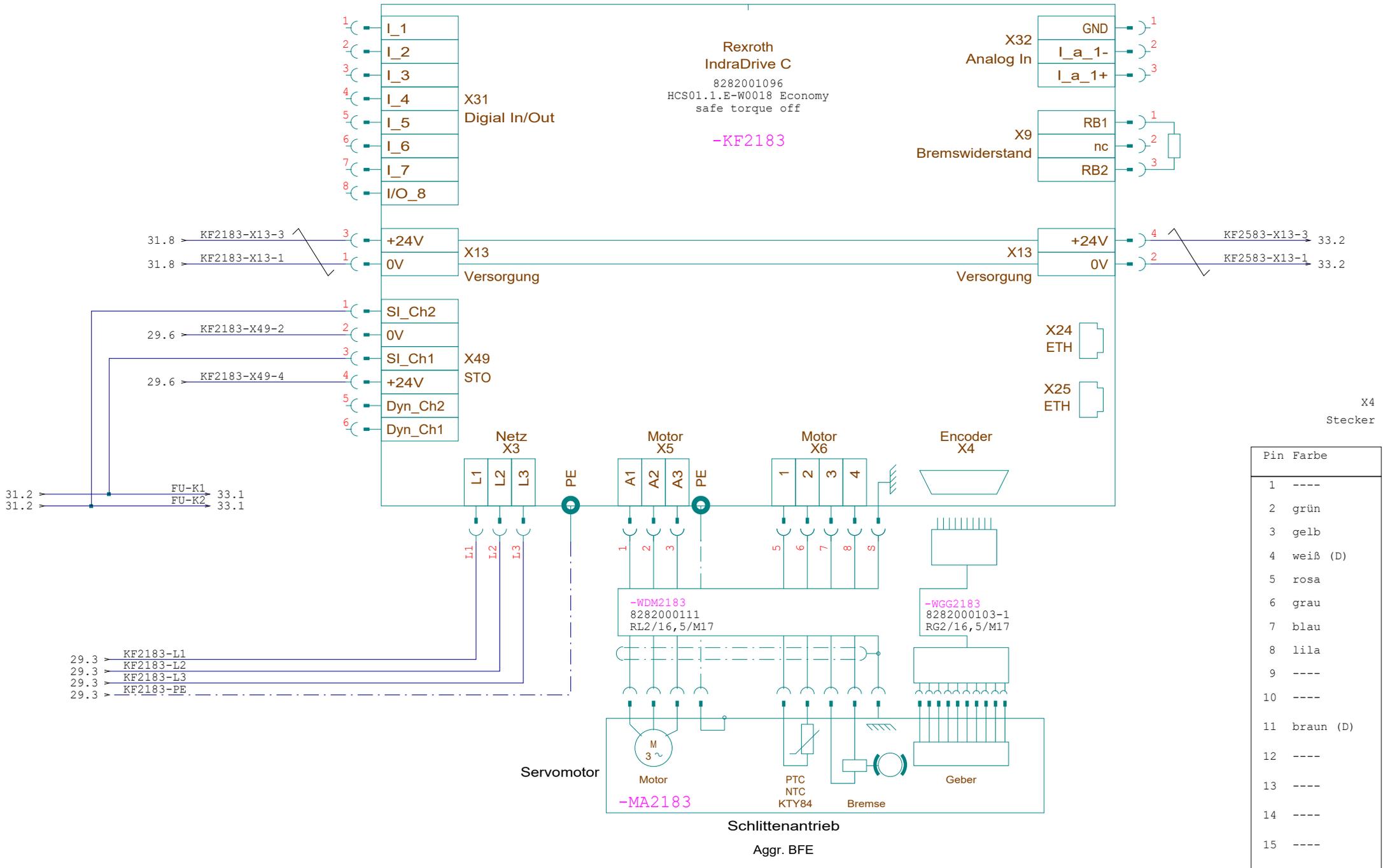


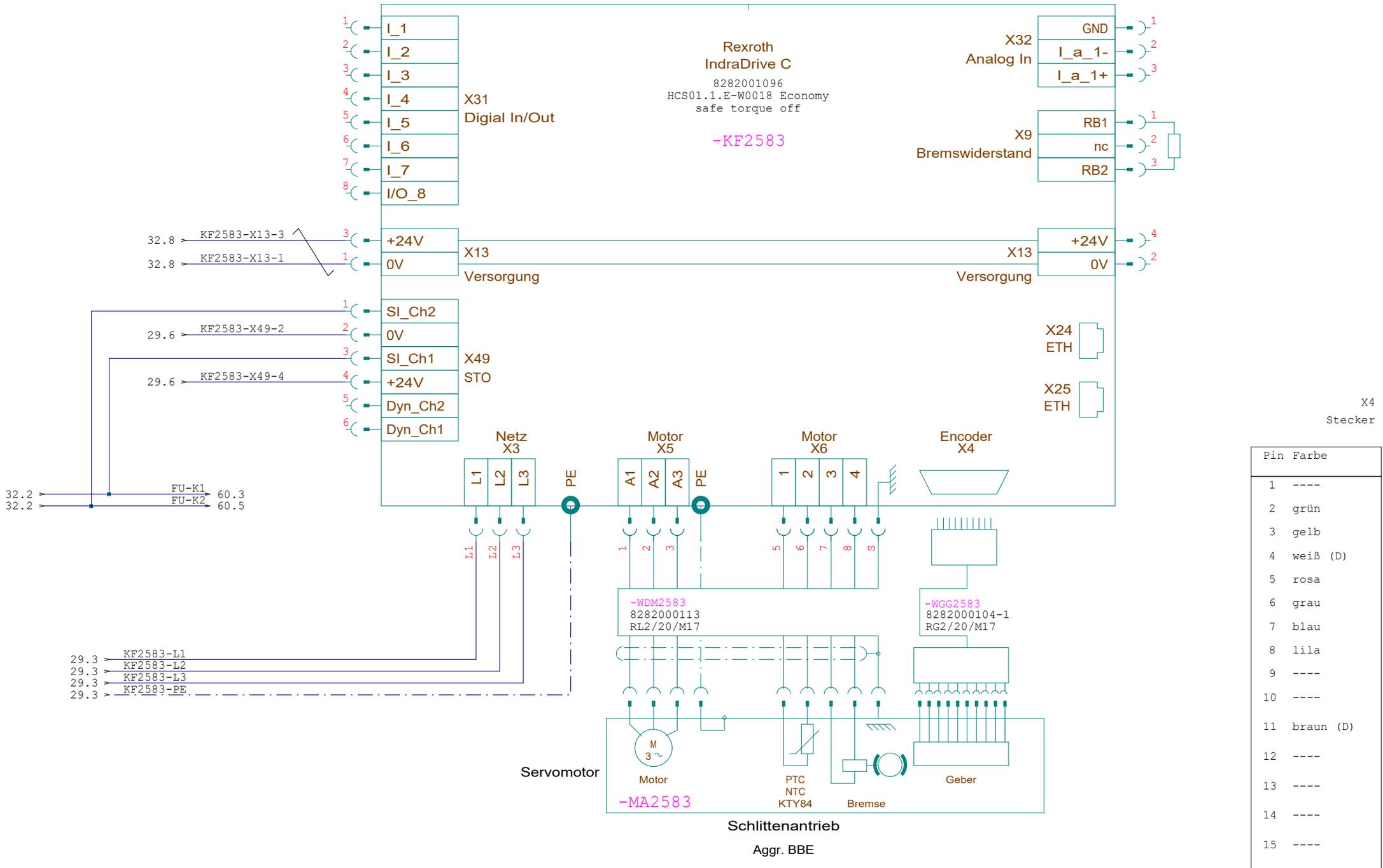
Spannungsversorgung
 zu den Servoreglern

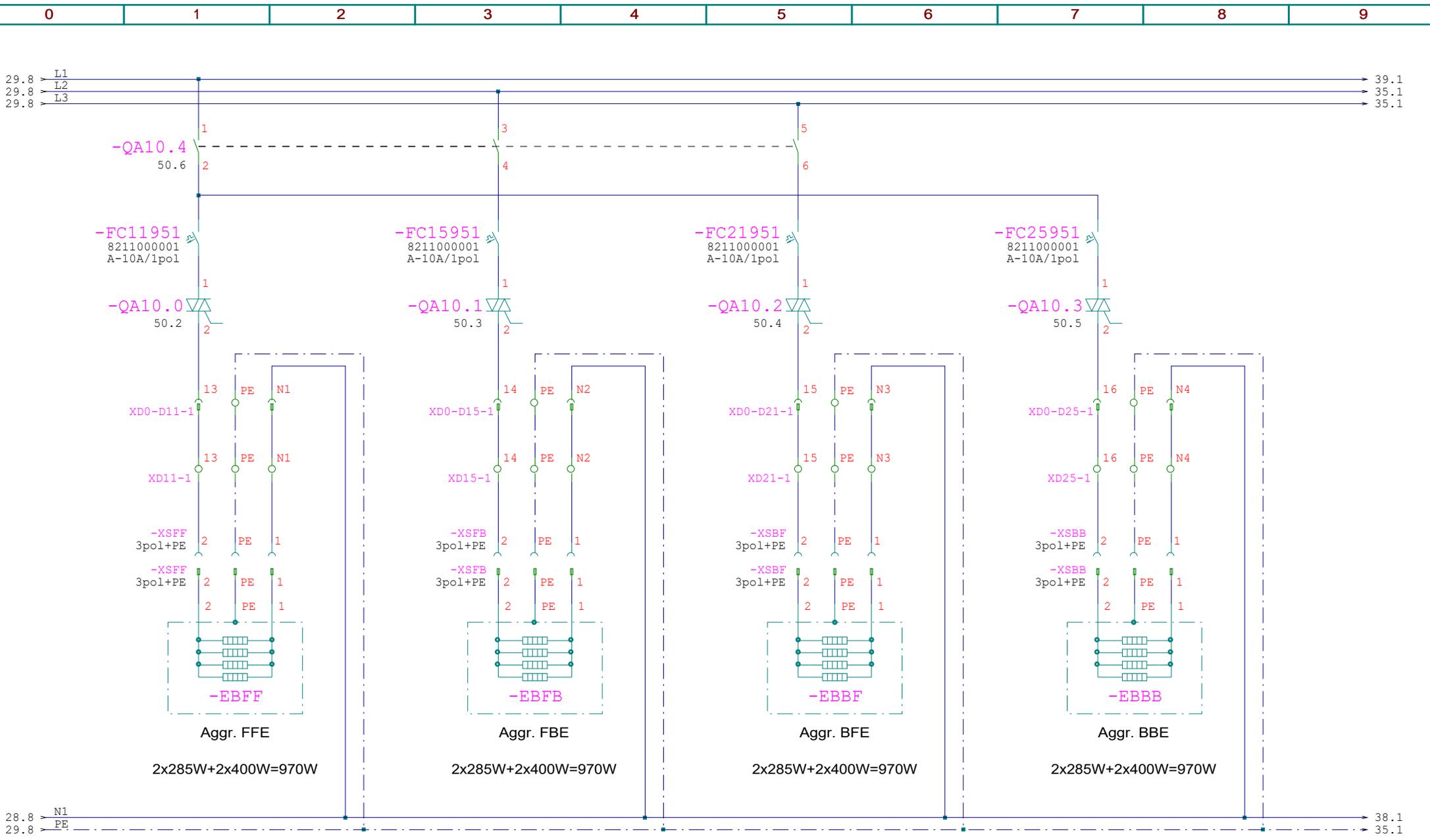


Pin	Farbe
1	----
2	grün
3	gelb
4	weiß (D)
5	rosa
6	grau
7	blau
8	lila
9	----
10	----
11	braun (D)
12	----
13	----
14	----
15	----



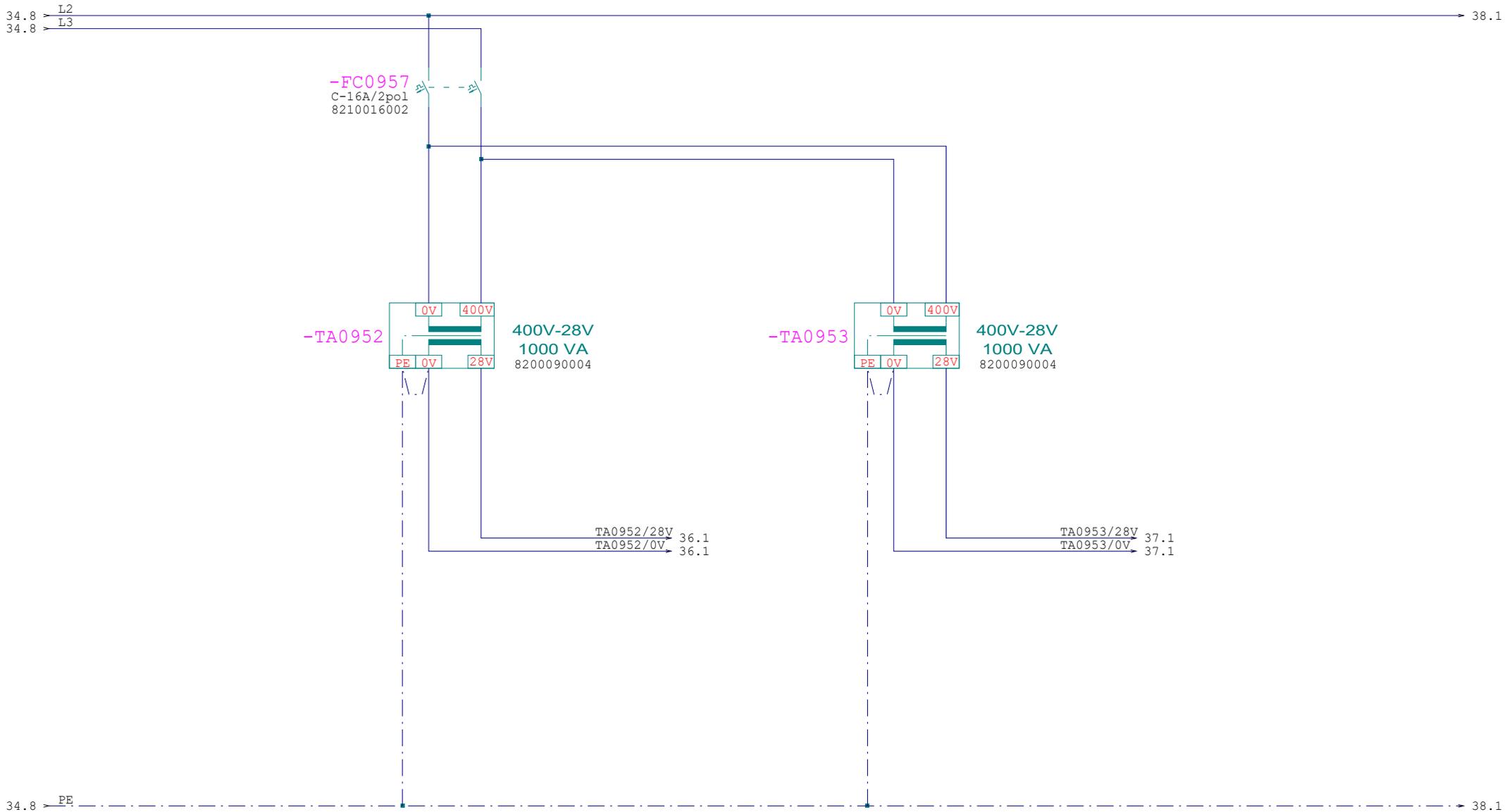






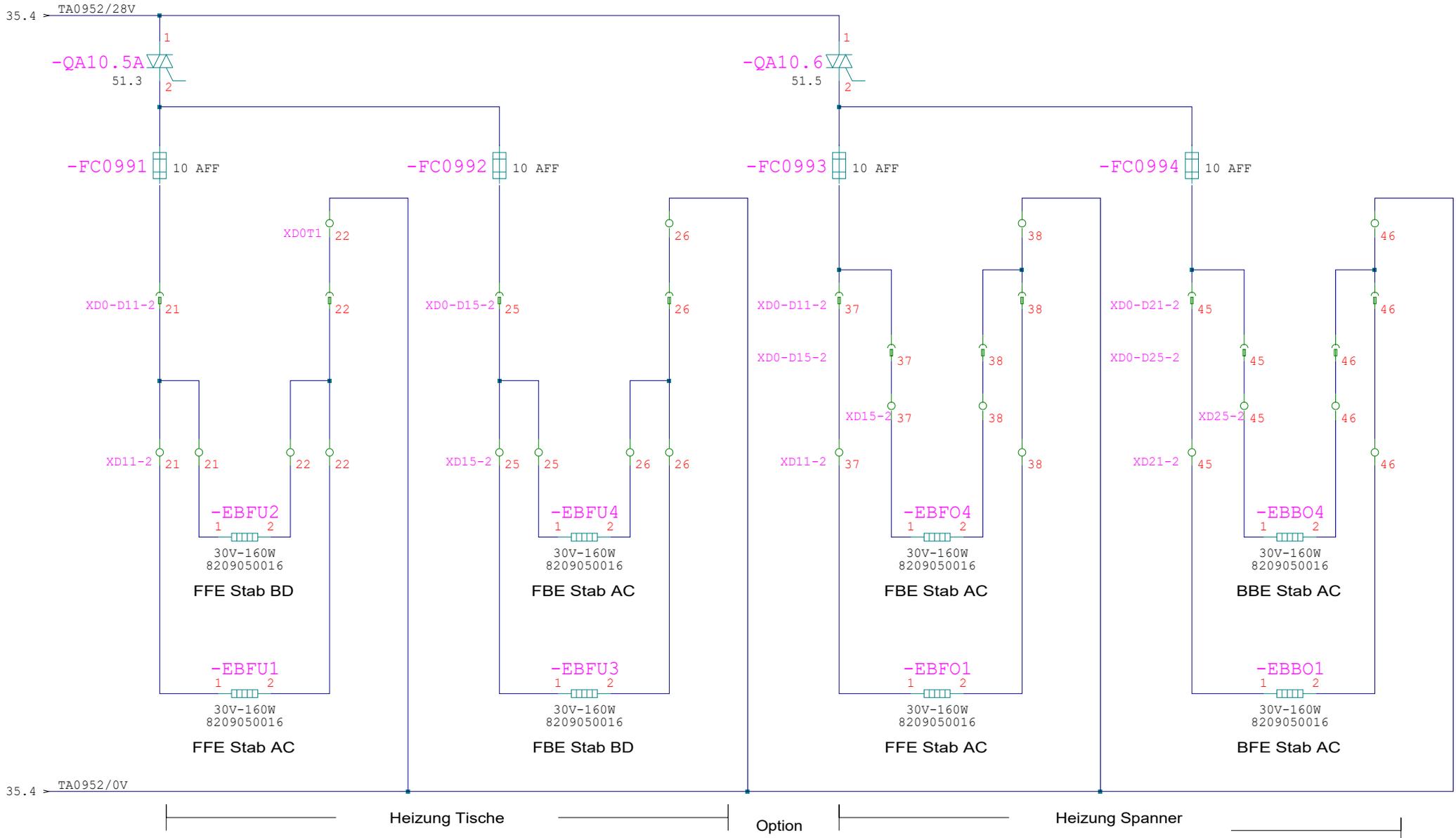
Heizspiegel

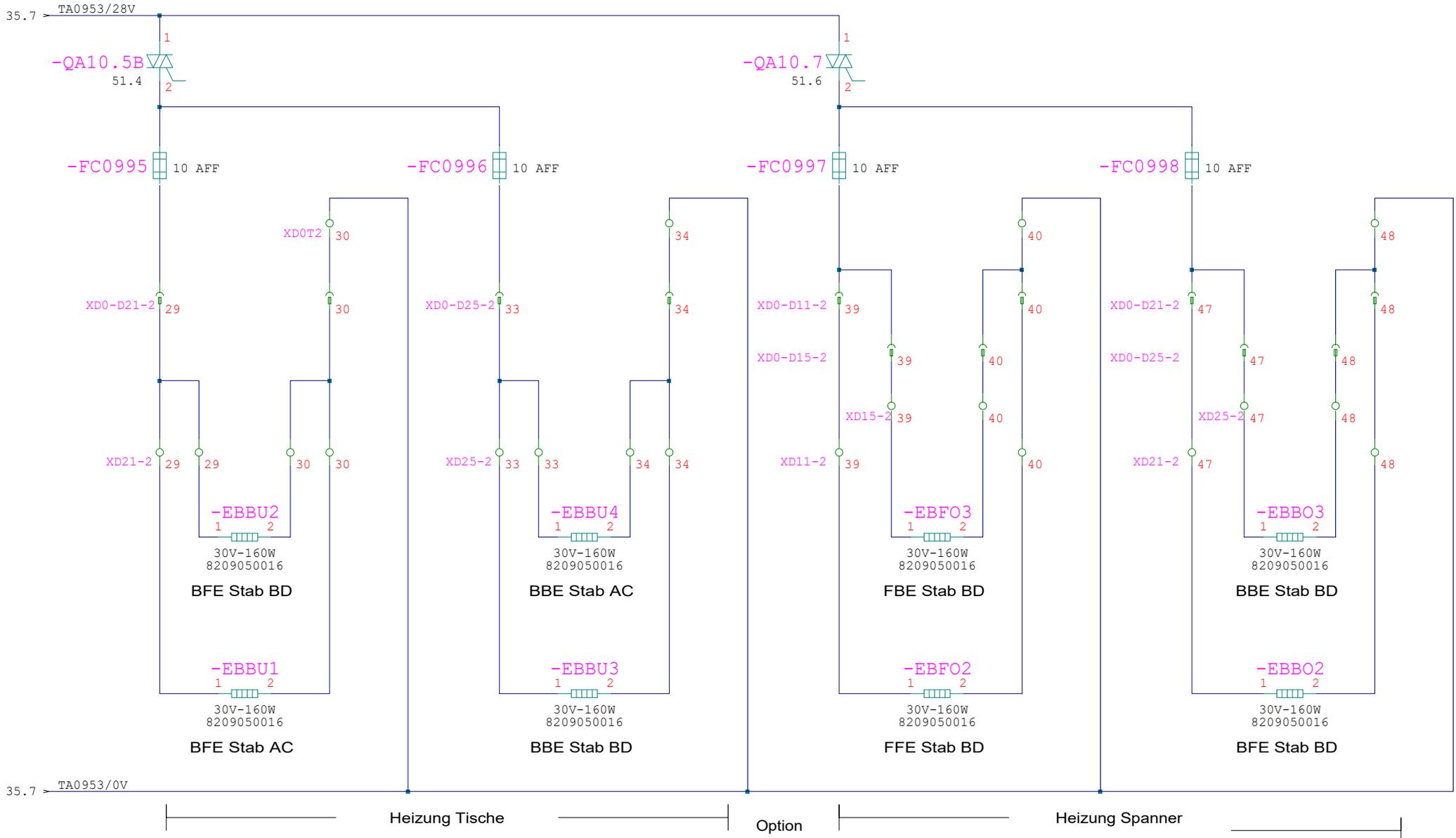
Bearb: Justus	Typ: SMH-510-4	ROTOX [®]	Datum: 14.10.2020	Blatt: 34
Feste Seite: links	Plan Nr: SMH-510-4-119_5010000002-0020		Geprüft:	von: 131

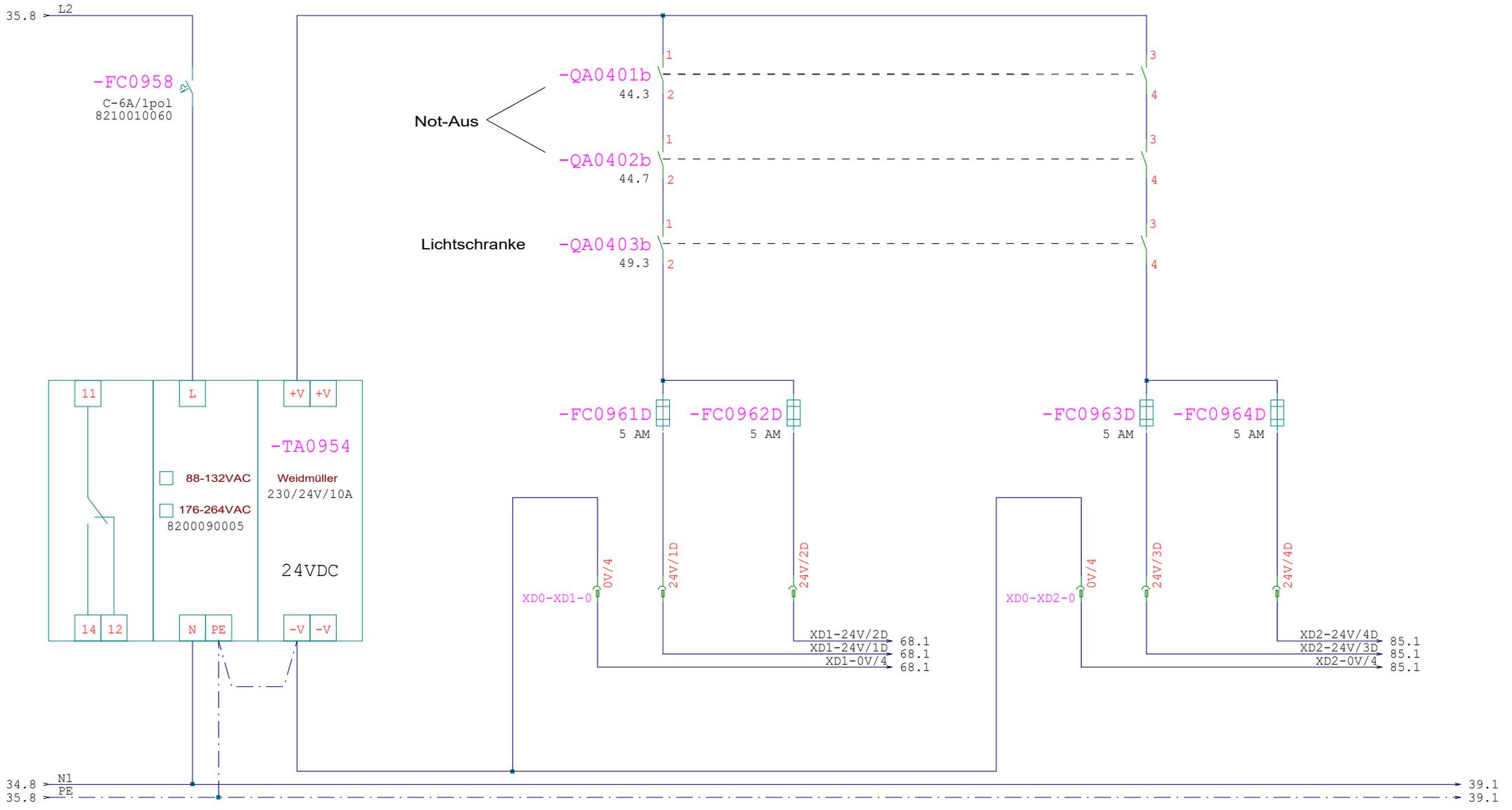


Trafos für Messerheizung

Option

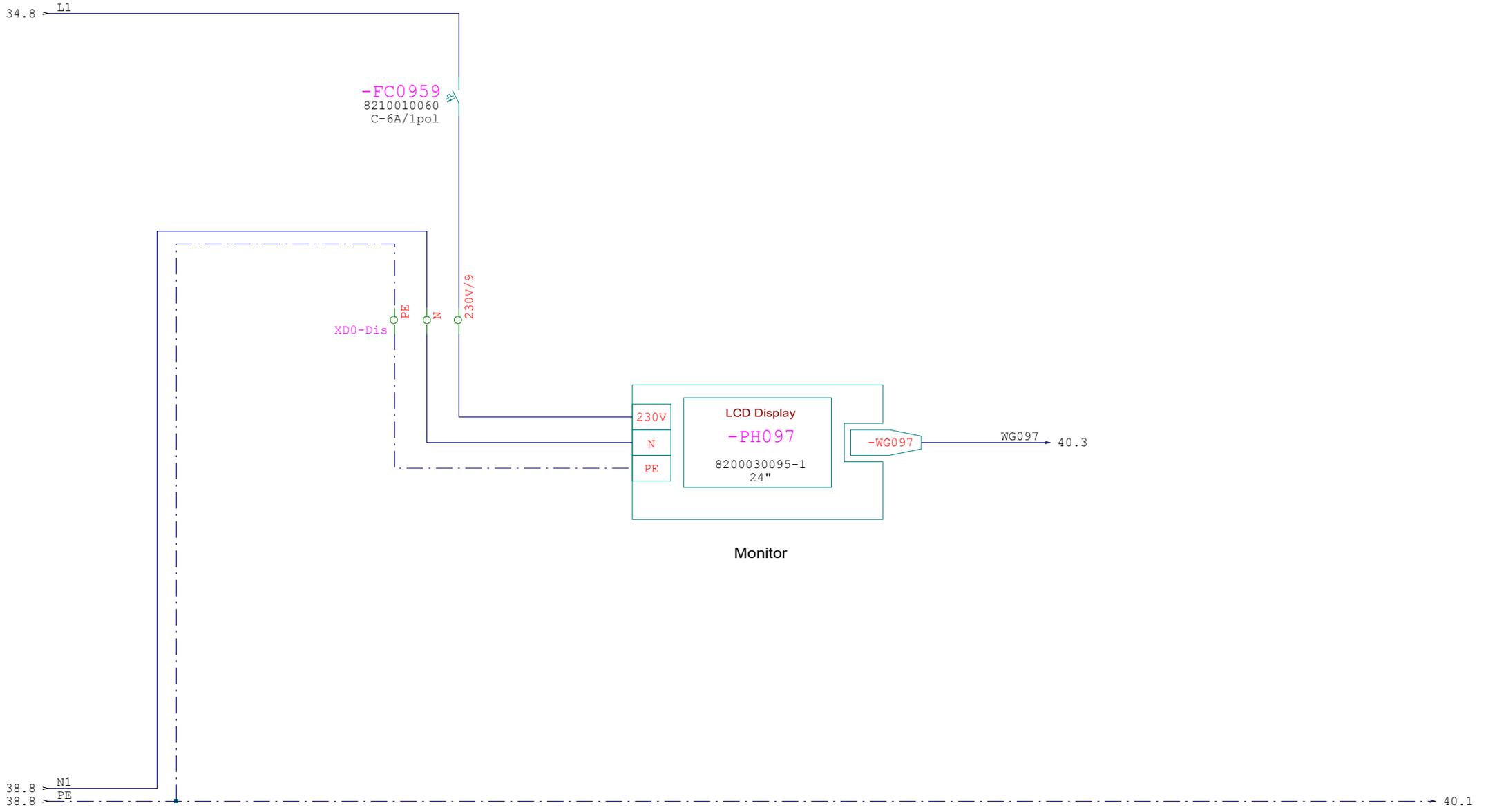


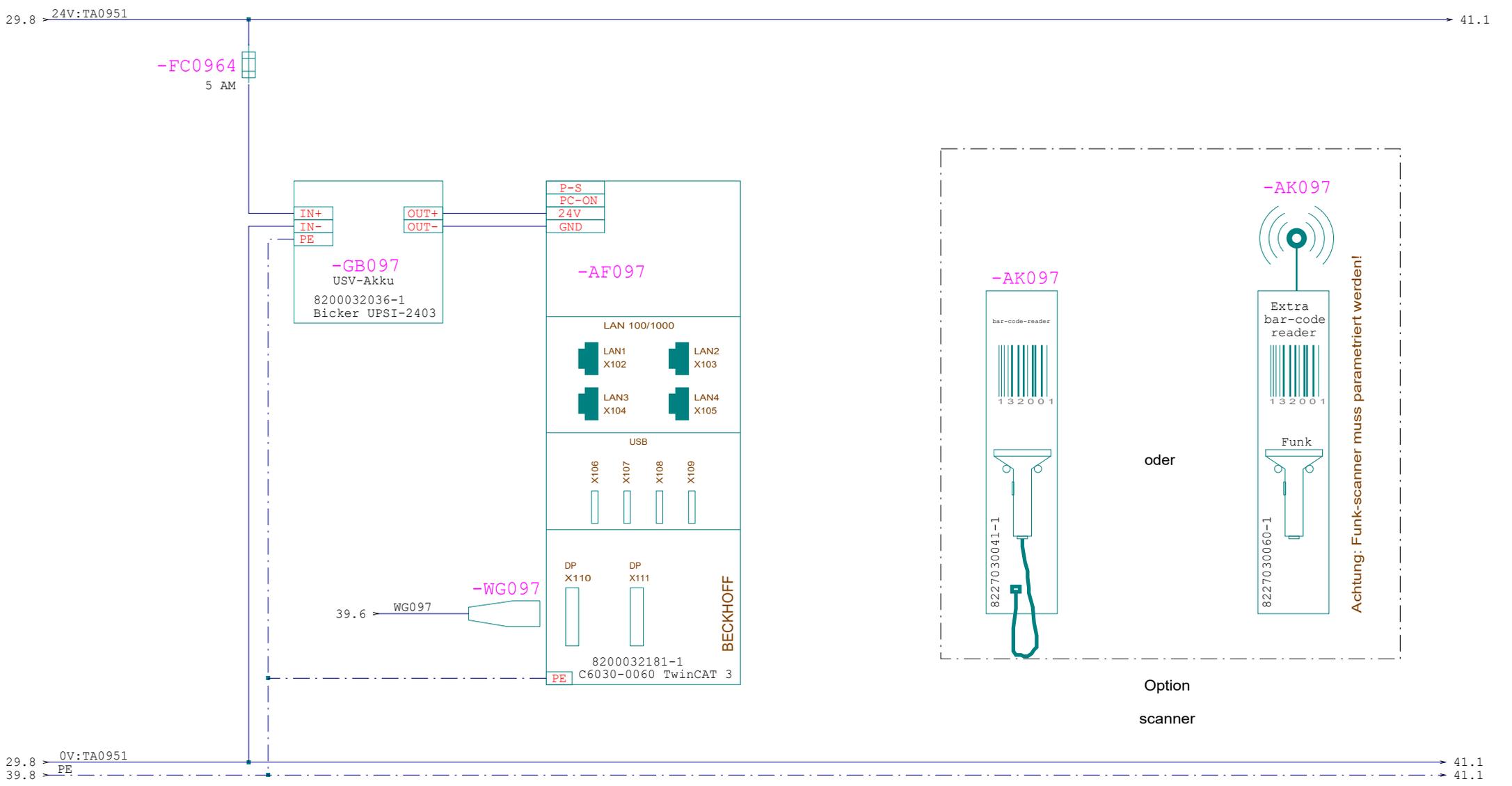


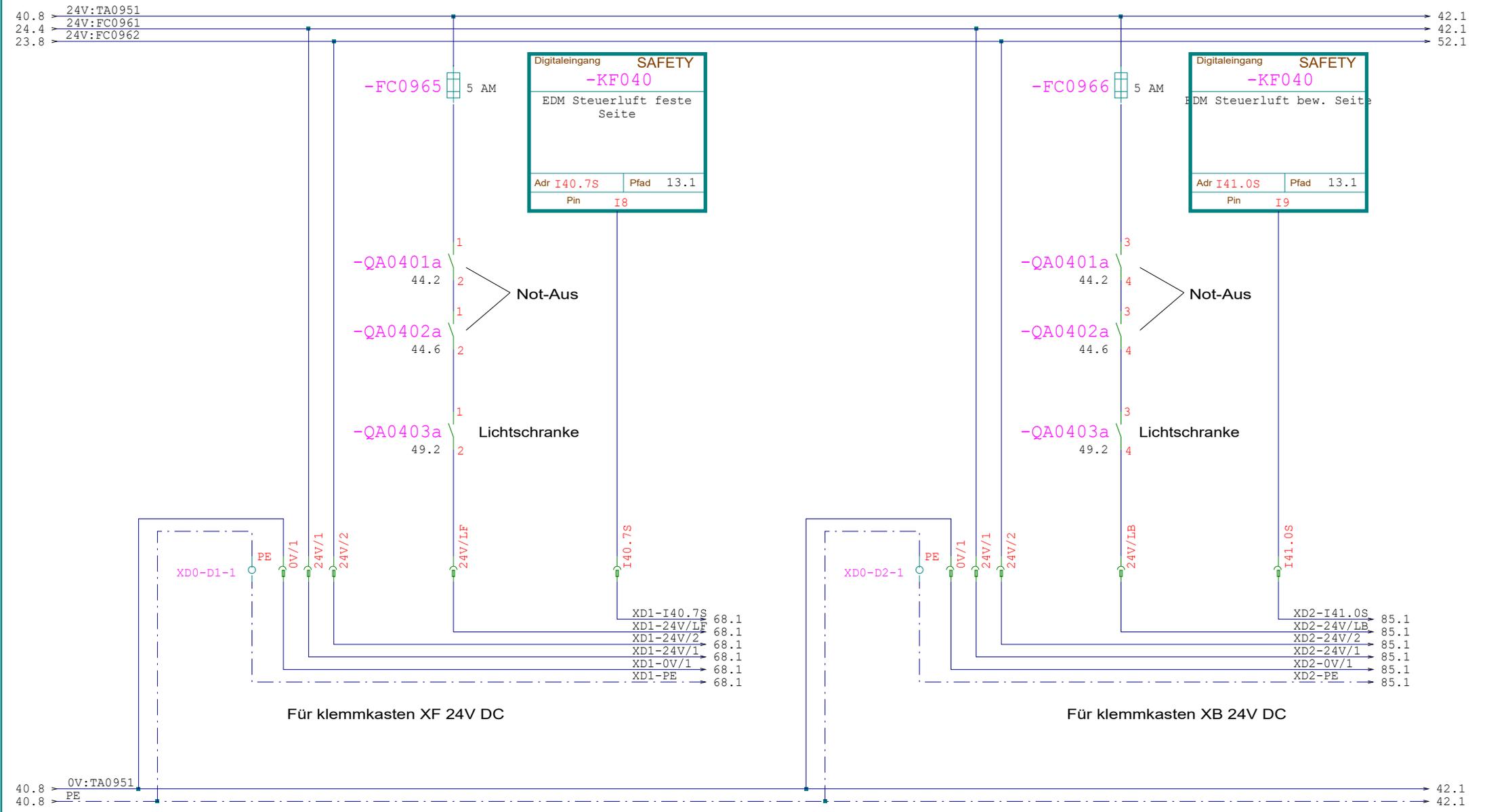


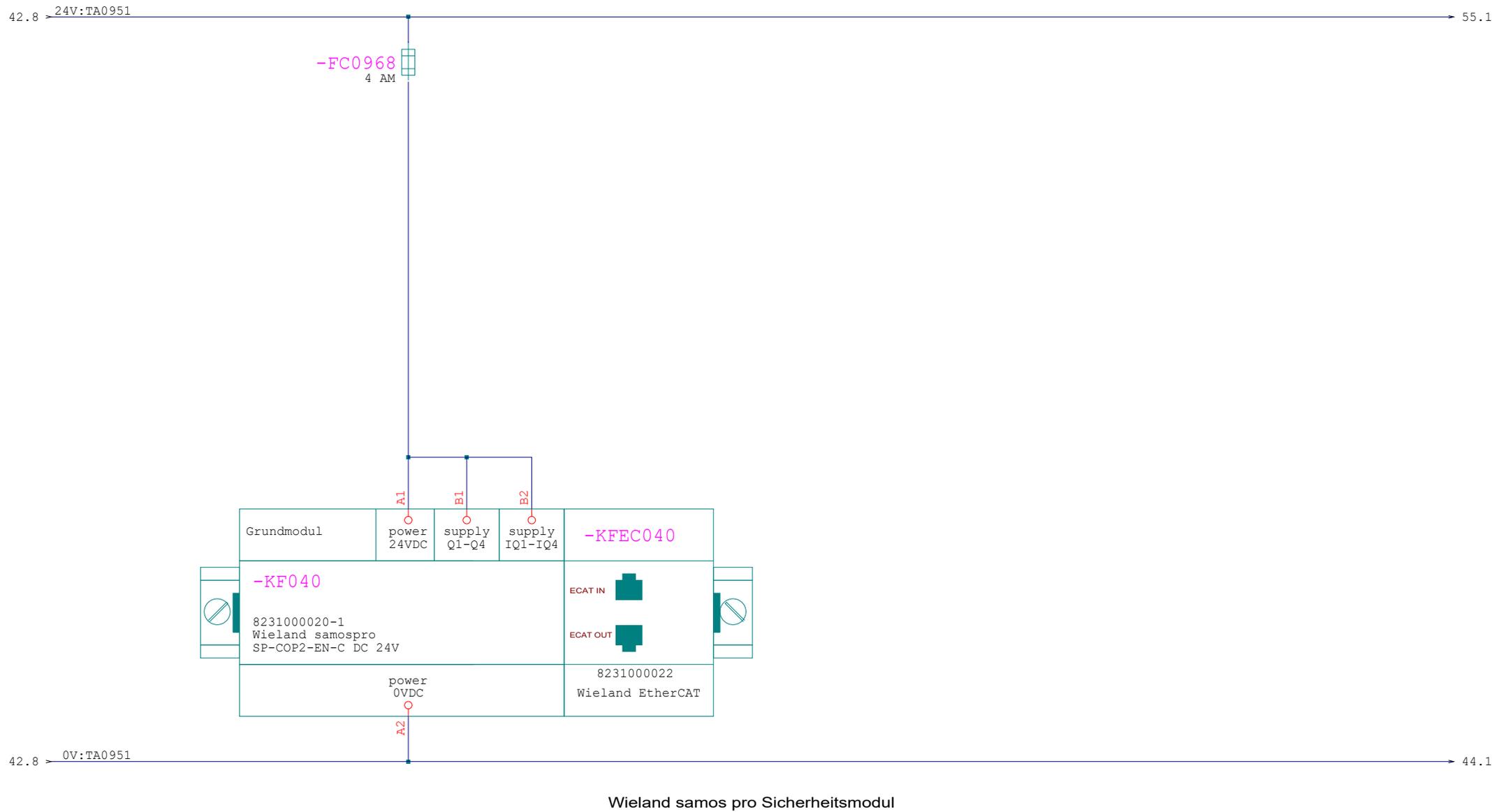
Dichtungsformer Netzteil

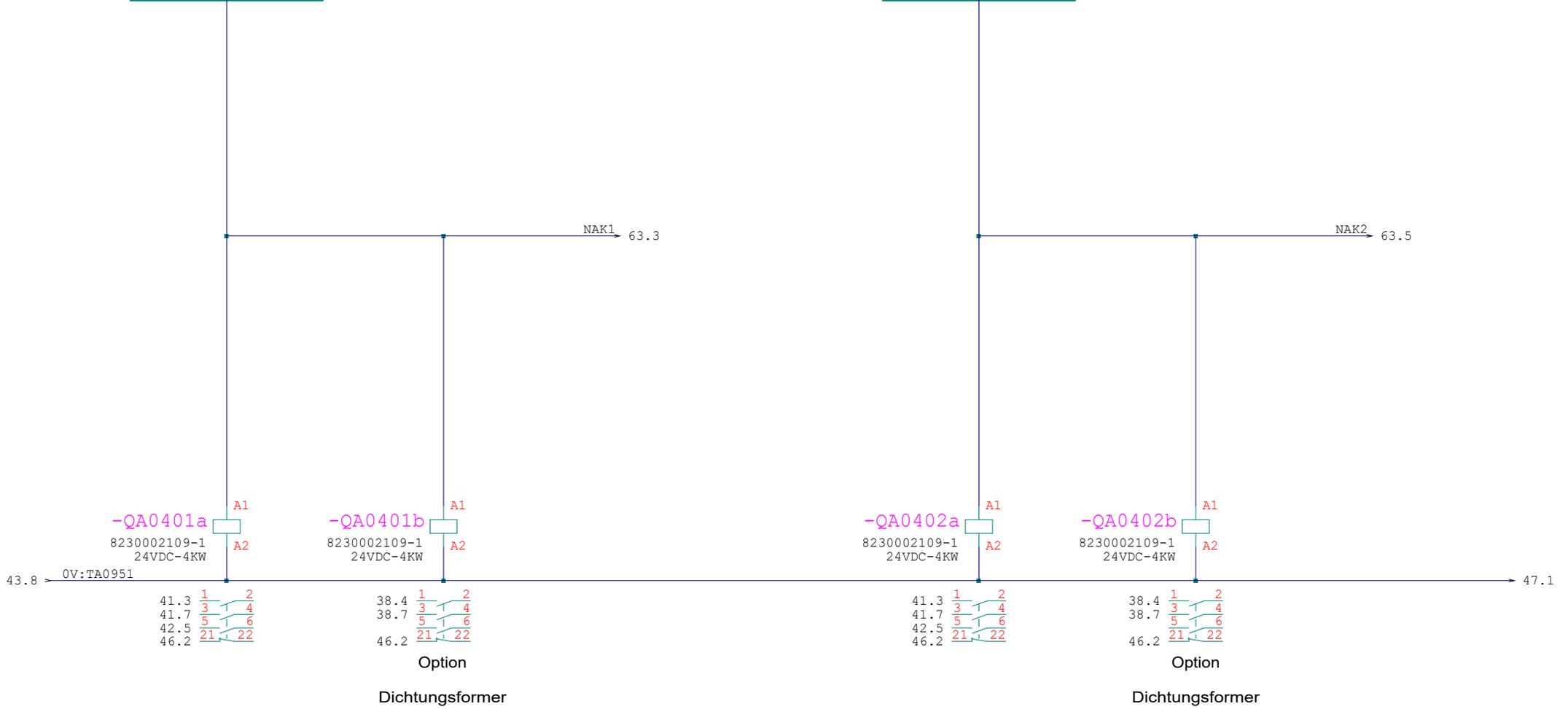
Option





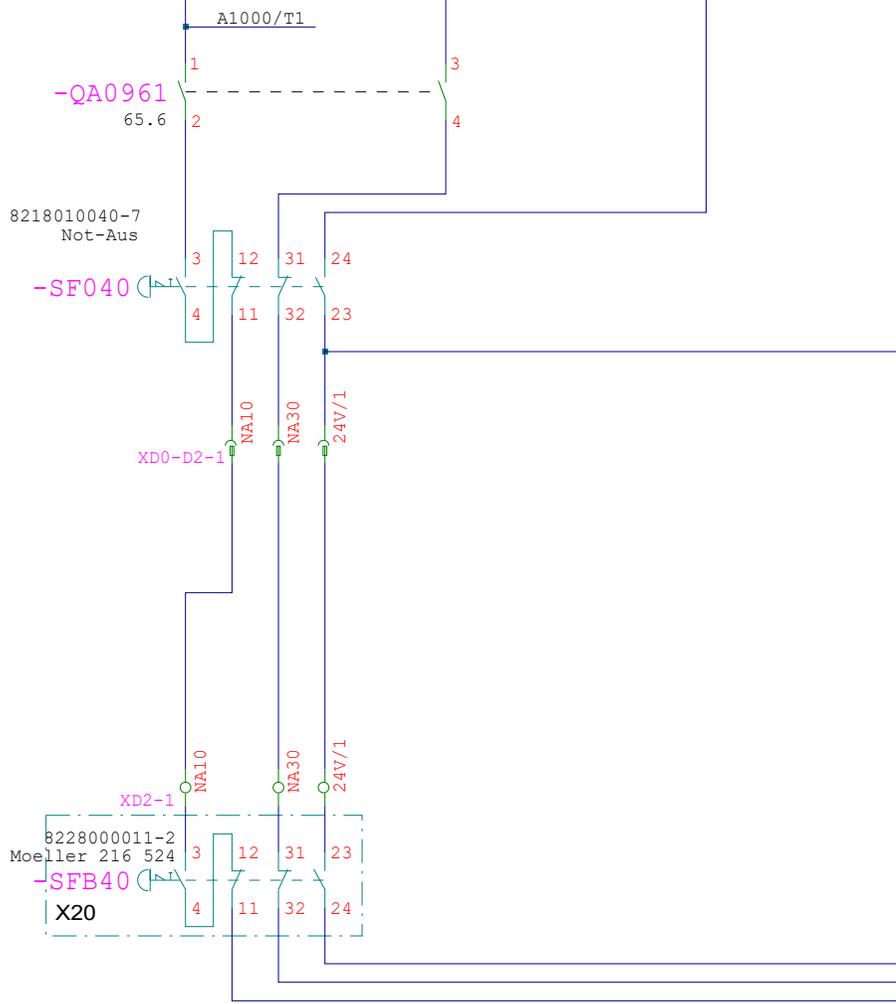




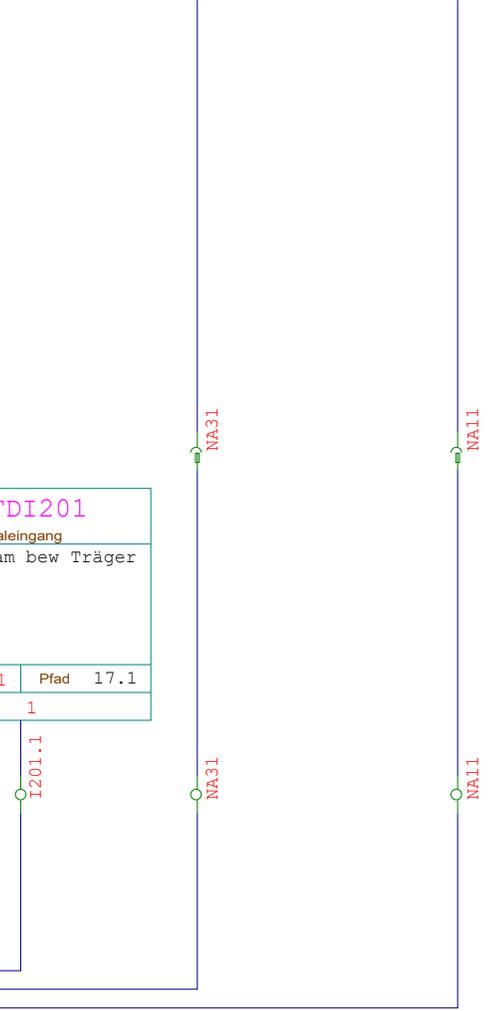


Control-Ausgang -KF040	Control-Ausgang SAFETY -KF040	Control-Ausgang SAFETY -KF040	-KFDI0 Digitaleingang	
Testausgang 1	Testausgang 2	Not-Aus am Schaltschrank		
Adr Q40.0S	Pfad 13.1	Adr Q40.1S	Pfad 13.1	Adr I0.3
Pin T1		Pin T2		Pin 3

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

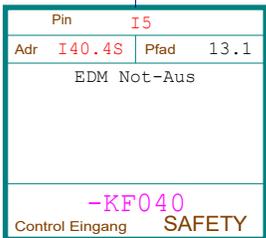
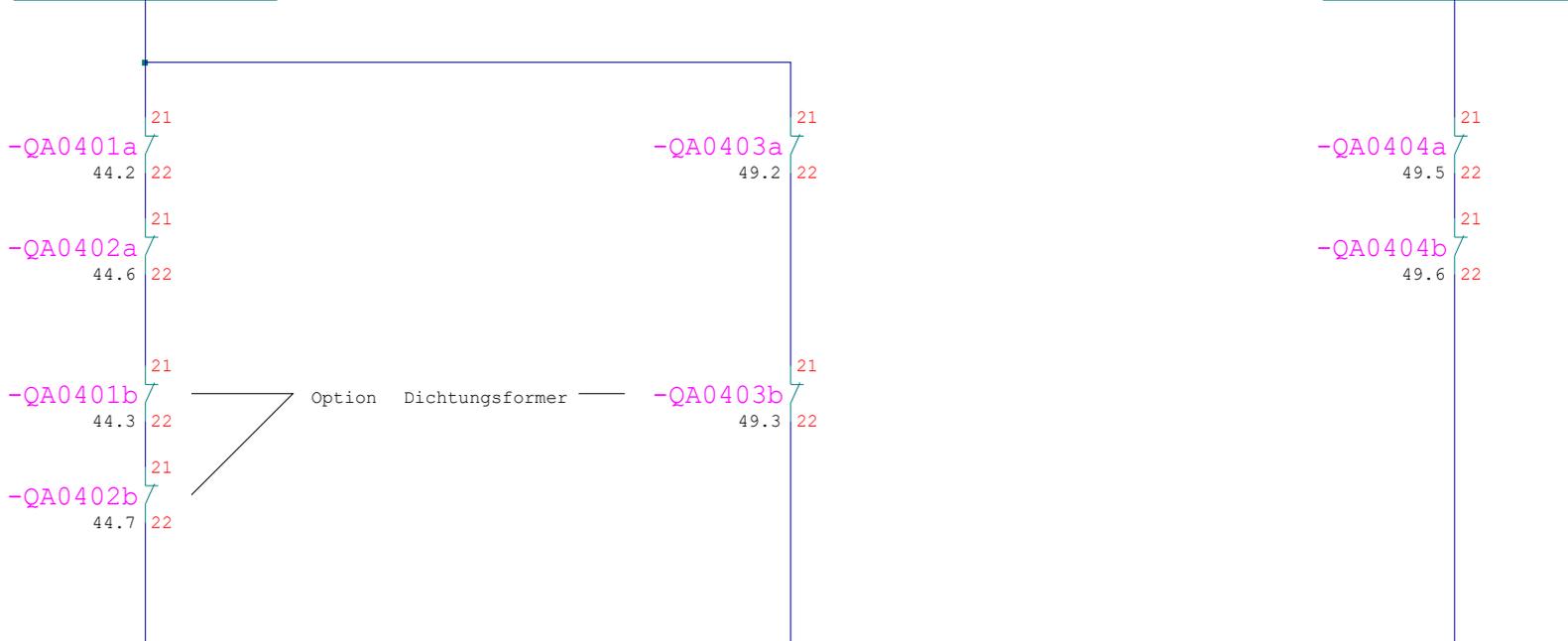


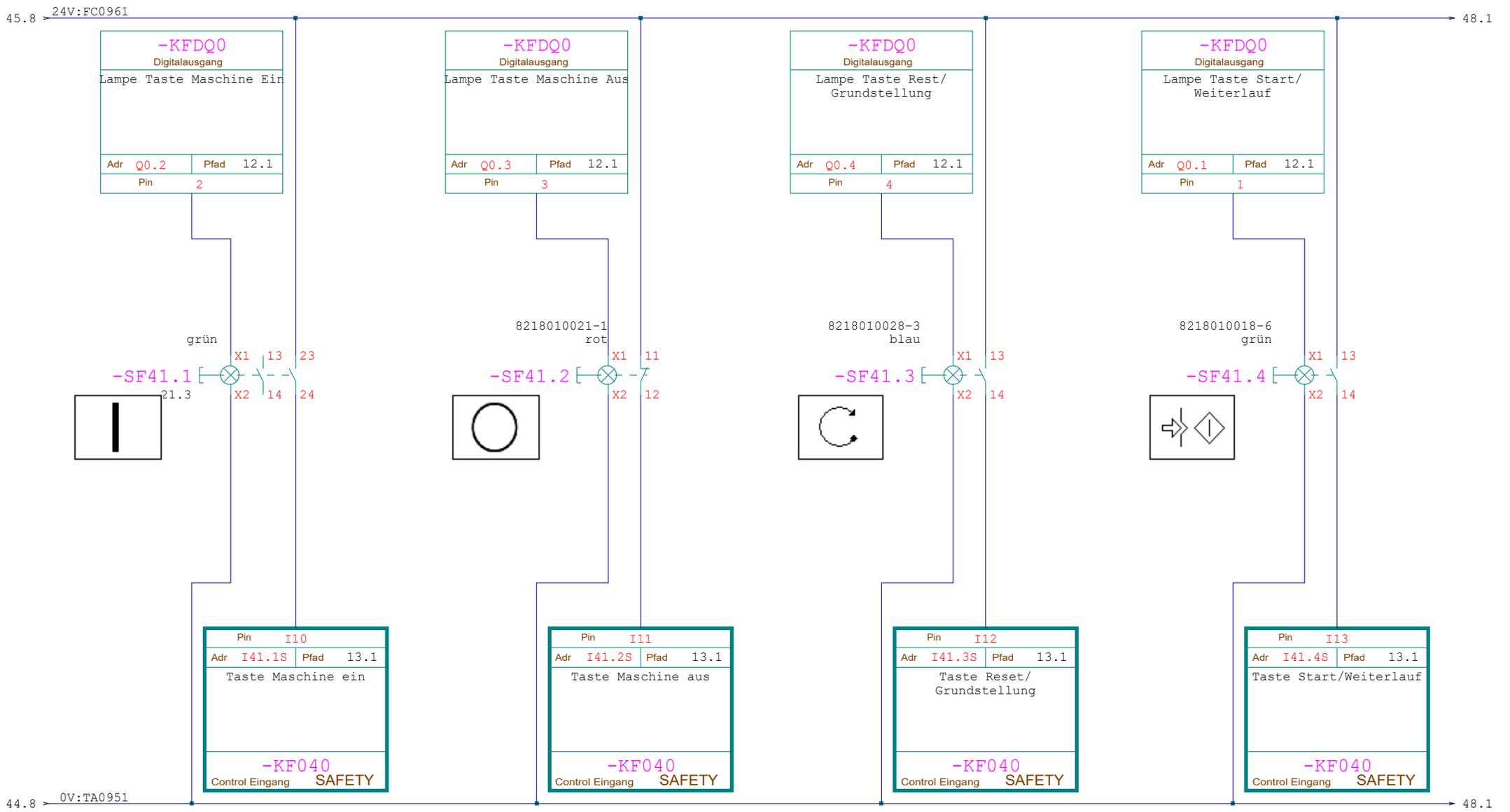
-KFDI201 Digitaleingang	
Not-Aus am bew Träger	
Adr I201.1	Pfad 17.1
Pin 1	

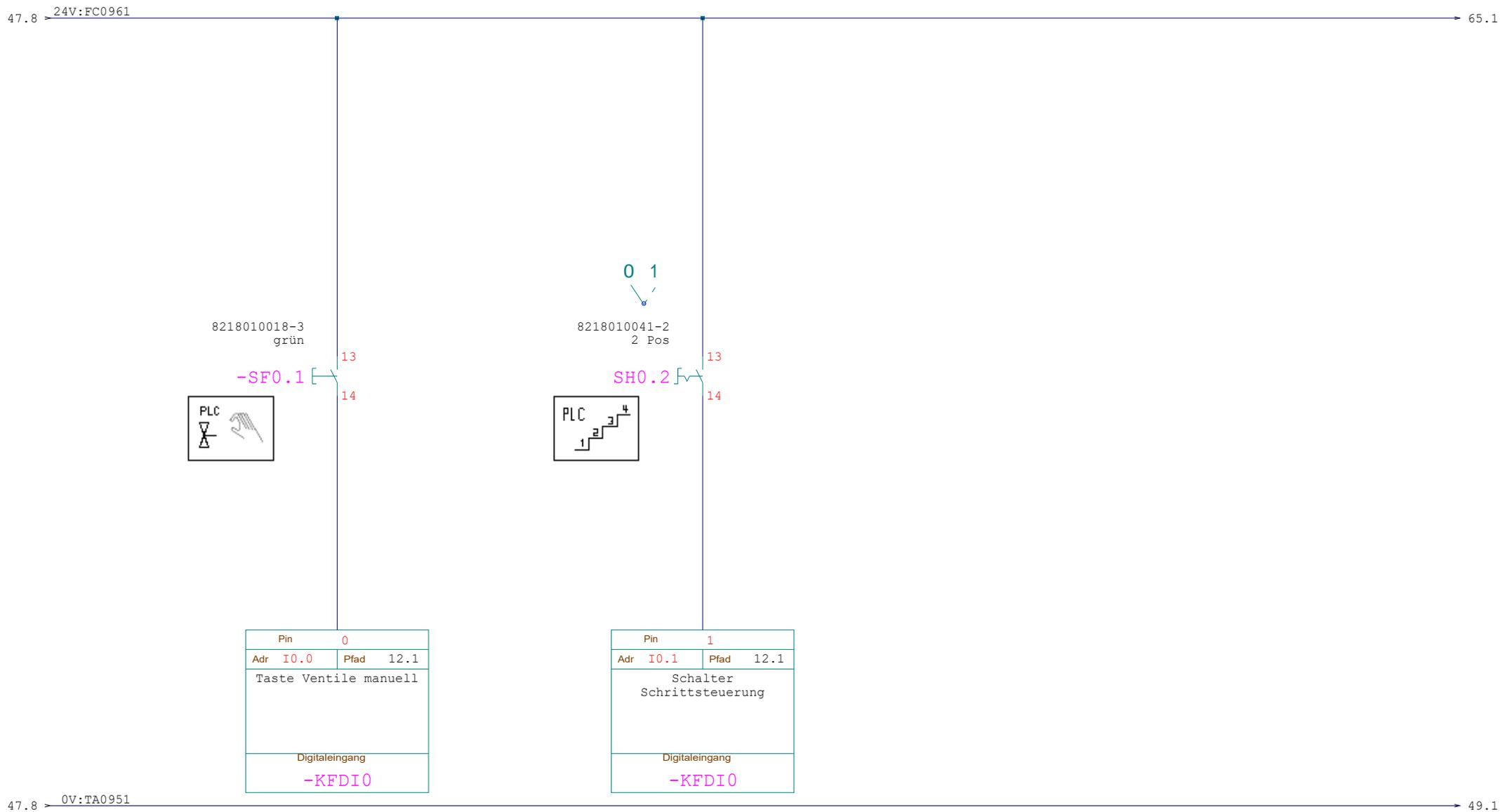


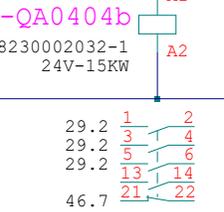
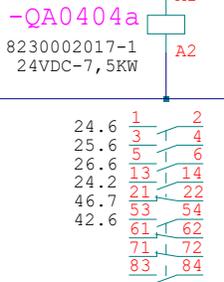
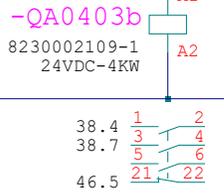
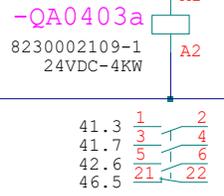
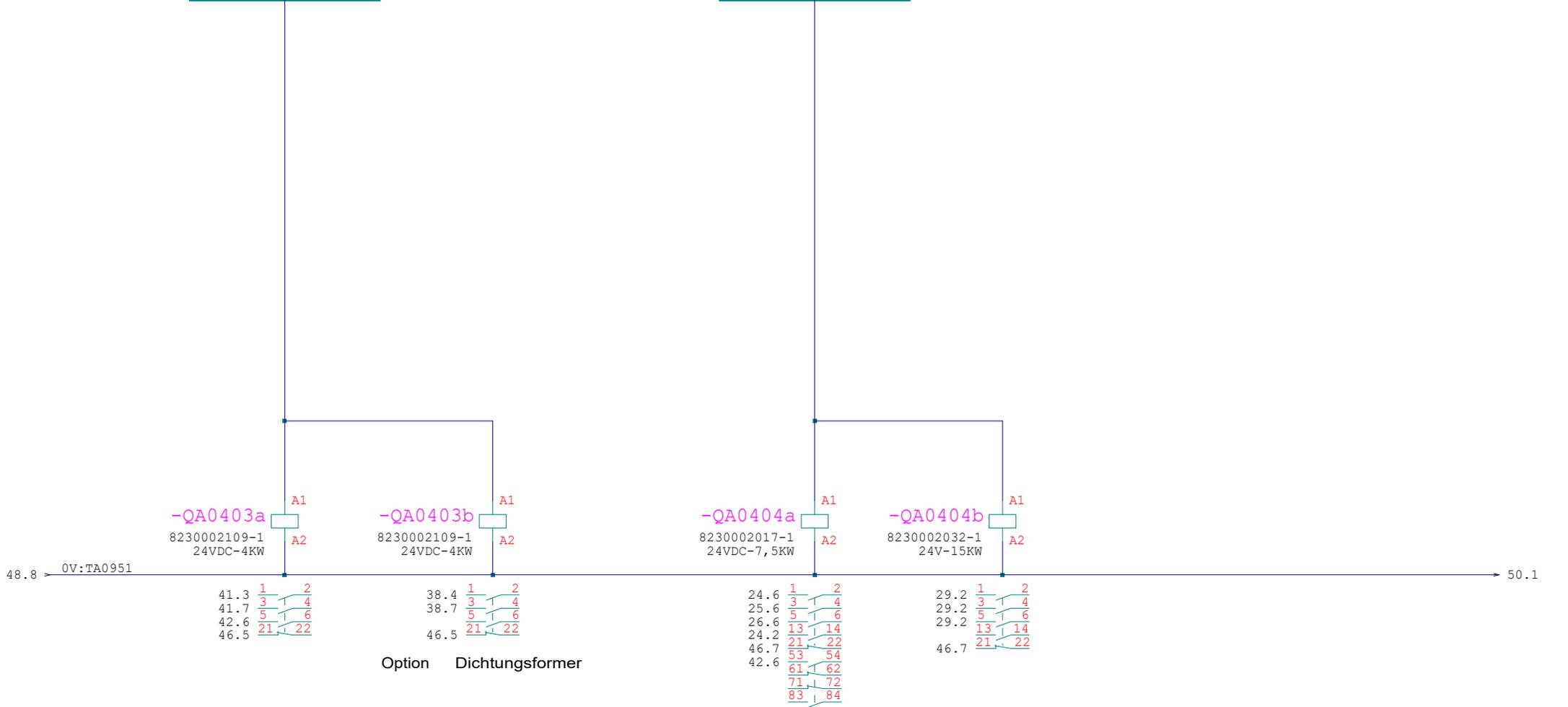
Not-Aus Kreis





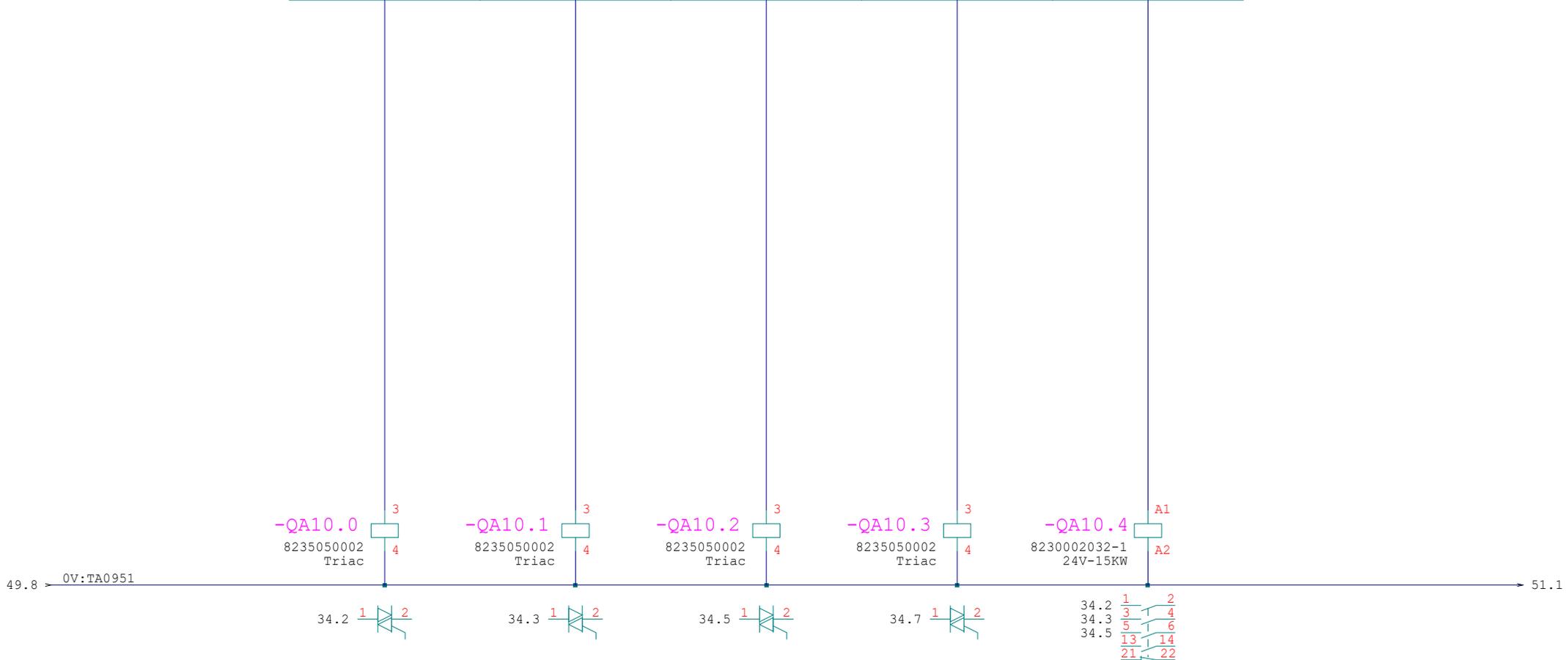


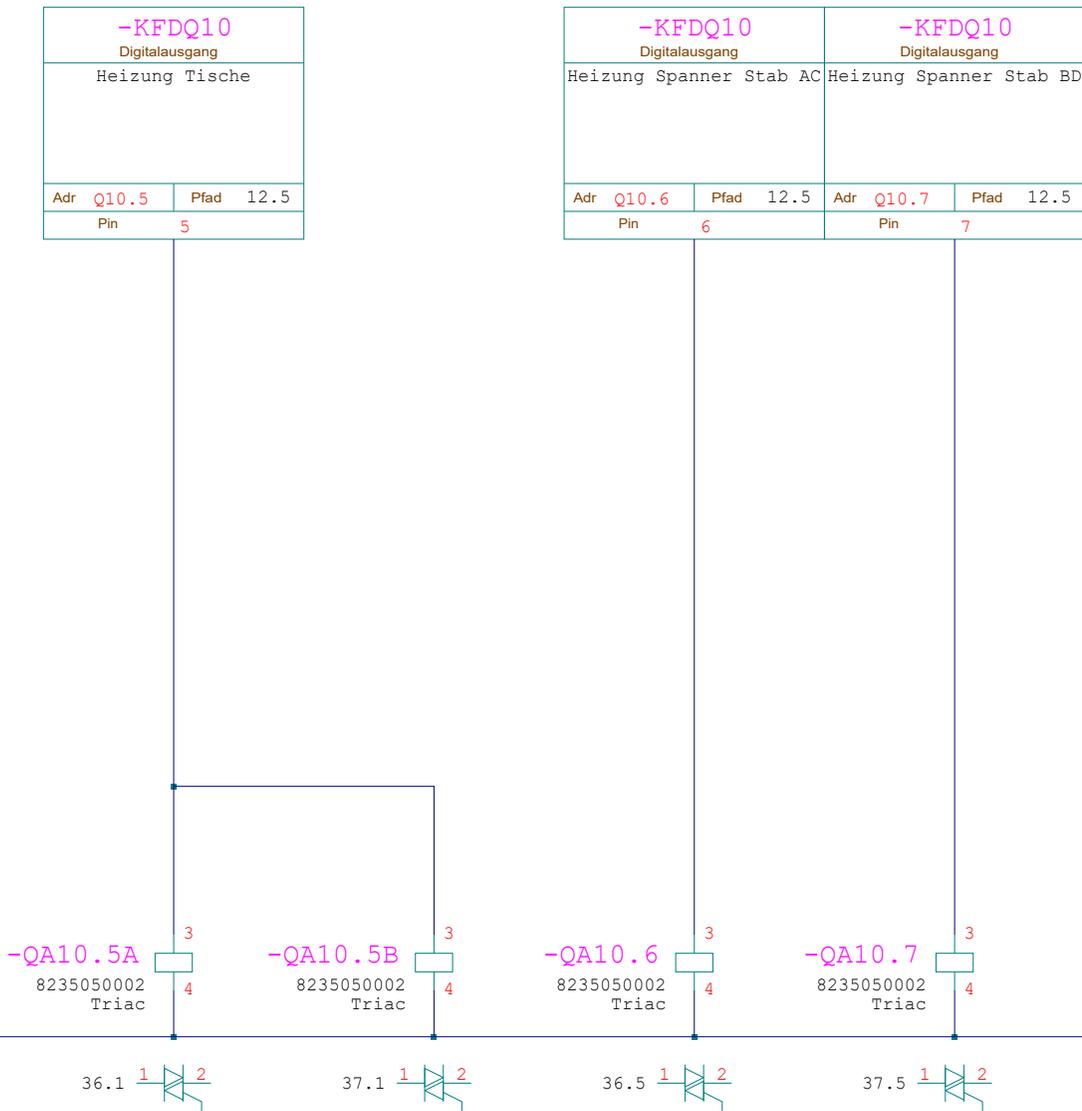




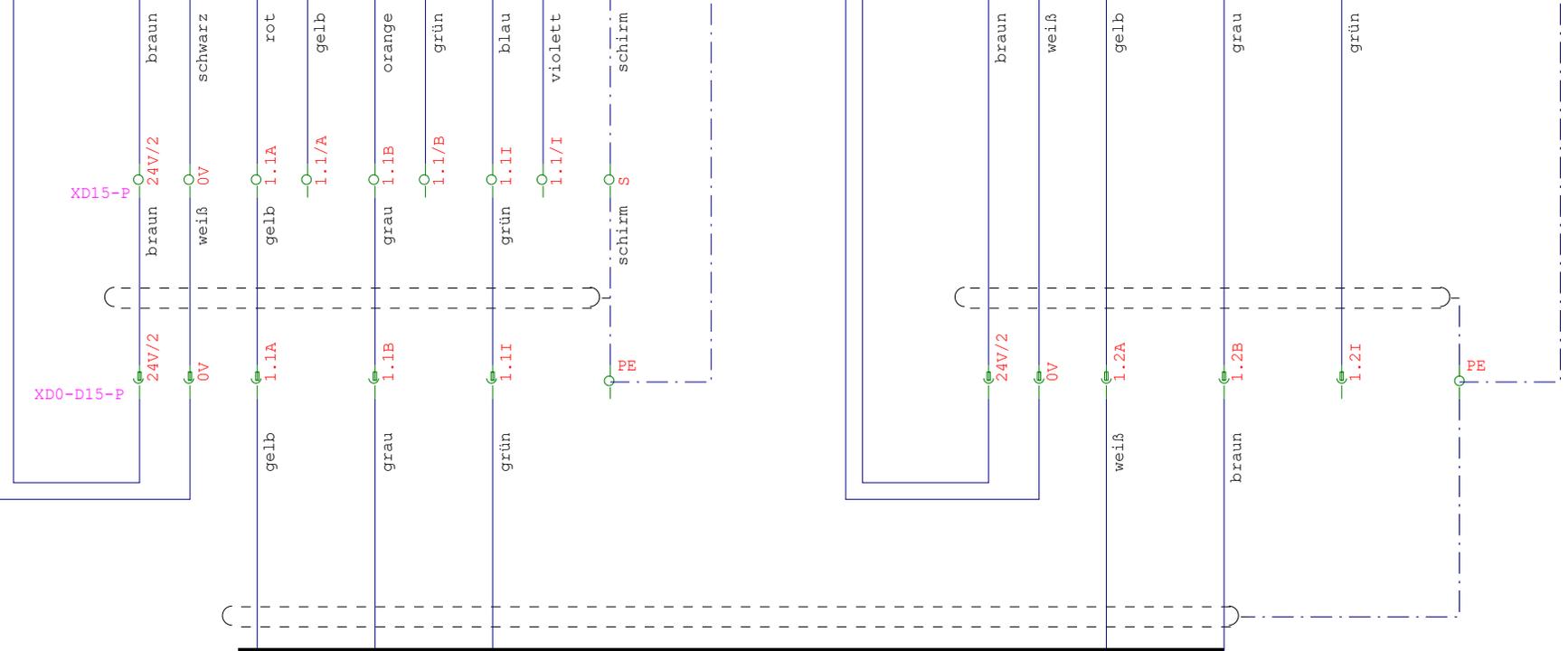
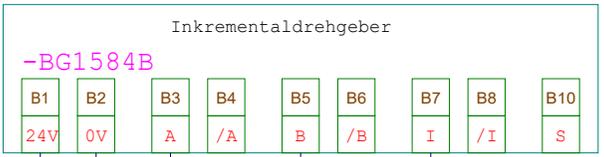
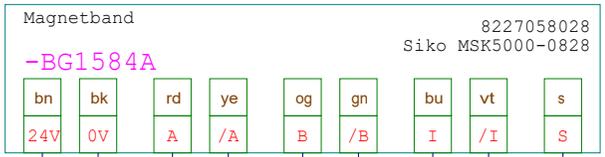
Option Dichtungsformer

