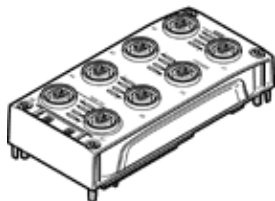


# digital input/output module CPX-AP-A-12DI4DO-M12-5P

Part number: 8129111

FESTO



## 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
Mounting type	Tightened
Product weight	98 g
Assembly position	Any
Ambient temperature	-20 ... 50 °C
Note on ambient temperature	Note ambient temperature derating according to IEC 61131-2:2017
Storage temperature	-20 ... 70 °C
Relative air humidity	5 - 95 % non-condensing
Nominal altitude of use	≤ 2000 m ASL (> 79,5 kPa)
Max. installation height	3,500 m
Note on max. installation height	> 2000 m ASL (< 79,5 kPa) Note ambient temperature derating according to IEC 61131-2:2017
Corrosion resistance classification CRC	1 - Low corrosion stress
Vibration resistance	Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6
Note on vibration resistance	SG1 on H-rail SG2 on direct mounting Transport application test at severity level 1 in accordance with FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 in accordance with 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 in accordance with FN 942017-5 and EN 60068-2-27
Safety class	III
Degree of contamination	2
Overvoltage category	II
Max. line length	30 m outputs 30 m inputs
PWIS conformity	VDMA24364-B2-L
Material fire test	UL94 V-0 (housing)
Materials note	Conforms to RoHS Halogen-free Free of phosphoric acid ester
Material housing	PC
Material cover	PBT-reinforced
Material screws	Steel, nickel-plated
Material o-ring	FPM
Diagnostics via LED	(Outputs) Power supply load (Outputs) Diagnostics per channel (Inputs-Outputs) Diagnostics per module

Feature	Value
	(Inputs-Outputs) Status per channel
Diagnostics per internal communication	Load switch-off Short-circuit/overload output signal Short circuit/overload in sensor supply Communication error Electronics/sensors overvoltage Load overvoltage Electronics/sensors undervoltage Load undervoltage
Maximum address volume for inputs	2 Byte
Maximum address volume for outputs	1 Byte
No. 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 voltage drop
Note on nominal operating voltage DC	Prot.Ext.Low-Volt. IEC 60204-1
Nominal operating voltage, DC outputs	24 V
Permissible voltage fluctuations, load	± 25 %
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	Typ. 40 mA
Intrinsic current consumption at nominal operating voltage load	Typical 5 mA
Power failure buffering	10 ms
Potential separation between the supply voltages electronics/sensors and load/valves	Yes
Polarity protected	Yes
Electrical connection, input, function	Digitaleingang
Electrical connection, input, connection type	6x socket
Electrical connection, input, connection technology	M12x1, A-coded in accordance with EN 61076-2-101
Electrical connection, input, number of pins/wires	5
No. of inputs	12
Input characteristics	to IEC 61131-2, type 3
Switching level	Signal 0: ≤ 5 V Signal 1: ≥ 11 V
Input circuit logic	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
Behaviour after end of overload of the sensor supply	Automatic return
Fuse protection of inputs (short circuit)	Internal electronic fuse protection per module
Max. residual current inputs per module	1.8 A
Electrical isolation of inputs between channels	No
Electrical isolation of inputs between channel - internal communication	Yes
Electrical connection, output, function	Digitalausgang
Electrical connection, output, connection type	2x socket
Electrical connection, output, connection technology	M12x1, A-coded in accordance with EN 61076-2-101
Electrical connection, output, number of pins/wires	5
Characteristic curve, outputs	to IEC 61131-2, type 0.5
Switching logic, outputs	PNP (positive-switching)
Fuse protection of outputs (short circuit)	Internal electronic fuse protection per channel
Behaviour after end of overload of the outputs	No automatic return
Output delay with resistive load	Signal change 0->1: < 200 µs Signal change 1->0: < 200 µs
Max. residual current outputs per module	2 A

<b>Feature</b>	<b>Value</b>
Electrical isolation of outputs between channels	No
Electrical isolation of outputs between channel - internal communication	Yes
Max. power supply per channel	0,5 A