

# Digital input module CPX-AP-I-16DI-M12-5P

Part number: 8179435

**FESTO**



 [General operating condition](#)

## Data sheet

| Feature                                                   | Value                                                                                                          |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Dimensions (W x L x H)                                    | 60 mm x 170 mm x 35 mm                                                                                         |
| Type of mounting                                          | On DIN rail via accessories<br>With through-hole                                                               |
| Product weight                                            | 216 g                                                                                                          |
| Ambient temperature                                       | -20 °C ... 60 °C                                                                                               |
| Storage temperature                                       | -40 °C ... 70 °C                                                                                               |
| Relative air humidity                                     | 5 - 95%<br>Non-condensing                                                                                      |
| Degree of protection                                      | IP65<br>IP67                                                                                                   |
| Note on degree of protection                              | Unused connections sealed                                                                                      |
| Corrosion resistance class CRC                            | 1 - Low corrosion stress                                                                                       |
| Max. cable length                                         | 30 m inputs<br>50 m system communication                                                                       |
| Note on max. cable length                                 | Power supply according to nominal voltage                                                                      |
| LABS (PWIS) conformity                                    | VDMA24364-B2-L                                                                                                 |
| 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                                                                                            |
| UKCA marking (see declaration of conformity)              | To UK instructions for EMC                                                                                     |
| KC mark                                                   | KC-EMV                                                                                                         |
| Approval                                                  | RCM<br>c UL us - Listed (Oil)                                                                                  |
| Certificate issuing authority                             | UL E239998                                                                                                     |
| Note on materials                                         | RoHS compliant                                                                                                 |
| Material housing                                          | Process automation<br>Makrolon®<br>Nickel-plated die-cast zinc                                                 |
| Material o-ring                                           | Fluoro rubber                                                                                                  |
| Diagnostics via LED                                       | Diagnostics per module<br>Status per channel                                                                   |
| Diagnostics per internal communication                    | Short circuit/overload in sensor supply<br>Electronics/sensors overvoltage<br>Electronics/sensors undervoltage |
| Communication interface, function                         | System communication XF10 IN / XF20 OUT                                                                        |
| Communication interface, connection type                  | 2x socket                                                                                                      |
| Communication interface, connection technology            | M8x1, D-coded according to EN 61076-2-114                                                                      |
| Communication interface, number of pins/cores             | 4                                                                                                              |
| Communication interface, protocol                         | AP                                                                                                             |

| Feature                                                                            | Value                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Communication interface, screened                                                  | Yes                                                                                        |
| Power supply, function                                                             | Incoming electronics/sensors and load                                                      |
| Power supply, connection type                                                      | Plug                                                                                       |
| power supply, connection system                                                    | M8x1, A-coded to EN 61076-2-104                                                            |
| Power supply, number of pins/wires                                                 | 4                                                                                          |
| Power transmission, function                                                       | Outgoing electronics/sensors and load                                                      |
| Power transmission, connection type                                                | Socket                                                                                     |
| Power transmission, connection technology                                          | M8x1, A-coded to EN 61076-2-104                                                            |
| Power transmission, number of pins/wires                                           | 4                                                                                          |
| Note regarding operating voltage                                                   | SELV/PELV fixed power supplies required<br>Note the voltage drop                           |
| 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 38 mA                                                                            |
| Power failure bridging                                                             | 10 ms                                                                                      |
| Reverse polarity protection                                                        | Yes                                                                                        |
| Electrical connection input, function                                              | Digital input                                                                              |
| Electrical connection input, connection type                                       | 8x socket                                                                                  |
| Electrical connection input, connector system                                      | M12x1, A-coded to EN 61076-2-101                                                           |
| Electrical connection input, number of connections/cores                           | 5                                                                                          |
| Number of inputs                                                                   | 16                                                                                         |
| Characteristic for inputs                                                          | To IEC 61131-2, type 3                                                                     |
| Switching level                                                                    | Signal 0: ≤ 5 V<br>Signal 1: ≥ 11 V                                                        |
| Switching logic for inputs                                                         | PNP (positive switching)<br>2-wire sensors to IEC 61131-2<br>3-wire sensors to IEC 61131-2 |
| Input debounce time                                                                | 0.1 ms<br>3 ms<br>10 ms<br>20 ms                                                           |
| Fuse protection of inputs (short circuit)                                          | Internal electronic fuse per module                                                        |
| Max. residual current of inputs per module                                         | 1.8 A                                                                                      |
| Electrical isolation of inputs between channels                                    | No                                                                                         |
| Electrical isolation of inputs between channel – internal communication            | Yes                                                                                        |