

Thermostats



Types 5312-2, 5313-., 5314-., 5315-., 5317-., 5318-.

Application

Typetested thermostats equipped with an immersion sensor, which act as temperature monitors (TM), temperature regulators (TR) and/or safety temperature limiters (STL).



Types 5313-4 to 5318-4 · Thermostats which operate according to the liquid expansion principle and are equipped with an immersion sensor (Type 5312-2 equipped with a capillary sensor made of Cu, filled with gas and sensitive over its entire length) and a diaphragm measuring system. They provide an electric signal whenever a preset set point value is exceeded.

Versions

Temperature monitor thermostat (TM) with one double-throw contact and automatic resetting

Type 5312-2 Set point range -10 to 12 °C

Safety temperature monitor thermostats (STM) causing the circuit to open in the event of a fracture of the measuring system (leakage)

Type 5313-4 Set point range 0 to 60 °C

Type 5313-5 Set point range 60 to 100 °C

Type 5313-6 Set point range 60 to 110 °C

Type 5313-7 Set point range 60 to 120 °C

Type 5313-8 Set point range 60 to 130 °C

Type 5313-9 Set point range 20 to 95 °C

Type 5313-10 Set point range 50 to 300 °C

Temperature regulator thermostats (TR) with a double-throw contact for temperature control. Set point adjustable at rotary knob.

Type 5314-1 Set point range 20 to 90 °C

Type 5314-2 Set point range 20 to 90 °C

Type 5314-3 Set point range 20 to 150 °C

Safety temperature limiter thermostats (STL) with one break contact and a reclosing lockout. The contact can be reset via pushbutton only after the temperature falls below the limit value.

Type 5315-1 Set point range 30 to 110 °C

Type 5315-2 Set point range 60 to 130 °C

Type 5315-3 Set point range 130 to 200 °C

Double thermostat (TR/STL) Combination of the Types 5314 and 5315 with two temperature sensors in one immersion tube.

Type 5317-2 Set point range 30 to 110 °C

Type 5317-3 Set point range 20 to 90 °C

Type 5317-4 Set point range 50 to 120 °C

Type 5317-5 Set point range 60 to 130 °C

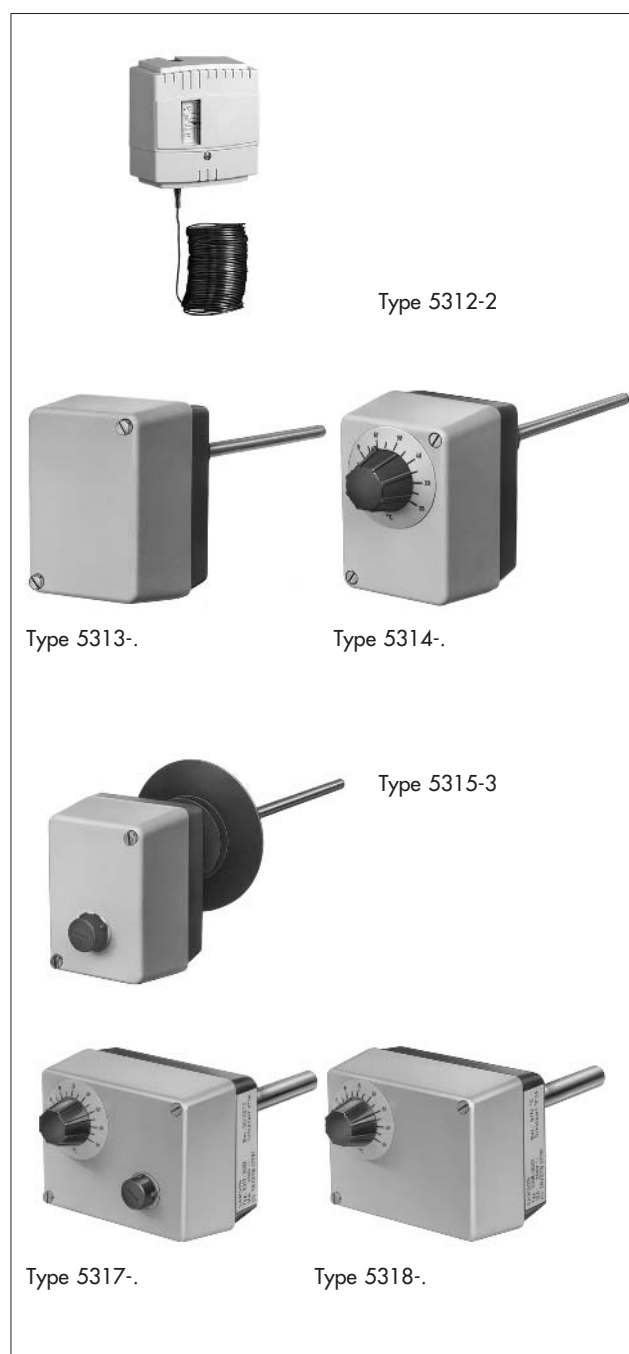
Double thermostat (TR/STM) Combination of the Types 5314 and 5313 with two temperature sensors in one immersion tube.

