P700 series

Example
P755 with connected Pt100 probe (6000-1018)

Application profile

The universally applicable, micro-processor-controlled hand-held instruments, Series P700, are ideal for measuring operations in which high accuracy counts or the possibility of online documentation is demanded.

Areas of application

- Measurements for quality assurance according to ISO 9000
- As a reference instrument for checking production
- For taking comparison measurements in service and repair
- For registration of humidity and temperature in air conditioning and environmental engineering
- Long-term monitoring of temperature and/or relative humidity with online documentation

High precise measurements in laboratories

Pressure-tight moisture probe for measuring in compressed air

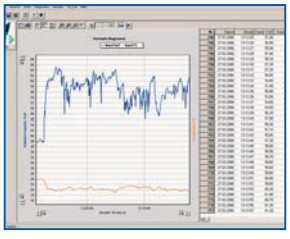
Quality control of climatic cabinets

Protection cover, rubberboot (5600-0092)

Measures equilibrium moisture in masonry, cement, plastic granulate

P750 as a standard in a laboratory

Climate control in greenhouses, during production and storage of food and sensitive goods



Windows Software DE-Graph (online measurements and calibration)

P700 series

Product features

- USB interface
- Optional DE-Graph Windows Software for graphic and tabular documentation
- High measuring accuracy (P750/P755 ±0,03°C)
- Integrated calibration function for simple compensation of sensor tolerances
- Physical 1-point, 2-point or 3-point calibration function
- Measuring channels are freely assignable
- Recording maximum, minimum, hold and average values
- Integrated sensor holder for one hand operation
- Mains operation possible
- Simultaneous display of two measured values
- Differential temperature display (2 channel instruments only)
- All Pt100-inputs in 4-wire-layout
- °C/°F-switchable

Example
P755 with connected vane probe (6050-1003)

Example
P770 with connected combination probe (6020-1001)

Technical data P700 series

For all instruments

Output:	USB-interface
Connector:	DIN 45326 8-pole
Working temp.:	0°C ... +40°C
Display:	2-line LCD
Housing:	plastic (ABS)
Dimensions:	200 x 93 x 44 mm (L x W x H)
Weight:	350 g
Power supply:	9 V battery
Battery life:	appr. 20 h

▶▶▶

-200 °C...+1760 °C

Pt100

Typ J, K, L, N, R, S, T

USB

MAX-MIN-HOLD

DIF-AVG

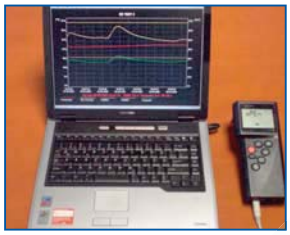
P700 / P705

Application profile

The all-round talent for temperature measurements with Pt100 sensor over a range of -200°C to +850°C and thermocouple (type J, K, L, N, R, S, T) to +1760°C with a resolution of 0,1°C over the full measuring range.

Areas of application

Ideal for quality assurance, service and production.
Also available as explosion-proof version page 27.



Accessories and probes
page 32 and up.

Example

P700 with connected Pt100 probe (6000-1001)

5000-0700

5000-0705

Technical data

Input:	Pt100, 4-wire Thermocouple type K, J, L, N, R, S, T
Measuring range:	
Pt100:	-200°C...+850°C (EN 60751)
Thermocouple:	-200°C...+1760°C (EN 60584-1)
Resolution:	0.1 °C
Accuracy:	
Pt100:	±0.1°C from -100°C...+200°C 0.1% remaining range
Thermocouple:	±1.0°C +0.1% (Type R, S) ±0.2°C from 0°C...+200°C (Type K, J, L, N, T) ±0.5°C to 1000°C ±1.0°C remaining range

5000-0700	P700 hand-held instrument, 1-channel, Pt100, thermocouple type J, K, L, N, R, S, T without probe and software
5000-0705	P705 hand-held instrument, 2-channel, Pt100, thermocouple type J, K, L, N, R, S, T without probe and software

P710 / P715

-200 °C...+1370 °C

Typ J, K, L, N, T

USB

MAX-MIN-HOLD

DIF-AVG

Application profile

The economically priced solution for precision measurements on a wide range of use. By using the thermocouple type J, K, L, N, T for a range of –200°C to +1370°C these instruments can be used for many application.

Areas of application

Industrial furnace control, taking surface measurements or differential temperature on heating systems.

Example

P710 with connected type K probe (6010-1010)

5000-0710

5000-0715

Accessories and probes page 32 and up.

