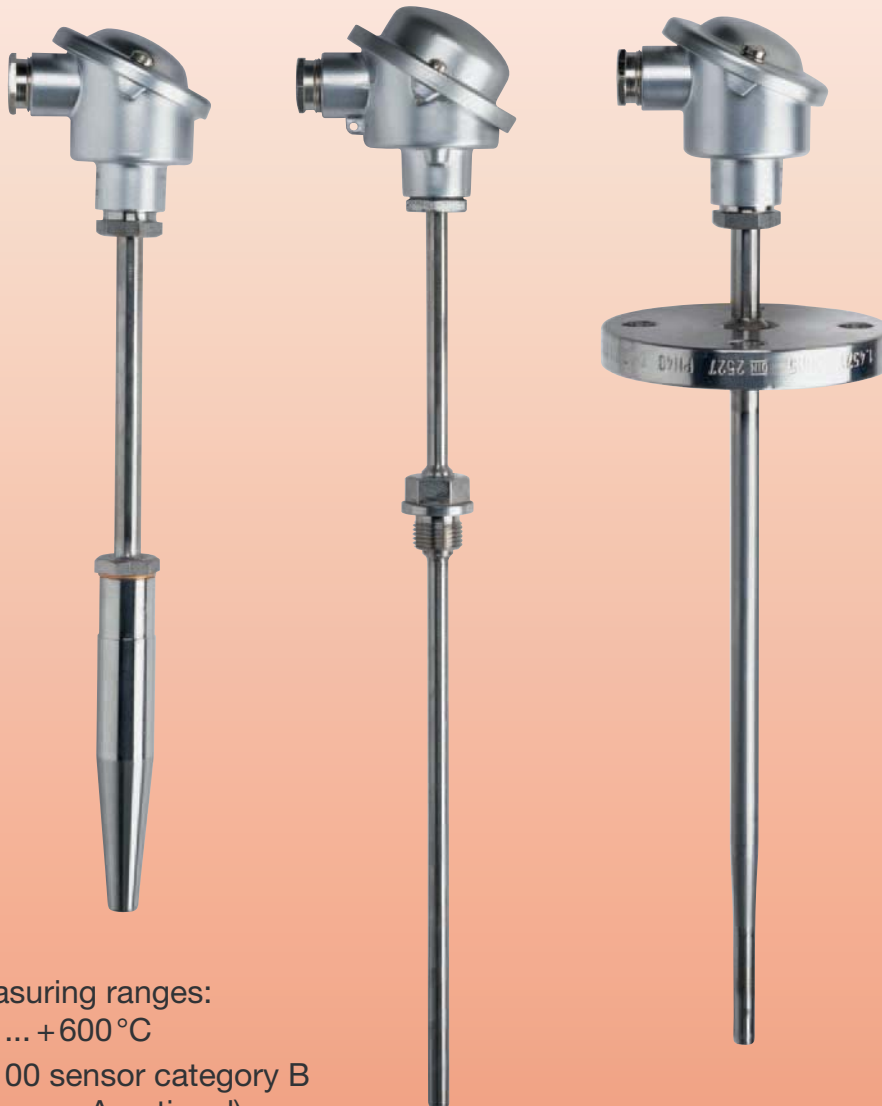




## Screw-In and Welded Resistance Thermometers according to DIN with Removable Measuring Element



measuring  
•  
monitoring  
•  
analysing



- Measuring ranges:  
-80 ... +600 °C
- Pt 100 sensor category B  
(category A optional)
- Optional head mounted  
transmitter; output: 4 - 20 mA
- Protective tubes  
according to DIN 43763  
form A, B, C, D, G, F



T2

KOBOLD companies worldwide:

ARGENTINA, AUSTRIA, BELGIUM, CANADA, CHILE, CHINA, COLOMBIA,  
CZECHIA, FRANCE, GERMANY, GREAT BRITAIN, INDIA, IRAN, INDONESIA,  
ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, SINGAPORE,  
SLOVAKIA, SPAIN, SWITZERLAND, THAILAND, USA, VENEZUELA, VIETNAM

KOBOLD Messring GmbH  
Nordring 22-24  
D-65719 Hofheim/Ts.  
☎ +49(0)6192 299-0  
Fax +49(0)6192 23398  
E-Mail: info.de@kobold.com  
Internet: www.kobold.com

**Model:**  
TWD...

### Description

The screw-in resistance thermometers comprise a rugged installation fitting made of stainless steel with thread or flange connection, a connection head made of aluminium casting and a removable measuring element. The measuring insert can also be replaced without emptying the process.

The weldable sleeve is supplied as standard for welded resistance thermometers.

A Pt 100 temperature sensor according to IEC 751, category B in two-wire circuitry is fitted in the measuring insert as standard.

These sensors are available as single or double resistance thermometers.

The resistance thermometer is available with a transmitter as an option.

