

Temperature Measuring Instruments

Temperature Measuring Instruments T1, T51, T55

The measurement of temperature is essential in many production processes, storage, drying and transportation applications, and even at home for a comfortable climate. In many countries, the law demands that in the food- and pharmaceutical industry temperature is controlled and recorded. ROTRONIC offers handheld instruments and transmitters for this purpose, which are used in the pharmaceutical industry, as well as in dairy food chains, the transportation sector, warehouses etc. The easy handling and installation, and the wide measuring ranges make them suitable for most applications. The M-series and Roline-L-series transmitters are also available for temperature measurement only.



Handheld measuring instrument T1 for Pt100 probes

- Measuring range: -100...500 °C
- Plug in Pt100 probes, see next page
- Automatic range adjustment at 200 °C
- Large, 3¹/₂ digit LCD display
- DATA HOLD
- °C/°F selectable on PCB by jumper
- Adjustable

Order code:
T1



Handheld measuring instrument T51

- Interchangeable thermocouple type K, see page 90
- Max. display
- DATA HOLD
- Impact protection
- Includes one wire probe
- °C/°F switch selectable

Order code:
T51



Handheld measuring instrument T55

- 2 interchangeable thermocouples type K or J, see page 90
- Min/max display
- DATA HOLD
- Temperature difference T1-T2
- Stopwatch function
- Impact protection
- Includes two wire probes
- °C/°F switch selectable

Order code:
T55



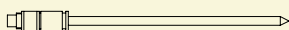
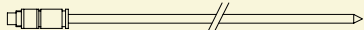
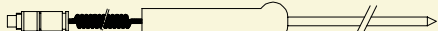
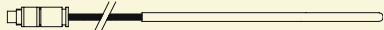
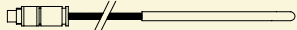
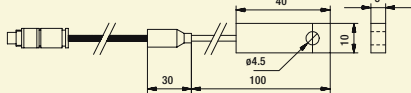
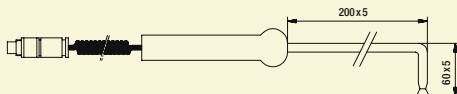

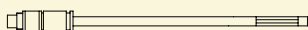
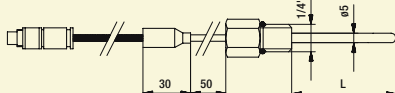
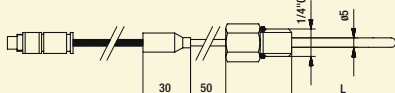
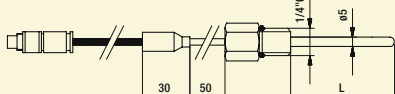
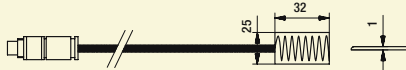
TI Transmitter for Pt100 probes

- Transmitter for the most demanding industrial processes
- IP65 housing
- Linear output signals
- Probe connector on housing
- Connectable Pt100 probes, see next page
- Optional digital display

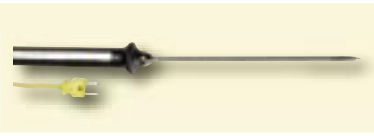
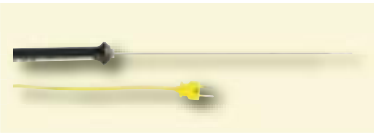
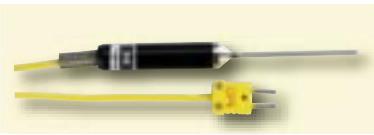
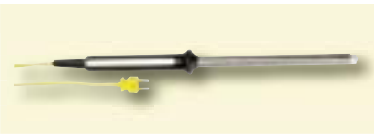
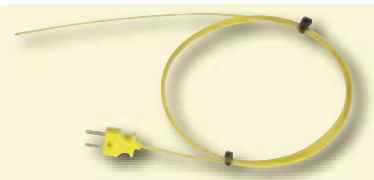

