kamstrup

Data sheet

TemperatureSensor 63

2-wire temperature sensors for use with heat and cooling meters

- Delivered as a set of two paired temperature sensors
- Easy installation and exchange
- Quick response to temperature changes
- High water resistance (IP68)
- Support of temperature offset adjustment

Contents

Application

Kamstrup TemperatureSensor 63 consists of two paired temperature sensors and is used together with electronic energy meters for measuring the inlet and outlet temperatures. The temperature sensors have built-in platinum resistors of which the electric resistance changes according to the temperature. A measurement of the resistance value thus provides an analogue expression of the temperature.

Kamstrup TemperatureSensor 63 has a very broad selection of temperature sensor types and thus fits most heat or cooling installations. Kamstrup TemperatureSensor 63 is approved for IP68 and is thus especially suited to be used for both heat and cooling measurements.
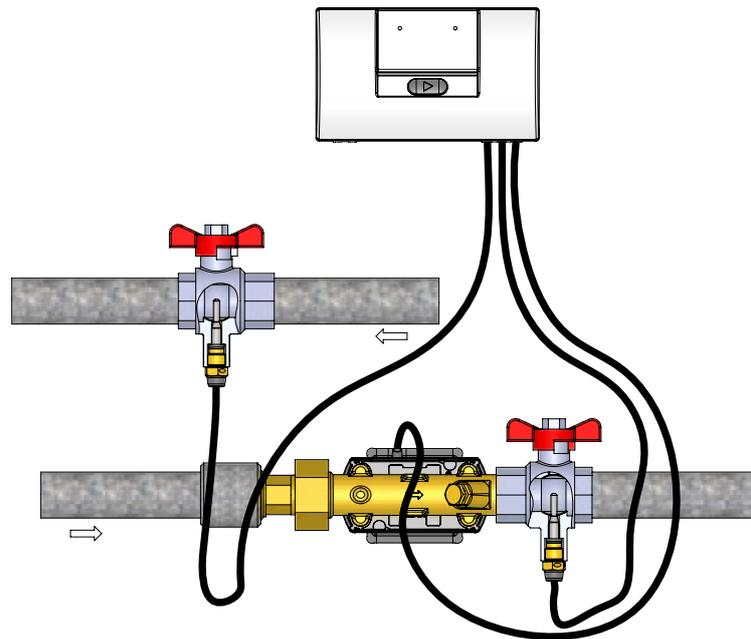
Approval and verification

MID approval DK-0200-MI004-046

Temperature range	θ: 2....150 °C
Temperature difference	ΔΘ: 3....140 K

Danish cooling approval TS 27.02 017

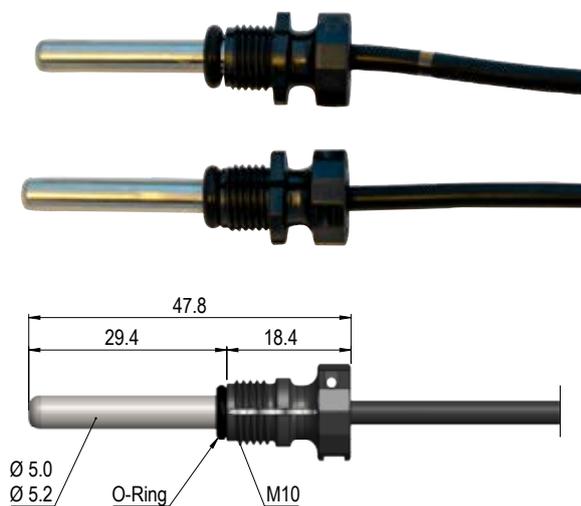|	
Temperature range	θ: 2....150 °C
Temperature difference	ΔΘ: 3....140 K

