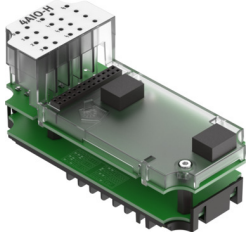


# Input module CPX-4AE-4AA-H

Part number: 8059847

**FESTO**



 [General operating condition](#)

## Data sheet

| Feature                                    | Value                                                                                                                                                                                              |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protocol                                   | HART                                                                                                                                                                                               |
| Dimensions W x L x H                       | (incl. interlinking block and connection system)<br>50 mm x 107 mm x 70 mm                                                                                                                         |
| Width dimension                            | 50 mm                                                                                                                                                                                              |
| Type of mounting                           | On interlinking block                                                                                                                                                                              |
| Product weight                             | 77.4 g                                                                                                                                                                                             |
| Ambient temperature                        | -5 °C ... 50 °C                                                                                                                                                                                    |
| Storage temperature                        | -20 °C ... 70 °C                                                                                                                                                                                   |
| Relative air humidity                      | 95 %<br>Non-condensing                                                                                                                                                                             |
| Degree of protection                       | Depends on manifold block                                                                                                                                                                          |
| Corrosion resistance class (CRC)           | 1 - Low corrosion stress<br>(when installed)                                                                                                                                                       |
| Vibration resistance                       | Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6                                                                                                               |
| Shock resistance                           | Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27                                                                                                                              |
| Max. cable length                          | 500 m                                                                                                                                                                                              |
| LABS (PWIS) conformity                     | VDMA24364-B2-L                                                                                                                                                                                     |
| CE marking (see declaration of conformity) | As per EU EMC directive                                                                                                                                                                            |
| Note on materials                          | RoHS-compliant                                                                                                                                                                                     |
| Housing material                           | PA-reinforced<br>PC                                                                                                                                                                                |
| LED indicators                             | 1 group diagnostics<br>4 channel diagnostics<br>4 channel status                                                                                                                                   |
| Diagnostics                                | Wire break per channel<br>Limit value violation per channel<br>Short circuit/overload per channel<br>Parameterization error<br>Overflow/underflow<br>Limit value violation as per NE43 per channel |
| Control elements                           | DIL switch                                                                                                                                                                                         |

| Feature                                                        | Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameterization                                               | Data format<br>Fail-safe modes per channel<br>Forcing per channel<br>Limit value monitoring per channel<br>Idle mode per channel<br>Measured value smoothing<br>Signal range per channel<br>Overflow/underflow monitoring<br>Monitoring according to NE43 inputs<br>Wire break monitoring per channel<br>Number of HART repetitions<br>Wire break per channel<br>Limit value violation as per NE43 per channel<br>Limit value violation per channel<br>HART variables<br>Hysteresis for critical limits<br>Short circuit/overload per channel<br>Parameterization error<br>Overflow/underflow<br>Response to short circuit/overload |
| Max. load                                                      | 750 Ohm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| DC operating voltage range                                     | 18 V ... 30 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Nominal operating voltage DC                                   | 24 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Intrinsic current consumption at nominal operating voltage     | Typ. 170 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Power failure buffering                                        | 10 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Reverse polarity protection                                    | for all electrical connections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Min. available sensor voltage                                  | 20.7 V at 20 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Max. input resistance                                          | 300 Ohm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Number of selectable analog inputs/outputs                     | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Data format                                                    | 15 bit + sign<br>Scalable to 15 bits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Signal range                                                   | 0 - 20 mA<br>4 - 20 mA<br>4–20 mA with HART                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Repetition accuracy                                            | 0.05 % at 25 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Basic error limit at 25°C                                      | ±0.1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Operating error limit related to the ambient temperature range | ±0.3 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Sensor type                                                    | 0 - 20 mA<br>4 - 20 mA<br>4–20 mA with HART                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Max. open circuit voltage                                      | 28.8 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Electrical isolation between channels                          | no                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Electrical isolation between channel and internal bus          | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Max. short circuit current                                     | 22 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Fuse protection (short circuit)                                | Internal electronic fuse per channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |