

Temperature Sensors

Type 5207 to Type 5277



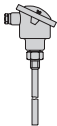
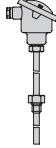



with Pt 1000 resistors

Application

Sensors for measuring temperatures in heating, ventilation and air-conditioning systems. Versions with Pt 1000 resistors. Basic values according to Class B of DIN EN 60751.









Table 1 · Temperature sensors with Pt 1000 resistors

Screw-in sensor	•	•	•	•	•	•			
Duct sensor							•		
Contact sensor								•	
Outdoor sensor									•
Number of Pt 1000 resistors	1	1	1	1	1	1	1	1	1
Pt 1000 resistors	See Table 2								
Sensor length mm	80	160	250	160	250	400	60 ... 280	–	
Sensor shaft G ½ made of ¹⁾	Brass			1.4571			Brass, nickel-pl.	–	
Nominal pressure PN	16			40			–		
Permissible temperatures									
Medium °C	–20 to 150			–60 to 400			–20 to 150	–20 to 120	–35 to 85
Ambient °C	–20 to 70			–20 to 70			–20 to 70	–20 to 120	–35 to 85
Degree of protection IP	54						41	42	44
Weight kg	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.04	0.1
Type	5207-21	5207-27	5207-26	5207-47	5207-46	5207-48	5217	5267-2	5227-2
Style									
Preferable scope of application	Flow or return flow pipes, domestic hot water heating, heating systems						Supply air, mixed air, exhaust air; non-corrosive air and gases	Flow or return flow pipes	Exterior walls of buildings

¹⁾ For duct sensors, flanged connection instead of G ½

Table 1 (continued) · Temperature sensors with Pt 1000 resistors

Room sensor	•	•	•	•	•	•	
with potentiometer 1 k Ω		•					
with potentiometer and button			•				
with potentiometer and mode selector switch				•		•	
with potentiometer and step switch					•		
Immersion sensor w. thermowell							
Number of Pt 1000 resistors	1	1	1	1	1	1	
Pt 1000 resistors	See Table 2						
Sensor length mm	-						
Sensor shaft G 1/2 made of	-						
Nominal pressure PN	-						
Permissible temperatures							
Medium °C	-35 to 70		-20 to 60		-35 to 70	-20 to 60	
Ambient °C	-35 to 70		-20 to 60		-35 to 70	-20 to 60	
Degree of protection IP	20		30		20	30	
Weight kg	0.2		0.08		0.2	0.08	
Length of conn. lead m	-						
Type	5257-1	5257-2	5257-3	5257-5	5257-6	5257-7	
Style							
Preferable scope of application	Recreation rooms and offices						

Connected to Controller Type	5257-1	5257-2	5257-3	5257-5	5257-6	5257-7
Automation system						
TROVIS MODULON	•	•	•		•	
Controllers for HVAC engineering						
TROVIS 5432	•			•		
TROVIS 5433	•			•		
TROVIS 5476	•			•		
TROVIS 5477	•	•			•	
TROVIS 5479	•			•		
TROVIS 5575	•			•		
TROVIS 5576	•			•		
TROVIS 5579	•			•		
TROVIS 5571 (PLC)	•	•	• (BE1 only)	•	•	
Electric process controller						
TROVIS 6493-01	•	•	•		•	
TROVIS 6495-2	•	•	•		•	
Controller with electric actuator						
Type 5725-7		•				•
Type 5757-7		•				•

Note

It is not necessary to calibrate the line with temperature sensors with Pt 1000 resistors. In cases where the length of line between sensor and controller exceeds 100 m, the cross-section of the wire must be at least 1.5 mm².

The connecting lead between temperature sensor and controller are to be routed separately from live mains cables.

Type 5267 Contact Sensor suitable for pipes up to Ø 60 mm. On assembly, the supplied heat-conducting paste must be applied between the sensor (copper protective tube) and the pipe.

Terminals for sensors (Types 5227, 5257 and 5267) must have a maximum wire cross-section of 1.5 mm².

