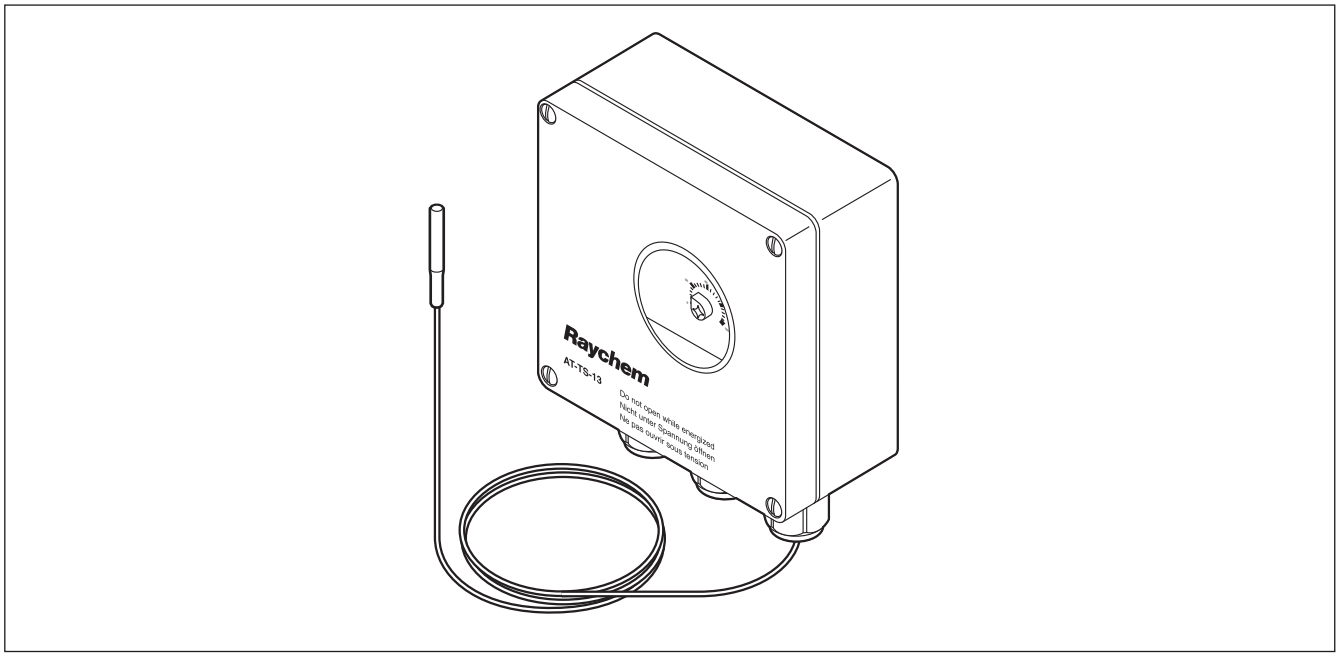
AT-TS-13 and AT-TS-14

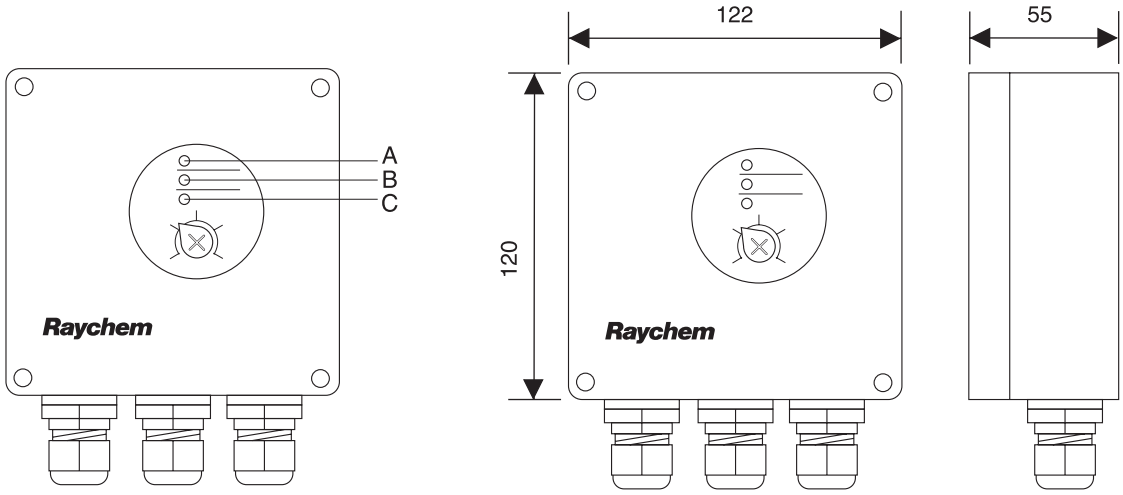
Surface sensing thermostat, electronic

AT-TS thermostats provide temperature control in safe area. The temperature set point can be checked through a window in the lid. LED´s are providing an indication when cables are energized (Heating ON) or when the temperature sensor is defect (sensor break or sensor short-circuit). The temperature sensor has a length of 3 meter and can be shortened for ambient sensing operating. Direct connection of the heating cable is possible. Connection kits need to be ordered separately. The thermostat is available in 2 temperature ranges.



	AT-TS-13	AT-TS-14
General		
Area of use	Ordinary area, outdoors	Ordinary area, outdoors
Supply voltage	230 V +10% –15% 50/60 Hz	230 V +10% –15% 50/60 Hz
Max. switching current	16 A, 250 VAC	16 A, 250 VAC
Max. conductor size	2.5 mm^2	2.5 mm^2