Pairing and verification according to EN1434-5:2015.
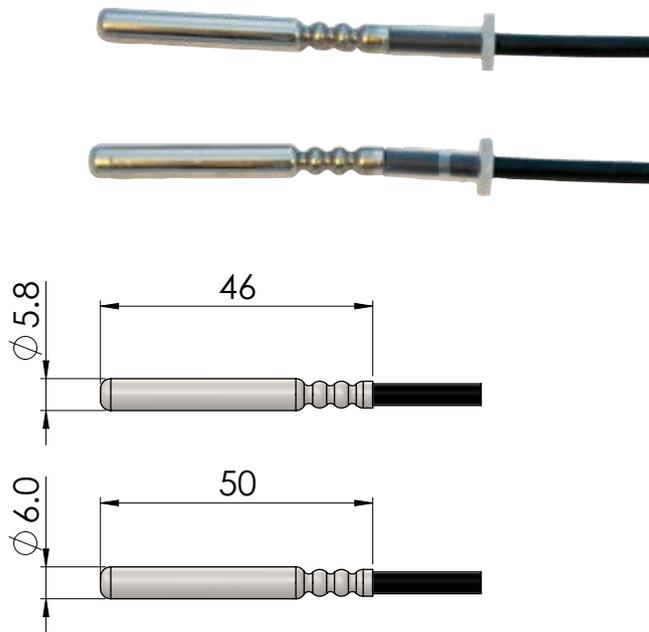
Temperature sensors

Direct short temperature sensor
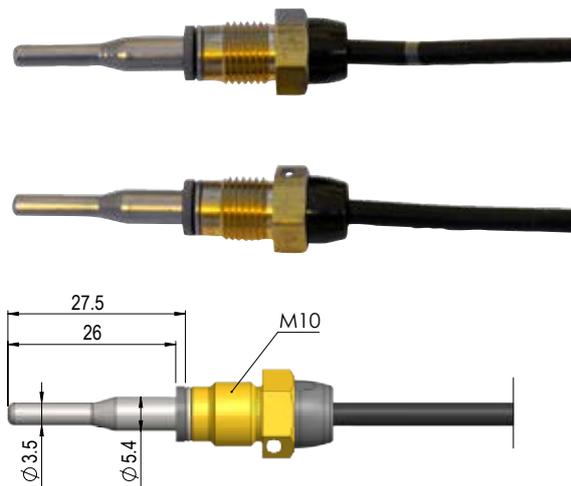
ø5.0 mm / ø5.2 mm temperature sensors

Temperature sensors
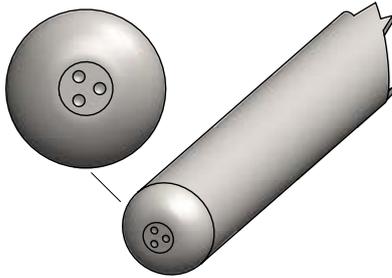
**ø5.8 mm / ø6.0 mm temperature sensors**

Technical data

	Direct short temperature sensor	ø5.0 mm temperature sensor/ ø5.2 mm temperature sensor	ø5.8 mm temperature sensor/ ø6.0 mm temperature sensor
Component		Pt500 according to EN60751	
Time constant $\tau_{0.5}$	2 s	3 s	4 s
Minimum submersion depth	15 mm	17 mm	18 mm
Sensor pipe material		AISI 316L W-no. 1.4404	
Silicone cable		2 x 0.22 mm²	
Cable lengths	1.5 m, 3 m	1.5 m, 3 m, 5 m, 10 m	

Identification of the diameter of pocket sensors

ø5.8 mm

ø6.0 mm
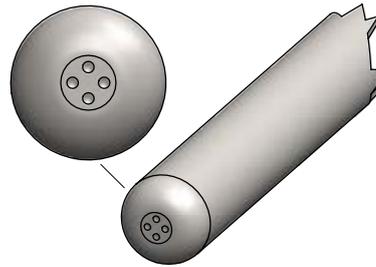
Temperature sensor application area