Table 2 · Resistance values for Type 5207 to 5277 Pt 1000 Resistors

Temperature °C	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
Resistance Ω	862.5	882.2	901.9	921.6	941.2	960.9	980.4	1000.0	1019.5	1039.0	1058.5	1077.9
Temperature °C	25	30	35	40	45	50	55	60	65	70	75	80
Resistance Ω	1097.3	1116.7	1136.1	1155.4	1174.7	1194.0	1213.2	1232.4	1251.6	1270.7	1289.9	1308.9
Temperature °C	85	90	95	100	105	110	115	120	125	130	135	140
Resistance Ω	1328.0	1347.0	1366.1	1385.0	1404.0	1422.9	1441.8	1460.6	1479.5	1498.3	1517.1	1535.8
Temperature °C	145	150	155	160	165	170	175	180	185	190	195	200
Resistance Ω	1554.6	1573.3	1591.9	1610.5	1629.1	1647.7	1666.3	1684.8	1703.3	1721.7	1740.2	1758.6

Screw-in sensors

Type 5207-2

Type 5217; immersion depth adjustable between 60 and 280 mm

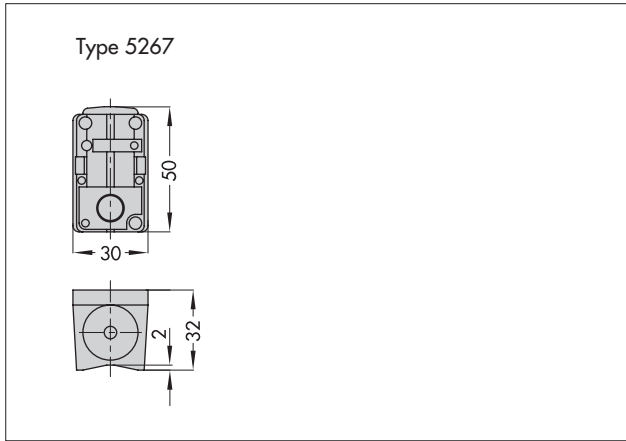
Type 5207-4

Typical application

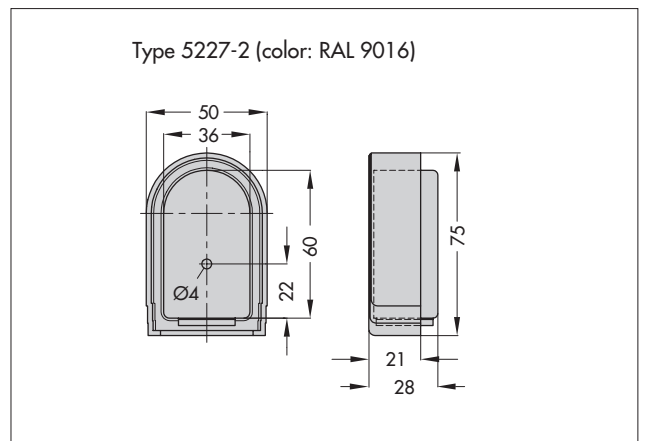
Pipe installations:

- On elbows, against the direction of flow
- In smaller pipes, positioned at an angle against the direction of flow
- At a right angle to the flow