-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	



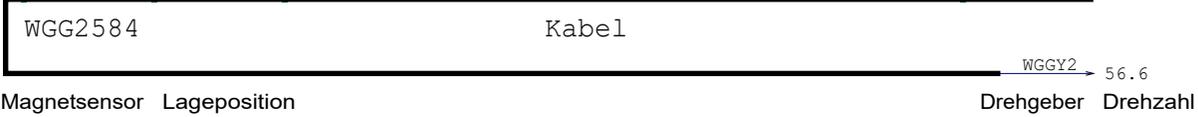
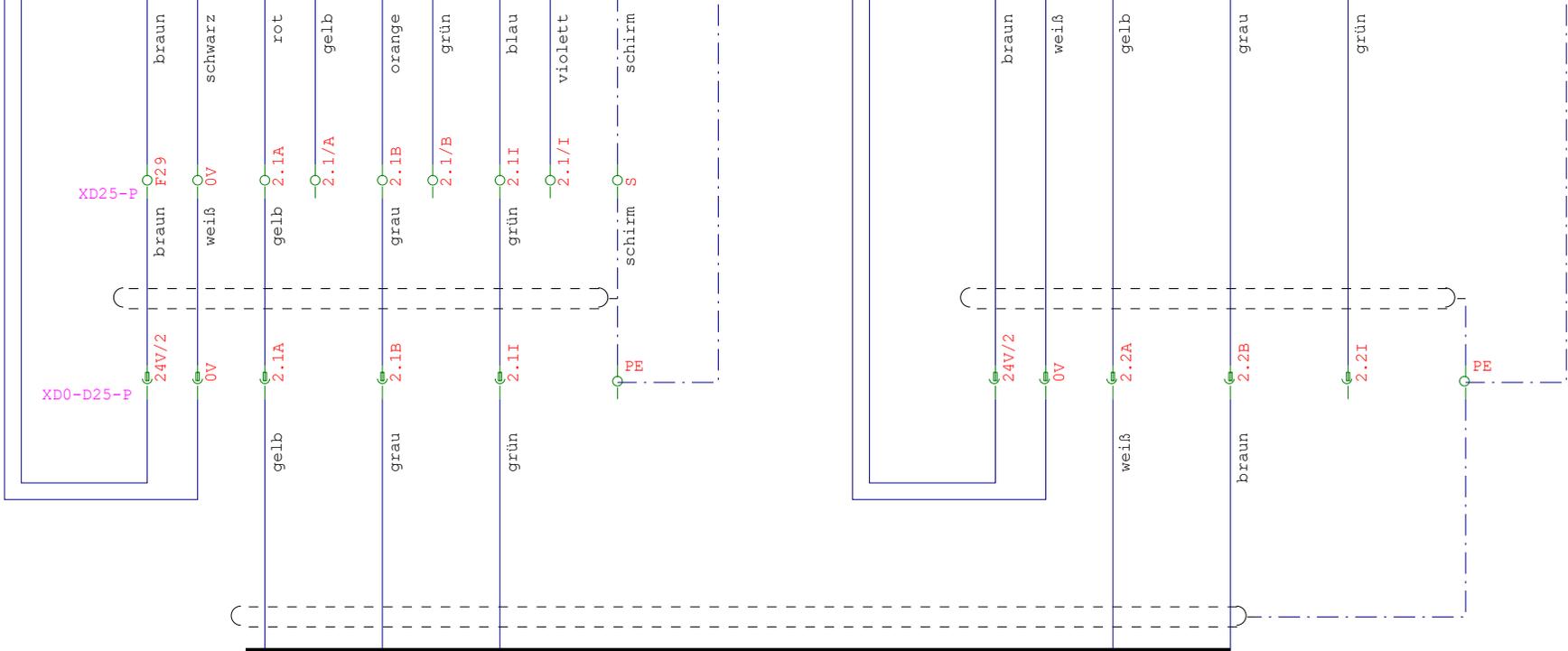
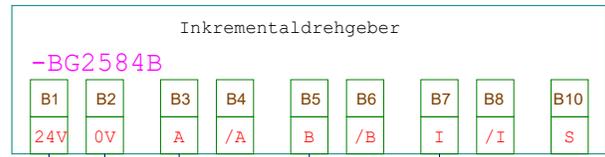
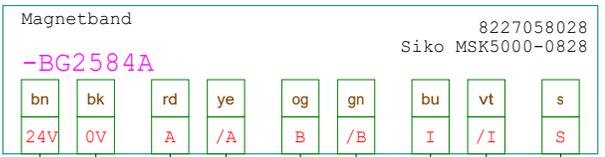


Option Messerheizung



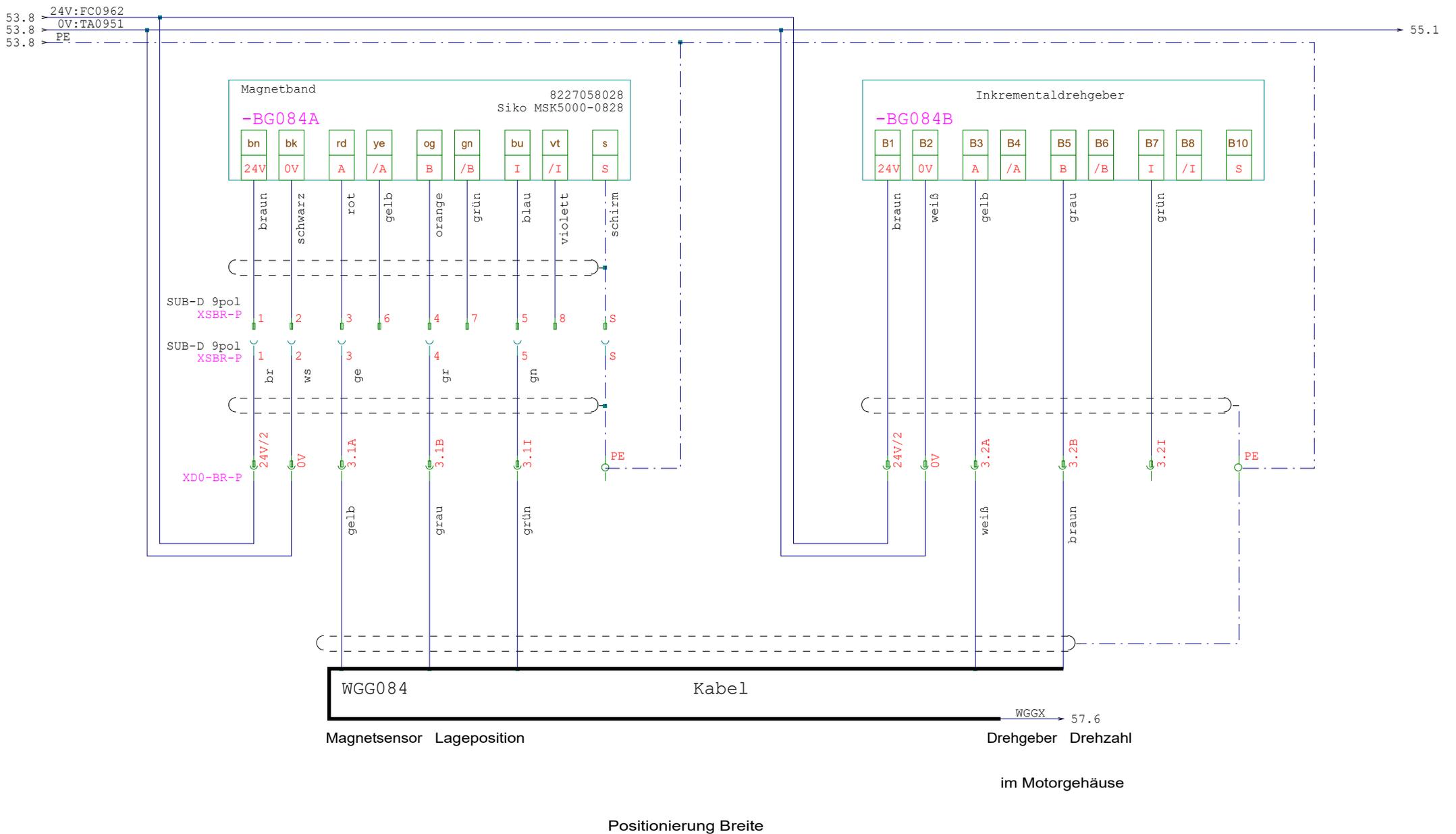
-WGG1584 Kabel
 Magnetsensor Lageposition Drehgeber Drehzahl
 WGGY1 → 55.6
 im Motorgehäuse

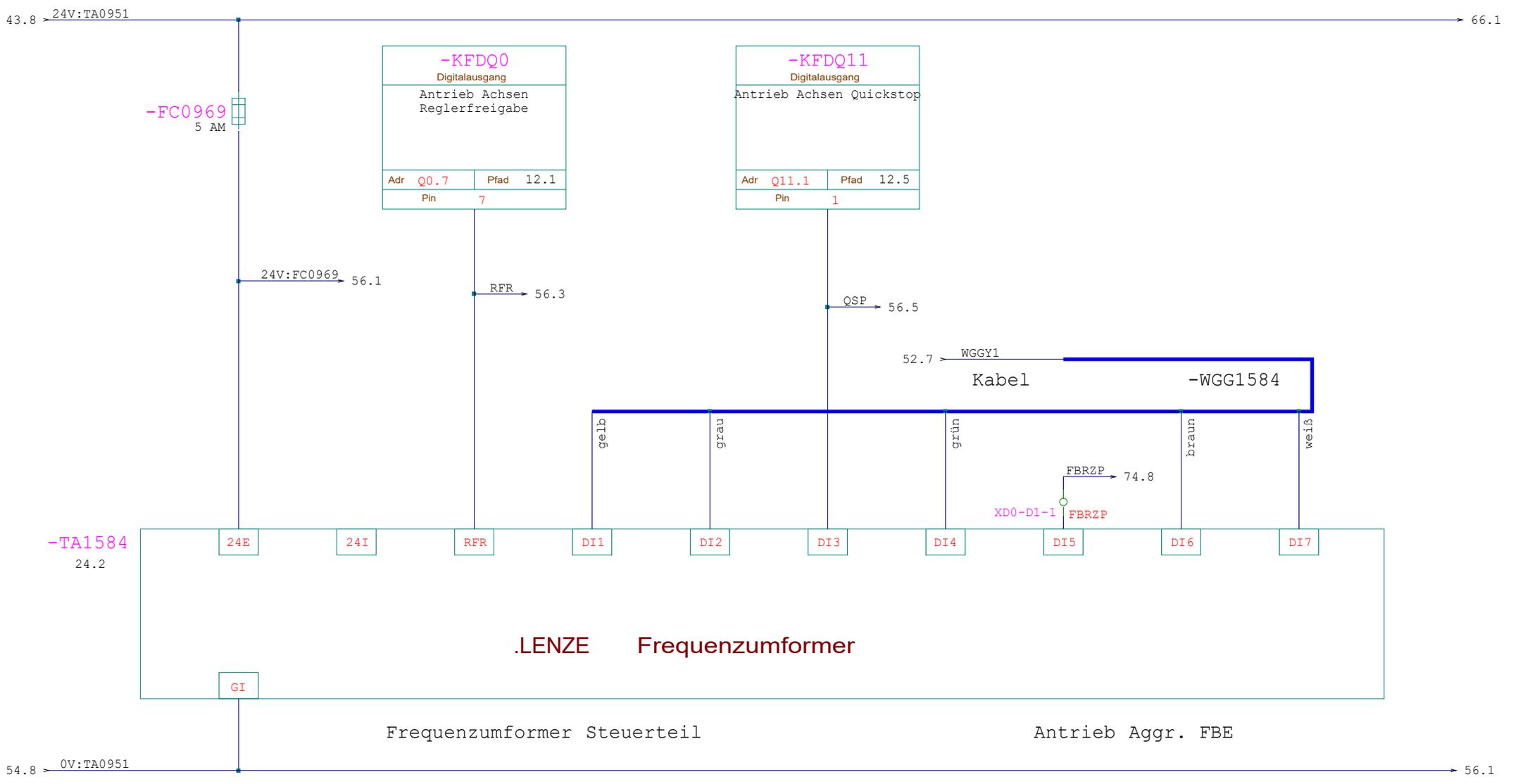
Positionierung Aggr. FBE

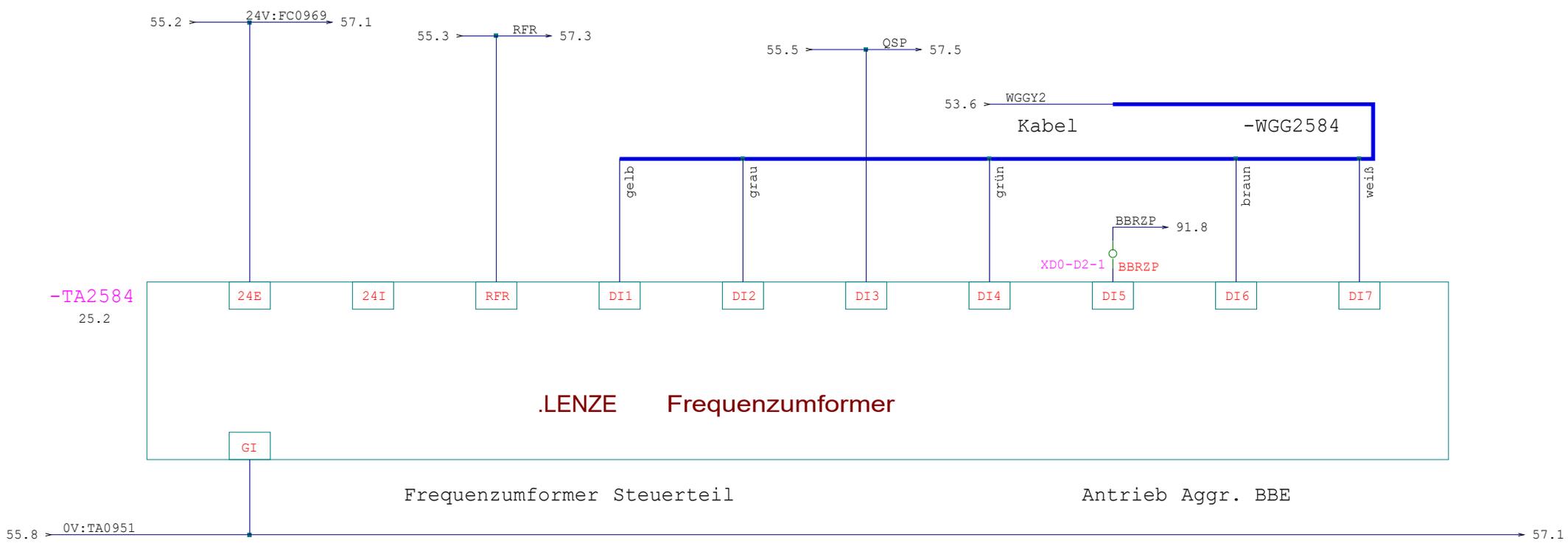


im Motorgehäuse

Positionierung Aggr. BBE





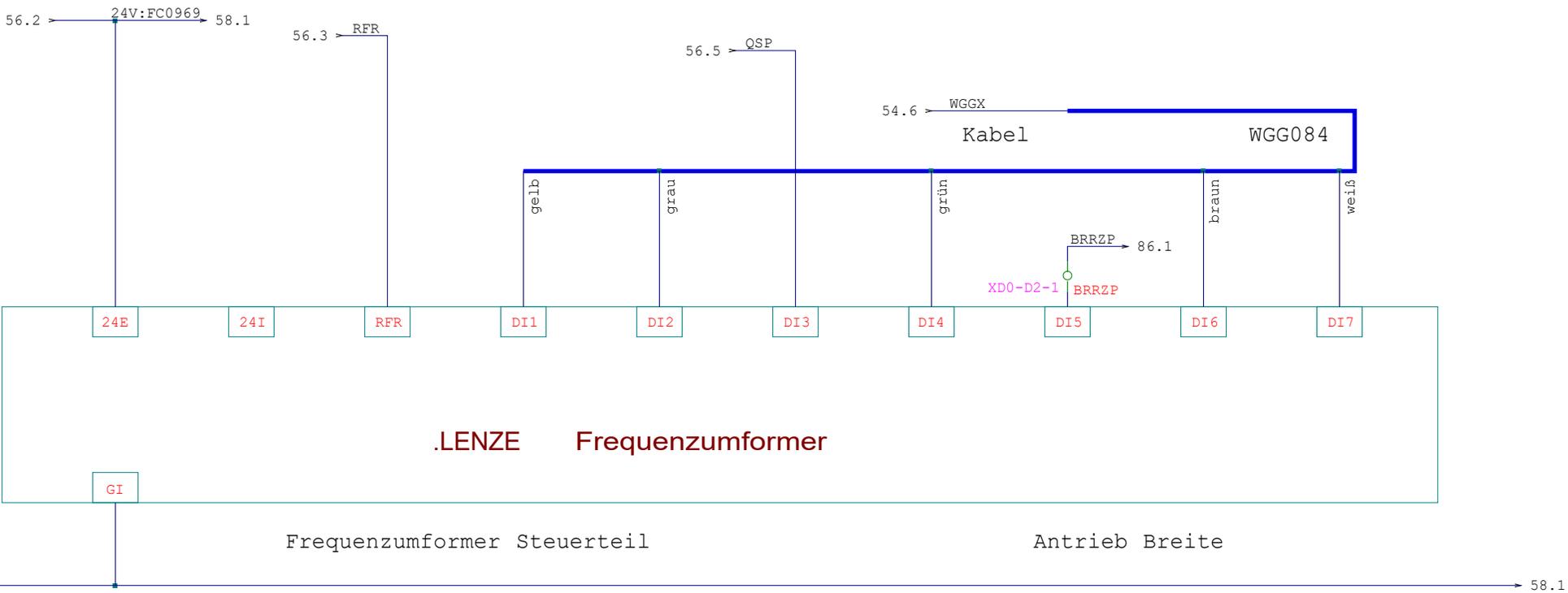


-TA2584
25.2

.LENZE Frequenzumformer

Frequenzumformer Steuerteil

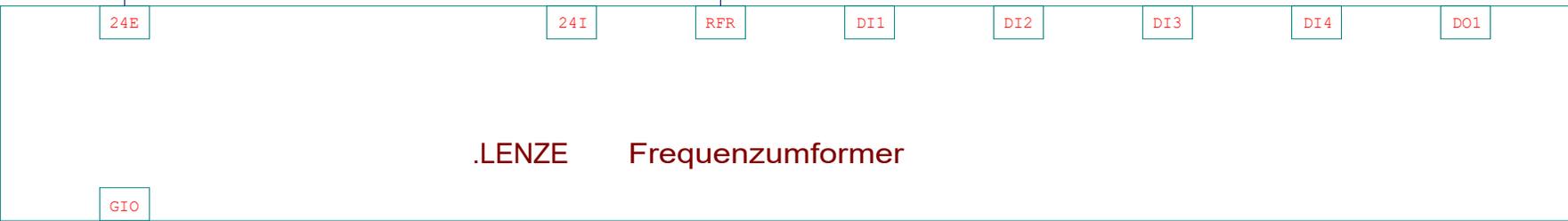
Antrieb Aggr. BBE



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

57.2 → 24V:FC0969 → 59.1

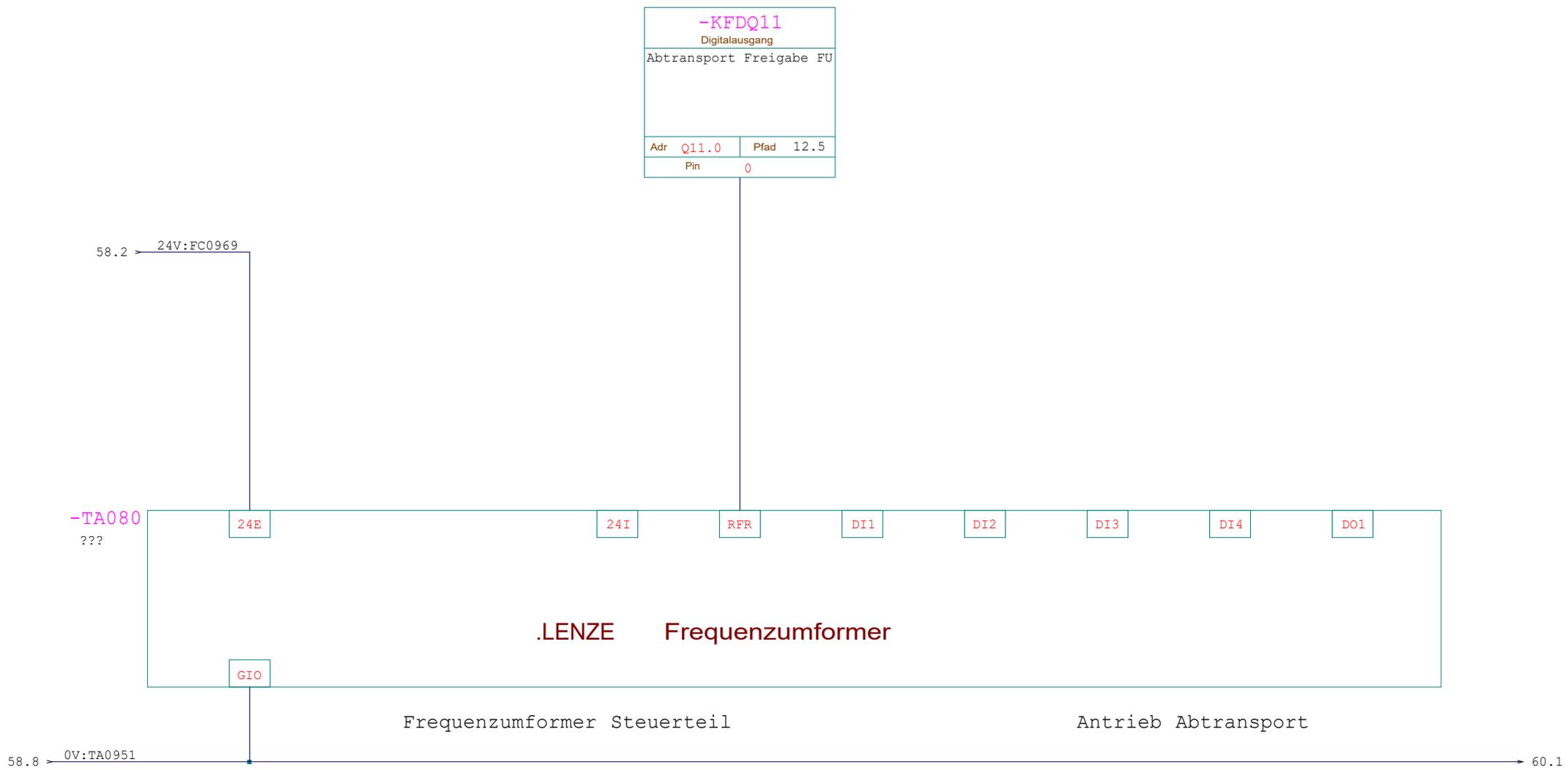
-TA580
???



Frequenzumformer Steuerteil

Antrieb Kühlstation

57.8 ← 0V:TA0951 → 59.1



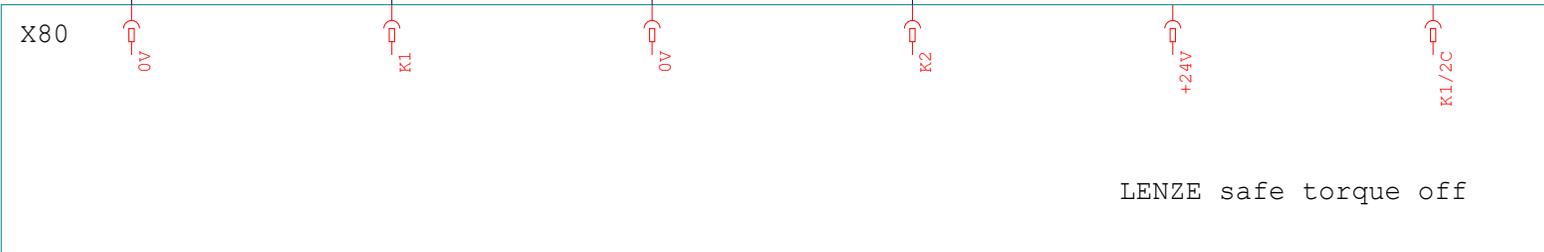
59.8 → 0V:TA0951 → 61.1

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

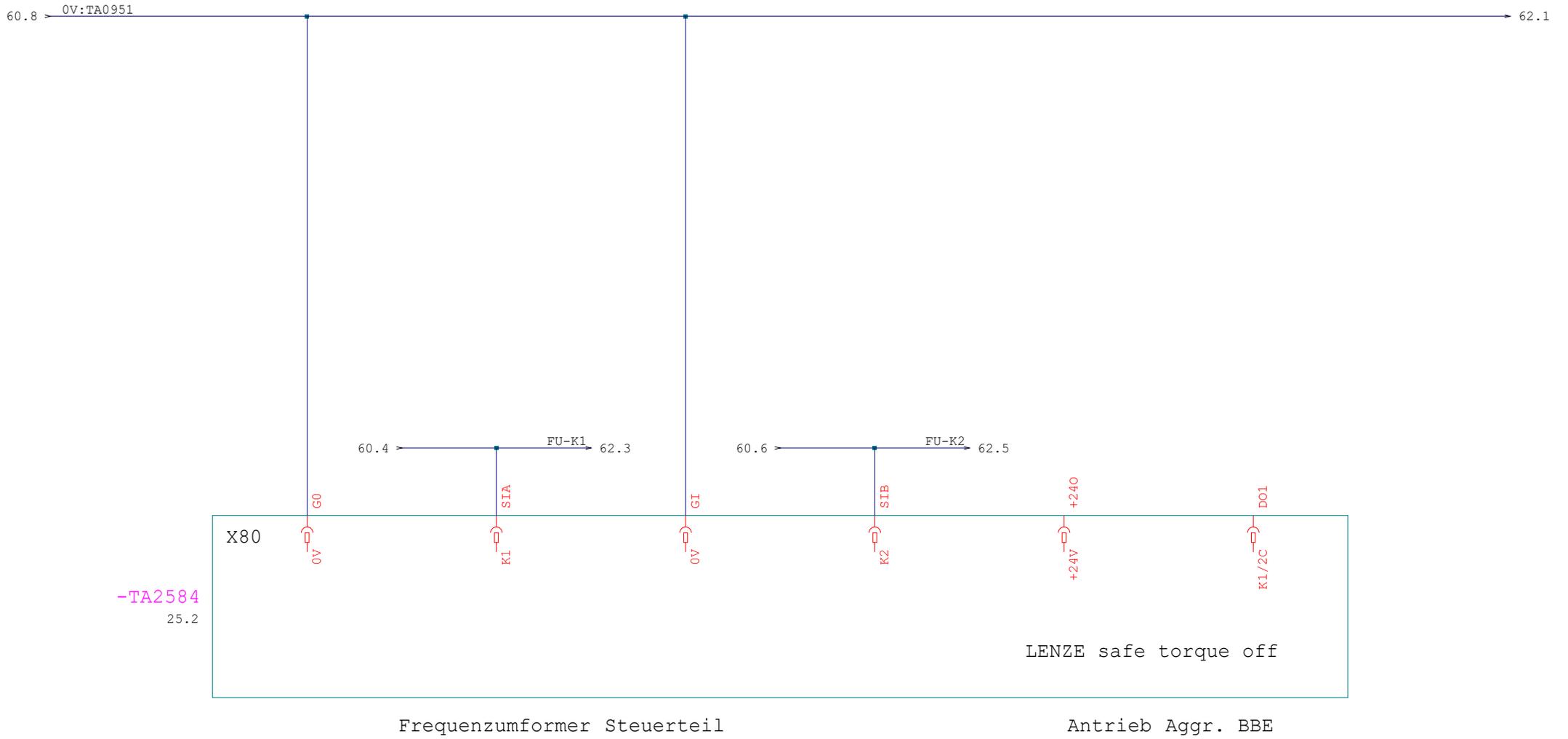
33.2 → FU-K2 → 61.5

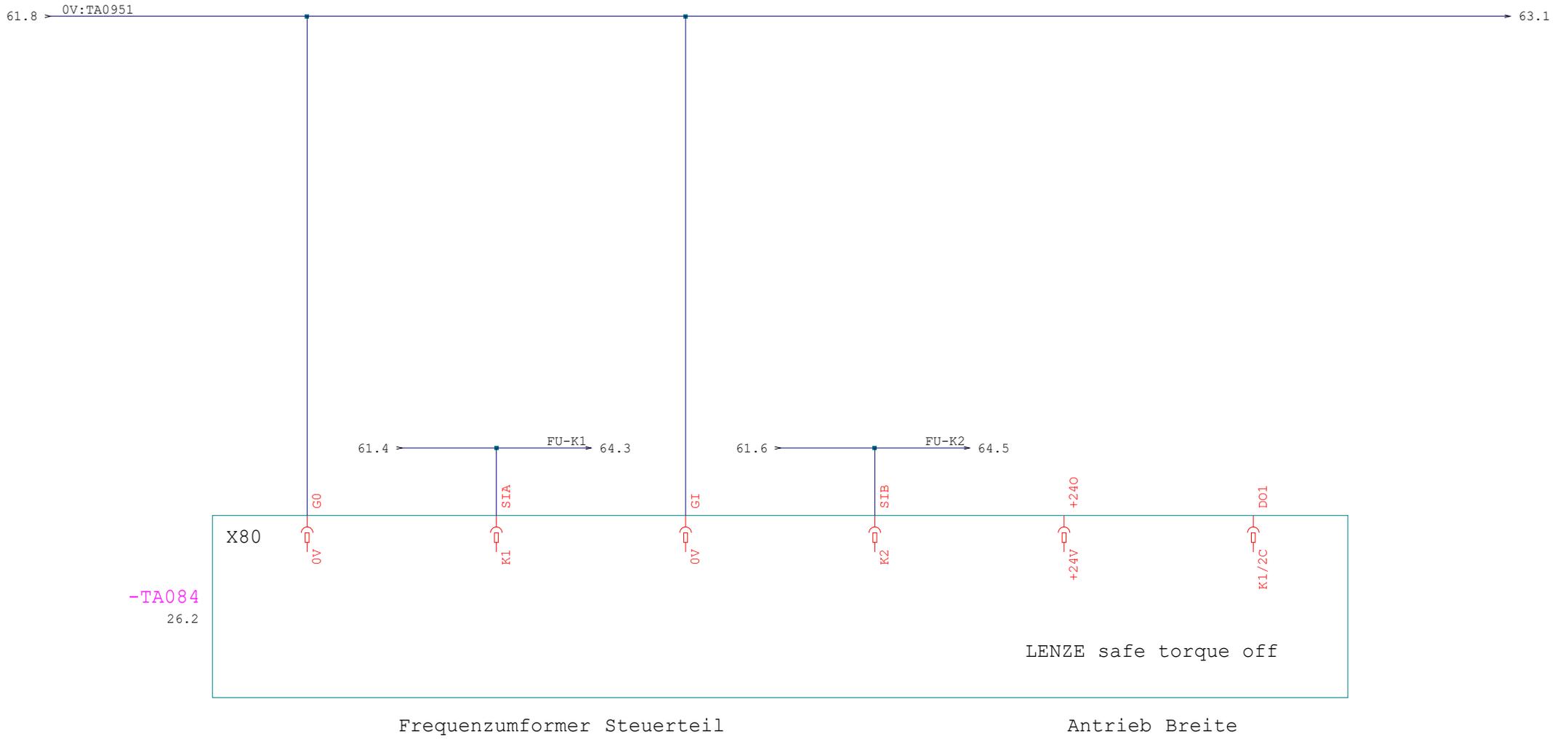


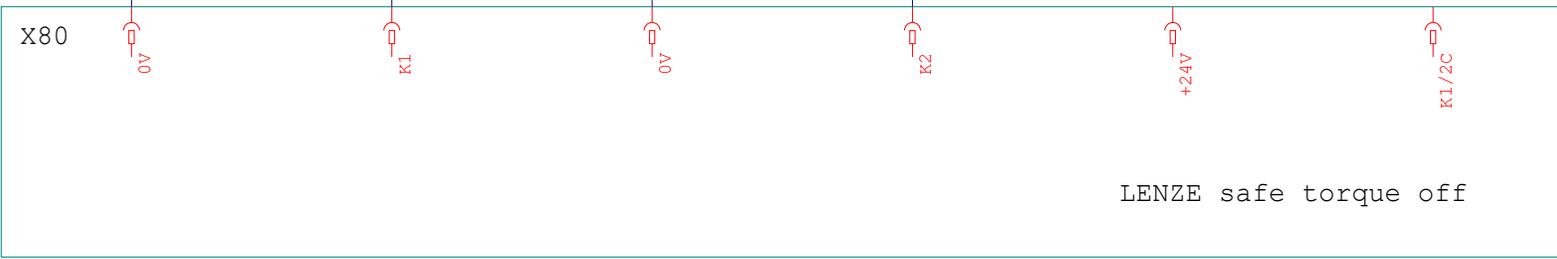
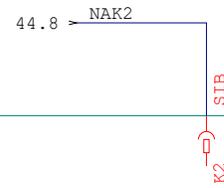
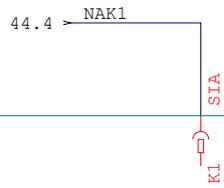
Frequenzumformer Steuerteil

Antrieb Aggr. FBE

-TA1584
24.2



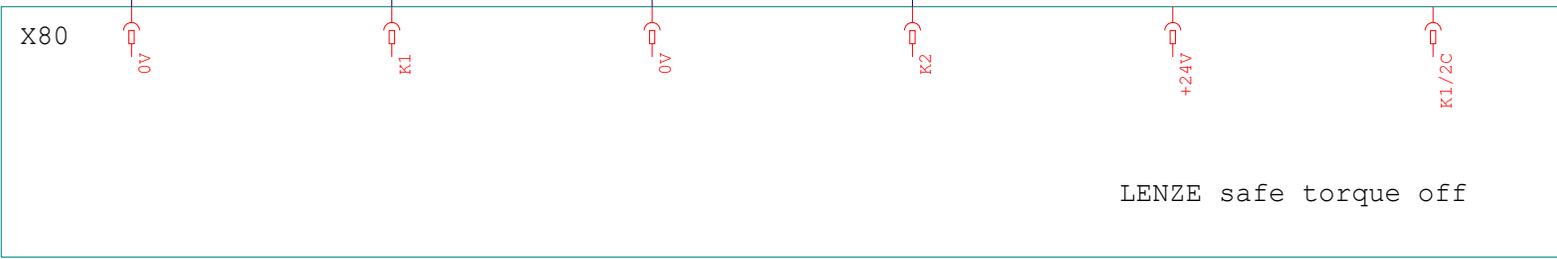
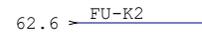
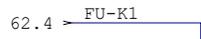




Frequenzumformer Steuerteil

Antrieb Kühlstation

-TA580
???



