Quick guide temperature switch WTR 630

Safety instructions !!!

Intended product use

- The sensor has been manufactured exclusively for the intended use described here or
  in the data   sheet and may only be used in this way.
- The technical specifications in these operating instructions must be observed.
- Improper handling or operation of the unit outside the technical specifications requires
immediate decommissioning and inspection by promesstec.

Claims of any kind are excluded due to improper use excluded !!

Personnel qualification

Improper handling of the sensor can lead to considerable personal injury and damage to
property. The activities described in this operating manual may only be carried out by
qualified personnel with the appropriate qualifications. For installation and commissioning
of the sensor, the corresponding country-specific guidelines and standards must be
observed. Depending on the application, contact with aggressive media may occur,
especially when mounting the sensor. The safety measures must be observed.
There is a danger to life if live parts are touched. The safety measures must be observed.

Special dangers

Residues of measuring materials in dismantled devices can endanger persons, the
environment and equipment. Sufficient precautionary measures must be taken. The units
must not be used in safety or emergency stop installations. Incorrect use or operation of
the unit can lead to injuries. At Depending on the application, aggressive media with
extreme temperatures and high temperatures and high pressure or vacuum may be present.
We recommend installing and and dismantling of the unit only at ambient temperature and
in a depressurised state.

Dangers when operating the appliance

Our units have a very high protection class when properly assembled and installed. When
cleaning your unit with high-pressure cleaners, steam cleaners, etc., make sure that the
cover as well as the cable gland or M12 connector are not directly exposed to the pressure
jet. If the temperature falls below the dew point, condensation may form in the connection
compartment of the unit. In such extreme applications, contact our sales and technical
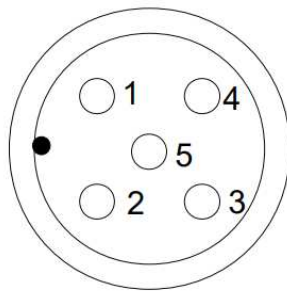support before commissioning.

Temperature measurement technology

Connection WTR 630

installation length | 75mm

Ø6 | M12 | 18mm
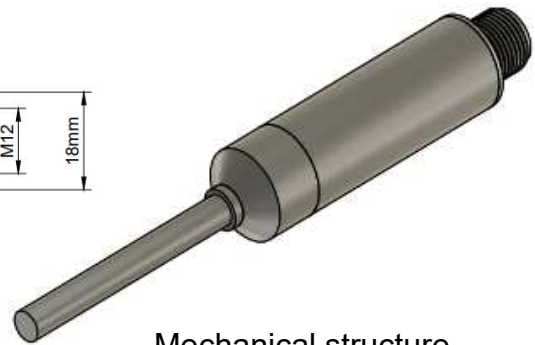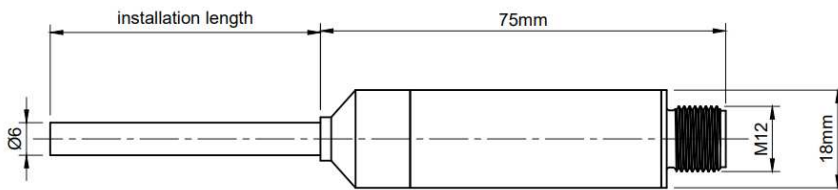
Mechanical structure

Electrical connection WTR 630

1 4
5
2 3

1: + Power supply
2: Output PNP
3: - Power supply
4: Interface RS485 (A)
5: Interface RS485 (B)

Technical specifications WTR 630

Operating voltage	UB = 8...30 V DC
Current requirement	15 mA + switching output PNP
Switch-on delay	<0.3s
Measured value recording	PT100 class A
Measuring range	-50°C to +150°C
Measurement deviation (accuracy)	< ±0.1% of final value
Output Switching output	PNP, (active max. 60 mA, short-circuit proof)
Control behaviour	two-point controller
Factory setting of switching point	50°C
Factory setting hysteresis	1°C
Factory setting Modbus ID	1
Protection class	IP69K according to DIN 60529
Electrical connection	M12 5-pole
Interface	RS485 Modbus protocol for configuration as well as readout of the measurement results and statuses
Process connection	G ½
Width across flats	24
Tightening torque	5..10 Nm
Material Protection pipe	Stainless steel 1.4571 (V4A)
Diameter	6 mm
Storage temperature	-20 to 60 °C
Process pressure/operating pressure	max. 10 bar
Humidity	0...95 % r. h.
Weight approx.	150 g

