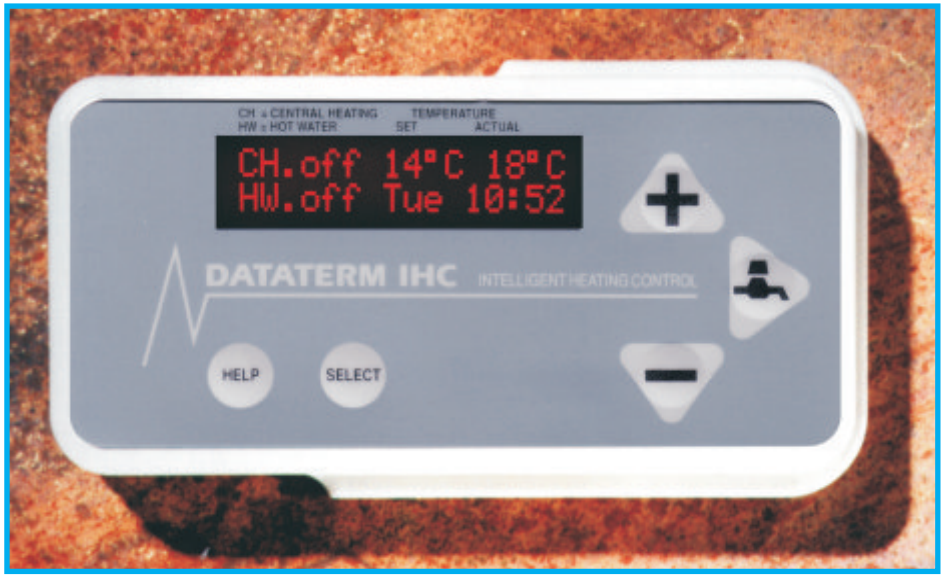
Dataterm IHC Installer Guide



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 Data Terminal 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 ***Earth***, 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.

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 Centre

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

The electrical supply to the switching centre 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 centre is usually near to the motorised valves and pump etc, the airing cupboard or boiler room is a good place. Avoid placing the switching centre directly below valves and pumps because a water leak can cause major problems in this area.

To fit the switching centre, 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 2 core overall screened cable. The colour co-ordination is usually Red, Black and Screen.

Section 3. Screened Cable

DataTerm to Switching Centre Connection

RED	Connect to DataTerm PL2 Pin 1	**POWER**	Switching Center PCB PL5 +ve	Pin 1
SCREEN	Connect to DataTerm PL2 Pin 2	**SIGNAL**	Switching Center PCB PL5 GND	Pin 2
BLACK	Connect to DataTerm PL2 Pin 3	**B.LIGHT**	Switching Center PCB PL5 Back Light	Pin 3

DataTerm to Remote Sensor Connection

RED	Connect to DataTerm PL1 Pin 1	Sensor Terminal 1
BLACK	Connect to DataTerm PL1 Pin 2	Sensor Terminal 2
SCREEN	Connect to DataTerm PL1 Pin 3	Sensor Terminal EARTH

Switching Centre to Cylinder Thermostat Connection

RED	Connect to Switching Center PL5 Pin 4 to Thermostat connection C (common)
BLACK	Connect to Switching Center PL5 Pin 5 to Thermostat connection 1 or NC connection
SCREEN	Connect to Switching Center PL5 EARTH to Thermostat Earth Point or insulate

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, 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"** Pressing + or - will show other options.

Units C

Pressing the tap symbol or Right Arrow will move the cursor across the screen, once on the option + or - will change the value. Pressing select will take you back to the main display.

Option A - Option to change the displayed temperature in Centigrade or Fahrenheit.

Option B - Temperature calibration, used to adjust room temperature reading.

Option C - Maximum pre-heat, default is 3 hours you can adjust from 5 hours down to 0, this is the time Dataterm is allowed to come on in advance to heat your property.

Option D - Lock, this is used to prevent tampering of programed time and temperature adjustments, options are Full, Partial or Off

Option E - Time constant allows you to speed up the learning / heating process, this figure changes with use.Dataterm uses this information to adjust preheat times.

Option F - T: used to test the installation after completion, this option switches Hot Water and Heating on and off without any delay

Section 6. Installation Check List

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

Switching Centre.
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 Sensor.
Check all wiring is secure and that there are no strands of wire exposed.
Seal any holes behind sensor or Dataterm.
Check colour coding of wires and location.

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 centre is required.
Each Dataterm system comes complete with Data Terminal, Wiring Centre, Installation Instructions and a User Guide. Optional extras are Remote Sensors, Cylinder Thermostats and Motorized Valves.

