Dataterm Multizone Installer Guide

Dataterm Important Points... ***Dataterm*** is a computer and should be kept out of direct sun light, away from dust, power tools and moisture. The ***DataTerminal*** is best situated where a room thermostat would normally be placed, from there you can program and sense temperature. If a remote sensor is used, temperature sensing is done from the remote sensor. Remote sensors should be placed in suitable locations as above. ***The Remote Sensor and*** Dataterminal ***MUST BE connected via a 2 core screened cable only,*** available from Warmworld. In this guide there are several different wiring diagrams to suit most situations. To test an installation once complete please refer to the section marked ***Installation Setup Options.*** The screened cable ***must*** have its screen connected to GND, if a remote sensor is fitted its screen ***must*** join the power cable screen, Dataterm operates at +12Vdc.

Section 1. Installing the Dataterm Programmer

Locate a suitable position in accordance with the following,

DO NOT...

Locate Dataterm or Remote Sensor on an outside wall.
Locate Dataterm above or too close to a radiator or other heat source.
Locate Dataterm Programmer within 1m of a boiler.
Locate Dataterm or Remote Sensor adjacent to a dimmer switch.
Locate Dataterm or Remote Sensor in a room with a secondary heat source (gas fire).
Use existing mains cable when replacing room thermostats with Dataterm.
Fit thermostatic radiator valves in the same room as the Dataterm or Remote Sensor.

Subject to change without prior notice. MTZ4 June 2011

YOU MUST....

Use the correct screened cable for connection to the Dataterm Programmer and Remote Sensor.
Locate the Dataterm or Remote Sensor at a height of 1.68m or 5'6" on an internal wall.
Connect all screened cables correctly to their relevant terminal.
Insulate all bare wires with insulation tape as to prevent shorts and malfunctioning of the controls.
Seal all holes behind the Remote Sensor or Dataterm Programmer.
Remove any mains power from old wiring if a retrofit installation takes place.
Remove link LK1 on the rear of the Dataterm Programmer if a Remote Sensor is fitted.
Always calibrate the Dataterm when using a Remote Sensor (see section 5).

Section 2. Installing the Switching Center

ALL WIRING TO BE IN ACCORDANCE WITH I.E.E. REGULATIONS.

The electrical supply to the switching center must be through a 3 amp switched fused spur. This spur must feed all parts of the heating system so that when isolated the whole heating and hot water system is isolated and safe to work on. There must also be an isolation device in the same room as close to the boiler as possible.

A good position for the location of the switching center is usually near to the motorised valves and pump etc, the airing cupboard or boiler room is a good place. Avoid placing the switching center directly below valves and pumps because a water leak can cause major problems in this area.

To fit the switching center, offer the base of the box up to the wall and mark the three holes, drill and plug as necessary. Assemble the bag of components into the box by fitting the PCB supports, cable glands and secure the box to the wall. Locate the PCB over the supports and gently push into place, It is important to connect the Earth tags to the PCB for safety's sake.

All wiring is connected to the PCB via push on terminal blocks, insert the wires into the blocks first then press the terminal block onto the PCB in the correct position. If VOLTAGE FREE switching is required DO NOT fit link between C&L on the bottom left hand side of the PCB, all Dataterm Programmers and Remote Sensors MUST be connected with our 3 core overall screened cable. The colour co-ordination is usually Red, Black and Screen (bare wire).

Section 3. Screened Cable

Dataterm to Switching Center Connection

RED	Connect to Dataterm J2 Pin 1 +ve to Switching Center PCB J1 Pin 2 +ve
SCREEN	Connect to Dataterm J2 Pin 2 GND to Switching Center PCB J1 Pin 1 GND
BLACK	Connect to Dataterm J2 Pin 3 Back Light to Switching Center PCB J1 Pin 3 Back Light

Dataterm to Remote Sensor Connection

RED	Connect to Dataterm J1 Pin 1 Sensor to Remote Sensor Terminal 1
BLACK	Connect to Dataterm J1 Pin 2 Sensor to Remote Sensor Terminal 2
SCREEN	Connect to Dataterm J1 Pin 3 GND to Remote Sensor Terminal SCR

Repeat for J3, J4 & J7 if used & remove LK1!

