

PHYSICS 100-2 – Digital Measuring Device, Ludwig Schneider



PHYSICS 100-2 – Digital measuring device for precise measurements

For highest precision we provide our PHYSICS measuring device for precise measurements in meteorology, chemical, biotechnology, food industries, water analytics, science and research as well as for quality assurance or inspection equipment monitoring in the industrial sector.

General technical data:

Output: 2 output channels
 Display: 2 lines, statically 7/16 segments
 Display illumination: 2 LEDs, white
 Operating elements: 7 silicone keys
 Casing: ABS (max. 70 °C), light grey
 Degree of protection: IP54, dust- and splash-proof
 Dimensions (LxBxH): 127 x 83 x 42 mm
 Weight: 290 g

Further general features:

Test functions: segment monitoring, range monitoring, probe error check, battery check
 Measuring functions: measuring value, zero-setting, max./min. value documentation, 2-step adjustment, scaling (optional: multi-point calibration for temperature values)
 Function menu: min/max values, average value of time, individual values or measuring points
 Interfaces: USB, RS232, Ethernet, Bluetooth, analogue
 Language selection: German, English, French

Technical data:

Probes: thermocouples, resistance thermometers, NTC, humidity, pressure and more
 Measuring input: 2 input channels
 Galvanic isolation: semiconductor relays (50 V)
 Channels: 4 function channels e.g. for dual probes, 4 internal functions (e.g. difference)
 AD converter: Delta-Sigma 16 bit, 2.5 or 10 M/s
 Probe voltage: battery operation 9 V, max. 150 mA, mains operation 12 V, max. 150 mA
 Resolution: 0.01 °C
 Probe display: intelligent probe display with probe specific functions (cold-junction compensation etc.)

Article	Order No.
① Digital measuring device PHYSICS 100-2	10 16 53874

Probes

Thermocouple to immerse with handle type K (NiCr-Ni)

Thermocouple with handle type K (NiCr-Ni), acc. to DIN EN 60584 Class 2, made of Inconel, compensating line fix connected through handle made of plastic, teflon/silicone insulated, cable length: 2 m, cable outlet secured by means of bend protection, plug PHYSICS resolution 0.1 °C

Technical data:

Sheat Ø: 3 mm
 Nominal length: 250 mm
 Range of application: -100 °C to +400 °C

Article	Order No.
② Thermocouple with handle type K (NiCr-Ni)	10 16 59962

Pt100 resistance thermometer to immerse

Immersion resistance thermometer Pt100, acc. to DIN EN 60751 Class A or AA, 4-wire connection, with sheathed cable made of stainless steel, compensating line fix connected through transition casing made of stainless steel, teflon/silicone insulated, cable length: 2 m, cable outlet secured by means of heat-shrink tubing. Plug PHYSICS resolution 0.01 °C (class A)

Technical data:

Sheat Ø: 3 mm
 Nominal length: 300 mm
 Range of application: -90 °C to +350 °C

Article	Order No.
③ Immersion resistance thermometer Pt100	10 16 57136



Pt100 resistance thermometer made of glass (N16B)

Labor resistance thermometer of glass Pt100, acc. to DIN EN 60751 Class A, 4-wire connection, with glass shaft Ø 6 mm, narrowed at sensor to Ø 3 mm, compensating line fix connected through transition casing made of stainless steel, teflon/silicone insulated, cable length: 2 m, cable outlet secured by means of heat-shrink tubing.

Plug PHYSICS resolution 0.01°C (class A)

Technische Daten:

Glass shaft Ø: 3/6 mm

Nominal length: 200 mm

Range of application: -50°C to +250°C

Article	Order No.
④ Resistance thermometer made of glass Pt100	10 16 57152

Pt100 resistance thermometer PTFE coated

Cable resistance thermometer Pt100, acc. to DIN EN 60751 Class A, 4-wire connection, compensating line directly connected with protective conduit made of stainless steel, VA-wire netting/teflon insulated, cable length: 2 m, with PTFE coating from measuring tip to +20 mm connection cable.

With plug PHYSICS resolution 0.01°C (class A)

Technical data:

Protective conduit Ø: 6 mm

Nominal length: 150 mm

Range of application: -50°C to +200°C

Article	Order No.
⑤ Resistance thermometer Pt100, PTFE coated	10 16 57178

