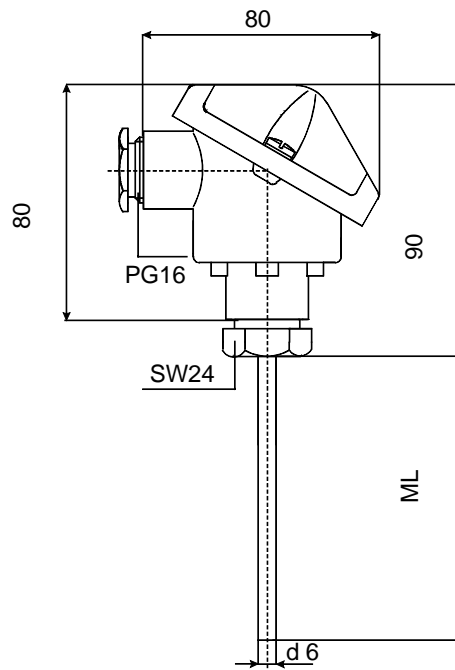


# Thermocouple inset *omnigrad TEC 420*

According to DIN 43735



## Description

The thermometer TEC 420 comprises a TEC 100 6 mm diameter inset with either a transmitter mounting plate or a ceramic block terminal. The hot junction can be either "grounded" or "isolated" from the sheath. The terminal head can be selected from a wide choice of standards items (see Technical Information TA 20 or order key).

## Application

TEC 420 sheathed thermocouples cover temperatures range of -200°C to 1200°C depending on the type of thermocouple. They can be used in low pressure applications in direct contact with the medium or protected by a thermowell. They can also be used in all applications where small immersion lengths are needed. Special attention should be paid to the maximum operating temperature of the connection head.

## Response time

To 50% and 90% of end value in water at 0,4m/s according to VDE/VDI 3522

	T <sub>50</sub>	T <sub>90</sub>
Isolated junction	2.5 s	7 s



## Technical Data

### Inset

Type:  
Thermocouple type  
single or double:  
Range:  
Tolerances

Isolation resistance:  
Sheath material:

### Terminal head

Standard:

### Process connection

Type:

TEC 100 to DIN 43735, 6 mm diameter

T (Cu/CuNi), J (Fe/CuNi), K (NiCr/NiAl)  
according to the type of thermocouple  
according to class 2 DIN IEC 584.2  
other available on request

≥ 1000 MΩ/ test voltage 500 V DC  
AISI316-W1.4401; INCONEL 600-W2.4816

TA 20A DIN B type, in Al, max temp. 130 °C  
IP68 protection rate, or,

TA 20B DIN B type, in PA, max. temp. 80 °C  
IP55 protection rate, or,

TA 20C DIN B type, in Al, max. temp. 130 °C,  
for I.S. applications, IP55 protection rate

TA 50 threaded compression fitting (see fig. 1)  
TA 60 flanged compression fitting (see fig. 2)  
TA 70 weld-in sanitary fitting (see fig. 3),  
to be ordered separately

Endress+Hauser

Nothing beats know-how



# Order Key

## TEC 420, 6 mm - Sheath TC Thermometer with insulation in mineral oxide

Includes a 6 mm mineral insulated thermocouple and a terminal head.

Range : according to type of thermocouple

Tolerance : Class 2, DIN IEC 584.2

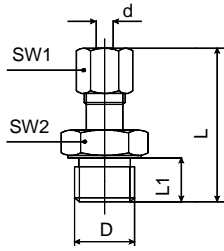


Fig. 1 - TA 50 threaded compression fitting, d=6 mm

D	SW1	SW2	L1	L	Element material
G1/4"	17	19	10	43.5	AISI 316
G1/2"	17	27	15	50.5	PTFE
G1/4"	17	19	10	41	
G1/2"	17	27	15	48	

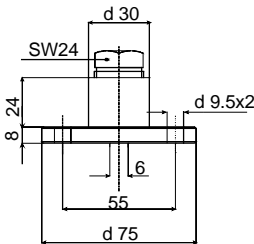


Fig. 2 - TA 60 flanged compression fitting  
Sealant glands in PTFE or in AISI 316

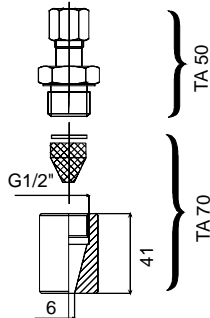


Fig. 3 - TA 70 weld-in hygienic fitting  
to be used with TA 50

### Type of thermoelement

- B - 1 x TC type K, sheath INCONEL 600 - W2.4816
- F - 2 x TC type K, sheath INCONEL 600 - W2.4816
- H - 1 x TC type J, sheath AISI 316 - W1.4401
- J - 2 x TC type J, sheath AISI 316 - W1.4401
- L - 1 x TC type T, sheath AISI 316 - W1.4401
- M - 2 x TC type T, sheath AISI 316 - W1.4401

### Insertion length ML

- A - 120 mm insertion length ML
- B - 175 mm insertion length ML
- C - 235 mm insertion length ML
- D - 275 mm insertion length ML
- E - 335 mm insertion length ML
- F - 365 mm insertion length ML
- G - 425 mm insertion length ML
- H - 485 mm insertion length ML
- K - 515 mm insertion length ML
- L - 615 mm insertion length ML
- M - 695 mm insertion length ML
- P - 785 mm insertion length ML

### Type of terminal strip

- 12 - Washer DIN B head, wire length 45 mm
- 13 - Ceramic block, DIN B head, 1 x TC
- 14 - Ceramic block, DIN B head, 2 x TC

### Hot junction type

- G - Hot junction grounded
- J - Hot junction isolated

### Terminal head

- A - TA 20A - DIN B, Al
- B - TA 20B - DIN, PA
- C - TA 20C - DIN B, Al, i.s.

### Built-in 2 wire transmitter

- 0 - Transmitter not built-in
- 1 - Transmitter built-in

TEC 420-

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Complete Order Code

All information is subject to change without notice

### Export Division

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