





CANopen Sensors and I/O Modules

Process monitoring and automation: Precise measurement of ambient and process conditions with CANopen sensors

The CANopen communication protocol is ideally suited for embedded systems in process automation. In complex devices and systems in the automotive and transport sectors, as well as in mobile machines, stationary plants and test benches, sensors with CANopen interfaces enable the monitoring of important process conditions. The reasons for the versatile applications are the simple and flexible configuration options of this standardised embedded network. CANopen relieves integrators, for example, in the implementation of time-critical processes and bit timing by providing standardised communication objects. For these purposes, ZILA offers CANopen sensors for measuring pressure, air or media temperature as well as relative humidity in combination with temperature.

Modern control systems in industrial applications increasingly require a standardized bus system such as CAN bus. However, not all signals are available with dedicated CAN sensor probes. This is where input and output modules of the ZILA cIO series can help. These are a flexible and efficient option to convert incoming electrical signals into CAN bus.



| | | | |
|--|---|--|--|
|  robust sensor probes |  easy & fast integration |  standardised output signal |  EDS/DBC file available |
|--|---|--|--|

CANopen®



TSR-CAN-03
media temperature



DS-CAN-01
pressure



ZILA cIO Series
input / output modules



KS-CAN-03
rel. humidity temperature



TSL-CAN-03
ambient air temperature

fluidio_CanopenSensoren_EN_08072024_T0Subject to technical changes

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CANopen Sensors and I/O Modules

| Product feature | DS-CAN-01 pressure sensor | KS-CAN-03 climate sensor | TSR-CAN-03 media temperature | TSL-CAN-03 air temperature |
|-----------------------|--|---|--|---|
| Material | Stainless steel | probe: Aluminum cap: PTFE, Aluminum, Standard | Stainless steel | probe: Aluminum cap: PTFE, Aluminum, Standard |
| Measurand | absolute pressure gauge pressure | relative Humidity Temperature | Temperature | Temperature |
| Measuring ranges | 2...4000 bar -1...2 bar | -40...80 °C 0...100 % rH | -40...80 °C -40...+150 °C (optional) | -40...80 °C |
| Mounting | screw-in sensor | wall/cable mount | screw-in sensor | wall/cable mount |
| Connectors (Standard) | electrical: M12 process: various | electrical: M12 | electrical: M12 process: various | electrical: M12 |
| Dimensions in mm | 80x24 | 150x19 | 120x22 (standard) | 150x19 |
| Accuracy | 0,5 % FS | ± 0,5 K (5...+40 °C) ± 2 % (10...90 % rH) | ± 0,3 K (-40...+80 °C) | ± 0,3 K (10...+80 °C) |
| Operating Voltage | 12...27 VDC ± 20% | 10...48 VDC | 12...27 VDC ± 20% | 10...48 VDC |
| Operating temperature | -10...+80 °C | -40...+80 °C | -40...+80 °C | -40...+80 °C |
| Special features | use with all stainless steel compatible media | selectable protective cap | extended temperature range; other measuring tip length | selectable protective cap |

Subject to technical changes

| I/O Module | Digital Inputs | Digital Outputs | Analog inputs | Analog outputs | PT100 PT1000 | Features |
|------------|----------------|-----------------------------------|-------------------------------|-------------------------|--|--|
| cIO-CAN-50 | 2x 24 V | 2x 24 V high side switching | | | | Event counter, PWM |
| cIO-CAN-51 | | 2x 24V | | | | Full-Bridge-Drivers for DC motors, valves or similar loads |
| cIO-CAN-52 | | | | 4x -10...+10V | | |
| cIO-CAN-53 | | | | 1x regulated current | | drive proportional valves |
| cIO-CAN-55 | | | 4x 0...+10 V -10...+10V | | | Resolution: 16 Bit |
| cIO-CAN-56 | | | | | max. 4 PT100/1000 (0,1 K Resolution) | Measuring range: -100°C...+500°C 2-wire-connection (4x) 3-wire-connection (2x) 4-wire-connection (1x) |
| cIO-CAN-57 | | | 4x (0) 4...20mA | | | Resolution: 16 Bit |
| cIO-CAN-58 | | | 2x 4...20mA | | | Resolution: 12 Bit |
| cIO-CAN-59 | 2x 24V | 2x 24V high side switching | | | | Compare-Counter |
| cIO-CAN-60 | | | | 2x 0...20 mA | | Resolution: 12 Bit |

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