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

76

0V/1

75

74

73

73

24V/10

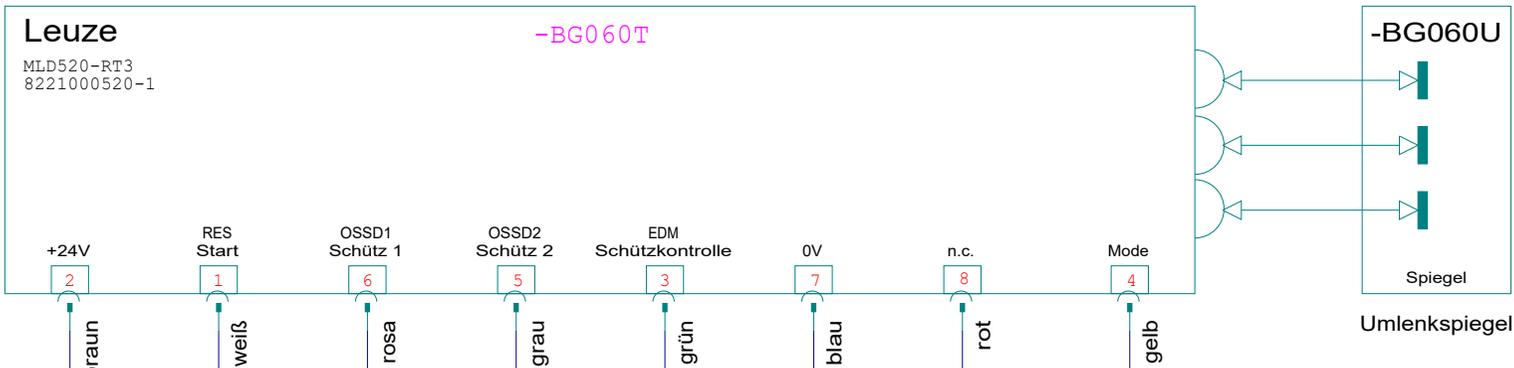
24V/10

BG060T/2 67.1
BG060T/3 67.1

BG060T/4 67.1
BG060T/1 67.1

BG060T/6 67.1
BG060T/5 67.1

BG060T/7 67.1
BG060T/8 67.1



- 66.8 > BG060T/2
- 66.8 > BG060T/1
- 66.8 > BG060T/6
- 66.8 > BG060T/5
- 66.8 > BG060T/3
- 66.8 > BG060T/7
- 66.8 > BG060T/8
- 66.8 > BG060T/4

Sicherheitslichtschranke

Option

24V/1:D1 → 70.1

68.8

Lichttaster

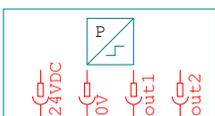
-BG101.18221005105-1
0500.GI

24V 0V

braun 1
blau 3
schwarz 4

XD1-1

Pin	1
Adr	I101.1
Pfad	14.1
Lichtschranke Abtransport	
Digitaleingang	
-KFDI101	

1-10bar
8220018036
-BP101.0braun 1
blau 3
schwarz 4

24V/1

0V/1

Pin	0
Adr	I101.0
Pfad	14.1
Überwachung Eingangsdruck	
Digitaleingang	
-KFDI101	

Zylindersensor

-BG110.58044000118-1
BIM-UNT-AP7X+ 0V 1
braun
blau
schwarz

24V/1

0V/1

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

-BG110.0
 8044000118
 BIM-UNT-AP7X



+ 0V 1

-BG110.1
 8044000118
 BIM-UNT-AP7X



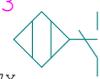
+ 0V 1

-BG110.2
 8044000118
 BIM-UNT-AP7X



+ 0V 1

-BG110.3
 8044000118
 BIM-UNT-AP7X

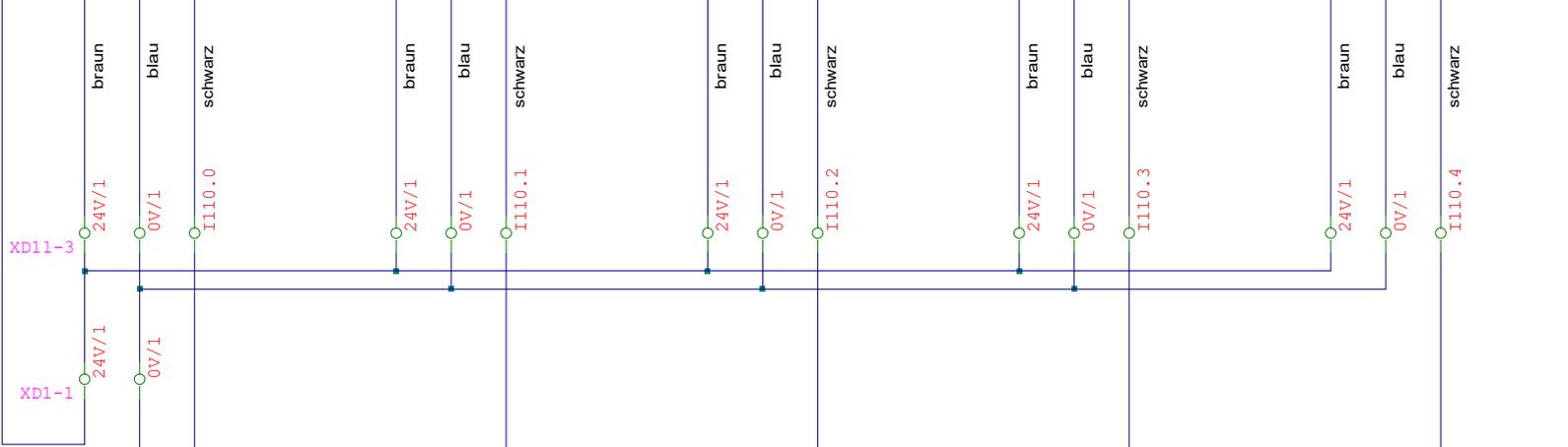


+ 0V 1

-BG110.4
 8228000037
 ICDO 8814



+ 0V 1



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	

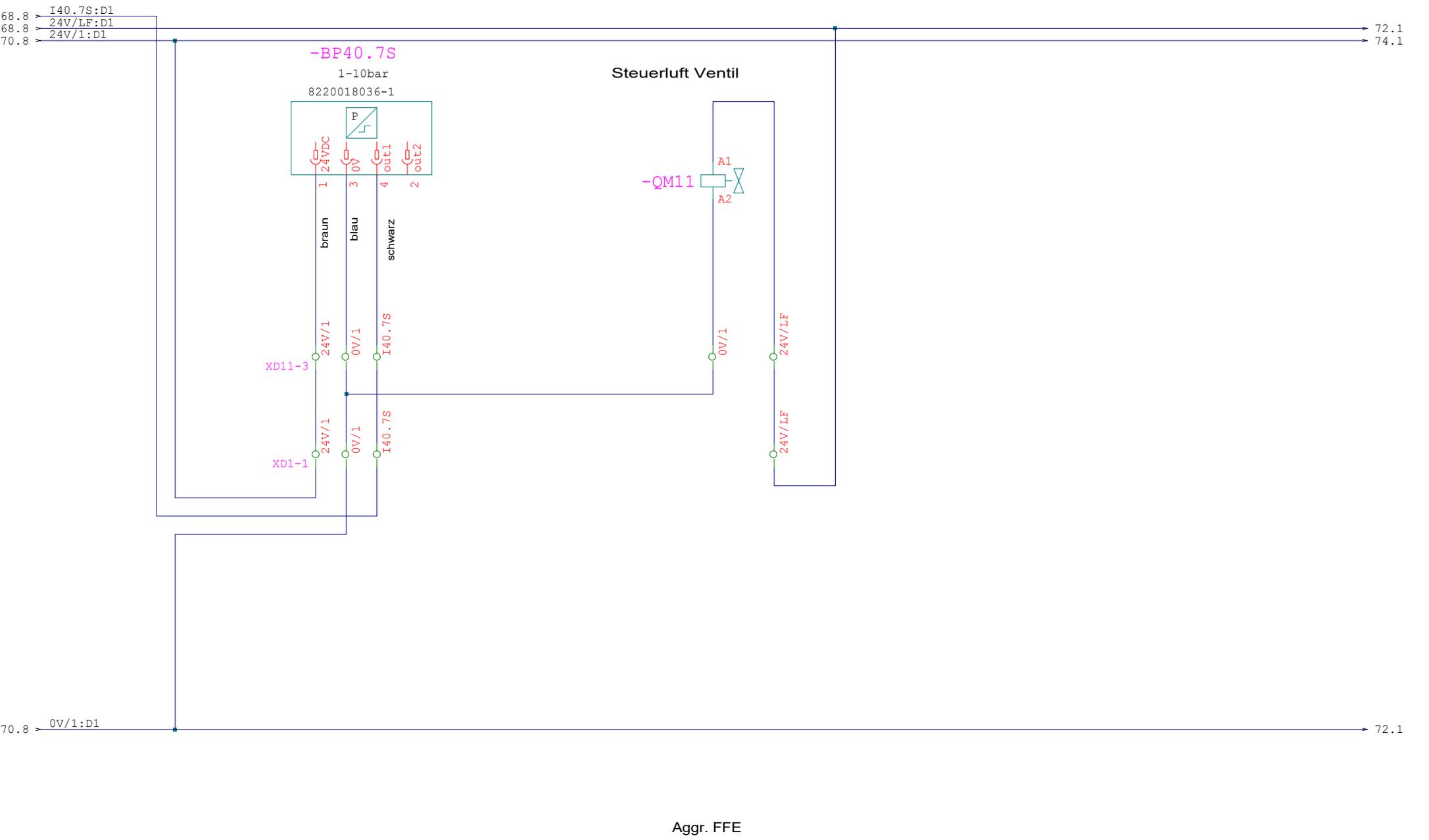
Pin	3
Adr	I110.3
Pfad	14.1
Riegel Spannerschiebung Stab A FFE GS	
Digitaleingang	
-KFDI110	

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

69.8 → 0V/1:D1 → 71.1

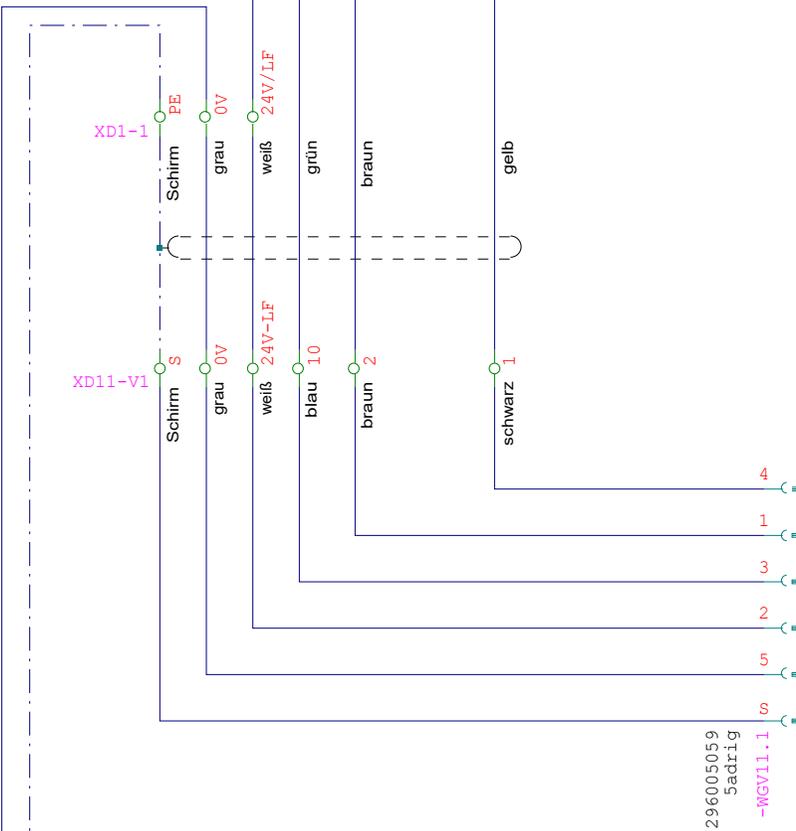
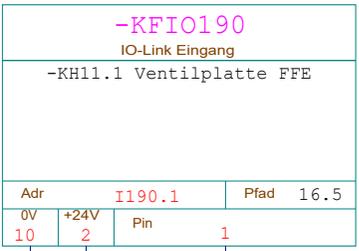
AS = Arbeitsstellung
 GS = Grundstellung

Aggr. FFE



Aggr. FFE

71.8 → 24V/LF:D1 → 73.1



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				
10	QM44	Druckumschaltung Spanner A	AS	GS
11	-QM16A	Spanner AS Stab A	AS	GS
12	QM16B	Spanner GS Stab A	AS	GS

8296005059
Sadrig
5adrig
-WGV11.1

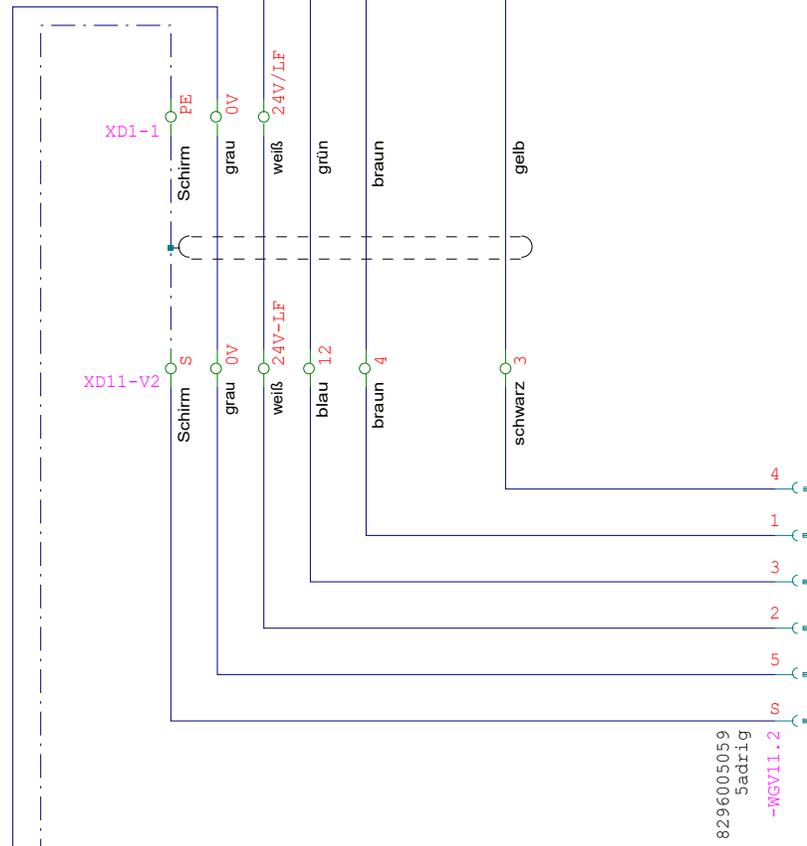
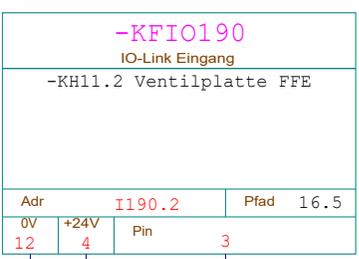
IO-Link Ventilplatte -KH11.1 FFE VAEM-L1-S-12-PT

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

Option

24V/1:D1 77.1

71.8

Zylindersensor

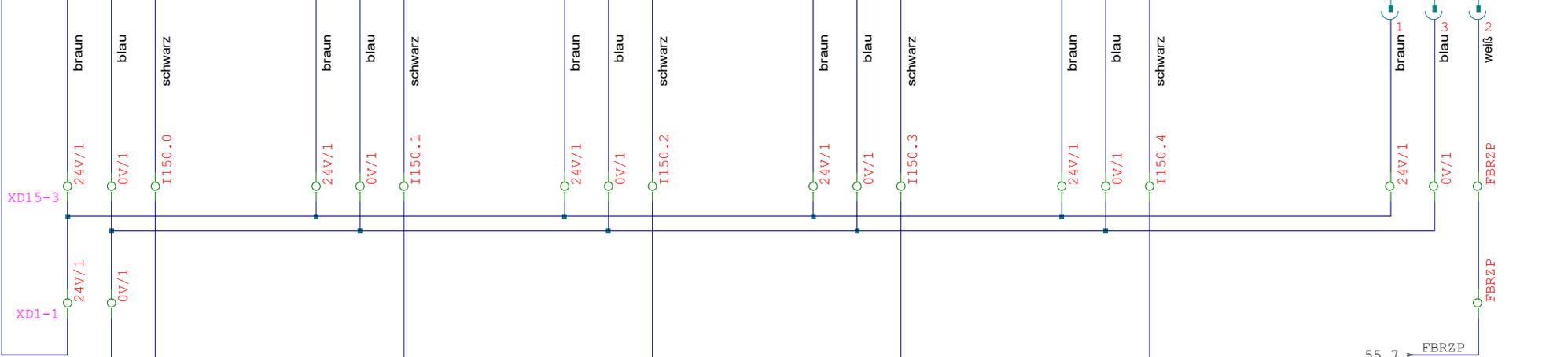
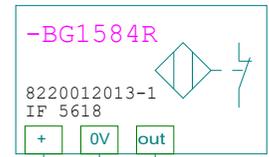
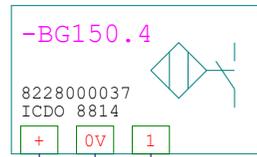
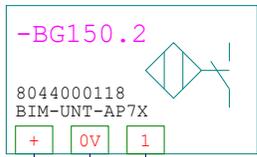
Zylindersensor

Zylindersensor

Zylindersensor

Initiator

Initiator



55.7 FBRZP

Referenzpunkt Aggr. FBE

Pin	0
Adr	I150.0 Pfad 14.5
Heizspiegelantrieb FBE AS	
Digitaleingang	
-KFDI150	

Pin	1
Adr	I150.1 Pfad 14.5
Heizspiegelantrieb FBE GS	
Digitaleingang	
-KFDI150	

Pin	2
Adr	I150.2 Pfad 14.5
Riegel Kopfverschiebung FBE AS	
Digitaleingang	
-KFDI150	

Pin	3
Adr	I150.3 Pfad 14.5
Riegel Spannerschiebung Stab C FBE GS	
Digitaleingang	
-KFDI150	

Pin	4
Adr	I150.4 Pfad 14.5
DF Ref FBE	
Digitaleingang	
-KFDI150	

73.8

0V/1:D1 75.1

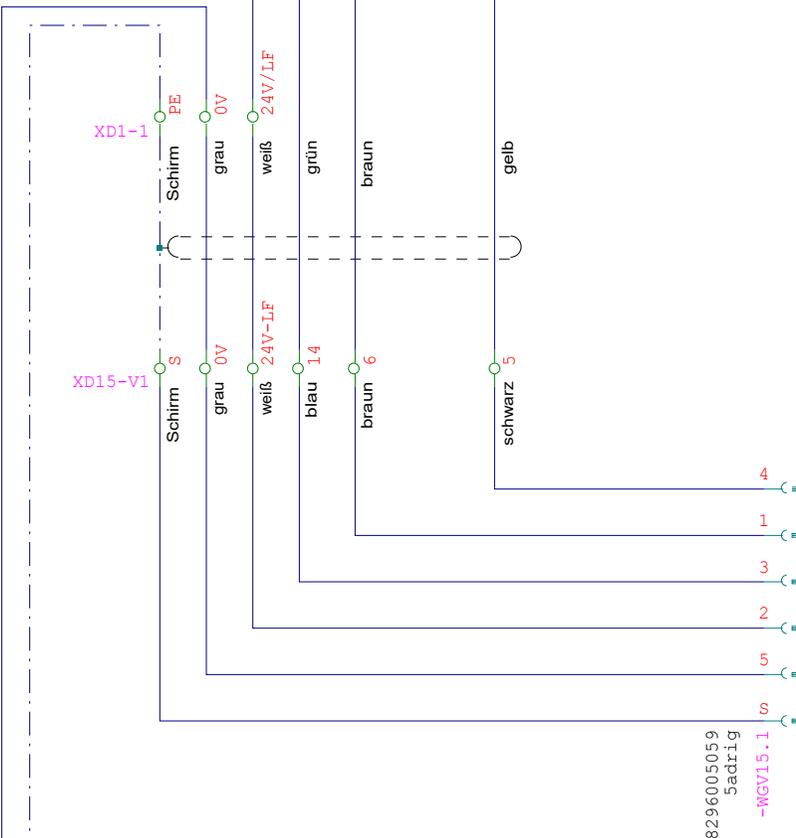
AS = Arbeitsstellung
GS = Grundstellung

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		



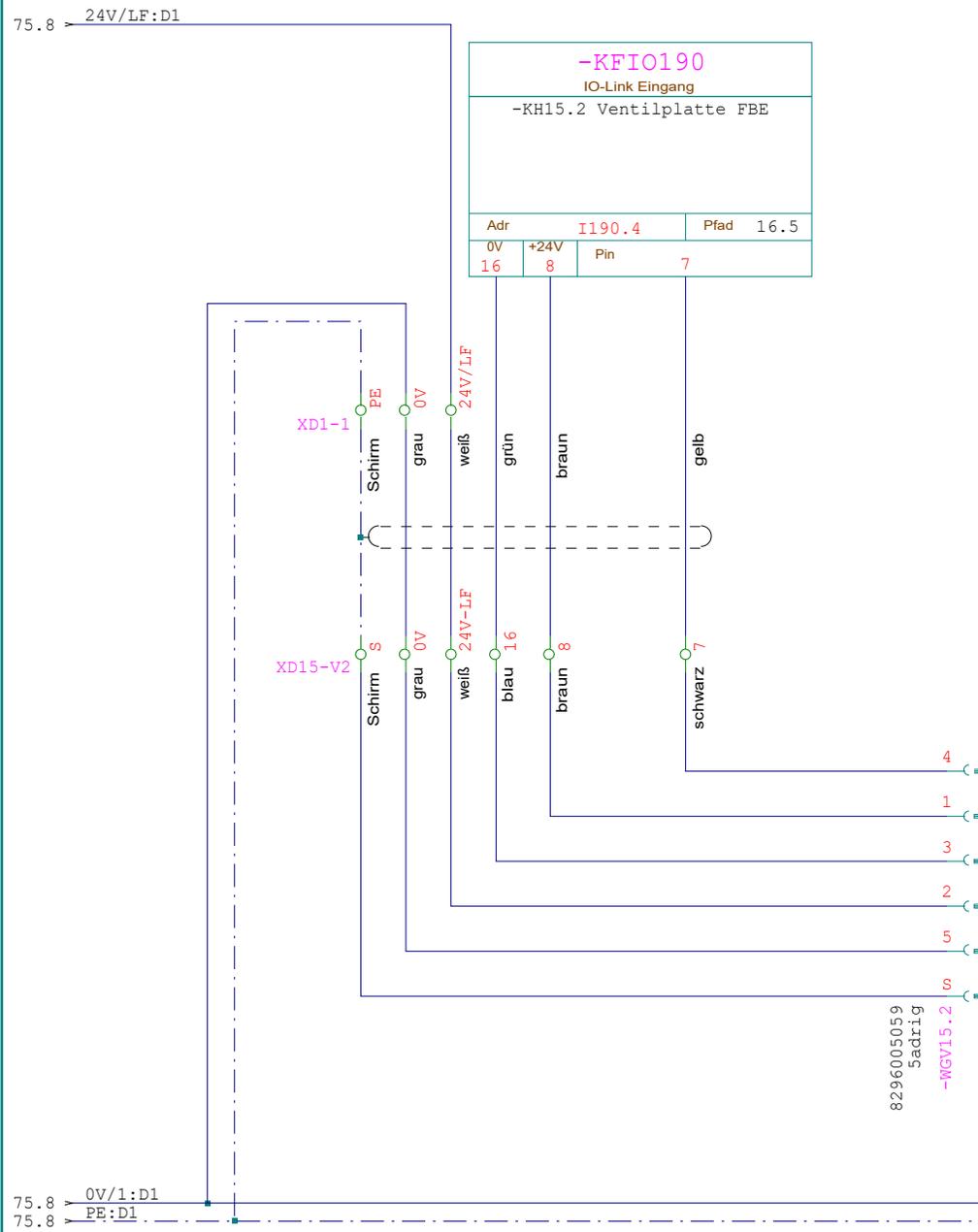
Nr.	Name	Funktion	14	12
1	-QM1	Profilanschlag	AS	GS
2	-QM8	Heizspiegelantrieb	AS	GS
3	-QM10	Spannerverschiebung Stab BD	AS	GS
4	-QM203	Riegel Kopfverschiebung	AS	GS
5	-QM204	Bremse Kopfverschiebung	AS	GS
6	-QM29	Dichtungsformer auf/ab	AS	GS
7	-QM30	Dichtungsformer Riegel	AS	GS
8	-QM55	Dichtungsformer 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

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

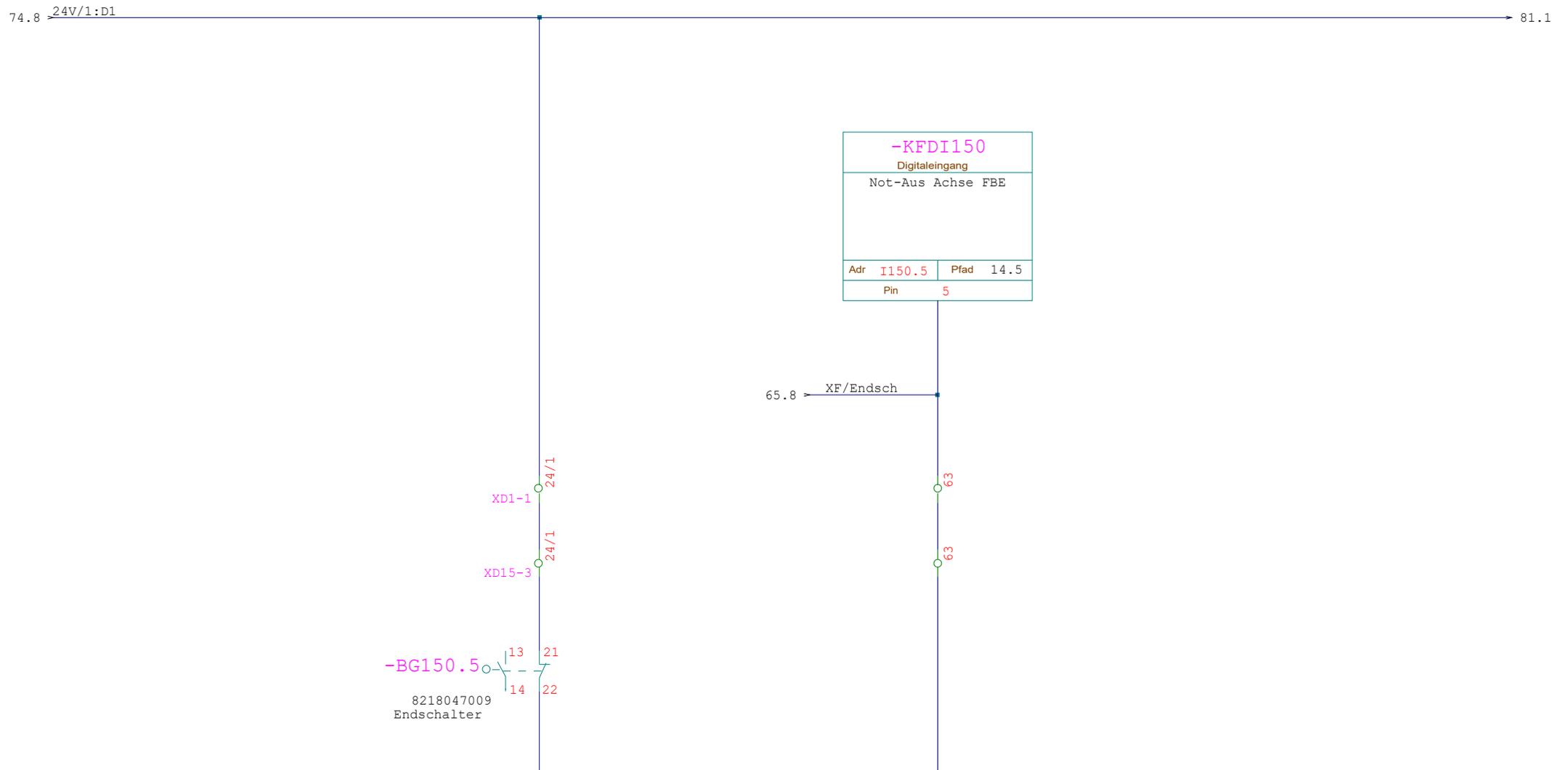
Nr.	Name	Funktion	14	12
1	-QM110	Spannerverschiebung Stab C	AS	GS
2	-QM38	Riegel Spannerverschiebung Stab C	AS	GS
3				
4	-QM33	Werkzeugausheber	AS	GS
5	-QM205	Druckumschaltung Kopfverschiebung	AS	GS
6	-QM45	Druckumschaltung Spanner BD	AS	GS
7				
8	-QM201	Kopfverschiebung	AS	GS
9	-QM17A	Spanner AS Stab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

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

8296005059
Sadrig
-WGV15.2

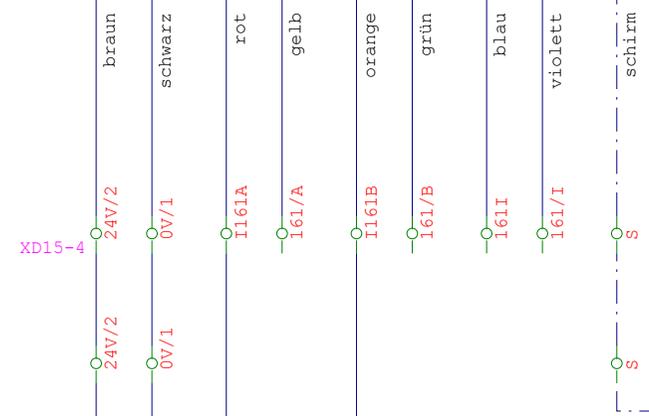
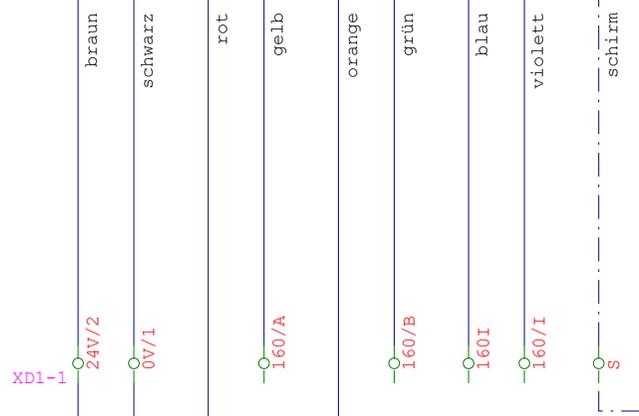
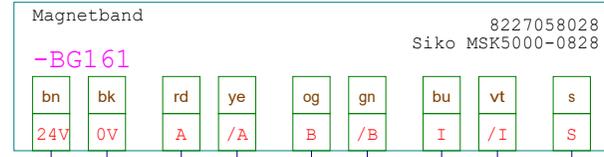
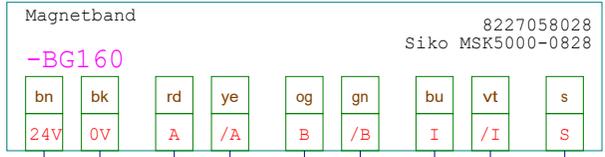
AS = Arbeitsstellung
GS = Grundstellung

Aggr. FBE



68.8

24V/2:D1



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	

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	

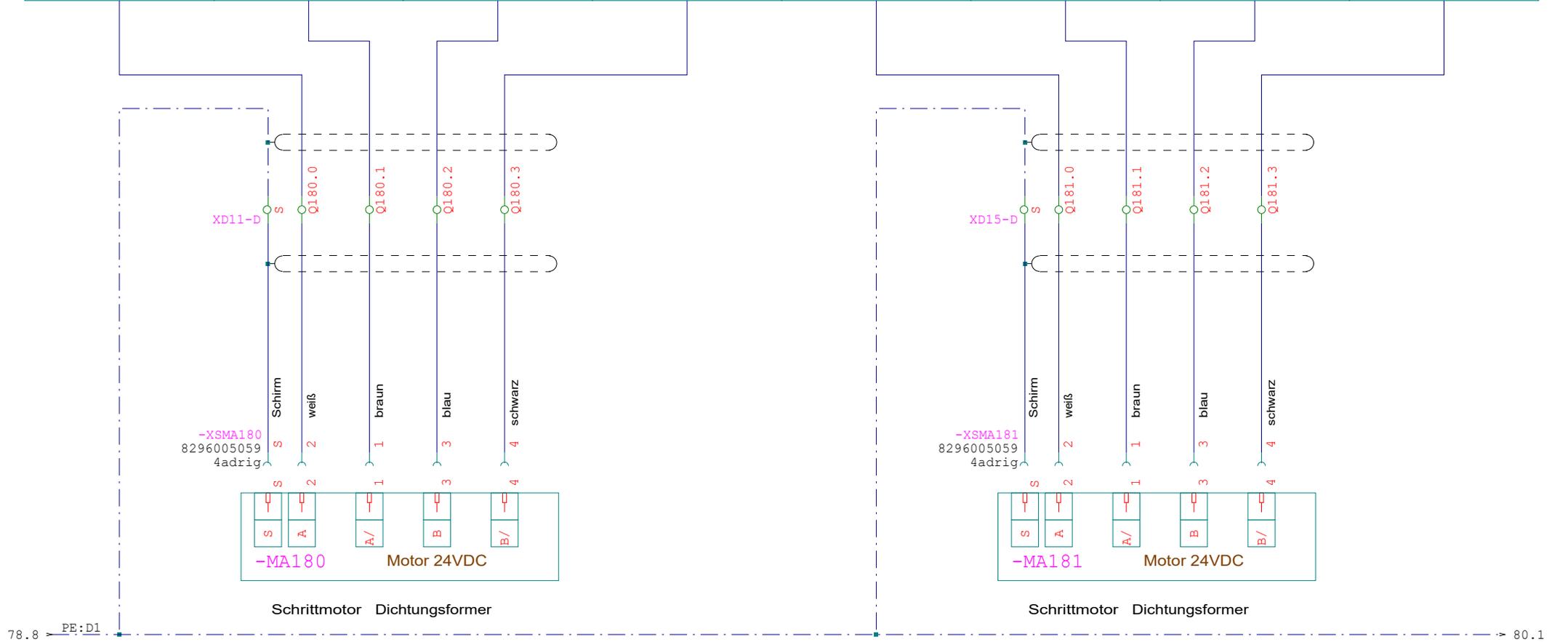
76.8

76.8

0V/1:D1 81.1

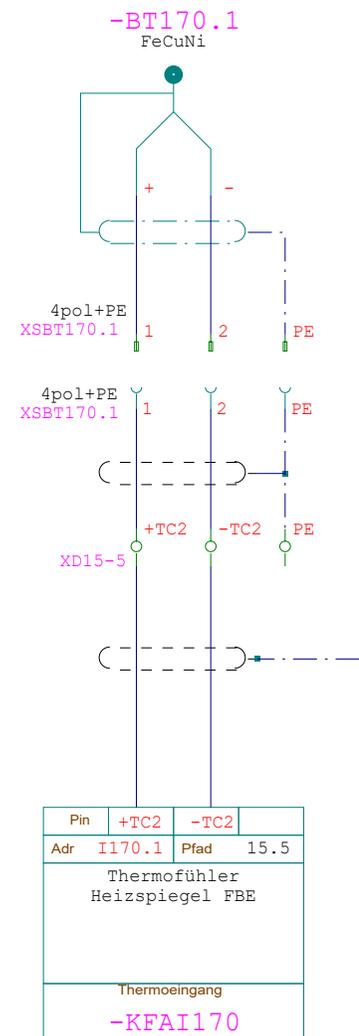
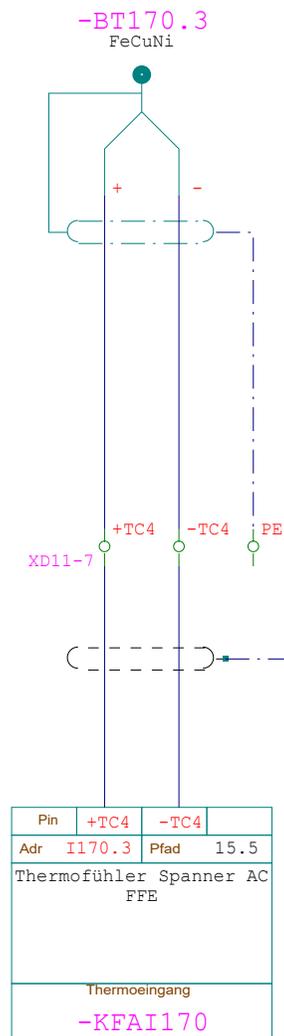
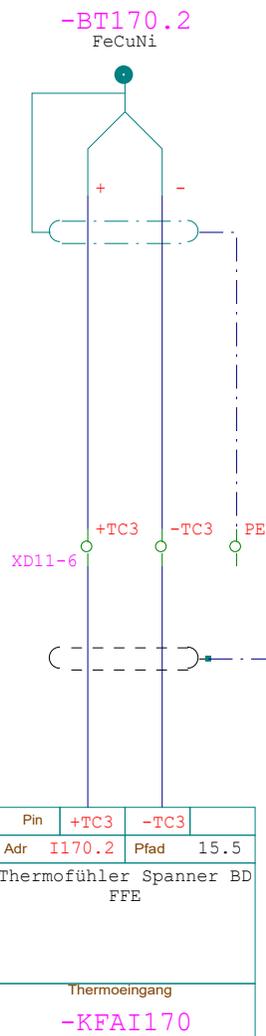
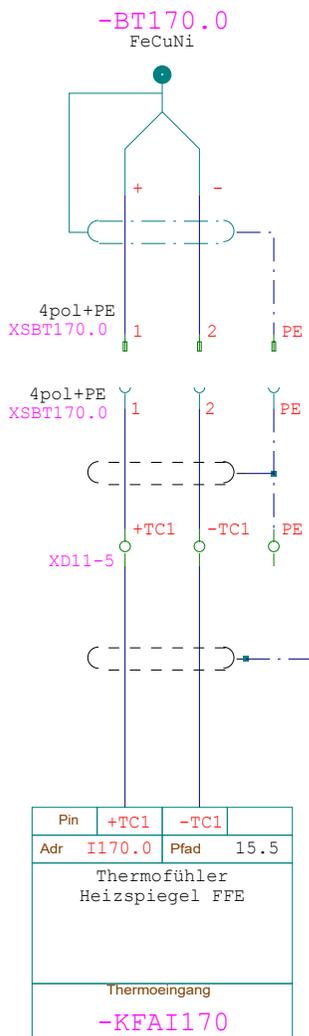
PE:D1 79.1

