

The information in this document is subject to change without notice and should not be construed as a commitment by ABB. ABB assumes no responsibility for any errors that may appear in this document.

Except as may be expressly stated anywhere in this document, nothing herein shall be construed as any kind of guarantee or warranty by ABB for losses, damages to persons or property, fitness for a specific purpose or the like.

In no event shall ABB be liable for incidental or consequential damages arising from use of this document.

This document and parts thereof must not be reproduced or copied without ABB's written permission, and contents thereof must not be imparted to a third party nor be used for any unauthorized purpose. Contravention will be prosecuted.

Additional copies of this document may be obtained from ABB at its then current charge.

© Copyright 2017 ABB ALL right reserved.

ABB AB

SE-721 68 Västerås  
Sweden

# TABLE OF CONTENTS

PAGE	PAGE DESCRIPTION	Date	Edited by
1	COPYRIGHT page	2017-03-13	Thomas
2	TABLE OF CONTENTS	2017-03-17	Thomas
3	TABLE OF CONTENTS	2017-03-17	Thomas
4	TABLE OF CONTENTS	2017-03-17	Thomas
5	TABLE OF CONTENTS	2017-03-17	Thomas
6	TABLE OF CONTENTS	2017-03-17	Thomas
7	SYMBOL INFORMATION	2015-09-30	Thomas
8	VIEW OF CONTACTS	2017-03-13	Thomas
8.1	REVISION INFOMATION	2017-03-17	Thomas
9	Device list, by LOCATION	2017-03-16	Thomas
10	Device list, by LOCATION	2017-03-16	Thomas
11	Device list, by FUNCTION	2017-03-16	Thomas
12	Device list, by FUNCTION	2017-03-16	Thomas
13	BLOCK DIAGRAM CONTROL MODULE	2017-03-13	Thomas
14	BLOCK DIAGRAM SINGLE DRIVE MODULE	2017-03-13	Thomas
15	BLOCK DIAGRAM DRIVE MODULE	2017-03-13	Thomas
16	FRONT VIEW OF SINGLE CABINET MDU HV	2017-03-13	Thomas
17	FRONT VIEW OF SINGLE CABINET MDU LV and HV	2017-03-13	Thomas
18	SIDE VIEWS OF SINGLE CABINET	2017-03-13	Thomas
19	VIEW OF DRIVE MODULE CABINET	2017-03-16	Thomas
20	VIEW OF PANEL BOARD	2017-03-13	Thomas
21	VIEW OF CONTACTOR & AXIS COMPUTER UNIT	2017-03-13	Thomas
22	VIEW OF VOLTAGE MEARSUREMENT BOX	2017-03-13	Thomas
23	CONTACT AT THE CABINET WALL	2017-03-16	Thomas
24	OPT:POWER SUPPLY DSQC609 XT31, G4, G5, G6	2017-03-16	Thomas
25	RUN CHAIN block diagram in PANEL BOARD A21 and CONTROL PANEL S21	2017-03-15	Thomas
26	RUN CHAIN and PANEL BOARD A21 Sh. 1 of 4	2017-03-13	Thomas
27	RUN CHAIN and PANEL BOARD A21 Sh. 2 of 4	2017-03-13	Thomas
28	RUN CHAIN and PANEL BOARD A21 Sh. 3 of 4	2017-03-16	Thomas
28.1	PANEL BOARD A21 Sh. 4 of 4 Opt:EXT.CUSTOMER. CONNECT. SYSTEM SIGNALS	2017-03-13	Thomas
28.2	Opt. LED on front; Software based Mode Selector Internal safety harness	2017-03-16	Thomas
29	RUN CHAIN S21, EM.STOP, 2 & 3 MODE SELECTOR, SOFTWARE MODE SWITCH	2017-03-13	Thomas
30	FPU, FLEXPENDANT and option HOT PLUG	2017-03-16	Thomas

# TABLE OF CONTENTS

PAGE	PAGE DESCRIPTION	Date	Edited by
30.1	FPU, FLEXPENDANT and Opt. HOLD TO RUN DEVICE T10 JOGGING DEVICE	2017-03-16	Thomas
30.2	FPU, Extended FLEXPENDANT cable 15 - 30 m	2017-03-16	Thomas
31	RUN CHAIN A21, EXTERNAL EMERGENCY STOP, EXTERNAL 2 AND 3 MODE SELECTOR	2017-03-13	Thomas
32	RUN CHAIN EXT A21 OPERATING WITH OPT: HOT PLUG rel 11.1	2017-03-15	Thomas
34	MAIN COMPUTER/ANYBUS_CC/RS232 EXP. /INTERFACE BOARD/	2017-03-13	Thomas
35	MAIN COMPUTER A31 DSQC1000/1018/1024	2017-03-17	Thomas
36	MAIN COMPUTER A31 DSQC1000/1018/1024 ; A32 DSQC1003	2017-03-17	Thomas
37	FIELDBUS ADAPTER A32: ETHERNET/IP, PROFIBUS and PROFINET IO	2017-03-13	Thomas
38	PROFIBUS DP M/S A31.3	2017-03-16	Thomas
38.4	SAFETY BOARD A31.4 SOFTWARE SWITCH	2017-03-13	Thomas
38.5	SAFETY BOARD A31.4 DSQC1015 Hardware and Software based Mode Switch	2017-03-13	Thomas
39	DEVICENET A31.2 m/s DSQC1006	2017-03-13	Thomas
40	DEVICENET ADAPTER	2017-03-16	Thomas
40.1	ETHERNET SWITCH A34, option MULTI MOVE 604-1/2	2017-03-15	Thomas
41	ETHERNET SWITCH A62	2017-03-16	Thomas
42	VISION, INTEGRATED CAMERAS	2017-03-13	Thomas
43	ETHERNET SWITCH A64/CAMERA	2017-03-15	Thomas
44	ETHERNET SWITCH A65	2017-03-15	Thomas
45	DISPENCE PAC SUPPORT A57	2017-03-15	Thomas
46	DIGITAL PART OF COMBI I/O AND DIGITAL I/O UNIT DSQC651&652	2017-03-15	Thomas
47	DIGITAL I/O UNIT DSQC652	2017-03-15	Thomas
47.1	Local I/O Digital master 16in/16out	2017-03-15	Thomas
47.2	Local I/O Digital add on 16in/16out	2017-03-13	Thomas
48	COMBI I/O UNIT DSQC651	2017-03-15	Thomas
49	RELAY I/O UNIT DSQC653	2017-03-15	Thomas
50	RELAY I/O UNIT DSQC653	2017-03-13	Thomas
50.1	Local I/O Relay add on 8RO/8DI	2017-03-14	Thomas
51	ANALOGUE I/O UNIT DSQC355B	2017-03-15	Thomas
51.1	Local I/O Analog add on 4in/4out	2017-03-14	Thomas
52	REMOTE I/O UNIT DSQC350A	2017-03-15	Thomas
53	ENCODER UNIT DSQC377	2017-03-15	Thomas
54	REMOTE SERVICE BOX DSQC680 to Rel. 16.1	2017-03-16	Thomas
54.1	REMOTE SERVICE BOX DSQC1016/DSQC1023 from Rel. 16.2	2017-03-15	Thomas

# TABLE OF CONTENTS

PAGE	PAGE DESCRIPTION	Date	Edited by
55	MAINS CONNECTION XP0, Q1, F6, Z1, Z3	2017-03-13	Thomas
56	TRANSFORMER UNIT 480V T1.1, T1.3, Z2, X10	2017-03-13	Thomas
57	TRANSFORMER UNIT 262V T1.2, X10	2017-03-16	Thomas
58	OPTION : SERVICE OUTLET F4, F5, X22	2017-03-15	Thomas
59	POWER SUPPLY DSQC 626 AND 627 FOR DRIVE MODULE F2, G1, G9, K41.X1	2017-03-16	Thomas
60	POWER SUPPLY DSQC 661 AND 662 G1, G2, G3, F2, XT16	2017-03-15	Thomas
61	FAN UNIT E1, E2, E3, E5, A21, A43	2017-03-13	Thomas
62	CONTACTOR BOARD A43	2017-03-16	Thomas
63	CONTACTOR UNIT A43, K42, K43, K44	2017-03-16	Thomas
64	CONTACTOR UNIT XS40, XP40 Only for release 13.2 and earlier	2017-03-15	Thomas
65	CONTACTOR BOARD A43.X5, XS5, XP5 Connection for release 13.2 and earlier	2017-03-16	Thomas
66	AXIS COMPUTER UNIT A42, A41.1	2017-03-15	Thomas
67	AXIS COMPUTER UNIT A42, A44	2017-03-13	Thomas
68	FORCE MEASUREMENT BOX	2017-03-15	Thomas
69	EPS A44, DSQC646	2017-03-16	Thomas
70	SAFE MOVE A44, DSQC647	2017-03-15	Thomas
71	SAFE MOVE A44, DSQC647	2017-03-15	Thomas
72	MAIN DRIVE UNIT and ADDITIONAL AXIS 1-3 for LV A41.1 ,2 ,3 ,4 ,5	2017-03-15	Thomas
73	MAIN DRIVE UNIT and ADDITIONAL AXIS 1-3 for HV A41.1, 3, 4, 5	2017-03-15	Thomas
74	EXTERNAL AXIS A43, XS/XP7 Only for release 13.2 and earlier	2017-03-15	Thomas
75	EXTERNAL AXIS no 7, 8, 9 A41.3 .4 .5 , XS/XP7	2017-03-13	Thomas
75.1	EXTERNAL AXES ADAPTER HARNESS XS/XP40, A43:XP5, A7:XP7 :XP8 :XP9 Only for rel.14.1 and later.	2017-03-15	Thomas
76	SERVO DRIVE SYSTEM IRB 120	2017-03-14	Thomas
77	CONTROL CABLE IRB 120	2017-03-14	Thomas
78	CUSTOMER SIGNALS IRB 120	2017-03-14	Thomas
79	SERVO DRIVE SYSTEM IRB 140	2017-03-13	Thomas
80	CONTROL CABLE IRB 140	2017-03-14	Thomas
81	CUSTOMER SIGNAL SINGLE CABINET IRB 140	2017-03-13	Thomas
82	SERVO DRIVE UNIT IRB 260	2017-03-13	Thomas
83	CONTROL CABLE IRB 260	2017-03-14	Thomas
84	CUSTOMER POWER/SIGNAL SINGLE CABINET IRB 260	2017-03-16	Thomas
85	SERVO DRIVE UNITS IRB 360	2017-03-16	Thomas
86	CONTROL CABLE IRB 360	2017-03-14	Thomas

# TABLE OF CONTENTS

PAGE	PAGE DESCRIPTION	Date	Edited by
87	CUSTOMER SIGNAL SINGLE CABINET IRB 360	2017-03-13	Thomas
87.1	CUSTOMER POWER/SIGNAL SINGLE CABINET IRB 360	2017-03-13	Thomas
88	SERVO DRIVE SYSTEM IRB 460	2017-03-13	Thomas
89	CONTROL CABLE IRB 460	2017-03-16	Thomas
90	CUSTOMER POWER/SIGNAL IRB460, 660, 760	2017-03-16	Thomas
91	C-BUS/P-BUS/ to CP/CS IRB460, 660, 760	2017-03-16	Thomas
92	SERVO DRIVE SYSTEM IRB 660, 760	2017-03-16	Thomas
93	CONTROL CABLE IRB 660, 760	2017-03-16	Thomas
93.5	SERVO DRIVE SYSTEM IRB 1200	2017-03-13	Thomas
93.6	CONTROL CABLE IRB 1200	2017-03-14	Thomas
93.7	CUSTOMER SIGNAL SINGLE CABINET IRB 1200	2017-03-16	Thomas
94	SERVO DRIVE SYSTEM IRB 1410	2017-03-14	Thomas
95	CONTROL CABLE IRB 1410	2017-03-14	Thomas
96	CUSTOMER SIGNALS SINGLE CABINET IRB 1410	2017-03-14	Thomas
97	SERVO DRIVE SYSTEM IRB 1520	2017-03-14	Thomas
98	CONTROL CABLE IRB 1520	2017-03-14	Thomas
99	CUSTOMER SIGNALS IRB 1520	2017-03-14	Thomas
100	SERVO DRIVE UNIT IRB 1600/1660	2017-03-14	Thomas
101	CONTROL CABLE IRB 1600/1660	2017-03-14	Thomas
102	CUSTOMER POWER/SIGNAL SINGLE CABINET IRB 1600/1660	2017-03-14	Thomas
103	SERVO DRIVE UNIT IRB 2400	2017-03-14	Thomas
104	CONTROL CABLE IRB 2400	2017-03-14	Thomas
105	CUSTOMER POWER/SIGNAL SINGLE CABINET IRB 2400	2017-03-14	Thomas
106	SERVO DRIVE SYSTEM IRB 2600	2017-03-14	Thomas
107	CONTROL CABLE IRB 2600	2017-03-14	Thomas
108	CUSTOMER POWER/SIGNAL IRB2600	2017-03-16	Thomas
109	CUSTOMER POWER/SIGNAL DEVICE NET IRB2600	2017-03-16	Thomas
110	CUSTOMER POWER/SIGNAL PROFI BUS IRB 2600	2017-03-16	Thomas
111	DevNet/Pofinet/Ethernet/Profibus addition to CP/CS IRB2600	2017-03-16	Thomas
112	SERVO DRIVE SYSTEM IRB 4400	2017-03-14	Thomas
113	CONTROL CABLE IRB 4400	2017-03-16	Thomas
114	CUSTOMER POWER/SIGNAL SINGLE CABINET IRB 4400	2017-03-14	Thomas
115	SERVO DRIVE SYSTEM IRB 4600	2017-03-14	Thomas

# TABLE OF CONTENTS

PAGE	PAGE DESCRIPTION	Date	Edited by
116	CONTROL CABLE IRB 4600	2017-03-16	Thomas
117	CUSTOMER POWER/SIGNAL IRB4600	2017-03-16	Thomas
118	CUSTOMER POWER/SIGNAL DEVICE NET IRB4600	2017-03-16	Thomas
119	CUSTOMER POWER/SIGNAL PROFI BUS IRB 4600	2017-03-16	Thomas
120	DevNet/ProfiNet/Ethernet/Profibus addition to CP/CS IRB4600	2017-03-16	Thomas
120.1	SERVO DRIVE SYSTEM IRB 6400R	2017-03-14	Thomas
120.2	CONTROL CABLE IRB 6400R	2017-03-14	Thomas
120.3	CUSTOMER POWER/SIGNAL/BUS IRB 6400R	2017-03-14	Thomas
120.4	SERVO DRIVE SYSTEM IRB 6700	2017-03-14	Thomas
120.5	CONTROL CABLE IRB 6700	2017-03-14	Thomas
120.6	CUSTOMER POWER/SIGNAL PARABUSCOM SINGLE CABINET PROFI/DEVICE NET BUS IRB 6700	2017-03-16	Thomas
120.7	DevNet//EtherNet//ProfiNet//PBUS ADDITION TO CP/CS IRB 6700	2017-03-14	Thomas
121	SERVO DRIVE SYSTEM IRB 66xx - 76xx	2017-03-13	Thomas
122	CONTROL CABLE IRB 66xx - 76xx	2017-03-14	Thomas
123	COOLING AXES 1/2 SINGLE CABINET IRB 6600 - 7600	2017-03-14	Thomas
124	CUSTOMER POWER/SIGNAL SINGLE CABINET IRB 6600 - 7600	2017-03-16	Thomas
125	DevNet//EtherNet//ProfiNet//PBUS ADDITION TO CP/CS IRB 66xx - 7600	2017-03-14	Thomas
126	CUSTOMER POWER/SIGNAL SINGLE CABINET PROFI BUS IRB 6600 - 7600	2017-03-16	Thomas
128	CUSTOMER POWER/SIGNAL SINGLE CABINET DEVICE NET IRB 6600 - 7600	2017-03-16	Thomas
128.5	SERVO DRIVE SYSTEM AXES 1-3 IRB 87xx	2017-03-14	Thomas
128.6	SERVO DRIVE SYSTEM AXES 4-6 IRB 87xx	2017-03-14	Thomas
128.7	CONTROL CABLE IRB 87xx	2017-03-14	Thomas
128.8	CUSTOMER POWER/SIGNAL PARAMULTI SINGLE CABINET PROFI/DEVICE NET BUS IRB 8700	2017-03-16	Thomas
128.9	DevNet//EtherNet//ProfiNet//PBUS ADDITION TO CP/CS PARAMULTI IRB 8700	2017-03-13	Thomas

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden. © Copyright 2003 ABB

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
TABLE OF CONTENTS

Status: =  
Approved  
Plant: =  
Location: +  
Sublocation: +

Document no.	Rev. Ind	Page6
3HAC024480-011	08	Next 7
		Total 156

	Stomme, ramverk/ Functional equipotential bonding
	Jord, allmän symbol/ Earth , general symbol.
	Störningsfri jord/ Functional earthing.
	Skyddsjord/ Protective earthing.
	Tvinnade ledare/ Twisted conductors.
	Trippel tvinnade ledare/ Triple twisted conductors.
	Fyrdubbelt tvinnade ledare/ Quadruple twisted conductors.
	Twinnade ledare part A med part B Twisted conductors part A with part B
	Skärm/ Shield.

	Slutkontakt/ Make contact, general.
	Handmanövrerad brytare, allmän/ Switch manually operated, general.
	Styrning med spak/ Actuator (operated by lever).
	Styrning genom vridning/ Actuator(operated by turning).
	Styrning genom tryckning/ Actuator(operated by pushing).
	Nödstopp (svamptryckknapp)/ Actuator, emergency.
	Skarvhylsa Through joint
	Filter/ Filter.
	Lampa/ Lamp.
	Kontakthylsa hona/ Socket outlet female.
	Kontaktstift hane/ Pin male.

	Strömtransformator/ Current transformer.
	Likström, DC / Direct current, DC.
	Växelström, AC / Alternating current, AC.
	Styrning, elektromagnetisk styrdon/ Actuator, by electromagnetic.
	Ethernet signal: 1. Transmit TX+ or TX- and receive RX+ or RX- 2. Unit possible to transmit or receive TX+/RX+ or TX-/RX- 3. Ethernet Gigabit signal, transmit pair one MX1+, MX1- and receive the MX2+, MX2- If Gigabit transmit pair MX3+, MX3- and receive pair MX4+, MX4-

Column coordinate number on the drawing  
Wire/connector one colour code.  
BK = Black, BN = Brown, RD = Red, OG = Orange  
YE = Yellow, GN = Green, BU = Blue, VT = Violet  
GY = Grey, WH = White, PK = Pink, TQ = Turquoise  
Wire/connector two colour code.  
Example 1 : WH/RD = White and Red.  
Example 2 : GNYE = Green and Yellow.

Example: Cable with four colour coded wire,  
square area AWG24 and cable number 709.

709	AWG24	BK
		BN
		RD/OG
		BK/OG

Translation table square area from AWG to mm2.

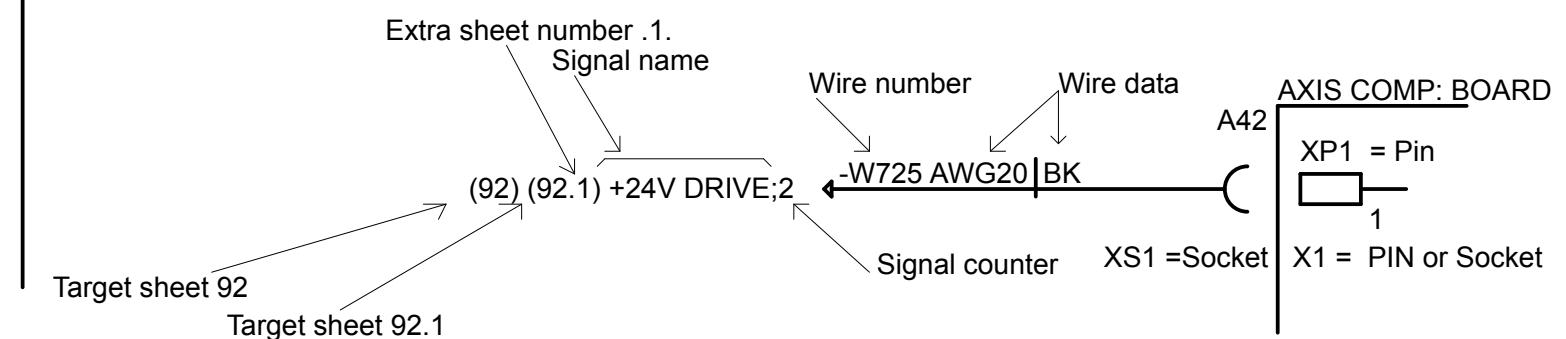
AWG28	0,093	AWG18	0,93
AWG26	0,15	AWG16	1,25
AWG24	0,25	AWG14	2,44
AWG22	0,34	AWG12	3,02
AWG20	0,56	AWG10	4,65

Run chain presentation starts at sheet 26.  
The Run chain marked as a wider wire.

Example: Run chain marked with a wider wire.

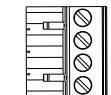
Example: Not Run chain marked with a thin wire.

Example, showing how to read the information before and after a signal.



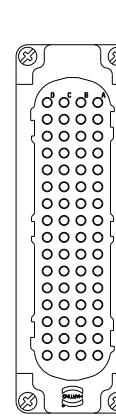
Top view 4 pole Phoenix

Top view

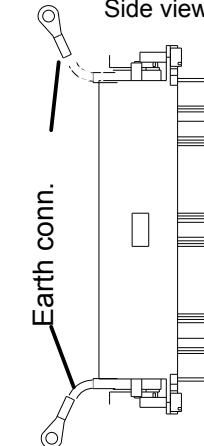


Power connection 64 pole. XP1  
Industrial connector Harting/Amphenol

Front view

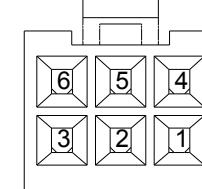


Side view

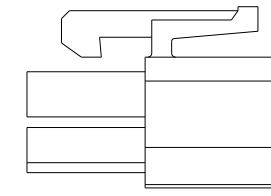


Position for Micro/Mini Fit (principal)

Back view 6 pole.



Side view



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
VIEW OF CONTACTS

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 8

3HAC024480-011

08

Total 156

1	2	3	4	5	6	7	8
<b>Revison 06 2016 02 Release 16.1</b>				<b>Revison 08 2017 03 Release 17.1</b>			
Sh.1 Copyright 2015 updated Sh.8.1 new revision information. Sh.18 K42.X31/32, K43.X31/32 added to the Left view coordinate column 3 and 4. Sh.23 XP/XS3, XP/XS5, XP/XS7, XP/XS13, XS/XP58 added. Sh.26 Software mode switch connection add. Column 1. Sh.27 Software mode switch connection add. Column 1. Sh.28 Software mode switch connection add. Column 1. Sh.29 Software/Hardware mode switch connection add. Column 1 and 8. Sh.33 Software mode switch connection add. Column 3 & 7. Sh.34 A31.4 safety board add./A31.1 DSQC 1017 exchanged with DSQC1001. Sh.38.5 Safety bord new sheet.  Sh.55 IRB 8700 option add. Sh.56 IRB6700, 8700 option T1.1 and T1.3 coordinate 2 and 6 Sh.63 K42.31 and 32 added, K43.31 and 32 added. Column 4. Sh.66 Signal was exchanged, right conn. (518 +24V_XS6:2) and (519 0V_XS6:1) Sh.79, 80 Power and signal connection added to IRB140//  Sh.93.5, 93.6, 93.7 reference to cirquit drawing 3HAC046307-003 Sh.121.1, .2, .3 exchanged from IRB6700 to IRB6400R Sh.121.4, .5, .6, .7 New sheet IRB6700 Sh.128.5-.9 added, IRB8700 Sh.129, 130 IRB6400R removed to Sh121.1-.3				Sh.2 - 6 table of contents updated Sh.9 - 10 Device list updated Sh.8.1 Revision information Sh.16 updated with opt.1541-1, 1542-1, 1543-1, 1544-1 Sh.17 IRB87xx added.  Sh.19 XS9 removed from floor plate// text "COMMUNICATION DRIVE MODULE AND CONTROL MODULE" Sh.17 IRB87xx added. Sh.23 XS9 (TXRX-, RXTX+) and (2.BI_DA- 2.BI_DB+) was switched at Column 1// XS1/XP1 and xs2/xp2 updated crossref, Sh.25 all Cross references was updated./S21.X1 and EXT S21.X1 added.  Sh.26 Column 1 cross reference updated// A21x1.2 and A21x2.2 changed signal direction. Sh.27 Cross references was updated// Sh.28 Cross references was updated// Connection to A21 X12 was changed. // S21.1 was removed  Sh.28.1 Cross section at column 3 updated// Signal direction changed direction column 3// Text acc. to 1) column 1 was changed//Text added to column 7 // Signal direction changed at column 7//Signal A21x6:2, :3, :4 and :5 changed Signal direction column 7. Sh.28.2 New signals to board A23 column 8  Sh.29 A21 changed to S21 column 2/terminal at column 7 changed Device tag. Sh.30 Coordinate 7 // XP4 was EXT-XP4// ref ((Connected to page)) removed // 1) Connect to XS4 .... new text // Flexpendat cable presentation changed at column 5-8 Sh.30.2 added.  Sh.31 EXT-A21 change to EXT-S21 column 2 Sh.32 Device tag H1 changed at column 3//Column 5 changed wire information 205 -219 Sh.34 DSQC1024 add. column 4//DSQC1022 add. column 6 Sh.35 DSQC1024 add. column 4// Sh.36 DSQC1024 add. column 4//  Sh.38.5 Sheet Title name changed. Sh.40 device net cable was splitted in two parts.column 3 and 4 Sh.51.2, 51.4, 51.6, 51.8 Local I/O Digital, Analogue, Relay. Sh.54.1 Cross reference add. column 1 and at column 8 Sh.55 shield Title page was changed Sh.56 GNYE text add. column 1 and GNYE moved outside the transformer column 6 Sh.59 Note 1) changed. Sh.61 New signal name column 5 Sh.62 Internal connection XS6:1 to X5:2 removed// Signal at X5 moves out side the A43 column 6 Sh.65 IRB87xx add. column 1 Sh.75.1 ref. to circuit drawings column 1 Sh.79 The motor phases exchange place X12, X16, X13 Sh.82 The motor phases exchange place X12, X13, X16 Sh.106-109 Ref. to manip. circ. drawing added 3HAC029570-007 Sh.110 Ref. to manip. circ. draw. was 3HAC025744-001, 3HAC13347-1. Sh.111 XS9 and R1.(TXRX-, RXTX+)//Ref. to manip.circ.draw.add. 3HAC029570-007 Sh.128.7 Conductor information at terminal XS1/XP1 column 5 and 6.			
<b>Revison 07 2016 09 Release 16.2</b>							
Sh.24 new ref. to sheet 54.1 +24V RES//0V RES  Sh.33 Note 1) add// XS/XP3 was XP3 at coordinate column 4. Sh.34 A31.4 PROFIBUS board add. DSQC 1005. Sh.38.4 Safety bord XS3 was S3 coordinate column 7.  Sh.54 Changed page description"DSQC to REL. 16.1//4.TXRX+ change to TXRX+.4 TXRX+.10 add. Sh.54.1 New sheet for the new REMOTE SERVICE BOX for 16.2 Sh.56 IRB460 added to option T1.1 and T1.3  Sh.57 IRB460 removed from the sheet for T1.2 Sh. 93.6 the SMB and power signals have been implemented.  Sh. 93.7 +R1-CS connection terminal changed from numeric to Alphabetical Coordinate column7 Sh. 100--102 Page description ...IRB1600/1660 was IRB1600 Sh. 123 XS/XP58 was removed//R1.SW23 was /R1.FAN.SW							

1	2	3	4	5	6	7	8
Location name	Function name		Page	Location name	Function name		Page
A21	PANEL BOARD		26	E1-E41	FAN UNIT		61
A23	OPTION:STATUS LED ON FRONT		28.2	E1-E41-R1	THERMISTOR		61
A31	MAIN COMPUTER		35	E1-E42	FAN UNIT		61
A31-E22	CHASSIS BLOWER		35	E1-E42-R1	Thermistor		61
A31.2	DeviceNet M/S DSQC1006		39	E1-E43	Fan unit		61
A31.3	PROFIBUS M		38	E1-E43-R1	Thermistor		61
A31.4	Safety Board DSQC1015		38.5	E1-E44	Fan unit		61
A32	Expansion board serie DSQC1003		36	E1-E44-R1	Thermistor		61
A32	DSQC 1003		37	E2	EXT. COMPUTER FAN opt.708-2		61
A32.1	ETHERNET/IP Fieldbus adapter DSQC 669 Slave		37	E2-M1	EXTERNAL COMPUTER FAN		61
A32.2	PROFIBUS Fieldbus adapter DSQC 667 Slave		37	E3	INTERNAL FAN		61
A32.3	PROFINET IO Fieldbus adapter DSQC 688 Slave		37	E3-M1	INTERNAL FAN		61
A32.4	DEVICENET IO Fieldbus adapter DSQC 1004 Slave		37	E5	MDU FAN		61
A34	ETHERNET SWITCH A34 opt. MULTI MOVE 604-1/2		40.1	E5-M1	OPTION : INTERNAL FAN		61
A41	MAIN SERVO DRIVE UNIT		94	EXT-A21-S21.2-H1	MOTOR ON (LAMP)		31
A41.1	MAIN SERVO DRIVE UNIT		100	EXT-ETH_FPU	FLEXPENDANT		30.1
A41.1	MAIN SERVO DRIVE UNIT		66	EXT-ETH_FPU-USB	FLEXPENDANT		30.1
A41.1	MAIN SERVO DRIVE UNIT		120.1	EXT-S21.1	2-MODE SELECTOR		31
A41.1	MAIN SERVO DRIVE UNIT		121	EXT-S21.1	3-MODE SELECTOR		31
A41.1	MAIN SERVO DRIVE UNIT		76	EXT-S21.2	MOTOR ON PB		31
A41.1	MAIN SERVO DRIVE UNIT		128.6	EXT-S21.3	EMERGENCY PB		31
A41.1-6	MAIN SERVO DRIVE UNIT		103	EXT-S22	Option HOT PLUG		32
A41.1-8	Main servo drive unit 4600		115	EXT-S22-H1	SIGNAL LAMP		32
A41.2	ADDITIONAL RECTIFIER UNIT		72	EXT-T10	T10 JOGGING DEVICE		30.1
A41.3	ADDITIONAL DRIVE UNIT		75	EXT-T10-ETH_FPU	FLEXPENDANT		30.1
A41.3	ADDITIONAL DRIVE UNIT		72	EXT-T10.1	HOLD TO RUN DEVICE		30.1
A41.4	ADDITIONAL DRIVE UNIT		75	F1	AUTOMATIC FUSE		63
A41.4	ADDITIONAL DRIVE UNIT		72	F2	AUTOMATIC FUSE		59
A41.5	ADDITIONAL DRIVE UNIT		75	F4	EARTH FAULT BREAKER		58
A41.5	ADDITIONAL DRIVE UNIT		72	F5	CIRCUIT BRAKER		58
A42	AXIS COMPUTER BOARD		66	F6	Option: CIRCUIT BRAKER		55
A43	CONTACTOR UNIT		75.1	G1	POWER SUPPLY DSQC661		60
A43	CONTACTOR BOARD		62	G2	POWER DISTRIBUTION BOARD DSQC662		60
A44	EPS		67	G3	ENERGY BANK		60
A57	Process Interface Board (PIB)		45	G6	DEVICENET POWER SUPPLY		24
A61	Option: REMOTE SERVICE BOX DSQC680		54	G9	POWER SUPPLY Note 1)		59
A62	Ethernet switch		41	H1	STATUS DIOD DRIVE MODULE		63
A64	Ethernet switch		43	I/Ox	Digital I/O Master module		47.1
A65	Ethernet switch		44	I/Ox	Relay I/O Add on module		50.1
C1	CAPACITOR		93	I/Ox	Digital I/O Add on module		47.2
C2	Capacitor 0,47uF		74	I/Ox	Analog I/O Add on module		51.1

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden. © Copyright 2003 ABB

Latest revision:



Lab/Office:  
PRN

IRC5 DESIGN 14 Rel: 17.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.  
3HAC024480-011

Rev. Ind Page 9  
Next 10  
08 Total 156

1 Location name	2 Function name	3	4	5 Page	6 Location name	7	8 Function name	Page
K41	RELAY UNIT			59				
K42	MOTORS ON CONTACTOR 1			63				
K43	MOTORS ON CONTACTOR 2			63				
K44	BRAKE CONTACTOR			63				
M140-A41.1	MAIN SERVO DRIVE UNIT			79				
M260-A41.1	MAIN SERVO DRIVE UNIT			82				
M360-A41.1	MAIN SERVO DRIVE UNIT			85				
M460-A41.1	Main servo drive unit 460			88				
O716-I/Ox	DIG. PART OF COMBI I/O AND DIG. I/O UNIT			46				
O719-I/O.X	ANALOGUE I/O UNIT			51				
O721-I/O.X	REMOTE I/O UNIT			52				
O726-I/O.X	ENCODER UNIT			53				
O738-EXT-FMB	Option: 738-1			68				
O738-EXT-FMB-A1	DSQC686 VOLTAGE MEASURE BOARD			68				
O818-RELAY I/O	RELAY I/O UNIT			50				
OP1-Q1	Main switch circuit breaker			55				
OP1-Z2	REAKTOR UNIT			56				
OP716_816-I/O.X	DIGITAL I/O UNIT			47				
OP717_817-I/O.X	COMBI I/O UNIT			48				
OP718_818-I/O.X	DIG. PART OF RELAY I/O UNIT			49				
P1	OPTION :DUTY TIME COUNTER			62				
Q1	MAINS SWITCH			55				
R1.1	BLEEDER			72				
S1	SWITCH			61				
S21	CONTROL PANEL			29				
S21.1	3-MODE SELECTOR			29				
S21.1	2-MODE SELECTOR			29				
S21.2	MOTOR ON PB			29				
S21.2-H1	MOTOR ON (LAMP)			29				
S21.3	EMERGENCY PB			29				
S22	Option with HOT PLUG			30				
S22-H1	SIGNAL LAMP			30				
T1.1	TRANSFORMER UNIT			56				
T1.2	TRANSFORMER UNIT			57				
T1.3	TRANSFORMER UNIT			56				
Z1	OPTION: MAINS LINE FILTER			55				
Z2	REAKTOR UNIT			56				
Z3	OPTION: MAINS LINE FILTER IRB8700			55				

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden. © Copyright 2003 ABB

Latest revision:



Lab/Office:  
PRN

IRC5 DESIGN 14 Rel: 17.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.  
3HAC024480-011

Rev. Ind Page 10  
Next 11  
08 Total 156

1	2	3	4	5	6	7	8
Location name	Function name		Page	Location name	Function name		Page
S21.1	2-MODE SELECTOR		29	G3	ENERGY BANK		60
EXT-S21.1	2-MODE SELECTOR		31	A34	ETHERNET SWITCH A34 opt. MULTI MOVE 604-1/2		40.1
S21.1	3-MODE SELECTOR		29	A32.1	ETHERNET/IP Fieldbus adapter DSQC 669 Slave		37
EXT-S21.1	3-MODE SELECTOR		31	E2	EXT. COMPUTER FAN opt.708-2		61
G9	POWER SUPPLY Note 1)		59	E2-M1	EXTERNAL COMPUTER FAN		61
A41.3	ADDITIONAL DRIVE UNIT		75	A62	Ethernet switch		41
A41.4	ADDITIONAL DRIVE UNIT		75	A64	Ethernet switch		43
A41.5	ADDITIONAL DRIVE UNIT		75	A65	Ethernet switch		44
A41.3	ADDITIONAL DRIVE UNIT		72	A32	Expansion board serie DSQC1003		36
A41.4	ADDITIONAL DRIVE UNIT		72	E1-E41	FAN UNIT		61
A41.5	ADDITIONAL DRIVE UNIT		72	E1-E42	FAN UNIT		61
A41.2	ADDITIONAL RECTIFIER UNIT		72	EXT-ETH_FPU	FLEXPENDANT		30.1
O719-I/O.X	ANALOGUE I/O UNIT		51	EXT-ETH_FPU-USB	FLEXPENDANT		30.1
F1	AUTOMATIC FUSE		63	EXT-T10-ETH_FPU	FLEXPENDANT		30.1
F2	AUTOMATIC FUSE		59	E1-E44	Fan unit		61
A42	AXIS COMPUTER BOARD		66	E1-E43	Fan unit		61
I/Ox	Analog I/O Add on module		51.1	EXT-T10.1	HOLD TO RUN DEVICE		30.1
R1.1	BLEEDER		72	E3	INTERNAL FAN		61
K44	BRAKE CONTACTOR		63	E3-M1	INTERNAL FAN		61
C1	CAPACITOR		93	A31	MAIN COMPUTER		35
A31-E22	CHASSIS BLOWER		35	A41.1	MAIN SERVO DRIVE UNIT		100
F5	CIRCUIT BRAKER		58	A41	MAIN SERVO DRIVE UNIT		94
OP717_817-I/O.X	COMBI I/O UNIT		48	A41.1	MAIN SERVO DRIVE UNIT		66
A43	CONTACTOR BOARD		62	A41.1-6	MAIN SERVO DRIVE UNIT		103
A43	CONTACTOR UNIT		75.1	M140-A41.1	MAIN SERVO DRIVE UNIT		79
S21	CONTROL PANEL		29	M260-A41.1	MAIN SERVO DRIVE UNIT		82
C2	Capacitor 0,47uF		74	M360-A41.1	MAIN SERVO DRIVE UNIT		85
G6	DEVICENET POWER SUPPLY		24	A41.1	MAIN SERVO DRIVE UNIT		120.1
A32.4	DEVICENET IO Fieldbus adapter DSQC 1004 Slave		37	A41.1	MAIN SERVO DRIVE UNIT		121
O716-I/Ox	DIG. PART OF COMBI I/O AND DIG. I/O UNIT		46	A41.1	MAIN SERVO DRIVE UNIT		76
OP718_818-I/O.X	DIG. PART OF RELAY I/O UNIT		49	A41.1	MAIN SERVO DRIVE UNIT		128.6
OP716_816-I/O.X	DIGITAL I/O UNIT		47	Q1	MAINS SWITCH		55
O738-EXT-FMB-A1	DSQC686 VOLTAGE MEASURE BOARD		68	E5	MDU FAN		61
A32	DSQC 1003		37	EXT-A21-S21.2-H1	MOTOR ON (LAMP)		31
A31.2	DeviceNet M/S DSQC1006		39	S21.2-H1	MOTOR ON (LAMP)		29
I/Ox	Digital I/O Add on module		47.2	EXT-S21.2	MOTOR ON PB		31
I/Ox	Digital I/O Master module		47.1	S21.2	MOTOR ON PB		29
F4	EARTH FAULT BREAKER		58	K42	MOTORS ON CONTACTOR 1		63
EXT-S21.3	EMERGENCY PB		31	K43	MOTORS ON CONTACTOR 2		63
S21.3	EMERGENCY PB		29	M460-A41.1	Main servo drive unit 460		88
O726-I/O.X	ENCODER UNIT		53	A41.1-8	Main servo drive unit 4600		115

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden. © Copyright 2003 ABB

Latest revision:



Lab/Office:  
PRN

IRC5 DESIGN 14 Rel: 17.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.  
3HAC024480-011

Rev. Ind Page 11  
Next 12  
Total 156  
08

1	2	3	4	5	6	7	8
Location name	Function name		Page	Location name	Function name		Page
OP1-Q1	Main switch circuit breaker		55				
EXT-S22	Option HOT PLUG		32				
E5-M1	OPTION : INTERNAL FAN		61				
P1	OPTION :DUTY TIME COUNTER		62				
Z1	OPTION: MAINS LINE FILTER		55				
Z3	OPTION: MAINS LINE FILTER IRB8700		55				
A23	OPTION:STATUS LED ON FRONT		28.2				
S22	Option with HOT PLUG		30				
F6	Option: CIRCUIT BRAKER		55				
A61	Option: REMOTE SERVICE BOX DSQC680		54				
O738-EXT-FMB	Option: 738-1		68				
A44	EPS		67				
A21	PANEL BOARD		26				
G2	POWER DISTRIBUTION BOARD DSQC662		60				
G1	POWER SUPPLY DSQC661		60				
A32.2	PROFIBUS Fieldbus adapter DSQC 667 Slave		37				
A31.3	PROFIBUS M		38				
A32.3	PROFINET IO Fieldbus adapter DSQC 688 Slave		37				
A57	Process Interface Board (PIB)		45				
OP1-Z2	REAKTOR UNIT		56				
Z2	REAKTOR UNIT		56				
O818-RELAY I/O	RELAY I/O UNIT		50				
K41	RELAY UNIT		59				
O721-I/O.X	REMOTE I/O UNIT		52				
I/Ox	Relay I/O Add on module		50.1				
EXT-S22-H1	SIGNAL LAMP		32				
S22-H1	SIGNAL LAMP		30				
H1	STATUS DIOD DRIVE MODULE		63				
S1	SWITCH		61				
A31.4	Safety Board DSQC1015		38.5				
EXT-T10	T10 JOGGING DEVICE		30.1				
E1-E41-R1	THERMISTOR		61				
T1.1	TRANSFORMER UNIT		56				
T1.2	TRANSFORMER UNIT		57				
T1.3	TRANSFORMER UNIT		56				
E1-E42-R1	Thermistor		61				
E1-E43-R1	Thermistor		61				
E1-E44-R1	Thermistor		61				

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden. © Copyright 2003 ABB

Latest revision:



Lab/Office:  
PRN

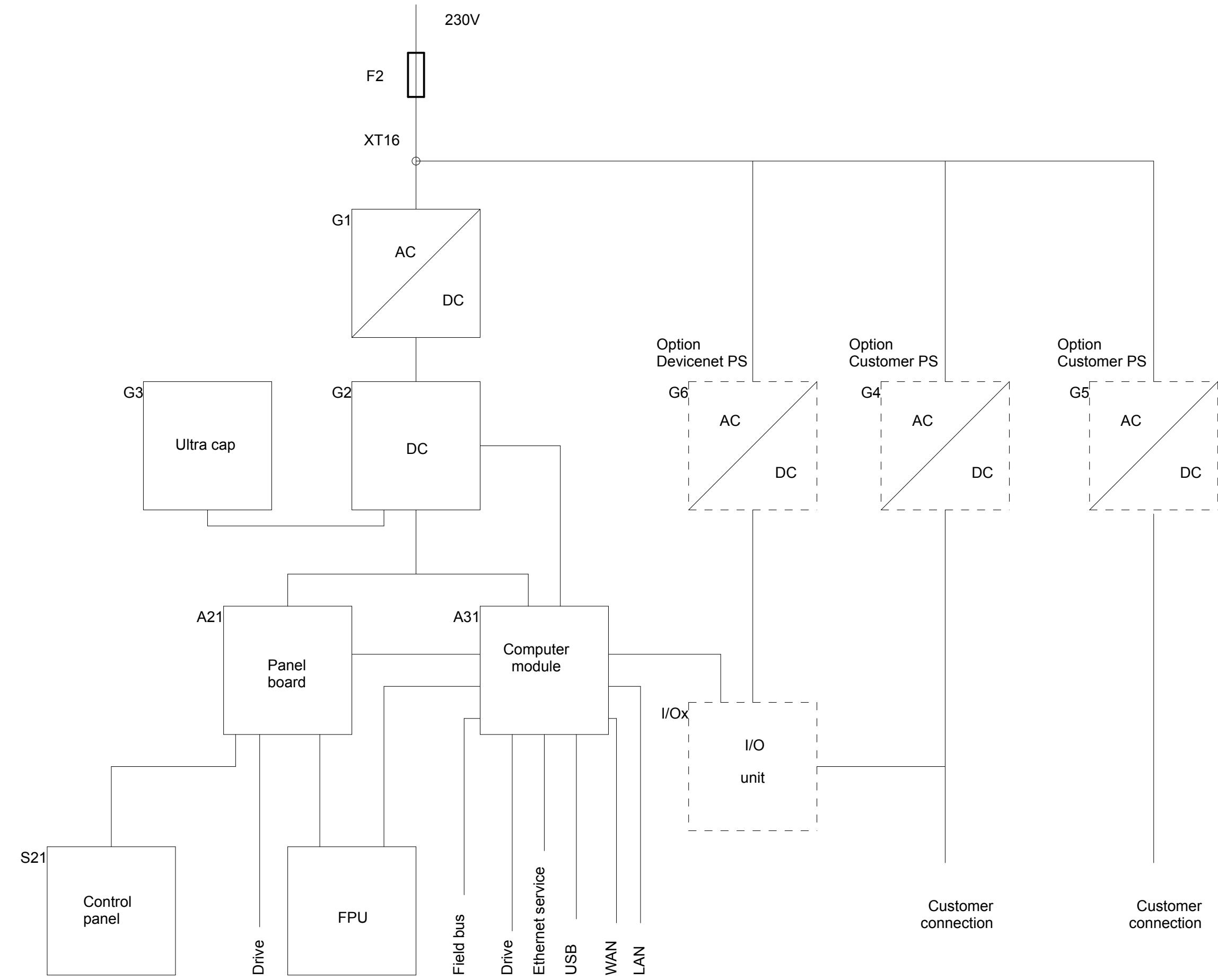
IRC5 DESIGN 14 Rel: 17.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.  
3HAC024480-011

Rev. Ind Page 12  
Next 13  
Total 156  
08



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
BLOCK DIAGRAM CONTROL MODULE

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

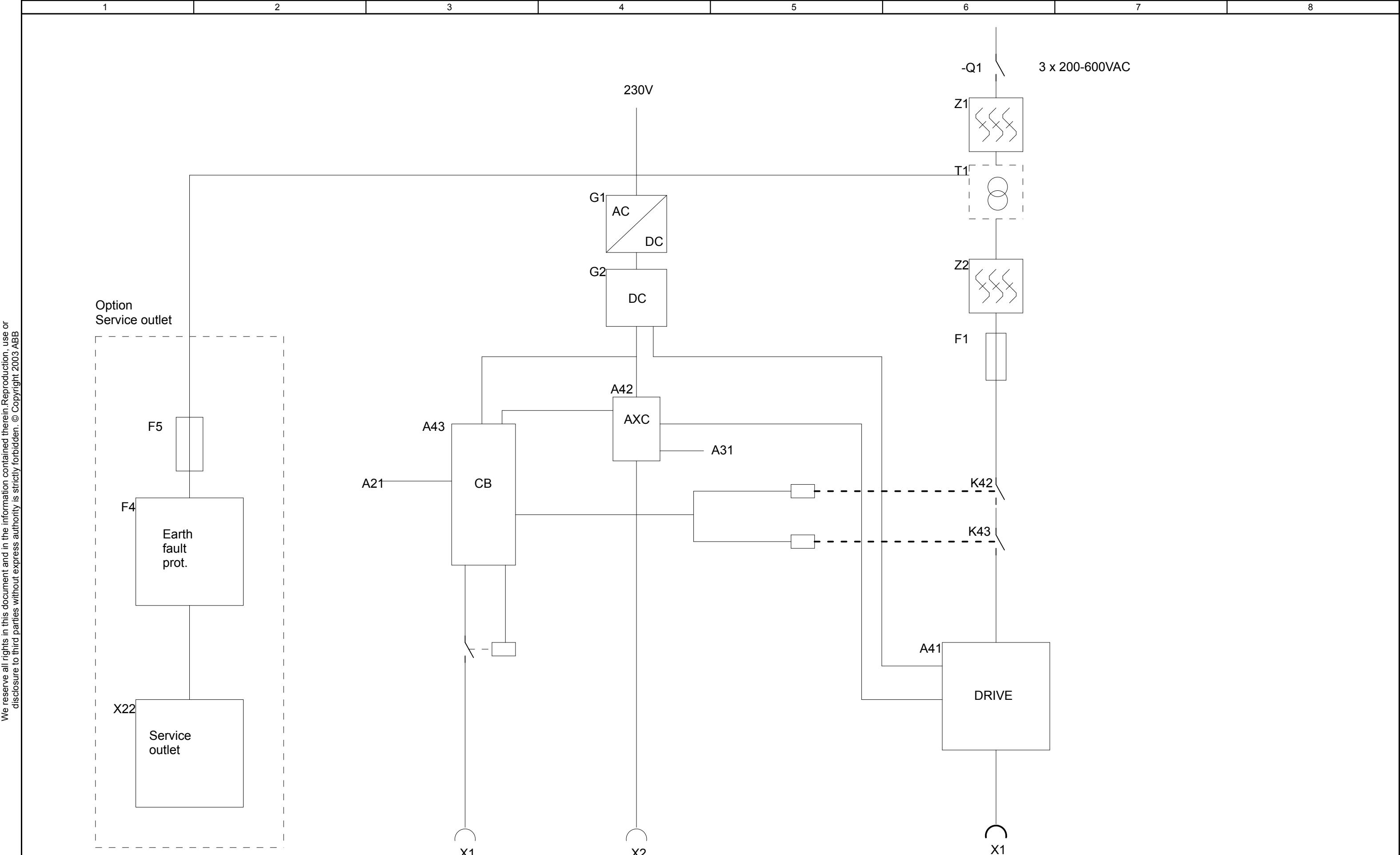
Rev. Ind

Page 13

3HAC024480-011

Next 14

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
BLOCK DIAGRAM SINGLE DRIVE MODULE

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

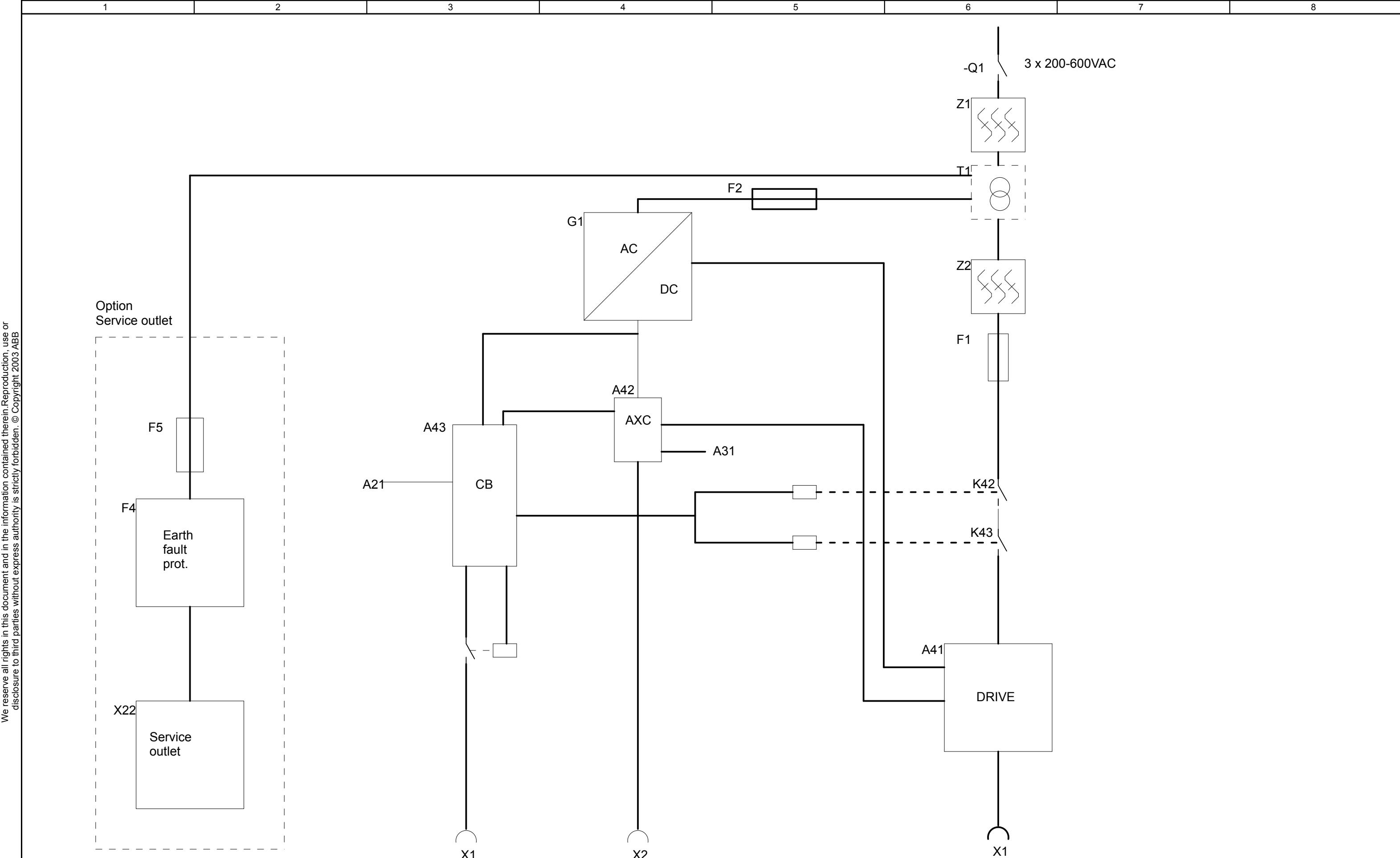
Document no.

Rev. Ind Page 14

3HAC024480-011

Next 15

08 Total 156



Latest revision:

**ABB**

Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
BLOCK DIAGRAM DRIVE MODULE

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

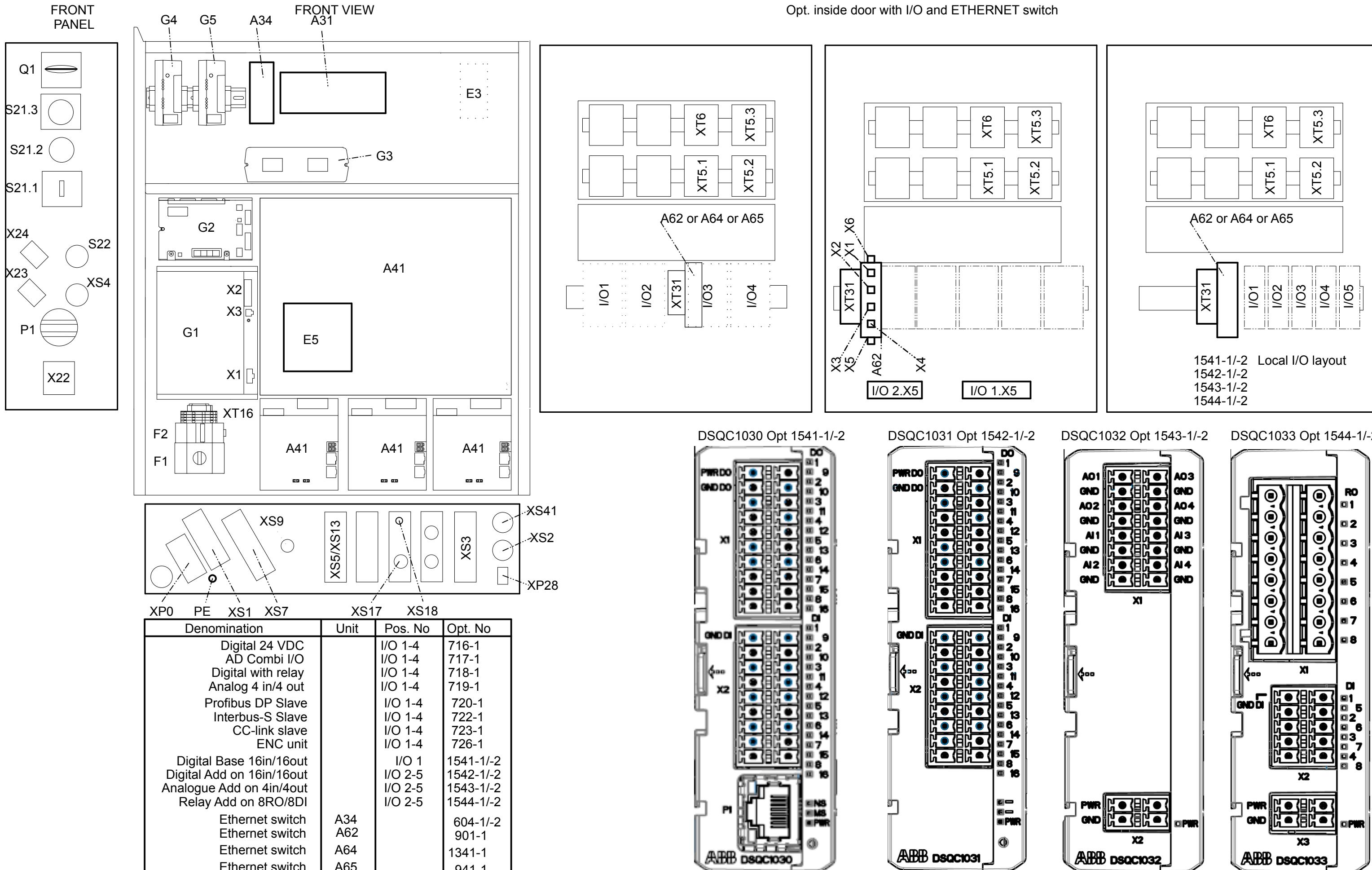
Document no.

Rev. Ind Page 15

3HAC024480-011

Next 16

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
FRONT VIEW OF SINGLE CABINET MDU HV

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

Rev. Ind

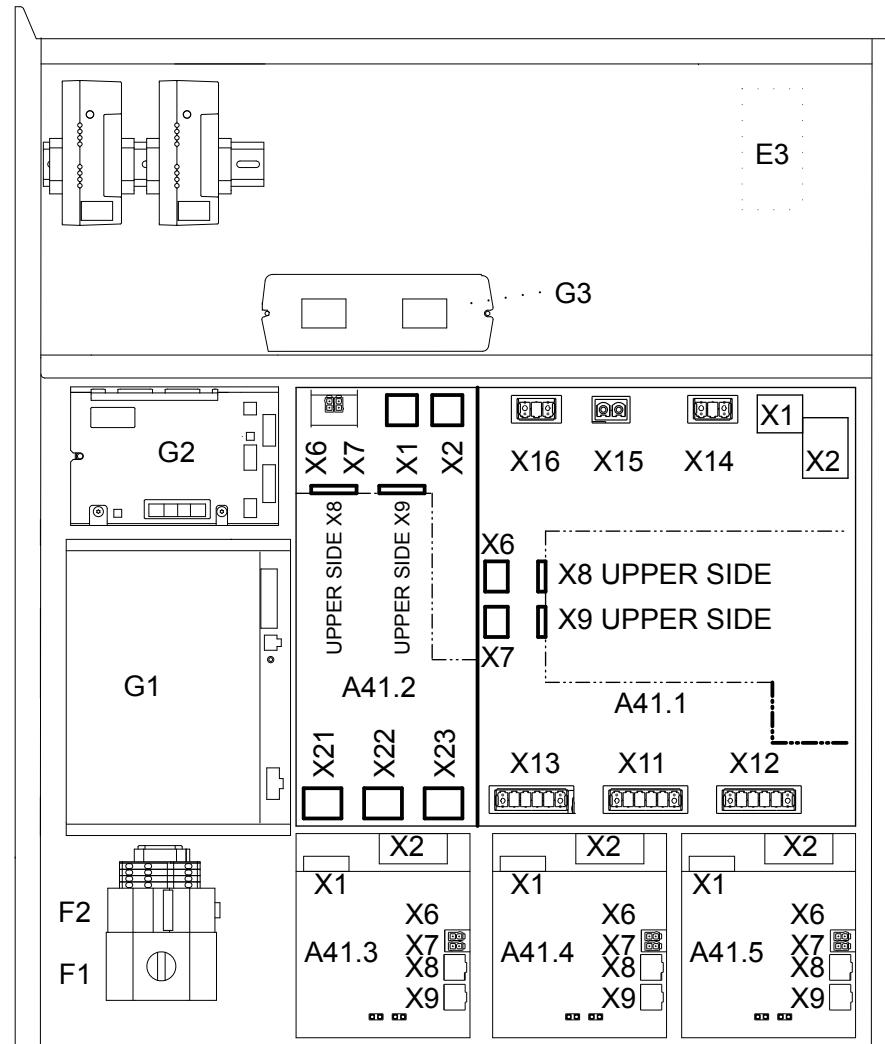
Page 16

3HAC024480-011

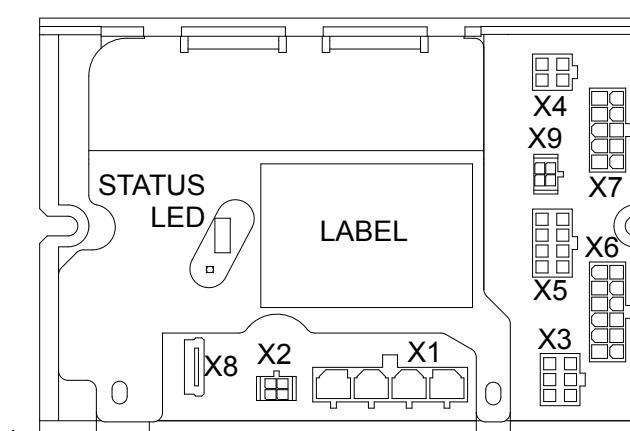
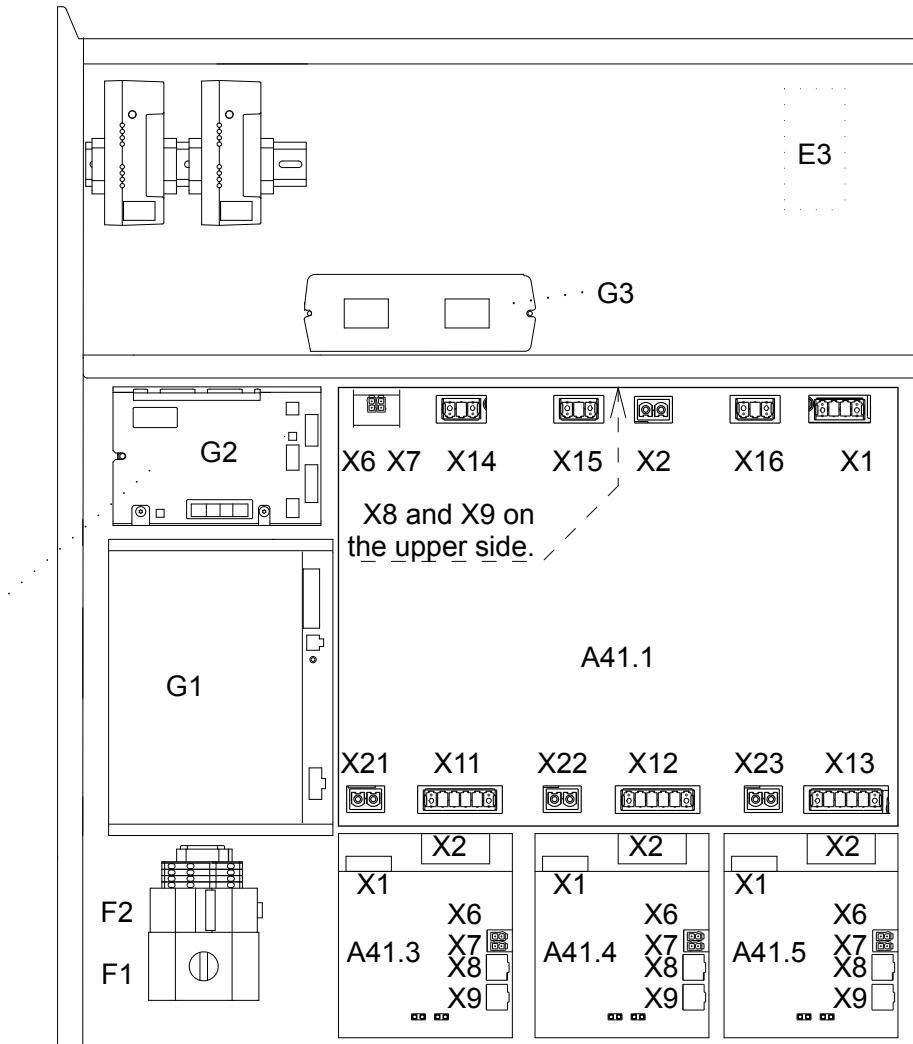
Next 17

Total 156

FRONT VIEW  
MAIN DRIVE UNIT FOR IRB 120 - 1600  
LV Low voltage



FRONT VIEW  
MAIN DRIVE UNIT FOR IRB 2400 - 87XX  
HV High voltage



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
FRONT VIEW OF SINGLE CABINET MDU LV and HV

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

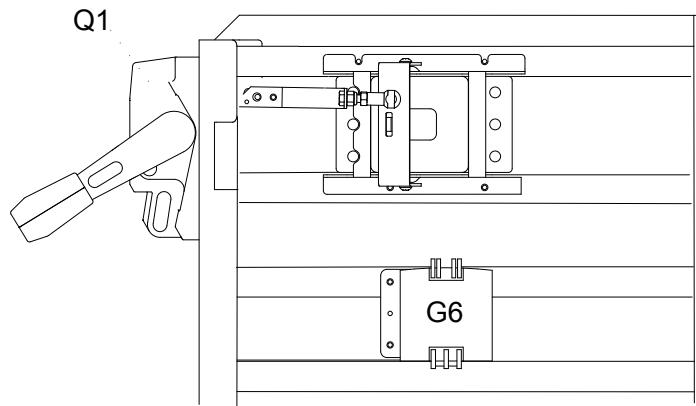
Rev. Ind Page 17

3HAC024480-011

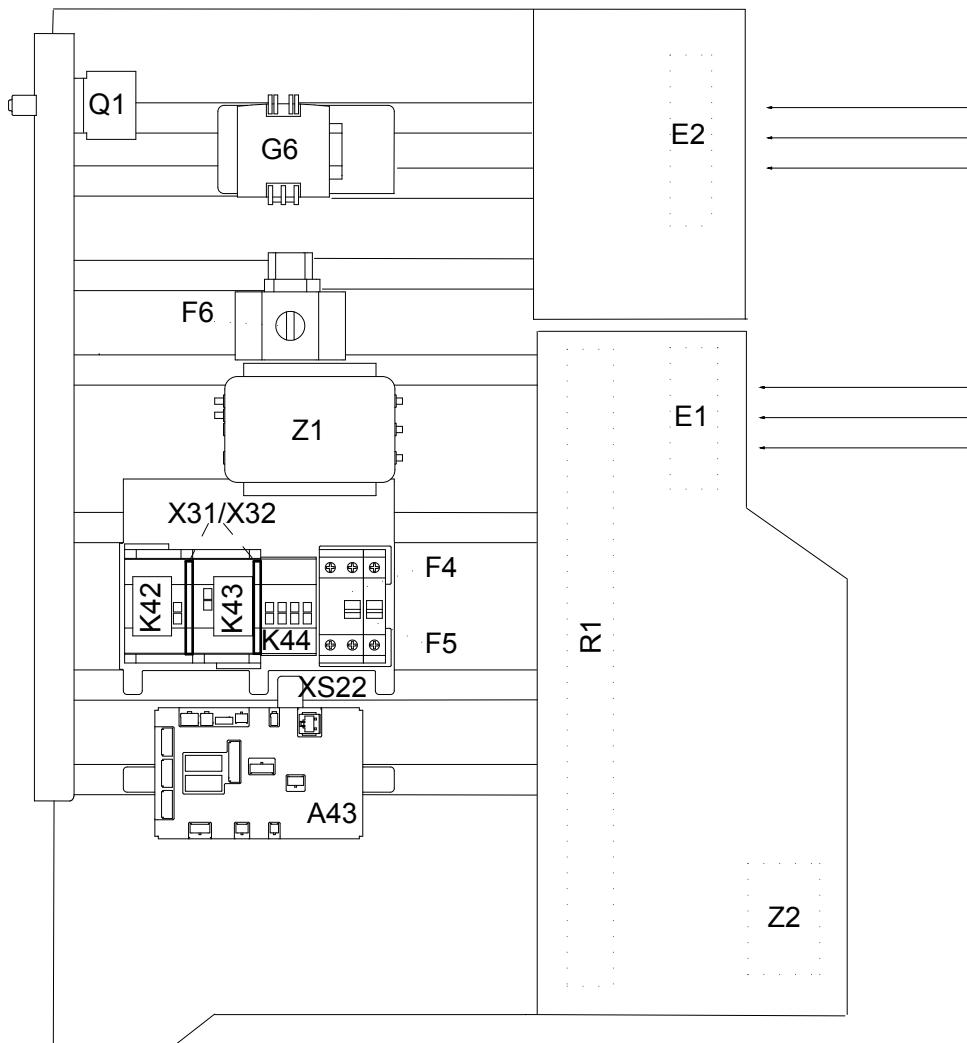
Next 18

Total 156

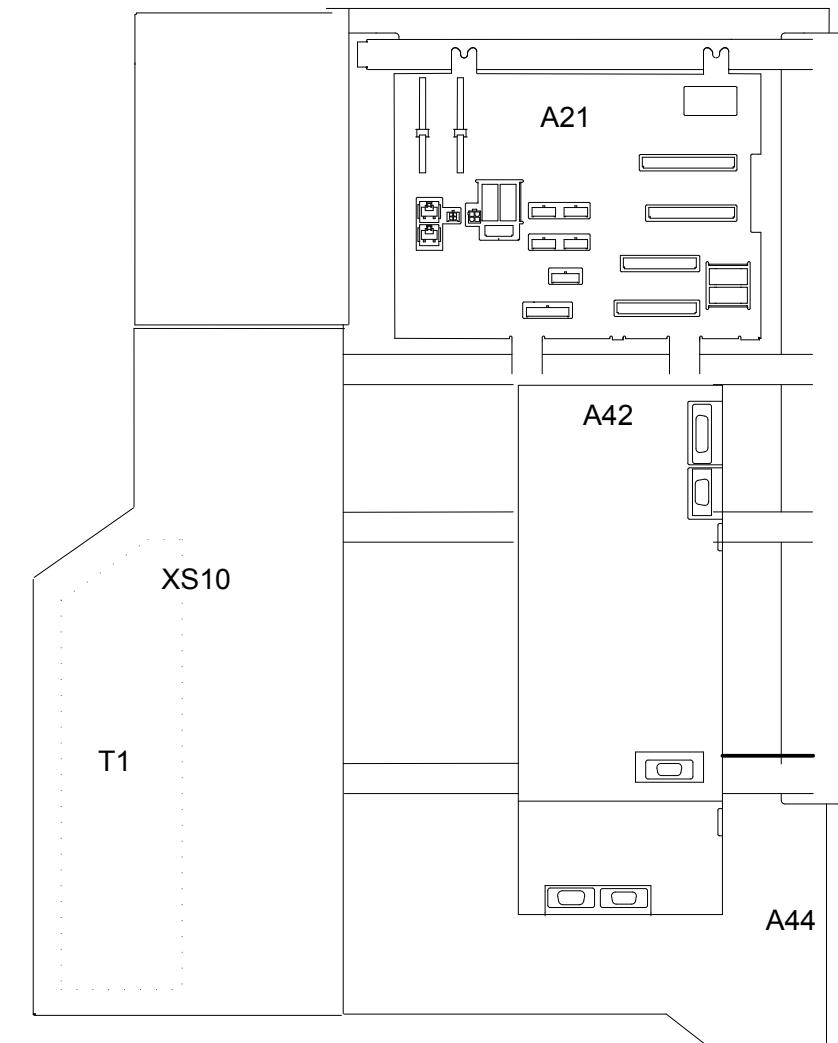
LEFT VIEW WITH  
FLANGE DISCONNECT



LEFT VIEW



RIGHT VIEW



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SIDE VIEWS OF SINGLE CABINET

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

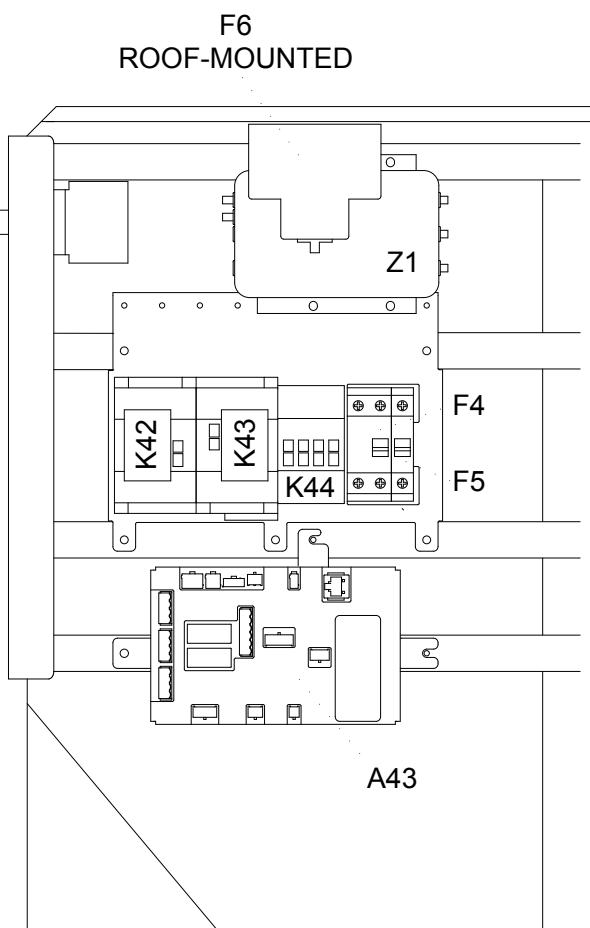
Page 18

3HAC024480-011

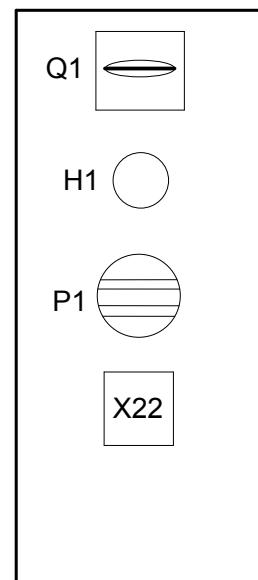
Next 19

Total 156

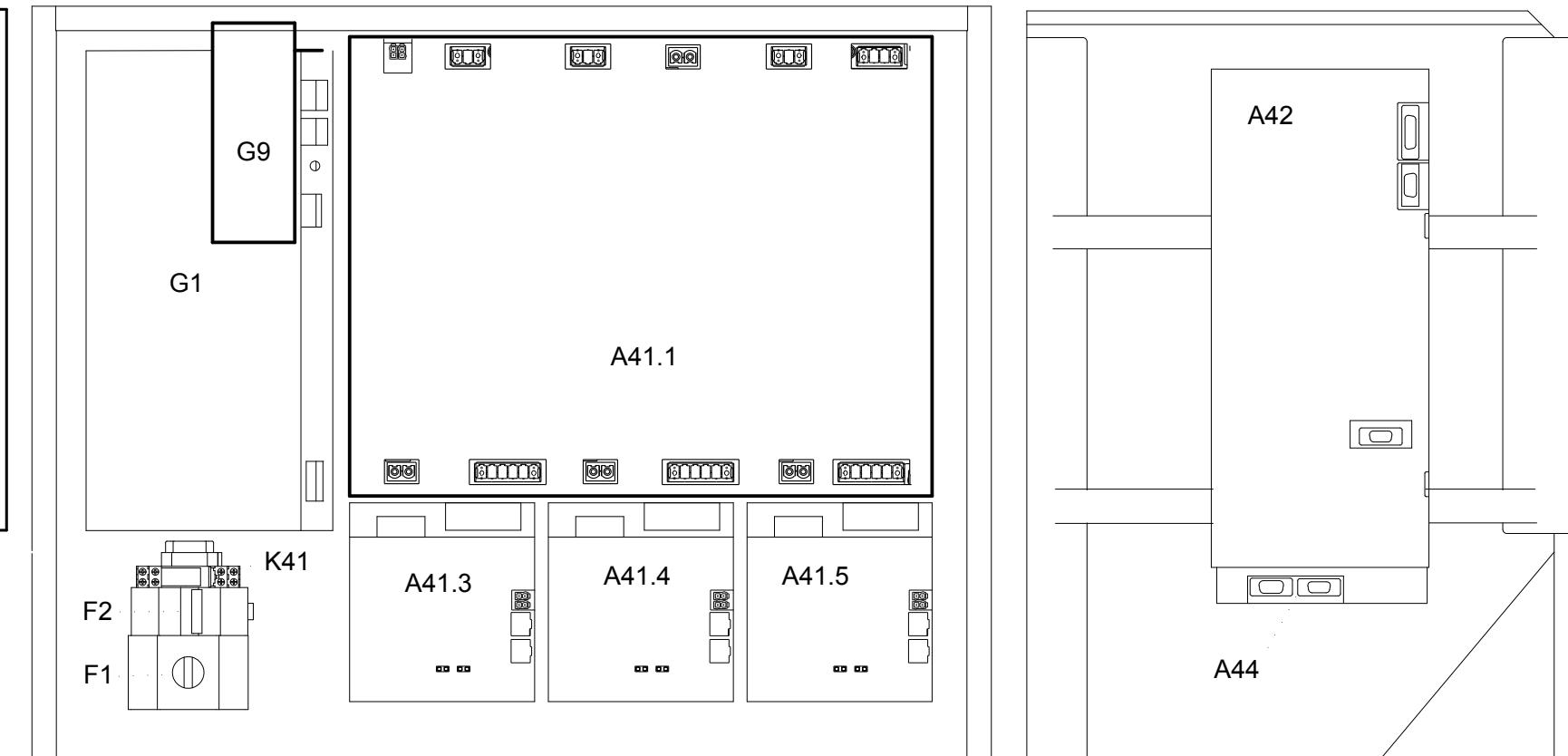
LEFT  
VIEW



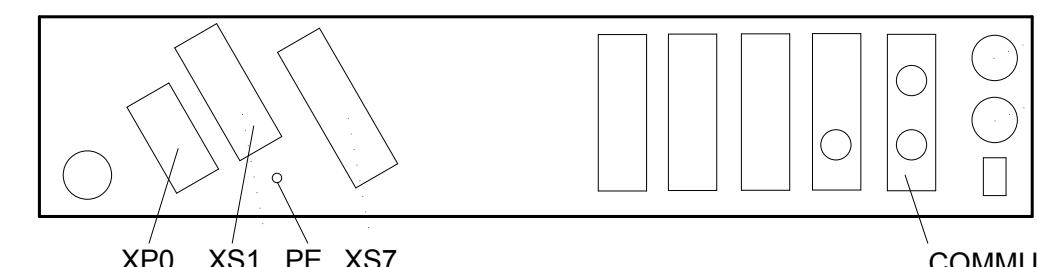
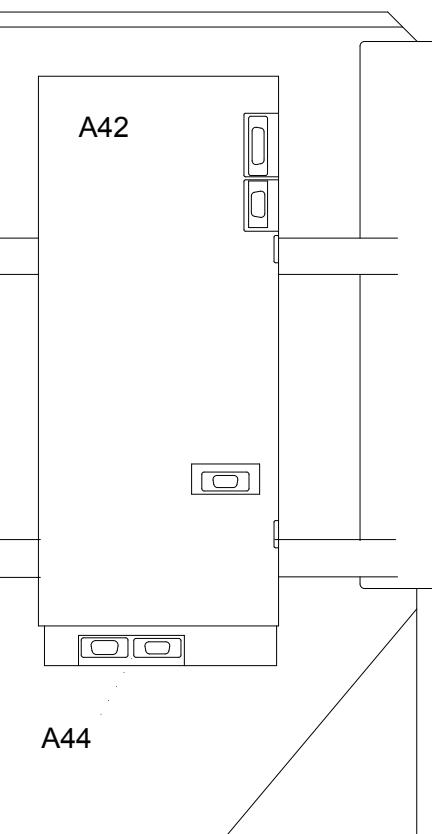
FRONT  
PANEL