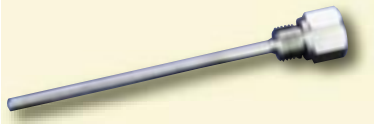

Order code:
see table on page 91

Pt100 Probes

Temperature Measuring Probes

Order code	Probe type	Specification	Material	Cable	Pt100 Probes All Probes with Binder 4 pin plugs
AC 1900	Rod Type, 100 x 3 mm	-70...300°C Pt 100 Class A	DIN 1.4401	N/A	
AC 1901	Rod Type 250 x 3 mm	-70...500°C Pt 100 Class A	DIN 1.4401	N/A	
AC 1902	Penetration Type 250 x 3 mm	-70...500°C Pt 100 Class A Tmax Cable: 80°C	DIN 1.4401	1 m PUR spiral	
AC 1903	Cable Type 200 x 6 mm	-70...500°C Pt 100 Class A Tmax Cable: 180°C	DIN 1.4401	2 m Silicon straight	
AC 1904	Cable Type 50 x 6 mm	-50...120°C Pt 100 Class A Tmax Cable: 120°C	DIN 1.4401	2 m, Thermoplast straight	
AC 1905	Surface Type 40 x 10 x 5 mm	-70...300°C Pt 100 Class A Tmax Cable: 180°C	Brass	2 m Silicon straight	
AC 1907	Surface Type, angle 90°, 250/60 x 5 mm	0...200°C Pt 100 Class B Tmax Cable: 80°C	DIN 1.4401	1 m PUR spiral	
AC 1908	Handheld, for measurement in air 250 x 5 mm	-50...200°C Pt 100 Class A Tmax Cable: 80°C	DIN 1.4401	1 m spiral	
AC 1909	Rod, for measurement in air 100 x 5 mm	-50...200°C Pt 100 Class A Tmax Cable: 180°C	DIN 1.4401	2 m Silicon straight	
AC1910	Screw in, ¼" G, 30 mm	-70...500°C Pt 100 Class A Tmax Cable: 180°C	DIN 1.4401	N/A	
AC 1911	Screw in, ¼" G, 50 mm	-70...500°C Pt 100 vA Tmax Cable: 180°C	DIN 1.4401	N/A	
AC 1912	Screw in, ¼" G, 100 mm	-70...500°C Pt 100 Class A Tmax Cable: 180°C	DIN 1.4401	N/A	
AC 1913	Foil 25 x 32 x 1 mm	0...200°C Pt 100 Class A	Silicon	1 m	

Temperature Measuring Instruments

Order Code	Probe Type	Specification	Used for	All Probes with K-type plug
44.10.1885	TCP-A Penetration probe 150 x 4 mm	-50...800 °C K-element	Measuring in the food industries in semi-compact material such as jelly etc.	
44.10.1890	TCP-B Immersion probe 200 x 2 mm	-50...800 °C K-element	Measuring in liquids and jellies etc.	
44.10.1486	RO40017 Universal probe 28 x 57 mm	-50...480 °C K-element	Multi purpose probe	
44.10.1900	TCP-F Surface probe 150 x 10 mm	-50...800 °C K-element	Fast measuring on surfaces	
44.10.1475	S533 wire probe 1000 x 1.3 mm	-50...250 °C K-element	For measuring in air, liquids etc.	
Accessories				
AC 2001		Screw-in measuring-sleeve for 3 mm probes; Thread ¼" G Immersion depth 50 mm		
AC 2002		Screw-in measuring-sleeve for 3 mm probes; Thread ¼" G Immersion depth 100 mm		
HygroClip TH100-B5		Adaptor for all Pt100 probes for HygroPalm 2/3 & HygroLab instruments with Binder 5-pin plug		

Order Code TI Temperature Transmitters

Order code		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Example:		T11	-	2	-	B	4	-	4	A	1	X	-	1	4	
Transmitter Series		T11	-													
Power supply:	230 VAC			0												
	115 VAC			1												
	4...20 mA loop power (U _{min} = 10 V + 0.02 x load)			2												
	24 VAC galvanically separated			3												
	10(15)...35 VDC/12...24 VAC			8												
	PT100 connector Binder 4-pin					B	4									
Output signal	0...20 mA								0	A						
	4...20 mA								4	A						
	0...1 V								1	V						
	0...5 V								5	V						
	0...10 V								0	V						
Cable connection	1 M16 Terminals											1				
	2 M12 Terminals											2				
	Tuchel plug 7-pin											7				
Display	None												X			
	With Display												D			
Temperature Range =	0...50 °C														1	0
Output signal	-30...70 °C														1	1
	0...100 °C														1	4
	-40...60 °C														1	9
	0...200 °C														2	0
	-50...150 °C														2	1
	-100...100 °C														2	2
	-100...200 °C														2	3
	-100...300 °C														2	4

Technical Data Temperature Measuring Instruments

Series	T1	T51	T55	TI-Series
Instrument type	Handheld			Transmitter
IP Protection rating	IP50	IP-50, rubber impact protection		IP65
Power supply				AC/DC/mains
9 V PP3 alkaline battery	Yes			No
10...35 VDC/24 VAC	N/A			Option
115 /230 V AC	N/A			Option
Galvanic separation	N/A			Option
4...20 mA loop power (U _{min} = 10 V + 0.02 x load)	N/A			Option
Number of Probe inputs	1	1	2	1
Connection type of probe	3-wire	2-wire		3-wire
Operating range electronics	0...50 °C / 0...90% rh			-20...50 °C
Measuring range	with Pt100 with K-Type with J-Type	-100...500 °C N/A N/A	N/A -50...1300 °C N/A	N/A -200...1370 °C -200...760 °C
Accuracy	at 23 °C Pt100	±0.1 K		±0.3 K
	<1000 °C	N/A	±0.3% +1 K	±0.1% +1 K
	>1000 °C	N/A	±0.5% +1 K	±0.3% +1 K
Reproducibility	0.1 K			
Display	3½ Digits	4 Digits		Option, not for loop power
Auto Power Off	Yes	No		N/A
Low Battery Indicator	Yes			N/A
Hold Function	Yes			N/A
Tmax. recording	No	Yes		N/A
Differential Temp.	No			N/A
Stop Watch	No			N/A