Ambient temperature	-10 °C...70 °C
Storage and transport temperatures	-25 °C...70 °C
Medium	District heating water
Medium temperature	0...150 °C, for a short period 160 °C
Humidity	< 98 % rF condensing
IP class	IP 68
Approved mechanical classes	M1, M2
Approved pressure stages for direct short temperature sensor	PN16, PN25, PS25
Approved pressure stages for direct short ø5.0 mm/ø5.2 mm temperature sensor with composite union nut	PN16, PN25, PS25

Optimise the accuracy of inlet and outlet temperatures through offset adjustment

The heat/cooling meters MULTICAL® 303, MULTICAL® 403, MULTICAL® 603 and MULTICAL® 803 have an offset adjustment function that enables the adjustment of the inlet and outlet temperatures by up to ± 0.99 K. The offset adjustment value is determined in connection with the factory calibration of Kamstrup TemperatureSensor 63, and when this value is embedded in the meter, the deviation of the inlet and outlet temperatures will typically be less than ± 0.1 K. As both the inlet and outlet temperatures are adjusted with the same value, the offset adjustment does not influence the calculation of the consumed energy.

Temperature offset value
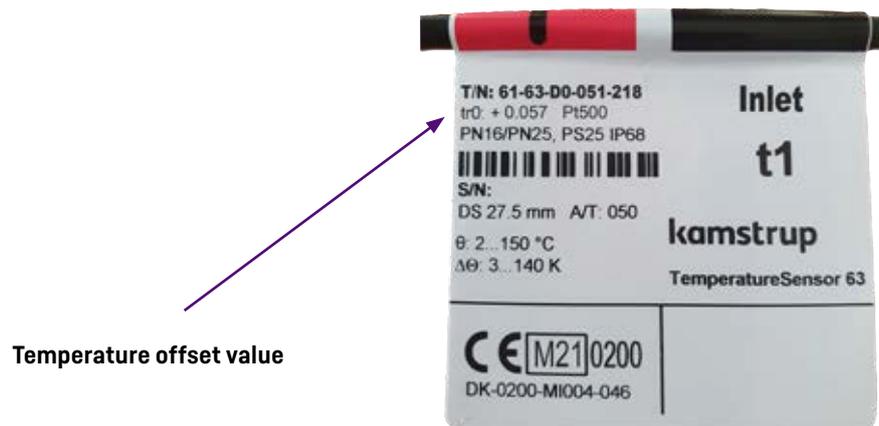
Pockets for ø5.8 mm temperature sensors

Technical data

|	
Installation lengths	65 mm, 90 mm, 140 mm
Thread	Conical thread R½
Material	AISI 304 / W.-no. 1.4301
Time constant $\tau_{0.5}$	Max 8 s
Type number in approval	65 mm pocket: 6557-340 90 mm pocket: 6557-341 140 mm pocket: 6557-342
Pressure stage	PN16/PN25, PS25
Maximum flow velocity	3 m/s
Maximum application temperature	150 °C
Approved mechanical classes	M1, M2

Installed pockets in the field

ø5.8 mm temperature sensors are also approved together with the following pockets in the field:

