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Customer Solutions

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2.9.4

Plant designation

FMCP-3P-FE-5CMMP-CPXE



Customer order no.

6800099354



Festo order number

5221134280

Material / Project no

23455210 / CA_CS.2178969-A

Customer

Name

FESTO CORPORATION

Type of project 37B1F6LX

Responsible for project Zaid Faraj

Plant

Customer plant

Project name CA_CS.2178969-A 1330719396

Street

1377 MOTOR PARKWAY, SUITE 310

Created 19.11.2021 / CA0ZFA

Code postal: / location

11749 ISLANDIA

Edit 23.11.2021 / ca0zfa

Approved /

/

Number of pages

76

FESTO assumes no warranty and liability for any changes to this documentation made by the customer. The circuit diagrams were created on the EPLAN Electric P8 and EPLAN Fluid CAE systems. Changes may only be made using the CAE systems and the original parameters.

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Structure identifier overview

Full designation	Labeling	Structure description
Higher-level function		
=A1	System 1	

Project status	xxx
Date	19.11.2021
Edit by	ca0zfa 23.11.2021 ca0zfa
Appr.	

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE



Structure identifier overview

EN &MDB

Material no.: 23455210 =

+ Pg. 1

Project no.: CA_CS.2178969-A Pg. 1

Productionorder: 001330719396 Pg. 3

Structure identifier overview

Full designation	Labeling	Structure description
+O1	Mounting location	Mounting location 1
+EXT	Mounting location	External

Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 23.11.2021 ca0zfa
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Structure identifier overview

EN	&MDB
Material no.:	23455210 =
	+
Project no.:	CA_CS.2178969-A Pg. 2
Productionorder:	001330719396 Pg. 3

Structure identifier overview

Full designation	Labeling	Structure description
&MAA	Document type	Cover sheet
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&MDB	Document type	Structure identifier overview
&MPC	Document type	Bill of materials
&MEC	Document type	Technical documentation
&MTB	Document type	Construction design
&MTL	Document type	Control cabinet construction, terminal box construction
&ELU	Document type	Control cabinet construction
&EFA	Document type	Functional overview documents
&EFS	Document type	Circuit diagram, electric
&MFA	Document type	Functional overview documents
&MFS	Document type	Pneumatic circuit diagram
&MFE	Document type	Functional descriptions
&EMA	Document type	Terminal diagram, Plug diagram
&EMB	Document type	Cable overview, Cable diagram

Summarized parts list

Quantity	Order number	Type number	Designation	Σ Length [m]	Manufacturer
1	WEI.BR3C06UC		Circuit breaker 3Poles, C-Curve,6A	0	
5				0	
1				0	
1	194E-A32-1753	194E	IEC Load Switch, Base/DIN Rail Mounting	0	Allen-Bradley (NFPA Data)
1	194L-G3394	194L	Shaft Extension	0	Allen-Bradley (NFPA Data)
1	194L-HE6G-175	194L	Handle for Front/Base Mounting, 64 x 64mm	0	Allen-Bradley (NFPA Data)
1	35A1804U	35A1804U	Cable 4 x 18AWG	0	AWP
1	eWON EC61330	EC61330	Ewon COSY 131 Ethernet Industrial Remote Access Router,	0	
3	1501327	CMMP-AS-C5-11A-P3-M3	Motor controller	0	Festo
3	550311	NEBM-M23G8-E-10-Q9N-LE8	Motor cable	30	Festo
3	550319	NEBM-M12W8-E-10-N-S1G15	Encoder cable	30	Festo
2	8150834	NEBM-M23G15-EH-10-Q7N-S1LEG21-CS		20	Festo
10	AT-C5-3BU-10PK		3FT Cat5e UTP 24AWG Ethernet Network	0	Festo
3	3215473	CMMP-AS-C15-11A-P3-M3	Motor controller	0	Festo
5	567856	CAMC-EC	Interface	0	Festo
5	1501330	CAMC-G-S1	Safety module	0	Festo
3	550138	EMMS-AS-140-L-HS-RMB	Servo motor	0	Festo
2	5242219	EMMT-AS-60-L-HS-RMB	Servo motor	0	Festo
1	5266781	CPX-E-CEC-M1	control unit	0	Festo
1	1336615	CACR-LE2-100-W500	Braking resistance	0	Festo
1	2882343	CACR-KL2-40-W2000	Braking resistance	0	Festo
2	9000-41068-0400000	MICO Basic 8.4	MICO BASIC 8.4 electronic circuit protection 8 CHANNELS	0	Murrelektronik
1	85691	85691	Emparro Power Supply 3-PHASE	0	Murrelektronik
1	3000-33113-3020060	MIRO SAFE+ T 2 24	MIRO SAFE+ T 2 24 24 VAC/DC - 3 N/O contact / 2 N/O contact delayed	0	Murrelektronik
1	4000-73000-0010000	4000-73000-0010000	Connector (special)	0	Murrelektronik
5	2761622	SUBCON 25/M-SH	D-SUB bus connector	0	Phoenix Contact
1	3238124	SK.3238124	SK TopTherm fan-and-filter unit, 55 m³/h, 24 V (DC), WH: 148.5x148.5 mm	0	Rittal
5	WEI.BR3C15UC	WEI.BR3C15UC	Circuit Breaker , 3Poles,C-Curve,15A	0	Weidmueller



Summarized parts list

Quantity	Order number	Type number	Designation	Σ Length [m]	Manufacturer
51	2434340000	AMC 2.5	motor connection terminal	0	Weidmueller

Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 23.11.2021 ca0zfa
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Summarized parts list

EN &MPC
Material no.: 23455210 =
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Project no.: CA_CS.2178969-A Pg. 1.1

Item parts list

Reference identification Placement	Quantity	Order number Type number	Designation	X-length Length [m]	Manufacturer	Identcode 1 Identcode 2
-?TA-XD9 =A1+O1&EFS/33.0	1	1501327 CMMP-AS-C5-11A-P3-M3	Motor controller		Festo	
-CB0120 =A1+O1&EFS/1.1	1	WEI.BR3C06UC	Circuit breaker 3Poles, C-Curve,6A			
-CB0130 =A1+O1&EFS/1.2	1	WEI.BR3C15UC WEI.BR3C15UC	Circuit Breaker , 3Poles,C-Curve,15A		Weidmueller	
-CB0140 =A1+O1&EFS/1.3	1	WEI.BR3C15UC WEI.BR3C15UC	Circuit Breaker , 3Poles,C-Curve,15A		Weidmueller	
-CB0150 =A1+O1&EFS/1.4	1	WEI.BR3C15UC WEI.BR3C15UC	Circuit Breaker , 3Poles,C-Curve,15A		Weidmueller	
-CB0160 =A1+O1&EFS/1.5	1	WEI.BR3C15UC WEI.BR3C15UC	Circuit Breaker , 3Poles,C-Curve,15A		Weidmueller	
-CB0170 =A1+O1&EFS/1.6	1	WEI.BR3C15UC WEI.BR3C15UC	Circuit Breaker , 3Poles,C-Curve,15A		Weidmueller	
-CBL1 =A1+O1&EFS/5.1	1	35A1804U 35A1804U	Cable 4 x 18AWG		AWP	
CBL2210 =A1+O1&EFS/22.0	1	550311 NEBM-M23G8-E-10-Q9N-LE8	Motor cable	10 m	Festo	
CBL2230 =A1+O1&EFS/22.3	1	550319 NEBM-M12W8-E-10-N-S1G15	Encoder cable	10 m	Festo	
CBL2610 =A1+O1&EFS/26.0	1	550311 NEBM-M23G8-E-10-Q9N-LE8	Motor cable	10 m	Festo	
CBL2630 =A1+O1&EFS/26.3	1	550319 NEBM-M12W8-E-10-N-S1G15	Encoder cable	10 m	Festo	
CBL3010 =A1+O1&EFS/30.0	1	550311 NEBM-M23G8-E-10-Q9N-LE8	Motor cable	10 m	Festo	
CBL3030 =A1+O1&EFS/30.3	1	550319 NEBM-M12W8-E-10-N-S1G15	Encoder cable	10 m	Festo	
CBL3410 =A1+O1&EFS/34.0	1	8150834 NEBM-M23G15-EH-10-Q7N-S1LEG21-CS		10 m	Festo	

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Item parts list

EN	&MPC
Material no.:	23455210
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Project no.:	CA_CS.2178969-A
Productionorder:	001330719396
	Pg. 2
	Pg. 2.4

Item parts list

Reference identification Placement	Quantity	Order number Type number	Designation	X-length Length [m]	Manufacturer	Identcode 1 Identcode 2
CBL3810 =A1+O1&EFS/38.0	1	8150834 NEBM-M23G15-EH-10-Q7N-S1LEG21-CS		10 m	Festo	
-CBL5010 =A1+O1&EFS/50.0	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
-CBL5020 =A1+O1&EFS/50.2	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
-CBL5030 =A1+O1&EFS/50.3	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
-CBL5040 =A1+O1&EFS/50.4	2	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
CBL5110 =A1+O1&EFS/51.2	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
CBL5120 =A1+O1&EFS/51.2	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
CBL5130 =A1+O1&EFS/51.4	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
CBL5140 =A1+O1&EFS/51.7	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
CBL5150 =A1+O1&EFS/51.9	1	AT-C5-3BU-10PK	3FT Cat5e UTP 24AWG Ethernet Network		Festo	
CMMP-AS-1 =A1+O1&EFS/21.0	1	3215473 CMMP-AS-C15-11A-P3-M3	Motor controller		Festo	
CMMP-AS-1-EC =A1+O1&EFS/51.1	1	567856 CAMC-EC	Interface		Festo	
CMMP-AS-1-S1 =A1+O1&EFS/21.3	1	1501330 CAMC-G-S1	Safety module		Festo	
CMMP-AS-2 =A1+O1&EFS/25.0	2	3215473 CMMP-AS-C15-11A-P3-M3	Motor controller		Festo	
CMMP-AS-2-EC =A1+O1&EFS/51.3	1	567856 CAMC-EC	Interface		Festo	

Item parts list

Reference identification Placement	Quantity	Order number Type number	Designation	X-length Length [m]	Manufacturer	Identcode 1 Identcode 2
CMMMP-AS-2-S1 =A1+O1&EFS/25.3	1	1501330 CAMC-G-S1	Safety module		Festo	
CMMMP-AS-3-EC =A1+O1&EFS/51.5	1	567856 CAMC-EC	Interface		Festo	
CMMMP-AS-3-S1 =A1+O1&EFS/29.4	1	1501330 CAMC-G-S1	Safety module		Festo	
CMMMP-AS-4 =A1+O1&EFS/33.0	1	1501327 CMMMP-AS-C5-11A-P3-M3	Motor controller		Festo	
CMMMP-AS-4-EC =A1+O1&EFS/51.7	1	567856 CAMC-EC	Interface		Festo	
CMMMP-AS-4-S1 =A1+O1&EFS/33.4	1	1501330 CAMC-G-S1	Safety module		Festo	
CMMMP-AS-5 =A1+O1&EFS/37.0	1	1501327 CMMMP-AS-C5-11A-P3-M3	Motor controller		Festo	
CMMMP-AS-5-EC =A1+O1&EFS/51.1	1	567856 CAMC-EC	Interface		Festo	
CMMMP-AS-5-S1 =A1+O1&EFS/37.4	1	1501330 CAMC-G-S1	Safety module		Festo	
CON2300 =A1+O1&EFS/23.0	1	2761622 SUBCON 25/M-SH	D-SUB bus connector		Phoenix Contact	
CON2700 =A1+O1&EFS/27.0	1	2761622 SUBCON 25/M-SH	D-SUB bus connector		Phoenix Contact	
CON3100 =A1+O1&EFS/31.0	1	2761622 SUBCON 25/M-SH	D-SUB bus connector		Phoenix Contact	
CON3500 =A1+O1&EFS/35.0	1	2761622 SUBCON 25/M-SH	D-SUB bus connector		Phoenix Contact	
CON3900 =A1+O1&EFS/39.0	1	2761622 SUBCON 25/M-SH	D-SUB bus connector		Phoenix Contact	
-DS0110 =A1+O1&EFS/1.1	1	194E-A32-1753 194E	IEC Load Switch, Base/DIN Rail Mounting		Allen-Bradley (NFPA Data)	

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMMP-CPXE



Item parts list

EN	&MPC
Material no.:	23455210
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Project no.:	CA_CS.2178969-A	Pg.	2.2
Productionorder:	001330719396	Pg.	2.4

Item parts list

Reference identification Placement	Quantity	Order number Type number	Designation	X-length Length [m]	Manufacturer	Identcode 1 Identcode 2
-DS0110 =A1+O1&EFS/1.1	1	194L-G3394 194L	Shaft Extension		Allen-Bradley (NFPA Data)	
-DS0110 =A1+O1&EFS/1.1	1	194L-HE6G-175 194L	Handle for Front/Base Mounting, 64 x 64mm		Allen-Bradley (NFPA Data)	
ETH5000 =A1+O1&EFS/50.0	1	eWON EC61330 EC61330	Ewon COSY 131 Ethernet Industrial Remote Access Router,			
FAN5530 =A1+O1&EFS/55.3	1	3238124 SK.3238124	SK TopTherm fan-and-filter unit, 55 m³/h, 24 V (DC), WH: 148.5x148.5 mm		Rittal	
FU0220 =A1+O1&EFS/2.3	1	9000-41068-0400000 MICO Basic 8.4	MICO BASIC 8.4 electronic circuit protection 8 CHANNELS		Murrelektronik	
FU0240 =A1+O1&EFS/2.7	1	9000-41068-0400000 MICO Basic 8.4	MICO BASIC 8.4 electronic circuit protection 8 CHANNELS		Murrelektronik	
MOT1 =A1+O1&EFS/22.0	1	550138 EMMS-AS-140-L-HS-RMB	Servo motor		Festo	
MOT2 =A1+O1&EFS/26.0	1	550138 EMMS-AS-140-L-HS-RMB	Servo motor		Festo	
MOT3 =A1+O1&EFS/30.0	1	550138 EMMS-AS-140-L-HS-RMB	Servo motor		Festo	
MOT4 =A1+O1&EFS/34.0	1	5242219 EMMT-AS-60-L-HS-RMB	Servo motor		Festo	
MOT5 =A1+O1&EFS/38.0	1	5242219 EMMT-AS-60-L-HS-RMB	Servo motor		Festo	
PLC1102 =A1+O1&EFS/11.2	1	5266781 CPX-E-CEC-M1	control unit		Festo	
PSU0210 =A1+O1&EFS/2.0	1	85691 85691	Emparro Power Supply 3-PHASE		Murrelektronik	
-PS_AXIS1 =A1+O1&EFS/21.2	5					
R1 =A1+O1&EFS/21.2	1	1336615 CACR-LE2-100-W500	Braking resistance		Festo	

Item parts list

Reference identification Placement	Quantity	Order number Type number	Designation	X-length Length [m]	Manufacturer	Identcode 1 Identcode 2
R2 =A1+O1&EFS/25.1	1	2882343 CACR-KL2-40-W2000	Braking resistance		Festo	
-SR0510 =A1+O1&EFS/5.0	1	3000-33113-3020060 MIRO SAFE+ T 24	MIRO SAFE+ T 24 24 VAC/DC - 3 N/O contact / 2 N/O contact delayed		Murrelektronik	
-XF5080 =A1+O1&EFS/50.5	1	4000-73000-0010000 4000-73000-0010000	Connector (special)		Murrelektronik	

Project status		xxx		
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Item parts list

EN	&MPC
Material no.:	23455210
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+	

Project no.:	CA_CS.2178969-A	Pg.	2.4
Productionorder:	001330719396	Pg.	2.4

Technical notes

Voltage and frequency, as well as the setting points for motor protection and time relays must be checked prior to commissioning.

All terminal screws must be tightened prior to commissioning and during maintenance work

Keep doors closed at all times, as dust and moisture may cause malfunctioning.

The specified cable cross sections are minimum cross section for copper, without taking into account:

a.) Cable lengths and the resulting voltage drops. (Permissible voltage drop for motors according to VDE 0530 5%* Un)

b.) Type of cable installation and permissible ambient temperature (Installation type reduction factor 0,8 / amb. temp. 20° C)

In the event that operating voltages deviate from the assumed values listed above, correspondingly larger cross-sections must be selected.

(e.g. with increased voltage drop, increased ambient temp., unsuitable type of cable installation, high wiring density)

Sizing of cables is the responsibility of the customer

Air supply:

This controller is designed for a state-of-the-art (ISO 8573-A:2010) compressed air network

We require compressed air that is unlubricated, free of residual oil (residual oil from compressors max. 0.1mg/m³ for "HEES fluids, biodegradable oils" or max. 5mg/m³ for mineral oils permissible) and appropriately dried

A filter should remove solid contamination from the compressed air. (ISO 8573-A:2010)

Class:

7:4:4 --> 40µm Filter

Technical data

Reference identification	=A1+O1
IP-degree of protection	UL Type 1
Ambient temperature	+5°C - +35°C
Humidity	max. 50%

Electric

Supply voltage	480 VAC
Pre-fuse (max.)	--A
Supply cable	----

Pneumatics

Max. system pressure	na
Working pressure	na
Supply air connection	Tube mm externally calibrated
Working ports	according to circuit diagram

Special feature

No single-core marking
no hose designation

Wire colours used:

Power circuit:	Black (BK)
Power circuit (permanent voltage):	Yellow (YE)
Neutral conductor:	Blue (BU)
Protective conductor:	Green/yellow (GNYE)
Control circuit AC:	Red (RD)
Control circuit DC (+):	Dark blue (DBU)
Control circuit DC (-):	Dark blue (DBU)
excepted circuits:	Orange (OG)

Standards used:

NFPA 79	Electrical Standard for Industrial Machinery
UL 508A	STANDARD FOR SAFETY Industrial Control Panels
EN 60204-1:2018	Safety of machinery - Electrical equipment of machines – Part 1: General requirements
EN ISO 4414:2010	Pneumatic fluid power - General rules and safety requirements for systems and their components

Hose used

PUN-H-.....-BL --> Control cabinet
PUN-H-.....-SW --> Control cabinet outside
PUN-H-...-NT --> Condensate drain
PUN-.....-BL --> M5-Series

FESTO
5300 Explorer Drive , Mississauga, Ontario
Tel: 1-877-GO-FESTO Fax: 1-877-FX-FESTO
CONTROL PANEL
Part # / Project # : CA_CS.2178969-A
Prod. Order / Serial #: CA_CS.2178969-A 1330719396
Year of Mfg.: 2021
Main Voltage 480 VAC FLA 50.5 A
Largest Motor: 7.8 A
Fault Rating: 5 KVA Control Voltage: 24V DC
Panel type: Type 1
Operating Pressure na



Level 4

Level 3

Level 2

Level 1

Level No.

-XD5

Terminal No.

EN	&MEC
Material no.:	23455210 =
	+
Project no.:	CA_CS.2178969-A Pg. 1
Productionorder:	001330719396 Pg. 1

PRODUCTION
22.10.2021

&MEC/1

Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 22.10.2021 jret
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Construction design

EN	&MTB
Material no.:	23455210 =
Project no.:	CA_CS.2178969-A Pg. 1
Productionorder:	001330719396 Pg. 1

&MTB/1

23.11.2021
DIN A3

PRODUCTION
22.10.2021

&MTB/1

Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 22.10.2021 jret
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Control cabinet construction

EN	&MTL
Material no.:	23455210 = +
Project no.:	CA_CS.2178969-A Pg. 1

Plug overview

Plug designation	Function text	Plug					Page of plug diagram
		first	last	Total PE	Total N	Total number	
		1	5	18	0	148	&EMA/1
		1	15	0	0	30	&EMA/2

PRODUCTION
23.11.2021

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
	=A1+O1-CMMP-AS-1:X9:1	1	=A1+O1-CB0130:1	=A1+O1&EFS/21.0
	=A1+O1-CMMP-AS-1:X9:2	2	=A1+O1-CB0130:3	=A1+O1&EFS/21.1
	=A1+O1-CMMP-AS-1:X9:3	3	=A1+O1-CB0130:5	=A1+O1&EFS/21.1
	=A1+O1-CMMP-AS-1:X9:9	9	=A1+O1-TB2:7PE:7	=A1+O1&EFS/21.2
	=A1+O1-CMMP-AS-1:X9:4	4		=A1+O1&EFS/21.1
	=A1+O1-CMMP-AS-1:X9:5	5		=A1+O1&EFS/21.1
	=A1+O1-CMMP-AS-1:X9:6	6		=A1+O1&EFS/21.1
	=A1+O1-CMMP-AS-1:X9:7	7		=A1+O1&EFS/21.2
	=A1+O1-CMMP-AS-1:X9:8	8		=A1+O1&EFS/21.2
	=A1+O1-CMMP-AS-1:X9:10	10	=A1+O1-FU0220:OUT:5	=A1+O1&EFS/21.2
	=A1+O1-CMMP-AS-1:X9:11	11	=A1+O1-TB2:2:6	=A1+O1&EFS/21.2
	=A1+O1-CMMP-AS-1:X6:9	9		=A1+O1&EFS/22.2
	=A1+O1-CMMP-AS-1:X6:8	8	1	=A1+O1&EFS/22.2
	=A1+O1-CMMP-AS-1:X6:7	7	4	=A1+O1&EFS/22.1
	=A1+O1-CMMP-AS-1:X6:6	6	3	=A1+O1&EFS/22.1
	=A1+O1-CMMP-AS-1:X6:1	1	D	=A1+O1&EFS/22.0
	=A1+O1-CMMP-AS-1:X6:2	2	C	=A1+O1&EFS/22.0
	=A1+O1-CMMP-AS-1:X6:3	3	B	=A1+O1&EFS/22.1
	=A1+O1-CMMP-AS-1:X6:4	4	A	=A1+O1&EFS/22.1
	=A1+O1-CMMP-AS-1:X6:5	5	2	=A1+O1&EFS/22.1
	=A1+O1-CMMP-AS-2:X9:1	1	=A1+O1-CB0140:1	=A1+O1&EFS/25.0
	=A1+O1-CMMP-AS-2:X9:2	2	=A1+O1-CB0140:3	=A1+O1&EFS/25.1
	=A1+O1-CMMP-AS-2:X9:3	3	=A1+O1-CB0140:5	=A1+O1&EFS/25.1
	=A1+O1-CMMP-AS-2:X9:9	9	=A1+O1-TB2:8PE:7	=A1+O1&EFS/25.2
	=A1+O1-CMMP-AS-2:X9:4	4		=A1+O1&EFS/25.1
	=A1+O1-CMMP-AS-2:X9:5	5		=A1+O1&EFS/25.1
	=A1+O1-CMMP-AS-2:X9:6	6	=A1+O1-R2:1	=A1+O1&EFS/25.1
	=A1+O1-CMMP-AS-2:X9:7	7	=A1+O1-R2:2	=A1+O1&EFS/25.2

Project status		xxx		
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Plug diagram =+
FESTO

EN	&EMA
Material no.:	23455210
	=
	+
Project no.:	CA_CS.2178969-A
Productionorder:	Pg. 1 001330719396 Pg. 2.1

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
	=A1+O1-CMMP-AS-2:X9:8	8		=A1+O1&EFS/25.2
	=A1+O1-CMMP-AS-2:X9:10	10	=A1+O1-FU0220:OUT:6	=A1+O1&EFS/25.2
	=A1+O1-CMMP-AS-2:X9:11	11	=A1+O1-TB2:4:6	=A1+O1&EFS/25.2
	=A1+O1-CMMP-AS-2:X6:9	9		=A1+O1&EFS/26.2
	=A1+O1-CMMP-AS-2:X6:8	8	1	=A1+O1&EFS/26.2
	=A1+O1-CMMP-AS-2:X6:7	7	4	=A1+O1&EFS/26.1
	=A1+O1-CMMP-AS-2:X6:6	6	3	=A1+O1&EFS/26.1
	=A1+O1-CMMP-AS-2:X6:1	1	D	=A1+O1&EFS/26.0
	=A1+O1-CMMP-AS-2:X6:2	2	C	=A1+O1&EFS/26.0
	=A1+O1-CMMP-AS-2:X6:3	3	B	=A1+O1&EFS/26.1
	=A1+O1-CMMP-AS-2:X6:4	4	A	=A1+O1&EFS/26.1
	=A1+O1-CMMP-AS-2:X6:5	5	2	=A1+O1&EFS/26.1
	=A1+O1-CMMP-AS-2:X9:1	1	=A1+O1-CB0150:1	=A1+O1&EFS/29.0
	=A1+O1-CMMP-AS-2:X9:2	2	=A1+O1-CB0150:3	=A1+O1&EFS/29.1
	=A1+O1-CMMP-AS-2:X9:3	3	=A1+O1-CB0150:5	=A1+O1&EFS/29.1
	=A1+O1-CMMP-AS-2:X9:9	9	=A1+O1-TB2:9:6	=A1+O1&EFS/29.2
	=A1+O1-CMMP-AS-2:X9:4	4		=A1+O1&EFS/29.1
	=A1+O1-CMMP-AS-2:X9:5	5		=A1+O1&EFS/29.1
	=A1+O1-CMMP-AS-2:X9:6	6		=A1+O1&EFS/29.1
	=A1+O1-CMMP-AS-2:X9:7	7		=A1+O1&EFS/29.2
	=A1+O1-CMMP-AS-2:X9:8	8		=A1+O1&EFS/29.2
	=A1+O1-CMMP-AS-2:X9:10	10	=A1+O1-FU0220:OUT:7	=A1+O1&EFS/29.2
	=A1+O1-CMMP-AS-2:X9:11	11	=A1+O1-TB2:6:6	=A1+O1&EFS/29.2
	=A1+O1-CMMP-AS-3:X6:9	9		=A1+O1&EFS/30.2
	=A1+O1-CMMP-AS-3:X6:8	8	1	=A1+O1&EFS/30.2
	=A1+O1-CMMP-AS-3:X6:7	7	4	=A1+O1&EFS/30.1
	=A1+O1-CMMP-AS-3:X6:6	6	3	=A1+O1&EFS/30.1
	=A1+O1-CMMP-AS-3:X6:1	1	D	=A1+O1&EFS/30.0

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
	=A1+O1-CMMP-AS-3:X6:2	2	C	=A1+O1&EFS/30.0
	=A1+O1-CMMP-AS-3:X6:3	3	B	=A1+O1&EFS/30.1
	=A1+O1-CMMP-AS-3:X6:4	4	A	=A1+O1&EFS/30.1
	=A1+O1-CMMP-AS-3:X6:5	5	2	=A1+O1&EFS/30.1
	=A1+O1-CMMP-AS-4:X9:1	1	=A1+O1-CB0160:1	=A1+O1&EFS/33.0
	=A1+O1-CMMP-AS-4:X9:2	2	=A1+O1-CB0160:3	=A1+O1&EFS/33.1
	=A1+O1-CMMP-AS-4:X9:3	3	=A1+O1-CB0160:5	=A1+O1&EFS/33.1
	=A1+O1-CMMP-AS-4:X9:9	9	=A1+O1-TB2:10PE:7	=A1+O1&EFS/33.2
	=A1+O1-CMMP-AS-4:X9:4	4		=A1+O1&EFS/33.1
	=A1+O1-CMMP-AS-4:X9:5	5		=A1+O1&EFS/33.1
	=A1+O1-CMMP-AS-4:X9:6	6		=A1+O1&EFS/33.1
	=A1+O1-CMMP-AS-4:X9:7	7		=A1+O1&EFS/33.2
	=A1+O1-CMMP-AS-4:X9:8	8		=A1+O1&EFS/33.2
	=A1+O1-CMMP-AS-4:X9:10	10	=A1+O1-FU0220:OUT:8	=A1+O1&EFS/33.2
	=A1+O1-CMMP-AS-4:X9:11	11	=A1+O1-TB2:8:6	=A1+O1&EFS/33.2
	=A1+O1-CMMP-AS-4:X6:9	9	=A1+O1-?WD-XD1:PE	=A1+O1&EFS/34.2
	=A1+O1-CMMP-AS-4:X6:8	8	=A1+O1-?WD-XD1:B	=A1+O1&EFS/34.2
	=A1+O1-CMMP-AS-4:X6:7	7	=A1+O1-?WD-XD1:C	=A1+O1&EFS/34.1
	=A1+O1-CMMP-AS-4:X6:6	6		=A1+O1&EFS/34.1
	=A1+O1-CMMP-AS-4:X6:1	1	=A1+O1-?WD-XD1:A	=A1+O1&EFS/34.0
	=A1+O1-CMMP-AS-4:X6:2	2	=A1+O1-?WD-XD1:4	=A1+O1&EFS/34.0
	=A1+O1-CMMP-AS-4:X6:3	3	=A1+O1-?WD-XD1:1	=A1+O1&EFS/34.1
	=A1+O1-CMMP-AS-4:X6:4	4		=A1+O1&EFS/34.1
	=A1+O1-CMMP-AS-4:X6:5	5		=A1+O1&EFS/34.1
	=A1+O1-CMMP-AS-5:X9:1	1	=A1+O1-CB0170:1	=A1+O1&EFS/37.0
	=A1+O1-CMMP-AS-5:X9:2	2	=A1+O1-CB0170:3	=A1+O1&EFS/37.1
	=A1+O1-CMMP-AS-5:X9:3	3	=A1+O1-CB0170:5	=A1+O1&EFS/37.1
	=A1+O1-CMMP-AS-5:X9:9	9	=A1+O1-TB2:11PE:7	=A1+O1&EFS/37.2

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
	=A1+O1-CMMP-AS-5:X9:4	4		=A1+O1&EFS/37.1
	=A1+O1-CMMP-AS-5:X9:5	5		=A1+O1&EFS/37.1
	=A1+O1-CMMP-AS-5:X9:6	6		=A1+O1&EFS/37.1
	=A1+O1-CMMP-AS-5:X9:7	7		=A1+O1&EFS/37.2
	=A1+O1-CMMP-AS-5:X9:8	8		=A1+O1&EFS/37.2
	=A1+O1-CMMP-AS-5:X9:10	10	=A1+O1-FU0240:OUT:1	=A1+O1&EFS/37.2
	=A1+O1-CMMP-AS-5:X9:11	11		=A1+O1&EFS/37.2
	=A1+O1-MOT1:X6:1	1	8	=A1+O1&EFS/22.0
	=A1+O1-MOT1:X6:3	3	6	=A1+O1&EFS/22.1
	=A1+O1-MOT1:X6:4	4	7	=A1+O1&EFS/22.1
	=A1+O1-MOT1:X6:A	A	4	=A1+O1&EFS/22.1
	=A1+O1-MOT1:X6:PE	2	5	=A1+O1&EFS/22.0
	=A1+O1-MOT1:X6:B	B	3	=A1+O1&EFS/22.1
	=A1+O1-MOT1:X6:C	C	2	=A1+O1&EFS/22.1
	=A1+O1-MOT1:X6:D	D	1	=A1+O1&EFS/22.2
	=A1+O1-MOT1:X2B:1	1	=A1+O1-?WD:2	=A1+O1&EFS/22.3
	=A1+O1-MOT1:X2B:2	2	=A1+O1-?WD:9	=A1+O1&EFS/22.3
	=A1+O1-MOT1:X2B:3	3	=A1+O1-?WD:12	=A1+O1&EFS/22.4
	=A1+O1-MOT1:X2B:4	4	=A1+O1-?WD:5	=A1+O1&EFS/22.4
	=A1+O1-MOT1:X2B:6	6	=A1+O1-?WD:6	=A1+O1&EFS/22.4
	=A1+O1-MOT1:X2B:7	7	=A1+O1-?WD:13	=A1+O1&EFS/22.4
	=A1+O1-MOT1:X2B:8	8	=A1+O1-?WD:10	=A1+O1&EFS/22.4
	=A1+O1-MOT1:X2B:5	5	=A1+O1-?WD:3	=A1+O1&EFS/22.4
	=A1+O1-MOT3:X6:1	1	8	=A1+O1&EFS/30.0
	=A1+O1-MOT3:X6:3	3	6	=A1+O1&EFS/30.1
	=A1+O1-MOT3:X6:4	4	7	=A1+O1&EFS/30.1
	=A1+O1-MOT3:X6:A	A	4	=A1+O1&EFS/30.1
	=A1+O1-MOT3:X6:PE	2	5	=A1+O1&EFS/30.0

