DM665TM USER GUIDE

BATTERY POWERED DIGITAL THERMOMETER

Important - Please read this document before installing; in particular the CE/UKCA information when applicable to the application.

Every effort has been taken to ensure the accuracy of this document; however, we do not accept responsibility for damage, injury, loss or expense resulting from errors and omissions, and we reserve the right of amendment without notice.

IMPORTANT – CE, UKCA & SAFETY REQUIREMENTS

The instrument is designed to be battery powered. The user must ensure the sensor entry maintains environmental protection to at least IP65 rating.

The product contains no serviceable parts. No attempt must be made to repair this product. Faulty units must be returned to supplier for repair.

This product must be installed by a qualified person. All electrical wiring must be carried out in accordance with the appropriate regulations for the place of installation.

ABSOLUTE MAXIMUM CONDITIONS (To exceed may cause damage to the unit).	
Ambient temperature depending on batteries 1.5 v Alkaline 1.5 v Lithium (ENERGIZER L91)	 (-15 to 40) °C (-25 to 60) °C

Important – Read this document before installing.

1~DESCRIPTION.

The DM665TM accepts Pt100 or thermocouple temperature sensors and displays the sensor temperature in °C or °F on a 6-digit LCD display.

2~RECEIVING AND UNPACKING.

Please inspect the packaging and instrument thoroughly for any signs of transit damage. If the instrument has been damaged, please notify your supplier immediately.

3~SPECIFICATION.

Refer to data sheet for full specification. Download at www.status.co.uk

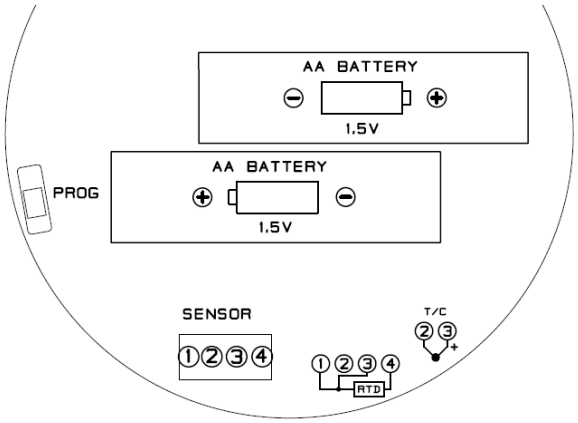
Factory defaults	Pt100, °C, 0.0 resolution, 10 s update rate

4~CONDITIONS for use to comply with CE and UKCA

1	The equipment must be installed correctly, providing environmental protection of IP 65 or greater. Steps must be taken to ensure the maximum ambient operating range is not exceeded, in particular, the temperature probe surface temperature at the point of entry into the equipment housing.
2	To maintain full CE, UKCA EMC requirements for industrial applications, maximum sensor wire length is 3 metres.
3	Apart from battery replacement, the device contains no serviceable parts. No attempt must be made to repair this product. Please return faulty devices to the supplier.
4	Primary Cell Batteries – fire, explosion and severe burn hazard. Do not attempt to re-charge, crush, incinerate, disassemble, heat above limits or expose to water.
5	Disposal of the batteries must conform to the regulations applicable to the area of use.

5~INSTALLATION

Figure 1: Back panel



5~1 Battery

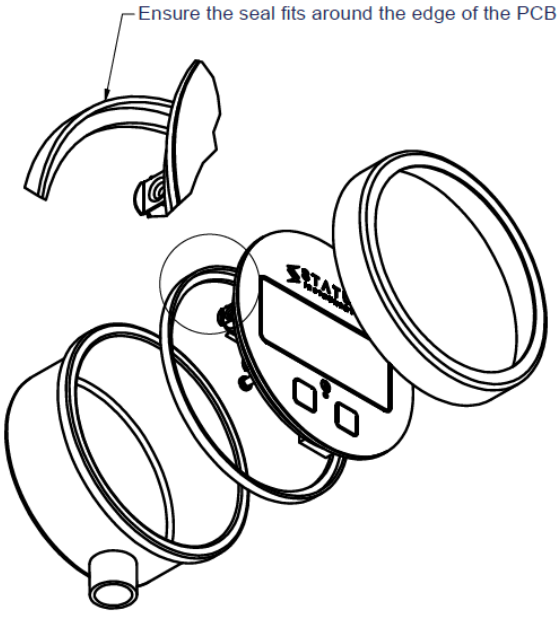
Applications use 2 x 1.5 v AA Batteries

Please observe the above polarity, see Figure 1, when fitting batteries.

