

# Controller CPX-E-CEC-C1

Part number: 5226780

**FESTO**



## Data sheet

 General operating condition

| Feature                                        | Value                                                                                                                                                                          |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions (W x L x H)                         | 42.2 mm x 76.5 mm x 125.8 mm                                                                                                                                                   |
| Grid dimension                                 | 18.9 mm                                                                                                                                                                        |
| Type of mounting                               | With H-rail                                                                                                                                                                    |
| Max. number of modules                         | 10                                                                                                                                                                             |
| Product weight                                 | 145 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 to FN 942017-4 and EN 60068-2-6                                                                                               |
| Shock resistance                               | Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27                                                                                                              |
| Protection against direct and indirect contact | PELV                                                                                                                                                                           |
| LABS (PWIS) conformity                         | VDMA24364 zone III                                                                                                                                                             |
| CE mark (see declaration of conformity)        | To EU EMC Directive<br>In accordance with EU RoHS Directive                                                                                                                    |
| UKCA marking (see declaration of conformity)   | To UK instructions for EMC<br>To UK RoHS instructions                                                                                                                          |
| KC mark                                        | KC-EMV                                                                                                                                                                         |
| Approval                                       | RCM trademark<br>c UL us listed (OL)                                                                                                                                           |
| Certificate issuing authority                  | UL E239998                                                                                                                                                                     |
| Note on materials                              | RoHS-compliant                                                                                                                                                                 |
| Material housing                               | PA                                                                                                                                                                             |
| Diagnostics via LED                            | Force mode<br>Module status<br>Network status, engineering port 1<br>EtherCAT® network status<br>Run<br>Power supply, electronics/sensors<br>Load power supply<br>System fault |
| Operator controls                              | DIL switch for RUN/STOP                                                                                                                                                        |
| IP address setting                             | DHCP<br>Via CODESYS                                                                                                                                                            |

| Feature                                                                            | Value                                                                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Fieldbus interface                                                                 | Ethernet                                                                                                                                   |
| Field bus, protocol                                                                | EtherCAT®<br>EtherCAT CoE<br>EtherCAT EoE<br>EtherCAT FoE<br>EtherCAT Master                                                               |
| Fieldbus interface, function                                                       | Outgoing bus connection                                                                                                                    |
| Field bus, connection type                                                         | Socket                                                                                                                                     |
| Field bus, connection system                                                       | RJ45                                                                                                                                       |
| Fieldbus interface, connection pattern                                             | 00995789                                                                                                                                   |
| Field bus, connection pattern                                                      | 8                                                                                                                                          |
| Field bus interface, electrical isolation                                          | yes                                                                                                                                        |
| Field bus interface, transmission rate                                             | 100 Mbit/s                                                                                                                                 |
| Ethernet interface, connection type                                                | Socket                                                                                                                                     |
| Ethernet interface, protocol                                                       | EasyIP<br>Modbus® TCP<br>OPC UA<br>TCP/IP                                                                                                  |
| Ethernet interface, function                                                       | Diagnostics                                                                                                                                |
| Ethernet interface, connection system                                              | RJ45                                                                                                                                       |
| Ethernet interface, connection pattern                                             | 00995789                                                                                                                                   |
| Ethernet interface, number of pins/wires                                           | 8                                                                                                                                          |
| Ethernet interface, transmission rate                                              | 10 Mbit/s<br>100 Mbit/s                                                                                                                    |
| Max. address volume, inputs                                                        | 64 Byte                                                                                                                                    |
| Max. address volume, outputs                                                       | 64 Byte                                                                                                                                    |
| System parameters                                                                  | Diagnostic memory<br>Fail-safe response<br>System start                                                                                    |
| Module parameters                                                                  | Channel alarms bundling<br>Undervoltage diagnostics<br>Channel alarms for undervoltage<br>Process value representation of analogue modules |
| Configuration support                                                              | CODESYS V3                                                                                                                                 |
| Additional functions                                                               | CODESYS V3                                                                                                                                 |
| CPU data                                                                           | Dual Core 650 MHz                                                                                                                          |
| Power supply, function                                                             | Electronics and sensors                                                                                                                    |
| Power supply, connection type                                                      | Terminal strip                                                                                                                             |
| Power supply, note on connection type                                              | > 4 A and UL 2x terminal strip for power supply                                                                                            |
| power supply, connection system                                                    | Spring-loaded terminal                                                                                                                     |
| Power supply, connection pattern                                                   | 00995847                                                                                                                                   |
| Power supply, number of pins/wires                                                 | 4                                                                                                                                          |
| Nominal DC operating voltage, electronics/sensors                                  | 24 V                                                                                                                                       |
| Permissible voltage fluctuations for electronics/sensors                           | ± 25%                                                                                                                                      |
| Power supply, conductor diameter                                                   | 0.2 mm² ... 1.5 mm²                                                                                                                        |
| Power supply, note on conductor diameter                                           | 0.2 - 2.5 mm² for flexible conductors without wire ferrule                                                                                 |
| Max. power supply                                                                  | 8 A                                                                                                                                        |
| Intrinsic current consumption at nominal operating voltage for electronics/sensors | Typically 65 mA                                                                                                                            |
| Power failure bridging                                                             | 20 ms                                                                                                                                      |
| Reverse polarity protection                                                        | 24 V sensor supply against 0 V sensor supply                                                                                               |
| Programming software                                                               | CODESYS provided by Festo                                                                                                                  |
| Program memory                                                                     | 12 MB user program                                                                                                                         |
| Processing time                                                                    | Approx. 200 µs/1 k instruction                                                                                                             |
| Function modules                                                                   | And others<br>Read CPX-E module diagnostics<br>CPX-E diagnostic status<br>Copy CPX-E diagnostic trace                                      |

| Feature                        | Value                    |
|--------------------------------|--------------------------|
| Buffering time real-time clock | 3 Weeks                  |
| Flag                           | CODESYS variable concept |