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
	=A1+O1-MOT3:X6:B	B	3	=A1+O1&EFS/30.1
	=A1+O1-MOT3:X6:C	C	2	=A1+O1&EFS/30.1
	=A1+O1-MOT3:X6:D	D	1	=A1+O1&EFS/30.2
	=A1+O1-MOT3:X2B:1	1	=A1+O1-?WD:2	=A1+O1&EFS/30.3
	=A1+O1-MOT3:X2B:2	2	=A1+O1-?WD:9	=A1+O1&EFS/30.3
	=A1+O1-MOT3:X2B:3	3	=A1+O1-?WD:12	=A1+O1&EFS/30.4
	=A1+O1-MOT3:X2B:4	4	=A1+O1-?WD:5	=A1+O1&EFS/30.4
	=A1+O1-MOT3:X2B:6	6	=A1+O1-?WD:6	=A1+O1&EFS/30.4
	=A1+O1-MOT3:X2B:7	7	=A1+O1-?WD:13	=A1+O1&EFS/30.4
	=A1+O1-MOT3:X2B:8	8	=A1+O1-?WD:10	=A1+O1&EFS/30.4
	=A1+O1-MOT3:X2B:5	5	=A1+O1-?WD:3	=A1+O1&EFS/30.4
	=A1+O1-MOT2:X6:1	1	8	=A1+O1&EFS/26.0
	=A1+O1-MOT2:X6:3	3	6	=A1+O1&EFS/26.1
	=A1+O1-MOT2:X6:4	4	7	=A1+O1&EFS/26.1
	=A1+O1-MOT2:X6:A	A	4	=A1+O1&EFS/26.1
	=A1+O1-MOT2:X6:PE	2	5	=A1+O1&EFS/26.0
	=A1+O1-MOT2:X6:B	B	3	=A1+O1&EFS/26.1
	=A1+O1-MOT2:X6:C	C	2	=A1+O1&EFS/26.1
	=A1+O1-MOT2:X6:D	D	1	=A1+O1&EFS/26.2
	=A1+O1-MOT2:X2B:1	1	=A1+O1-?WD:2	=A1+O1&EFS/26.3
	=A1+O1-MOT2:X2B:2	2	=A1+O1-?WD:9	=A1+O1&EFS/26.3
	=A1+O1-MOT2:X2B:3	3	=A1+O1-?WD:12	=A1+O1&EFS/26.4
	=A1+O1-MOT2:X2B:4	4	=A1+O1-?WD:5	=A1+O1&EFS/26.4
	=A1+O1-MOT2:X2B:6	6	=A1+O1-?WD:6	=A1+O1&EFS/26.4
	=A1+O1-MOT2:X2B:7	7	=A1+O1-?WD:13	=A1+O1&EFS/26.4
	=A1+O1-MOT2:X2B:8	8	=A1+O1-?WD:10	=A1+O1&EFS/26.4
	=A1+O1-MOT2:X2B:5	5	=A1+O1-?WD:3	=A1+O1&EFS/26.4
	=A1+O1-CMMP-AS-5:X6:9	9	=A1+O1-?WD-XD1:PE	=A1+O1&EFS/38.2

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
	=A1+O1-CMMP-AS-5:X6:8	8	=A1+O1-?WD-XD1:B	=A1+O1&EFS/38.2
	=A1+O1-CMMP-AS-5:X6:7	7	=A1+O1-?WD-XD1:C	=A1+O1&EFS/38.1
	=A1+O1-CMMP-AS-5:X6:6	6		=A1+O1&EFS/38.1
	=A1+O1-CMMP-AS-5:X6:1	1	=A1+O1-?WD-XD1:A	=A1+O1&EFS/38.0
	=A1+O1-CMMP-AS-5:X6:2	2	=A1+O1-?WD-XD1:4	=A1+O1&EFS/38.0
	=A1+O1-CMMP-AS-5:X6:3	3	=A1+O1-?WD-XD1:1	=A1+O1&EFS/38.1
	=A1+O1-CMMP-AS-5:X6:4	4		=A1+O1&EFS/38.1
	=A1+O1-CMMP-AS-5:X6:5	5		=A1+O1&EFS/38.1

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE



Plug diagram =+

EN	&EMA
Material no.:	23455210
	=
	+
Project no.:	CA_CS.2178969-A
Productionorder:	Pg. 1.5
	Pg. 2.1

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
		1	=A1+O1-CMMP-AS-4:X2B:1	=A1+O1&EFS/34.3
		2	=A1+O1-CMMP-AS-4:X2B:2	=A1+O1&EFS/34.3
=A1+O1-?WD-XD1:6	3		=A1+O1-CMMP-AS-4:X2B:3	=A1+O1&EFS/34.4
=A1+O1-?WD-XD1:7	4		=A1+O1-CMMP-AS-4:X2B:4	=A1+O1&EFS/34.4
=A1+O1-?WD-XD1:10	6		=A1+O1-CMMP-AS-4:X2B:6	=A1+O1&EFS/34.4
	7		=A1+O1-CMMP-AS-4:X2B:7	=A1+O1&EFS/34.4
	8		=A1+O1-CMMP-AS-4:X2B:8	=A1+O1&EFS/34.4
=A1+O1-?WD-XD1:8	5		=A1+O1-CMMP-AS-4:X2B:5	=A1+O1&EFS/34.4
	9		=A1+O1-CMMP-AS-4:X2B:9	=A1+O1&EFS/34.5
=A1+O1-?WD-XD1:5	10		=A1+O1-CMMP-AS-4:X2B:10	=A1+O1&EFS/34.5
	11		=A1+O1-CMMP-AS-4:X2B:11	=A1+O1&EFS/34.5
	12		=A1+O1-CMMP-AS-4:X2B:12	=A1+O1&EFS/34.5
=A1+O1-?WD-XD1:9	13		=A1+O1-CMMP-AS-4:X2B:13	=A1+O1&EFS/34.5
	14		=A1+O1-CMMP-AS-4:X2B:14	=A1+O1&EFS/34.6
	15		=A1+O1-CMMP-AS-4:X2B:15	=A1+O1&EFS/34.6
	1		=A1+O1-CMMP-AS-5:X2B:1	=A1+O1&EFS/38.3
	2		=A1+O1-CMMP-AS-5:X2B:2	=A1+O1&EFS/38.3
=A1+O1-?WD-XD1:6	3		=A1+O1-CMMP-AS-5:X2B:3	=A1+O1&EFS/38.4
=A1+O1-?WD-XD1:7	4		=A1+O1-CMMP-AS-5:X2B:4	=A1+O1&EFS/38.4
=A1+O1-?WD-XD1:10	6		=A1+O1-CMMP-AS-5:X2B:6	=A1+O1&EFS/38.4
	7		=A1+O1-CMMP-AS-5:X2B:7	=A1+O1&EFS/38.4
	8		=A1+O1-CMMP-AS-5:X2B:8	=A1+O1&EFS/38.4
=A1+O1-?WD-XD1:8	5		=A1+O1-CMMP-AS-5:X2B:5	=A1+O1&EFS/38.4
	9		=A1+O1-CMMP-AS-5:X2B:9	=A1+O1&EFS/38.5
=A1+O1-?WD-XD1:5	10		=A1+O1-CMMP-AS-5:X2B:10	=A1+O1&EFS/38.5
	11		=A1+O1-CMMP-AS-5:X2B:11	=A1+O1&EFS/38.5
	12		=A1+O1-CMMP-AS-5:X2B:12	=A1+O1&EFS/38.5
=A1+O1-?WD-XD1:9	13		=A1+O1-CMMP-AS-5:X2B:13	=A1+O1&EFS/38.5

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Plug diagram =+

EN	&EMA
Material no.:	23455210
	=
	+
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396
Pg.	2
Pg.	2.1

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=+				
		14	=A1+O1-CMMP-AS-5:X2B:14	=A1+O1&EFS/38.6
		15	=A1+O1-CMMP-AS-5:X2B:15	=A1+O1&EFS/38.6

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Plug diagram =+
Material no.: 23455210
Project no.: CA_CS.2178969-A
Productionorder: 001330719396

Cable overview

Cable designation	from	up to	Cable type	Conductors	Conductors used	\emptyset	Length [m]	Remark
-CBL1	-TB2	-PB1			4			
	-TB3							
-CBL2210			NEBM-M23G8-E-10-Q9N-LE8	8	8	8x1,5/0,5 mm ²	10 m	
	-?WD	-?WD						
-CBL2230		-?WD	NEBM-M12W8-E-10-N-S1G15	8	8	8x0,14/0,34 mm ²	10 m	
-CBL2330	-TB2	-CON2300			4			
	-TB3							
-CBL2610			NEBM-M23G8-E-10-Q9N-LE8	8	8	8x1,5/0,5 mm ²	10 m	
-CBL2630		-?WD	NEBM-M12W8-E-10-N-S1G15	8	8	8x0,14/0,34 mm ²	10 m	
-CBL2730	-TB2	-CON2700			4			
	-TB3							
-CBL3010			NEBM-M23G8-E-10-Q9N-LE8	8	8	8x1,5/0,5 mm ²	10 m	
-CBL3030		-?WD	NEBM-M12W8-E-10-N-S1G15	8	8	8x0,14/0,34 mm ²	10 m	
-CBL3130	-TB2	-CON3100			4			
	-TB3							
-CBL3410		-?WD-XD1		12	14	12x0,75-0,15 mm ²	10 m	
-CBL3530	-TB2	-CON3500			4			
	-TB3							
-CBL3810		-?WD-XD1		12	6	12x0,75-0,15 mm ²	10 m	
-CBL3930	-TB2	-CON3900			4			
	-TB3							
-CBL5010	-ETH5000	-PLC1102			1			
-CBL5020					0			
-CBL5030					0			
-CBL5040					0			
-CBL5110	-CMMP-AS-1-EC	-PLC1			1			
-CBL5120	-CMMP-AS-1-EC	-CMMP-AS-2-EC			1			
-CBL5130	-CMMP-AS-2-EC	-CMMP-AS-3-EC			1			
-CBL5140	-CMMP-AS-3-EC	-CMMP-AS-4-EC			1			



Cable overview

Cable designation	from	up to	Cable type	Conductors	Conductors used	\emptyset	Length [m]	Remark
-CBL5150	-CMMMP-AS-4-EC	-CMMMP-AS-5-EC			1			

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE



Cable overview

EN	&EFA
= A1	
+ O1	
Project no.:	CA_CS.2178969-A Pg. 1.1
Productionorder:	001330719396 Pg. 100

Terminal strip overview :

Terminal strip	Function text	Terminals					Terminal diagram page
		first	last	Total PE	Total N	Total number	
-TB1		1	1	1	0	1	=A1+O1&EMA/1
-TB2		1PE	19	19	0	19	=A1+O1&EMA/2
-TB3		1PE	32	32	0	32	=A1+O1&EMA/3
-XD0	Supply upstream of mains switch			0	0	0	
-XD1	Supply downstream of mains switch			0	0	0	
-XD2	AC distribution			0	0	0	
-XD3	Emergency stop			0	0	0	
-XD4	Emergency stop delayed			0	0	0	
-XD5	24V DC distribution			0	0	0	
-XD6	48V DC distribution			0	0	0	
-XD10	Signals to external			0	0	0	
-XD11	Signals from external			0	0	0	

Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 23.11.2021 ca0zfa
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



EN	&EFA
Material no.:	23455210
	= A1
	+ O1
Project no.:	CA_CS.2178969-A Pg. 2
Productionorder:	001330719396 Pg. 100

Plug overview

Plug designation	Function text	Plug					Page of plug diagram
		first	last	Total PE	Total N	Total number	
-?TA-XD6				0	0	0	
-?TA-XD9				0	0	0	
-?WD		1	15	0	0	45	=A1+O1&EMA/4
-?WD-XD1		1	PE	2	0	30	=A1+O1&EMA/5
-?WD-XD2				0	0	0	
-PS_AXIS1				0	0	0	

Project status	xxx
Date	19.11.2021
Edit by	ca0zfa 23.11.2021
Appr.	

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Plug overview

EN	&EFA
= A1	
+ O1	
Project no.:	CA_CS.2178969-A Pg. 3
Productionorder:	001330719396 Pg. 100

Overview Terminal types Image

Quantity	Order number	Type number	Designation		Manufacturer
51	2434340000	AMC 2.5	motor connection terminal	 	Weidmueller

Project status		xxx		
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Overview Terminal types Image

EN	&EFA
Material no.:	23455210
= A1	
+ O1	
Project no.:	CA_CS.2178969-A
Productionorder:	Pg. 100
	001330719396
	Pg. 100

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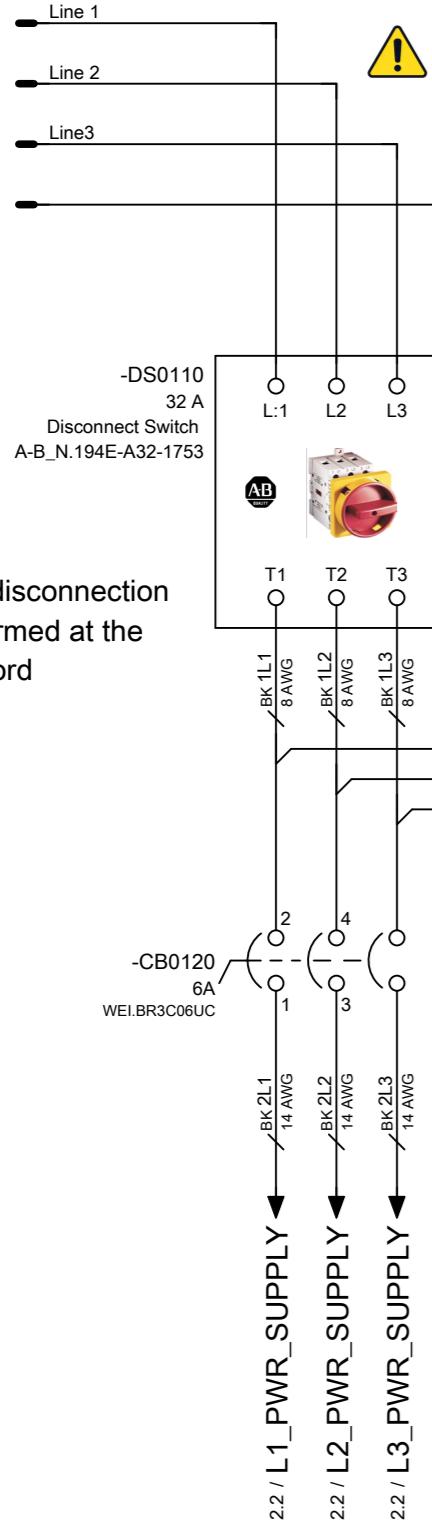
Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 23.11.2021 ca0zfa
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



place all Terminals

EN	&EFS
= A1	
+ O1	
Project no.:	CA_CS.2178969-A Pg. 0
Productionorder:	001330719396 Pg. 60



► 3-PHASE, 4-WIRE 480VAC SHALL BE SUPPLIED BY THE CUSTOMER

Disconnect Switch
A-B_N.194E-A32-1753

disconnection
formed at the
word



Project status	xxx				
		Date	19.11.2021	CA0ZF	
		Edit by	23.11.2021	ca0z	
		Appr.			
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU	

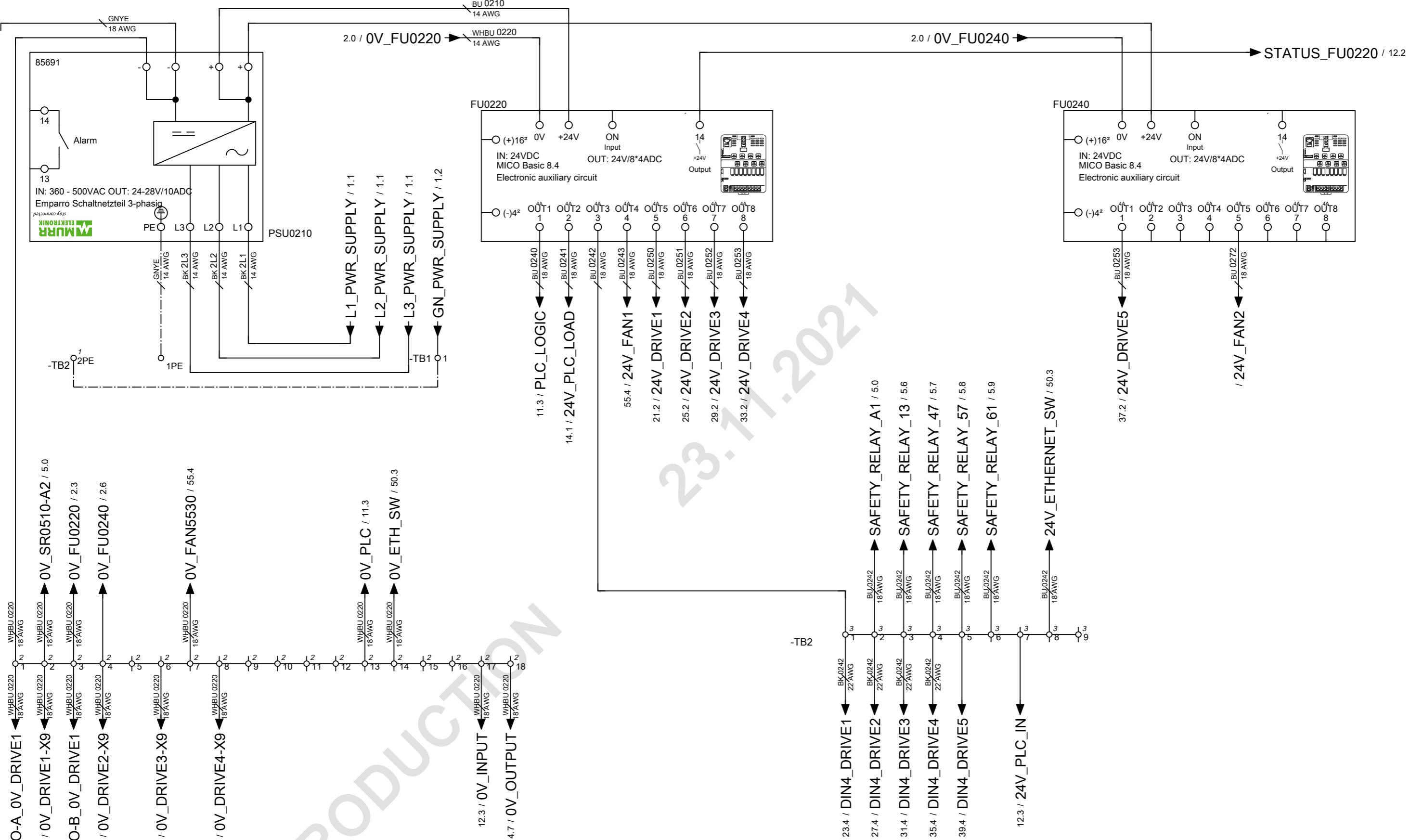
FESTO CORPORATION

EMCR 3B EE 5CMMP CE

FESTO

MAIN AC

	EN	&EFS	
Material no.:	23455210	= A1	
		+ O1	
Project no.:	CA_CS.2178969-A	Pg.	1
Production order:	001330719396	Pg.	60



Project status		xxx		
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zf
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

ESTATE PLANNING

FESTO CORPORATION

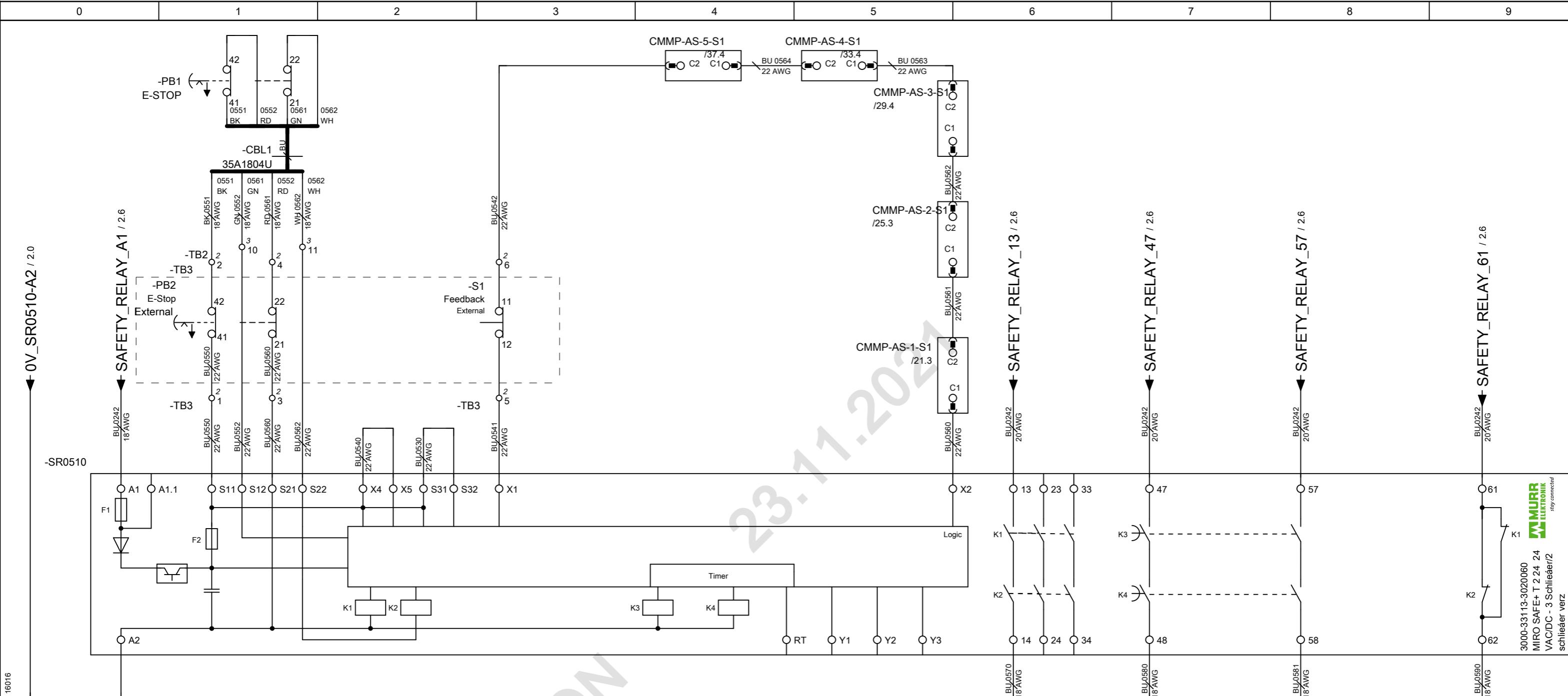
FMCP-3P-FF-5CMMMP-CPX

TM01-01-TE COMM-01-X

FESTO

—

	EN	&EFS	
Material no.:	23455210	= A1	
		+ O1	
Project no.:	CA_CS.2178969-A	Pg.	2
Production order:	001330719396	Pg.	60



⚠ Components in the dashed box (PB2 and S1)
are optional and external and shall be provided by the customer when required .
If these componts are not used they can be replaced with jumpers.

Project status		xxx			
		Date	19.11.2021	CA0ZFA	
		Edit by	23.11.2021	ca0zfa	
		Appr.			
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU	

Time setting (see Fig. 3 and 4)



DIP switch settings:

- The DIP switches are located underneath the front cover of the safety-monitoring module (see Fig. 3 and 4).
- Both DIP switches SW 1 (channel 1) and SW 2 (channel 2) must be set identically.
- The DIP switches can be set when the operating voltage is on; however, in order for the setting to be saved in the MIRO SAFE+ T 2 24, the voltage supply must be interrupted for approx. 3 seconds.
- The functionality of the setting must be checked.



Fig. 3

DIP switch setting	Drop-out delay	DIP switch setting	Drop-out delay
	<0.1 s		5.0 s
	0.5 s		8.5 s
	1.0 s		10.0 s
	1.5 s		12.0 s
	2.0 s		15.0 s
	2.5 s		20.0 s
	3.0 s		25.0 s
	4.0 s		30.0 s

PANEL WILL BE SHIPPED WITH THE SETTING MARKED ABOVE

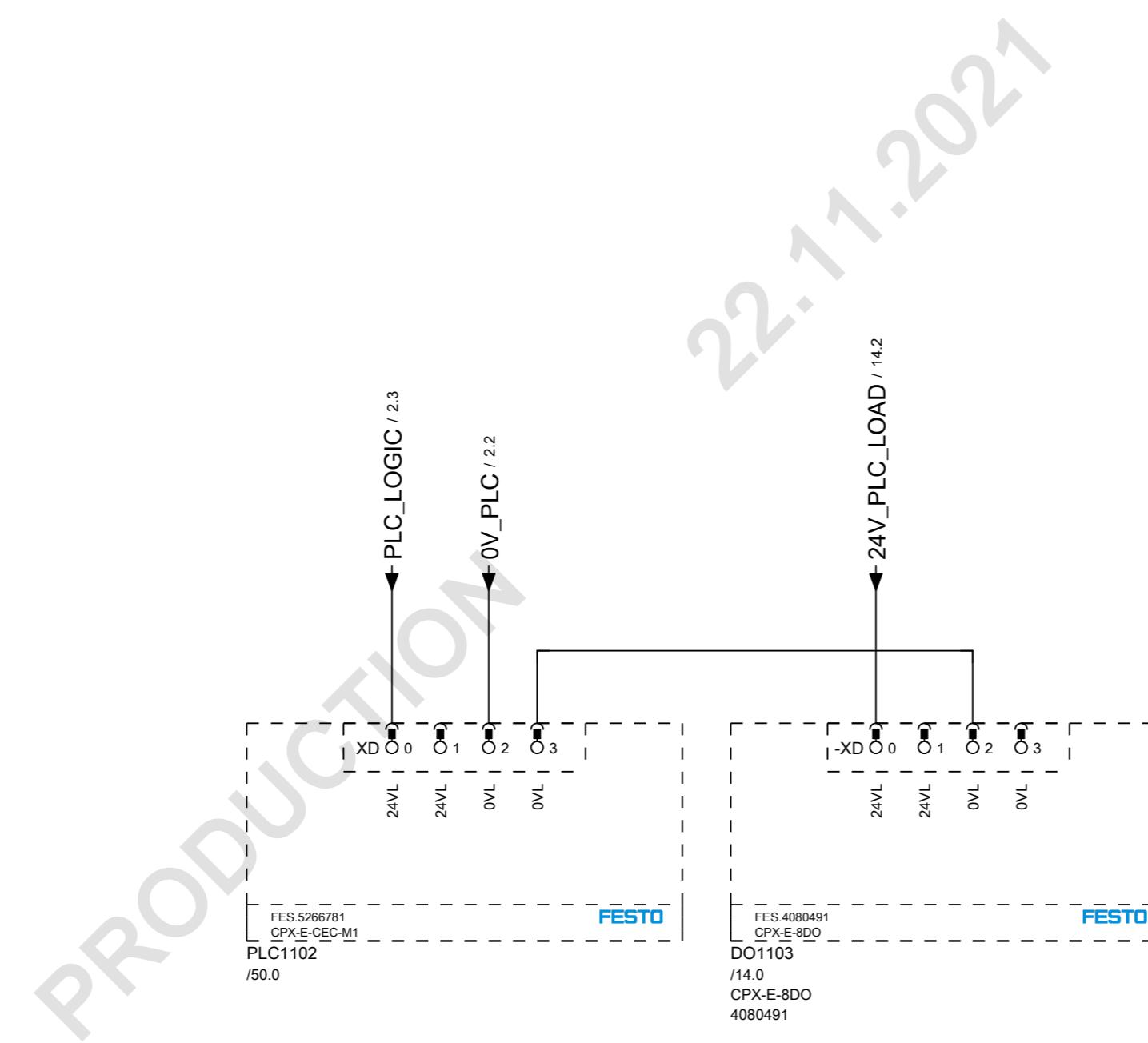
Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	19.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE

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SAFETY RELAY CONFIGURATION

EN	&EFS
Material no.:	23455210
	= A1
	+ O1
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396
	Pg. 5.1
	Pg. 60



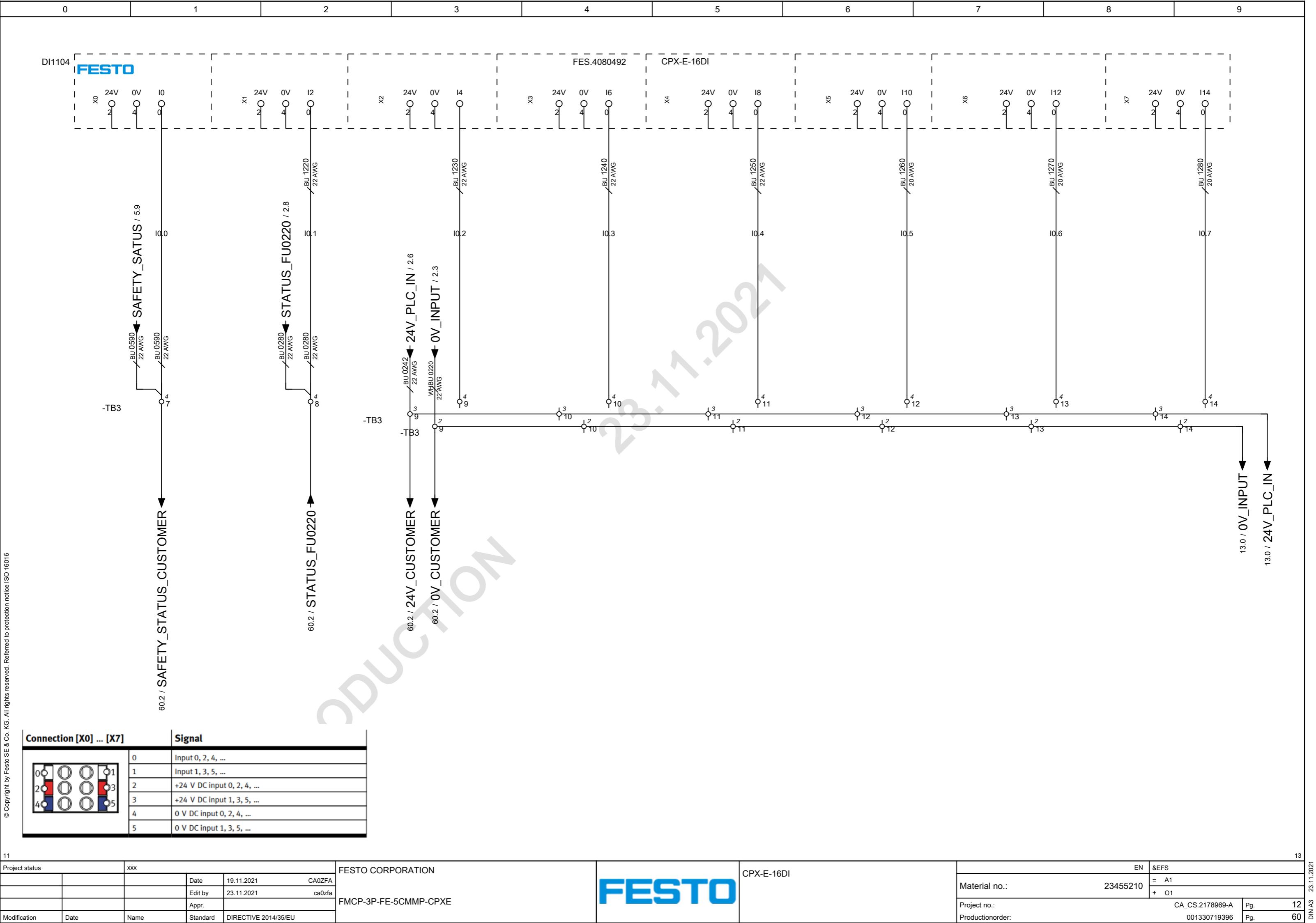
Project status	xxx
Date	19.11.2021 CA0ZFA
Edit by	22.11.2021 ca0zfa
Appr.	

