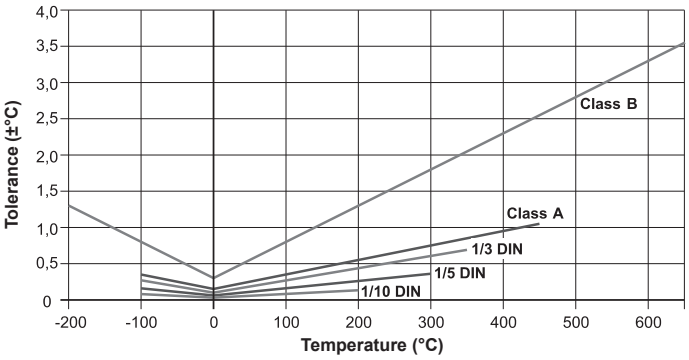
TEMPERATURE PROBES

Pt100 SENSOR PROBES α=0.00385 °C^{-1} , R_0 = 100 Ω

Depending on the manufacturing technology of the Platinum sensing element, there are two categories of Pt100 sensor probes:

- **Wire Wound** probes : identified by the letter **I** in the ordering code;
- **Thin Film** probes : identified by the letter **O** in the ordering code.

The best performances are obtained by using the wire wound probes, characterized by a very low long-term drift compared to the thin film probes. **The measuring uncertainty of the probes with SICRAM module can be improved with a calibration Report or an ACCREDIA calibration certificate.**



Tolerance Classes

Reference standards:
- **DIN 43760 : 1980**
- **IEC 60751 : 2008**
- **BS EN 60751 : 2008**

IEC nomenclature	DIN nomenclature	Temperature range of validity of the tolerance class		Tolerance at 0 °C
		wire wound sensor	thin film sensor	
W0.03 (*)	1/10 DIN	Not defined by the standard	Not defined by the standard	± 0.03 °C
W0.06 (*)	1/5 DIN	Not defined by the standard	Not defined by the standard	± 0.06 °C
W0.1	1/3 DIN	-100…+350 °C	0…+150 °C	± 0.1 °C
W0.15	Class A (1/2 DIN)	-100…+450 °C	-30…+300 °C	± 0.15 °C
W0.3	Class B (DIN)	-196…+660 °C	-50…+600 °C	± 0.3 °C