Type 5318-1 Set point range 0 to 70 °C

Type 5318-2 Set point range 20 to 120 °C

Type 5318-3 Set point range 20 to 100 °C

Type 5318-4 Set point range 20 to 110 °C



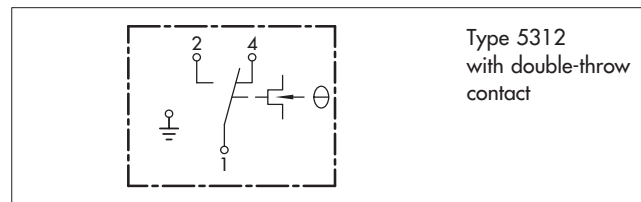
Technical data

Type 5312-2

Type	5312-2
Set point range	-10 to +12 °C
Function	Temperature monitor
Sensor	Copper capillary tube, approx. 6 m long, already active in sections of approx. 0.3 m
Switching differential	Approx. 1 K
Max. <u>of medium</u> temperature at housing	200 °C -15 to 55 °C
Min. housing temperature	As adjusted set point
Switch element	Microswitch, 1 changeover contact
Contact rating	At 24–250 V~: 15 (8) A with resistive load 2 A with $\cos \varphi = 0.6$ At 24 V~ min. 150 mA
Housing	Sheet steel, degree of protection IP 40

