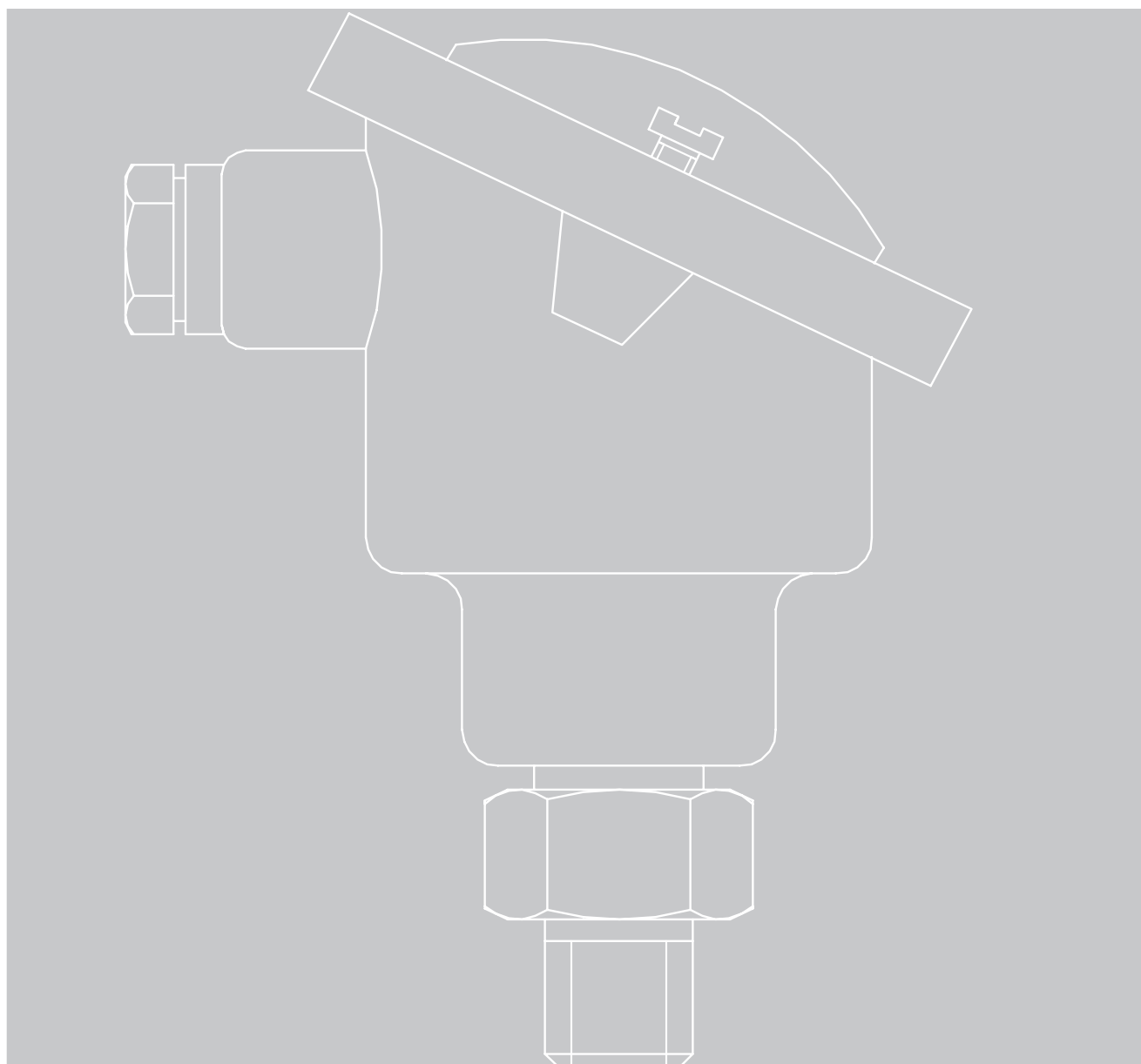


INFORMATION SHEET

T 5200 EN

Temperature Sensors and Thermostats



Outdoor sensors

Measurement of outdoor temperature mounted on the exterior walls of buildings




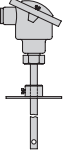
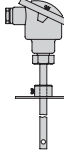
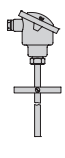
Type	5225	5226	5227-4
Resistor	Pt 100	Pt 100	Pt 1000
Qty.	1	2	1
Permissible temperature range [°C]			
Process medium	-20 to +50	-20 to +50	
Ambient	-35 to +85	-35 to +85	-50 to +90
Style			
Data sheet	▶ T 5203	▶ T 5203	▶ T 5220



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	Pt 100	Pt 100	Pt 1000
Qty.	1	2	1
Sensor length [mm]	60 to 300	60 to 300	60 to 280
Sensor shaft made of	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Permissible temperature [°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	5257-7 ¹⁾	5257-11 ¹⁾	5257-51 ¹⁾
Resistor	Pt 100	Pt 1000	Pt 1000	Pt 1000
Qty.	1	1	1	1
Permissible temperature range [°C]	-35 to +85	-20 to +60	-35 to +70	-35 to +70
Equipped with		•		•
Set point correction and mode switch				
Style				
Data sheet	▶ T 5203	▶ T 5220	▶ T 5220	▶ T 5220