6557-324, Stainless steel pocket, 65 mm with R1/2 connection
6557-325, Stainless steel pocket, 65 mm with G1/2B connection
6557-327, Stainless steel pocket, 90 mm with R1/2 connection
6557-328, Stainless steel pocket, 90 mm with G1/2B connection
6557-309, Stainless steel pocket, 90 mm with R1/2 connection
6557-314, Stainless steel pocket, 140 mm with R1/2 connection
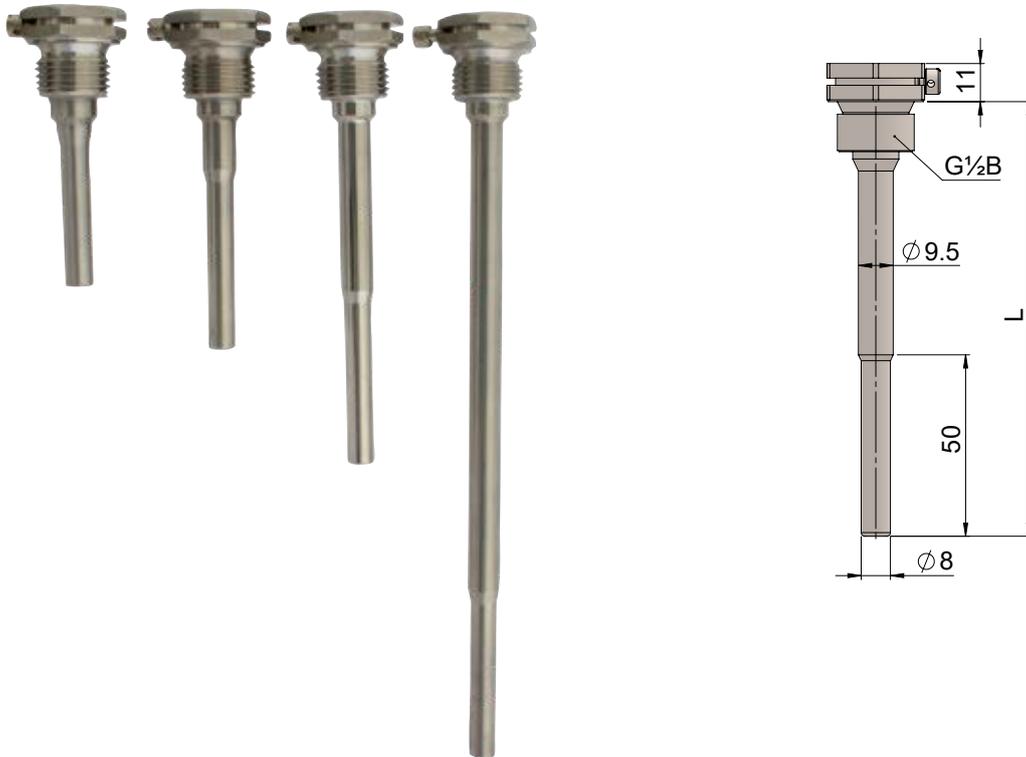
Examples