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE

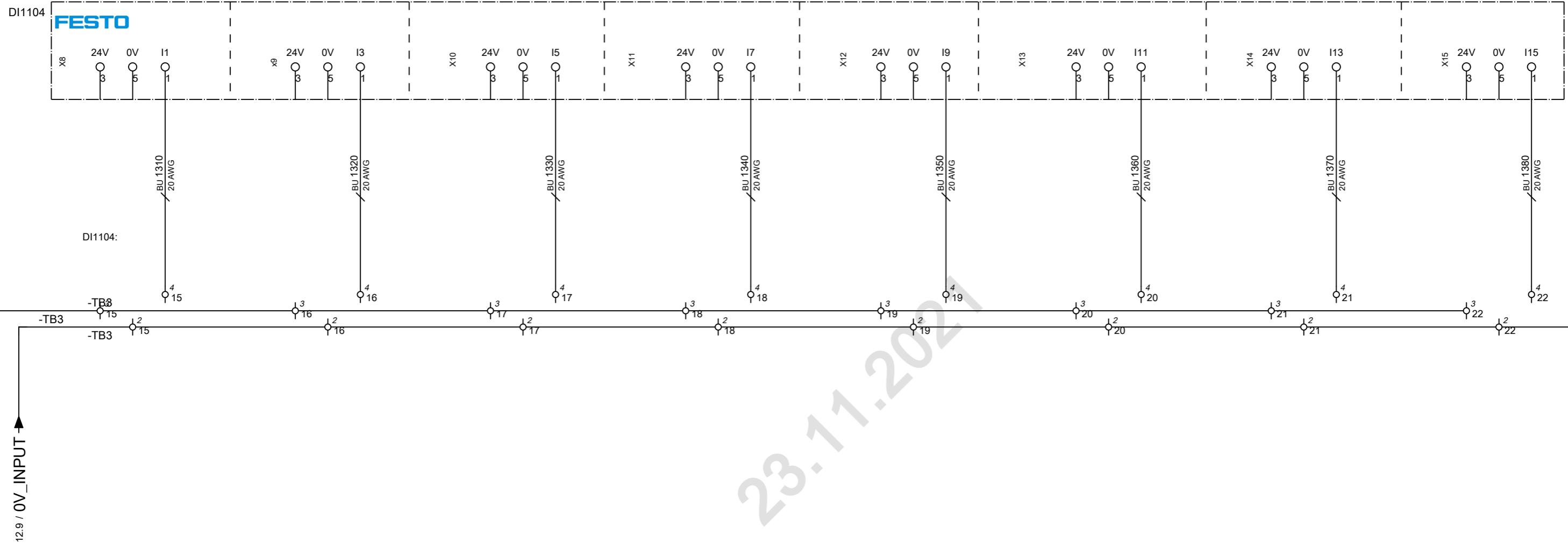
FESTO

electrical Supply 1

EN	&EFS
Material no.:	23455210
Project no.:	CA_CS.2178969-A Pg. 11
Productionorder:	001330719396 Pg. 60



Connection [X0] ... [X7]		Signal
	0	Input 0, 2, 4, ...
	1	Input 1, 3, 5, ...
	2	+24 V DC input 0, 2, 4, ...
	3	+24 V DC input 1, 3, 5, ...
	4	0 V DC input 0, 2, 4, ...
	5	0 V DC input 1, 3, 5, ...



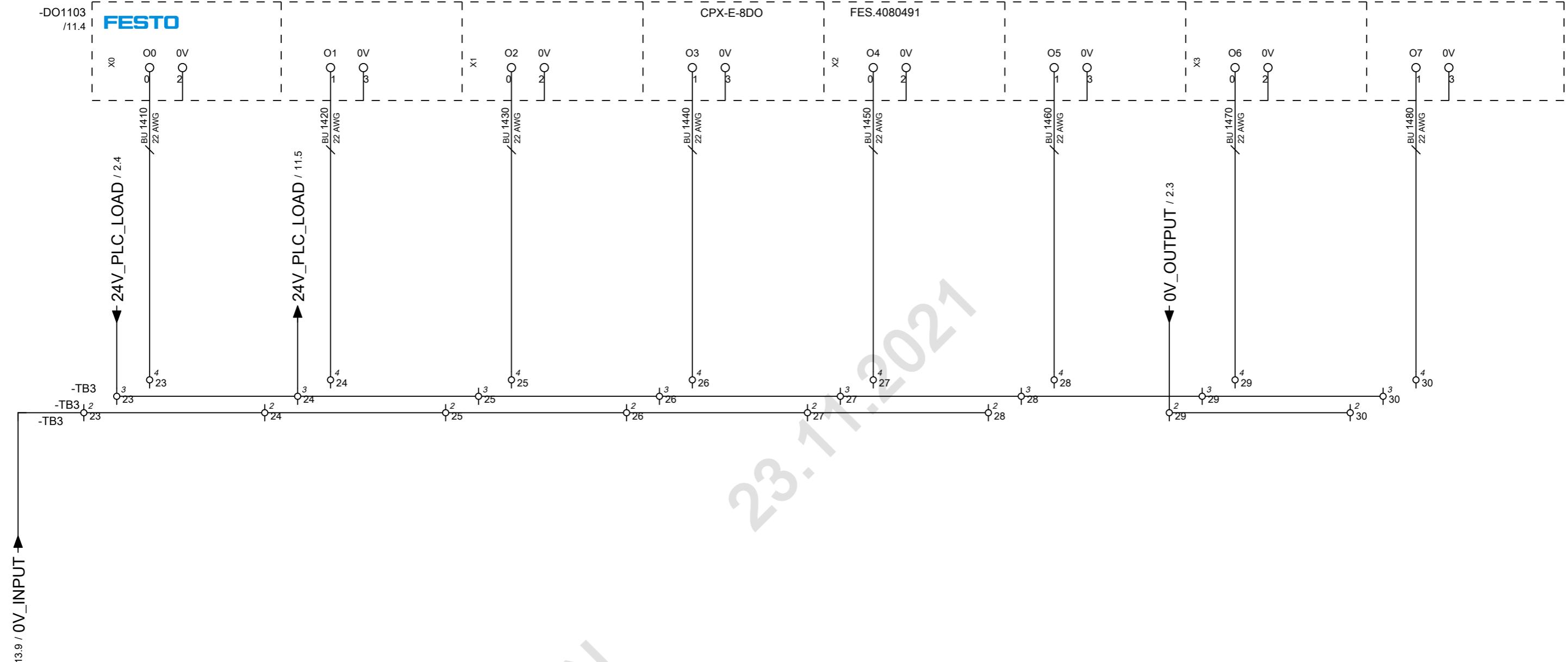
Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE

FESTO

CPX-E-16DI

EN	&EFS
Material no.:	23455210
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396



Connection [X0] ... [X3]		Signal
		0 +24 V DC output 0, 2, 4, ... 1 +24 V DC output 1, 3, 5, ... 2 0 V DC output 0, 2, 4, ... 3 0 V DC output 1, 3, 5, ...

Project status		xxx		
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE

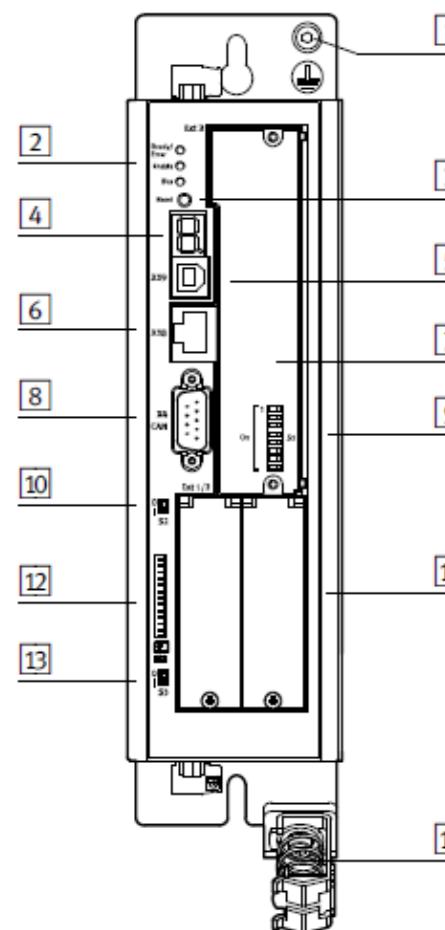
FESTO

CPX-E-8DO

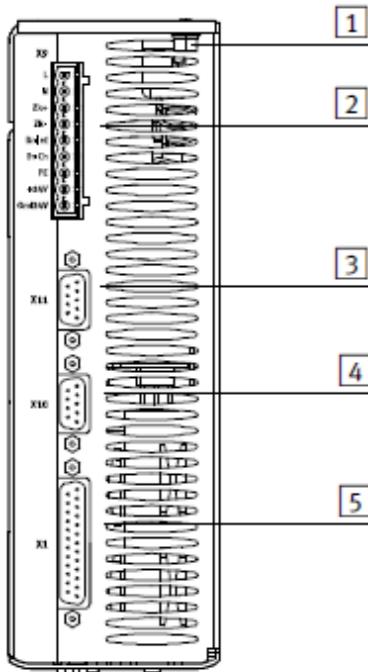
EN	&EFS
Material no.:	23455210
= A1	
+ O1	
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396
Pg.	14
Pg.	60

View of motor controller

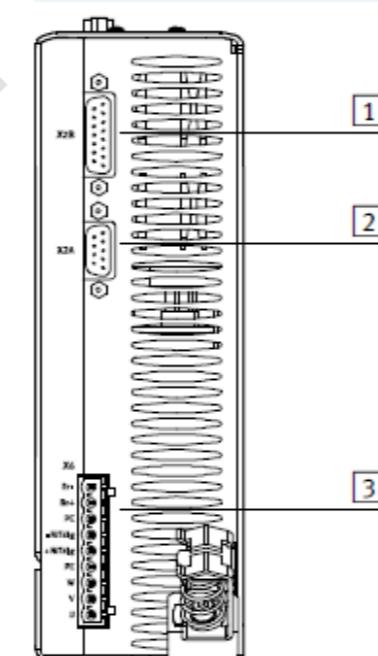
CMMP-AS...-M3



- 1 PE connection
- 2 LEDs
- 3 Reset button
- 4 7-segment display
- 5 X19 USB interface
- 6 X18 Ethernet interface
- 7 Slot for switch or safety module
- 8 X4 CANopen interface
- 9 Fieldbus settings
- 10 Activation of CANopen terminating resistor
- 11 Slots for extension modules
- 12 SD/MMC card slot
- 13 Activation of firmware download
- 14 Screened connection

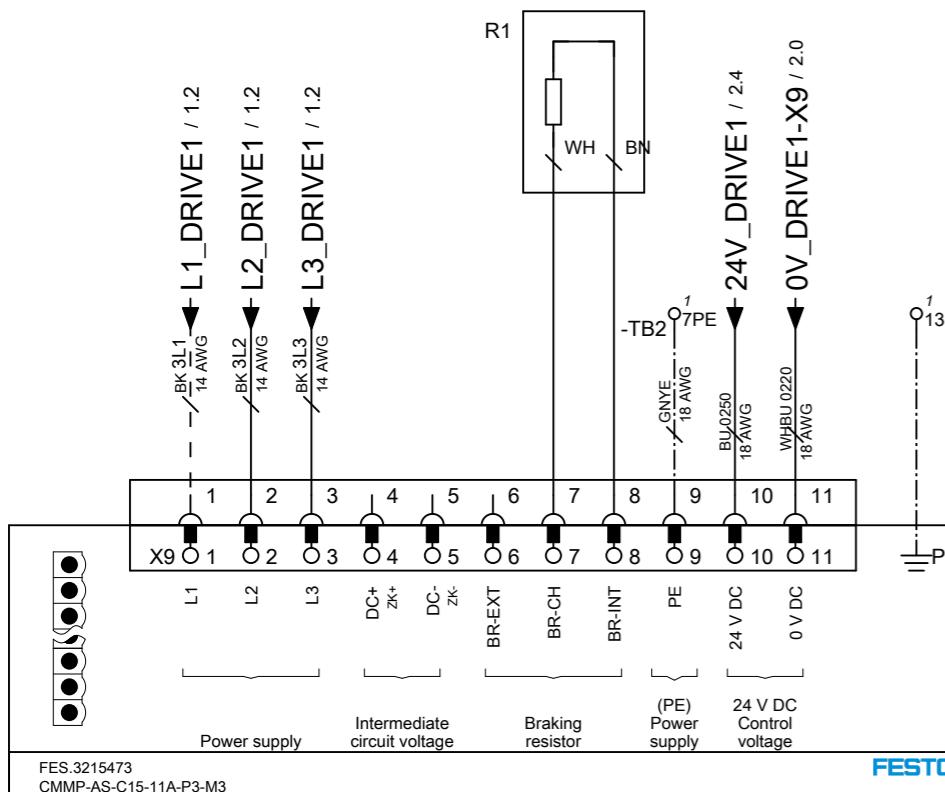
From above

- 1 PE connection
- 2 X9 power supply
- 3 X11 incremental encoder interface (output)
- 4 X10 incremental encoder interface (input)
- 5 X1 I/O interface

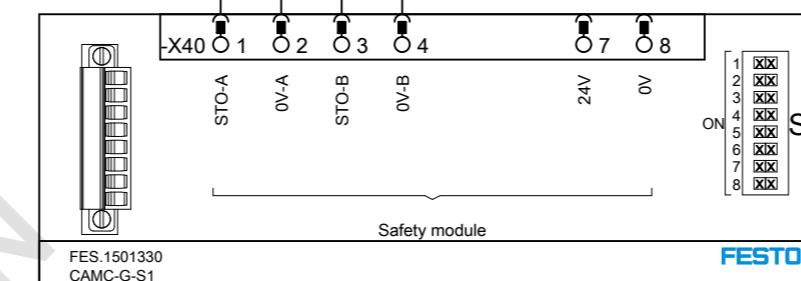
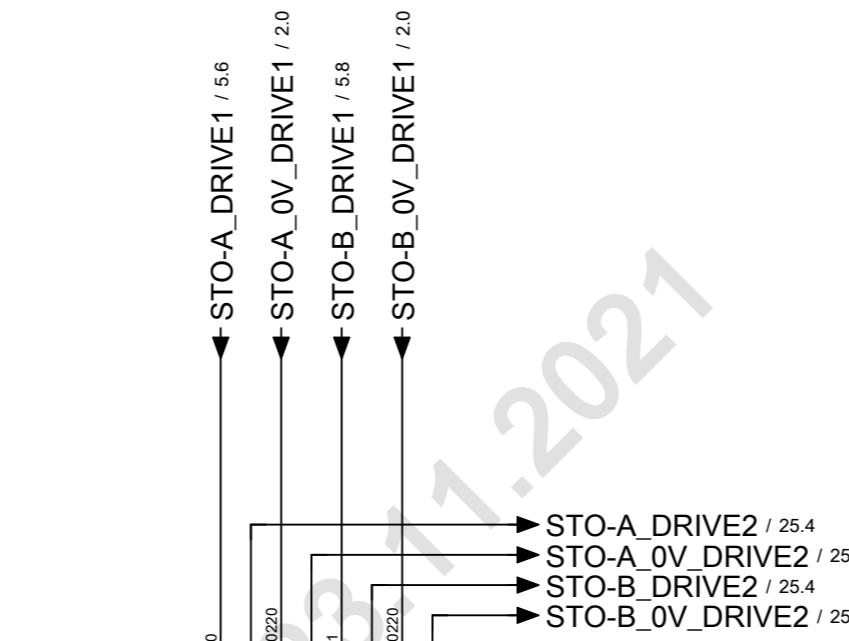
From underneath

- 1 X2B encoder connection
- 2 X2A resolver connection
- 3 X6 motor connection

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	19.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU



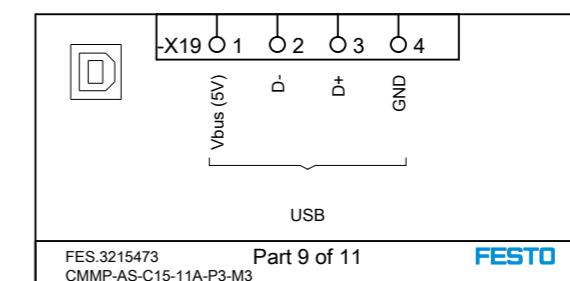
CMMP-AS-1
/21.6
/22.0
/22.3
/22.7
/23.0
/23.6
/23.6
/30.7
/21.8



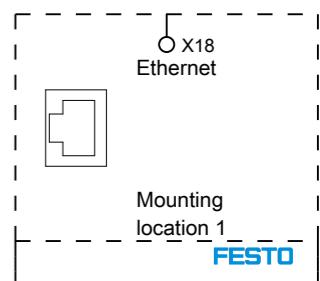
CMMP-AS-1-S1
/5.5

Note : Pin 5 (C1) and Pin 6 (C2) of Connector X40 are shown on the safety page.

[X40]1	Pin no.	Designation	Value	Specification
	8	0 V	0 V	Reference potential for auxiliary power supply.
	7	24 V	+24 V DC	Output for auxiliary power supply (24 V DC logic supply of the motor controller brought out).
	6	C2	-	Feedback contact for the status "STO" on an external controller.
	5	C1	-	
	4	0V-B	0V	Reference potential for STO-B.
	3	STO-B	0V / 24 V	Control port B for the function STO.
	2	0V-A	0V	Reference potential for STO-A.
	1	STO-A	0V / 24V	Control port A for the function STO.



CMMP-AS-1
/21.0



192.168.4.21
/21.0
CMMP-AS-1

[X6 1]	Pin no.	Designation	Value	Specification
1	Br-	0 V brake		Holding brake (motor), signal level dependent on switching status, high-side/low-side switch
2	BR+	24 V brake		
3	PE	PE		Cable shield for the holding brake and the temperature sensor (with Festo cables: n.c.)
4	-MTdig	GND		Motor temperature sensor, N/C contact, N/O contact, PTC, KTY ...
5	+MTdig	+3.3 V 5 mA		
6	PE	PE		Protective earth conductor from the motor
7	W	Technical data → Tab. A.9		Connection of the three motor phases
8	V			
9	U			

1) Representation of the plug on the device of the motor controller CMMP-AS-...-3A-M0

[X2B]	Pin no.	Designation	Value	Specification
1 O	1	MT+	+3.3 V $R_J = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...
2 O	9	U_SENS+	5 V ... 12 V	Sensor cable for the encoder supply
3 O	2	U_SENS-	$R_J \approx 1 \text{ k}\Omega$	
4 O	10	US	5 V / 12 V $\pm 10\%$ $I_{max} = 300 \text{ mA}$	Operating voltage for high-resolution incremental encoder
5 O	3	GND	0V	Reference potential for encoder supply and motor temperature sensor
6 O	11	-		
7 O	4	-		
8 O	12	DATA	5 V _{SS}	Bidirectional RS485 data cable
	5	DATA#	$R_J \approx 120 \Omega$	(differential)
	13	SCLK	5 V _{SS}	RS485 clock output
	6	SCLK#	$R_J \approx 120 \Omega$	(differential)
	14	COS_ZO 1)	1 V _{SS} $\pm 10\%$	COSINE tracking signal
	7	COS_ZO 1) #	$R_J \approx 120 \Omega$	(differential) from high-resolution incremental encoder
	15	SIN_ZO 1)	1 V _{SS} $\pm 10\%$	SINE tracking signal
	8	SIN_ZO 1) #	$R_J \approx 120 \Omega$	(differential) from high-resolution incremental encoder

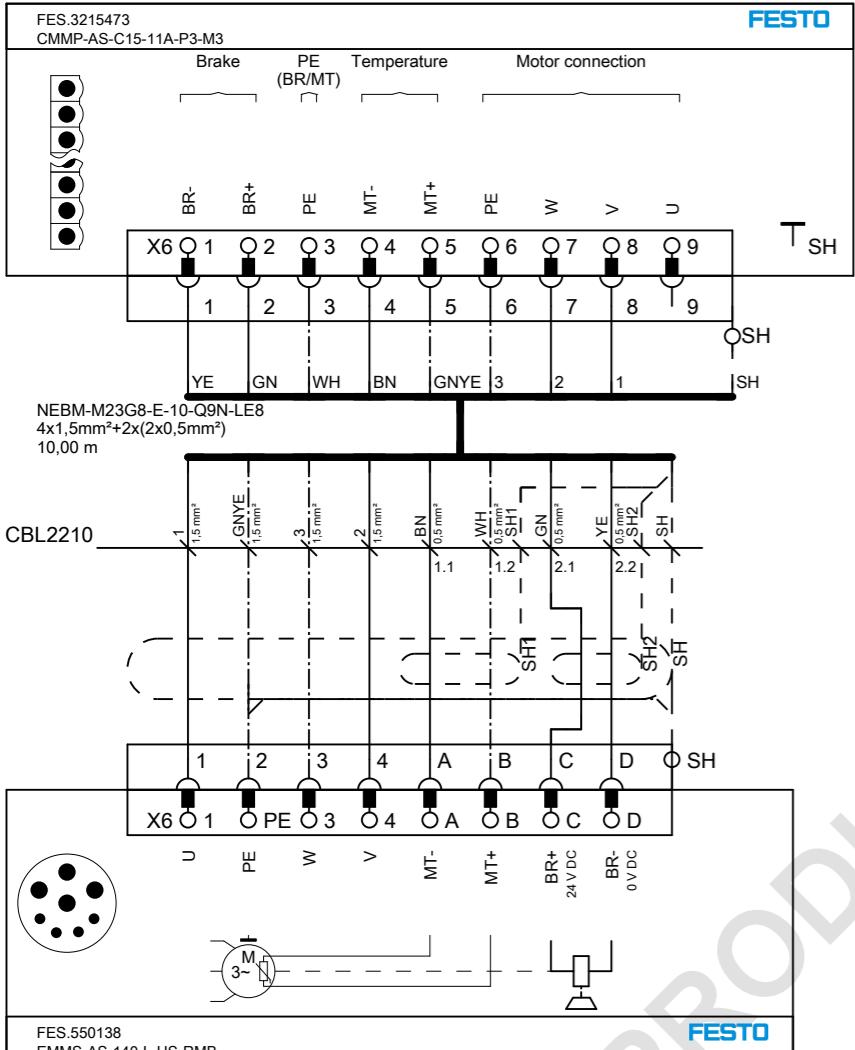
1) Heidenhain encoder: A=SIN_Z0; B=COS_Z0

Pin assignment: Incremental encoder with serial interface. e.g. EnDat – optional

Pin assignment [X2A]				
[X2A]	Pin no.	Designation	Value	Specification
 1 O O 6 2 O O 7 3 O O 8 4 O O 9 5 O	1	S2	3.5 V _{eff} 5-10 kHz	SINE tracking signal, differential
	6	S4	R _i > 5 kΩ	
	2	S1	3.5 V _{eff} 5-10 kHz	COSINE tracking signal, differential
	7	S3	R _i > 5 kΩ	
	3	AGND	0 V	Screening for signal pairs (inner screening)
	8	MT-	GND	Reference potential for temperature sensor
	4	R1	7 V _{eff} 5-10 kHz I _A ≤ 150 mA _{eff}	Carrier signal for resolver
	9	R2	GND	
	5	MT+	+3.3 V R _i = 2 kΩ	Temperature sensor, motor temperature, N/C contact, PTC KTY ...

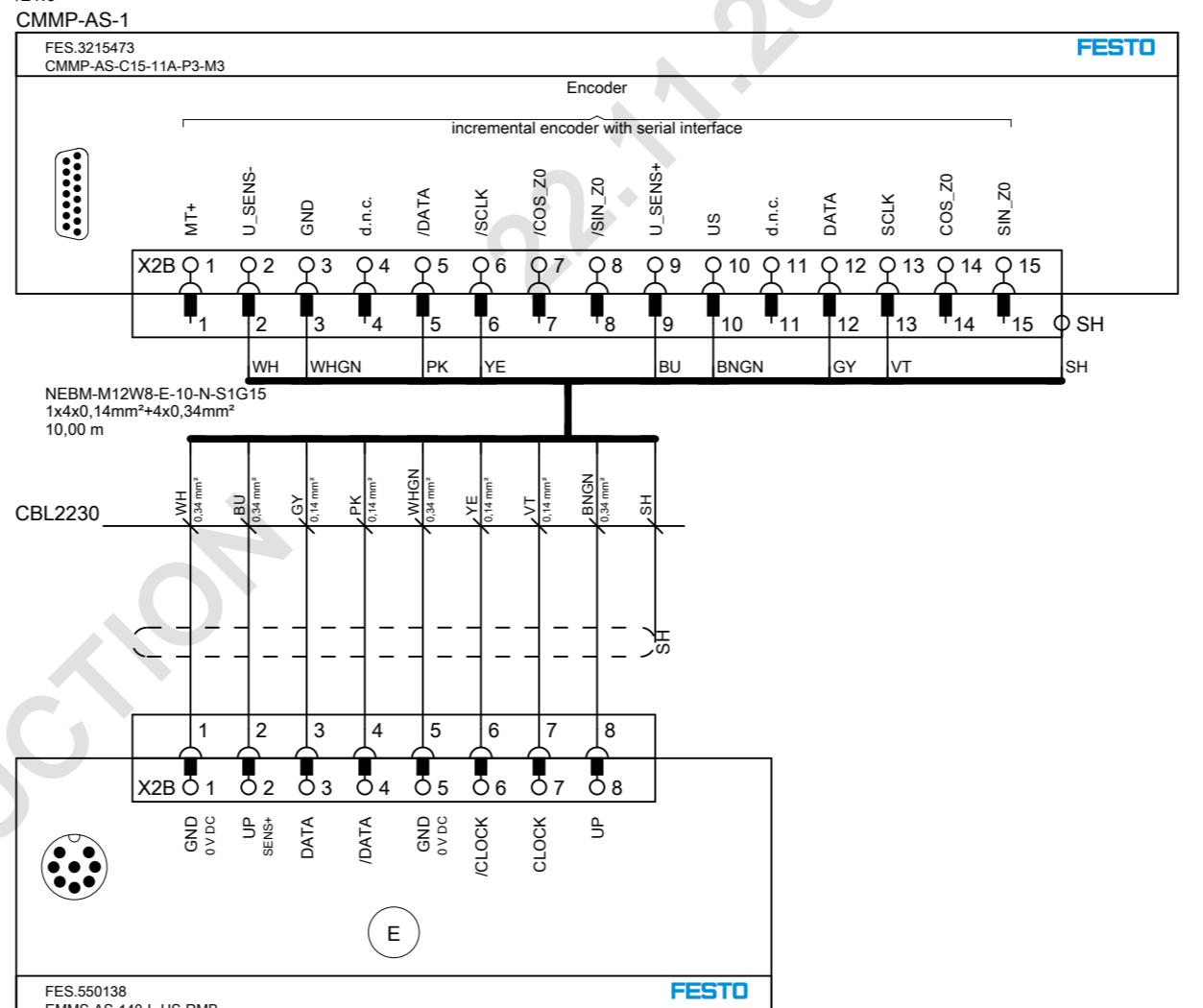
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CMMMP-AS-1



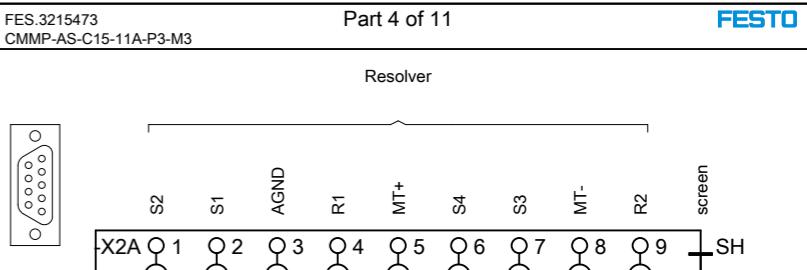
MOT1
/22 3

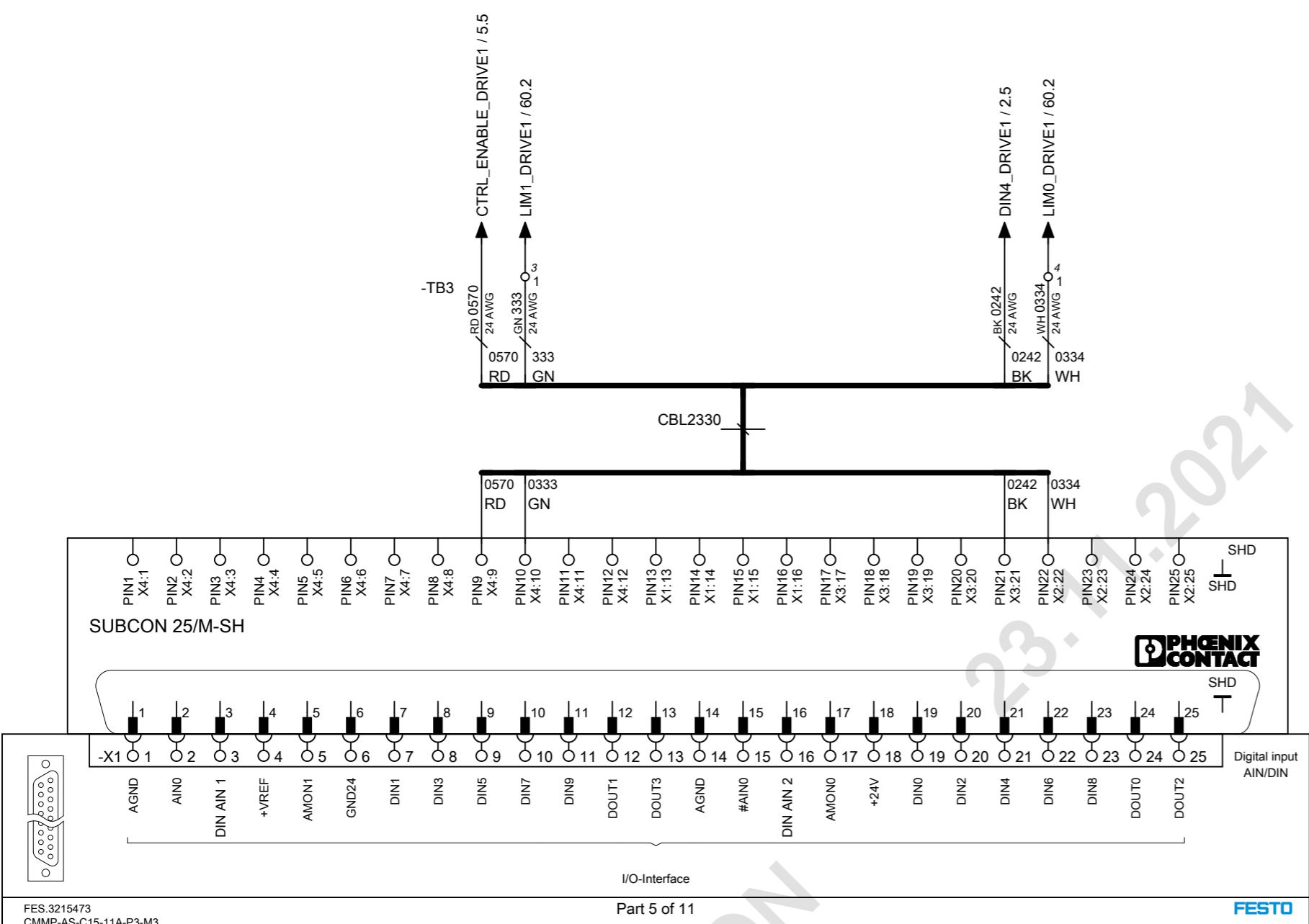
/21.0



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CMMP-AS-1





[X1]	Pin no.	Designation	Specification
O 1 O 2 O 3 O 4 O 5 O 6 O 7 O 8 O 9 O 10 O 11 O 12 O 13 O 14 O 15 O 16 O 17 O 18 O 19 O 20 O 21 O 22 O 23 O 24 O 25 O 26 O 27 O 28 O 29 O 30	13	DOUT3	Output freely parameterisable, optionally parameterisable as DIN11
	25	DOUT2	Output freely parameterisable, optionally parameterisable as DIN10
	12	DOUT1	Output freely parameterisable
	24	DOUT0	Controller ready, output permanently assigned
	11	DIN 9	Fieldbus data profile (CiA 402, FHPP), input freely parameterisable
	23	DIN 8	Fieldbus activation communication, input freely parameterisable
	10	DIN7	Limit switch 1 (blocks n < 0), input permanently assigned
	22	DIN6	Limit switch 0 (blocks n > 0), input permanently assigned
	9	DINS	Controller enable, input permanently assigned
	21	DINA4	End stage enable, input permanently assigned
	8	DIN 3	Fieldbus offset node number bit 3, input freely parameterisable
	20	DIN 2	Fieldbus offset node number bit 2, input freely parameterisable
	7	DIN 1	Fieldbus offset node number bit 1, input freely parameterisable
	19	DIN 0	Fieldbus offset node number bit 0, input freely parameterisable
	6	GND24	Reference potential for digital I/Os
	18	+24 V	24 V output
	5	AOUT1	Analogue output freely parameterisable
	17	AOUT0	Analogue output freely parameterisable
	4	+VREF	Reference output for setpoint potentiometer
	16	DIN13	Fieldbus transmission rate bit 1, optionally parameterisable as AIN1 ²¹
	3	DIN12	Fieldbus transmission rate bit 0, optionally parameterisable as AIN1 ¹¹
	15	#AIN0	Setpoint input 0, differential analogue input
	2	AIN0	
	14	AGND	Reference potential for analogue signals
	1	AGND	Screening for analogue signals, AGND

1) Configuration with FCT. Observe note → Abschnitt 4.3.3.

