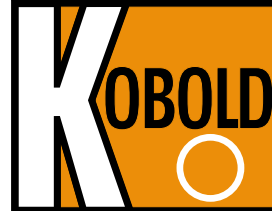


## Digital Hand-Held Thermometers Professional Series



measuring  
•  
monitoring  
•  
analysing

- For NiCr-Ni probes
- Measurements taken in seconds
- Extensive range of probes
- Precision measuring instruments



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KOBOLD Messring GmbH  
Nordring 22-24  
D-65719 Hofheim/Ts.  
☎ (06192) 299-0  
Fax (06192) 23398  
E-mail: info.de@kobold.com  
Internet: www.kobold.com

**Model:**  
TD-1300  
TD-1400  
TD-1500



### Description

The temperature hand-held measuring instruments TD 1300, TD 1400 and TD 1500 are highly accurate, compact and suitable for universal service with thermocouples NiCr-Ni. Precise measurement results are achieved over the entire measuring range with the associated temperature detectors. An extensive range of probes are available for different measurement applications and special applications. Every temperature detector can be combined with a device from this series. The application guide below determines which combination should be selected.

Of course these microprocessor-based top-of-the-range measuring instruments can display more than just the temperatures. All devices in the series have a range of features, including, maximum and minimum value storage, hold function and automatic cut-off with the values permanently stored.

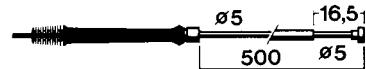
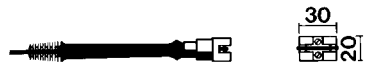



### Technical Details

Model	TD 1300	TD 1400	TD 1500
Number of channels	1	1	2
Functions	Hold function (HOLD); °C or F° - display; surface or dip measuring Minimum value memory; maximum value memory; mean value storage		
Measured-value storage		Measured-value storage (1536 individual values)	Measured-value storage (1024 pairs of measured values)
Software		Software package: for measured-value acquisition on a PC including PC cable. System requirements: AT-PC 286 up, IBM compatible, Hercules graphics, CGA, EGA or VGA, RS 232 D	
Differential temperature			T1; T2 (electrically isolated) T1; T2 (differential indication)
Outputs/interfaces		Analogue output 1 mV/°C, 0.5 mV/F° RL ≥ 50 KΩ Serial interface RS 232D; ±5 V, 2400 baud, 8 bit	
Integrated memory		32 KB non-volatile, real-time clock with date	
Probe	NiCr-Ni (model K)		
Measuring range	-200 to +1300°C, -328 to +2372°F		
Accuracy	+40 to +399.9°C: ±0.2°C ±1 digit; above 400°C: ±0.2% of measured-value ±1 digit		
Resolution	up to +399.9°C: 0.1 K above 400°C: 1 K		
Allowed ambient temperature	0°C to +40°C		
Allowed storage temperature	-10°C to +60°C		
Display	4-segment, 12 mm high, multi-function display		
Key pad	Tactile keypad with acoustic acknowledgement		
Probe connections	Miniature thermal plug connector (according to ISA standard model K)		
Operating time/battery	approximately 50 hours/9 V battery (charger available)		
Connection for charger	with overcharge protection		
Battery monitor	on the display		
Weight	approximately 270 g (with battery)		
Dimensions (mm)	180 x 70 x 28		

**Probes for surface and immersion measurements (cable length 1500 mm)**

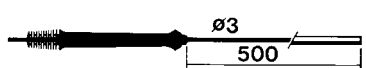
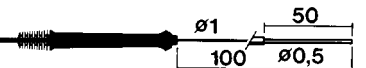
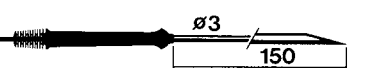
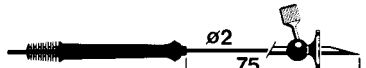
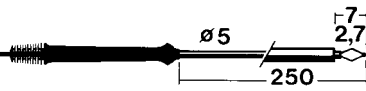

