

Temperature Sensors and Pockets

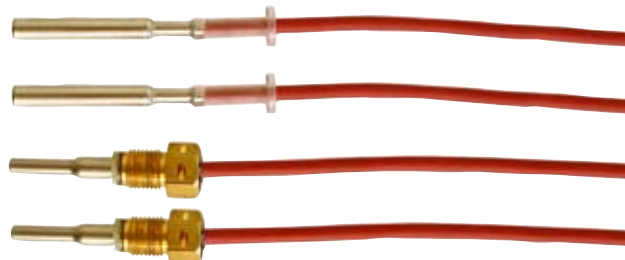
For fitting in pockets or directly in liquid flow

Heat resistant silicone cable

Delivered as a set

Sensor tube material, stainless steel

Fast response time



TS 27.01 111 EN 1434	TS 27.01 112 EN 1434
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MID-2004/22/EC



Application

A sensor set is used together with an electronic heat meter for measuring flow and return flow temperatures in heating installations.

Depending on the type, the sensors can be used directly in the liquid flow (direct sensor) or fitted in a sensor pocket.

The sensor has a built-in platinum resistor with an electric resistance, which changes with the temperature. Measuring the resistance value gives an analog indication of the temperature.

A heat meter calculates the differential temperature of a heating installation on the basis of measured flow and return flow temperatures. Based on the differential temperature and the volume of liquid measured, the energy consumed can then be calculated and summed up.



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Technical data

	Pocket sensor	Direct short sensor
Element	Pt500 according to EN60751	
Pairing	EN1434	
Temperature of medium	0...150°C short-term 160°C	
Ambient temperature	-10...70°C	
Storage & transp. temp.	-25...70°C	
Response time $\tau_{0,5}$	5 sec.	2 sec.
Medium	Heating water	
Humidity	< 98% RF condensing	
Pressure level	Pocket	PN16
Diameter	ø5.8 mm	ø4/5.6 mm
Sensor tube length	47 mm	> 27.5 mm
Silicone cable	2 x 0.25 mm ² , 1.5 m, 3 m, 5 m and 10 m	2 x 0.25 mm ² , 1.5 m and 3 m
Sensor tube material	AISI 304, W-no. 1.4301	AISI 316 Ti, W-no. 1.4571
Protection class	IP65	IP67

Approvals

Heat sensor

TS27.01/111, DS/EN 1434 θ : 10...150°C, $\Delta\theta$: 3...130 K
 TS27.01/112, DS/EN 1434 θ : 10...150°C, $\Delta\theta$: 3...130 K
 DK-0200-MI004-002 θ : 10...150°C, $\Delta\theta$: 3...140 K

MID designation

Mechanical environment Class M1

Technical data

Pockets

Temperature of medium 0 - 160°C
 Medium Heating water
 Response time $\tau_{0,5}$ Max. 11 s for 65 and 90 mm pocket
 Max. 25 s for 140 mm pocket
 Pressure level PN25
 Flow velocity Max. 3 m/sec.
 Diameter 8 mm (14.5 mm)
 Length 65, 90 and 140 mm
 Connection R¹/₂
 Nipple and sensor tube material 65 and 90 mm –
 AISI 304, W-no. 1.4301
 140 mm –
 AISI 316, W-no. 1.4571

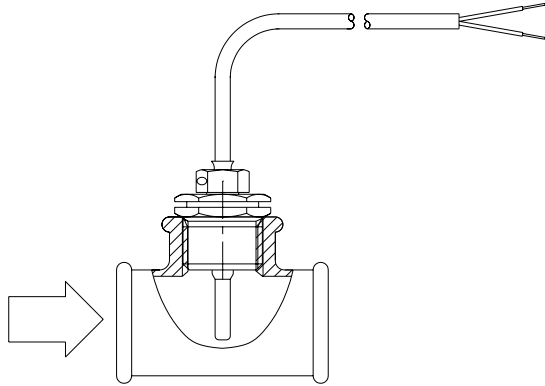
Change-over nipples, direct short sensor

Connection R¹/₂ or R³/₄
 Material MS 58 pb

Fitting examples

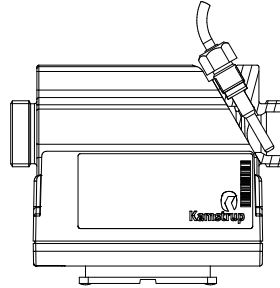
Example 1

Direct short sensor, type no. 66-00-0F0/0G0, fitted in an elbow by means of change-over nipple, type no. 65-56-491.



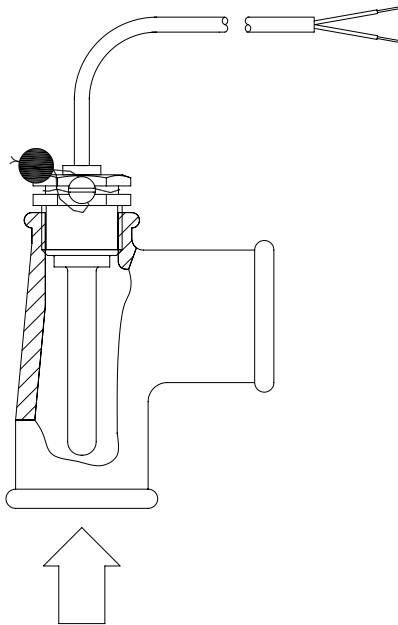
Example 2

Direct short sensor, type no. 66-00-0F0/0G0, fitted in ULTRAFLOW®, type no. 65-S-CDAА-XXX.