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		

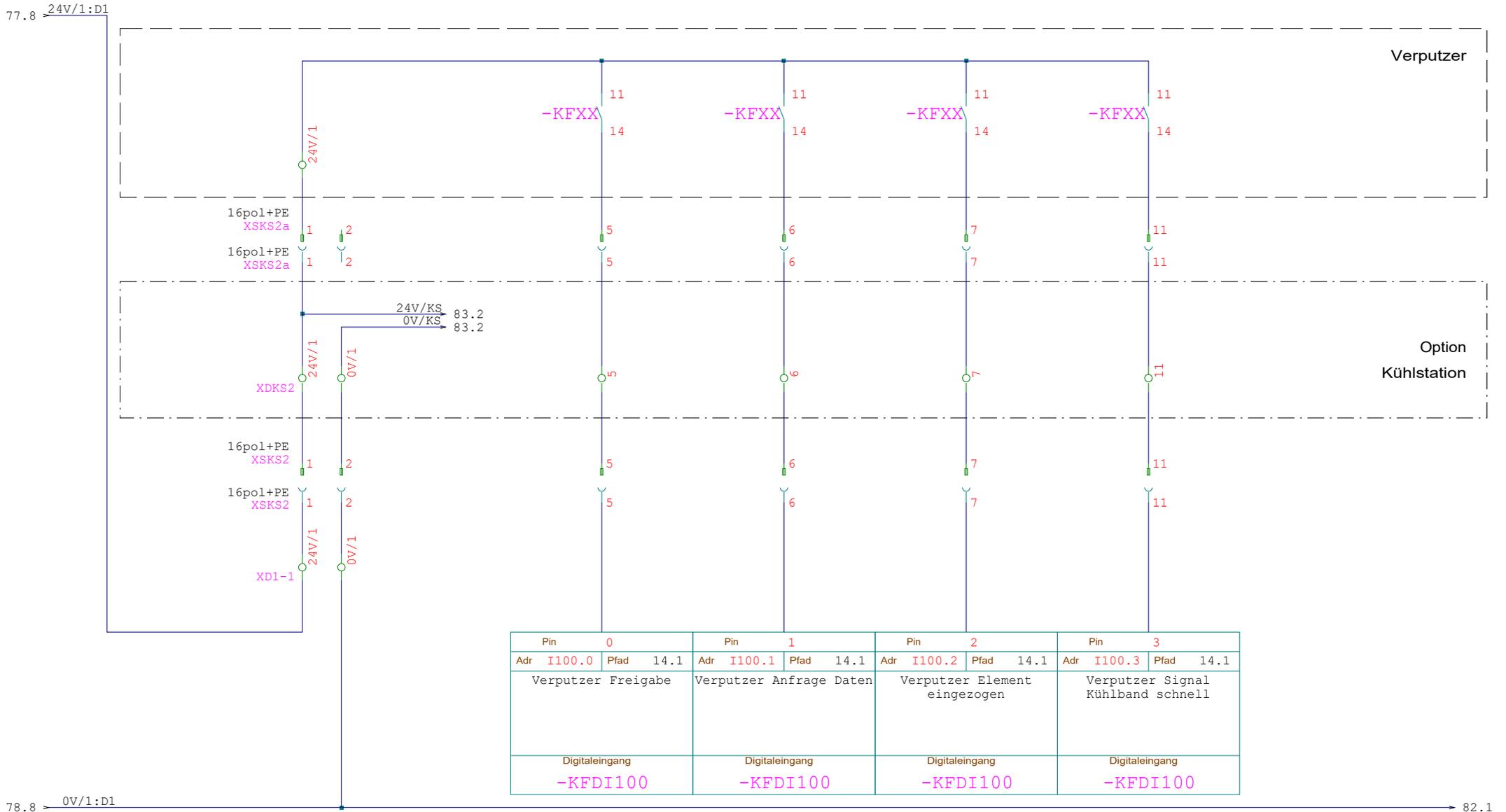


Option

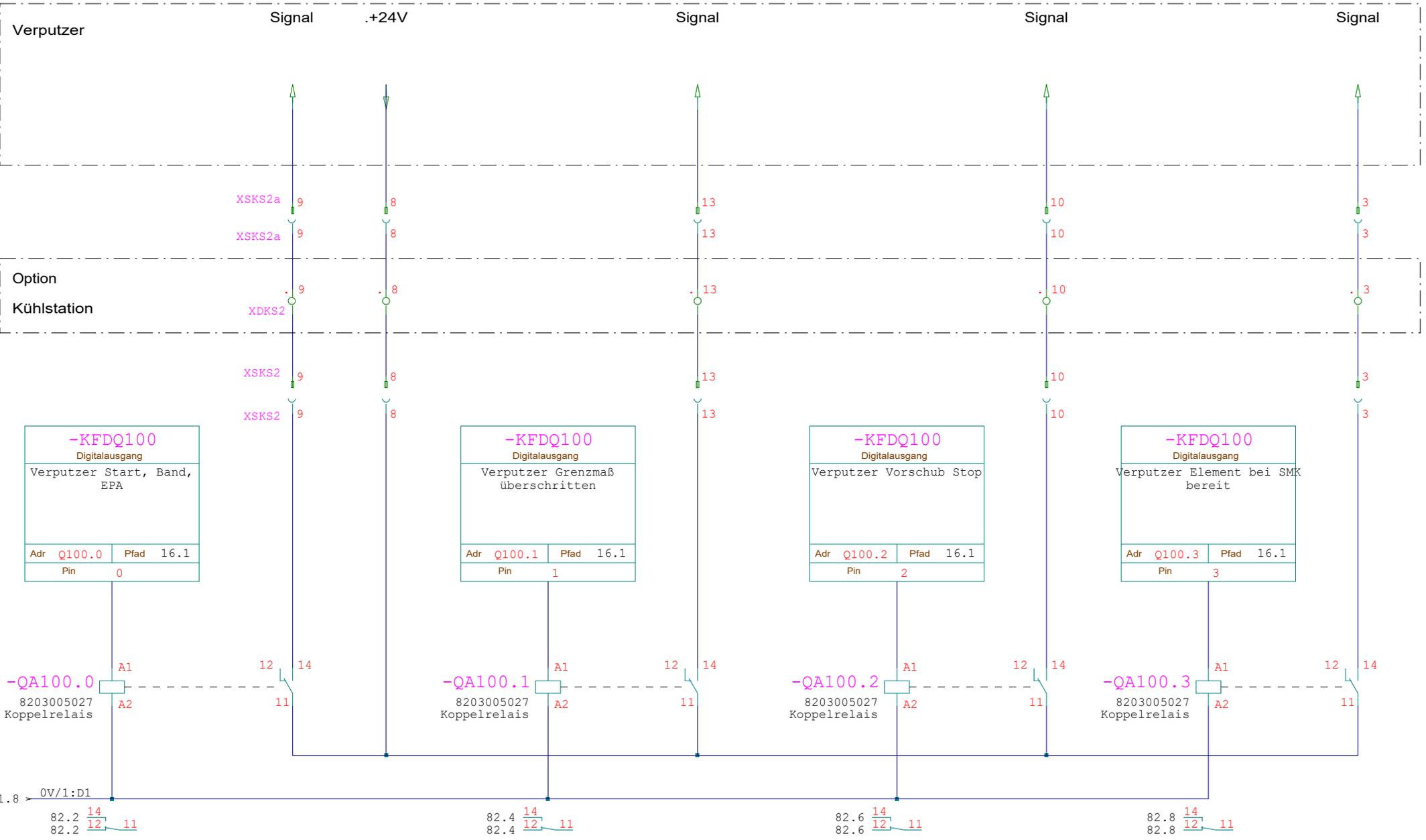
Option



79.8 PE:D1

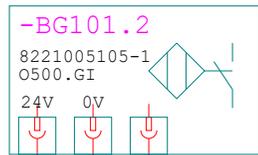


Option EPA Signalaustausch mit Relais



Option EPA Signalaustausch mit Relais

Lichttaster



1
braun
3
blau
4
schwarz

XDKS2

81.3 → 24V/KS
81.3 → 0V/KS

XSKS2

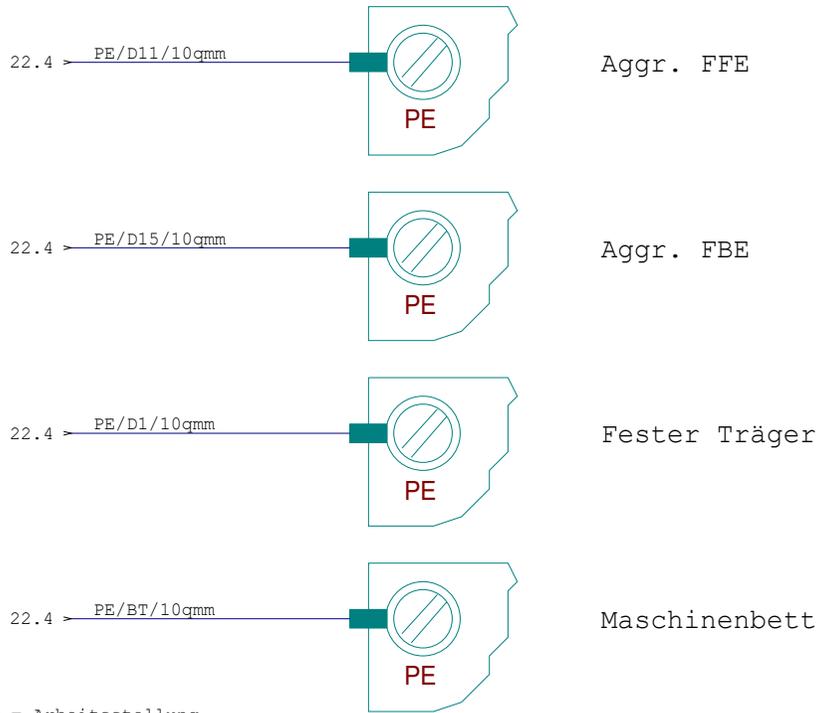
XSKS2

Pin	2
Adr	I101.2
Pfad	14.1
Lichtschranke Kühlstation	
Digitaleingang	
-KFDI101	

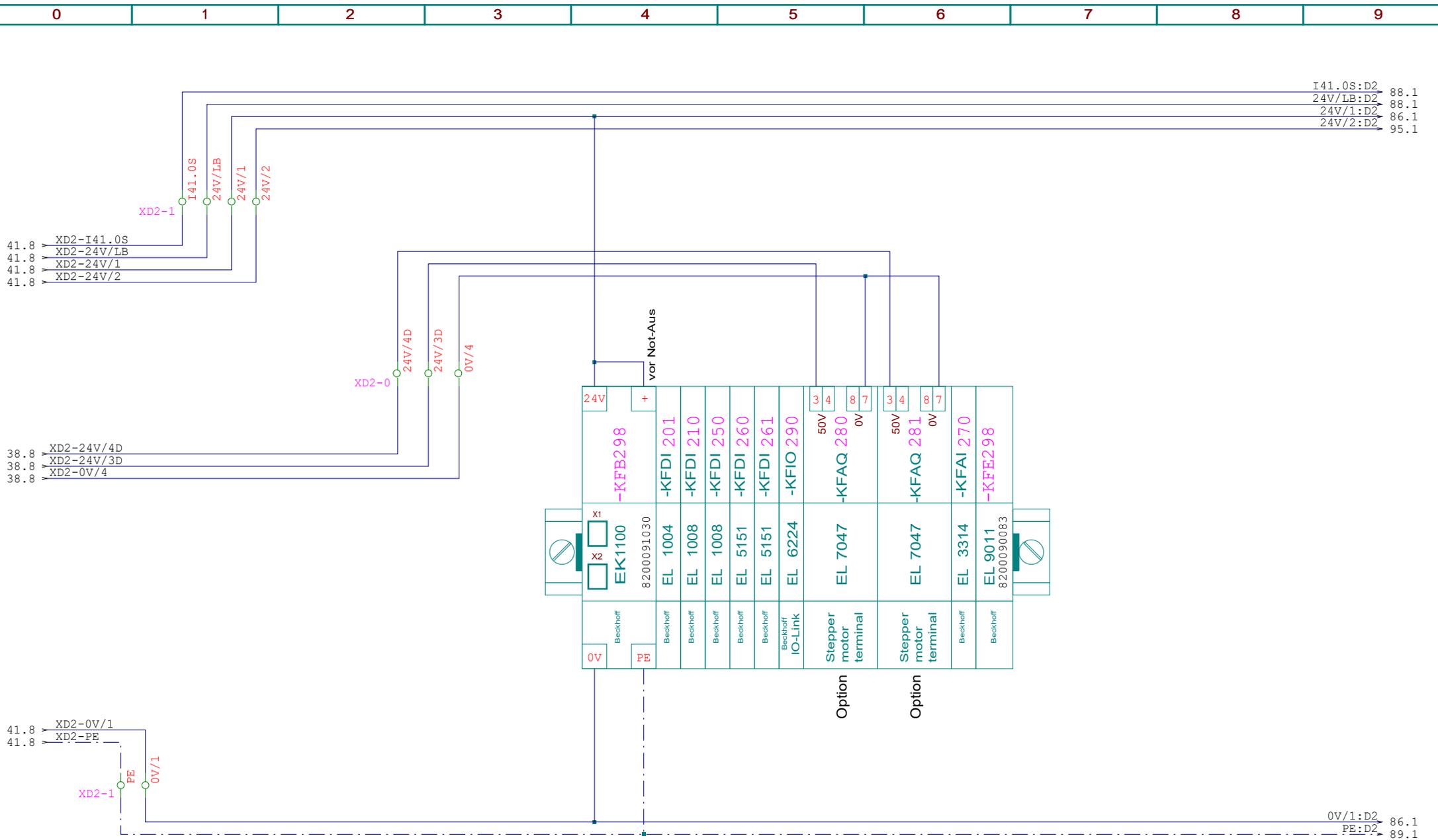
Option

Kühlstation

Erdung



AS = Arbeitsstellung
GS = Grundstellung



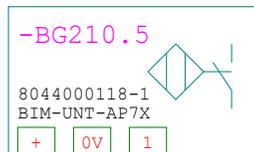
SPS-Steuerung

Option

24V/1:D2 → 87.1

Initiator

Zylindersensor



braun⁺

blau^{0V}

weiß^N

braun

blau

schwarz

XD2-1

24V/1

0V/1

BRRZP

24V/1

0V/1

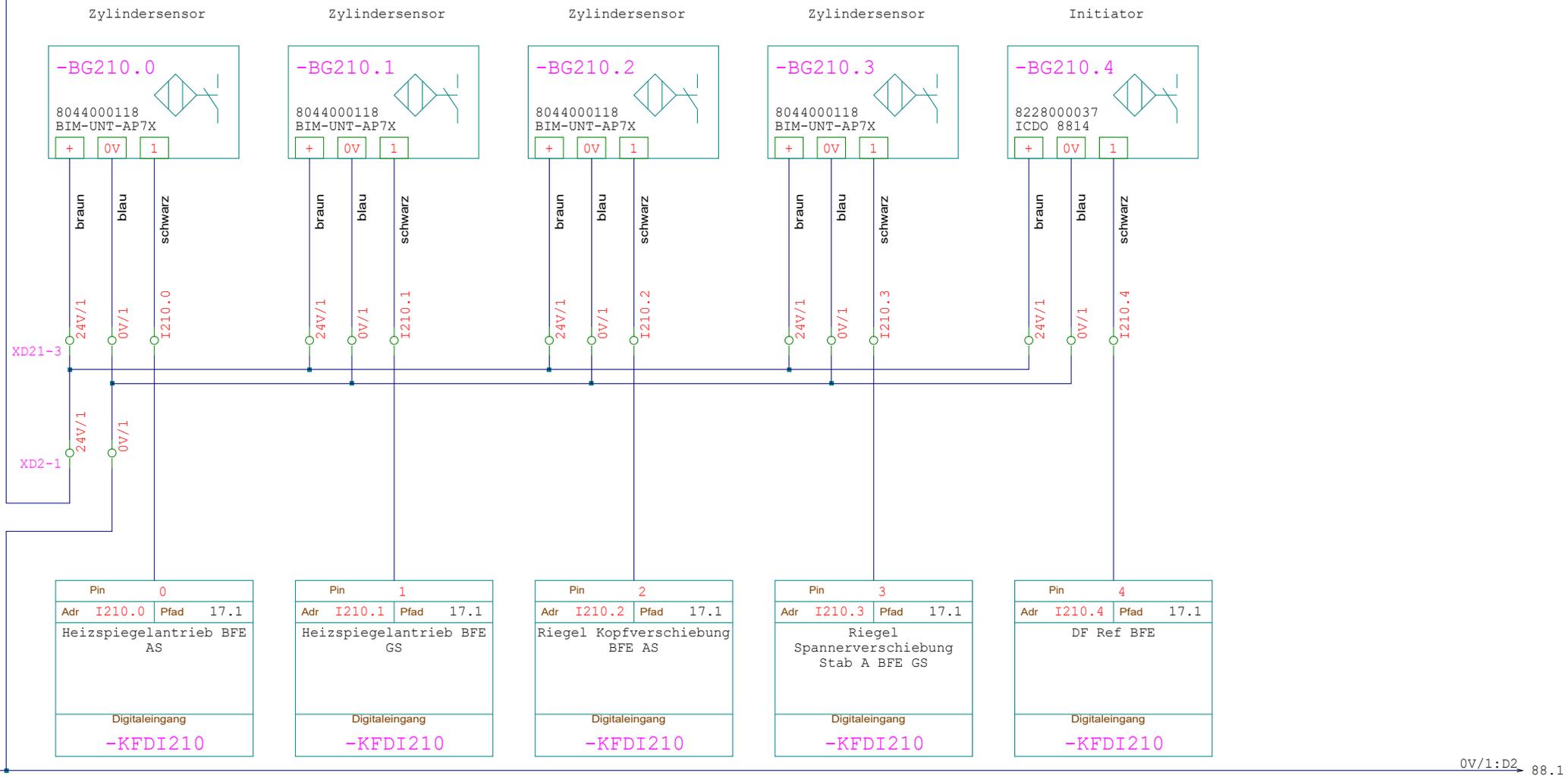
57.7 → BRRZP

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

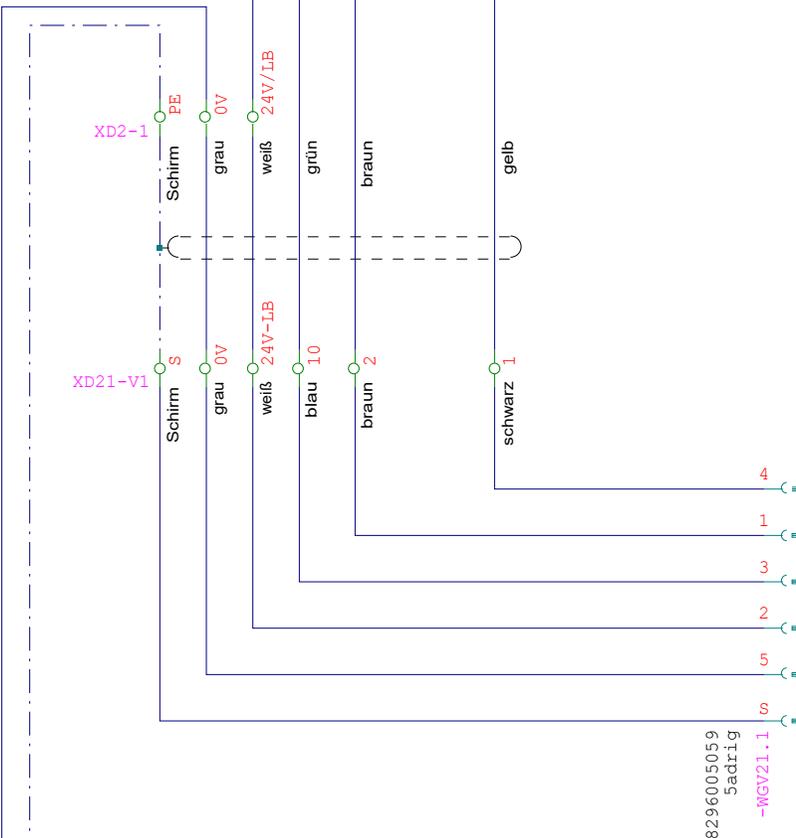


AS = Arbeitsstellung
GS = Grundstellung

88.8 → 24V/LB:D2 → 90.1

-KFIO290
IO-Link Eingang
-KH21.1 Ventilplatte BFE

Adr	I290.1	Pfad	19.5
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	-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
Sadrig
5adrig
-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

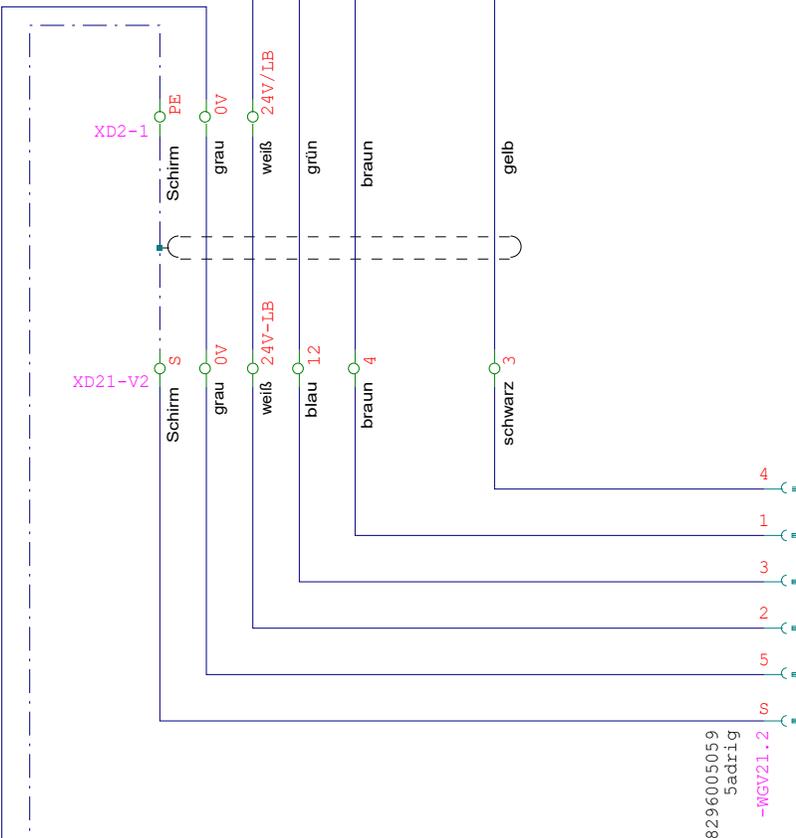
AS = Arbeitsstellung
GS = Grundstellung

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	3
12	4		



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

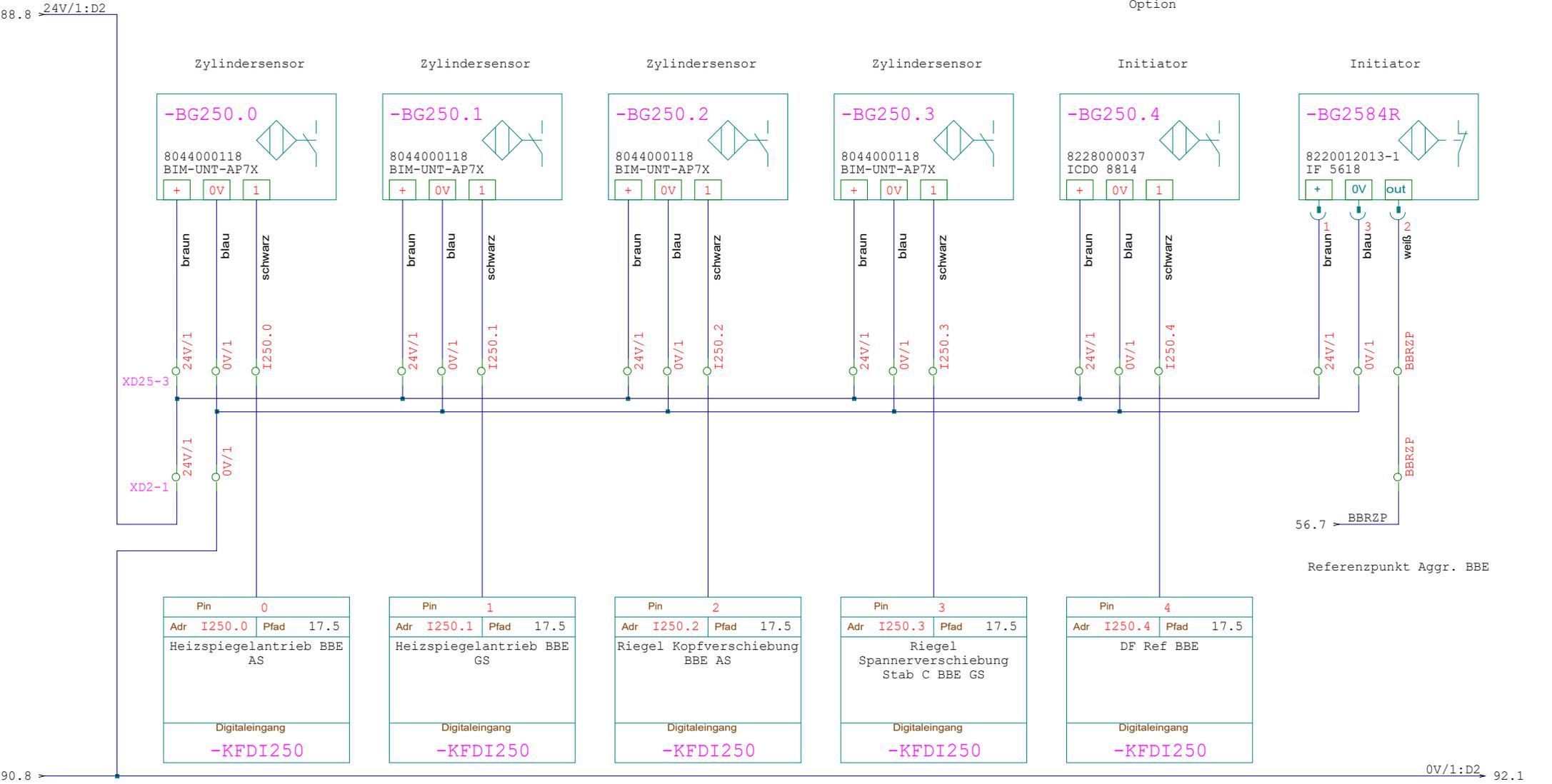
8296005059
Sadrig
5adrig
-WGV21.2

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

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

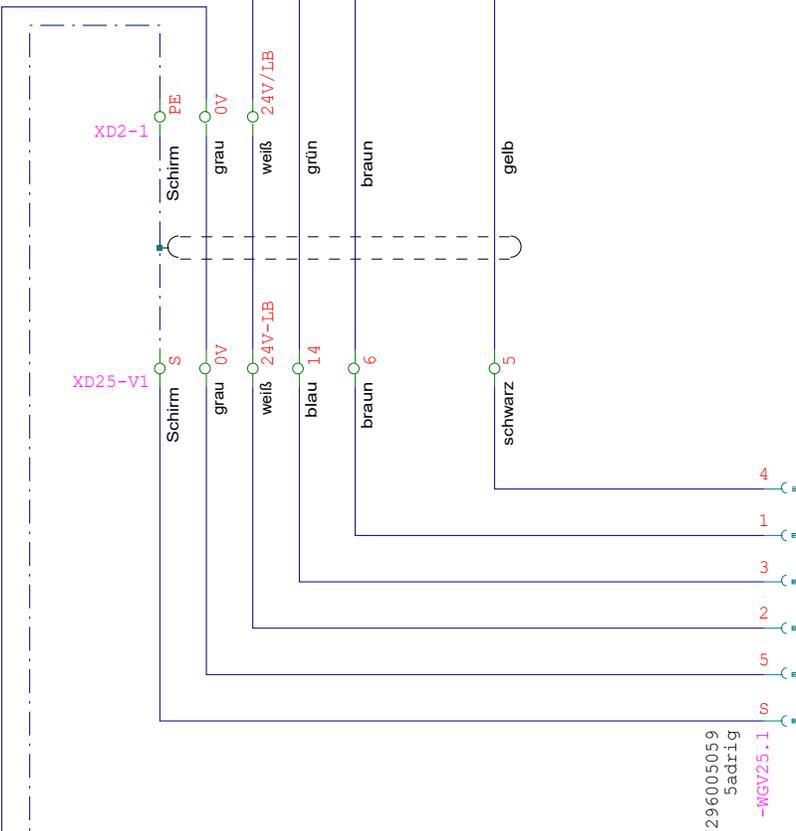
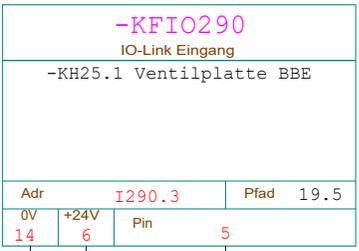
AS = Arbeitsstellung
GS = Grundstellung

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

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

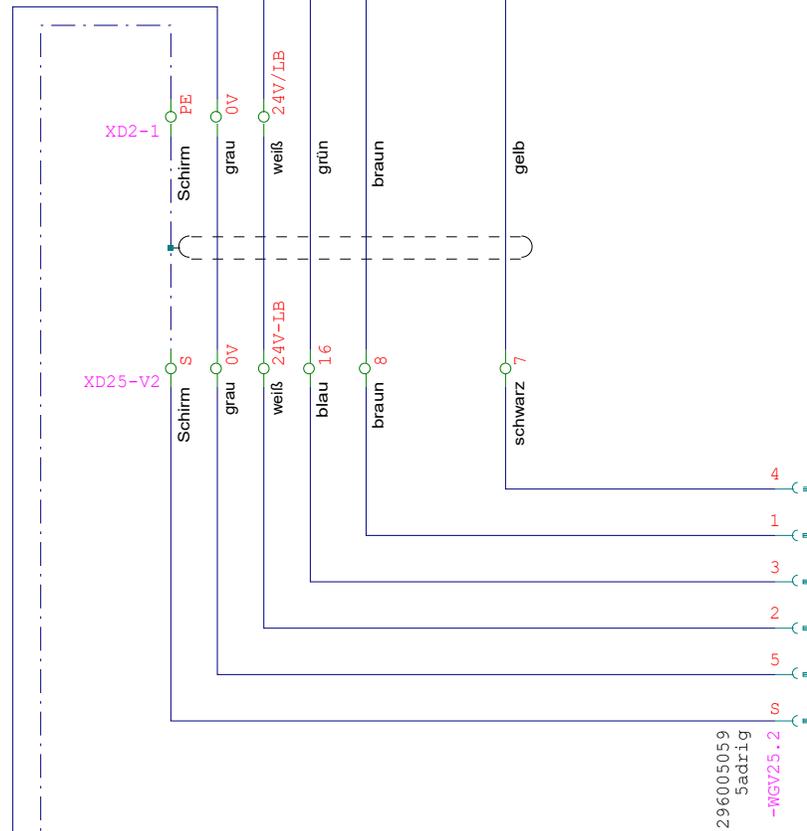
Aggr. BBE

92.8 → 24V/LB:D2

-KFIO290
IO-Link Eingang

-KH25.2 Ventilplatte BBE

Adr		I290.4	Pfad		19.5
0V	+24V	Pin			
16	8	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

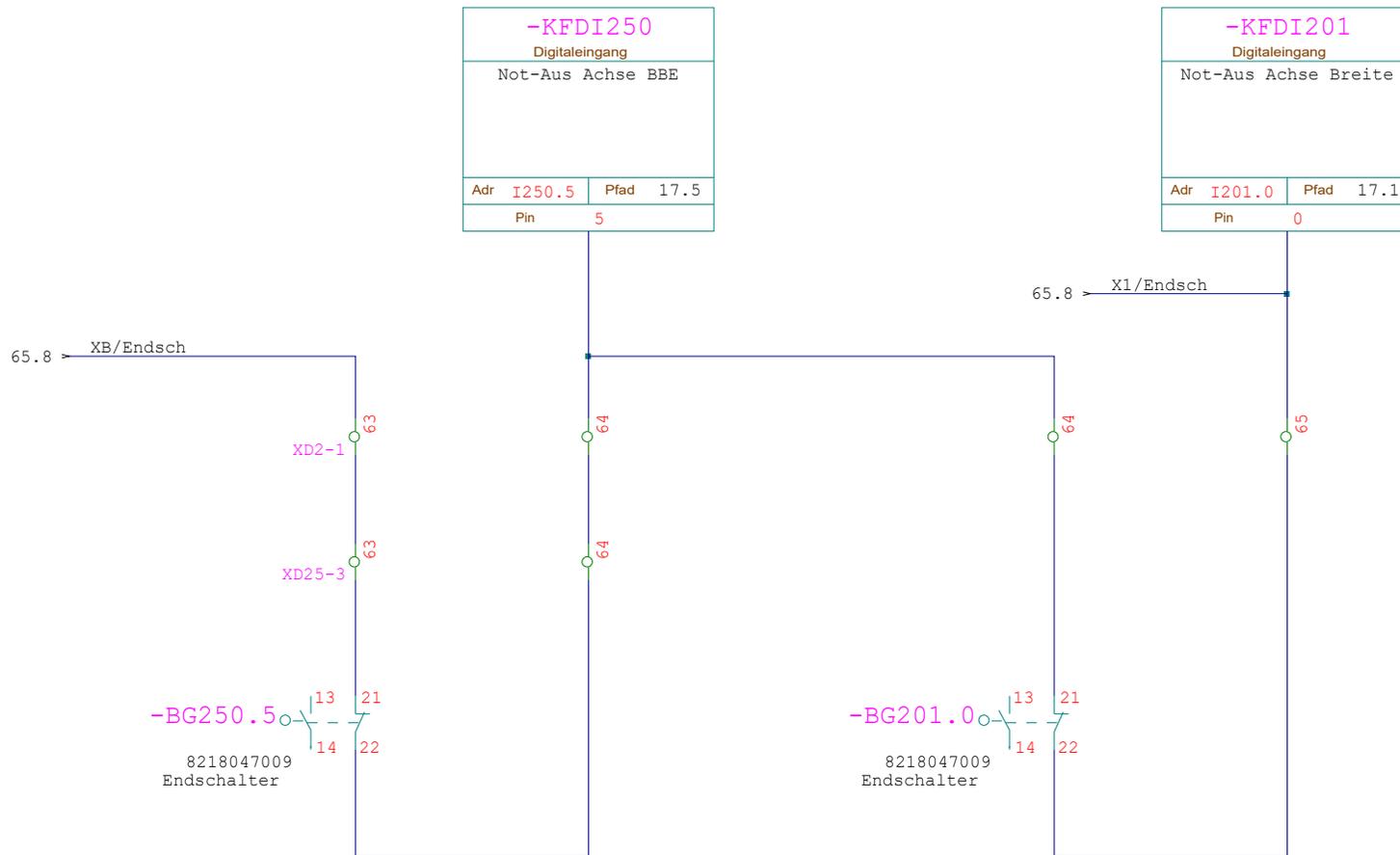
IO-Link Ventilplatte -KH25.2 BBE VAEM-L1-S-10-PT

8296005059
Sadrig
-WGV25.2

92.8 → 0V/1:D2 → 95.1
 92.8 → PE:D2 → 95.1

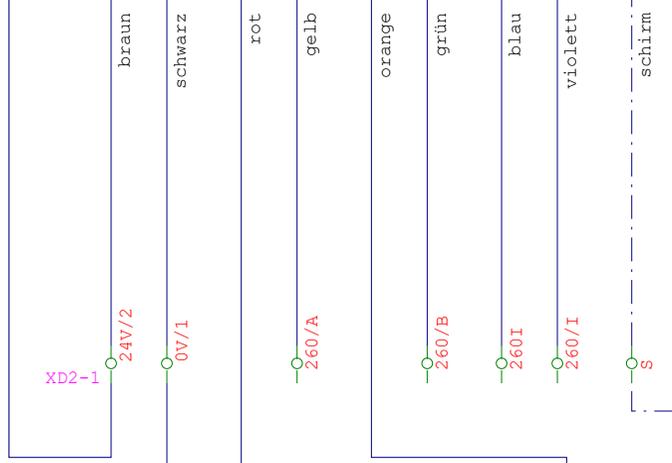
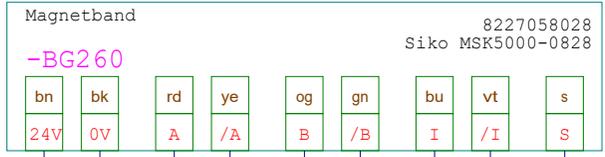
AS = Arbeitsstellung
GS = Grundstellung

Aggr. BBE



85.8

24V/2:D2



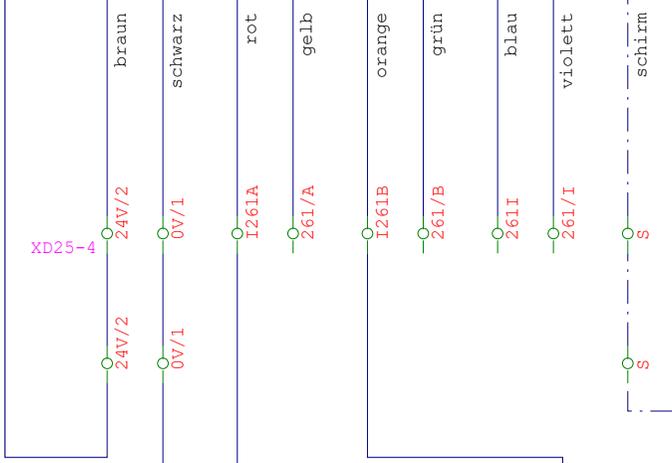
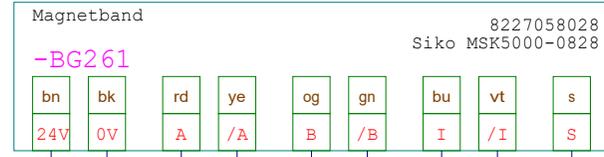
XD2-1

