



Communication module/power supply unit for remote text display via CANopen, 24 V DC



Part no. MFD-CP4-CO
Catalog No. 115736

EL-Nummer (Norway) 4560806

Delivery program

Accessories			CANopen® interface for MFD80
Product range			Multi-function-display MFD-Titan
			Communication module with CANopen® interface automatic baud rate setting up to 1 Mbaud Up to 64 display pages can be saved
Function			For use with display/operating unit MFD-80-B(-X) and connection cable EU4A-RJ45-CAB2
Supply voltage			24 V DC
For use with			EC4P XC100/200 Other devices with CANopen® interface

Technical data

General

Standards			EN 61000-6-1/-2/-3/-4, IEC 60068-2-6, IEC 60068-2-27
Dimensions (W x H x D)		mm	75 x 58 x 36.2
Weight		kg	0.164
Mounting			Fitted onto the fixing shaft of the display

Terminal capacities

Power supply			
Solid		mm ²	0.5 - 2.5 (AWG 20 - 14)
flexible with ferrules		mm ²	0.5 - 1.5 (AWG 20 - 16)
Standard screwdriver		mm	3.5 x 0.6
Data cable			
Solid		mm ²	0.2 - 0.5 (AWG 24 - 20)

Climatic environmental conditions

Operating ambient temperature		°C	-25 to 55, cold as per IEC 60068-2-1, heat as per IEC 60068-2-2
Condensation			Take appropriate measures to prevent condensation
Storage		°C	- 40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95
Air pressure (operation)		hPa	795 - 1080

Ambient conditions, mechanical

Pollution degree			2
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Vibrations (IEC/EN 60068-2-6)		Hz	
Constant amplitude 0.15 mm		Hz	10 - 57
Constant acceleration 2 g		Hz	150 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Impacts	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1
Mounting position			Vertical or horizontal

Electromagnetic compatibility (EMC)

Overvoltage category/pollution degree			II/2
Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)		kV	
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (RFI) to IEC EN 61000-4-3		V/m	10
Radio interference suppression			EN 55011 Class B, EN 55022 Class B

Burst Impulse (IEC/EN 61000-4-4, Level 3)			
Supply cable		kV	2
Signal lines		kV	2
Power pulses (surge) (IEC/EN 61000-4-5)		kV	2 (supply cables, symmetrical)
power pulses (surge) (IEC/EN 61000-4-5, level 2)		kV	1 (supply cables, symmetrical)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10

Insulation resistance

Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142
Insulation resistance			EN 50178

Power supply

Rated operational voltage	U_e	V	24 DC (-15/+20 %)
Admissible range		V DC	
Min. admissible range		V DC	20.4
Max. admissible range		V DC	28.8
Residual ripple		%	≤ 5
Input current			
at 24 V DC		mA	Normally 185
Voltage dips		ms	≤ 10
Power loss	P	W	Normally 1.5
Note on heat dissipation			Current consumption at 24 V DC

Interfaces

CANopen®			
Control contact rated current			to DS301V4
PDO type			asynchronous (event controlled)
Addresses			1 to 63, can be set through display
Baud rate/length		kBd	10 kByte up to 1 MByte, Automatic detection Manual setting via display possible.
Connection technique			6-pole cage clamp terminal
Terminating resistor		Ω	external 120

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	1.5
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Meets the product standard's requirements.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.

10.9 Insulation properties		
10.9.2 Power-frequency electric strength		Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage		Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material		Is the panel builder's responsibility.
10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 6.0

PLC's (EG000024) / Text panel (EC001426)		
Electric engineering, automation, process control engineering / Control / Operate and Observe (HMI) / Text panel (HMI) (ecl@ss8.1-27-24-23-04 [BAA724010])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	20.4 - 28.8
Voltage type of supply voltage		DC
Number of HW-interfaces industrial Ethernet		0
Number of HW-interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		0
Number of HW-interfaces parallel		0
Number of HW-interfaces Wireless		0
Number of HW-interfaces other		2
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		Yes
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for MODBUS		No
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		No
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No

Type of display			LCD with background illumination
Number of display lines			4
Number of characters per line			16
Max. character height, display		mm	32
Useful project memory/user memory		kByte	0
With numeric keyboard			No
With alpha numeric keyboard			No
Number of function buttons, programmable			9
Number of buttons with LED			0
Number of system buttons			0
With message indication			Yes
With message system (incl. buffer and confirmation)			No
Process value representation (output) possible			Yes
Process default value (input) possible			Yes
With recipes			No
Number of password levels			1
Printer output available			No
Number of online languages			1
Degree of protection (IP), front side			IP65
Operation temperature		°C	-25 - 55
Graphic objects presentable			No
Suitable for safety functions			No
Width of the front		mm	86.5
Height of the front		mm	86.5
Built-in depth		mm	36.2

Approvals

North America Certification			Request filed for UL and CSA
Specially designed for North America			No
Current Limiting Circuit-Breaker			No

Dimensions