6557-327
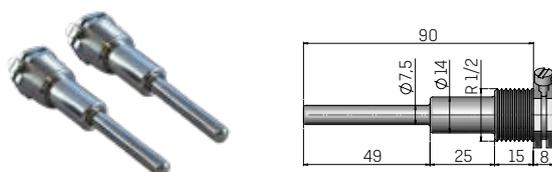
6557-314
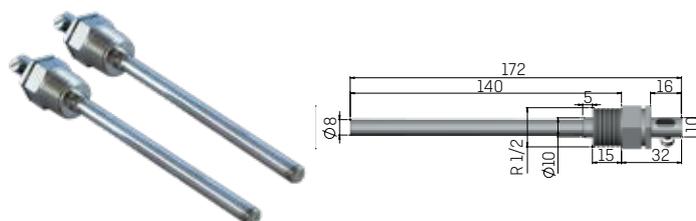
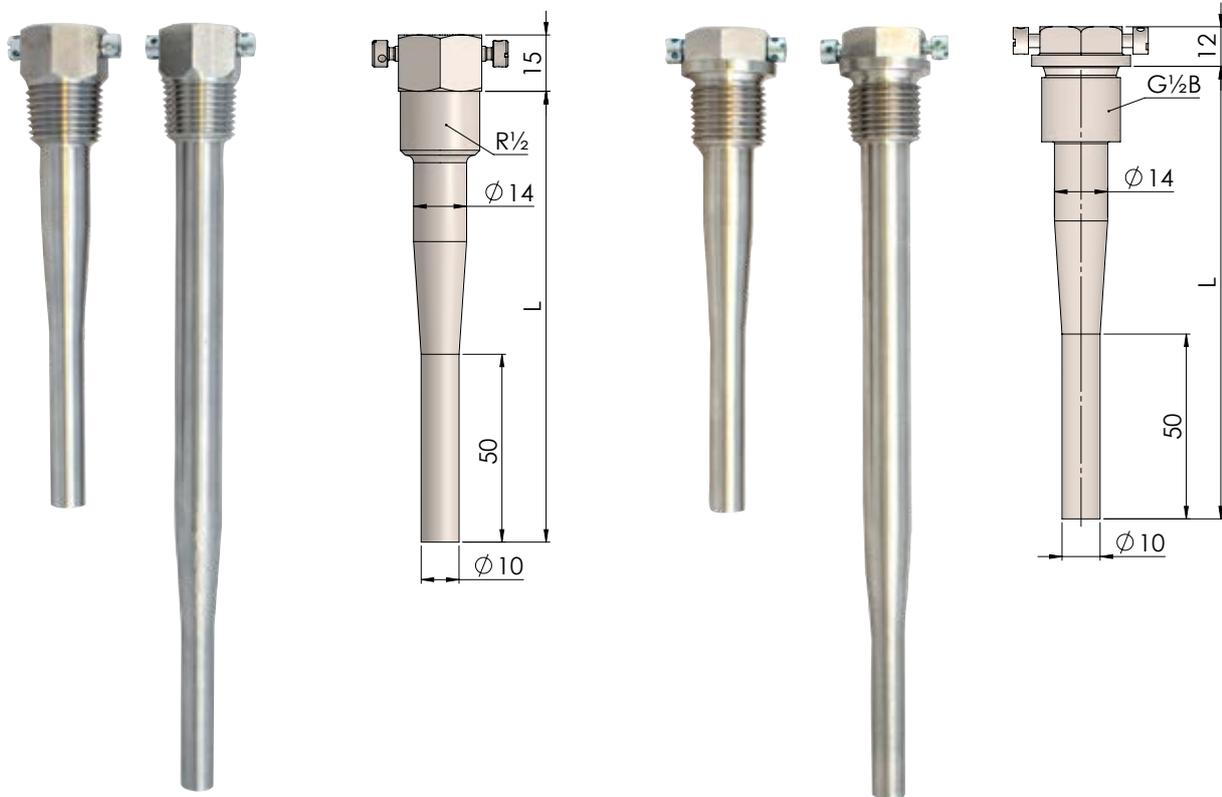# Pockets for ø5.8 mm / ø6.0 mm temperature sensors

Technical data

Installation lengths L	65 mm, 85 mm, 120 mm, 210 mm
Thread	Straight thread G½B
Gasket	Copper gasket (included in bag with 2 pockets)
Material	AISI 316L / W.-no. 1.4404
Time constant $\tau_{0.5}$	Max 10 s with ø6.0 mm temperature sensor Max 14 s med ø5.8 mm temperature sensor
Type number in approval	65 mm pocket: 6557-355 85 mm pocket: 6557-343 120 mm pocket: 6557-344 210 mm pocket: 6557-345
Pressure stage	PN16/PN25, PS25
Maximum flow velocity	3 m/s
Maximum application temperature	150 °C
Approved mechanical classes	M1, M2

Reinforced pockets for ø5.8 mm / ø6.0 mm temperature sensors

Technical data

|	
Installation lengths	120 mm, 210 mm
Thread	Conical thread R½ or straight thread G½B
Gasket for pockets with straight threads G½B	Copper gasket (included in bag with 2 pockets)
Material	AISI 316L / W.-No. 1.4404
Time constant $\tau_{0.5}$	Max 12 s with ø6.0 mm temperature sensor Max 16 s med ø5.8 mm temperature sensor
Type number in approval	120 mm pockets with R½ thread: 6557-350 210 mm pockets with R½ thread: 6557-351 120 mm pockets with G½B thread: 6557-352 210 mm pockets with G½B thread: 6557-353
Pressure stage	PN16/PN25/PN40, PS40
Maximum flow velocity	10 m/s
Maximum application temperature	180 °C
Approved mechanical classes	M1, M2