Electrical connection

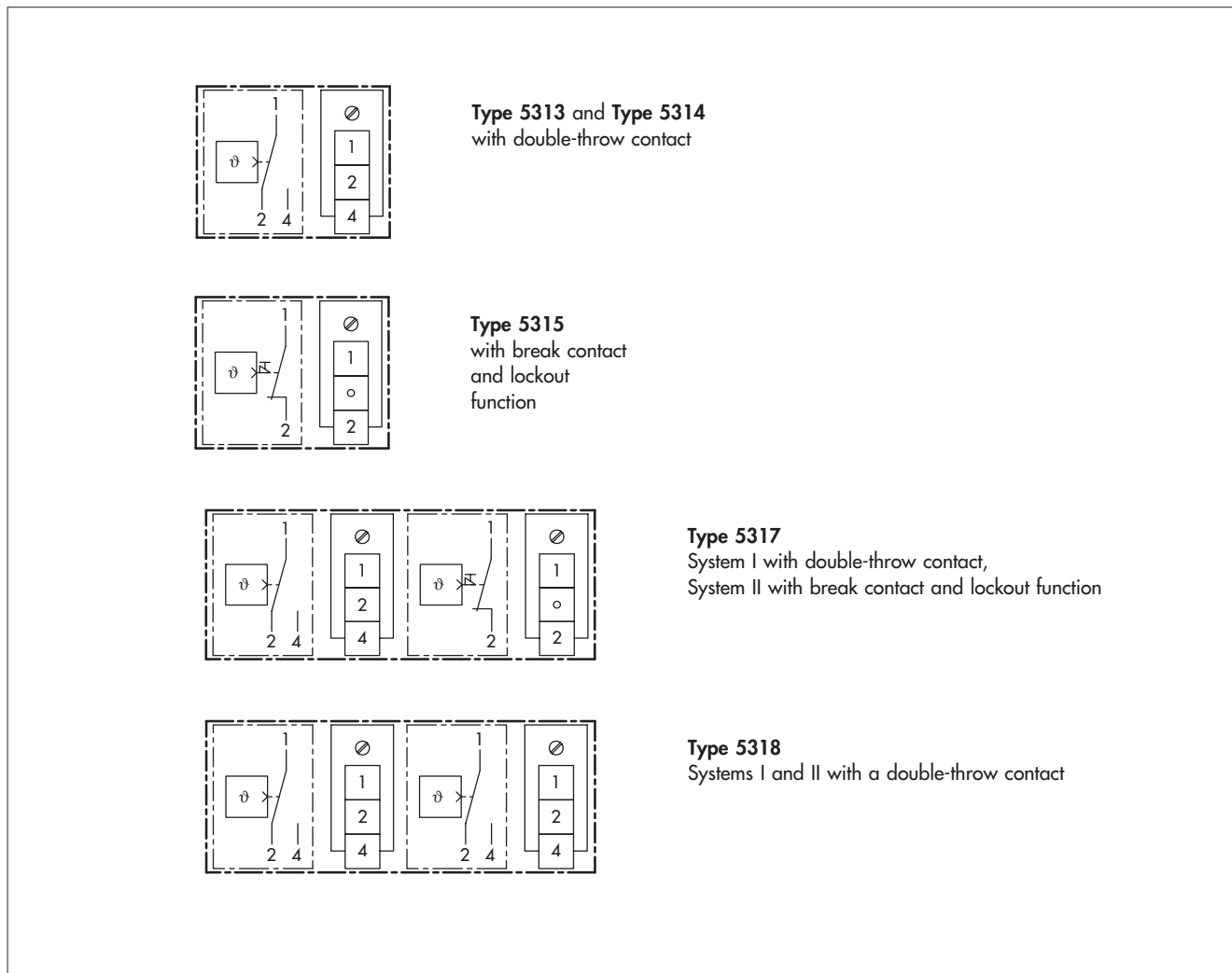
Type 5312



Ordering text

Type 5312-2 Frost Protection Thermostat
Kit of mounting clamps if need be (6 pieces)

Electrical connection of Types 5313 to 5318



Ordering text

Thermostat Type ...
Immersion tube made of CrNiMo if need be

Technical data related to Types 5313 to 5318

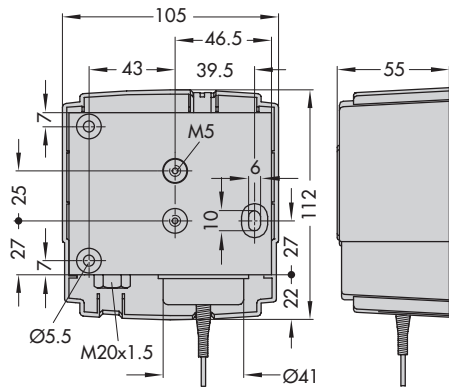
Type	Set point range	Function	Sensor material	Sensor dimensions	Insulating piece	Max. pressure ¹⁾	Switching differential approx. K	Repeat accuracy K	Max. medium temperature
5313-4	0 to 60 °C	STM	Immer. tube Brass	200 x 8 mm G ½		50 bar (92 bar)	3	+0 -3	69 °C
5313-5	60 to 100 °C	STM	Immer. tube Brass	150 x 8 mm G ½		48 bar (88 bar)	4	+0 -4	149 °C
5313-6	60 to 110 °C	STM	Immer. tube Brass	150 x 8 mm G ½		48 bar (88 bar)	4	+0 -4	149 °C
5313-7	60 to 120 °C	STM	Immer. tube Brass	150 x 8 mm G ½		48 bar (88 bar)	4	+0 -4	149 °C
5313-8	60 to 130 °C	STM	Immer. tube Brass	150 x 8 mm G ½		48 bar (88 bar)	4	+0 -4	149 °C
5313-9	20 to 95 °C	STM	Immer. tube CrNiMo	300 x 8 mm G ½		88 bar	5	+0 -4	138 °C
5313-10	50 to 300 °C	STM	Immer. tube Steel ²⁾	150 x 8 mm G ½	•	50 bar (72 bar)	15	+0 -12	345 °C
5314-1	20 to 90 °C	TR	Immer. tube Brass	150 x 8 mm G ½		50 bar (92 bar)	3	±1	103 °C
5314-2	20 to 90 °C	TR	Immer. tube Brass	300 x 8 mm G ½		50 bar (92 bar)	3	±1	103 °C
5314-3	20 to 150 °C	TR	Immer. tube Brass	100 x 8 mm G ½		48 bar (88 bar)	5	±2	172 °C
5315-1	30 to 110 °C	STL	Immer. tube Brass	150 x 8 mm G ½		48 bar (88 bar)	8	+0 -4	126 °C
5315-2	60 to 130 °C	STL	Immer. tube Brass	150 x 8 mm G ½		48 bar (88 bar)	7	+0 -4	149 °C
5315-3	130 to 200 °C	STL	Immer. tube Steel ²⁾	150 x 8 mm G ½	•	78 bar (83 bar)	7	+0 -4	230 °C
5317-2	30 to 110 °C	TR/STL	Immer. tube Brass	150 x 15 mm G ½		26 bar (48 bar)	TR: 3 STL: 8	±1.2	126 °C
5317-3	20 to 90 °C	TR/STL	Immer. tube Brass	150 x 15 mm G ½		27 bar (50 bar)	TR: 3 STL: 8	±1.2 -4	103 °C
5317-4	50 to 120 °C	TR/STL	Immer. tube Brass	150 x 15 mm G ½		26 bar (48 bar)	TR: 3 STL: 8	±1.2 -4	138 °C
5317-5	60 to 130 °C	TR/STL	Immer. tube Brass	150 x 15 mm G ½		26 bar (48 bar)	TR: 3 STL: 8	±1 -4	149 °C
5318-1	0 to 70 °C	TR/STM	Immer. tube Brass	300 x 15 mm G ½		27 bar (50 bar)	TR: 3 STM: 8	±1 -4	80 °C
5318-2	20 to 120 °C	TR/STM	Immer. tube Brass	150 x 15 mm G ½		26 bar (48 bar)	TR: 3 STM: 8	±2 -5	138 °C
5318-3	20 to 100 °C	TR/STM	Immer. tube Brass	150 x 15 mm G ½		27 bar (50 bar)	TR: 3 STM: 8	±2 -5	138 °C
5318-4	20 to 110 °C	TR/STM	Immer. tube Brass	150 x 15 mm G ½		26 bar (48 bar)	TR: 3 STM: 8	±2 -5	138 °C

