**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

<table>
<thead>
<tr>
<th></th>
<th>$T_{50}$</th>
<th>$T_{90}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolated junction</td>
<td>2.5 s</td>
<td>7 s</td>
</tr>
</tbody>
</table>

**Technical Data**

**Inset**

Type: TEC 100 to DIN 43735, 6 mm diameter

Thermocouple type

single or double: 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

Isolation resistance:

$\geq 1000 \text{ M}\Omega$ test voltage 500 V DC

AISI316-W1.4401; INCONEL 600-W2.4816

Sheath material:

Terminal head

Standard:

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

Process connection

Type:

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
**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

**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

All information is subject to change without notice.

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**Export Division**

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