Switching Center to Cylinder Thermostat Connection

RED	Connect to Switching Center PL5 Pin 4 to Thermostat Common
BLACK	Connect to Switching Center PL5 Pin 5 to Thermostat Call
SCREEN	Connect to Switching Center PL5 Pin 2 GND to Thermostat Earth

Cylinder thermostat must be wired so that it breaks or goes open circuit on temperature rise!

Section 4. Optional Remote Sensor

The Dataterm IHC can be connected to an optional remote temperature sensor for applications that would not suit the Dataterm Programmer in certain locations due to public access or decor requirements. Section 3 covers the requirements for wiring and the sensor should be fitted at a height of 1.68m on an internal wall.

Once fitted the Dataterm MUST BE CALIBRATED to read the correct room temperature reading for each zone, see section 5 below.

Section 5. Installation Set-up Options

User preferences can be input using the set-up options menu, this can be accessed by pressing the **"Help and Select"** Buttons together at the same time. Once in this mode the display will show **"Set Options Units C"** Pressing the (-) minus button will show other options as listed below.

Pressing the "Tap or Right Arrow" Button will move the cursor across the screen where you can change the value with the + or - buttons. Pressing "Select" will take you back to the main display screen.

Option A - Option to change the displayed temperature in **Centigrade** or **Fahrenheit**.
Option B - Displays the sensor type used, **Wire** for wired sensors or **RF** for wireless sensors.
Option C - Summer / Winter time adjustment, **On** or **Off,** + or - 1 hour.
Option D - Test function to toggle the outputs for each channel on or off.
Option E - Time Constant, adjust to speed up the optimisation process, Dataterm will alter this as it learns the response times.
Option F - Lock - use this to prevent tampering of programmed time and temperature adjustments, options are FULL, PARTIAL or OFF.
Option G - Max PreHt, default is 3 hours and it is adjustable from 0 minutes to 300 minutes, this is the time Dataterm is allowed to come on in advance in order to heat your home.
Option H - Temp Cal - Adjust to make the Dataterm read the correct room temperature, press the zone button to calibrate each zone in turn.

Section 6. Installation Check List

If you have followed this guide you will now be ready to commission the installation of Dataterm.

Switching Center.
Check all wiring is secure and that there are no strands of wire exposed.
Ensure correct fuse is fitted to adjacent fused spur.
Proceed to fit lid but remember to connect all earth connectors.

Dataterm & Remote Sensors.
Check all wiring is secure and that there are no strands of wire exposed.
Check colour coding of wires and location.
Seal any holes behind sensors or Dataterm.

If all is correct switch on the power, the display should be illuminated showing the current status, check calibration, load relevant plan and demonstrate operation to the end user.

IMPORTANT! PLEASE MAKE SURE THAT THE CORRECT HEATING PLAN IS SET AND THE DATATERM READS THE CORRECT ROOM TEMPERATURE READING BEFORE LEAVING.

Technical Data

Dataterm is extremely easy to install and should take less time than a conventional system would. No additional wiring center is required.

Each Dataterm system comes complete with Dataterminal, Wiring Center, Remote Sensors and Installation and User Guide.

If using wired remote sensors it is important to make sure that you have ordered enough of our screened cable to wire from the Dataterminal to each remote sensor.

Dimensions	*Height*	*Width*	*Depth*
Dataterminal	85 mm	160 mm	29 mm
Remote Sensor	80 mm	80 mm	29 mm
Wiring Center	450 mm*	300 mm	90 mm

energy saving trust® recommended
Certification Mark

*Measured to the bottom of the cable glands, allow for cable access!

Maximum cable run from each remote sensor to Dataterminal must not exceed 100 m and from Dataterminal to wiring center is also 100 m.

Wireless sensors are pre-configured with defined zone and site numbers so that no set-up is required by the installer, just fit the batteries supplied and Dataterm will locate the sensors when a data stream is sent.

The range of the wireless Dataterm is up to 100 m in clear sight, however buildings vary in location and structure so the actual range could be less, if you have trouble receiving data from a sensor place it near to the Dataterminal to register before fitting it to the wall.