FRONT  
VIEW



RIGHT  
VIEW



COMMUNICATION DRIVE MODULE  
AND CONTROL MODULE

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
VIEW OF DRIVE MODULE CABINET

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

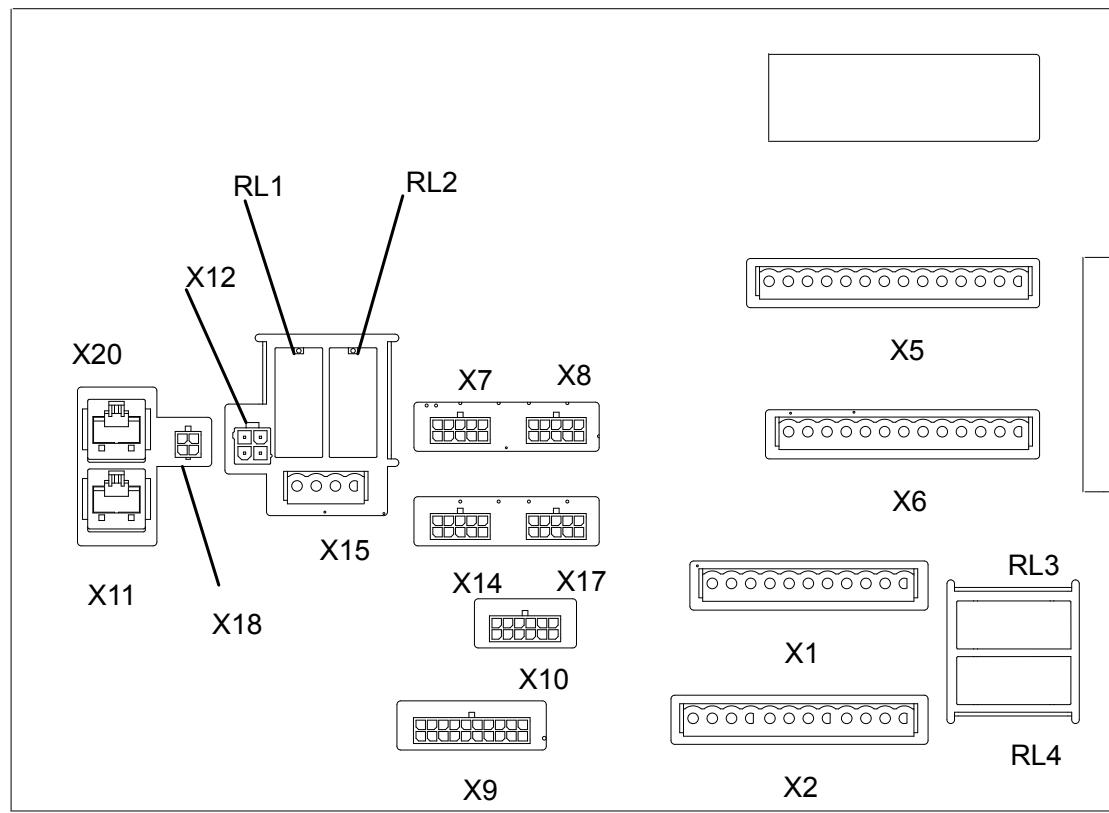
Page 19

3HAC024480-011

Next 20

Total 156

PANEL  
BOARD  
A21



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
VIEW OF PANEL BOARD

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

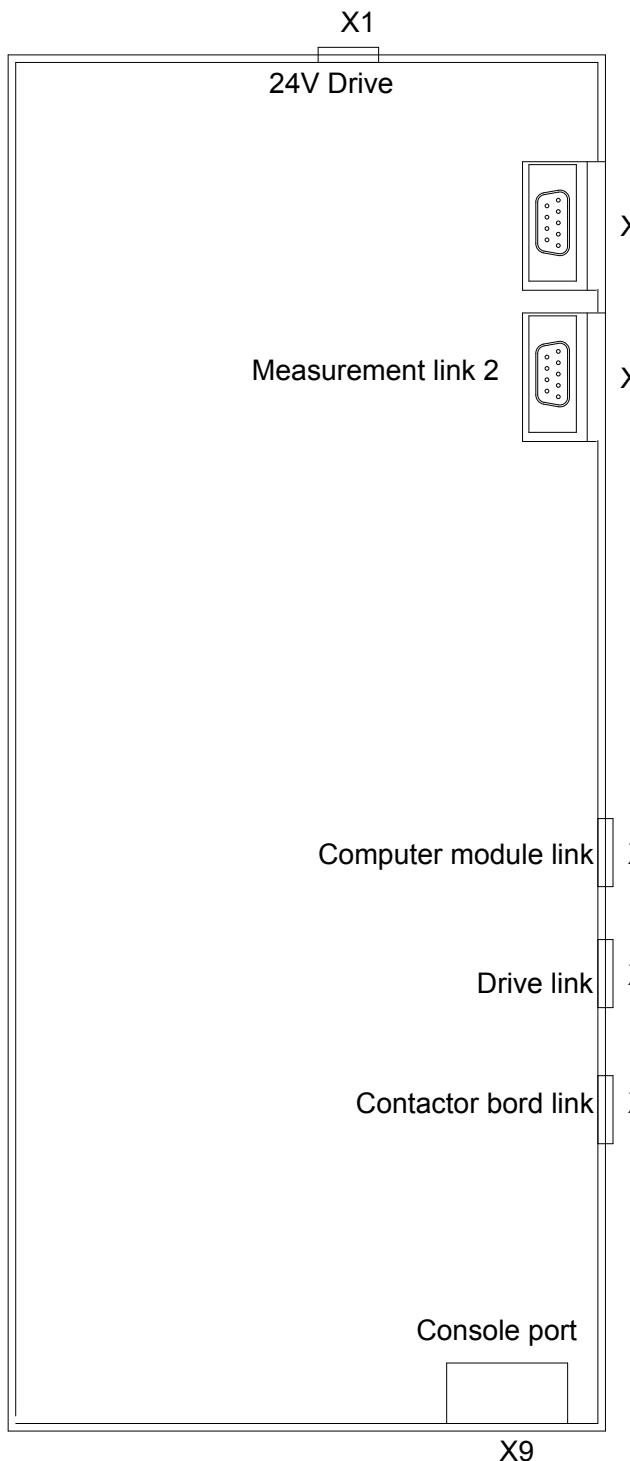
Page 20

3HAC024480-011

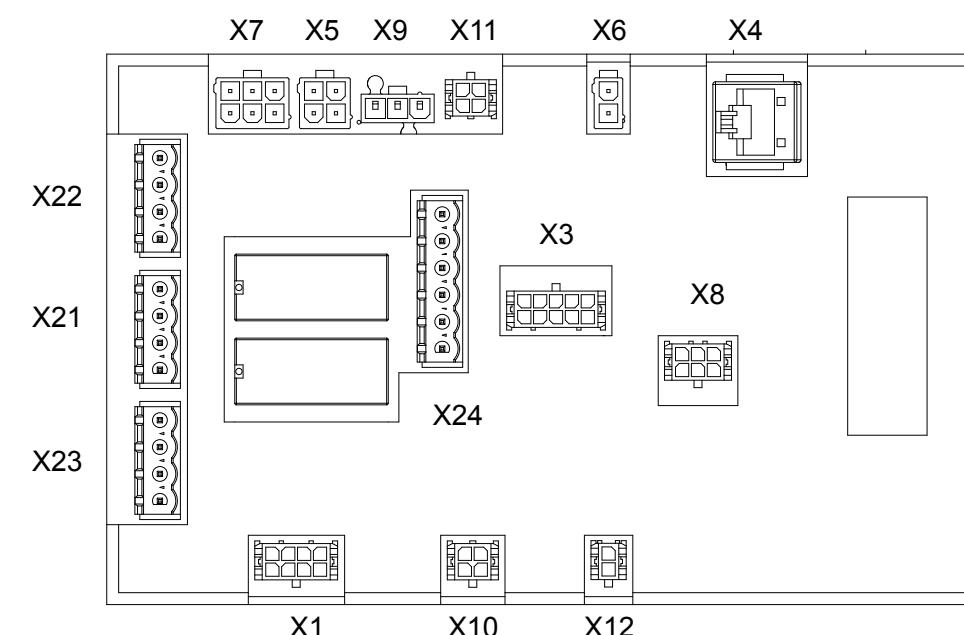
08

Total 156

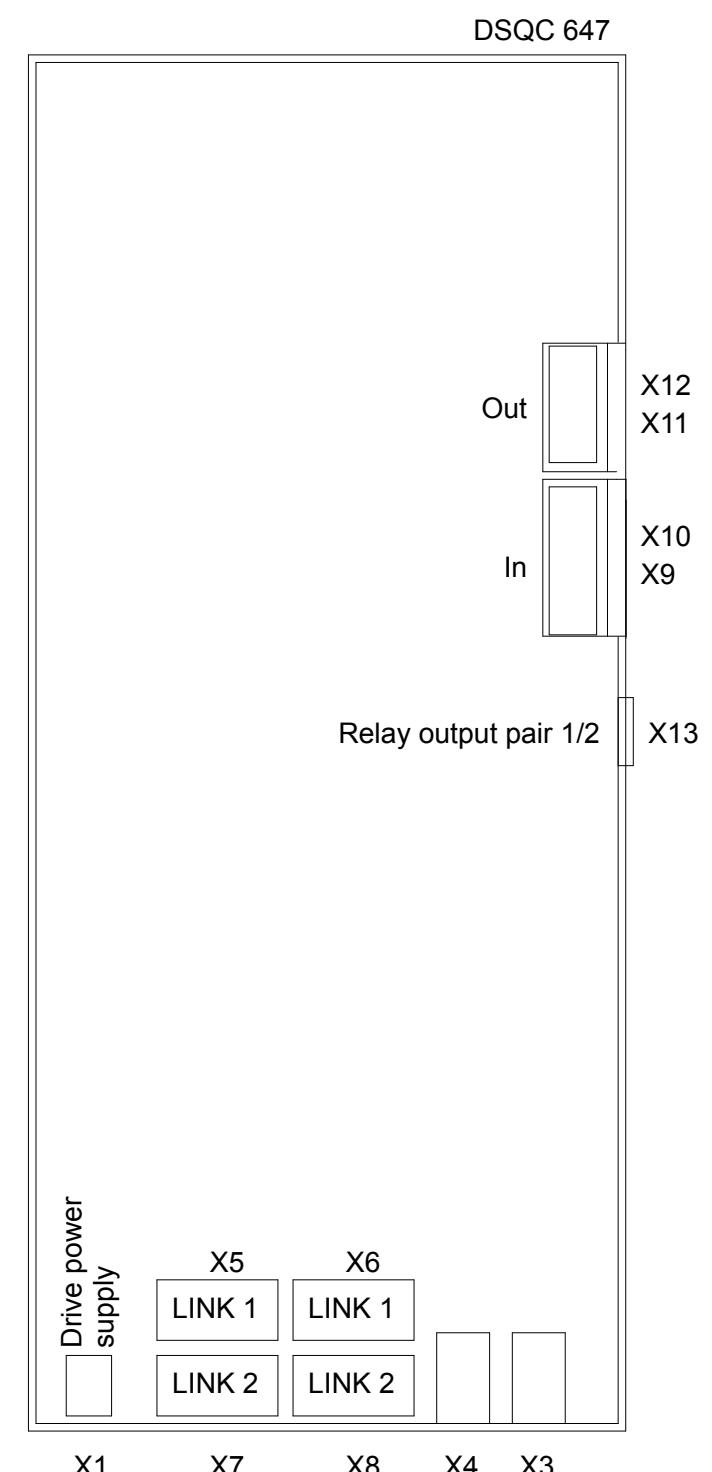
A42 Axis computer unit



A43 Contactor unit



A44.2 Safe move



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
VIEW OF CONTACTOR & AXIS COMPUTER UNIT

Status:  
Approved

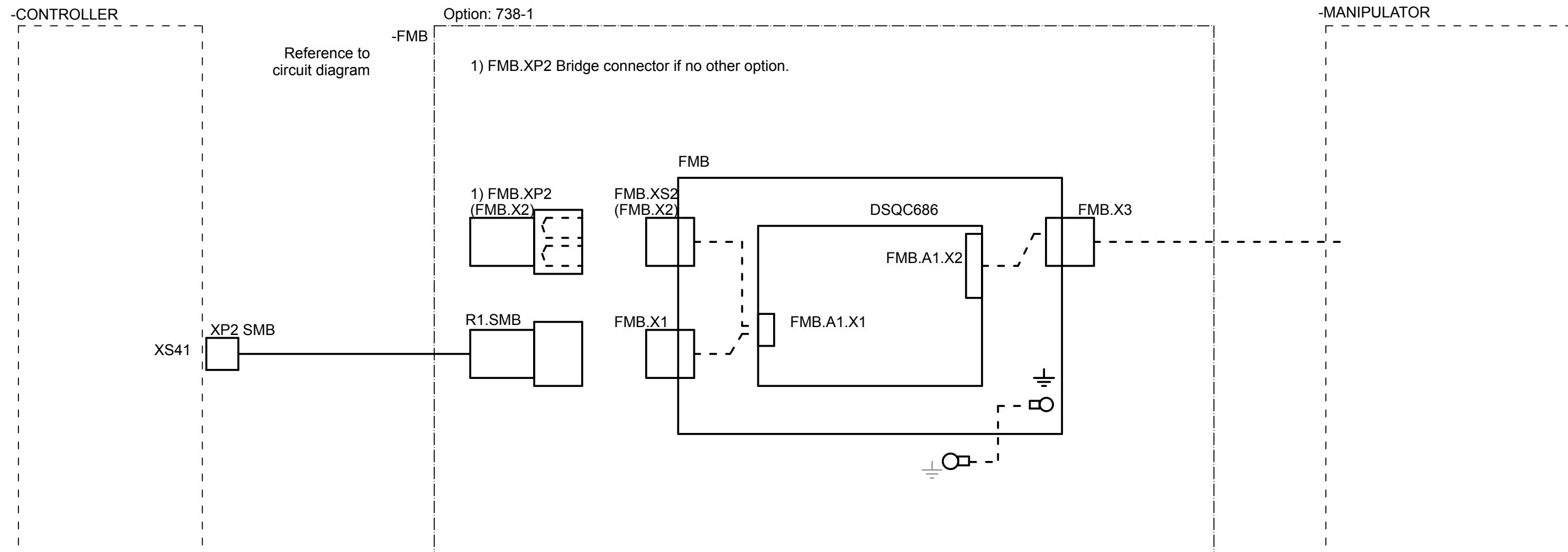
Plant: =  
Location: +  
Sublocation: +

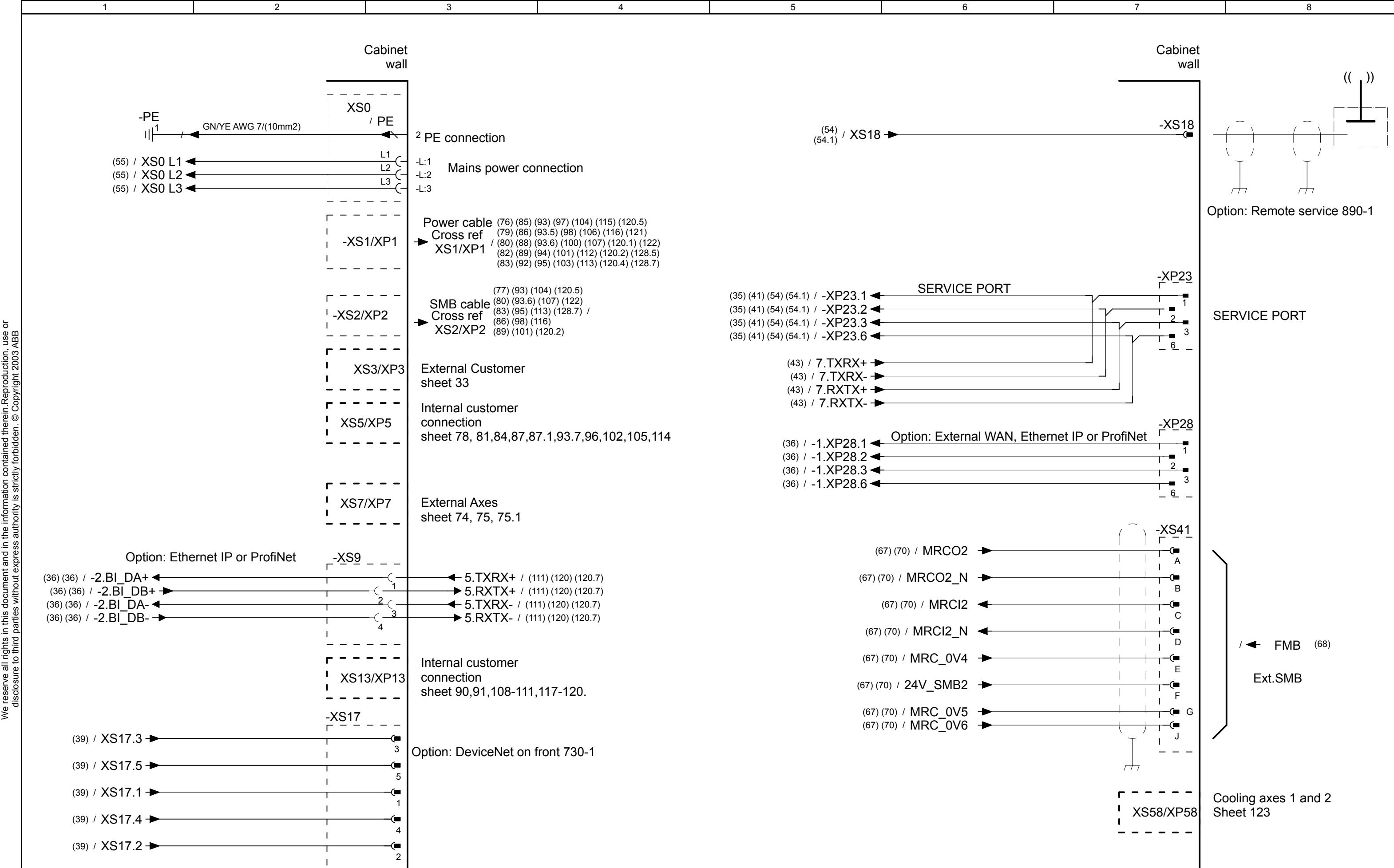
Document no.

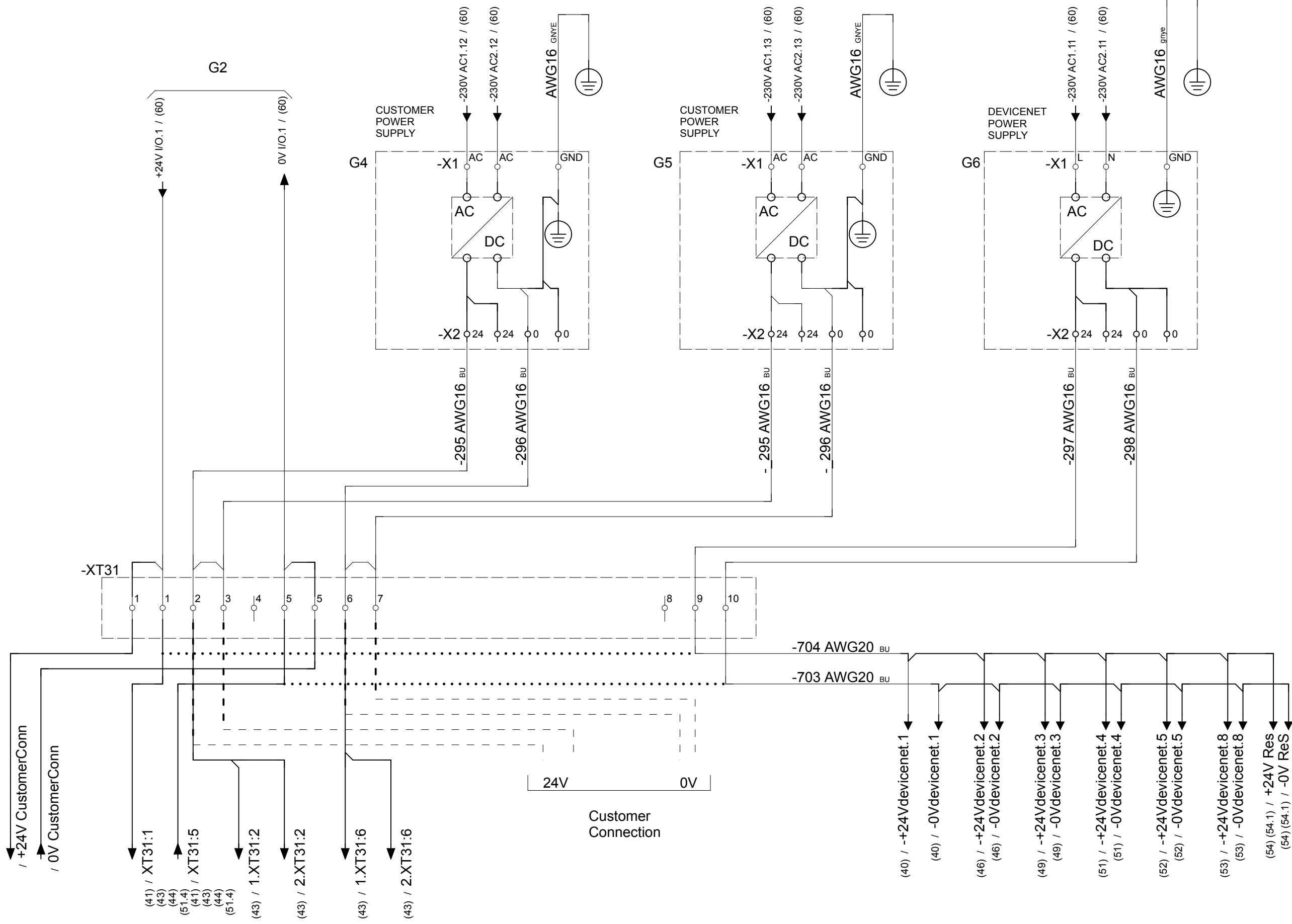
Rev. Ind Page 21

3HAC024480-011

Next 22  
Total 156  
08







Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
OPT:POWER SUPPLY DSQC609 XT31, G4, G5, G6

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

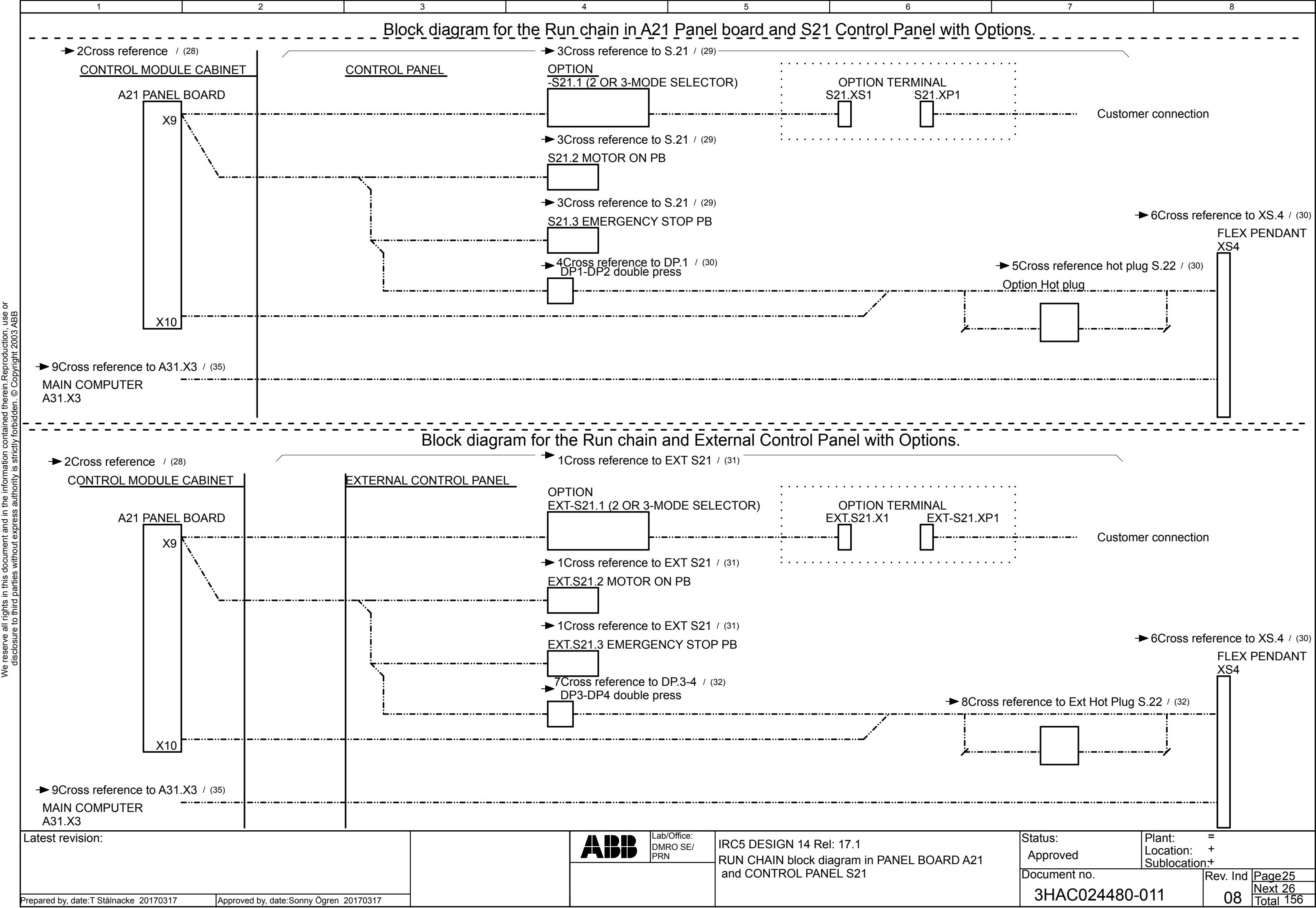
Rev. Ind

Page 24

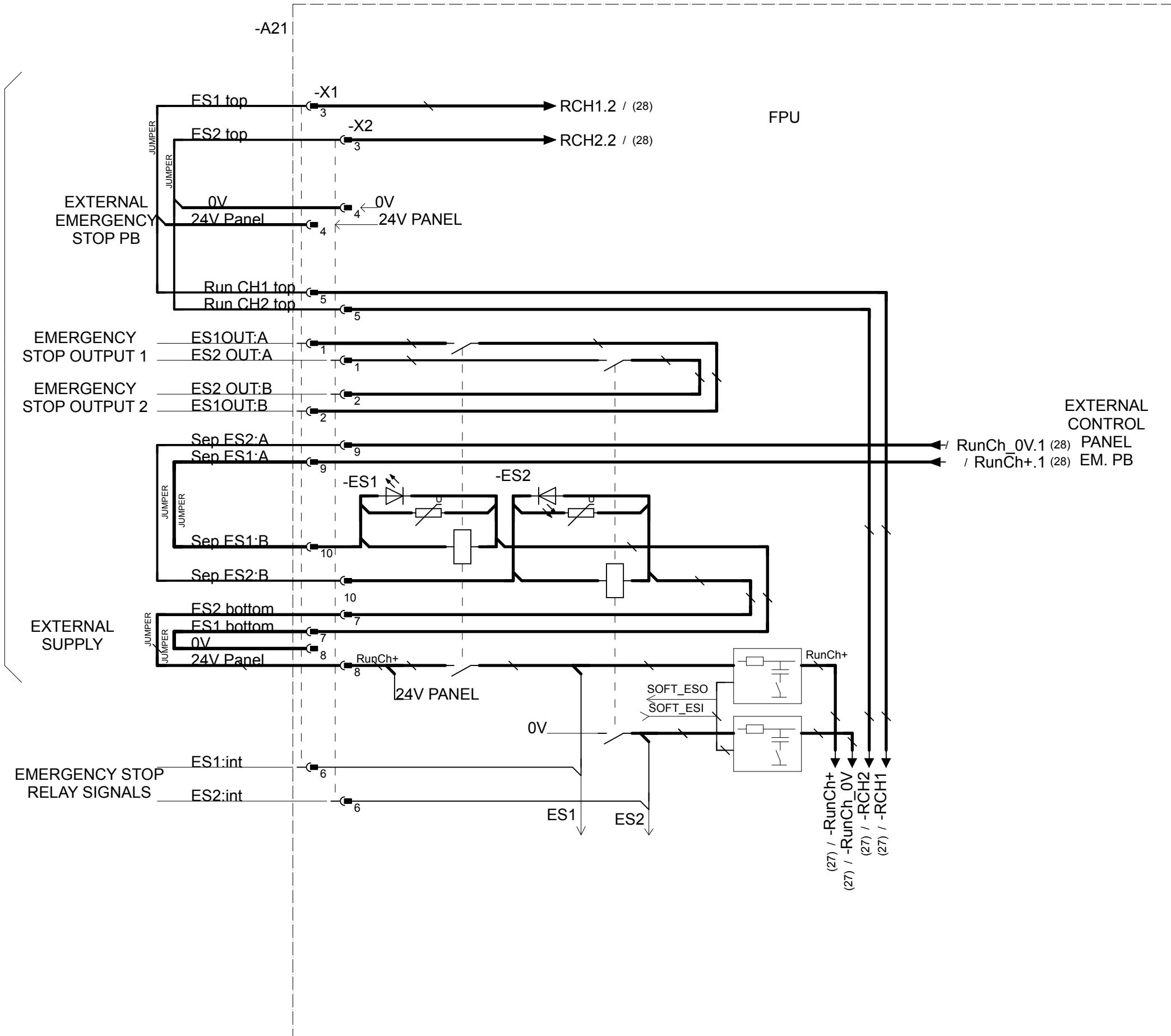
3HAC024480-011

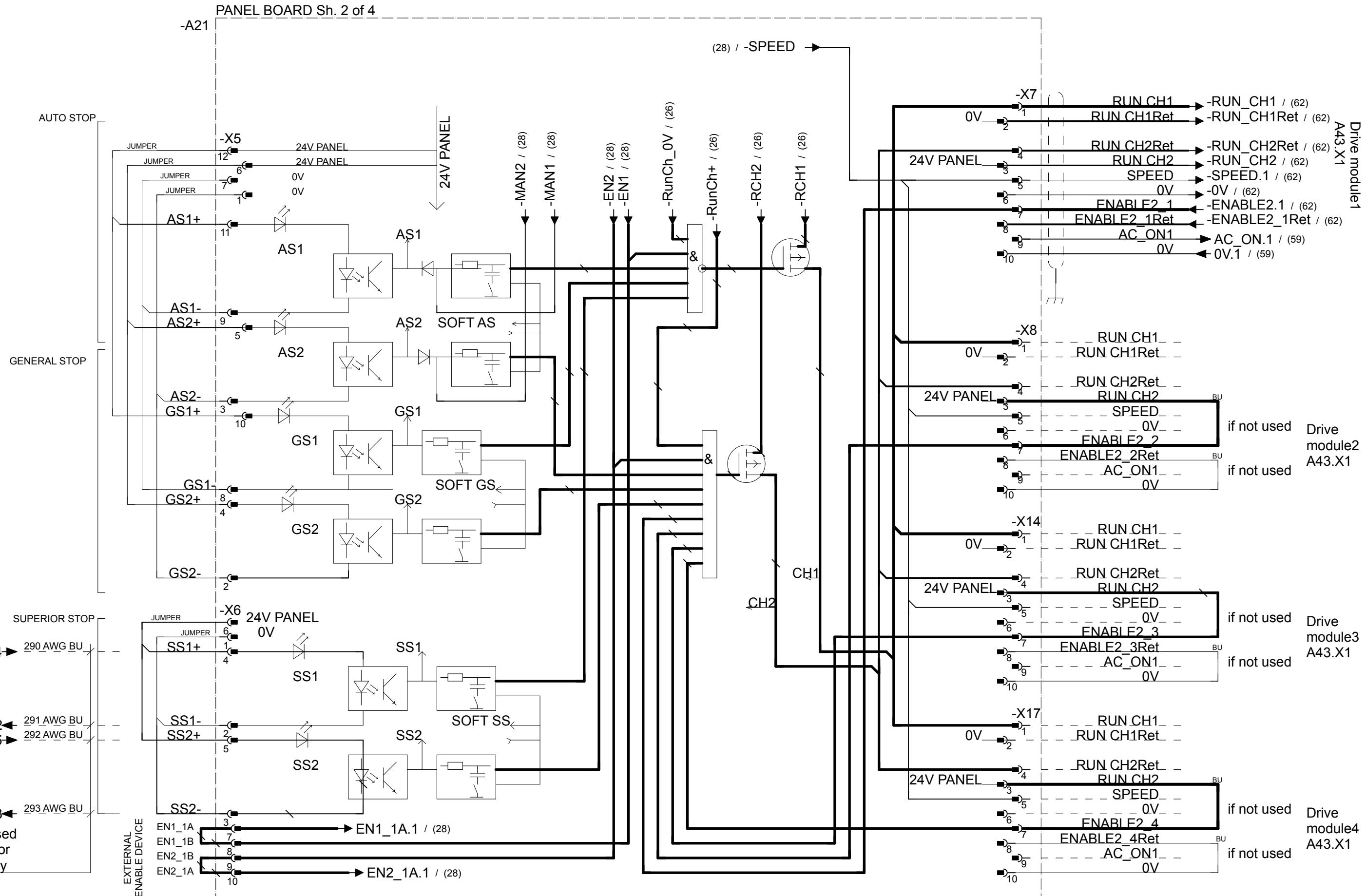
Next 25

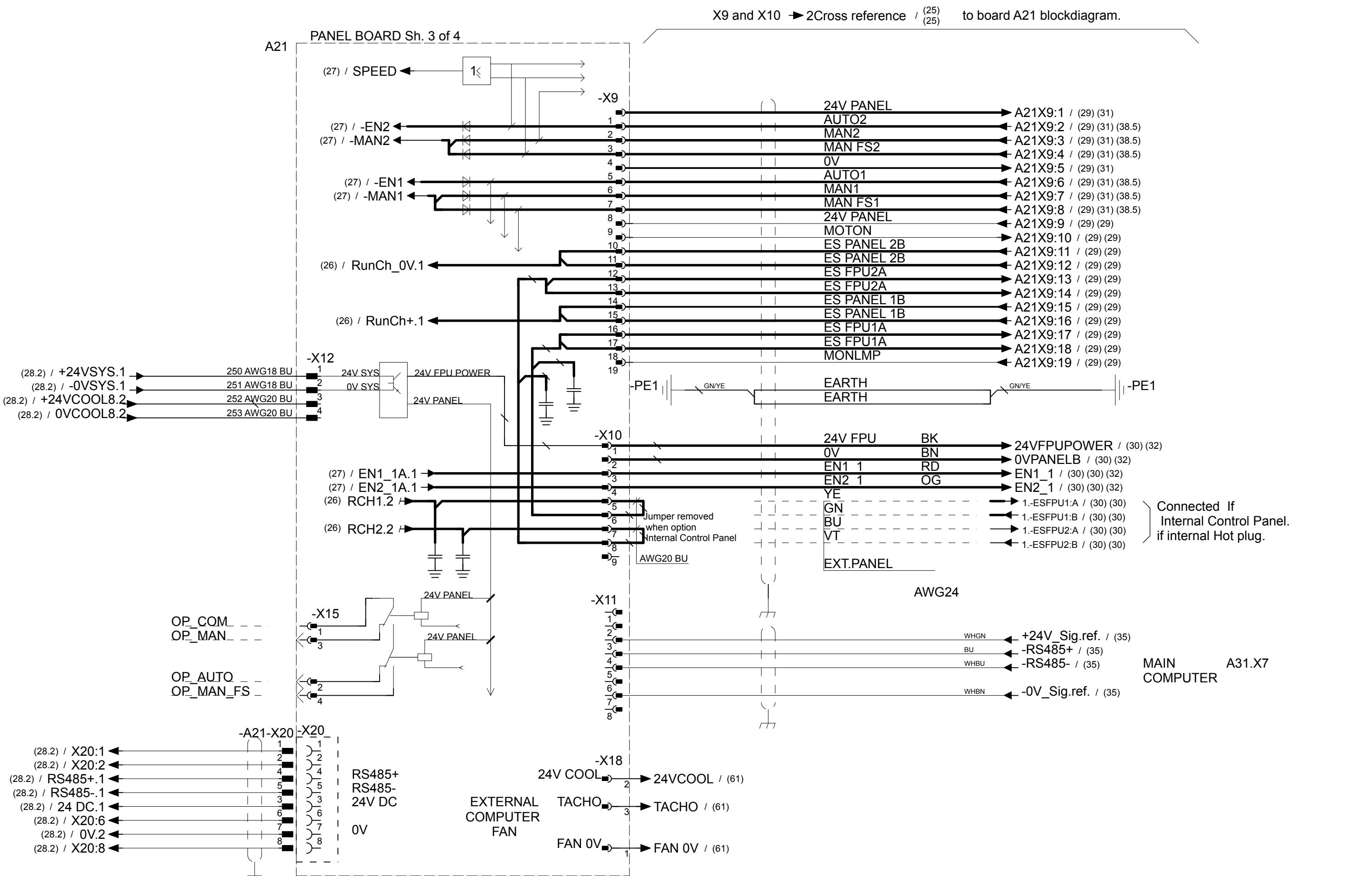
Total 156



PANEL BOARD Sh. 1 of 4







Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
RUN CHAIN and PANEL BOARD A21 Sh. 3 of 4

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

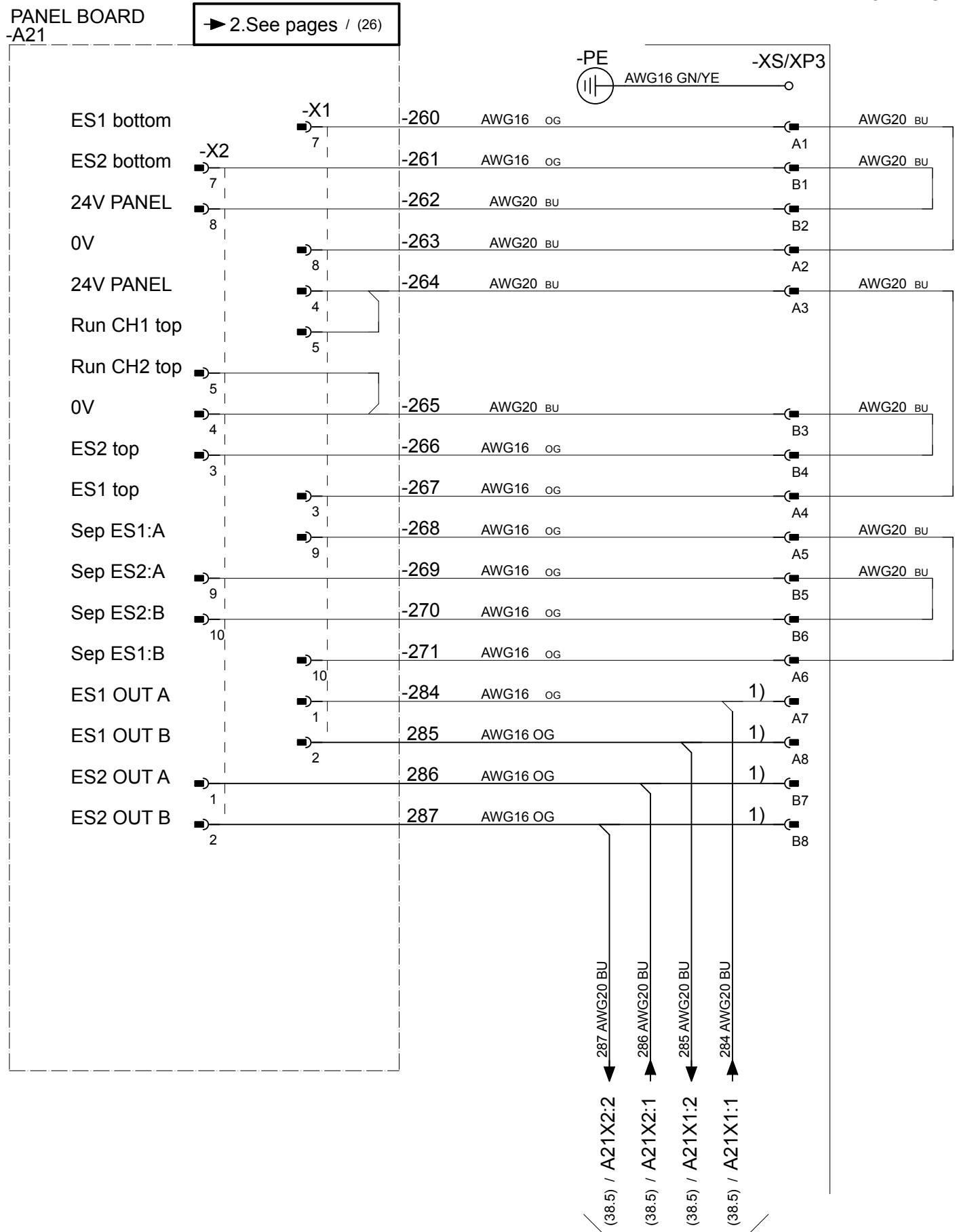
Rev. Ind Page 28

3HAC024480-011

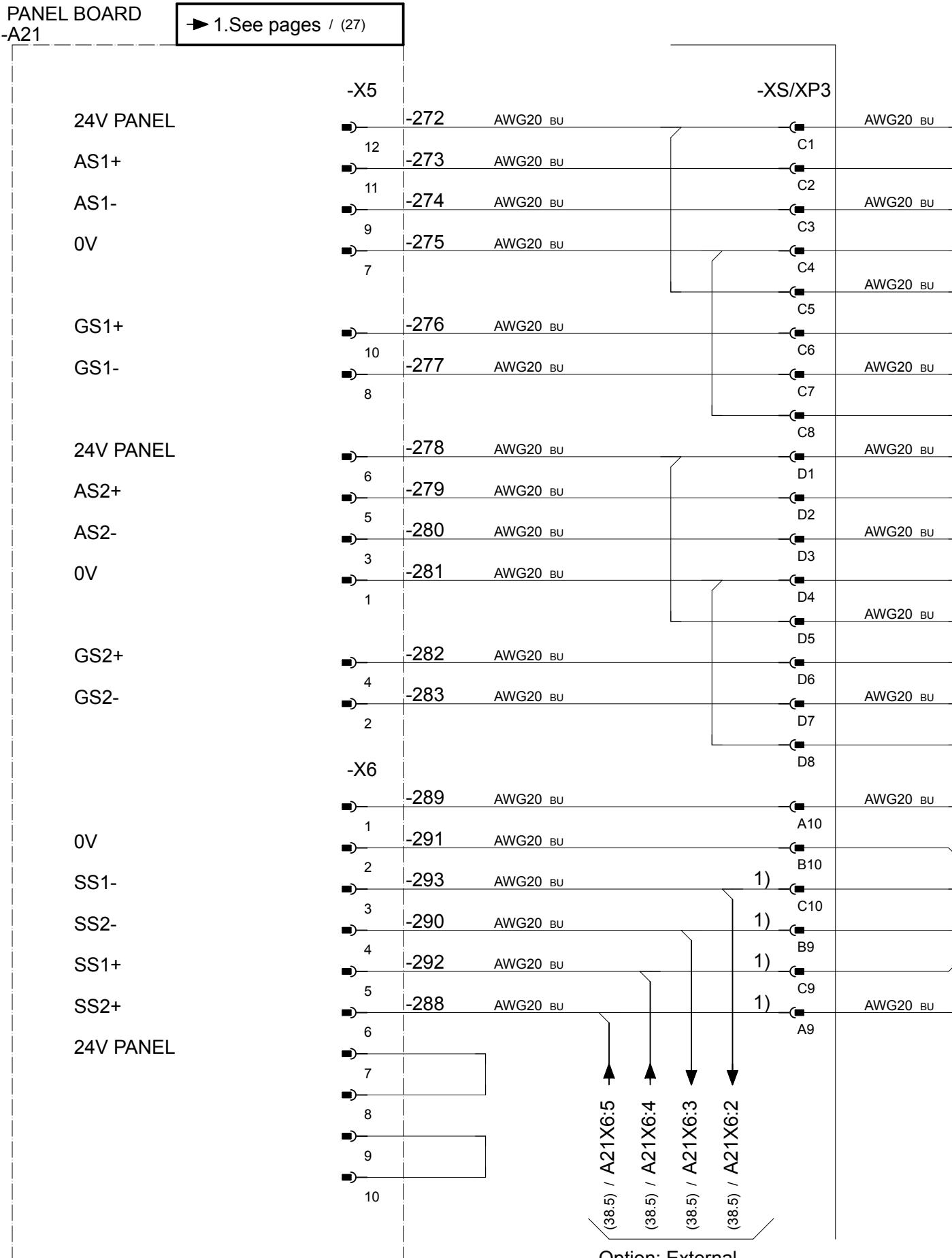
08

Total 156

PANEL BOARD Sh. 4 of 4



Option: External  
Software based Mode switch



1) NO CONNECTION IF SAFETY BOARD DSQC 1015 (A31.4)

Option: External  
Software based Mode switch

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
PANEL BOARD A21 Sh. 4 of 4  
Opt:EXT.CUSTOMER. CONNECT. SYSTEM SIGNALS

Status:  
Approved

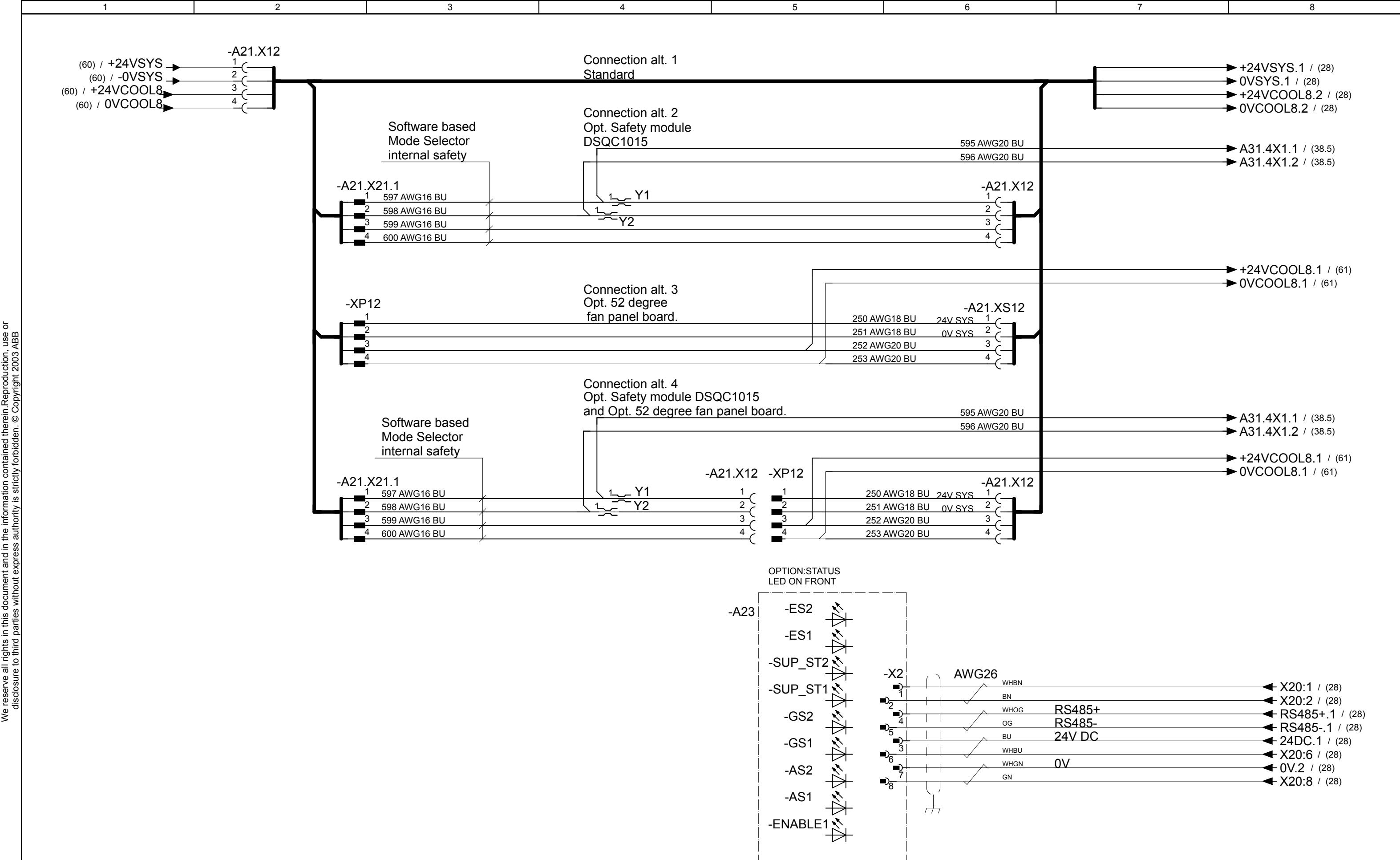
Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 28.1  
Next 28.2  
Total 156

3HAC024480-011

08



→ 3Cross reference to S.21 / (25)  
 (25)  
 (25)

CONTROL PANEL  
 -S21

(28) / A21X9:3 → -222 AWG20  
 (28) / A21X9:2 → -221 AWG20  
 (28) / A21X9:7 → -226 AWG20  
 (28) / A21X9:6 → -225 AWG20

Option:Run chain Operating, 2 Mode Selector

2-MODE SELECTOR  
 S21.1



-S21.1-XS1 → -241 EXT.AUTO1 / (29)  
 -S21.1-XP1 → -240 EXT.MAN1 / (29)  
 -S21.1-XP1 → -245 EXT.AUTO2 / (29)  
 -S21.1-XP1 → -244 EXT.MAN2 / (29)

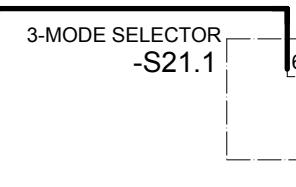
EXT.AUTO1 / (29)  
 EXT.MAN1 / (29)  
 EXT.AUTO2 / (29)  
 EXT.MAN2 / (29)

Hardware based Mode switch  
 24V COMMON\_CH1 / (38.5)  
 0V COMMON\_CH2 / (38.5)

(28) / A21X9:5 → -224 AWG20  
 (28) / A21X9:1 → -220 AWG20

Option:Run chain Operating, 3 Mode Selector

3-MODE SELECTOR  
 -S21.1



-245 EXT.AUTO2 / (29)  
 -244 EXT.MAN2 / (29)  
 -243 EXT.MAN FS2 / (31)  
 -241 EXT.AUTO1 / (29)  
 -240 EXT.MAN1 / (29)  
 -239 EXT.MAN FS1 / (31)

EXT.AUTO2 / (29)  
 EXT.MAN2 / (29)  
 EXT.MAN FS2 / (31)  
 EXT.AUTO1 / (29)  
 EXT.MAN1 / (29)  
 EXT.MAN FS1 / (31)

Hardware based Mode switch  
 24V COMMON\_CH1 / (38.5)  
 0V COMMON\_CH2 / (38.5)

(28) / A21X9:8 → -227AWG20  
 (28) / A21X9:4 → -223AWG20  
 -XS/XP37  
 (28) / A21X9:9 → -588 AWG20 BU 1  
 (28) / A21X9:10 → -589 AWG20 BU 2  
 (28) / A21X9:19 → -590 AWG20 BU 11  
 (28) / A21X9:17 → -586 AWG20 OG 9  
 (28) / A21X9:18 → -587 AWG20 OG 10  
 (28) / A21X9:13 → -582 AWG20 OG 5  
 (28) / A21X9:14 → -583 AWG20 OG 6  
 (28) / A21X9:11 → -580 AWG20 OG 3  
 (28) / A21X9:12 → -581 AWG20 OG 4  
 (28) / A21X9:15 → -584 AWG20 OG 7  
 (28) / A21X9:16 → -585 AWG20 OG 8  
 -237 AWG20 OG ES panel 1:A  
 -238 AWG20 OG ES panel 1:A  
 -233 AWG20 OG ES panel 2:A  
 -234 AWG20 OG ES panel 2:A  
 -231 AWG20 OG ES panel 2:B  
 -232 AWG20 OG ES panel 2:B  
 -235 AWG20 OG ES panel 1:B  
 -236 AWG20 OG ES panel 1:B

Software based  
 Mode Selector  
 internal safety

EMERGENCY PB  
 S21.3



XP37  
 Connected jumper when no  
 Emergency Stop on Panel.

(28) / A21X9:17 → -237 AWG20 ES panel 1:A  
 (28) / A21X9:18 → -238 AWG20 ES panel 1:A  
 (28) / A21X9:13 → -233 AWG20 ES panel 2:A  
 (28) / A21X9:14 → -234 AWG20 ES panel 2:A  
 (28) / A21X9:11 → -231 AWG20 ES panel 2:B  
 (28) / A21X9:12 → -232 AWG20 ES panel 2:B  
 (28) / A21X9:15 → -235 AWG20 ES panel 1:B  
 (28) / A21X9:16 → -236 AWG20 ES panel 1:B

MOTOR ON PB  
 S21.2

-229 AWG20

-230 AWG20

-228 AWG20

X2 X1

-PE1

(28) / A21X9:10 →

(28) / A21X9:19 ←

(28) / A21X9:9 ←

-PE1

Latest revision:



Lab/Office:  
 DMRO SE/  
 PRN

IRC5 DESIGN 14 Rel: 17.1  
 RUN CHAIN S21, EM.STOP, 2 & 3 MODE SELECTOR,  
 SOFTWARE MODE SWITCH

Status:  
 Approved

Plant: =  
 Location: +  
 Sublocation: +

Document no.

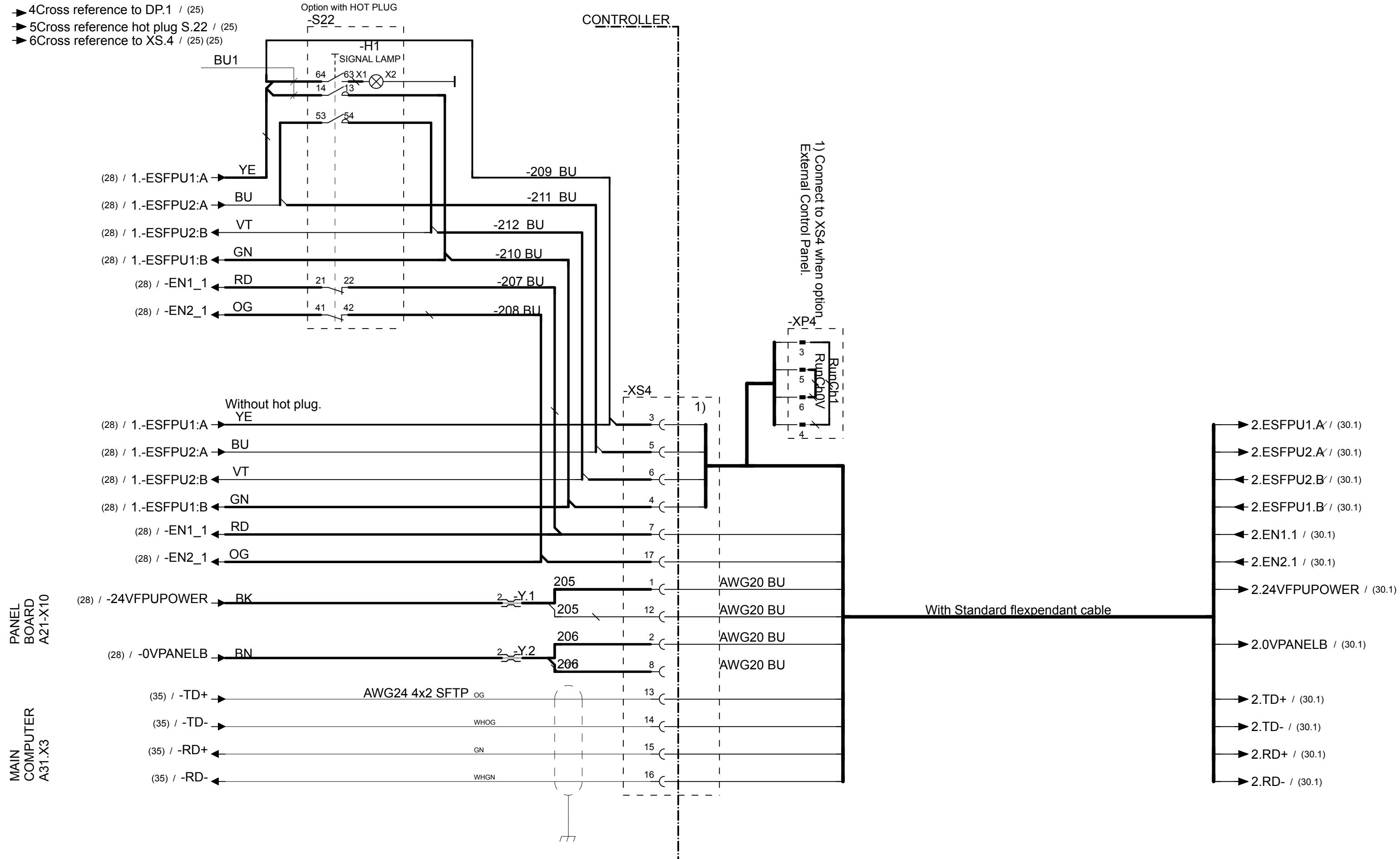
Rev. Ind

Page 29

3HAC024480-011

Next 30

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
FPU, FLEXPENDANT and option HOT PLUG

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

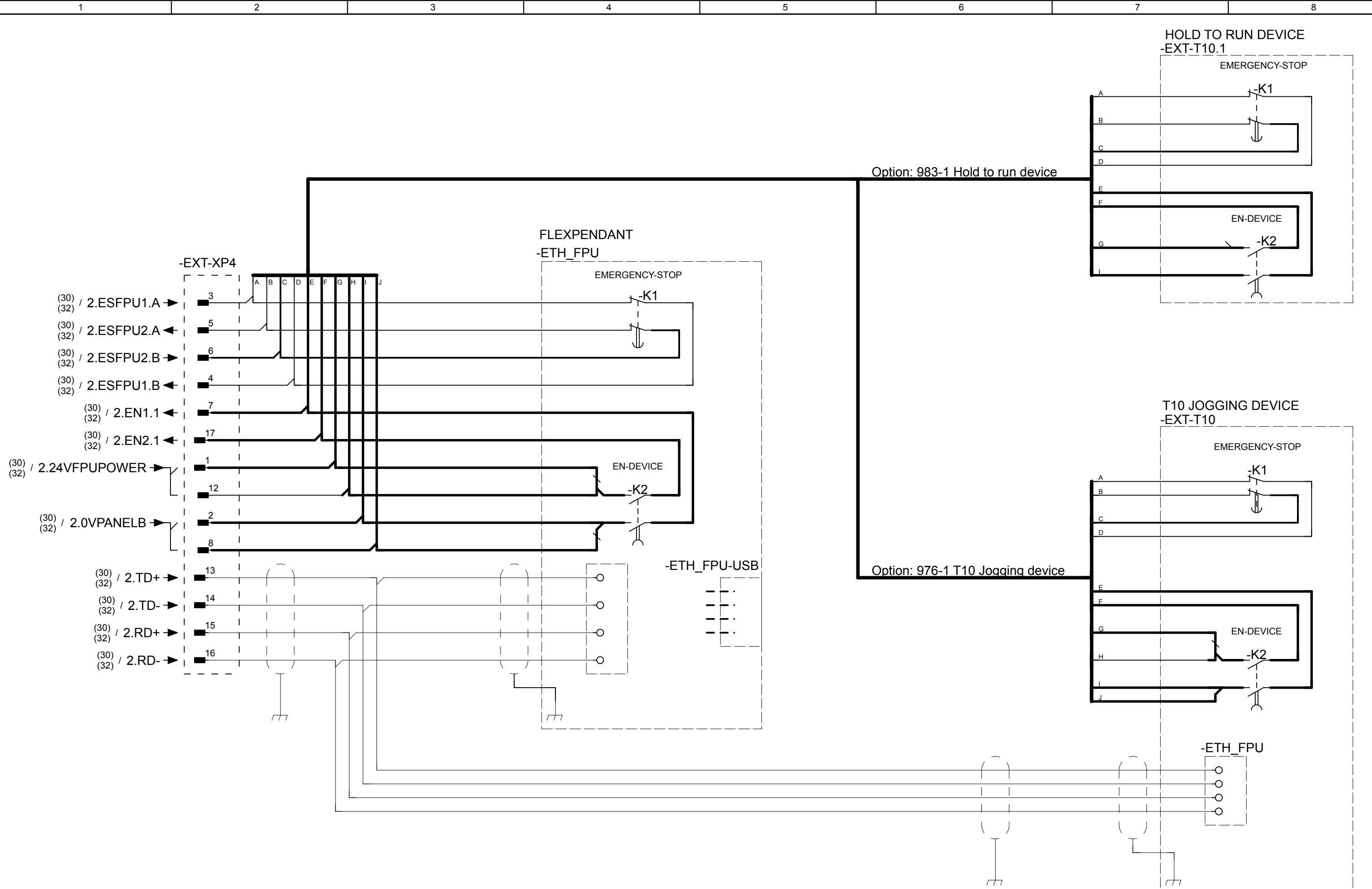
Rev. Ind

Page 30

3HAC024480-011

Next 30.1

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
FPU, FLEXPENDANT and Opt. HOLD TO RUN DEVICE  
T10 JOGGING DEVICE

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

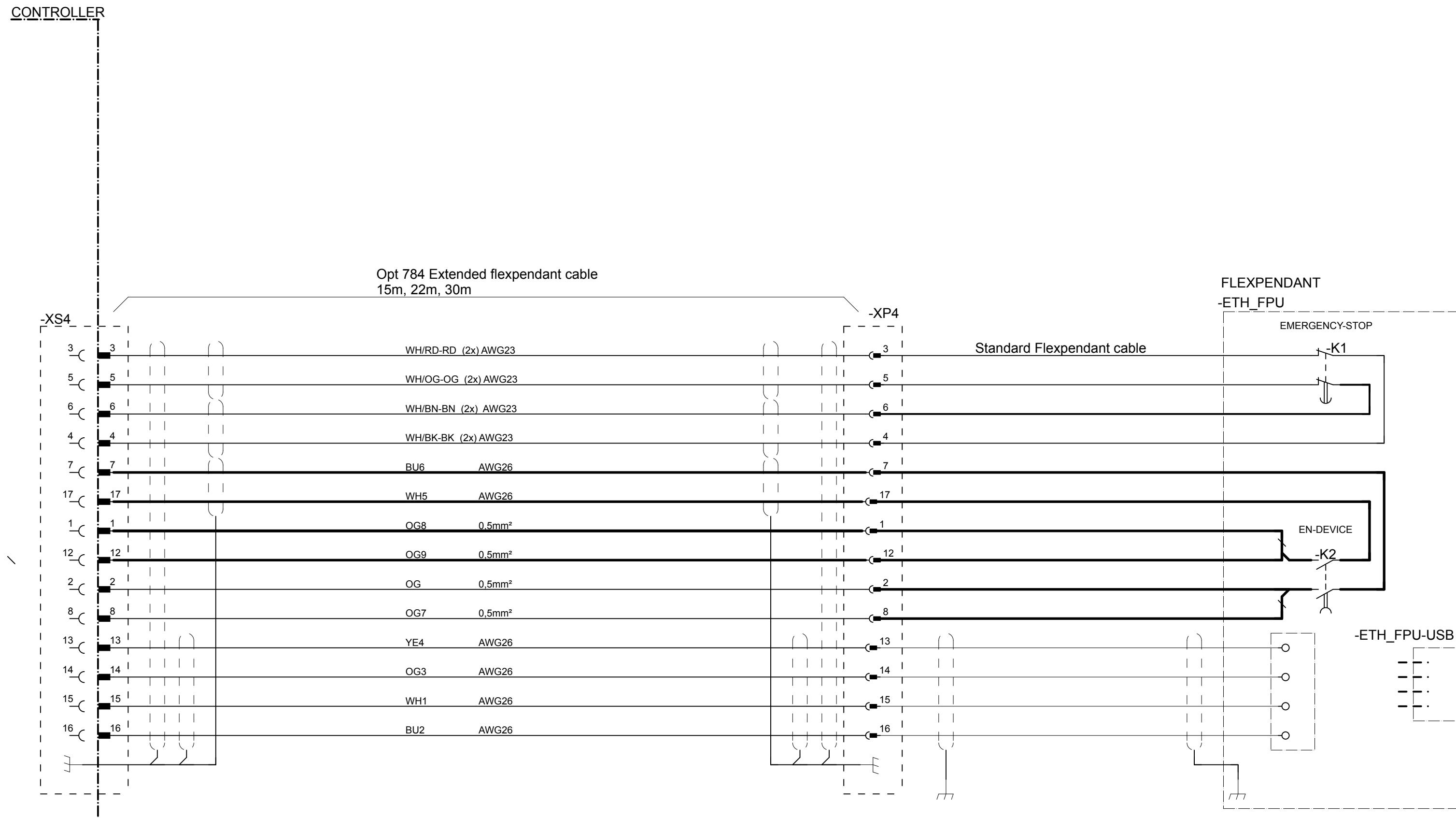
Rev. Ind

Page 30.1

3HAC024480-011

Next 30.2

Total 156



Latest revision:

Lab/Office:  
DMRO SE/  
PRNIRC5 DESIGN 14 Rel: 17.1  
FPU, Extended FLEXPENDANT cable 15 - 30 mStatus:  
ApprovedPlant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 30.2

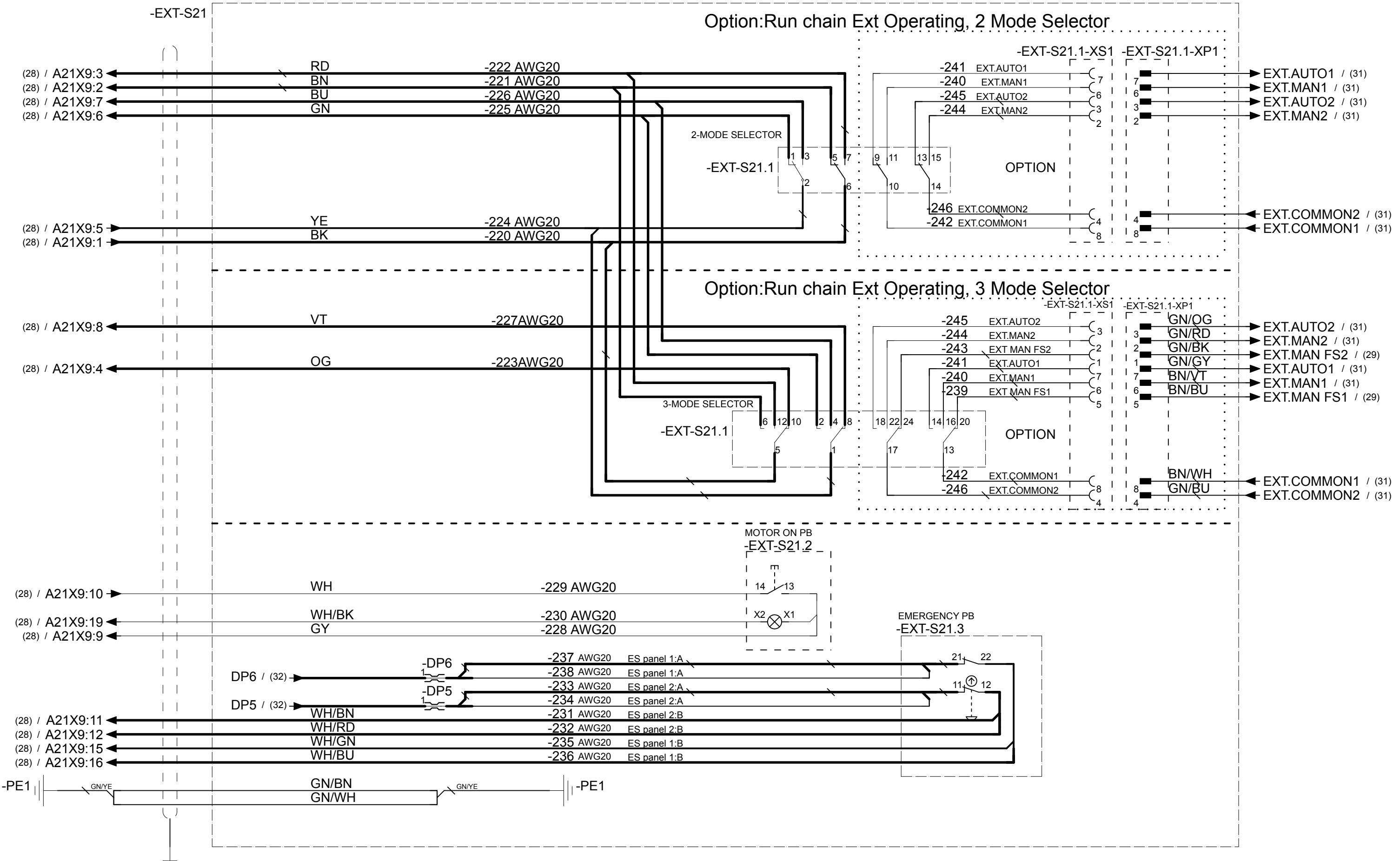
3HAC024480-011

08

Total 156

► 1 Cross reference to EXT S21 / (25) (25) (25)

## EXT.CONTROL PANEL Sh.1 of 2



► 8 Cross reference to Ext Hot Plug S.22 / (25)

Option: Hot plug from Rel.11.1

► 7 Cross reference to DP.3-4 / (25)

### EXT.CONTROL PANEL Sh.2 of 2

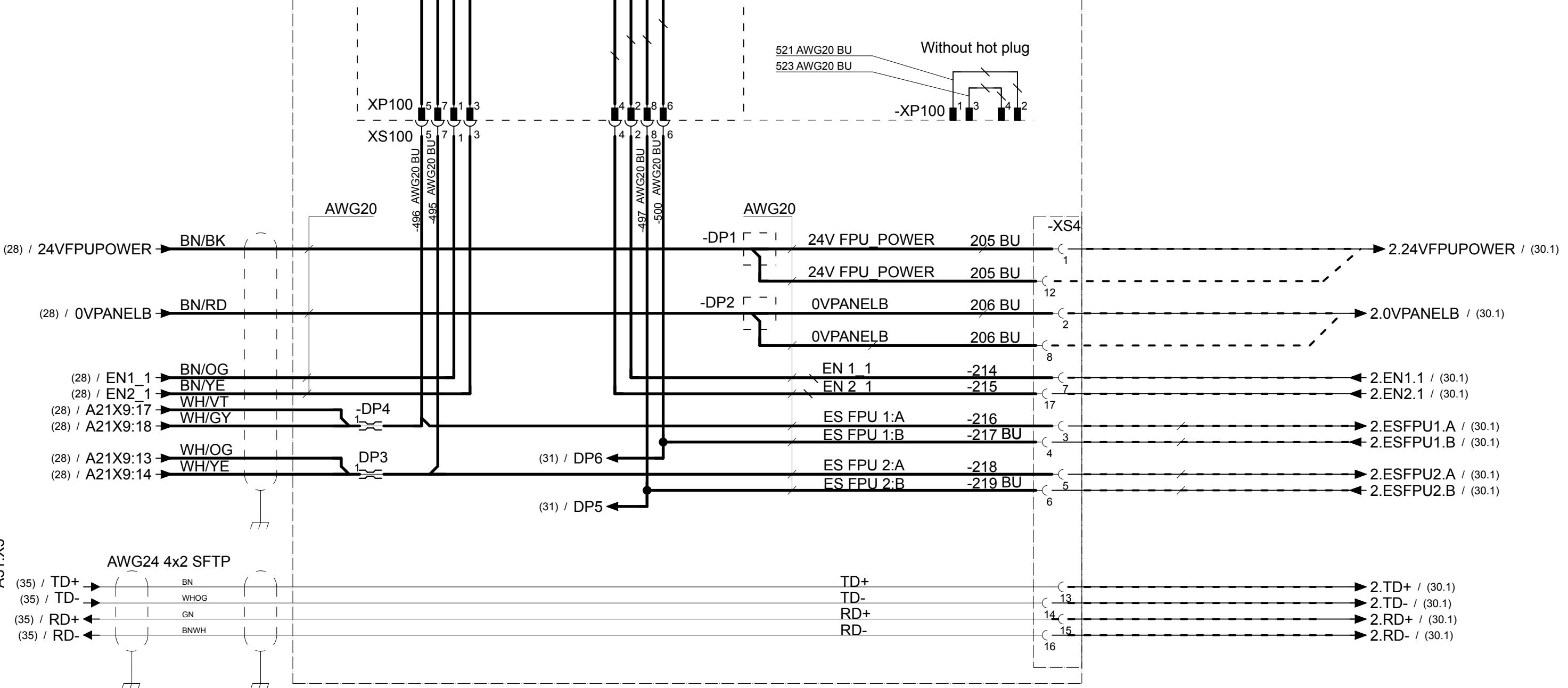
-EXT-S21

#### Option HOT PLUG

-EXT-S22



Without hot plug  
521 AWG20 BU  
523 AWG20 BU



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
RUN CHAIN EXT A21 OPERATING WITH  
OPT: HOT PLUG rel 11.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

