ms electronics

energy saving controls

E814/F

Product Guide

Standard Robust Thermostat
with semi-automatic on/off control
with Frost Temperature Range

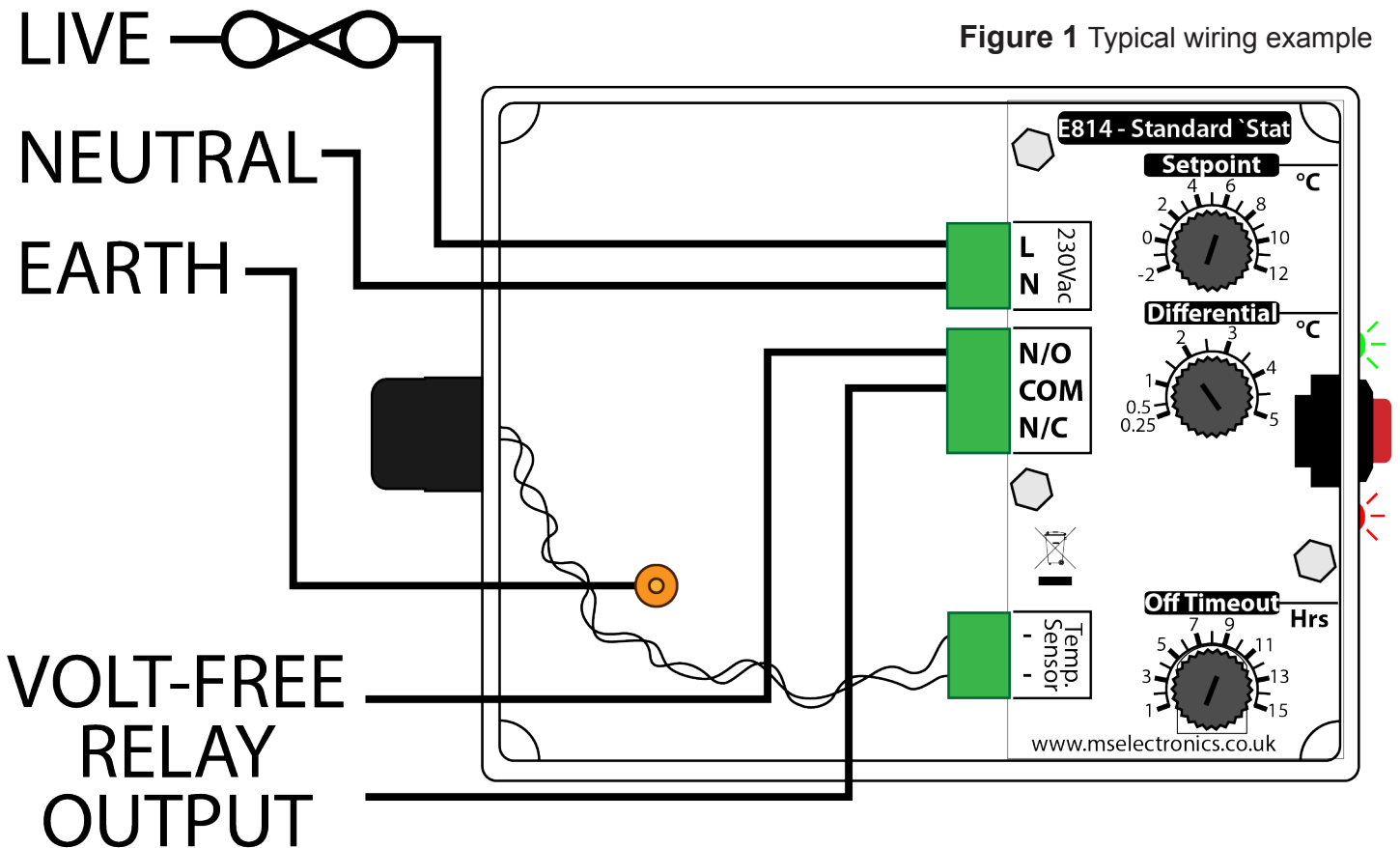today, tomorrow and in the future

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Product Overview

The E814/F offers a high quality and robust solution to tamperproof energy saving thermostatic control. It utilises a high-accuracy radiant heat sensor in conjunction with its die-cast aluminium case and tamperproof screws to ensure vandal-resistant yet accurate tamperproof energy control. The E814/F regulates to a fully adjustable temperature set-point between -2°C and +12°C, combined with an adjustable temperature hysteresis (differential) of anything between 0.25°C and 5°C.

