Measuring transducer

for Pt100, galvanically isolated

The MODEX series includes a temperature measuring transducer mounted on-site in the same way as a rail-mounted terminal. The module transforms the signal received from the Pt100 temperature sensor into a proportional, load-in-dependent 4 to 20 mA output signal.

The sensor circuit is intrinsically safe according to Ex protection type Ex ia. An output current exceeding the 4 to 20 mA range signals a senor fault (open/short circuit). The Pt100 temperature sensor can be operated in 2-wire or 3-wire circuits in Zone 1.

- For Pt100
- Analog output 4 to 20 mA
- Fault detector
- Ex ia/ib
- Two-, three-wire senors

Explosion protection

ATEX Ex protection type	⟨Ex⟩ II 2G Ex db e [ia Ga] IIC/IIB Gb ⟨Ex⟩ II M2 Ex db e [ia Ma] I Mb
ATEX certificate number	PTB 97 ATEX 1068 U TÜV 97 ATEX 1204 X
IECEx Ex protection type	Ex db e [ia Ga] IIC/IIB Gb Ex db e [ia Ma] I Mb
IECEx certificate number	IECEx PTB 11.0083U IECEx TUN 11.0030X
Marking CSA	Class I, Zone 1, IIC A/Ex d e [ia] IIC Gb
CSA certificate number	CSA 2011-2484303U
Fitting	Pt100 measuring transducer Type 17-6582-1.../.... ⟨Ex⟩ II (1)G [Ex ia Ga] IIC/IIB ⟨Ex⟩ II (1)D [Ex ia Da] IIIC/IIIB
Safety data	U_m = 253 V I_0 = 12 mA U_0 = 17.3 V P = 51.9 mW

Ex ia	IIC	IIB
L_0 (mH) ≤	200	800
C_0 (nF) ≤	341	2048

For further approvals and certifiactes, see www.bartec.com

Technical data

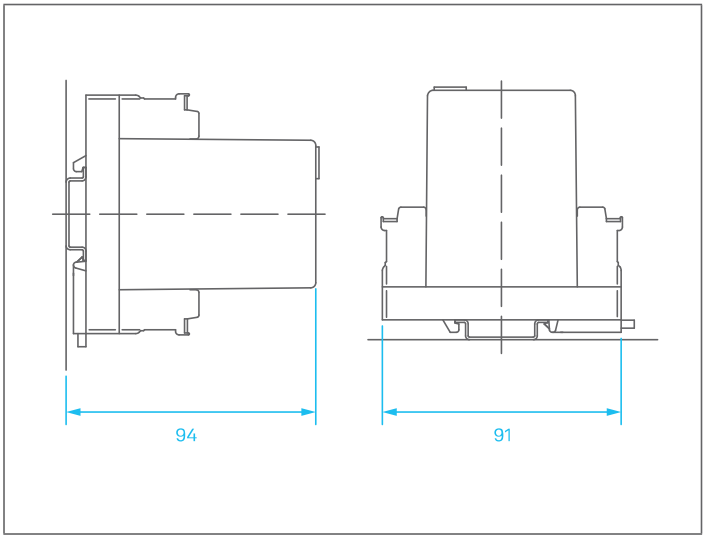
Enclosure material	High-quality thermoplastic
Terminals	2.5 mm², fine stranded
Mounting rail	TH 35 x 7.5 (15) EN/IEC 60715
Terminal designation	written marking labels
Ambient temperature	-40 °C to +60 °C at T4
Storage temperature	-40 °C to +60 °C
Weight	0.250 kg

Electrical data

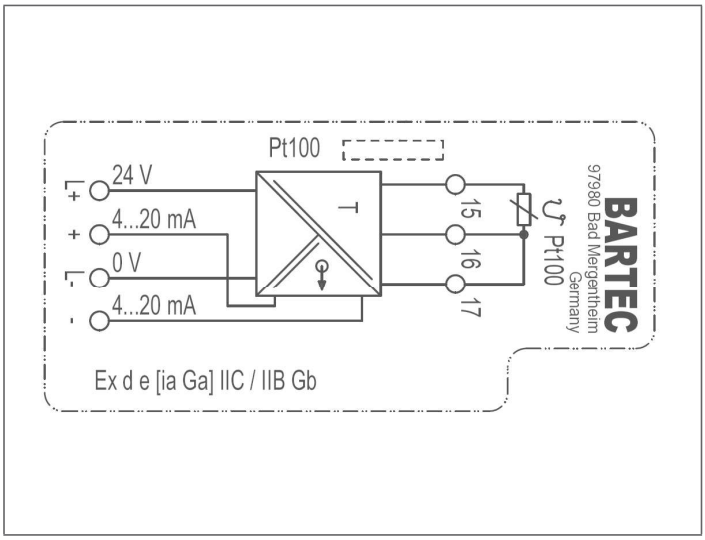
Operating voltage	DC 24 V -10 %, +20 %
Power consumption	1.6 W
Sensor	Pt100 temperature sensor 2- or 3-wire circuits
Output	Load independent current: 4 to 20 mA Max. load: ≤ 400 Ω
Temperature range	-50 °C to +100 °C 0 °C to +200 °C 0 °C to +400 °C
Accuracy	± 1 % of upper value
Function test	100 Ω resistor to terminals 15-16 and bridge terminal 16 with 17. Measure the current value between terminals + and - terminals. Set value: 4 mA +/- 0.2 mA (for type .../5350 deviating 9.3 mA +/- 0.3 mA) Note: Observe the terminal assignment.

Dimensions/mounting positions

Module width: 30 mm



Wiring diagram/terminal assignment



Ordering information

-50 °C to +100 °C	07-7311-93T5/5350
0 °C to +200 °C	07-7311-93T5/7350
0 °C to +400 °C	07-7311-93T5/9350
0 °C to +150 °C	07-7311-93T5/A350