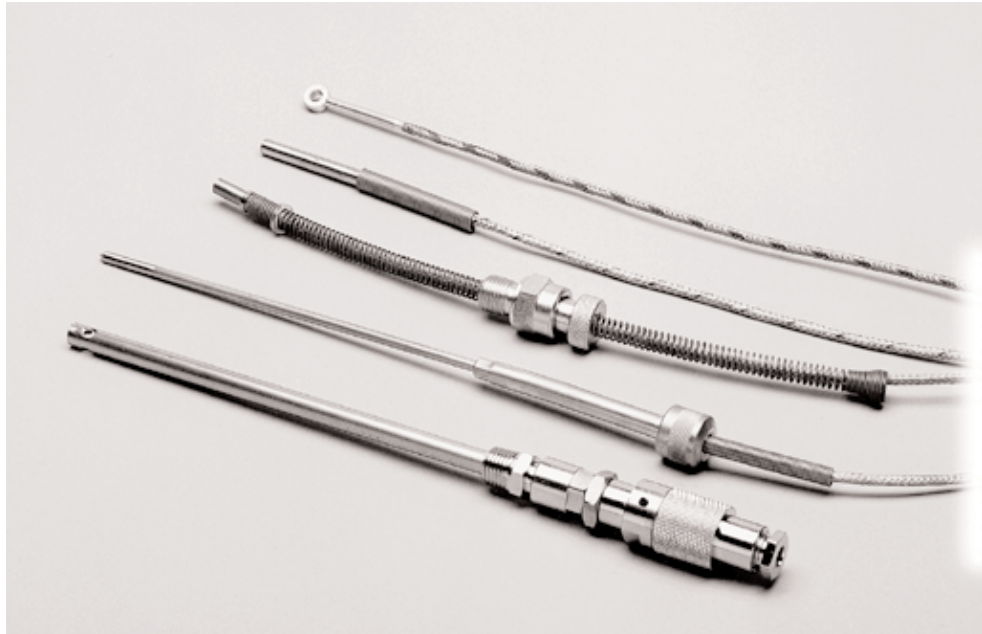


THERMOCOUPLES AND RESISTANCE TEMPERATURE DETECTORS



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

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 Pt100 Ω /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.

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 <i>refer to table 1</i>
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, <i>refer to table 2</i>
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.)

TABLE

Temp. (°C)	TC-J (mV)	TC-K (mV)	Pt100 (Ω)
-100	-4.63	-3.55	60.25
-50	-2.43	-1.89	80.31
0	0	0	100.00
50	2.65	2.02	119.40
100	5.37	4.10	138.50
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	16.40	247.03
450	25.00	18.51	264.11
500	27.85	20.64	280.90

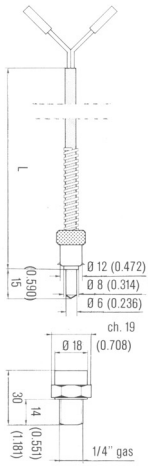
Table 1: SENSOR CALIBRATION

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

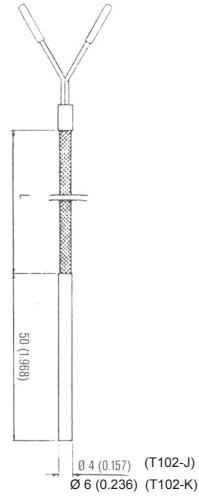
Table 2: SENSOR CONNECTION

THERMOCOUPLE AND RTD DIMENSIONS

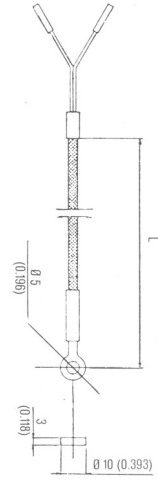
T101-J



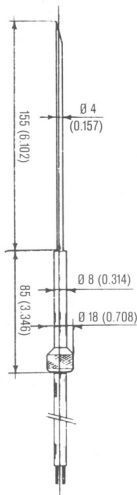
T102-J/K



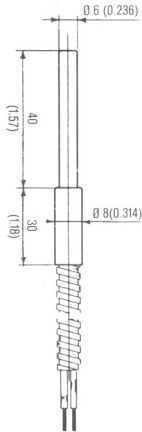
T104-J/K



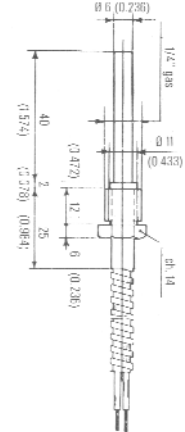
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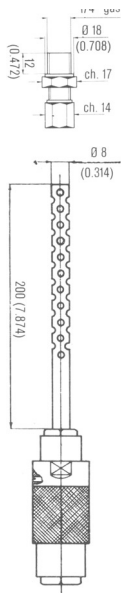
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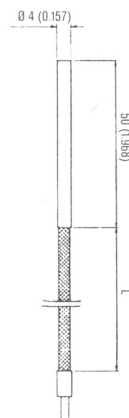
P103



P105



P106





MODELS

MODEL	DESCRIPTION	CODE 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

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