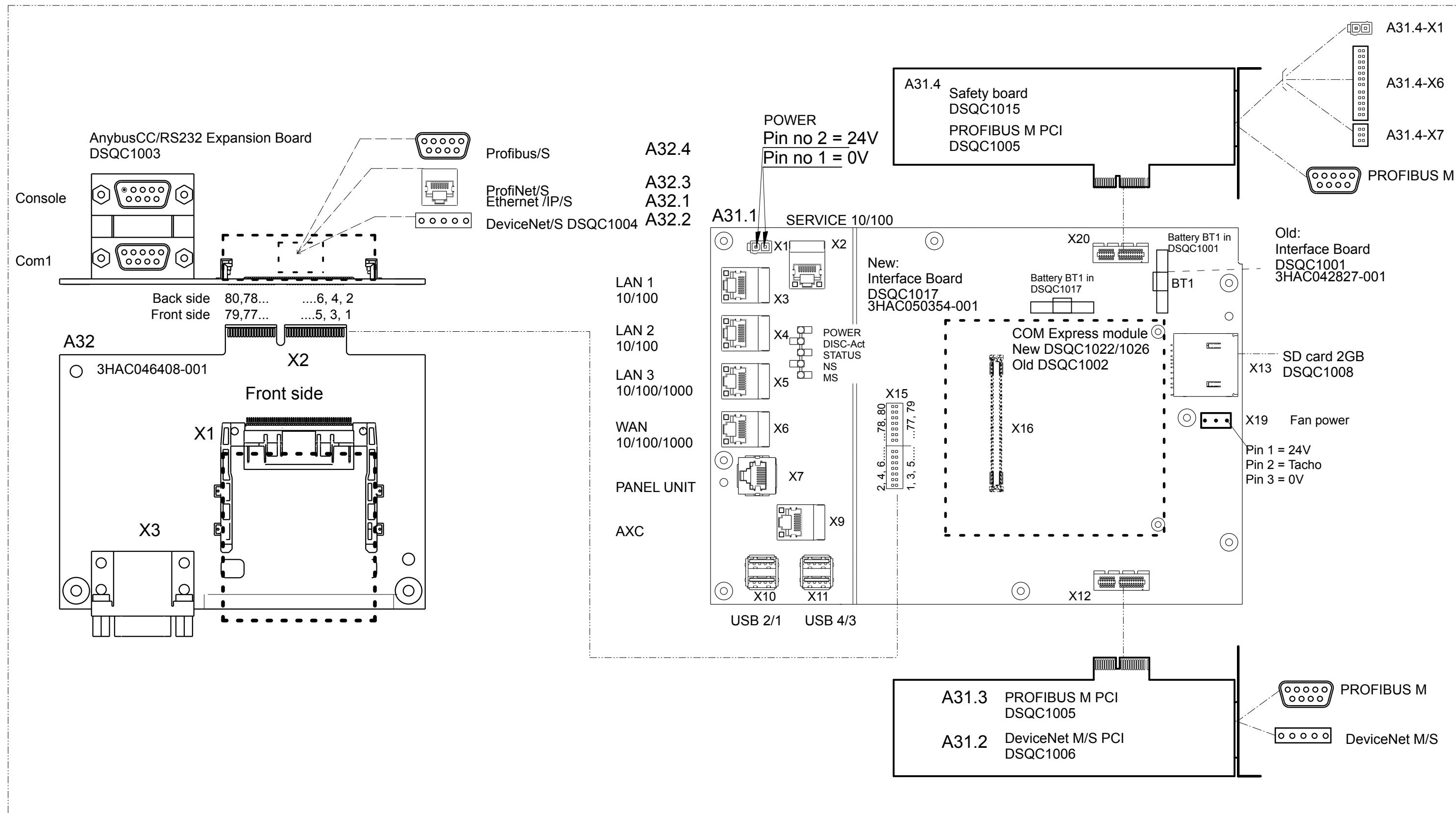
Rev. Ind

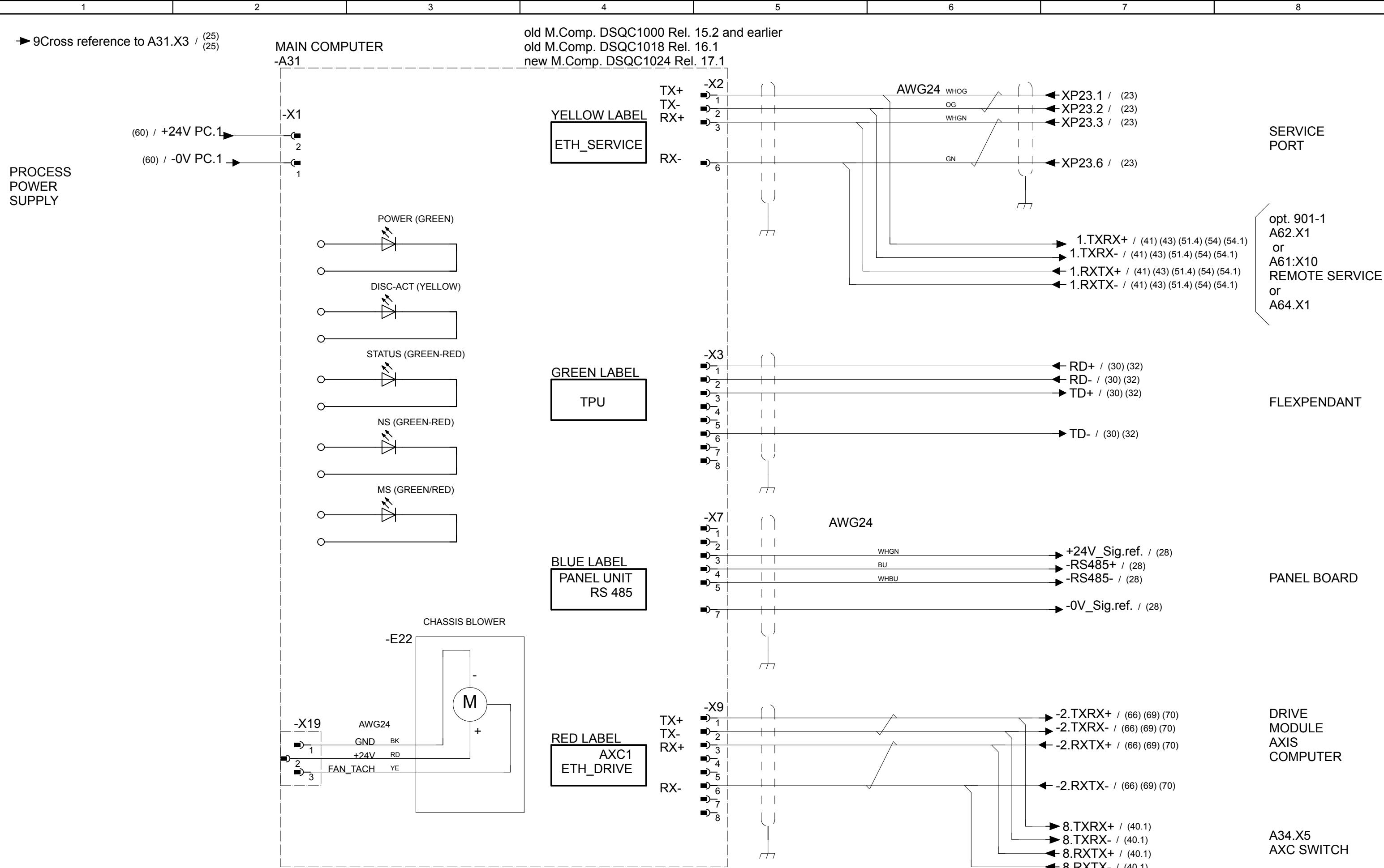
Page 32

3HAC024480-011

08

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
MAIN COMPUTER A31 DSQC1000/1018/1024

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

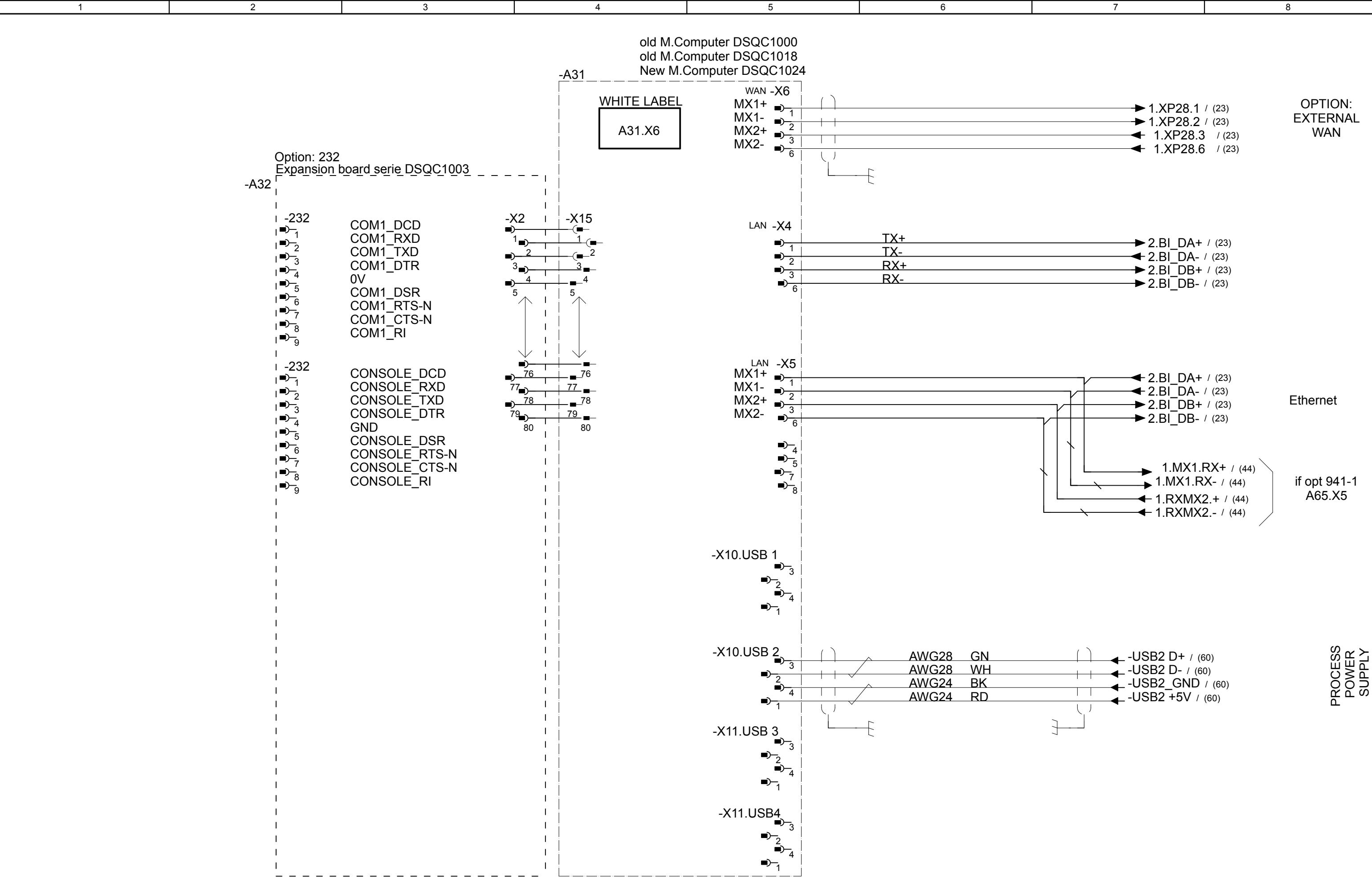
Document no.

Rev. Ind Page 35

3HAC024480-011

Next 36

Total 156



Latest revision:



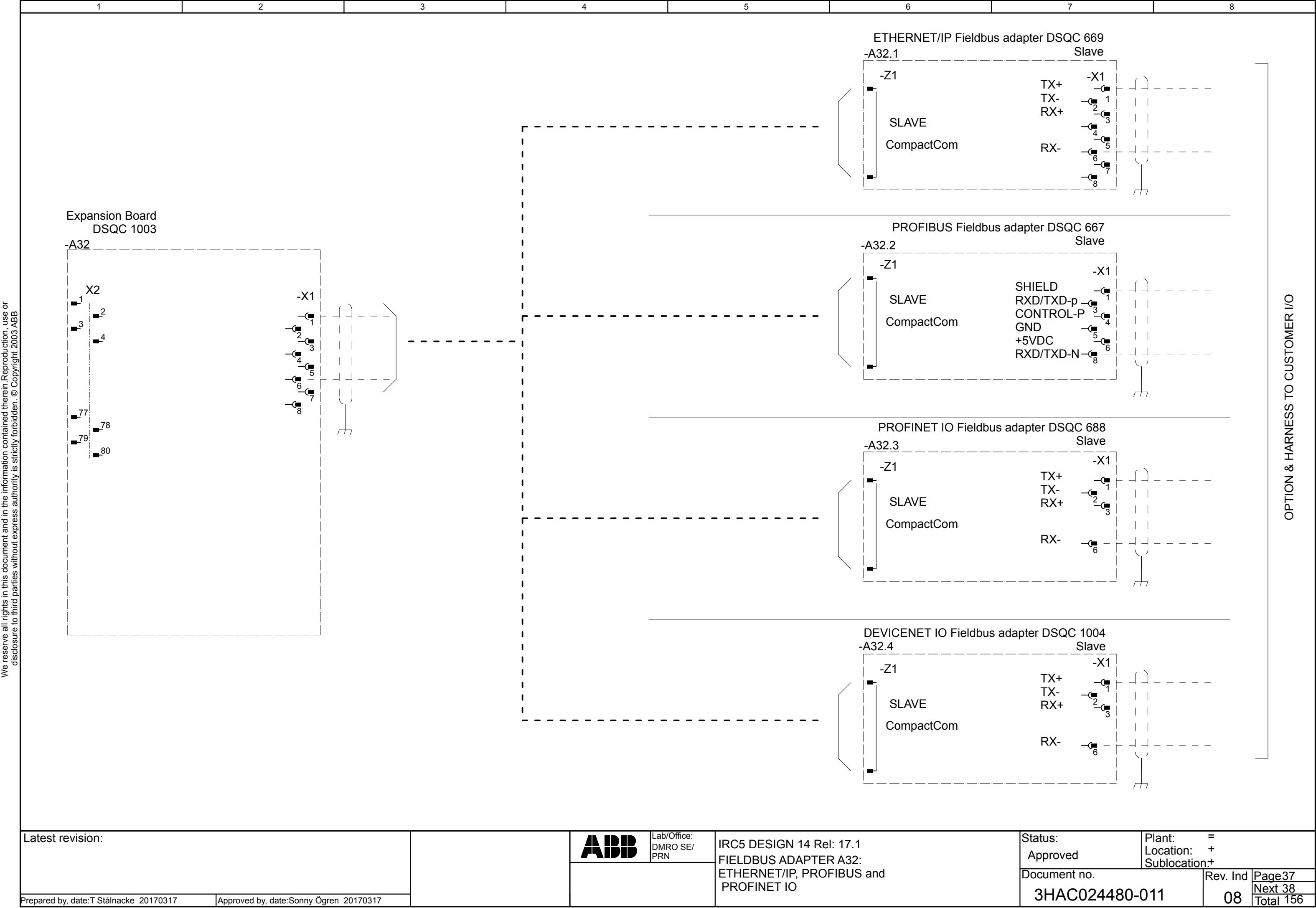
Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
MAIN COMPUTER A31 DSQC1000/1018/1024 ;  
A32 DSQC1003

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.	Rev. Ind	Page 36
3HAC024480-011		Next 37
		Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
FIELDBUS ADAPTER A32:  
ETHERNET/IP, PROFIBUS and  
PROFINET IO

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

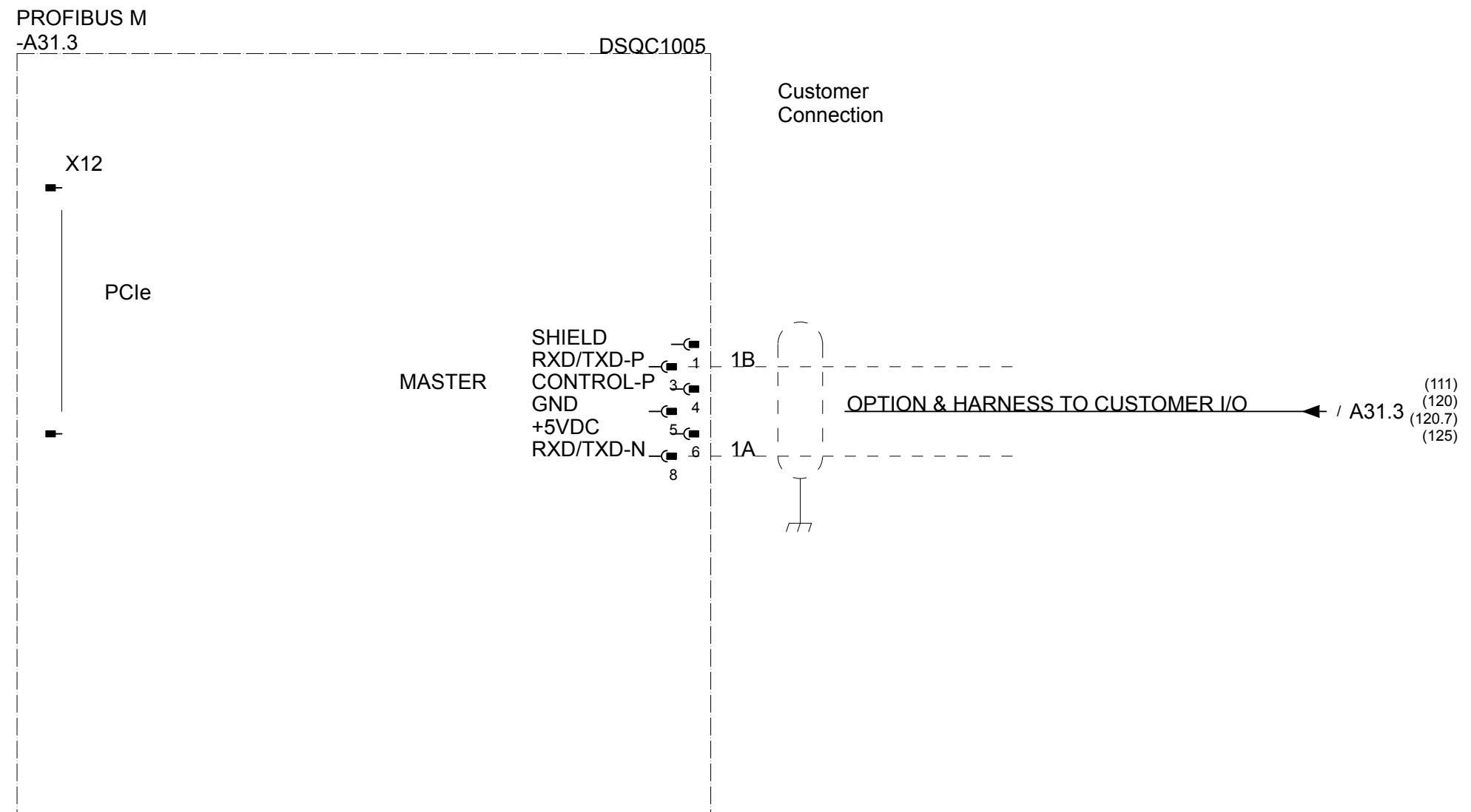
Rev. Ind

Page 37

3HAC024480-011

Next 38

Total 156



Options: With harness connection

996-1 Safety Module

and

735-7 Keyless Mode Selector

and

731-1 Safety internal connection.

Options: With harness connection

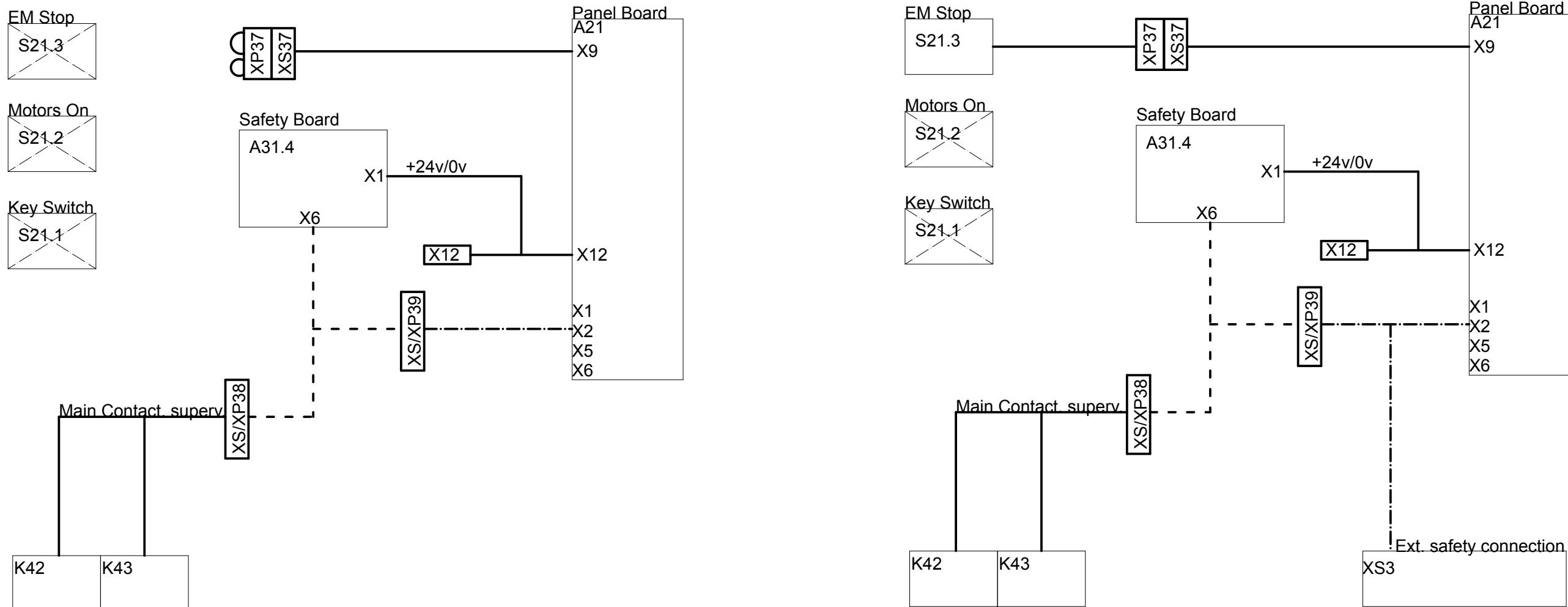
996-1 Safety Module

and

735-7 Keyless Mode Selector

and

731-2 Safety external connection.



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SAFETY BOARD A31.4 SOFTWARE SWITCH

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

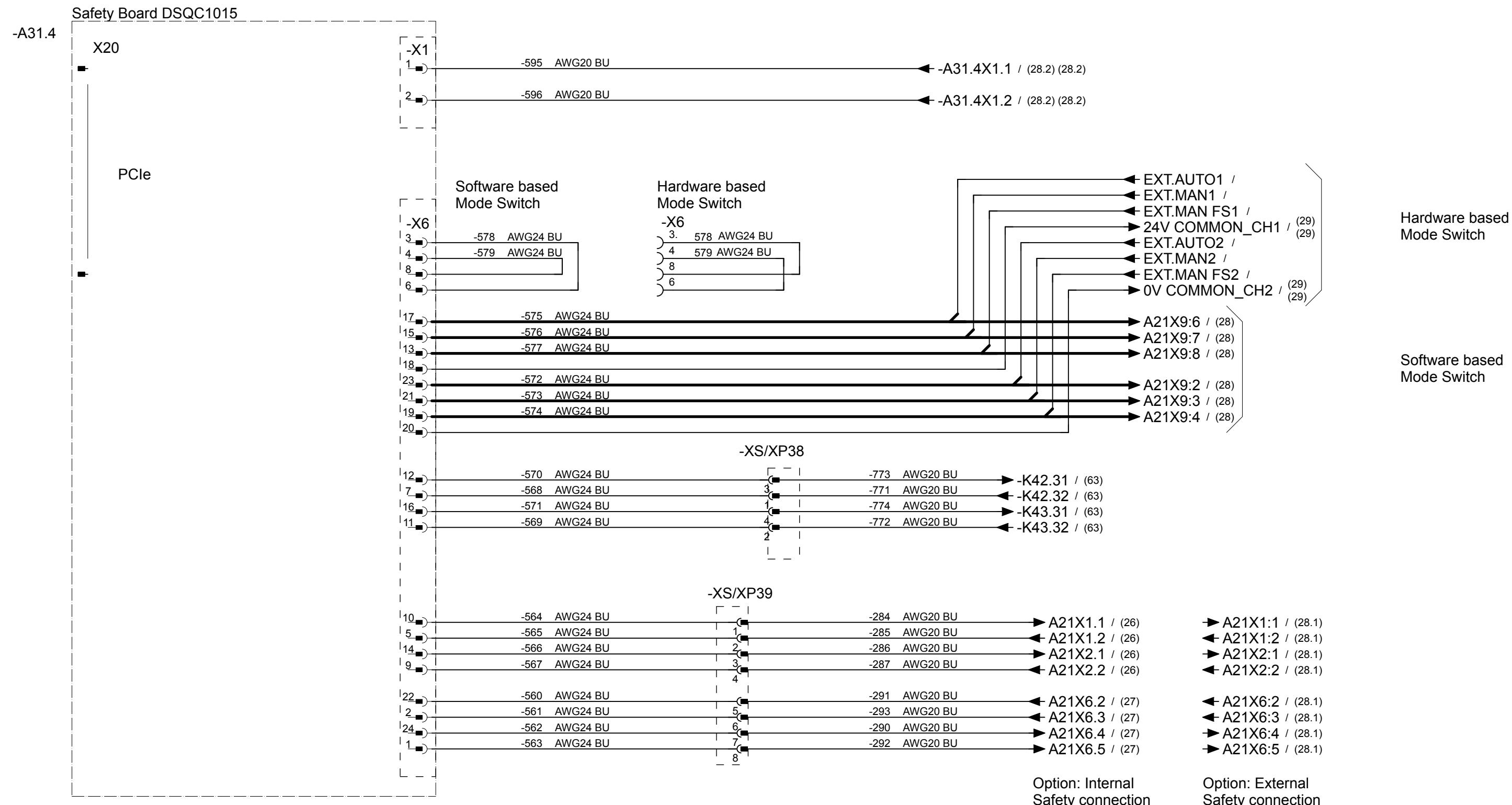
Rev. Ind

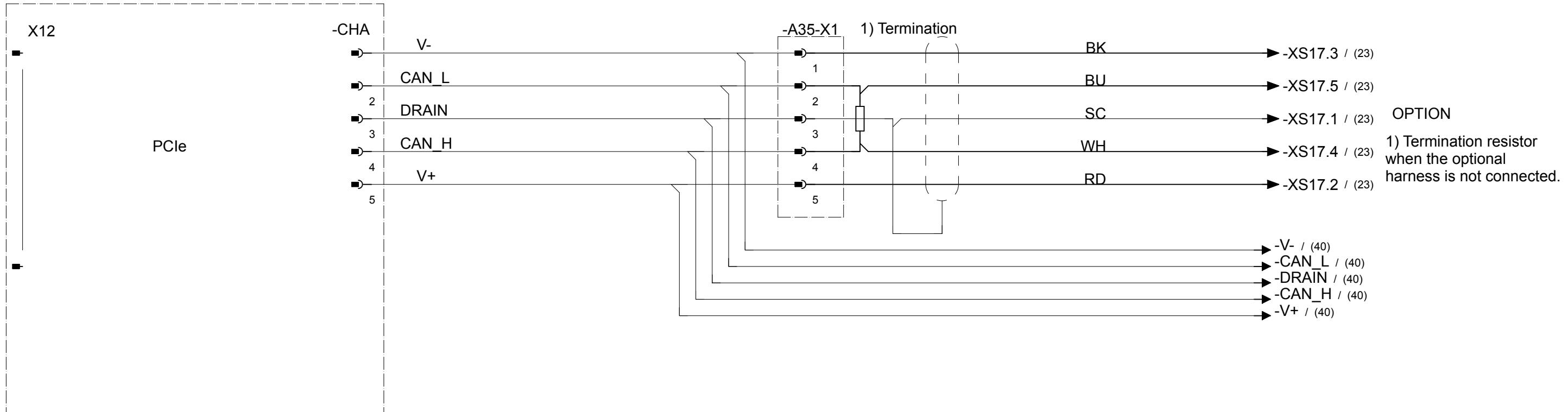
Page 38.4

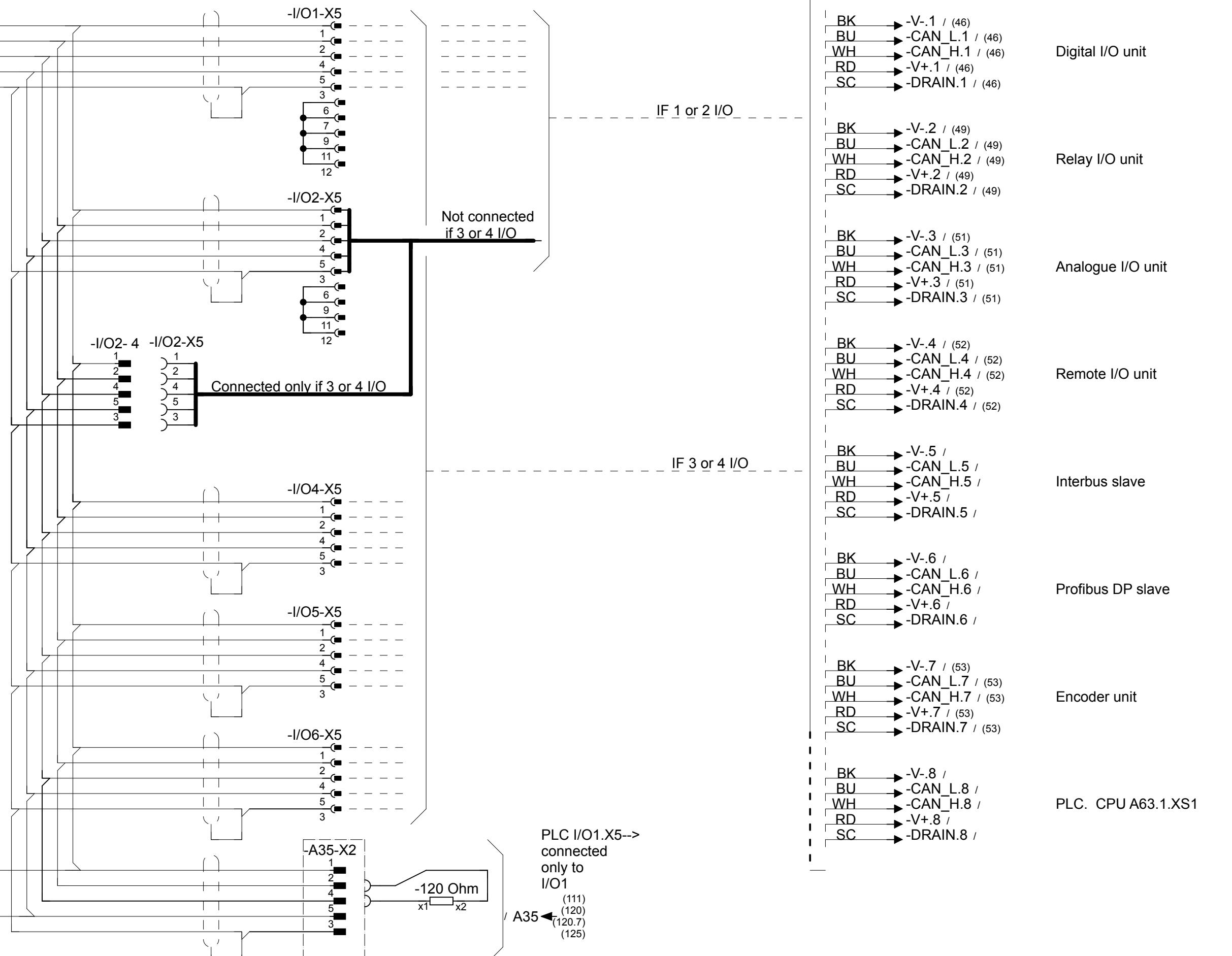
3HAC024480-011

Next 38.5

Total 156







Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
DEVICENET ADAPTER

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

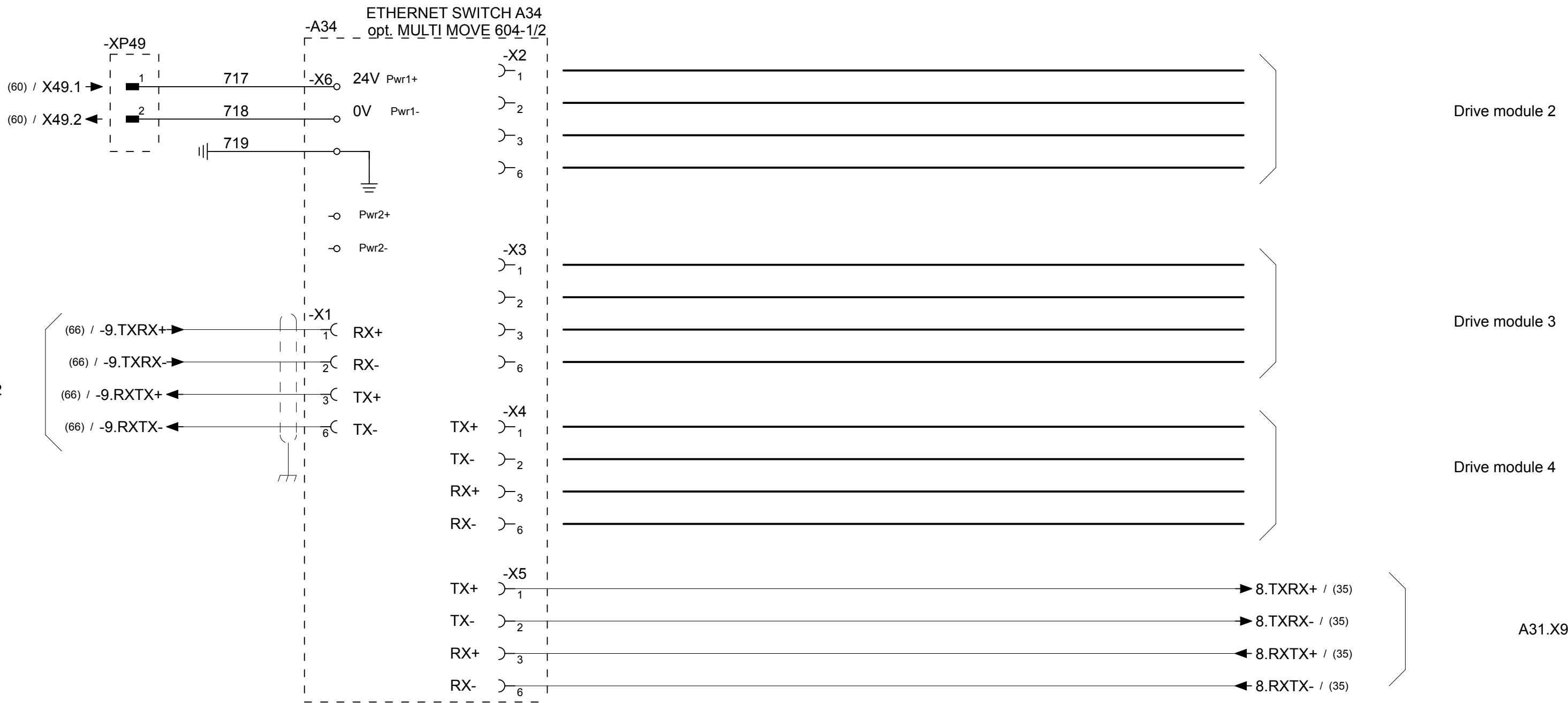
Document no.

Rev. Ind Page 40

3HAC024480-011

08

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
ETHERNET SWITCH A34, option MULTI MOVE  
604-1/2

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

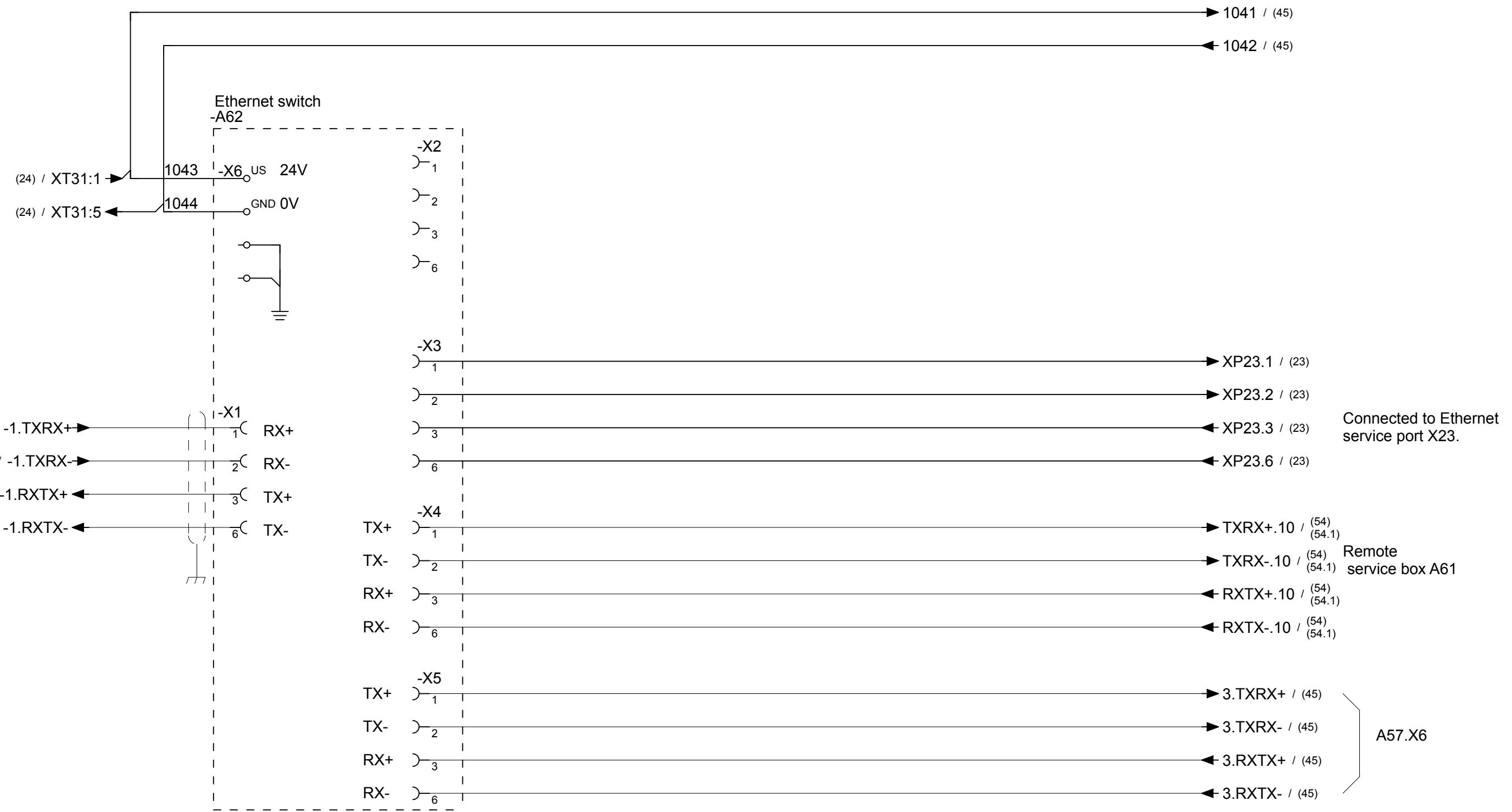
Rev. Ind Page 40.1

3HAC024480-011

08

Total 156

if opt. 901-1



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
ETHERNET SWITCH A62

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

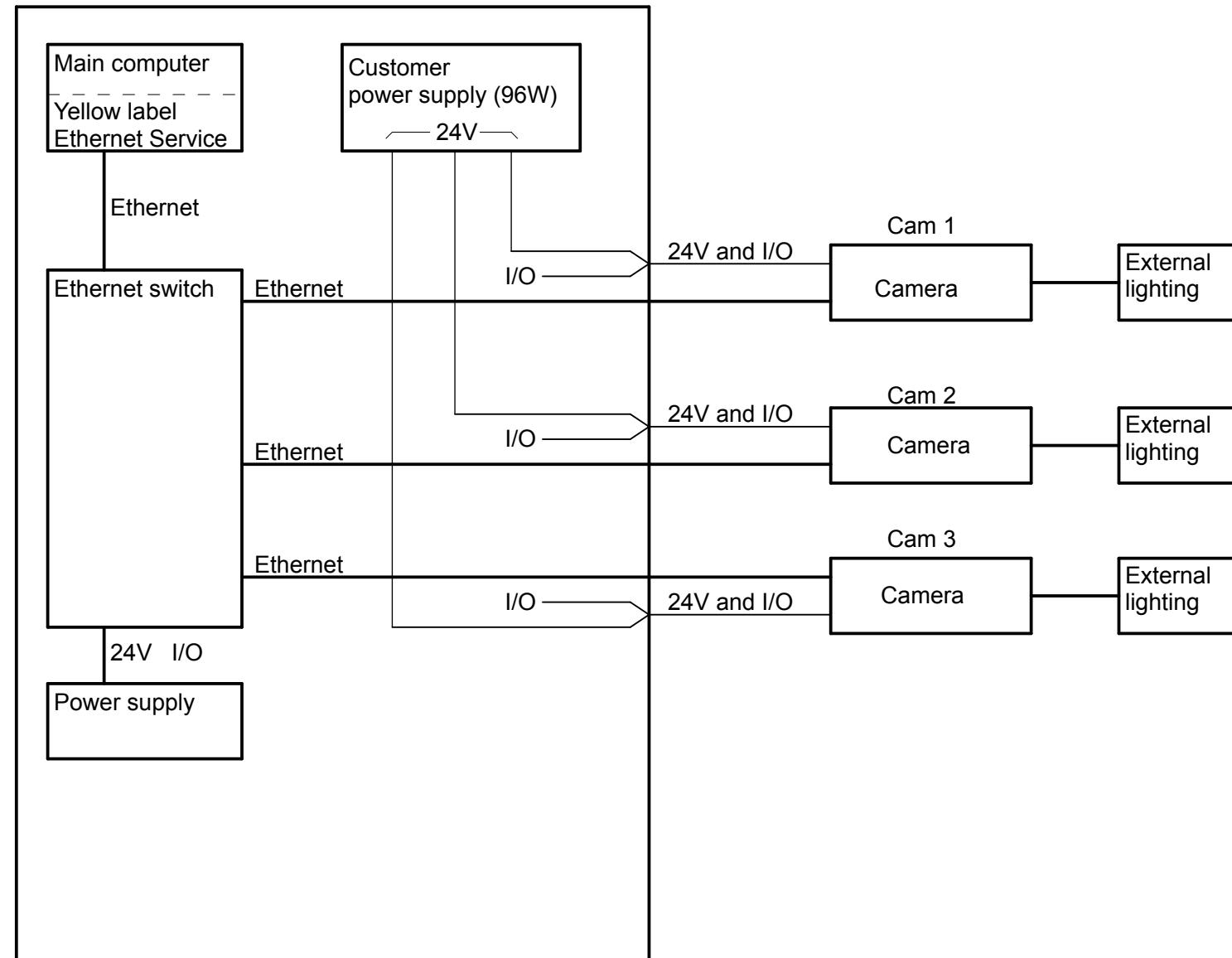
Document no.

Rev. Ind Page 41

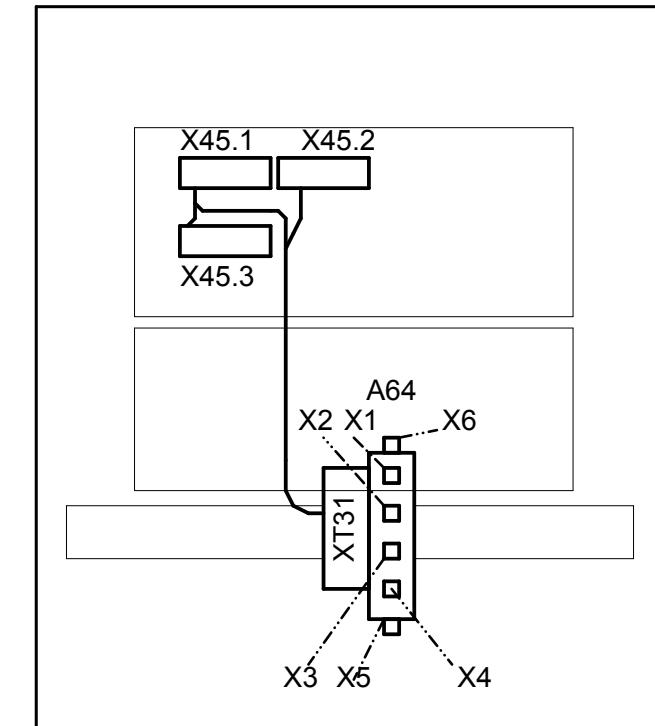
3HAC024480-011

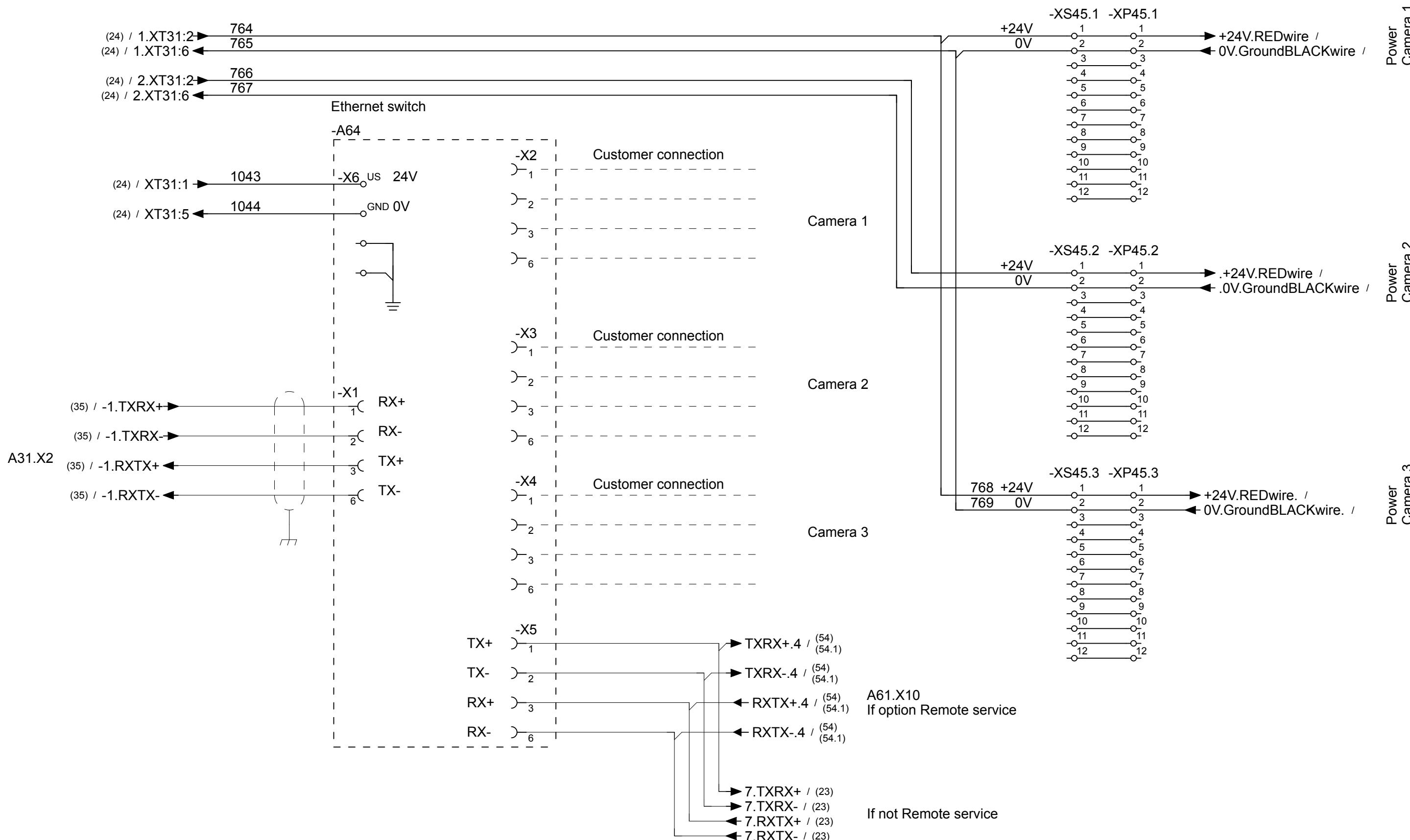
08 Total 156

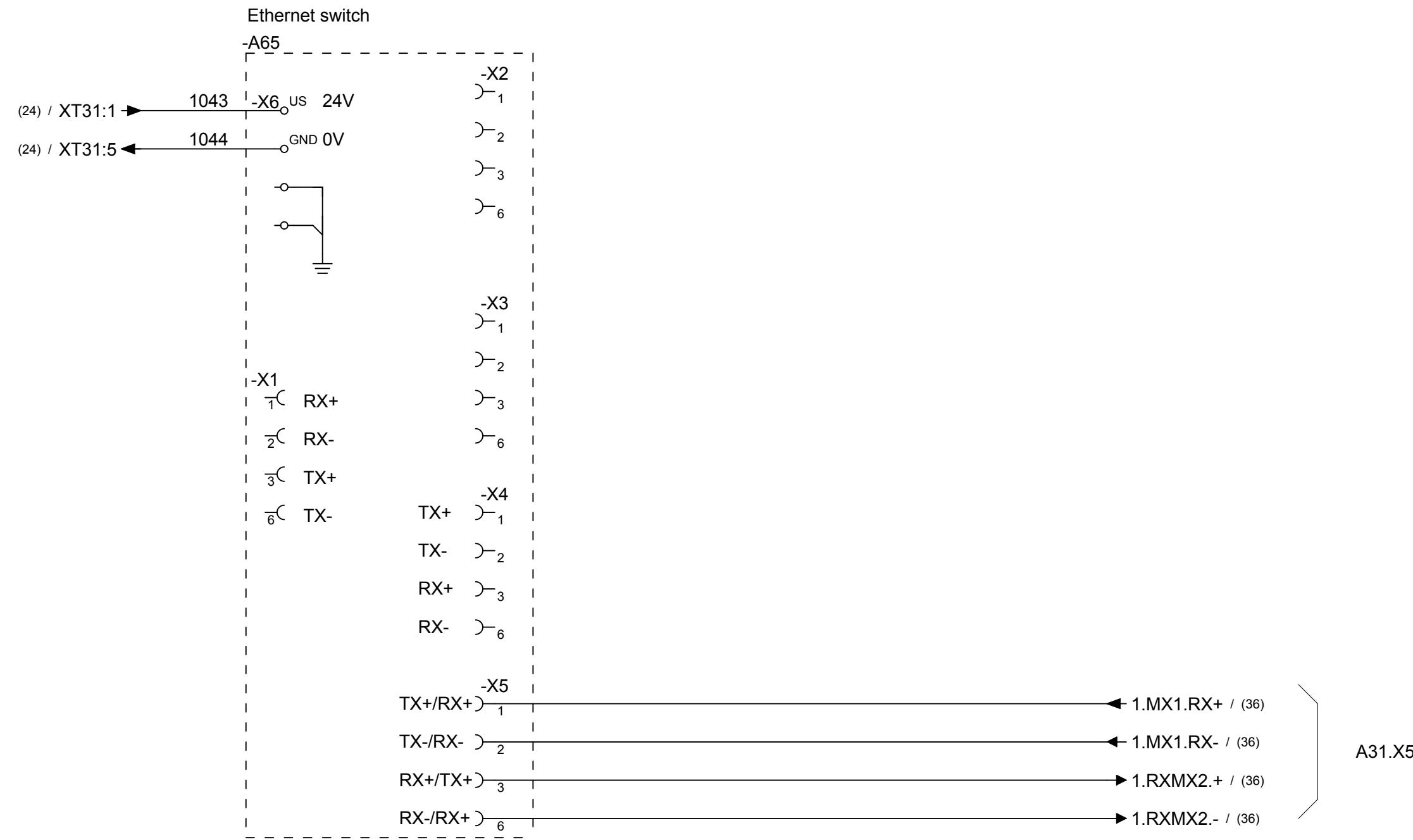
## Robot controller

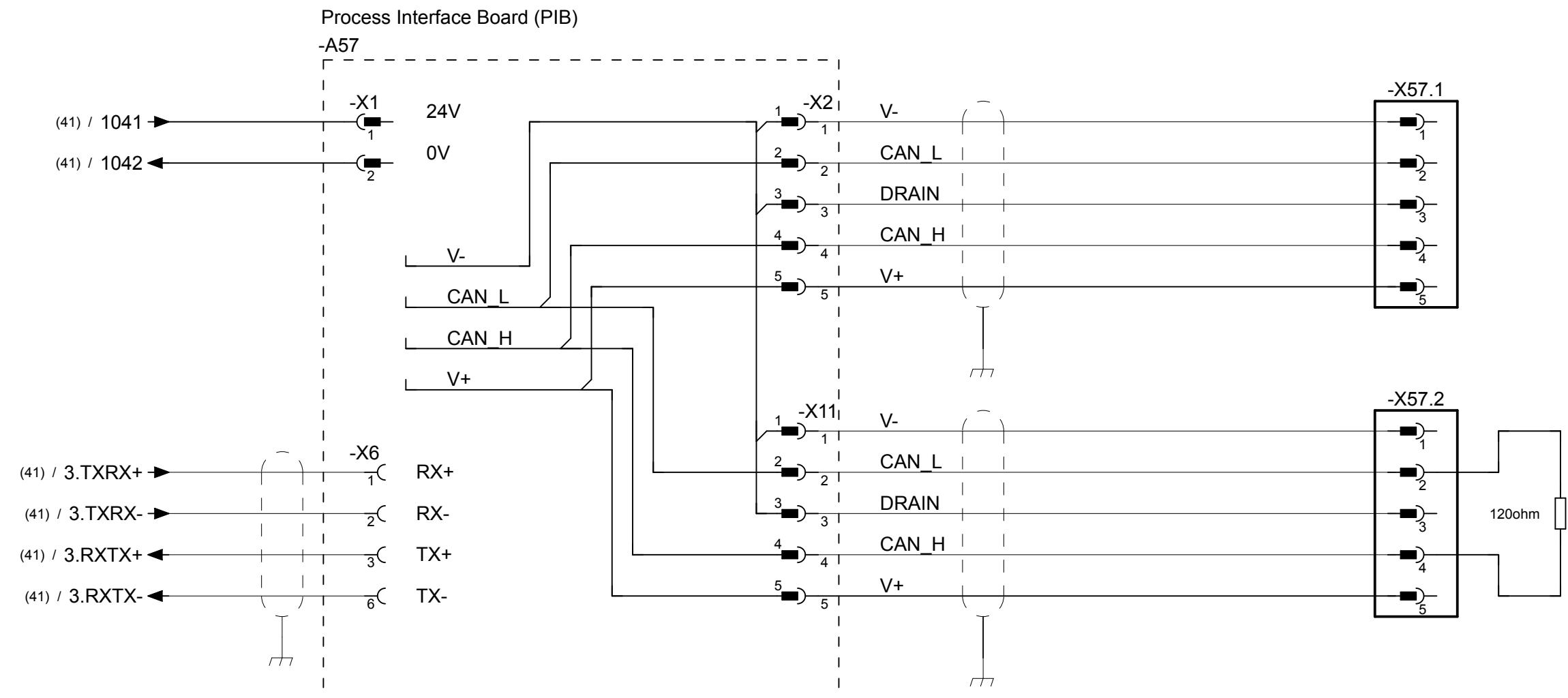


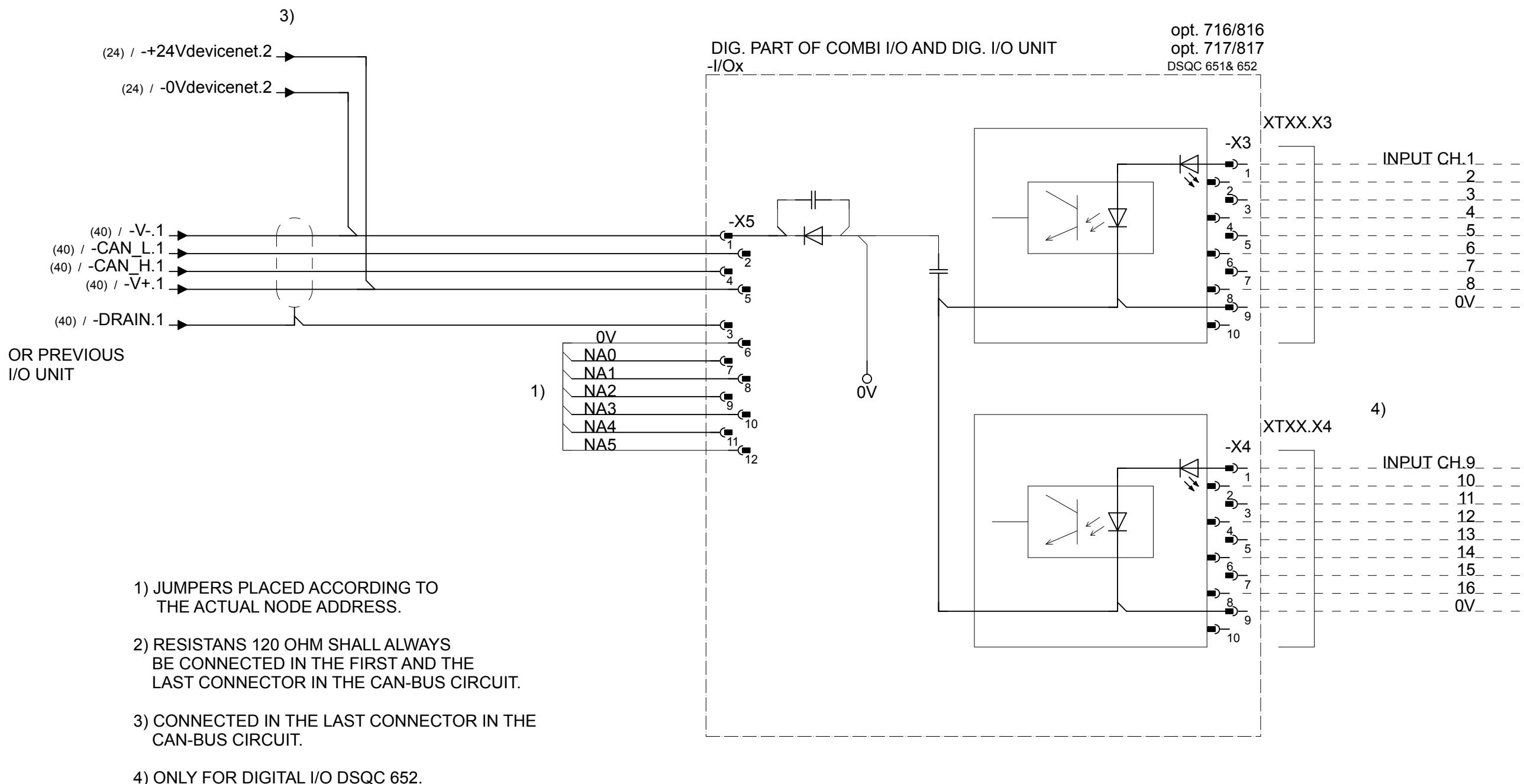
Opt. INSIDE DOOR WITH ETHERNET for CAMERAS

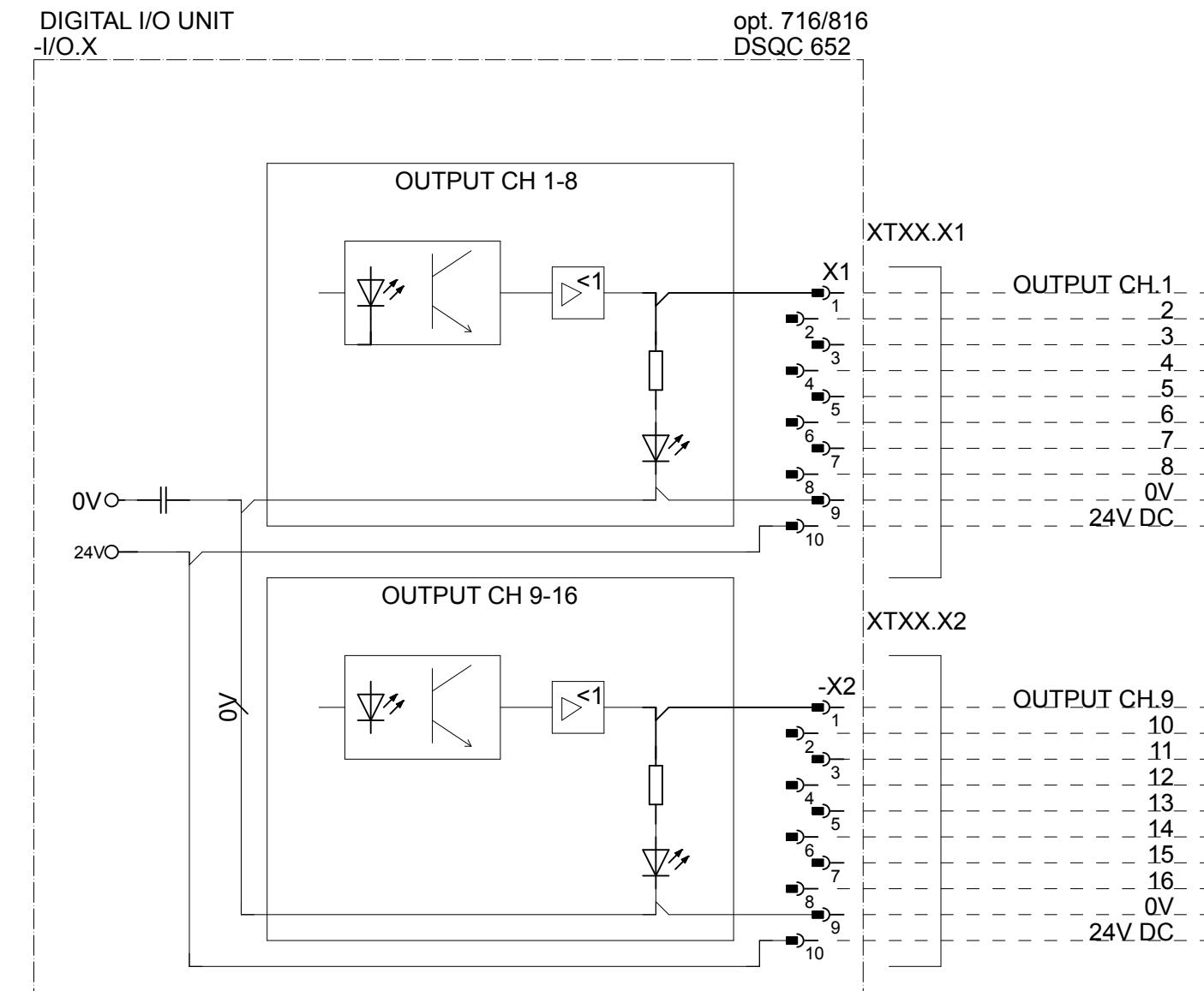


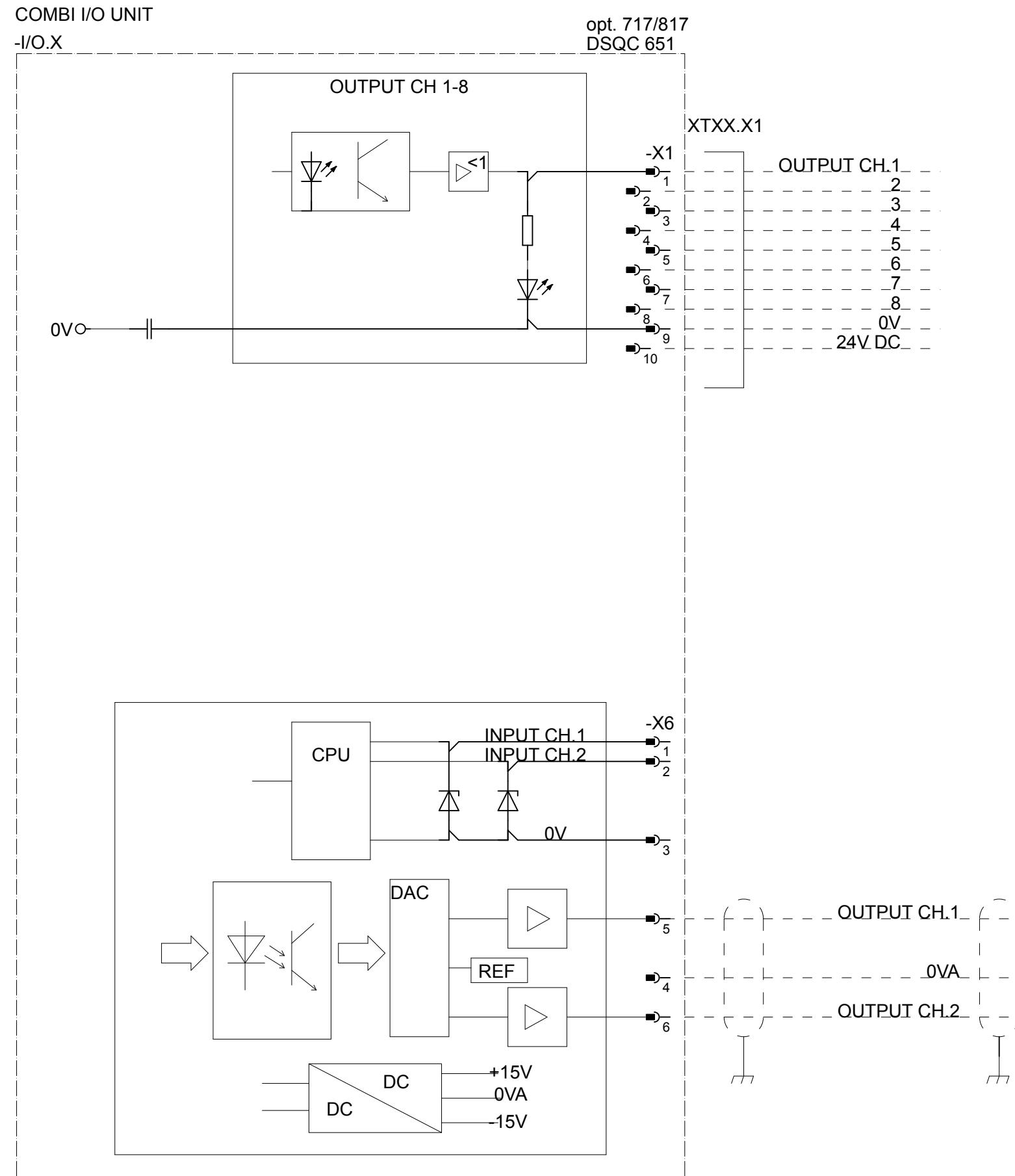












Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
COMBI I/O UNIT DSQC651

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

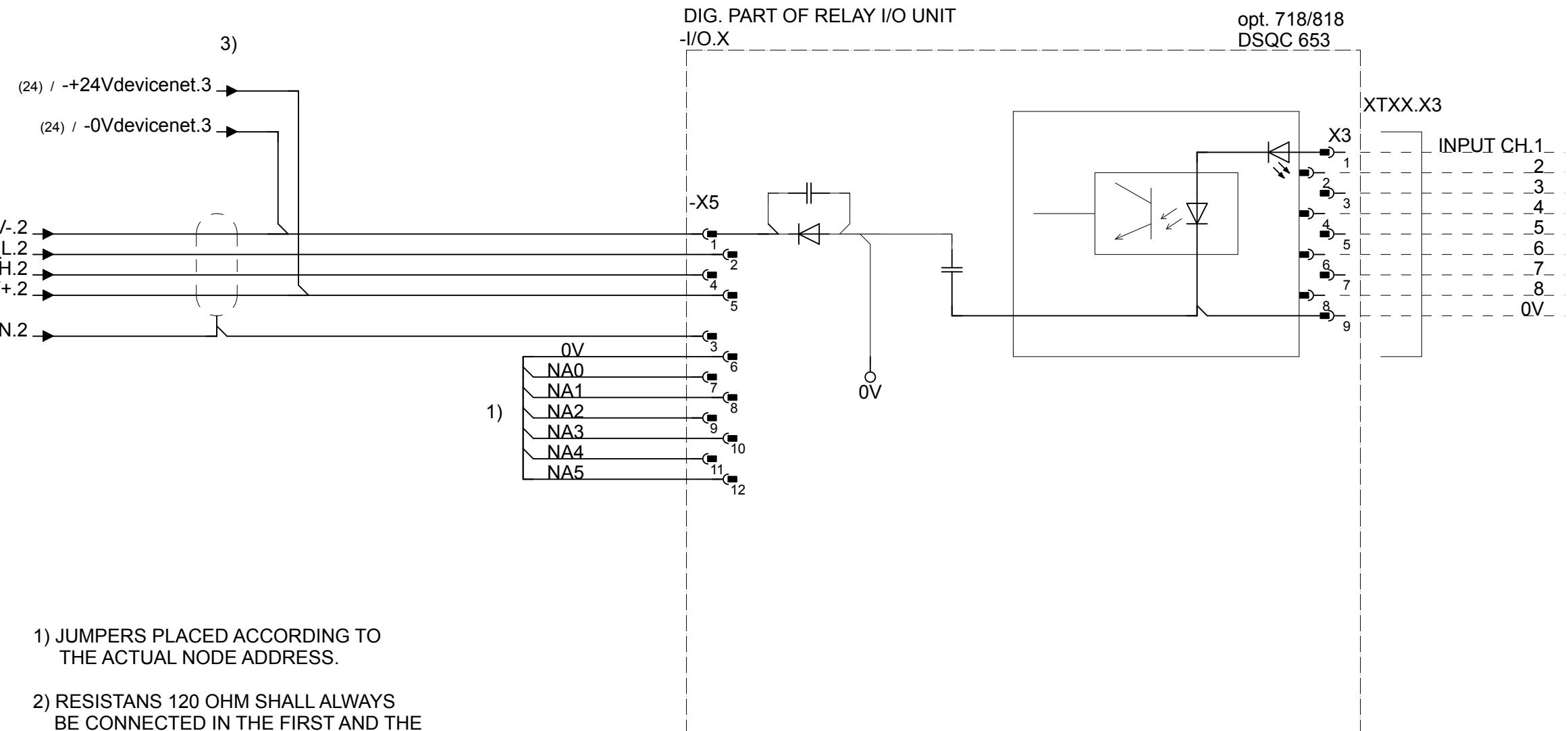
Rev. Ind

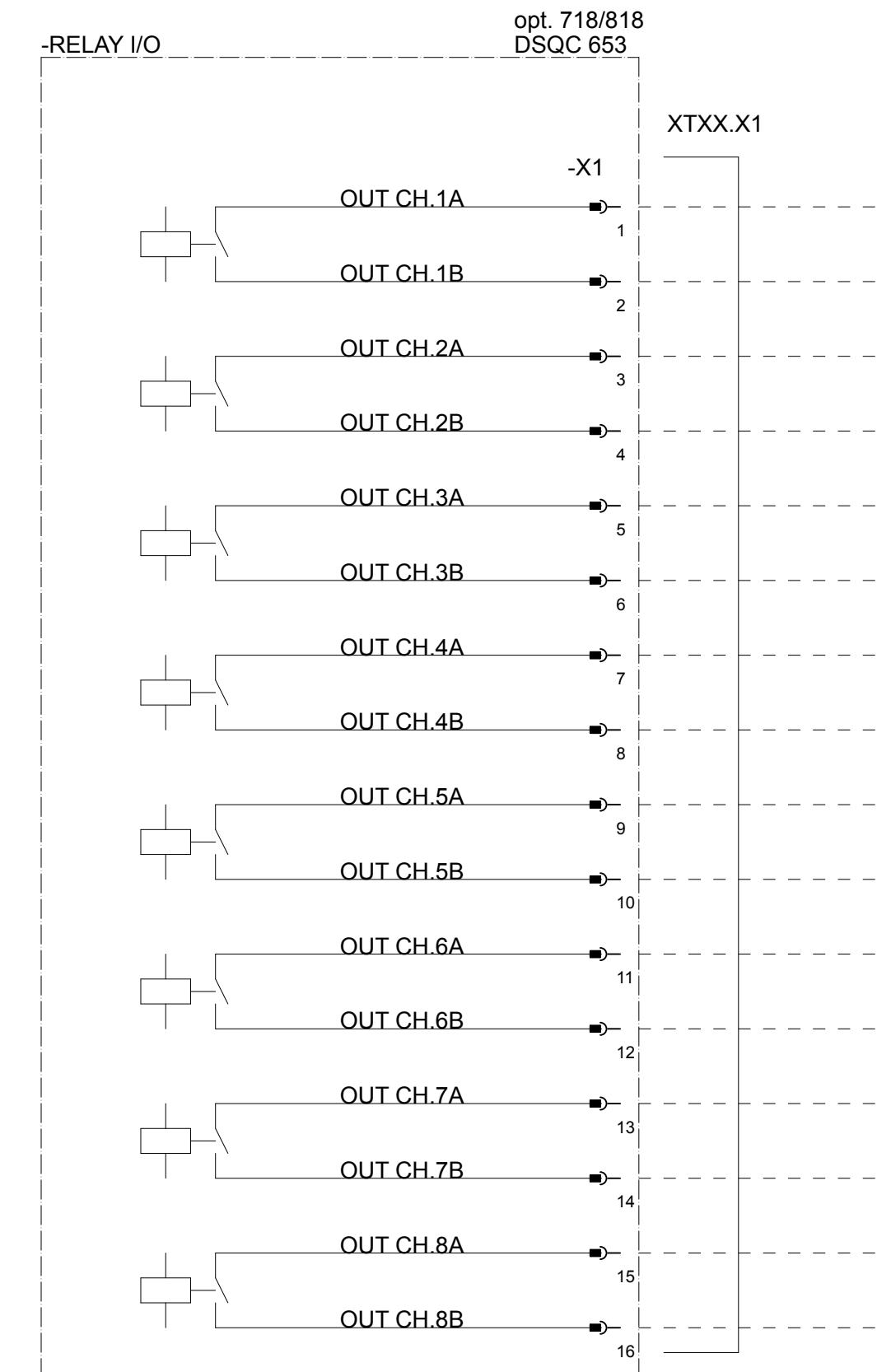
Page 48

3HAC024480-011

Next 49

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
RELAY I/O UNIT DSQC653

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

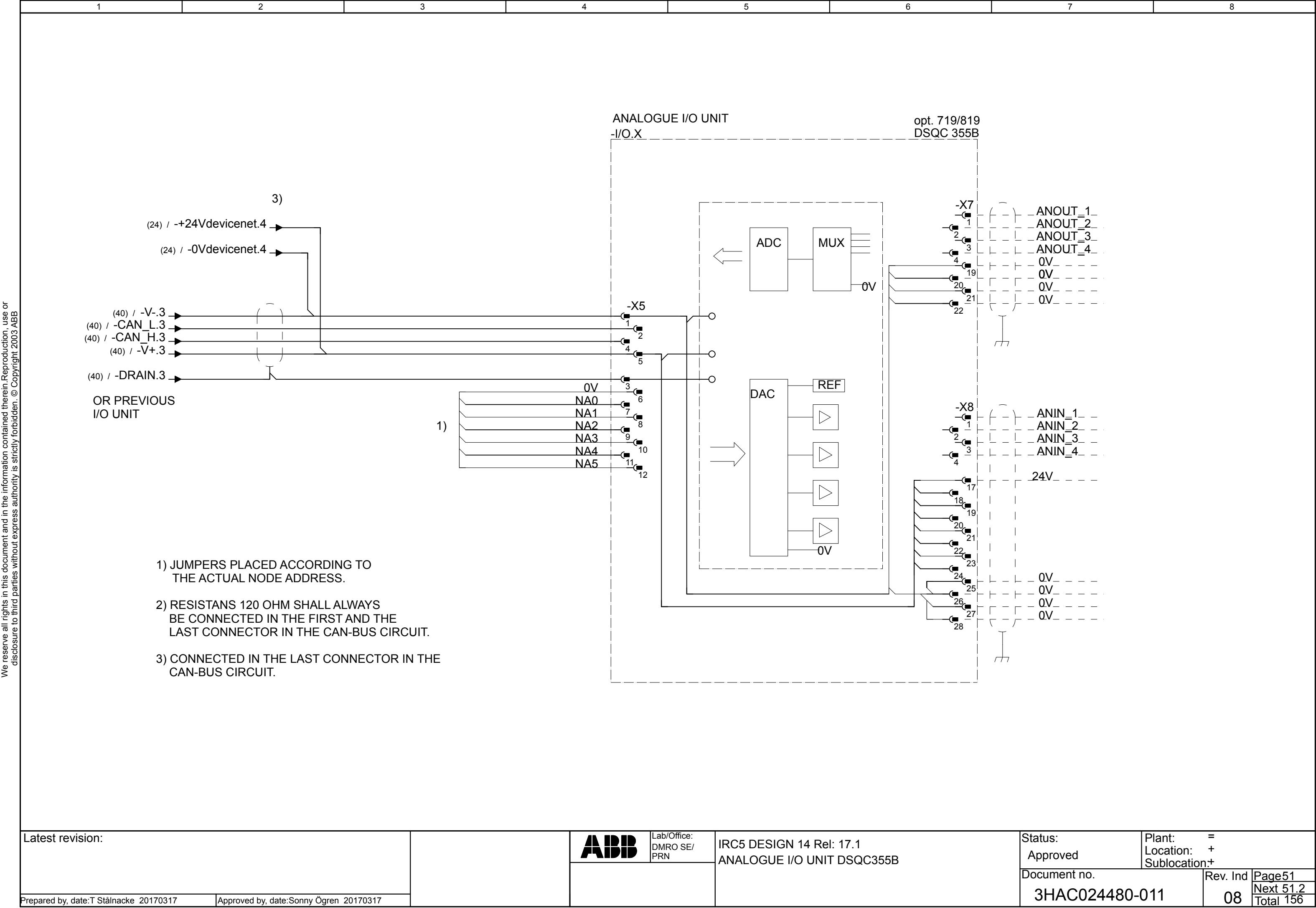
Rev. Ind

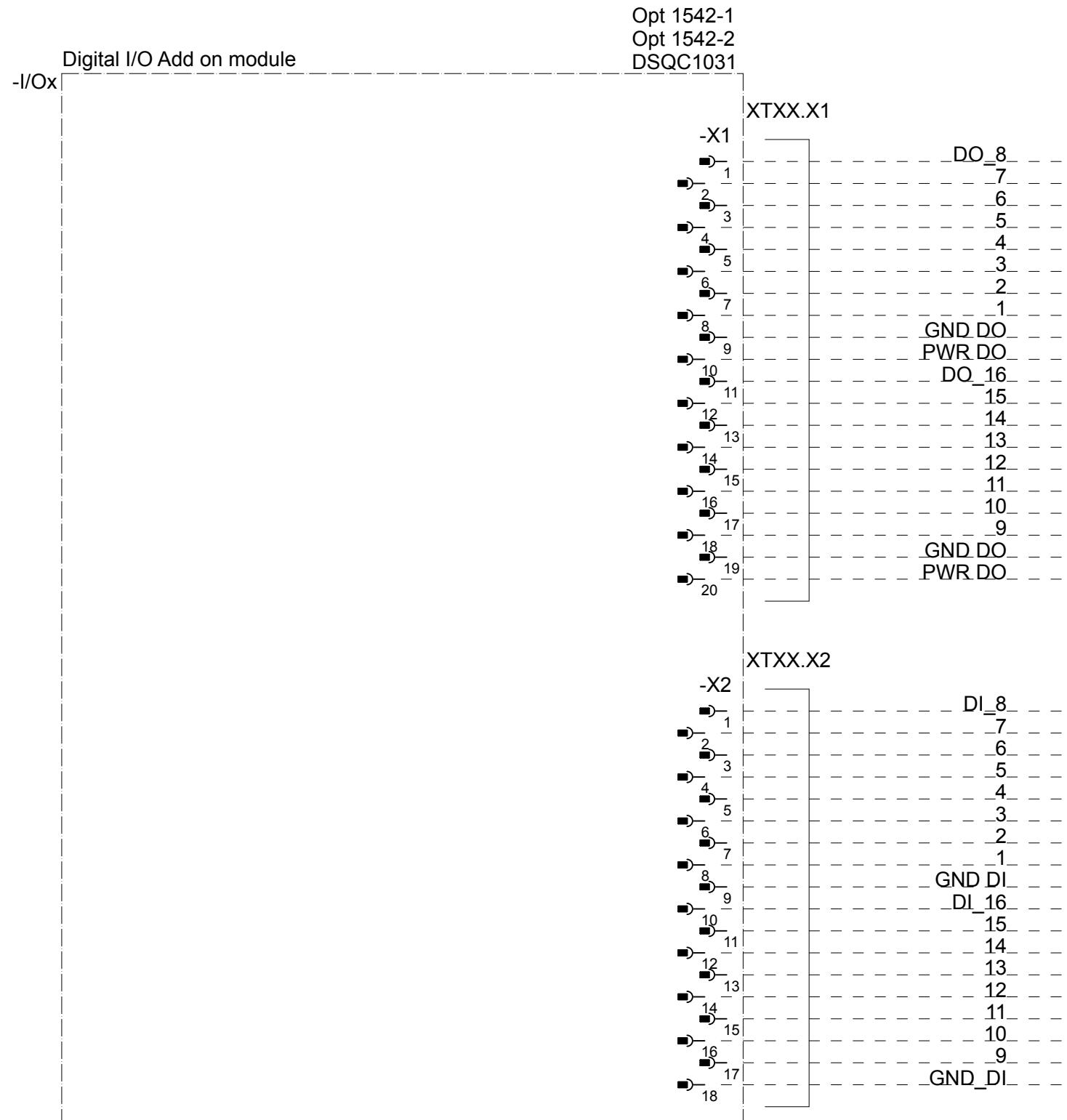
Page 50

3HAC024480-011

Next 51

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
Local I/O Digital add on 16in/16out

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

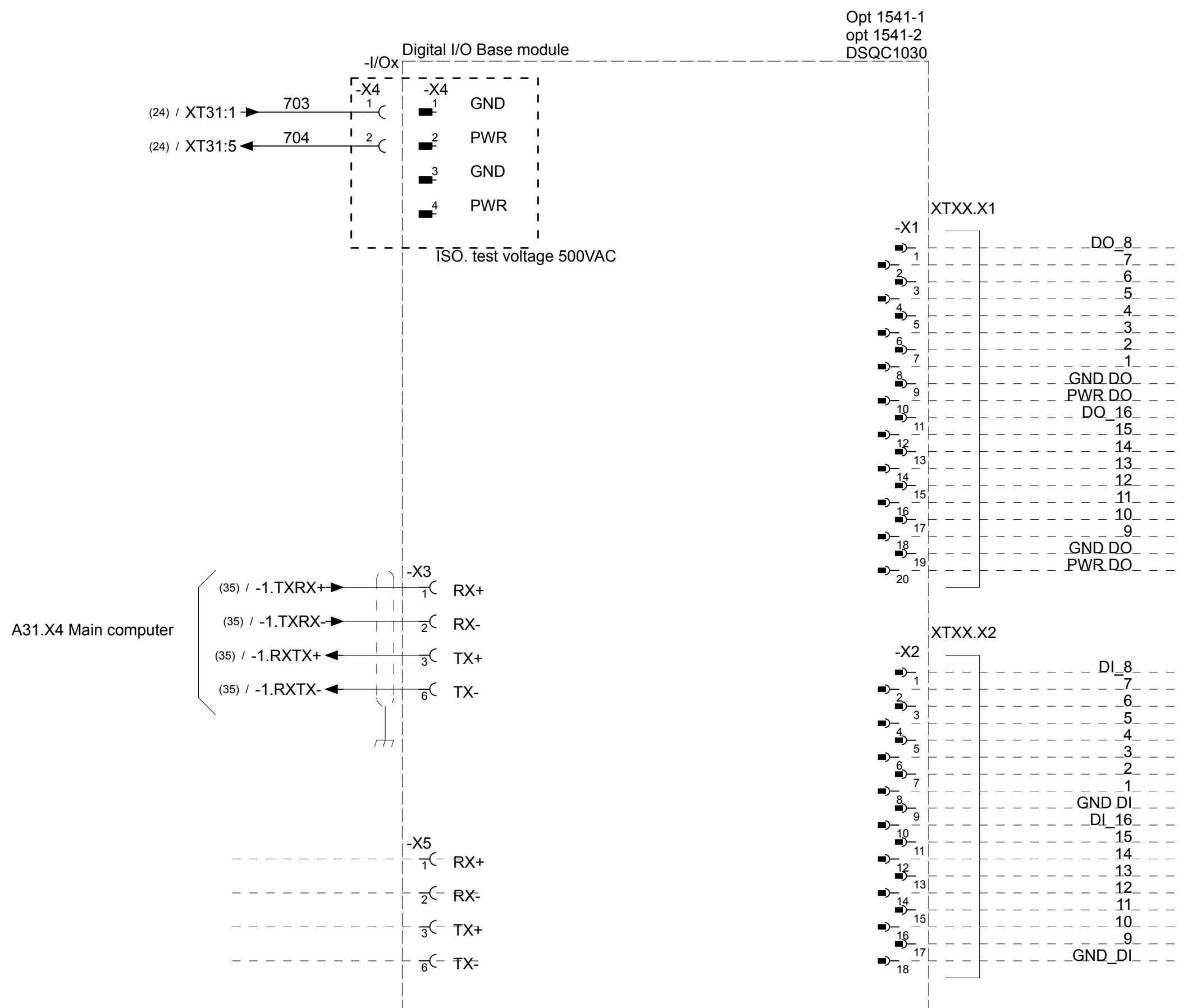
Document no.

