HD 9215
HD 9214

DIGITAL MICROPROCESSOR THERMOMETERS FOR PROBES WITH Pt100 PLATINUM SENSOR

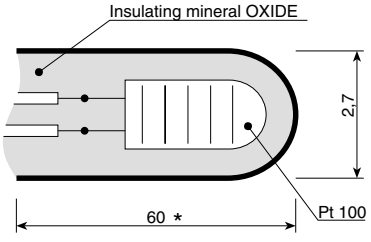
These are very compact portable instruments. Their high technological features are accompanied by a pleasing design. With their range of interchangeable probes, they are indispensable instruments for measuring temperature in the fields of maintenance, heating/air-conditioning, laboratories, food and agriculture and all other sectors where temperature measurements must be precise, fast and repeatable. The reading can be in °C or in °F. The calibration is managed by the keyboard.

CHARACTERISTICS

- Automatic change of scale
- Instrument switches off automatically after 8 minutes (the auto power off function may be disactivated)
- Temperature measurement with a Pt100 Platinum sensor **(100Ω at 0°C), 4-wire connection**
- Probes available for measurements by immersion, surface contact and penetration (pointed), all with 4-wire connection and precision in accordance with standards IEC 751/1983, BS 1904/1984, DIN 43760/1980 in precision classes A, 1/3 DIN, (on request 1/5 DIN)
- Low battery charge warning light
- Battery power supply
- Calibration with storage of the calibration data in the memory
- LCD display with 3 ½ digit, height 8 mm
- **The total precision of the instrument plus the chosen measuring probe is given by the sum of the instrument error plus the error of the chosen probe depending on whether the probe is class A, 1/3 DIN or 1/5 DIN. The ohmic there and back resistance of the cable of the probe is 0,40Ω**
- Instrument working range: -5°C...+50°C
- Storage temperature: -20°C...+60°C
- Relative humidity: 0...90% R.H.
- Number of conversions: 1 per second
- Power supply: 9V battery, IEC 6LF22, zinc/carbon battery life approx. 200 hours
- Low battery charge warning light
- Instrument connector: male 8-pole circular connector ***DIN 45326***
- Case: ABS Bayer NOVODUR, grey **7553CF**
- Dimensions: instrument 42x185x23 mm weight 130 grams
- **Kit** 370x140x60 mm - **weight** 500 grams.

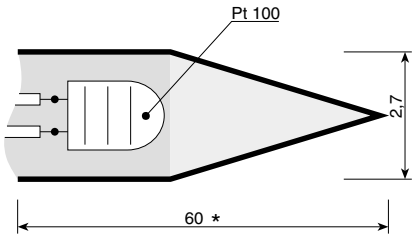
Model	Measuring range	Error	Resolution	Temperature drift -5°C...+50°C	°C/°F	Hold
HD 9215	-50,0°...+199,9°C	±0,2°C	0,1°C	0°C/°C between 18°C and 25°C 0,01°C/°C above	•	•
HD 9214	-199,9°C...+600°C	-199,9°C...-50°C ±0,2°C -50,0°C...+199,9°C ±0,2°C +200°C...+600°C ±0,2°C	0,1°C 0,1°C 1°C		•	•

Immersion probe



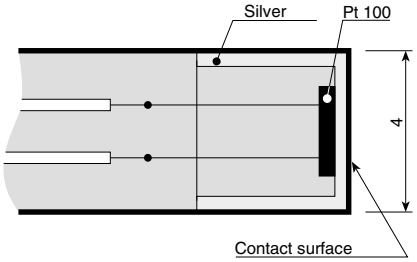
* Minimum length of immersion to perform measurement correctly

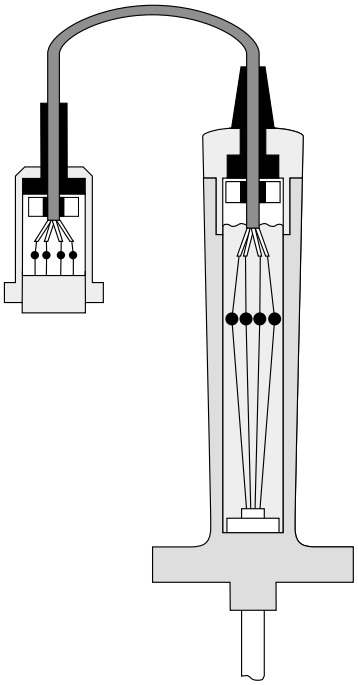
Penetration probe



* Minimum length of penetration to perform measurement correctly

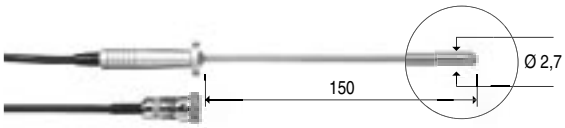
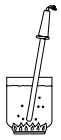
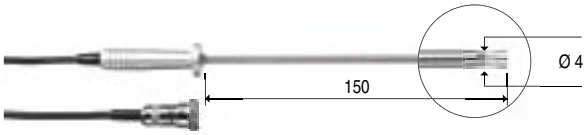
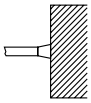
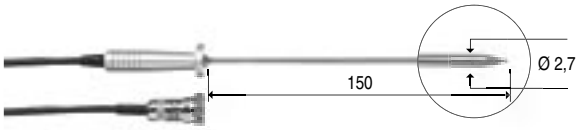
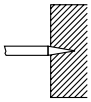
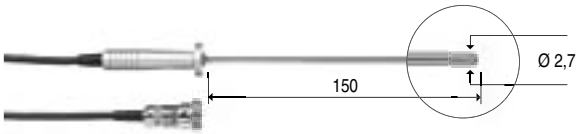
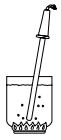
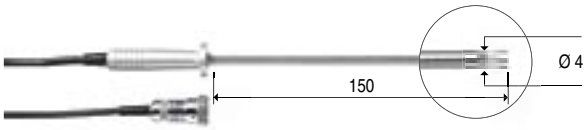
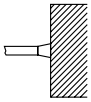
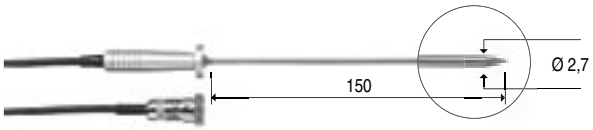
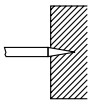
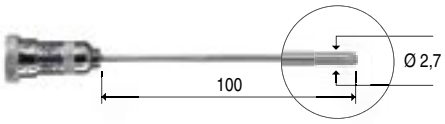
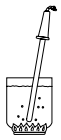
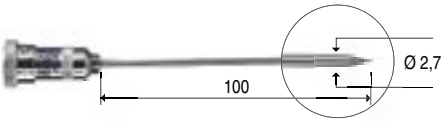
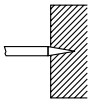
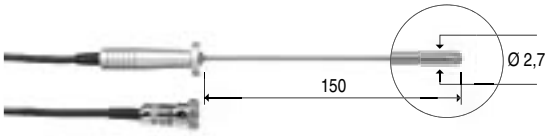
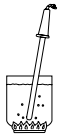
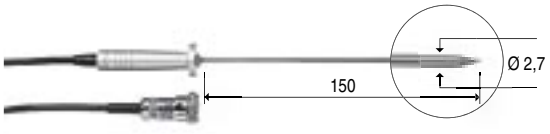
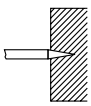
Surface probe





The probe and connector are assembled as in the drawing

The temperature probes in the TP 9... series are composed of a Pt100 Platinum sensor (100 Ω at 0°C), tubular sheath in stainless steel AISI 316, a grip in anodized anticorodal UNI 9006/4 and a flexible cable diam. 4 mm, length 1500 mm, completed at the end by a female 8-pole circular connector DIN 45326. Respecting the connections, various probes in the TP 9... series may be connected to the instrument, as long as they are always Platinum 100 Ω at 0°C. In this case the precision of the probes will depend on the precision of the sensor used. The sensor housing inside the probe is as shown in the drawings.

