

Sets of PHYSICS Measuring Units

Ready to use sets for precise digital measurements

- Precision digital measuring devices
- Ready to use programmed device-independent sensors
- Suitable software PHYSICS View
- Convenient case with mains adapter and USB cable
- Clearly arranged multi-lingual menu
- With DKD calibration certificate (temperature)

Intelligent
Probe Plugs



Ludwig Schneider 

High-precision measuring instruments for
temperature and density

Precise and Highly Variable Digital Measuring Set PHYSICS 300



Ready to use set in a stable hard protective case including: digital measuring device PHYSICS 300, software PHYSICS View, temperature sensor (resistance thermometer Pt100), mains adapter 230 V, USB cable and DKD calibration certificate.

Various measurement tasks and functions are achievable e.g. temperature (Pt100, thermocouples, NTC, infrared), air humidity, air flow, pressure, power, flow rate, electrical values etc. Up to 3 channels or 3 measuring points can be covered simultaneously and subject to type of probe 4 internal per function channels can be processed.

Measurement units PHYSICS 300

mbar, Pa, lux, °C, °F, Hz, kJ/kg, %H, ppm, mA, V, min, W/m², mS, bar, g/Kg, m/s, pH

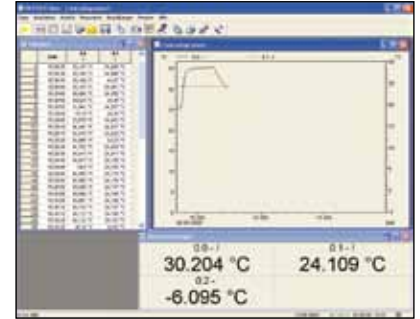
Technical data PHYSICS 300

Measuring input:	3 input channels for some 65 measuring units
Galvanic isolation:	Semiconductor relays (50 V)
Kanäle:	4 channels/plugs for dual probes and function channels, 4 internal channels (e.g. balance/channel)
AD converter:	Delta-Sigma 16 bit, 2,5 or 10 M/s
Probe voltage:	Battery: 9 V, max. 150 mA, Mains adapter: 12 V, max. 150 mA
Output:	2 output channels for analog, data, trigger, relay cable, memory modules etc.)
Display graphic:	128 x 64 pixel, 8 lines
Display illumination:	2 LEDs, white
Keyboard:	7 silicone keys
Internal memory:	59 kB EEPROM (12000 values)
Batteries:	3 Mignon Alkaline
Mains adapter:	230 V (AC) to 12 V (DC), 200 mA, (galvanically isolated)
DC adapter cable:	10-30 V, 0,25 A (galvanically isolated)
Casing:	ABS (max. 70 °C), light grey
Degree of protection:	IP 54
Dimensions and weight:	L 127 x W 83 x H 42 mm, 290 g

Technical data of probe/sensor

Probe:	Immersion resistance thermometer Pt100 acc. to DIN EN 60751 Class A, 4-wire connection
Measuring range:	-90...+350 °C
Sensor:	stainless steel, 3 mm dia., Length (NL): 250 mm
Handle:	plastic (max. 100 °C)
Cable (Length 2.000 mm):	4 x 0.22 mm ² Teflon, silicone insulated

Set Ref. No.: 60868/04



Digital measuring device PHYSICS 300 and the suitable software PHYSICS View



Ready to use temperature sensor Pt100 (device-independent programmed plug)



Stable case (includes PHYSICS 300, sensor, DKD certificate, mains adapter, USB cable)

Technical features

- Compact shape and ergonomic design
- 3 galvanically separated input channels, various measuring units
- Intelligent probe display with probe specific functions
- Resolution options 0,01 or 0,1
- Measuring functions: measuring value, zero-setting, set-point adjustment
- 2-step adjustment, scaling (optional: multi-point calibration for temperature values)
- Functions: max./min. value documentation
- Average value by time, single values or Measuring points
- Measuring menu free programmable (numeric or graph display)
- Interfaces: USB, RS232, Ethernet, Bluetooth, analog
- Memory (various data logger functions programmable)
 - Internal: EEPROM memory for up to 12000 values (as linear or ring memory configurable)
 - External: memory plug with MM card connectable
- Sleep mode for long-term documentations
- Language selection: German, English, French
- Including DKD calibration certificate (for the measuring unit temperature)

Digital Measuring Set PHYSICS 51



Ready to use set in a stable hard protective case including: digital measuring device PHYSICS 51, software PHYSICS View, temperature sensor (resistance thermometer Pt100), mains adapter 230 V, USB cable and DKD calibration certificate.

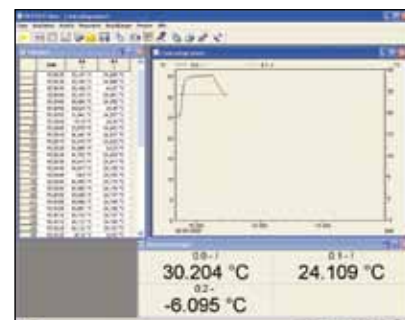
Subject to type of probe 4 internal function channel data can be processed.

Technical data PHYSICS 51

Measuring input:	1 input channel
Galvanic isolation:	Semiconductor relays (50 V)
Channels:	4 channels/plugs for dual probes and function channels
AD converter:	Delta-Sigma 15 bit resolution
Output:	2 output channels
Display graphic:	128 x 64 pixel, 8 lines
Display illumination:	2 LEDs, white
Keyboard:	7 silicone keys
Batteries:	3 Mignon Alkaline
Mains adapter:	230 V (AC) to 12 V (DC), 200 mA, (galvanically isolated)
DC adapter cable:	10-30 V, 0,25 A (galvanically isolated)
Casing:	ABS (max. 70 °C), light grey
Operating temperature:	-10 to +60 °C
Operating air humidity:	10 to 90 % R.H. (non condensing)
Dimensions and weight:	L 127 x W 83 x H 42 mm, 290 g

Technical data of probe/sensor

Probe:	Immersion thermo couple NiCr-Ni Type K, acc. to DIN EN 60584 class 2
Measuring range:	-100...+800 °C
Sensor:	stainless steel, 3 mm dia., Length (NL) 250 mm
Handle:	plastic (max. 100 °C)
Cable (Length 2.000 mm):	2 x 0.22 mm ² , Teflon, silicone insulated
Set Ref. No.:	60869/04



Digital measuring device PHYSICS 51 and the suitable software PHYSICS View



Ready to use thermocouple Type K (device-independent programmed plug)



Stable case (includes PHYSICS 51, sensor, DKD certificate, mains adapter, USB cable)

Technical features

- Compact shape and ergonomic design
- 1 input channel for thermocouples, NTC resistance thermometers, humidity probes etc.
- Measuring functions: measuring value, zero-setting, max./min. value documentation
- 2-step adjustment, scaling (optional: multi-point calibration for temperature values)
- Interfaces: USB, RS232, Ethernet, analog
- Test functions: segment monitoring, range monitoring, sensor breakage indication, battery voltage check and display
- Language selection: German, English, French
- Including DKD calibration certificate (for the measuring unit temperature)

Additional Accessories for PHYSICS Digital Measuring Devices

Interface accessories	Ref. No.
RS232 cable (galvanically isolated, max. 115.2 kB)	55855
Ethernet cable (galvanically isolated, max. 115.2 kB)	57512
Bluetooth adapter plug, class 2	58321
Memory plug with MM card for further measuring values	57733



Holster for digital measuring device

Stable protective cover (grey) with combi-bracket for standing/hanging

Ref. No: 58804

Probes for PHYSICS 300	Ref. No.
Immersion resistance thermometer Pt100 Measuring range: -90...+350 °C	59954
Insertion resistance thermometer Pt100 Measuring range: -50...+200 °C	59966
Immersion thermocouple Type K Measuring range: -100...+500 °C, sensor: 1.5 mm dia.	59961
Insertion thermocouple Type K Measuring range: -50...+200 °C	59963
Humidity psychrometer Suitable for high temperatures and long-term measurements Psychrometer encoder Measuring range: 10...100 % r.H. at 0...90 °C	59937
Capacitive humidity sensor Measuring range: 5...98 % r.H./-20...+80 °C	59644
Humidity psychrometer Hand-held psychrometer Measuring range: 10...100 % r.H. at 0...60 °C	59638
Humidity/temperature sensor With electronic box in all-weather protective housing Measuring range: -30...60 °C/0...90 % r.H. (non-condensing)	59938
Room climate sensor/globe thermometer Wet Bulb Globe Temperature measuring (WBGT) Measuring range: -50...200 °C	59639
Sensor for barometric pressure Measuring range: 700...1,050 mbar (0...1,050 mbar)	59645
Infrared temperature sensor Measuring range: -20...350 °C	59128
Probes for PHYSICS 51	Ref. No.
Immersion thermocouple Type K Measuring range: -100...+500 °C, sensor: 1.5 mm dia.	59961
Insertion thermocouple Type K Measuring range: -50...+200 °C	59963

Ludwig Schneider 

Ludwig Schneider GmbH & Co. KG

Postfach 15 61 · 97865 Wertheim

Am Eichamt 4 · 97877 Wertheim

Tel.: +49-93 42- 85 60-0 · Fax: +49-93 42-8 46 71

e-Mail: info@ludwig-schneider.de

www.ludwig-schneider.com

