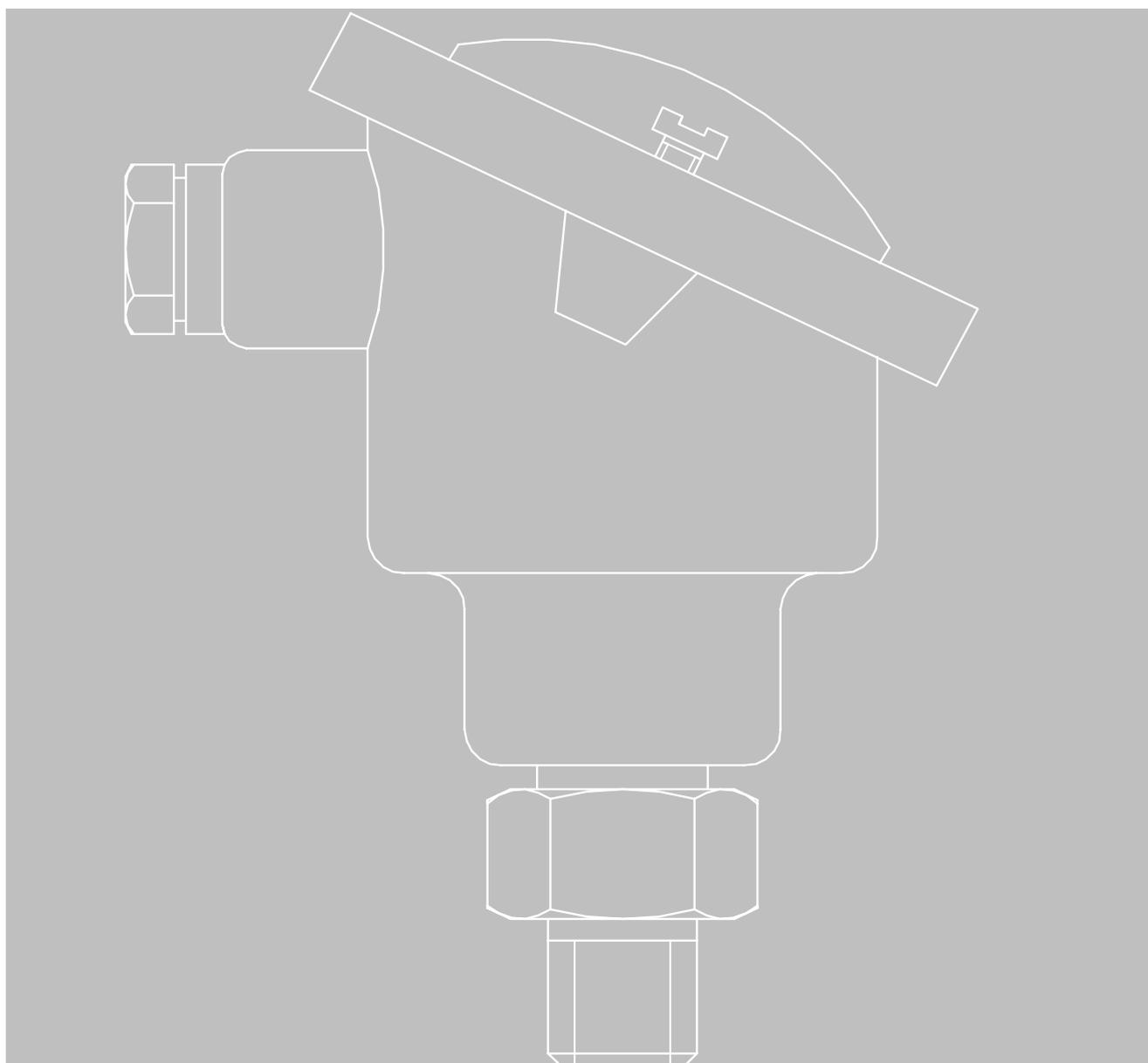# INFORMATION SHEET

T 5200 EN

Temperature Sensors and Thermostats

CE

Outdoor sensors

Measurement of outdoor temperature mounted on the exterior walls of buildings
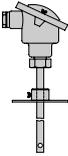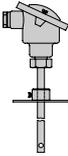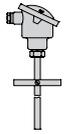
Type	5225	5226	5227-4
Resistor	Pt100	Pt100	Pt1000
Qty.	1	2	1
Permissible temperature range in °C			
Process medium	-20 to +50	-20 to +50	
Ambient	-35 to +85	-35 to +85	-50 to +90
Style			
Data sheet	▶ T 5203	▶ T 5203	▶ T 5220