Dataterm can be used with most heating systems up to a loading of 3.15 amps, if the load is likely to exceed this then additional relays or contactors can be fitted.

The Multizone platform is designed to work with spring return motorised valves and facilitates the end contacts of the valves to call for the boiler.

The output can be volt-free or up to 230v AC by using a link on the PCB, J13 Pins 4,5 & 6.

Abbreviations used in this guide.

E	Mains Earth	SL	Switched Live (usually 230v AC)
L	Mains Live	PL	Permanent Live
N	Mains Neutral	W	White
NO	Normally Open Contact	O	Orange
NC	Normally Closed Contact	G	Grey
GND	Ground (linked to Earth on PCB)	GY	Green & Yellow (earth)
+ve	12 volts DC	B	Blue
PO	Pump Over-run	BR	Brown

Dataterminal Rear View.

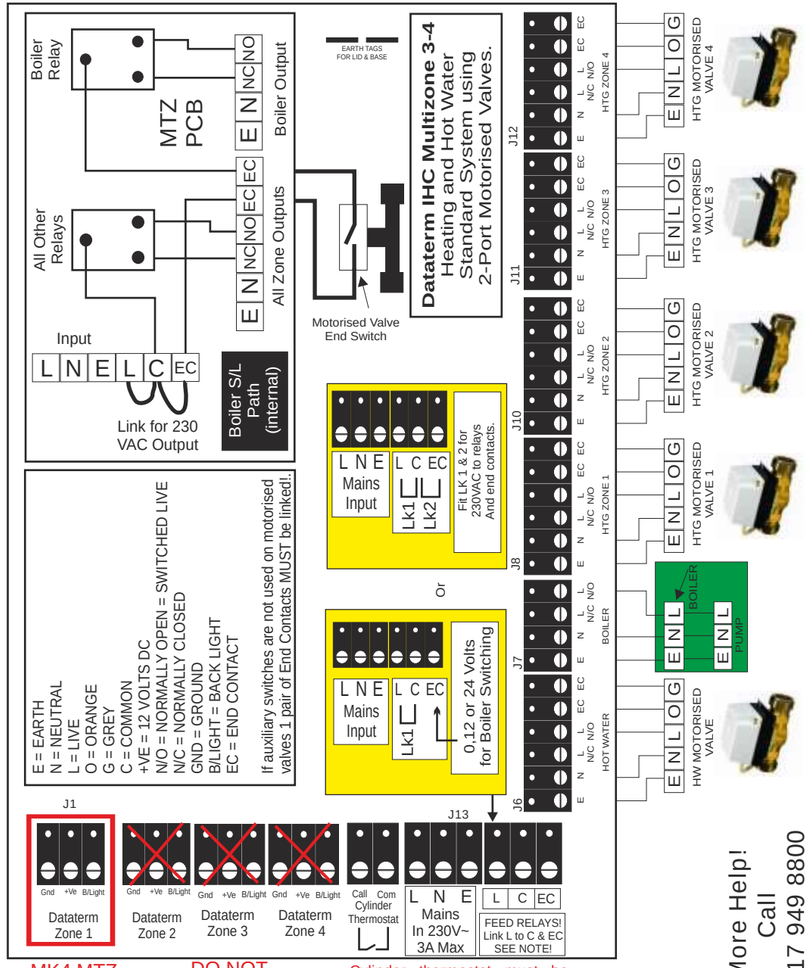
4 Zone Wiring Center Detail

Failure to follow these instructions may invalidate the guarantee.
Your statutory rights are not affected.

Multizone 4 Technical Detail

For 2 zone application ignore zones 3 & 4!

It is important to use the terminals marked EC on J5,7,8,10,11,12 & 13 in order for the boiler to be called for heat! If valves are used without the auxiliary switches connected to EC then a link is required between EC & EC of that connection terminal.



MK4 MTZ Head ONLY!

DO NOT USE Z2-4!

Cylinder thermostat must be wired so that it breaks or goes open circuit on temperature rise!

More Help! Call 0117 949 8800