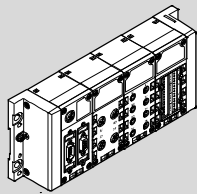


Terminal CPX-EX1E



with order code 50E-...-EX1E, 51E-...-EX1E, 53E-...-EX1E
II 3G Ex ec IIC T4 X Gc



FESTO

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Operating conditions EX
(Translation of the original instructions)

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Terminal CPX-EX1E English



For all available product documentation → www.festo.com/pk.

1 Function

The CPX-P terminal consists of electronic modules. CPX-P terminals with field bus connection enable communication with distant higher-order control systems.

2 Application

- The CPX terminal is intended as the interface to the higher-order controller via the field bus or Ethernet.
- The device can be used under the specified operating conditions in zone 2 of potentially explosive gas atmospheres.



Note

If labelled with X: special conditions

- Fit the device into a housing with at least IP54 (corresponding to EN 60079-0).
- Do not disconnect or open under tension.
- Prevent separation of the push-in connector M8 or M12 by means of the safety clip NEAU-M8-GD or NEAUM12-GD (not in scope of delivery) or through an additional housing with special seal.
- Prevent separation of the push-in connector(s) M9 by means of the cable tie NEAM-B-140-DL-EX2-P10 (not in scope of delivery) or through an additional housing with special seal.
- Seal unused inputs/outputs with the cover caps ISK-M8, ISK-M12 and the M9 protective cap FLANSCHDOSE SER.712 (not included in delivery).
- Use additional strain relief for cables in front of every plug.
- Danger from electrostatic discharge.
- Ambient temperature: $-5\text{ °C} \leq T_a \leq +50\text{ °C}$
- Protect the device from ultra-violet radiation.
- Protect the device against all kinds of shock stress.

- Use the product in its original condition without undertaking any modifications. The right of use will be withdrawn if modifications are made by the user. Replacement of electronic modules is permitted.
- Use only approved components.

3 Commissioning



Warning

The discharge of electrostatically charged parts can lead to sparks which can cause an explosion.

- Prevent electrostatic discharges by means of suitable installation and cleaning measures.
- Include the device in the potential equalization of the system.
- The screening shield is electrically insulated: Include it separately in the potential equalisation of the system.
- Prevent processes that are strongly charge generating.

- The following work should only be performed outside potentially explosive areas: Commissioning, mounting
- Observe the specifications on the product labelling.
- Comply with applicable national and international guidelines.
- Observe the operating conditions.
- Limit the power supply of the CPX terminal to 8 A per supply contact.
- Earth all supply voltages.



Warning

For CPX-4AE-P-B2 and CPX-4AE-P-D10:

- Cyclic compression of the compressed air and non-permitted operating parameters can overheat the device.
- Avoid overheating due to cyclic compression of the compressed air.
- Ensure a minimum permitted period duration with fluctuations in pressure. The following rule applies: $\text{Difference in pressure [bar]} / 2 = \text{duration of period [s]}$.



Note

Escaping exhaust air can swirl up dust and create an explosive dust atmosphere.

4 Operating

- Observe the operating conditions.
- Comply with permissible limit values → Technical data.



Warning

Electrically produced sparks may ignite a potentially explosive atmosphere.

- Do not disconnect or open under tension.

5 Service and maintenance

- Carry out service and maintenance only outside potentially explosive areas. Wearing parts and spare parts can be replaced in individual cases. Repairs of this nature may only be undertaken by qualified and authorized personnel.
- Please contact a specialist from Festo.

6 Technical data

Operating conditions

Electrical characteristics		
Rated operating voltage	V DC	24 ± 25 %
Ambient temperature		$-5\text{ °C} \leq T_a \leq +50\text{ °C}$
Power supply per supply contact		
without End plate CPX-...-EV-S	A	8
with End plate CPX-...-EV-S	A	6
Safety class		III (PELV) nach EN 61140
Overvoltage category		III
Degree of contamination		2
Protection class		IP20 nach EN 60529
Tightening torque		
Earthing screw	Nm	1.3 ± 20 %
Tie rod	Nm	2.0 ± 15 %