The E814/F's external pushbutton allows the room user to switch off the unit. Thermostatic control will automatically be restored after the "Off Timeout" period has elapsed. LED indicators illuminate to display the state of the thermostat (ON or OFF).

Product Wiring

1. **IMPORTANT**: ensure all electrical connections are isolated before commencing any work on the unit.
2. Power to the thermostat is provided via the Live and Neutral input terminals labelled "L" and "N" (230V AC, 50Hz). This supply should be suitably fused (recommended: 1A slow blow).
3. **NOTE**: This thermostat MUST be earthed using the earth terminal provided.
4. A voltage-free changeover relay output capable of switching loads of up to 10A, 250V AC (resistive) is provided by the thermostat.
5. The Common "COM" terminal is connected to the Normally Open "N/O" terminal when the sensed room temperature is above the "Setpoint" temperature.
6. Conversely, it is connected to the Normally Closed "N/C" terminal when the room temperature is sensed to be below the "Setpoint".
7. The temperature sensor is factory fitted to all models with the exception of the Remote Sensor versions. The 2-core screened cable connection should be made to the "Temp. Sensor" terminals in this case.

Figure 1 Typical wiring example

Installation

1. **IMPORTANT**: ensure all electrical connections are isolated before commencing any work on the unit.
2. Unscrew the 4 security screws using MS Electronics tamperproof screwdriver MSD-152 to remove the front cover.
3. Mount the unit securely using any suitable fixing in conjunction with the mounting holes provided in the unit. For optimal results, position the temperature sensor out of direct sunlight and well away from any heating/cooling sources.
4. Connect the wiring as shown in the diagram (or any suitably appropriate form) using the convenient pluggable terminal blocks provided. Make sure to choose the correct output terminals that are suitable to your application.
5. On the remote sensor version, 2-core screened cable should be used to connect the remote sensor to the thermostat. The screen should be connected to the earth terminal ONLY (do not connect the screen to anything at the remote sensor end).
6. Adjust the internal controls to suit the operational requirements (see below).
7. Replace the cover securely using the 4 security screws

Operation

1. **IMPORTANT**: ensure all electrical connections are isolated before commencing any work on the unit.
2. Adjust the "Setpoint" dial to the temperature the room is to be regulated at (typically 8ºC
3. Set the "Differential" to the total temperature swing either side of the "Setpoint" that the room temperature is required to keep within (typically 1°C).
4. Example of a standard set-up:
    "Setpoint" set to 8ºC
    "Differential" set to 1ºC
    "Off Timeout" set to 10 hours
    In the ON mode the unit will maintain the temperature between
    7.5ºC and 8.5ºC.
    The unit will remain in the ON state unless switched OFF.
    After 10 hours in the OFF mode it will automatically revert back to the ON mode.

Technical Specification	
Power supply:	220V - 240V AC 50Hz (live/neutral/earth) 22V - 26V AC or DC [/24V variant only]
Output switch rating:	10A , 250V AC 50Hz (resistive)
Output switch type:	Changeover relay (volt-free)
Temperature control:	-2°C to +12°C
Temperature differential:	0.25°C to 5°C
Sensor drift:	0.15°C over 5 years
Guarantee:	5 Years
Weight:	0.31Kg
Dimensions mm:	120mm x 95mm x 35mm

Product Accessories	
MSD-152	MS Electronics tamperproof screwdriver
MSD-150	Air temperature sensor (sensor only)
MSD-224	Air temperature sensor (internal, boxed)
MSD-370	Air temperature sensor (internal, faceplate)

Technical Support

For further help or information on this and the other products in the MS Electronics range visit www.mselectronics.co.uk or call 0333 666 1176.

Alternatively, email techsupport@mselectronics.co.uk
Additional copies of this product guide can be downloaded from our website.

Product Warranty

MS Electronics guarantees all their products against manufacturing defects for 5 years from the purchase date. If your product is found to be faulty, MS.Electronics will, at their discretion, repair or replace the product free of charge.

Note

Any modification or damage to the outer casing of the thermostat, as well as any damage to the product due to abuse or incorrect wiring may invalidate the guarantee.

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