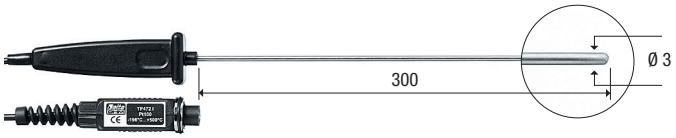
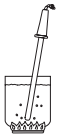
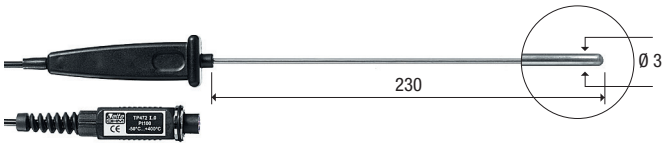
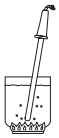
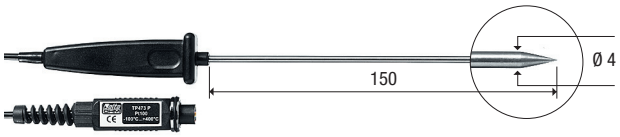
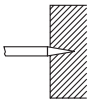
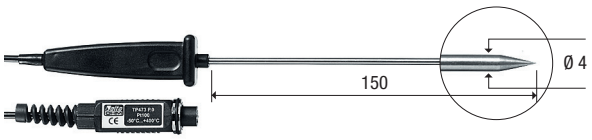
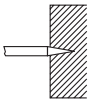
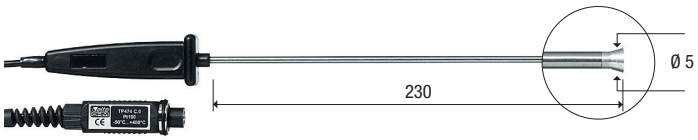
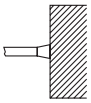
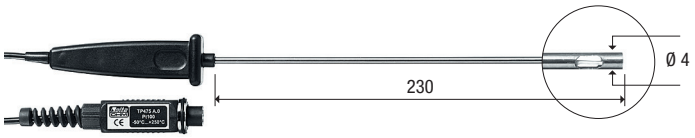
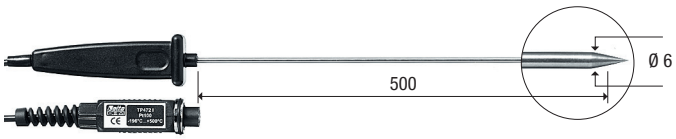
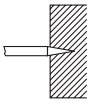
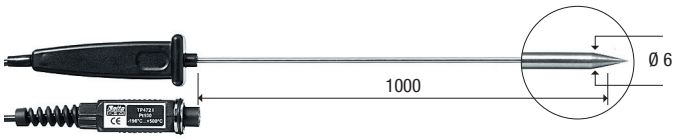
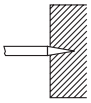
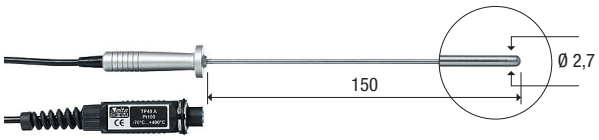
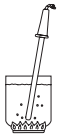
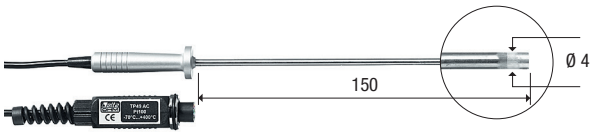
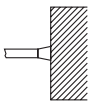
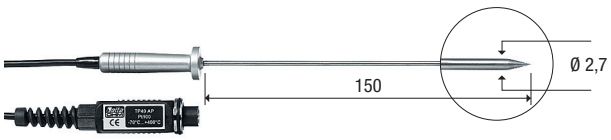
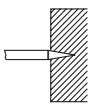
(*) Note: the tolerance classes W0.03 and W0.06 are not included in the IEC 60751 standard.

TOLERANCE AS A FUNCTION OF TEMPERATURE

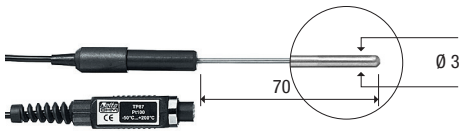
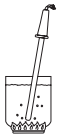
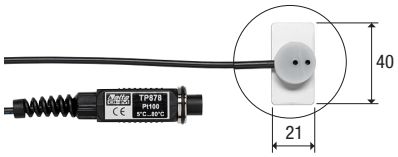
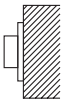
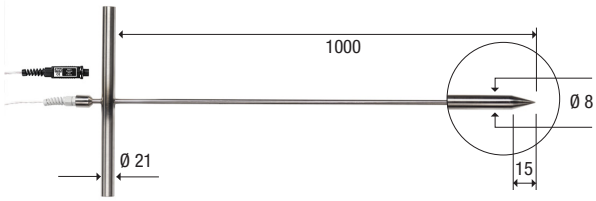
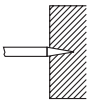
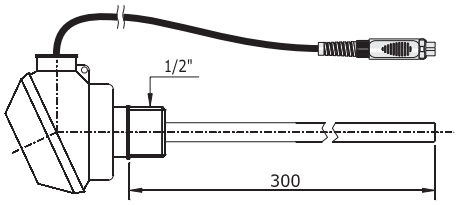
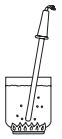
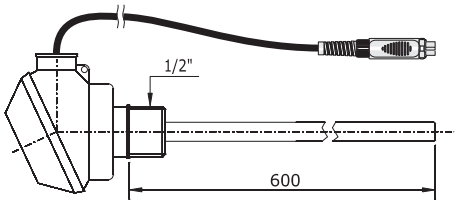
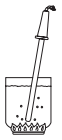
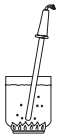
(the temperature range refers to the platinum wire wound probes)