Technical data

Input:	Thermocouple type K, J, L, N, T
Measuring range:	-200°C...+1370°C (EN 60584-1)
Resolution:	0.1 °C
Accuracy:	±0.2°C from -40°C...+200°C ±0.5°C to 1000°C ±1.0°C remaining range

5000-0710	P710 hand-held instrument, 1-channel, thermocouple type K, J, L, N, T without probe and software
5000-0715	P715 hand-held instrument, 2-channel, thermocouple type K, J, L, N, T without probe and software

P750 / P755 / P755-LOG

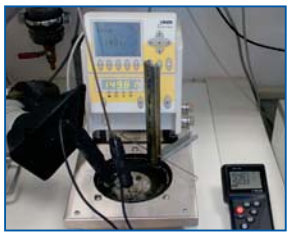
-200 °C...+1760 °C
Pt100
Typ J, K, L, N, R, S, T
USB
m/s
% rF
Pa
MAX-MIN-HOLD
DIF-AVG

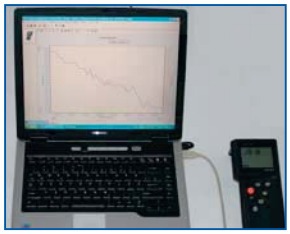
Application profile

The multi-function-instruments are outstanding for their high accuracy of ±0,03°C. You can optional plug in Pt100 or thermocouple(type J, K, L, N, R, S, T), as well as probes for humidity and flow. The high precision makes them eminently suitable as reference instruments.

Areas of application

For testing subordinate measuring instruments in quality assurance laboratories or for checking temperature-critical processes. These instruments are frequently provided with a DKD calibration certificate.
Also available as explosion-proof version page 27.





Example

P755 with connected Pt100 probe (6000-1018)

5000-0750

5000-0755

Accessories and probes page 32 and up.

Technical data

Input:	Pt100, 4-wire Thermocouple type K, J, L, N, R, S, T rel. humidity, flow
Measuring range:	
Pt100:	-200°C...+850°C (EN 60751)
Thermocouple:	-200°C...+1760°C (EN 60584-1)
Humidity:	0 %...100 %rF
Flow:	0 ... 40 m/s
Differential pressure:	0 ... 3500 Pa
Resolution:	0.01°C from -200°C...+200°C otherwise 0.1°C, 0.1%, 0.01 m/s
Accuracy:	
Pt100:	±0.03°C from -50°C...+199.99°C ±0.05°C from -200°C...-50.01°C otherwise ±0.05% of reading
Thermocouple:	±1.0°C +0.1% (Type R, S) of reading ±0.2°C from 0°C...+200°C (Type K, J, L, N, T) ±0.5°C to 1,000°C ±1.0°C remaining range
Humidity:	±1.5%rH (2...98%)
Flow:	1% of end of value
Differential pressure:	±1%, +1Pa
Memory:	6,000 measurements (P755-LOG only)
5000-0750	P750 hand-held instrument, 1-channel, Pt100, thermocouple, rel. humidity, dew point, flow without probe and software
5000-0755	P755 hand-held instrument, 2-channel, Pt100, thermocouple, rel. humidity, dew point, flow without probe and software
5000-0755L	P755-LOG hand-held instrument, as P755, with memory for 6,000 measurements

P770 / P770-LOG

-200 °C...+1370 °C

% rF

Pa

MAX-MIN-HOLD

Application profile

The allrounder of the P700-series for temperature, humidity, dew point and flow measurements.

Areas of application

This instrument is especially suitable for climatic applications.

Example

P770 with connected with dew point probe (6020-1009)

5000-0770

Accessories and probes
page 32 and up.

Technical data

Input:	Pt100, 4-wire Thermocouple type K, J, L, N, T rel. humidity, flow, dew point
Measuring range:	
Pt100:	-200°C...+850°C (EN 60751)
Thermocouple:	-200°C...+1370°C (EN 60584-1)
Humidity:	0 %...100 %rF
Flow:	0 ... 40 m/s
Differential pressure:	0 ... 3500 Pa
Resolution:	0.1°C, 0.1%, 0.01 m/s
Accuracy:	
Pt100:	±0.1°C from -100°C...+200°C otherwise 0.1%
Thermocouple:	±0.2°C from 0°C...+200°C (Type K, J, L, N, T) ±0.5°C to 1,000°C ±1.0°C remaining range
Humidity:	±1,5%rH (2...98%)
Flow:	1% of end of value
Differential pressure:	±1%, +1Pa
Memory:	6,000 measurements (P770-LOG only)
5000-0770	P770 hand-held instrument, 2-channel, Pt100, thermocouple, rel. humidity, dew point, flow without probe, without software
5000-0770L	P770-LOG hand-held instrument, as P770, with memory for 6,000 measurements

P600-EX / P605-EX
P650-EX / P655-EX
P655-LOG-EX

EEx ib IIB T4

-200 °C...+850 °C

Pt100

RS 232

MAX-MIN-HOLD

DIF-AVG

Areas of application

Instruments for measuring in explosion hazard areas (temperature range –200°C…+850°C), EX-mark: EEx ib IIB T4.

TÜV CERT

Translation

EC-TYPE EXAMINATION CERTIFICATE

TÜV 01 ATEX 1768 X

TÜV NORD CERT

5000-X600

5000-X605

5000-X650

5000-X655

5000-X655L

Accessories and probes
page 32 and up.

Technical data

Input:	Pt100, 4-wire
Measuring range:	-200°C...+850°C (EN 60751)
Resolution:	
P600-EX / P605-EX:	0.1°C
P650-EX / P655-EX / P655-LOG-EX:	0.01°C from -200°C...+200°C otherwise 0,1°C
Accuracy:	
P600-EX / P605-EX:	±0.1°C from -100°C...+200°C 0,1% remaining range
P650-EX / P655-EX / P655-LOG-EX:	±0,03°C from -50°C...+199,99°C ±0,05°C from -200°C...-50.01°C otherwise 0,05%
EX-mark:	EEX ib IIB T4
Memory:	6,000 measurements (P655-LOG-EX only)
5000-X600	P600-EX hand-held instrument, Pt100 1-channel, without probe and software
5000-X605	P605-EX hand-held instrument, Pt100, 2-channel, without probe and software
5000-X650	P650-EX hand-held instrument, Pt100, 1-channel, without probe and software
5000-X655	P655-EX hand-held instrument, Pt100, 2-channel, without probe and software
5000-X655L	P655-LOG-EX hand-held instrument, Pt100, 2-channel, Pt100, with memory, without probe and software

T900 series

-200 °C...+1760 °C
Pt100
Typ J, K, L, N, R, S, T
RS 232
m/s
% rF
Pa
MAX-MIN-HOLD
DIF-AVG
Output 0-1 volt

Application profile

Useable for a wide range of applications the T900 bench instrument contains two measuring channel for temperature (pt100 + thermocouple, humdity, dew point and flow. The measuring range is whichever probe is connected: -200°C…+1760°C, 0..40m/s and 0..100%rH. Via a menu function the user is able to configurate displayed units (°C/°F, td…), calibration options, measuring channel and two scalable analoge output signals (each per channel).

Areas of application

The universally applicable micro-processor-controlled instruments are ideal for measuring operations in which high accuracy counts or the possibility of online documentation via PC, Printer or Pen recorder is demanded.
The central issue for all instruments is the traceability of the measurement results to the national standards. DKD certified test equipment is recognized, without any further specifications, as an instrument of traceability in Europe and in many other non-European countries. As a service, certification for existing test equipment can be provided at any time.

- Reference System for your laboratory
- Service-Area
- Calibration lab
- Quality insurance
- Accurate longterm monitoring

Accessories and probes
page 32 and up.

Technical data T900 series

For all instruments

Output:	RS232-interface (serial printer can be connected), 2 analog outputs 0-1 Volt (11-bit scaleable)
Connector:	DIN 45326 8-pole
Working temp.:	0°C ... +40°C
Display:	2-line LCD
Housing:	plastic (ABS)
Dimensions:	200 x 200 x 80 mm (L x W x H)
Weight:	950 g
Power supply:	230 VAC

▶▶▶

T905 / T955

-200 °C...+1760 °C
Pt100
Typ J, K, L, N, R, S, T
RS 232
m/s
% rF
Pa
MAX-MIN-HOLD
DIF-AVG
Output 0-1 volt

Product features

- 2-channel-instruments, for Pt100 according EN 60751, thermocouple according EN 60584-1 type J, K, L, N, R, S, T, relative humidity, dew point, air velocity (m/s)
- Simultaneous display of two measured values or differential measurement display
- Recording maximum, minimum, hold and average (average over free selectable time)
- Integrated calibration function(options: 1-point, 2-point or 3-point adjustment)
- High measuring accuracy (T955 ±0,03 °C)
- Scalable analog output 0-1V (resolution up to 0,01)
- Password protection for calibration function
- Optional DE-Graph Windows software for graphical and tabular documentation

5000-0905

5000-0955

Technical data

Input:	Pt100, 4-wire Thermocouple type K, J, L, N, R, S, T T955 only: rel. humidity, flow, dew point
Measuring range:	
Pt100:	-200°C...+850°C (EN 60751)
Thermocouple:	-200°C...+1760°C (EN 60584-1)
Humidity:	0 %...100 %rF (T955 only)
Flow:	0 ... 40 m/s (T955 only)
Resolution T905:	0.1°C
Resolution T955:	0.01°Cfrom -200°C...+200°C otherwise 0.1°C, 0.1%, 0.01 m/s
Accuracy:	
Pt100 T905:	±0.1°C from -100°C...+200°C, otherwise 0,1%
Pt100 T955:	±0.03°C from -50°C...+199.99°C ±0.05°C from -200°C...-50.01°C otherwise 0.05%
Thermocouple:	±1.0°C +0.1% (Type R, S) ±0.2°C from 0°C...+200°C (Type K, J, L, N, T) ±0.5°C to 1,000°C ±1.0°C remaining range
Humidity:	±1.5%rH (T955 only)
Flow:	1% of end of value (T955 only)
5000-0905	T905 bench instrument, 2-channel, Pt100, thermocouple without probe, without software
5000-0955	T955 bench instrument, 2-channel, Pt100, thermocouple, rel. humidity, dew point, air flow without probe, without software