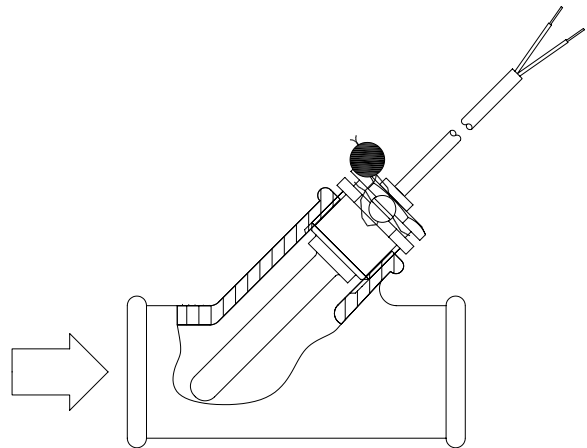
Example 3

Pocket sensor, type no. 65-00-0A0/0B0/0C0/ 0D0, fitted in an elbow by means of sensor pocket, type no. 65-57-3XX.



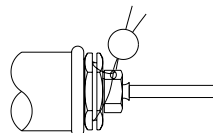
Example 4

Pocket sensor, type no. 65-00-0A0/0B0/0C0/ 0D0, fitted in an elbow with 45° angle by means of sensor pocket, type no. 65-57-3XX.

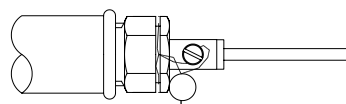
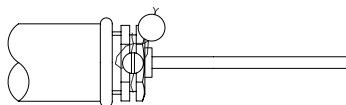


Sealing examples

Direct short sensor seal with change-over nipple
M10 x R $\frac{1}{2}$.

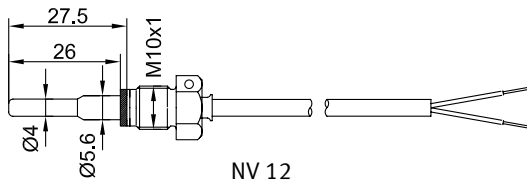


Pocket sensor seal in sensor pocket.



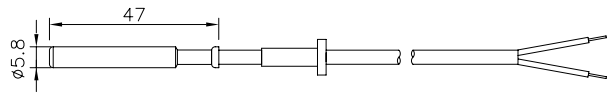
Dimensional drawings

Direct short sensor

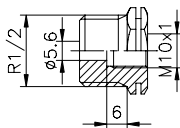


NV 12

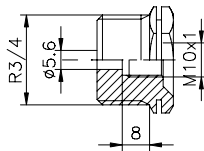
Pocket sensor



Change-over nipples for direct short sensor

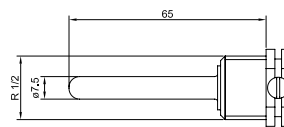


NV 22

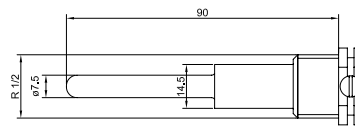


NV 27

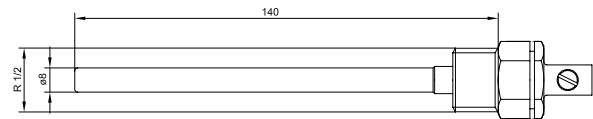
Sensor pocket



NV 22
65 mm



NV 22
90 mm



NV 22
140 mm

R $\frac{1}{2}$ and R $\frac{3}{4}$ thread according to ISO 7.1.

Order specification

Temperature sensor set

Type no.*	Description
65-00-0A0 XXX	Pt500 pocket temperature sensor set with 1.5 m cable
65-00-0B0 XXX	Pt500 pocket temperature sensor set with 3.0 m cable
65-00-0C0 XXX	Pt500 pocket temperature sensor set with 5 m cable
65-00-0D0 XXX	Pt500 pocket temperature sensor set with 10 m cable
66-00-0F0 XXX	Pt500 direct short temperature sensor set with 1.5 m cable
66-00-0G0 XXX	Pt500 direct short temperature sensor set with 3.0 m cable

Accessories

Type no.	Description
65-56-491	Change-over nipple M10 - R $\frac{1}{2}$ for direct short temperature sensor
65-56-492	Change-over nipple M10 - R $\frac{3}{4}$ for direct short temperature sensor
65-57-324	Sensor pocket, length = 65 mm
65-57-327	Sensor pocket, length = 90 mm
65-57-314	Sensor pocket, length = 140 mm

* Type numbers may vary due to local approvals