Industrial thermostat

ETI



HVAC CONTROLS AND POWER



Compact ON/OFF thermostat

ETI is a series of compact ON/OFF thermostats for industrial applications, primarily ON/OFF control of a single electric heating element in floor, ceiling and radiant heating systems.

ETI thermostats are also ideal for pipe frost protection and for ON/OFF control of pumps and compressors. Furthermore, the integrated change-over relay allows ETI to be used as a cooling thermostat.

Despite their compact design, ETI thermostats are capable of handling electrical loads of up to 10A or 2200W, allowing several loads to be controlled without the necessity of installing large electrical panels. As the thermostats are also extremely robust, little or no maintenance is required.

FUNCTION

Adjustable temperature differential

The temperature differential around the setpoint can be adjusted to ensure a suitable ON/OFF switching frequency in relation to heating/cooling effects and sensor reaction to temperature changes. When the temperature is lower than the setpoint minus half the temperature differential, the thermostat registers a need for heating and the potential-free relay cuts in. When the temperature is higher than the setpoint plus half the temperature differential, the relay cuts out, switching off the heating.

Visual status indication

ETI thermostats have a built-in red LED which lights up when the relay is activated. This saves time on fault finding when heating is absent.

Compact design

ETI thermostats are designed for DIN-rail mounting and are only 36 mm wide. It should therefore be easy to find room for them in most electrical panels and space is saved in the panel in comparison with conventional thermostats.

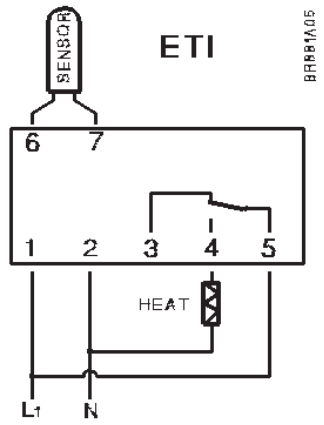
Sensor programme

OJ Electronics offers a wide range of sensors in various designs suitable for use with ETI thermostats, including floor sensors, immersion sensors, machinery and equipment sensors, outdoor sensors, room sensors, duct sensors, pipe sensors and wall sensors. For further information on sensors, see ETF data sheet (catalogue section 7).

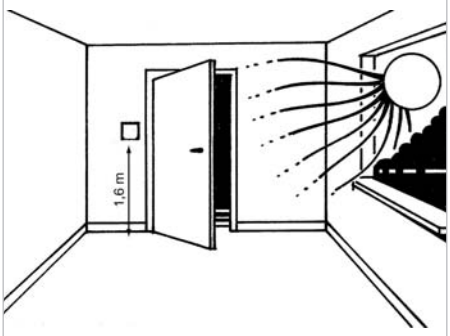
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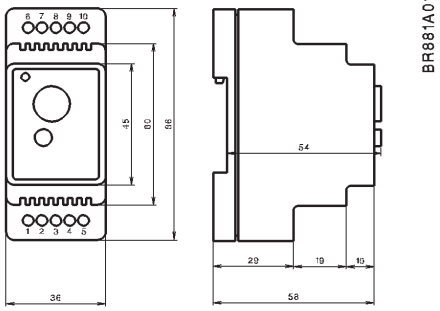
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Wiring diagram



Application example



Dimensions

FUNKTION

Fault protection

In case of sensor fault, the relay cuts out and defective sensors can therefore not cause overheating.

CE MARKING

ETI thermostats meet the requirements contained in the following standards:

EMC DIRECTIVE	LOW VOLTAGE DIRECTIVE
EN 61000-6-2, EN 61000-6-3	EN 60730-2-9, EN 60730-1

INSTALLATION

Thermostat installation

ETI thermostats are designed to be mounted on a DIN rail inside an enclosure with a suitable rating. A wall-mounting enclosure is available as an accessory.

Cable connection

The sensor cable may be extended up to 100 m. The sensor cable must be kept separate from mains-carrying cables as disruptive voltages may be induced. The sensor cable need not be screened, but the use of screened cable increases ETI resistance to interference, which is particularly important in industrial installations. The screen must be connected by a bracket to an earthed metal backplate or direct to an earth terminal.

Room sensors

Room sensors should be positioned on the wall in such a way as to allow free air circulation around them. They must also be positioned so as to prevent them being affected by direct heat sources (e.g. the sun), draughts from doors and windows, or outside temperature (i.e. do not mount on outer wall).

Floor sensors

Floor sensors should be installed in standard conduit embedded in the floor between heating cables, preferably as close to the floor surface as possible.

TECHNICAL DATA

Supply voltage	ETI-1xx1:	230V AC ±10%, 50-60 Hz
	ETI-2xx1:	115V AC ±10%, 50-60 Hz
	ETI-3xx1:	24V AC ±10%, 50-60 Hz
Sensor input		NTC
Relay output		SPCO 10A, 250V AC
Setpoint adjustment	ETI-x221	+10/+110°C
	ETI-x551	-10/+50°C
Temperature differential	ETI-x221	0,5-10°C
	ETI-x551	0,3-6°C
Ambient temperature		0/+50°C
Power consumption		3VA
Max. fuse rating		10A, Type g
Enclosure		IP 20
Dimensions (W/H/D)		36 x 58 x 86 mm
Weight		170 g

PRODUCT PROGRAMME -10/+50°C

TYPE	PRODUCT
ETI-1551	Thermostat 230V
ETI/F-1551	Thermostat with IP65 floor sensor 230V
ETI-2551	Thermostat 115V
ETI-3551	Thermostat 24V

ACCESSORIES	
ETF-aa33/44/55	Temperature sensors, NTC, -20 - +70°C (see ETF data sheet)
ETF-aa44/99	Temperature sensors, NTC, -20 - +70°C (see ETF data sheet)
ETNK	Enclosure for wall mounting

PRODUCT PROGRAMME +10/+110°C

TYPE	PRODUCT
ETI-1221	Thermostat 230V
ETI-2221	Thermostat 115V
ETI-3221	Thermostat 24V

ACCESSORIES	
ETF-aa22	Temperature sensors, NTC, -40 - +120° C (see ETF data sheet)
ETNK	Enclosure for wall mounting