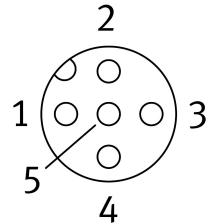


Digital input/output module CPX-AP-A-12DI4DO-M12-5P

FESTO

Part number: 8129111



Data sheet

| Feature | Value |
|----------------------------------|---|
| Dimensions (W x L x H) | (incl. 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 | 98 g |
| Mounting position | optional |
| 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 H-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 |
| 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 to FN 942017-5 and EN 60068-2-27 |
| Oversupply category | II |
| Max. cable length | 30 m outputs 30 m inputs |
| LABS (PWIS) conformity | VDMA24364-B2-L |
| Fire test material | UL94 V-0 (housing) |

| Feature | Value |
|--|--|
| Note on materials | RoHS-compliant Free of halogen Free of phosphoric acid ester |
| Material o-ring | FPM |
| 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 | Load switch-off Communication fault 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 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 | 6 x 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 | 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 |
| Behaviour after end of overload of the sensor supply | Automatic return |
| 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 |
| Electrical connection output, function | Digital output |
| Electrical connection output, connection type | 2x socket |

| Feature | Value |
|--|--|
| Electrical connection output, connector system | M12x1, A-coded to EN 61076-2-101 |
| Electrical connection output, number of connections/cores | 5 |
| Characteristic for outputs | According 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 |
| Max. residual current outputs per module | 2 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 |