Temperature (°C)	Tolerance (°C)				
	W0.3 Class B (DIN)	W0.15 Class A (1/2 DIN)	W0.1 1/3 DIN	W0.06 1/5 DIN	W0.03 1/10 DIN
-200	± 1.3	---	---	---	---
-100	± 0.8	± 0.35	± 0.27	± 0.16	± 0.08
0	± 0.3	± 0.15	± 0.10	± 0.06	± 0.03
100	± 0.8	± 0.35	± 0.27	± 0.16	± 0.08
200	± 1.3	± 0.55	± 0.44	± 0.26	± 0.13
300	± 1.8	± 0.75	± 0.60	± 0.36	---
350	± 2.1	± 0.85	± 0.69	---	---
400	± 2.3	± 0.95	---	---	---
450	± 2.6	± 1.05	---	---	---
500	± 2.8	---	---	---	---
600	± 3.3	---	---	---	---
650	± 3.6	---	---	---	---

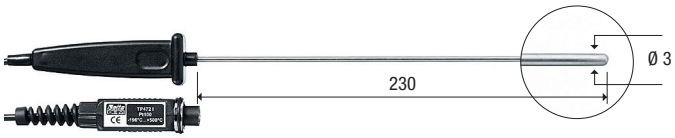
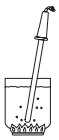
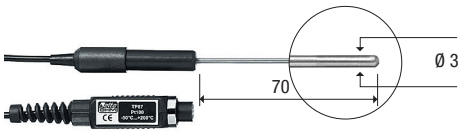
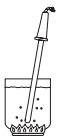
Pt100 PROBES FOR PORTABLE INSTRUMENTS EQUIPPED WITH SICRAM MODULE

CODE	°C max	τ s	DIMENSIONS	USE
TP 472 I	-196 +500	3s		
TP 472 I.0 **1/3 DIN** **Thin Film**	-50 +300	3s		
TP 473 P.I	-50 +400	5s		
TP 473 P.0 **1/3 DIN** **Thin Film**	-50 +300	5s		
TP 474 C.0 **1/3 DIN** **Thin Film**	-50 +300	5s		
TP 475 A.0 **1/3 DIN** **Thin Film**	-50 +250	12s		
TP 472 I.5	-50 +400	3s		
TP 472 I.10	-50 +400	3s		
TP 49 A.I **Class A** **Thin Film**	-70 +250	3,5s		
TP 49 AC.I **Class A** **Thin Film**	-70 +250	5,5s		
TP 49 AP.I **Class A** **Thin Film**	-70 +250	4s		