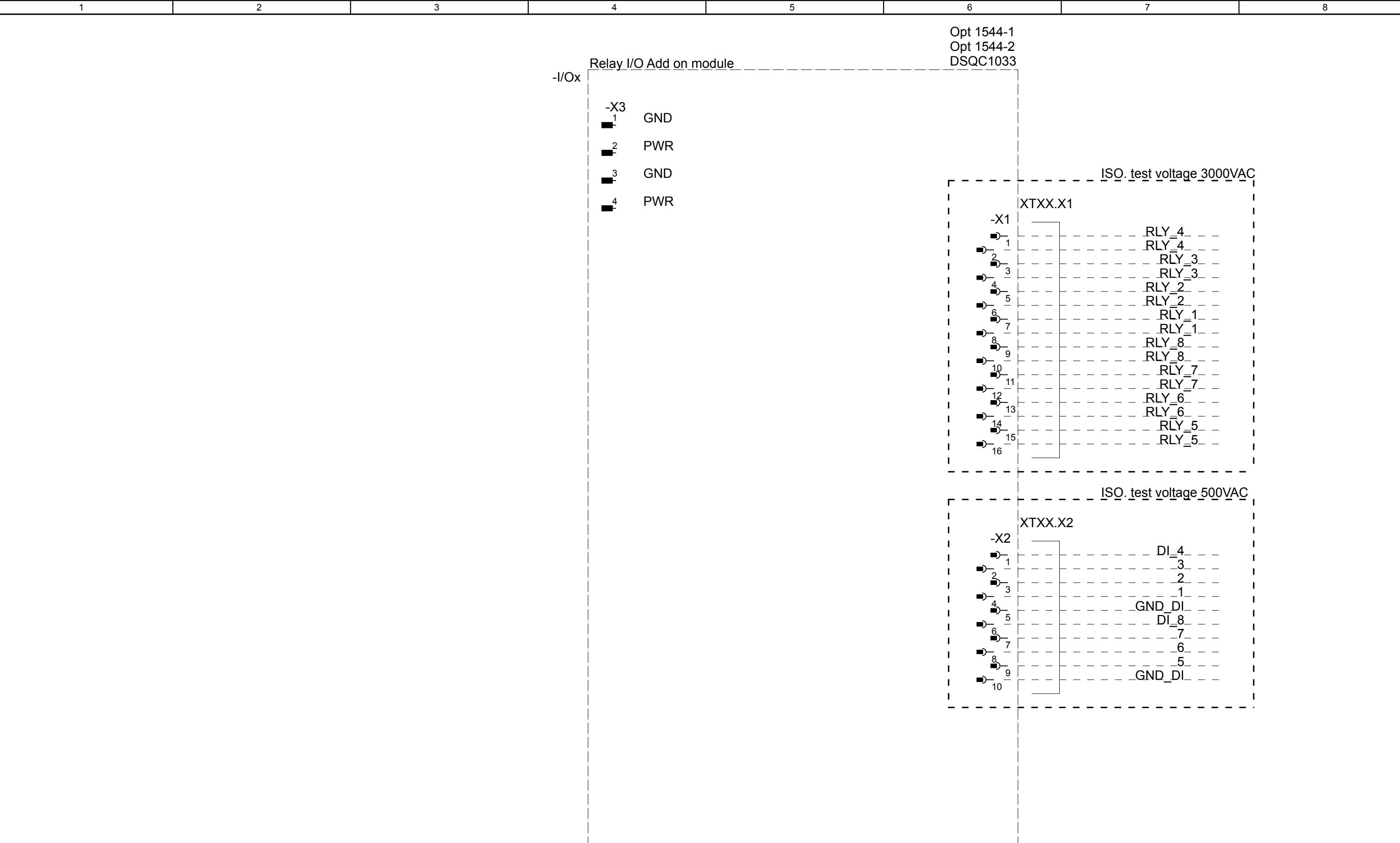
Rev. Ind Page 51.2

3HAC024480-011

Next 51.4

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
Local I/O Relay add on 8RO/8DI

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

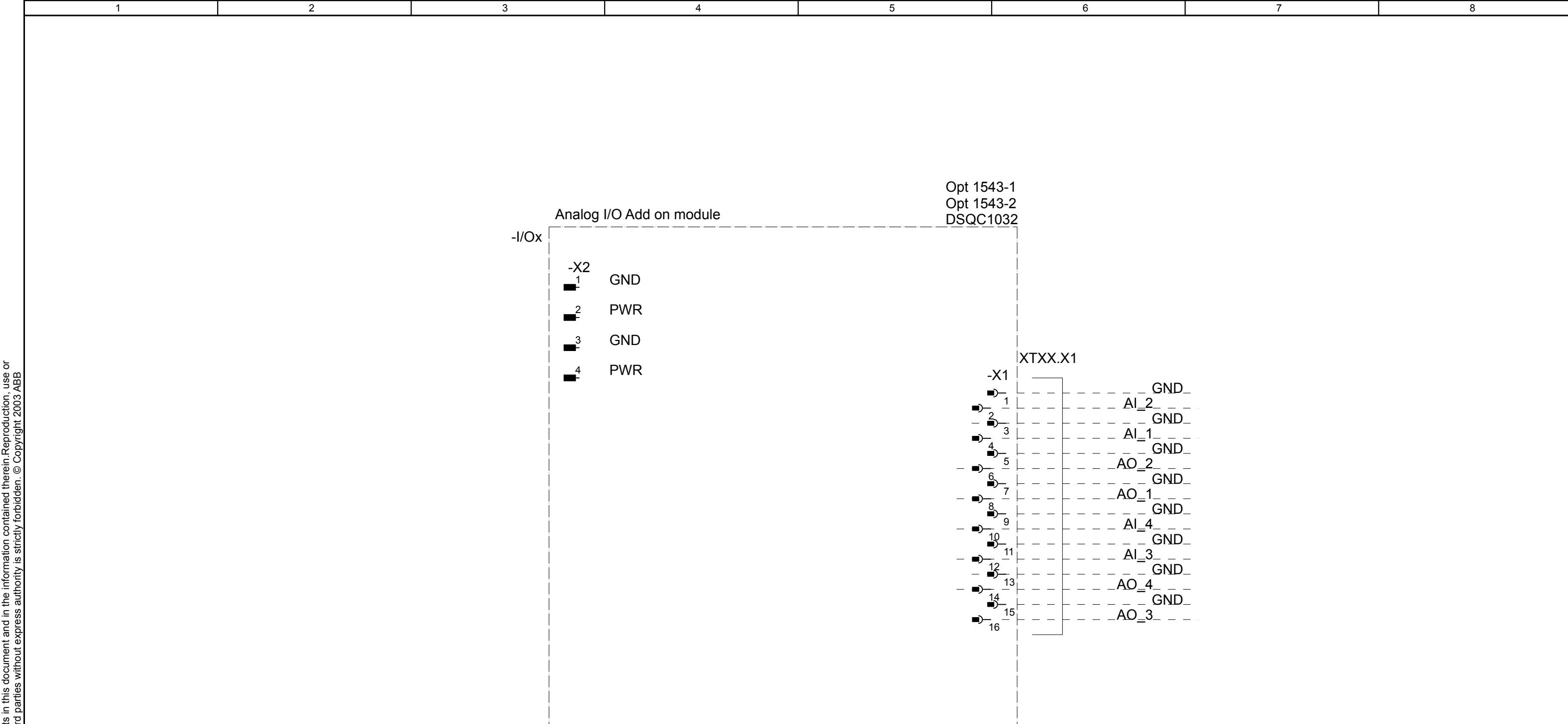
Rev. Ind

Page 51.6

3HAC024480-011

Next 51.8

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
Local I/O Analog add on 4in/4out

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

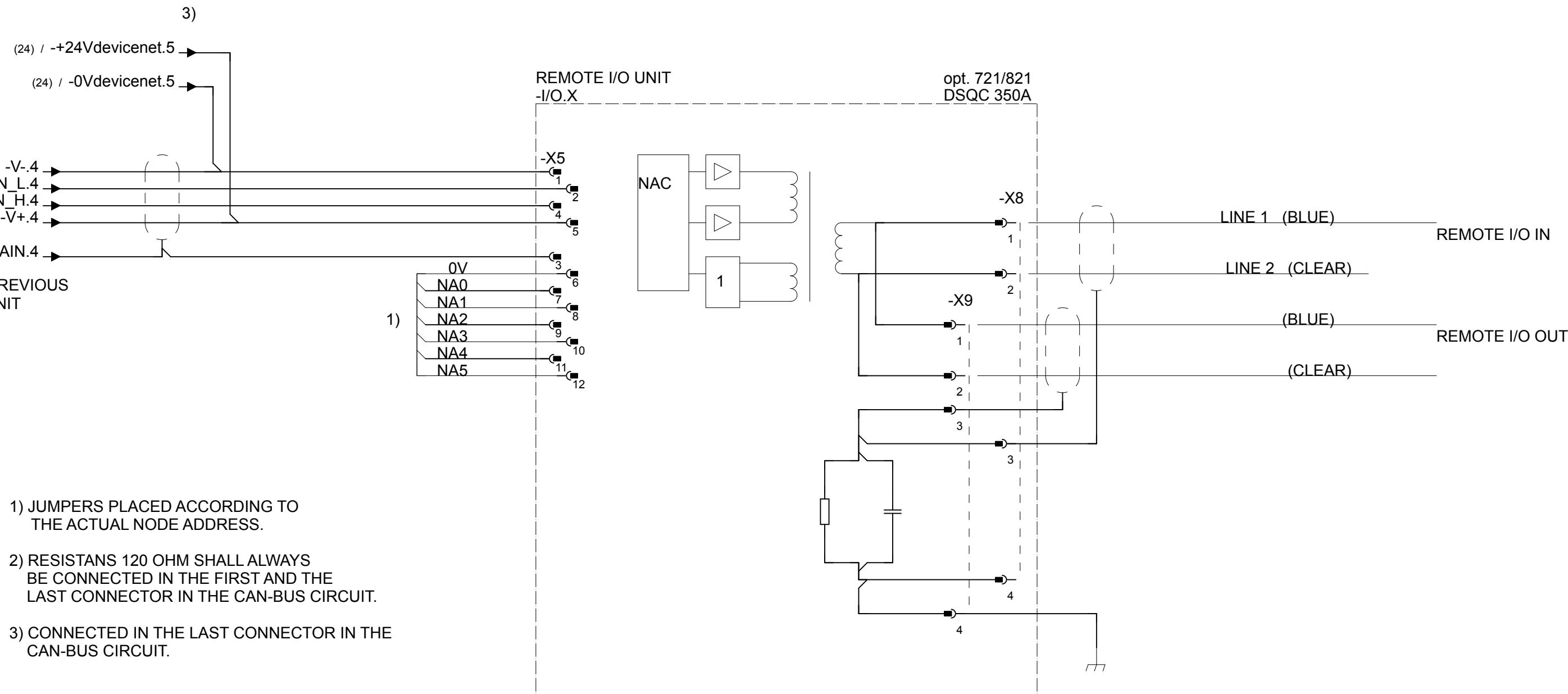
Document no.

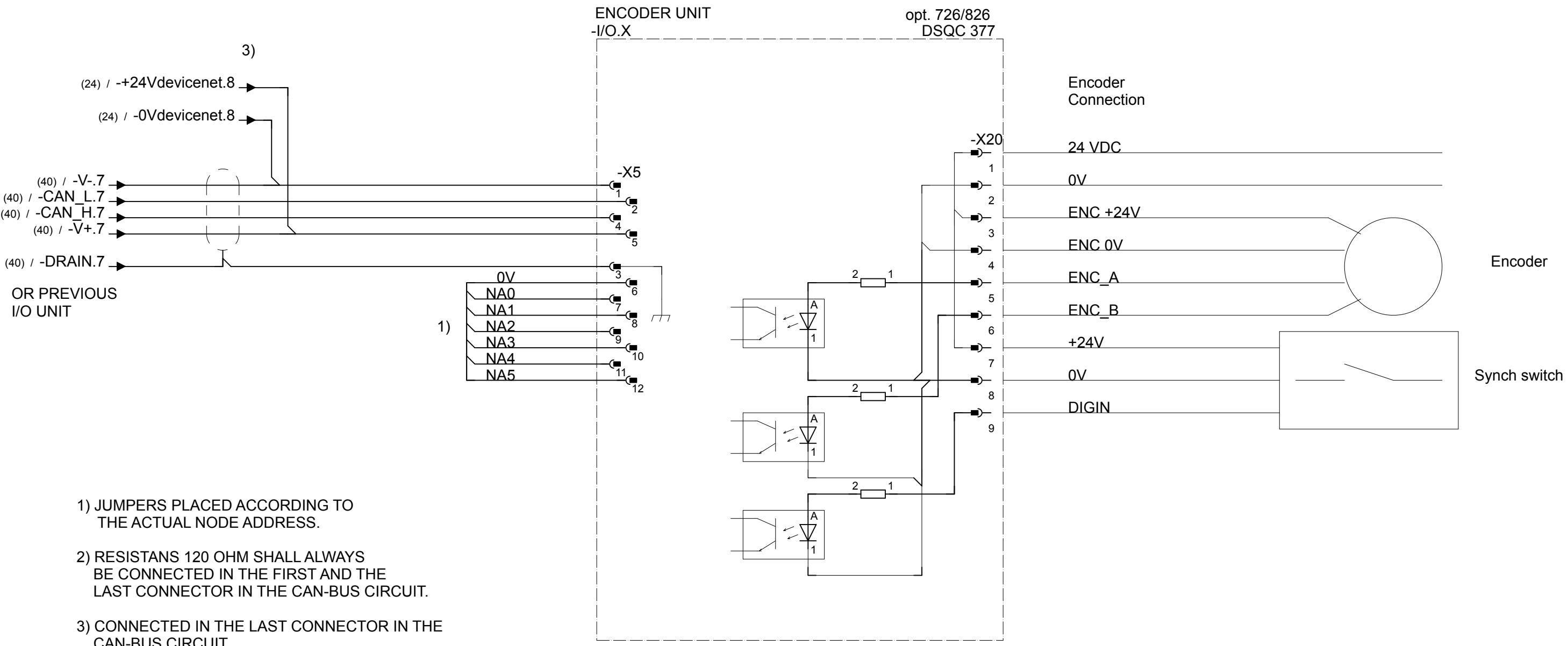
Rev. Ind Page 51.8

3HAC024480-011

08 Next 52

Total 156

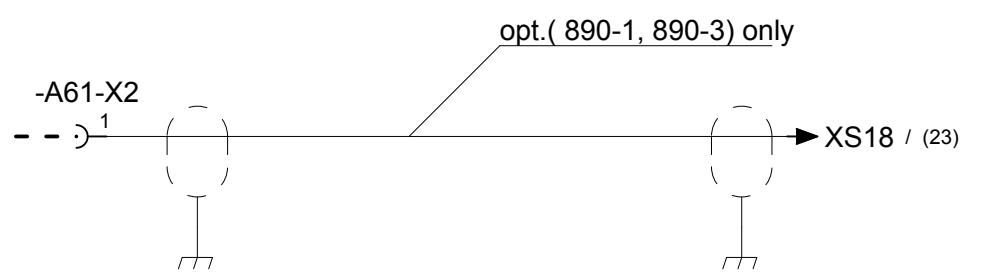
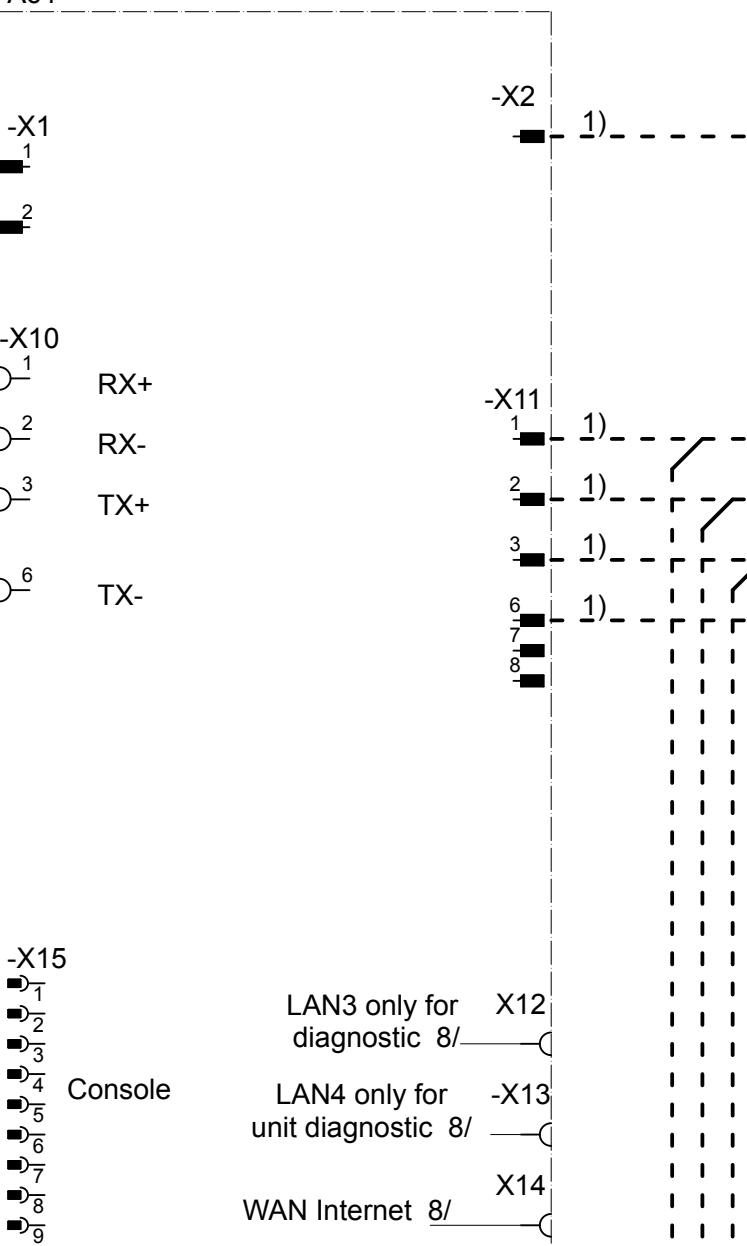
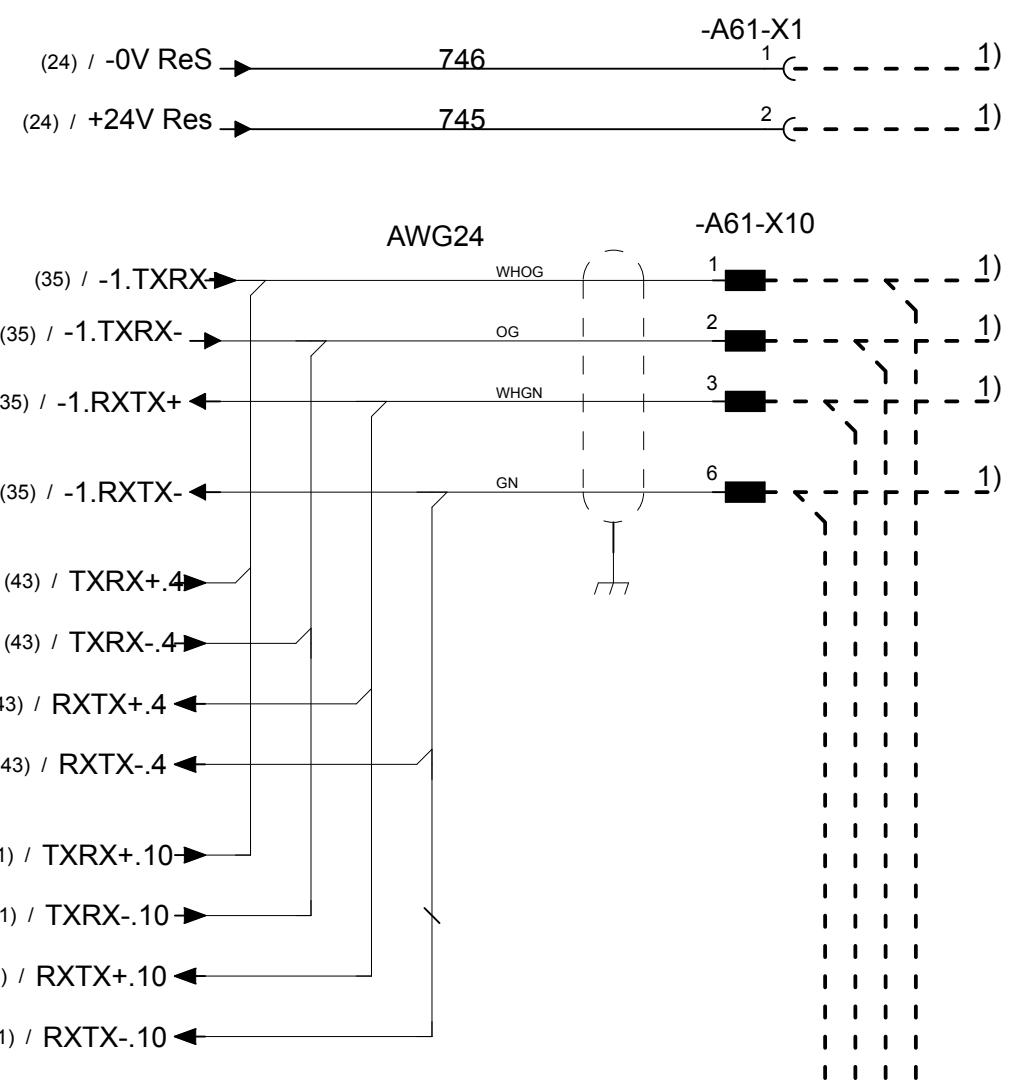




1) Only connected if Opt. REMOTE SERVICE BOX

Option:  
REMOTE SERVICE BOX  
DSQC680  
-A61

opt. 890-1  
opt. 890-2



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
REMOTE SERVICE BOX DSQC680 to Rel. 16.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

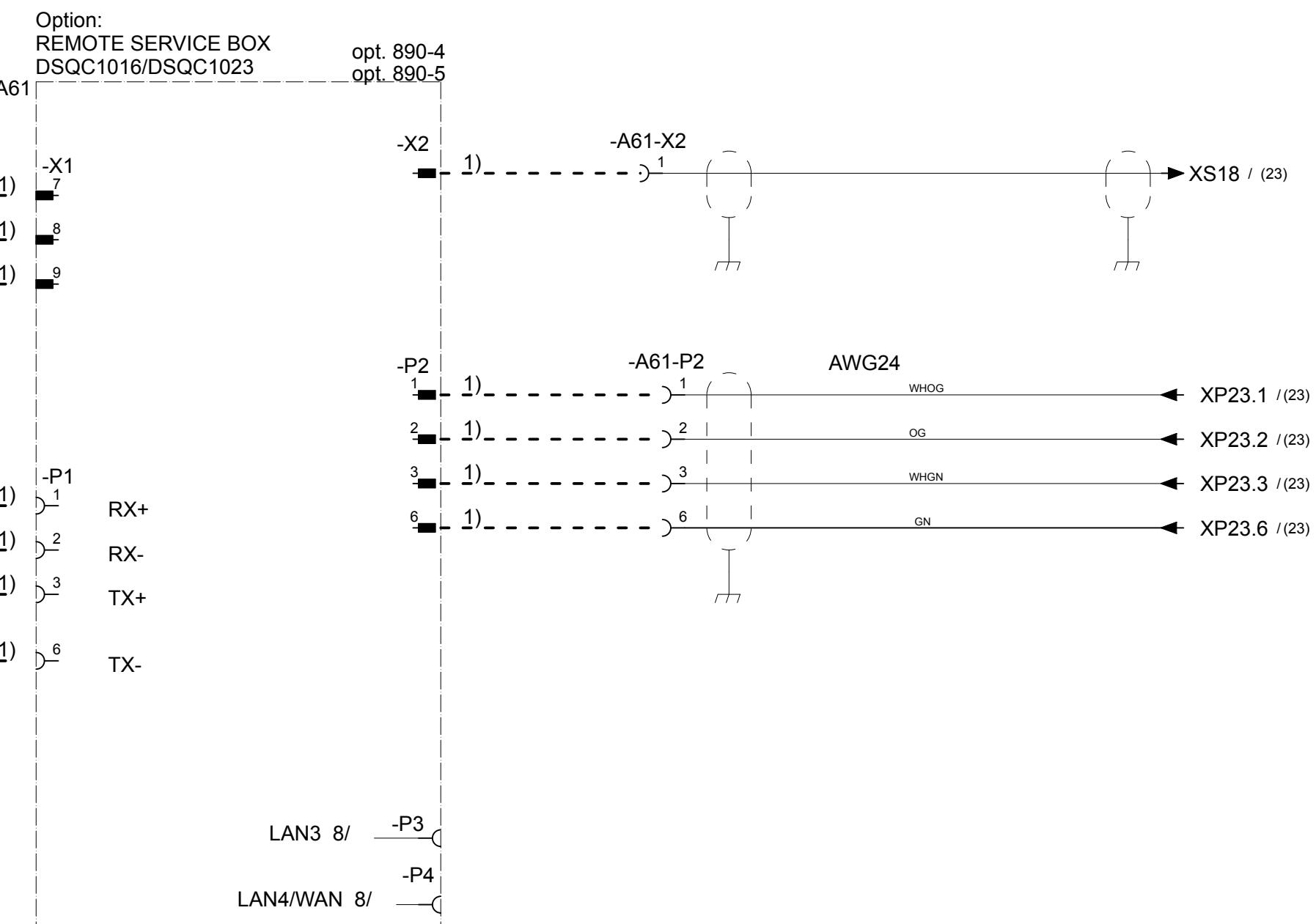
Page 54

3HAC024480-011

Next 54.1

Total 156

1) Only connected if Opt. REMOTE SERVICE BOX



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
REMOTE SERVICE BOX DSQC1016/DSQC1023  
from Rel. 16.2

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

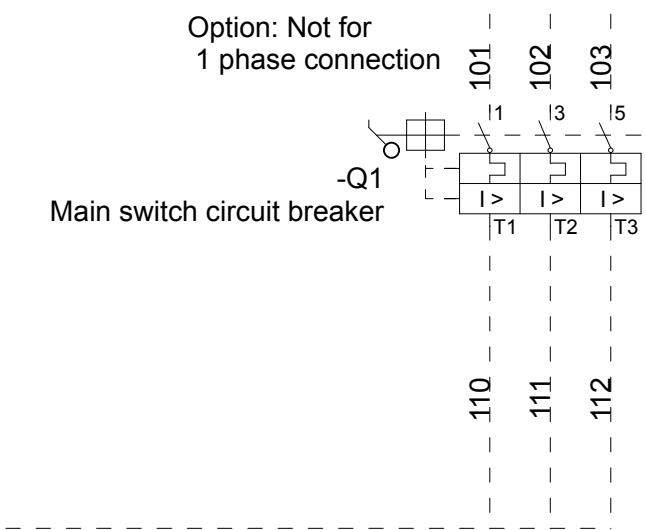
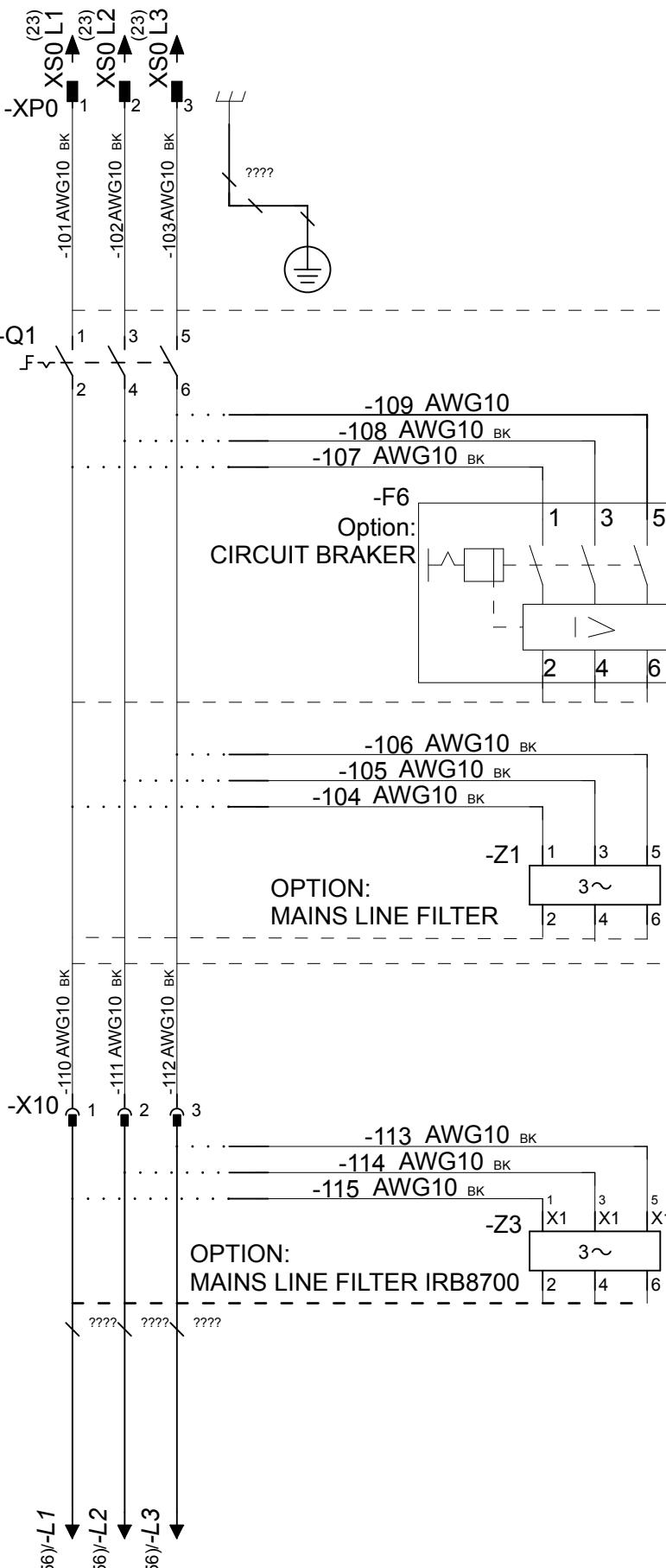
Rev. Ind Page 54.1

3HAC024480-011

08

Next 55

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
MAINS CONNECTION XP0, Q1, F6, Z1, Z3

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

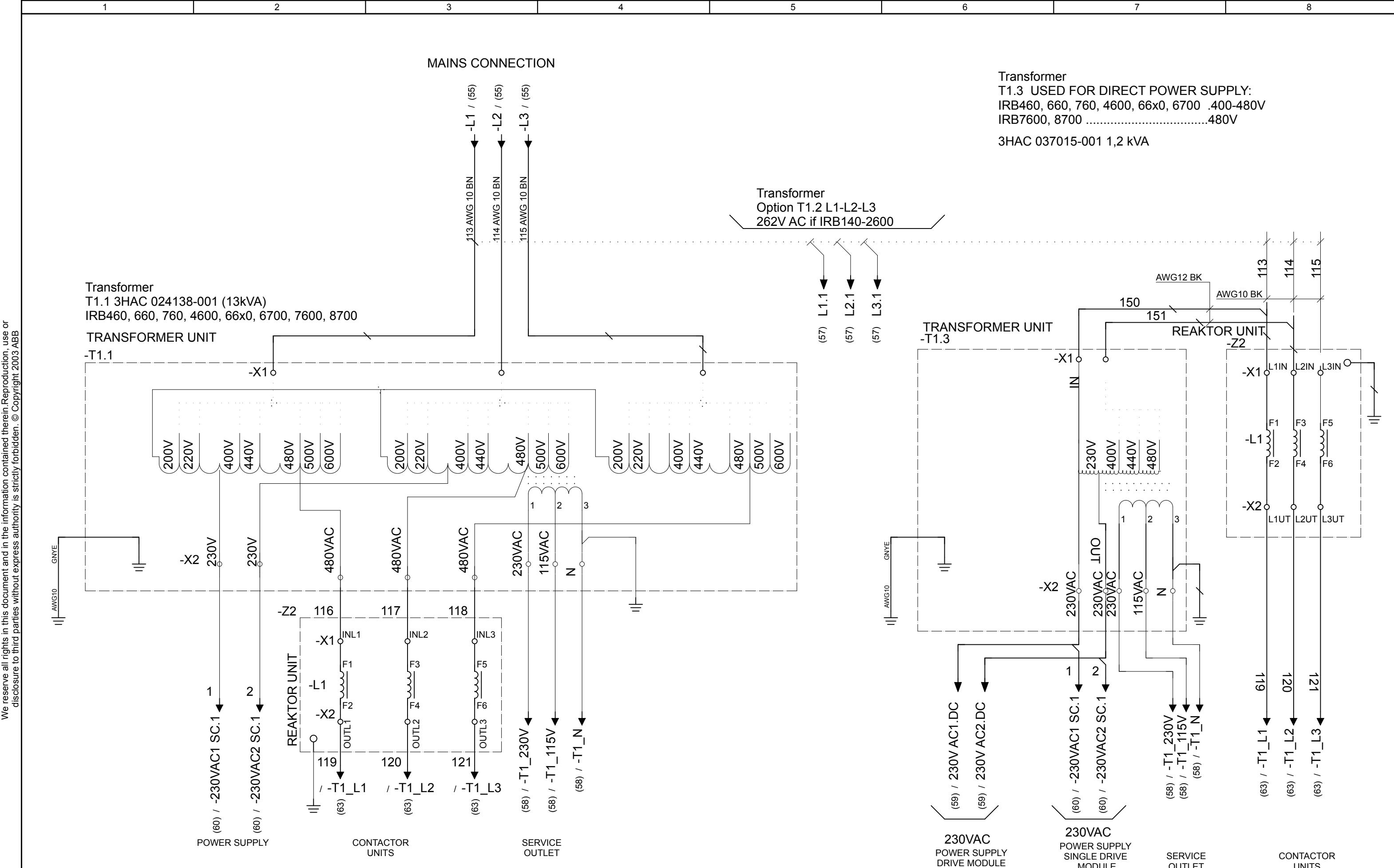
Rev. Ind Page 55

3HAC024480-011

08

Next 56

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
TRANSFORMER UNIT 480V T1.1, T1.3, Z2, X10

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

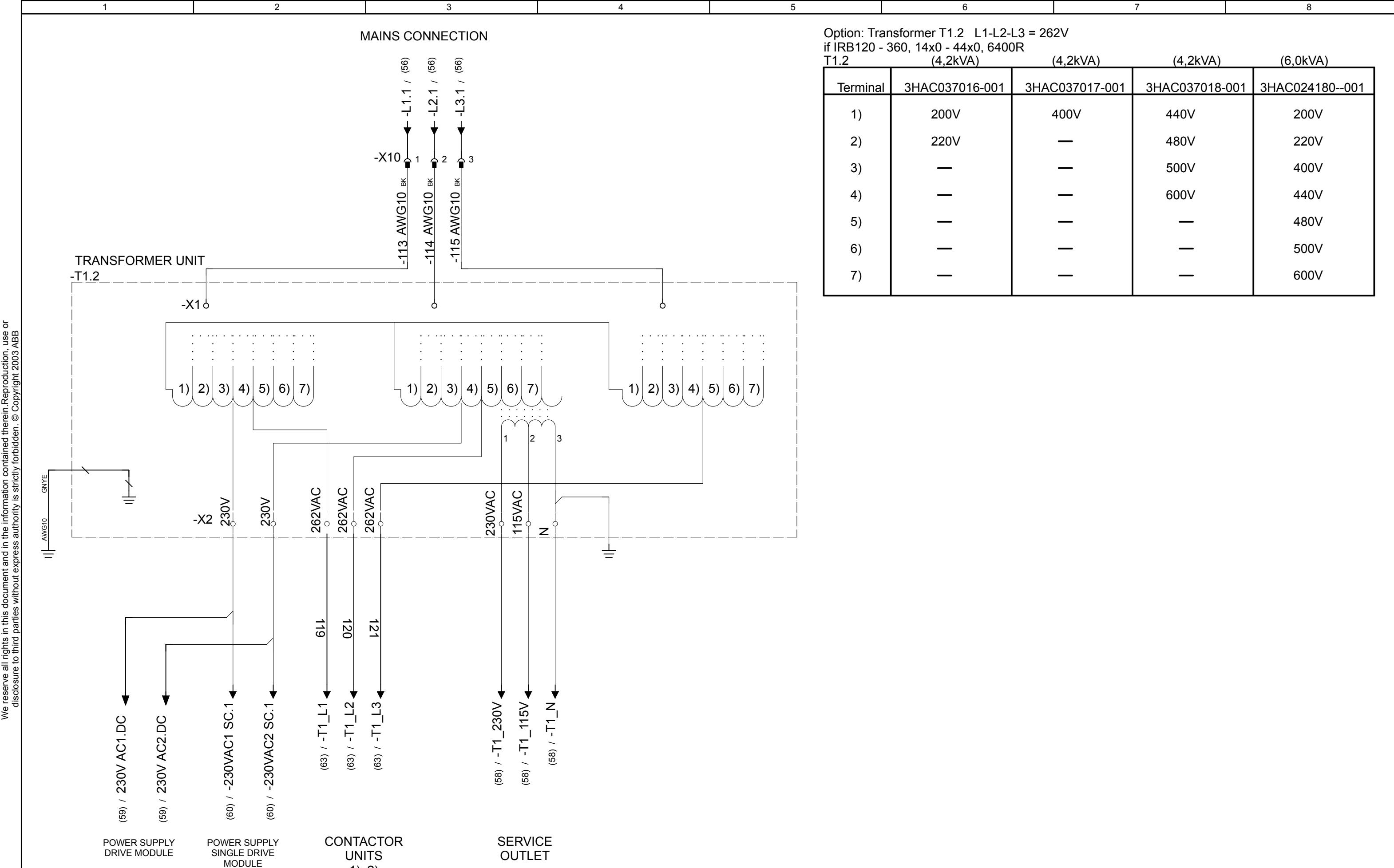
Rev. Ind Page 56

3HAC024480-011

08

Next 57

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
TRANSFORMER UNIT 262V T1.2, X10

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

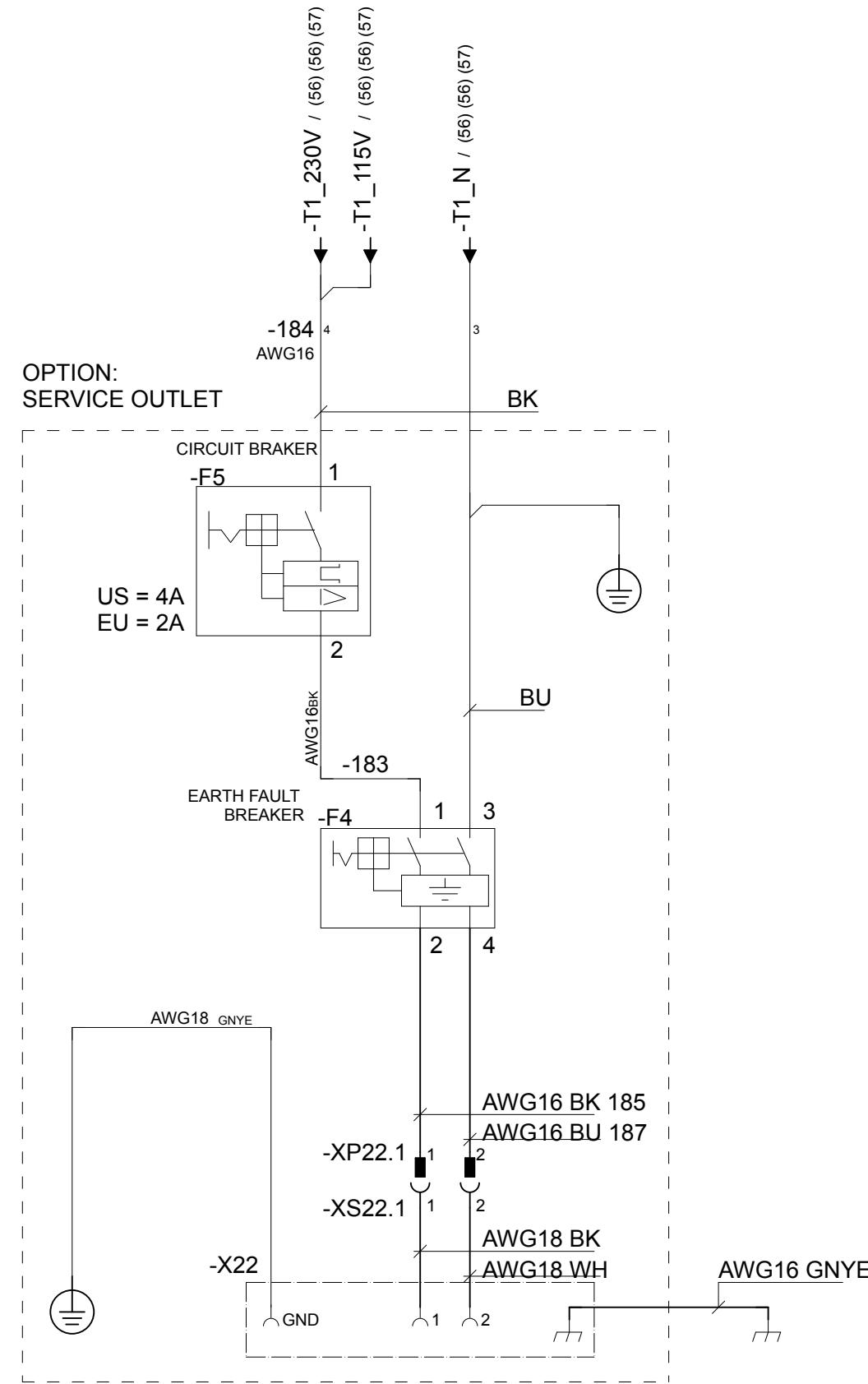
Rev. Ind

Page 57

3HAC024480-011

Next 58

08 Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
OPTION : SERVICE OUTLET F4, F5, X22

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

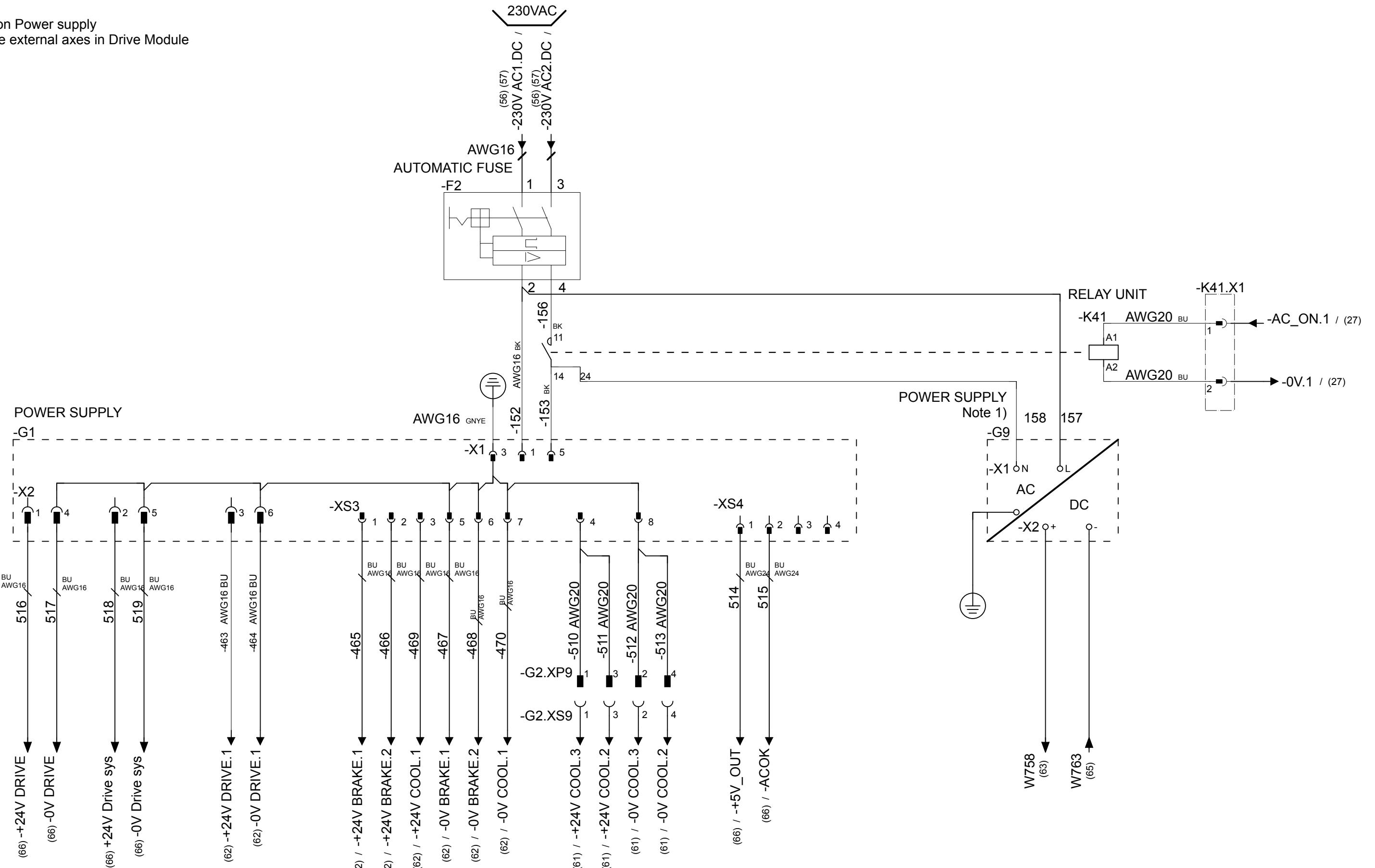
Page 58

3HAC024480-011

08

Total 156

1) Option Power supply  
for three external axes in Drive Module



AXIS COMP.  
UNIT

MAIN SERVO  
DRIVE UNIT

CONTACTOR  
UNIT

CONTACTOR  
UNIT

MAIN FAN  
UNIT

AXIS COMP.  
UNIT

EXTERNAL  
AXES

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
POWER SUPPLY DSQC 626 AND 627  
FOR DRIVE MODULE F2, G1, G9, K41.X1

Status:  
Approved

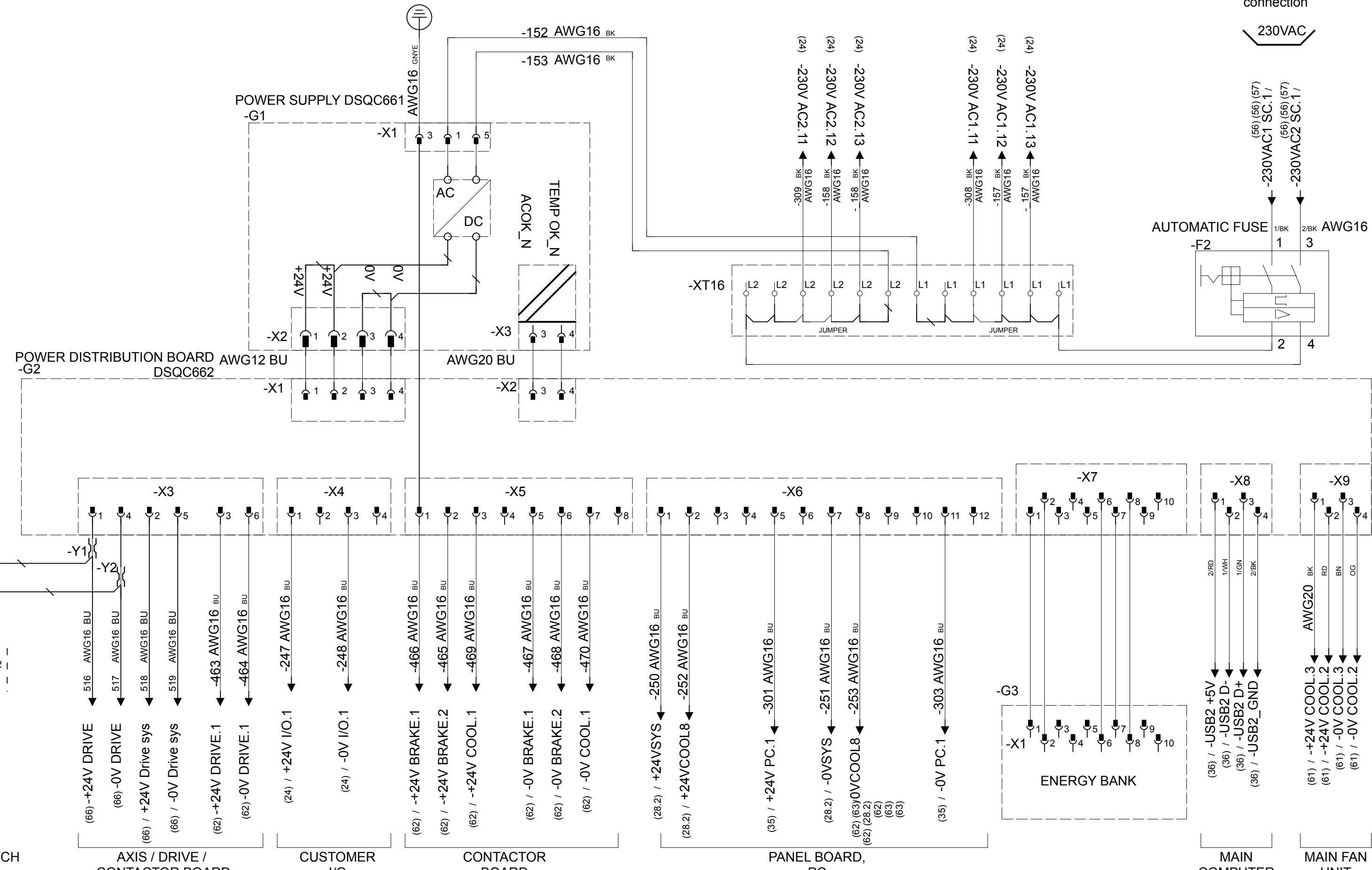
Plant:  
Location:  
Sublocation:

Document no. 3HAC024480-011

Rev. Ind Page 59

Next 60

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

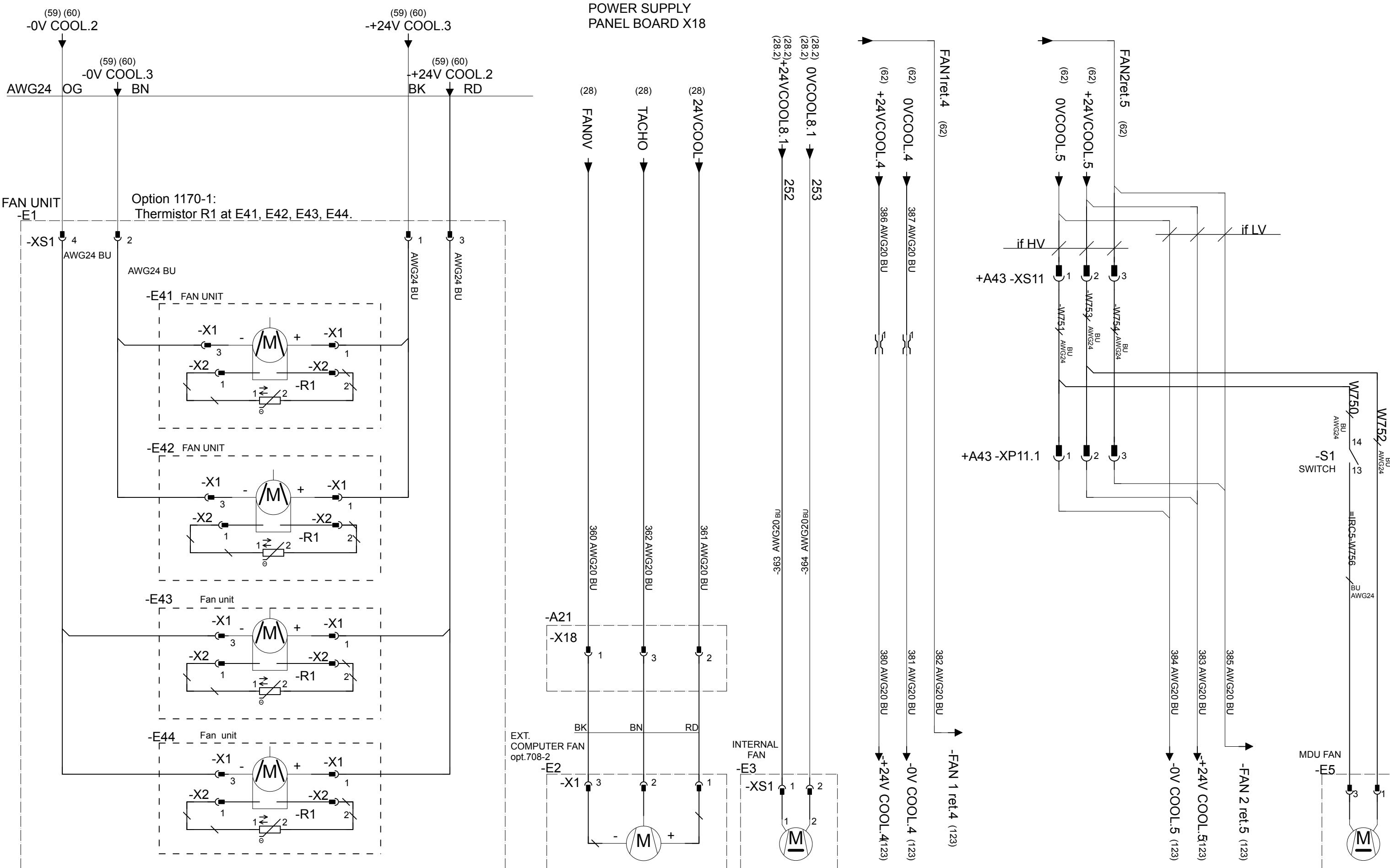
IRC5 DESIGN 14 Rel: 17.1  
POWER SUPPLY DSQC 661 AND 662  
G1, G2, G3, F2, XT16

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 60  
Next 61  
Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
FAN UNIT E1, E2, E3, E5, A21, A43

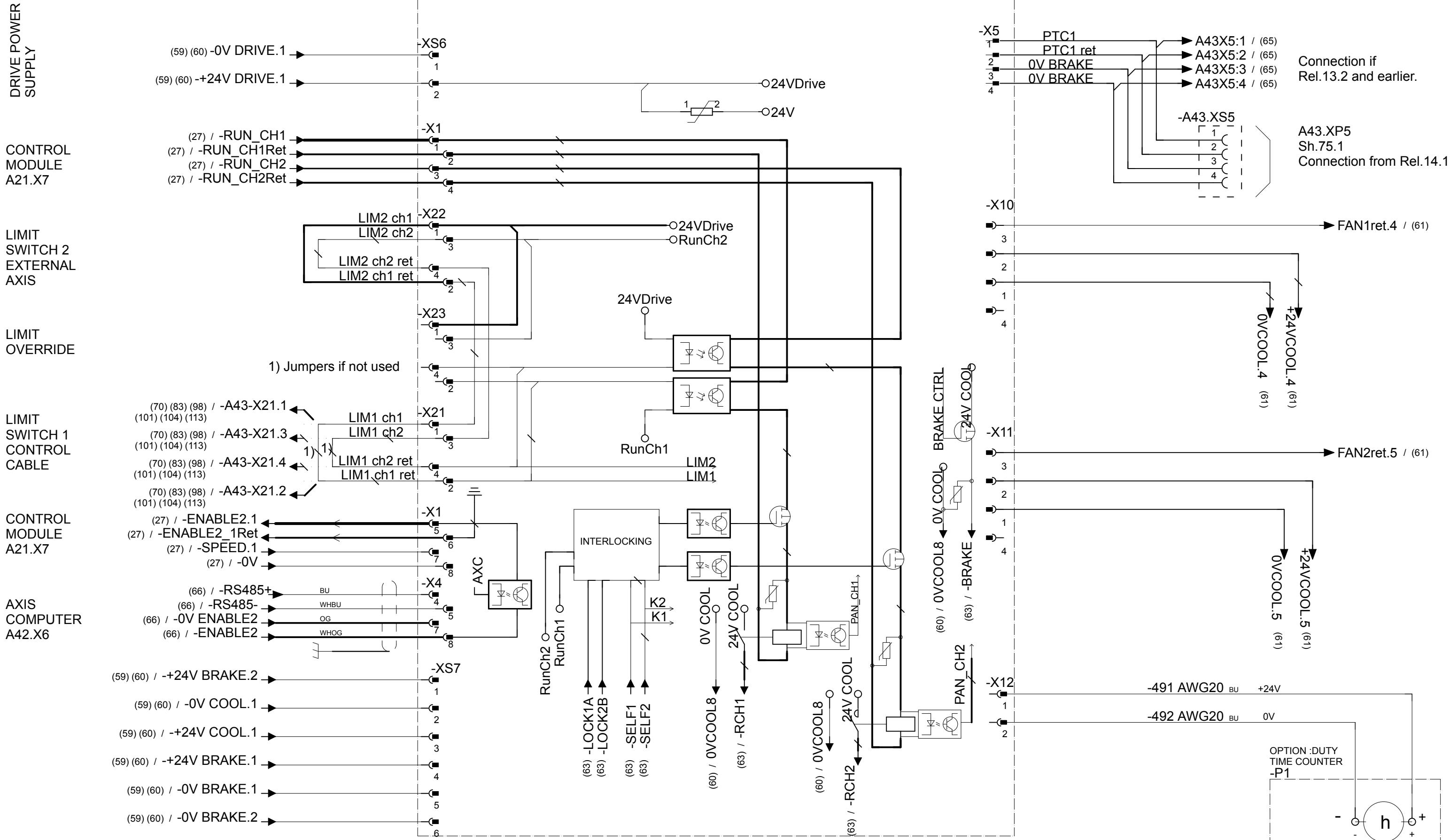
Status:  
Approved

Plant:  
Location:  
Sublocation:  
+ +

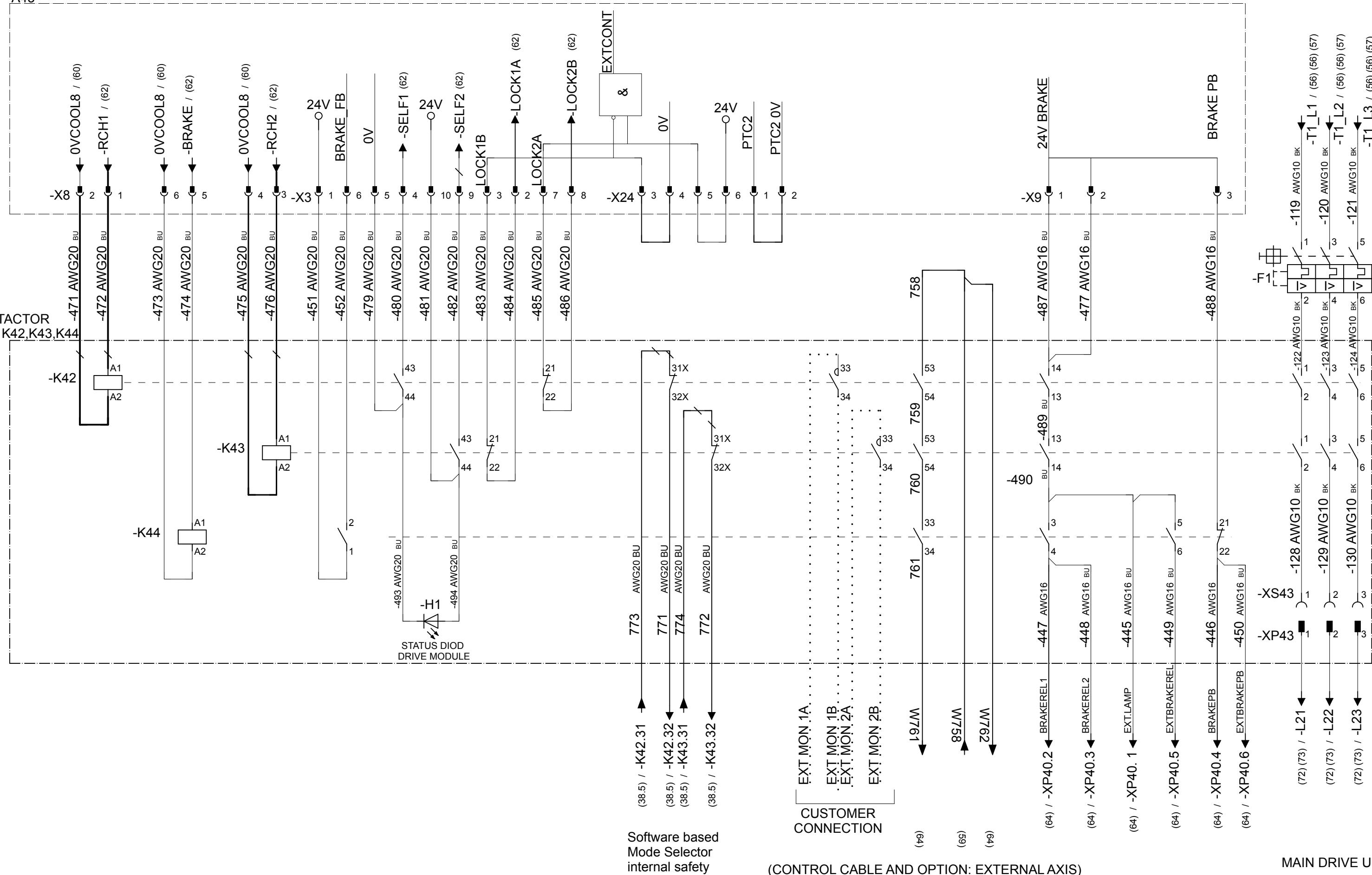
Document no.

