

TC/TR SERIES

The TC/TR series offers thermocouple and RTD temperature sensors for measurements ranging from -100 to +450 °C, or up to 600 °C for the T101-J model.

The J type (Iron/Constantan) or K type (Chromel/Alumel) thermocouples present a tubular stainless steel housing or with brass ring; the measurement junction is grounded in order to obtain the best response speed.

The resistance temperature detectors are made with a Pt100Ω/0°C type platinum sensitive element and are available in different tubular housings, with chamfer point for penetration measurements, or holed for detection in open air; in stainless steel in all cases, with an insulated sensitive element.

The thermocouples and the resistance temperature detectors of the TC/TR series are suitable for applications in automatic packaging, food sector, plastic material printing and wood working.



HIGHLIGHTS

- J and K type thermocouples
- Pt100 type RTDs
- Wide range of operating temperatures
- Housing in AISI 304 stainless steel

APPLICATIONS

Process control



Packaging lines



TECHNICAL DATA

Calibration	J type TC (Fe/Cu-Ni) - DIN 43710
	K type TC (Ni-Cr/Ni-Al) - DIN 43710
	Pt100Ω/0°C RTD - DIN 43760 (refer to table 1)
Tolerance:	thermocouple ± 2°C at 200°C
	RTD ± 0.55°C at 200°C
Connection:	bi-polar 2 m cable
	2 screw terminals (P105 mod.)
	TC polarity and colour - DIN 43713, non-polarised RTD (refer to table 2)
Assembly:	TC with grounded junction
	RTD with insulated element
Housing material:	stainless steel AISI 304
	brass ring (T104-J and T104-K mod.)
Operating temperature:	-100 ... +450°C
	-100 ... +600°C (T101-J and T102-K mod.)

Temp.(°C)	TC-J (mV)	TC-K (mV)	Pt100 (.)
-100	-4,63	-3,55	60,25
-50	-2,43	-1,89	80,31
0	0	0	100
50	2,65	2,02	119,4
100	5,37	4,1	138,5
150	8,15	6,14	157,31
200	10,95	8,14	175,84
250	13,75	10,15	194,07
300	16,56	12,21	212,02
350	19,36	14,29	229,67
400	22,16	16,4	247,03
450	25	18,51	264,11
500	27,85	20,64	280,9

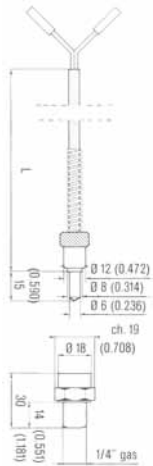
Table 1: SENSOR CALIBRATION

Sensor	Positive	Negative
J type TC	red wire	blue wire
K type TC	red wire	green wire
Pt100 RTD	(non-polarised)	

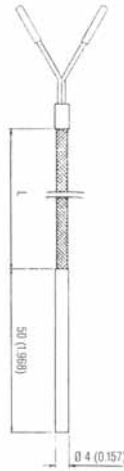
Table 2: SENSOR CONNECTION

DIMENSIONS

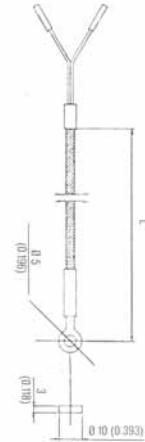
T101-J



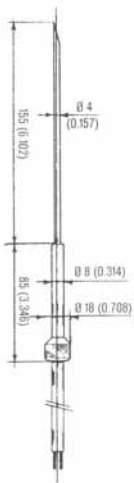
T102-J/K



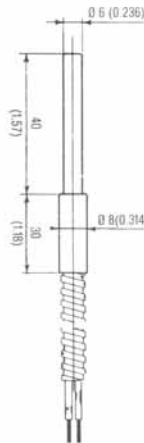
T104-J/K



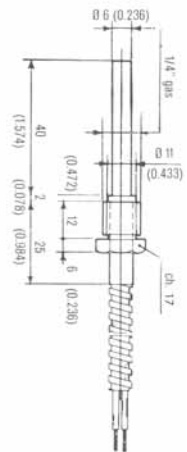
P101



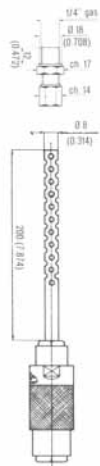
P102



P103



P105



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MODEL SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	ORDER N°
T101-J	J type thermocouple with bayonet nipple 1/4" gas	T9980000
T102-J	J type thermocouple - tubular head with Ø 4 mm L 50 mm	T9980001
T102-K	K type thermocouple - tubular head with Ø 6 mm L 50 mm	T9981001
T104-J	J type thermocouple with Ø 5 mm eyelet	T9980003
T104-K	K type thermocouple with Ø 5 mm eyelet	T9981003
P101	Pt100 RTD - chamfer point with Ø 4 mm L 155 mm	T9982000
P102	Pt100 RTD - tubular head with Ø 6 mm L 40 mm	T9982001
P103	Pt100 RTD with moveable nipple 1/4 gas	T9982002
P105	Pt100 RTD - holed head with Ø 8 mm L 200 mm	T9982004
P106	Pt100 RTD - tubular head Ø 4 mm L 50 mm	T9982005

The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.