Accurate measurements at any time through integrated calibration function

To minimise measurement uncertainty of the complete system (instrument and sensor) the P700 series and T900 series measuring instruments have a special calibration function which compensates the sensor tolerances when a sensor is replaced.

To this end all our measuring sensors are tolerance calibrated in our laboratory. The determined deviation is converted into a number code which is marked on the sensor.

This code contains information on the sensor deviation at zero point and the increase in relation to the respective DIN Standard on which it is based.

The number code is simply entered in the measuring instrument and is stored by means of the instrument control panel or the software and interface. The instrument processor corrects the tolerance of the measuring sensor defined by the number code and corrects the measuring error resulting out of this. The corrected measured value is displayed in the LCD.

The measuring instruments can be calibrated to uncoded measuring sensors through a further instrument function by simple physical compensation (comparison measurement). At the same time this function can be used to easily correct any possible drift error caused by ageing of the sensor, for example. For the physical calibration you can select either a 1, 2, or 3-point-calibration. To implement this function the measuring sensors to be calibrated are immersed, for example, in two reference temperature points (optional 1 or 3 points) one after the other and the values entered into the instrument through the keyboard.

The instruments monitor the calibration process automatically so that the operation is automatically broken off in the case of references which are unstable, for example, in order to be able to continue to use the previously valued correction values in the processor.

To achieve good results only such references should be used for calibration the maximum error of which are lower than the specific error limits for the respective instruments by the factor 3.

The DE-Graph software offered for the measuring instruments permits simple, efficient administration of the various measuring sensors and pertinent number codes and the transfer for read-out of the appropriate code on the measuring instrument.

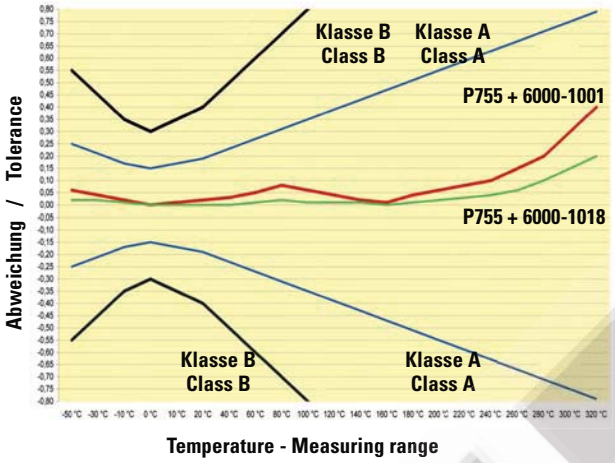
As a result the above-described calibration function eliminates the influence of the sensor error to a great extent and permits system accuracy which is about the same as the accuracy of the measuring instrument itself.

The resulting high system measuring accuracy predestines the measuring instruments for applications in quality assurance and laborarotory.

Typical system accuracy of P700/T900-series

with our Pt100-probes by using the sensor calibration code. (class A and class B according EN 60751)

For example:
P755 with Pt100 probe 6000-1001 (red line)
P755 with Pt100 probe 6000-1018 (green line)
Class A (blue line)
Class B (black line)



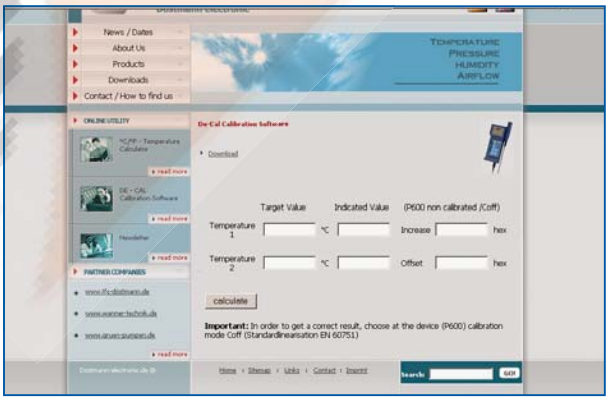
P700-display during "switch on"

① Calibration option: 1
② Calibration code (gradient)
③ P = Pt100 Selected probe
④ Calibration code (Offset)

Important!
To reach the specified measuring uncertainty it is absolutely necessary to enter the sensor calibration code into the instrument.
To be sure of using the correct calibration code the instrument is showing for 3 seconds the last saved sensor calibration code after switching on.