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



Contact sensors

Measurement of water temperature in heating supply pipes and return pipes

Type	5267-2
Resistor	Pt 1000
Qty.	1
Permissible temperature range [°C]	-20 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	5277-2	5277-3, -5
Resistor	Pt 1000	Pt 1000
Qty.	1	1
Length [mm]		
Sensor	50	
Connecting cable	2000	3000, 5000
Sensor shaft made of	Brass, CrNiMo steel	Brass, CrNiMo steel
Pressure rating	PN 16 and 40	PN 16 and 40
Permissible temperature range [°C]	-50 to +180	
Style		
Data sheet	▶ T 5220	▶ T 5220

Fast-response temperature sensors

Fast-responding temperature sensors for measuring rapid temperature changes in heat exchangers

Type	5207-0060	5207-61	5207-64	5207-65
Resistor	Pt 1000	Pt 1000	Pt 1000	Pt 1000
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 [°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 5267-2 Contact Sensor




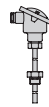



Fig. 3: Type 5277-2 Immersion Sensor with short and long thermowells



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	Pt 100	Pt 100	Pt 100	Pt 1000	Pt 1000
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 made of	Brass ¹⁾	1.4571	1.4571	Brass	1.4571
Pressure rating	PN 16	PN 40	PN 40	PN 16	PN 40
Permissible temperature [°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)

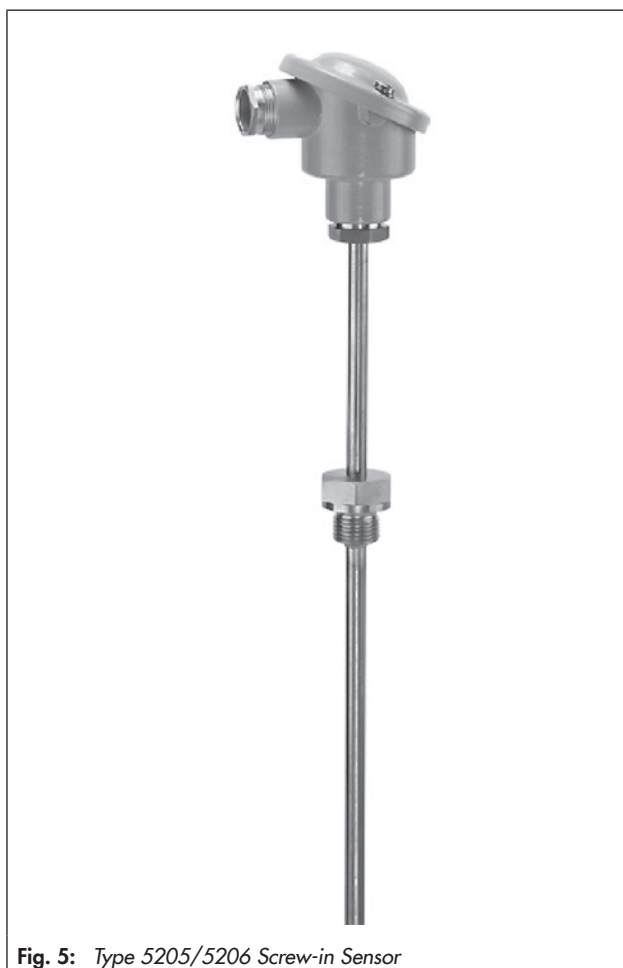






Fig. 5: Type 5205/5206 Screw-in Sensor

Thermostats




Typetested thermostats 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	5312-2	5343-1 to -4	5344-1 and -2	5345-1/-2
Function	TM	STM	TR	STL
Set point range [°C]	-10 to +12	0 to 60, 40 to 100, 70 to 130 or -35 to +95	0 to 120 or 20 to 150	70 to 130 or 30 to 90
Sensor length [mm]	6000	100, 150, 200, 300 ¹⁾		
Max. medium temperature [°C]	200	85, 125, 155 or 120	145 or 175	155 or 115
Style				
Data sheet	▶ T 5207	▶ T 5206		

Double thermostats

Type	5347-1/-2	5348-1/-2	5349-1
Function	TR/STL	TR/STM	STM/STL
Set point range [°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 [mm]	150, 300 ¹⁾		
Max. medium temperature [°C]	145 or 115	145 or 125	145
Style			
Data sheet	▶ T 5206		

Note: Old SAMSON thermostats can be replaced by the new SAMSON thermostats as shown in the table on page 6.

Replacement of old SAMSON thermostats with the new SAMSON thermostats

Function	OLD			Thermowell	NEW		
	SAMSON type	Conf. ID	Range		SAMSON type	Configuration ID	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	5343-4	2382590	35 to 95 °C
	5313-9	1008801	20 to 95 °C	300x8 mm, CrNi-Mo steel			
	5313-10	1008800	50 to 300 °C	150x8 mm, G ½			
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