Rev. Ind Page 61  
Next 62 Total 156

08



# CONTACTOR BOARD A43



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTACTOR UNIT A43, K42, K43, K44

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

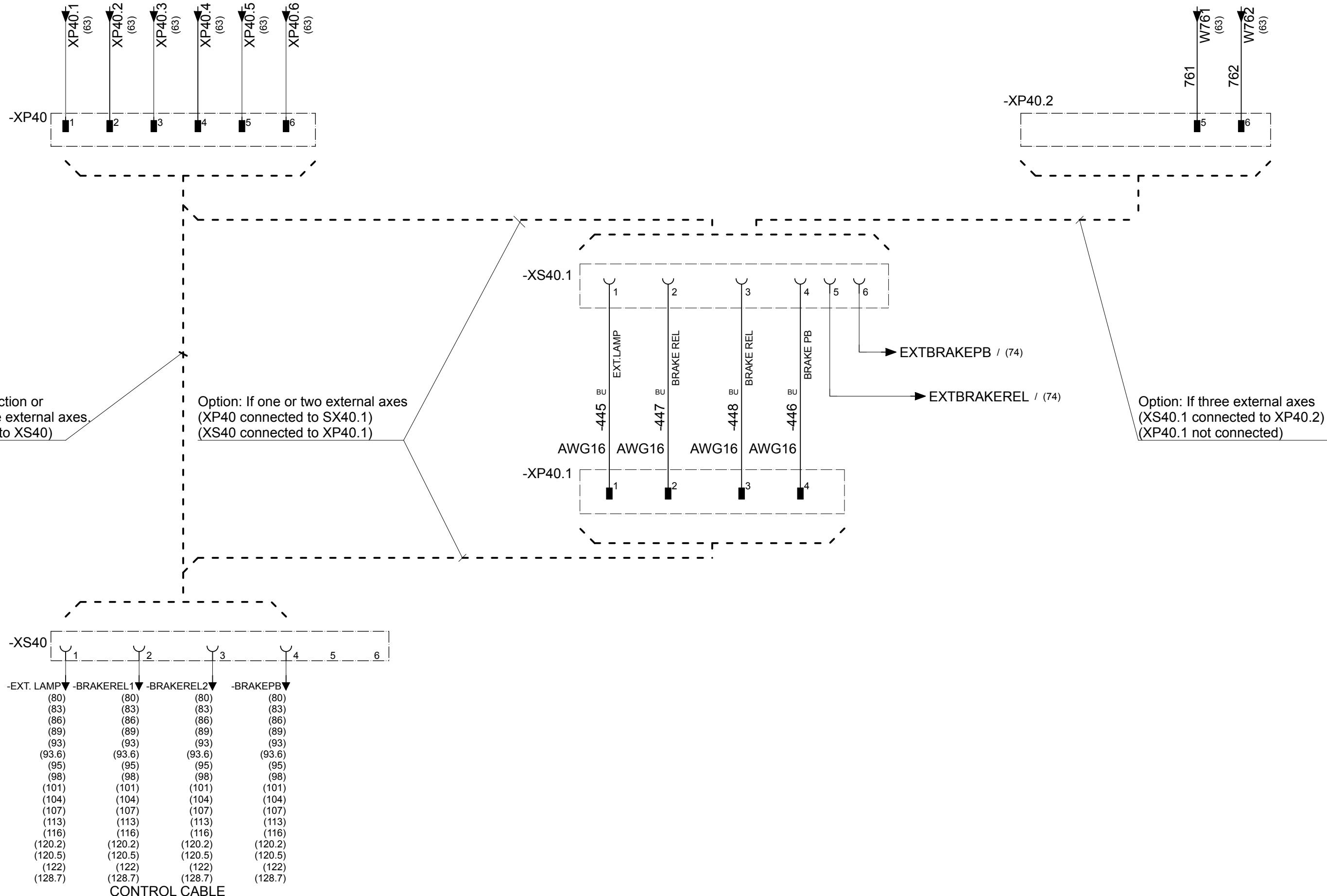
3HAC024480-011

Rev. Ind

Page 63

Next 64

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTACTOR UNIT XS40, XP40  
Only for release 13.2 and earlier

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

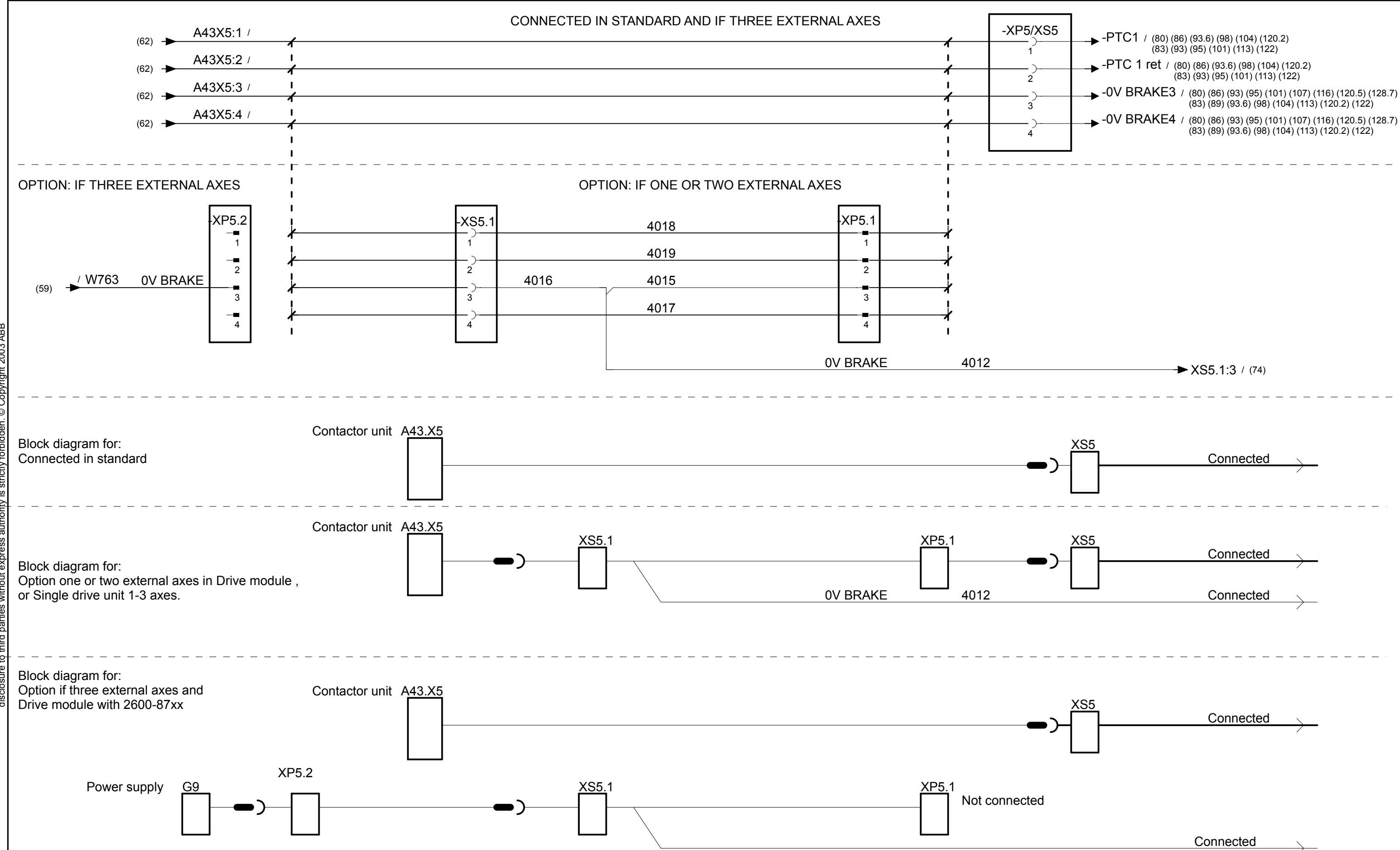
Rev. Ind

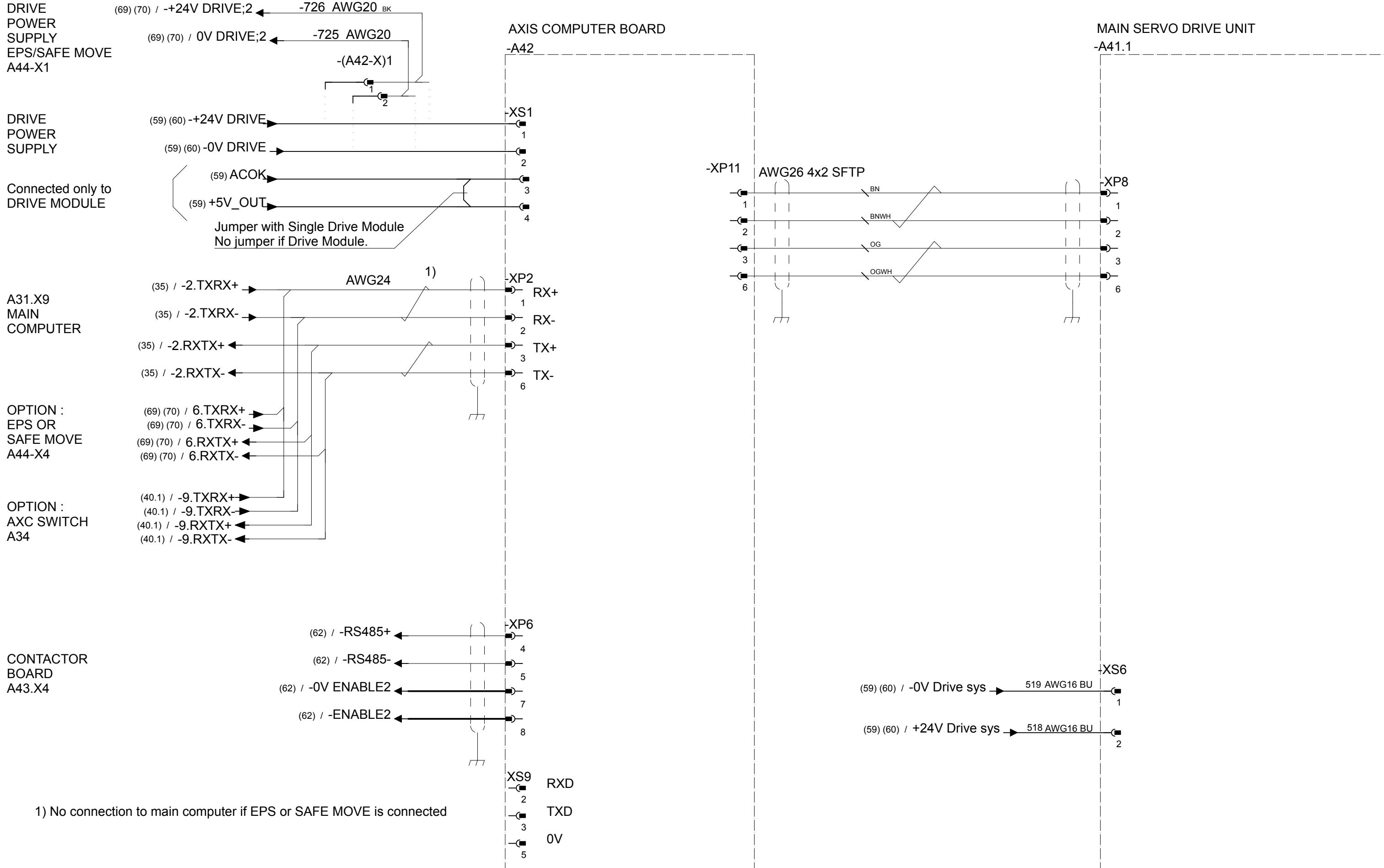
Page 64

3HAC024480-011

08

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
AXIS COMPUTER UNIT A42, A41.1

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

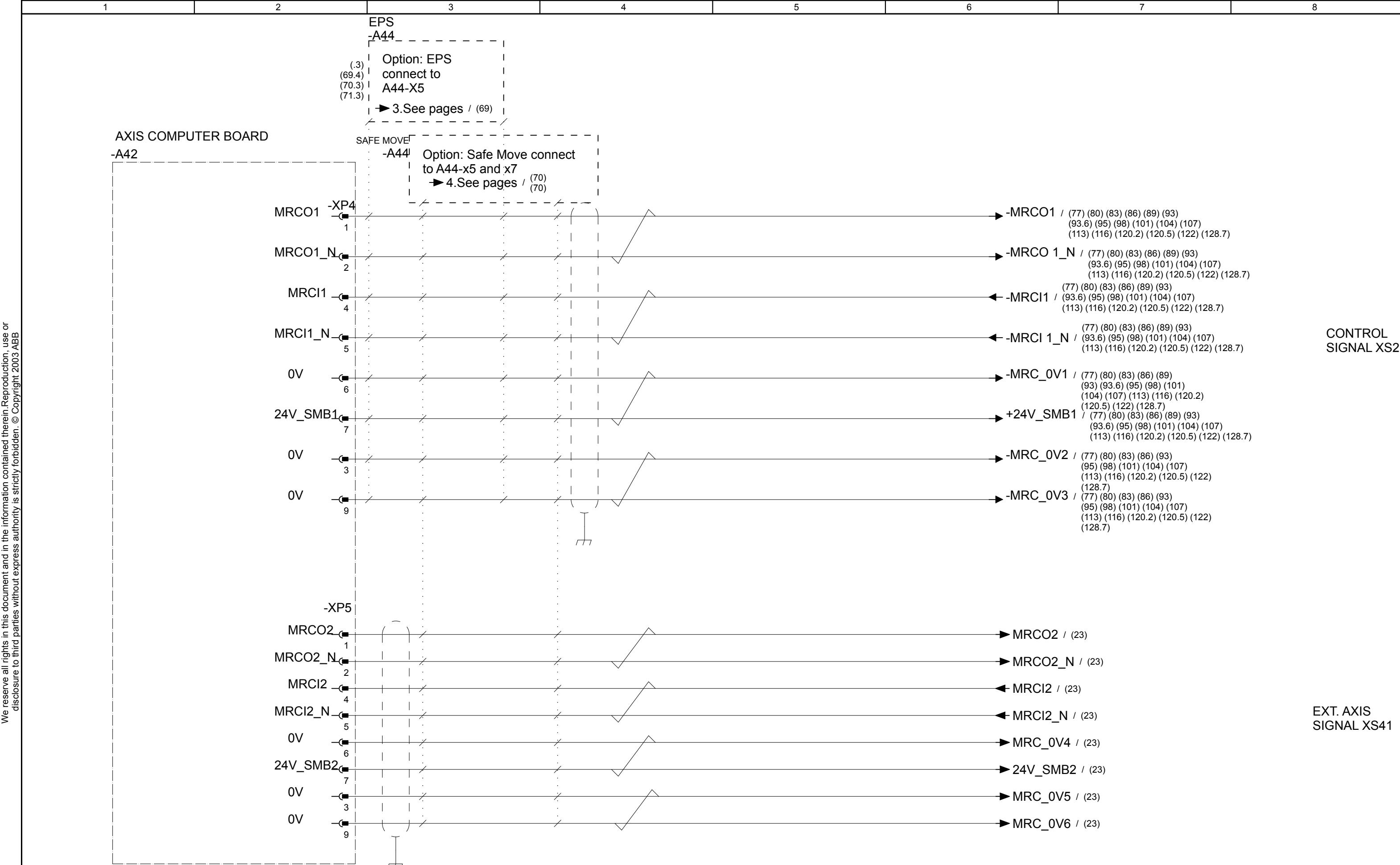
Rev. Ind

Page 66

3HAC024480-011

Next 67

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
AXIS COMPUTER UNIT A42, A44

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

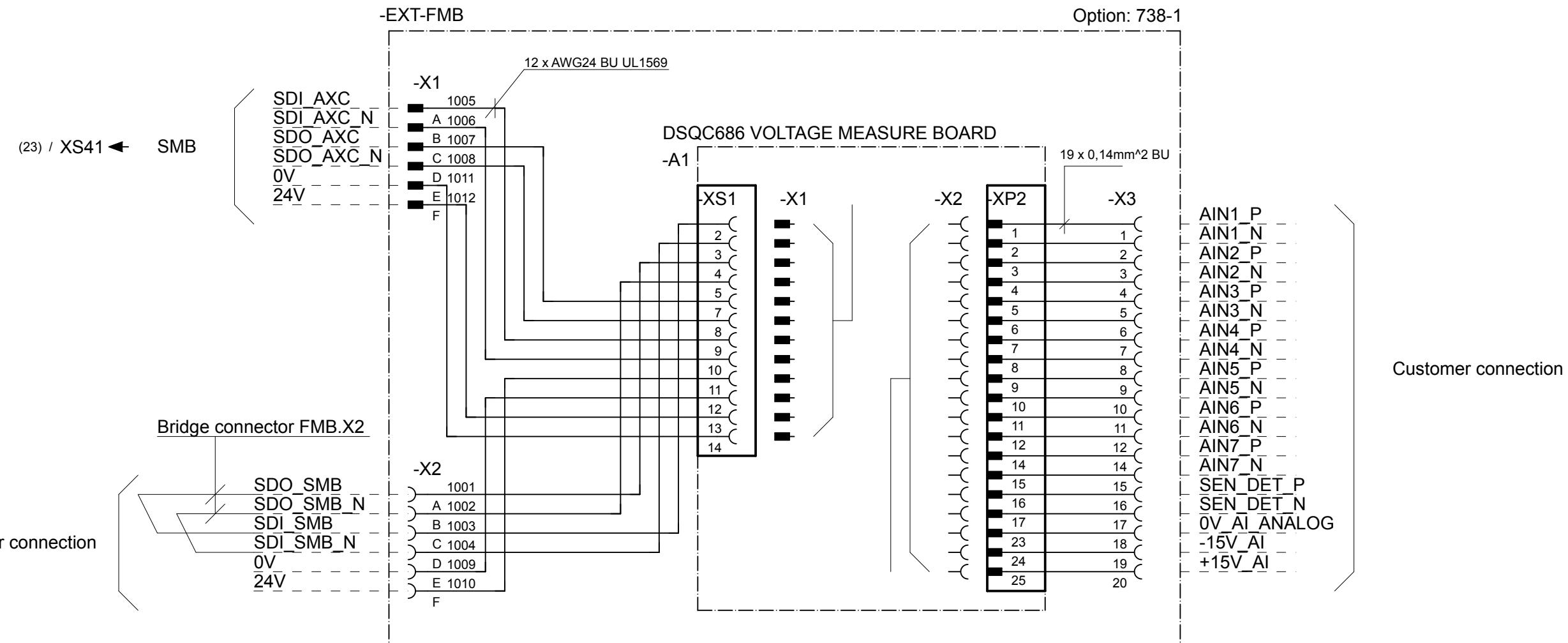
Rev. Ind

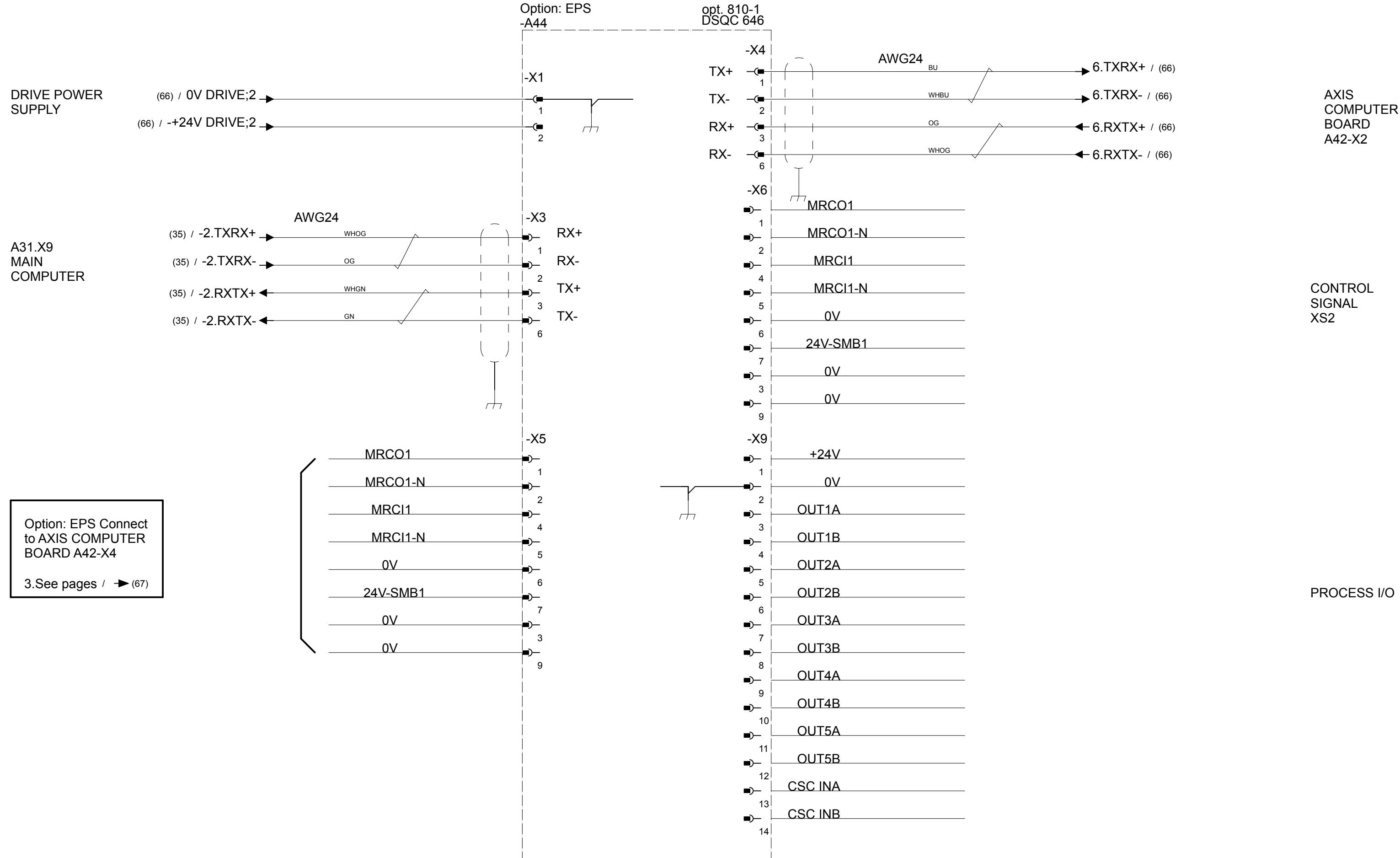
Page 67

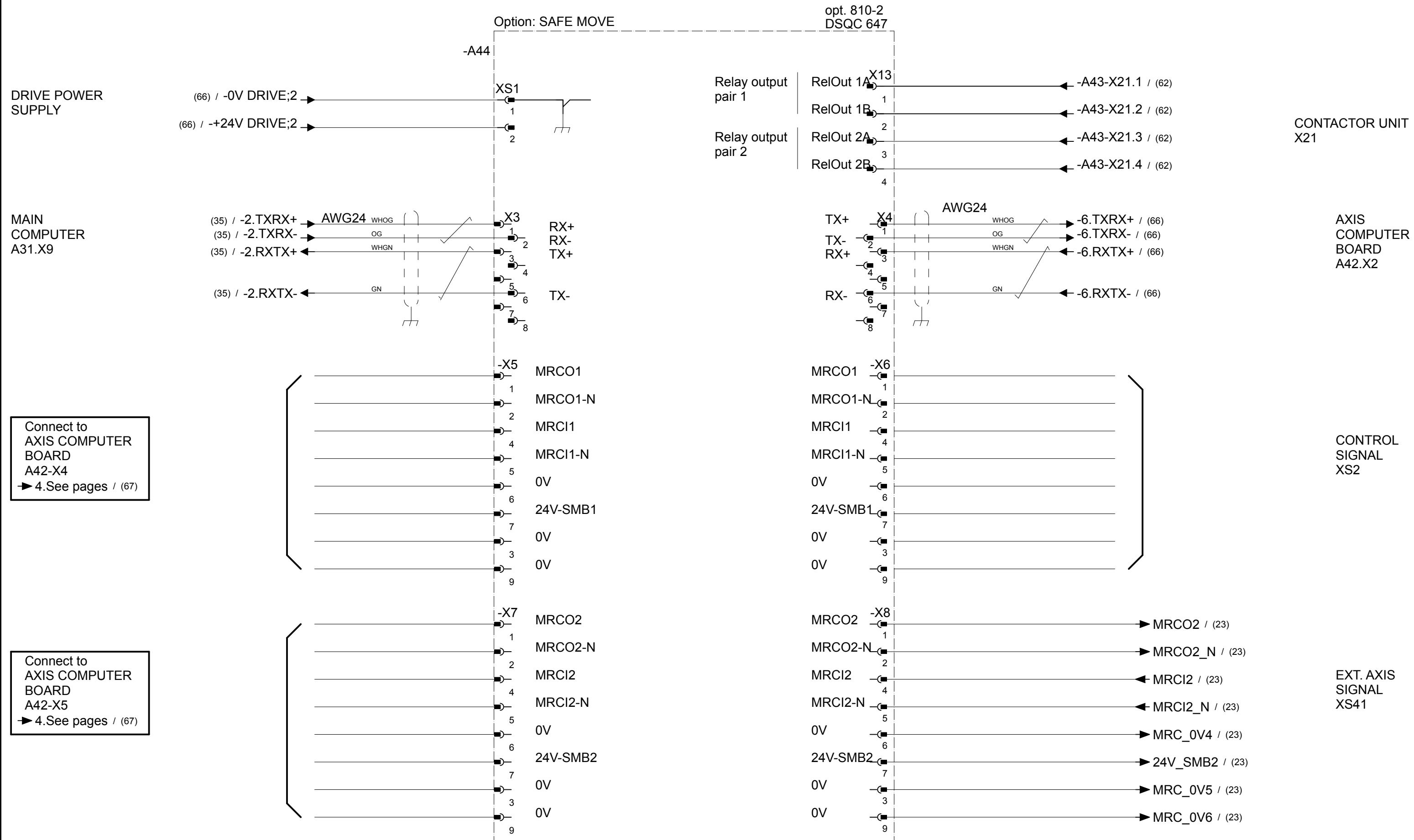
3HAC024480-011

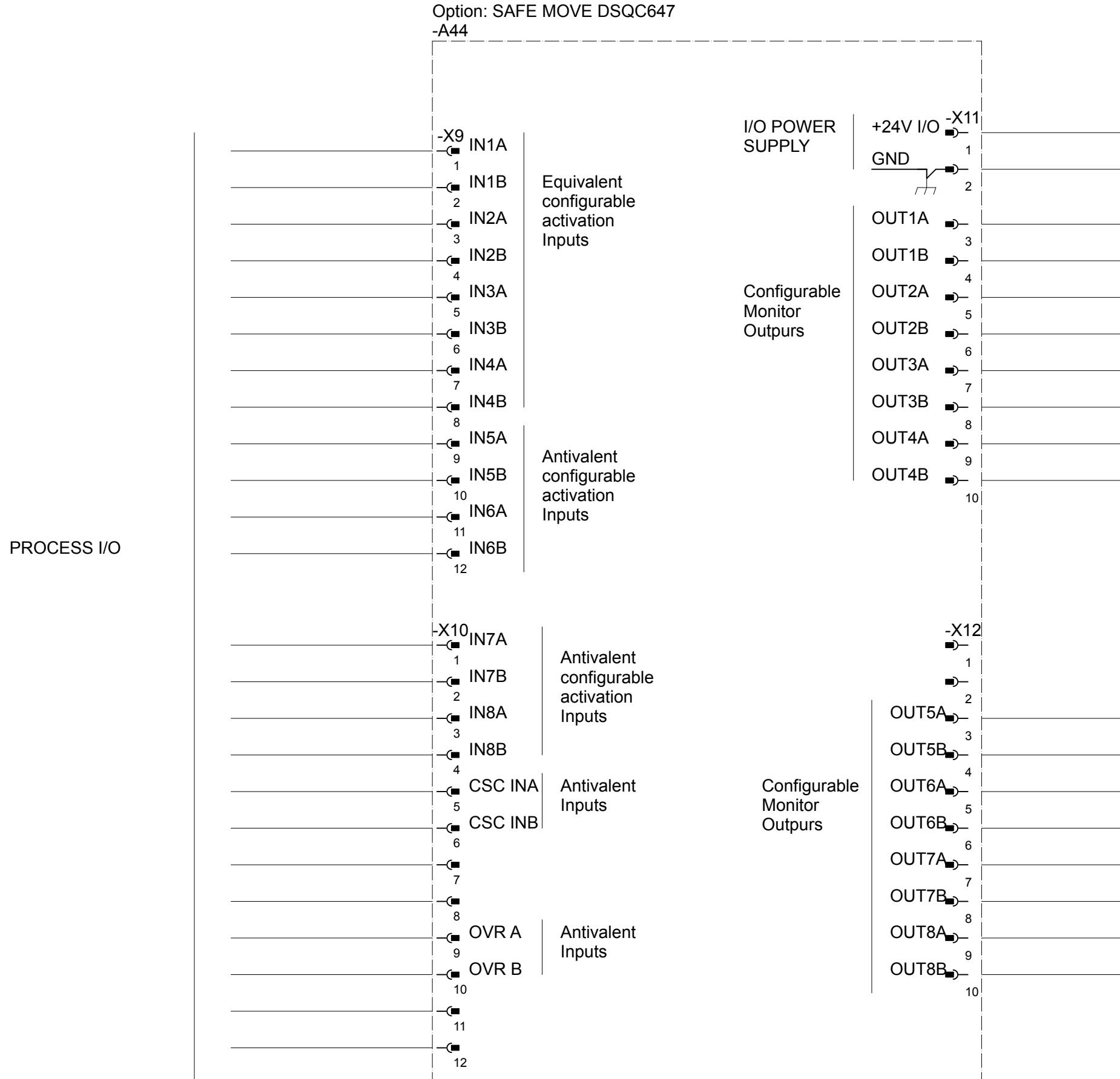
Next 68

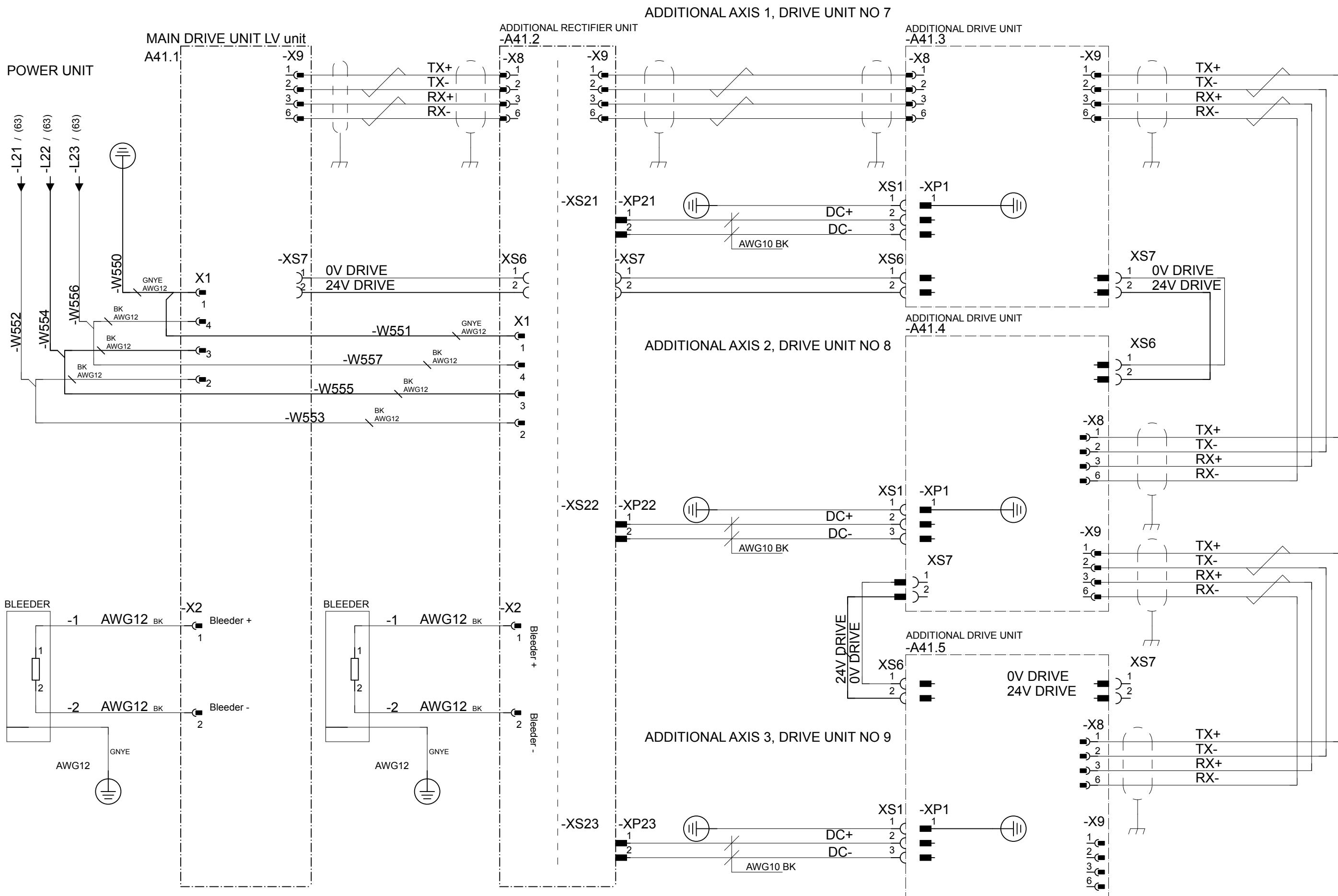
Total 156

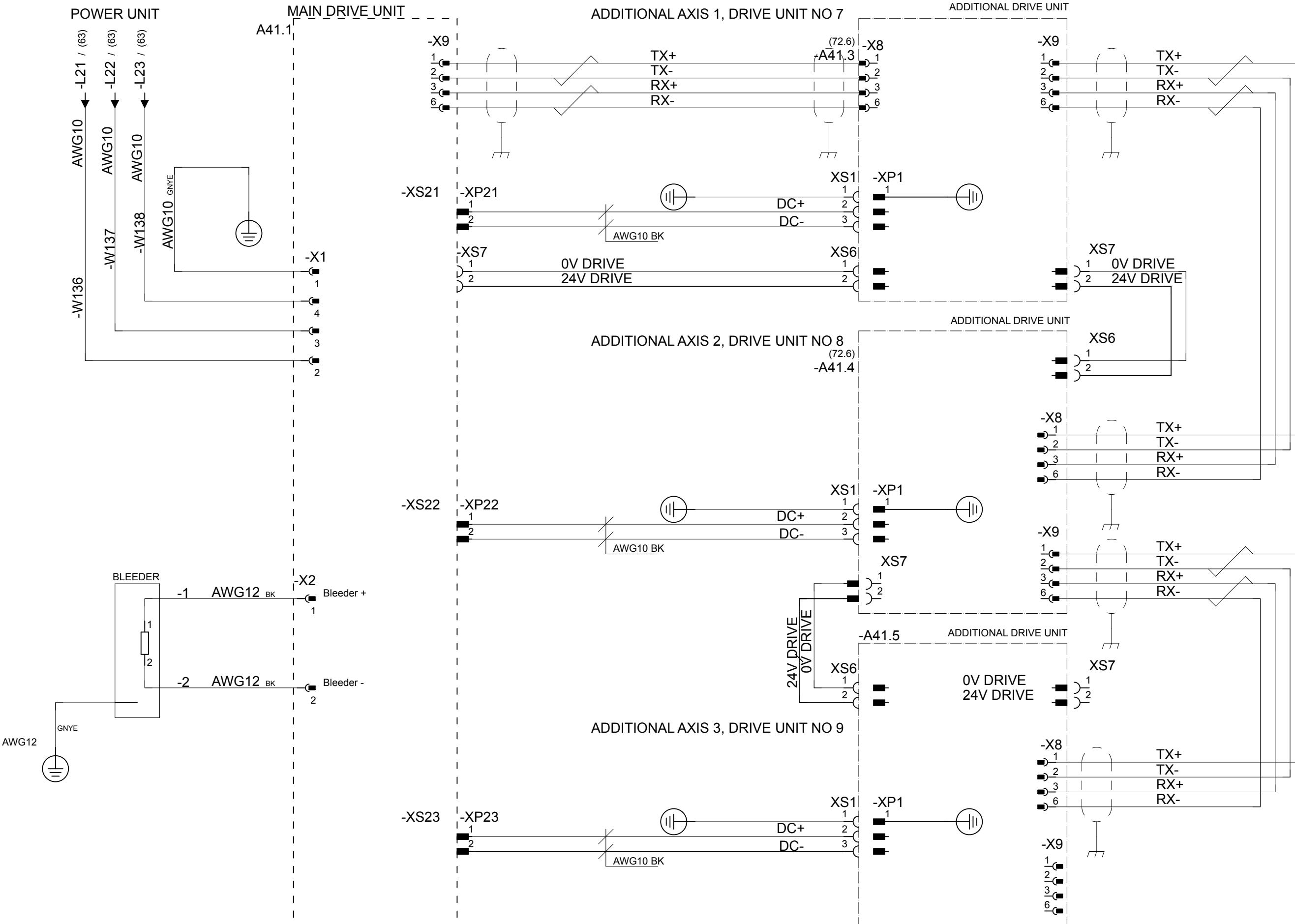












Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
MAIN DRIVE UNIT and ADDITIONAL AXIS 1-3  
for HV A41.1, 3, 4, 5

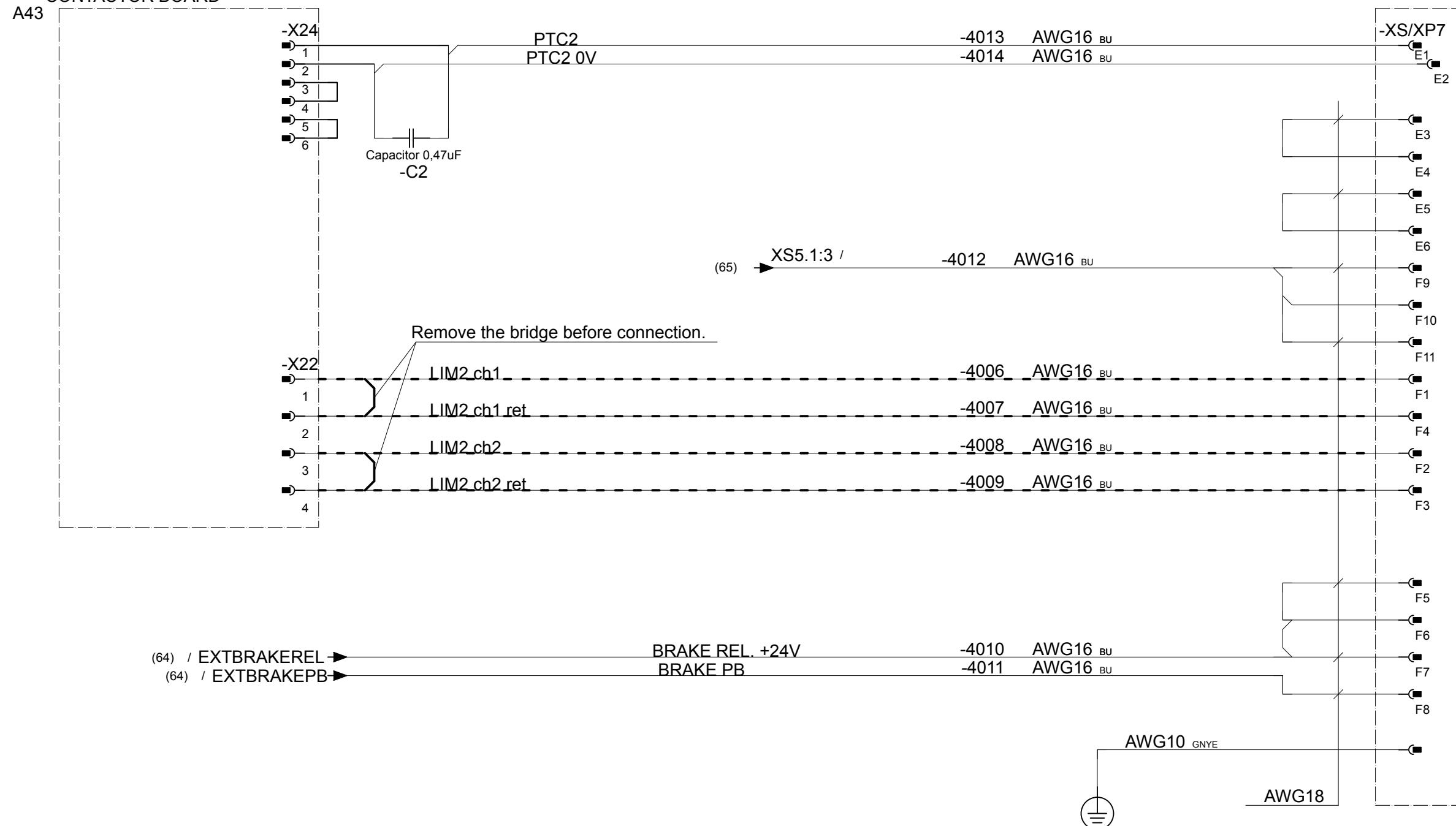
Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 73  
Next 74  
Total 156

CONTACTOR BOARD



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
EXTERNAL AXIS A43, XS/XP7  
Only for release 13.2 and earlier

Status:  
Approved

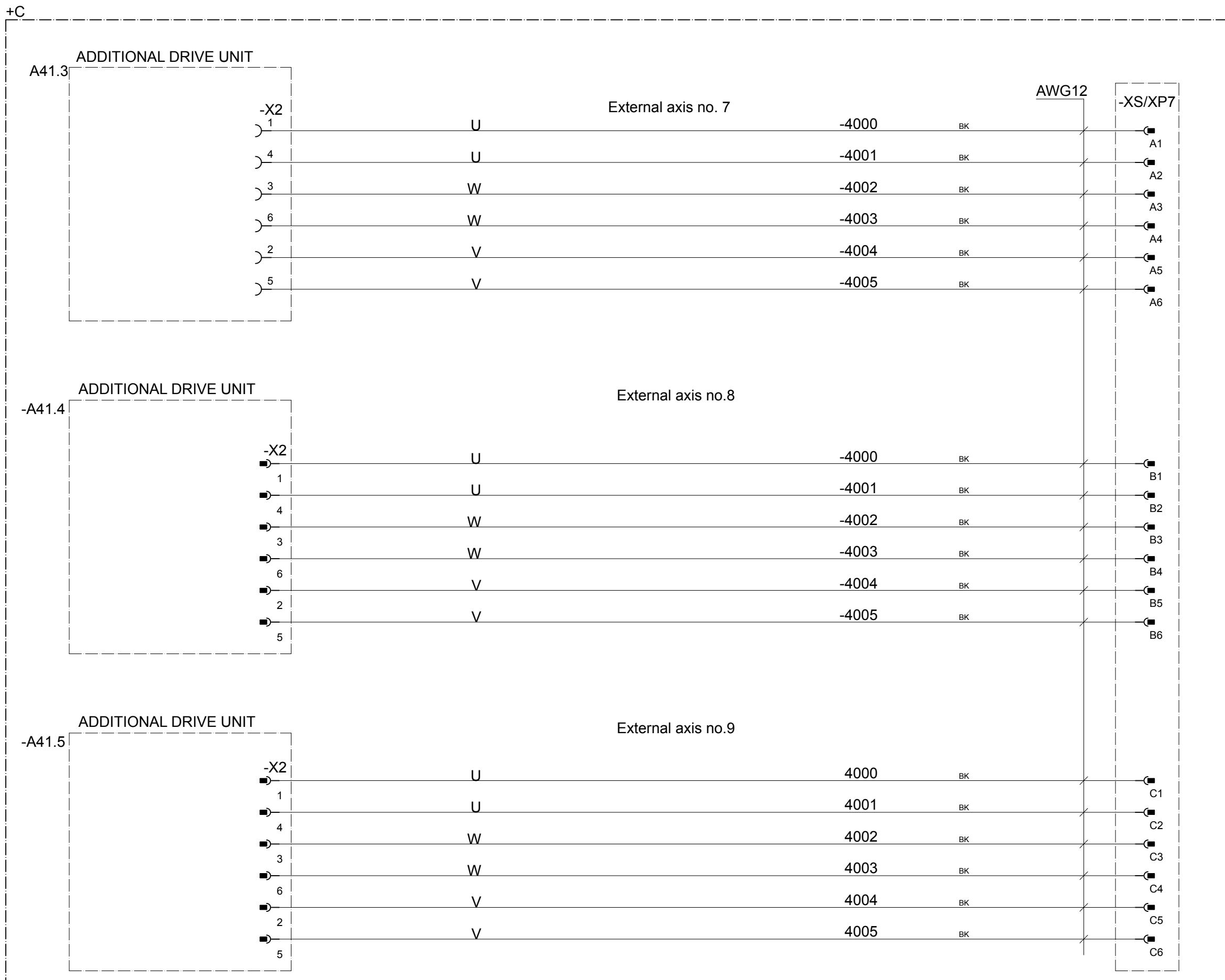
Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 74  
Next 75  
Total 156

3HAC024480-011

08



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
EXTERNAL AXIS no 7, 8, 9 A41.3 .4 .5 , XS/XP7

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

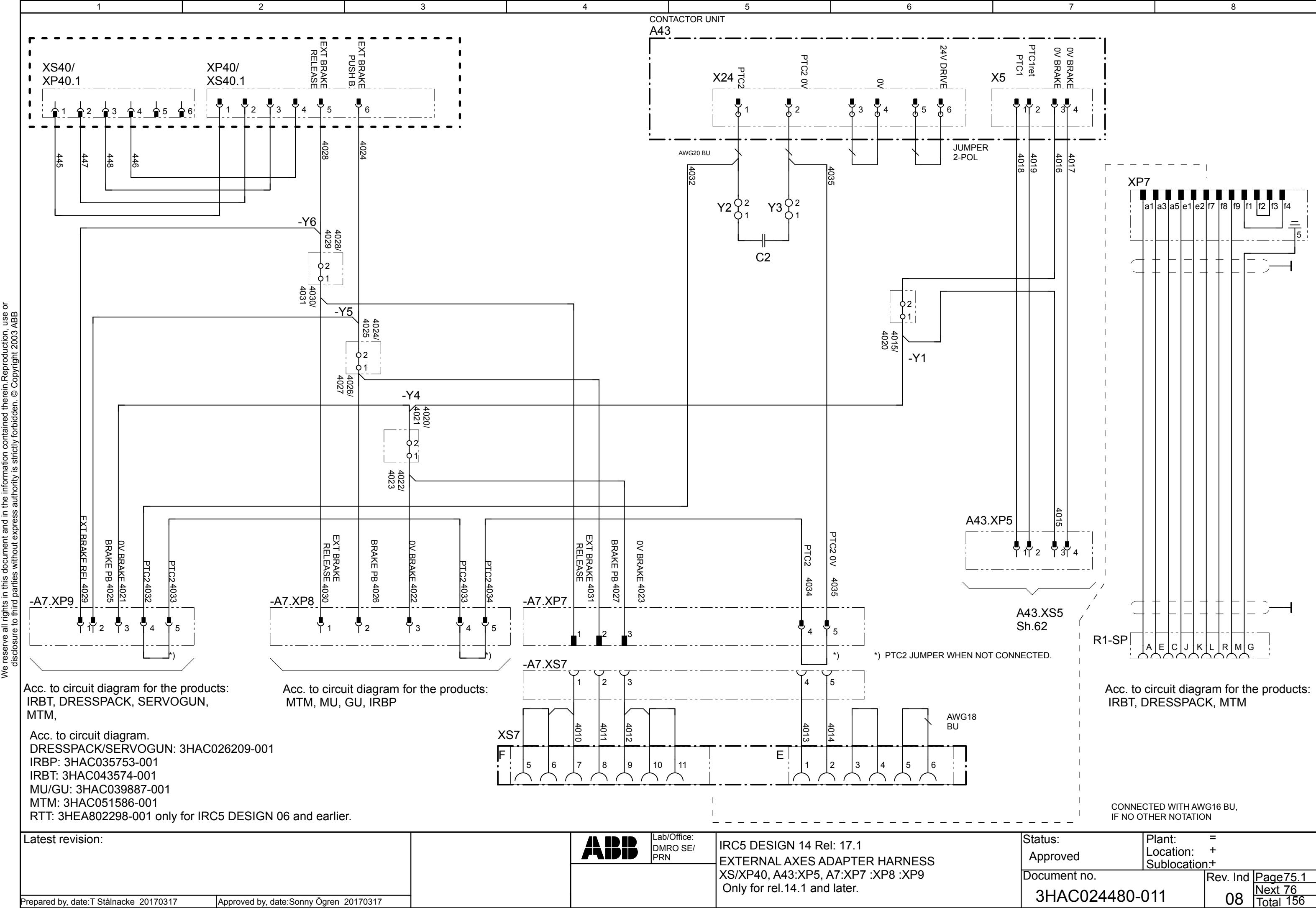
Rev. Ind

Page 75

3HAC024480-011

Next 75.1

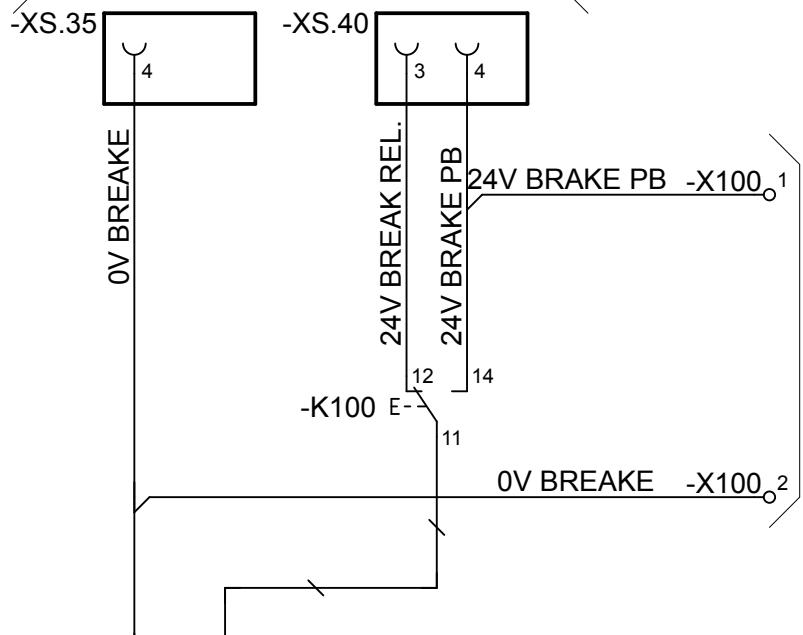
Total 156



MAIN SERVO DRIVE UNIT  
A41.1

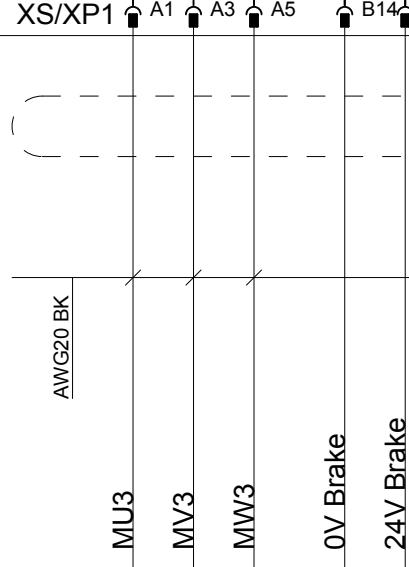
This is not any available option.  
This is only examples how to connect  
the break release button for the IRB120  
internal or external the cabinet.

Connection to the break release button,  
with power from the cabinet.

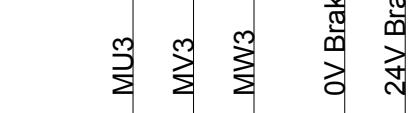
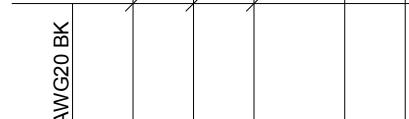


Connection to the break release button,  
with power outside the cabinet.

Cross ref  
XS1/XP1 / (23)



FLOOR CABLE



According to Manipulator circuit diagram 3HAC031408-003

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 120

Status:  
Approved

Plant:  
Location:  
Sublocation:

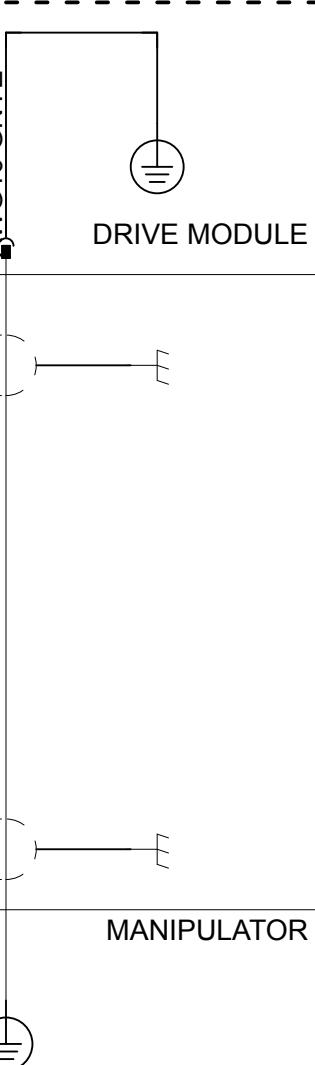
Document no.

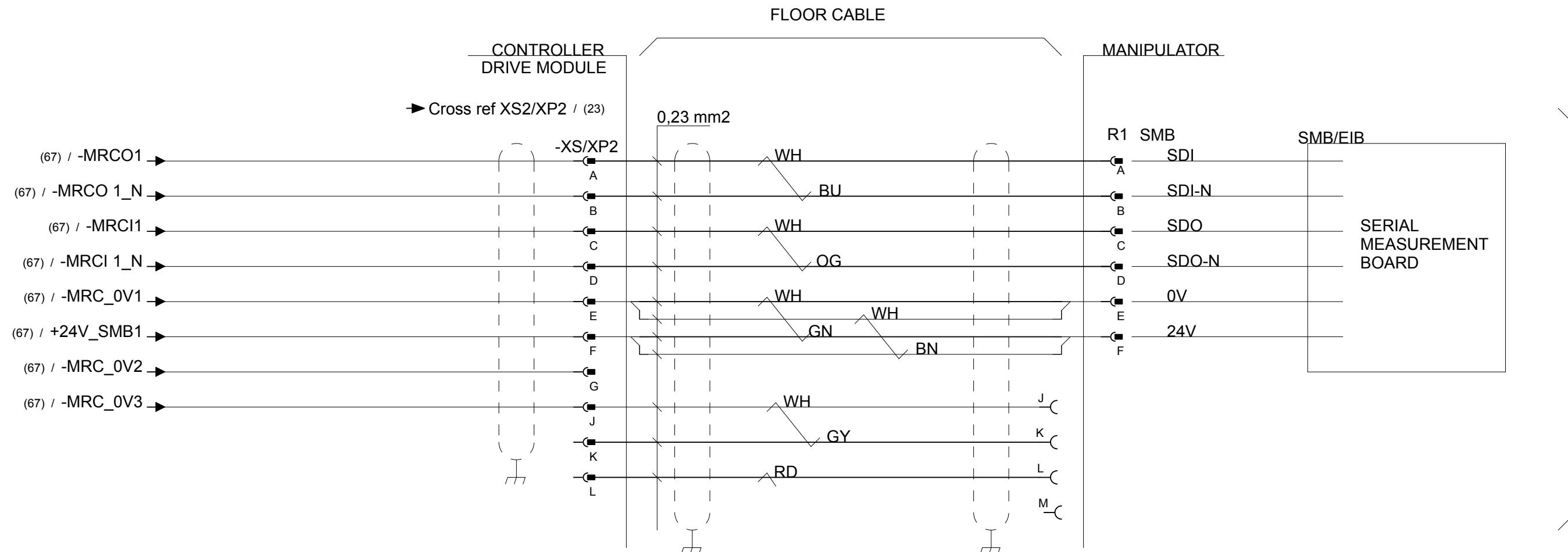
Rev. Ind

Page 76

Next 77

Total 156





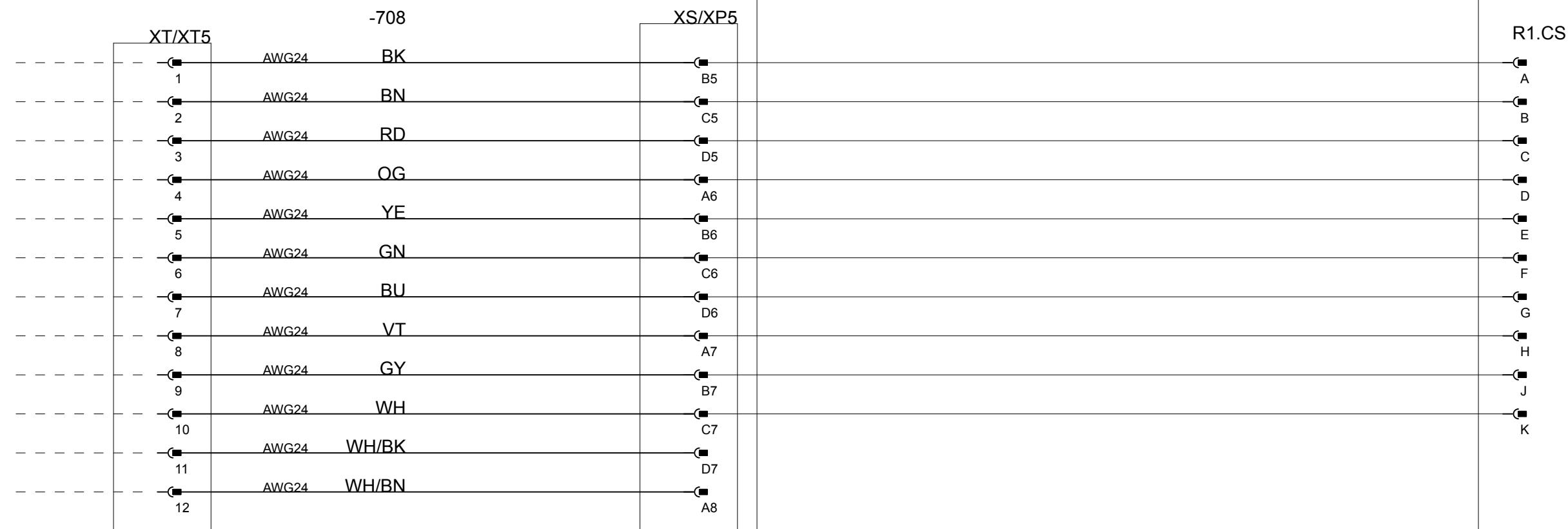
According to Manipulator circuit diagram 3HAC031408-003

Customer Connection

CONTROLLER

FLOOR CABLE supplied by the customer

MANIPULATOR



According to Manipulator circuit diagram 3HAC031408-003

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER SIGNALS  
IRB 120

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

Page 78

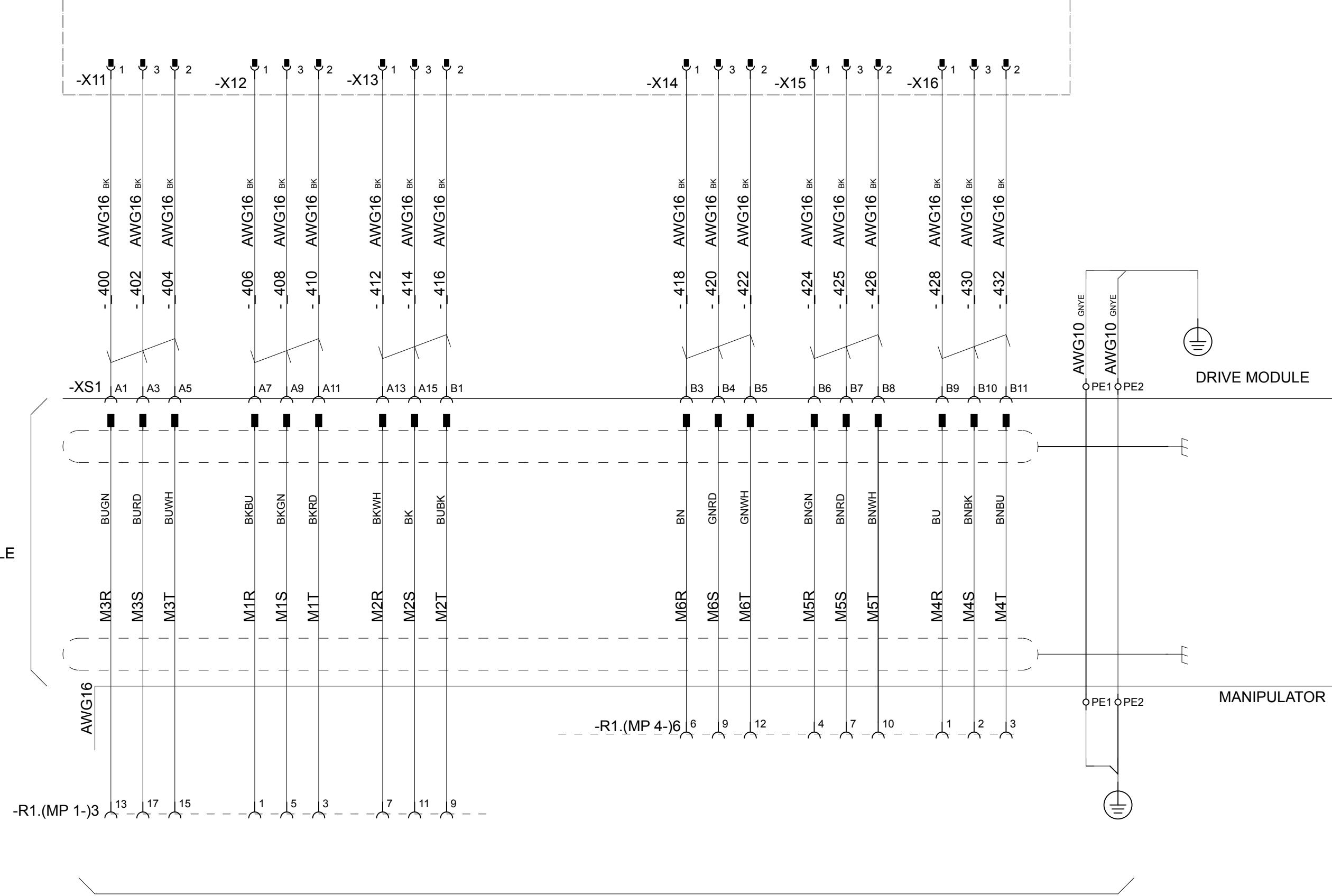
3HAC024480-011

08

Total 156

### MAIN SERVO DRIVE UNIT

-A41.1



According to Manipulator circuit diagram 3HAC6816-3

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 140

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

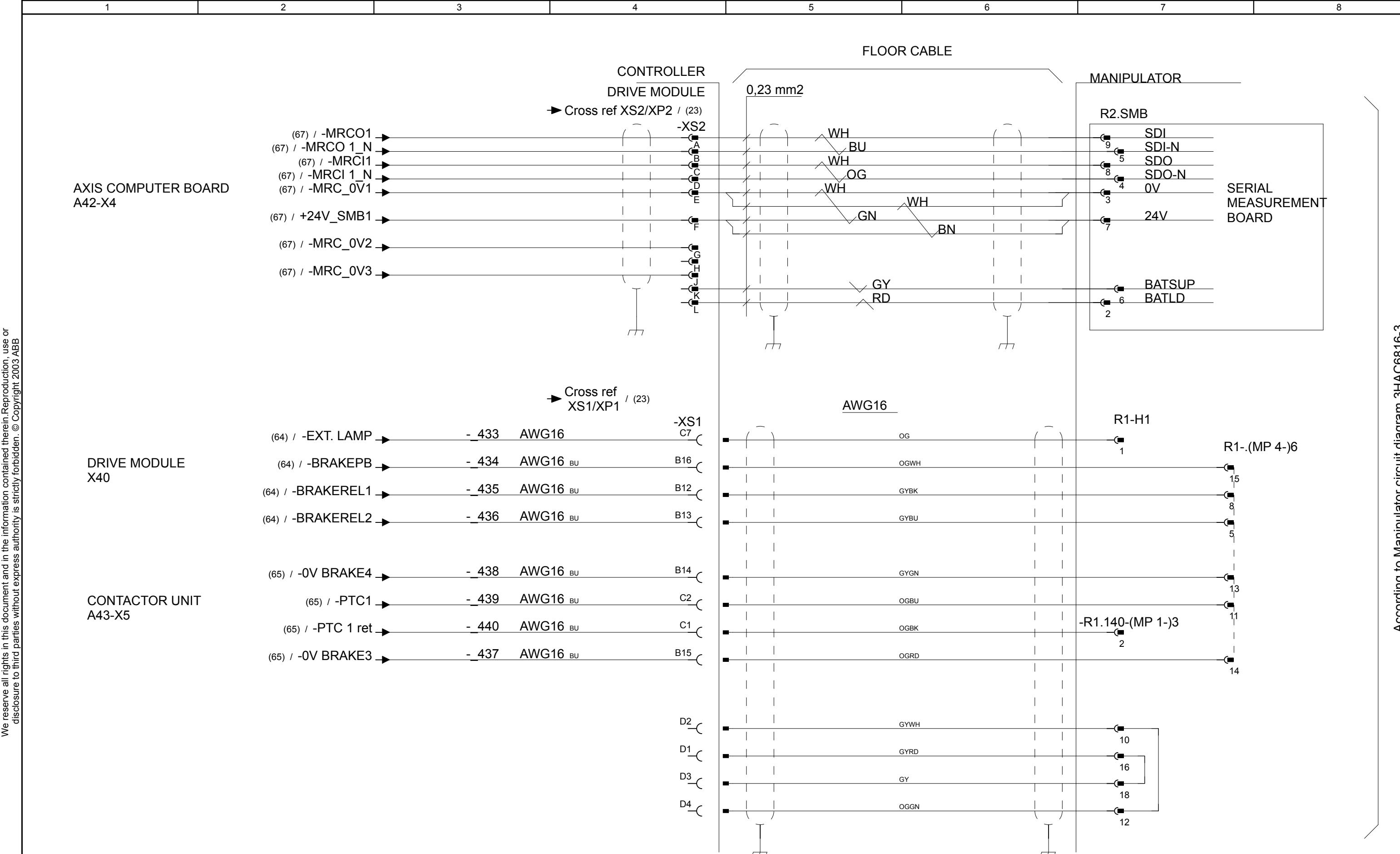
Rev. Ind

Page 79

3HAC024480-011

08

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 140

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

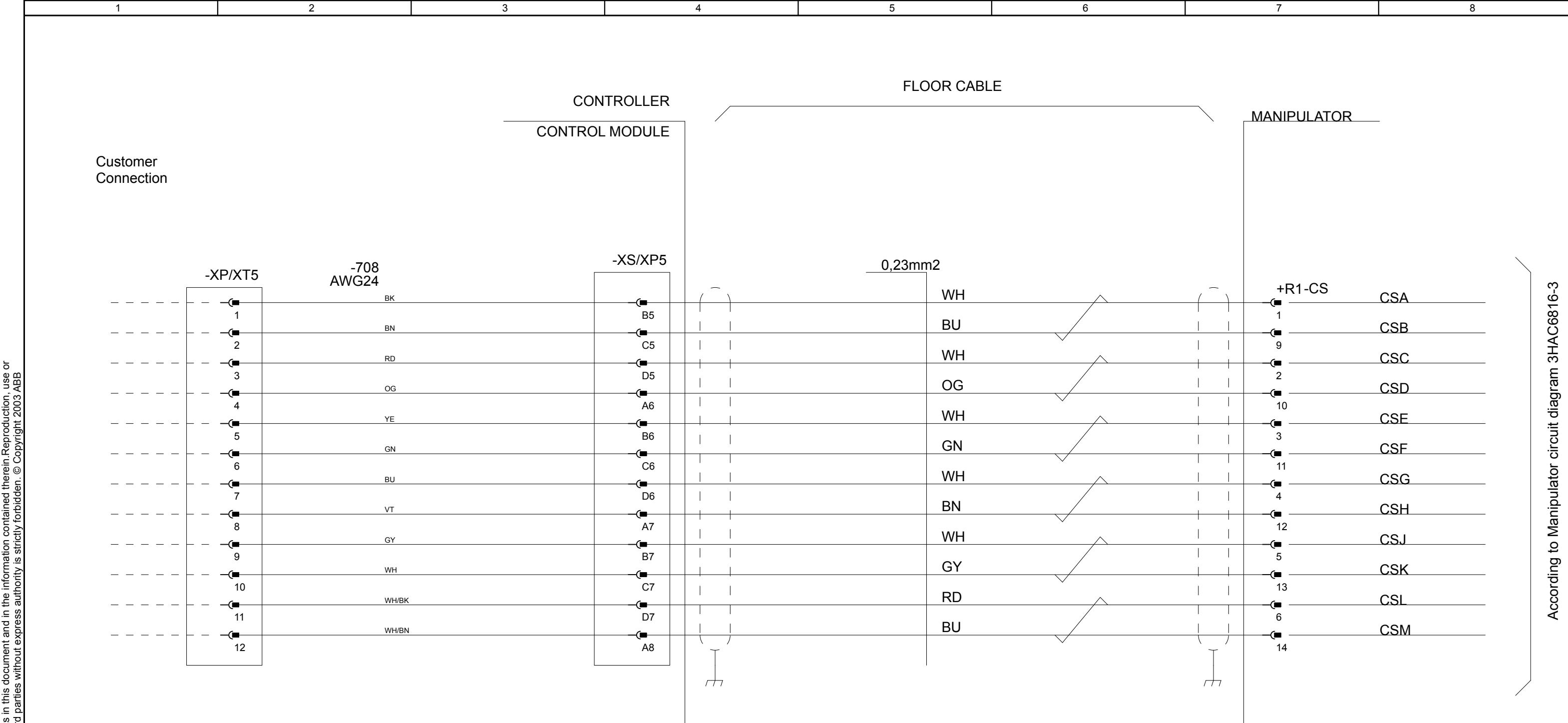
Rev. Ind

Page 80

3HAC024480-011

Next 81

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER SIGNAL  
SINGLE CABINET  
IRB 140

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

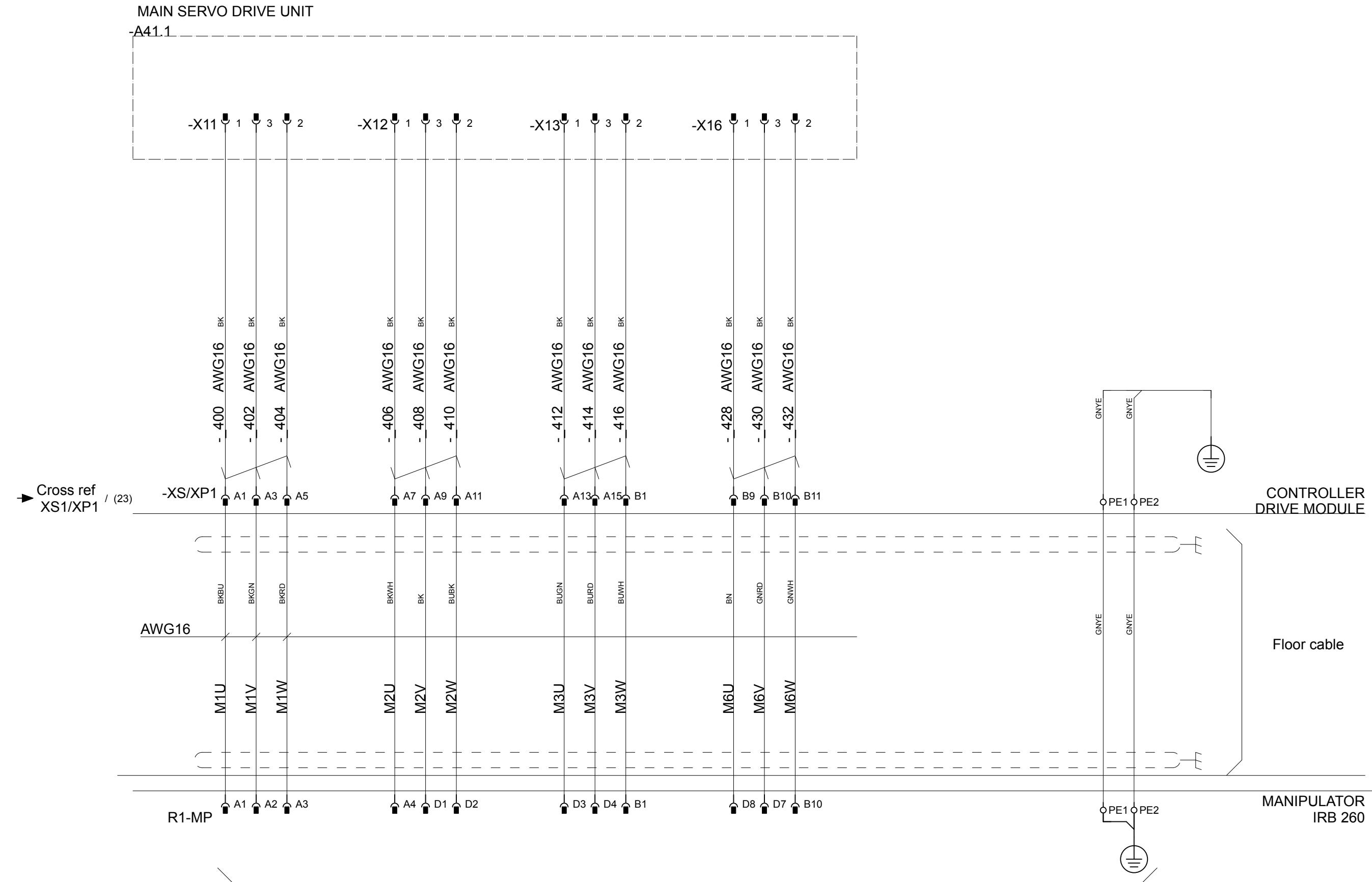
Rev. Ind

Page 81

3HAC024480-011

Next 82

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE UNIT  
IRB 260

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

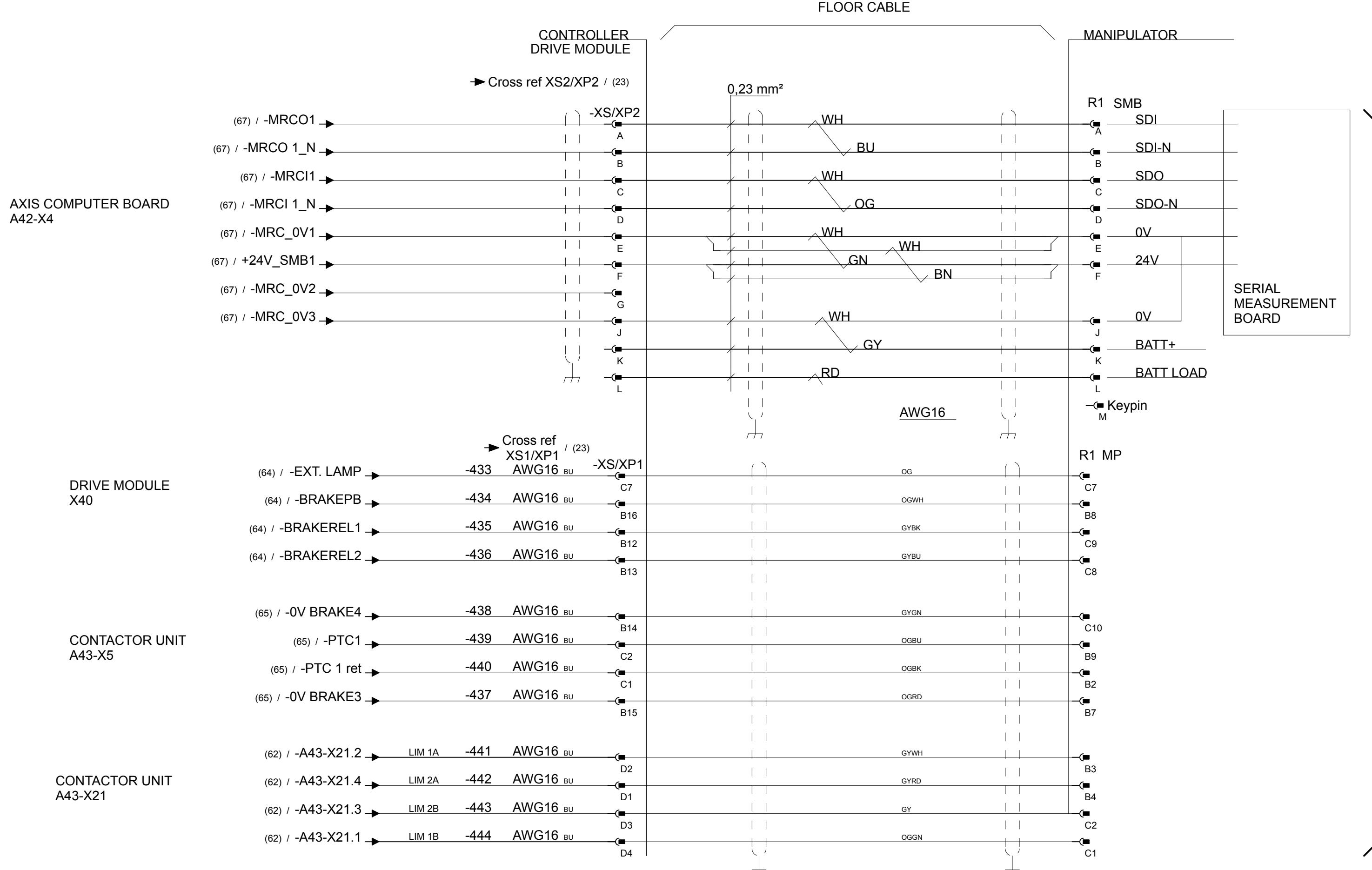
Document no.

