Analogue input module
CPX-AP-A-4AI-U-I-RTD-M12

Part number: 8129113

General operating condition

Data sheet

Feature	Value
Dimensions (W x L x H)	50.1 mm x 107.3 mm x 57.5 mm
Grid dimension	50.1 mm
Type of mounting	Screw-clamped
Product weight	121 g
Mounting position	optional
Ambient temperature	-20 °C ... 50 °C
Note on ambient temperature	Observe ambient temperature derating according to IEC 61131-2:2017
Storage temperature	-20 °C ... 70 °C
Relative air humidity	5 - 95% Non-condensing
Nominal altitude of use	<= 2000 m ASL (> 79.5 kPa)
Max. installation height	3500 m
Note on max. installation height	> 2000 m ASL (< 79.5 kPa) Observe ambient temperature derating according to IEC 61131-2:2017
Corrosion resistance class CRC	1 - Low corrosion stress
Vibration resistance	Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6
Note on vibration resistance	SG1 on H-rail SG2 on direct mounting Transport application test with severity class 1 to FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27
Note on shock resistance	30 g/11 ms to EN 60068-2-27 SG1 on H-rail SG2 on direct mounting Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Protection class	III
Pollution degree	2
Overvoltage category	II
Max. cable length	30 m inputs
LABS (PWIS) conformity	VDMA24364-B2-L
Fire test material	UL94 V-0 (housing)
Note on materials	RoHS-compliant Free of halogen Free of phosphoric acid ester
Material cover	PBT-reinforced
Material screws	Nickel-plated steel
Material threaded sleeve	High-alloy stainless steel
Material o-ring	FPM

Feature	Value
Diagnostics via LED	Diagnostics per module Status per channel
Diagnostics per internal communication	Wire break Communication fault Short circuit/overload Parameter errors Parameterisation error Overload at analogue inputs Upper limit value violated Electronics/sensors overvoltage Overflow/underflow Lower limit value not observed Electronics/sensors undervoltage
Max. address volume, inputs	8 Byte
Channel parameters	Measured value smoothing Signal range Lower/upper limits Activation of linear scaling Unit for temperature measurement Hysteresis for monitoring measured values
Communication interface, protocol	AP
Note regarding operating voltage	SELV/PELV fixed power supplies required Note voltage drop
Note on nominal operating voltage DC	Protected Extra-Low-Voltage to IEC 60204-1
Nominal DC operating voltage, electronics/sensors	24 V
Permissible voltage fluctuations for electronics/sensors	± 25%
Intrinsic current consumption at nominal operating voltage for electronics/sensors	Typically 34 mA
Power failure bridging	10 ms
Reverse polarity protection	yes
Electrical connection input, function	Analogue input
Electrical connection input, connection type	4x socket
Electrical connection input, connector system	M12x1, A-coded to EN 61076-2-101
Electrical connection input, number of connections/cores	5
Electrical connection input, connection pattern	00995384
Number of inputs	4
Behaviour after end of overload of the sensor supply	Automatic return
Fuse protection of inputs (short circuit)	Internal electronic fuse per module
Max. residual current of inputs per module	1 A
Electrical isolation of inputs between channels	no
Electrical isolation of inputs between channel - internal communication	yes
Measured variable	Voltage Current Temperature Resistor
Note on the measured variable	Temperature: PT100 and NI100 supported
Data format	15 bits + prefix Linear scaling
analog input	-10 - 10 V -5 - 5 V 0 - 10 V 1 - 5 V 0 - 20 mA 4 - 20 mA 0 - 500 Ohm
Repetition accuracy	±0.025% at 25°C
Basic error limit at 25 °C	±0.1% for voltage ±0.1% for current ±0.4% for temperature ±0.2% for resistor

Feature	Value
Operating error limit related to the ambient temperature range	±0.15% for voltage ±0.15% for current ±0.9% for temperature ±0.35% for resistor
Max. power supply per channel	0.5 A