

Mining Master Smart


Type:	KTC145.1 Breuer
Partnumber	44000011
Drawing No.	G074-4080
Creator	J. Strauß
Date	19.07.2019
Rev. Date	19.07.2019

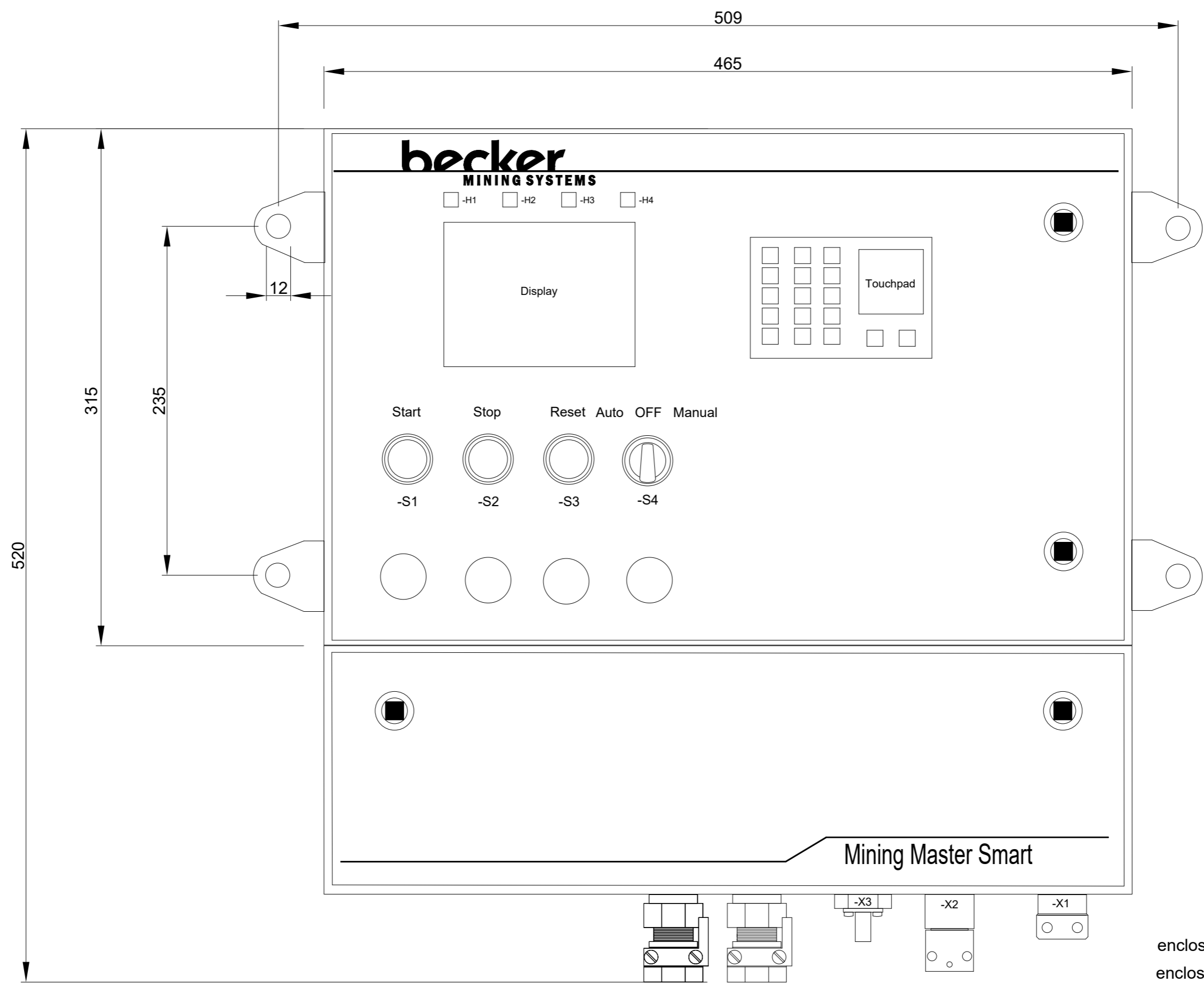
Walter-Becker-Straße 1
66299 Friedrichsthal
Fon: +49 6897 / 857 - 0
Fax: +49 6897 / 857 - 188

Becker MINING EUROPE GmbH
<http://www.becker-mining.com>
e-mail: info@becker-mining.com

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a			Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Contents	Projekt title		= 44000011
b		Drawn	J. Strauß	Mining Master Smart				+		
c		Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by	Drawing No.	G074-4080	Sheet3 + 18 Bl.



enclosure depth 140 mm
 enclosure depth 207 mm (with door)
 weight approx. 25 kg

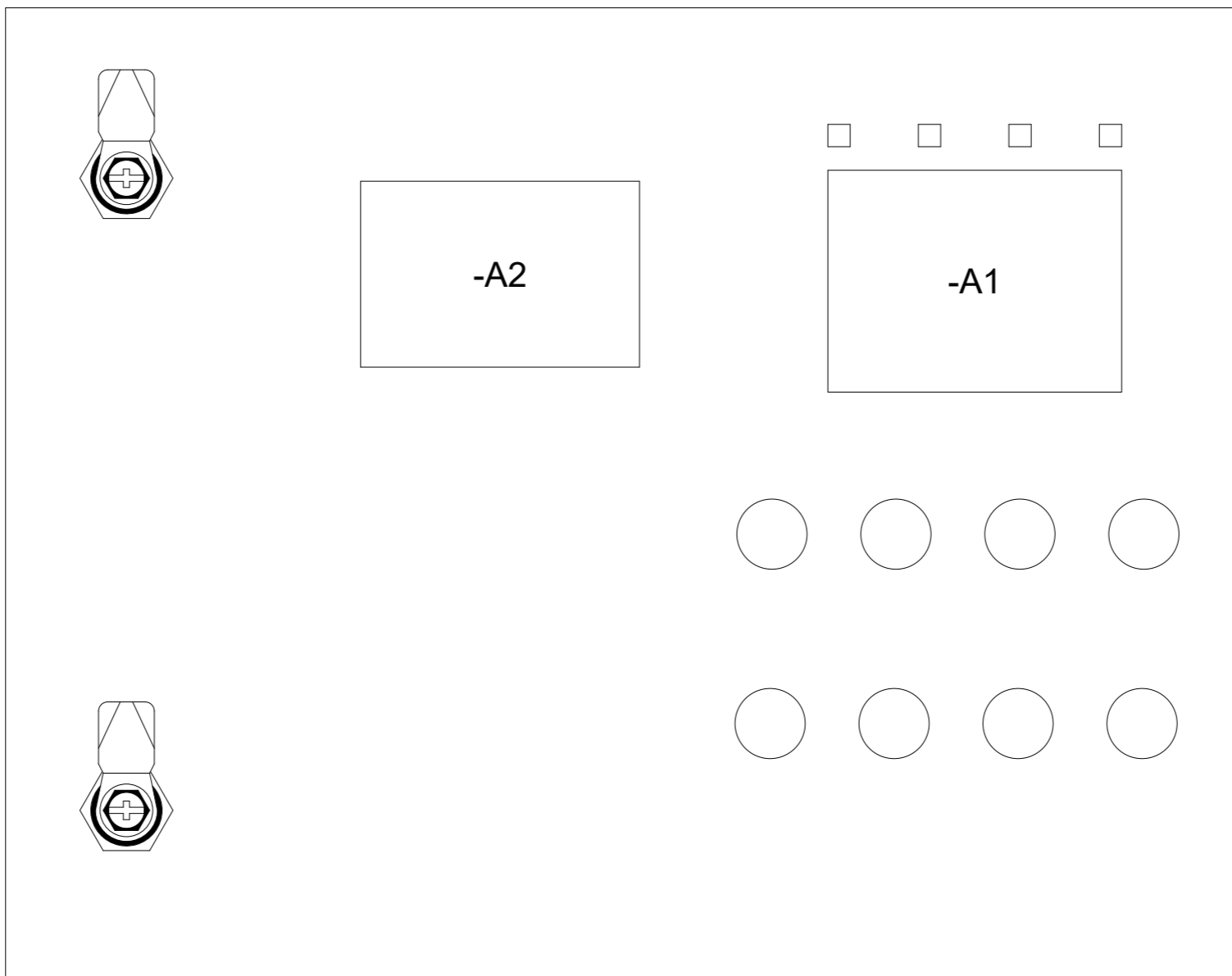
a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Mechanical construction Supervision	Projekt title	= 44000011	
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		Drawing No. G074-4080	Sheet 100 +	18 Bl.