Accessories
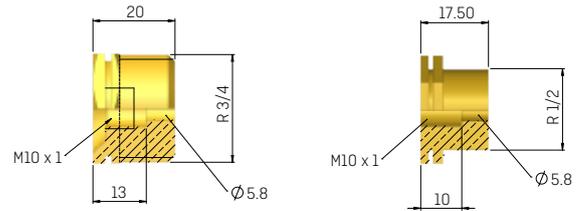
Nipples

Technical data

Connection	R½ or R¾
Material	MS 58 Bb

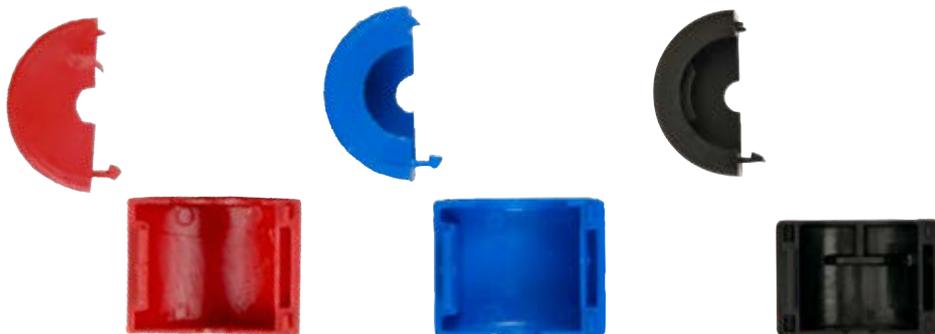Nipples may be used in both PN16 and PN25 installations.

Nipples with increased submersion depth
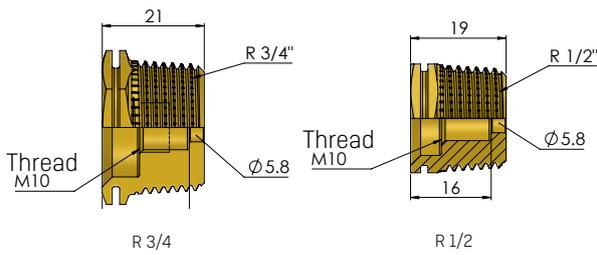
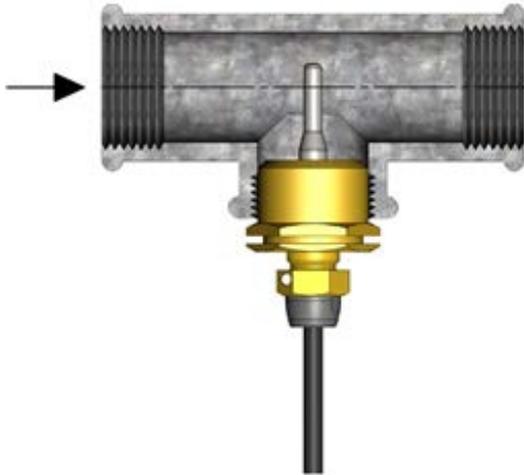**Nipples suited for use with sealing caps**

Sealing caps

Mounting examples

Example 1

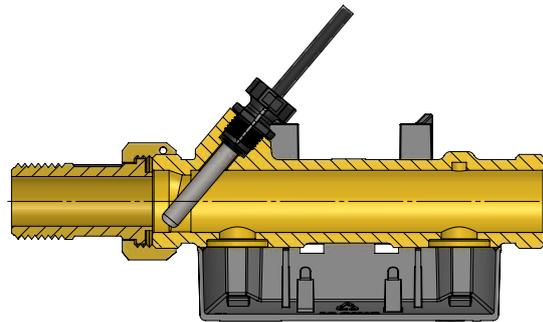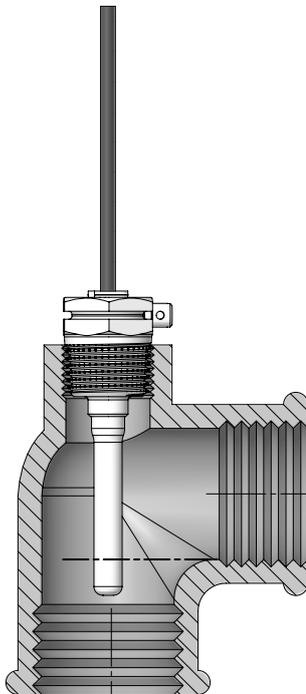**Direct short temperature sensor mounted in T-piece using a nipple**