Fig. 1

7 Accessories

Approved components for the CPX terminal			
Cover cap	CPX-FB34/35/41	3311390	
	CPX-M-AK-C	548753	
	CPX-M-AK-D	2873537	
	CPX-PP	1605277	
	ISK-M12	165592	
	ISK-M8	177672	
	Cover plate	CPX-M-FB21-IB-RL	572818
Covering	AK-8KL	538219	
	CPX-AK-P	548757	
	CPX-M-AK-M	548754	
	AK-RJ45	534496	
Screening plate	CPX-AB-S-4-M12	526184	
Terminating resistor	CACR-S-B12G5-220-PB	1072128	
Axis controller	CPX-CMA-X-C1-1	548932	
Analogue module	CPX-2AA-U-I	526170	
	CPX-2AE-U-I	526168	
	CPX-4AE-I	541484	
	CPX-4AE-P-B2	560361	
	CPX-4AE-P-D10	560362	
	CPX-4AE-T	541486	
	CPX-4AE-TC	553594	
	CPX-4AE-U-I	573710	
	Manifold block	CPX-AB-1-SUB-BU-25POL	525676
CPX-AB-2-M12-RK-DP		541519	
CPX-AB-2-M12-RK-IB		534505	
CPX-AB-4-M12-8POL		526178	
CPX-AB-4-M12X2-5POL		195704	
CPX-AB-4-M12X2-5POL-R		541254	
CPX-AB-8-KL-4POL		195708	
CPX-AB-8-M8-3POL		195706	
CPX-AB-8-M8X2-4POL		541256	
CPX-M-AB-4-M12X2-5POL		549367	
CPX-AB-1-7/8-DN		571052	
CPX-AB-1-SUB-BU-25P-M3		547000	
CPX-AB-4-M12-8P-M3		556168	
CPX-AB-4-M12X2-5P-M3		546996	
CPX-AB-4-M12X2-5P-R-M3		546997	
CPX-AB-8-KL-4P-M3		546999	
CPX-AB-8-M8-3P-M3		546998	
CPX-AB-8-M8X2-4P-M3		556166	
CPX-AB-ID-P		2639571	
CPX-M-AB-4-M12X2-5POL-T		2639560	
CPX-M-AB-8-M12X2-5POL		549335	
Output module		CPX-4DA	195754
		CPX-8DA	541482
		CPX-8DA-H	550204
		CPX-FVDA-P2	1971599
		Mounting	CPX-BG-RW-10X
CPX-CPA-BG-NRH			526032
CPX-ZA-...	397118		
VMPAF-FB-BG-NRH	560798		
Mounting kit	CAFC-X1-BE	572257	
Mounting bracket	CPX-M-BG-RW-2X	550217	
	CPX-M-BG-VT-2X	2721414	
Bus connection	FBA-1-KL-5POL	197962	
	FBA-1-SL-5POL	525634	
	FBA-2-M12-5POL	525632	
	FBA-2-M12-5POL-RK	533118	
	FBSD-KL-2X5POL	525635	
Bus node	CPX-FB11	526172	
	CPX-FB13	195740	
	CPX-FB14	526174	
	CPX-FB23-24	526176	
	CPX-FB33	548755	
	CPX-FB36	1912451	
	CPX-FB37	2735960	
	CPX-FB38	552046	
	CPX-FB39	2093101	
	CPX-FB40	2474896	
	CPX-FB5-SA	540752	
	CPX-FB6	195748	
	CPX-M-FB21	572221	
	CPX-M-FB34	548751	
	CPX-M-FB35	548749	
	CPX-M-FB41	3228960	
	Input/output module	CPX-8DE-8DA	526257
		CPX-L-8DE-8DA-16-KL-3POL	572607
		CPX-2ZE2DA	576046