Rev. Ind Page 82

3HAC024480-011

Next 83

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 260

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

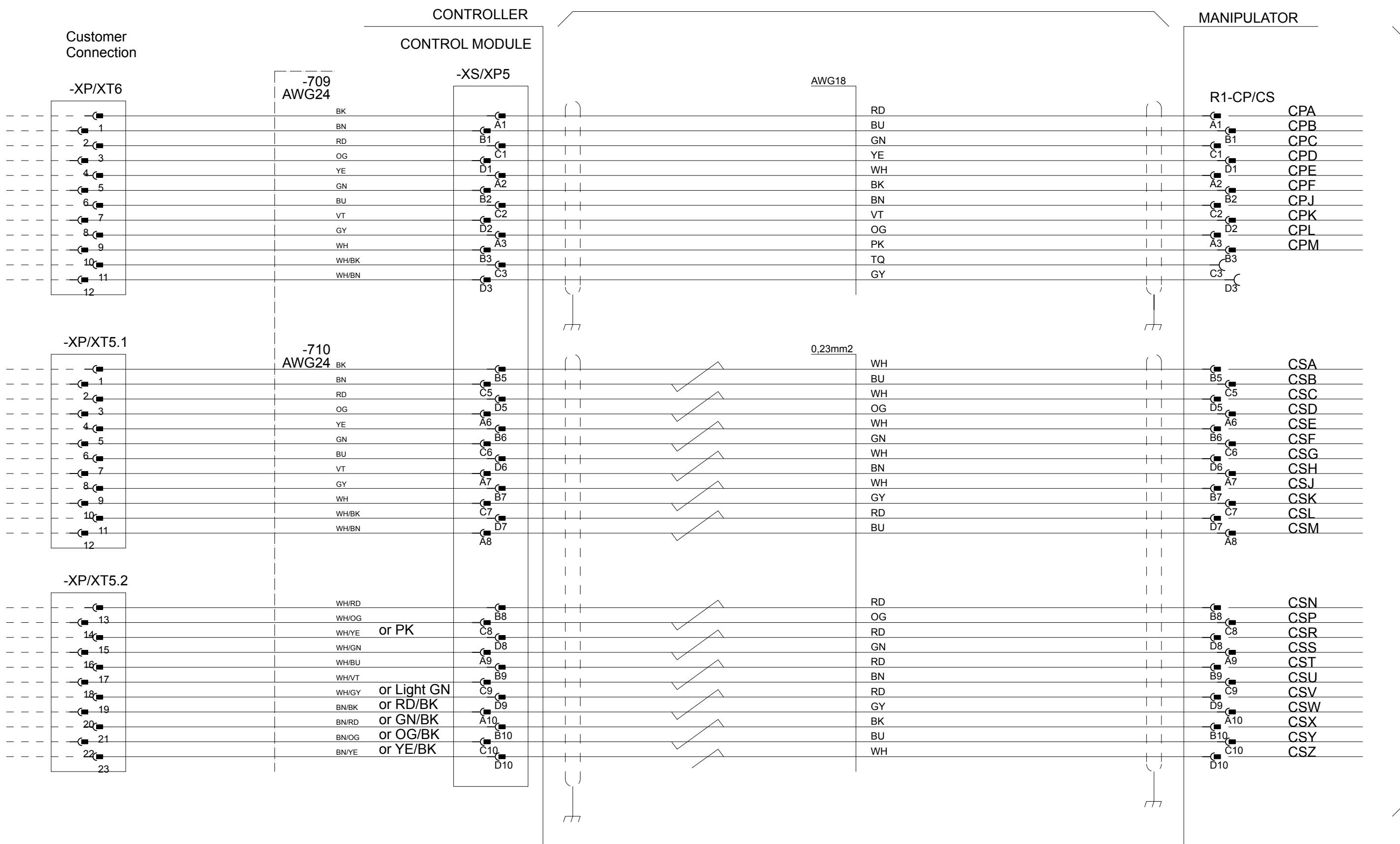
Page 83

3HAC024480-011

08

Total 156

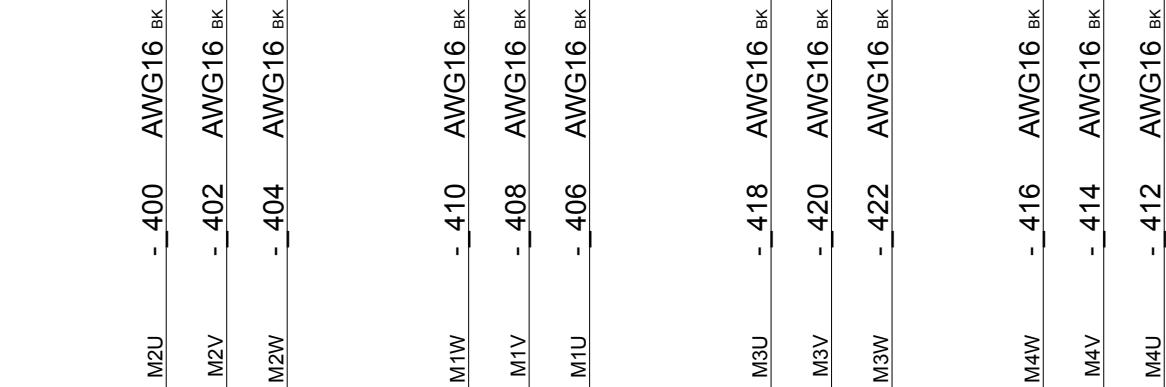
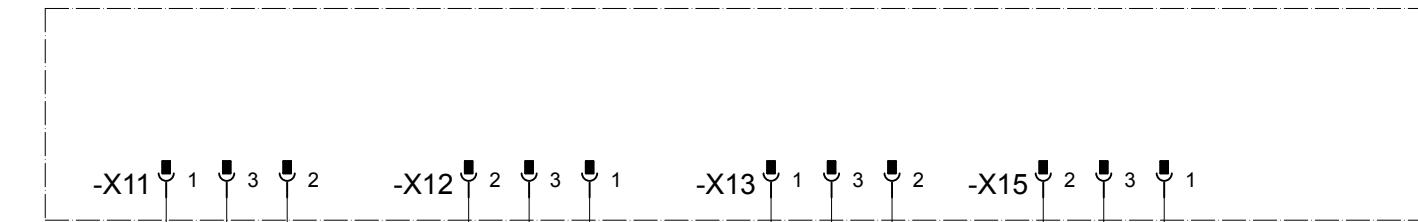
## Floor cable



According to Manipulator circuit diagram 3HAC025611-001

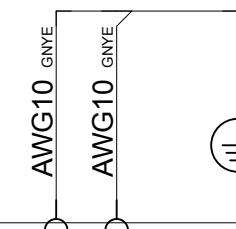
MAIN SERVO DRIVE UNIT

-A41.1



According to Manipulator circuit diagram 3HAC028647-009

-XS1 A11 A9 A7 A5 B3 B4 B10 B9 B8 A13 A15 B1



DRIVE MODULE

FLOOR CABLE

MANIPULATOR

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE UNITS  
IRB 360

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

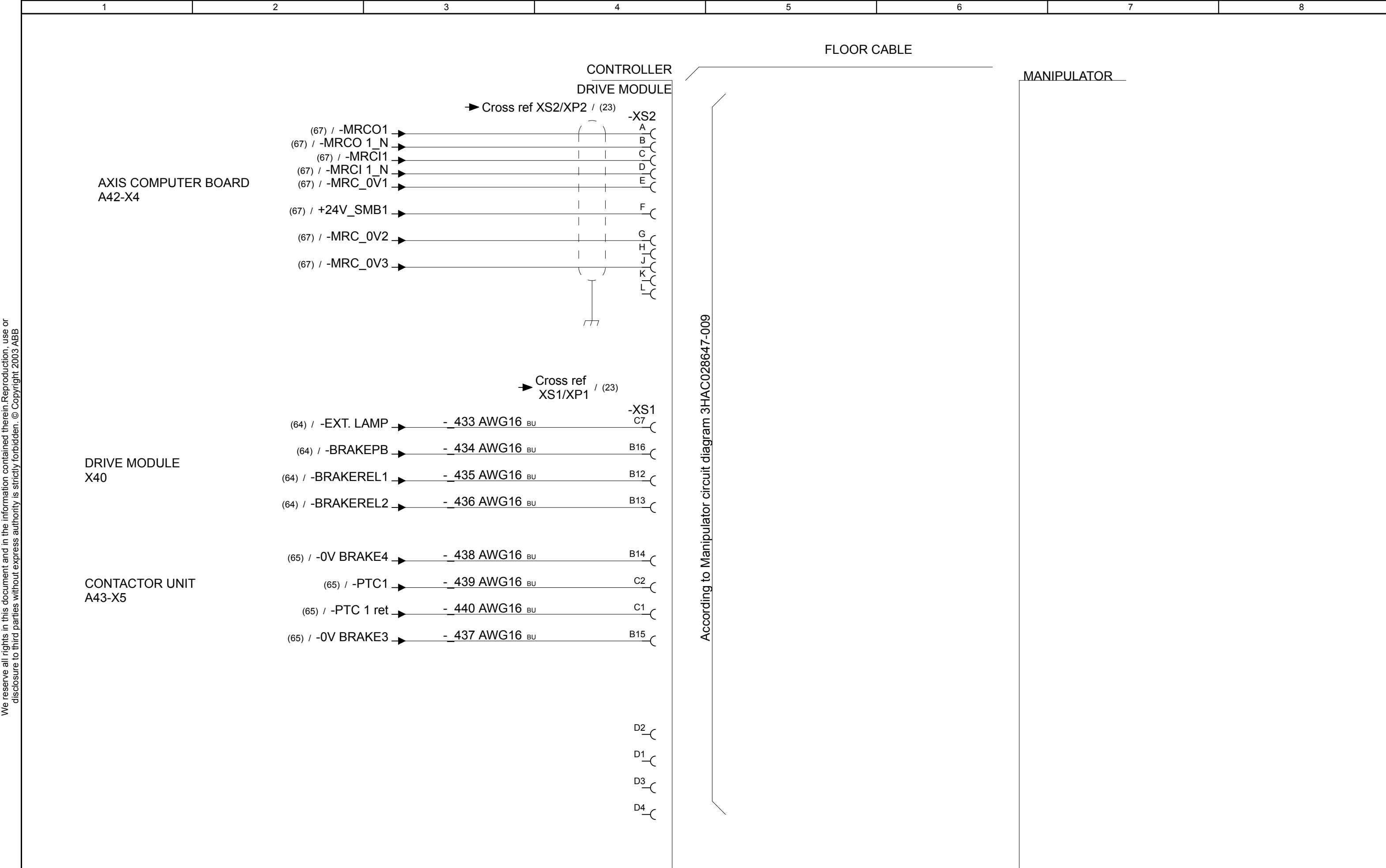
Rev. Ind

Page 85

3HAC024480-011

Next 86

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 360

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

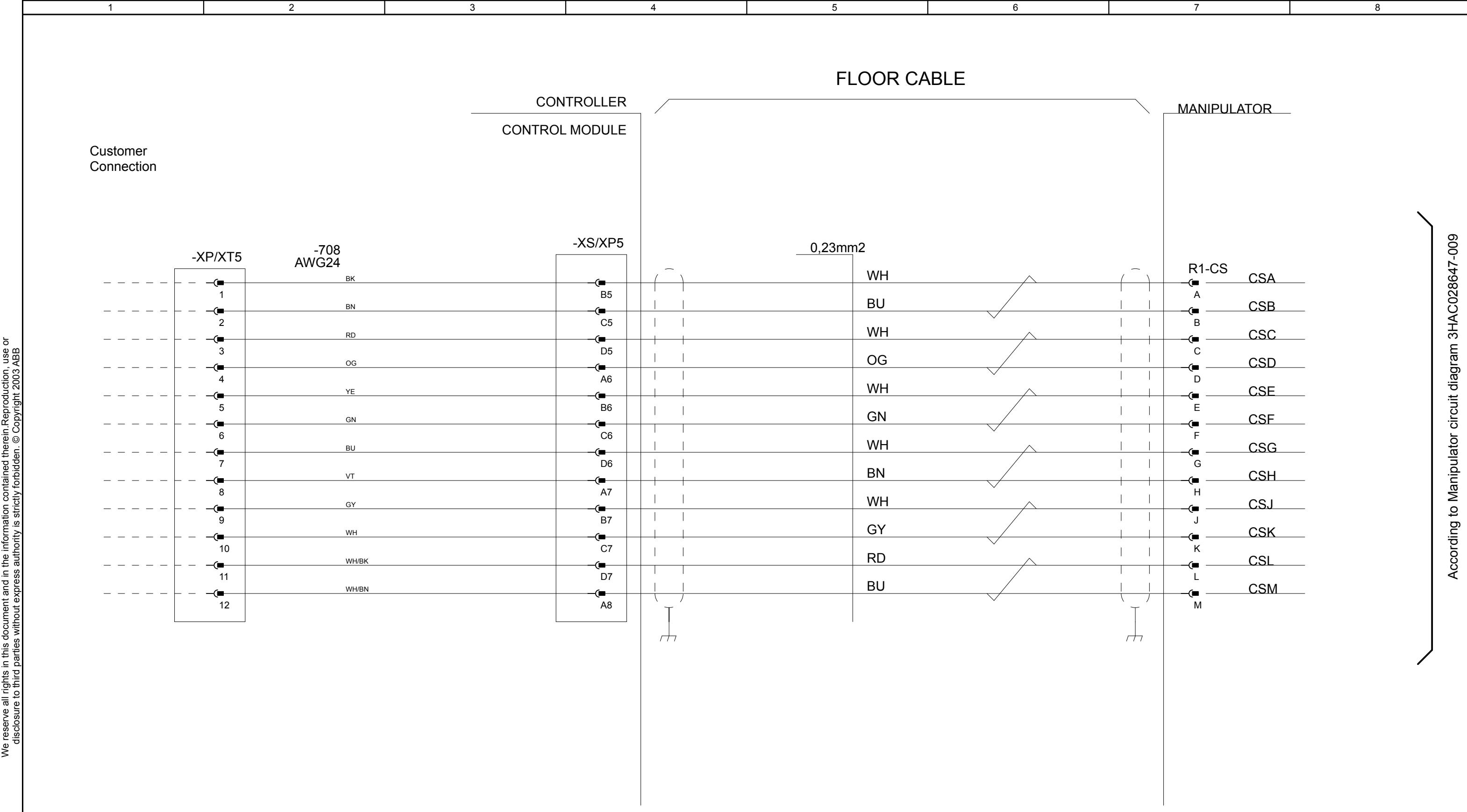
Rev. Ind

Page 86

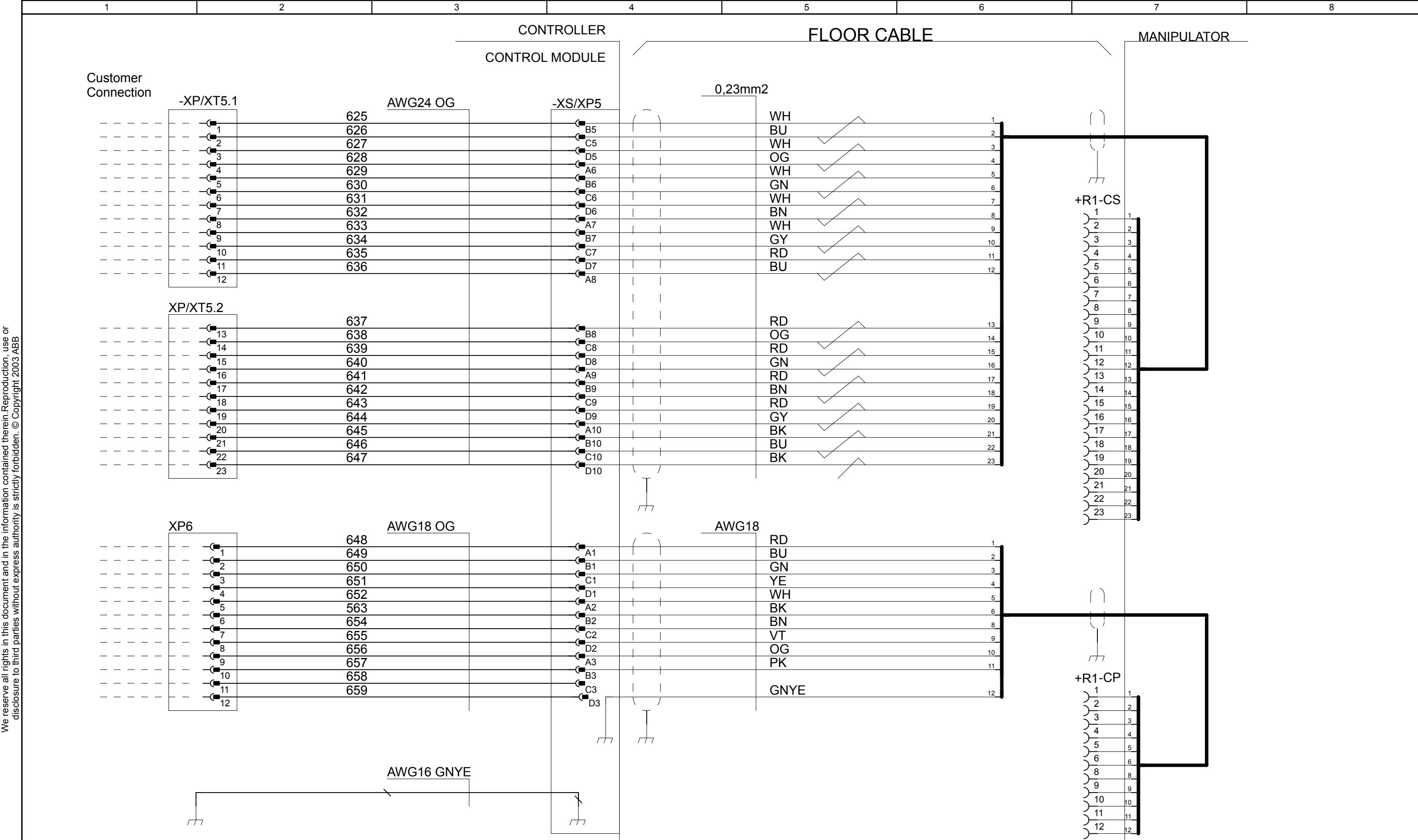
3HAC024480-011

Next 87

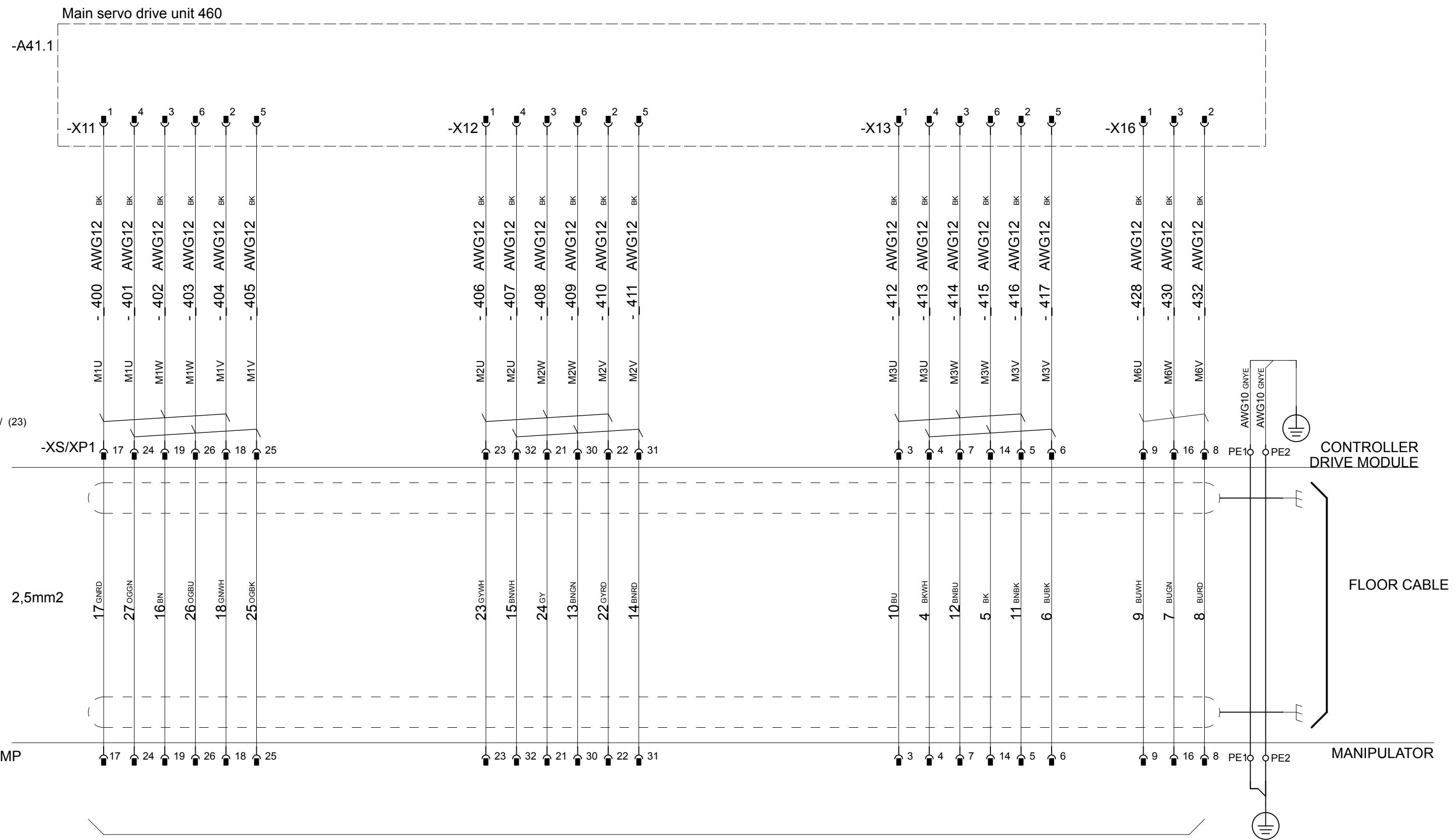
Total 156

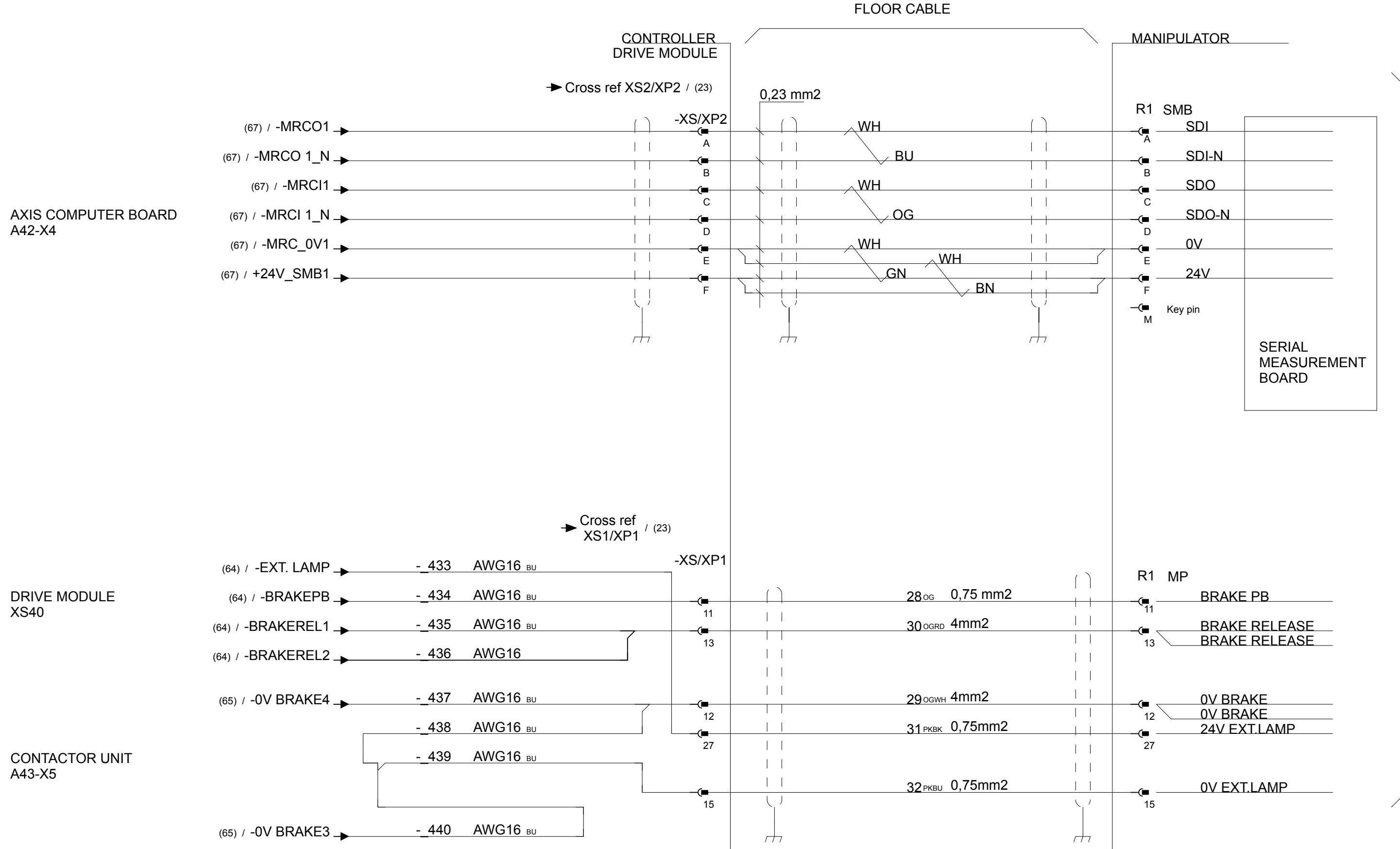


According to Manipulator circuit diagram 3HAC028647-009



## Cabinet module





According to Manipulator IRB 460 circuit diagram 3HAC036446-005

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 460

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

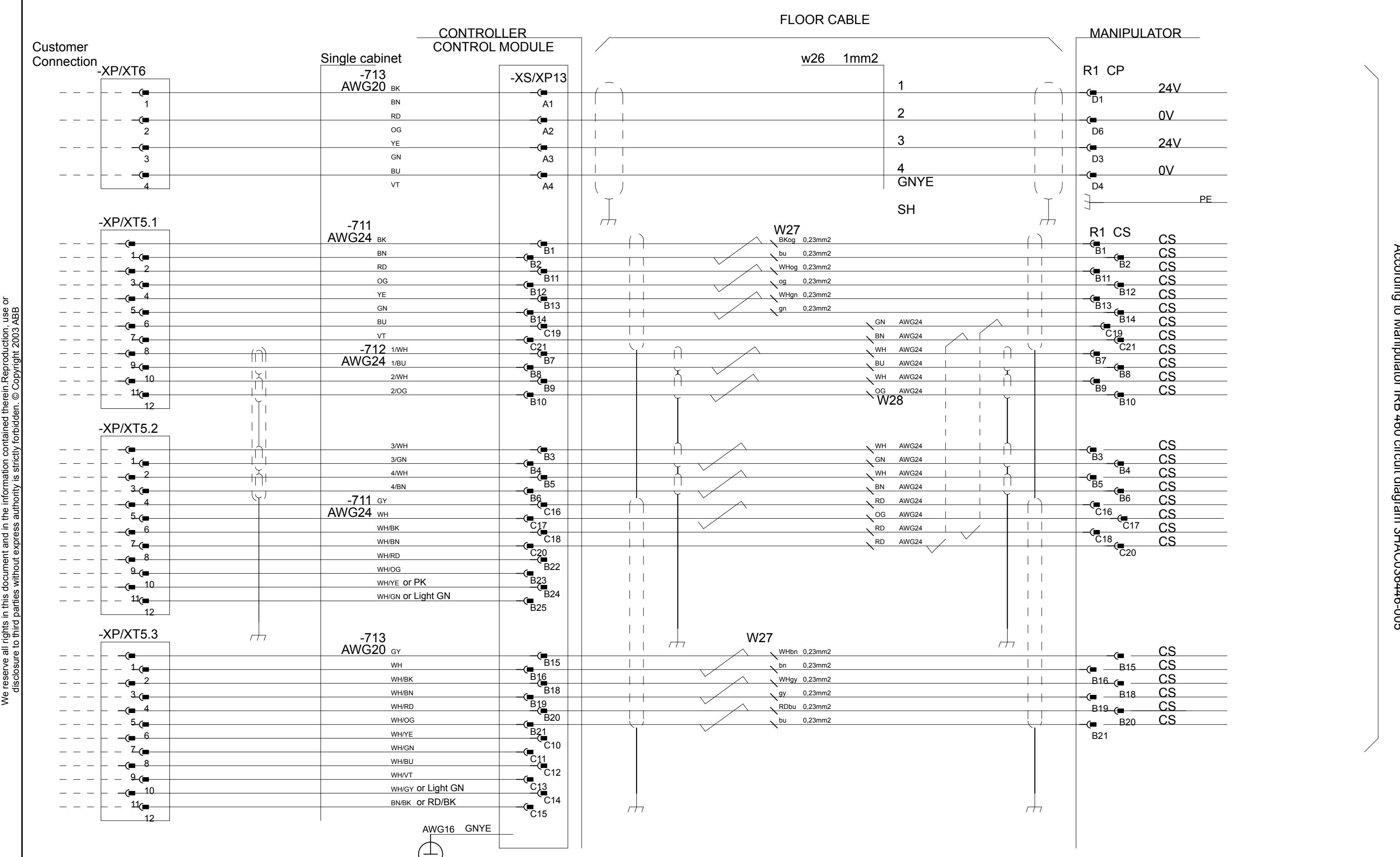
Rev. Ind

Page 89

3HAC024480-011

Next 90

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
IRB460, 660, 760

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

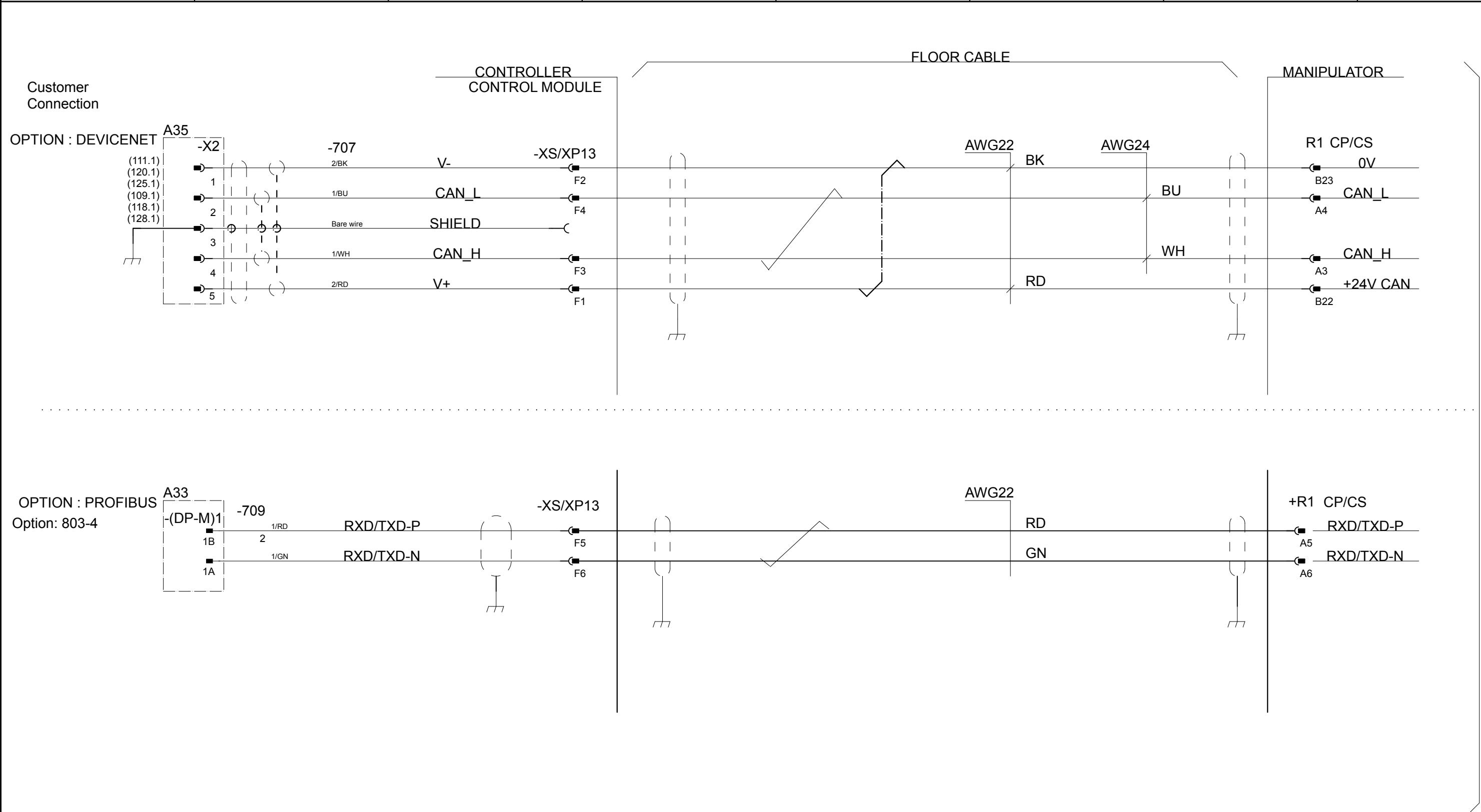
Rev. Ind

Page 90

08

Next 91

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
C-BUS/P-BUS/ to CP/CS  
IRB460, 660, 760

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

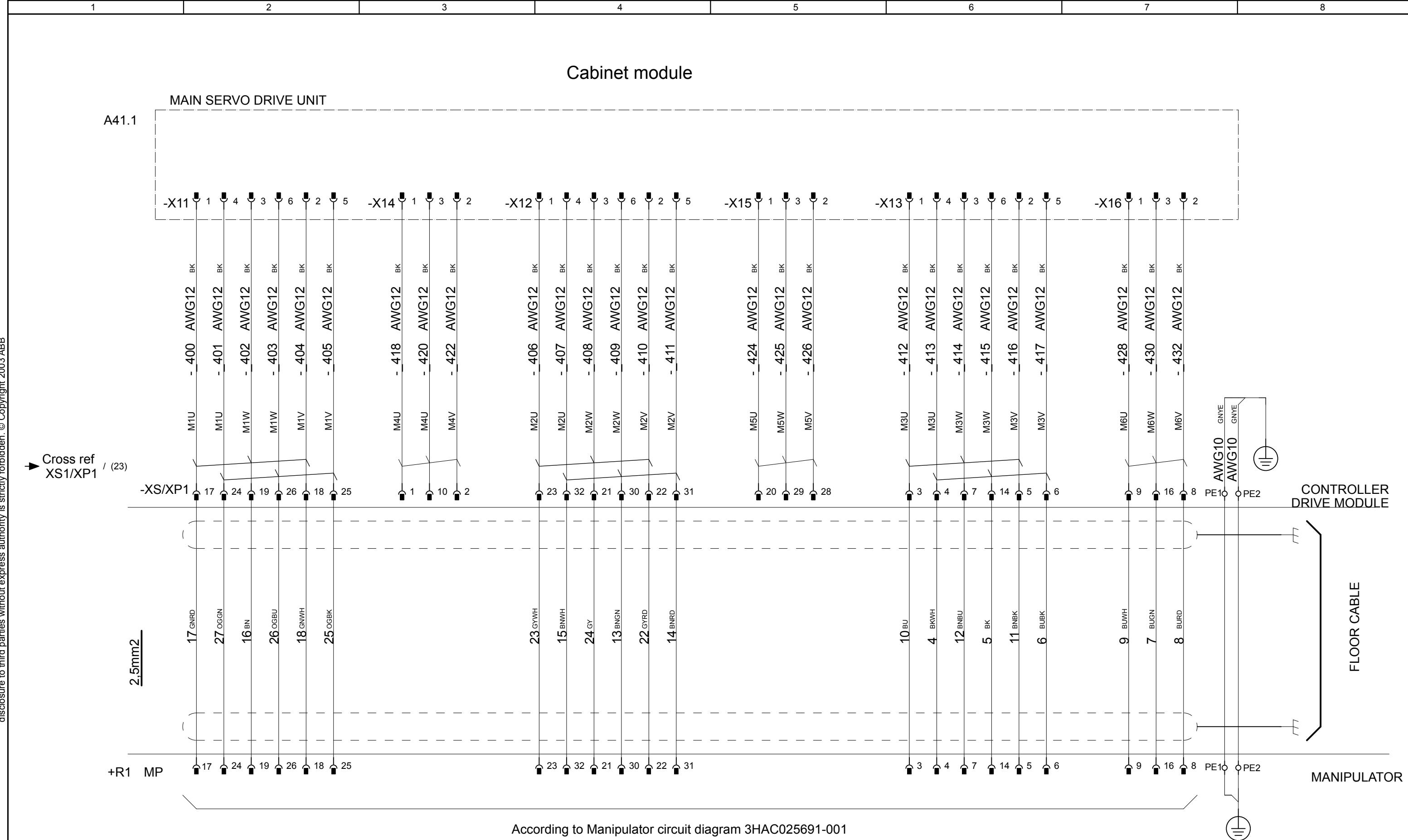
Rev. Ind

Page 91

3HAC024480-011

08

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 660, 760

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

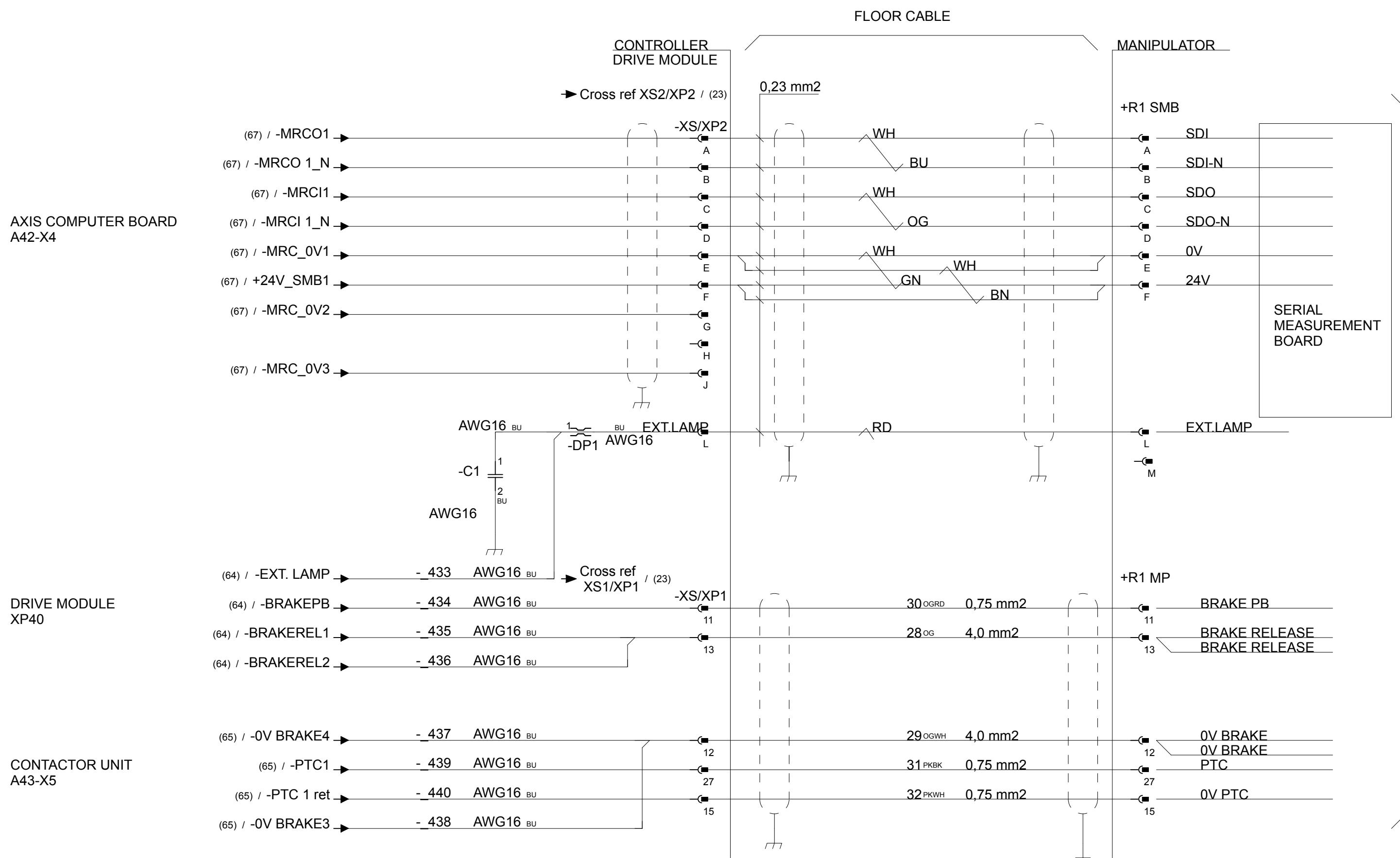
Document no.

Rev. Ind Page 92

3HAC024480-011

Next 93

Total 156



According to Manipulator IRB 660, 760 circuit diagram 3HAC025691-001

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 660, 760

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

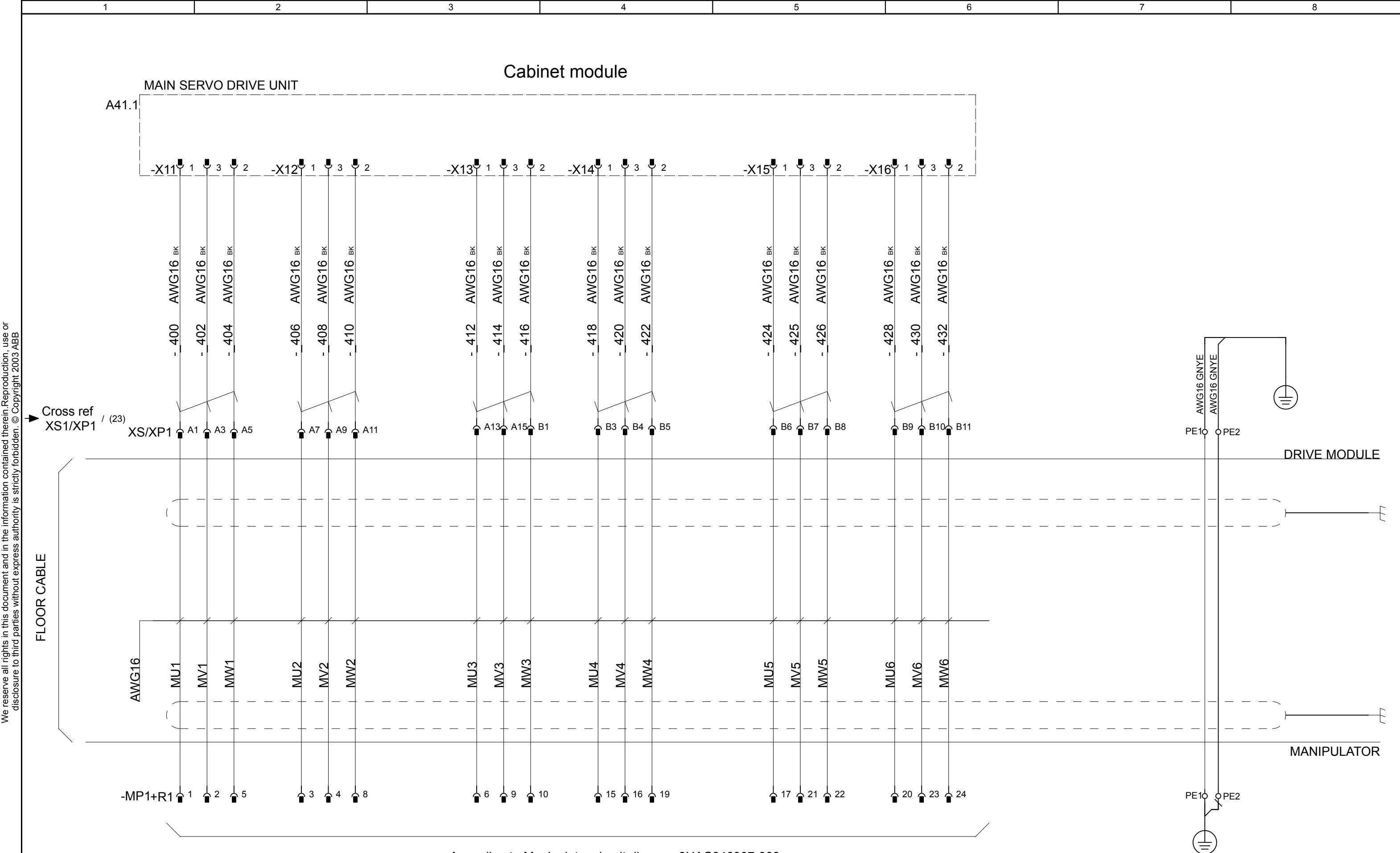
Rev. Ind

Page 93

08

Next 93.5

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

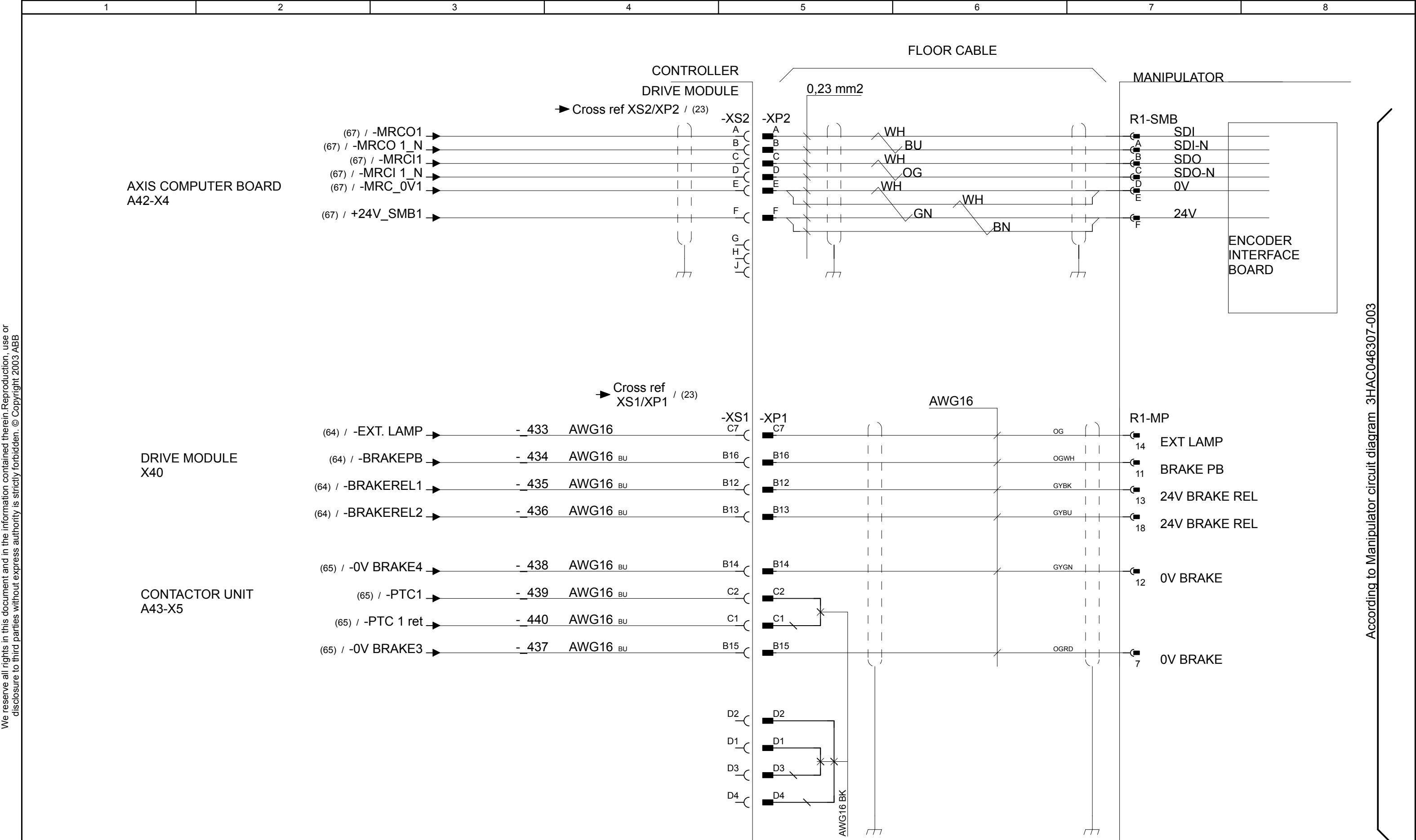
IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 1200

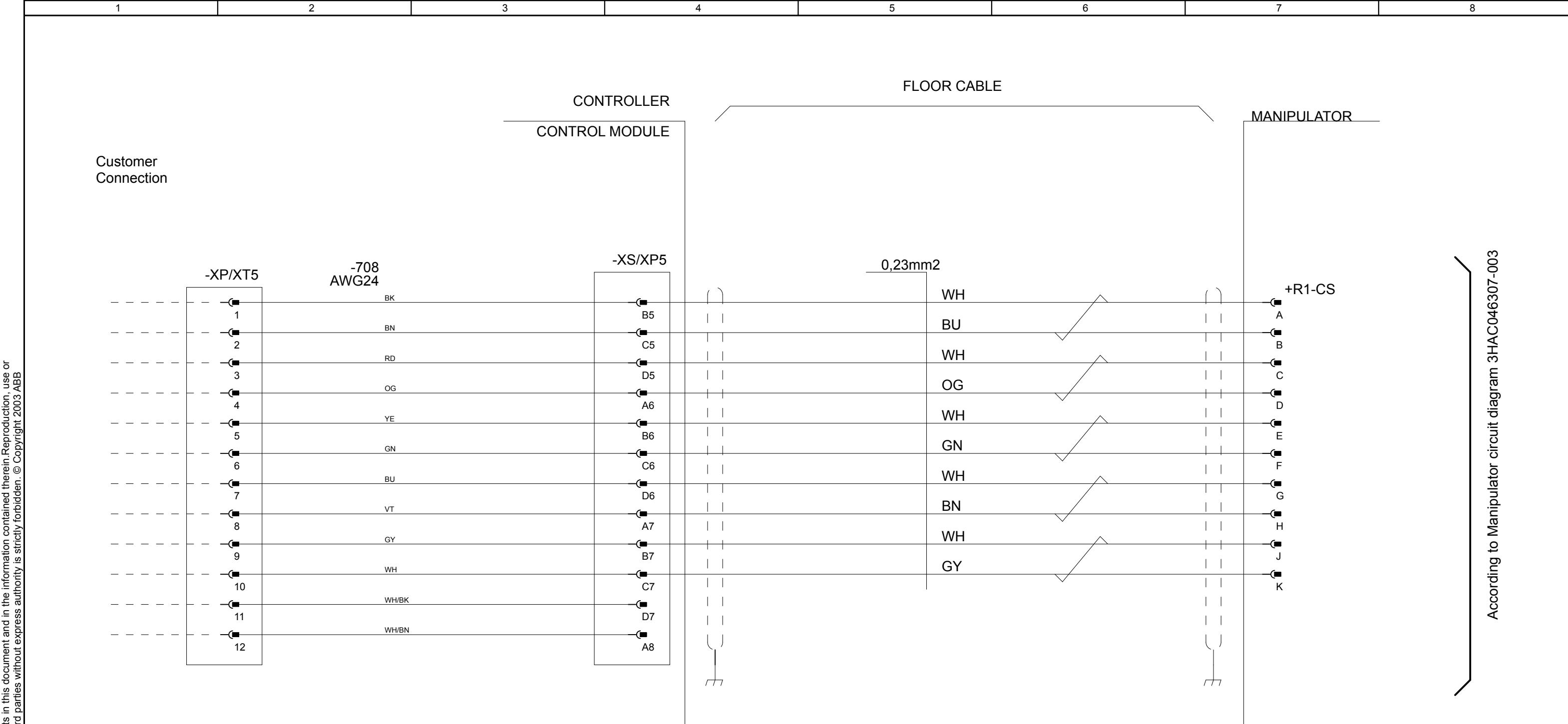
Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind Page 93.5  
Next 93.6  
Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER SIGNAL  
SINGLE CABINET  
IRB 1200

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

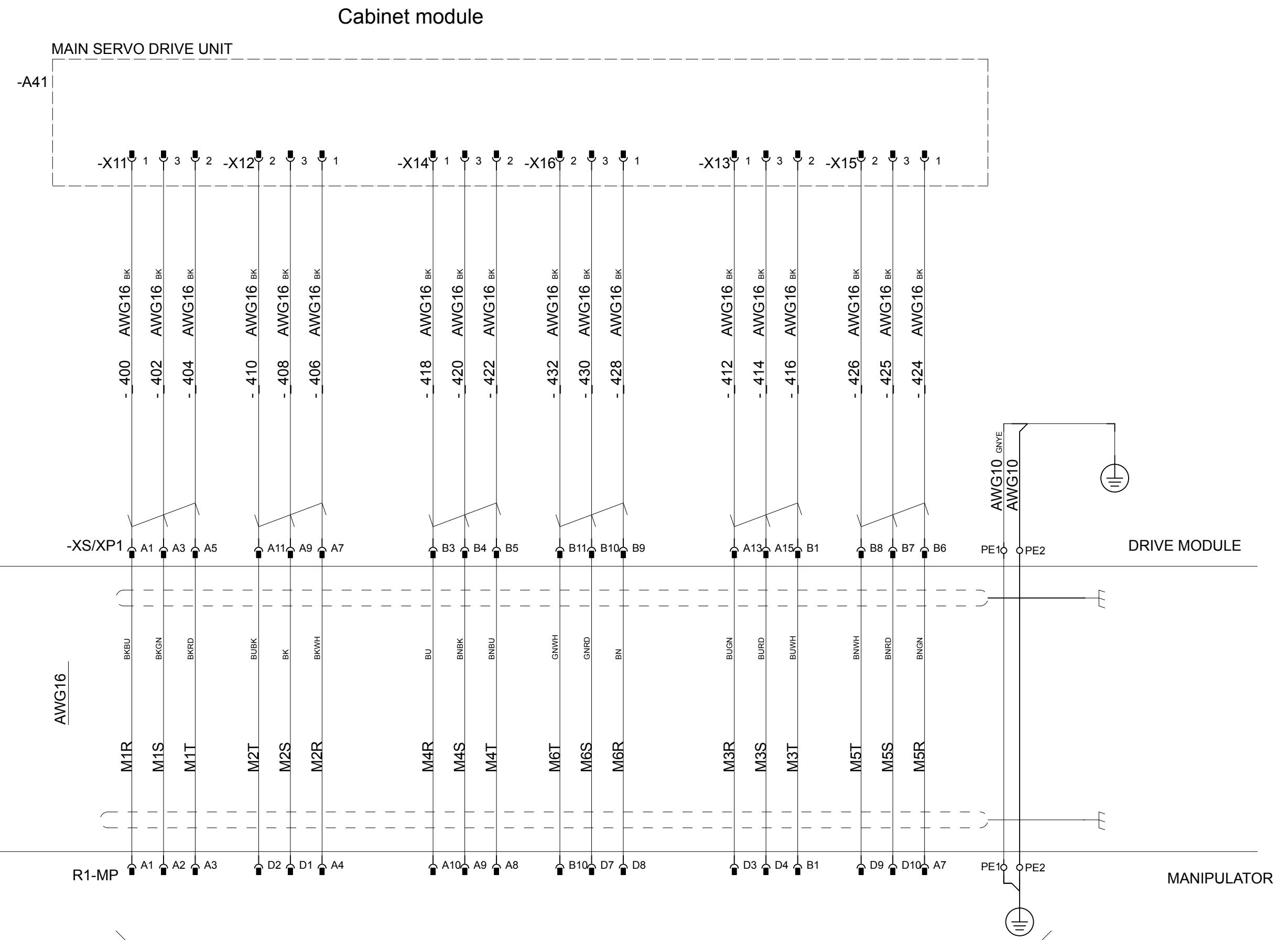
Rev. Ind

Page 93.7

3HAC024480-011

Next 94

Total 156

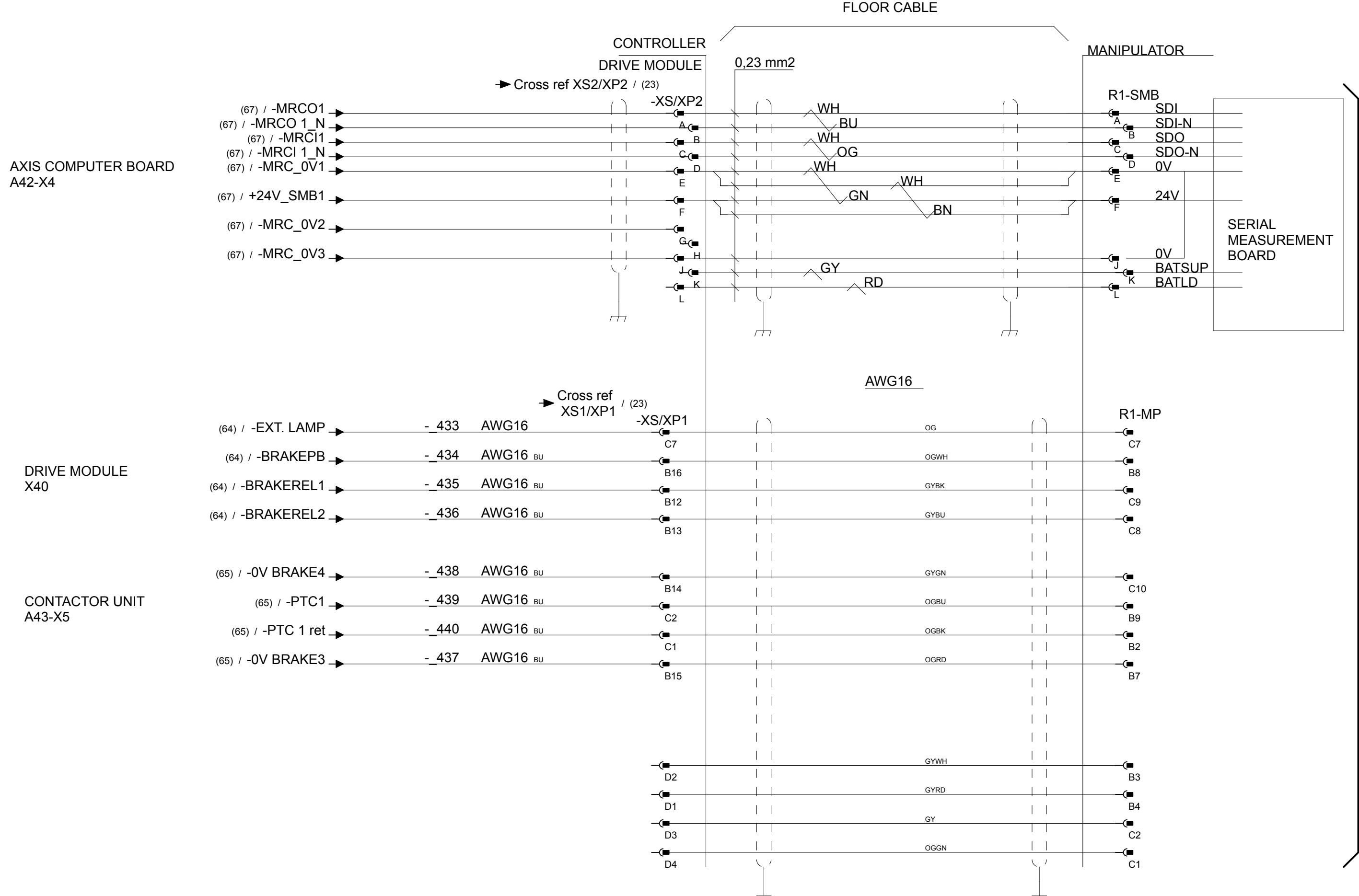


According to Manipulator circuit diagram 3HAC02803-3

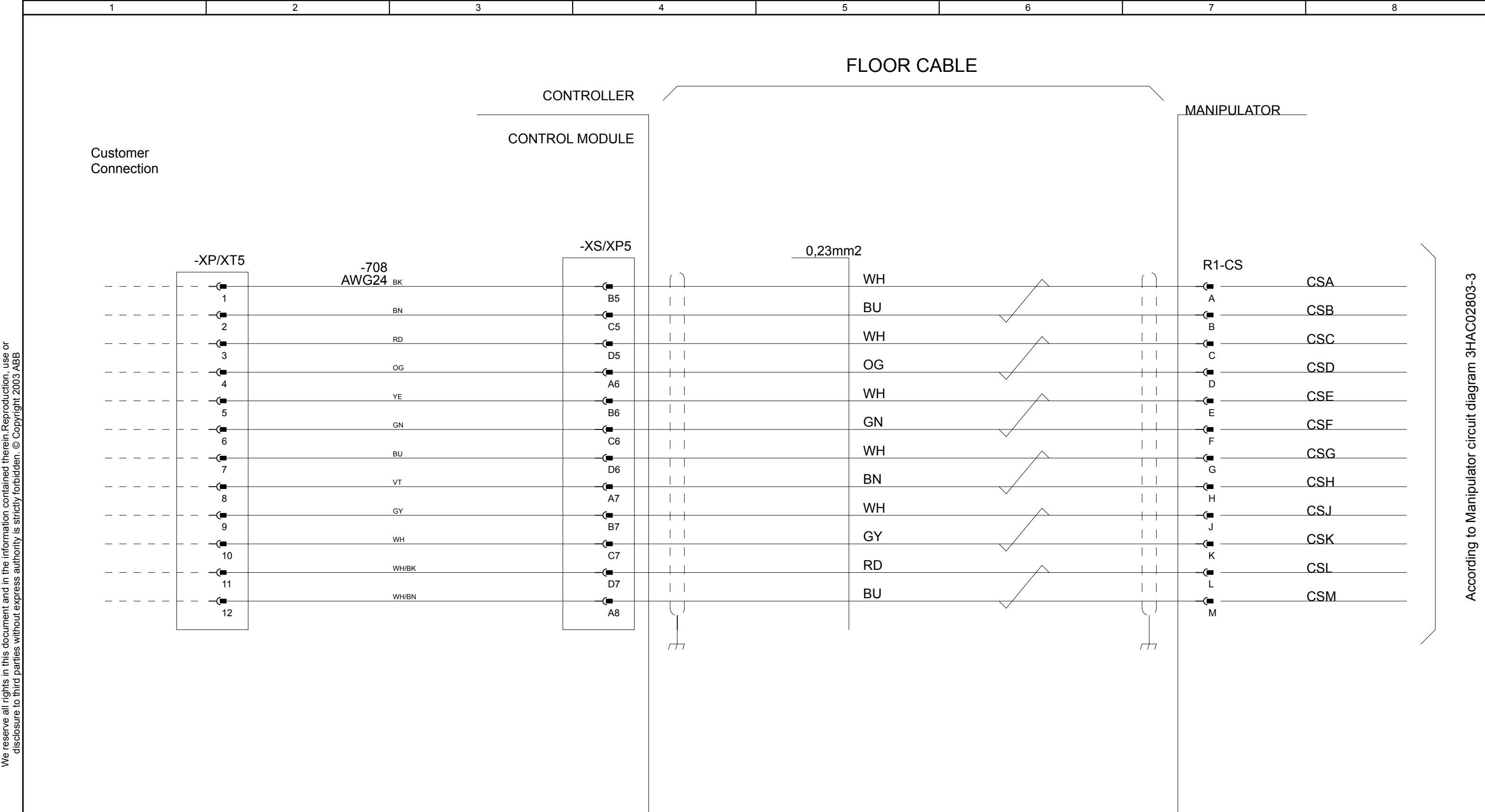


Lab/Office:  
DMRO SE/  
PRN  
IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 1410

Latest revision:	Status: Approved	Plant: =
	Location: +	Sublocation: +
	Document no.	Rev. Ind Page 94
	3HAC024480-011	Next 95

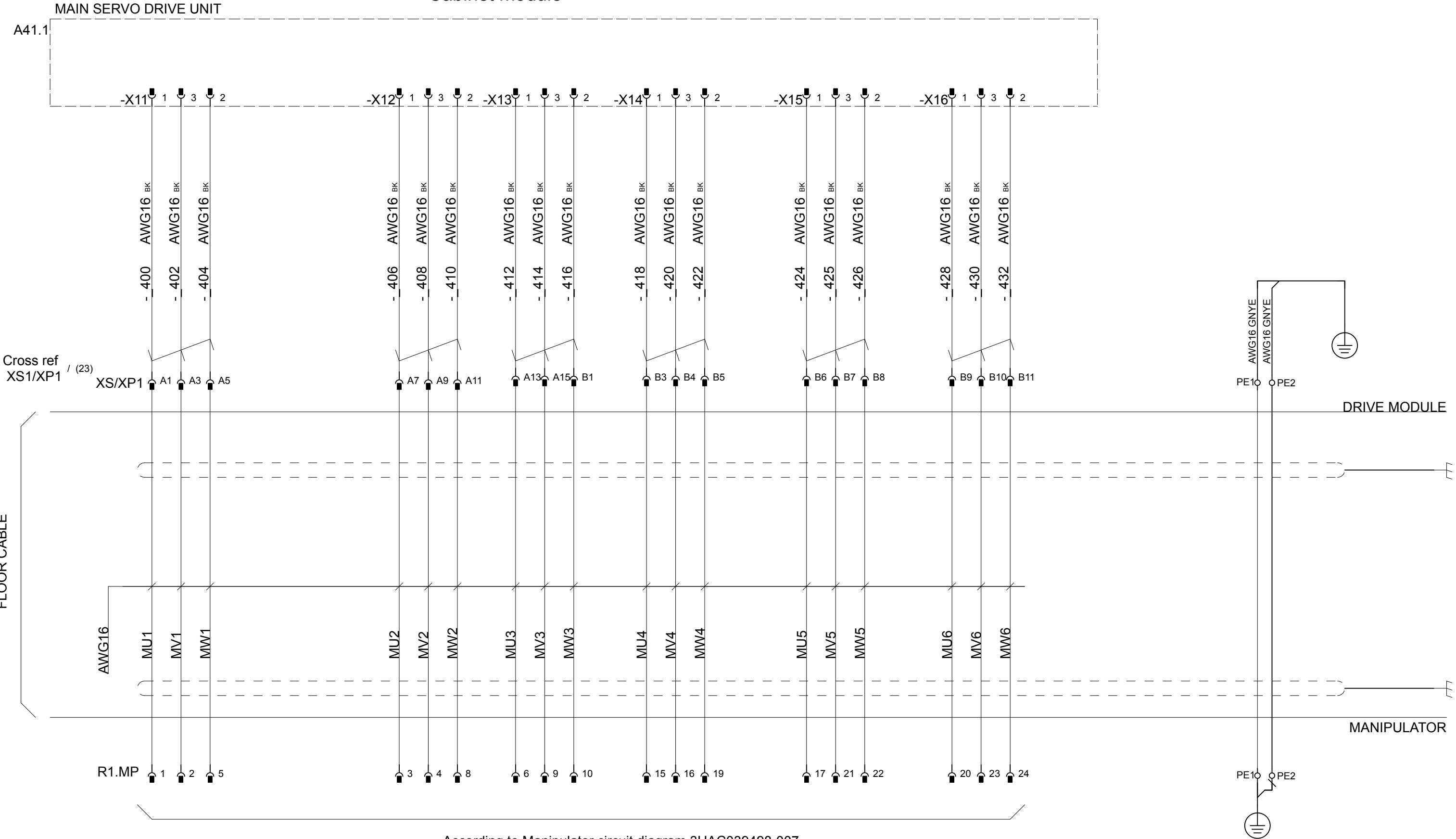


According to Manipulator circuit diagram 3HAC02803-3



According to Manipulator circuit diagram 3HAC02803-3

## Cabinet module



According to Manipulator circuit diagram 3HAC039498-007

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 1520

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

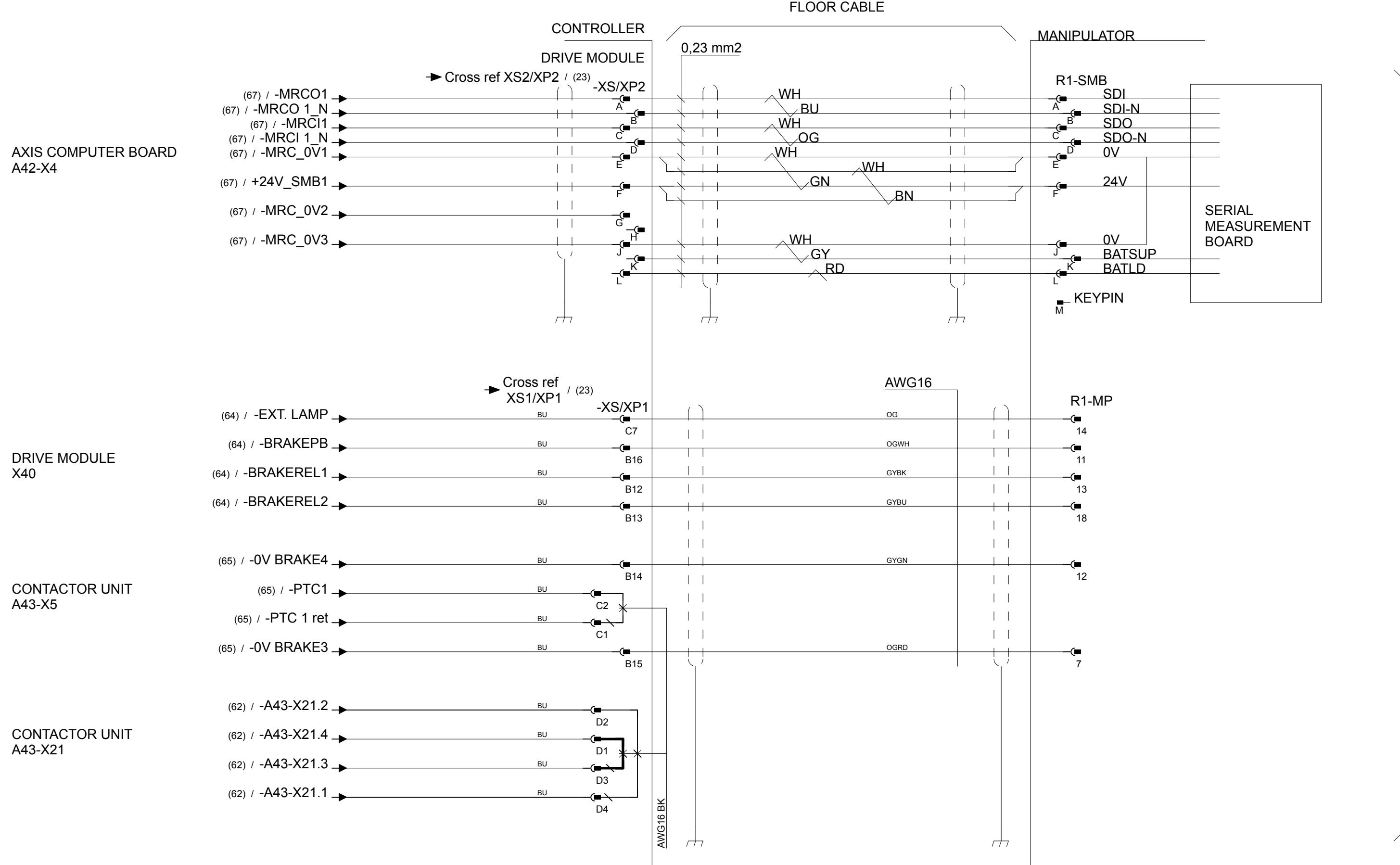
Document no.

Rev. Ind Page 97

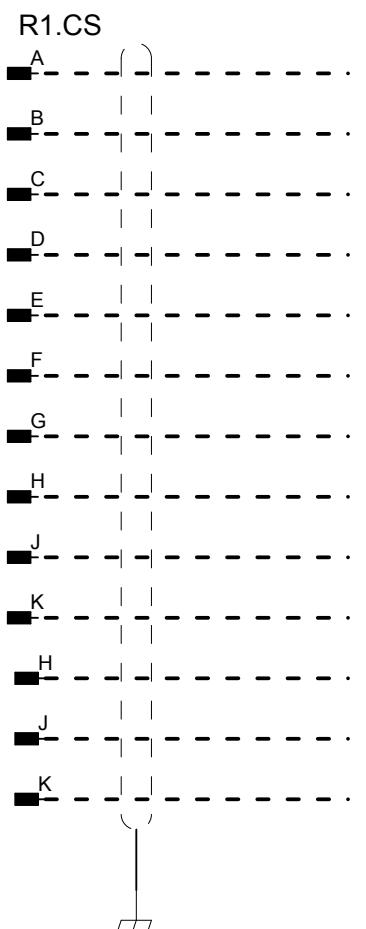
3HAC024480-011

Next 98

Total 156



MANIPULATOR



Customer connection Signal  
Included with option Power source RPS\_400

According to Manipulator circuit diagram 3HAC039498-007

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER SIGNALS  
IRB 1520

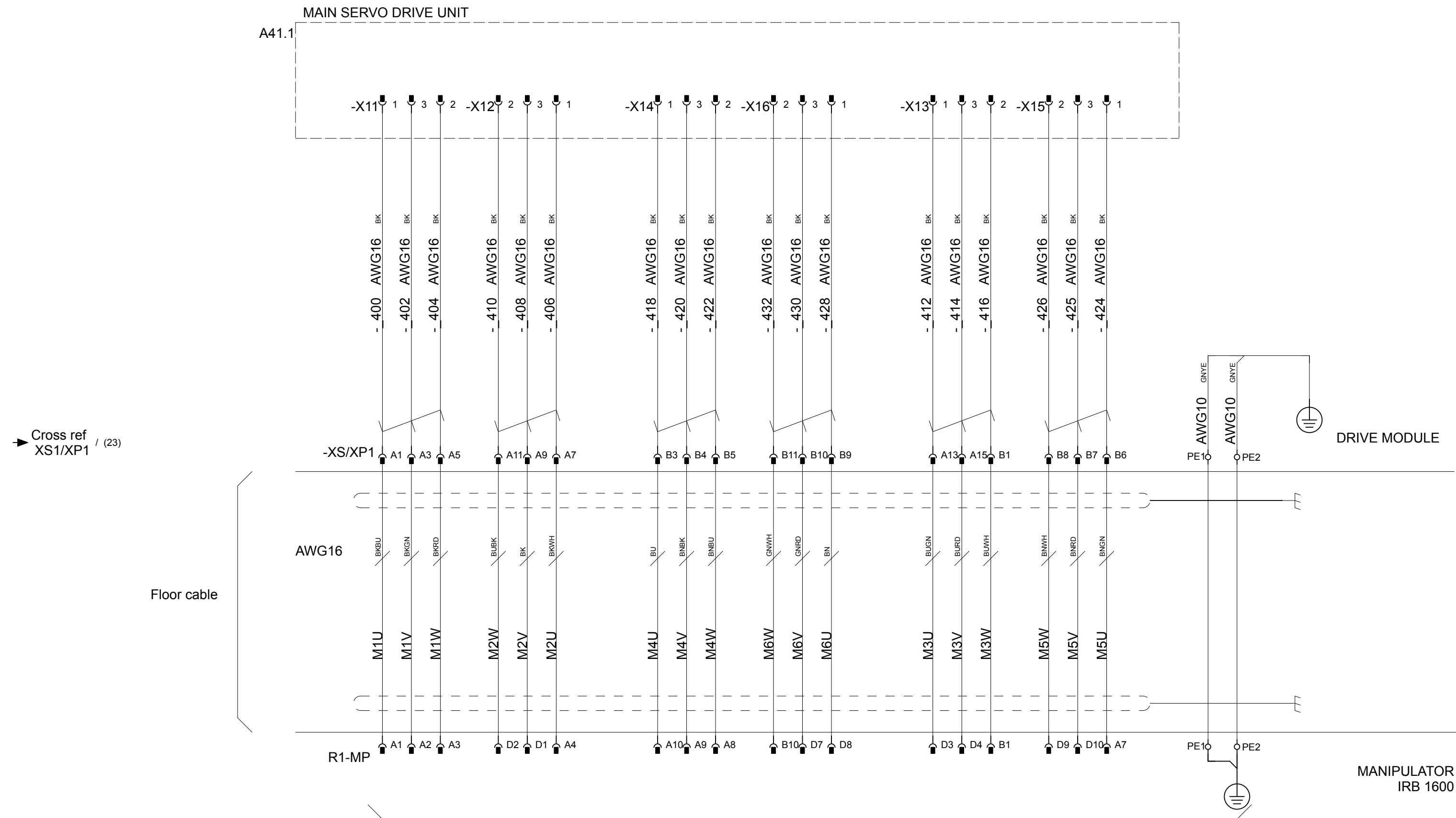
Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

Page 99  
Next 100  
Total 156



Latest revision:

According to Manipulator circuit diagram 3HAC021351-003



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE UNIT  
IRB 1600/1660

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

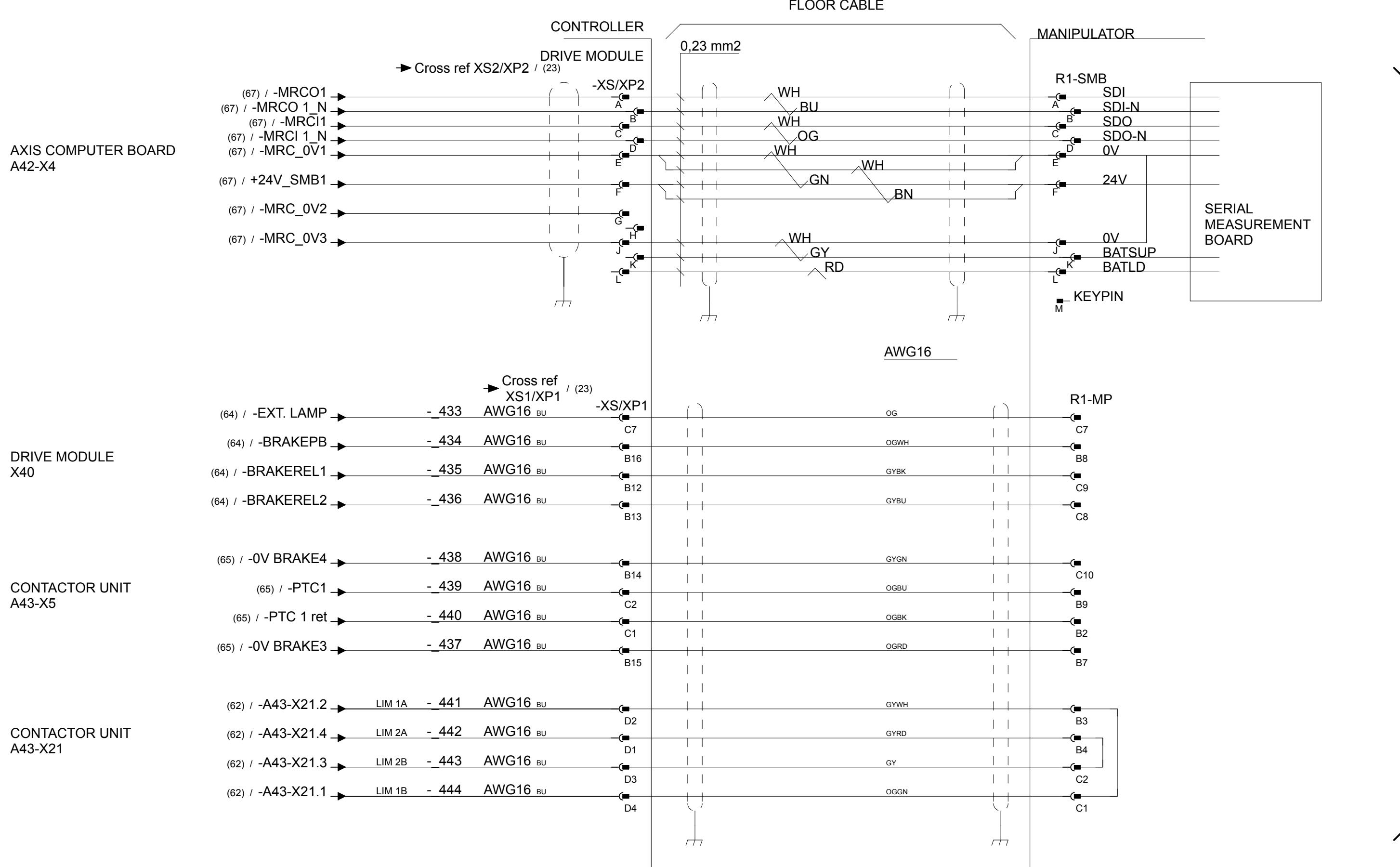
Document no.