Calibration software on the internet

Via our webpage you are able to calculate your own sensor calibration codes. Therefore you will need the appropriate references and a reliable temperature source (calibration bath or thermowell).



For using your own probes you will find a connector layout in our manual. The suitable connectors you will find on our accessories page 33. **(5920-0072)**

DE-Graph

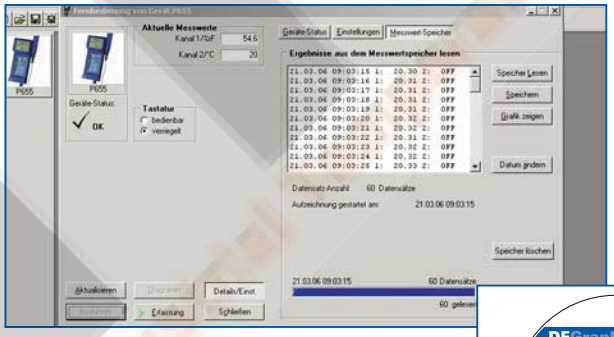
Product features

- Automatic instrument and PC-port identification
- Online-documentation during measuring via PC
- Simple memory download (DBF-file format allows an easy data export to excel)
- Graphic- and table-visualisation of the data
- User friendly graphic functions (drag & zoom, auto scale…)
- Administration of sensor calibrations (enabling of password protection for the cal-function)
- Software language: English, German and French, incl. online-help

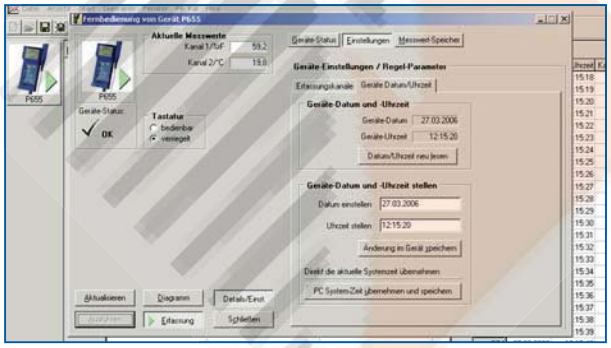
Automatic instrument- and port-identification

Language selection: German, English and French

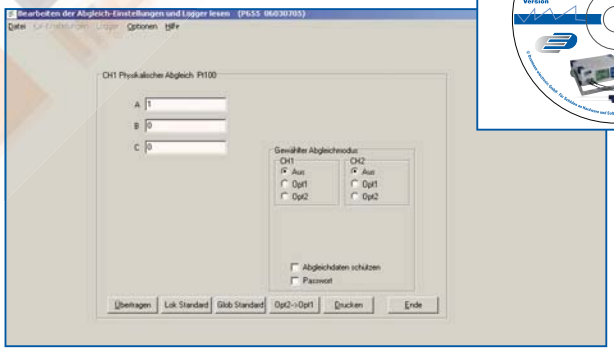
Graphic- and table- visualisation



Memory download



Real time clock: setup by PC



Administration of the sensor calibration codes

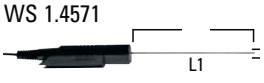
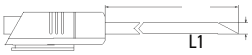
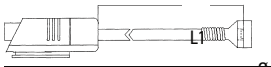
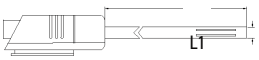
5090-0080	DE-Graph for P400, incl. PC-cable
5090-0081	DE-Graph for P700 / T900
5090-0002	PC-cabel for P400
5090-0046	PC-cabel for P700
5090-0004	PC-cabel for T900

SERVICE-SET

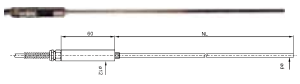
Fig.	Description	
	PC-cable (USB) for series P700	5090-0046
(1)	PC-adaptor cable for series P400	5090-0002
(2)	PC-adaptor cable for series T900	5090-0004
(3)	WINDOWS Software DE-Graph for series P700 / T900	5090-0081
(4)	Protection bag	5600-0044
(5)	Power pack 230 VAC for series P700	5990-0070
(6)	Service case with form rubber insert, suitable for P700 series, P795, with accessories	5600-0007
(7)	Battery charger for 9 V rechargeable battery	5600-0008
(8)	9 V battery	5990-0001
(9)	9 V accu	5990-0003
(10)	Adaptor plug DIN to type K - standard plug	5600-0048
(11)	Heat conducting paste - 20 g syringe for better heat transmission for measuring the surface	9905-0005
(12)	Probe connector P700/T900	5920-0072
(13)	Pt100 1/3 DIN chip sensor according to EN 60751, 2-wire, 2,2 x 2,2 mm for installation in the P700-connector for cold-junction compensation	6900-0012
(14)	USB-RS232 – adaptor to connect T900/P400 to Notebooks and PCs with USB-connectors only	5090-0035
(15)	Probe cable extension for Pt100-probes (P700/T900-series & P400), 5 meter	5090-0074
(16)	Protection cover, rubberboot (P700-series)	5600-0092