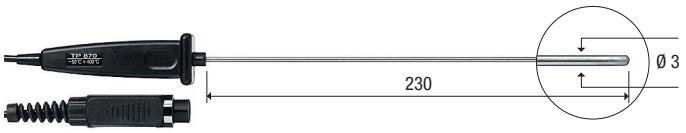
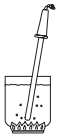
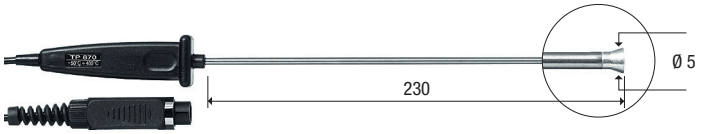
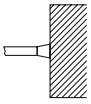
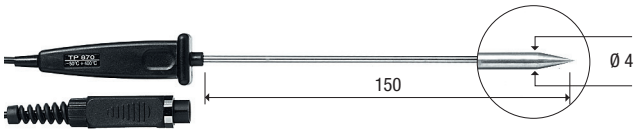
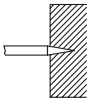
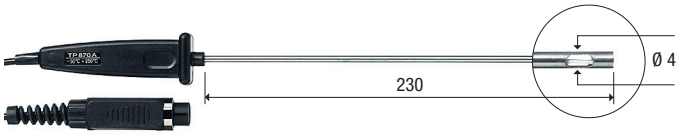
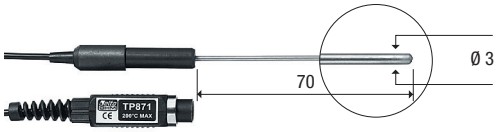
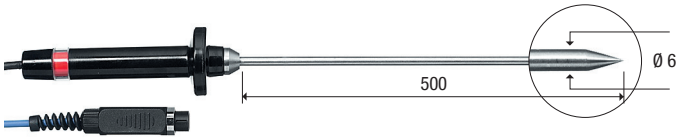
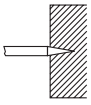
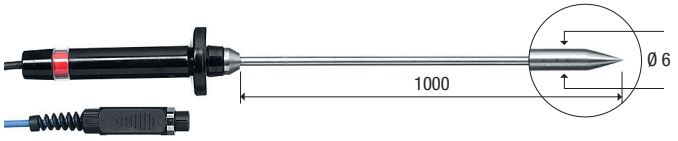
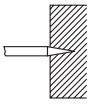
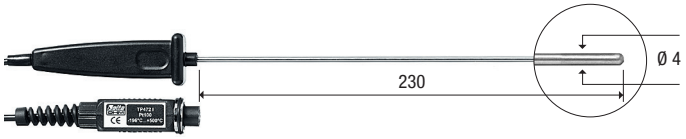
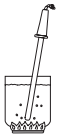
Pt100 PROBES FOR PORTABLE INSTRUMENTS EQUIPPED WITH SICRAM MODULE

CODE	°C max	τ s	DIMENSIONS	USE
TP 87.0 **1/3 DIN**	-50 +200	3s		
TP 878.0 **1/3 DIN** **Thin Film**	-40 +85	60s	Contact probe for solar panels equipped with SICRAM module. Cable L = 2m.		
TP 878.1.0 **1/3 DIN** **Thin Film**	-40 +85	60s	Contact probe for solar panels equipped with SICRAM module. Cable L = 5m.	
TP 879.0 **1/3 DIN** **Thin Film**	-20 +120	60s	Penetration probe for compost equipped with SICRAM module. Cable L = 5m		
TP 880/300.I	-50 +450	60s	Mini DIN head. Cable L = 2m		
TP 880/600.I	-50 +450	60s	Mini DIN head. Cable L = 2m		
TP 35.5AF.5S **Class A**	-110 +180	3s	Cable L = 5m. Shield in Inox + PTFE		
TP 875.I	-30 +120	15'	Globe-thermometer probe for measuring radiant heat ø150 mm. (ISO7243, ISO7726). 4 wires Pt100 Sensor cable L=2m. **Equipped with SICRAM module.**	
TP 876.I	-30 +120	15'	Globe-thermometer probe for measuring radiant heat ø50 mm. (ISO7243, ISO7726). 4 wires Pt100 Sensor cable L=2m. **Equipped with SICRAM module.**	