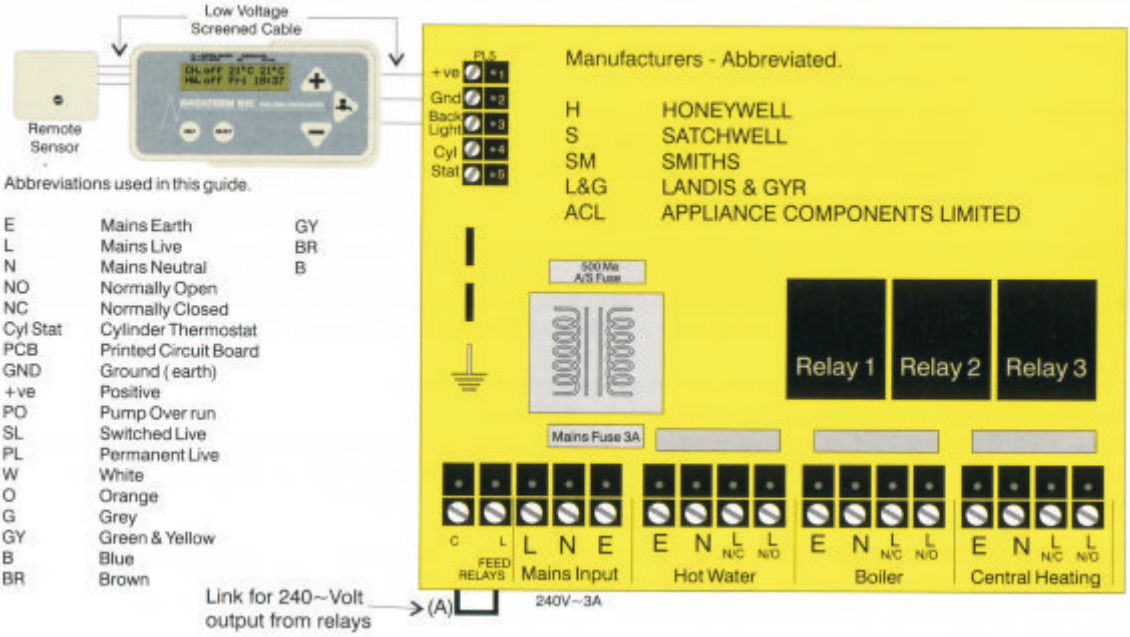
It is very important to order the correct amount of screened cable from WarmWorld when purchasing this equipment as it is not recommended to use cable of a different specification.

Dimensions	*Height*	*Width*	*Depth*
Data Terminal	86mm	161mm	30mm
Remote Sensor	70mm	70mm	30mm
Switching Centre	225mm*	169	58mm

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

Maximum cable run from switching centre to data terminal should be less than 50 metres.

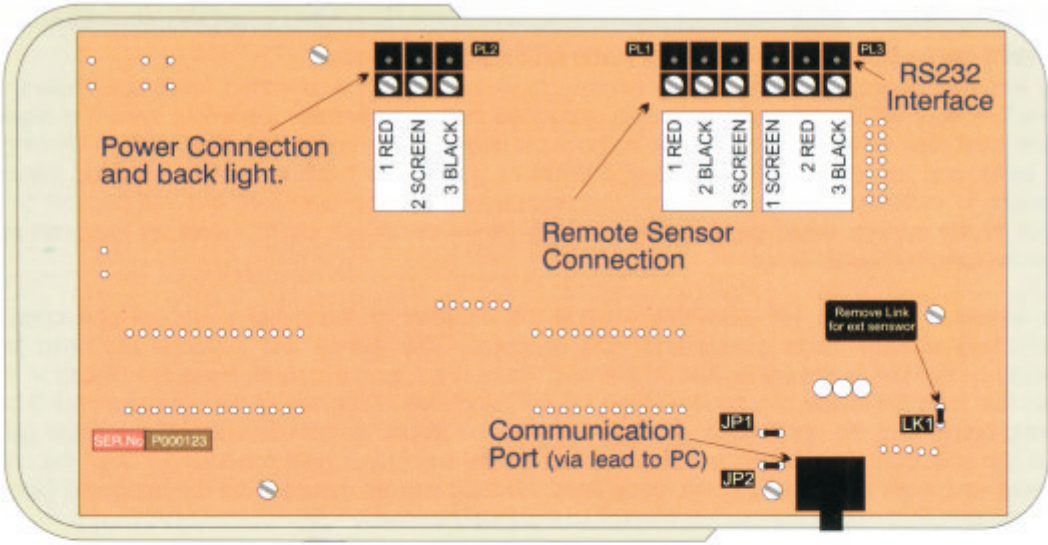
DataTerm can be used with most heating systems up to a loading of 3 amps, if it is necessary to switch higher loads additional relays can be fitted. 8 wiring diagrams are detailed in this guide for the most commonly used heating system arrangements, more detailed advice and assistance can be obtained from our technical department on 0117 949 8800 Monday - Friday 9.00 - 17:30.