1 2 3 4 5 6 7 8

A

A

Rear door assembly



B

B

C

C

D

D

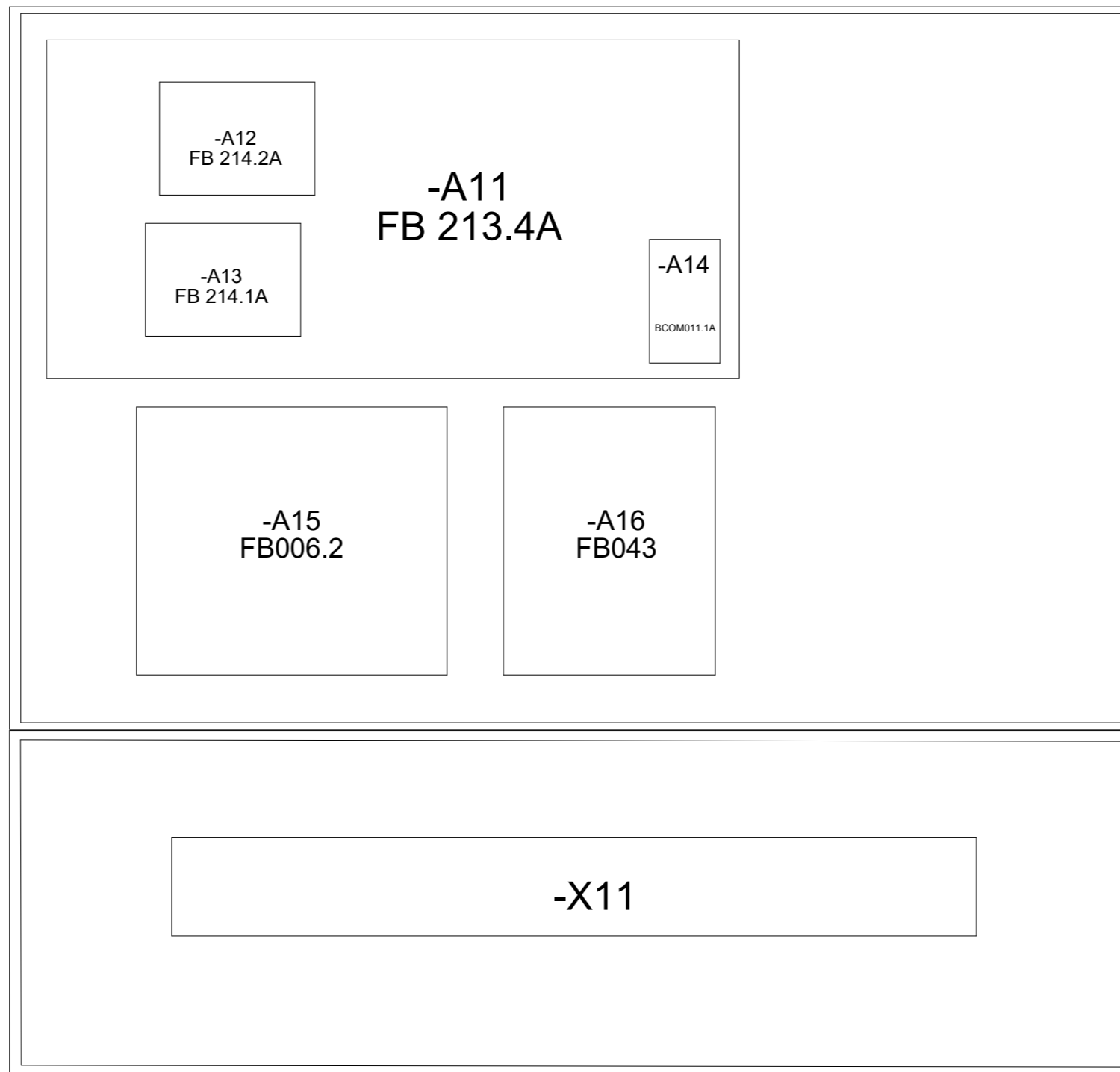
E

E

F

F

a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Mechanical construction Assembling rear side door	Projekt title		= 4400011
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		Drawing No.	Sheet101 +	
									G074-4080	18 Bl.	



a				Date	19.07.2019
b				Drawn	J. Strauß
c				Chkd.	
Rev.	Modification	Date	Name	Norm	