Fig. 1: *Type 5257-51 Room Panel*

Duct sensors

Measurement of supply air, mixed air or exhaust air temperatures in ventilation and air-conditioning systems (non-corrosive air or gases)

Type	5215	5216	5217
Resistor	Pt100	Pt100	Pt1000
Qty.	1	2	1
Sensor length in mm	60 to 300	60 to 300	60 to 280
Sensor shaft consisting of	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Permissible temperature range in °C			
Process medium	-35 to +200	-35 to +200	-20 to +150
Ambient	-20 to +70	-20 to +70	-20 to +70
Style			
Data sheet	▶ T 5203	▶ T 5203	▶ T 5220

Room sensors and room panels

Measurement of room temperature in recreation rooms and offices

Type	5255	5257-51 [1]	5257-71 [1]
Resistor	Pt100	Pt1000	Pt1000
Qty.	1	1	1
Permissible temperature range in °C	-35 to +85	-35 to +70	-35 to +70
Equipped with			
Set point correction and mode switch		•	•
Style			
Data sheet	▶ T 5203	▶ T 5220	▶ T 5220

[1] See associated Data Sheet ▶ T 5220 for possible connections to SAMSON controllers

Contact sensor

Measurement of water temperature in heating supply pipes and return pipes

Type	5267-3
Resistor	Pt1000
Qty.	1
Permissible temperature range in °C	-50 to +120
Style	
Data sheet	▶ T 5220

Immersion sensors with thermowell

Measurement of water temperature in heating supply pipes and return pipes, in hot water heaters and thermal plants.

Thermowell required

Type	5277-21	5277-31	5277-51
Resistor	Pt1000		
Qty.	1		
Length [mm]			
Sensor	50		
Connecting cable	2000	3000	5000
Sensor shaft Consisting of	Brass, CrNiMo steel		
Pressure rating	PN 16 and 40		
Permissible temperature range in °C	-50 to +180		
Style			
Data sheet	▶ T 5220		

Fast-response temperature sensors

Fast-responding temperature sensors to measure rapid temperature changes in heat exchangers

Type	5207-0060	5207-61	5207-64	5207-65
Resistor	Pt1000	Pt1000	Pt1000	Pt1000
Qty.	1	1	1	1
Length [mm]				
Immersion tube	–	110	170	250
Immersion depth	52	80	40 to 100	120 to 190
Connecting cable	2000	2500	2500	2500
Pressure rating	PN 16	PN 40	PN 40	PN 40
Permissible temperature range in °C				
Process medium	-5 to +90	-50 to +180	-15 to +180	-15 to +180
Ambient	-5 to +80	-50 to +180	-15 to +180	-15 to +180
Data sheet	▶ T 5222	▶ T 5221	▶ T 5221	▶ T 5221

Fig. 2: *Type 5267-3 Contact Sensor*

Fig. 3: *Type 5277-x1 Immersion Sensor with short and long thermowells*

Fig. 4: *Type 5207-0060 Fast-response Temperature Sensor*

Screw-in sensors

Measurement of water temperature in heating supply pipes and return pipes, in hot water heaters and thermal plants

Type	5204-21 5204-26 5204-27	5205-46 5205-47 5205-48	5206-46 5206-47 5206-48	5207-21 5207-26 5207-27	5207-46 5207-47 5207-48
Resistor	Pt100	Pt100	Pt100	Pt1000	Pt1000
Qty.	1	1	2	1	1
Sensor length					
80 mm	5204-21	–	–	5207-21	–
160 mm	5204-27	5205-47	5206-47	5207-27	5207-47
250 mm	5204-26	5205-46	5206-46	5207-26	5207-46
400 mm	–	5205-48	5206-48	–	5207-48
Sensor shaft consisting of	Brass [1]	1.4571	1.4571	Brass	1.4571
Pressure rating	PN 16	PN 40	PN 40	PN 16	PN 40
Permissible temperature range in °C					
Process medium	-20 to +150	-60 to +400	-60 to +400	-20 to +150	-60 to +400
Ambient	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70
Style					
Data sheet	▶ T 5203	▶ T 5203	▶ T 5203	▶ T 5220	▶ T 5220

[1]   Type 5204-21 also available in 1.4571 and PN 40 (▶ T 5203)

Fig. 5: *Types 5205 and 5206 Screw-in Sensors*

Thermostats

Thermostats tested according to DIN EN 14597 for use as temperature monitors (TM), safety temperature monitors (STM), temperature regulators (TR) or safety temperature limiter (STL) as well as in combinations consisting of temperature regulator and safety temperature limiter (TR/STL) or temperature regulator and safety temperature monitors (TR/STM).