Project status		xxx		
		Date	19.11.2021	CA
		Edit by	23.11.2021	CD
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CP



CMMP-AS-1:X1,X10,X11

[X 0]	Pin no.	Designation	Value	Specification
1 O 2 O 3 O 4 O 5 O	1	A/CLK/CW	5 V $R_L = 120 \Omega$	Incremental encoder signal A Stepper motor signal CLK Pulses clockwise CW pos. polarity in accordance with RS422
	6	A#/CLK#/CW#	5 V $R_L = 120 \Omega$	Incremental encoder signal A Step motor signal CLK Pulses clockwise CW neg. polarity in accordance with RS422
	2	B/DIR/CCW	5 V $R_L = 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW pos. polarity in accordance with RS422
	7	B#/DIR#/CCW#	5 V $R_L = 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW neg. polarity in accordance with RS422
	3	N	5 V $R_L = 120 \Omega$	Incremental encoder zero pulse N pos. polarity in accordance with RS422
	8	N#	5 V $R_L = 120 \Omega$	Incremental encoder zero pulse N neg. polarity in accordance with RS422
	4	GND	—	Reference GND for encoder
	9	GND	—	Screening for the connecting cable
	5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!

Tab. 4.21 Pin assignment X10: Incremental encoder input

/21.0

CMMMP-AS-1

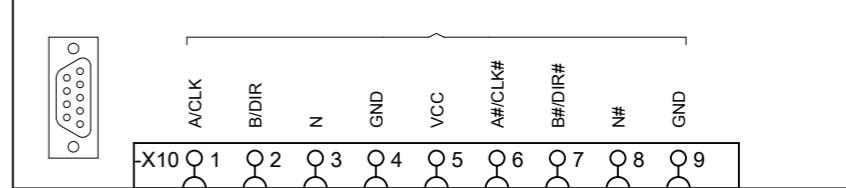
FES.3215473
CMMP-AS-C15-11A-P3-M3

Part 6 of 11

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Incremental encoder input



[X11]	Pin no.	Designation	Value	Specification
	1	A	$5\text{ V RA} \approx 66\text{ }\Omega\text{l}$	Incremental encoder signal A
	6	A#	$5\text{ V RA} \approx 66\text{ }\Omega\text{l}$	Incremental encoder signal A#
	2	B	$5\text{ V RA} \approx 66\text{ }\Omega\text{l}$	Incremental encoder signal B
	7	B#	$5\text{ V RA} \approx 66\text{ }\Omega\text{l}$	Incremental encoder signal B#
	3	N	$5\text{ V RA} \approx 66\text{ }\Omega\text{l}$	Incremental encoder zero pulse N
	8	N#	$5\text{ V RA} \approx 66\text{ }\Omega\text{l}$	Incremental encoder zero pulse N#
	4	GND	-	Reference GND for encoder
	9	GND	-	Screening for connecting cable
	5	VCC	$+5\text{ V} \pm 5\%$ 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!

1) The specification for RA designates the differential output resistance

/21.0

CMMP-AS-1

FES.3215473
CMMP-AS-C15-11A-P3-M3

Part 7 of 11

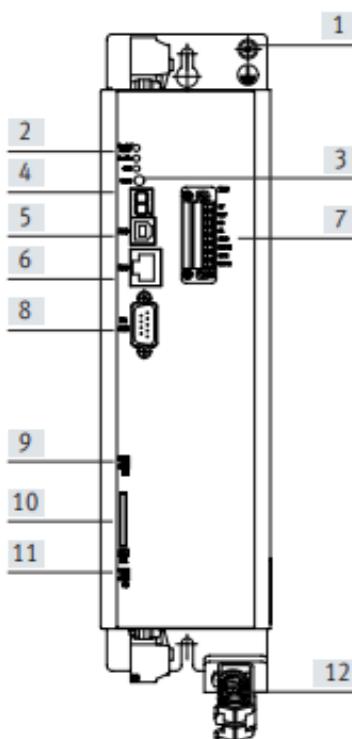
FESTO

Incremental encoder output

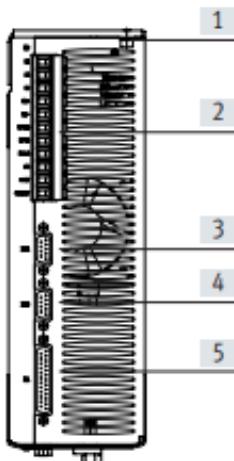


View of motor controller

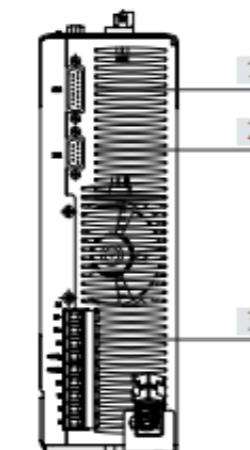
CMMP-AS-...-M0



- [1] PE connection
- [2] LEDs
- [3] Reset button
- [4] Seven-segment display
- [5] X19 USB interface
- [6] X18 Ethernet interface
- [7] X40 digital I/O interface for controlling the STO function
- [8] X4 CANopen interface
- [9] Activation of CANopen terminating resistor
- [10] SD/MMC card slot
- [11] Activation of firmware download
- [12] Shield connection

From above

- [1] PE connection
- [2] X9 power supply
- [3] X11 incremental encoder interface (output)
- [4] X10 incremental encoder interface (input)
- [5] X1 I/O interface

From underneath

- [1] X2B encoder connection
- [2] X2A resolver connection
- [3] X6 motor connection

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	19.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

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FMCP-3P-FE-5CMMP-CPXE

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Overview

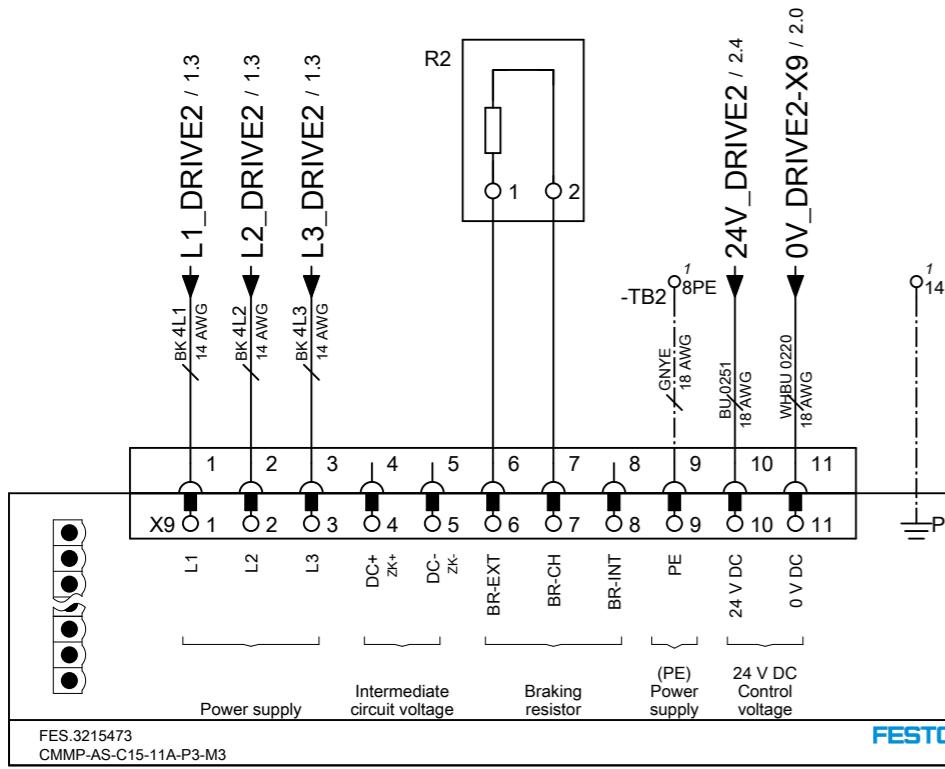
EN &EFS

Material no.: 23455210 = A1

+ O1

Project no.: CA_CS.2178969-A Pg. 24

Productionorder: 001330719396 Pg. 60



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/26.7

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/27.6

/27.6

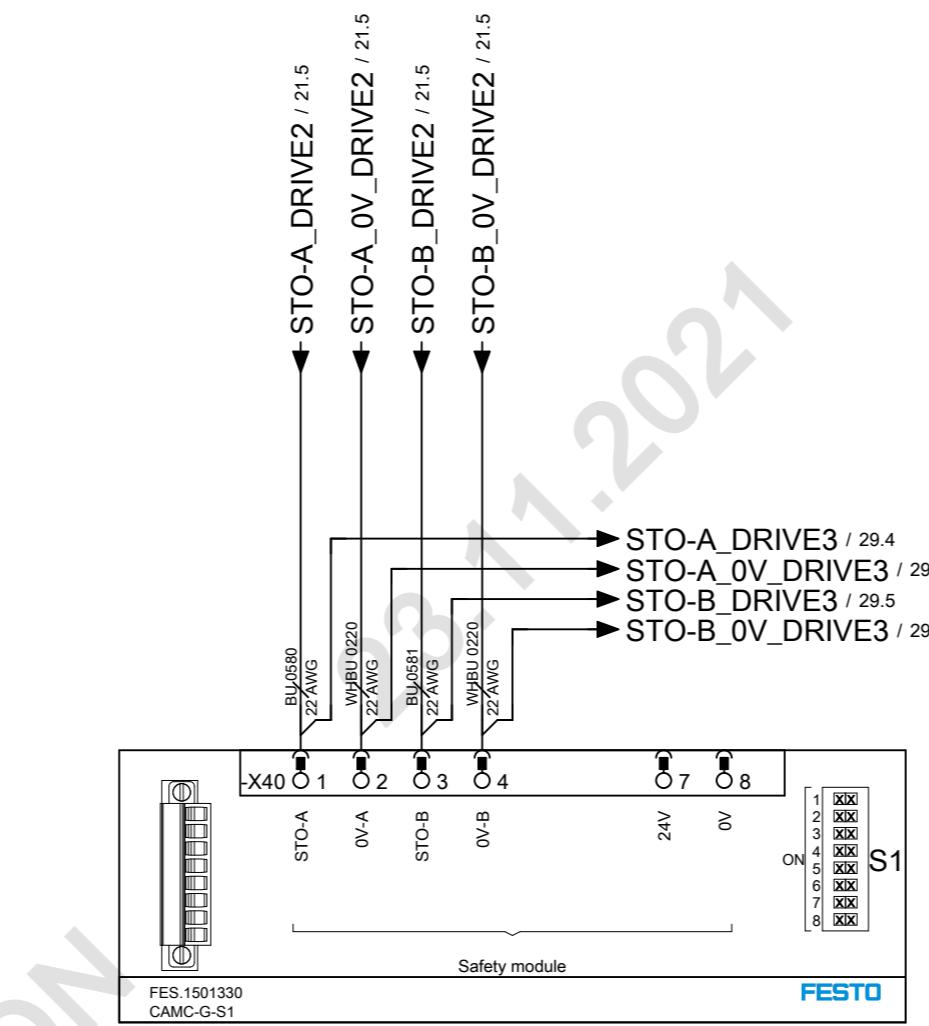
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/25.8

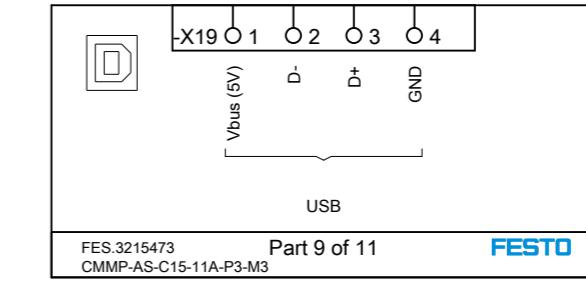
4.8.2 Pin assignment [X9] – single-phase

[X9]1	Pin no.	Designation	Value	Specification
1	L	100 ... 230 V AC		Mains phase
2	N	±10% 50 ... 60 Hz		Mains neutral conductor (reference potential)
3	ZK+	60 ... 380 V DC		Alternative supply: Positive intermediate circuit voltage
4	ZK-	GND_ZK		Alternative supply: Negative intermediate circuit voltage
5	BR-INT	< 460 V DC		Internal braking resistor connection (bridge after BR-CH when using the internal resistor).
6	BR-CH	< 460 V DC		Brake chopper connection for – internal braking resistor toward BR-INT – or – – external braking resistor against ZK+
7	PE	PE		Connection for protective conductor from the mains
8	+24 V	+24 V DC ±20%		Supply for control section, holding brake and I/O
9	GND24 V	GND24 V DC		Reference potential for supply 0V

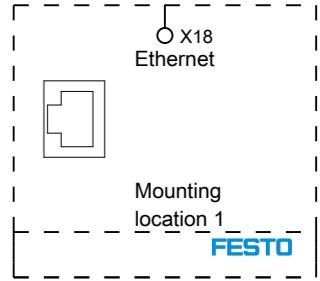
1) Representation of the contact strip on the motor controller CMMP-AS-...-3A-M0



[X40]1	Pin no.	Designation	Value	Specification
8	0 V	0 V		Reference potential for auxiliary power supply.
7	24 V	+24 V DC		Output for auxiliary power supply (24 V DC logic supply of the motor controller brought out).
6	C2	–		Feedback contact for the status "STO" on an external controller.
5	C1			
4	0V-B	0V		Reference potential for STO-B.
3	STO-B	0V / 24 V		Control port B for the function STO.
2	0V-A	0V		Reference potential for STO-A.
1	STO-A	0V / 24V		Control port A for the function STO.



/25.0



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CMMP-AS-2

[X6]1	Pin no.	Designation	Value	Specification
1	Br-	0 V brake	Holding brake (motor), signal level dependent on switching status, high-side/low-side switch	
2	BR+	24 V brake		
3	PE	PE	Cable shield for the holding brake and the temperature sensor (with Festo cables: n.c.)	
4	-MTdig	GND	Motor temperature sensor, N/C contact, N/O contact, PTC, KTY ...	
5	+MTdig	+3.3 V 5 mA		
6	PE	PE	Protective earth conductor from the motor	
7	W	Technical data → Tab. A.9	Connection of the three motor phases	
8	V			
9	U			

1) Representation of the plug on the device of the motor controller CMMP-AS-...-3A-M0

[X2B]	Pin no.	Designation	Value	Specification
1	MT+	+3.3 V $R_i = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...	
9	U_SENS+	5 V ... 12 V $R_i \approx 1 \text{ k}\Omega$	Sensor cable for the encoder supply	
2	U_SENS-			
10	US	5 V/12 V ±10% $I_{max} = 300 \text{ mA}$	Operating voltage for high-resolution incremental encoder	
3	GND	0 V	Reference potential for encoder supply and motor temperature sensor	
11	-			
4	-			
12	DATA	5 V _{SS} $R_i \approx 120 \Omega$	Bidirectional RS485 data cable (differential)	
5	DATA#	5 V _{SS} $R_i \approx 120 \Omega$	RS485 clock output (differential)	
6	SCLK	5 V _{SS} $R_i \approx 120 \Omega$	COSINE tracking signal (differential) from high-resolution incremental encoder	
7	COS_ZO 1)	1 V _{SS} ±10% $R_i \approx 120 \Omega$	COSINE tracking signal (differential) from high-resolution incremental encoder	
14	COS_ZO 1) #	1 V _{SS} ±10% $R_i \approx 120 \Omega$	SINE tracking signal (differential) from high-resolution incremental encoder	
15	SIN_ZO 1)	1 V _{SS} ±10% $R_i \approx 120 \Omega$	SINE tracking signal (differential) from high-resolution incremental encoder	
8	SIN_ZO 1) #			

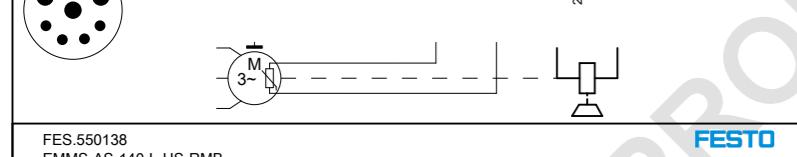
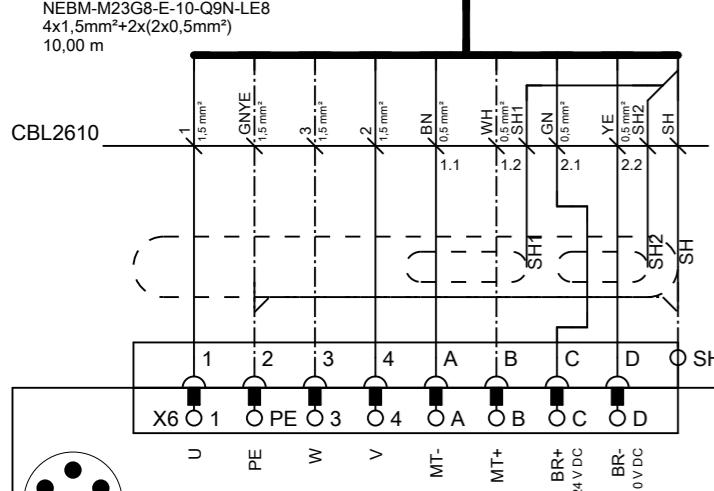
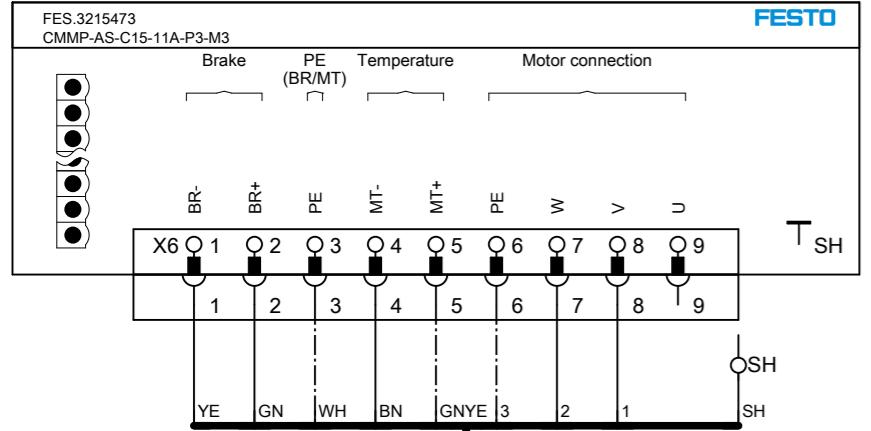
1) Heidenhain encoder: A=SIN_ZO; B=COS_ZO

Pin assignment: Incremental encoder with serial interface, e.e. EnDat – optional

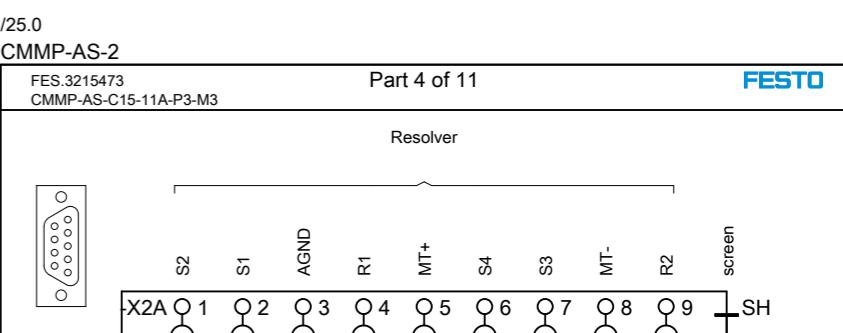
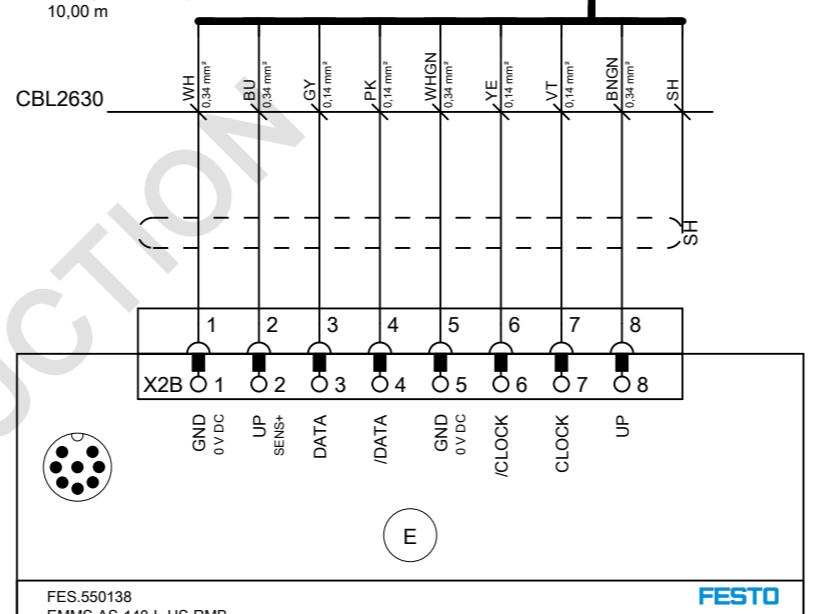
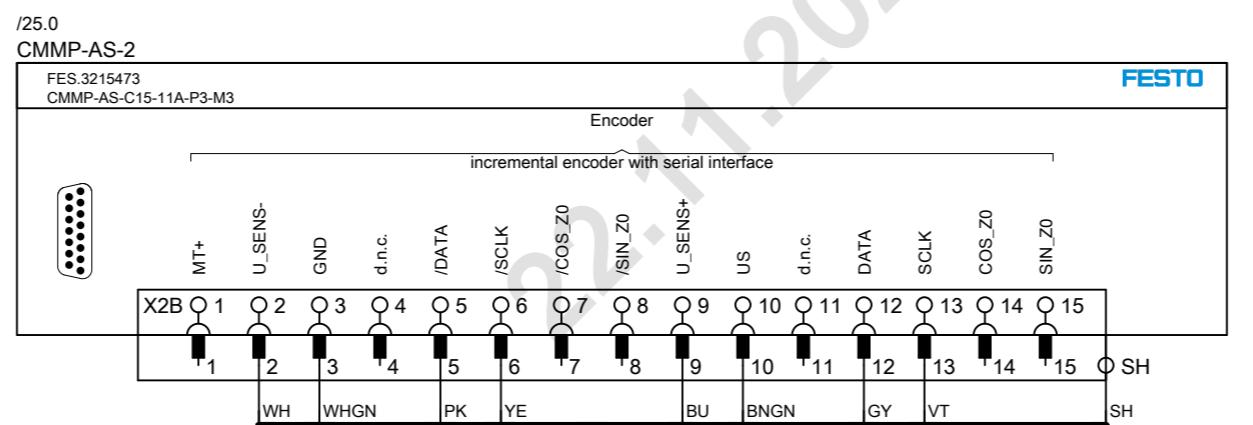
[X2A]	Pin no.	Designation	Value	Specification
1	S2	3.5 V _{eff} 5-10 kHz	SINE tracking signal, differential	
6	S4	$R_i > 5 \text{ k}\Omega$		
2	S1	3.5 V _{eff} 5-10 kHz	COSINE tracking signal, differential	
7	S3	$R_i > 5 \text{ k}\Omega$		
3	AGND	0 V	Screening for signal pairs (inner screening)	
8	MT-	GND	Reference potential for temperature sensor	
4	R1	7 V _{eff} 5-10 kHz $I_A \leq 150 \text{ mA}_{eff}$	Carrier signal for resolver	
9	R2	GND		
5	MT+	+3.3 V $R_i = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...	

/25.0

CMMP-AS-2

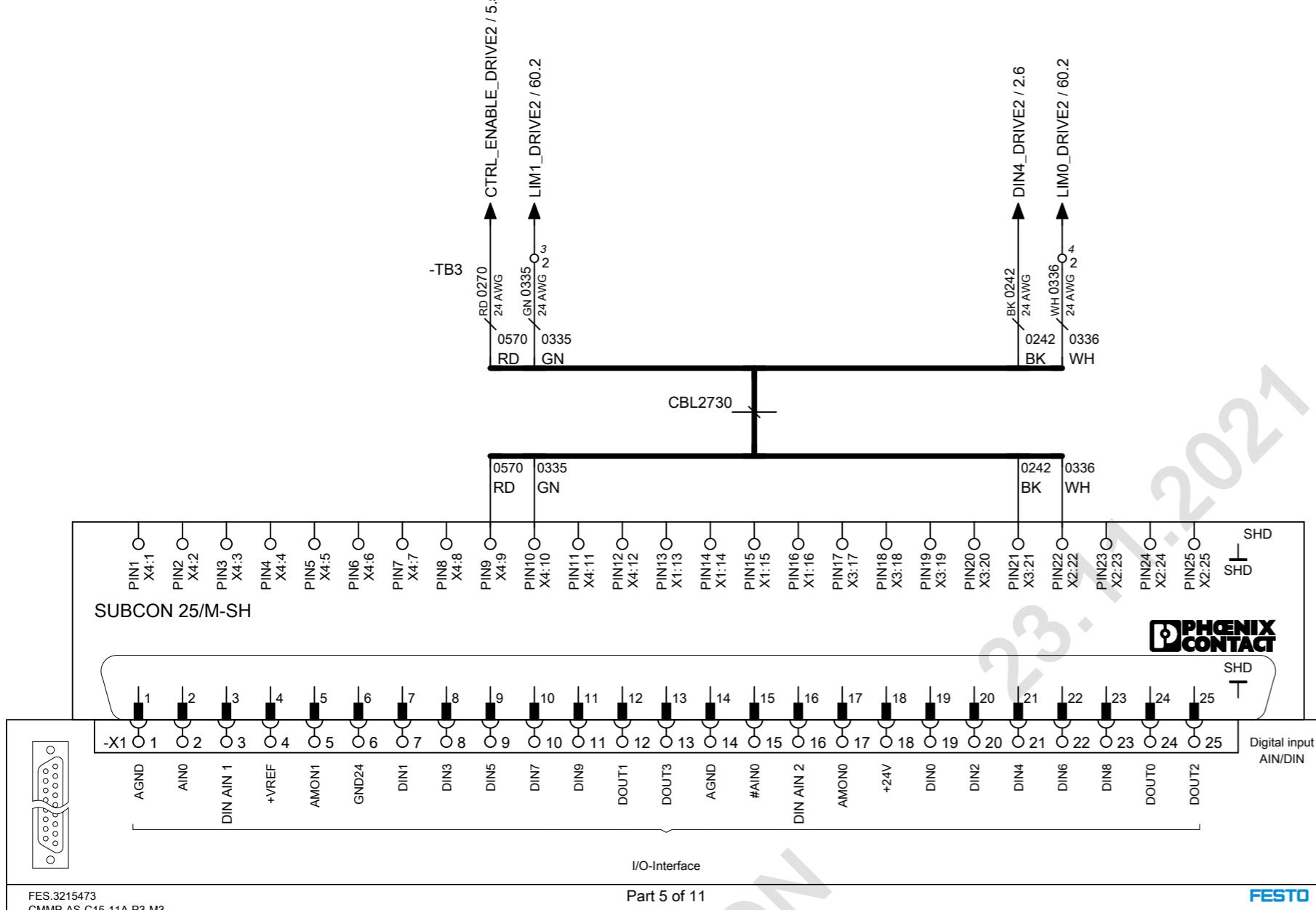


/26.3



[X1]	Pin no.	Designation	Specification
13	DOUT3	Output freely parameterisable, optionally parameterisable as DIN11	
25	DOUT2	Output freely parameterisable, optionally parameterisable as DIN10	
12	DOUT1	Output freely parameterisable	
24	DOUT0	Controller ready, output permanently assigned	
11	DIN 9	Fieldbus data profile (CiA 402, FHPP), input freely parameterisable	
23	DIN 8	Fieldbus activation communication, input freely parameterisable	
10	DIN 7	Limit switch 1 (blocks n < 0), input permanently assigned	
22	DIN 6	Limit switch 0 (blocks n > 0), input permanently assigned	
9	DIN 5	Controller enable, input permanently assigned	
21	DIN 4	End stage enable, input permanently assigned	
8	DIN 3	Fieldbus offset node number bit 3, input freely parameterisable	
20	DIN 2	Fieldbus offset node number bit 2, input freely parameterisable	
7	DIN 1	Fieldbus offset node number bit 1, input freely parameterisable	
19	DIN 0	Fieldbus offset node number bit 0, input freely parameterisable	
6	GND24	Reference potential for digital I/Os	
18	+24 V	24 V output	
5	AOUT1	Analogue output freely parameterisable	
17	AOUT0	Analogue output freely parameterisable	
4	-VREF	Reference output for setpoint potentiometer	
16	DIN13	Fieldbus transmission rate bit 1, optionally parameterisable as DIN2 ¹⁾	
3	DIN12	Fieldbus transmission rate bit 0, optionally parameterisable as DIN1 ¹⁾	
15	#AIN0	Setpoint input 0, differential analogue input	
2	AIN0		
14	AGND	Reference potential for analogue signals	
1	AGND	Screening for analogue signals, AGND	

1) Configuration with FCT. Observe note → Abschnitt 4.3.3.