Rev. Ind Page 100

3HAC024480-011

Next 101

Total 156



According to Manipulator circuit diagram 3HAC021351-003

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 1600/1660

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

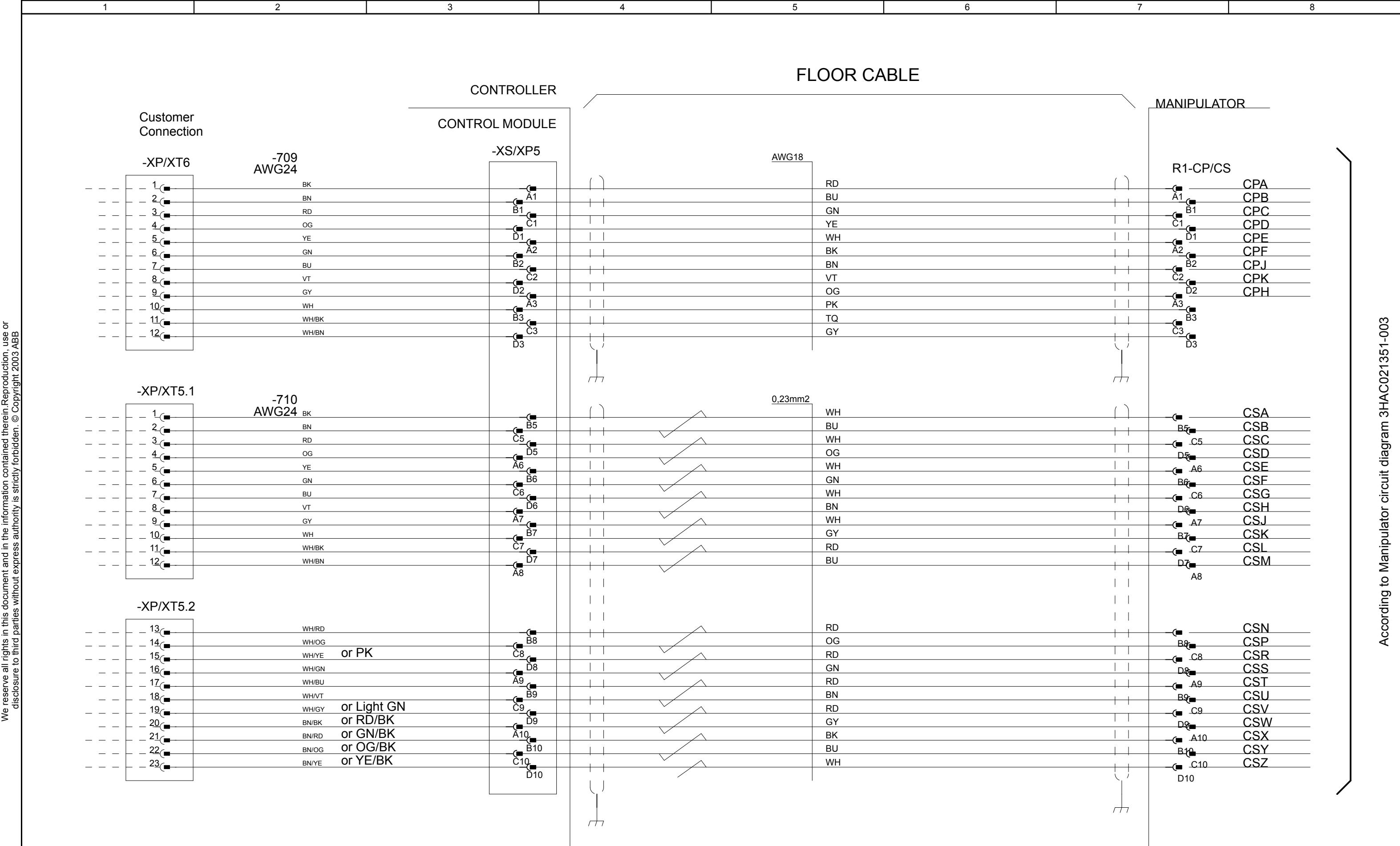
Rev. Ind

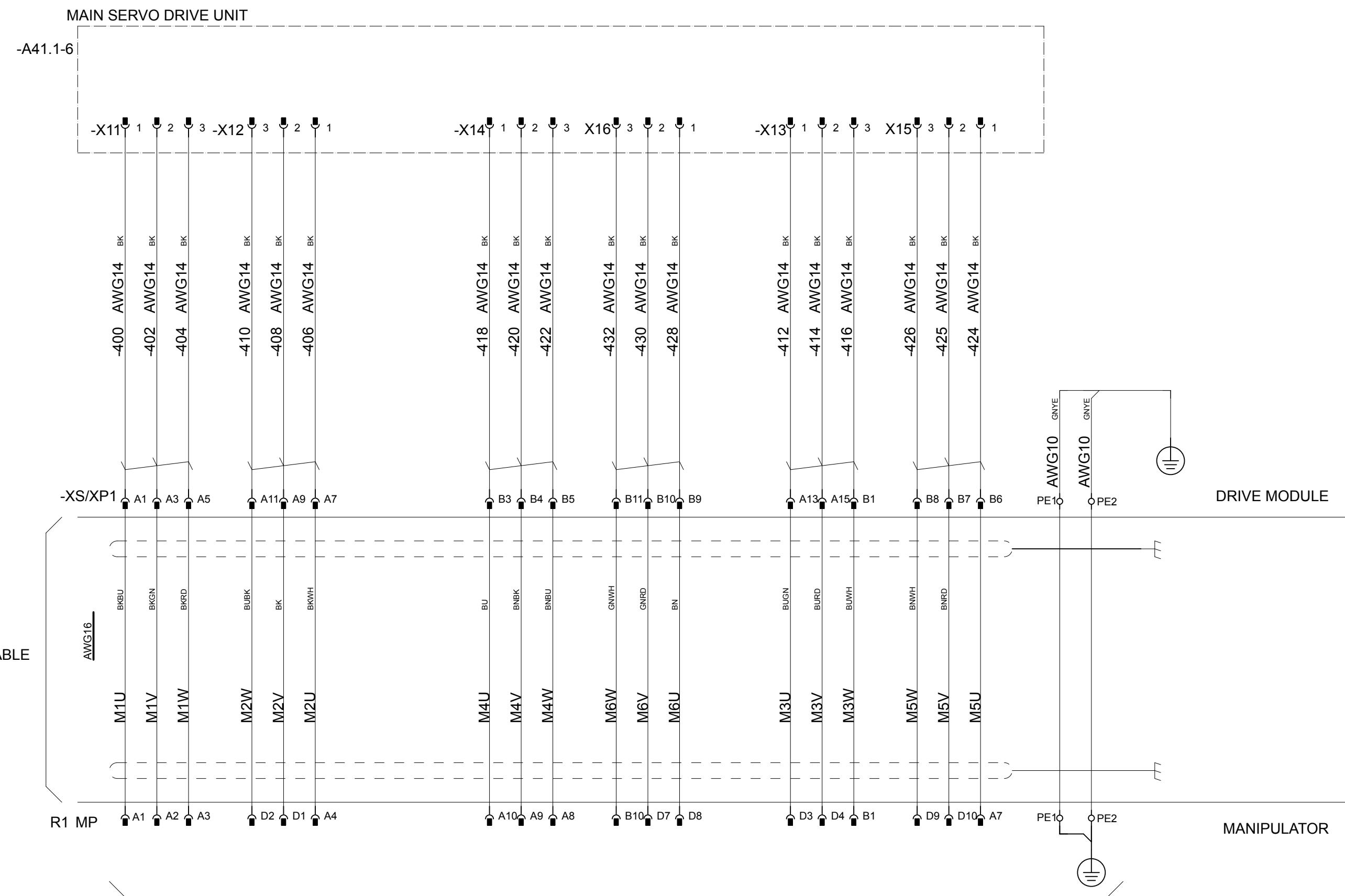
Page 101

3HAC024480-011

Next 102

Total 156





Latest revision:

According to Manipulator circuit diagram 3HAC6670-3



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE UNIT  
IRB 2400

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

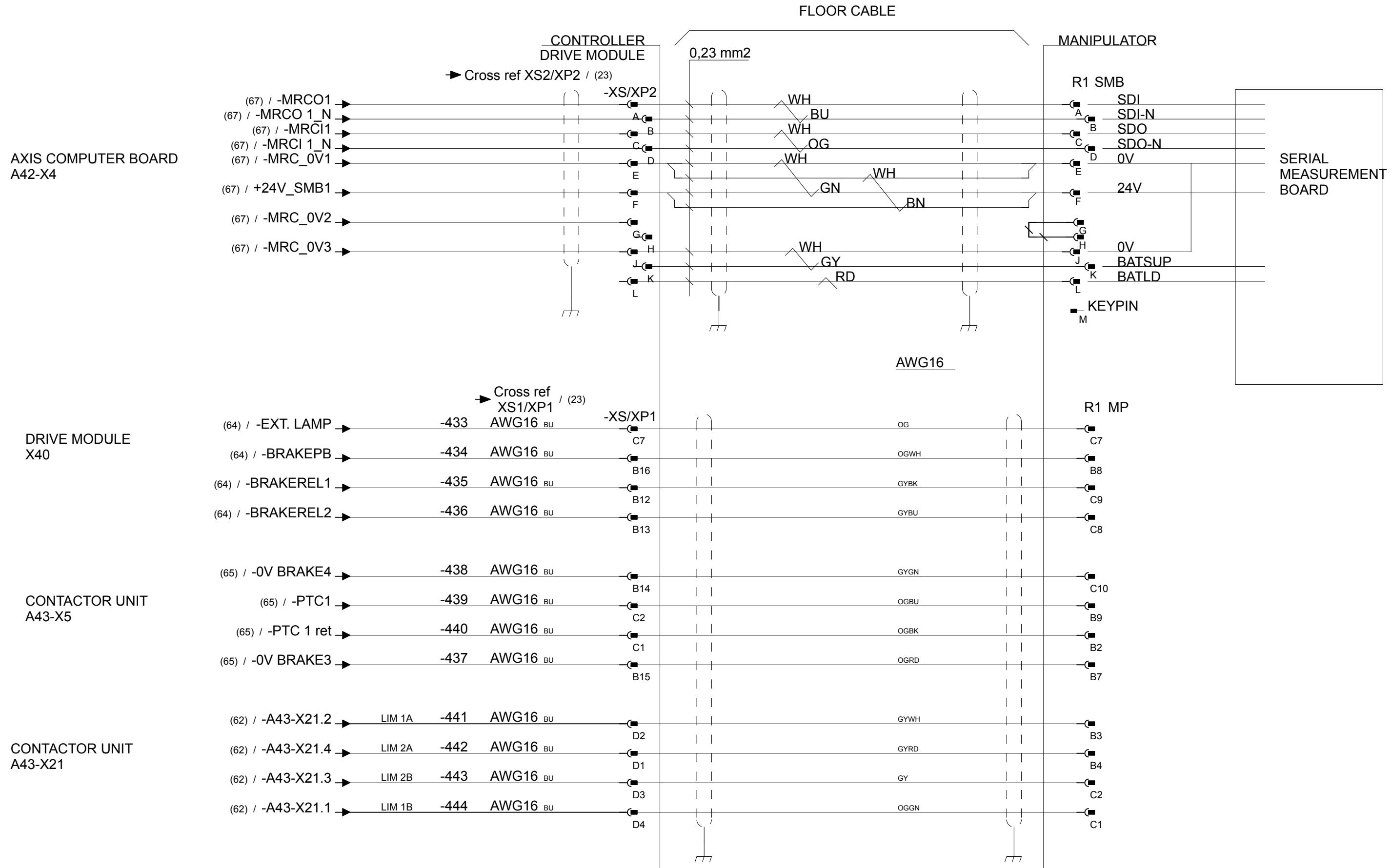
Rev. Ind

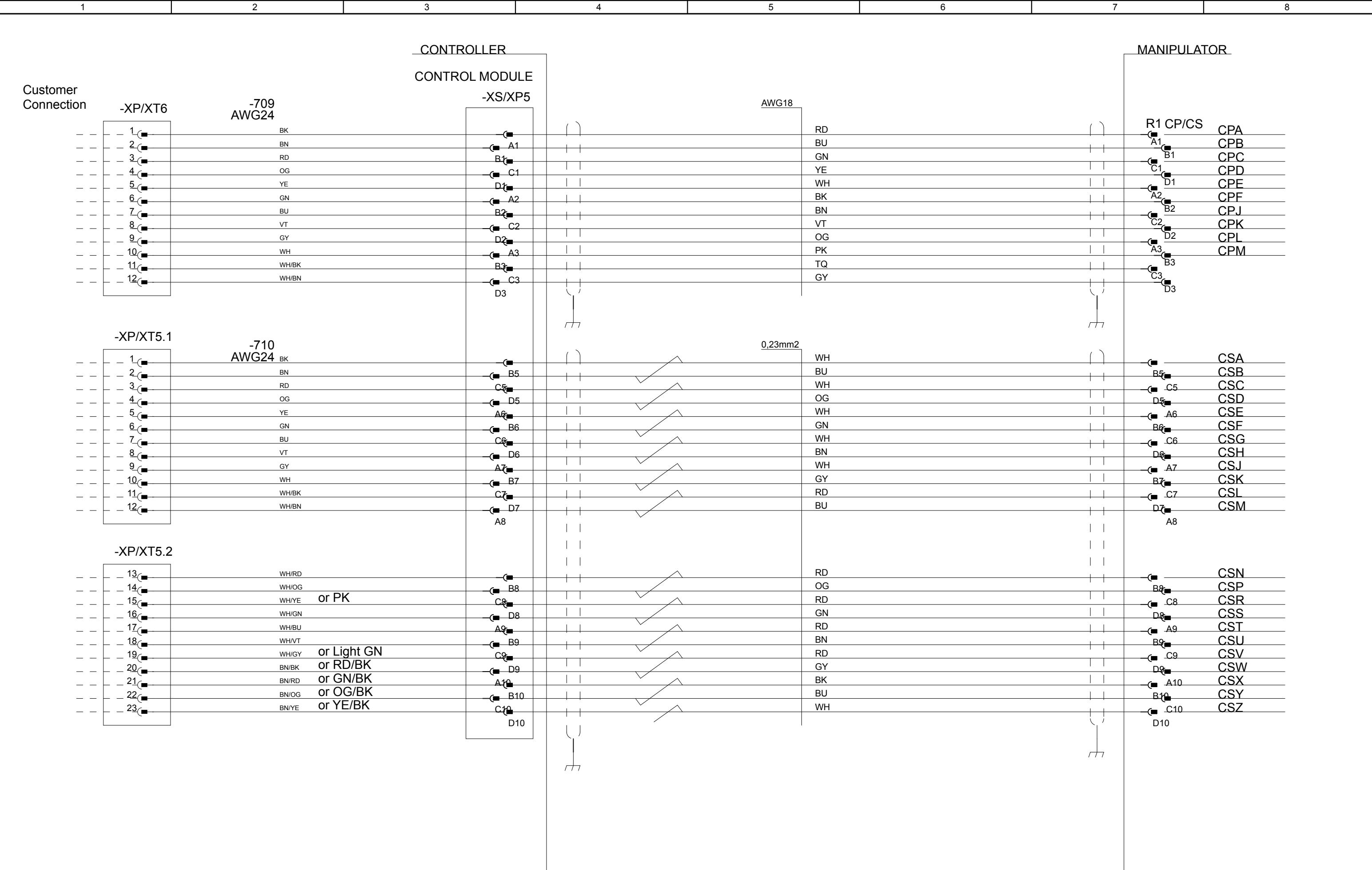
Page 103

3HAC024480-011

Next 104

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
SINGLE CABINET  
IRB 2400

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

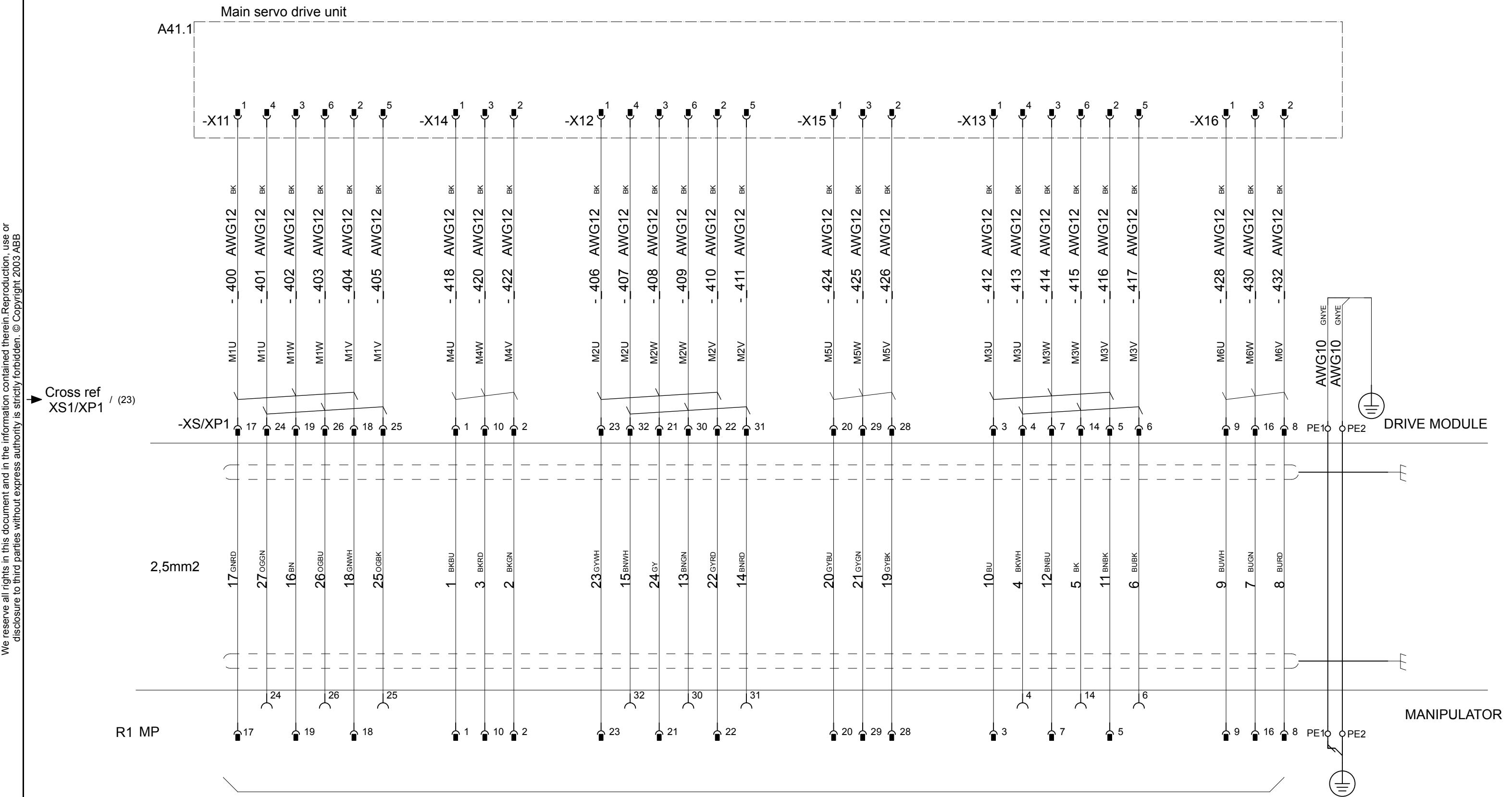
Rev. Ind

Page 105

3HAC024480-011

Next 106

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 2600

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

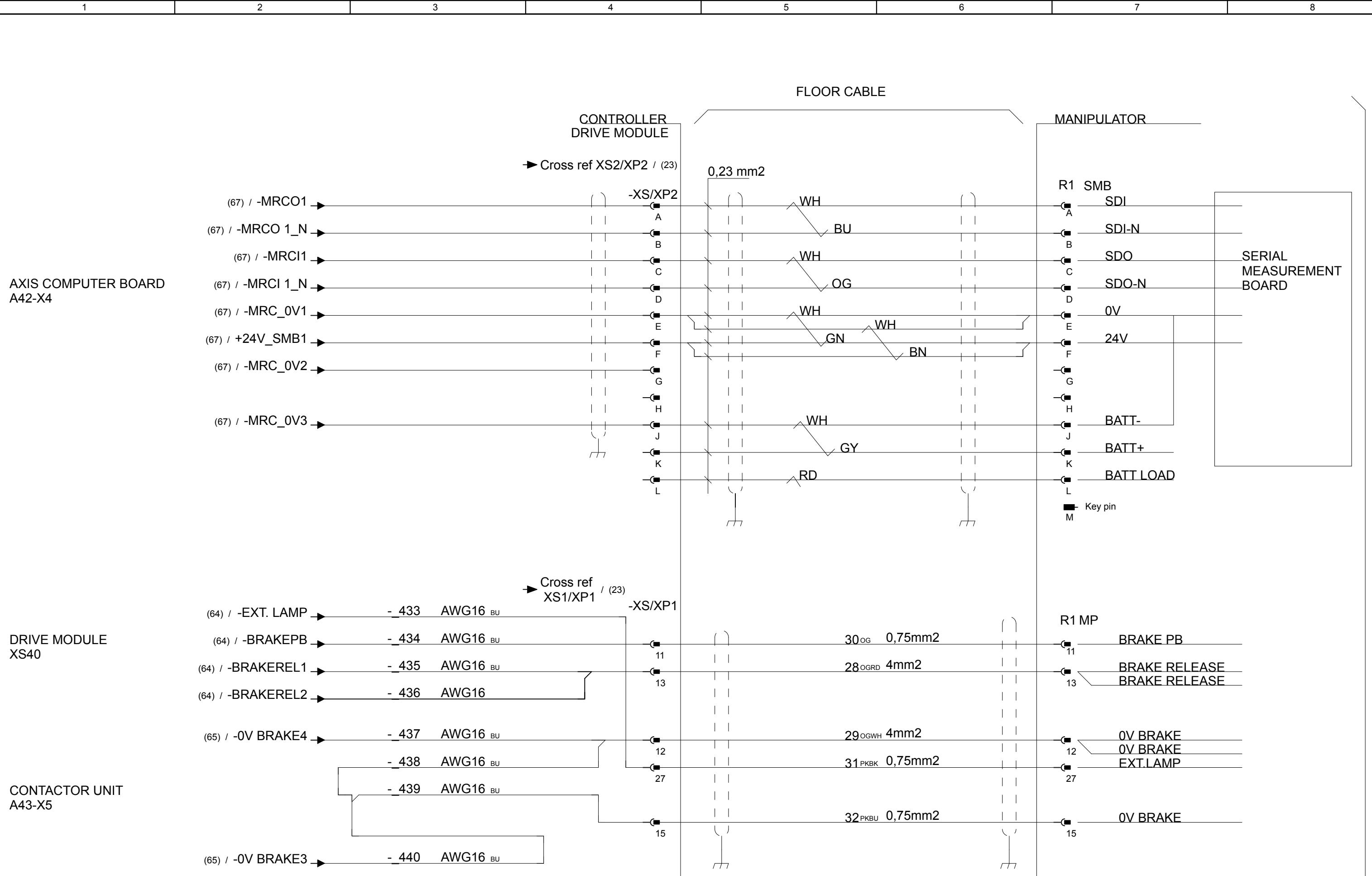
Rev. Ind

Page 106

3HAC024480-011

Next 107

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 2600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

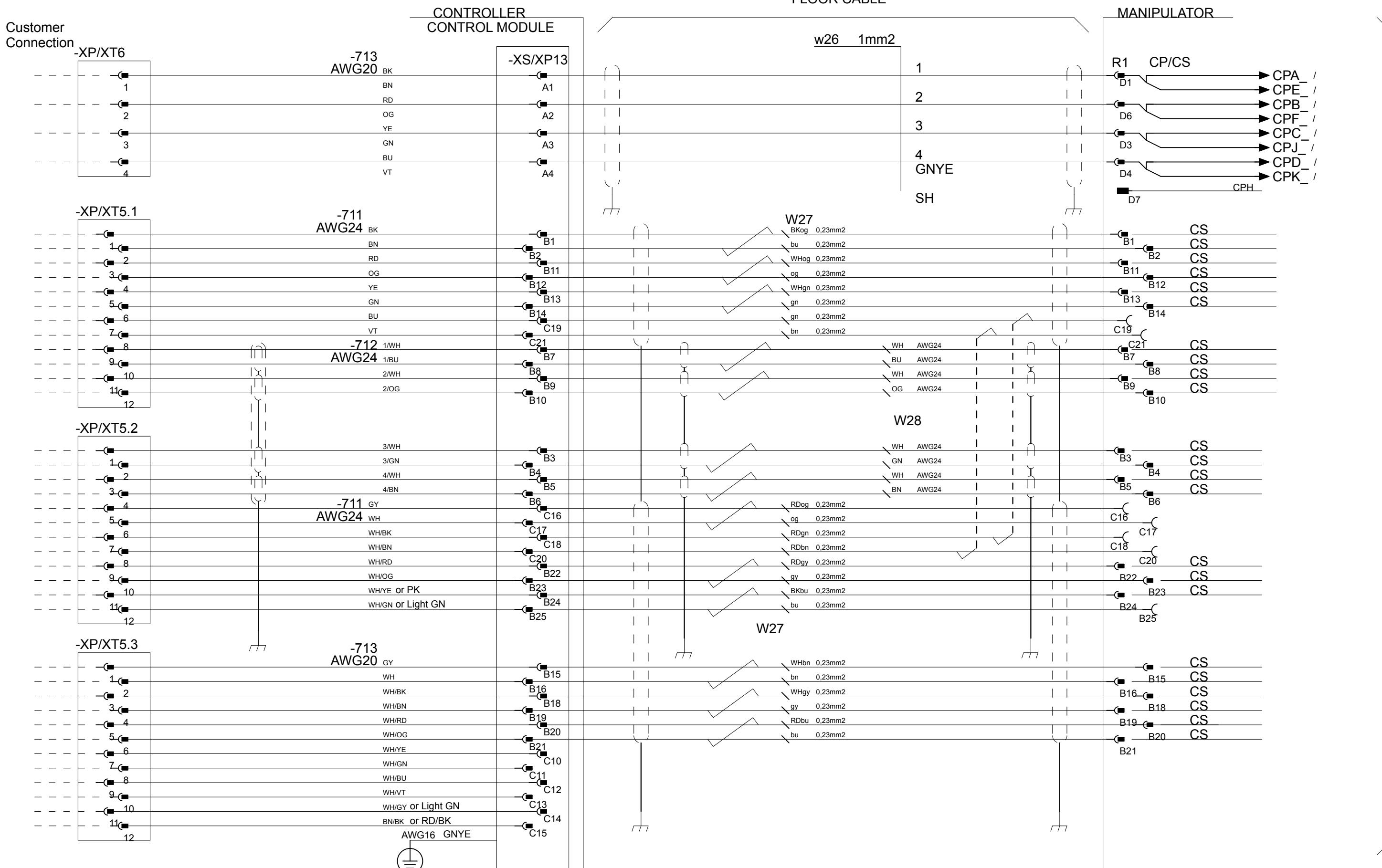
Rev. Ind

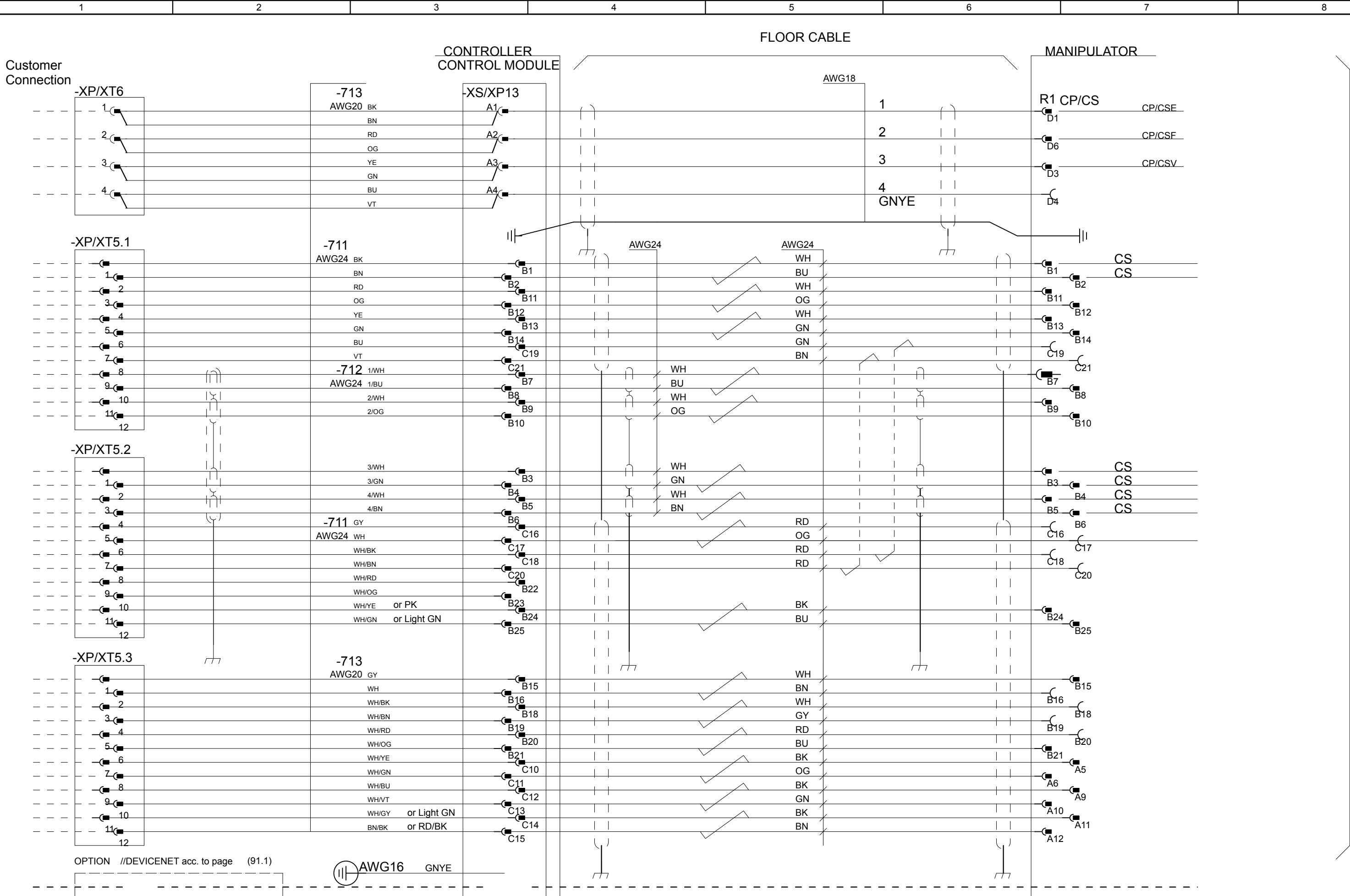
Page 107

3HAC024480-011

Next 108

08





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
DEVICE NET  
IRB2600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

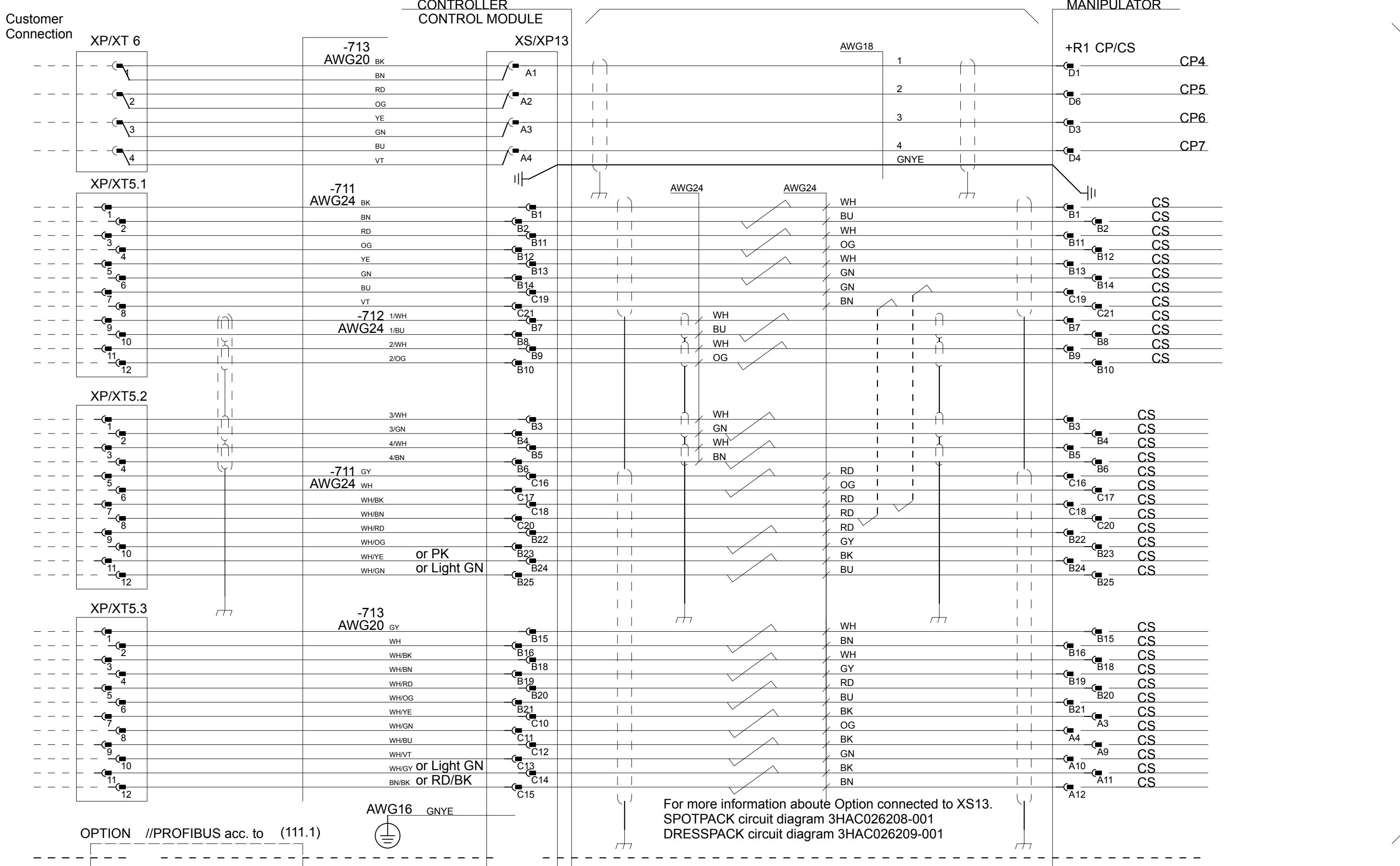
Page 109

3HAC024480-011

08

Next 110

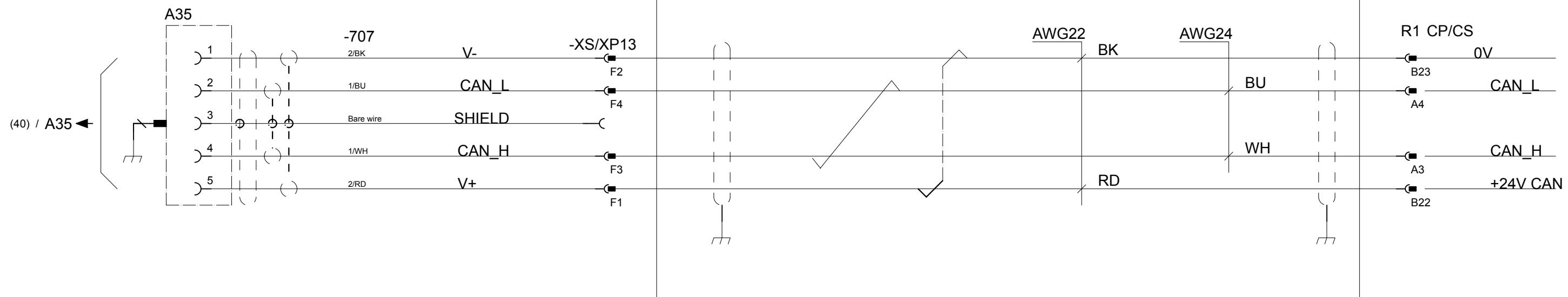
Total 156



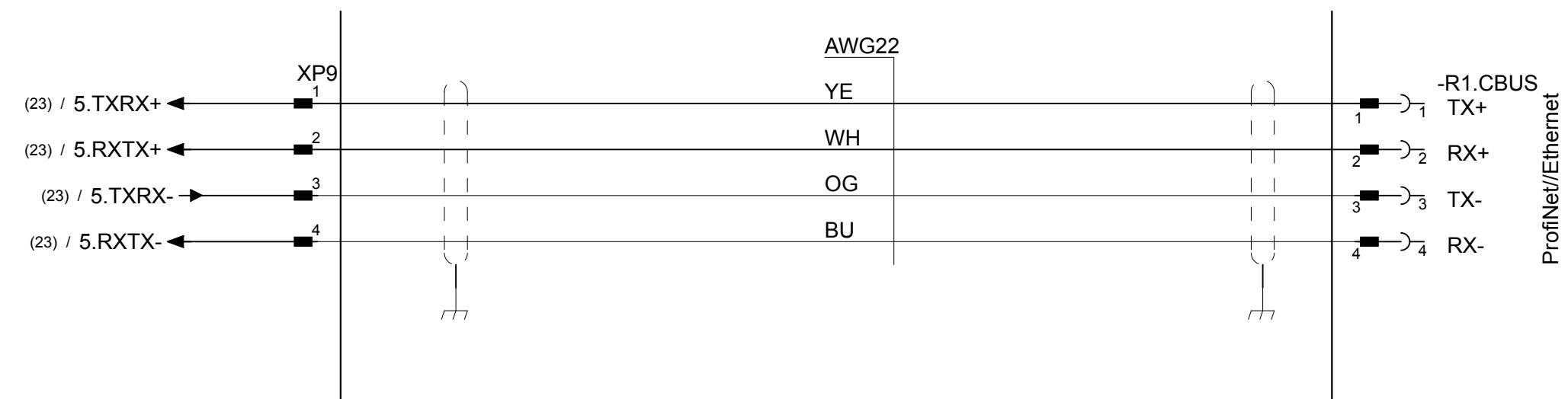
Customer  
Connection

OPTION : DEVICENET

Additional sheet (91.1) (120.1) (125.1) (109.1) (118.1) (128.1)



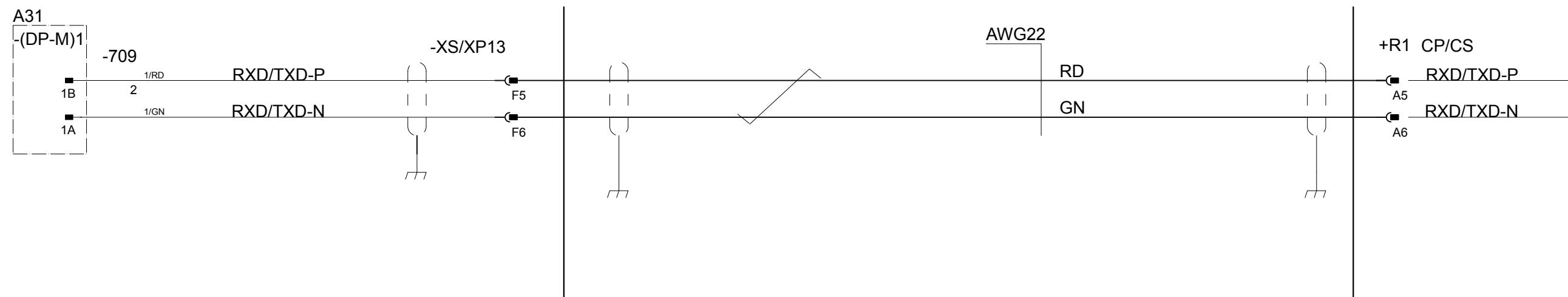
Option: ProfiNet / Ethernet IP



OPTION : PROFIBUS  
Option: 803-4

Additional sheet (110.1)

(38) / A31.3



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
DevNet/Pofinet/Ethernet/Profibus addition to CP/CS  
IRB2600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

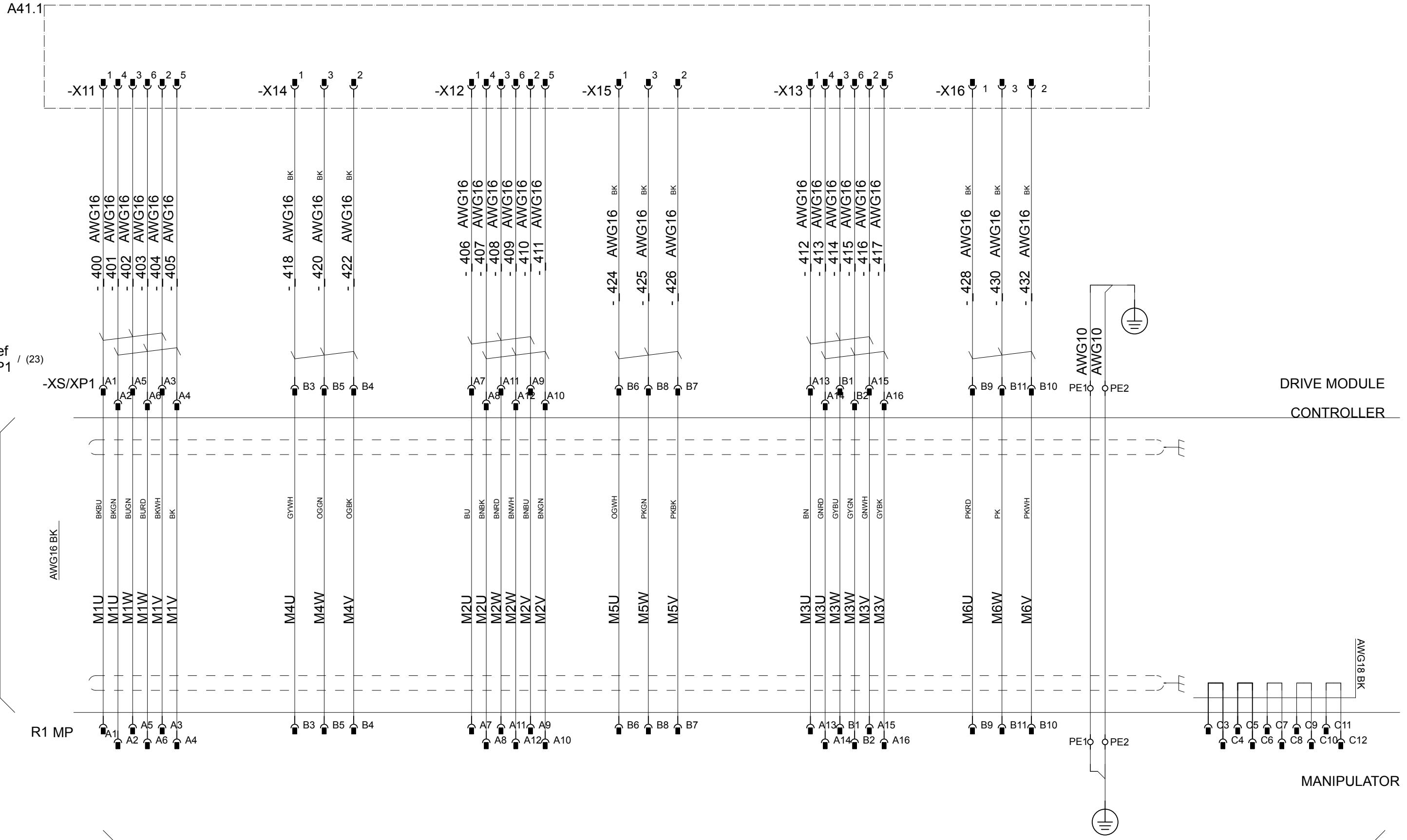
Page 111

3HAC024480-011

Next 112

Total 156

### MAIN SERVO DRIVE UNIT



Acc. to Manipulator circuit diagram 3HAC9821-1

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 4400

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

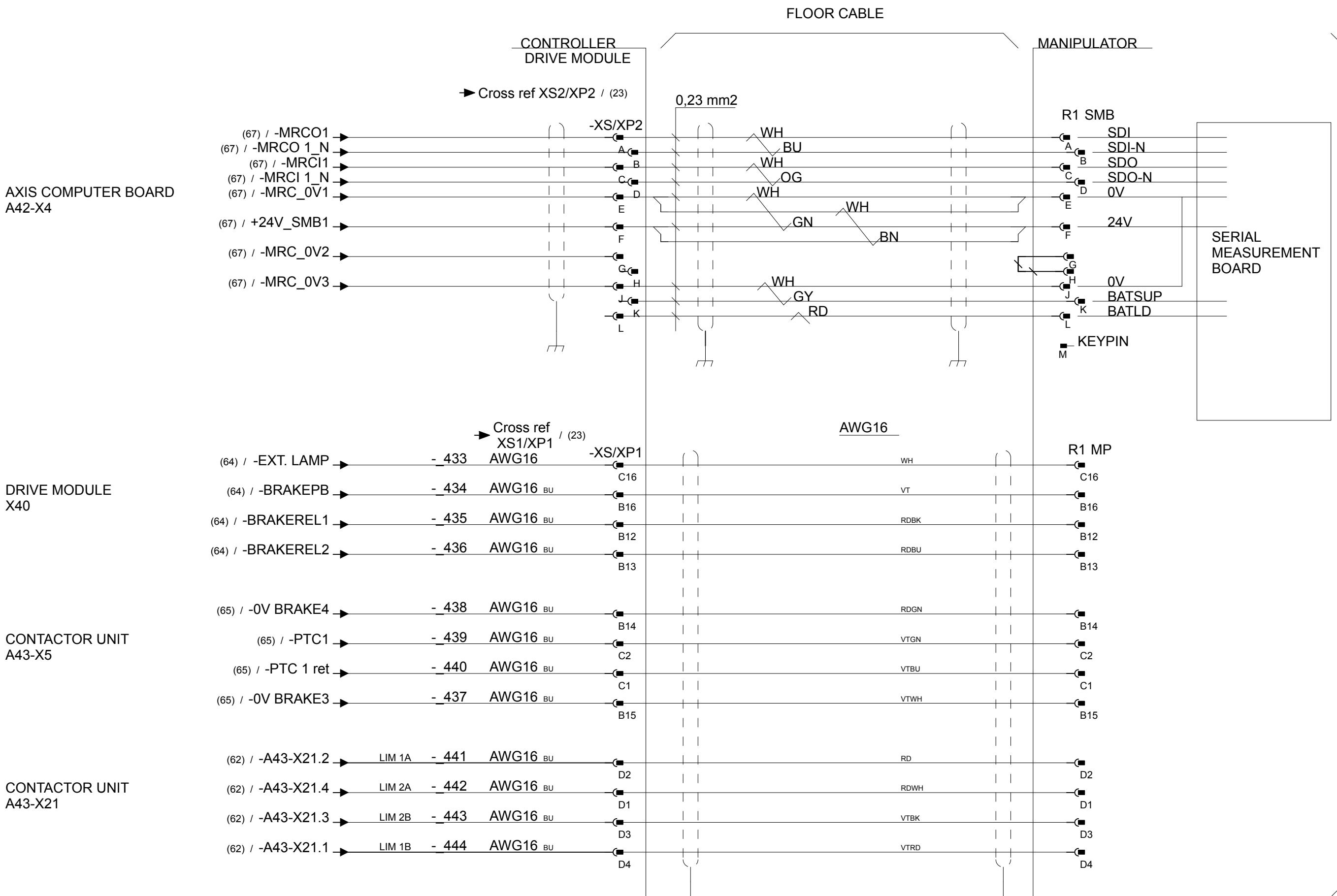
Document no.

Rev. Ind Page 112

3HAC024480-011

Next 113

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 4400

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

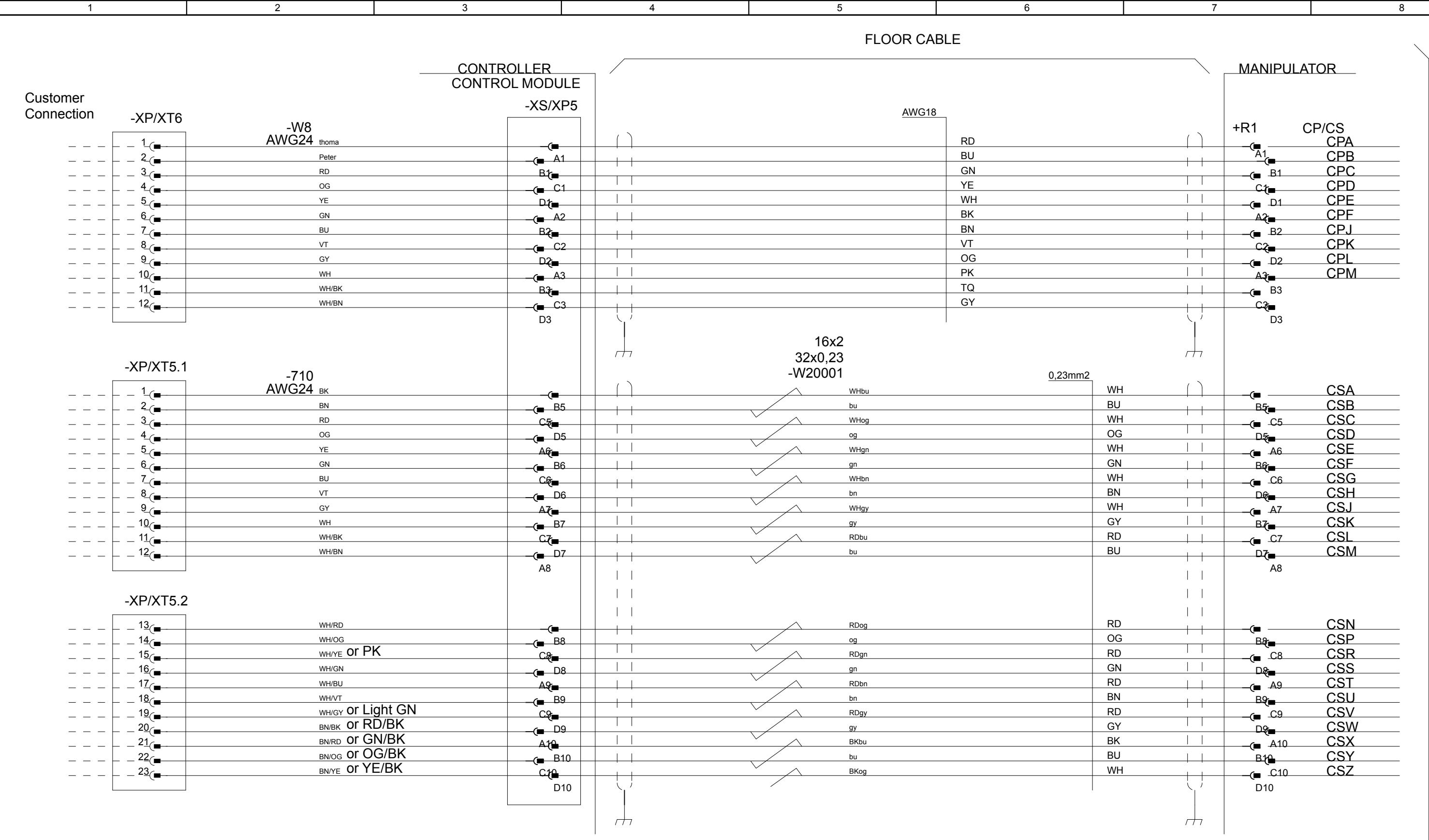
Document no.

Rev. Ind

Page 113

3HAC024480-011

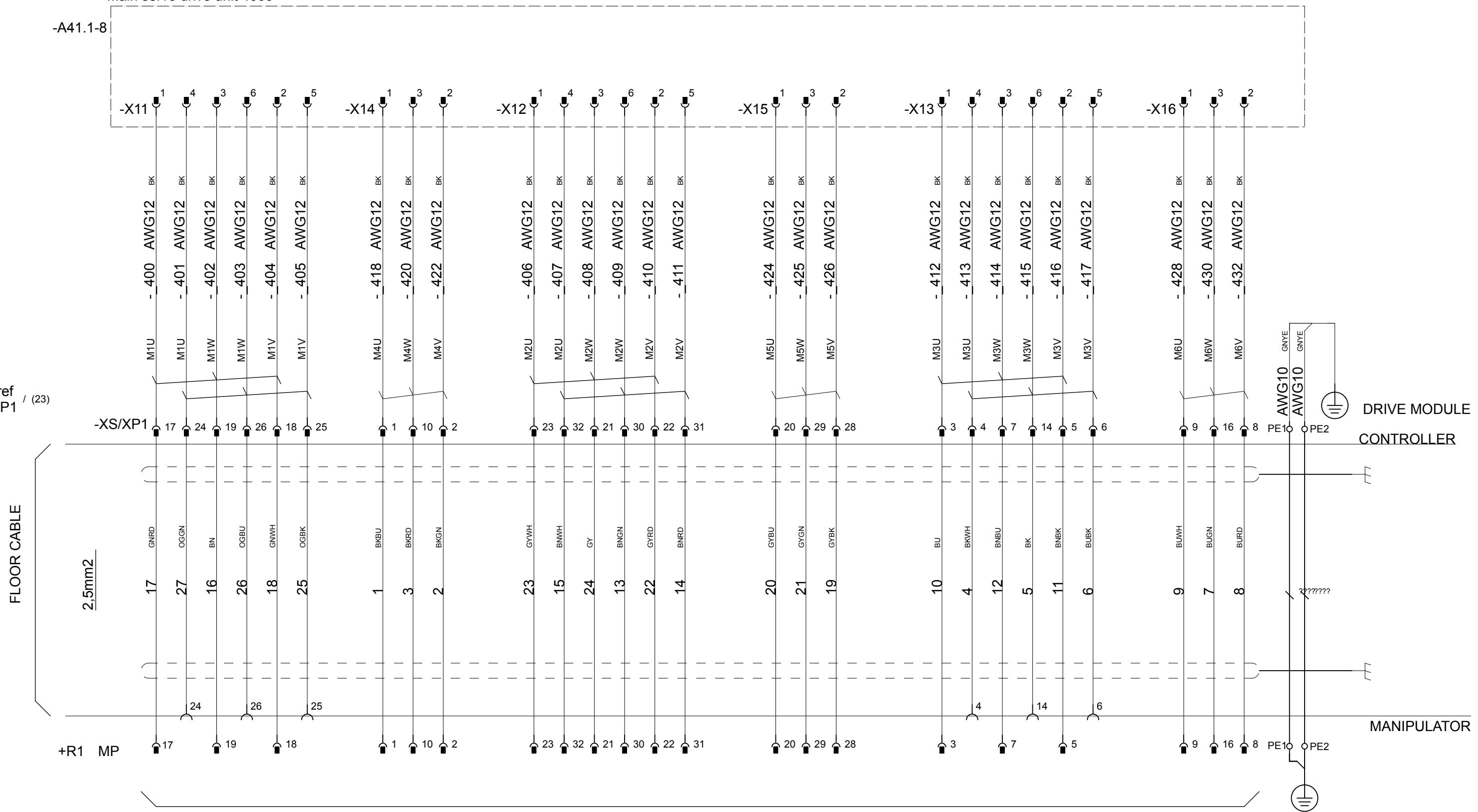
08



According to Manipulator diagram 3HAC9821-1

Main servo drive unit 4600

-A41.1-8



According to Manipulator circuit diagram 3HAC029038-003

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

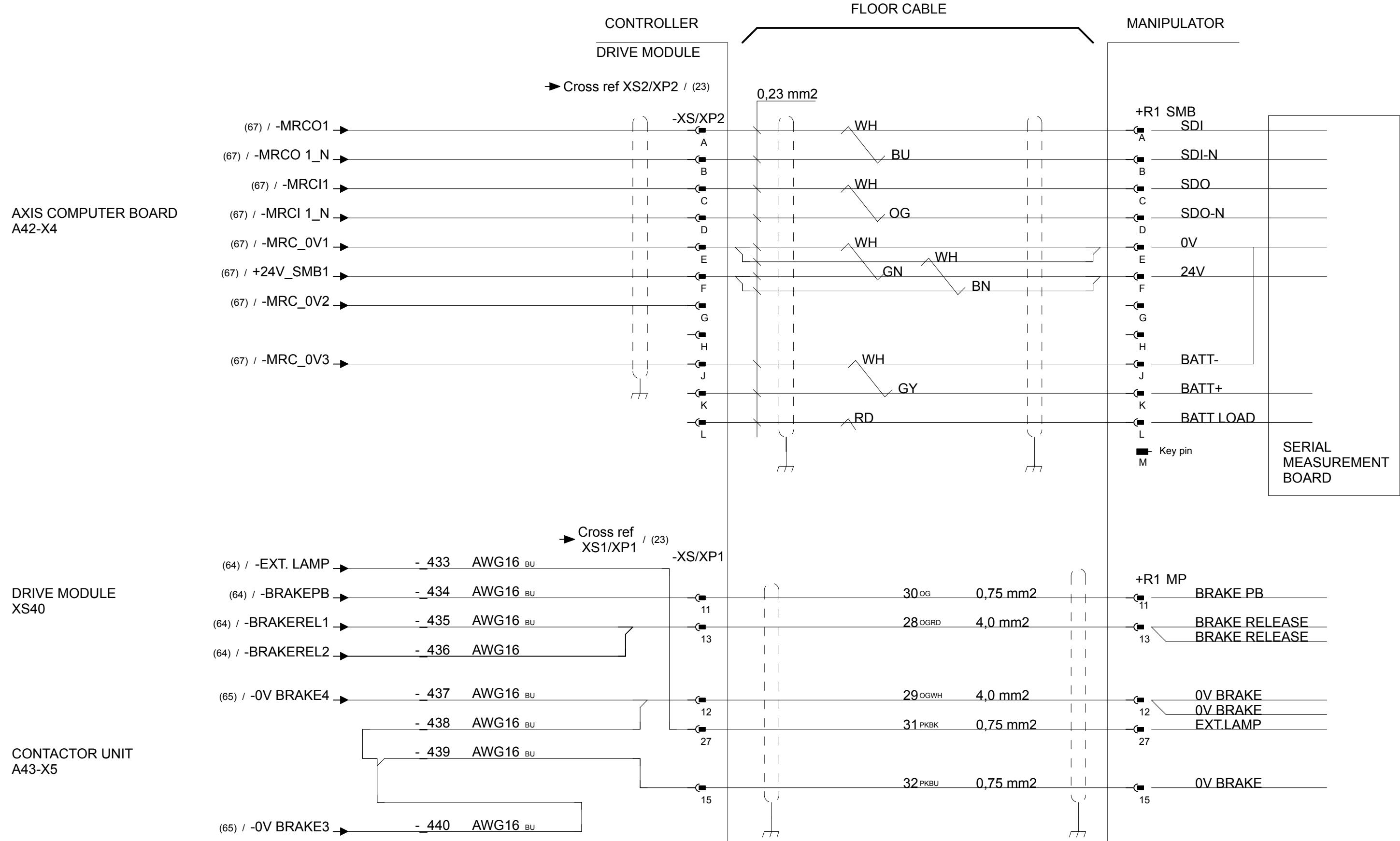
IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 4600

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

Rev. Ind Page 115  
Next 116  
Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 4600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

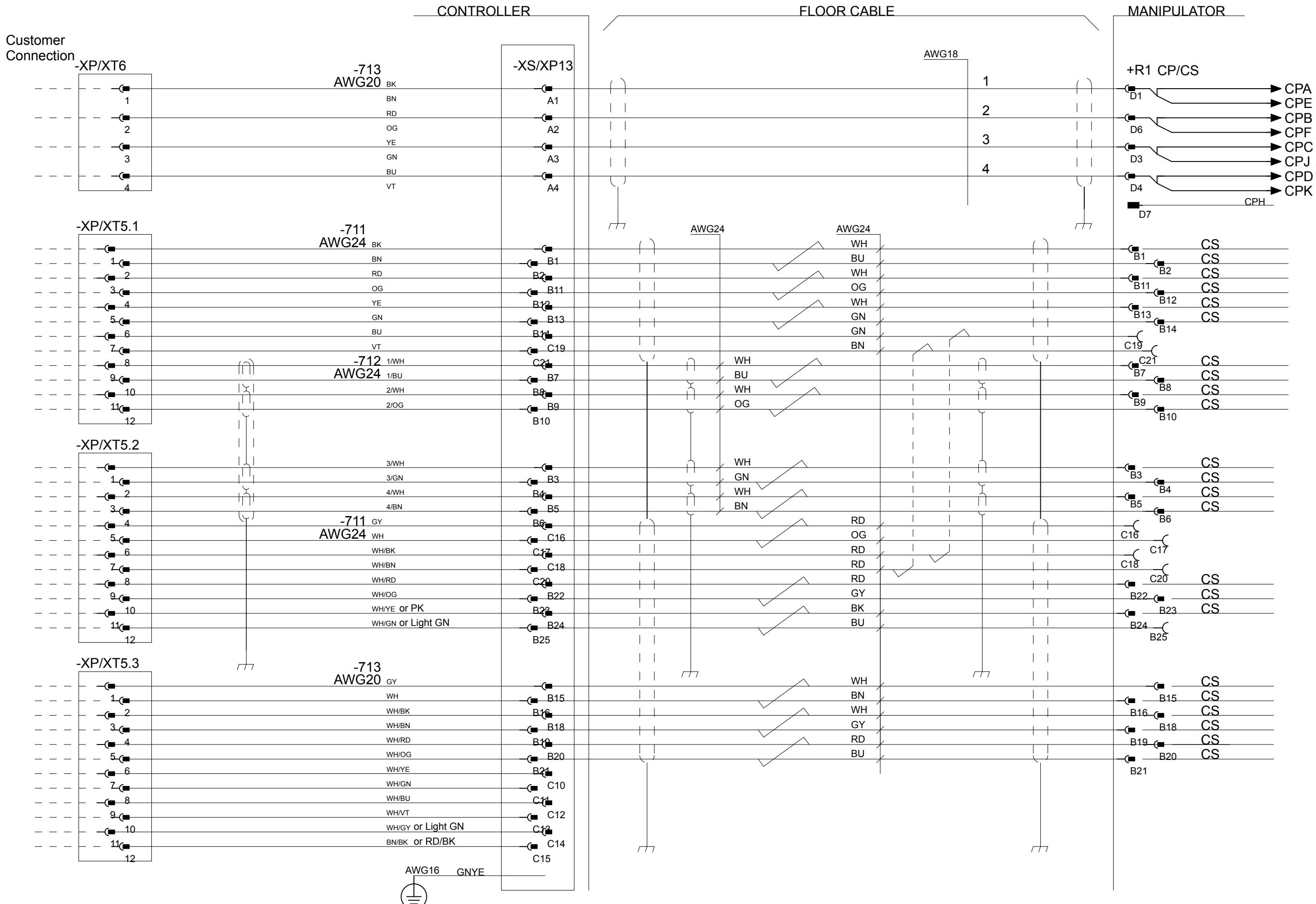
Rev. Ind Page 116

3HAC024480-011

08

Next 117

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
IRB4600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

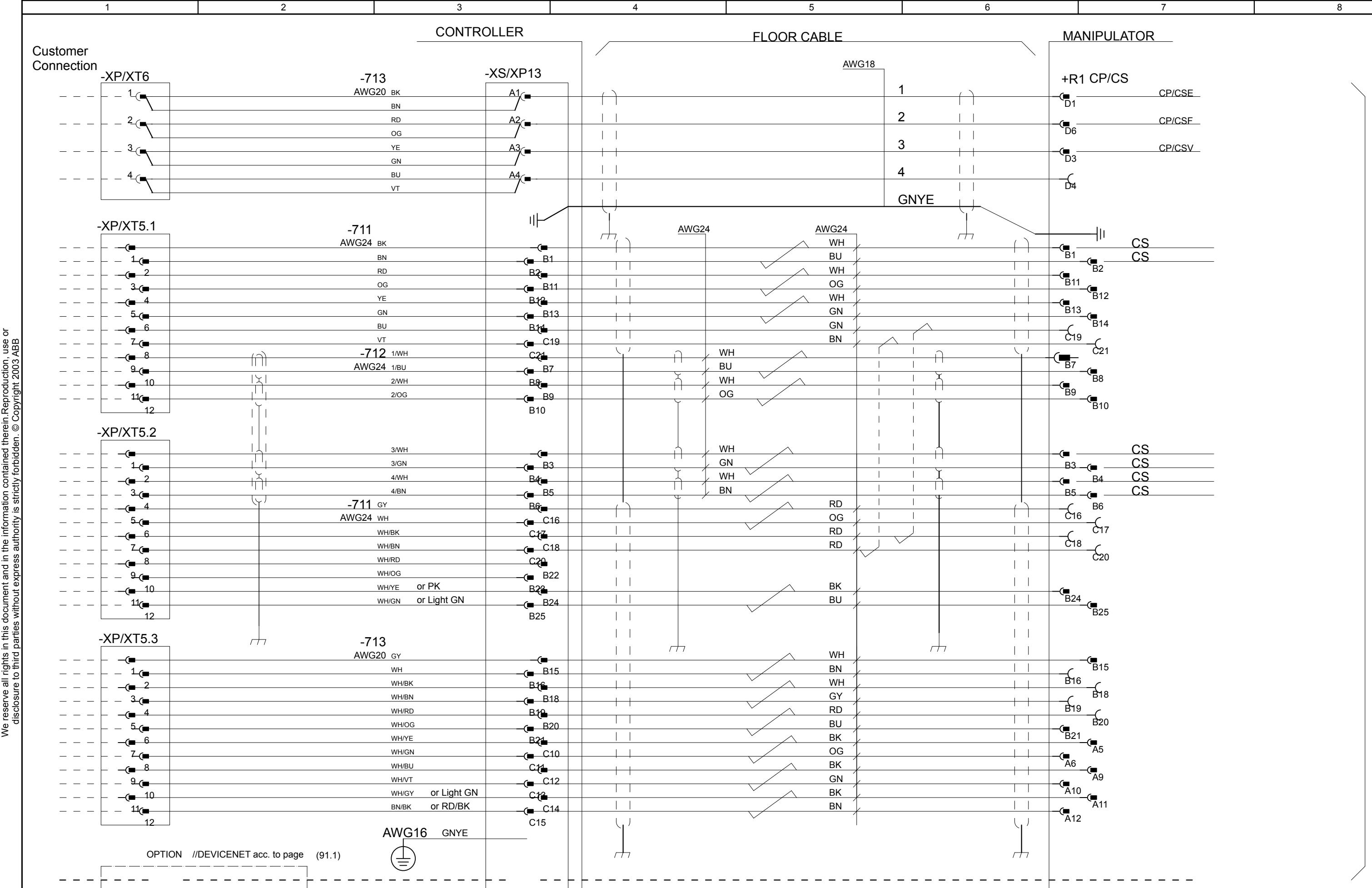
Rev. Ind

Page 117

3HAC024480-011

Next 118

Total 156



According to Manipulator diagram 3HAC025744-001 and 3HAC13347-1

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
DEVICE NET  
IRB4600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

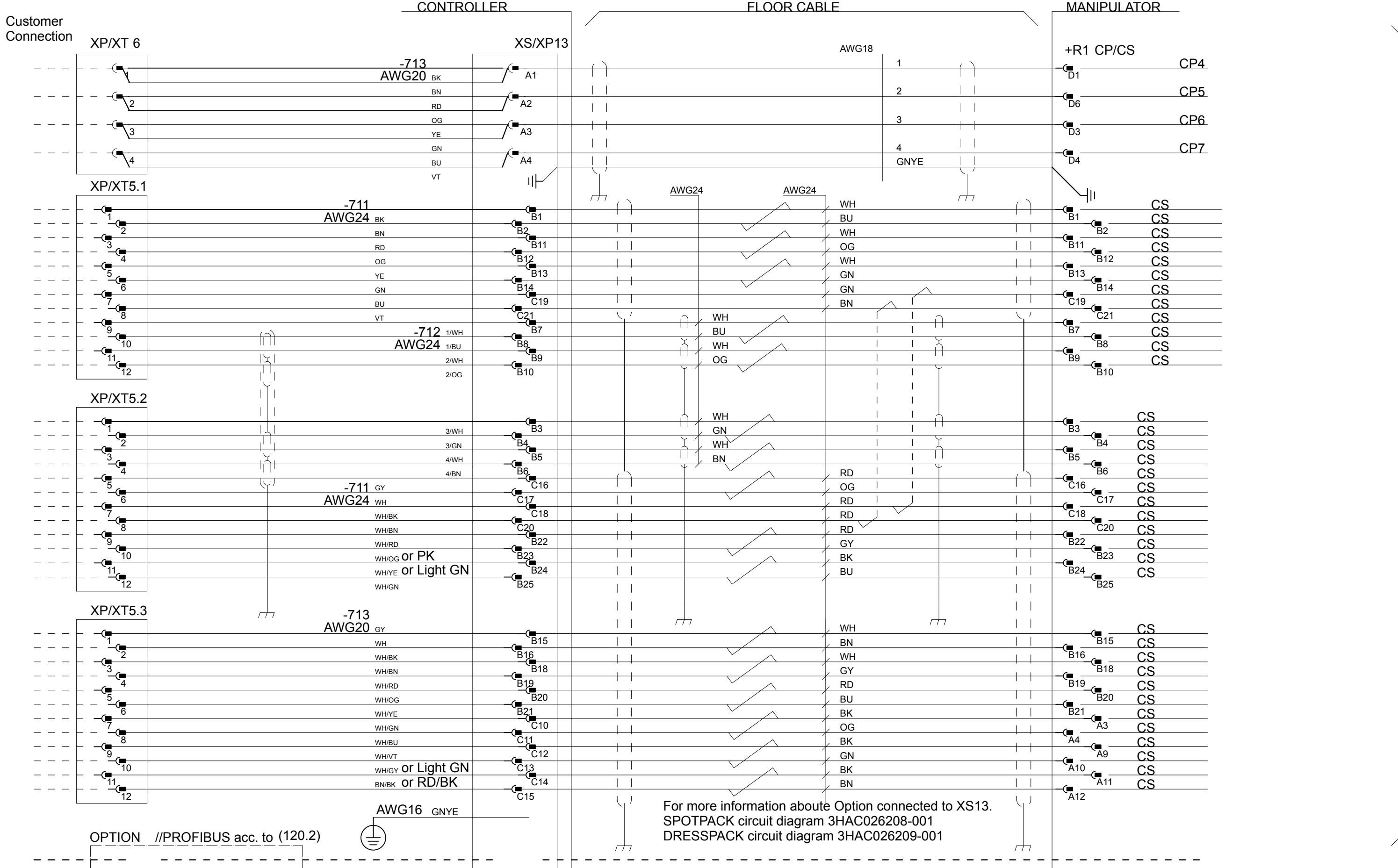
Page 118

3HAC024480-011

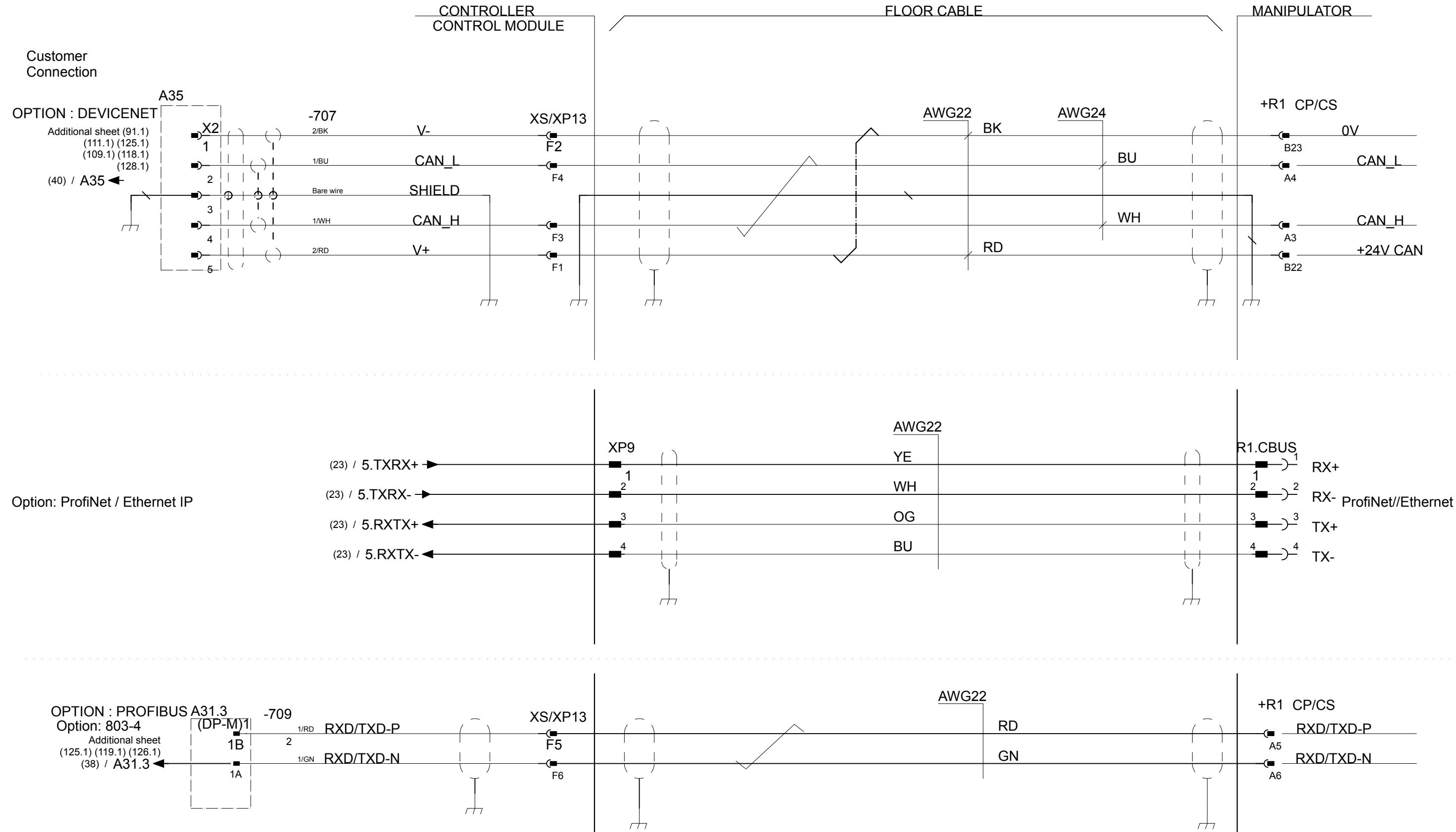
08

Next 119

Total 156



According to Manipulator diagram 3HAC025744-001 and 3HAC13347-1



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
DevNet/ProfiNet/Ethernet/Profibus addition to CP/CS  
IRB4600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