Resistance temperature probes

Pt100, EN 60751, 4-wire and PVC/PVC cable 1000 mm
suitable for P700 / P705 / P750 / P755 / P770 / P600-EX / P605-EX / P650-EX / P655-EX / P755-LOG / P655-LOG-EX / P770-LOG / P795 / T905 / T955

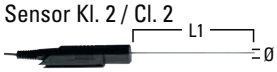
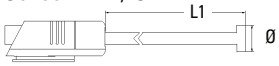
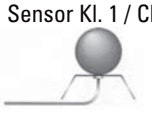
Description		Measuring range	L1 x Ø mm	t90	
Sensor Kl. B / Cl. B WS 1.4571 	Immersion probe, with handle, mineral insulated	-50 °C ... +350 °C	150 x 3,0	8	6000-1001
			300 x 3,0	8	6000-1002
			500 x 3,0	8	6000-1005
Sensor Kl. B / Cl. B WS 1.4571 	Insertion probe, with handle, mineral insulated				
		-50 °C ... +350 °C	150 x 4,0	10	6000-1006
		-50 °C ... +350 °C	300 x 4,0	10	6000-1007
Sensor Kl. B / Cl. B WS 1.4571 	Surface probe with buffer-block	-40 °C ... +300 °C	150 x 6,0	45	6000-1059
Sensor Kl. B / Cl. B (Chip-Widerstand) 	Surface probe, self adhesive, bendable silicone patch, 35 x 13 x 2 mm	-20 °C ... +250 °C		<3	6000-1075
Sensor Kl. B / Cl. B WS 1.4571 	Air probe for fast measurements of air or gas temperature, WS 1.4571	-50 °C ... +250 °C	250 x 4,0	7	6000-1055
Sensor Kl. B / Cl. B 	High temperature probe with handle, inconel tube	-50 °C ... +600 °C	300 x 6,0	20	6000-1056
	with handle, nickel tube	-200 °C ... +650 °C	300 x 6,0	20	6000-1079
Sensor Kl. B / Cl. B 	Immersion probe for tanks, with weight petroleum proof cable (10 m cable length)	-30 °C ... +150 °C	80 x 4,0	8	6000-1082
Sensor Kl. A / Cl. A 	Screw in probe, WS 1.4301, M8-thread	-100 °C ... +450 °C	50 x 3,0	8	6000-1083

High precision probes ±0,03°C (-30°C ... +200°C) siehe Grafik Systemgenauigkeit Seite 31 / see table system accuracy on page 31

Sensor Kl. 1/3 DIN / Cl. 1/3 DIN WS 1.4571 	Immersion probe, with handle, mineral insulated	-200 °C ... +450 °C	150 x 3,0	12	6000-1018
			300 x 3,0	12	6000-1019
			300 x 1,5	5	6000-1023
			300 x 6,0	20	6000-1078
Sensor Kl. 1/10 DIN Cl. 1/10 DIN WS 1.4571 	Immersion probe, with handle, mineral insulated	-200 °C ... +450 °C	150 x 3,0	12	6000-1073
			300 x 3,0	12	6000-1074
			300 x 6,0	20	6000-1084
Sensor Kl. 1/10 DIN Cl. 1/10 DIN WS 1.4571	Immersion probe, without handle, mineral insulated Silicone cable 1500 mm, bent protection spring	-200 °C ... +450 °C	400 x 3,0	12	6000-1090
			400 x 6,0	20	6000-1091
WS 1.4571 	Reference standard with stainless steel handle	-40 °C ... +500 °C	300 x 4,0	15	6000-1080

Thermocouple temperatue probes

Type K, NiCr-Ni, EN 60584-1 and PVC/PVC cable 1000 mm
suitable for P700 / P705 / P710 / P715 / P750 / P755 / P755-LOG / P770 / P770-LOG / T905 / T955