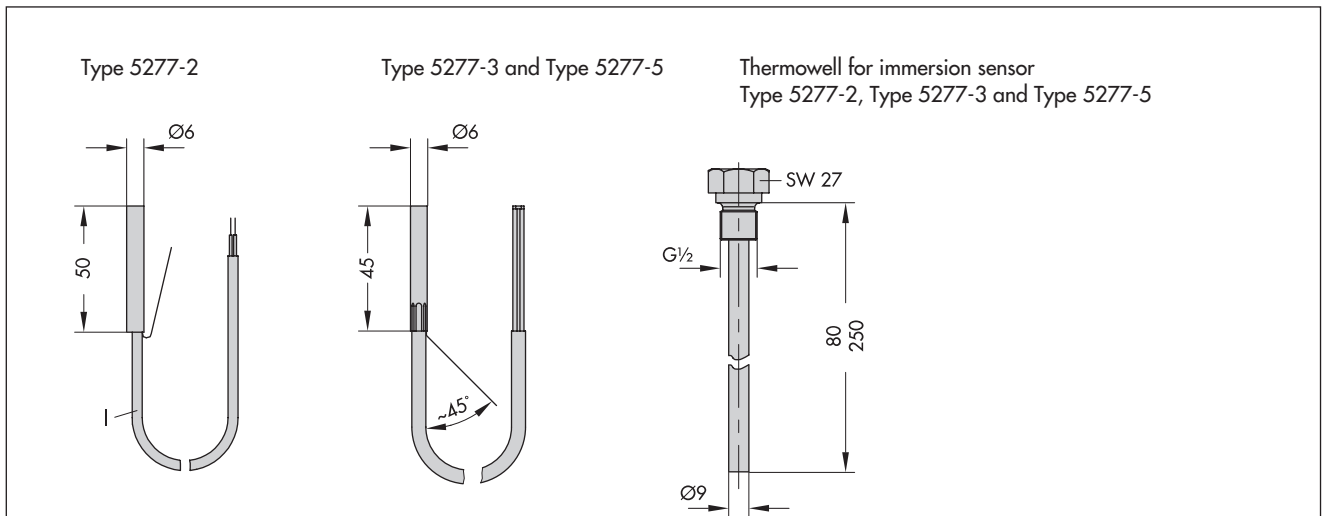
Contact sensor



Outdoor sensor



Immersion sensors



Length of connecting lead

Type 5277-2: $l = 2$ m

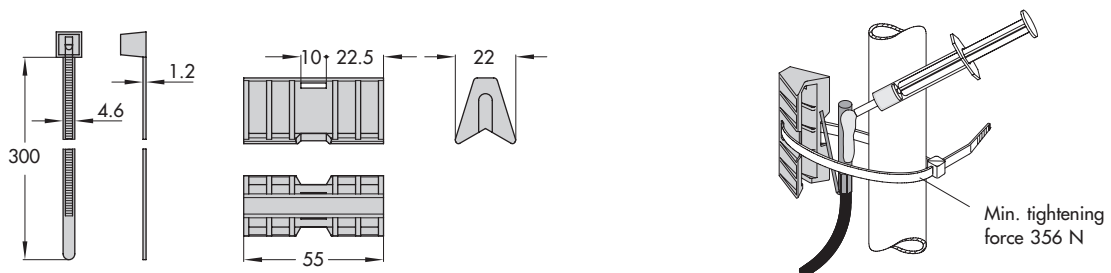
Type 5277-3: $l = 3$ m, silicone connecting cable

Type 5277-5: $l = 5$ m, silicone connecting cable

Bracket and cable tie in a mounting kit (order no. 8524-0020)

A mounting kit (order no. 8524-0020) is required if a Type 5277 Sensor is intended to be used as a contact sensor. The application range is between -40 and 105 °C (briefly up to 145 °C), the sensor is resistant against oil, fuel oil and grease.

Apply heat-conducting paste (syringe) to the sensor. Clamp the sensor between the pipe and bracket. Fasten the sensor on a clean pipe using the cable tie.

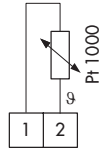
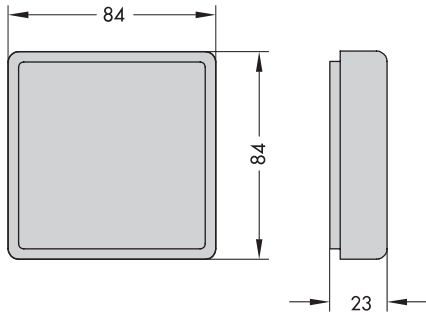


Room sensors

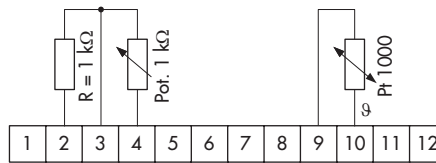
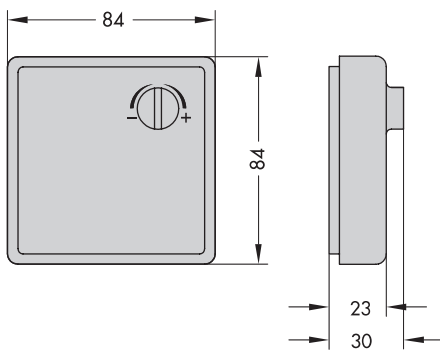
Mounting