### Special versions

**In addition to standard immersion lengths according to DIN, customer specified resistance thermometers can also be delivered.**

For example:

- Terminal housings BUZ or BBK
- other immersion lengths
- other materials
- other connection threads
- other tolerance class

### Transmitter

Resistance thermometers with transmitter are used to transmit measuring signals noise-free over long distances. The two-wire transmitter is encapsulated in epoxy resin and is situated in the connection head; its output is a temperature linear output signal of 4 - 20 mA.

### Applications

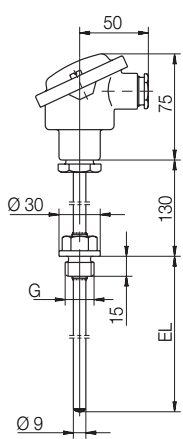
Screw-in resistance thermometers are particularly suited for measuring temperature in liquid and gaseous media. Areas of application are to be found in air conditioning and refrigeration technology, in heating installation, furnace, machine and apparatus construction as well as in industry in general.

### Technical Details

Protection:	head form B IP 54 ambient temperature head: max. 85 °C
Sensor:	Pt100, category B (category A optional)
Transmitter	
Output:	4 - 20 mA
Min./Max. measuring range:	-50/+600 °C
Minimum measuring span:	50 K
Supply voltage:	6.5 - 32 V <sub>DC</sub>

### Screw-in resistance thermometers form B with or without neck pipe

Protective tube G 1/2 AG according to DIN 43 763 (with neck pipe)

	Model no.	Immersion length [mm]	Protective tube	Connection	Sensor type/ category	Wiring	Connection head
	TWD-L9410	100	9 x 7 mm st. st. 1.4571 max. 600 °C without neck pipe	..2.. = G 1/2	..1.. = 1x Pt100, categ. B (-30..+550 °C) ..2.. = 2x Pt100, categ. B (-30..+550 °C)	..2.. = 2-wire ..3.. = 3-wire ..4.. = 4-wire** from an in- stallation length > 160 mm we recommend a 3- or 4-wire	..B = form B ..T* = form B with transducer for top moun- ting TUM-KW ..P* = form B with transducer for top moun- ting TUM-KP
	TWD-L9416	160					
	TWD-L9425	250					
	TWD-L9440	400					
	TWD-B9410	100	9 x 7 mm st. st. 1.4571 max. 600 °C with neck pipe	..2.. = G 1/2	..3.. = 1x Pt100, categ. B (-80..+600 °C) ..4.. = 2x Pt100, categ. B (-80..+600 °C)		
	TWD-B9416	160					
	TWD-B9425	250					
	TWD-B9440	400					

\* Please specify meas. range when ordering. \*\* with 1x Pt 100 only

**Screw-in resistance thermometer form C with neck pipe**

Protective tube G 1 AG according to DIN 43 763

	Model no.	Immersion length [mm]	Protective tube	Connection	Sensor type/ category	Wiring	Connection head
	TWD-CB410	100	11x7 mm st. st. 1.4571 max. 600°C	..4.. = G 1	..1.. = 1x Pt100, categ. B (-30..+550°C)	..2.. = 2-wire	..B = form B ..T* = form B with transducer for top moun- ting TUM-KW ..P* = form B with transducer for top moun- ting TUM-KP
	TWD-CB416	160			..2.. = 2x Pt100, categ. B (-30..+550°C)	..3.. = 3-wire	
	TWD-CB425	250			..3.. = 1x Pt100, categ. B (-80..+600°C)	..4.. = 4-wire**	
	TWD-CB440	400			..4.. = 2x Pt100, categ. B (-80..+600°C)	from an in- stallation length > 160 mm we recommend a 3- or 4-wire	

\* Please specify meas. range when ordering. \*\* with 1x Pt 100 only

**Screw-in resistance thermometer form G with neck pipe**

Tapered protective tube G 1 AG according to DIN 43 763 for faster response time

	Model no.	Immersion length [mm]	Protective tube	Connection	Sensor type/ category	Wiring	Connection head
	TWD-G9416	160	9x7 mm st. st. 1.4571 max. 400°C	..4.. = G 1	..1.. = 1x Pt100, categ. B (-30..+400°C)	..2.. = 2-wire	..B = form B ..T* = form B with transducer for top moun- ting TUM-KW ..P* = form B with transducer for top moun- ting TUM-KP
	TWD-G9425	250			..2.. = 2x Pt100, categ. B (-30..+400°C)	..3.. = 3-wire	
	TWD-G9428	280			..4.. = 4-wire**	from an in- stallation length > 160 mm we recommend a 3- or 4-wire	