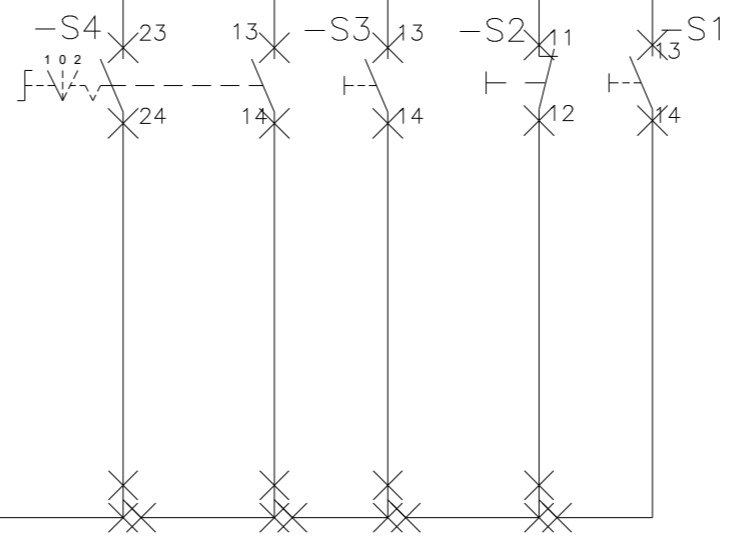
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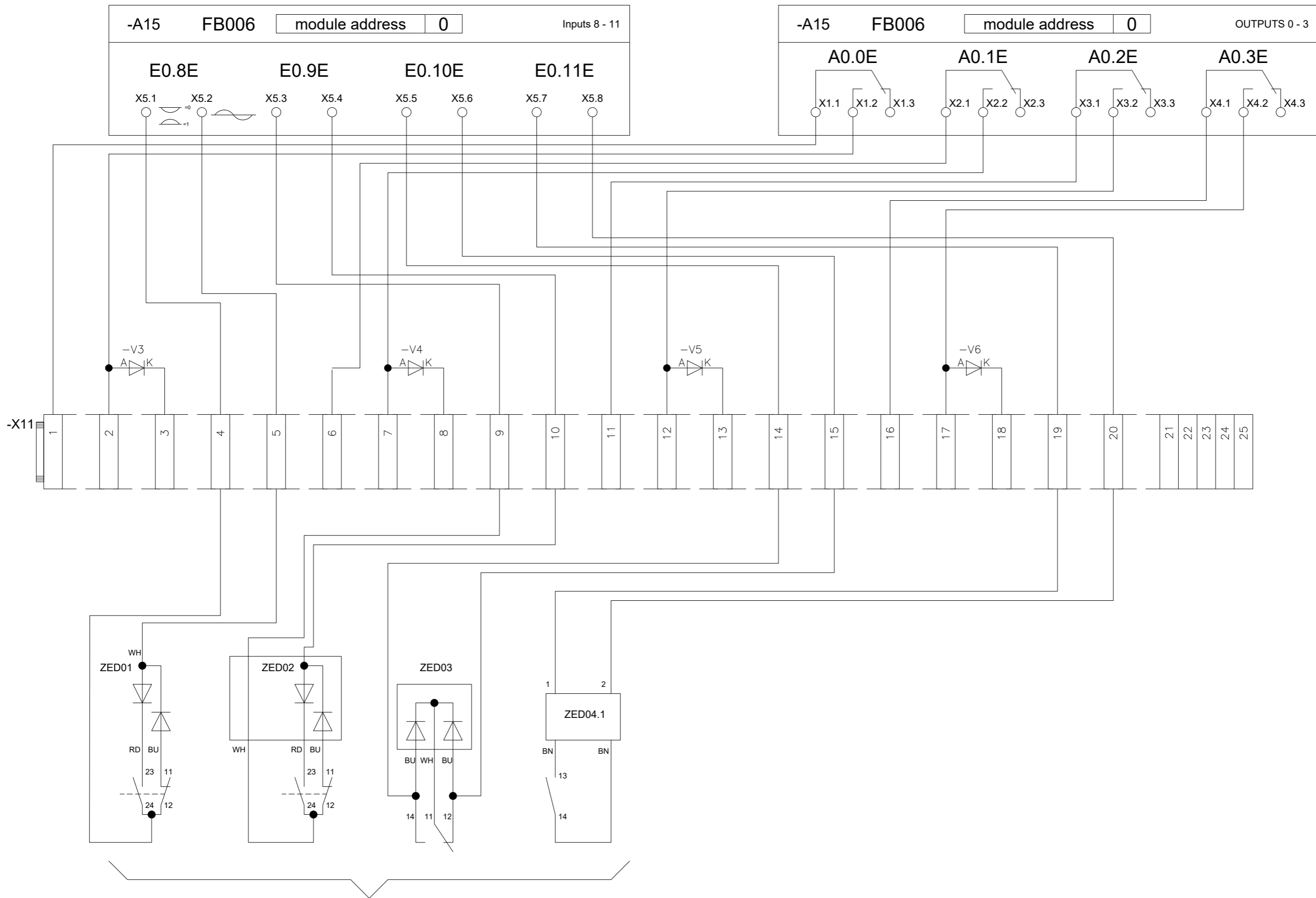
Mechanical
Assembling mounting plate

Projekt title	44000011
Mining Master Smart	+
Drawing No.	Sheet102 +
G074-4080	18 Bl.

-A1 FB212.3A													
GND	GND	E0.7NL	E0.6NL	E0.5NL	E0.4NL	E0.3NL	E0.2NL	E0.1NL	E0.0NL	Emergency-Stop response		Emergency safety circuit	
X6-2.2	X6-2.1	X5-2.2	X5-2.1	X4-2.2	X4-2.1	X3-2.2	X3-2.1	X2-2.2	X2-2.1	X2-4.2	X2-4.1	X3-4.2	X3-4.1

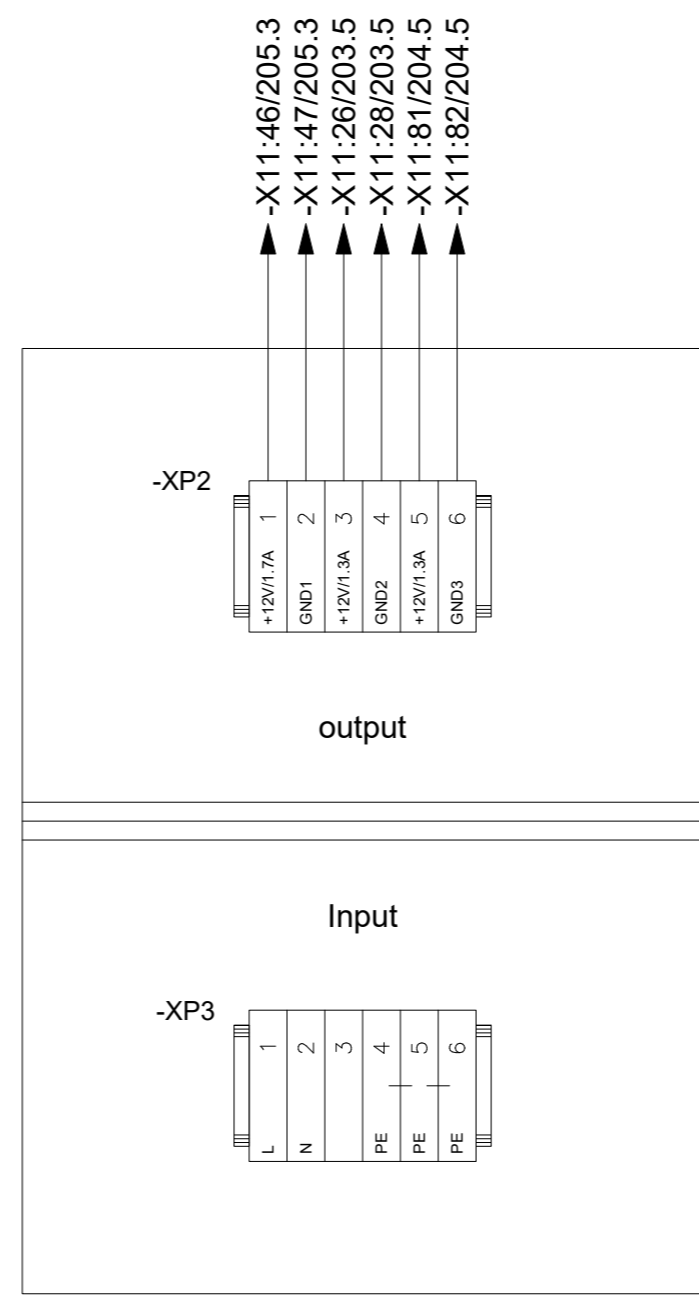


a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Wiring plan INPUTS E0.0NL - E0.7NL	Projekt title		= 44000011
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by	Drawing No.		Sheet200 +	
								G074-4080		18 Bl.	



