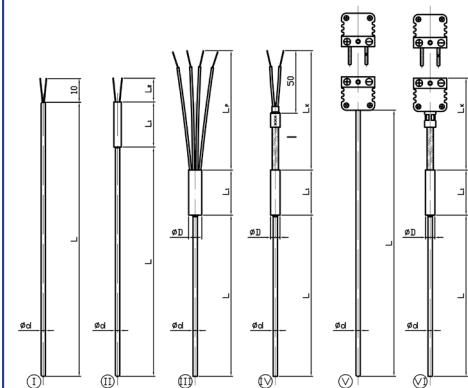


TP-42

Sheathed Thermocouple (Type J, K, N)

Thermocouple is made of sheathed, mineral insulated thermocouple wires. Metallic oxide (MgO) insulation is compacted into the sheath to mechanically support and electrically insulate the thermocouple wire and junction. Such a design allows small diameter and good flexibility of T/C. Sheathed thermocouple is highly mechanical and chemical resistant and has very low time of response.



Type	Execution	Version
TP-42	Basic - acc to catalog card	I ÷ VI
TP-42/ExiM1	Intrinsic for mining purposes – acc to Atex	
TP-42/Exi	Intrinsic – acc to Atex	

Technical specification

Sheathed sensor insert	Temp. range - Class 1	Characteristic	Junction
1xFe-CuNi (J), 2xFe-CuNi (J)	-40°C..+800°C	acc. EN 60584-1	ungrounded
1xNiCr-NiAl (K), 2xNiCr-NiAl (K)	-40°C..+1000°C (+1100°C)*		grounded
1xNiCrSi-NiSiMg(N), 2xNiCrSi-NiSiMg (N)	0°C..+1200°C (-270°C..+1300°C)*		

* short term

Sheath diameter d [mm]	Sleeve diameter D [mm]	Sleeve length L ₁ [mm]	Sheath material acc. AISI/DIN	Thermocouple	Configuration	Compensation cable type
ø0,5 ø1,0 ø1,5 ø2,0 ø3,0 ø4,5 ø6,0 ø8,0	on request	on request	2.4816 / Inconel 600	Single	2 wire (1-pair)	on request
			1.4571 / 316Ti	Double	4 wire (2-pair)	
			1.4541 / 321			
				Medium	Response Time T _{0,5}	
				Water	0,35 ÷ 2,5 sec	
				Bending radius R _{MIN}	Operating pressure	
				3 d	up to 20 MPa	

Non-standard models available.

Ordering Information

TP-42	A	B	C	D	E	F	G	H	I	J	K
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A Execution	
WT	Basic
WTT	with sleeve and conn. piece
WTTp	with sleeve and loose wires
WTTKbm	with T/C extension wire cable
WTW	with T/C plug
WTG	with T/C socket
WTG/W	with T/C socket and plug
WTW/G	with T/C plug and socket
WTTWKbm	with T/C plug and extension wire cable
WTTGKbm	with T/C socket and extension wire cable
WTTG/WKbm	with T/C socket and plug and ext. wire cable
WTTW/GKbm	with T/C plug and socket and ext. wire cable
WT/Exi	Intrinsic safe - basic
WTT/Exi	Intrinsic safe - with sleeve and conn. piece
WTTp/Exi	Intrinsic safe - with sleeve and loose wires
WTTKbm/Exi	Intrinsic safe - with T/C extension wire cable
WTW/Exi*	Intrinsic safe - with T/C plug
WTTWKbm/Exi*	Intrinsic safe - with T/C plug and ext. wire cable
WT/ExiM1	Intrinsic safe for mining - basic
WTT/ExiM1	Intrinsic safe for mining - with sleeve and conn. piece
WTTp/ExiM1	Intrinsic safe for mining - with sleeve and loose wires
WTTKbm/ExiM1	Intrinsic safe for mining - with T/C ext. wire cable
WTW/ExiM1*	Intrinsic safe for mining - with T/C plug
WTTWKbm/ExiM1*	Intrinsic safe for mining - with T/C plug and ext. wire cable

B Type of thermocouple	
1xJ	Single Fe-CuNi
2xJ	Double Fe-CuNi
1xK	Single NiCr-NiAl
2xK	Double NiCr-NiAl
1xN	Single NiCrSi-NiSiMg
2xN	Double NiCrSi-NiSiMg

C Sheath diameter d	
	specify in mm

NOTE: * Intrinsic safe version plug connectors can not be disconnected under voltage.

Ordering Example: TP-42-WTTp-2xK-3-160-2.4816-6x40-100-Z-400

stands for: Sheathed thermocouple, model with sleeve and loose wires, with sensor 2x NiCr-NiAl, sheath diameter $\varnothing 3$ mm, sheath length $L=160$ mm, sheath material 2.4816(Inconel600), sleeve diam. $D=6$ mm and length $L_1=40$ mm, wire length $L_p=100$ mm, grounded junction, operating temperature 400°C .

D Sheath length L	
	specify in mm

E Sheath material	
2.4816	2.4816 / Inconel 600
1.4571	1.4571 / 316Ti
1.4541	1.4541 / 321

F Sleeve diameter and length $D \times L_1$	
	specify in mm

G Compensation cable type	
L2GGD-J-0,22	L2GGD-J-0,22mm2
L2GGD-K-0,22	L2GGD-K-0,22mm2
L2TDT-J-0,22	L2TDT-J-0,22mm2
L2TDT-K-0,22	L2TDT-K-0,22mm2
L2SS-J-0,22	L2SS-J-0,22mm2
L2SS-K-0,22	L2SS-K-0,22mm2
L4GGD-J-0,22	L4GGD-J-0,22mm2
L4GGD-K-0,22	L4GGD-K-0,22mm2

H Cable length L_K or Wire length L_p	
	specify in mm

I Junction	
O	ungrounded
Z	grounded

J Operating temperature	
	specify in $^{\circ}\text{C}$

K Operating temperature socket/plug	
	specify in $^{\circ}\text{C}$