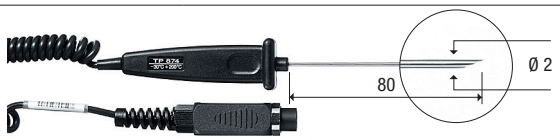
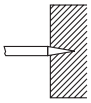
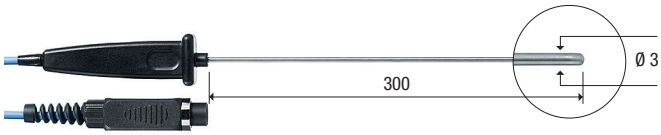
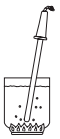
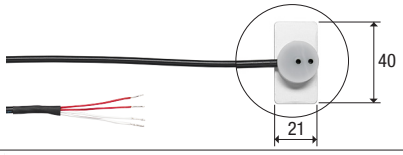
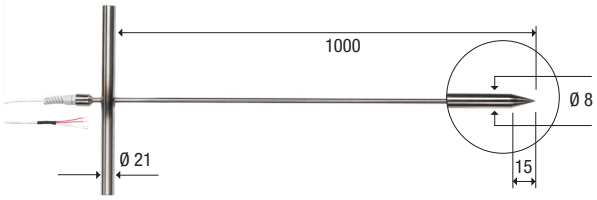
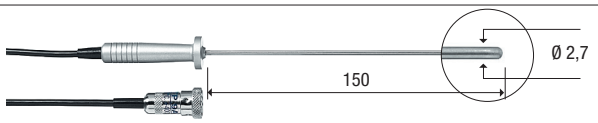
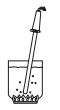
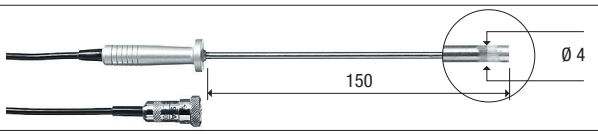
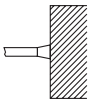
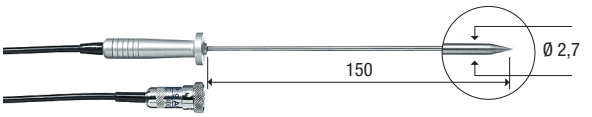
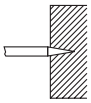
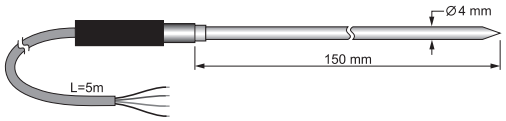
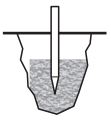
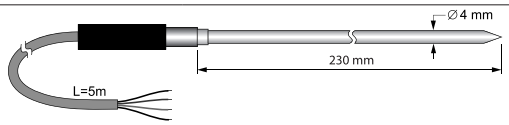
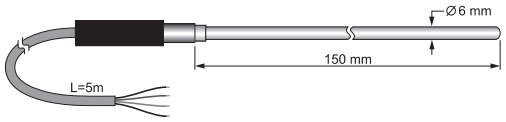
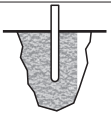
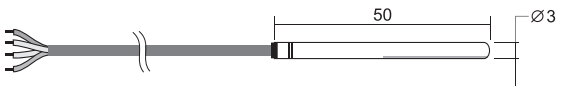
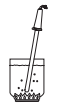
Pt100 / Pt1000 SENSOR PROBES WITH TP 47 MODULE

CODE	°C max	τ s	DIMENSIONS	USE
TP 47.100.0 (Pt100) 1/3 DIN Thin Film	-50 +250	3s		
TP 47.1000.0 (Pt1000) 1/3 DIN Thin Film	-50 +250	3s		
TP 87.100.0 (Pt100) 1/3 DIN Film sottile	-50 +200	3s		
TP 87.1000.0 (Pt1000) 1/3 DIN Thin Film	-50 +200	3s		
TP 47			Only connector for connection of probes without SICRAM module: direct 3 and 4 wires Pt100, 2 wires Pt1000. 	

