





- Very fast response time
- Compact dimensions, compact design
- Wide temperature range

This Pt100 Ex sheathed resistance thermometer has been particularly designed for use in potentially explosive areas. As it meets the requirements of the Ex m type of protection, intrinsically safe circuits can be dispensed with. Thanks to the pliable part of the resistance thermometer, the device is excellently suitable for application areas requiring a high degree of flexibility and replaceability (e.g. chemical and power plants).

Explosion protection

Marking	 II 2G Ex mb II T6  II 2D Ex mb IIIC T80 °C
Certification	PTB 03 ATEX 2152 X IECEX PTB 16.0010X
Other approvals and certificates, see www.bartec.de	

Technical data

Transducer	in 3-wire circuit
Temperature range	-50 °C to +600 °C or -200 °C to +600 °C tolerancen: class B (EN 60751)
Ambient temperature range	-20 °C to +60 °C or -50 °C to +70 °C
Dimensions	sensor tube diameter 3 mm sensor length 280 resp. 980 mm active sensor length 50 mm flexible part 230 resp. 930 mm bending radius min. 20 mm
Sheath material	stainless steel 1.4541
Connection cable	Rubber or silicone hose 4 x 0.75 mm ²
Protection class	IP 65/EN 60529

Electrical data

Operating voltage	max. AC/DC 60 V
Signal circuit	max. AC/DC 6 V max. AC/DC 10 mA max. AC/DC 60 mW

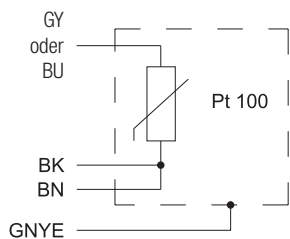
Structure

The resistance thermometer is made of a 3 mm mineral insulated cable with different lengths. This light mineral insulated cable is filled with magnesium oxide. The pliable part of the resistance thermometer starts after 50 mm. Via a transition gland, the connection to a flexible supply cable is created.

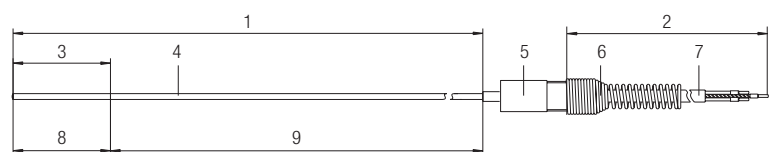
Function

Metals increase the electrical resistance with rising temperatures. The platinum element of the resistance thermometer has a resistance of 100 Ω at 0 °C. This characteristic is used for this type of resistance thermometers to get an image of the temperature. The resistance changes of the Pt100 Ex are converted into a temperature value and displayed by a control unit.

Electrical connection 3-wire



Structure



- 1 NL-20
- 2 AL
- 3 Length 50 mm
- 4 Sheathed cable
- 5 Transition gland
- 6 Anti-kink protection
- 7 connection cable
- 8 rigid
- 9 flexible

Ordering information

Measurement range	Ambient temperature range	Nominal length NL	Connecting cable AL Length	Connecting cable Version	Order no.
-50 °C to +600 °C	-20 °C to +60 °C	300 mm	2 m	rubber	27-7125-13330220
-50 °C to +600 °C	-20 °C to +60 °C	300 mm	5 m	rubber	27-7125-13330520
-200 °C to +600 °C	-20 °C to +60 °C	300 mm	2 m	rubber	27-7128-13330220
-50 °C to +600 °C	-50 °C to +70 °C	300 mm	2 m	silicone	27-7125-13330250
-50 °C to +600 °C	-50 °C to +70 °C	300 mm	5 m	silicone	27-7125-13330550
-200 °C to +600 °C	-50 °C to +70 °C	300 mm	2 m	silicone	27-7128-13330250
-200 °C to +600 °C	-50 °C to +70 °C	1000 mm	2 m	silicone	27-7128-13130250

Technical data subject to change without notice.