Abbreviations used in this guide.

E	Mains Earth	GY
L	Mains Live	BR
N	Mains Neutral	B
NO	Normally Open	
NC	Normally Closed	
Cyl Stat	Cylinder Thermostat	
PCB	Printed Circuit Board	
GND	Ground (earth)	
+ve	Positive	
PO	Pump Over run	
SL	Switched Live	
PL	Permanent Live	
W	White	
O	Orange	
G	Grey	
GY	Green & Yellow	
B	Blue	
BR	Brown	

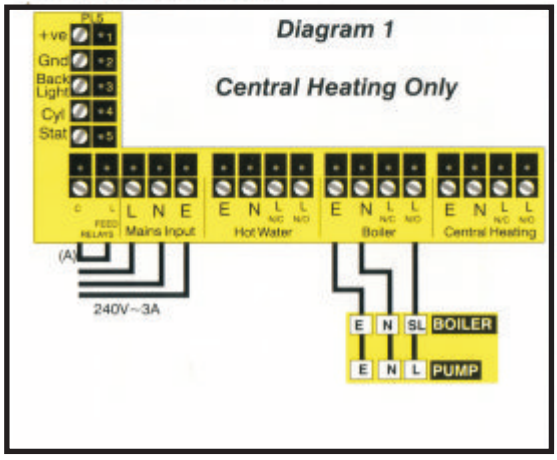
Dataterm IHC Rear View.

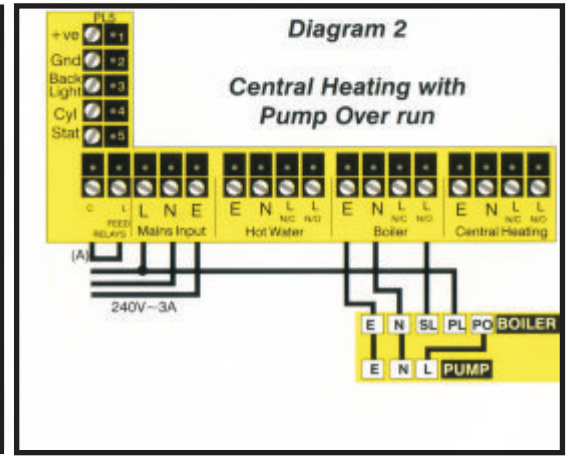


Dataterm IHC has the inbuilt ability to communicate with a computer provided the correct software and RS232 lead are used. Details of the software and wiring options are available from WarmWorld during normal office hours.

With the software loaded you can down load time and temperature history, remotely control hot water and heating requirements, upload new heating plans and much more.

A special version of DataTerm will allow data communications over a distance of 100m, all other versions operate on a special 1m long lead, jack plug at one end and a 9 way D connector at the other.





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

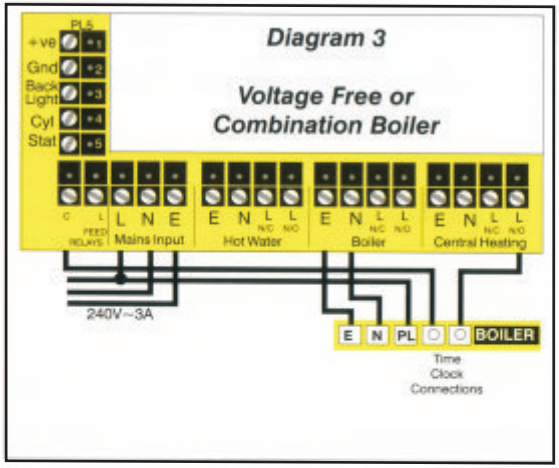


Diagram 3
Voltage Free or
Combination Boiler
+ve
Gnd
Back Light
Cyl Stat
Mains Input
Hot Water
Boiler
Central Heating
240V~3A
E N PL
BOILER
Time
Clock
Connections