[X10]	Pin no.	Designation	Value	Specification
1	A/CLK/CW	5 V $R_i \approx 120 \Omega$	Incremental encoder signal A Stepper motor signal CLK Pulses clockwise CW pos. polarity in accordance with RS422	
6	A#/CLK#/CW#	5 V $R_i \approx 120 \Omega$	Incremental encoder signal A# Step motor signal CLK# Pulses clockwise CW neg. polarity in accordance with RS422	
2	B/DIR/CCW	5 V $R_i \approx 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW pos. polarity in accordance with RS422	
7	B#/DIR#/CCW#	5 V $R_i \approx 120 \Omega$	Incremental encoder signal B# Step motor signal DIR# Pulses counterclockwise CCW neg. polarity in accordance with RS422	
3	N	5 V $R_i \approx 120 \Omega$	Incremental encoder zero pulse N pos. polarity in accordance with RS422	
8	N#	5 V $R_i \approx 120 \Omega$	Incremental encoder zero pulse N# neg. polarity in accordance with RS422	
4	GND	-	Reference GND for encoder	
9	GND	-	Screening for the connecting cable	
5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!	

Tab. 4.21 Pin assignment X10: Incremental encoder input

/25.0

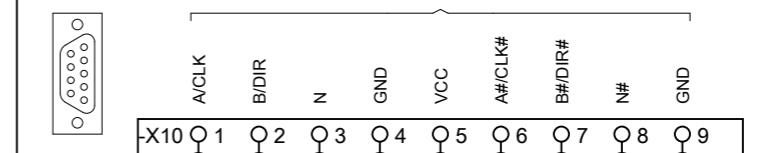
CMMP-AS-2

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CMMP-AS-C15-11A-P3-M3

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Incremental encoder input



[X11]	Pin no.	Designation	Value	Specification
1	A	5 V RA ≈ 66 Ω1)	Incremental encoder signal A	
6	A#	5 V RA ≈ 66 Ω1)	Incremental encoder signal A#	
2	B	5 V RA ≈ 66 Ω1)	Incremental encoder signal B	
7	B#	5 V RA ≈ 66 Ω1)	Incremental encoder signal B#	
3	N	5 V RA ≈ 66 Ω1)	Incremental encoder zero pulse N	
8	N#	5 V RA ≈ 66 Ω1)	Incremental encoder zero pulse N#	
4	GND	-	Reference GND for encoder	
9	GND	-	Screening for connecting cable	
5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!	

1) The specification for RA designates the differential output resistance

/25.0

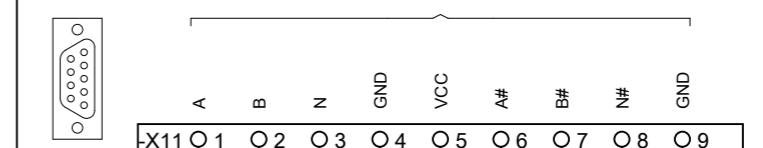
CMMP-AS-2

FES.3215473
CMMP-AS-C15-11A-P3-M3

Part 7 of 11

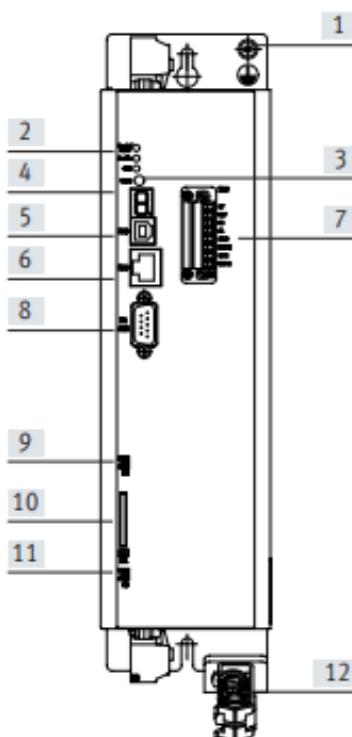
FESTO

Incremental encoder output

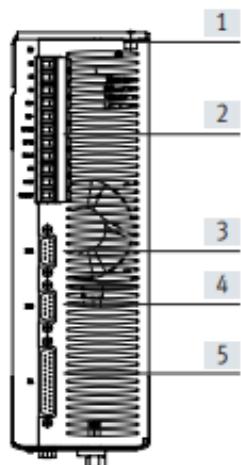


View of motor controller

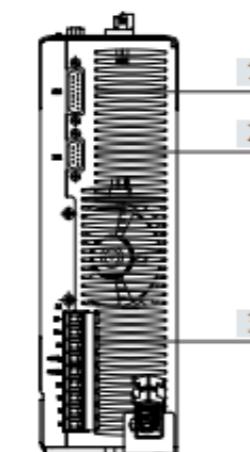
CMMP-AS-...-M0



- [1] PE connection
- [2] LEDs
- [3] Reset button
- [4] Seven-segment display
- [5] X19 USB interface
- [6] X18 Ethernet interface
- [7] X40 digital I/O interface for controlling the STO function
- [8] X4 CANopen interface
- [9] Activation of CANopen terminating resistor
- [10] SD/MMC card slot
- [11] Activation of firmware download
- [12] Shield connection

From above

- [1] PE connection
- [2] X9 power supply
- [3] X11 incremental encoder interface (output)
- [4] X10 incremental encoder interface (input)
- [5] X1 I/O interface

From underneath

- [1] X2B encoder connection
- [2] X2A resolver connection
- [3] X6 motor connection

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	19.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

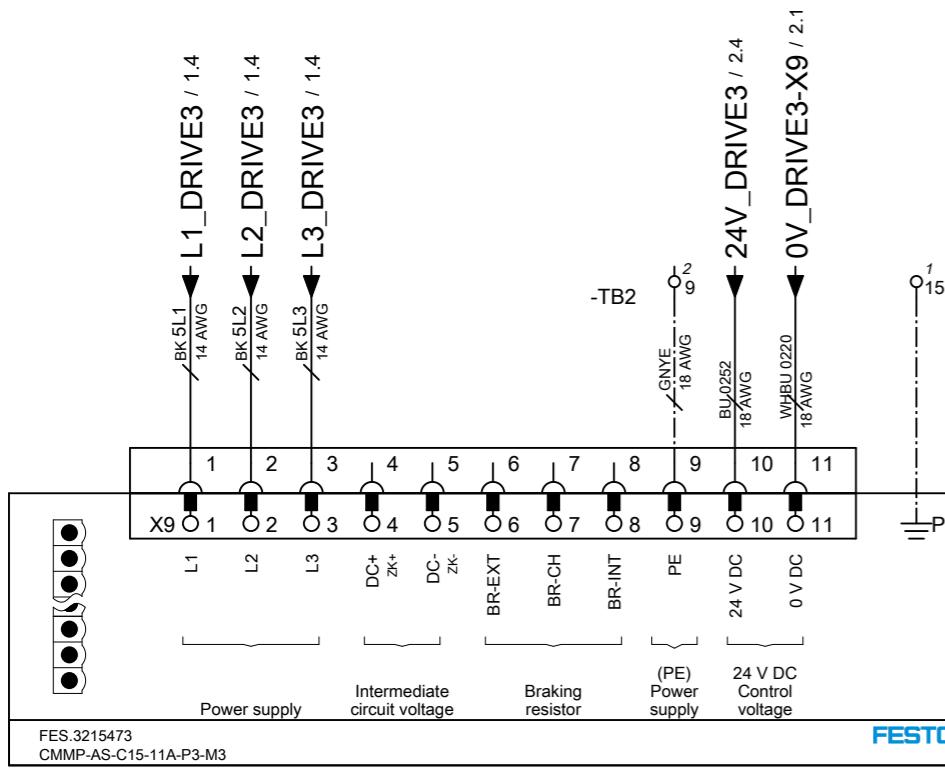
FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE

FESTO

Overview

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Material no.:	23455210
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396



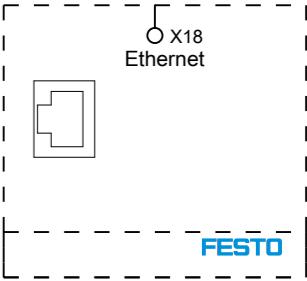
CMMMP-AS-2

/25.0
/25.6
/26.0
/26.3
/26.7
/27.0
/27.6
/27.6
/27.8

4.8.2 Pin assignment [X9] – single-phase

[X9]1)	Pin no.	Designation	Value	Specification
	1	L	100 ... 230 V AC	Mains phase
	2	N	±10% 50 ... 60 Hz	Mains neutral conductor (reference potential)
	3	ZK+	60 ... 380 V DC	Alternative supply: Positive intermediate circuit voltage
	4	ZK-	GND_ZK	Alternative supply: Negative intermediate circuit voltage
	5	BR-INT	< 460 V DC	Internal braking resistor connection (bridge after BR-CH when using the internal resistor).
	6	BR-CH	< 460 V DC	Brake chopper connection for – internal braking resistor toward BR-INT – or – – external braking resistor against ZK+
	7	PE	PE	Connection for protective conductor from the mains
	8	+24 V	+24 V DC ±20%	Supply for control section, holding brake and I/O
	9	GND24 V	GND24 V DC	Reference potential for supply 0V

1) Representation of the contact strip on the motor controller CMMMP-AS-...-3A-M0



CMMMP-AS-3

[X40]1)	Pin no.	Designation	Value	Specification
	8	0V	0V	Reference potential for auxiliary power supply.
	7	24 V	+24 V DC	Output for auxiliary power supply (24 V DC logic supply of the motor controller brought out).
	6	C2	-	Feedback contact for the status "STO" on an external controller.
	5	C1	-	
	4	0V-B	0V	Reference potential for STO-B.
	3	STO-B	0V / 24 V	Control port B for the function STO.
	2	0V-A	0V	Reference potential for STO-A.
	1	STO-A	0V / 24V	Control port A for the function STO.

Note : Pin 5 (C1) and Pin 6 (C2) of Connector X40 are shown on the safety page.

EN	&EFS
Material no.:	23455210
= A1	
+ O1	
Project no.:	CA_CS.2178969-A
Pg. 29	
Productionorder:	001330719396
Pg. 60	

[X6]1	Pin no.	Designation	Value	Specification
1	Br-	0 V brake	Holding brake (motor), signal level dependent on switching status, high-side/low-side switch	
2	BR+	24 V brake		
3	PE	PE	Cable shield for the holding brake and the temperature sensor (with Festo cables: n.c.)	
4	-MTdig	GND	Motor temperature sensor, N/C contact, N/O contact, PTC, KTY ...	
5	+MTdig	+3.3 V 5 mA		
6	PE	PE	Protective earth conductor from the motor	
7	W	Technical data → Tab. A.9	Connection of the three motor phases	
8	V			
9	U			

1) Representation of the plug on the device of the motor controller CMMP-AS-...-3A-M0

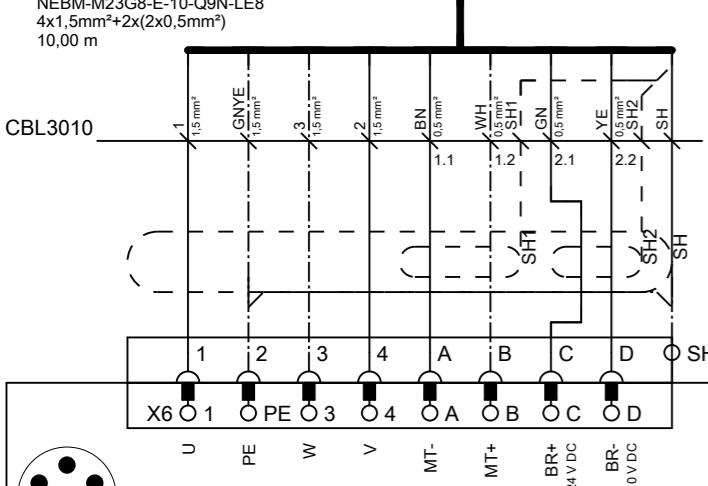
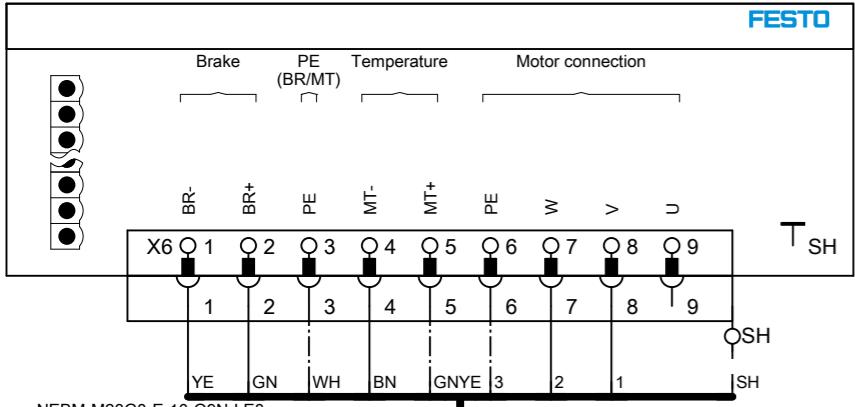
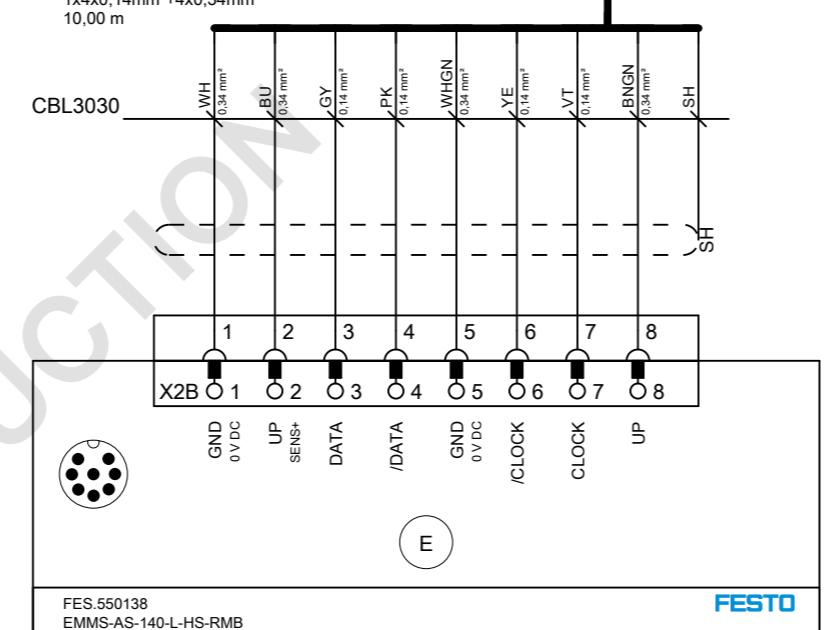
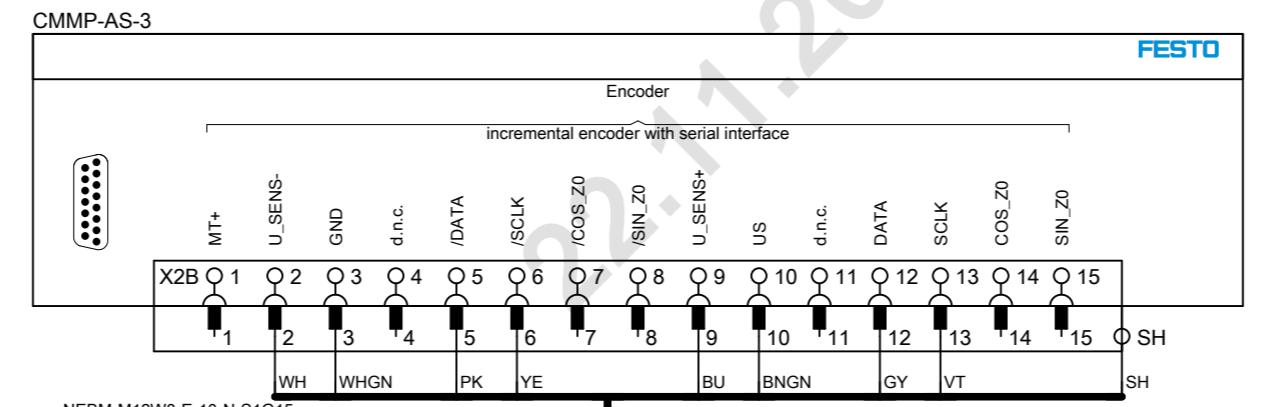
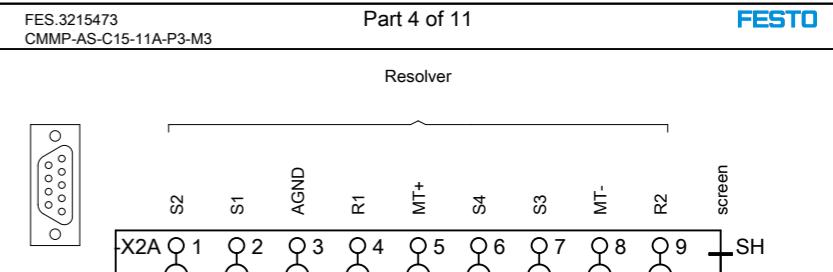
[X2B]	Pin no.	Designation	Value	Specification
1	MT+	+3.3 V $R_i = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...	
9	U_SENS+	5 V ... 12 V $R_i \approx 1 \text{ k}\Omega$	Sensor cable for the encoder supply	
2	U_SENS-			
10	US	5 V/12 V ±10% $I_{max} = 300 \text{ mA}$	Operating voltage for high-resolution incremental encoder	
3	GND	0 V	Reference potential for encoder supply and motor temperature sensor	
11	-			
4	-			
12	DATA	5 V _{SS} $R_i \approx 120 \Omega$	Bidirectional RS485 data cable (differential)	
5	DATA#	5 V _{SS} $R_i \approx 120 \Omega$	RS485 clock output (differential)	
6	SCLK	5 V _{SS} $R_i \approx 120 \Omega$	COSINE tracking signal (differential) from high-resolution incremental encoder	
7	SCLK#	1 V _{SS} ±10% $R_i \approx 120 \Omega$	COSINE tracking signal (differential) from high-resolution incremental encoder	
14	COS_ZO 1)	1 V _{SS} ±10% $R_i \approx 120 \Omega$	SINE tracking signal (differential) from high-resolution incremental encoder	
15	SIN_ZO 1)	1 V _{SS} ±10% $R_i \approx 120 \Omega$	SINE tracking signal (differential) from high-resolution incremental encoder	
8	SIN_ZO 1)#			

1) Heidenhain encoder: A=SIN_ZO; B=COS_ZO

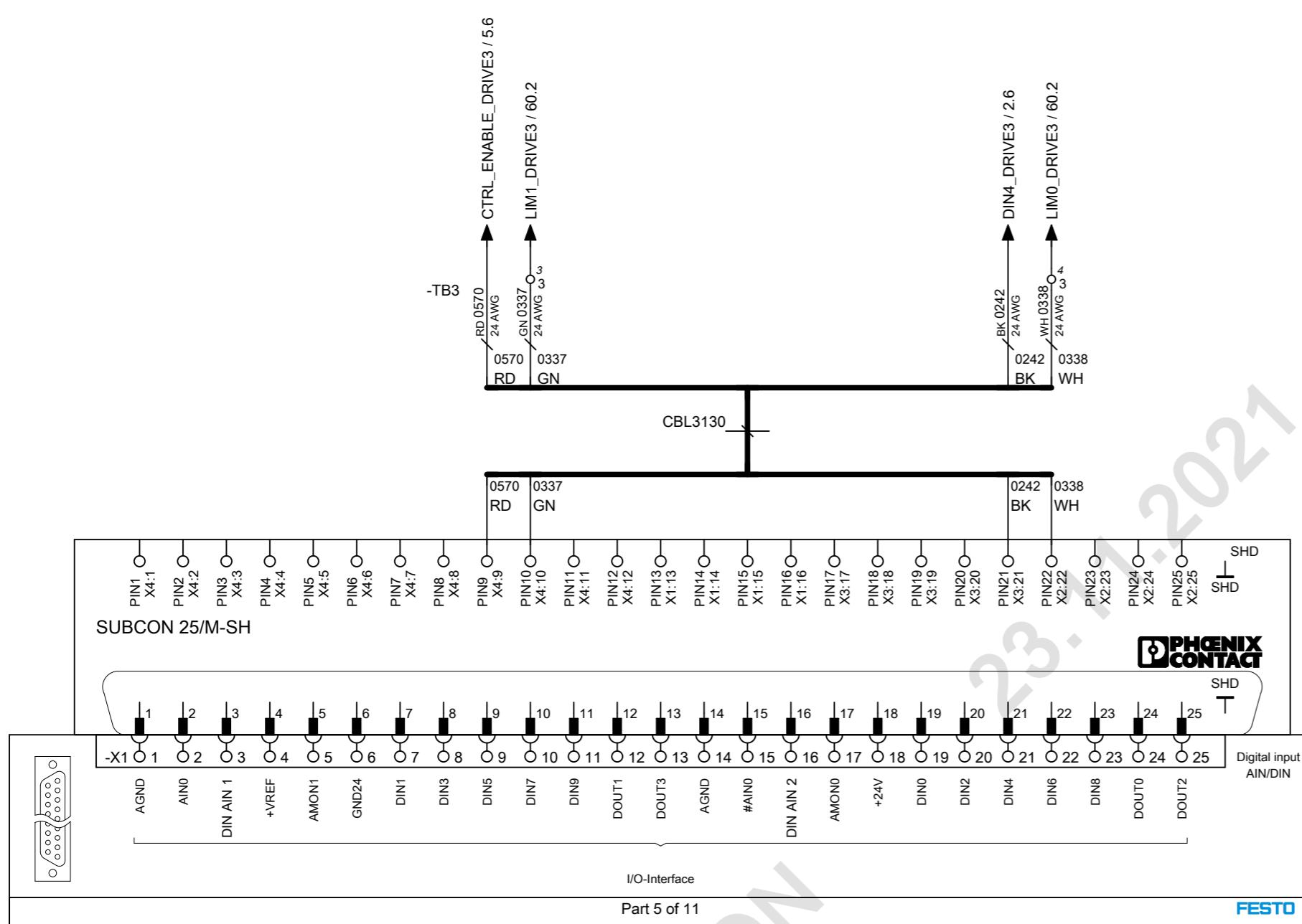
Pin assignment: Incremental encoder with serial interface, e.e. EnDat – optional

[X2A]	Pin no.	Designation	Value	Specification
1	S2	3.5 V _{eff} 5-10 kHz	SINE tracking signal, differential	
6	S4	$R_i > 5 \text{ k}\Omega$		
2	S1	3.5 V _{eff} 5-10 kHz	COSINE tracking signal, differential	
7	S3	$R_i > 5 \text{ k}\Omega$		
3	AGND	0 V	Screening for signal pairs (inner screening)	
8	MT-	GND	Reference potential for temperature sensor	
4	R1	7 V _{eff} 5-10 kHz $I_A \leq 150 \text{ mA}_{eff}$	Carrier signal for resolver	
9	R2	GND		
5	MT+	+3.3 V $R_i = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...	

CMMP-AS-3

MOT3
/30.3MOT3
/30.0/21.0
CMMP-AS-1

Project status	xxx		
	Date	19.11.2021	CA0ZFA
	Edit by	22.11.2021	ca0zfa
	Appr.		
Modification	Date	Name	Standard DIRECTIVE 2014/35/EU



CMMP-AS-3

[X1]	Pin no.	Designation	Specification
	13	DOUT3	Output freely parameterisable, optionally parameterisable as DIN11
	25	DOUT2	Output freely parameterisable, optionally parameterisable as DIN10
	12	DOUT1	Output freely parameterisable
	24	DOUT0	Controller ready, output permanently assigned
	11	DIN 9	Fieldbus data profile (CiA 402, FHPP), input freely parameterisable
O 13	23	DIN 8	Fieldbus activation communication, input freely parameterisable
25 O	10	DIN7	Limit switch 1 (blocks n < 0), input permanently assigned
O 12	22	DIN6	Limit switch 0 (blocks n > 0), input permanently assigned
24 O	9	DIN5	Controller enable, input permanently assigned
O 11	21	DIN4	End stage enable, input permanently assigned
23 O	8	DIN 3	Fieldbus offset node number bit 3, input freely parameterisable
O 10	20	DIN 2	Fieldbus offset node number bit 2, input freely parameterisable
21 O	7	DIN 1	Fieldbus offset node number bit 1, input freely parameterisable
O 9	19	DIN 0	Fieldbus offset node number bit 0, input freely parameterisable
20 O	6	GND24	Reference potential for digital I/Os
O 8	18	+24 V	24 V output
19 O	5	AOUT1	Analogue output freely parameterisable
O 7	17	AOUT0	Analogue output freely parameterisable
18 O	4	+VREF	Reference output for setpoint potentiometer
O 6	16	DIN13	Fieldbus transmission rate bit 1, optionally parameterisable as AIN2
O 5	3	DIN12	Fieldbus transmission rate bit 0, optionally parameterisable as AIN1
17 O	15	#AIN0	Setpoint input 0, differential analogue input
O 4	2	AIN0	
16 O	14	AGND	Reference potential for analogue signals
O 3	1	AGND	Screening for analogue signals, AGND
15 O			
O 2			
14 O			
O 1			

1) Configuration with FCT. Observe note → Abschnitt 4.3.3.

Project status		xxx		
		Date	19.11.2021	CA
		Edit by	23.11.2021	CD
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CP



CMMP-AS-3:X1,X10,X11

[X10]	Pin no.	Designation	Value	Specification
 1 O 2 O 0 6 3 O 0 7 4 O 0 8 5 O 0 9	1	A//CLK//CW	5 V $R_i = 120 \Omega$	Incremental encoder signal A Stepper motor signal CLK Pulses clockwise CW pos., polarity in accordance with RS422
	6	A#/CLK#/QW#	5 V $R_i = 120 \Omega$	Incremental encoder signal A Step motor signal CLK Pulses clockwise CW neg., polarity in accordance with RS422
	2	B//DIR//CCW	5 V $R_i = 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW pos., polarity in accordance with RS422
	7	B#/DIR#/CCW#	5 V $R_i = 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW neg., polarity in accordance with RS422
	3	N	5 V $R_i = 120 \Omega$	Incremental encoder zero pulse N pos., polarity in accordance with RS422
	8	N#	5 V $R_i = 120 \Omega$	Incremental encoder zero pulse N neg., polarity in accordance with RS422
	4	GND	—	Reference GND for encoder
	9	GND	—	Screening for the connecting cable
	5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!

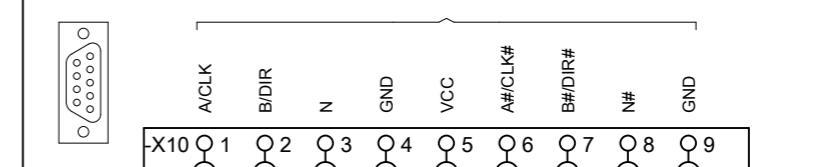
Tab. 4.21 Pin assignment X10: Incremental encoder input

CMMP-AS-3

Part 6 of 11

FESTO

Incremental encoder input



[X11]	Pin no.	Designation	Value	Specification
 1 O O 6 2 O O 7 3 O O 8 4 O O 9 5 O	1	A	5 V RA ≈ 66 Ω1)	Incremental encoder signal A
	6	A#	5 V RA ≈ 66 Ω1)	Incremental encoder signal A#
	2	B	5 V RA ≈ 66 Ω1)	Incremental encoder signal B
	7	B#	5 V RA ≈ 66 Ω1)	Incremental encoder signal B#
	3	N	5 V RA ≈ 66 Ω1)	Incremental encoder zero pulse N
	8	N#	5 V RA ≈ 66 Ω1)	Incremental encoder zero pulse N#
	4	GND	-	Reference GND for encoder
	9	GND	-	Screening for connecting cable
	5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!

