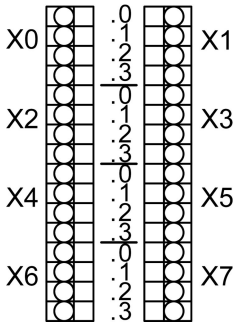
Digital input/output module
CPX-AP-A-12DI4DO-PI

Part number: 8129108





Data sheet

Feature	Value
Dimensions (W x L x H)	(including interlinking block) 50.1 mm x 107.3 mm x 57.5 mm
Grid dimension	50.1 mm
Type of mounting	Screw-clamped
Product weight	97 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
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 DIN 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
Overvoltage category	II
Max. cable length	30 m outputs
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 o-ring	Fluoro rubber

Feature	Value
Diagnostics via LED	(Outputs) Diagnostics per channel Power supply load (outputs) (Inputs-Outputs) Diagnostics per module (Inputs-Outputs) Status per channel
Diagnostics per internal communication	Switch-off load supply Communication error Short-circuit/overload in output signal Short circuit/overload in sensor supply Electronics/sensors overvoltage Load overvoltage Electronics/sensors undervoltage Load undervoltage
Max. address volume, inputs	2 Byte
Max. address volume, outputs	1 Byte
Number of outputs	4
Module parameters	Configuration of voltage monitoring load supply PL Behaviour after short circuit/overload at the output
Channel parameters	Input debounce time
Communication interface, protocol	AP
Note regarding operating voltage	SELV/PELV fixed power supplies required Note the voltage drop
Note on nominal operating voltage DC	Protected Extra-Low-Voltage to IEC 60204-1
Nominal operating voltage DC of load	24 V
Permissible voltage fluctuation of load	±25%
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 40 mA
Intrinsic current consumption at nominal operating voltage load	Typically 5 mA
Power failure bridging	10 ms
Potential separation between the supply voltages electronics/sensor technology and load/valves	Yes
Reverse polarity protection	Yes
Electrical connection input, function	Digital input
Electrical connection input, connection type	8x terminal strip
Electrical connection input, connector system	Spring-loaded terminal
Electrical connection input, number of connections/cores	4
Electrical connection for input, conductor cross section	0.25 mm²...1.5 mm²
Electrical connection for input, note on conductor cross section	0.25-1.5 flex.w.wire end.,rigid 0.13-1.5 flex. without wire ferrule
Electrical connection for input, AWG conductor cross section	AWG24 - AWG16
Number of inputs	12
Characteristic for inputs	To IEC 61131-2, type 3
Switching level	Signal 0: <= 5 V Signal 1: ≥ 11 V
Switching logic for inputs	PNP (positive switching) 2-wire sensors to IEC 61131-2 3-wire sensors to IEC 61131-2
Input debounce time	0.1 ms 3 ms (standard) 10 ms 20 ms
Electrical isolation of inputs between channel – internal communication	Yes
Behaviour after end of overload of the sensor supply	Automatic return
Fuse protection of inputs (short circuit)	Internal electronic fuse per module
Electrical isolation of inputs between channels	No
Electrical connection output, function	Digital output
Electrical connection output, connection type	8x terminal strip
Electrical connection output, connector system	Spring-loaded terminal

Feature	Value
Electrical connection output, number of connections/cores	4
Electrical connection for output, conductor cross section	0.25 mm²...1.5 mm²
Electrical connection for output, note on conductor cross section	0.13 - 1.5 mm² for flexible conductors without wire ferrule
Electrical connection for output, AWG conductor cross section	AWG24 - AWG16
Characteristic for outputs	To IEC 61131-2, type 0.5
Switching logic for outputs	PNP (positive switching)
Fuse protection of outputs (short circuit)	Internal electronic fuse per channel
Behaviour after end of overload of the outputs	No automatic return
Output delay with ohmic load	Signal change 0->1: < 200 µs Signal change 1->0: < 200 µs
Electrical isolation of outputs between channels	No
Electrical isolation of outputs between channel - internal communication	Yes
Max. power supply per channel	0.5 A