Description		Measuring range	L1 x Ø mm	t90	
Sensor Kl. 2 / Cl. 2 	Immersion probe/insertion probe for measuring in liquid and powdered or semi-solid materials, stainless steel	-40 °C ... +400 °C	120 x 3,5	8	6010-1016
Sensor Kl. 2 / Cl. 2 	Surface probe, with handle	-100 °C ... +1100 °C	300 x 6,0	4	6010-1003
Sensor Kl. 1 / Cl. 1 	Surface probe, with spring thermocouple strip	-40 °C ... +900 °C	130 x 8,0	3	6010-1014
	Surface probe, 90° bend, with spring thermocouple strip	-40 °C ... +900 °C	130 x 8,0	3	6010-1020
Sensor Kl. 1 / Cl. 1 	Surface probe with thermocouple strip	-65 °C ... +400 °C	120 x 6,0	4	6010-1071
Sensor Kl. 1 / Cl. 1 	Magnetic surface probe	-50 °C ... +200°C	16 x 25	5	6010-1070
Sensor Kl. 1 / Cl. 1 	Clamp probes for measurements on pipes (max. Ø 35 mm)	-40 °C ... +200 °C		15	6010-1024
Sensor Kl. 1 / Cl. 1 WS 2.4816 	Immersion probe, with handle, mineral insulated	-100 °C ... +1100°C	300 x 1,5 500 x 1,5 300 x 3,0 500 x 3,0	8 4 6 6	6010-1006 6010-1005 6010-1010 6010-1007
Sensor Kl. 1 / Cl. 1 WS 2.4816	Immersion probe, without handle, mineral insulated	-100 °C ... +800°C	100 x 0,5	1	6010-1011
Sensor Kl. 1 / Cl. 1 WS 1.4571 	Insertion probe with handle, mineral insulated	-100 °C ... +1100°C	300 x 4,0	8	6010-1037
Sensor Kl. 1 / Cl. 1 	Globe thermometer for measuring radiant heat	bis / up to +250°C	Ø 80 mm		6010-1035
Sensor Kl. 1 / Cl. 1 	High temperature probe type S, with ceramic tube (not suitable for P710/P715)	0 °C ... +1500 °C	500 x 10,0	4	6010-1068

Note: Other sizes and designs available upon request.

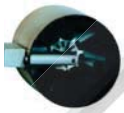
Combination probes

for temperature (Pt100 1/3 DIN), relative humidity, absolute humidity, dew point and PVC/PVC cable 1000 mm
suitable for P750 / P755 / P755-LOG / P770 / P770-LOG / T955

Description		Measuring range	L1 x Ø mm	t90	
Combination probe (POM) 	with slot cover (ABS)	0% ... 100 %rF / rH -30 °C ... +80 °C	120 x 20	3 10	6020-1001
Combination probe (Alu) 	aluminium tube with a sintered cover tip is heat resistant up to 140°C	0% ... 100 %rF / rH -30 °C ... +100 °C	230 x 12	3 10	6020-1009
Humidity sword 	for measuring humidity, between paper or in bulk material	0% ... 100 %rF / rH -30 °C ... +80 °C	300 x 20 x 5 (L x B x H)	3 10	6020-1003
Flexible humidity probe 	mini module for measuring equilibrium moisture, e.g. on granulate, flexible cable	0% ... 100 %rF / rH -30 °C ... +80 °C	19 x 21	3 10	6020-1004
Pressure dew point probe 	Pressure-tight humidity / dew point probe for measurements in compressed air systems pressure-tight up to 20 bar	0% ... 100 %rF / rH -30 °C ... +80 °C	120 x 20	120 30	6020-1007
	Measuring chamber with quick-connection for compressed air systems	-30 °C ... +30 °C			6020-1008
Sintered cover (bronze) 	for 6020-1001				6020-0051
Sintered cover with a tip 	for 6020-1009				6020-0061
Humidity testing kit	with testing cap and 5 ampoules for 6020-1001	25 %rF – 50 %rF – 80 %rF –	Accuracy ±2 %rH Accuracy ±2 %rH Accuracy ±2 %rH		5600-0014 5600-0018 5600-0015

Note: Other sizes and designs available upon request.

Flow sensors
for gases and fluids
suitable for P750 / P755 / P755-LOG / P770 / P770-LOG / T955

Description		Working temperature	Measuring range	L1 x Ø mm	
Micro Air, 3m cable					
	for gases		0,5 ... 20 m/s	165 x 11	6050-1001
		-10°C ... +80 °C	0,7 ... 40 m/s	165 x 11	6050-1002
Micro Water, 3m cable					
	for fluids	0°C ... +70 °C	0,04 ... 5 m/s	165 x 11	6050-1007
Mini Air, 3m cable					
	for gases		0,3 ... 20 m/s	175 x 22	6050-1003
		-10°C ... +80 °C	0,5 ... 40 m/s	175 x 22	6050-1004
Mini Water, 3m cable					
	for fluids	0°C ... +70 °C	0,02 ... 5 m/s	175 x 22	6050-1008
Macro Air					
	for gases				
5m cable		-10°C ... +80 °C	0,15 ... 20 m/s	225 x 80	6050-1005
Replacement turbine	for Micro Air		0,5 ... 20 m/s		6050-0056
			0,7 ... 40 m/s		6050-0057
	for Micro Water		0,04 ... 5 m/s		6050-0066
Replacement turbine	for Mini Air		0,3 ... 20 m/s		6050-0054
			0,5 ... 40 m/s		6050-0055
	for Mini Water		0,02 ... 5 m/s		6050-0067
Replacement turbine	for Macro Air				
			0,15 ... 20 m/s		6050-0068
Telescope extension	for turbine sensor max. 1000 mm				
				300...1000 x 23	6050-0052
Differential pressure probe					
	to measure differential pressure and flow speeds (with pitot tube), incl. probe holder for P700-series				
		0°C ... +50 °C	0...3500 Pa (±1%)	60 x 65 x 40	6060-1012