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	

93.8

0V/1:D2
PE:D2

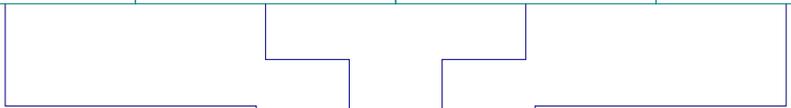
XD25-4



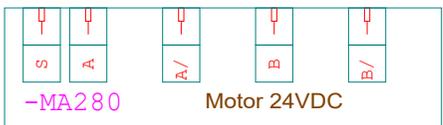
Pin	A	Pin	B
Adr	I261.0	Pfad	18.5
Adr	I261.1	Pfad	18.5
Kopferschiebung Spur A BBE		Kopferschiebung Spur B BBE	
Digitaleingang		Digitaleingang	
-KFDI261		-KFDI261	

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		



XSMA280
8296005059
4adrig



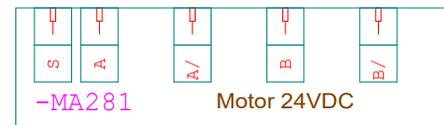
-MA280

Motor 24VDC

Schrittmotor Dichtungsformer



XSMA281
8296005059
4adrig



-MA281

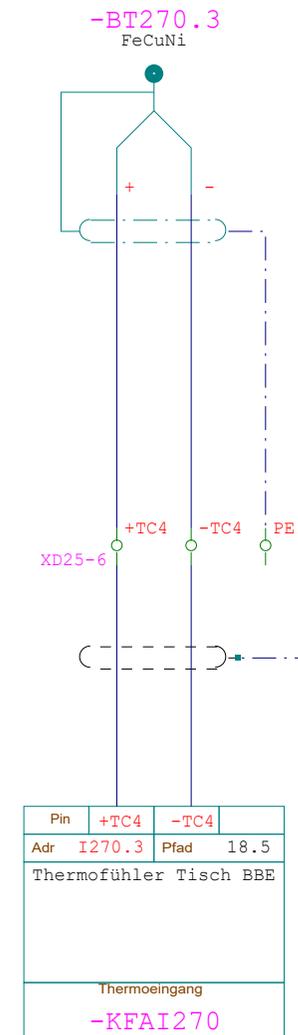
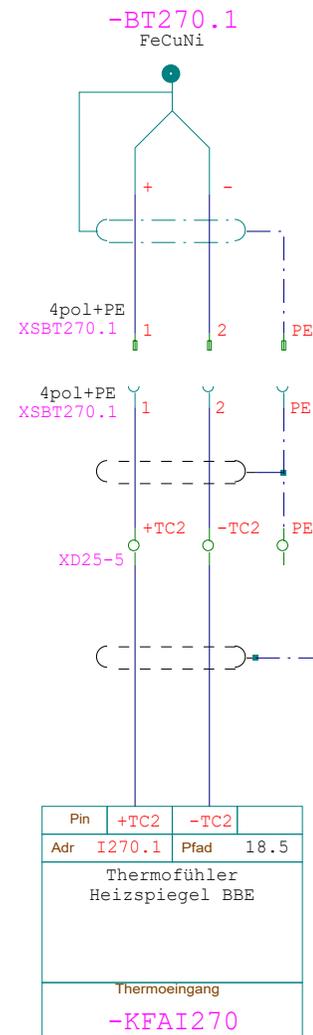
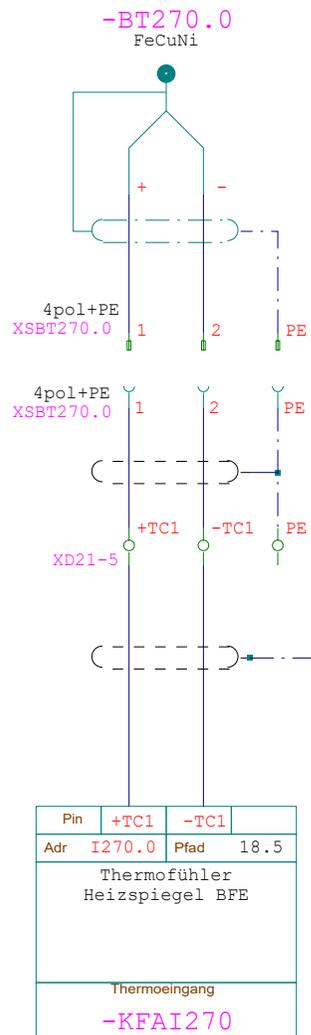
Motor 24VDC

Schrittmotor Dichtungsformer

95.8 PE: D2

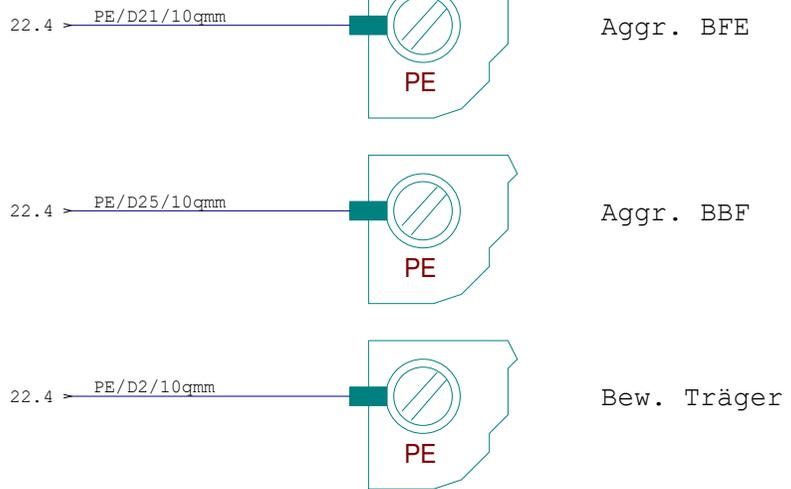
97.1

Option



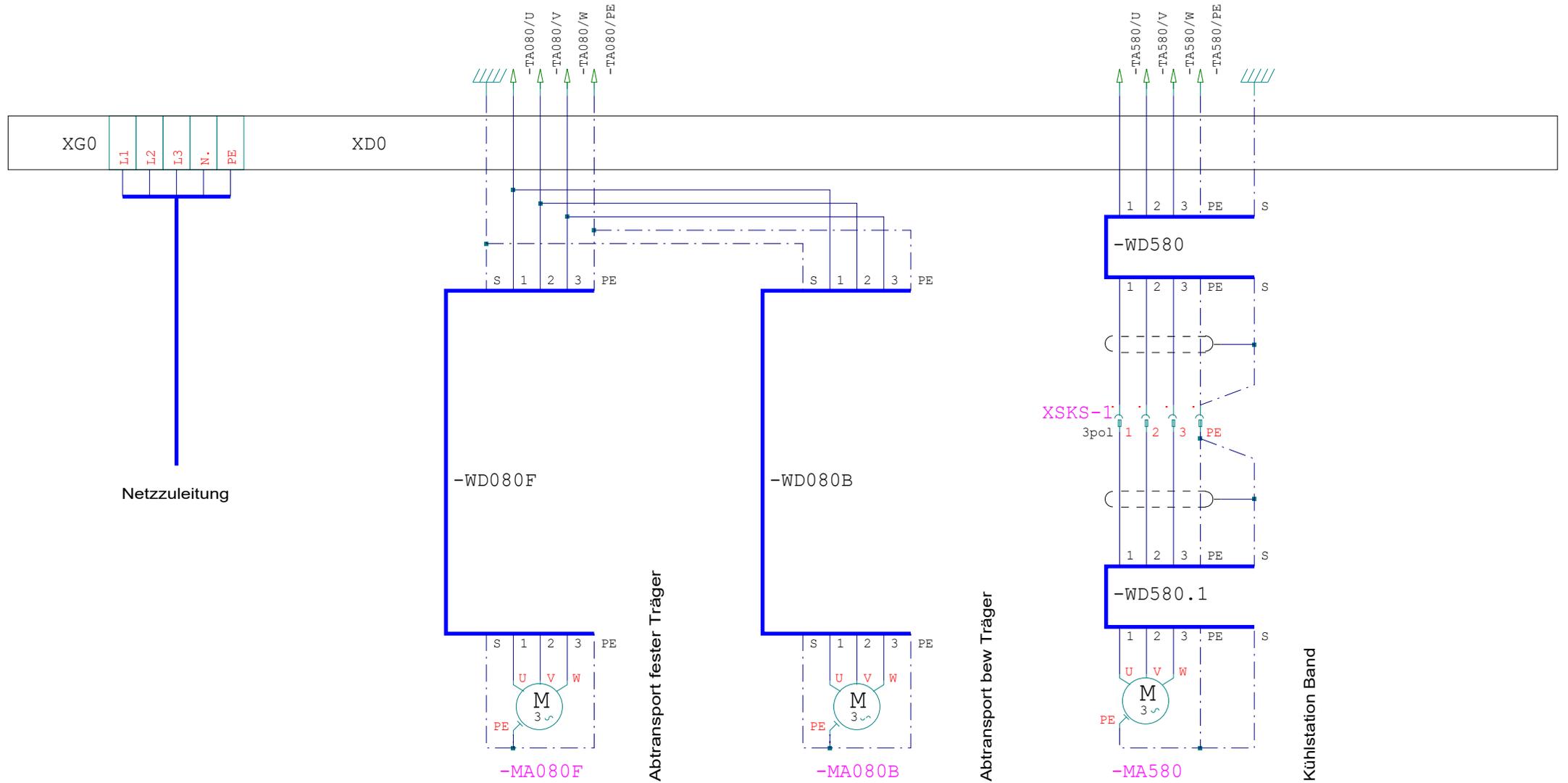
96.8 PE:D2

Erdung

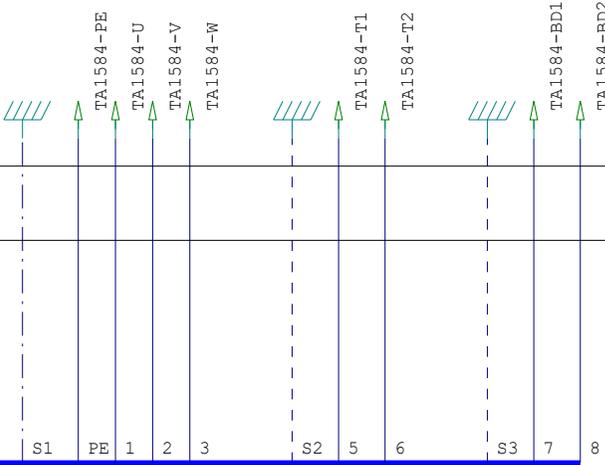


AS = Arbeitsstellung
GS = Grundstellung

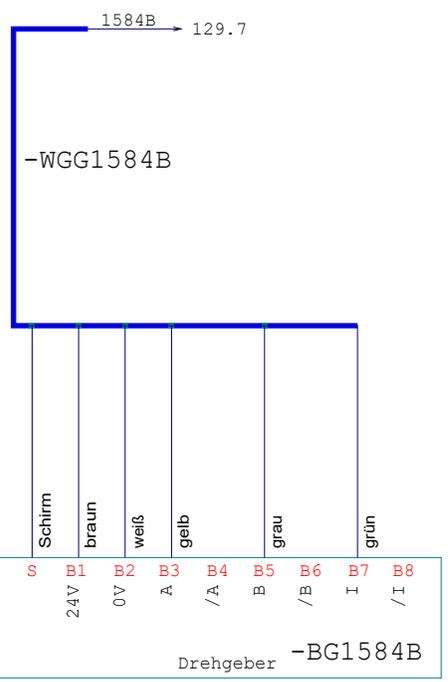
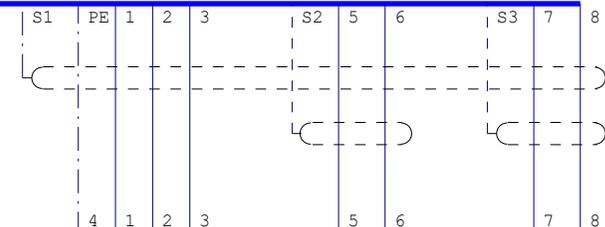
Klemmen und Kabelanordnung



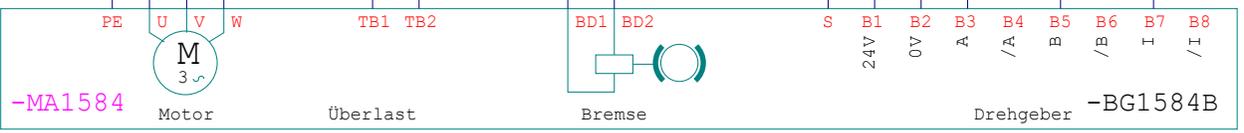
XDO



-WD1584
 Ein Kabel mit 4x1,5 und 2x1 und 2x1



-WGG1584B



-MA1584

Motor

Überlast

Bremse

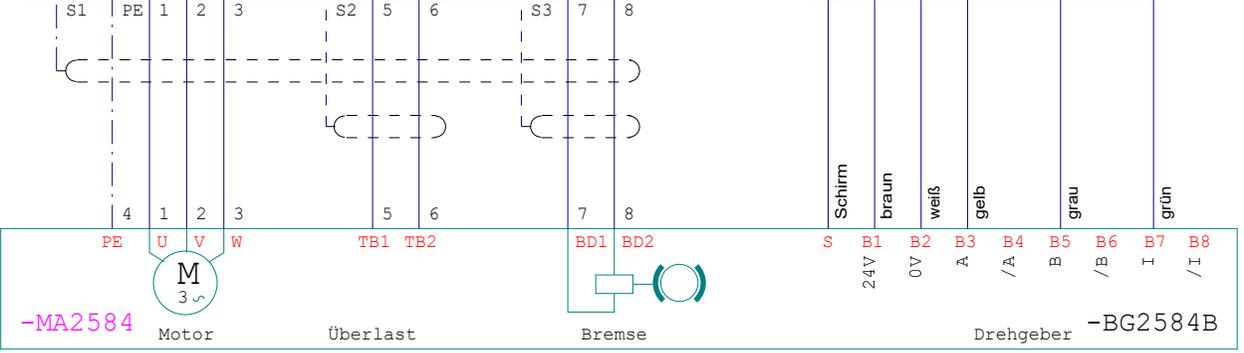
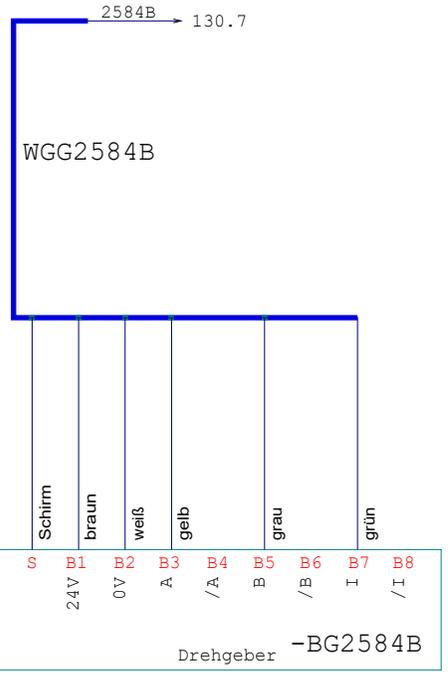
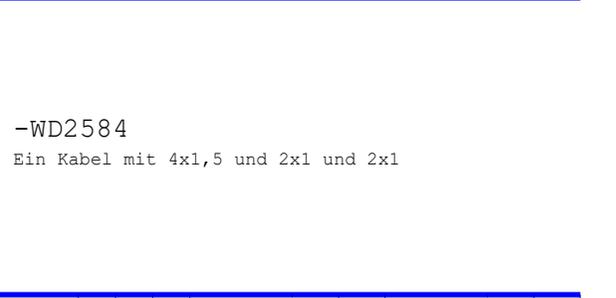
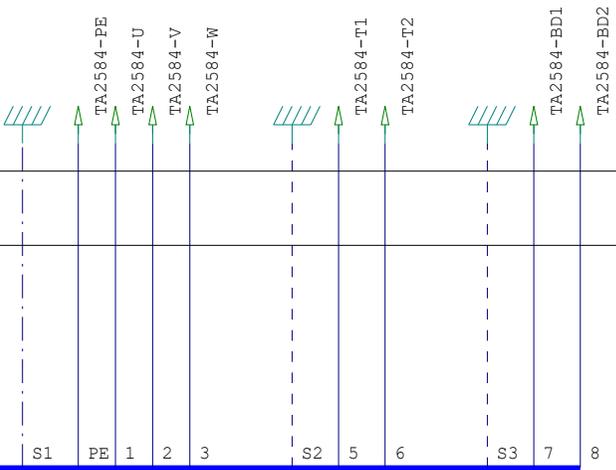
Drehgeber

-BG1584B

Positionieren

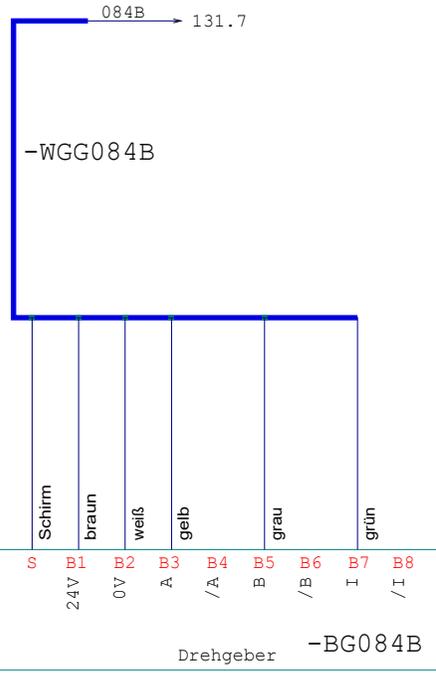
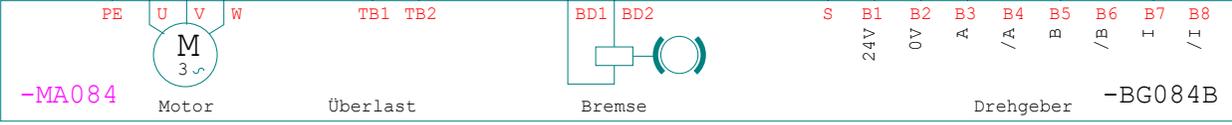
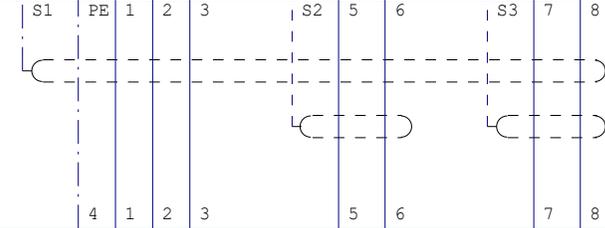
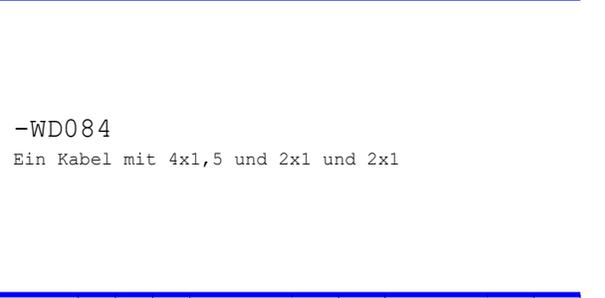
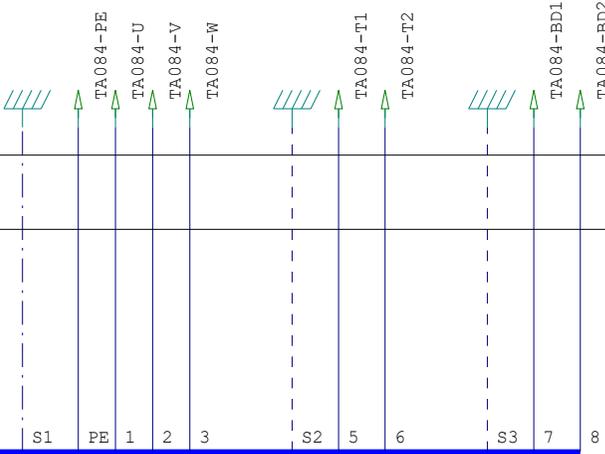
Aggr. FBE

XDO

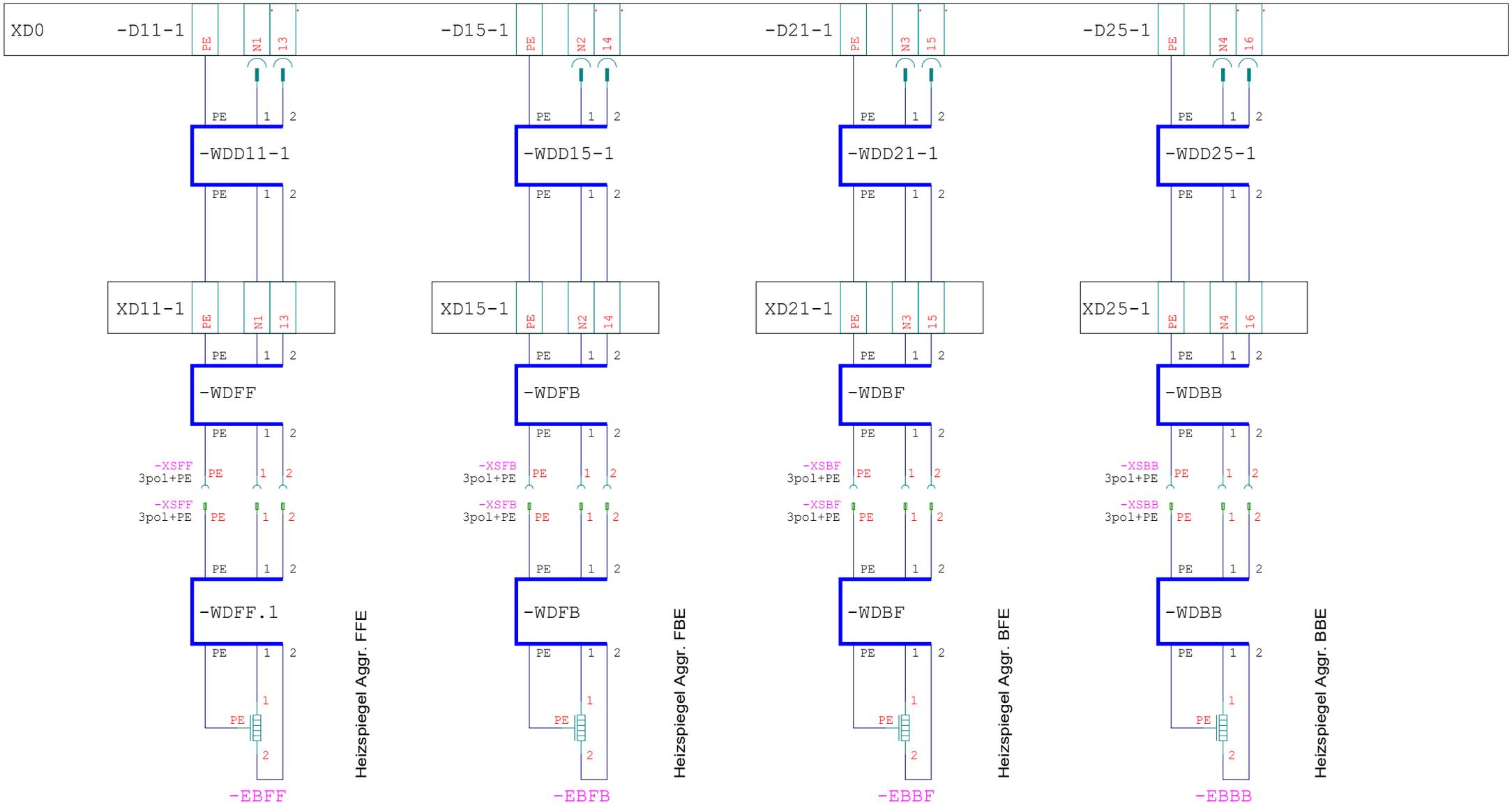


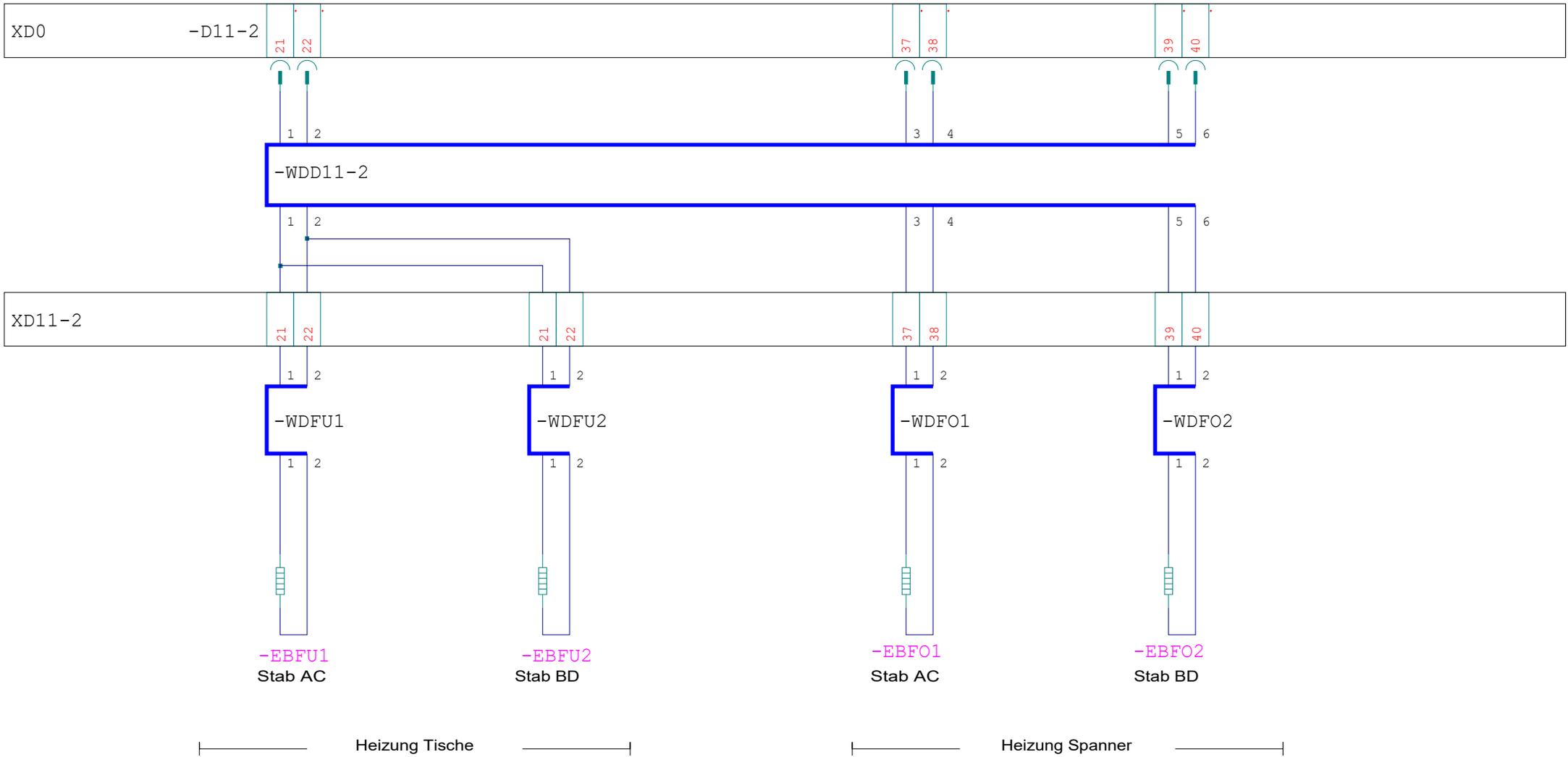
Positionieren
Aggr. BBE

XDO



Positionieren
Breite

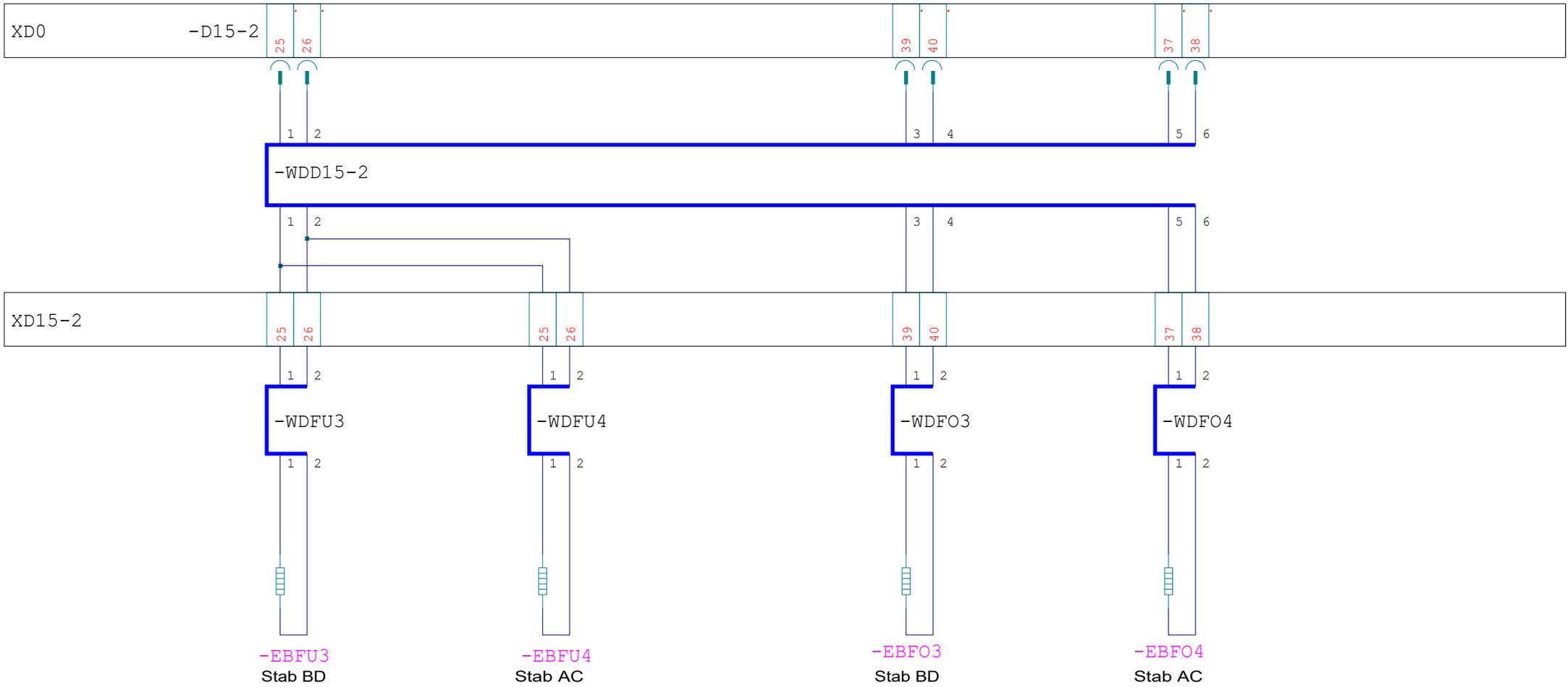




Heizung Tische

Heizung Spanner

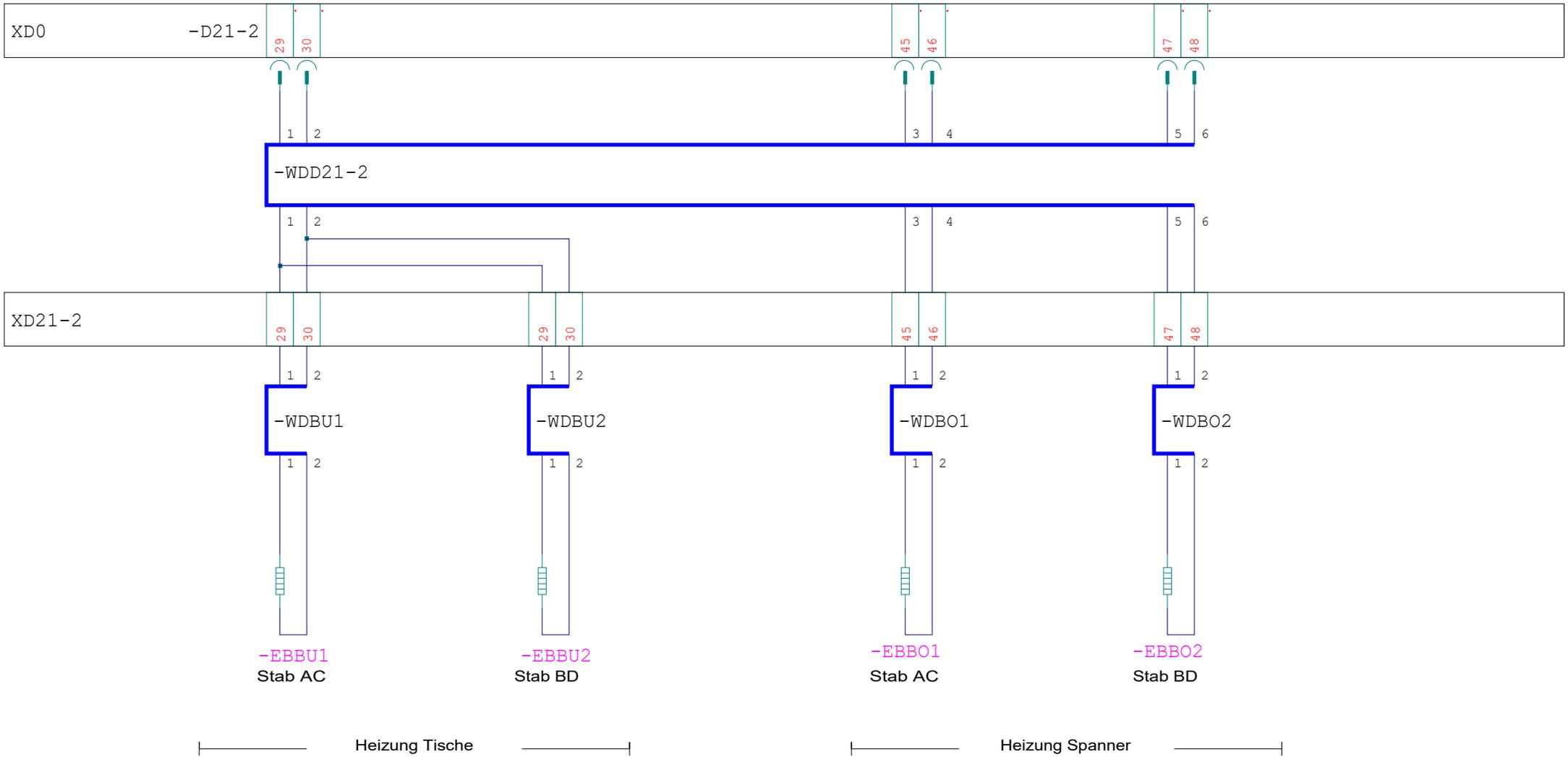
Option



Heizung Tische

Heizung Spanner

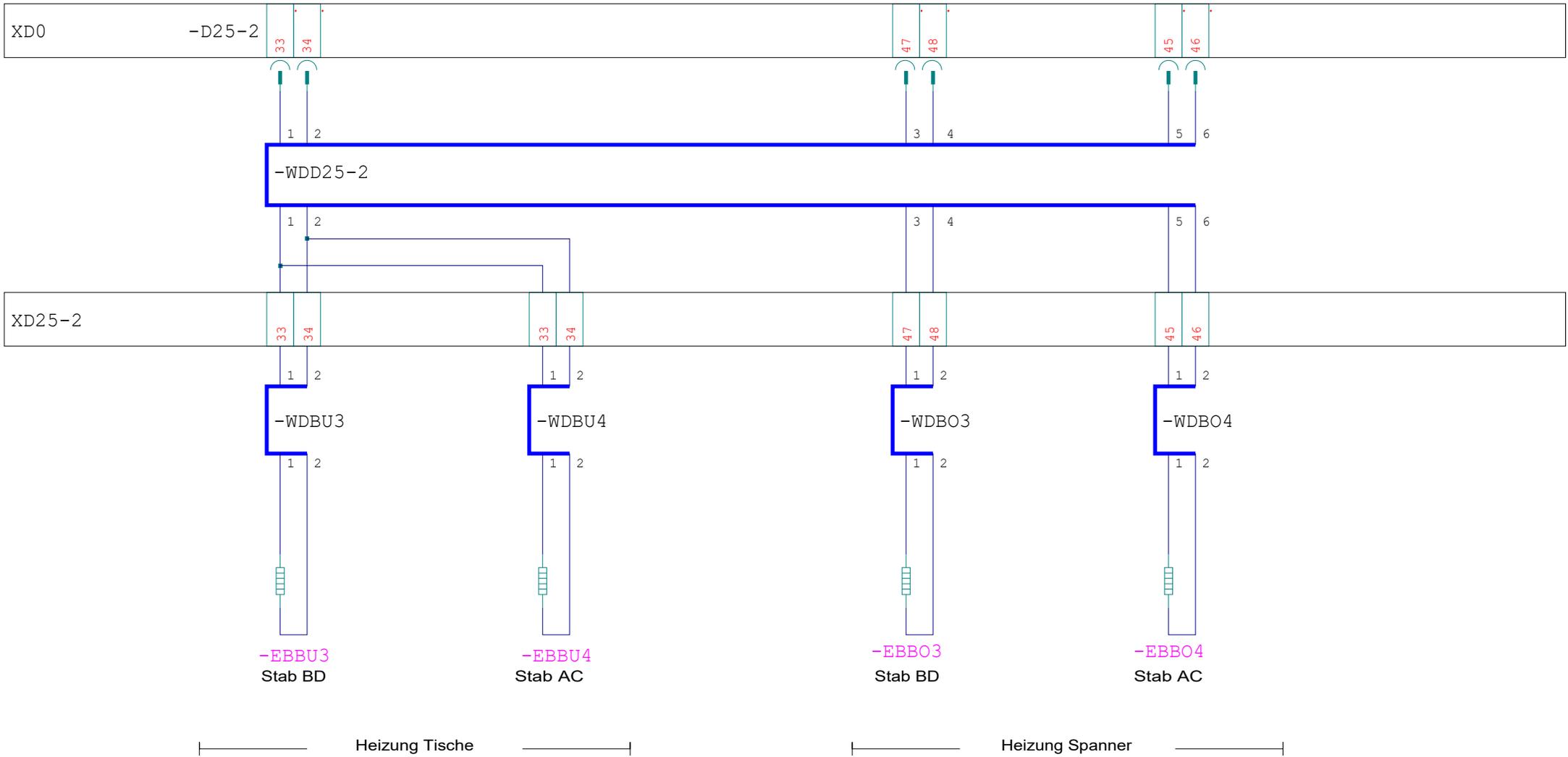
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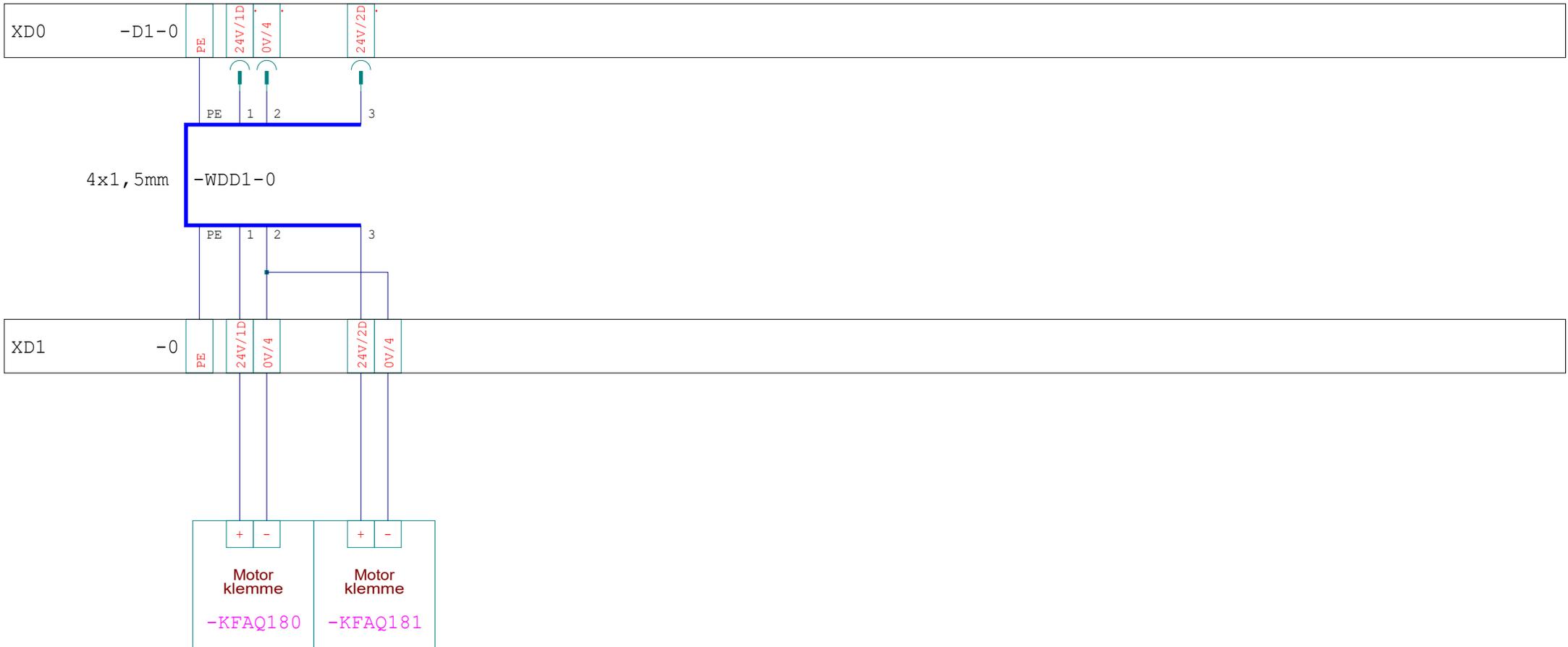


