

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

Part number: 8129113

FESTO



 [General operating condition](#)

Data sheet

Feature	Value
Dimensions W x L x H	50.1 mm x 107.3 mm x 57.5 mm
Width dimension	50.1 mm
Type of mounting	Screwed tightly
Product weight	121 g
Mounting position	Any
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 above sea level	≤ 2000 m ASL (> 79.5 kPa)
Max. installation height	3500 m
Information 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 as per 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 level 1 as per FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27
Note on shock resistance	30 g/11 ms as per EN 60068-2-27 SG1 on H-rail SG2 on direct mounting Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27
Protection class	III
Contamination level	2
Overvoltage category	II
Max. cable length	30 m inputs
LABS (PWIS) conformity	VDMA24364-B2-L
Material fire test	UL94 V-0 (housing)
Note on materials	RoHS-compliant Halogen-free Free of phosphoric acid ester
Cover material	PBT-reinforced
Material of screws	Steel, nickel-plated
Threaded sleeve material	High-alloy stainless steel
O-ring material	FPM

Feature	Value
Diagnostics via LED	Diagnostics per module Status per channel
Diagnose per internal communication	Wire break Communication error Short circuit/overload Parameter error Parameterization error Overload at analog inputs Upper limit value violated Electronics/sensors overvoltage Underflow/overflow Lower limit value not complied with Electronics/sensors undervoltage
Max. address capacity inputs	8 byte
Channel parameters	Measured value smoothing Signal range Lower/upper limit 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 as per IEC 60204-1
Nominal operating voltage DC for 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 buffering	10 ms
Reverse polarity protection	yes
Electrical connection input, function	Analog input
Electrical connection input, connection type	4x socket
Electrical input connection, connection technology	M12x1 A-coded as per EN 61076-2-101
Electrical connection, input, number of pins/wires	5
Electrical connection for input, connection pattern	00995384
No. of inputs	4
Behavior after end of overload of the sensor supply	Automatic return
Fuse protection inputs (short circuit)	Internal electronic fuse per module
Max. residual current of inputs per module	1 A
Electrical isolation of inputs between channels	no
Digital inputs, electrical isolation of input - internal communication	yes
Measured variable	Voltage Current Temperature Resistor
Note on the measured variable	Temperature: PT100 and NI100 supported
Data format	15 bit + sign Linear scaling
Signal range	-10 - 10 V -5 - 5 V 0 - 10 V 1 - 5 V 0 - 20 mA 4 - 20 mA 0 - 500 Ω
Repetition accuracy	±0.025 % at 25 °C
Basic error limit at 25°C	±0.1 % for voltage ±0.1 % for electrical 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 electrical current ±0.9 % for temperature ±0.35 % for resistor
Max. power supply per channel	0.5 A