Battery type. 1.5 V Alkaline AA or Lithium (ENERGIZER L91) AA size offering longer life at high temperature:

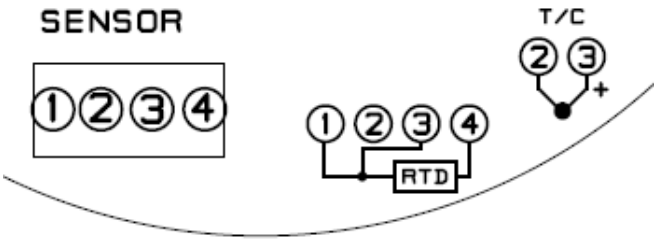
To fit or replace batteries, use the following procedure:	
Note: If fitted, the battery isolation tab will need to be removed before use.	
1	Turn the cap front bezel ring anti-clockwise until the ring releases from the enclosure body.
2	Remove the cap assembly from the enclosure base, un-plug the 4-way connector. The cap assembly should now be totally free from the base.
5	Fit new batteries. Observe the polarity symbols marked by the battery holder.
8	Inspect the seal for correct alignment, see Figure 2. Reconnect the 4-way plug and site the front assembly back on the case base.
9	Tighten the retaining ring until it stops turning smoothly. At this point, tighten an additional 1/12 of a turn (Approx.).
Please dispose of batteries in a responsible way	

Figure 2: Case assembly



5~2 Sensor wiring

Figure 3: Connection diagram



Important –unplug the 4-way sensor connector from the device during wiring, re-connect when wiring is complete. Ensure the sensor wires are long enough (80 to 100 mm) to allow easy access for reconnecting the plug to the device and, if required, access to the configuration button.

General – the instrument is designed to be directly attached to the sensor probe assembly. Remote Probes may be used but the user must ensure all sensor entries maintain environmental protection to at least IP65 rating. To comply with UKCA, CE EMC requirements the sensor wires should be no longer than 3 metres. When using a Pt100 sensor, for best results we recommend using three-wire connection; this method compensates for any lead resistance between the sensing element and instrument. Two-wire Pt100 connection is possible by linking pins 1 and 3: refer to Figure 2. Thermocouple wire type must be maintained from the sensor element to the instrument terminals.

6~USER CONFIGURATION.

IMPORTANT

READ COMPLETE SECTION BEFORE ATTEMPTING CONFIGURATION

Push-button Configuration



A single push-button is provided together with a simple configuration menu for configuration. The following variables can be configured: sensor type, temperature unit, decimal place and response time.

Single press, in display mode to enter the menu lists.

The configuration settings are presented as a series of menu lists. A single press (click) from display mode is used to enter the configuration menu lists.

Long Press > 3 seconds, in configuration mode

To advance through the menu option lists, press continuously for over 3 seconds. This action is used to advance to the next option in the menu list and to confirm a selection when a variable has been selected.

The order of the menu lists options is as follows:

- Sensor type.
- Temperature display unit.
- Decimal place.
- Response time.
- Sensor offset (+/- 10.0 °C maximum)

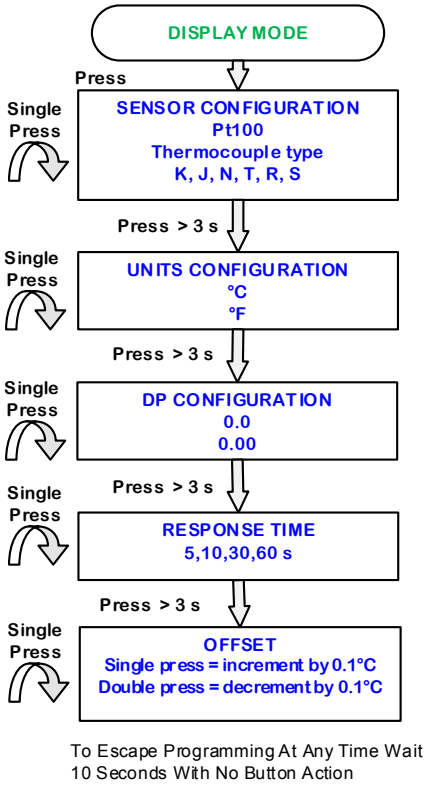
Single press in configuration mode

A single press (click) from configuration mode. This action steps through the selected menu list variable, e.g. Sensor type list variable = Pt100, single press will select T/C Type K

No press > 10 seconds, to exit configuration mode

To escape from the configuration menu, allow a period of 10 seconds with no button action.

Figure 4: Configuration menu flow diagram.



To Escape Programming At Any Time Wait
10 Seconds With No Button Action

7~OPERATION.

In display mode no interaction with the DM665TM is required. The display will show the sensor temperature based upon the configuration entered.

Maximum and Minimum value recall

To momentarily display the Maximum or Minimum recorded value, single press the MAX or MIN button. The recorded value will momentarily be shown on the display.

To clear either the MAX or MIN value, long press the relevant button, wait for the count-down to reach “CLR 0” and the value will be cleared.

Loss of Signal

On loss of sensor signal the display will read “ERROR” and a warning triangle will flash.

Low Battery

The low battery condition is indicated by the warning “LOBATT” alternating with the sensor temperature value on the display.

The batteries should now be replaced.

Depending on the configuration and operating conditions, the DM665TM can last approximately one month in this condition, giving time for battery replacement to be scheduled.

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