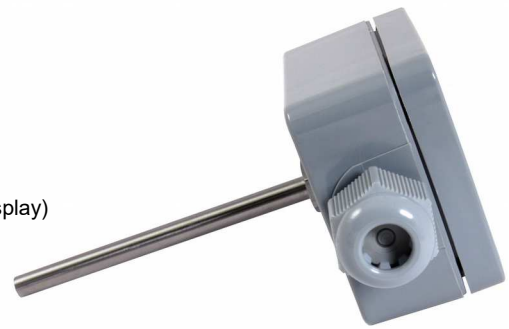
resistance thermometer WTR 230

features

- resistance thermometer without neck tube and polyamide connection housing
- flat protective fitting without process connecting thread
- protective fitting can be adapted with various compression fittings
- protective fitting can be adapted with various welding screw connections
- available with tapered measuring tip
- protective fitting screwed with connecting head
- temperature resistance PT100 directly constructed in protective fitting
- both passive and active (with transmitter) available
- available with: digital measuring transducer DMU50 (4..20mA 3-wire/OLED display)
  head transmitter KMU100 (4..20mA 2-wire)
- special designs on request



WTR 230-A1-A-1A3

product benefits

The WTR 230 is the ideal immersion sensor for the refrigeration, air conditioning and ventilation industry for temperature measurement in pipes and containers. Due to the smooth protection fitting, it is possible to select the immersion depths flexibly. In addition, the sensor has a robust polyamide PA6 housing, which gives the sensor a high longevity and temperature resistance despite a very good price/performance factor.

technical specifications

- protective fitting: made of stainless steel 1.4571 (V4A)
- sensor length: freely selectable
- connection housing: plastic polyamide PA6
- dimensions: 58 x 64 x 35 mm
- protection class: IP 65 according to DIN 60529
- standard temperature range: -50 °C to +130 °C
  (deviation when using a measuring transducer)

WTR 230-A1-A-1A2/Pt1000-DMU

technical specifications DMU50

- operating temperature: -30 °C..+70 °C
- operating voltage: UB = 10..35 V DC
- current requirement: 7.3 mA (UB=24V) + 4..20mA output
- input: PT1000 2-wire
- measuring range max. -100°C..+650°C
- measuring span min.: 10 K
- measuring deviation: <+-0.1% of the final value
- output: 4..20mA 3-wire (underflow 3.5mA, overflow 20.5mA)
- sensor break: 21mA
- standard configuration: 4mA = -40°C, 20mA = 70°C
  (wide temperature range can be parameterized)
- max. permissible load: Rmax=[(UB – 6V) / 0.021 A] Ω
- display: high-resolution OLED display 0.96 inches
- orientation display: 0° or 180°
- display digits: 4 digits
- display range: -99.9 to +999.9°C
- configuration interface: USB Type C
- electrical connection: 5x terminal connection 1.5 mm²
- configuration: commercially available USB Type C cable (no programming adapter necessary)
  windows application for configuration (“pmtKonfigTool”)

technical specifications KMU100

- operating temperature: -40 °C..+85 °C
- operating voltage: UB = 10..36VDC
- current requirement: 4..20mA output
- input: PT100 or PT1000 2, 3, 4 wire
- measuring range max. Pt100: -200°C..+850°C; Pt1000: –200°C … +250 °C
- measuring span min.: 10 K
- measuring deviation: across the entire range: 0.15 K or 0.07% of span*
  n the range -50°C … +250°C: 0.1 K or 0.07% of the measuring span*
- output: 4-20mA (underflow linear drop of 4.0 ... 3.8 mA,
  linear increase of 20.0 … 20.5 mA)
- sensor break: ≤ 3.6 mA (“Low”) or ≥ 21 mA (“High”) can be selected
- standard configuration 4mA = -50°C, 20mA = 150°C
  (wide temperature range can be parameterized)
- electrical connection: 6x screw terminals 1.5mm²
- configuration: PXU01 programming adapter
  Windows application for configuration (“PXU01”)

* the larger value is valid

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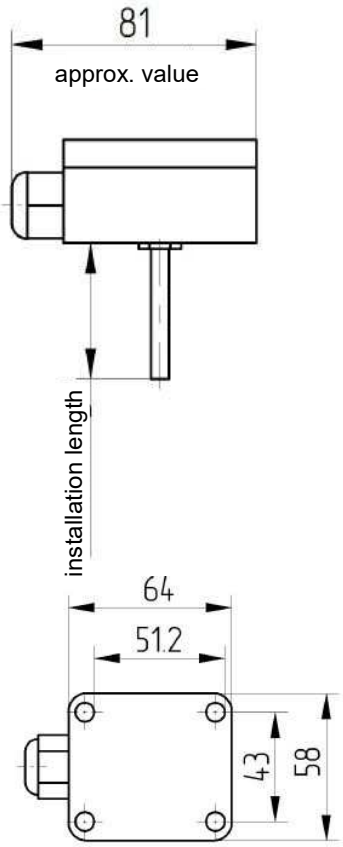
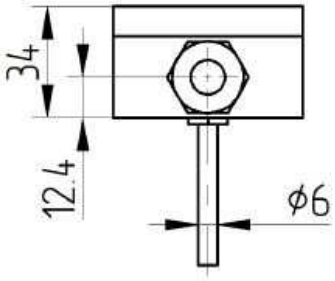
resistance thermometer WTR 230