Switching differential	0.6 K to 1 K	0.6 K to 1 K
Switching accuracy	± 1 K at 5°C (calibration point)	2 K at 60°C (calibration point)
Switch type	SPST (normally open)	SPST (normally open)
Adjustable temperature range	–5°C to +15°C	0°C to +120°C
Housing		
Temperature setting	inside	inside
Exposure temperature	–20°C to +50°C	–20°C to +50°C
Ingress protection	IP65 according to EN 60529	IP65 according to EN 60529
Entries	1 x M20 for supply cable (∅ 8-13 mm) 1 x M25 for heating element (∅ 11-17 mm) 1 x M16 for the sensor	1 x M20 for supply cable (∅ 8-13 mm) 1 x M25 for heating element (∅ 11-17 mm) 1 x M16 for the sensor
Material	ABS	ABS
Lid fixing	nickel-plated quick release screws	nickel-plated quick release screws
Mounting	SB-110 and SB-111 or surface mount	SB-110 and SB-111 or surface mount

Dimensions (in mm)

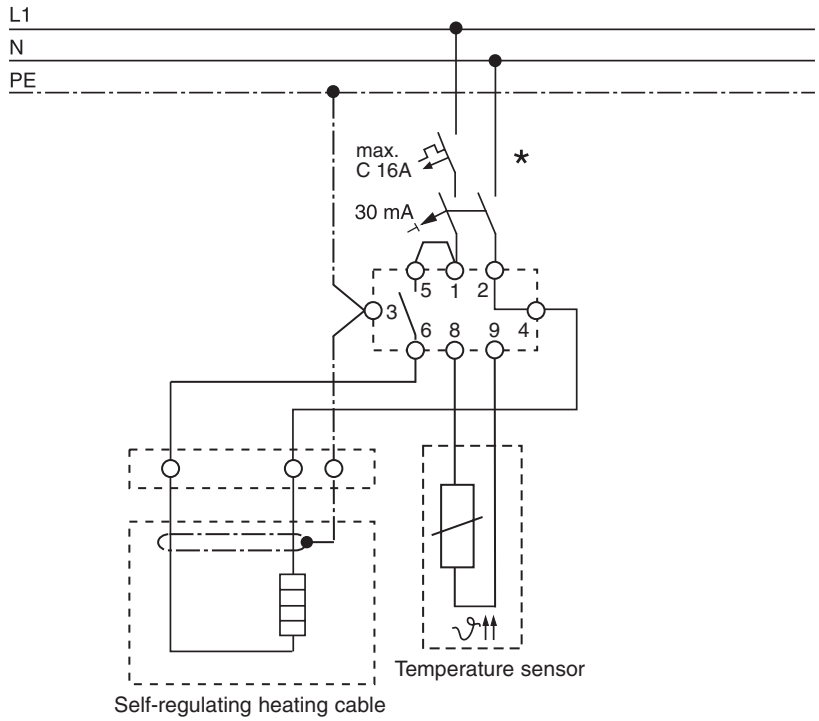


A	Green LED	Heating cable on
B	Red LED	Sensor break
C	Red LED	Sensor short-circuit