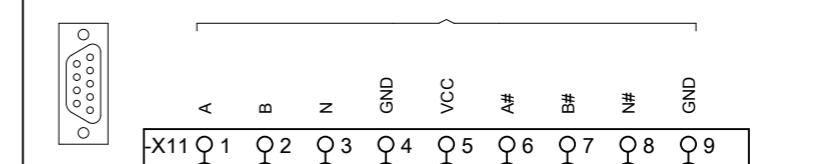
1) The specification for RA designates the differential output resistance

CMMMP-AS-3

Part 7 of 11

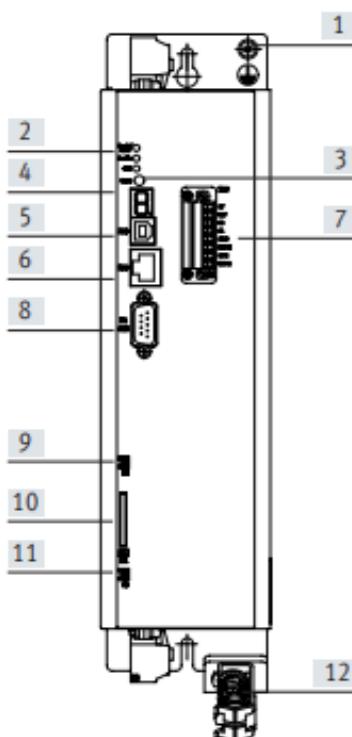
FESTO

Incremental encoder output



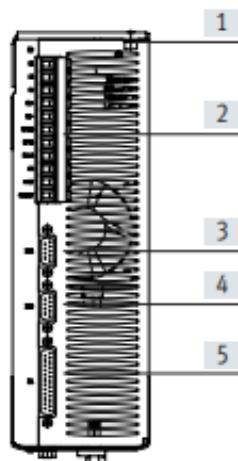
View of motor controller

CMMP-AS-...-M0



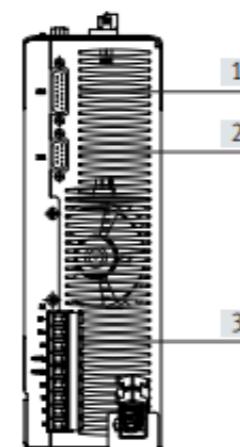
- [1] PE connection
- [2] LEDs
- [3] Reset button
- [4] Seven-segment display
- [5] X19 USB interface
- [6] X18 Ethernet interface
- [7] X40 digital I/O interface for controlling the STO function
- [8] X4 CANopen interface
- [9] Activation of CANopen terminating resistor
- [10] SD/MMC card slot
- [11] Activation of firmware download
- [12] Shield connection

From above



- [1] PE connection
- [2] X9 power supply
- [3] X11 incremental encoder interface (output)
- [4] X10 incremental encoder interface (input)
- [5] X1 I/O interface

From underneath



- [1] X2B encoder connection
- [2] X2A resolver connection
- [3] X6 motor connection

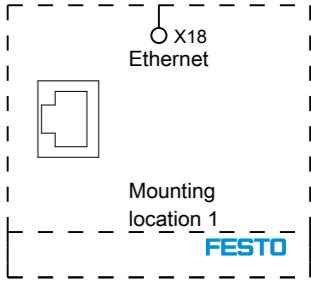
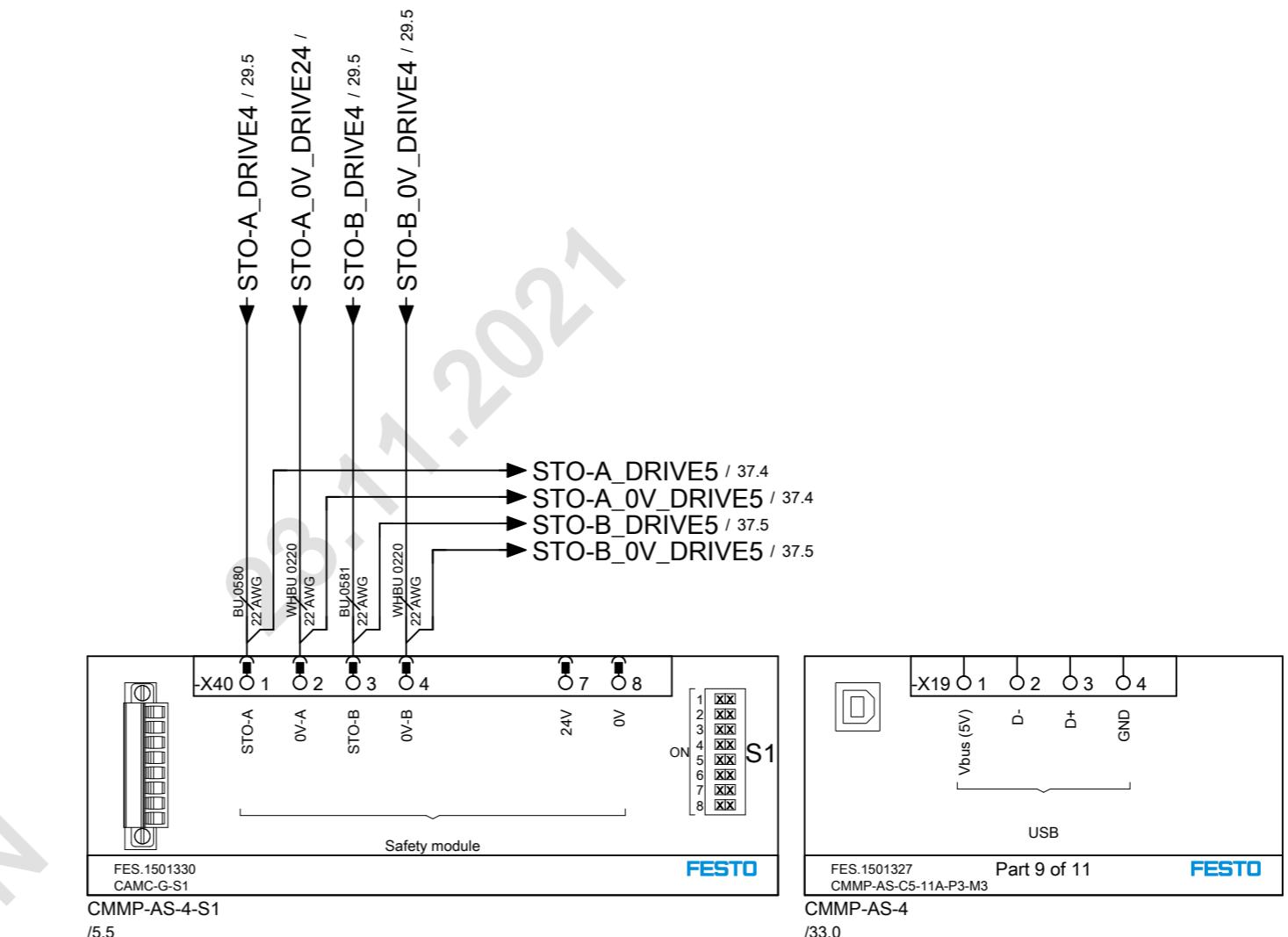
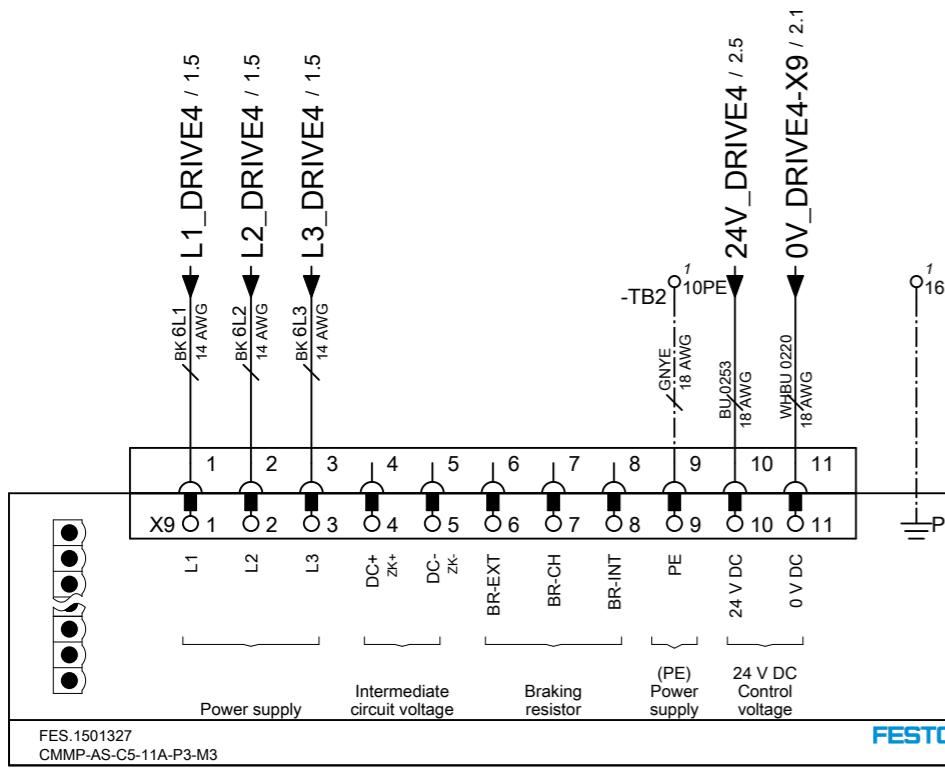
Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	19.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE

Overview

EN	&EFS
Material no.:	23455210
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396



192.168.4.24
/33.0
CMMMP-AS-4

[X40]1	Pin no.	Designation	Value	Specification
8	0 V	0 V	–	Reference potential for auxiliary power supply.
7	24 V	+24 V DC	–	Output for auxiliary power supply (24 V DC logic supply of the motor controller brought out).
6	C2	–	–	Feedback contact for the status "STO" on an external controller.
5	C1	–	–	–
4	0V-B	0V	–	Reference potential for STO-B.
3	STO-B	0V / 24 V	–	Control port B for the function STO.
2	0V-A	0V	–	Reference potential for STO-A.
1	STO-A	0V / 24V	–	Control port A for the function STO.

Note : Pin 5 (C1) and Pin 6 (C2) of Connector X40 are shown on the safety page.

[X6 1]	Pin no.	Designation	Value	Specification
1	Br-	0 V brake		Holding brake (motor), signal level dependent on switching status, high-side / low-side switch
2	BR+	24 V brake		
3	PE	PE		Cable shield for the holding brake and the temperature sensor (with Festo cables: n.c.)
4	-MTdig	GND		Motor temperature sensor, N/C contact, N/O contact, PTC, KTY ...
5	+MTdig	+3.3 V 5 mA		
6	PE	PE		Protective earth conductor from the motor
7	W	Technical data → Tab. A.9		Connection of the three motor phases
8	V			
9	U			

1) Representation of the plug on the device of the motor controller CMMP-AS-...-3A-M0

[X2B]	Pin no.	Designation	Value	Specification
10	1	MT+	+3.3 V $R_I = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...
9	9	U_SENS+	5 V ... 12 V	Sensor cable for the encoder supply
10	2	U_SENS-	$R_I \approx 1 \text{ k}\Omega$	
11	10	US	5 V/12 V $\pm 10\%$ $I_{max} = 300 \text{ mA}$	Operating voltage for high-resolution incremental encoder
12	3	GND	0V	Reference potential for encoder supply and motor temperature sensor
13	11	--		
14	4	--		
15	12	DATA	5 V _{SS}	Bidirectional RS485 data cable (differential)
16	5	DATA#	$R_I \approx 120 \Omega$	
17	13	SCLK	5 V _{SS}	RS485 clock output (differential)
18	6	SCLK#	$R_I \approx 120 \Omega$	
19	14	COS_ZO 1)	1 V _{SS} $\pm 10\%$ $R_I \approx 120 \Omega$	COSINE tracking signal (differential) from high-resolution incremental encoder
20	7	COS_ZO 1)#		
21	15	SIN_ZO 1)	1 V _{SS} $\pm 10\%$ $R_I = 120 \Omega$	SINE tracking signal (differential) from high-resolution incremental encoder
22	8	SIN_ZO 1)#		

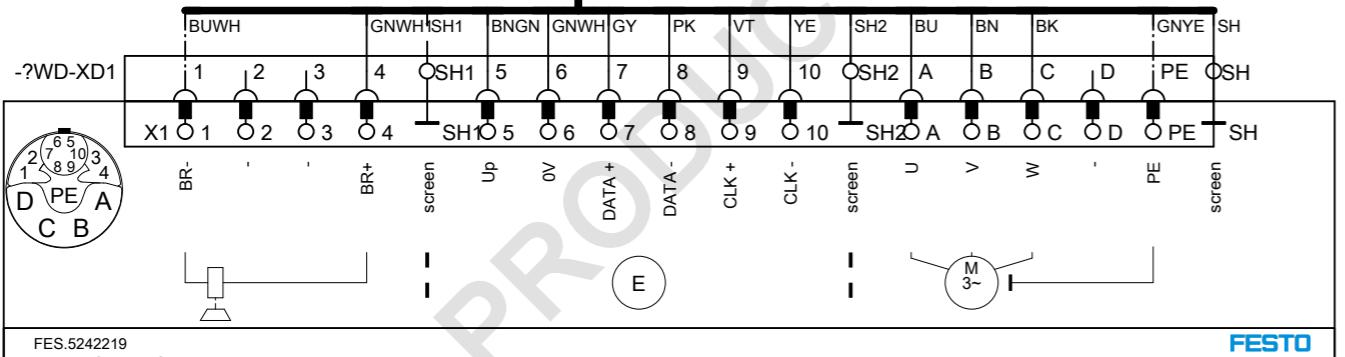
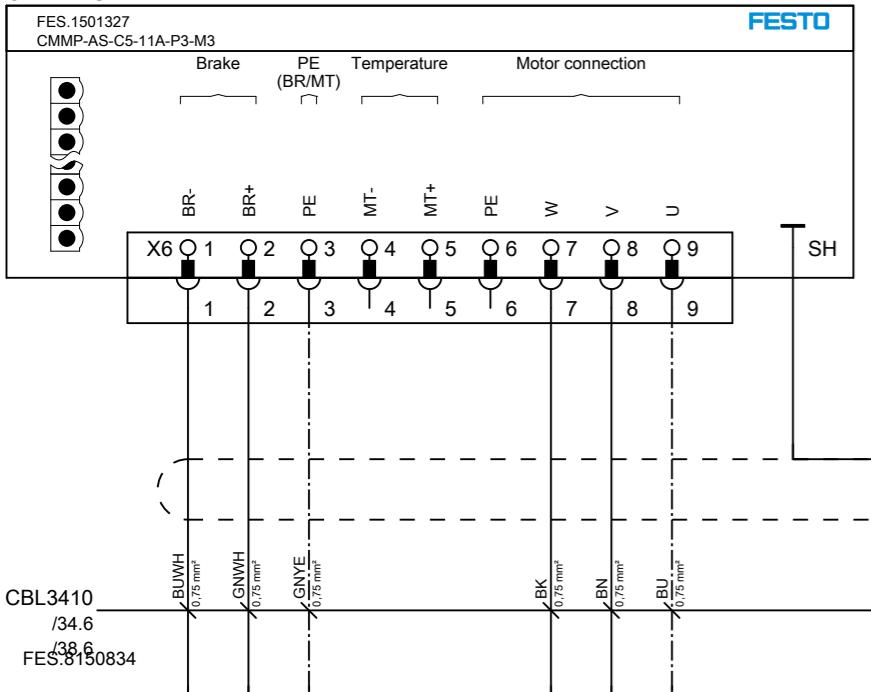
Heidenhain encoder: A=SIN_20; B=COS_20

Pin assignment: Incremental encoder with serial interface, e.g. EnDat – optional

Pin assignment [X2A]				
[X2A]	Pin no.	Designation	Value	Specification
 1 O O 6 2 O O 7 3 O O 8 4 O O 9 5 O	1	S2	3.5 V _{eff} 5-10 kHz	SINE tracking signal, differential
	6	S4	R _i > 5 kΩ	
	2	S1	3.5 V _{eff} 5-10 kHz	COSINE tracking signal, differential
	7	S3	R _i > 5 kΩ	
	3	AGND	0 V	Screening for signal pairs (inner screening)
	8	MT-	GND	Reference potential for temperature sensor
	4	R1	7 V _{eff} 5-10 kHz I _A ≤ 150 mA _{eff}	Carrier signal for resolver
	9	R2	GND	
	5	MT+	+3.3 V R _i = 2 kΩ	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...

/33.0

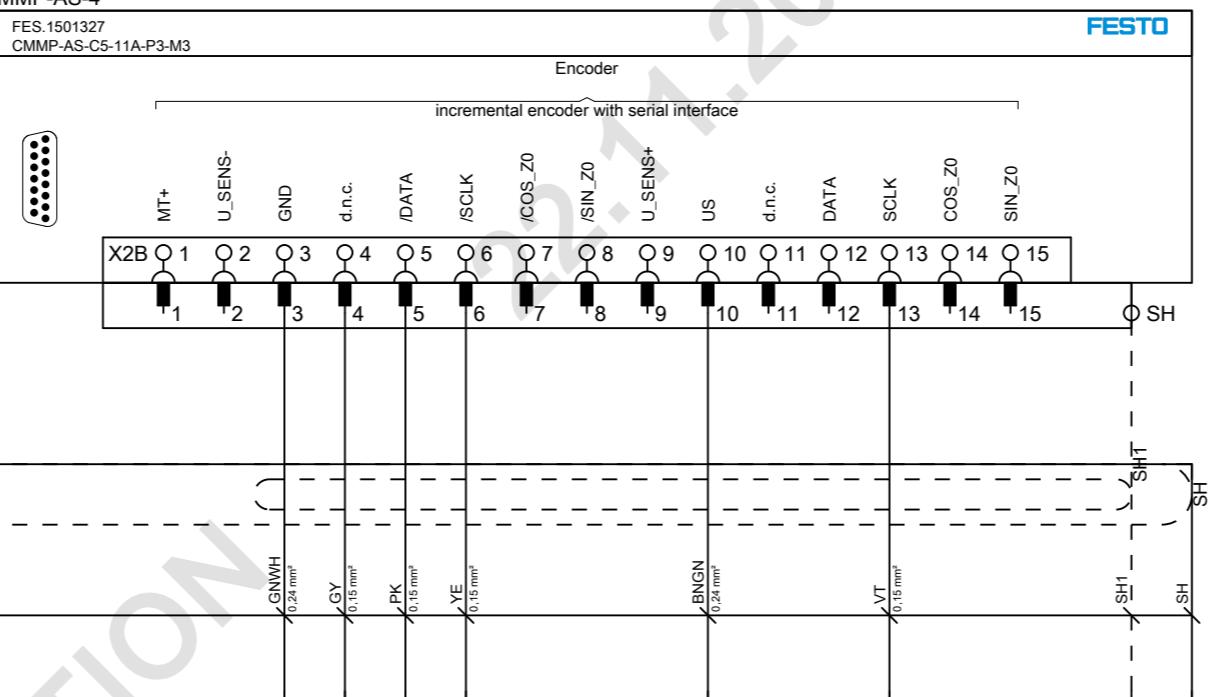
CMMP-AS-4



EMM
MOT4

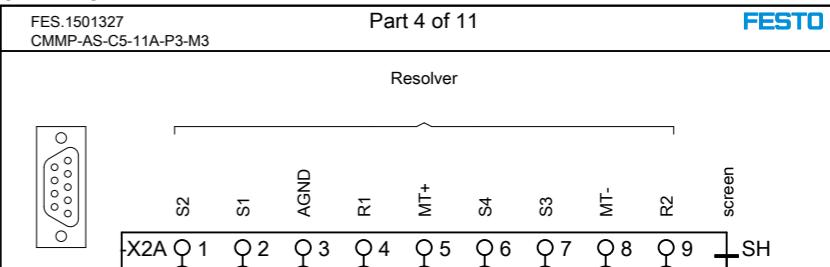
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MMP-AS-4



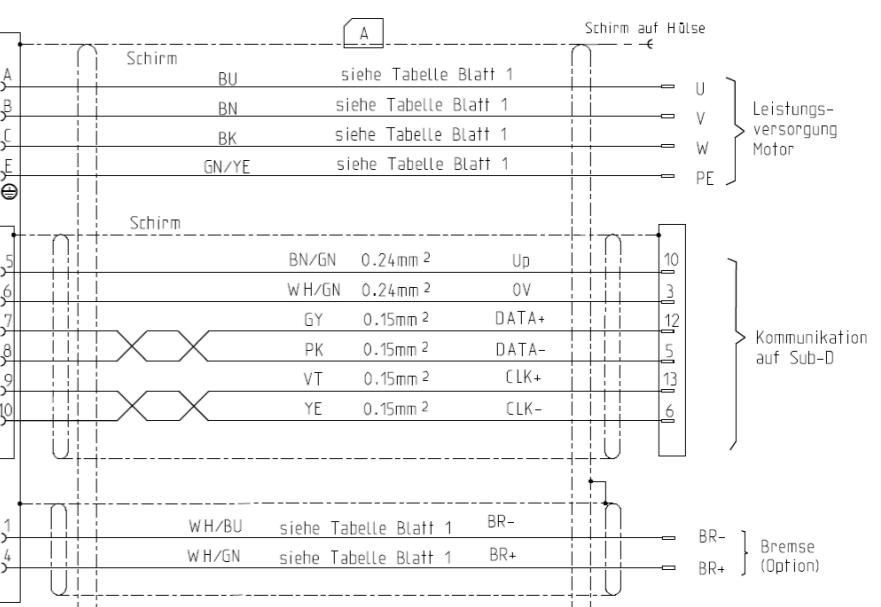
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CMMMP-AS-4



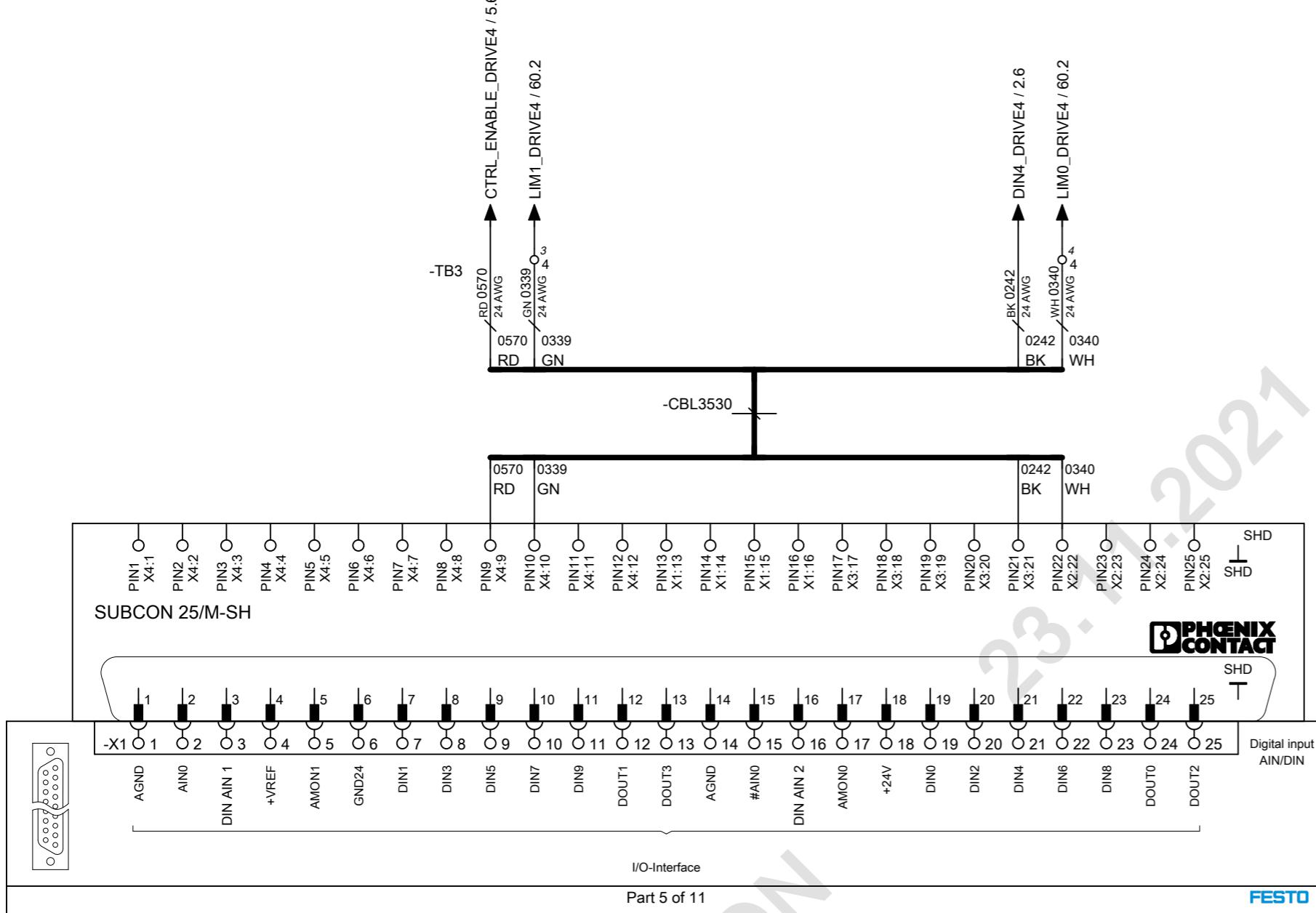
OTODSEITE

CONTROLLERSEITE



[X1]	Pin no.	Designation	Specification
13	DOUT3	Output freely parameterisable, optionally parameterisable as DIN11	
25	DOUT2	Output freely parameterisable, optionally parameterisable as DIN10	
12	DOUT1	Output freely parameterisable	
24	DOUT0	Controller ready, output permanently assigned	
11	DIN 9	Fieldbus data profile (CiA 402, FHPP), input freely parameterisable	
23	DIN 8	Fieldbus activation communication, input freely parameterisable	
10	DIN 7	Limit switch 1 (blocks n < 0), input permanently assigned	
22	DIN 6	Limit switch 0 (blocks n > 0), input permanently assigned	
9	DIN 5	Controller enable, input permanently assigned	
21	DIN 4	End stage enable, input permanently assigned	
8	DIN 3	Fieldbus offset node number bit 3, input freely parameterisable	
20	DIN 2	Fieldbus offset node number bit 2, input freely parameterisable	
7	DIN 1	Fieldbus offset node number bit 1, input freely parameterisable	
19	DIN 0	Fieldbus offset node number bit 0, input freely parameterisable	
6	GND24	Reference potential for digital I/Os	
18	+24 V	24 V output	
5	AOUT1	Analogue output freely parameterisable	
17	AOUTO	Analogue output freely parameterisable	
4	-VREF	Reference output for setpoint potentiometer	
16	DIN13	Fieldbus transmission rate bit 1, optionally parameterisable as DIN2 ¹⁾	
3	DIN12	Fieldbus transmission rate bit 0, optionally parameterisable as DIN1 ¹⁾	
15	#AIN0	Setpoint input 0, differential analogue input	
2	AIN0		
14	AGND	Reference potential for analogue signals	
1	AGND	Screening for analogue signals, AGND	

1) Configuration with FCT. Observe note → Abschnitt 4.3.3.



[X10]	Pin no.	Designation	Value	Specification
1	A/CLK/CW	5 V $R_i \approx 120 \Omega$	Incremental encoder signal A Stepper motor signal CLK Pulses clockwise CW pos. polarity in accordance with RS422	
6	A#/CLK#/CW#	5 V $R_i \approx 120 \Omega$	Incremental encoder signal A Step motor signal CLK Pulses clockwise CW neg. polarity in accordance with RS422	
2	B/DIR/CCW	5 V $R_i \approx 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW pos. polarity in accordance with RS422	
7	B#/DIR#/CCW#	5 V $R_i \approx 120 \Omega$	Incremental encoder signal B Step motor signal DIR Pulses counterclockwise CCW neg. polarity in accordance with RS422	
3	N	5 V $R_i \approx 120 \Omega$	Incremental encoder zero pulse N pos. polarity in accordance with RS422	
8	N#	5 V $R_i \approx 120 \Omega$	Incremental encoder zero pulse N neg. polarity in accordance with RS422	
4	GND	-	Reference GND for encoder	
9	GND	-	Screening for the connecting cable	
5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!	

Tab. 4.21 Pin assignment X10: Incremental encoder input

/33.0

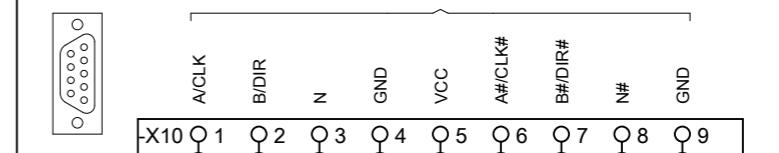
CMMP-AS-4

FES.1501327
CMMP-AS-C5-11A-P3-M3

Part 6 of 11

FESTO

Incremental encoder input



[X11]	Pin no.	Designation	Value	Specification
1	A	5 V RA ≈ 66 Ω ¹⁾	Incremental encoder signal A	
6	A#	5 V RA ≈ 66 Ω ¹⁾	Incremental encoder signal A#	
2	B	5 V RA ≈ 66 Ω ¹⁾	Incremental encoder signal B	
7	B#	5 V RA ≈ 66 Ω ¹⁾	Incremental encoder signal B#	
3	N	5 V RA ≈ 66 Ω ¹⁾	Incremental encoder zero pulse N	
8	N#	5 V RA ≈ 66 Ω ¹⁾	Incremental encoder zero pulse N#	
4	GND	-	Reference GND for encoder	
9	GND	-	Screening for connecting cable	
5	VCC	+5 V ±5% 100 mA	Auxiliary supply, maximum load 100 mA, short-circuit proof!	