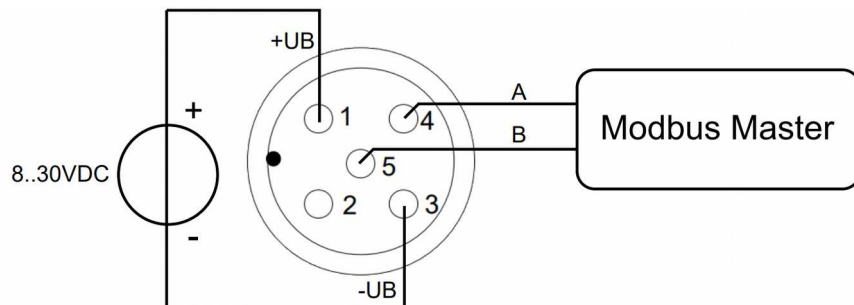## Configuration WTR 630

The WTR 630 has an RS485 interface and works with the Modbus RTU protocol. The interface can be used to read out the measured values and the status as well as to carry out the configuration. The switching point, the hysteresis, the output logic and the Modbus ID can be configured. The temperature switch has the address "1" as standard and can be configured by a Modbus master. It is also possible to configure the WTR 630 using the in-house Windows software "pmtKonfigTool". An RS485 to USB programming adapter is required for this.

The register table, designations and explanations are stored in the data sheet of the WTR 630. A detailed explanation of the configuration can be found in the instructions.

Configuration via Modbus Master

Configuration via Windows software
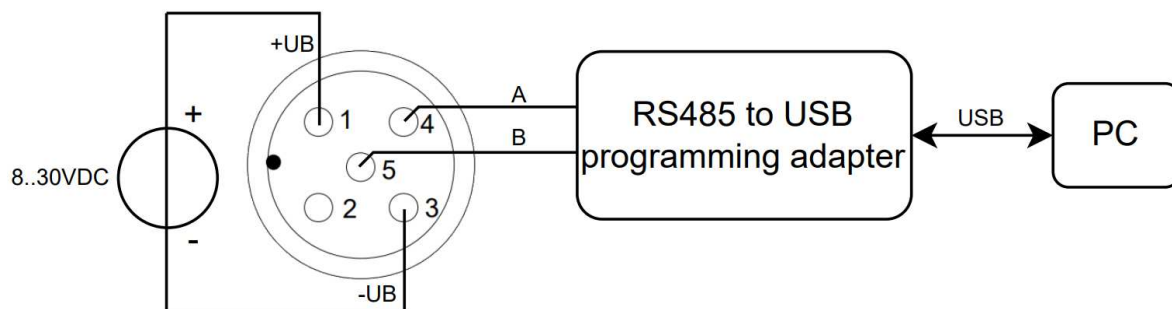
Assembly instructions !!!

Assembly instructions

- Only use promesstec welding sockets and process connections for the adaptation in your process. This is the only way we can guarantee you an optimum measuring point.
- After installing the sensor, check the tightness of the measuring point.

Electrical assembly

- Install the sensor in your process before electrical assembly. In this way you avoid winding up the cable when mounting the measuring point.

- **M12 connector**: Turn the M12 socket by hand onto the connector on the promesstec sensor. Mounting is done without tools.
- When installing the connection cable, ensure that both components are firmly and positively connected. The permissible tightening torque can be found the data sheet of the respective connection cable.

Important notes !!!

Return and repair

The promesstec units are modular in design. This enables us to carry out repairs and overhauls of defective devices. To do this, send the device to promesstec. You will find a return form with the details to be provided on our homepage under "Technical information".

Disposal of the units

Dispose of equipment, components and packaging in an environmentally friendly manner in accordance with the country's waste treatment and disposal regulations. Pay attention to waste separation and the recycling of high-quality materials such as stainless steel, etc.

Further documentation

These operating instructions and the data sheets can be found as a file on our homepage under the respective units. The documentation is available in both German and English. Other languages are available on request. Additional information on temperature sensors etc. can be found on our homepage under

www.promesstec.de