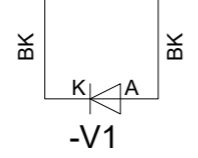
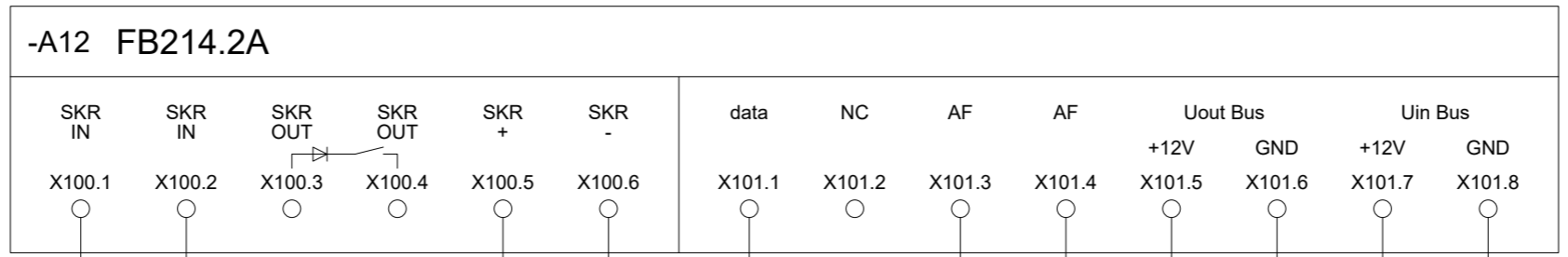
Connection examples

a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Wiring plan FB006 Mod. Adr. 0	Projekt title	= 44000011
b			Drawn	J. Strauß	Mining Master Smart				+	
c			Chkd.							
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		Drawing No. G074-4080	Sheet201 + 18 Bl.

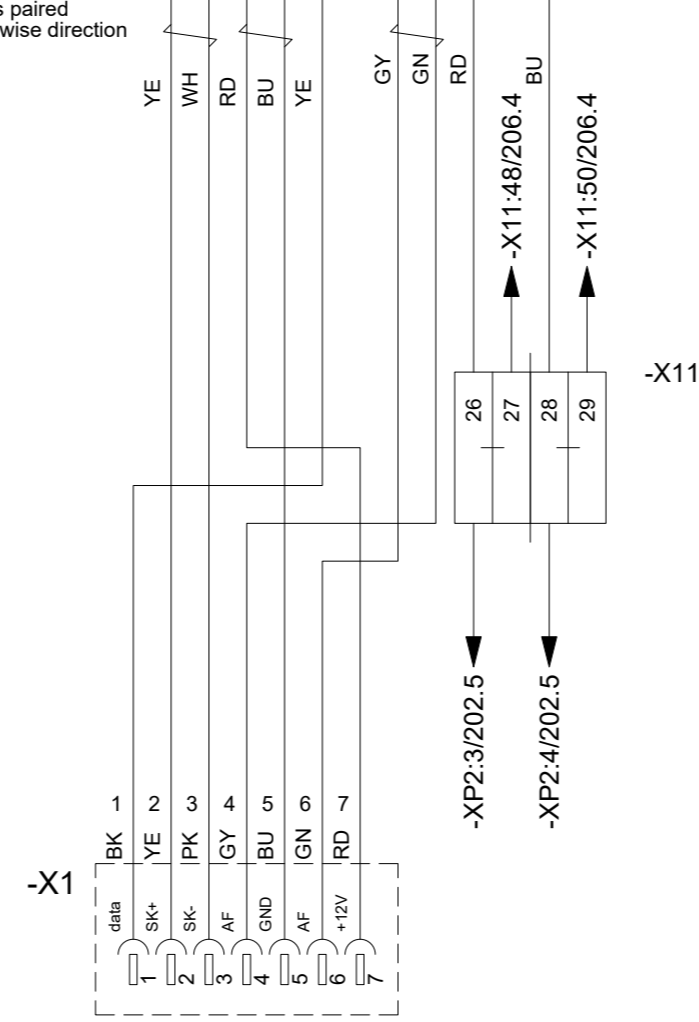


External power supply
KDW127

a				Date	19.07.2019		Becker MINING EUROPE GmbH	Wiring plan External power supply	Projekt title	= 44000011	
b			Drawn	J. Strauß	Walter-Becker-Straße 1		Mining Master Smart		+		
c			Chkd.		66299 Friedrichsthal				Drawing No.	Sheet 202 +	
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by	G074-4080	18 Bl.		

