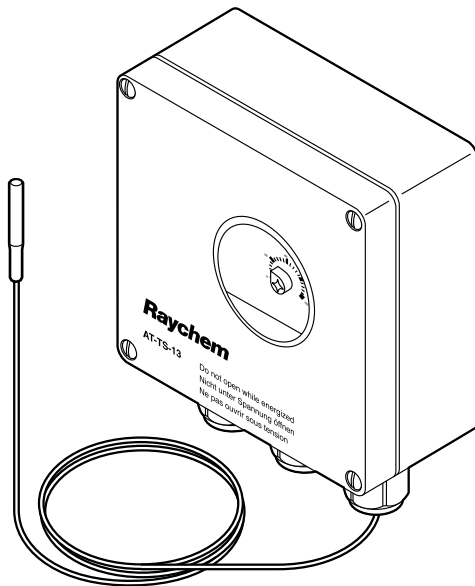# *DigiTrace* AT-TS-13 AND AT-TS-14
## SURFACE SENSING THERMOSTAT, ELECTRONIC

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.

GENERAL	AT-TS-13	AT-TS-14
Area of use	Ordinary area, outdoors	Ordinary area, outdoors
Supply voltage	230 Vac +10% −15% 50/60 Hz	230 Vac +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)
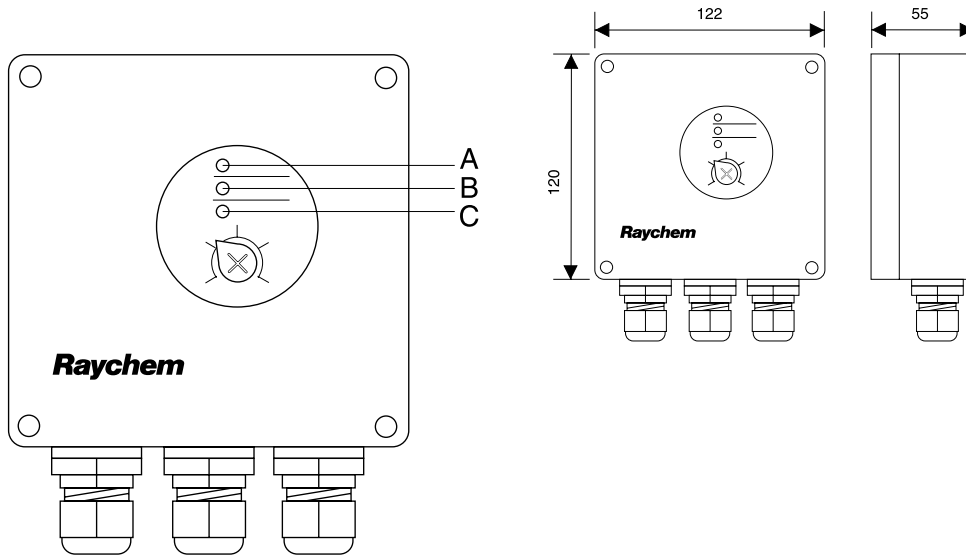
A Green LED Heating cable on

B Red LED Sensor break

C Red LED Sensor short-circuit

TEMPERATURE SENSOR	AT-TS-13	AT-TS-14
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 (0.44 kg)	648945-000 (0.44 kg)

ACCESSORIES

PA Reducer	Reducer M25 (M)/M20 (F)	Reducer M25 (M)/M20 (F)
PN	184856-000	184856-000
Spare temperature sensor	HARD-69	HARD-69
(AT-TS-13 and AT-TS-14)	(Max. exposure temperature 160°C)	
PN (Weight)	133571-000 (180 g)	133571-000 (180 g)