1) The specification for RA designates the differential output resistance

/33.0

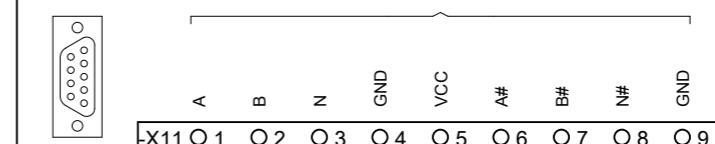
CMMP-AS-4

FES.1501327
CMMP-AS-C5-11A-P3-M3

Part 7 of 11

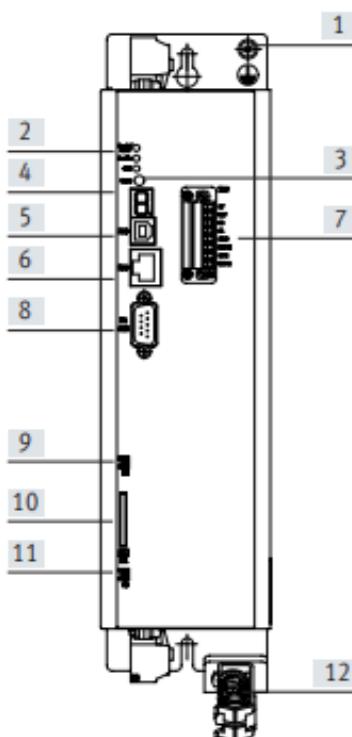
FESTO

Incremental encoder output

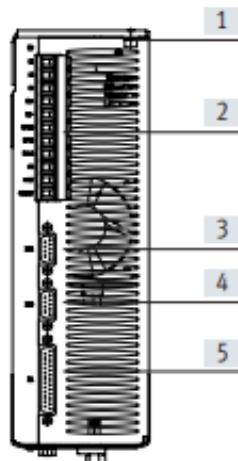


View of motor controller

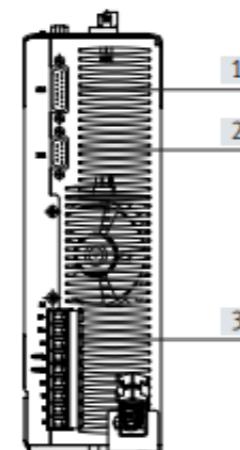
CMMP-AS-...-M0



- [1] PE connection
- [2] LEDs
- [3] Reset button
- [4] Seven-segment display
- [5] X19 USB interface
- [6] X18 Ethernet interface
- [7] X40 digital I/O interface for controlling the STO function
- [8] X4 CANopen interface
- [9] Activation of CANopen terminating resistor
- [10] SD/MMC card slot
- [11] Activation of firmware download
- [12] Shield connection

From above

- [1] PE connection
- [2] X9 power supply
- [3] X11 incremental encoder interface (output)
- [4] X10 incremental encoder interface (input)
- [5] X1 I/O interface

From underneath

- [1] X2B encoder connection
- [2] X2A resolver connection
- [3] X6 motor connection

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	19.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

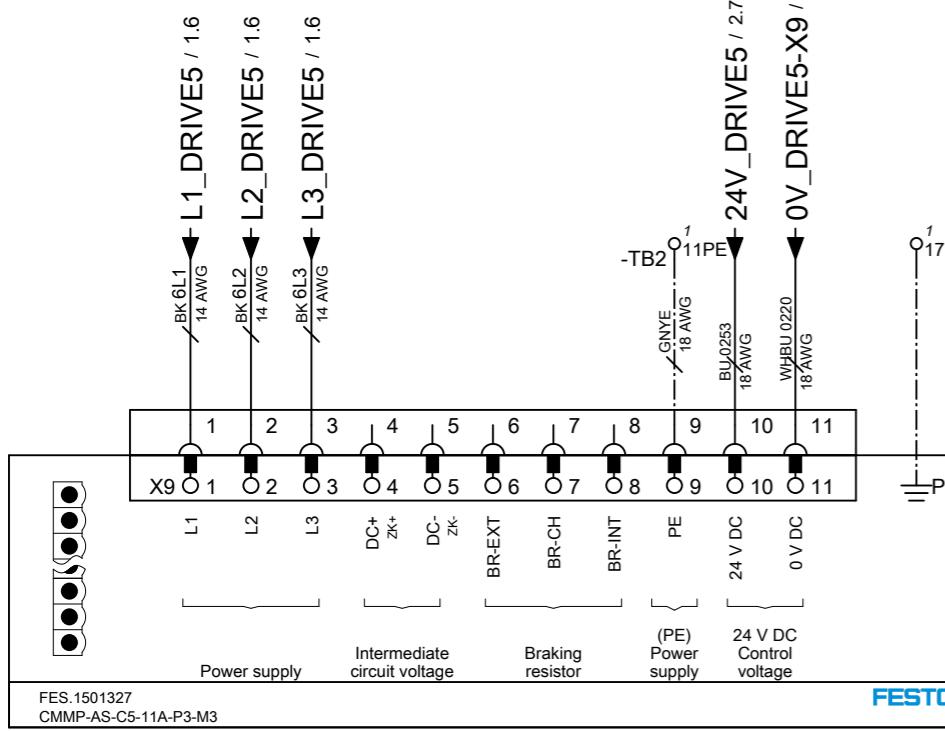
FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE

FESTO

Overview

EN	&EFS
Material no.:	23455210
Project no.:	CA_CS.2178969-A Pg. 36
Productionorder:	001330719396 Pg. 60



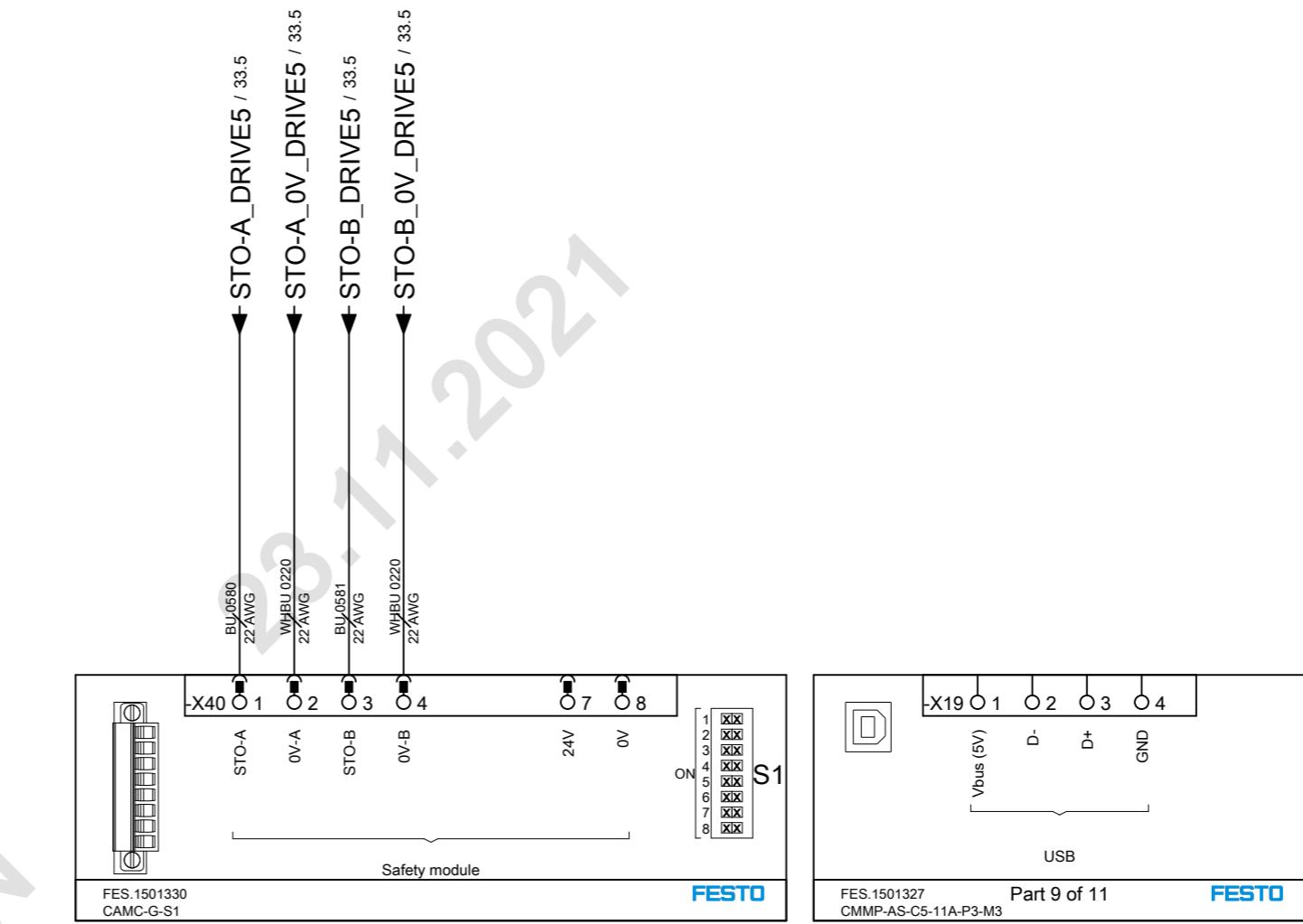
1) Representation of the contact strip on the motor controller CMMP-AS-...-3A-M0

CMMMP-AS-5

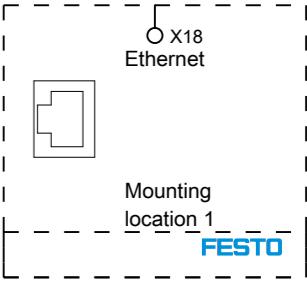
/37.6

4.8.2 Pin assignment [X9] – single-phase

[X9]1)	Pin no.	Designation	Value	Specification
1	L	100 ... 230 V AC		Mains phase
2	N	±10% 50 ... 60 Hz		Mains neutral conductor (reference potential)
3	ZK+	60 ... 380 V DC		Alternative supply: Positive intermediate circuit voltage
4	ZK-	GND_ZK		Alternative supply: Negative intermediate circuit voltage
5	BR-INT	< 460 V DC		Internal braking resistor connection (bridge after BR-CH when using the internal resistor).
6	BR-CH	< 460 V DC		Brake chopper connection for - internal braking resistor toward BR-INT - or - - external braking resistor against ZK+
7	PE	PE		Connection for protective conductor from the mains
8	+24 V	+24 V DC ±20%		Supply for control section, holding brake and I/O
9	GND24 V	GND24 V DC		Reference potential for supply 0V

**CMMMP-AS-5**

/37.0



192.168.4.24
/37.0
CMMMP-AS-5

[X40]1)	Pin no.	Designation	Value	Specification
8	0V	0V		Reference potential for auxiliary power supply
7	24 V	+24 V DC		Output for auxiliary power supply (24 V DC logic supply of the motor controller brought out).
6	C2	-		Feedback contact for the status "STO" on an external controller.
5	C1	-		
4	0V-B	0V		Reference potential for STO-B.
3	STO-B	0V / 24 V		Control port B for the function STO.
2	0V-A	0V		Reference potential for STO-A.
1	STO-A	0V / 24V		Control port A for the function STO.

Note : Pin 5 (C1) and Pin 6 (C2) of Connector X40 are shown on the safety page.

[X6 1]	Pin no.	Designation	Value	Specification
1	Br-	0 V brake		Holding brake (motor), signal level dependent on switching status, high-side / low-side switch
2	BR+	24 V brake		
3	PE	PE		Cable shield for the holding brake and the temperature sensor (with Festo cables: n.c.)
4	-MTdig	GND		Motor temperature sensor, N/C contact, N/O contact, PTC, KTY ...
5	+MTdig	+3.3 V 5 mA		
6	PE	PE		Protective earth conductor from the motor
7	W	Technical data → Tab. A.9		Connection of the three motor phases
8	V			
9	U			

1) Representation of the plug on the device of the motor controller CMMP-AS-...-3A-M0

[X2B]	Pin no.	Designation	Value	Specification
10	1	MT+	+3.3 V $R_I = 2 \text{ k}\Omega$	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...
9	9	U_SENS+	5 V ... 12 V	Sensor cable for the encoder supply
10	2	U_SENS-	$R_I \approx 1 \text{ k}\Omega$	
11	10	US	5 V/12 V $\pm 10\%$ $I_{max} = 300 \text{ mA}$	Operating voltage for high-resolution incremental encoder
12	3	GND	0V	Reference potential for encoder supply and motor temperature sensor
13	11	--		
14	4	--		
15	12	DATA	5 V _{SS}	Bidirectional RS485 data cable (differential)
16	5	DATA#	$R_I \approx 120 \Omega$	
17	13	SCLK	5 V _{SS}	RS485 clock output (differential)
18	6	SCLK#	$R_I \approx 120 \Omega$	
19	14	COS_ZO 1)	1 V _{SS} $\pm 10\%$ $R_I \approx 120 \Omega$	COSINE tracking signal (differential) from high-resolution incremental encoder
20	7	COS_ZO 1)#		
21	15	SIN_ZO 1)	1 V _{SS} $\pm 10\%$ $R_I = 120 \Omega$	SINE tracking signal (differential) from high-resolution incremental encoder
22	8	SIN_ZO 1)#		

Heidenhain encoder: A=SIN_20; B=COS_20

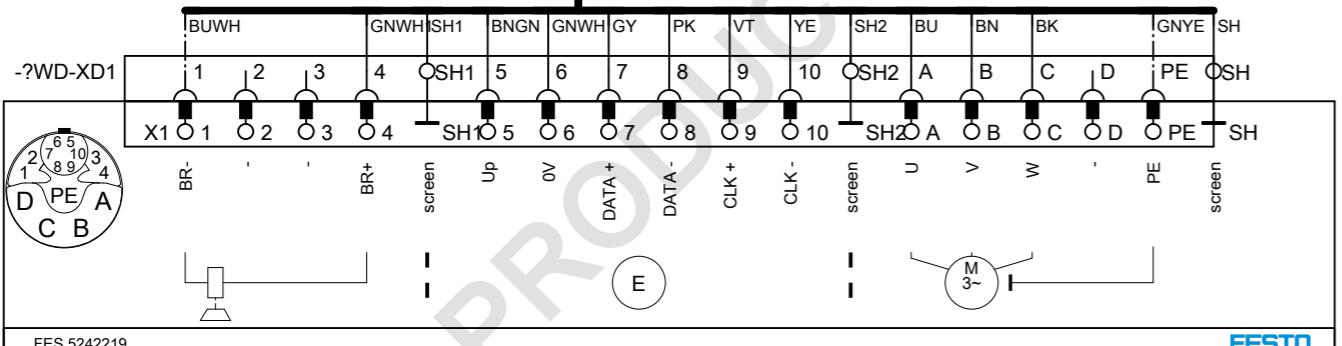
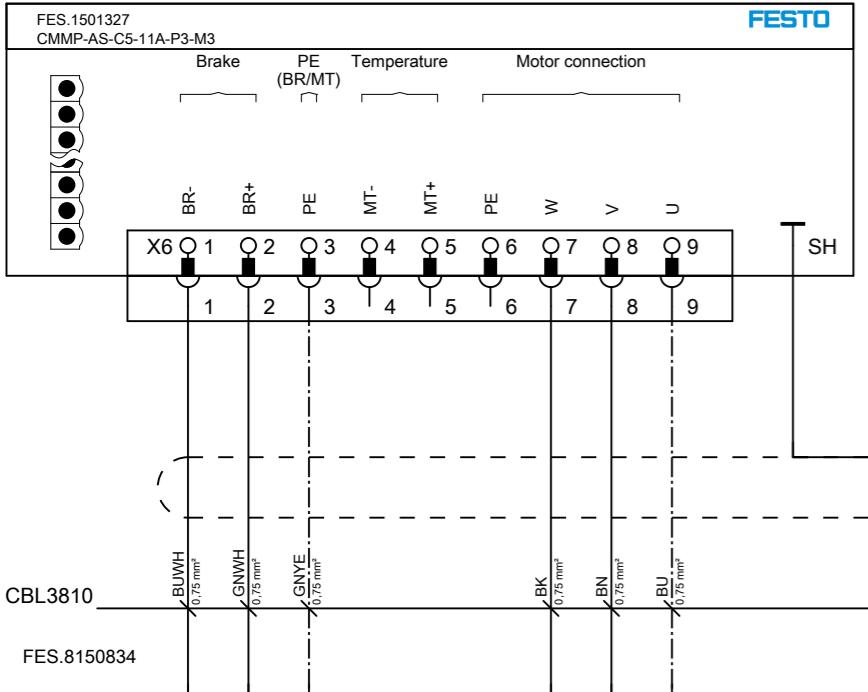
Pin assignment: Incremental encoder with serial interface, e.g. EnDat – optional

Pin assignment [X2A]				
[X2A]	Pin no.	Designation	Value	Specification
 1 O O 6 2 O O 7 3 O O 8 4 O O 9 5 O	1	S2	3.5 V _{eff} 5-10 kHz	SINE tracking signal, differential
	6	S4	R _i > 5 kΩ	
	2	S1	3.5 V _{eff} 5-10 kHz	COSINE tracking signal, differential
	7	S3	R _i > 5 kΩ	
	3	AGND	0 V	Screening for signal pairs (inner screening)
	8	MT-	GND	Reference potential for temperature sensor
	4	R1	7 V _{eff} 5-10 kHz I _A ≤ 150 mA _{eff}	Carrier signal for resolver
	9	R2	GND	
	5	MT+	+3.3 V R _i = 2 kΩ	Temperature sensor, motor temperature, N/C contact, PTC, KTY ...

/37.0

CMMP-AS-5

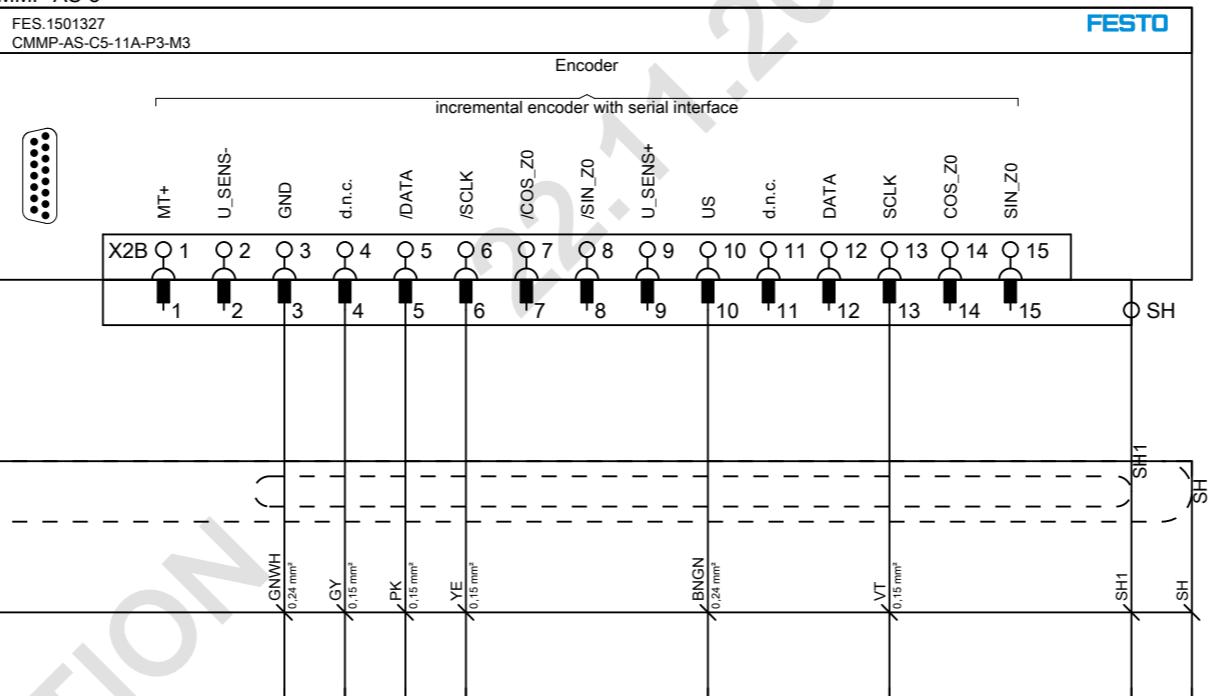
FES.1501327



EMM

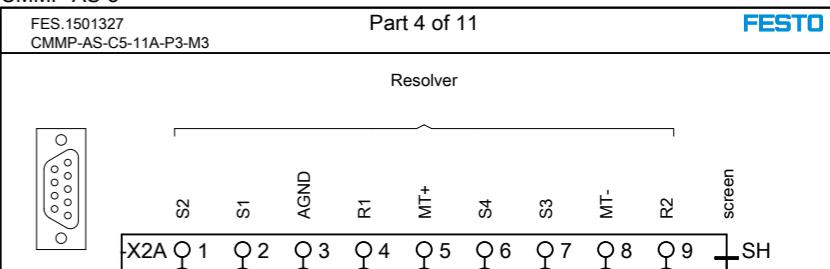
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MMP-AS-5



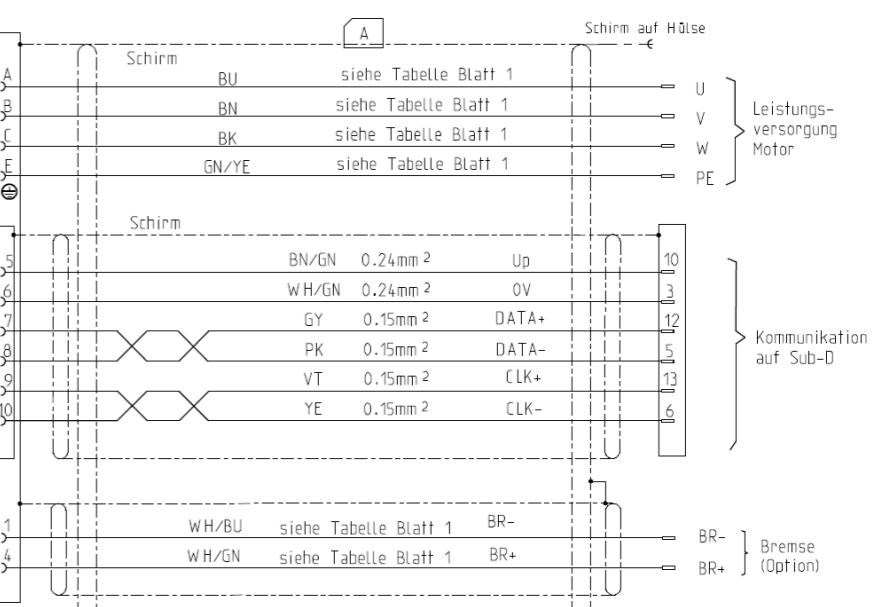
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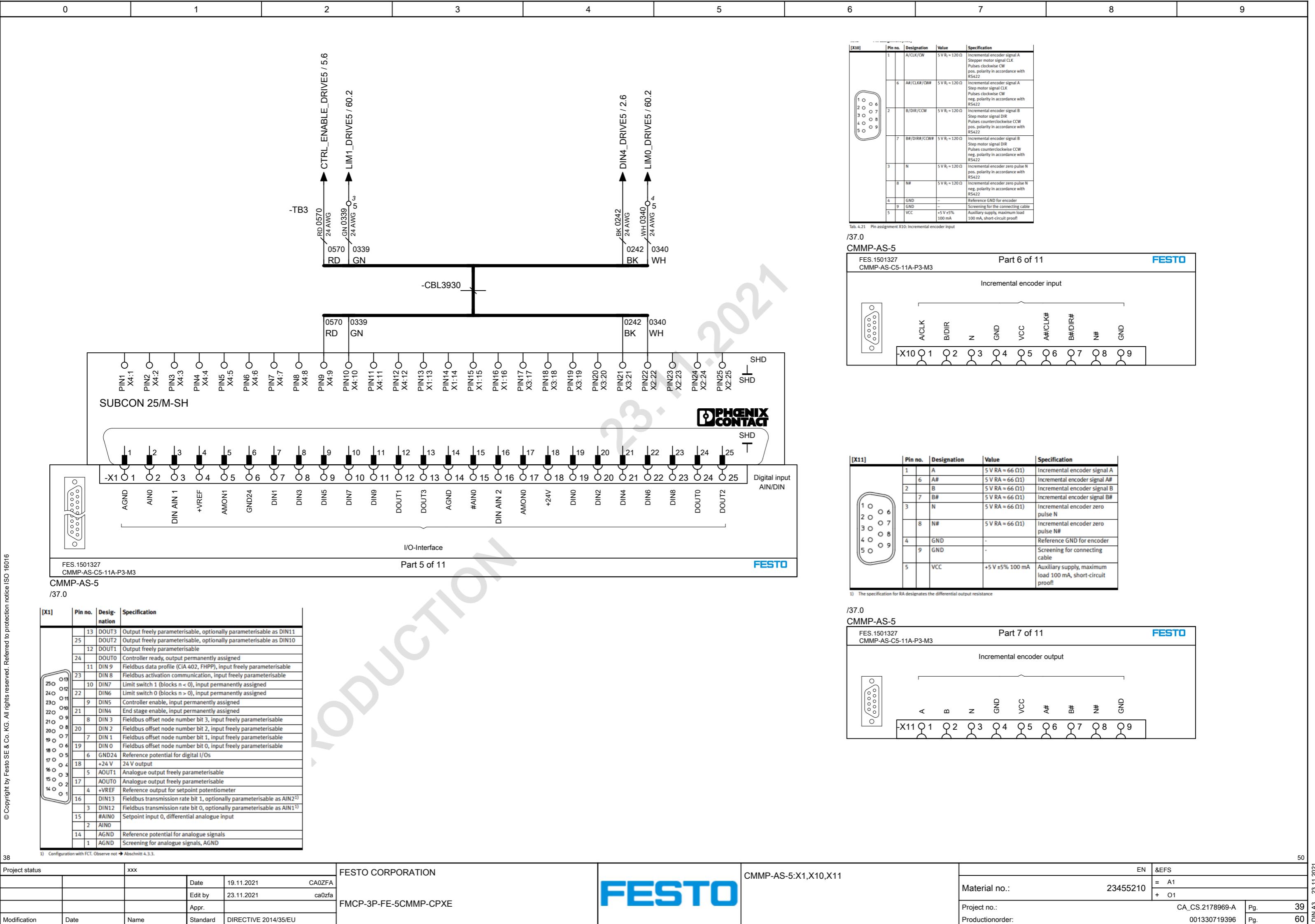
CMMMP-AS-5

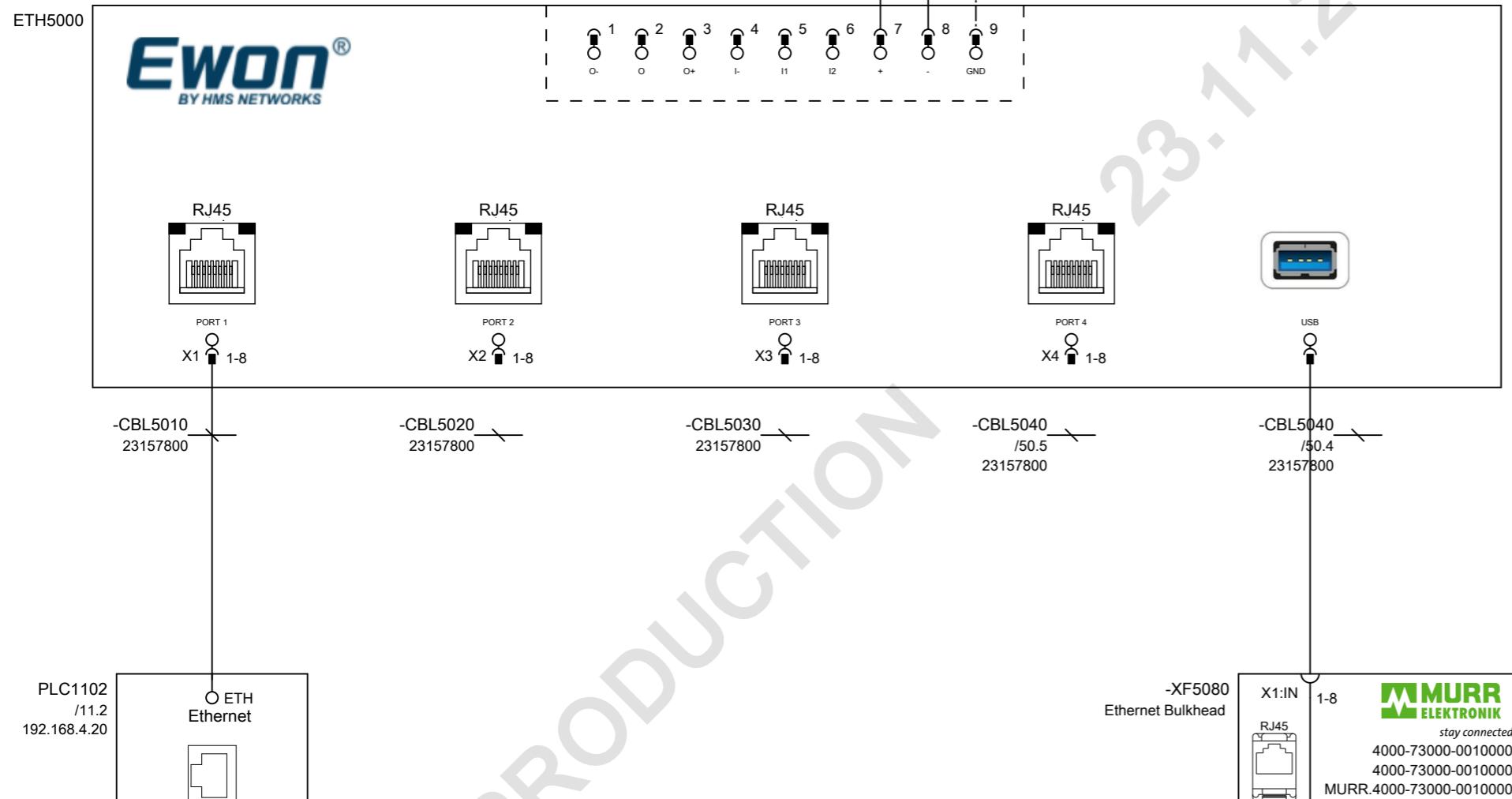


TOPSEITE

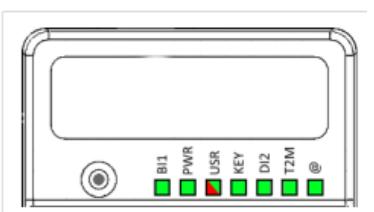
CONTROLLER SITE







Label	Description
BI1	Button BI1 input Steady green = reset button is being pressed
PWR	Power Steady green = unit is powered on
USR	User Blinking green slowly = Unit is ok Red pattern = special attention required
KEY	Digital IN 1 <i>See Digital Output & Digital Inputs, p. 27</i> Green = ON : Signal on Input 1 detected
DI2	Digital IN 2 <i>See Digital Output & Digital Inputs, p. 27</i> Green = ON : Signal on Input 2 detected
T2M	Talk2M <i>See Digital Output & Digital Inputs, p. 27</i> Green = ON : Talk2M VPN connection established
@	Internet Steady green = Internet is configured on the Ewon Cosy 131

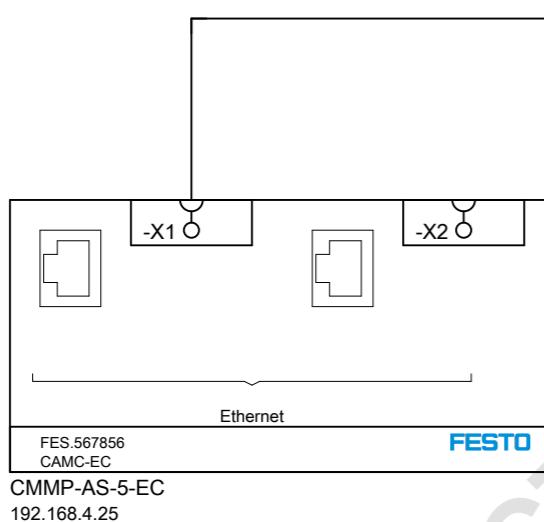
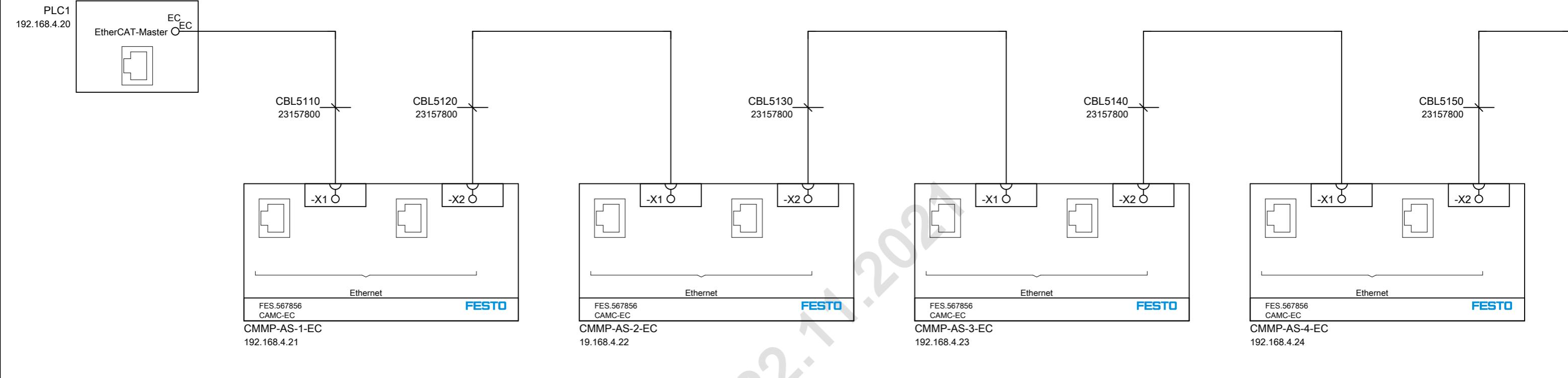