\* Please specify meas. range when ordering. \*\* with 1x Pt 100 only

**Immersion resistance thermometer form A**

Protective tube according to DIN 43 763 with adjustable screwing

	Model no.	Nominal length [mm]	Protective tube	Connection	Sensor type/ category	Wiring	Connection head
	TWD-AF450	500	15x11 mm st. st. 1.4571 max. 600°C	..B.. = adjustable, G 3/4, st. steel ..C.. = aluminium sliding flange DIN 43743	..1.. = 1x Pt100, categ. B (-30..+550°C)	..3.. = 3-wire ..4.. = 4-wire**	..B = form B ..T* = form B with transducer for top moun- ting TUM-KW ..P* = form B with transducer for top moun- ting TUM-KP
	TWD-AF471	710			..2.. = 2x Pt100, categ. B (-30..+550°C)		
	TWD-AF41T	1000			..3.. = 1x Pt100, categ. B (-80..+600°C)		
	TWD-AF4T4	1400			..4.. = 2x Pt100, categ. B (-80..+600°C)		
	TWD-AF42T	2000					

\* Please specify meas. range when ordering. \*\* with 1x Pt 100 only

**Welded resistance thermometer form D**  
with protective tube according to DIN 43 763

Model no.	Lengths EL/L1 [mm]	Protective tube	Connection	Sensor type/ category	Wiring	Connection head
TWD-D1406	65 / 140 (D1)	stainless steel 1.4571 -60..+550 °C	..0..=welded	..1.. = 1x Pt100, categ. B (-30..+550 °C)	..3.. = 3-wire ..4.. = 4-wire**	..B = form B ..T* = form B with transducer for top mounting TUM-KW
TWD-D2412	125 / 200 (D2)			..2.. = 2x Pt100, categ. B (-30..+550 °C)		
TWD-D4406	65 / 200 (D4)			..3.. = 1x Pt100, categ. B (-80..+600 °C)		
TWD-D5412	125 / 260 (D5)			..4.. = 2x Pt100, categ. B (-80..+600 °C)		
TWD-D1906	65 / 140 (D1)	stainless steel 1.7335 -60..+540 °C	..0..=welded	..1.. = 1x Pt100, categ. B (-30..+550 °C)	..3.. = 3-wire ..4.. = 4-wire**	..P* = form B with transducer for top mounting TUM-KP
TWD-D2912	125 / 200 (D2)			..2.. = 2x Pt100, categ. B (-30..+400 °C)		
TWD-D4906	65 / 200 (D4)			..3.. = 1x Pt100, categ. B (-80..+600 °C)		
TWD-D5912	125 / 260 (D5)			..4.. = 2x Pt100, categ. B (-80..+600 °C)		

\* Please specify meas. range when ordering. \*\* with 1x Pt 100 only

**Insertion resistance thermometer form F**

with flange DN 25 PN 40, tapered protective tube according to DIN 43 763 for faster response time

Model no.	Immersion length [mm]	Protective tube	Connection	Sensor type/ category	Wiring	Connection head
TWD-F9422	225	9x7 mm st. st. 1.4571 max. 400 °C	..4.. = DN 25	..1.. = 1x Pt100, categ. B (-30..+400 °C)	..3.. = 3-wire ..4.. = 4-wire**	..B = form B ..T* = form B with transducer for top mounting TUM-KW ..P* = form B with transducer for top mounting TUM-KP
TWD-F9428	285			..2.. = 2x Pt100, categ. B (-30..+400 °C)		
TWD-F9434	345			..3.. = 1x Pt100, categ. B (-80..+600 °C)		

\* Please specify meas. range when ordering. \*\* with 1x Pt 100 only

**Spare measuring insert for resistance thermometers according to DIN 43 762**

Model no.	For form	Immers. length [mm]	Length of sensing [mm]	Diameter [mm]	Sensor type/ category	Wiring	Electrical connection
TWD-M82050	A	500	525	8	..1.. = 1x Pt100, categ. B	..2.. = 2-wire ..3.. = 3-wire ..4.. = 4-wire	..K = ceramic base for head form B
TWD-M82071	A	710	735	8			
TWD-M8201T	A	1000	1025	8			
TWD-M820T4	A	1400	1425	8			
TWD-M8202T	A	2000	2025	8	..2.. = 2x Pt100, categ. B	..T* = form B with transducer for top mounting TUM-KW	..P* = form B with transducer for top mounting TUM-KP
TWD-M62010	B,** C	100	255	6			
TWD-M62016	B,** C	160	315	6	..A.. = 1x Pt100, categ. A	..4.. = 4-wire	
TWD-M62025	B,** C	250	405	6			
TWD-M62040	B,** C	400	555	6	..B.. = 2x Pt100, categ. A		
TWD-M620D1	D1	65	315	6			
TWD-M620D2	D2	125	375	6			
TWD-M620D4	D4	65	375	6			
TWD-M620D5	D5	125	435	6			

\*Please specify meas. range when ordering. \*\* Version B with neck pipe (without neck pipe on request)

T2