

# Digital input/output module CPX-AP-I-4DI4DO-M8-3P

Part number: 8086601

**FESTO**



 [General operating condition](#)

## Data sheet

| Feature                                      | Value                                                                                                                                                                                                                 |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions W x L x H                         | 30 mm x 170 mm x 35 mm                                                                                                                                                                                                |
| Type of mounting                             | With through-hole                                                                                                                                                                                                     |
| Product weight                               | 129 g                                                                                                                                                                                                                 |
| Ambient temperature                          | -20 °C ... 50 °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 outputs<br>30 m inputs<br>50 m system communication                                                                                                                                                              |
| Information on max. cable length             | Power supply according to nominal voltage                                                                                                                                                                             |
| LABS (PWIS) conformity                       | VDMA24364-B2-L                                                                                                                                                                                                        |
| Cleanroom class                              | Statically installed element, no meaningful evaluation possible according to ISO 14644-1                                                                                                                              |
| CE marking (see declaration of conformity)   | As per EU EMC directive                                                                                                                                                                                               |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC                                                                                                                                                                                            |
| KC characters                                | KC EMC                                                                                                                                                                                                                |
| Certification                                | RCM compliance mark<br>c UL us - Listed (OL)                                                                                                                                                                          |
| Certificate issuing authority                | UL E239998                                                                                                                                                                                                            |
| Note on materials                            | RoHS-compliant                                                                                                                                                                                                        |
| Housing material                             | PC<br>Die-cast zinc, nickel-plated                                                                                                                                                                                    |
| O-ring material                              | FPM                                                                                                                                                                                                                   |
| Diagnostics via LED                          | Diagnostics per module<br>Load power supply<br>Status per channel                                                                                                                                                     |
| Diagnose per internal communication          | Load switch-off<br>Short-circuit/overload in output signal<br>Short circuit/overload in sensor supply<br>Electronics/sensors overvoltage<br>Load overvoltage<br>Electronics/sensors undervoltage<br>Load undervoltage |
| No. of outputs                               | 4                                                                                                                                                                                                                     |
| Communication interface, function            | System communication XF10 IN / XF20 OUT                                                                                                                                                                               |

| Feature                                                                            | Value                                                                                              |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Communication interface, connection type                                           | 2x socket                                                                                          |
| Communication interface, connection technology                                     | M8x1, D-coded as per EN 61076-2-114                                                                |
| Communication interface, number of pins/wires                                      | 4                                                                                                  |
| Communication interface, protocol                                                  | AP                                                                                                 |
| Communication interface, shielding                                                 | yes                                                                                                |
| Power supply, function                                                             | Incoming electronics/sensors and load                                                              |
| Power supply, type of connection                                                   | Plug                                                                                               |
| Power supply, connection technology                                                | M8x1, A-coded as per EN 61076-2-104                                                                |
| Power supply, number of pins/wires                                                 | 4                                                                                                  |
| Voltage forwarding, function                                                       | Outgoing electronics/sensors and load                                                              |
| Voltage forwarding, connection type                                                | Socket                                                                                             |
| Voltage forwarding, connection technology                                          | M8x1, A-coded as per EN 61076-2-104                                                                |
| Voltage forwarding, number of pins/wires                                           | 4                                                                                                  |
| Note regarding operating voltage                                                   | SELV/PELV fixed power supplies required<br>Note voltage drop                                       |
| Nominal operating voltage DC load                                                  | 24 V                                                                                               |
| Permissible voltage fluctuations load                                              | ± 25 %                                                                                             |
| Nominal operating voltage DC for 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 35 mA                                                                                    |
| Intrinsic current consumption at nominal operating voltage load                    | Typically 10 mA                                                                                    |
| Power failure buffering                                                            | 10 ms                                                                                              |
| Reverse polarity protection                                                        | yes                                                                                                |
| Electrical connection input, function                                              | Digital input                                                                                      |
| Electrical connection input, connection type                                       | 4x socket                                                                                          |
| Electrical input connection, connection technology                                 | M8x1, A-coded as per EN 61076-2-104                                                                |
| Electrical connection, input, number of pins/wires                                 | 3                                                                                                  |
| No. of inputs                                                                      | 4                                                                                                  |
| Input characteristics                                                              | As per IEC 61131-2, type 3                                                                         |
| Switching level                                                                    | Signal 0: ≤ 5 V<br>Signal 1: ≥ 11 V                                                                |
| Input switching logic                                                              | PNP (positive switching)<br>2-wire sensors as per IEC 61131-2<br>3-wire sensors as per IEC 61131-2 |
| Input debounce time                                                                | 0.1 ms<br>3 ms<br>10 ms<br>20 ms                                                                   |
| Fuse protection 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                                                                                                 |
| Digital inputs, electrical isolation of input - internal communication             | yes                                                                                                |
| Electrical connection output, function                                             | Digital output                                                                                     |
| Electrical connection output, connection type                                      | 4x socket                                                                                          |
| Electrical connection output, connection technology                                | M8x1, A-coded as per EN 61076-2-104                                                                |
| Electrical output connection, number of pins/wires                                 | 3                                                                                                  |
| Characteristic curve outputs                                                       | As per IEC 61131-2, type 0.5                                                                       |
| Switching logic at outputs                                                         | PNP (positive switching)                                                                           |
| Fuse protection outputs (short circuit)                                            | Internal electronic fuse per channel                                                               |
| Output delay with resistive load                                                   | Signal change 0→1: < 200 µs<br>Signal change 1→0: < 200 µs                                         |
| Max. residual current of outputs per module                                        | 2 A                                                                                                |
| Electrical isolation of outputs between channels                                   | no                                                                                                 |

| Feature                                                                  | Value |
|--------------------------------------------------------------------------|-------|
| Electrical isolation of outputs between channel - internal communication | yes   |
| Max. power supply per channel                                            | 0.5 A |