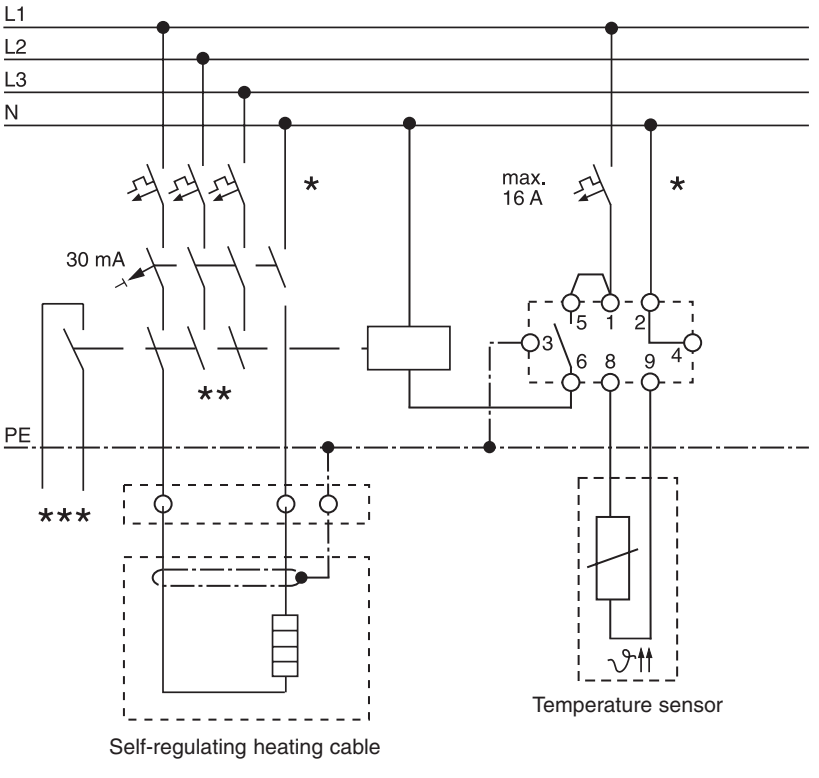
	AT-TS-13	AT-TS-14
Temperature sensor		
Type	PTC KTY 83-110	PTC KTY 83-110
Length sensor cable	3 m	3 m
Diameter sensor cable	5.5 mm	5.5 mm
Diameter sensor head	6.5 mm	6.5 mm
Sensor material	PVC	Silicone
Max. exposure temperature sensor cable	80°C	160°C
	The sensor cable may be extended to a maximum of 100 m using a 2-conductor wire with a cross-section of 1.5 mm^2. The sensor cable should be shielded if it is laid in cable ducts or in the vicinity of high-voltage carrying cables. The shield of the extension cable should be grounded at the controller end only.	
Output parameters		
Alarm on LED	Green LED: Heating Cable ON Red LED: Sensor break Red Led: Sensor short-circuit	Green LED: Heating Cable ON Red LED: Sensor break Red Led: Sensor short-circuit
Ordering details		
Part description	AT-TS-13	AT-TS-14
PN (Weight)	728129-000 (440 g)	648945-000 (440 g)
Accessories		
PA Reducer	Reducer M25 (M) / M20 (F)	Reducer M25 (M) / M20 (F)
PN	184856-000	184856-000
Spare temperature sensor (AT-TS-13 and AT-TS-14)	HARD-69 (Max. exposure temperature 160°C)	HARD-69
PN (Weight)	133571-000 (180 g)	133571-000 (180 g)

Wiring diagram for thermostat AT-TS-13 or AT-TS-14

AT-TS-13/14 direct



AT-TS-13/14 with contactor



* Two- or four-pole electrical protection by circuit-breaker may be needed for local circumstances, standards and regulations
** Depending on the application, one- or three-pole circuit-breakers or contactors may be used
*** Optional: Potential-free circuit-breaker for connection to the BMS