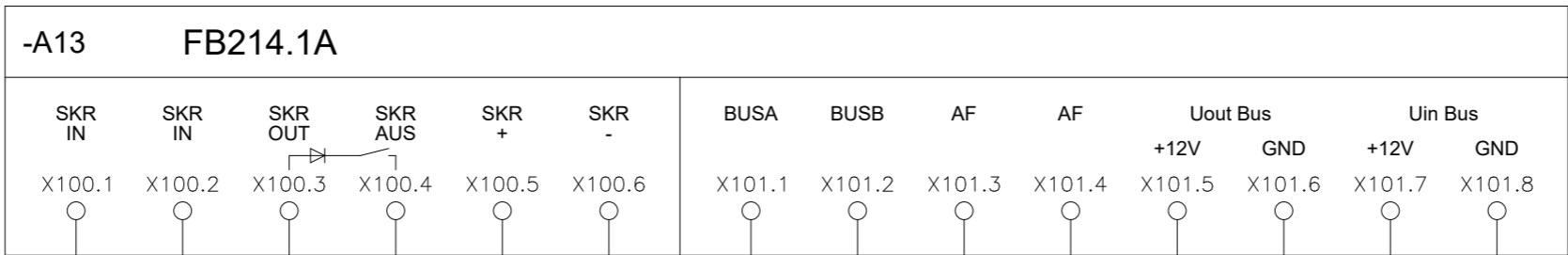


Individual cores paired and twisted in a clockwise direction

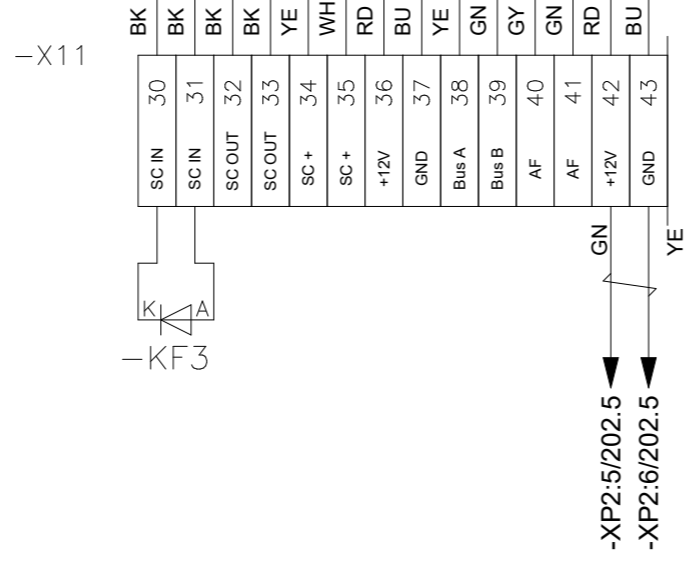


Fieldbus line 0
Ast

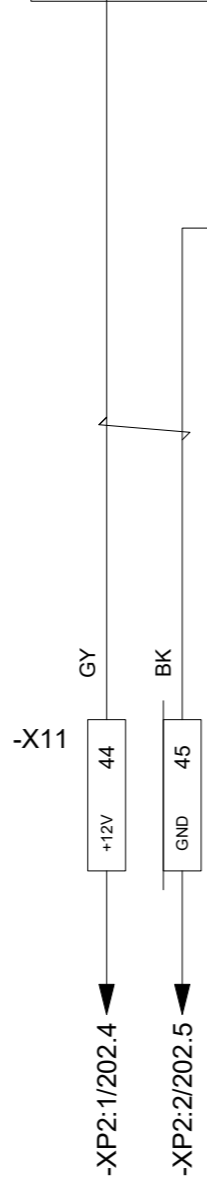
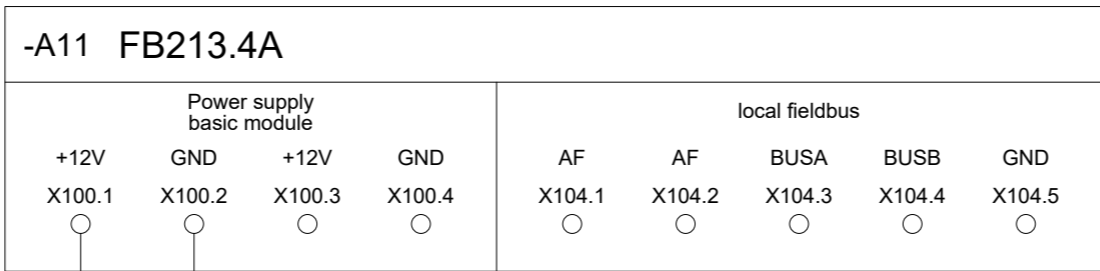
a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Wiring plan Fieldbus line 0 AST	Projekt title	= 44000011	
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		Drawing No.	G074-4080	Sheet 203 + 18 Bl.



Individual cores paired and twisted in a clockwise direction



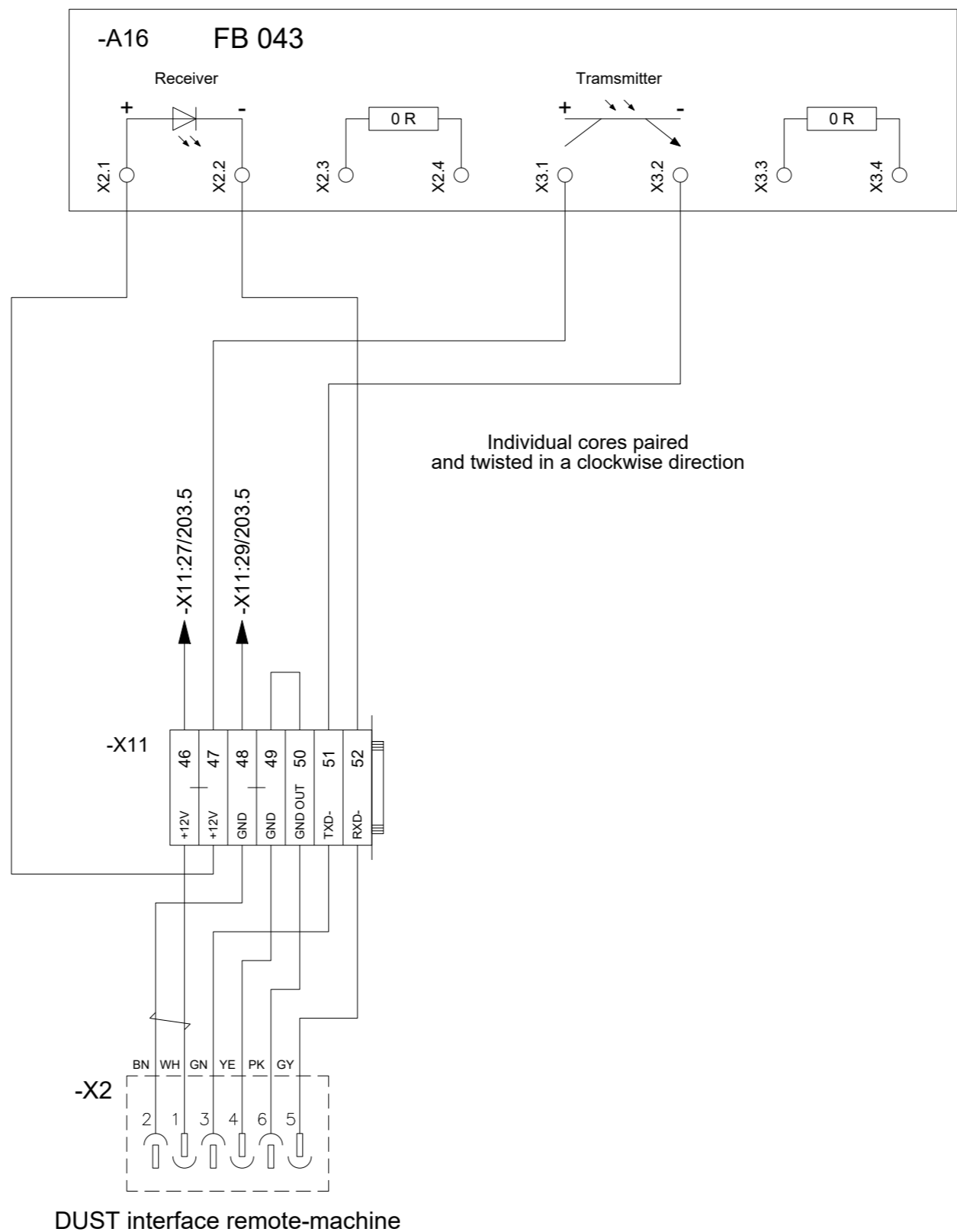
a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Wiring plan RS485 Fieldbus line 1 - BTS	Projekt title	= 44000011	
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		Drawing No.	G074-4080	Sheet204 + 18 Bl.



Individual cores paired and twisted in a clockwise direction

a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Wiring plan basic module	Projekt title		= 44000011
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by	Drawing No.		Sheet205 +	
								G074-4080		18 Bl.	

Transmitter active / Receiver passive



a				Date	19.07.2019
b				Drawn	J. Strauß
c				Chkd.	
Rev.	Modification	Date	Name	Norm	

