

# Digital output module CPX-AP-A-8DO-PI

Part number: 8129107

FESTO



 General operating condition

## Data sheet

| Feature                          | Value                                                                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions (W x L x H)           | 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                | Any                                                                                                                                           |
| 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%<br>Non-condensing                                                                                                                     |
| Nominal altitude of use          | ≤ 2000 m ASL (≥ 79.5 kPa)                                                                                                                     |
| Max. installation height         | 3500 m                                                                                                                                        |
| Note on max. installation height | 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 DIN rail<br>SG2 on direct mounting<br>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<br>SG1 on DIN rail<br>SG2 on direct mounting<br>Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27 |
| Protection class                 | III                                                                                                                                           |
| Pollution degree                 | 2                                                                                                                                             |
| Overvoltage category             | II                                                                                                                                            |
| Max. cable length                | 30 m outputs                                                                                                                                  |
| LABS (PWIS) conformity           | VDMA24364-B2-L                                                                                                                                |
| Fire test material               | UL94 V-0 (housing)                                                                                                                            |
| Note on materials                | RoHS compliant<br>Free of halogen<br>Free of phosphoric acid ester                                                                            |
| Material cover                   | Reinforced PBT                                                                                                                                |
| Material screws                  | Nickel-plated steel                                                                                                                           |
| Material o-ring                  | Fluoro rubber                                                                                                                                 |

| Feature                                                                                        | Value                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diagnostics via LED                                                                            | Diagnostics per channel<br>Diagnostics per module<br>Load power supply<br>Status per channel                                                                                   |
| Diagnostics per internal communication                                                         | Communication error<br>Short-circuit/overload in output signal<br>Electronics/sensors overvoltage<br>Load overvoltage<br>Electronics/sensors undervoltage<br>Load undervoltage |
| Max. address volume, outputs                                                                   | 1 Byte                                                                                                                                                                         |
| Number of outputs                                                                              | 8                                                                                                                                                                              |
| Module parameters                                                                              | Configuration of voltage monitoring load supply PL<br>Behaviour after short circuit/overload at analogue output                                                                |
| Communication interface, protocol                                                              | AP                                                                                                                                                                             |
| Note regarding operating voltage                                                               | SELV/PELV fixed power supplies required<br>Note the 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 output, function                                                         | Digital output                                                                                                                                                                 |
| Electrical connection output, connection type                                                  | 8x terminal strip                                                                                                                                                              |
| Electrical connection output, connector system                                                 | Spring-loaded terminal                                                                                                                                                         |
| Electrical connection output, number of connections/cores                                      | 4                                                                                                                                                                              |
| Electrical connection output, connection pattern                                               | 00997388                                                                                                                                                                       |
| Electrical connection for output, conductor cross section                                      | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                                                                                                   |
| Electrical connection for output, note on conductor cross section                              | 0.13 - 1.5 mm <sup>2</sup> for flexible conductors without wire ferrule                                                                                                        |
| Electrical connection for output, AWG conductor cross section                                  | AWG24 - AWG16                                                                                                                                                                  |
| Characteristic for outputs                                                                     | 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<br>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                                                                                                                                                                          |