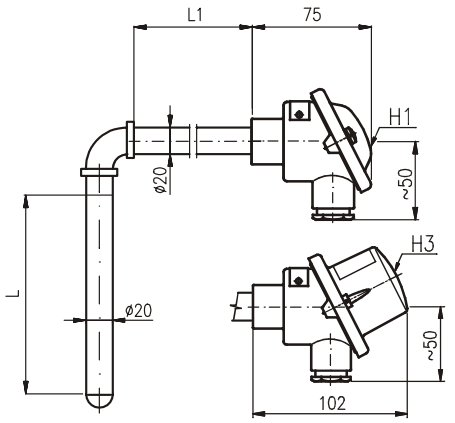
T1506
Angle-type Thermocouple Temperature Sensors without/with Transmitters

- **Thermocouple J, K**
- **Measuring range -200 to +500 °C ("J"), 0 to +1000 °C ("K")**
- **Accuracy class 2 according to EN 60584-2**
- **Head form B according to DIN**
- **Protective tube materials: steel DIN 1.7335, DIN 1.4845**
- **Selectable protective tube length**
- **Thermometer is fixed with fixing shift pipe union**
- **Housing IP 54**
- **Optional headmounted programmable transmiter with output 4 to 20 mA, including circuit isolation version and II 1G EEx d IIC T1 ... T6 (ATEX)**



Application

Angle-type thermocouple temperature sensors T1506 are designed for remote measuring of temperature in furnaces, baths and the like. They can be supplied with or without 4 to 20 mA headmounted transmitters.

Description

A single thermocouple type J or type K which is placed in the protective tube and connected to a terminal block inside the head form B according to DIN. There is made use of rise of thermoelectric voltage. Its size depends on a temperature difference between a measuring junction and a cold junction of the thermocouple. With a version with a transmitter the thermoelectric voltage is converted to a unified linear current signal of 4 to 20 mA. The thermometer should be mounted into furnace and the like by a fixing shift pipe union.

Technical Specifications

Thermocouple:
J, K, accuracy class 2 according to EN 60584-2

Measuring Range:
-200 to +500 °C (thermocouple J)
0 to +1000 °C (short-term up to 1100 °C) (T/C K)

Diameter of Wires:
∅3 mm

Materials:

Head	- Aluminium alloy
Protective tube	- Carbon steel DIN 1.7335 (for „J“ only)
	- Stainless steel DIN 1.4845 (for „K“ only)

Housing:
IP 54

EMC (Electromagnetic Compatibility):
According to EN 61326-1:98 / A1:99

Operation Conditions

Maximal Temperature of Head:
150 °C (without transmitter)
80 °C (with transmitter PT-031 and P3301)
85 °C (with transmitter P5102, P5201 and P5310)

Other specifications

EMC (Electromagnetic Compatibility):
According to EN 61326-1:98 / A1:99

Weight:
a) without transmitters with head H1:
Nominal lenght L: 500, 400 ... 1.70 kg
630, 500 ... 2.00 kg
630, 600 ... 2.10 kg
800, 600 ... 2.50 kg

b) with head H2 plus 0.03 kg

c) with transmitter PT-031 plus 0.02 kg
with transmitter P5102 plus 0.04 kg
with transmitter P5201 plus 0.05 kg
with transmitter P3301 plus 0.04 kg
with transmitter P5310 plus 0.04 kg

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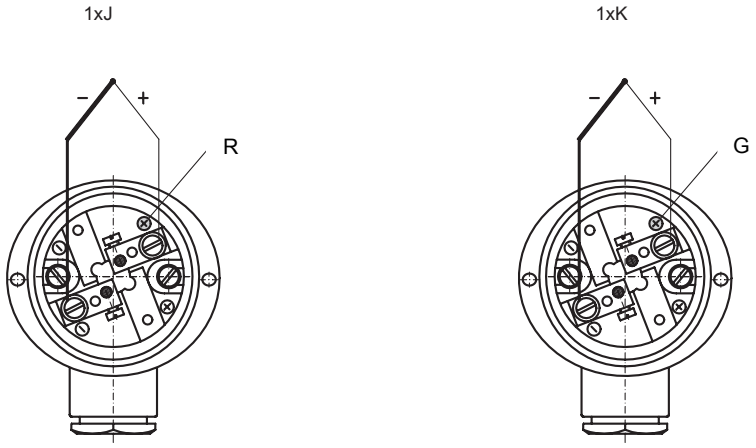
Electrical Connections

R - red
G - green



Type	Description	
T1506-6 ➔	Angle-type Thermocouple Temperature Sensors	
Code	**Thermocouple**	**Measuring Range**
21 ➔	1x "J" (Fe-CuNi), Insulated	-200 to +500 °C
61	2x "J" (Fe-CuNi), Insulated, Isolated Junctions	-200 to +500 °C
22	1x "K" (NiCr-NiAl), Insulated	0 to +1000 °C
62	2x "K" (NiCr-NiAl), Insulated, Isolated Junctions	0 to +1000 °C
Code	**Accuracy Class according to EN 60584-2**	
7 ➔	2	
Code	**Nominal Length L [mm]**	**L1 [mm]**
150 ➔	500	400
165	630	500
166	630	600
180	800	600
Code	**Protective Tube - Outside Diameter x Wall Thickness [mm]**	**Material**
O1 ➔	∅ 20x2.5	Stainless Steel DIN 1.4845 (for Thermocouple "K" Only)
O2	∅ 20x2.5	Carbon Steel DIN 1.7335 (for Thermocouple "J" Only)
Code	**Head**	
H1	Al Alloy, Cable Outlet M20x1.5, Housing IP 55, with Terminal Board	
H3 ➔	Al Alloy, with High Cap for Mounting of Transmitter ∅ 44 mm into Cap, Cable Outlet M20x1.5, Housing IP 54, with Terminal Board	
	OPTIONAL ACCESSORIES	
Code	**Calibration**	
KTE3	Sensor Calibration in Three Customer's Given Temperature Points (0 to +1100 °C)	
KTE9	Other	
Code	**Fixing Flanges**	
P1 ➔	Fixing Shift Pipe Union UPS 20 M30 (See Data Sheet No. 126)	
Code	**Transmitters for Headmounting**	
P5310	Programmable Transmitter P5310 with LHP Communication, Base Accuracy up to 0.1 % from Set Range (See Data Sheet No. 824)	
PT-031	Programmable Transmitter for Thermoelectric Sensors PT-031, Base Accuracy 0.15 % from Input Range (See Data Sheet No. 471)	
P5102 ➔	Programmable Transmitter P5102 H10, Base Accuracy to 0.07 % from Set Range (See Data Sheet No. 451)	
P5102EEx	Intrinsically Safe Programmable Transmitter P5102 H10EEx, Base Accuracy to 0.07 % from Set Range (See Data Sheet No. 451)	
P5201 ➔	Universal Programmable Transmitter P5201 H10 with Circuit Isolation, Base Accuracy to 0.05 % from Set Range (See Data Sheet No. 288)	
P5201EEx	Intrinsically Safe Universal Programmable Transmitter P5201 H10EEx with Circuit Isolation, Base Accuracy to 0.05 % from Set Range (See Data Sheet No. 288)	
P3301	Universal Programmable Transmitter P3301 SMART with Circuit Isolation, Base Accuracy to 0.065 % from Set Range HART Communication Interface (See Data Sheet No. 507)	

Example of Order: T1506-6 21 7 150 O1 H3 P1 P5102 H10 C2 RL 0 °C RH 350 °C EHL