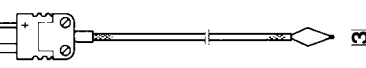
Dimensions	Probe type	Response time*	Order number
	<b>Surface/immersion probe 60 mm</b> Tmax. 600 °C, short-time 800 °C for dip measuring	5 s	TD-4102
	<b>Surface/immersion probe 150 mm</b> Tmax. 600 °C, short-time 800 °C for dip measuring	5 s	TD-4121
	<b>Surface/immersion probe 250 mm</b> Tmax. 600 °C, short-time 800 °C for dip measuring	5 s	TD-4101
	<b>Surface/immersion probe 135 mm</b> angular probe tube. Tmax. 600 °C, short-time 800 °C for dip measuring	5 s	TD-4117
	<b>Surface/immersion probe 210 mm</b> angular probe tube. Tmax. 600 °C, short-time 800 °C for dip measuring	5 s	TD-4103
	<b>Surface/immersion probe 60 mm</b> with spring-loaded tip. Defined bearing pressure of 20 N. Tmax. 600 °C	5 s	TD-4112
	<b>Surface/immersion probe 150 mm</b> with spring-loaded tip. Defined bearing pressure of 20 N. Tmax. 600 °C	5 s	TD-4122
	<b>Surface/immersion probe 250 mm</b> with spring-loaded tip. Defined bearing pressure of 20 N. Tmax. 600 °C	5 s	TD-4111

**Special probes for surface measurements (cable length 1500 mm)**

Dimensions	Probe type	Response time*	Order number
	<b>Surface probe</b> Tmax. 1100 °C, short-time to 1200 °C	12 s	TD-4118
	<b>Drum-type probe</b> Fitted spring-loaded, thermocouple for fast measurements on cylindrical objects. Tmax. 250 °C	2 s	TD-4108
	<b>Straight probe for metal belt</b> for fast measurements. Tmax. 500 °C	1-2 s	TD-4113
	<b>Angular probe for metal belt Ø 12/22 mm</b> for fast measurements. Tmax. 300 °C	1-2 s	TD-4114
	<b>Angular probe for metal belt Ø 15/50 mm</b> for fast measurements. Tmax. 500 °C	1-2 s	TD-4109



**Special probes for immersion**

Dimensions	Probe type	Response time*	Order number
	<b>Flexible sheathed thermocouple probe</b> tube made of Inconel. Very rugged. Tmax. 1100°C short-time to 1200°C	5 s	TD-4104
	<b>Flexible sheathed thermocouple probe</b> Extremely thin and fast response. Probe tube made of Inconel. Tmax. 1100°C short-time to 1200°C	0,5 s	TD-4105
	<b>Knife-edge probe</b> Inclined sharpened probe tube for penetration. Tmax. 600°C	5 s	TD-4107
	<b>Knife-edge probe</b> Inclined sharpened probe tube with depth stop for penetration. Tmax. 600°C	3 s	TD-4106
	<b>Gas probe</b> for measuring air and gases. At flow velocity of 1.5 m/s in air	60 s	TD-4120
	<b>Flexible thermocouple probe</b> for measuring tasks in ovens and electrical equipment. Tmax. 350°C		TD-5827
	<b>Free thermocouple</b> with glass filament insulated thermoelectric wire. 2 m thermoelectric lead. Tmax. 400°C		TD-5825

\*Response time T<sub>99</sub> in water

**Accessories for Probes**

Description	Order number
Miniature thermocouple plug to ISA standard	TD-5809
Miniature thermocouple socket	TD-5829
NiCr-Ni thermocouple wire glass filament isolated	TD-4948
Extension cable for probe 5 m long	TD-4942
Protective tube for probe for TD-4104 made of stainless steel 200 mm	TD-4932
Protective tube for probe for TD-4104 made of stainless steel 400 mm	TD-4953
Probe holder for probes up to 100 mm long	TD-4922
Probe holder for probes up to 250 mm long	TD-4921
Probe holder for probes up to 500 mm long	TD-4954

**Accessories for TD 1300 / TD 1400 / TD 1500**

Description	Order number
9 V battery	TD-4915
Charger	TD-4967
Leather carrying case	TD-4968
Plastic carrying case for measuring instrument, batteries, charger and up to 4 probes	TD-4970
Connection cable with 9-pin connector for computers	TD-4971
Connection cable for analogue devices (2 banana plugs)	TD-4972
Measuring point selector for 6 measuring points	TD-4943
Silicone thermolube P 12 30 g tube	TD-4950
Evaluation software for data transmission	TD-4979