WIRING DIAGRAM FOR THERMOSTAT

AT-TS-13 or AT-TS-14

L1
N
PE

max.
C 16A   *

30 mA

5 1 2
3
6 8 9 4

Heating system

Temperature
sensor
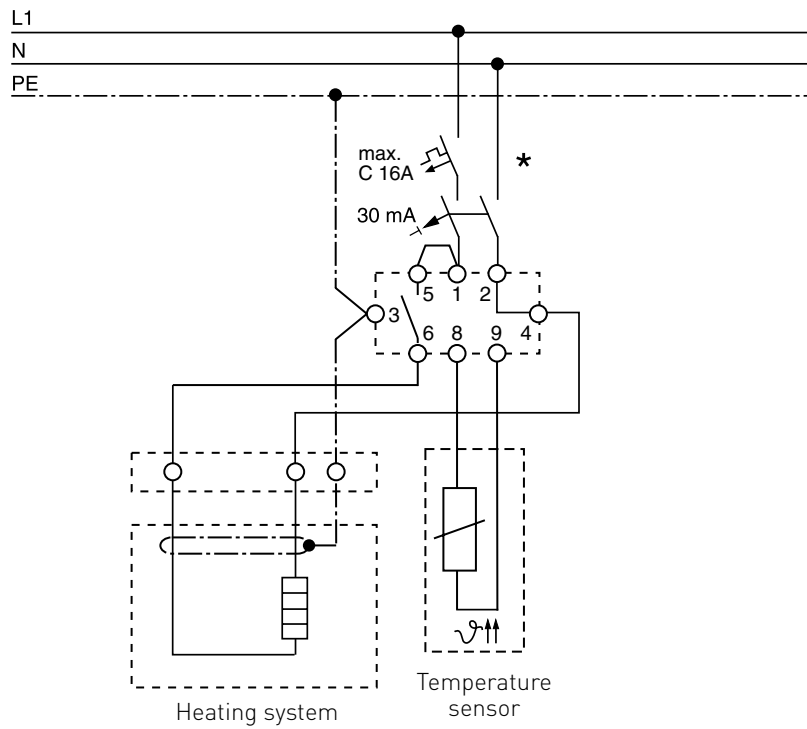
AT-TS-13/14 with contactor

L1
L2
L3
N

*

max.
16 A   *

30 mA

**

PE

***

5 1 2
3
6 8 9 4

Heating system

Temperature
sensor
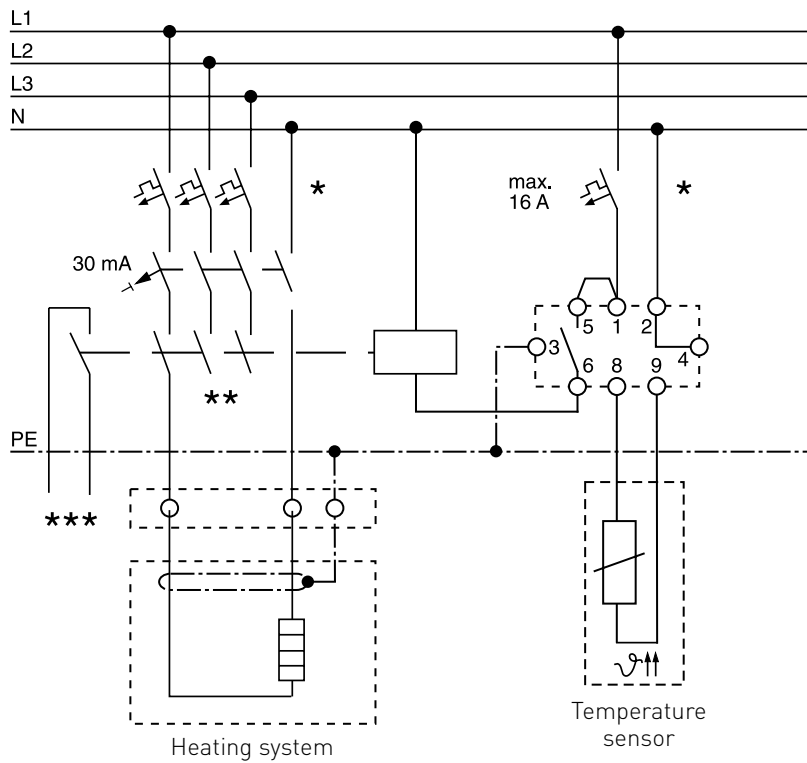
*   Two- or four-pole electrical protection by circuit-breaker may be needed for local circumstances, standards and regulations

**   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

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