

DIGISTAT 3 ON / OFF TEMPERATURE CONTROLLER

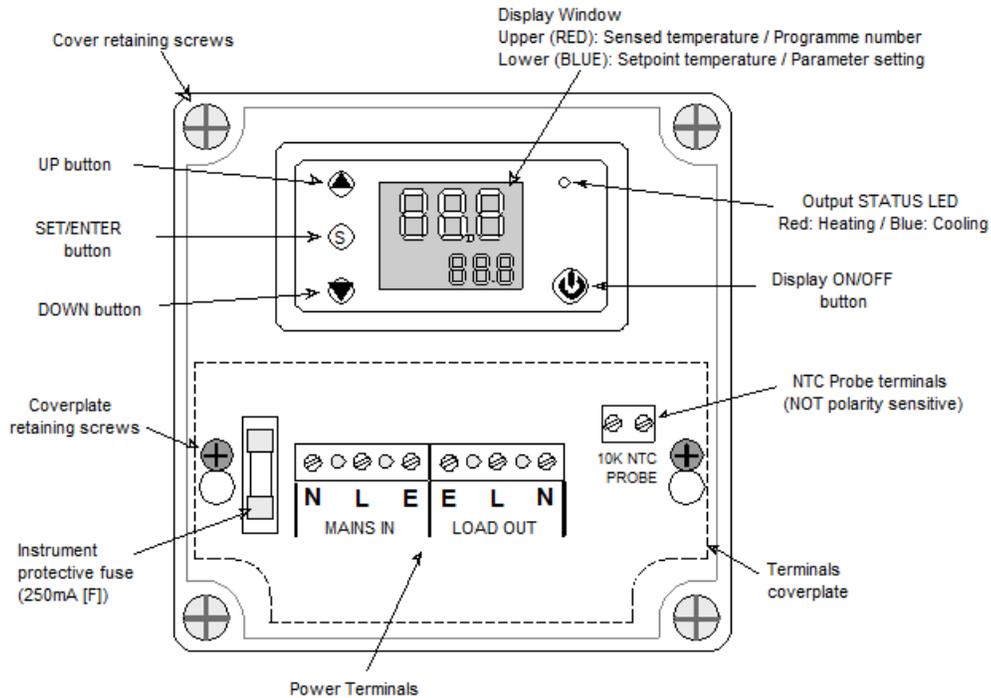
A simple to install, configure and use Digital temperature controller housed within an IP66 weatherproof enclosure for general purpose applications indoors or for outdoors.

For 230v / 1 phase / 50Hz operation.
Maximum Direct Switching: 10 Amps / 2kW (resistive) loads.

Supplied with 2m probe, in & out power cable sealing glands for flexible cables up to 7mm diameter (e.g. 1.25mm csa). Alternative gland types / sizes available. Also available, a range of add on relay and contactor units for higher loads, including 3 phase applications.



The DIGISTAT 3 is configurable for either HEATING or COOLING applications such as electrical space heaters, coolers, refrigeration, duct heaters, fan systems, air handling units, trace heating etc.



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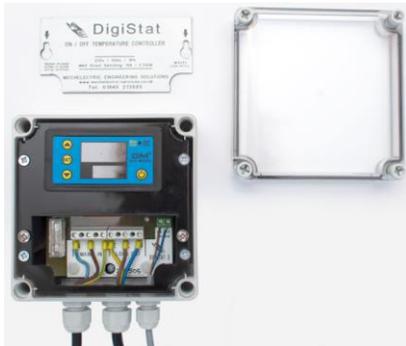
DIGISTAT 3 INSTALLATION & USER GUIDE

For surface mounting, remove the 4 (corner) cover retaining screws. Note these screws are held captive in the transparent lid of the Digistat 3.

Position the enclosure on the surface at chosen location and mark the corner fixings position. The fixings grid is 110mm x 110mm square. Fix the enclosure. Do NOT overtighten fixings, but ensure a secure mounting.

Electrical connections. ENSURE THAT ANY EXISTING SUPPLY WIRING IS ISOLATED AND IN A SAFE STATE. Loosen the two arrowed screws (about ONE turn) which secure the white Terminals coverplate, and remove it by sliding upwards and away over the screw heads. (A piece of adhesive tape helps to grip the coverplate to aid removal).

Firstly, install the supplied temperature sensing probe cable through the smaller cable gland and connect to the green terminal block. The probe is NOT polarity sensitive and may be connected either way round.



Install the flexible cable leading to the controlled load via the centre cable gland and connect to the right hand grey terminal block marked "LOAD OUT". Live (Brown) to **L**, Neutral (Blue) to **N**, Earth (Green/Yellow) to **E**.