Single thermostats

Type	5343-1 to -4	5344-1 and -2	5345-1/-2
Function	STM	TR	STL
Set point range in °C	0 to 60, 40 to 100, 70 to 130 or -35 to +95	0 to 120 or 20 to150	70 to 130, or 30 to 90
Sensor length in mm	2000 [1], [2]		
Possible thermowell length in mm	100, 150, 200, 300 [1]		
Max. medium temperature in °C	85, 125, 155 or 120	145 or 175	155 or 115
Style			
Data sheet	▶ T 5206		

[1]   Thermowell not included in the scope of delivery. See Data Sheet ▶ T 5206 for description.
[2]   Strap for mounting the contact thermostat not included in the scope of delivery. See Data Sheet ▶ T 5206 for description.

Double thermostats

Type	5347-1/-2	5348-1/-2	5349-1
Function	TR/STL	TR/STM	STM/STL
Set point range in °C	TR: 0 to 120 STL: 70 to 130 or TR: 0 to 120 STL: 30 to 90	TR: 0 to 120 STM: 70 to 130 or TR: 0 to 120 STM: 40 to 100	STM: 70 to 130 STL: 70 to 130
Sensor length in mm	2000 [1], [2]		
Possible thermowell length in mm	150, 300 [1]		
Max. medium temperature in °C	145 or 115	145 or 125	145
Style			
Data sheet	▶ T 5206		

[1]   Thermowell not included in the scope of delivery. See Data Sheet ▶ T 5206 for description.
[2]   Strap for mounting the contact thermostat not included in the scope of delivery. See Data Sheet ▶ T 5206 for description.

Replacement of old SAMSON thermostats with the new SAMSON thermostats

ℹ *Note*

The adapter (order no. 1400-9856) must be used when the thermowell of old single thermostats is to be used.
The thermowell of double thermostats must always be replaced (▶ T 5206).

Function	Old				New		
	SAMSON type	Mat. no.	Measuring range	Thermowell	SAMSON type	Mat. no.	Measuring range
STM	5313-4	1008795	0 to 60 °C	150x8 mm, G ½	5343-1	2111650	0 to 60 °C
	5313-5	1008797	60 to 100 °C	150x8 mm, G ½	5343-2	2111654	40 to 100 °C
	5313-6	1008796	60 to 110 °C	150x8 mm, G ½	5343-3	2111655	70 to 130 °C
	5313-7	1008798	60 to 120 °C	150x8 mm, G ½			
	5313-8	1008799	60 to 130 °C	150x8 mm, G ½			
	5313-9	1008801	20 to 95 °C	300 x 8 mm, CrNiMo steel	5343-4	2382590	35 to 95 °C
	5313-10	1008800	50 to 300 °C	150x8 mm, G ½	1)		
TR	5314-1	1008802	20 to 90 °C	150x8 mm, G ½	5344-1	2111657	0 to 120 °C
	5314-2	1008803	20 to 90 °C	300x8 mm, G ½			
	5314-3	1008804	20 to 150 °C	100x8 mm, G ½	5344-2	2111659	20 to 150 °C
STL	5315-1	1008805	30 to 110 °C	150x8 mm, G ½	5345-1	2108361	70 to 130 °C
	5315-2	1008806	60 to 130 °C	150x8 mm, G ½			
	5315-3	1008807	130 to 200 °C	150x8 mm, G ½	1)		
					5345-2	2382592	30 to 90 °C
TR/STL	5317-2	1008810	30 to 110 °C	150x8 mm, G ½	5347-1	2108363	TR: 0 to 120 °C STL: 70 to 130 °C
	5317-3	1008809	20 to 90 °C	150x8 mm, G ½			
	5317-4	1008811	50 to 120 °C	150x8 mm, G ½	5347-2	2821326	TR: 0 to 120 °C STL: 30 to 90 °C
	5317-5	1008808	60 to 130 °C	150x8 mm, G ½			
TR/STM	5318-1	1008813	0 to 70 °C	300x8 mm, G ½	1)		
	5318-2	1008814	20 to 120 °C	150x8 mm, G ½	5348-1	2108365	TR: 0 to 120 °C STM: 70 to 130 °C
	5318-3	1008815	20 to 100 °C	150x8 mm, G ½			
	5318-4	1008812	20 to 110 °C	150x8 mm, G ½	5348-2	2821369	TR: 0 to 120 °C STM: 40 to 100 °C
STM/STL					5349-1	2347423	STM: 70 to 130 °C STL: 70 to 130 °C

1) No comparable thermostat in the current product range