

Temperature difference controller ETR 78

Electronic thermo controller with remote sensor



Technical data

Operating voltage: 230 V~, 50 Hz
Switching capacity: 10 (3) A at 250 V~, 50/60 Hz
Contact: 1 relay as a potential-free changeover contact
Ambient temperature: 0...55 °C
Degree of protection: IP 65
Protection class: II
Mounting / installation: wall mounting, independent of position
Colour: grey (bottom part RAL 7016, upper part RAL 7035)

Application

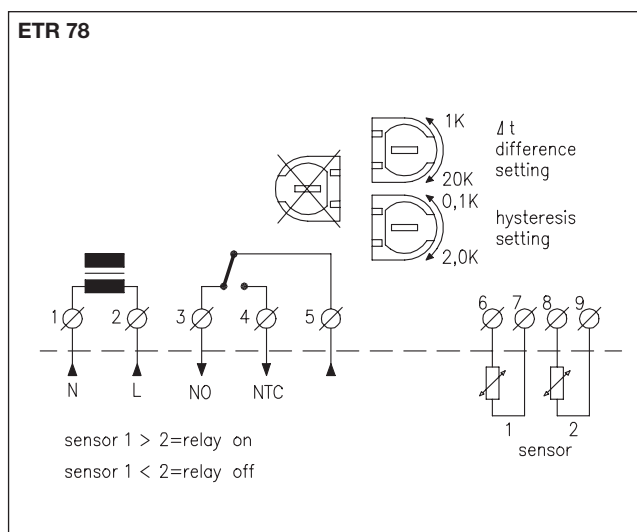
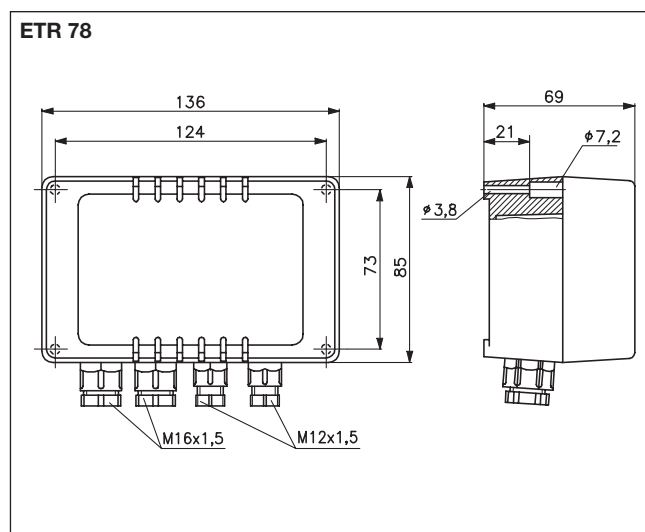
Acquisition of the temperature differential between two independent NTC sensors. Mainly suited for use with solar heating systems for the triggering of the circulating pump. Also suited for control of heating and service water pumps, valves or heat pumps in dependence on a certain temperature difference.

Sensors are not included in the scope of the delivery (for choice of sensors available, see as of page 133).

Application of sensor types according to sensor no. indicated (i.e. all no. 5/25 sensor types can be used, e.g. HF-5, LF-25 or AF-5, etc.). **Two sensors** need to be ordered per device.

Avoid parallel laying of sensor line and mains supply cables or protect it by shielding.

Type	Item No.	Control range	Δt	Switching difference	Sensor	PG
ETR 78.005	D 4780041	35...95 °C	1...20 K	0.1...2 K	5/25 (NTC 50 K)	II
ETR 78.006	D 4780080	0...60 °C	1...20 K	0.1...2 K	3/23 (NTC 8 K)	II



Function: The controller is connected to 2 temperature sensors, the temperature at each sensor is compared, and if the difference between them (t) exceeds a predefined value, the switch is triggered. The sensors can take different forms depending on the specific application, e.g. external sensors, sleeve sensors, air duct sensors, etc. The required sensors must be ordered separately. The output relay is potential free. When it is triggered, the potential applied to terminal 5 is switched through to normally open contact terminal 4 (terminal 3 = break contact).

Operation: As long as the temperature at sensor 1 is lower than the temperature at sensor 2, the output relay is deactivated. When the temperature at sensor 1 exceeds the temperature at sensor 2 by a value more than the predefined temperature difference, the output relay switches on. The individual temperatures of the sensors themselves have no effect on the function. It should be noted, however, that the temperatures of both sensors must be within the normal operating range of the controller.