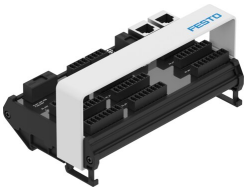
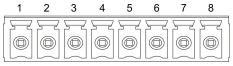
Digital input/output module
CPX-AP-L-16NDI8NDO-PI

Part number: 8176415





Data sheet

Feature	Value
Protocol	AP
Dimensions (W x L x H)	90 mm x 152 mm x 70 mm
Type of mounting	via DIN rail
Product weight	200 g
Ambient temperature	-20 °C...50 °C
Storage temperature	-40 °C...70 °C
Relative air humidity	5 - 95% Non-condensing
Degree of protection	IP20
Corrosion resistance class CRC	0 - No corrosion stress
Vibration resistance	Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Overvoltage category	II
Max. cable length	30 m outputs 30 m inputs 50 m system communication
Note on max. cable length	Power supply according to nominal voltage
LABS (PWIS) conformity	VDMA24364 zone III
Cleanroom suitability, measured according to ISO 14644-14	Element installed statically, no meaningful evaluation possible according to ISO 14644-1
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive
KC mark	KC-EMV
Approval	RCM
Note on materials	RoHS compliant Free of halogen
Diagnostics via LED	Diagnostics per module Load power supply Status per channel
Diagnostics per internal communication	Switch-off load supply Short-circuit/overload in output signal Short circuit/overload in sensor supply Electronics/sensors overvoltage Load overvoltage

Feature	Value
	Electronics/sensors undervoltage Load undervoltage
Max. address volume, inputs	2 Byte
Max. address volume, outputs	1 Byte
Number of outputs	8
Communication interface, function	System communication XF10 IN / XF20 OUT
Communication interface, connection type	2x socket
Communication interface, connection technology	RJ45
Communication interface, number of pins/cores	8
Communication interface, protocol	AP
Communication interface, screened	Yes
Power supply, function	Incoming electronics/sensors and load
Power supply, connection type	Socket
power supply, connection system	Push-pull according to IEC 61984
Power supply, number of pins/wires	4
Power transmission, function	Outgoing electronics/sensors and load
Power transmission, connection type	Socket
Power transmission, connection technology	Push-pull according to IEC 61984
Power transmission, number of pins/wires	4
Note regarding operating voltage	SELV/PELV fixed power supplies required Note the voltage drop
Nominal operating voltage DC	24 V
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%
Max. power supply	2 x 4 A (external fuse required)
Intrinsic current consumption at nominal operating voltage for electronics/sensors	Typically 32 mA
Intrinsic current consumption at nominal operating voltage load	Typically 11 mA
Power failure bridging	10 ms
Reverse polarity protection	Yes
Electrical connection input, function	Digital input
Electrical connection input, connection type	6x socket
Electrical connection input, connector system	Push-pull according to IEC 61984
Electrical connection input, number of connections/cores	8
Number of inputs	16
Characteristic for inputs	To IEC 61131-2, type 3
Switching level	Signal 0: (PS – 5 V) to PS Signal 1: 0 V to (PS – 11 V)
Switching logic for inputs	NPN (negative 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
Fuse protection of inputs (short circuit)	Glass cartridge fuse
Max. residual current of inputs per module	4 A
Electrical isolation of inputs between channels	No
Electrical isolation of inputs between channel – internal communication	No
Electrical connection output, function	Digital output
Electrical connection output, connection type	3x socket
Electrical connection output, connector system	Push-pull according to IEC 61984
Electrical connection output, number of connections/cores	8

Feature	Value
Characteristic for outputs	To IEC 61131-2, type 0.5
Switching logic for outputs	NPN (negative switching)
Output delay with ohmic load	Signal change 0->1: < 200 µs Signal change 1->0: < 200 µs
Max. residual current outputs per module	4 A
Electrical isolation of outputs between channels	No
Electrical isolation of outputs between channel - internal communication	Yes
Max. power supply per channel	0.5 A