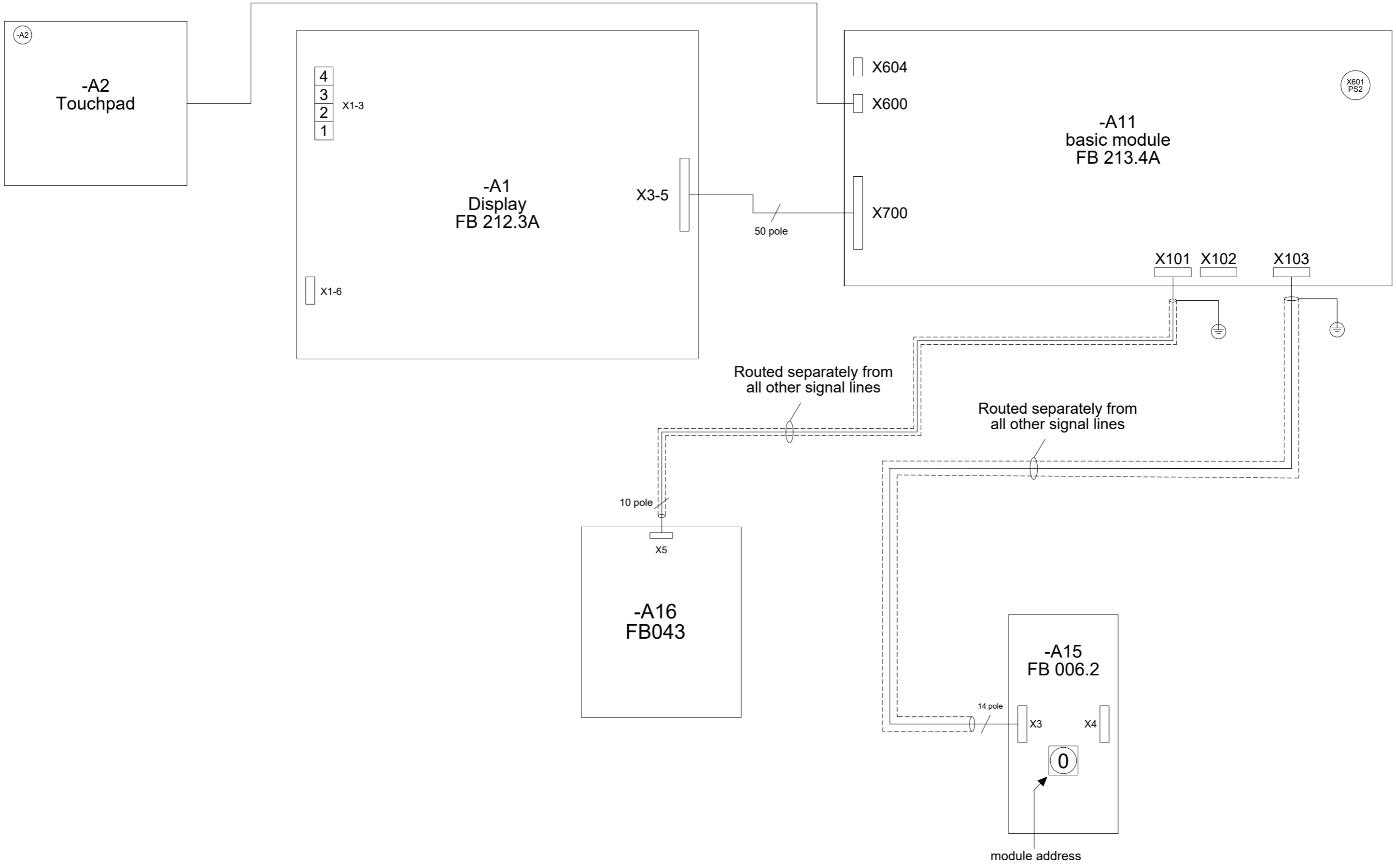
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Original	Subst. For	Replaced by
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Wiring plan
FB 043 DUST module

Projekt title	44000011
Mining Master Smart	+
Drawing No.	Sheet206 +
G074-4080	18 Bl.



a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Wiring plan Ribbon cable	Projekt title	= 44000011
b			Drawn	J. Strauß	Mining Master Smart				+	
c			Chkd.							
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		Drawing No. G074-4080	Sheet 207 + 18 Bl.

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

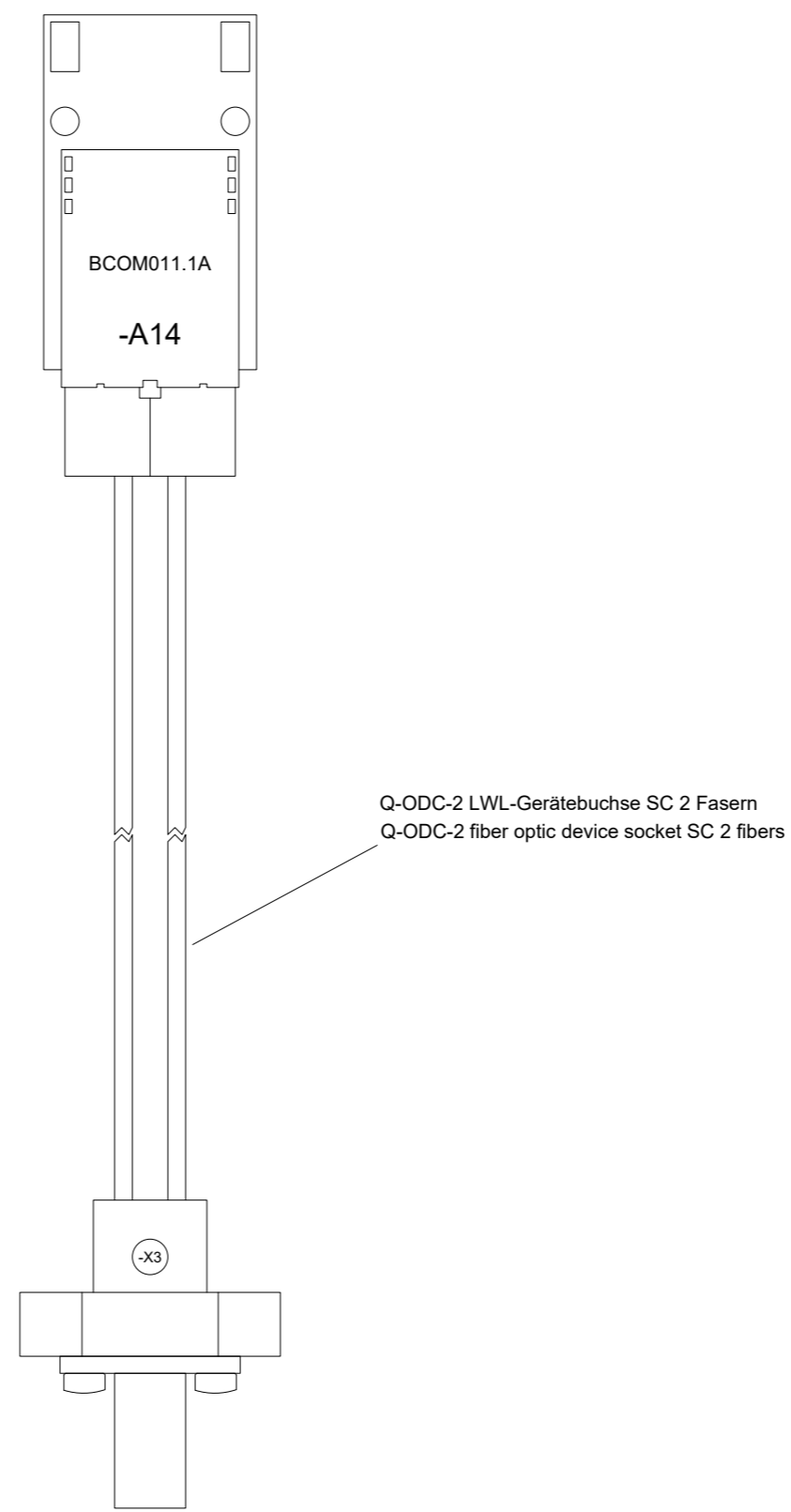
D


E

E

F

F



a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Fiber optic connections Replaced by	Projekt title Mining Master Smart		= 4400011 +	
b			Drawn	J. Strauß	Drawing No. G074-4080				Sheet208 + 18 Bl.			
c			Chkd.		Original				Subst. For			
Rev.	Modification	Date	Name	Norm								