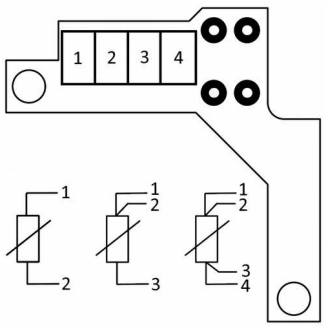
technical drawing



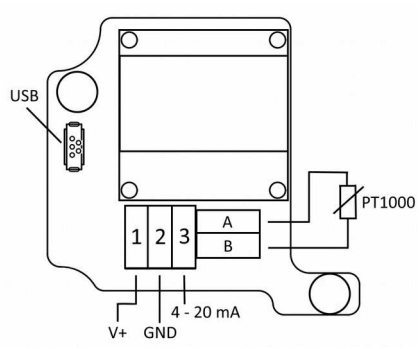


connection

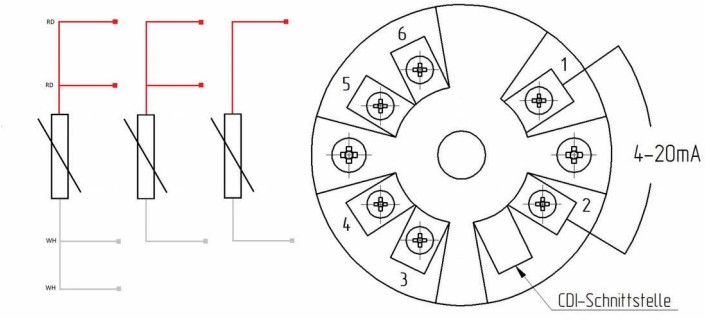
WTR 230 passive



WTR 230 with DMU 50



WTR 230 with KMU 100



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configuration

If the WTR 230 is used with a DMU 50, the DMU settings can be read out, graphically displayed and changed using the Windows software “pmtKonfigTool”. The Windows software can be downloaded from the website www.promesstec.de. The connection between PC and WTR 230-DMU can be established with a standard USB Type C cable.

If the WTR 230 is used with a KMU 100, the settings of the KMU can be read out, graphically displayed and changed using the PXU01 parameterization software kit. In addition to the software, the software kit also includes a programming adapter.

order-code WTR 230... order example: WTR 230-A1-A-1A2-KMU

position of gland of protective fitting (sensor)

-A1	protective fitting (sensor) below

mounting length

-A	50 mm mounting length
-B	100 mm mounting length
-C	150 mm mounting length
-D	200 mm mounting length
-E	250 mm mounting length
-F	300 mm mounting length
-G	350 mm mounting length
-H	400 mm mounting length
-K	mounting length on customer`s request (please specify length)

type of sensor and tolerance

-1A2	1xPT100 class A 2-wire
-1A3	1xPT100 class A 3-wire
-1A4	1xPT100 class A 4-wire
-2A2	2xPT100 class A 2-wire
-2A3	2xPT100 class A 3-wire
- 1A2/PT1000	1x PT1000 2-wire (PT1000 with DMU 50)
-KX	types of sensor and tolerance on customer`s request

optional

- DMU	with digital measuring transducer DMU50 (4..20mA 3-wire, OLED display)
- KMU	with head transmitter KMU100 (4..20mA 2-wire)

accessories

clamp screw fittings

-99-000197	KVS6E-1/2“ clamp screw fitting
-99-000199	KVS6T-1/2“ clamp screw fitting with screw-in thread, for 6mm sensor, clamping ring made of Teflon, material 1.4571
-99-000512	KVS6E-1/4“ clamp screw fitting
-99-000198	KVS6T-1/4“ clamp screw fitting
-99-000196	KKVS6P bullet clamp bolting, for 6mm tube, PEEK sealing ring, material 1.4404

immersion pockets

-99-000456	THVA, 100mm, in G1/2“, dimension 9x1, diameter immersion pocket 9mm, inner diameter 7mm, material VA, with M4 screw in the hexagon
-99-001938	THVA-KVS 100mm, in G1/2“, sleeve dimension 9x1mm, inner diameter 7mm, with clamp screw fitting for 6mm probe, with PTFE clamping ring
-99-002871	ESTHK, 50mm, welding immersion pocket, diameter pocket 9x1mm, with clamp screw fitting PEEK, material 1.4404

Other lengths available on request.

For more accessories, see accessories data sheet.

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