

Overview thermostat/ temperature controller

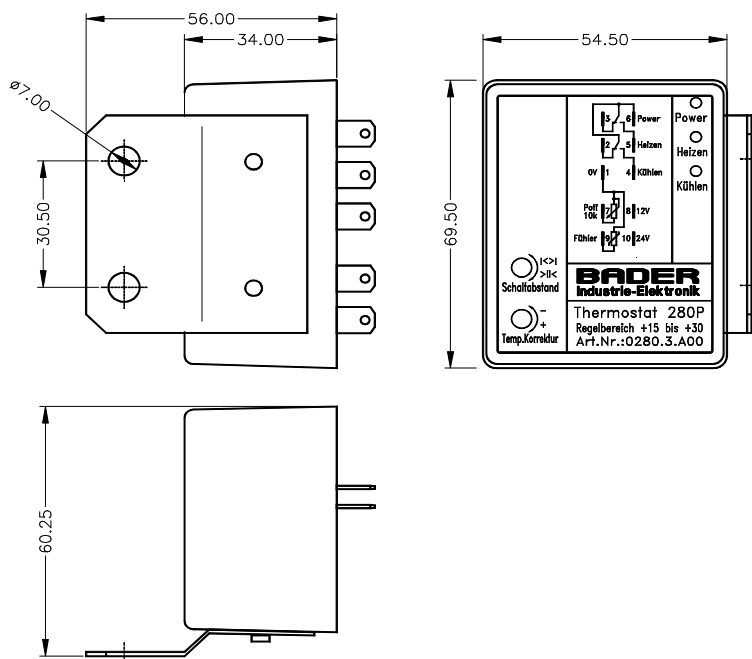
Thermostat TR-280 (0280.3.A00)

The Thermostat TR-280 is a electronic three-level controller for control of heating and cooling in climate control units and vehicles.

Nominal voltage:	12V and 24V DC
Voltage range (12V):	10V to 18V DC
Voltage range (24V):	18V to 30V DC
Control range:	+15°C to +30°C
Hystereses relays:	1K
Reacting distance between relays:	1K to 5K adjustable
External setpoint:	10 kΩ -Potentiometer, linear
Temperature sensor:	PTC, KTY-14
Relays contact:	2 times isolated changeover contact
Contact load open/close:	10/20A (resistive load)
Operation temperature:	-40°C to +85°C
Storage temperature:	-40°C to +85°C
Connector:	11 AMP- FASTONr 6,3x0,8mm
Protection class:	IP20
weight:	approx. 115g
Interference immunity:	According to DIN VDE 0839 part 1

Notice: Sensor- and potentiometer lines with length of more than 2 meter length must be shielded or twisted!

Dimensiones:



Subject to technical modifications!

As of Dec.2019

BADER
INDUSTRIE-ELEKTRONIK
www.badergmbh.de

Elektroniksysteme für Fahrzeugtechnik und Industrieautomation
D- 71691 Freiberg, Siemensstr.21
Tel: 07141/ 6 88 77 – 0 Fax: 07141/ 68877-22

Registered at the local court Stuttgart HRB 205971. Managing director: Florian Bader.

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Function:

The controller determines the difference between the **set point** (adjustable with potentiometer) and the **actual value** (measured with external sensor).

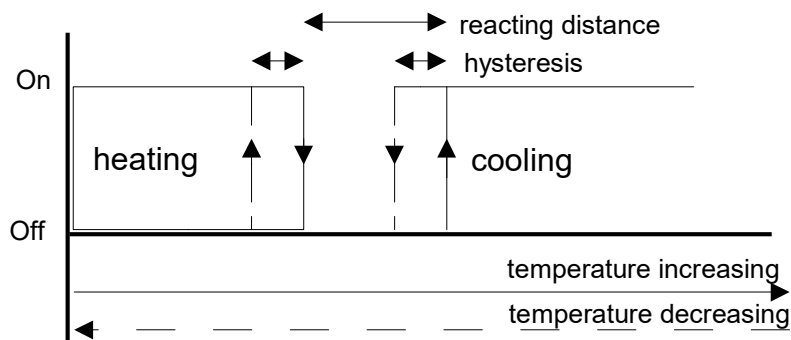
Positiv control deviation (set point – actual value) gets the relay „heating“ activated, at negativ control deviations the relay „cooling“ gets adressed.

The switch point distance range between the both relays is adjustable between 0,5K and 5K (both relays off).

The adjustment is done with the potentiometer „reacting distance“.

Each relay is equipped with fixed hysteresis of about 1K, to avoid permanent switching.

The potentiometer „Temp.correction“ tunes the tolerances of the sensor.



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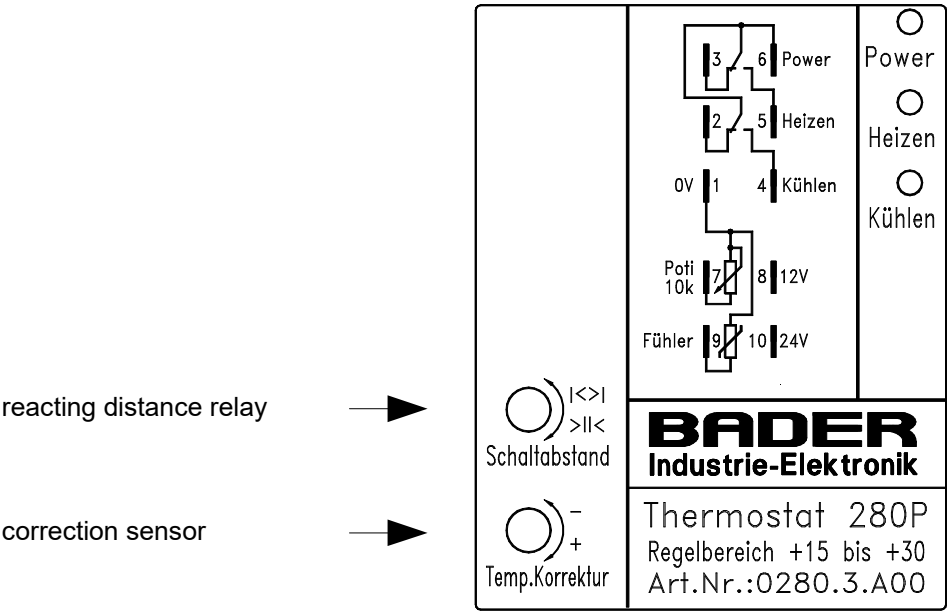
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Adjustements



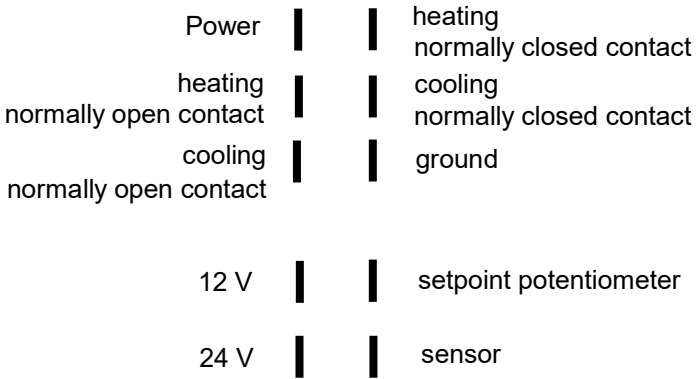
reacting distance relay



correction sensor



connection



One terminal of setpoint potentiometer and sensor each has to be connected to ground.