Status LEDs representation — All

PIN	ICON	ID	Description
1	O.	DO_COM	Output signal (0V ground) connected to the emitter of the MOSFET transistor
2	O	DO	Output signal connected to the drain of the MOSFET transistor
3	O ₊	DO_VDC	Common of the external predrive power supply (between +12 et +24 VDC)
4	I.	DI_COM	Ground of the input (isolated)
5	I ₁	DI1	Input signal 1
6	I ₂	DI2	Input signal 2
7	+	Power in VDD +	Between +12 and +24 VDC
8	-	Power in GND —	0V
9		Functional earth	



Fig. 12 Connector pinout



Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	22.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE

FESTO

EtherCAT Connection

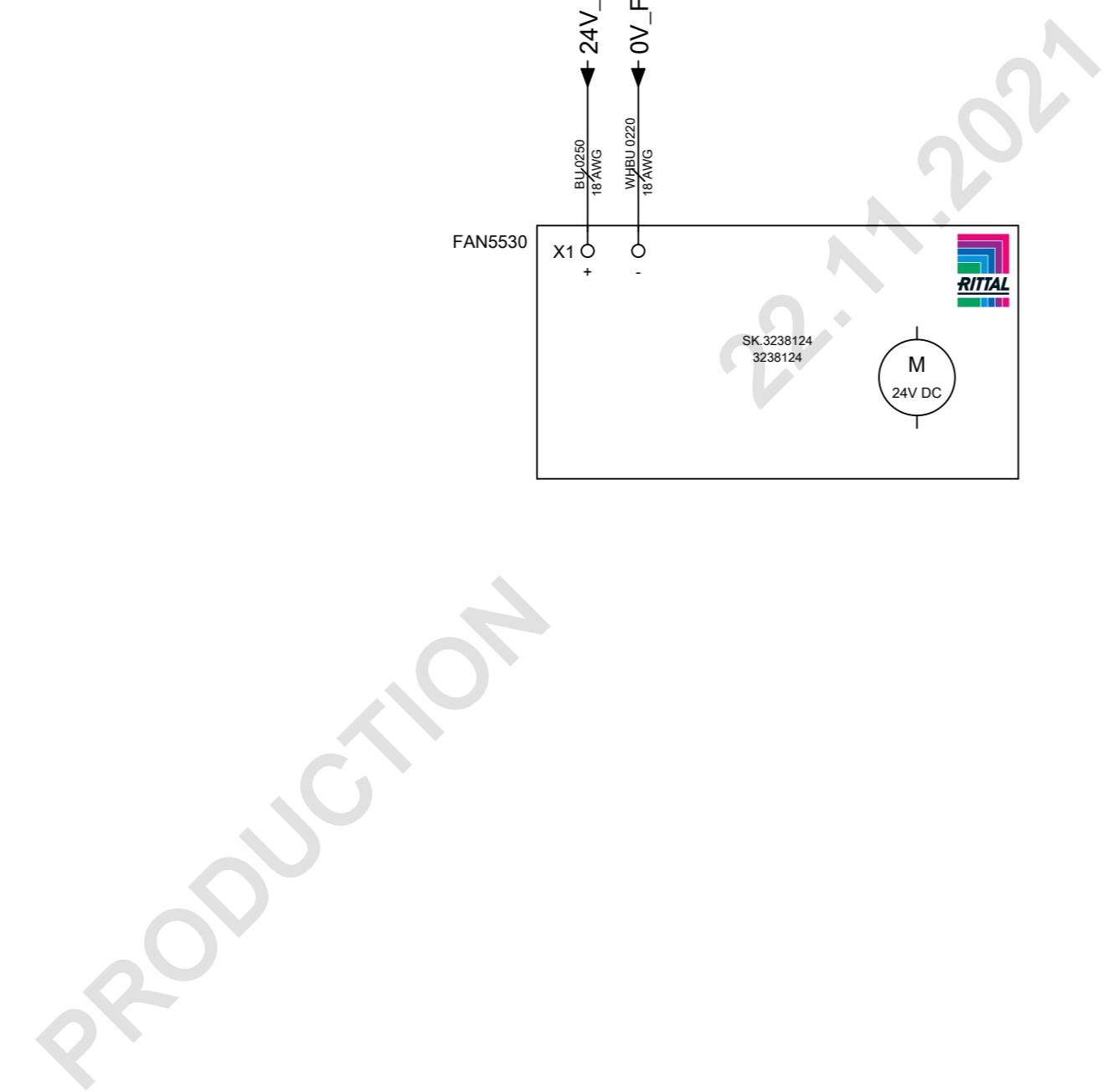
EN &EFS

Material no.: 23455210 = A1

+ O1

Project no.: CA_CS.2178969-A Pg. 51

Productionorder: 001330719396 Pg. 60



Project status	xxx
Date	19.11.2021
Edit by	ca0zfa 22.11.2021
Appr.	ca0zfa

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FMCP-3P-FE-5CMMP-CPXE



FAN Connection

EN	&EFS
Material no.:	23455210
Project no.:	CA_CS.2178969-A
Productionorder:	Pg. 55 001330719396 Pg. 60

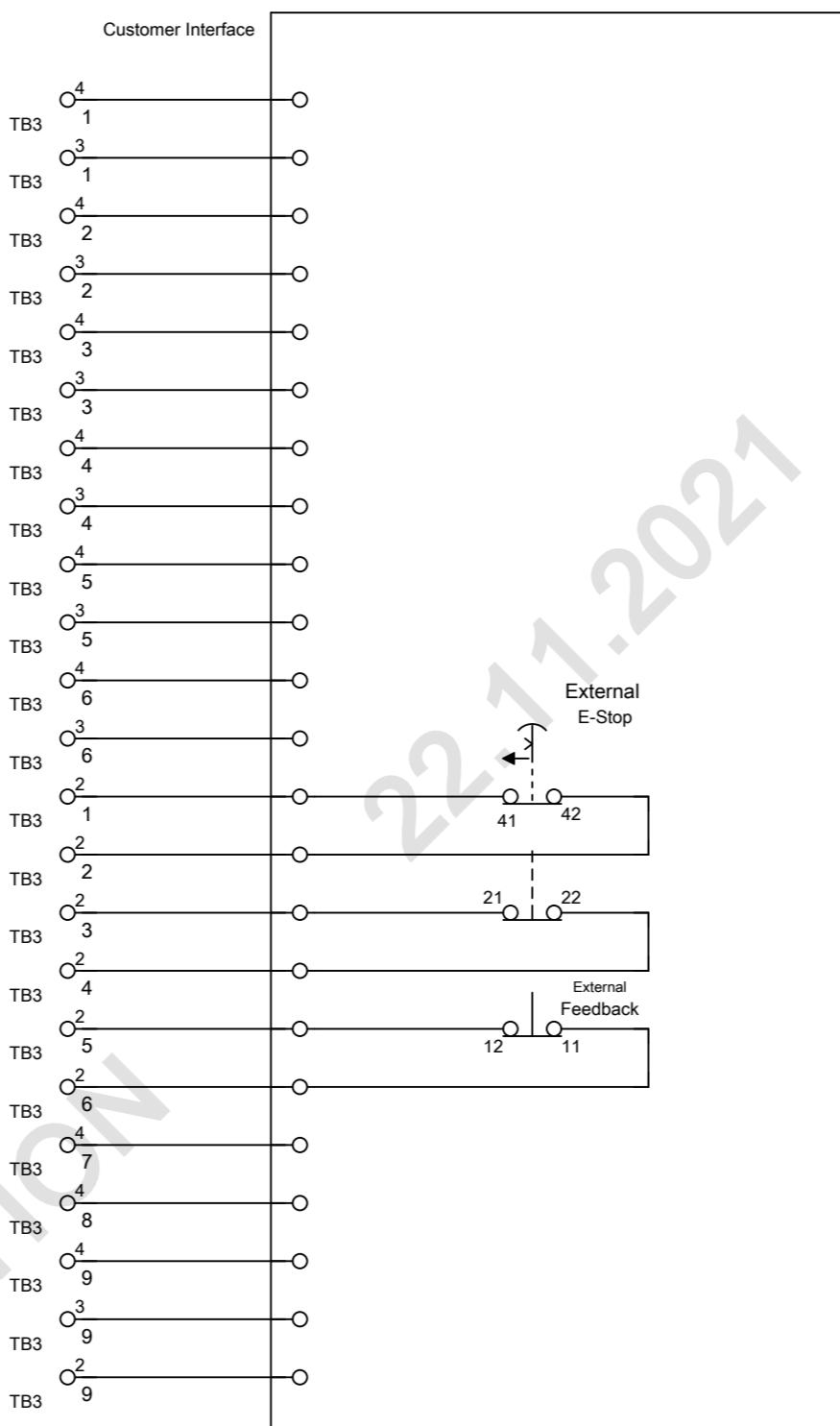
TERMINAL BLOCKS IN FMCP PANEL

23.4 / LIM0_DRIVE1 ➔
 23.2 / LIM1_DRIVE1 ➔
 27.4 / LIM0_DRIVE2 ➔
 27.2 / LIM1_DRIVE2 ➔
 31.4 / LIM0_DRIVE3 ➔
 31.2 / LIM1_DRIVE3 ➔
 35.4 / LIM0_DRIVE4 ➔
 35.2 / LIM1_DRIVE4 ➔
 39.4 / LIM0_DRIVE5 ➔
 39.2 / LIM1_DRIVE5 ➔

 EXTERNAL ESTOP CH1 IN / ➔
 EXTERNAL ESTOP CH1 OUT / ➔
 EXTERNAL ESTOP CH2 IN / ➔
 EXTERNAL ESTOP CH2 OUT / ➔
 EXTERNAL RESET IN / ➔
 EXTERNAL RESET OUT / ➔

 12.1 / SAFETY_STATUS_CUSTOMER ➔
 12.2 / STATUS_FU0220 ➔

 12.3 / 24V_CUSTOMER ➔
 12.3 / 0V_CUSTOMER ➔



Check Page 5 for Safety Interface.
Terminal Bank 3 for Customer Interface .

This page is a quick guide for the customer to interact with FMCP

The terminal blocks and other components in this page are duplicated and shown in relevant pages in the document

Project status				xxx		FESTO CORPORATION FMCP-3P-FE-5CMMP-CPXE	Customer Interface	EN &EFS	
		Date	19.11.2021	CA0ZFA				Material no.:	23455210
		Edit by	22.11.2021	ca0zfa				Project no.:	CA_CS.2178969-A
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU				Productionorder:	Pg. 60
									001330719396 Pg. 60

Terminal diagram

Type number	Manufacturer	Connection design / -number	external	Terminal strip =A1+O1-TB1			internal	Cable name	Cable type	Connection design / -number	Page / column
				Target designation	Level	Connection	Jumper	Target designation			&EFS/2.3

Project status	xxx	Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		
Modification	Date	Name	Standard	DIRECTIVE 2014/35/EU

FESTO CORPORATION

FMCP-3P-FE-5CMMP-CPXE



Terminal diagram

EN	&EMA
Material no.:	23455210
Project no.:	CA_CS.2178969-A
Productionorder:	001330719396
Pg.	5.1

Terminal diagram

Type number	Manufacturer	Connection design / -number	Terminal strip =A1+O1-TB2										Page / column		
			external					internal							
			Cable name	Cable type											
AMC 2.5	WEI	GNYE			-PSU0210	PE	7	1	1PE					&EFS/2.1	
	0220	WHBU			-CMMP-AS-1-S1	-X40:2	6	2	1	1	-2	-PSU0210		WHBU 0220 &EFS/2.0	
	0242			BK	-CON2300	X3:21	5	3	1	1	OUT:3	-FU0220		BU 0242 &EFS/2.5	
	0570			RD	-CON2300	X4:9	4	4	1	1	14	-SR0510		BU 0570 &EFS/5.5	
AMC 2.5	WEI				-TB1	1	7	1	2PE					&EFS/2.0	
	0220	WHBU					11	6	2	2	1	A2	-SR0510		WHBU 0220 &EFS/2.0
	0242			BK	-CON2700	X3:21	5	3	2	2	2	A1	-SR0510		BU 0242 &EFS/2.6
	0270			RD	-CON2700	X4:9	4	4	2	2	3			&EFS/5.5	
AMC 2.5	WEI				-ETH5000	9	7	1	3PE					&EFS/50.4	
	0220	WHBU			-CMMP-AS-1-S1	-X40:4	6	2	3	1	0V	-FU0220		WHBU 0220 &EFS/2.0	
	0242			BK	-CON3100	X3:21	5	3	3	2	13	-SR0510		BU 0242 &EFS/2.6	
	0570			RD	-CON3100	X4:9	4	4	3	3				&EFS/5.6	
AMC 2.5	WEI					7	1	4PE							
	0220	WHBU					11	6	2	4	1	0V	-FU0240		&EFS/2.0
	0242			BK	-CON3500	X3:21	5	3	4	2	47	-SR0510		BU 0242 &EFS/2.6	
	0570			RD	-CON3500	X4:9	4	4	4	3				&EFS/5.6	
AMC 2.5	WEI					7	1	5PE							
	0242			BK	-CON3900	X3:21	5	3	5	2	57	-SR0510		BU 0242 &EFS/2.6	
	0570			RD	-CON3900	X4:9	4	4	5	3				&EFS/5.6	
AMC 2.5	WEI					7	1	6PE							
	0220	WHBU					11	6	2	6	1				
								5	3	6	2	61	-SR0510		
								4	4	6	3			&EFS/5.6	
AMC 2.5	WEI	GNYE				9	7	1	7PE					&EFS/21.2	
	0242	BU			-TB3	9:2	5	3	7	1	X1:-	-FAN5530		WHBU 0220 &EFS/2.1	
	0580	BU			-CMMP-AS-1-S1	-X40:1	4	4	7	3	48	-SR0510		BU 0580 &EFS/5.6	
AMC 2.5	WEI	GNYE				9	7	1	8PE					&EFS/25.2	
	0220	WHBU				11	6	2	8	1				&EFS/2.1	
							5	3	8	2	7	-ETH5000		BU 0242 &EFS/2.7	
							4	4	8	3				&EFS/5.7	
AMC 2.5	WEI					7	1	9PE							
						6	2	9	1					&EFS/2.1	
						5	3	9	2					&EFS/2.7	
						4	4	9	3					&EFS/5.7	

Terminal diagram

Type number	Manufacturer	Connection design / -number	Terminal strip =A1+O1-TB2										Connection design / -number	Page / column		
			external					internal								
Target designation		Connection		Terminal		Jumper		Connection		Target designation						
			Level	Connection external	Connection internal	Level	Connection external	Connection internal	Level	Connection external	Connection internal					
		GNYE	9	6	2	PE	9	1							&EFS/29.2	
AMC 2.5	WEI	GNYE	9	7	1	10	PE								&EFS/33.2	
			6	2	10		1								&EFS/2.2	
0552	BU	-SR0510	S12	5	3	10		2		1	21	-PB1	GN	0552	&EFS/5.1	
			4	4	10		3								&EFS/5.7	
AMC 2.5	WEI	GNYE	9	7	1	11	PE								&EFS/37.2	
			6	2	11		1								&EFS/2.2	
0562	BU	-SR0510	S22	5	3	11		2		1	22	-PB1	BU	0562	&EFS/5.1	
			4	4	11		3								&EFS/5.7	
AMC 2.5	WEI		7	1	12	PE									&EFS/2.2	
			6	2	12		1									
			5	3	12		2									
			4	4	12		3								&EFS/5.7	
AMC 2.5	WEI	-CMMP-AS-1	X9:PE	7	1	13	PE								&EFS/21.3	
			6	2	13		1									
			5	3	13		2									
0581	BU	-CMMP-AS-1-S1	X40:3	4	4	13		3			58	-SR0510		BU	0581	&EFS/5.8
AMC 2.5	WEI	-CMMP-AS-2	X9:PE	7	1	14	PE								&EFS/25.3	
			6	2	14		1									
			5	3	14		2								&EFS/2.2	
			4	4	14		3									
AMC 2.5	WEI	-CMMP-AS-2	X9:PE	7	1	15	PE								&EFS/29.3	
			6	2	15		1									
			5	3	15		2								&EFS/2.3	
			4	4	15		3									
AMC 2.5	WEI	-CMMP-AS-4	X9:PE	7	1	16	PE								&EFS/33.3	
			6	2	16		1									
			5	3	16		2								&EFS/2.3	
			4	4	16		3									
AMC 2.5	WEI	-CMMP-AS-5	X9:PE	7	1	17	PE								&EFS/37.3	
			6	2	17		1									
			5	3	17		2									
			4	4	17		3									
AMC 2.5	WEI															
0220	WHBU	-TB3	9:1	6	2	17		1								
				5	3	17		2								
				4	4	17		3								
				7	1	18	PE									
AMC 2.5	WEI															
0220	WHBU	-TB3	29:1	6	2	18		1								
				5	3	18		2								

Terminal diagram

Type number	Manufacturer	Connection design / -number	external	Terminal strip =A1+O1-TB2			internal	Connection design / -number	Page / column
Cable name	Cable type	Target designation	Connection	Level	Connection external	Connection internal	Jumper	Target designation	
AMC 2.5	WEI			4	4 PE	18	3	●	&EFS/5.9
				7	1 19PE				
				6	2 19	1	1		
				5	3 19	2	1		
				4	4 19	3	1		

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Terminal diagram

EN &EMA
= A1
+ O1
23455210
CA_CS.2178969-A Pg. 2.2
001330719396 Pg. 5.1

Terminal diagram

Type number	Manufacturer	Connection design / -number	Terminal strip =A1+O1-TB3										Connection design / -number	Page / column		
			external			internal			Target designation							
Level	Connection external	Connection internal	Terminal		Jumper	Connection	Target designation									
			Target designation	Connection												
AMC 2.5	WEI						7 1 1PE	1	1	S11	-SR0510		BU	0550 &EFS/5.1		
		0550 BU		-PB2	41	6 2 1	1	1	1	X4:10	-CON2300	GN		333 &EFS/23.2		
						5 3 1	2	1	1	X2:22	-CON2300	WH		0334 &EFS/23.4		
AMC 2.5	WEI						7 1 2PE	2	2							
		0551 BK	-PB1	41	6 2 2	1	1	42	1		-PB2			&EFS/5.1		
						5 3 2	2	1	1	X4:10	-CON2700	GN		0335 &EFS/27.2		
						4 4 2	3	1	1	X2:22	-CON2700	WH		0336 &EFS/27.4		
AMC 2.5	WEI						7 1 3PE	3	3							
		0560 BU	-PB2	21	6 2 3	1	1	S21	1		-SR0510		BU	0560 &EFS/5.1		
						5 3 3	2	1	1	X4:10	-CON3100	GN		0337 &EFS/31.2		
						4 4 3	3	1	1	X2:22	-CON3100	WH		0338 &EFS/31.4		
AMC 2.5	WEI						7 1 4PE	4	4							
			-PB2	22	6 2 4	1	1	42	1		-PB1		RD	0561 &EFS/5.1		
						5 3 4	2	1	1	X4:10	-CON3500		GN	0339 &EFS/35.2		
						4 4 4	3	1	1	X2:22	-CON3500		WH	0340 &EFS/35.4		
AMC 2.5	WEI						7 1 5PE	5	5							
			-S1	12	6 2 5	1	1	X1	1		-SR0510		BU	0541 &EFS/5.3		
						5 3 5	2	1	1	X4:10	-CON3900		GN	0339 &EFS/39.2		
						4 4 5	3	1	1	X2:22	-CON3900		WH	0340 &EFS/39.4		
AMC 2.5	WEI						7 1 6PE	6	6							
			-S1	11	6 2 6	1	1	-X40:6	-CMMP-AS-5-S1-CMMP-AS-4				BU	0542 &EFS/5.3		
						5 3 6	2	1	1							
						4 4 6	3	1	1							
AMC 2.5	WEI						7 1 7PE	7	7							
							6 2 7	1	1							
							5 3 7	2	1	1						
							4 4 7	3	1	X0:0	-DI1104		BU	0590 &EFS/12.1		

Terminal diagram

Terminal diagram

Type number	Manufacturer	Connection design / -number	Terminal strip =A1+O1-TB3										Page / column
			external			internal			Connection				
			Cable name	Cable type	Target designation	Level	Connection external	Connection internal	Target designation	Cable name	Cable type		
						5 3	16	2					&EFS/13.2
						4 4	16	3	X0:1	-DI1104		BU	1320 &EFS/13.2
AMC 2.5	WEI					7 1	17PE						&EFS/13.3
						6 2	17	1					&EFS/13.3
						5 3	17	2					&EFS/13.3
						4 4	17	3	X2:1	-DI1104		BU	1330 &EFS/13.3
AMC 2.5	WEI					7 1	18PE						&EFS/13.4
						6 2	18	1					&EFS/13.4
						5 3	18	2					&EFS/13.4
						4 4	18	3	X3:1	-DI1104		BU	1340 &EFS/13.4
AMC 2.5	WEI					7 1	19PE						&EFS/13.5
						6 2	19	1					&EFS/13.5
						5 3	19	2					&EFS/13.5
						4 4	19	3	X4:1	-DI1104		BU	1350 &EFS/13.5
AMC 2.5	WEI					7 1	20PE						&EFS/13.6
						6 2	20	1					&EFS/13.6
						5 3	20	2					&EFS/13.6
						4 4	20	3	X5:1	-DI1104		BU	1360 &EFS/13.6
AMC 2.5	WEI					7 1	21PE						&EFS/13.7
						6 2	21	1					&EFS/13.7
						5 3	21	2					&EFS/13.7
						4 4	21	3	X6:1	-DI1104		BU	1370 &EFS/13.8
AMC 2.5	WEI					7 1	22PE						&EFS/13.9
						6 2	22	1					&EFS/13.9
						5 3	22	2					&EFS/13.8
						4 4	22	3	X7:1	-DI1104		BU	1380 &EFS/13.9
AMC 2.5	WEI					7 1	23PE						&EFS/14.0
						6 2	23	1					&EFS/14.0
						5 3	23	2	OUT:2	-FU0220		BU	0241 &EFS/14.1
						4 4	23	3	X0:0	-DO1103		BU	1410 &EFS/14.1
AMC 2.5	WEI					7 1	24PE						&EFS/14.1
						6 2	24	1					&EFS/14.1
						5 3	24	2		-XD:0	-DO1103		&EFS/14.2
						4 4	24	3	X0:1	-DO1103		BU	1420 &EFS/14.2
AMC 2.5	WEI					7 1	25PE						&EFS/14.2
						6 2	25	1					

Terminal diagram

Type number	Manufacturer	Connection design / -number	Terminal strip =A1+O1-TB3										Connection design / -number	Page / column	
			external			internal			Jumper			Target designation			
			Target designation	Connection	Level	Target designation	Connection	Level	Target designation	Connection	Level	Target designation			
				Connection external	Connection internal		Connection	Connection internal		Connection	Connection internal				
AMC 2.5	WEI		5 3 25 2												&EFS/14.3
AMC 2.5	WEI		4 4 25 3	X1:0		-DO1103							BU	1430	&EFS/14.3
AMC 2.5	WEI		7 1 26PE												&EFS/14.4
AMC 2.5	WEI		6 2 26 1												&EFS/14.4
AMC 2.5	WEI		5 3 26 2												&EFS/14.4
AMC 2.5	WEI		4 4 26 3	X1:1		-DO1103							BU	1440	&EFS/14.4
AMC 2.5	WEI		7 1 27PE												&EFS/14.5
AMC 2.5	WEI		6 2 27 1												&EFS/14.5
AMC 2.5	WEI		5 3 27 2												&EFS/14.5
AMC 2.5	WEI		4 4 27 3	X2:0		-DO1103							BU	1450	&EFS/14.5
AMC 2.5	WEI		7 1 28PE												&EFS/14.6
AMC 2.5	WEI		6 2 28 1												&EFS/14.6
AMC 2.5	WEI		5 3 28 2												&EFS/14.6
AMC 2.5	WEI		4 4 28 3	X2:1		-DO1103							BU	1460	&EFS/14.6
AMC 2.5	WEI		7 1 29PE												&EFS/14.7
AMC 2.5	WEI		6 2 29 1		18:6	-TB2							WHB	0220	&EFS/14.7
AMC 2.5	WEI		5 3 29 2												&EFS/14.7
AMC 2.5	WEI		4 4 29 3	X3:0		-DO1103							BU	1470	&EFS/14.7
AMC 2.5	WEI		7 1 30PE												&EFS/14.8
AMC 2.5	WEI		6 2 30 1												&EFS/14.8
AMC 2.5	WEI		5 3 30 2												&EFS/14.8
AMC 2.5	WEI		4 4 30 3	X3:1		-DO1103							BU	1480	&EFS/14.8
AMC 2.5	WEI		7 1 31PE												
AMC 2.5	WEI		6 2 31 1												
AMC 2.5	WEI		5 3 31 2												
AMC 2.5	WEI		4 4 31 3												
AMC 2.5	WEI		7 1 32PE												
AMC 2.5	WEI		6 2 32 1												
AMC 2.5	WEI		5 3 32 2												
AMC 2.5	WEI		4 4 32 3												

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=A1+O1-?WD				
		1	-CMMP-AS-1:X2B:1	&EFS/22.3
		1	-CMMP-AS-2:X2B:1	&EFS/26.3
		1	-CMMP-AS-3:X2B:1	&EFS/30.3
1	2		-CMMP-AS-1:X2B:2	&EFS/22.3
1	2		-CMMP-AS-2:X2B:2	&EFS/26.3
1	2		-CMMP-AS-3:X2B:2	&EFS/30.3
5	3		-CMMP-AS-1:X2B:3	&EFS/22.4
5	3		-CMMP-AS-2:X2B:3	&EFS/26.4
5	3		-CMMP-AS-3:X2B:3	&EFS/30.4
	4		-CMMP-AS-1:X2B:4	&EFS/22.4
	4		-CMMP-AS-2:X2B:4	&EFS/26.4
	4		-CMMP-AS-3:X2B:4	&EFS/30.4
4	5		-CMMP-AS-1:X2B:5	&EFS/22.4
4	5		-CMMP-AS-2:X2B:5	&EFS/26.4
4	5		-CMMP-AS-3:X2B:5	&EFS/30.4
6	6		-CMMP-AS-1:X2B:6	&EFS/22.4
6	6		-CMMP-AS-2:X2B:6	&EFS/26.4
6	6		-CMMP-AS-3:X2B:6	&EFS/30.4
	7		-CMMP-AS-1:X2B:7	&EFS/22.4
	7		-CMMP-AS-2:X2B:7	&EFS/26.4
	7		-CMMP-AS-3:X2B:7	&EFS/30.4
	8		-CMMP-AS-1:X2B:8	&EFS/22.4
	8		-CMMP-AS-2:X2B:8	&EFS/26.4
	8		-CMMP-AS-3:X2B:8	&EFS/30.4
2	9		-CMMP-AS-1:X2B:9	&EFS/22.5
2	9		-CMMP-AS-2:X2B:9	&EFS/26.5
2	9		-CMMP-AS-3:X2B:9	&EFS/30.5
8	10		-CMMP-AS-1:X2B:10	&EFS/22.5

Project status	xxx			
		Date	19.11.2021	CA0ZFA
		Edit by	23.11.2021	ca0zfa
		Appr.		

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Plug diagram =A1+O1-?WD

EN	&EMA
= A1	
+ O1	
Project no.:	CA_CS.2178969-A Pg. 4
Productionorder:	001330719396 Pg. 5.1

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=A1+O1-?WD				
	8	10	-CMMP-AS-2:X2B:10	&EFS/26.5
	8	10	-CMMP-AS-3:X2B:10	&EFS/30.5
		11	-CMMP-AS-1:X2B:11	&EFS/22.5
		11	-CMMP-AS-2:X2B:11	&EFS/26.5
		11	-CMMP-AS-3:X2B:11	&EFS/30.5
	3	12	-CMMP-AS-1:X2B:12	&EFS/22.5
	3	12	-CMMP-AS-2:X2B:12	&EFS/26.5
	3	12	-CMMP-AS-3:X2B:12	&EFS/30.5
	7	13	-CMMP-AS-1:X2B:13	&EFS/22.5
	7	13	-CMMP-AS-2:X2B:13	&EFS/26.5
	7	13	-CMMP-AS-3:X2B:13	&EFS/30.5
		14	-CMMP-AS-1:X2B:14	&EFS/22.6
		14	-CMMP-AS-2:X2B:14	&EFS/26.6
		14	-CMMP-AS-3:X2B:14	&EFS/30.6
		15	-CMMP-AS-1:X2B:15	&EFS/22.6
		15	-CMMP-AS-2:X2B:15	&EFS/26.6
		15	-CMMP-AS-3:X2B:15	&EFS/30.6

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=A1+O1-?WD-XD1				
	-MOT4:X1:1	1	3	&EFS/34.1
	-MOT5:X1:1	1	3	&EFS/38.1
	-MOT4:X1:2	2		&EFS/34.1
	-MOT5:X1:2	2		&EFS/38.1
	-MOT4:X1:3	3		&EFS/34.1
	-MOT5:X1:3	3		&EFS/38.1
	-MOT4:X1:4	4	2	&EFS/34.1
	-MOT5:X1:4	4	2	&EFS/38.1
	-MOT4:X1:5	5	10	&EFS/34.2
	-MOT5:X1:5	5	10	&EFS/38.2
	-MOT4:X1:6	6	3	&EFS/34.2
	-MOT5:X1:6	6	3	&EFS/38.2
	-MOT4:X1:7	7	4	&EFS/34.2
	-MOT5:X1:7	7	4	&EFS/38.2
	-MOT4:X1:8	8	5	&EFS/34.2
	-MOT5:X1:8	8	5	&EFS/38.2
	-MOT4:X1:9	9	13	&EFS/34.2
	-MOT5:X1:9	9	13	&EFS/38.2
	-MOT4:X1:10	10	6	&EFS/34.3
	-MOT5:X1:10	10	6	&EFS/38.3
	-MOT4:X1:A	A	1	&EFS/34.3
	-MOT5:X1:A	A	1	&EFS/38.3
	-MOT4:X1:B	B	8	&EFS/34.3
	-MOT5:X1:B	B	8	&EFS/38.3
	-MOT4:X1:C	C	7	&EFS/34.3
	-MOT5:X1:C	C	7	&EFS/38.3
	-MOT4:X1:D	D		&EFS/34.4
	-MOT5:X1:D	D		&EFS/38.4

Plug diagram

Plug	Plug target	with contact, unipolar	Female pin target	Page / column
=A1+O1-?WD-XD1				
	-MOT4:X1:PE	PE	9	&EFS/34.4
	-MOT5:X1:PE	PE	9	&EFS/38.4

PRODUCTION
23.11.2021

Project status	xxx
	Date 19.11.2021 CA0ZFA
	Edit by 23.11.2021 ca0zfa
	Appr.

FESTO CORPORATION
FMCP-3P-FE-5CMMP-CPXE



Plug diagram =A1+O1-?WD-XD1

EN	&EMA
Material no.:	23455210
	= A1
	+ O1
Project no.:	CA_CS.2178969-A Pg. 5.1
Productionorder:	001330719396 Pg. 5.1