Next, install the supply cable via the left hand cable gland and connect to the left hand grey terminal block marked "MAINS IN". Live (Brown) to **L**, Neutral (Blue) to **N**, Earth (Green/Yellow) to **E**. Ensure all electrical connections are secure, and replace the Terminals Coverplate and gently retighten the arrowed screws. The Digistat 3 is now ready for setting up and use.

On power up the display may illuminate immediately. If not, press the 'Display ON/OFF' button to start the display.

Setting Up (Programming).

The Digistat 3 is very straightforward to configure to your requirements; the three yellow buttons to the left of the display are used.

Simple operation: A short press on 'SET/ENTER' will cause the lower (blue) setpoint value to flash, and can be adjusted by the 'UP' or 'DOWN' buttons to select the required setpoint (operating) temperature. A second short press on 'SET/ENTER' stores the new value and the unit is now in normal operation.

Advanced operation: A long press on 'SET/ENTER' allows access to advanced programming as seen in the Set Up / Programming table. Use 'UP' or 'DOWN' buttons to select programme number to modify (P0 – P8 on the red display), a short press on 'SET/ENTER' button causes the current (blue) value to flash which can now be modified with the 'UP' or 'DOWN' buttons. After selecting a new value, wait 3 seconds for the change to be stored and the unit reverts to operational mode. Repeat the procedure for each required programme alteration.

Advanced Programming Table

The following table shows the functions that are user configurable. HOWEVER, the Digistat 3 is shipped set up as per the table.

Prog No. / Code	Function	Range/Options	Default
P0	Heat / Cool mode	H / C	H
P1	Hysteresis	0.1°C - 30.0°C (0.1°F - 54°F)	0.5°C (0.5°F) See NOTE 1
P2	Set Upper limit	-55°C - 120°C (67°F - 248°F)	120°C (248°F)
P3	Set Lower limit	-55°C - 120°C (67°F - 248°F)	-55°C (-67°F)
P4	Calibration Offset	-10°C - +°C (-27°F - +27°F)	0°C (0°F) See NOTE 2
P5	Delay on START	0 - 10 minutes	0 minutes
P6	Alarm temperature	-55°C - +120°C (-67°F - +248°F)	120°C (248°F)
P7	Temperature UNIT	°C / °F	°C
P8	Data Lock	ON / OFF	OFF

On request we can pre-programme to your requirements prior to shipping.

NOTE 1:

Hysteresis is the temperature differential between the controller ON and OFF states.

In HEATING mode, hysteresis is NEGATIVE, i.e. the controller will activate at SETPOINT – HYSTERESIS.

Example: If Setpoint = 20°C and Hysteresis = 0.5°C, the controller switches ON heating at 19.5°C, and OFF at 20°C.

In COOLING mode, hysteresis is POSITIVE, i.e. the controller will activate at SETPOINT + HYSTERESIS.

Example: If Setpoint = 20°C and Hysteresis = 0.5°C, the controller switches ON cooling at 20.5°C, and OFF at 20°C.

NOTE 2:

Calibration Offset is adjusted to match the supplied probe to the controller. (There is sometimes slight variation between different probes).

We configure Calibration Offset to the probe being supplied with the Digistat 3 by comparison with our Reference Thermometer at a known temperature PRIOR to shipping.

A copy of the Advanced Programming Table is included with the shipment indicating actual Calibration Offset as well as any other customer specified programming.

DIGISTAT 3 specifications

Working voltage:	200 – 250v ac single phase.
Maximum direct switching current:	10 Amps.
Working temperature range:	-50°C – 120°C
Resolution:	0.1°C
Dimensions (Enclosure):	125mm x 125mm x 75mm.
Weight (excluding probe):	500 grams.
Ingress Protection:	IP66 (with equally rated cable entry glands).

Accessories for the DIGISTAT 3

A range of matching POWER RELAY and CONTACTOR and SOLID STATE RELAY modules for the controlling of high power loads (including 3 phase) are available.
(Can include MCB or RCD circuit protection)

A range of LOAD SPLITTER modules for connection of multiple loads to a single DIGISTAT 3 are available.
(Can include MCB or RCD circuit protection).

Trace Heating cables for frost protection, horticultural applications etc.

Indicating Circuit End (ICEbox) terminations for trace heating installations to give visual indication of circuit activation remote from controller.

Versions can be supplied with alternative cable glands and sizes for specific applications.

ALL products are subject to continuous improvement, and our range of Control, Measurement and Diagnostic units is continually expanding.



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