Pt100 SENSOR PROBES WITHOUT SICRAM MODULE

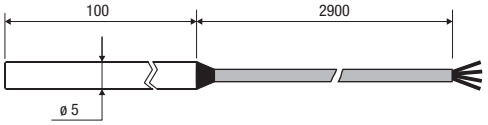
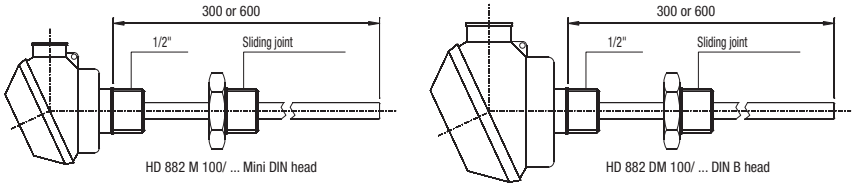
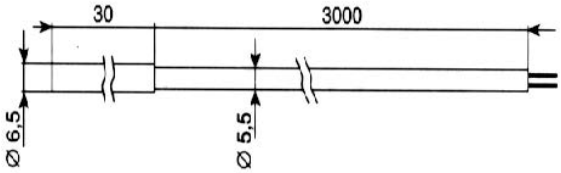
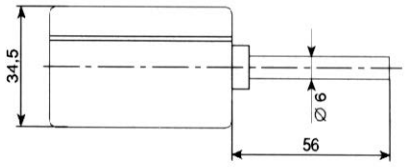
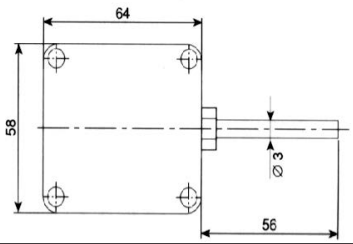
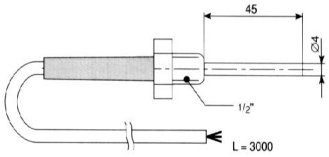
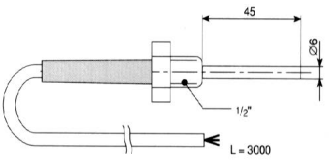
CODE	°C max	τ s	DIMENSIONS	USE
TP 870.0 1/3 DIN Thin Film	-50 +250	3s		
TP 870 C.0 1/3 DIN Thin Film	-50 +250	5s		
TP 870 P.0 1/3 DIN Thin Film	-50 +250	5s		
TP 870 A.0 1/3 DIN Thin Film	-50 +250	12s		
TP 871.0 1/3 DIN Thin Film	-50 +200	3s		
TP 872/500.I	-50 +400	10s		
TP 872/1000.I	-50 +400	10s		
TP 873.I	-50 +400	6s		

Pt100 SENSOR PROBE

CODE	°C max	τ s	DIMENSIONS	USE
TP 874.I **1/3 DIN**	-30 +200	3s		
TP 875.1.I	-30 +120	15'	Globe thermometer probe for measuring radiant head Ø150mm (ISO7243, ISO7726). 4 wires Pt100 sensor. Cable L = 2m.	
TP 876.1.I	-30 +120	15'	Globe thermometer probe for measuring radiant head Ø50mm (ISO7243, ISO7726). 4 wires Pt100 sensor. Cable L = 2m.	
TP 877.I	-200 +400	3s		
TP 878.1SS.0 **1/3 DIN** **Thin Film**	-40 +85	60s	Contact probe for solar panels without SICRAM module. Cable L = 5m.	
TP 879.1.0 **1/3 DIN** **Thin Film**	-20 +120	60s	Penetration probe for compost without SICRAM module. 4 wires cable L = 2m.	
TP 9 A.I	-70 +250	3,5s	CLASS A thin film	
TP 93.I	-70 +400	3,5s	1/3 DIN thin film	
TP 9 AC.I	-70 +250	5,5s	CLASS A thin film	
TP 93 C.I	-70 +400	5,5s	1/3 DIN thin film	
TP 9 AP.I	-70 +250	4s	CLASS A thin film	
TP 93 P.I	-70 +400	4s	1/3 DIN thin film	
TP 32MT.1P.I **1/3 DIN**	-40 +100	40s		
TP 32MT.1P.2 **1/3 DIN**	-50 +250	40s		
TP 32MT.2.I **1/3 DIN**	-40 +100	5s		
TP 35.5AF.5 **Class A**	-110 +180	3s		

At temperatures above 400°C avoid violent impacts or thermal shocks. Pt100 sensor can be irreparably damaged.

INDUSTRIAL PROBES WITH Pt100 SENSOR

CODE	°C max	DIMENSIONS
HD 882 E 100	-50 +300	
HD 882 M 100/300 **HD 882 M 100/600** **HD 882 DM 100/300** **HD 882 DM 100/600**	-50 +450	
HD 882/EK **SENSORE KTY81**	-40 +150	
HD882/GK **SENSORE KTY81**	-50 +100	
HD882/G100 **SENSORE Pt100**	-50 +100	
HD 882/L104 **SENSORE Pt100**	0 +250	
HD 882/L106 **SENSORE Pt100**	0 +250	
TP 471 **SICRAM electronic module for PRT sensors**