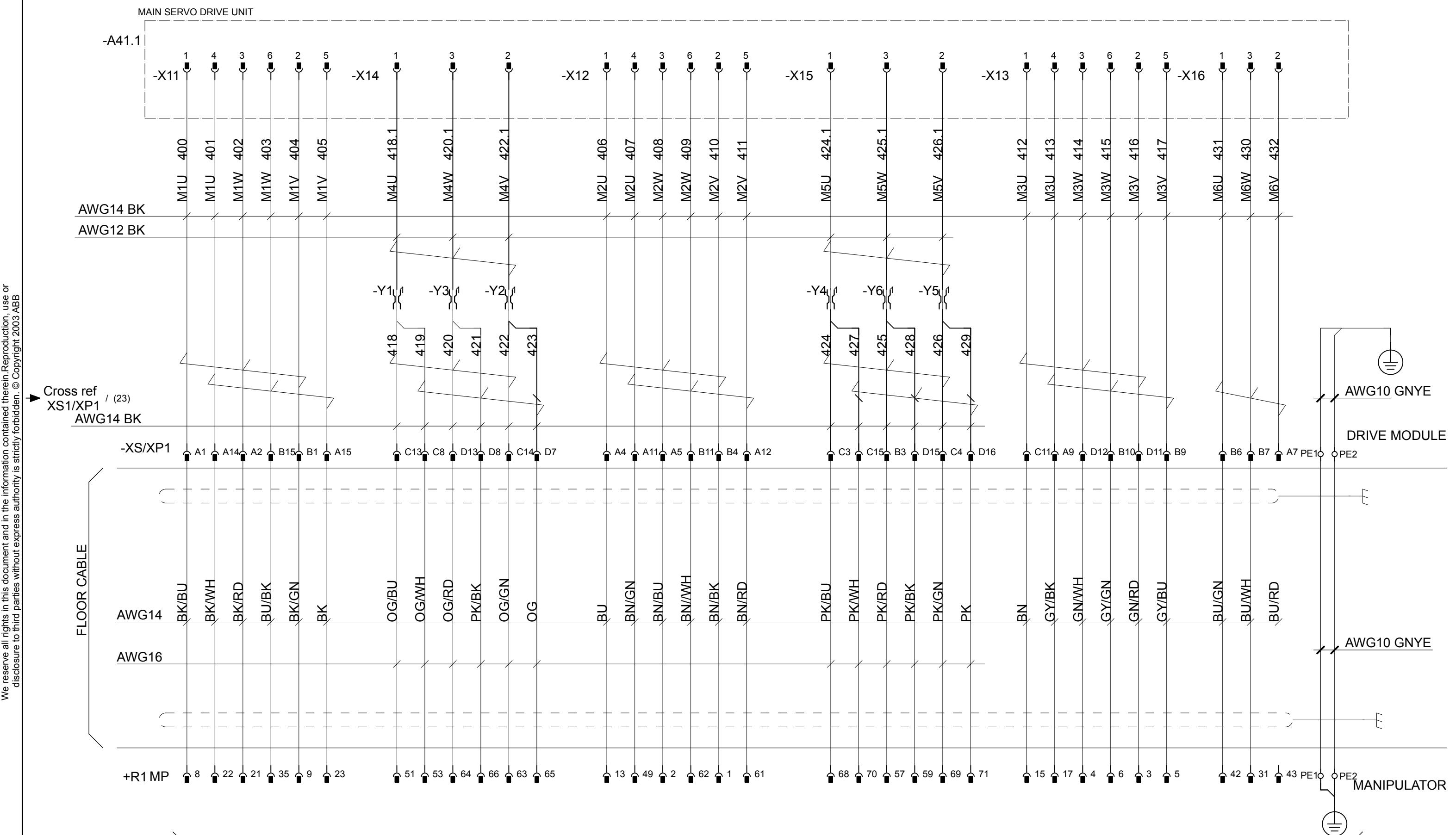
Rev. Ind Page 120

3HAC024480-011

08

Next 120.1

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

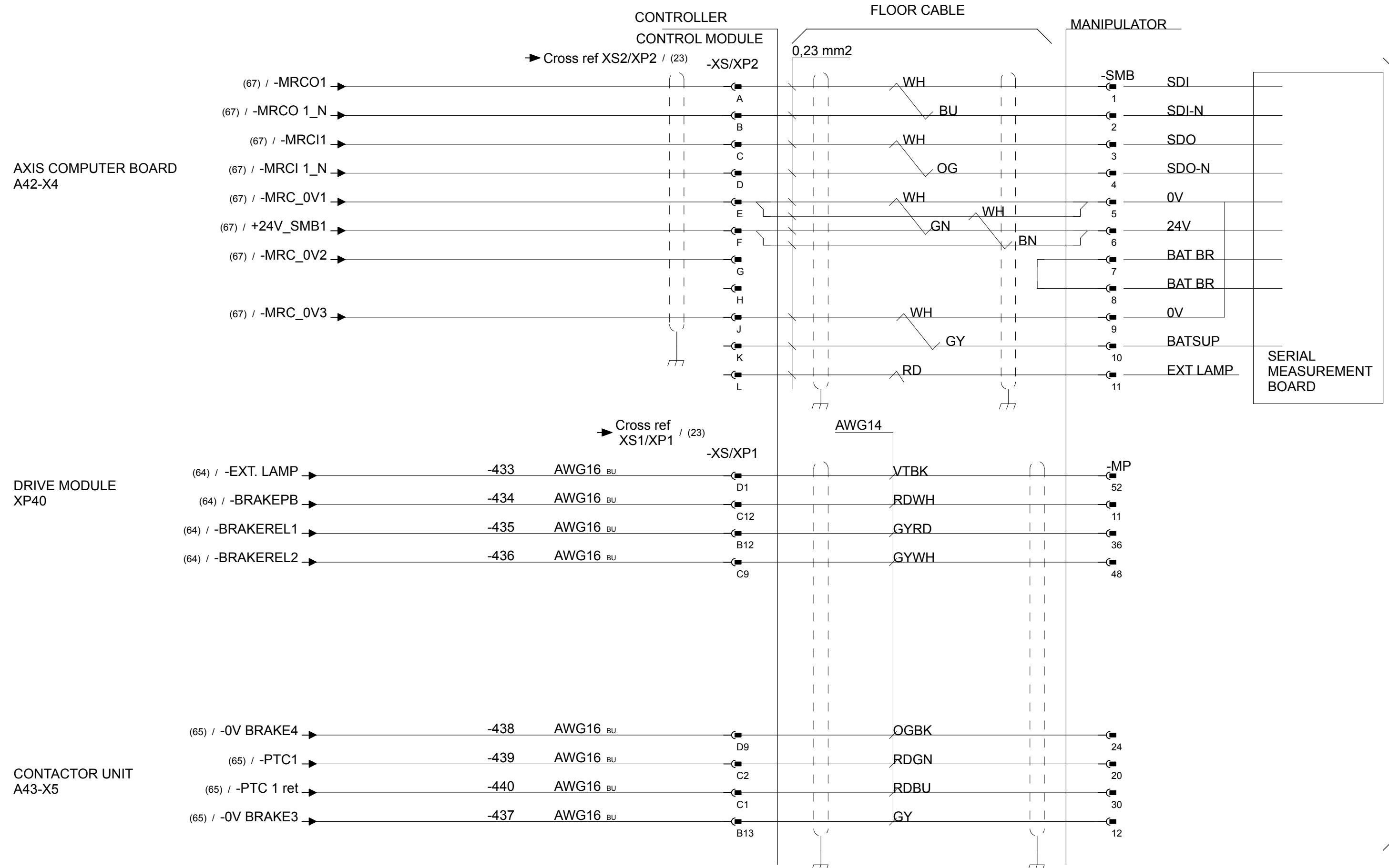
IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 6400R

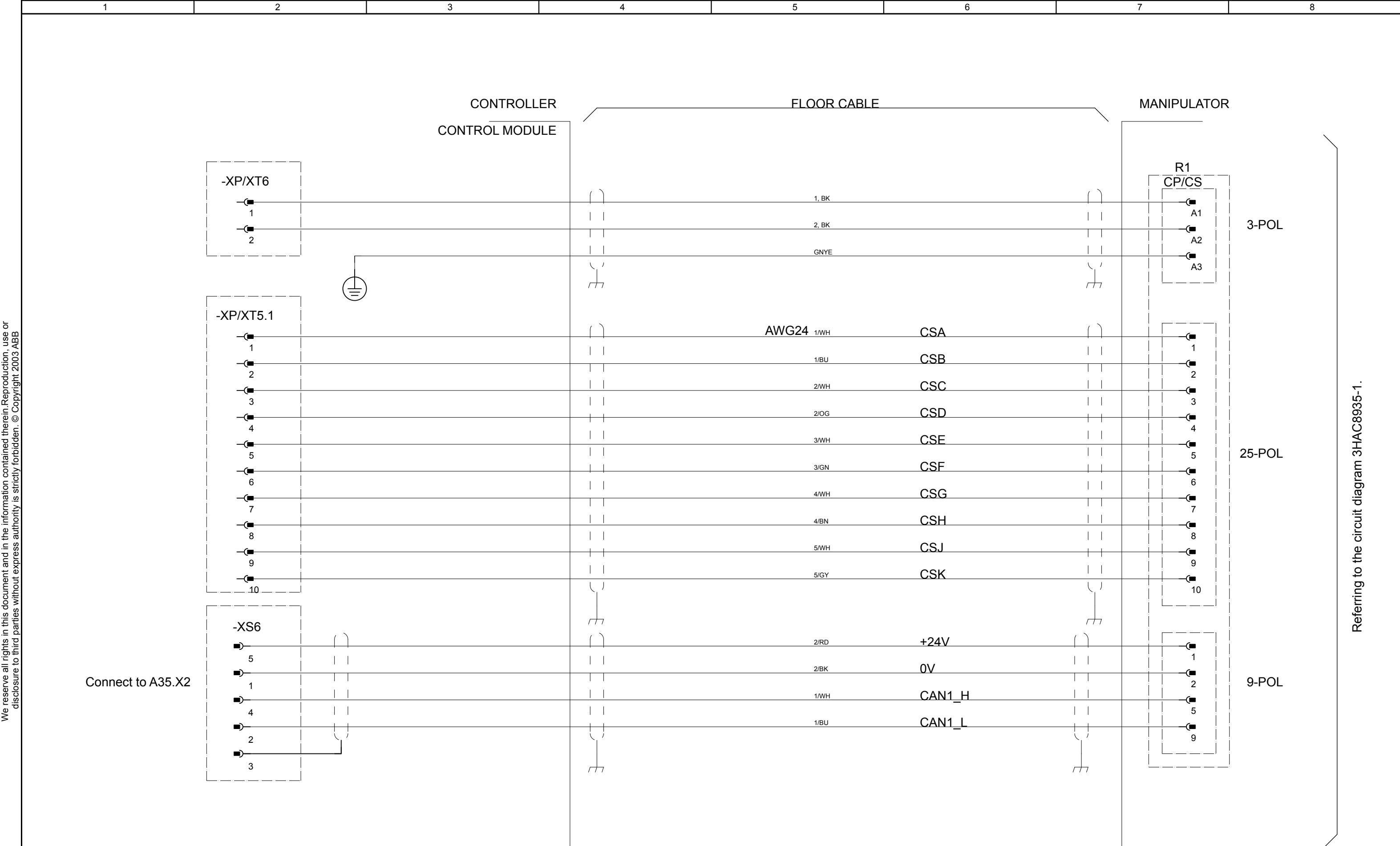
Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.  
3HAC024480-011

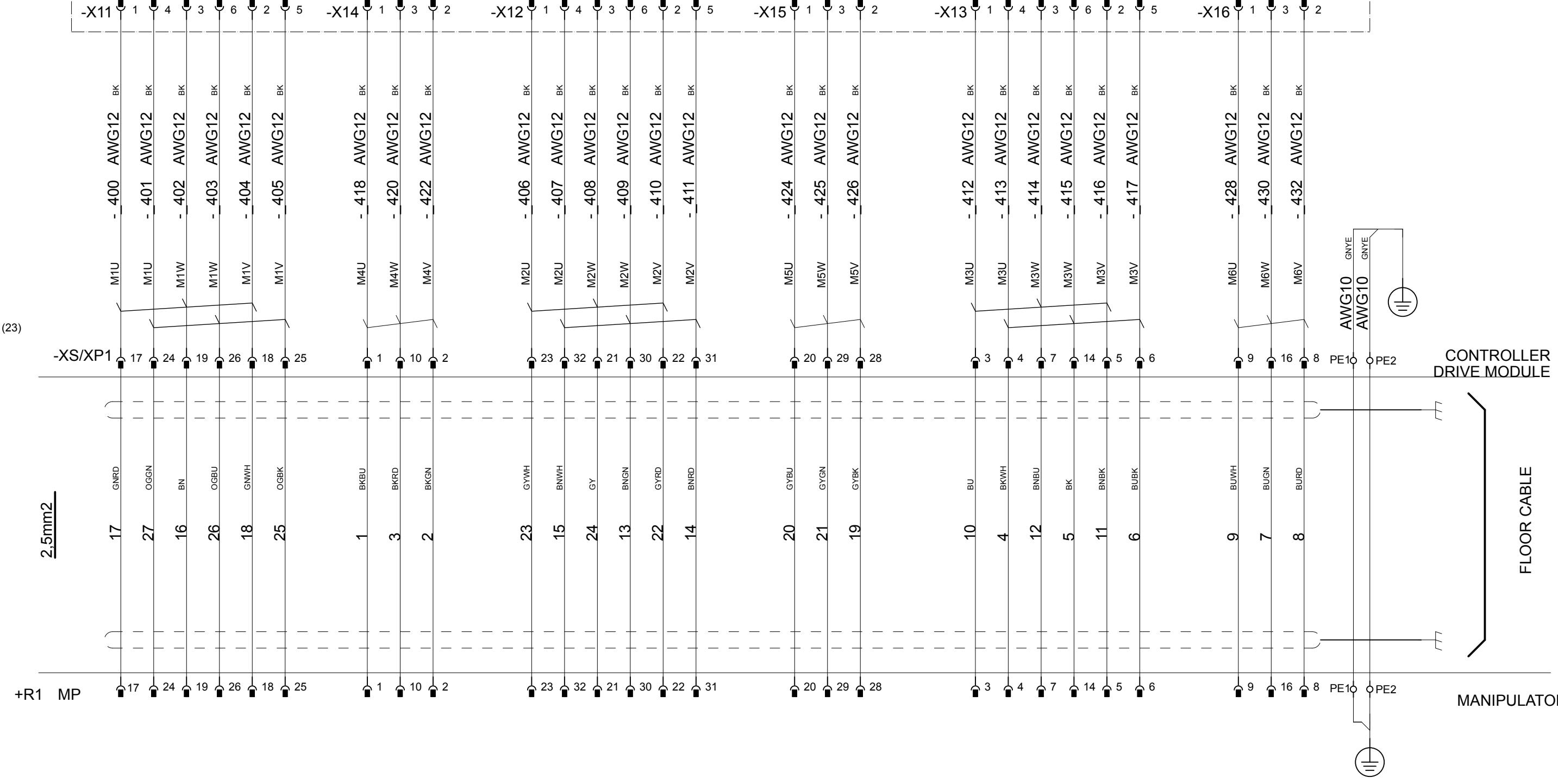
Rev. Ind Page 120.1  
Next 120.2  
Total 156  
08





MAIN SERVO DRIVE UNIT

A41.1



According to manipulator circuit diagram 3HAC043446-005 r00

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 6700

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

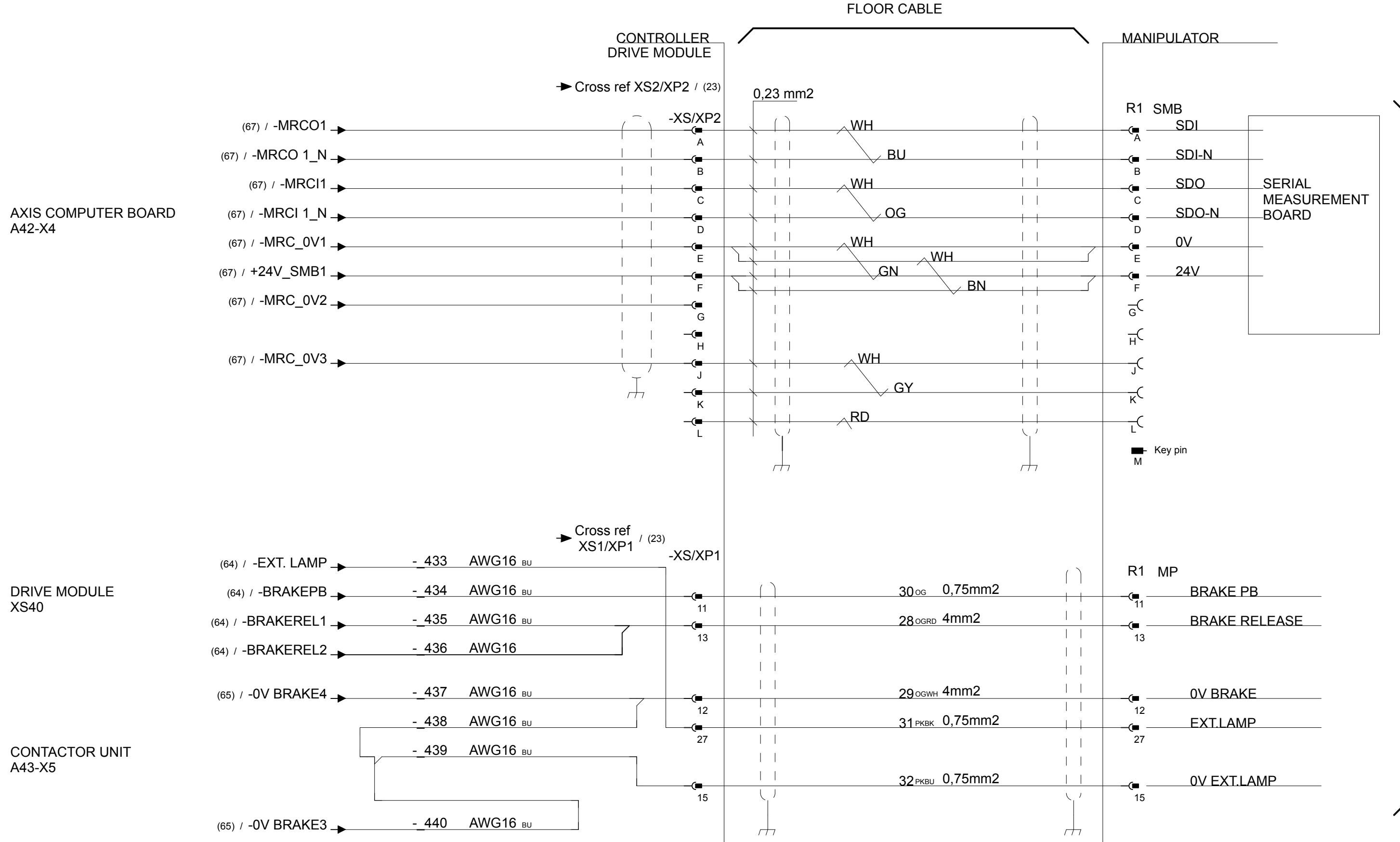
Document no.

Rev. Ind Page 120.4

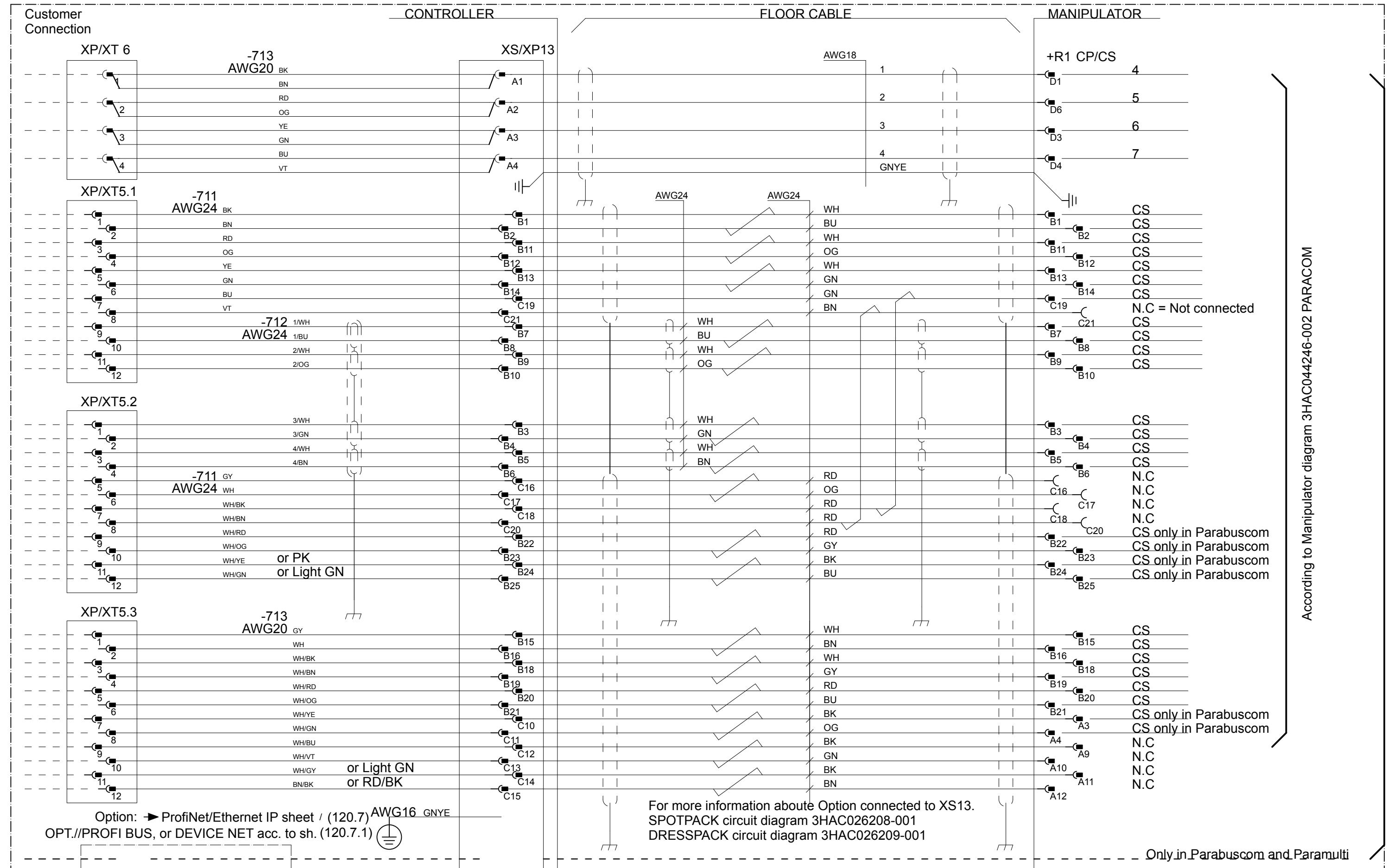
3HAC024480-011

Next 120.5

Total 156



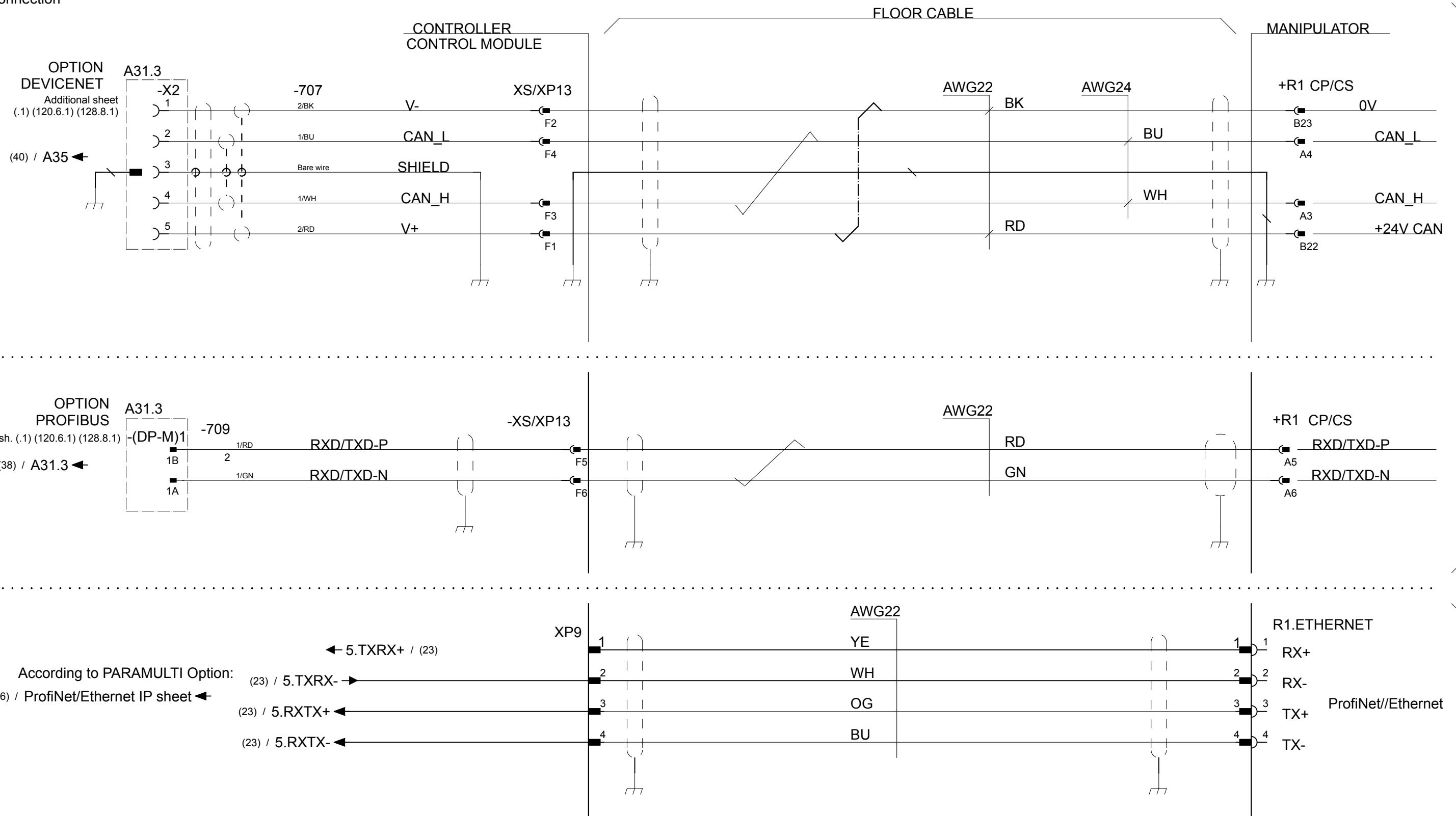
According to manipulator circuit diagram 3HAC043446-005 r00



+C

Customer  
Connection

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden. © Copyright 2003 ABB



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
DevNet//EtherNet//ProfiNet//PBUS ADDITION TO CP/CS  
IRB 6700

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

Page 120.7

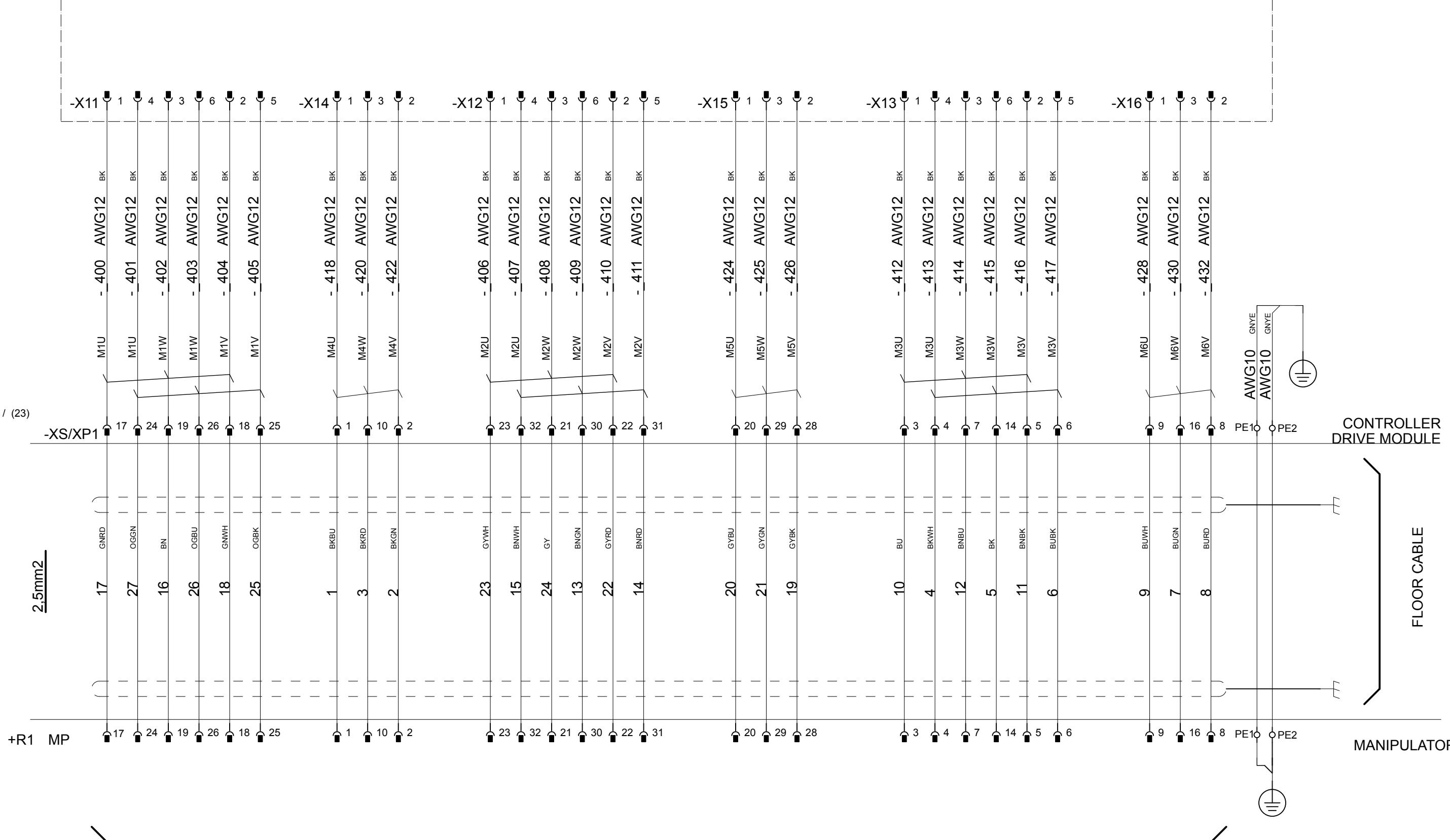
3HAC024480-011

08

Next 121

Total 156

MAIN SERVO DRIVE UNIT  
A41.1



According to Manipulator IRB66XX - 76XX circuit diagram 3HAC025744-001

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM  
IRB 66xx - 76xx

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

3HAC024480-011

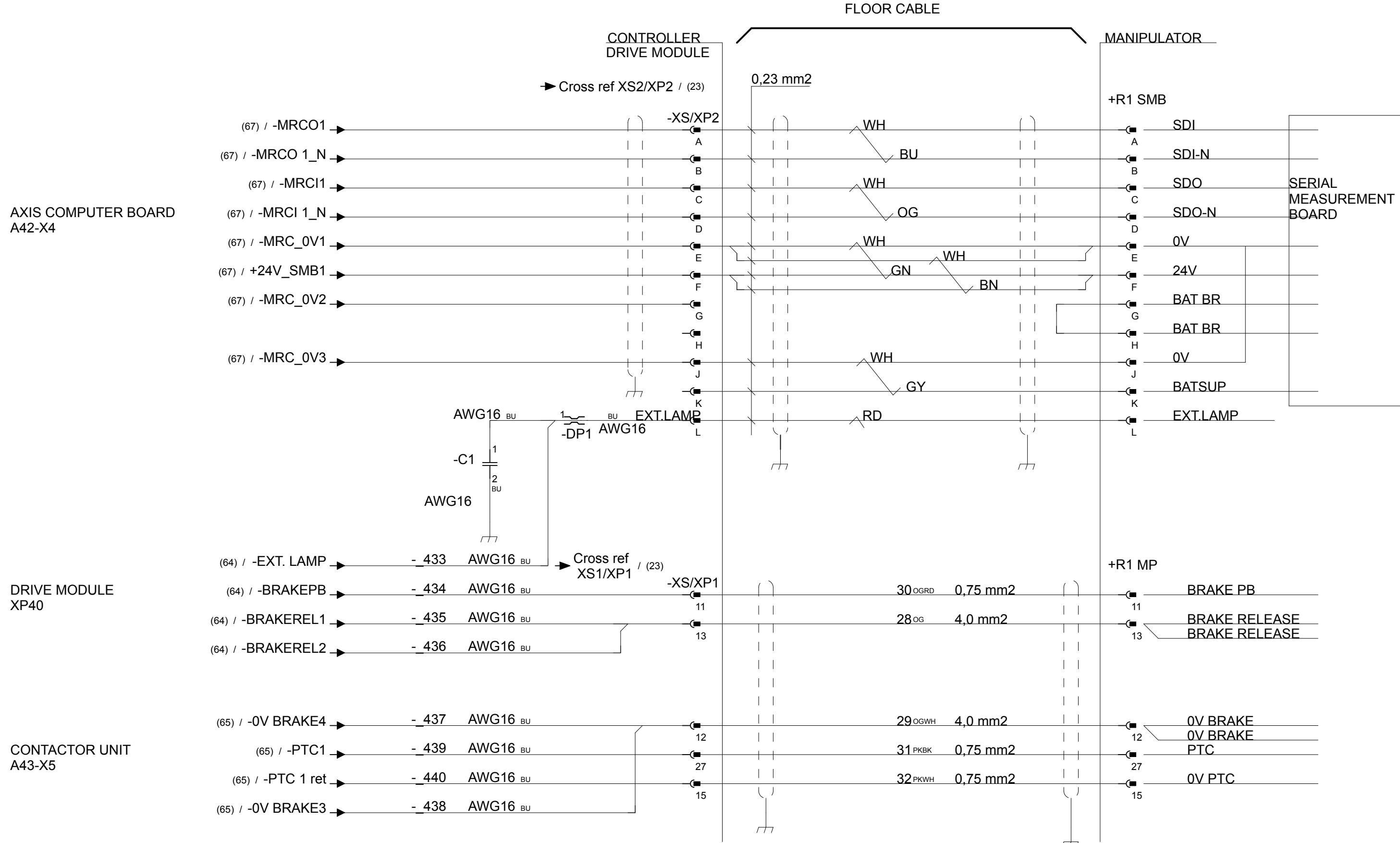
Rev. Ind

08

Page 121

Next 122

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CONTROL CABLE  
IRB 66xx - 76xx

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

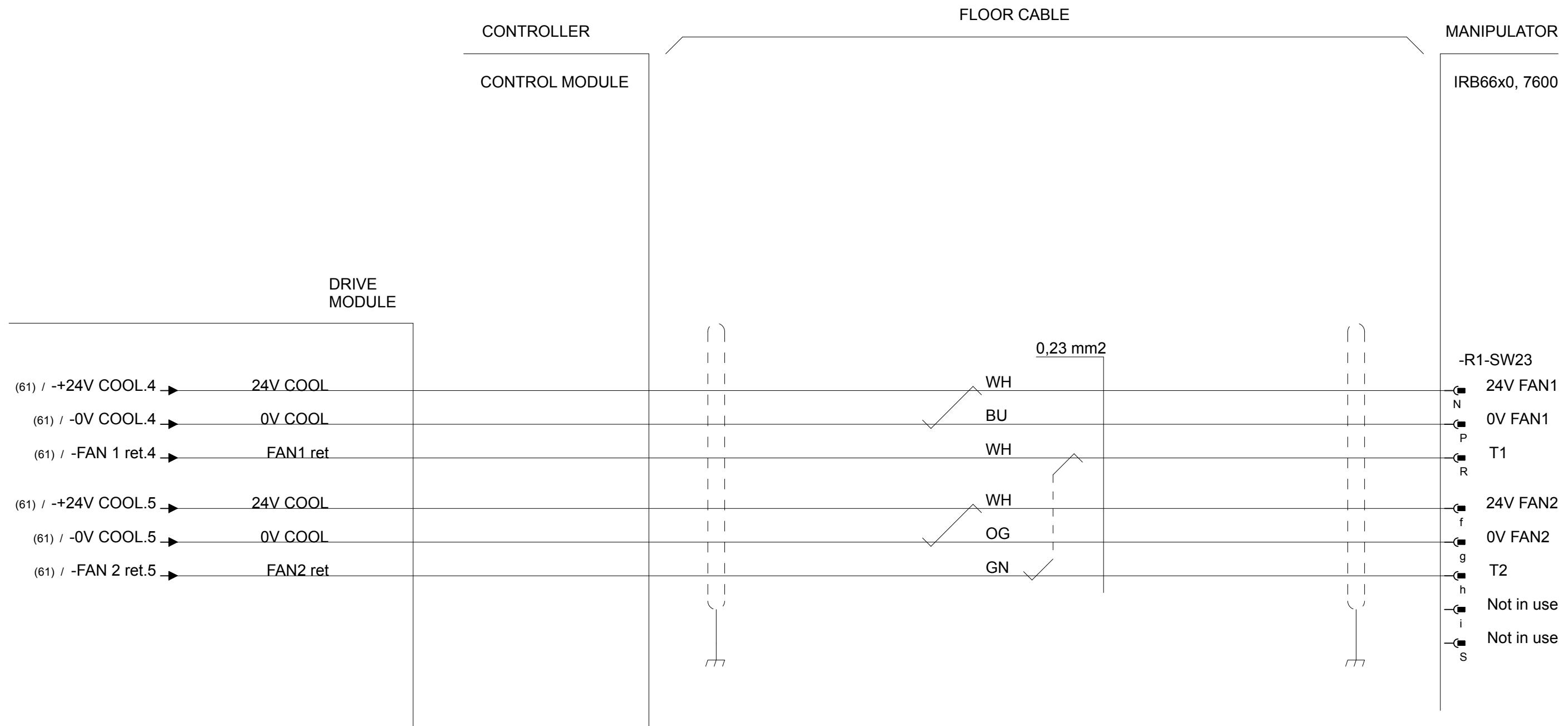
Rev. Ind

Page 122

3HAC024480-011

08

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
COOLING AXES 1/2  
SINGLE CABINET  
IRB 6600 - 7600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

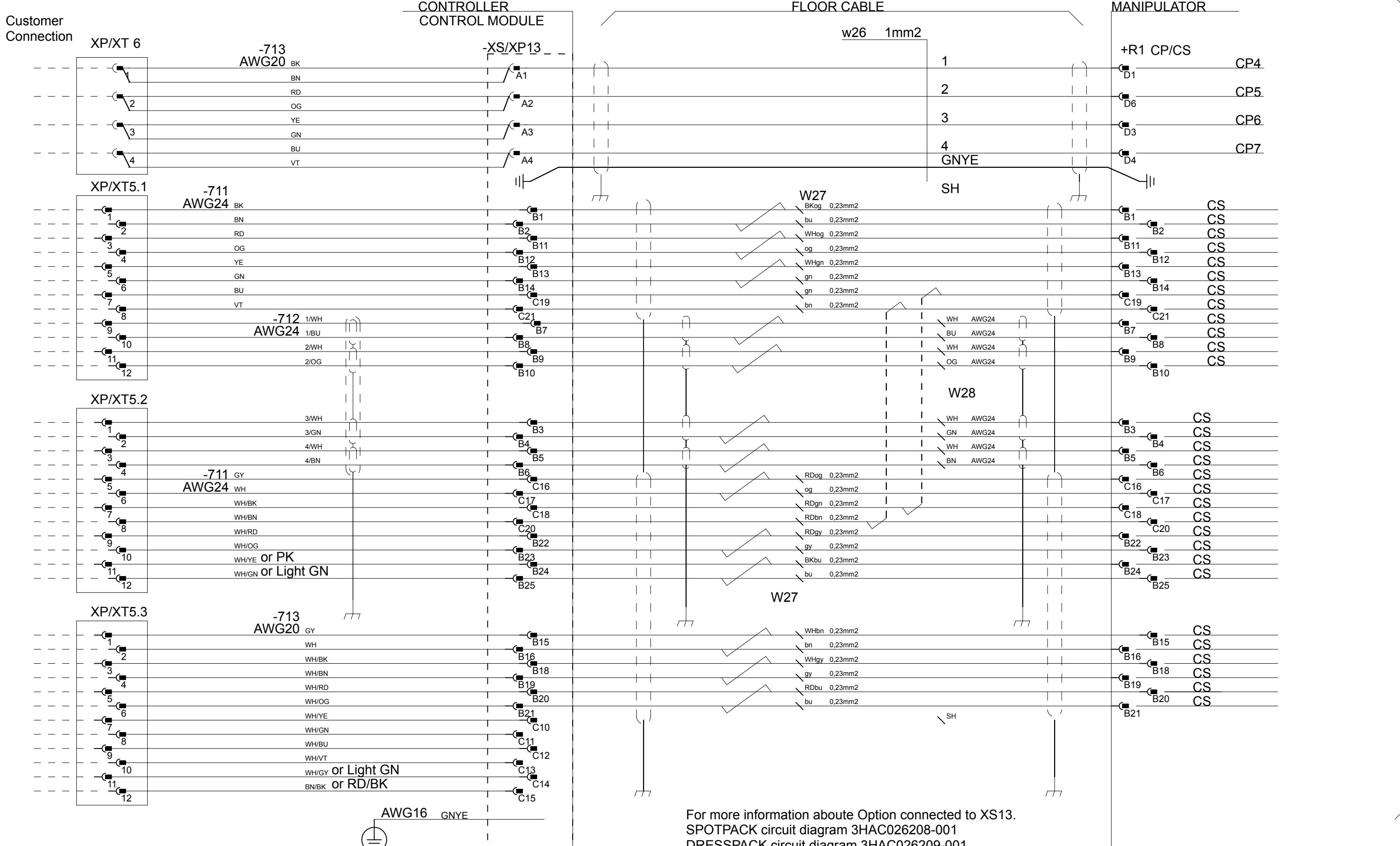
Rev. Ind

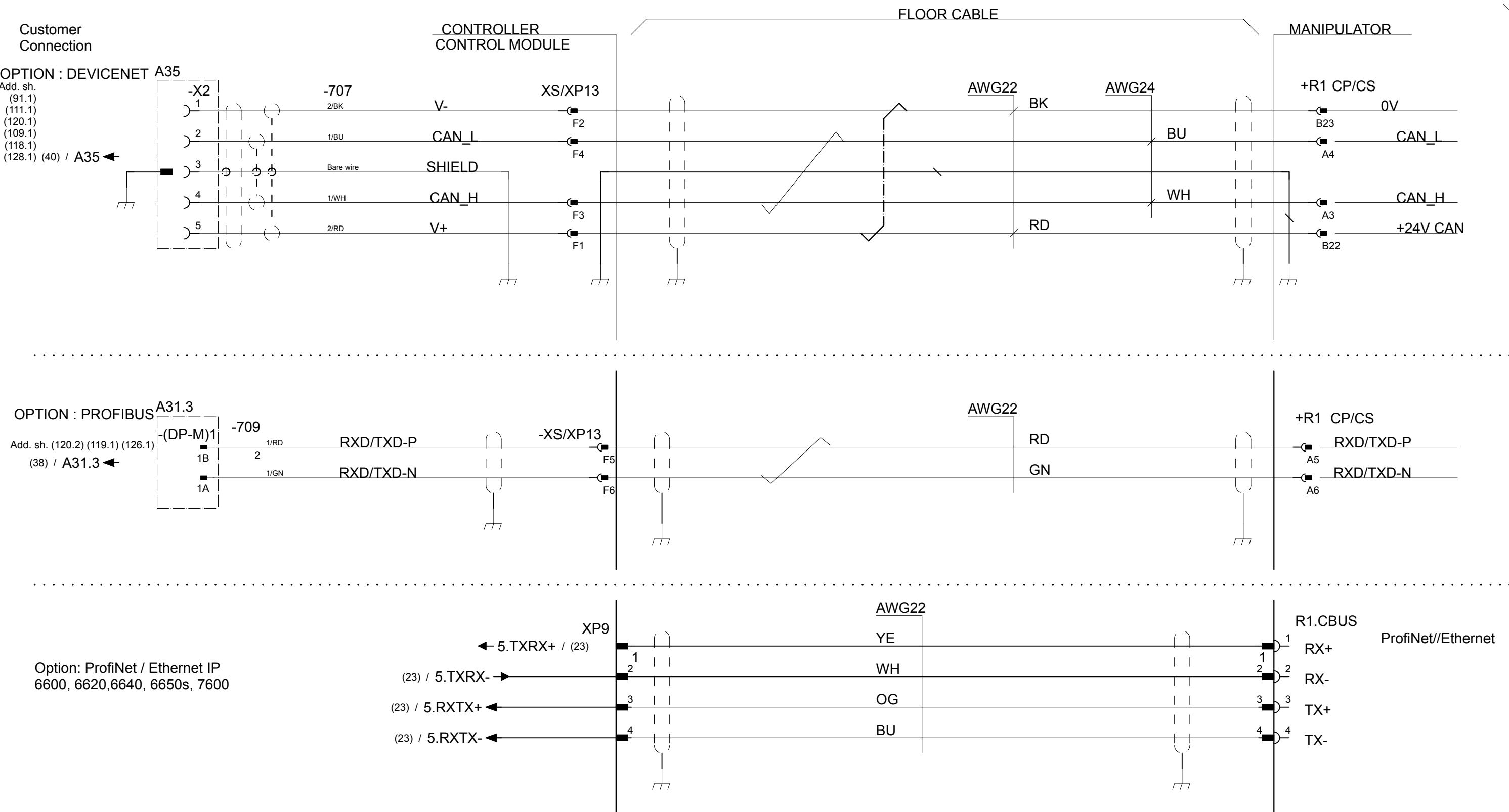
Page 123

3HAC024480-011

Next 124

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
DevNet//EtherNet//ProfiNet//PBUS ADDITION TO CP/CS  
IRB 66xx - 7600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

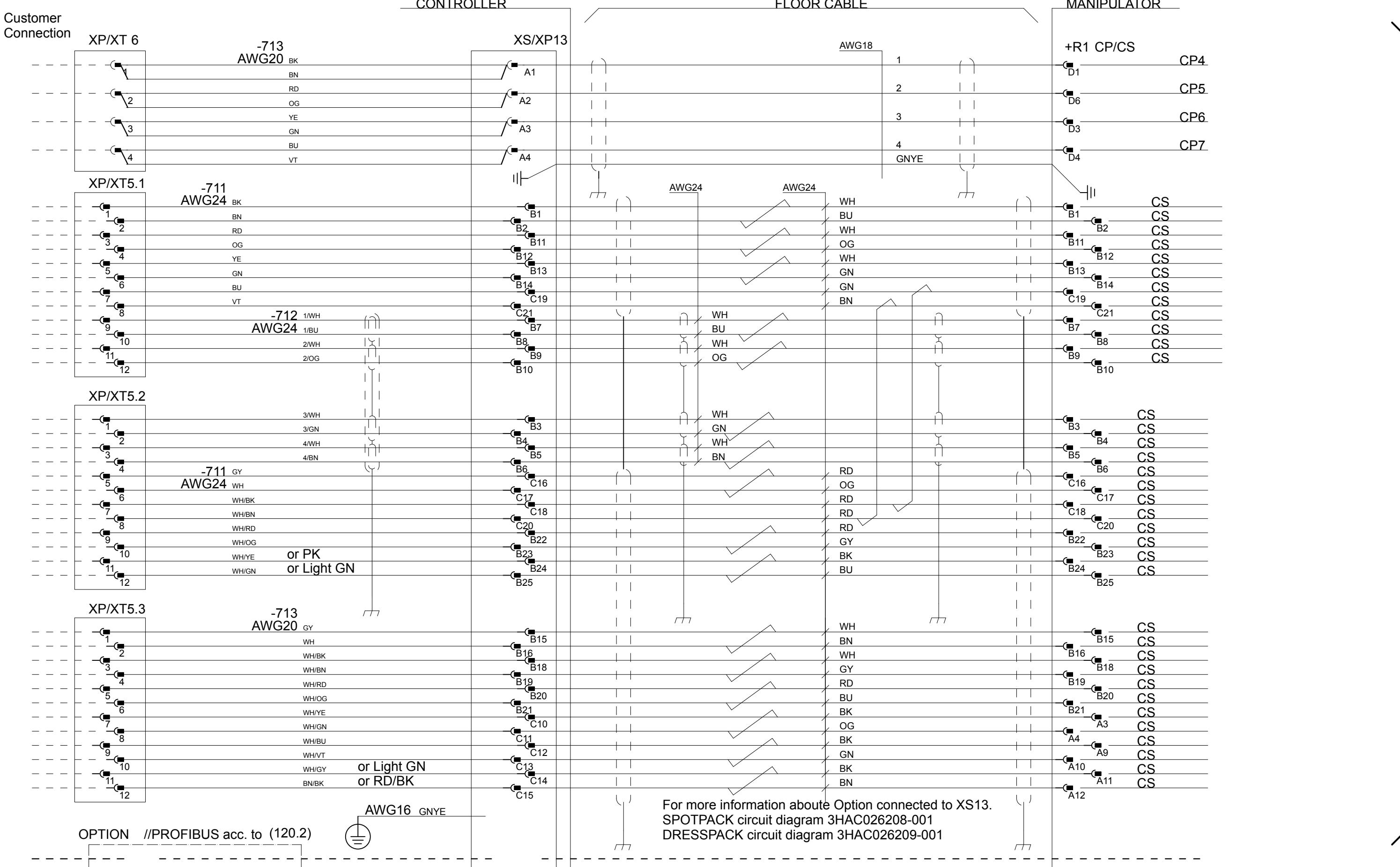
Document no.

Rev. Ind Page 125

3HAC024480-011

Next 126

08 Total 156



According to Manipulator diagram 3HAC025744-001 and 3HAC13347-1

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
SINGLE CABINET PROFI BUS  
IRB 6600 - 7600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

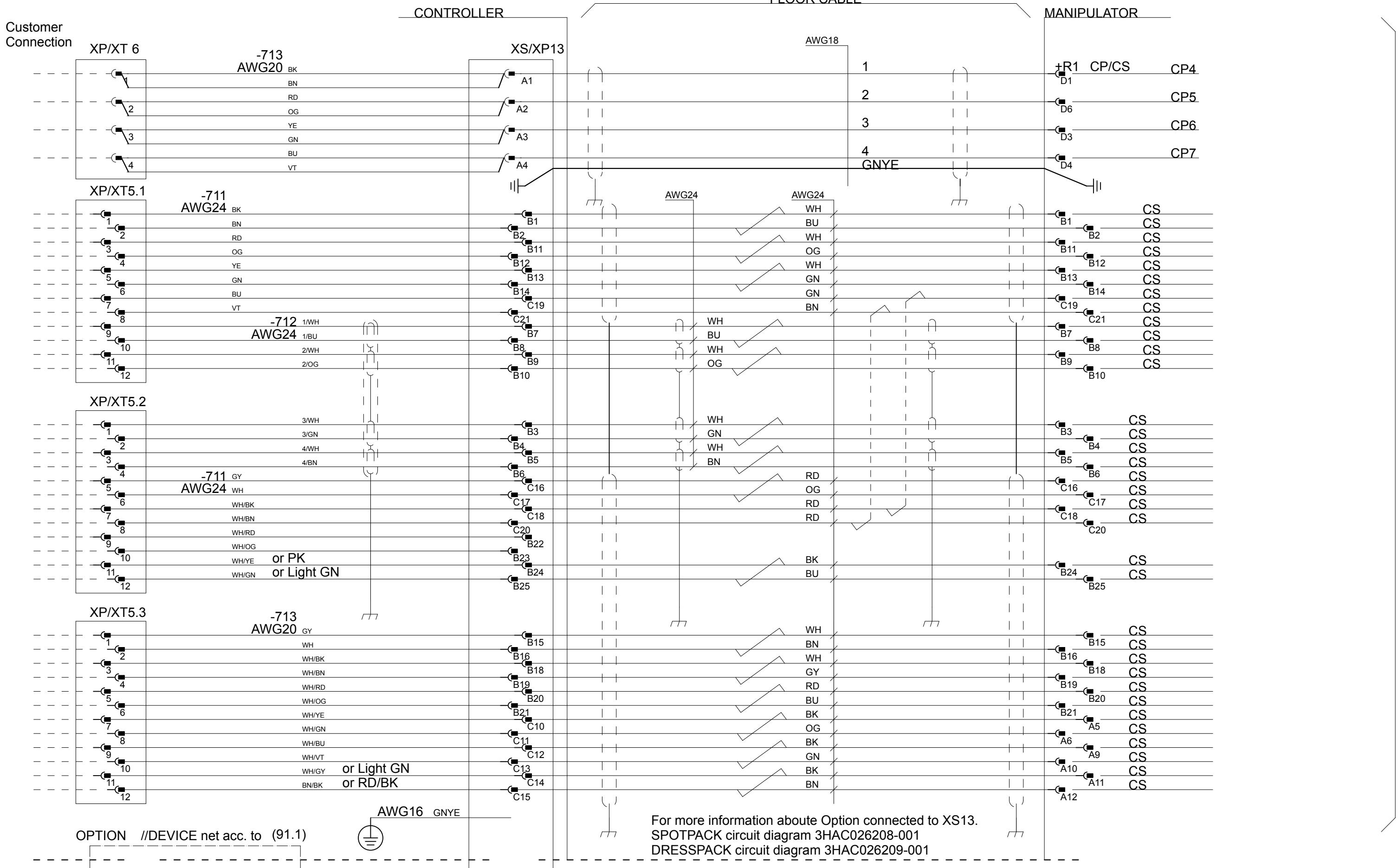
Rev. Ind

Page 126

3HAC024480-011

Next 128

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL  
SINGLE CABINET DEVICE NET  
IRB 6600 - 7600

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

Page 128

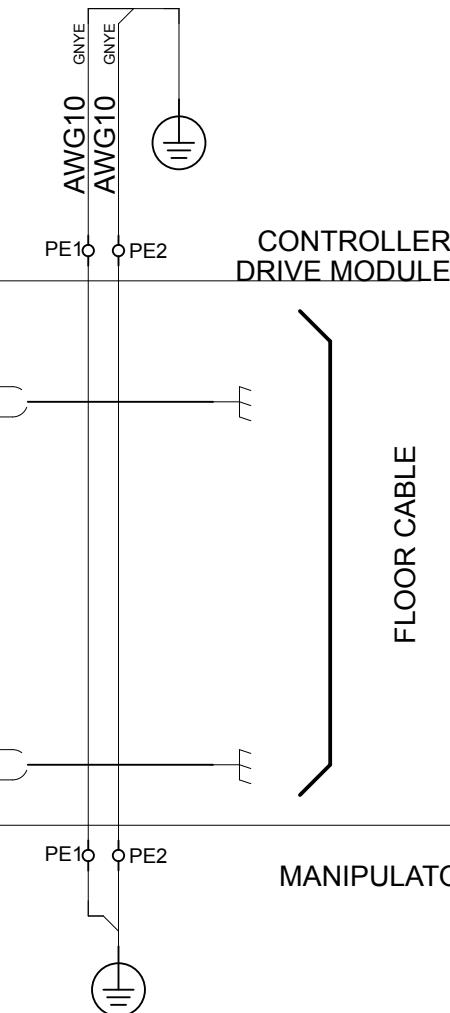
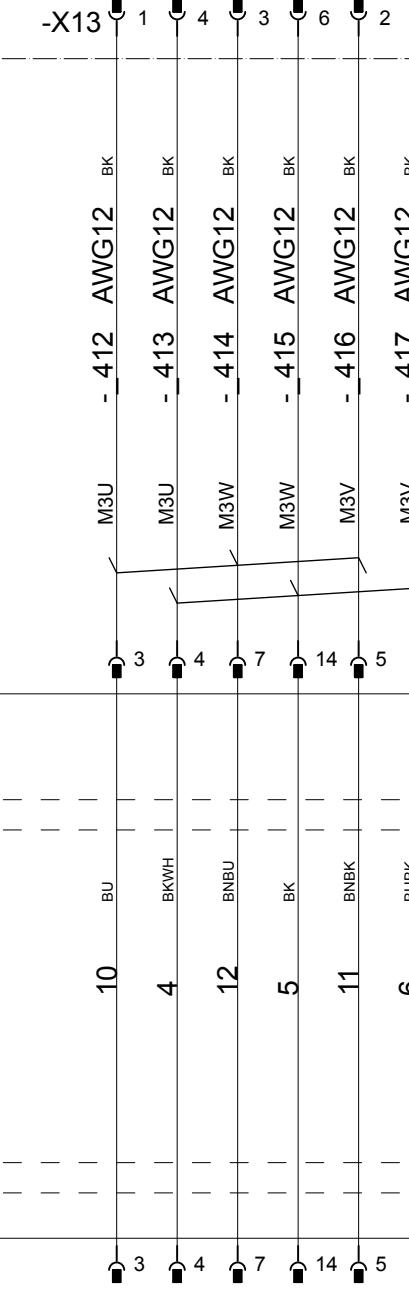
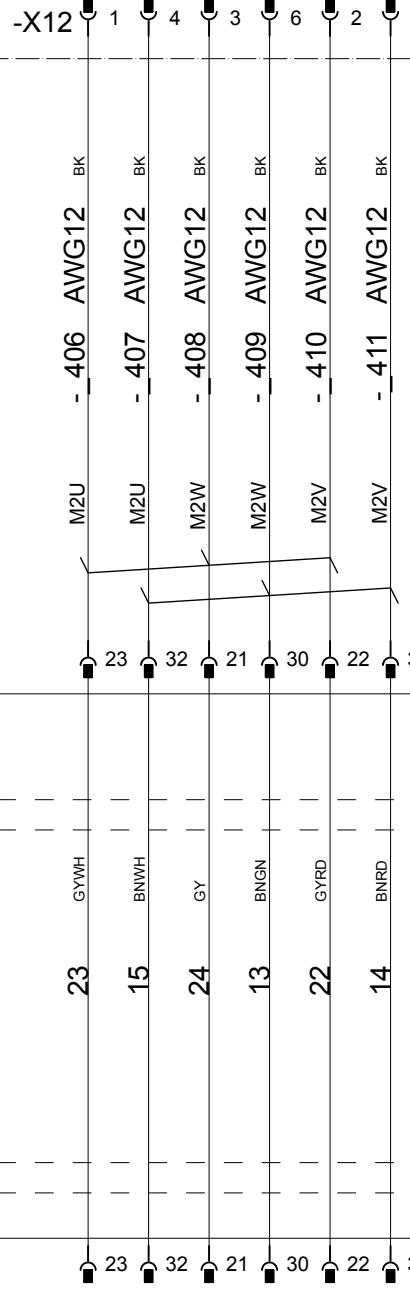
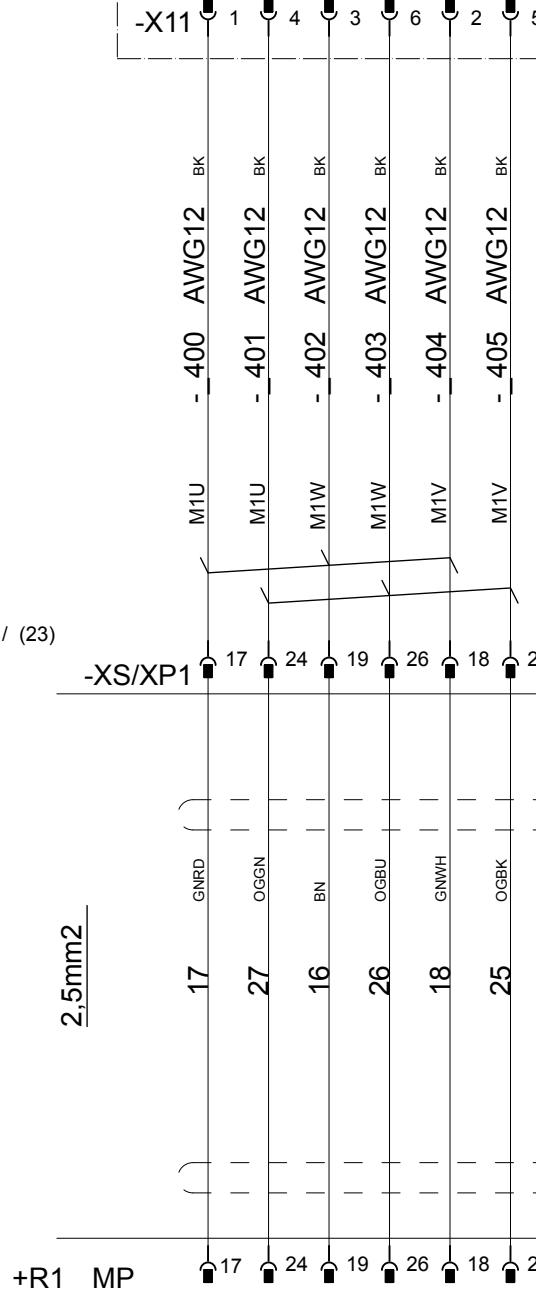
3HAC024480-011

08

Next 128.5

Total 156

MAIN SERVO DRIVE UNIT  
-A41.1



According to Manipulator IRB 87XX circuit diagram 3HAC051028-002

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM AXES 1-3  
IRB 87xx

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

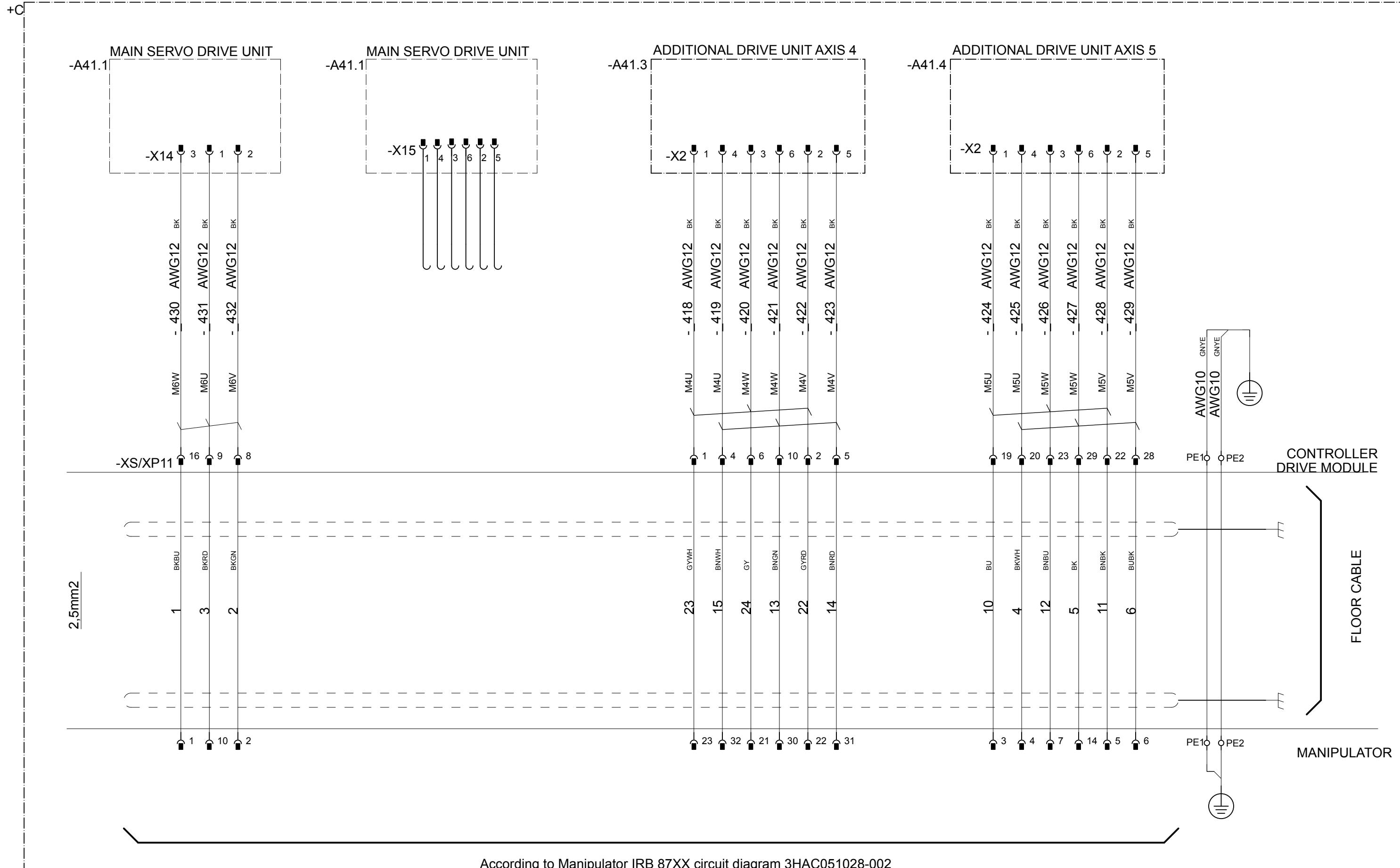
Rev. Ind Page 128.5

3HAC024480-011

08

Next 128.6

Total 156



According to Manipulator IRB 87XX circuit diagram 3HAC051028-002

Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
SERVO DRIVE SYSTEM AXES 4-6  
IRB 87xx

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

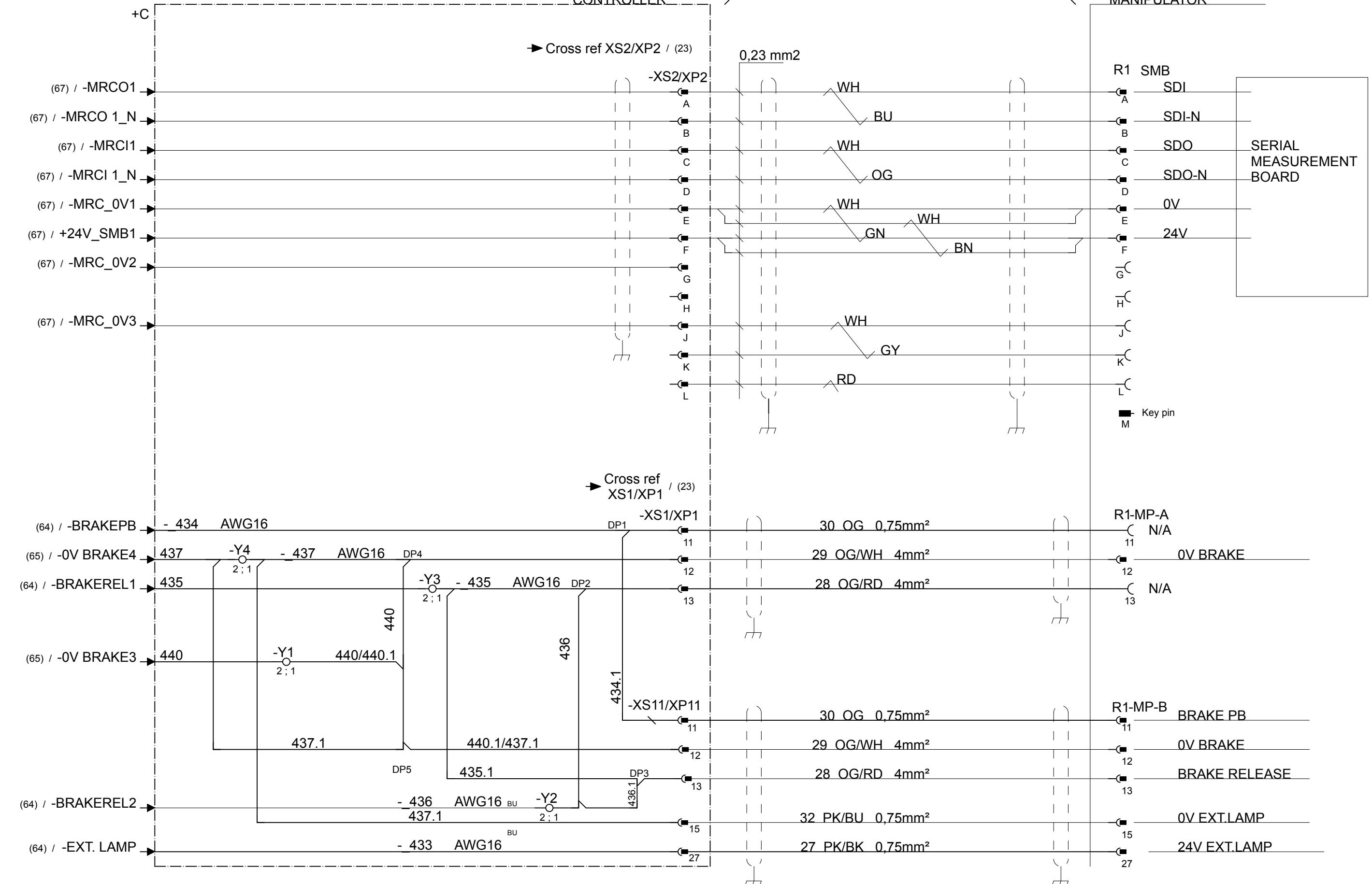
Document no.

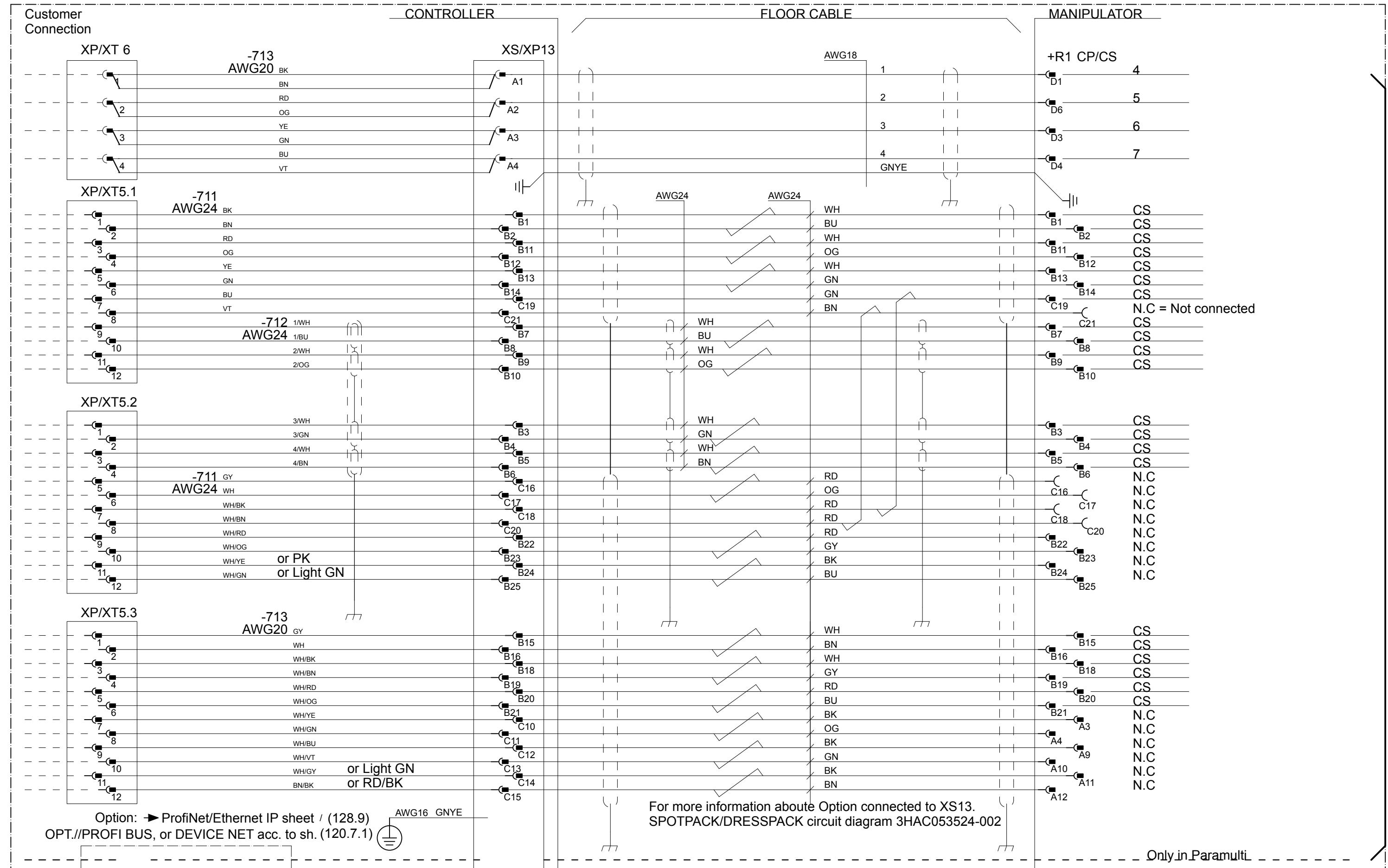
Rev. Ind Page 128.6  
Next 128.7

3HAC024480-011

08

Total 156





Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
CUSTOMER POWER/SIGNAL PARAMULTI  
SINGLE CABINET PROFI/DEVICE NET BUS  
IRB 8700

Status:  
Approved

Plant:  
Location:  
Sublocation:

Document no.

Rev. Ind

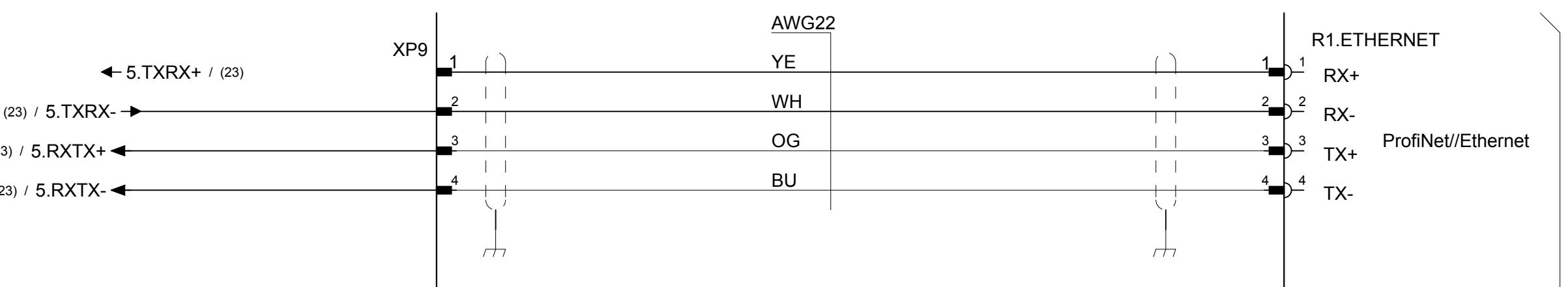
Page 128.8

3HAC024480-011

08

Next 128.9

Total 156



Latest revision:



Lab/Office:  
DMRO SE/  
PRN

IRC5 DESIGN 14 Rel: 17.1  
DevNet/EtherNet/ProfiNet/PBUS ADDITION TO  
CP/CS PARAMULTI IRB 8700

Status:  
Approved

Plant: =  
Location: +  
Sublocation: +

Document no.

Rev. Ind

Page 128.9

3HAC024480-011

08

Next

Total 156