¹⁾ Values in parentheses apply to version with immersion tube made of stainless steel 1.4571 (immersion tube is delivered with the thermostat.)

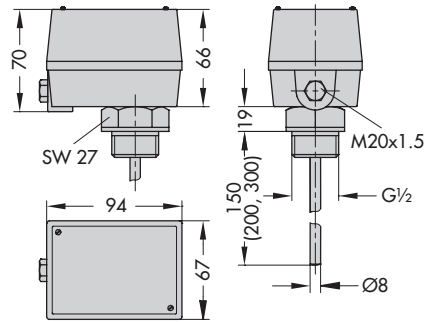
²⁾ Steel St 35.8

Permissible ambient temperature	0 to 80 °C; 55 °C for Type 5312	
Degree of protection	IP 54; IP 40 for Type 5312	
Weight	Approx. 0.5 kg; Type 5317-2 approx. 0.7 kg	
Switching capacity	at 230 V AC	10 A with resistive load 2 A with $\cos \varphi = 0.6$ Protection 10 A; 6 A for Type 5312
	at 230 V DC	0.25 A Protection 10 A; 6 A for Type 5312
Cover/housing	Housing: die-cast aluminum; Type 5312 sheet steel Cover: plastics (lead-sealable cover screws except for Type 5314)	

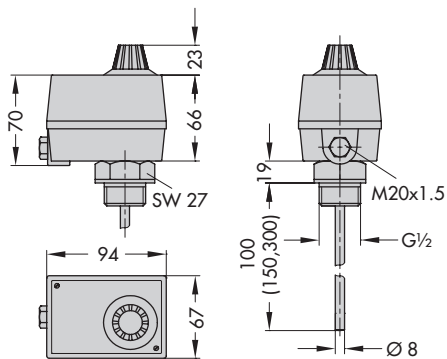
The associated DIN register numbers are listed in the mounting and operating instructions EB 5205 EN.



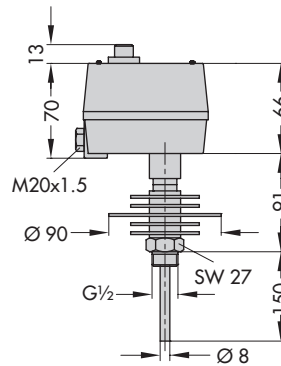
Type 5312-2 (Frost protection TM)



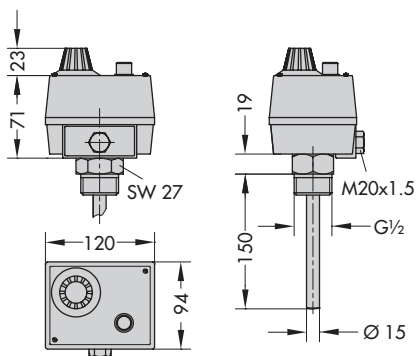
Type 5313 (STM)



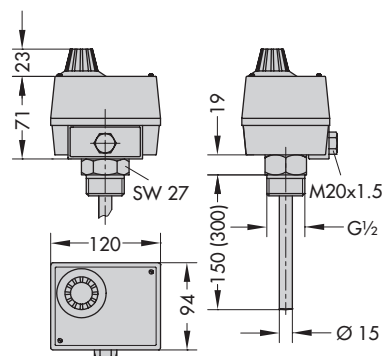
Type 5314 (TR)



Type 5315-3 (STL)
with insulating piece (from 150 °C upwards)



Type 5317 (TR/STL)



Type 5318 (TR/STM)