Example 2
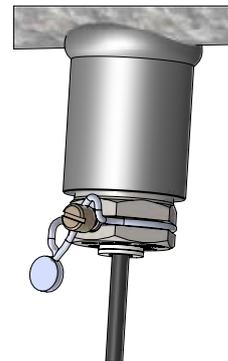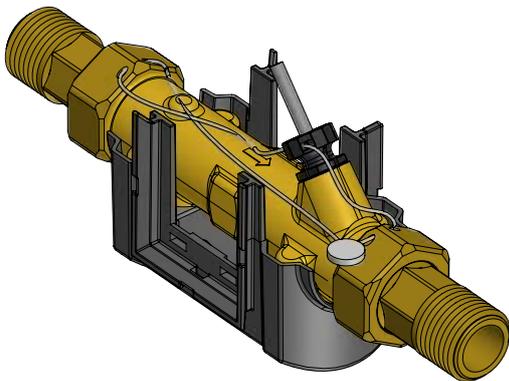
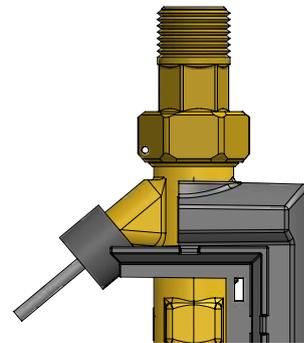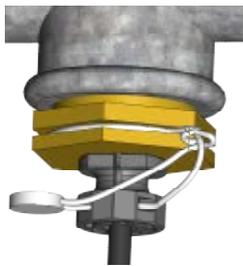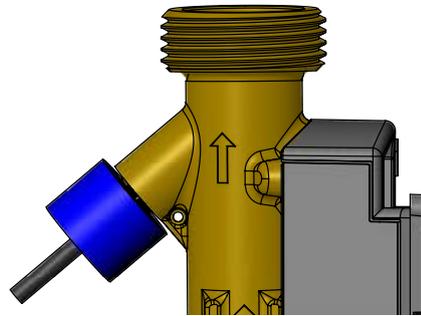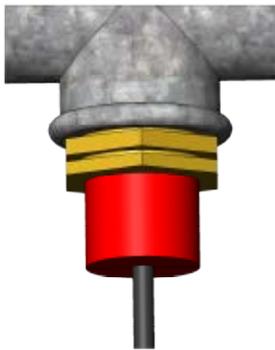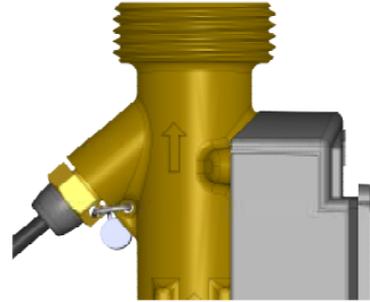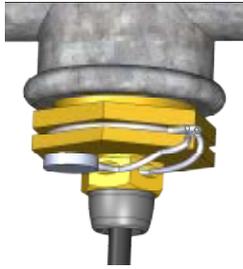**ø5.2 mm temperature sensor mounted in MULTICAL® 303**

Example 3

ø5.8 mm pocket sensor mounted in 90 degree angle using pocket, type number 6557-340