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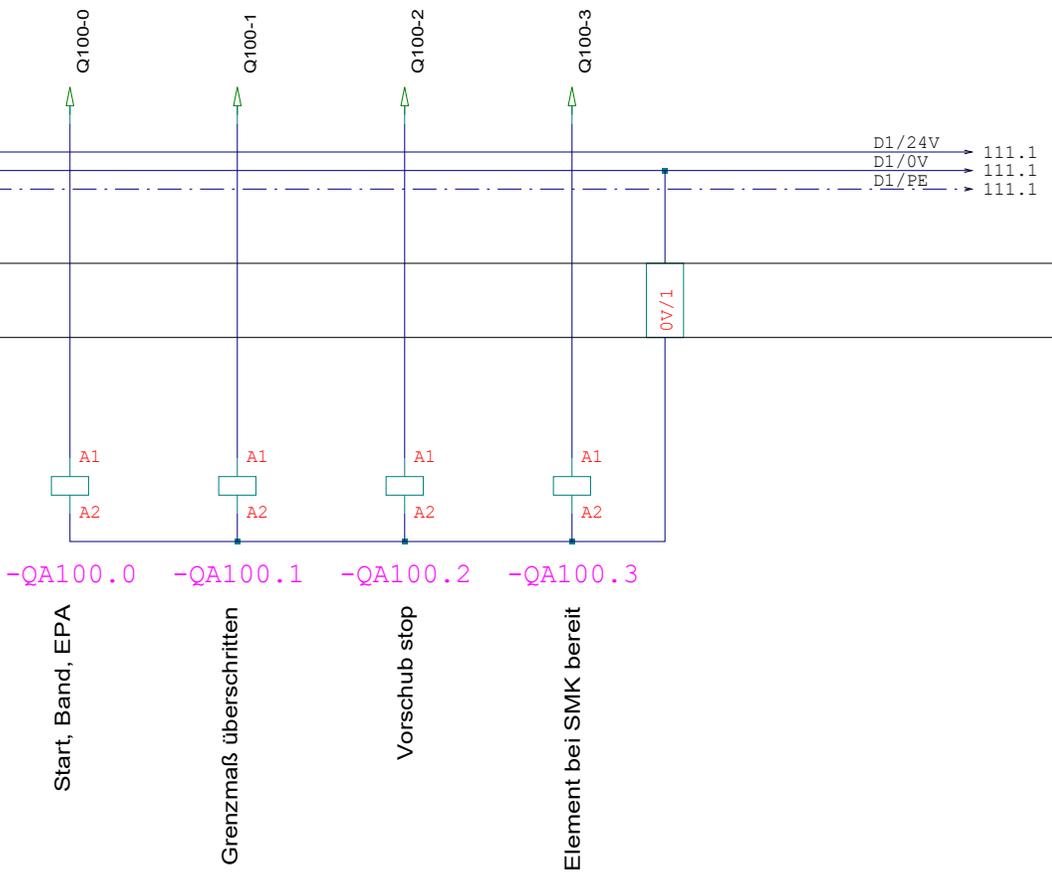
Heizung Spanner