SONDE SENSORE Pt100					
COD.	**WORKING RANGE**	**τ s**	**DIMENSIONS**	**USE**	
TP9A CLASS A	-70 +400	3,5s			HD9212 HD9213 HD9214 HD9215 HD9216 HD9219 HD9220
TP9AC CLASS A	-70 +400	5,5s			
TP9AP CLASS A	-70 +400	4s			
TP93 CLASS 1/3 DIN	-70 +400	3,5s			
TP93C CLASS 1/3 DIN	-70 +400	5,5s			
TP93P CLASS 1/3 DIN	-70 +400	4s			
TP932 CLASS 1/3 DIN	-70 +200	3,5s			
TP932P CLASS 1/3 DIN	-70 +40	4s			
TP95 CLASS 1/5 DIN	-70 +400	3,5s			
TP95P CLASS 1/5 DIN	-70 +400	4s			

Accuracy of Pt100 Platinum Sensors according to the standards IEC751(1983), BS1904 (1984), and DIN(1980)										
Temp °C	Uncertainty									
	CLASS B		CLASS A		1/3 DIN		1/5 DIN		1/10 DIN	
	+/- °C	+/- OHMS	+/- °C	+/- OHMS	+/- °C	+/- OHMS	+/- °C	+/- OHMS	+/- °C	+/- OHMS
- 200	1.3	0.56	0.55	0.24	0.44	0.19	0.26	0.11	0.13	0.06
- 100	0.8	0.32	0.35	0.14	0.27	0.11	0.16	0.06	0.08	0.03
0	0.3	0.12	0.15	0.06	0.1	0.04	0.06	0.02	0.03	0.01
100	0.8	0.3	0.35	0.13	0.27	0.1	0.16	0.05	0.08	0.03
200	1.3	0.48	0.55	0.2	0.44	0.16	0.26	0.1	0.13	0.05
300	1.8	0.64	0.75	0.27	0.6	0.21	0.36	0.13	0.18	0.06
400	2.3	0.79	0.95	0.33	0.77	0.26	0.46	0.16	0.23	0.08
500	2.8	0.93	1.15	0.38	0.94	0.31	0.56	0.19	0.28	0.09
600	3.3	1.06	1.35	0.43	1.1	0.35	0.66	0.21	0.33	0.1
650	3.6	1.13	1.45	0.46	1.2	0.38	0.72	0.23	0.36	0.11
700	3.8	1.17								
800	4.3	1.28								
850	4.6	1.34								

ORDER CODE

HD 9215: kit composed of instrument complete with zinc/carbon battery, instructions and carrying case. The carrying case is designed to hold 2 probes.

HD 9214: kit composed of instrument complete with zinc/carbon battery, instructions and carrying case. The carrying case is designed to hold 2 probes.

THE PROBES MUST BE ORDERED SEPARATELY.

The following probes, with the characteristics listed below, may be connected to the instrument:

CLASS A

TP 9A	–70 °C.. +400°C	Immersion
TP 9AC	–70 °C.. +400°C	Surface
TP 9AP	–70 °C.. +400°C	Penetration

CLASS 1/3 DIN

TP 93	–70 °C.. +400°C	Immersion
TP 93C	–70 °C.. +400°C	Surface
TP 93P	–70 °C.. +400°C	Penetration
TP 932	–70 °C.. +200°C	Immersion
TP 932P	–70 °C.. +200°C	Penetration

CLASS 1/5 DIN

TP 95 *	–70 °C.. +400°C	Immersion
TP 95P *	–70 °C.. +400°C	Penetration

***** Available on request.

• Avoid violent knocks, bending or thermal shock as these may cause irreparable damage to the sensor.

NOTE: At maximum temperature, measurements may be taken only for short periods.