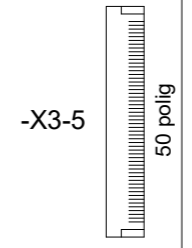
-A1

connection
Touchpad



X1-3

FB 212.3A
Display Mining Master Smart



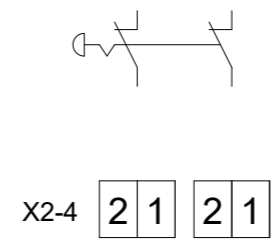
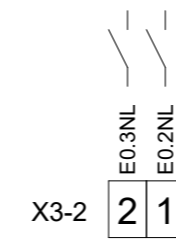
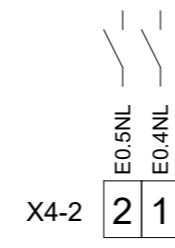
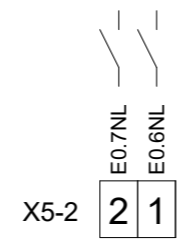
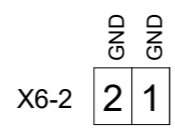
-X3-5

connection
basic module
Typ: FB213.*

I2C - Bus



X1-6



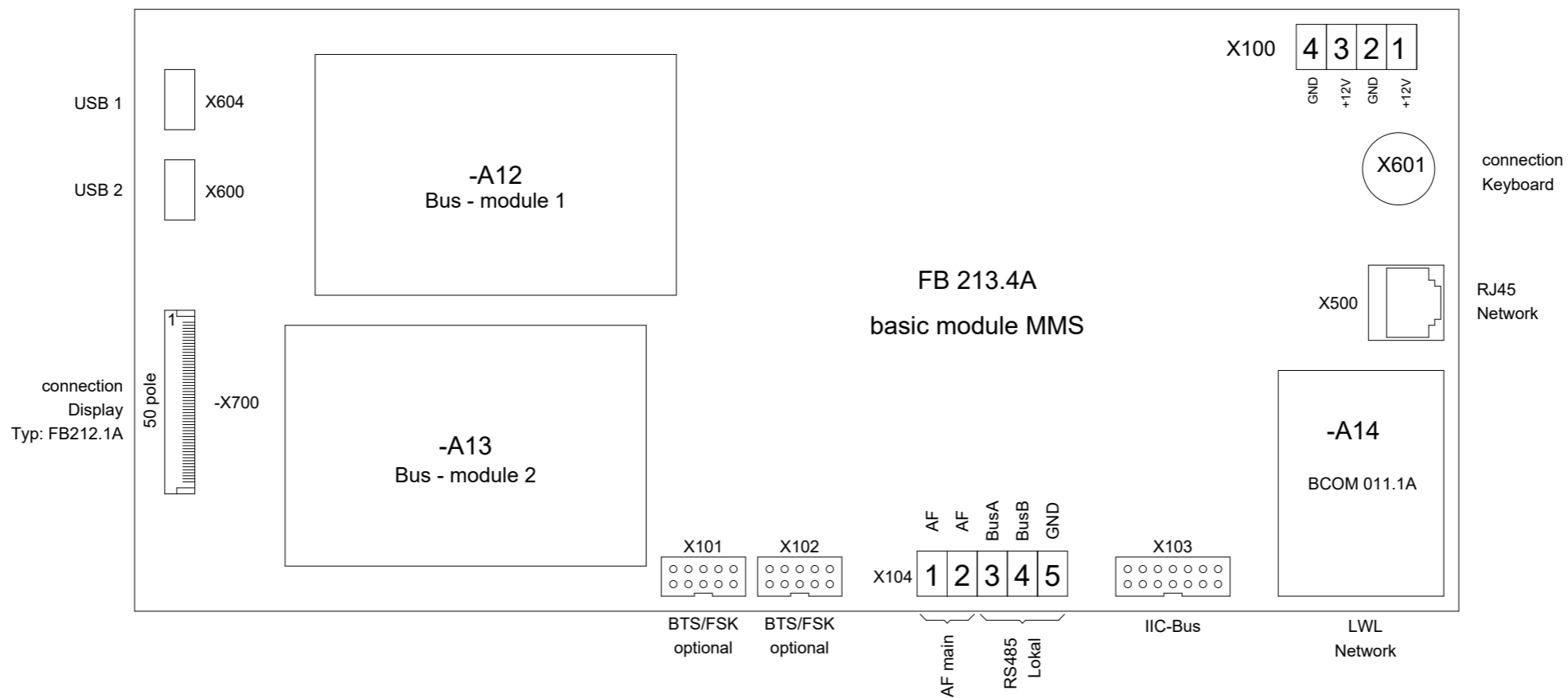
X3-4

8 INPUTS

EMERGENCY-STOP
Response
EMERGENCY-STOP
Safety circuit

a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Data sheet Display	Projekt title		= 44000011 +
b			Drawn	J. Strauß	Mining Master Smart						
c			Chkd.		Drawing No.				Sheet300 +		
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by		G074-4080		18 Bl.

-A11



a				Date	19.07.2019
b				Drawn	J. Strauß
c				Chkd.	
Rev.	Modification	Date	Name	Norm	

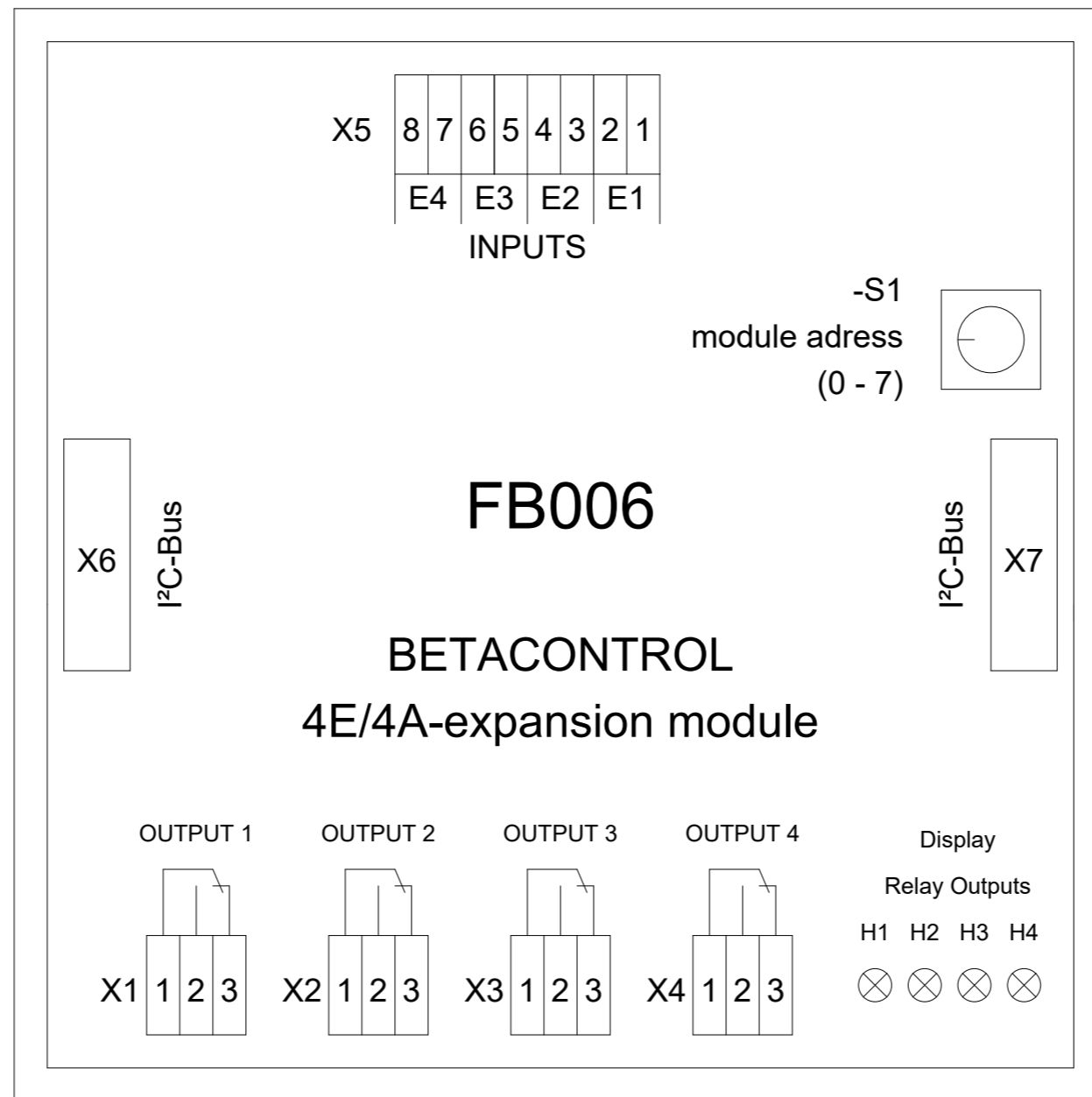
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66299 Friedrichsthal