Option

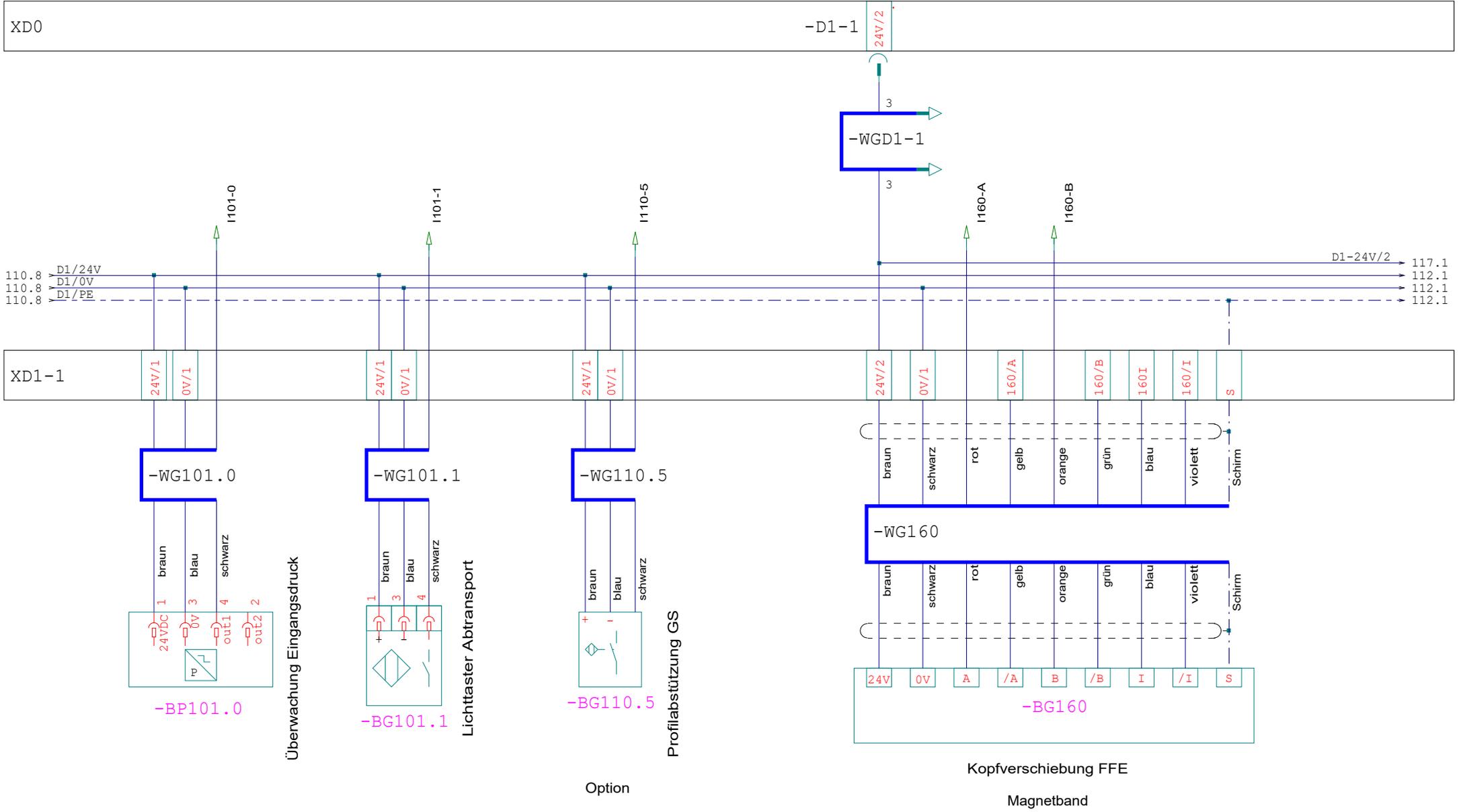




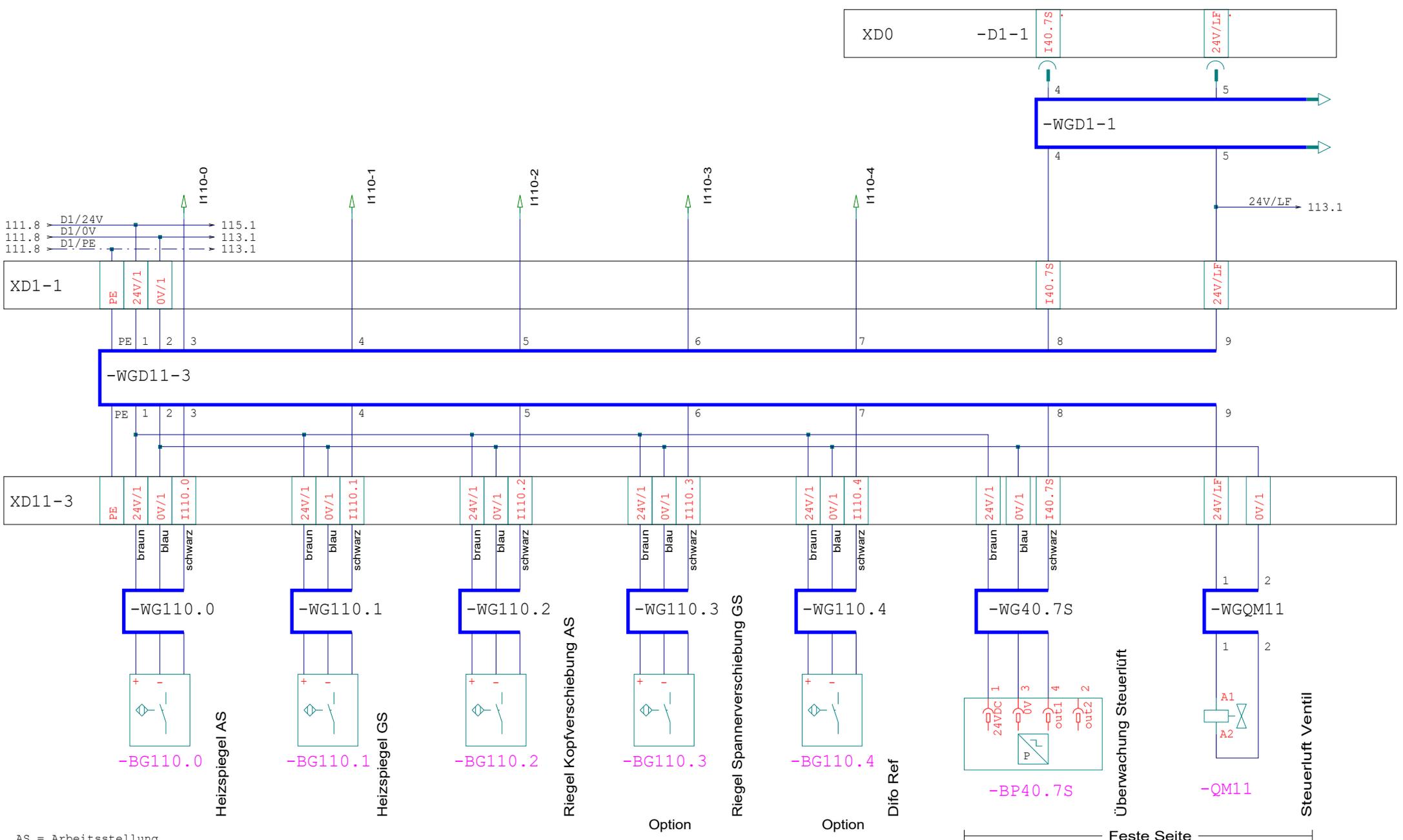
Option Dichtungsformer

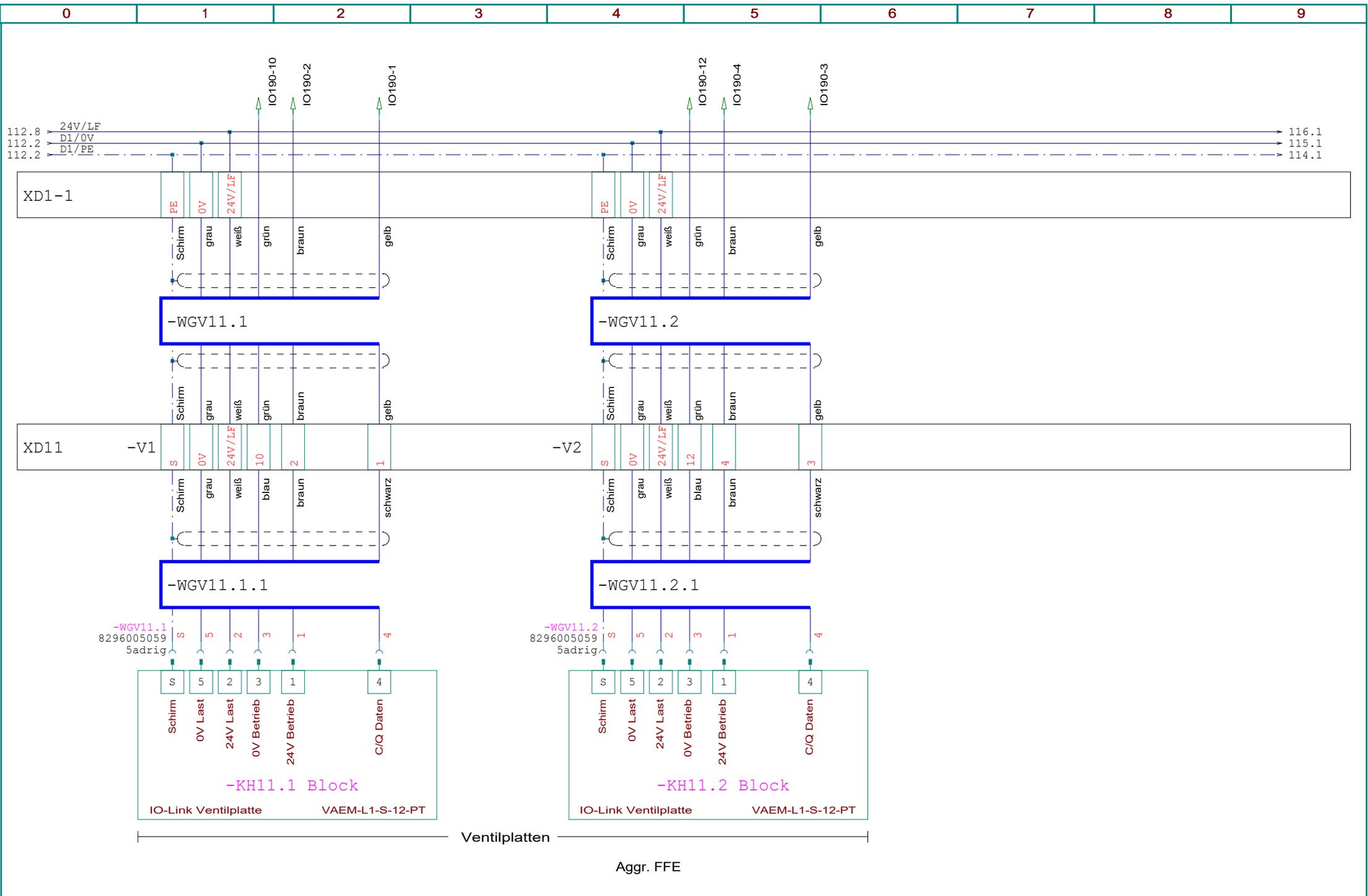


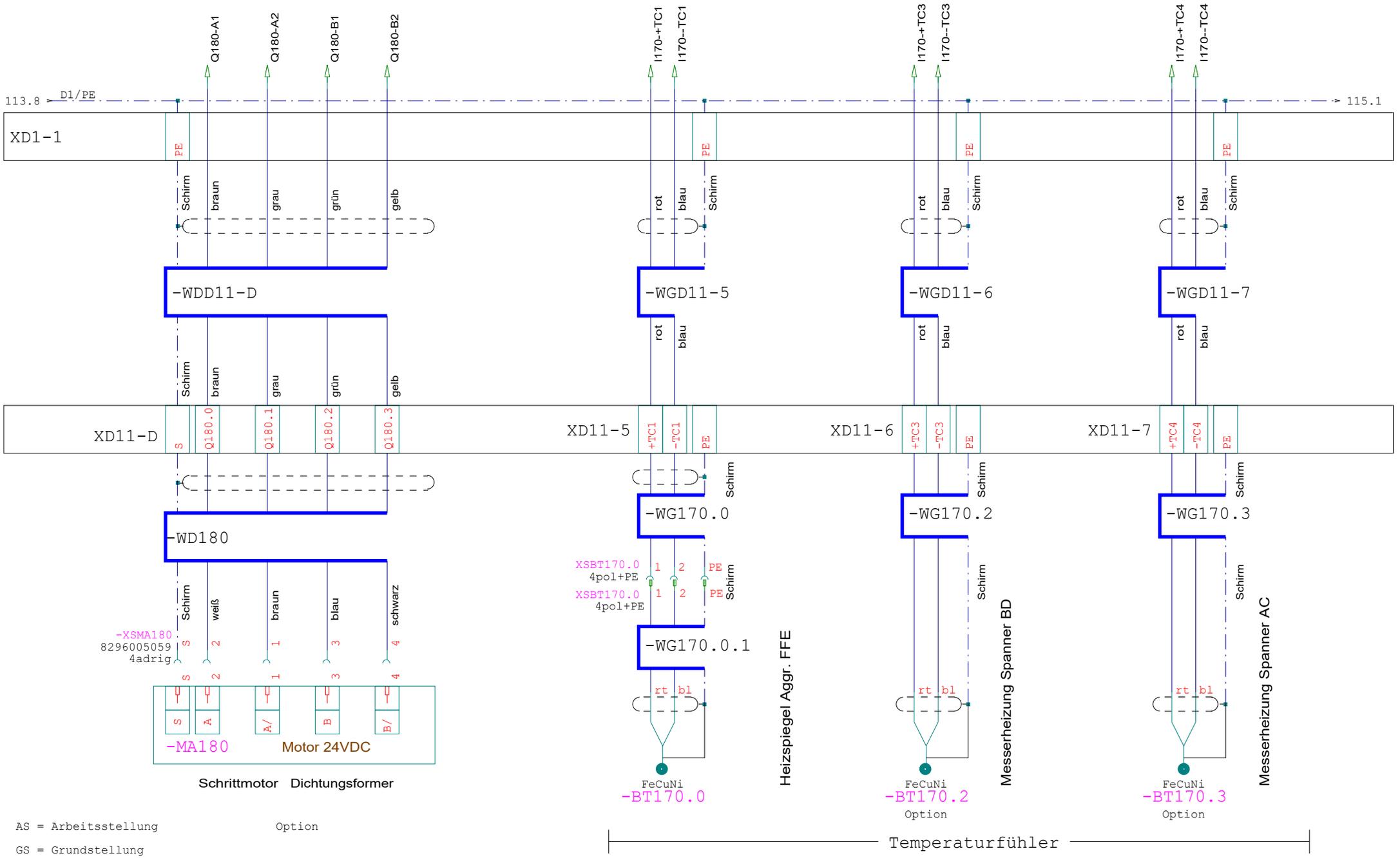
Option EPA Signalaustausch mit Relais

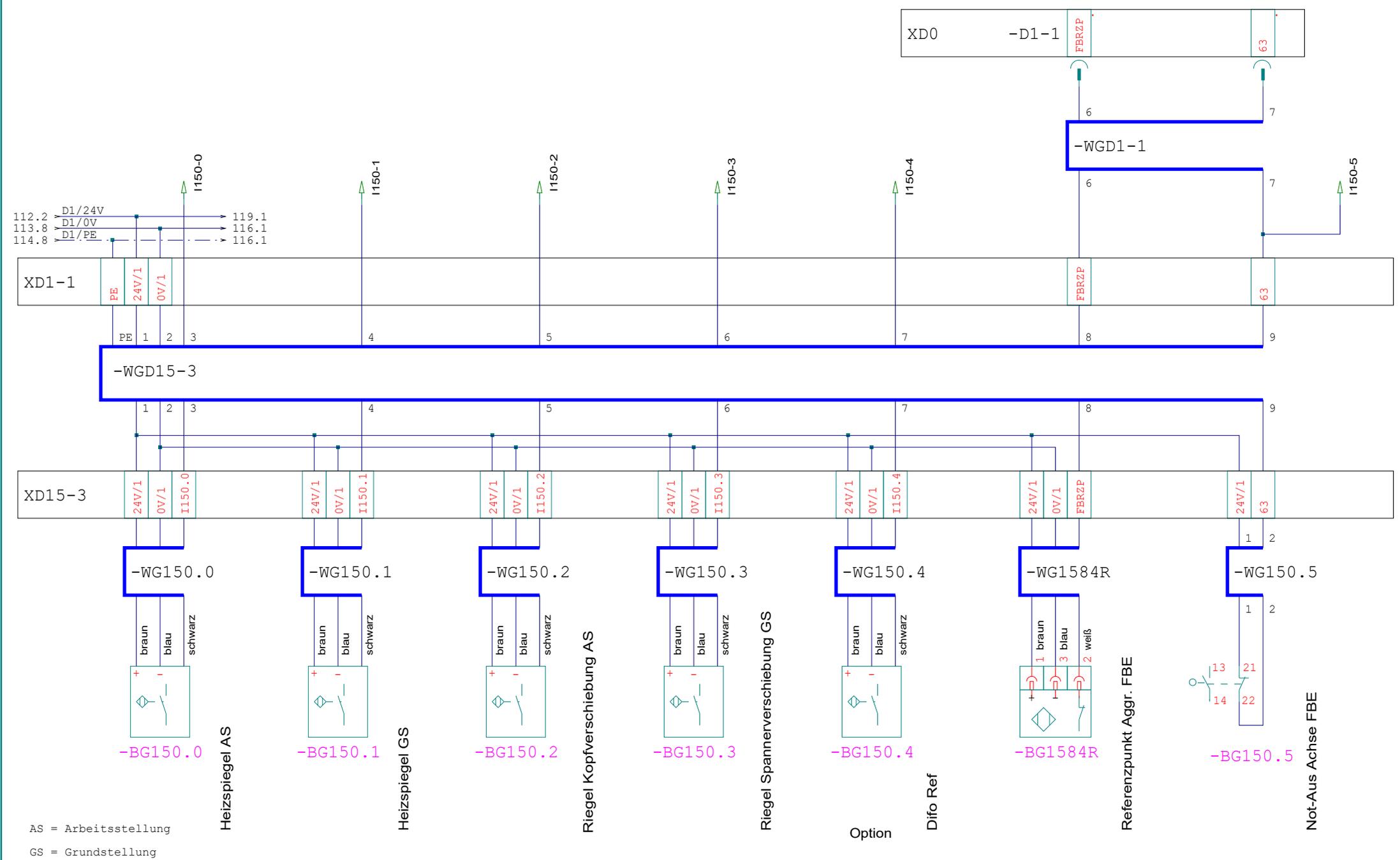


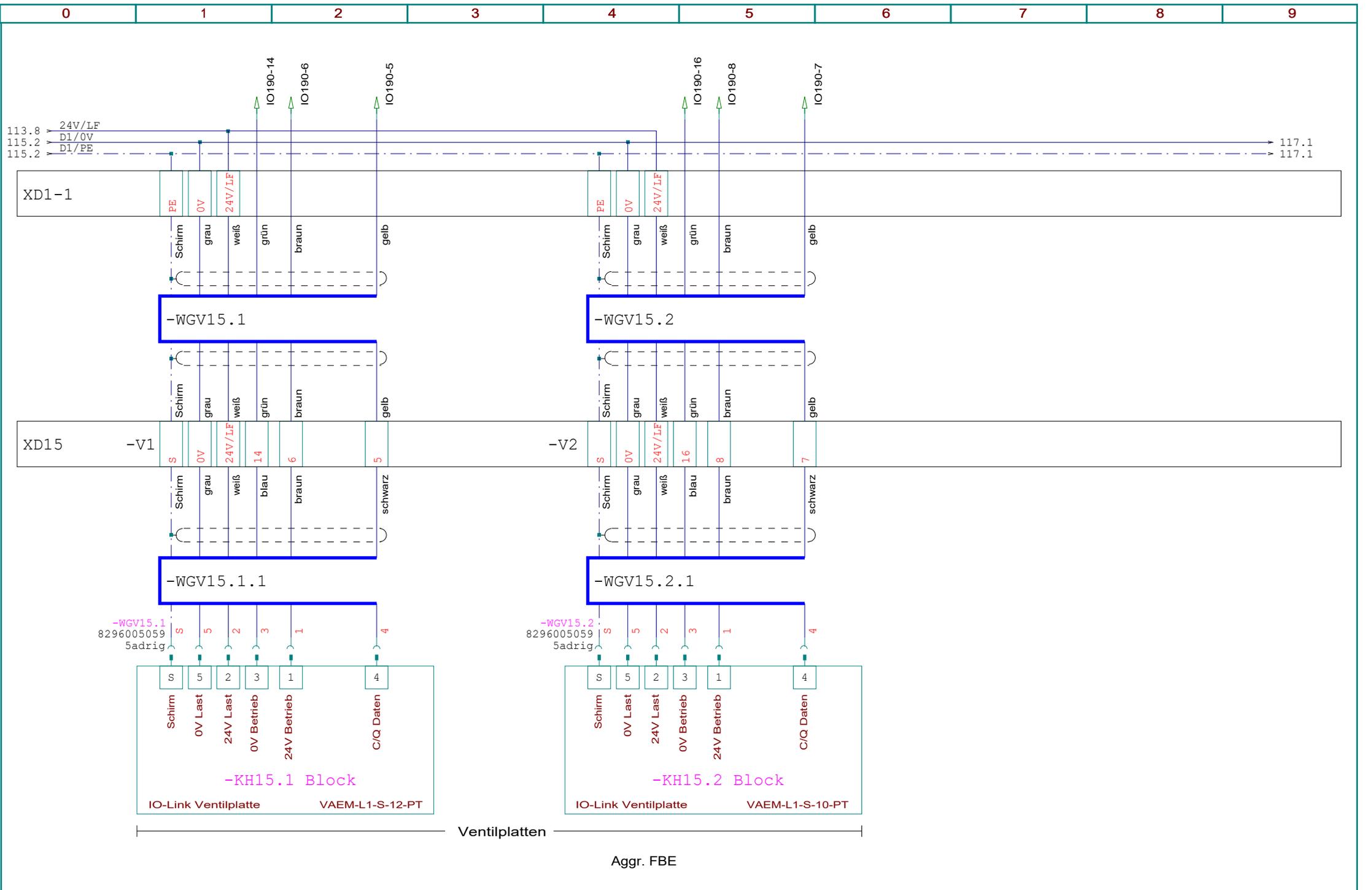
AS = Arbeitsstellung
GS = Grundstellung

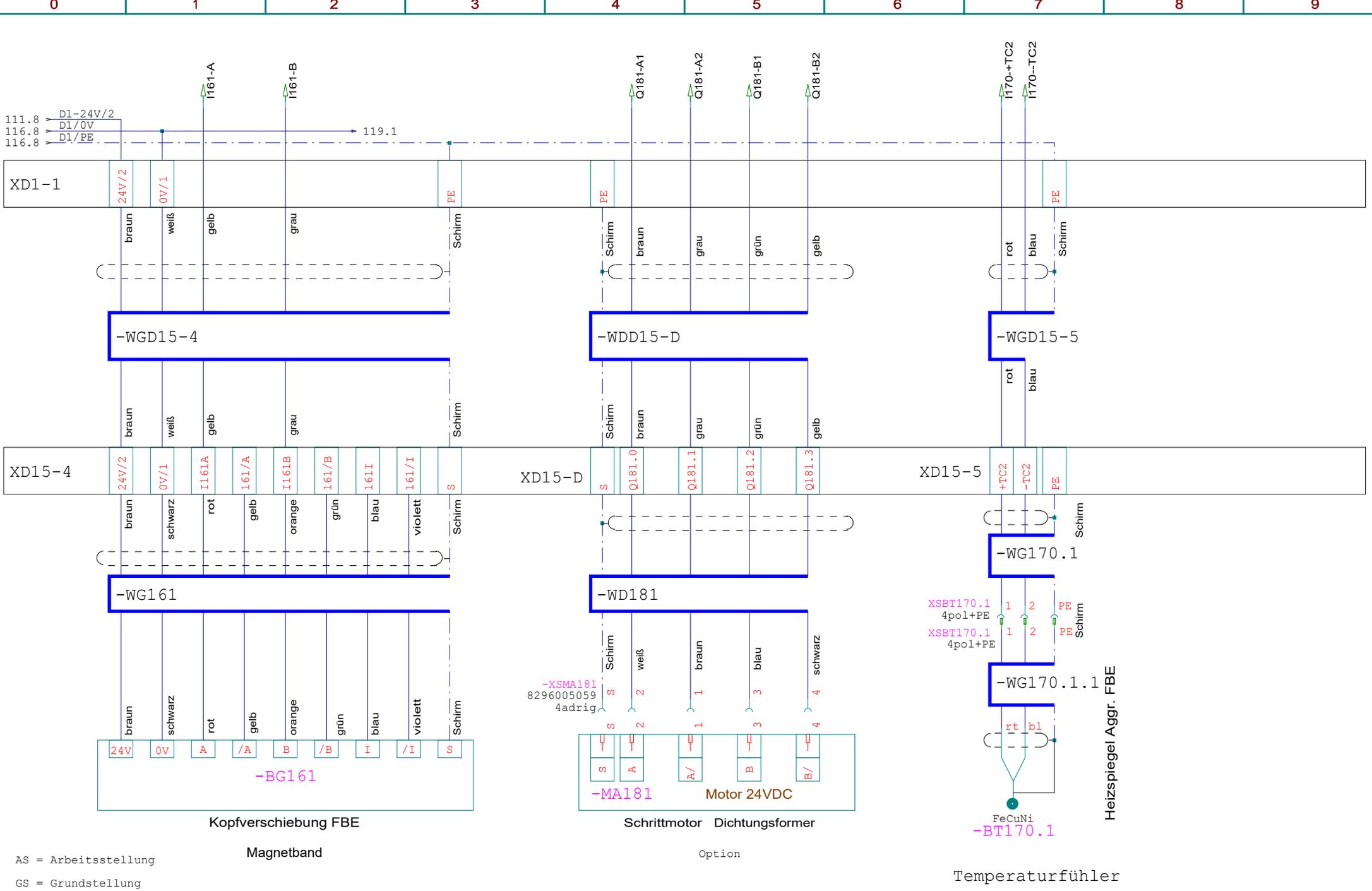












AS = Arbeitsstellung
GS = Grundstellung

Magnetband

Schrittmotor Dichtungsformer

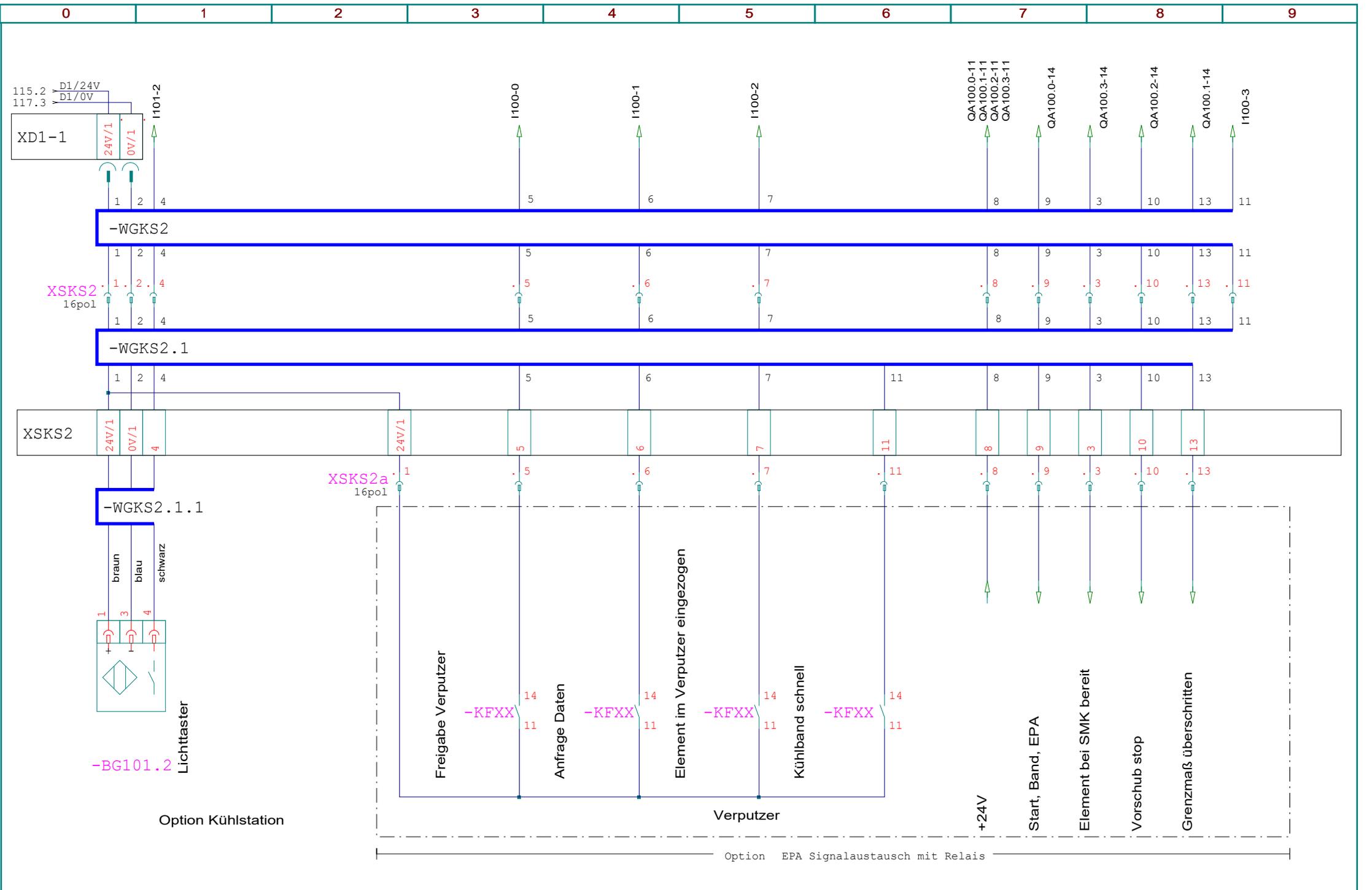
Temperaturfühler



-BG060T



Lichtschanke Positionieren





Option Dichtungsformer

0

1

2

3

4

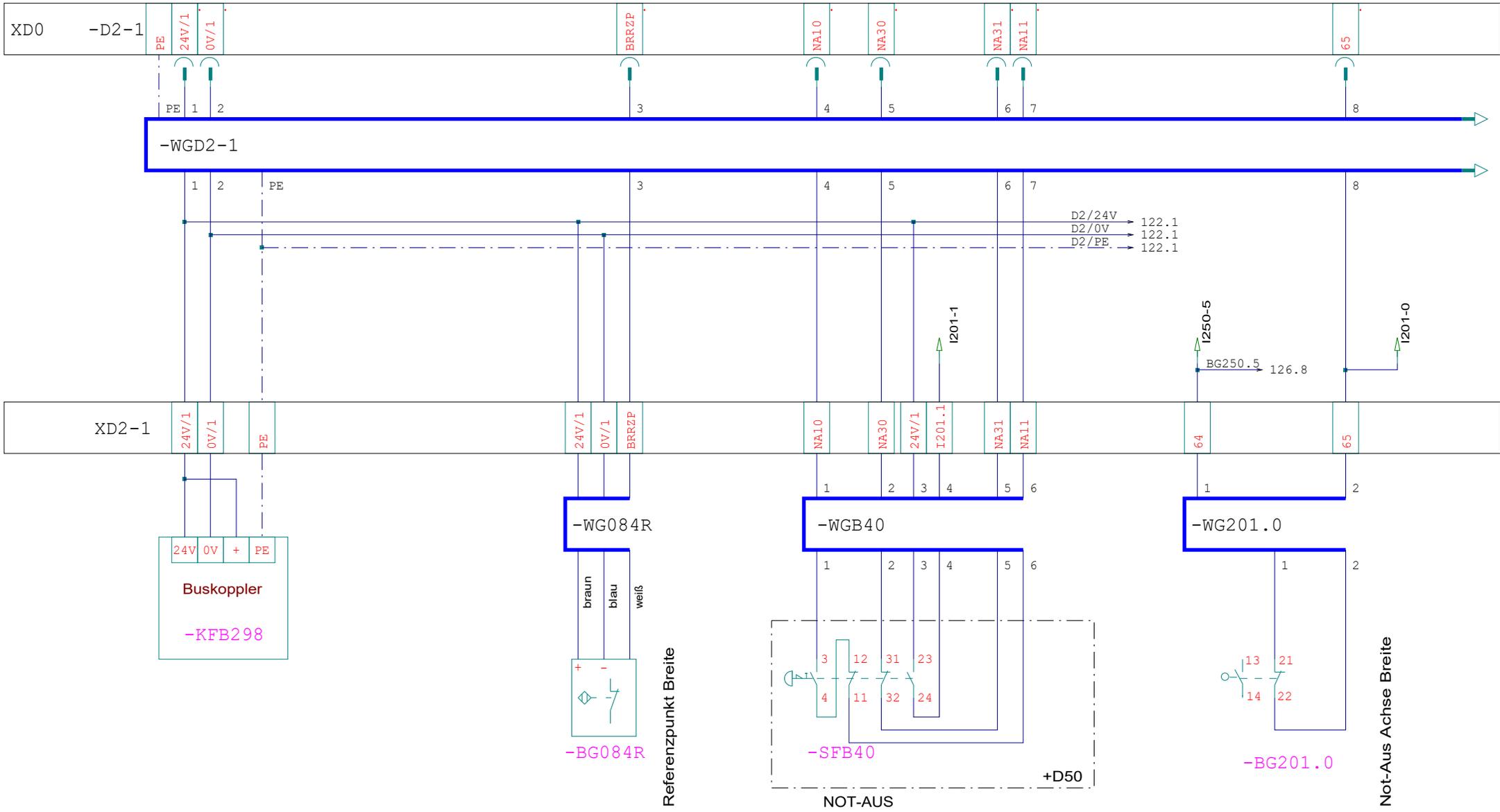
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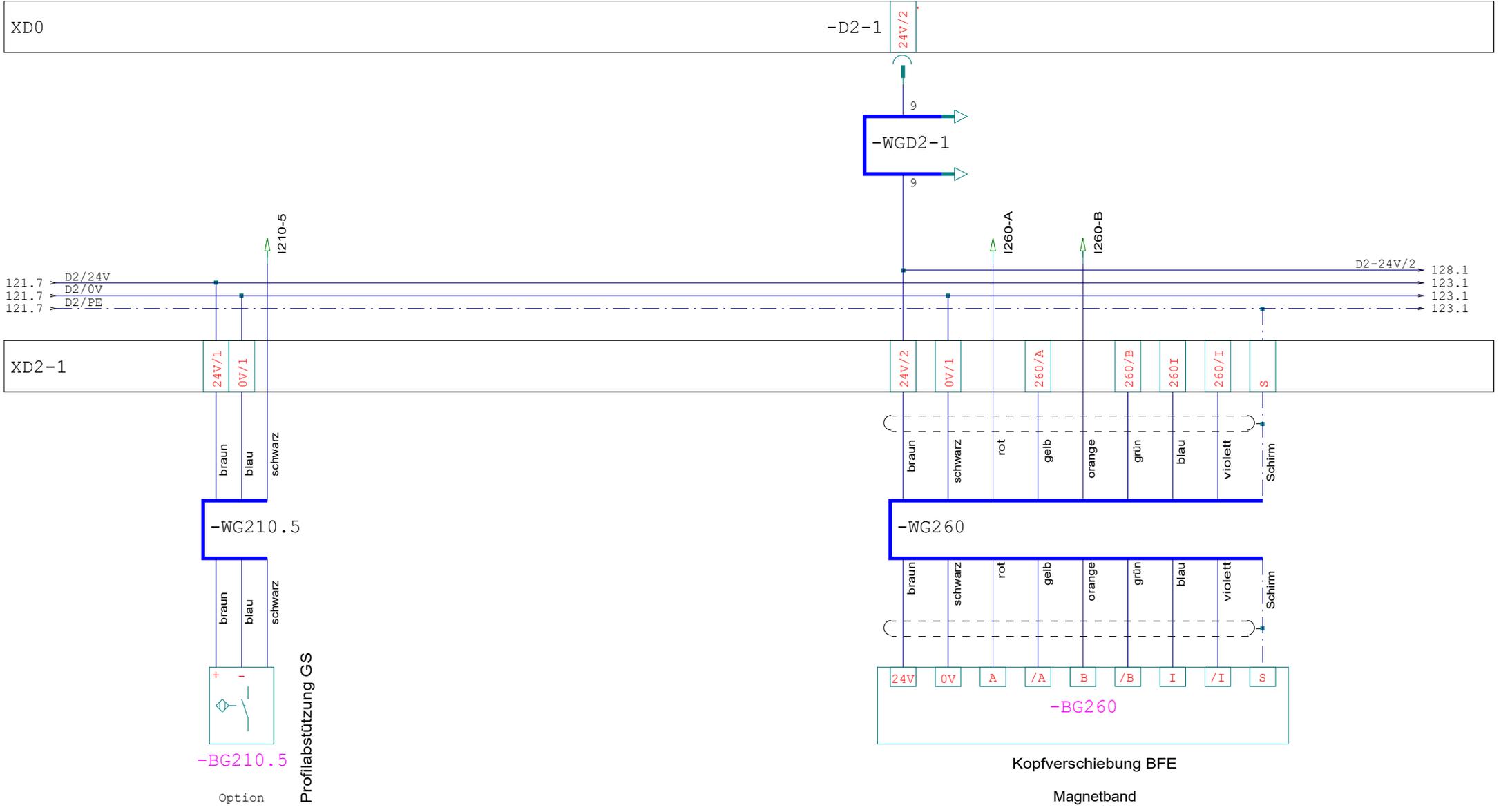
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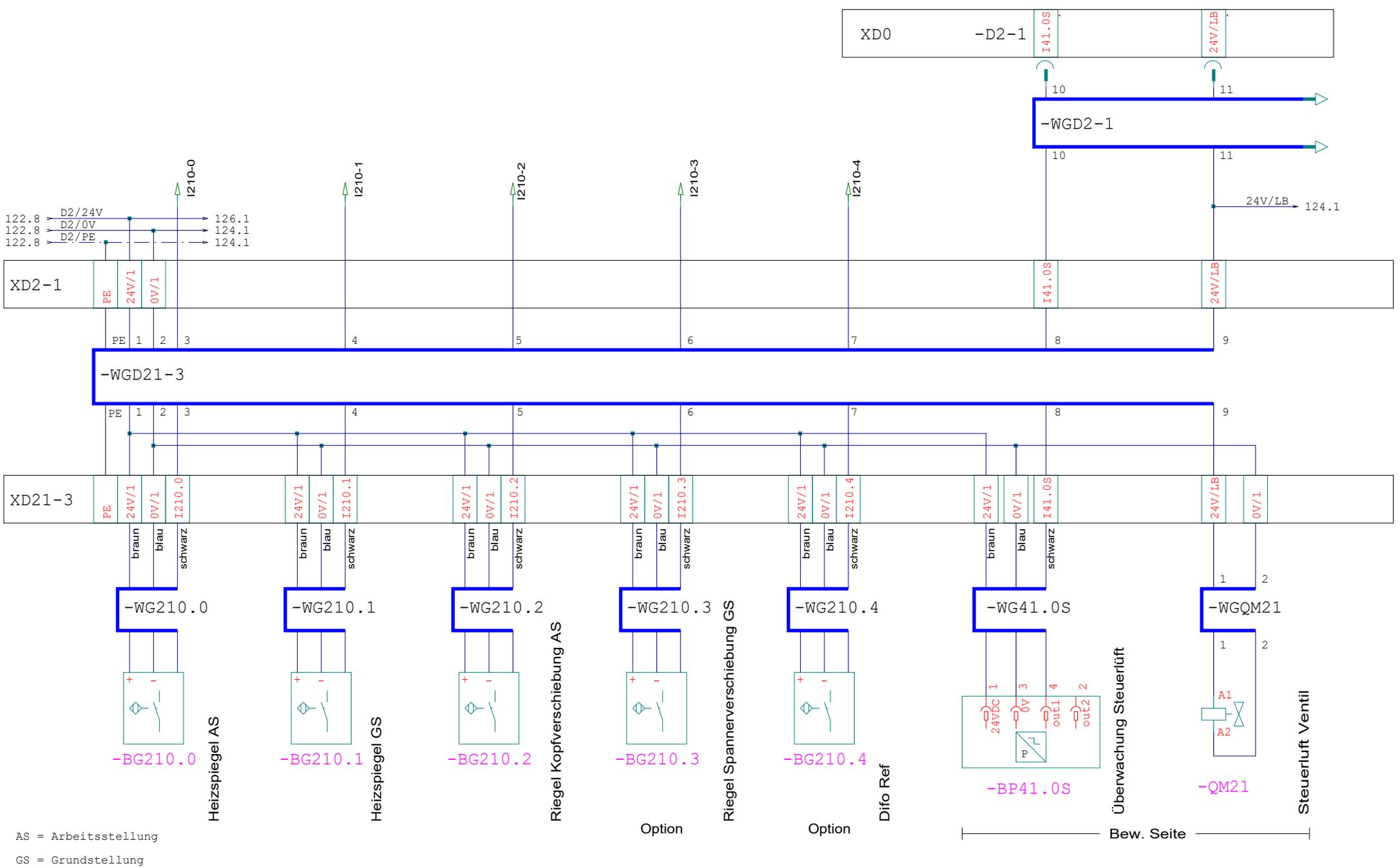
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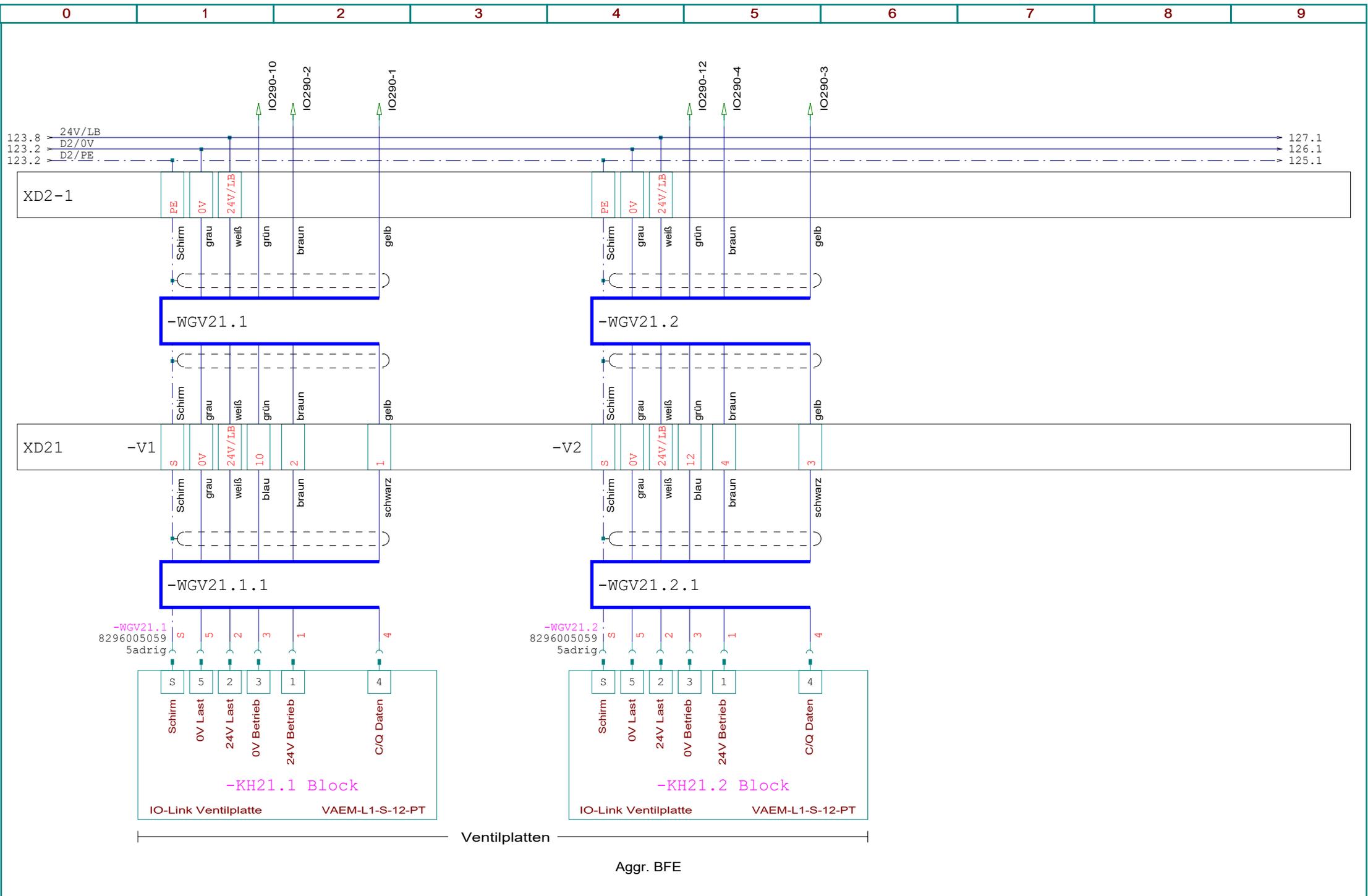


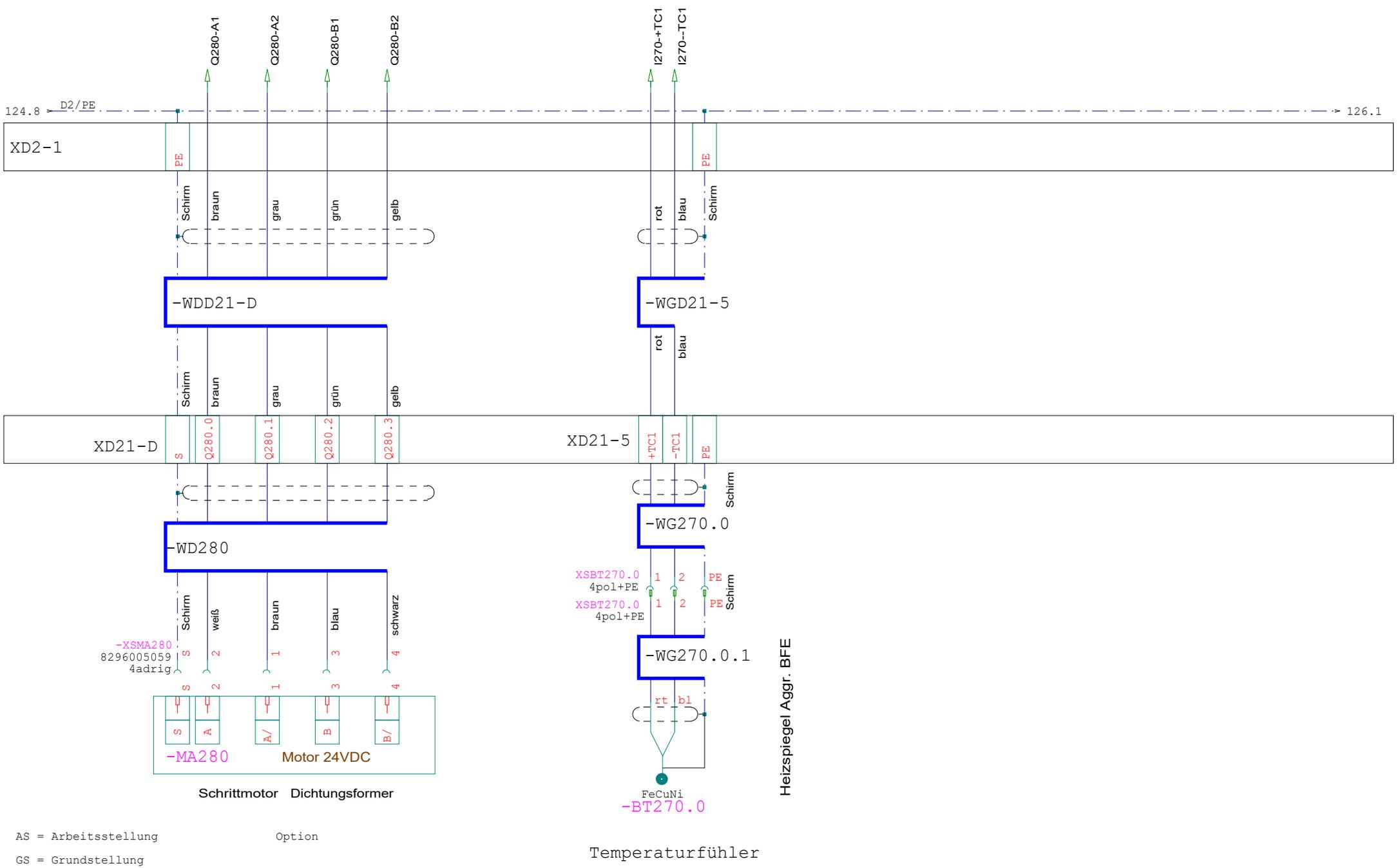


AS = Arbeitsstellung
 GS = Grundstellung



AS = Arbeitsstellung
GS = Grundstellung

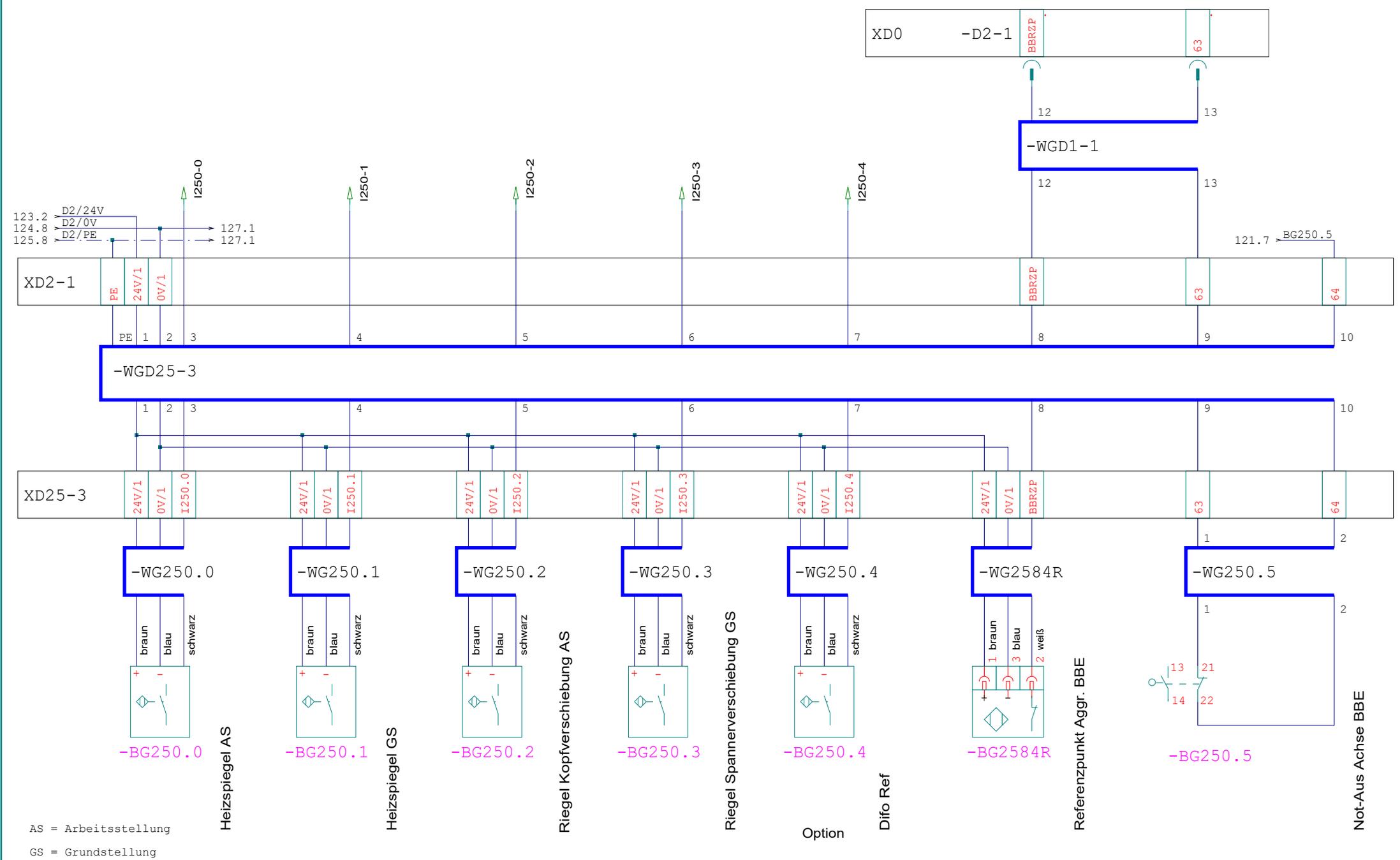


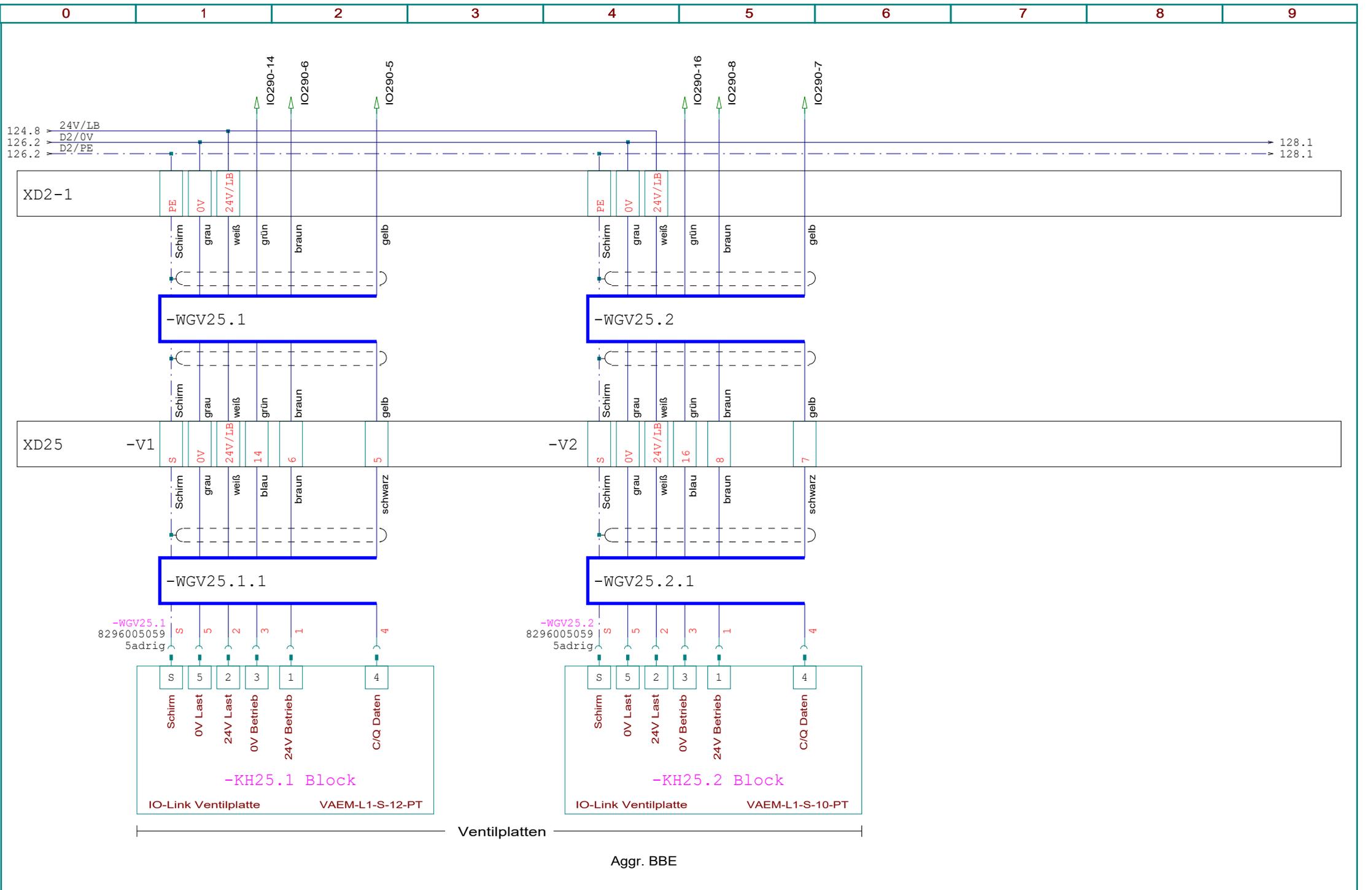


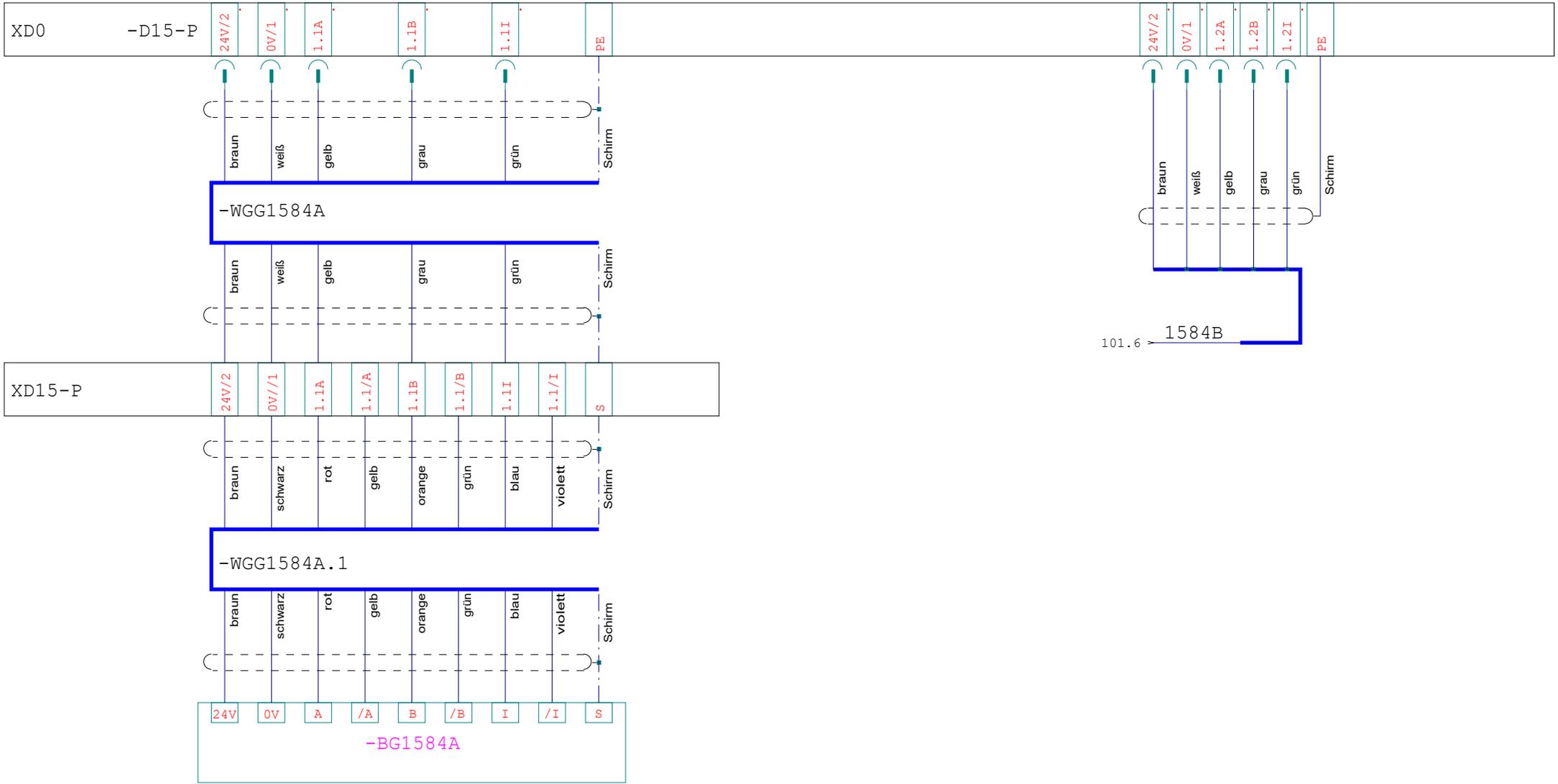
AS = Arbeitsstellung
GS = Grundstellung

Option

Temperaturfühler

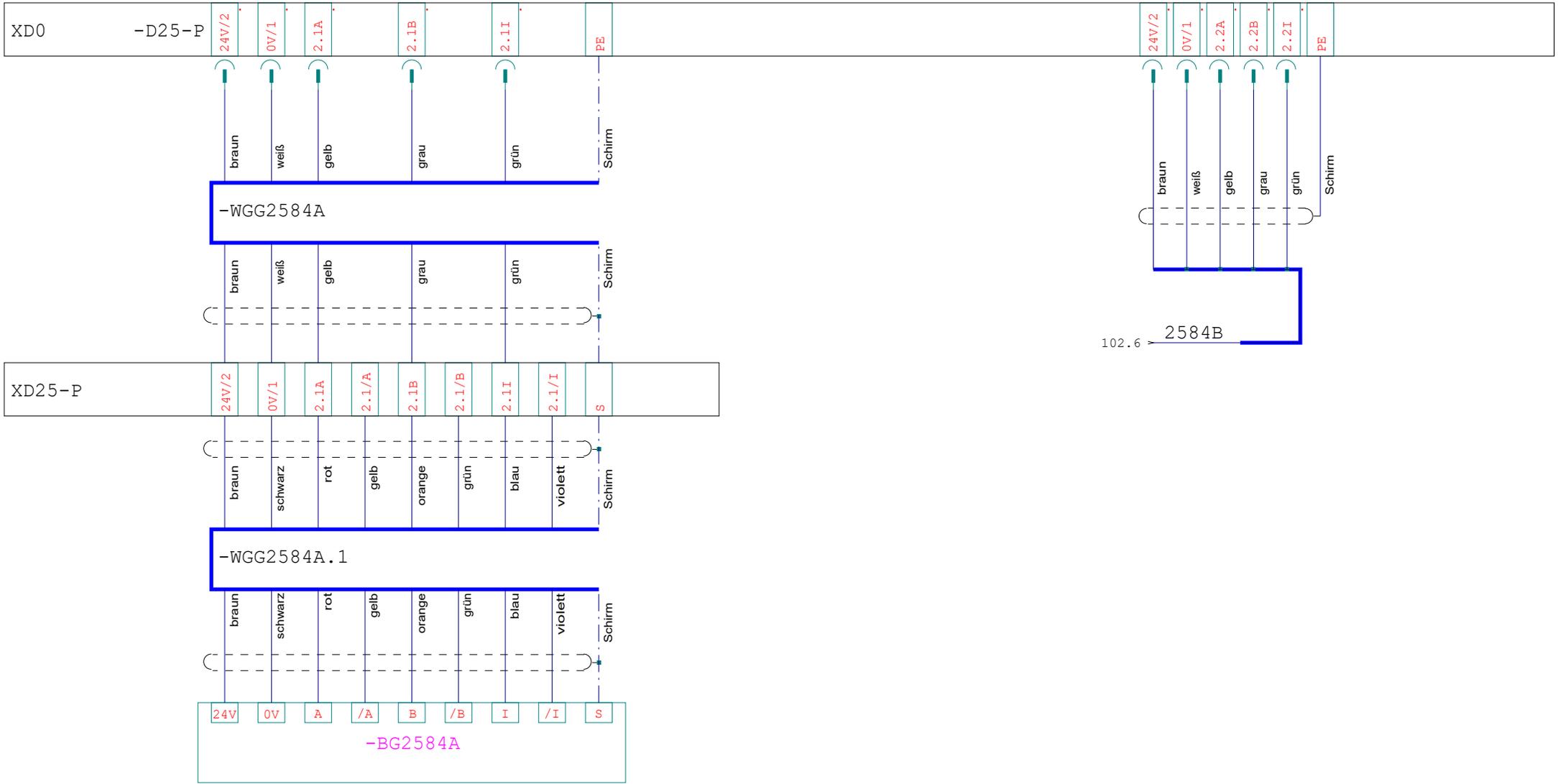






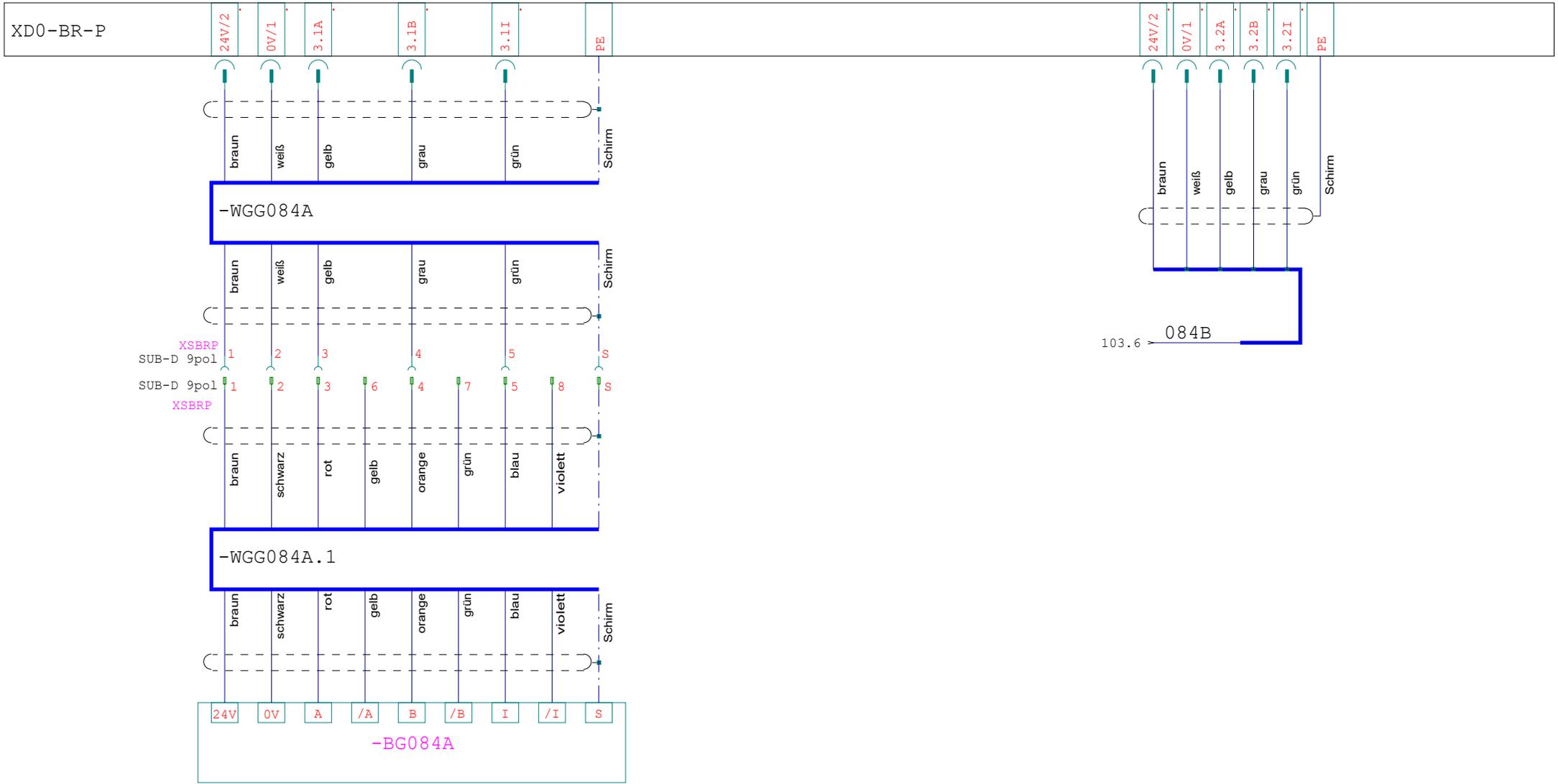
Magnetband

Positionierung Aggr. FBE



Magnetband

Positionierung Aggr. BBE



Magnetband

Positionierung Breite