- On the wall of the room concerned at a height of 1.5 m
- Do not mount the sensor in alcoves or close to appliances which give off heat

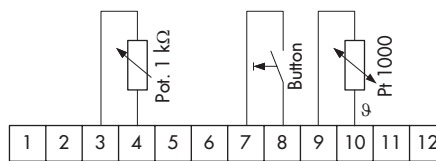
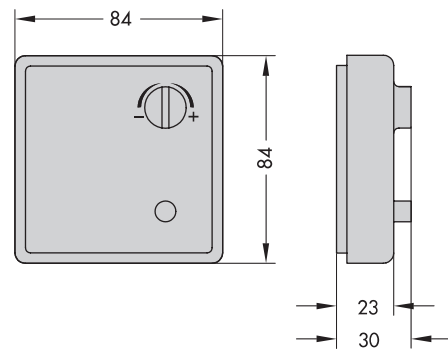
Type 5257-1 Room Sensor



Type 5257-2 Room Sensor



Type 5257-3 Room Panel

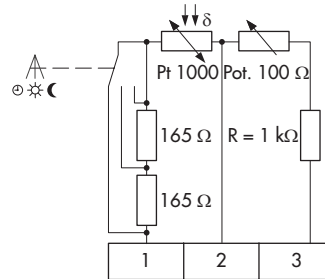
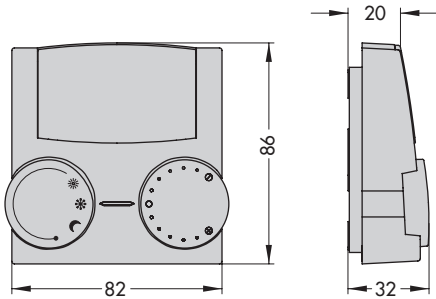


Room sensors (continued)

Type 5257-5 and Type 5257-7

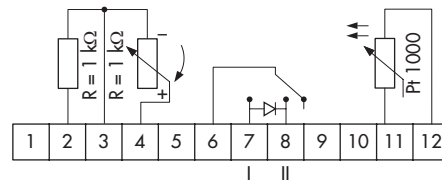
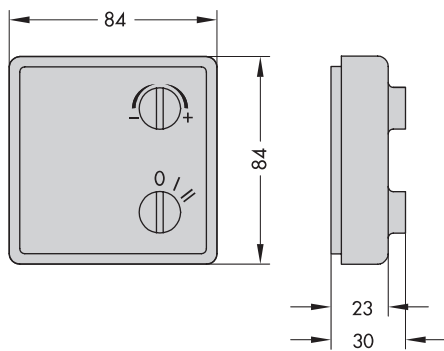
Remote control with room sensor for changing the room temperature set point, with heating program switch

Type 5257-5 Room Panel

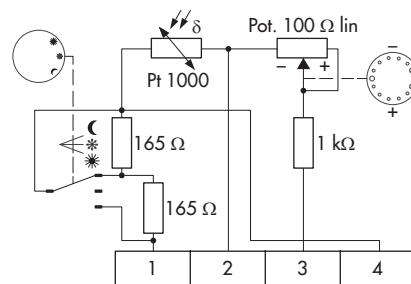
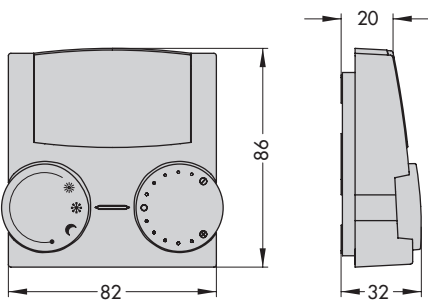


- ☉ Continuous automatic operation
- ☾ Continuous night mode (reduced operation)
- ☼ Continuous day mode (rated operation)

Type 5257-6 Room Sensor



Type 5257-7 Room Panel



- ☼ Continuous day mode (rated operation)
- ☼ Off/Frost protection
- ☾ Continuous night mode (reduced operation)

Specifications subject to change without notice.



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