Replacement turbine: By ordering with a new sensor half price)

Note: Other sizes and designs available upon request.

P795

-200 °C...+850 °C

Pt100

USB

MAX-MIN-HOLD

DIF-AVG

SMART-PROBE

± 0,01°C

Application profile

An instrument which meets the highest demands. The 2-channel-resistance thermometer automatically detects our Pt100-smartprobes with integrated EEprom. Thereby the calibration characteristic of each probe is transferred automatically to the instrument. The thermometer will achieve a system accuracy of ± 0,015K (instrument + probe). Both measuring channels can be easily seen on the large LCD display. The instrument contains numerous functions for the measurement visualization. Various integrated calibration functions, including the intelligent EEprom-probes, takes this compact instrument to a high performance class, making it ideally suitable as a primary reference standard.

Areas of application

The key issue for all instruments is the traceability of measurement to a recognised national standards laboratory. DKD (German UKAS equivalent) certified test equipment is recognized, without any further specifications, as an instrument of traceability in Europe and in many other non-European countries. As a service, certification for existing test equipment can be provided at any time.

- Reference system for your laboratory
- Service-Area
- Quality insurance
- Accurate longterm monitoringeasurements for quality assurance according to ISO 9000

Example

P795 with two connected Pt100 probes (6000-1718)

5000-0795

Example

P795 with one connected Pt100 probe (6000-1718)

P795

-200 °C...+850 °C
Pt100
USB
MAX-MIN-HOLD
DIF-AVG
SMART-PROBE
± 0,01°C

Product features

- 2-channel-instruments, for Pt100 according EN 60751,
- Simultaneous display of two measured values or differential measurement
- Recording maximum, minimum, hold and average values (average over user selectable time)
- Integrated calibration function (acc. EN60751 up to 14 points)
- High measuring accuracy (+ 0,010 °C)
- Password protection for calibration function
- USB interface, incl. USB-cable
- Manufacturers test certificate included
- Data Logger function for up to 6,000 measurements
- Optional DKD or ISO-system calibration certification

Technical data
(P795 with Eprom-probes)

Measuring channel 1/2:	Pt100 (EN 60751)
Measuring range:	-200 °C ... +850 °C
Accuracy:	±0.015 °C from -50 °C .. .+199.99 °C, otherwise ±0.025 %
Resolution:	0.001 °C 0.01 °C remaining range
Memory:	appr. 6,000 measurements
Clock:	Realtime clock, Quarz, battery-powered (via PC adjustable)
Working temp.:	0 °C ... +40 °C
Display:	2-lines LCD
Housing:	plastic (ABS)
Dimensions:	200 x 93 x 44 mm (L x W x H)
Weight:	350 g
Power supply:	9 V battery (optional Power supply 230 VAC)

5000-0795	P795 instrument, 2-channel, Pt100 -200 °C ... +850°C, 0,001°C resolution

Accessories

USB-cable (replacemant cable)	5090-0046
WINDOWS Software DE-Graph for Online-documentation & Download	5090-0081
Instrument case	5600-0007
USB-Power pack for P700 series	5990-0070
9 Volt Block battery for replacement	5990-0001
9 Volt Block-Accu	5990-0003
Probe cable extension, 5 m	5090-0074

Probes

Resistance probe, Pt100, with Eprom for the linearization polynom, Platinum-ceramic sensor EN60751, 4-wire, silicon cable 1000mm (R0ABC-Coefficients at 0 °C / 75 °C and 150 °C)

Immersion probe, with handle, mineral-insulated WS 1.4571, -200 °C... +450 °C,	150 x Ø 3,0 mm	6000-1773
mmersion probe as 6000-1773	300 x Ø 3,0 mm	6000-1774
Immersion probe as 6000-1773	300 x Ø 6,0 mm	6000-1784
Smart-adaptor, with integrated EEprom for saving the probe calibration on standard-Pt100		5600-0700

Note: Further probes on page 34.