Approved components for the CPX terminal			
Input module	CPX-16DE	543815	
	CPX-4DE	195752	
	CPX-8DE-D	541480	
	CPX-8DE	195750	
	CPX-8NDE	543813	
	CPX-F8DE-P	2597424	
	CPX-L-16DE-16-KL-3POL	572606	
	CPX-M-16DE-D	550202	
	CPX-4AE-4AA-H	8059847	
	CPX-P-8DE-N	565933	
	Electrical interface	CPX-CP-4-FB	526705
		CPX-CTE L-2-M12-5POL-LK	2900543
		CPX-CTE L-4-M12-5POL	1577012
End position controller	CPX-CMPX-C-1-H1	548931	
End plate	CPX-EPL-EV	195716	
	CPX-EPR-EV	195714	
	CPX-M-E PL-EV	550212	
	CPX-M-E PR-EV	550214	
	CPX-EPL-EV-S	576315	
	CPX-EPL-EV-X	576314	
	CPX-EPR-EV-X	576313	
	CPX-M-E PL-EV-X	576317	
	CPX-M-E PR-EV-X	576316	
	End plate assembly	CPX-EPR-LIGHT	2448016
Earthing component	CPX-EPFE-EV	538892	
Threaded sleeve	UNC4-40/M3X6	533000	
Hood	CAFC-X1-GAL-	572255	
	CAFC-X1-GAL-200	572258	
	CAFC-X1-GAL-300	572259	
Terminal strip	NECU-L3G7-C1	576319	
	NECU-L3G8-C1	565712	
	NECU-L3G8-C1-IS	565711	
Measuring module	CPX-CM IX-M1-1	567417	
Multi-pin plug distributor	NEDU-L4R1-M8G3L-M12G8	574586	
	NEDU-L6R1-M8G3L-M12G8	574587	
Power supply socket	NECU-G78G4-C2	543108	
	NECU-G78G5-C2	543107	
	NECU-M-PPG5-C1	563059	
	NTSD-GD-13,5	18526	
	NTSD-WD-11	533119	
	NEBU-G78W5-K-2-N-LE5	573855	
Rail	CAFC-X1-S	572256	
Inscription label holder	CPX-ST-1	536593	
Screw set	CAF-M-X1-S	752785	
Protective cover	FLANSCHDOSE SER.712	356684	
Inspection cover	AK-SUB-9/15-B	533334	
Memory card	CPX-SK-2	568647	
Socket	NECU-M-B12G5-C2-PB	1067905	
	NTSD-GD-9	18493	
	NTSD-WD-9	18527	
	NTSD-GD-9-M12-5POL-RK	538999	
	Plug	FBS-RJ45-8-GS	534494
FBS-RJ45-PP-GS		552000	
FBS-SCRJ-PP-GS		571017	
FBS-SUB-9-BU-2X5POL-B		532219	
FBS-SUB-9-BU-IB-B		532218	
FBS-SUB-9-GS-2X4POL-B		532220	
FBS-SUB-9-GS-DP-B		532216	
FBS-SUB-9-GS-IB-B		532217	
FBS-M12-5GS-PG9		175380	
FBS-SUB-9-GS-1X9POL-B		534497	
FBS-SUB-9-WS-CO-K		533783	
NECU-M-S-B12G5-C2-PB		1066354	
NECU-M-S-D12G4-C2-ET		543109	
NECU-S-M8G4-C2		1068198	
NECU-L3G8-C2-IS		565709	
NECU-M-S-A12G4-IS		575719	
NECU-S1W9-C2-ACO		574588	
NECU-S1W9-C2-APB		574589	
NECU-S-M12G4-D-IS		570956	
NECU-S-M12G4-P1-IS		570953	
NECU-S-M12G4-P1-Q6-IS		570955	
NECU-S-M12G4-P2-IS		570954	
NECU-S-M8G3-HX-Q3		564945	
SD-SUB-D-ST25		527522	
SEA-3GS-M8-S		192009	
SEA-4GS-7-2,5		192008	
SEA-5GS-11-DUO		192010	
SEA-GS-11-DUO	18779		
SEA-GS-7	18666		
SEA-GS-9	18778		
SEA-GS-M8	18696		
SEA-M12-5GS-PG7	175487		
Control block	CPX-CEC	567346	
	CPX-CEC-C1	567347	
	CPX-CM-HPP	562214	
	CPX-CEC-C1-V3	3473128	
	CPX-CEC-M1-V3	3472765	
	CPX-CEC-S1-V3	3472425	
Push-in T-connector	NEDU-M12D4-M12T4-IS	562248	

Approved components for the CPX terminal			
Connecting cable	KVI-CP-3-WS-GD-2	540332	
	KVI-CP-3-WS-GD-5	540333	
	KVI-CP-3-WS-GD-8	540334	
	KVI-CP-3-WS-WD-0,2	540329	
	KVI-CP-3-WS-WD-0,25	540327	
	KVI-CP-3-WS-WD-0,5	540328	
	KVI-CP-3-WS-WD-5	540330	
	KVI-CP-3-WS-WD-8	540331	
	NEBC-F12G8-KH-0.18-N-S-F12G8-SA	576556	
	NEBC-F12G8-KH-0.25-N-S-F12G8	564189	
	NEBC-F12G8-KH-0.5-N-S-F12G8	564190	
	NEBC-F12G8-KH-1.5-N-S-F12G8	564192	
	NEBC-F12G8-KH-1-N-S-F12G8	564191	
	NEBC-F12G8-KH-2-N-S-F12G8	576015	
	NEBC-F12G8-KH-3-N-S-F12G8	576636	
	NEBU-M12G5-E-10-Q8N-M12G5	574323	
	NEBU-M12G5-E-5-Q8N-M12G5	574321	
	NEBU-M12G5-E-7.5-Q8N-M12G5	574322	
	NEBU-M12G5-K-0.5-M12W5	8003617	
	NEBU-M12G5-K-2-M12W5	8003618	
	NEBU-M12W5-K-0.5-M12W5	570733	
	NEBU-M12W5-K-2-M12W5	570734	
	Interlinking block	CPX-GE-EV	195742
		CPX-GE-EV-S-VL	8022170
		CPX-GE-EV-S-7/8-5POL-VL	8022172
CPX-GE-EV-V-VL		8022171	
CPX-GE-EV-Z-VL		8022166	
CPX-GE-EV-Z-7/8-5POL-VL		8022173	
CPX-M-GE-EV		550206	
CPX-M-GE-EV-FVO		567806	
CPX-M-GE-EV-S-7/8-5POL-VL		8022165	
CPX-M-GE-EV-S-PP-5POL		563057	
CPX-M-GE-EV-Z-7/8-5POL-VL		8022158	
CPX-M-GE-EV-Z-PP-5POL		563058	
Fittings kit		VG-K-M9	538220
Resistance	CPX-W-PT1000	553596	
Tie rod	CPX-ZA-1	195718	
	CPX-ZA-2	195720	
	CPX-ZA-3	195722	
	CPX-ZA-4	195724	
	CPX-ZA-5	195726	
	CPX-ZA-6	195728	
	CPX-ZA-7	195730	
	CPX-ZA-8	195732	
	CPX-ZA-9	195734	
	CPX-ZA-10	195736	

Fig. 2