

CAN-CBX-PT100

CANopen® Module with 4 RTD Inputs



High Resolution Temperature Measurement

- 4 temperature sensor (RTD) inputs
- Two- or four-wire connection
- Resistance measurement
- Selectable resolution of sensor resistor inputs: 0.1 °C ... 0.0001 °C
- CANopen profiles acc. to CiA® specification CiA 301 and CiA 404

Approved Reliability and Ease of Use

- Electrical isolation of temperature sensor inputs: all channels are electrically isolated against each other
- InRailBus technology combines high ease of use and proven reliability
- DIN-EN carrier rail mounting

Extensive Setup Options of RTD Channels

- Selectable sample rates: 2.5 ... 1000 SPS
- Wide range of supported sensor types: (PT100 ... 5000, Ni100...5000)
- Linearisation according to NIST by on board microcontroller
- Offset/Gain can be adjusted by the user



RTD – Resistance Temperature Device Inputs

The CAN-CBX-Pt100 is designed for the direct connection of up to four temperature sensors. Simple resistance measurements can also be performed. Pt- and Ni-resistance sensors are supported. The sensor resistors can be connected in two- or four-wire configuration. The conversion of the four sensor resistor inputs is realized by

four independent $\Sigma\Delta$ -converters. Linearisation according to NIST is achieved by the on board microcontroller.

CAN Interface and LED Display

The CAN interface is designed according to ISO11898-2 high-speed layer with electrical isolation and supports bit rates up to 1 Mbit/s.

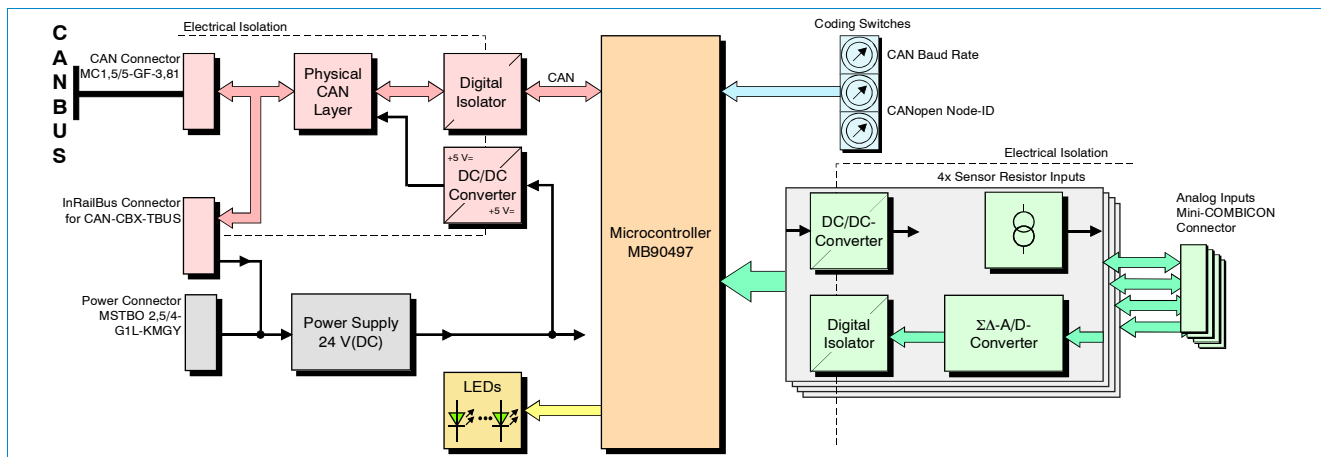
The CANopen-node number and the CAN-bit rate can be easily set via coding switches. Four LEDs indicate the module and CANopen node status.

InRailBus

The CAN-CBX-PT100 features the possibility to connect the power supply and the CAN bus signals via the InRailBus connector (TBUS-connector) integrated in the mounting rail. Individual modules can then be removed from the InRailBus without interrupting the bus signals.

Software Support

The module comes with CANopen firmware according to CiA 301 and supports the CiA 404 profile for measuring devices.



Technical Specifications:

Microcontroller and CAN interface:	
Microcontroller:	MB90F497, 16-bit, 1x ISO 11898-1
CAN interface:	High-speed, ISO 11898-2, up to 1 Mbit/s
Connector:	1x electrically isolated, 5-pin COMBICON style 1x InRailBus
Protocol	CANopen CiA 301, CiA 404
Sensor resistor inputs:	
Number of inputs:	4 $\Sigma\Delta$ -A/D-converter
Sensor types:	- Pt100, Pt200, Pt500, Pt1000 and Pt5000 - Ni100, Ni200, Ni500, Ni1000 and Ni5000 - Resistance measurement
Measuring current:	400 μ A or 40 μ A selectable
Connection technology:	Two- or four-wire configuration
Measurement range:	Pt sensors: -250 °C ... +850 °C Ni sensors: -200 °C ... +400 °C Resistance: 0 ... 50 K Ω
Conversion rate:	2.5 Hz ... 1000 Hz
Resolution:	<1 μ V at 25 Hz conversion rate \approx <0.01 °C

Sensor resistor inputs (continued):	
Connector:	4x 5-pin Mini-COMBICON connector
Electrical isolation:	Electrical isolation of temperature sensor inputs against each other and against power supply
General:	
Operating supply voltage:	24 V DC \pm 20%
Current consumption:	Typical (24 V): 120 mA
Ambient temperature:	-20 °C ... +60 °C
Relative humidity:	Max. 90 % (non-condensing)
Dimensions:	22.5 mm x 99 mm x 114.5 mm
Housing	Plastic housing (ME MAX) for carrier rail mounting NS 35/7,5 DIN EN 60715
Weight:	Approx. 125 g
Order information:	
Designation	order no.
CAN-CBX-PT100	4 sensor resistor inputs, incl. 1x CAN-CBX-TBUS (C.3000.01) C.3032.02