Sealing examples

Ordering

Temperature sensor set

Order no. *	Description
61-63-D0-051-XXX	Pt500 direct short temperature sensor set (2 pcs) with 1.5 m cable
61-63-D0-052-XXX	Pt500 direct short temperature sensor set (2 pcs) with 3 m cable
61-63-D0-061-XXX	Pt500 ø5.0 mm direct short temperature sensor set (2 pcs) with 1.5 m cable
61-63-D0-062-XXX	Pt500 ø5.0 mm direct short temperature sensor set (2 pcs) with 3 m cable
61-63-D0-071-XXX	Pt500 ø5.2 mm direct short temperature sensor set (2 pcs) with 1.5 m cable
61-63-D0-072-XXX	Pt500 ø5.2 mm direct short temperature sensor set (2 pcs) with 3 m cable
61-63-D0-073-XXX	Pt500 ø5.2 mm direct short temperature sensor set (2 pcs) with 5 m cable
61-63-D0-081-XXX	Pt500 ø5.8 mm pocket sensor set (2 pcs) with 1.5 m cable
61-63-D0-082-XXX	Pt500 ø5.8 mm pocket sensor set (2 pcs) with 3 m cable
61-63-D0-083-XXX	Pt500 ø5.8 mm pocket sensor set (2 pcs) with 5 m cable
61-63-D0-084-XXX	Pt500 ø5.8 mm pocket sensor set (2 pcs) with 10 m cable
61-63-D0-091-XXX	Pt500 ø6.0 mm pocket sensor set (2 pcs) with 1.5 m cable
61-63-D0-092-XXX	Pt500 ø6.0 mm pocket sensor set (2 pcs) with 3 m cable
61-63-D0-093-XXX	Pt500 ø6.0 mm pocket sensor set (2 pcs) with 5 m cable
61-63-D0-094-XXX	Pt500 ø6.0 mm pocket sensor set (2 pcs) with 10 m cable

* The order number may vary due to local approvals

Ordering

Pockets for pocket sensors

Order number	Description
6557-440	Bag with 2 pcs of ø5.8 mm pockets with R½ thread, length 65 mm
6557-441	Bag with 2 pcs of ø5.8 mm pockets with R½ thread, length 90 mm
6557-442	Bag with 2 pcs of ø5.8 mm pockets with R½ thread, length 140 mm
6557-455	Bag with 2 pcs of ø5.8 mm/ø6.0 mm pockets with G½B thread, length 65 mm
6557-443	Bag with 2 pcs of ø5.8 mm/ø6.0 mm pockets with G½B thread, length 85 mm
6557-444	Bag with 2 pcs of ø5.8 mm/ø6.0 mm pockets with G½B thread, length 120 mm
6557-445	Bag with 2 pcs of ø5.8 mm/ø6.0 mm pockets with G½B thread, length 210 mm
6557-450	Bag with 2 pcs of ø5.8 mm/ø6.0 mm reinforced pockets with R½ thread, length 120 mm
6557-451	Bag with 2 pcs of ø5.8 mm/ø6.0 mm reinforced pockets with R½ thread, length 210 mm
6557-452	Bag with 2 pcs of ø5.8 mm/ø6.0 mm reinforced pockets with G½B thread, length 120 mm
6557-453	Bag with 2 pcs of ø5.8 mm/ø6.0 mm reinforced pockets with G½B thread, length 210 mm

Ordering

Accessories

Order number	Description
6556-546	R½ distance nipple for direct short temperature sensor, increased submersion depth
6556-547	R¾ distance nipple for direct short temperature sensor, increased submersion depth
6556-492	R¾ distance nipple for direct short temperature sensor, suited for use with sealing cap
6556-491	R½ distance nipple for direct short temperature sensor, suited for use with sealing cap
2210-233	Fibre gasket for direct short temperature sensor
3026-517	Sealing cap, red, for direct short temperature sensor
3026-518	Sealing cap, blue, for direct short temperature sensor
3026-1034	Sealing cap, black, for ø5.0 mm / ø5.2 mm direct temperature sensors