

# Controller CPX-E-CEC-M1-PN

Part number: 4252743

FESTO



## Data sheet

 [General operating condition](#)

| Feature  | Value  |
|--|--|
| Dimensions W x L x H                           | 75.9 mm x 82.5 mm x 124.3 mm   |
| Width dimension                                | 18.9 mm  |
| Type of mounting                               | With H-rail  |
| Max. number of modules                         | 10   |
| Product weight                                 | 288 g  |
| Mounting position                              | Vertical<br>Horizontal   |
| Ambient temperature                            | -5 °C ... 50 °C  |
| Note on ambient temperature                    | -5 - 60 °C for vertical installation   |
| Storage temperature                            | -20 °C ... 70 °C   |
| Relative air humidity                          | 95 %<br>Non-condensing   |
| Degree of protection                           | IP20   |
| Corrosion resistance class (CRC)               | 0 - No corrosion stress  |
| Vibration resistance                           | Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6 |
| Shock resistance                               | Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27                |
| Protection against direct and indirect contact | PELV   |
| LABS (PWIS) conformity                         | VDMA24364 zone III   |
| CE marking (see declaration of conformity)     | As per EU EMC directive<br>As per EU RoHS directive                                  |
| UKCA marking (see declaration of conformity)   | To UK RoHS instructions  |
| 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                               | PA   |

| Feature  | Value  |
|--|--|
| Diagnostics via LED                                | Force mode<br>Module status<br>Network error<br>Network status, engineering port 1<br>Engineering port 2 network status<br>EtherCAT network status<br>Network status, port 1<br>Network status, port 2<br>Run<br>Power supply for electronics/sensors<br>Load power supply<br>System fault<br>Maintenance required |
| Control elements                                   | DIL switch for RUN/STOP<br>Optional: CDSB operating unit   |
| IP address setting                                 | DHCP<br>Via CODESYS<br>Optional: via CDSB operating unit   |
| Fieldbus interface, type                           | Ethernet   |
| Fieldbus interface, protocol                       | LLDP<br>MRP, MRPD (ring redundancy)<br>PROFINET I&MO .. 3<br>PROFINET IO<br>PROFINET RT<br>PROFINET Shared device<br>SNMP  |
| Fieldbus interface, function                       | Bus connection, incoming/forwarding  |
| Fieldbus interface, connection type                | 2x socket  |
| Fieldbus interface, connection technology          | RJ45   |
| Fieldbus interface, connection pattern             | 00995789   |
| Fieldbus interface, number of poles/wires          | 8  |
| Fieldbus interface, galvanic isolation             | yes  |
| Fieldbus interface, transmission rate              | 100 Mbit/s   |
| Fieldbus interface 2, type                         | Ethernet   |
| Fieldbus interface 2, protocol                     | CoE<br>EoE<br>EtherCAT®<br>EtherCAT Master<br>FoE  |
| Fieldbus interface 2, function                     | Bus connection, forwarding   |
| Fieldbus interface 2, connection type              | Socket   |
| Fieldbus interface 2, connection technology        | RJ45   |
| Fieldbus interface 2, connection pattern           | 00995789   |
| Fieldbus interface 2, number of poles/wires        | 8  |
| Fieldbus interface 2, galvanic isolation           | yes  |
| Fieldbus interface 2, transmission rate            | 100 Mbit/s   |
| Ethernet interface, connection type                | 2x socket  |
| Ethernet interface, protocol                       | EasyIP<br>Modbus® TCP<br>OPC-UA<br>TCP/IP  |
| Ethernet interface, function                       | Diagnostics<br>Switch  |
| Ethernet interface, connection technology          | RJ45   |
| Ethernet interface, connection pattern             | 00995789   |
| Ethernet interface, number of poles/wires          | 8  |
| Ethernet interface, transmission rate              | 10 Mbit/s<br>100 Mbit/s  |
| Max. address capacity inputs                       | 64 byte  |
| Fieldbus interface, max. address volume for inputs | 512 byte   |
| Max. address capacity outputs                      | 64 byte  |

| Feature  | Value   |
|--|---|
| Fieldbus interface, max. address volume for outputs                                | 512 byte  |
| System parameter   | Diagnostic memory<br>Fail-safe response<br>System start   |
| Module parameters  | Channel alarms for undervoltage<br>Analog module process value representation                               |
| Configuration support  | GSDML file  |
| Additional functions   | CODESYS V3 with SoftMotion  |
| CPU data   | Dual core 766 MHz   |
| Storage medium   | Micro SD ≤ 32 GB<br>USB memory stick ≤ 32 GB  |
| Power supply, function   | Electronics and sensors   |
| Power supply, type of connection   | Terminal strip  |
| Power supply, note on connection type  | > 4 A and UL 2x terminal strip for power supply   |
| Power supply, connection technology  | Spring-loaded terminal  |
| Power supply, connection pattern   | 00995847  |
| Power supply, number of pins/wires   | 4   |
| Nominal operating voltage DC for electronics/sensors                               | 24 V  |
| Permissible voltage fluctuations for electronics/sensors                           | ± 25 %  |
| Power supply, conductor diameter   | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>   |
| Power supply, information on conductor diameter                                    | 0.2 - 2.5 mm <sup>2</sup> for flexible conductors without cable end sleeves                                 |
| Max. power supply  | 8 A   |
| Intrinsic current consumption at nominal operating voltage for electronics/sensors | Typically 150 mA  |
| Power failure buffering  | 20 ms   |
| Reverse polarity protection  | 24 V sensor supply against 0 V sensor supply  |
| USB interface  | USB 2.0   |
| Programming software   | CODESYS provided by Festo   |
| Program memory   | 100 MB user program   |
| Processing time  | Approx. 200 µs/1 k instruction  |
| Function blocks  | and others<br>Read CPX-E module diagnostics<br>CPX-E diagnostic status<br>Copying of CPX-E diagnostic trace |
| Buffer time real-time clock  | 3 Weeks   |
| Flag   | CODESYS variable concept  |