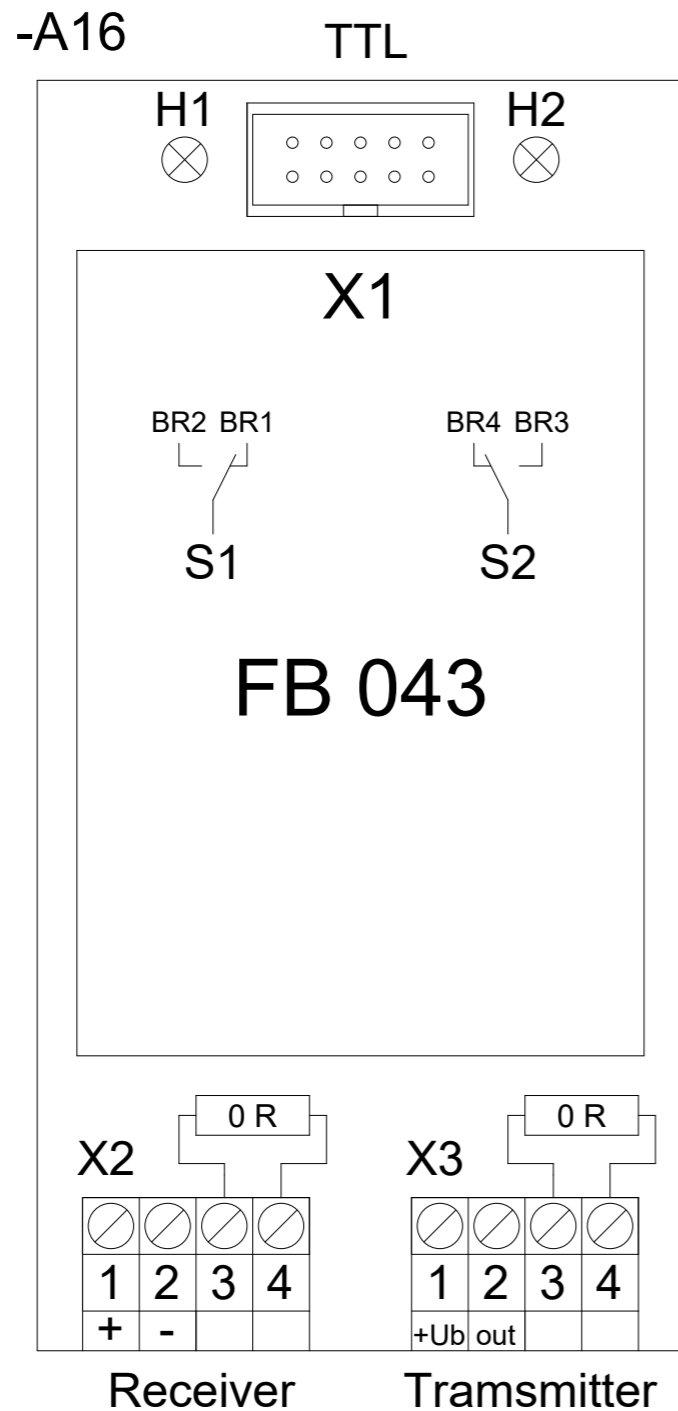
Data sheet
MMS basic module

Projekt title	Mining Master Smart		= 44000011
Drawing No.	G074-4080	Sheet301 +	18 Bl.

-A15



a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Data sheet FB006	Projekt title		= 44000011
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by	Drawing No.		Sheet302 +	
								G074-4080		18 Bl.	



H1 lights when the receiver line-current power off

H2 lights when transmitter = log 0

S1 - phasing receiver signal

BR1 - line-current on = 1 (default setting)

BR2 - inverted

S2 - phasing transmitter signal

BR4 - line-current on = 1 (default setting)

BR3 - inverted

a				Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Data sheet DUST module FB 043	Projekt title		= 44000011
b			Drawn	J. Strauß	Mining Master Smart				+		
c			Chkd.								
Rev.	Modification	Date	Name	Norm	Original	Subst. For	Replaced by	Drawing No.		Sheet303 -	
								G074-4080		18 Bl.	

Bill of material

no.	pos.	installation	location	device ID	Partnumber	Description	Specifications	page.row
1	0	44000011		A11	1000013024	MMSOF.02410 1xAST-1xBTS-SC/FO-OPC/ProV.		205.3
2	0	44000011		A14	5390020304	BCOM011.1A FO media converter		208.5
3	0	44000011		A15	5301006004	FB006.2 - 4E/4A Erweiterungsmodul		201.1
4	0	44000011		A16	5301212014	Display Board MMS (minimize)		200.2
5	0	44000011		A16	5301043014	20mA line current Interface		206.3
6	0	44000011		EW1	5207142220	End angle (EW15)		201.1
7	0	44000011		EW2	5207142220	End angle (EW15)		205.3
8	6	44000011		EW13	5207142220	End angle (EW15)		209.3
9	6	44000011		EW14	5207142220	End angle (EW15)		204.3
10	0	44000011		KF2	5101013520	1N4007-SII-Diode-1A		209.4
11	0	44000011		KF3	5101013520	1N4007-SII-Diode-1A		204.4
12	0	44000011		S1	NP2-BA31	Pushbutton green		200.5
13	0	44000011		S2	NP2-BA41	Pushbutton red		200.5
14	0	44000011		S3	NP2-BA61	Pushbutton blue		200.5
15	0	44000011		S4	M22-WK3	3 position switch		200.4
16	0	44000011		V1	5101013520	1N4007-SII-Diode-1A		203.3
17	0	44000011		V3	5101013520	1N4007-SII-Diode-1A		201.1
18	0	44000011		V4	5101013520	1N4007-SII-Diode-1A		201.3
19	0	44000011		V5	5101013520	1N4007-SII-Diode-1A		201.4
20	0	44000011		V6	5101013520	1N4007-SII-Diode-1A		201.6
21	0	44000011		X1	5391200104	BN4112AT 7-pin socket M25 x 1.5		203.4
22	1	44000011		X2	5391200304	ME2A10 socket 6p rotatable M25x1, 5 200cm		206.3
23	0	44000011		X3	1000013186	Q-ODC-2 fiber optic device socket SC 2 fibers		208.5
24	4	44000011		X12	5391200504	BS08D mounting socket 60cm 8 pin M25x1,5		209.4

a			Date	19.07.2019		Becker MINING EUROPE GmbH Walter-Becker-Straße 1 66299 Friedrichsthal	Bill of material Replaced by	Projekt title	Mining Master Smart		=
b			Drawn	J. Strauß				Drawing No.	G074-4080		+
c			Chkd.					Sheet500	+ 0 Bl.		
Rev.	Modification	Date	Name	Norm	Original	Subst. For					

