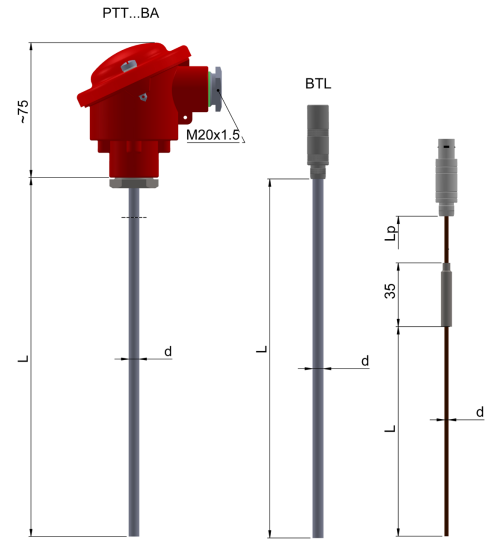


Mineral insulated thermocouple sensors PTTJ, PTTK, PTTN

Technical description

Measuring range / sensing element																													
(-40 ÷ 700) °C	J class 2																												
(-40 ÷ 1200) °C	K, N class 2																												
Thermowell																													
– material: steel 1.4541 for J, Inconel 600 for K and N																													
– length L [mm]: acc. to requirements																													
– min. bending radius [mm]: 3xd																													
Max. the range of continuous operation depends on the diameter of the mineral insulation																													
Thermocouple class 2	Mineral insulated diameter d [mm]																												
J	<table border="1"> <tr> <th>ø1</th> <th>ø1,5</th> <th>ø2</th> <th>ø3</th> <th>ø4,5</th> <th>ø6</th> <th>ø8</th> </tr> <tr> <td>315 °C</td> <td>315 °C</td> <td>400 °C</td> <td>450 °C</td> <td>550 °C</td> <td>700 °C</td> <td>–</td> </tr> <tr> <td>K</td> <td>760 °C</td> <td>760 °C</td> <td>800 °C</td> <td>900 °C</td> <td>1000 °C</td> <td>1200 °C</td> </tr> <tr> <td>N</td> <td>–</td> <td>–</td> <td>–</td> <td>900 °C</td> <td>–</td> <td>1200 °C</td> </tr> </table>	ø1	ø1,5	ø2	ø3	ø4,5	ø6	ø8	315 °C	315 °C	400 °C	450 °C	550 °C	700 °C	–	K	760 °C	760 °C	800 °C	900 °C	1000 °C	1200 °C	N	–	–	–	900 °C	–	1200 °C
ø1	ø1,5	ø2	ø3	ø4,5	ø6	ø8																							
315 °C	315 °C	400 °C	450 °C	550 °C	700 °C	–																							
K	760 °C	760 °C	800 °C	900 °C	1000 °C	1200 °C																							
N	–	–	–	900 °C	–	1200 °C																							
Construction version																													
– with head mounted transmitter	type AP																												
– with connection head	type BA (IP55, (-40 ÷ 100) °C)																												
– with exposed wire ends 20 mm	type BT																												
– with sleeve and stranded wires 50 mm	type T																												
– with M-type plug (miniature)*	type BTWM																												
– with S-type plug (standard)*	type BTWS																												
– with LEMO socket	type BTL																												
– with lead wire	type TKb																												
– with lead wire and M-type plug	type TKbWM																												
– with lead wire and S-type plug	type TKbWS																												
– with lead wire and LEMO plug	type TKbL																												
Wire																													
– wire: 2x0,22 mm ² in double silicone insulation																													
– wire: 2x0,22 mm ² in double metal fiberglass insulation																													
– measuring junction: isolated SO																													
– length L _p [m]: to order																													
Options																													
– head connection: aluminium NA, IP65; NA with snap lock – p. 217																													
– accuracy class: 1																													
Additional accessories																													
– temperature transmitters – p. 225+241																													
– version BTW, TKbW, BTL, TKbL: socket or plug acc. to requirements																													
– mounting brackets: UG-1, UG-3, UG-8, UZK-1 – p. 215+216																													



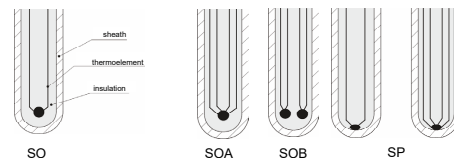
Response time T05/T09

Sensor type	ø9	ø11
Pt	≤33/≤95	≤40/≤120
J, K insulated junction	≤22/≤62	≤a27/≤90
J, K grounded junction	≤3/≤8	≤6/≤15

Tolerance for thermocouples class acc. to. PN-EN 60584

Thermocouple	Class 1		Class 2	
	Range [°C]	Tolerance [°C]	Range [°C]	Tolerance [°C]
J Fe-CuNi	(-40+375) (375+750)	±1,5 ±0,004 [t]	(-40+333) (333+750)	±2,5 ±0,0075 [t]
K, Na NiCr-NiAl	(-40+375) (375+1000)	±1,5 ±0,004 [t]	from (-40+333) (333+1200)	±2,5 ±0,0075 [t]

Types of measuring hot junction



* BTW M for mineral insulated [mm]: ø1; ø1,5; ø2; ø3

* BTW S for mineral insulated [mm]: ø1; ø1,5; ø2; ø3; ø4,5; ø6

Ordering code

Temperature sensor	...	PTT	...	...	...	...	...	...	...	...	...	...	...	...
Single		no sign												
Double for d>2 mm		2												
With transmitter (only BA)		AP												
Thermocouple Fe-CuNi			J											
Thermocouple NiCrSi-NiSi			N											
Thermocouple NiCr-NiAl			K											
Construction version		BA, BT, T, BTWM, BTWS, TKb*												
Mineral insulated diameter dx10						60*								
Thermocouple class							1, 2							
Junction insulated from the sheath								SOA, SOB, SO						
Junction grounded									SP					
Sheath length L [mm]										to order				
Cable length L _p [m]											to order			
Cable insulation: silicone														Si
Cable insulation: braided fiberglass														Ws
Type of transmitter and temperature settings														Tx-(0 ÷ 400) °C*
Additional accessories														UG-8*

* or others acc. to requirements

Ordering example

PTTJ-TKb-45-1-SO-500-3m-Si

On request, a Quality Certificate confirming the conformity of workmanship or a Calibration Certificate of the Accredited Laboratory for Temperature Measurements at Limatherm Sensor Sp. z o.o.