

TEMPERATURE SENSOR

type 411, 412, 413, 414, 415
type 421, 422, 423, 424, 425

SPECIFICATION

Temperature range	-40°C... +550°C -40°C... +400°C -40°C... +600°C -40°C... +900°C	(Pt100) (T) (J) (K)
Measuring element	platinum resistor thermocouple Cu-CuNi thermocouple Fe-CuNi thermocouple NiCr-NiAl	(Pt100) ⁽¹⁾ (T) (J) (K)
Class of processing element	2 (B) ⁽¹⁾	
Conductor material	wire Cu/Ni (for Pt100)	
Assembly	2, 3 or 4 wires (for Pt100)	
Measuring junction	insulated ⁽¹⁾	
Sheath material	steel 1.4541	
Roughness of sheath surface	$R_a < 0,8 \mu\text{m}$ ⁽²⁾	
Maximum operating pressure	see the Sheath Operating Loads information	
Connection head type	MA or B ⁽⁴⁾	
Head operating temperature	-40°C... +100°C	
Fitting	welded stationary with thread M20x1,5 or G1/2" ⁽³⁾	
Additional accessories	thermowell for welding temperature transmitter compensation cable	

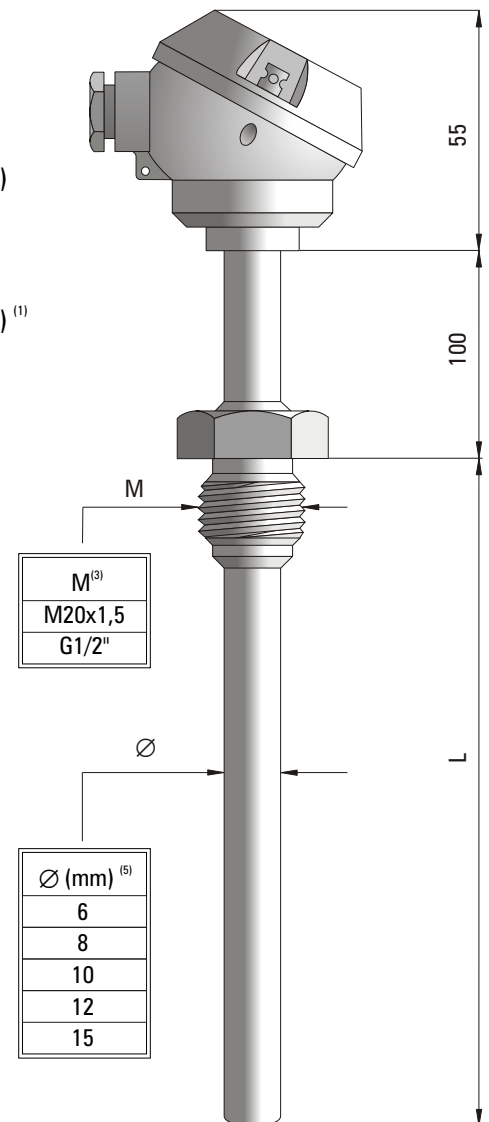
⁽¹⁾ Pt500, Pt1000, Ni100, Ni1000 on demand

⁽²⁾ Other parameters according to customer requirements

⁽³⁾ Other inch and metric threads on demand

⁽⁴⁾ Connection head with protection class IP65 or acid resistant on demand

⁽⁵⁾ Protection tube of outer diameter $\varnothing 9$ and $\varnothing 11$ mm on demand



ORDERING CODE



Thread: M 20x1,5 (1) or G1/2" (2)

Outer diameter: $\varnothing 6$ (1), $\varnothing 8$ (2), $\varnothing 10$ (3), $\varnothing 12$ (4), $\varnothing 15$ (5)

Measuring element **Pt100, T, J or K**

Single (1) or double (2) measuring element

Sensor length L = 50, 100, 200, 300, 400, 600, 800 or 1000 mm⁽²⁾

Option with the head-mount transmitter **T**

Example for order: TP-411K-1-400 sensor with single thermocouple NiCr-NiAl (K), with connection head type MA, of outer diameter $\varnothing = 6$ mm and length L=400mm with welded stationary fitting with thread M20x1,5.
 TP-411K-1-400-T; TCH-2140-K sensor with connection head type B, option with the head-mount transmitter type TCH-2140-K.