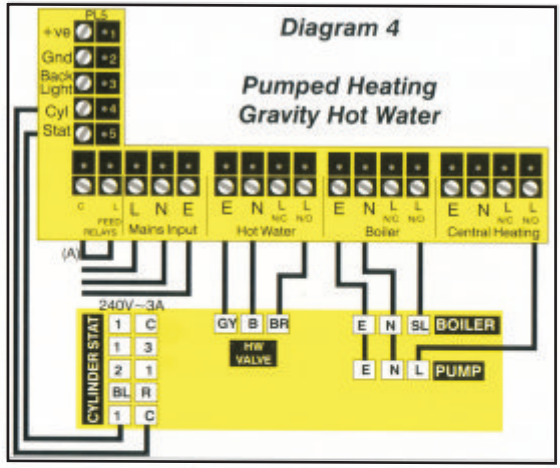


Diagram 4
Pumped Heating
Gravity Hot Water
+ve
Gnd
Back Light
Cyl Stat
Mains Input
Hot Water
Boiler
Central Heating
240V~3A
CYLINDER STAT
GY B BR
HW VALVE
E N SL BOILER
E N L PUMP

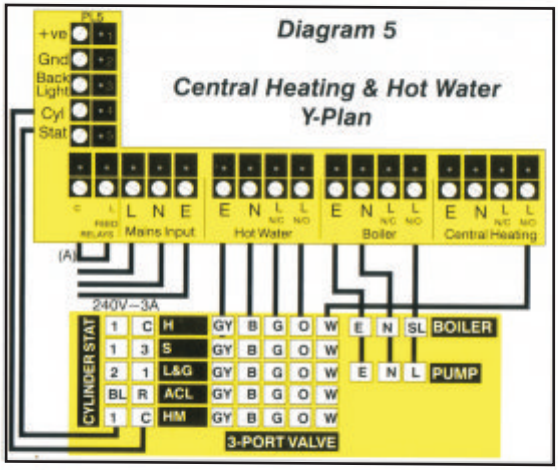


Diagram 5
Central Heating & Hot Water
Y-Plan
+ve
Gnd
Back Light
Cyl Stat
Mains Input
Hot Water
Boiler
Central Heating
240V~3A
CYLINDER STAT
H
S
L&G
ACL
HM
GY B G O W
E N SL BOILER
E N L PUMP
3-PORT VALVE

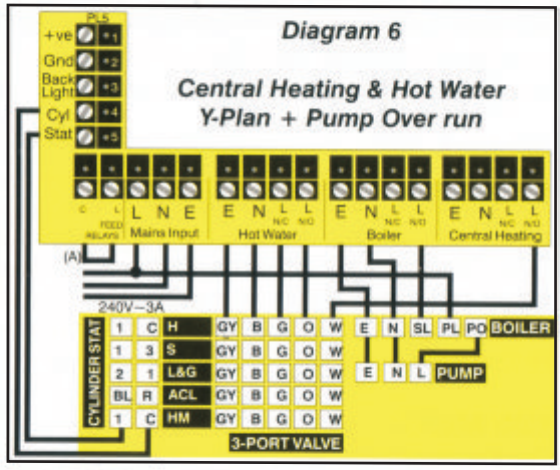


Diagram 6
Central Heating & Hot Water
Y-Plan + Pump Over run
+ve
Gnd
Back Light
Cyl Stat
Mains Input
Hot Water
Boiler
Central Heating
240V~3A
CYLINDER STAT
H
S
L&G
ACL
HM
GY B G O W
E N SL PL PO BOILER
E N L PUMP
3-PORT VALVE

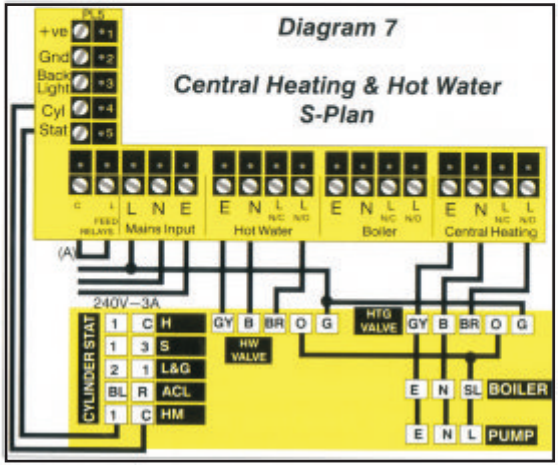


Diagram 7
Central Heating & Hot Water
S-Plan
+ve
Gnd
Back Light
Cyl Stat
Mains Input
Hot Water
Boiler
Central Heating
240V~3A
CYLINDER STAT
H
S
L&G
ACL
HM
GY B BR O G
HW VALVE
HTG VALVE
E N SL BOILER
E N L PUMP

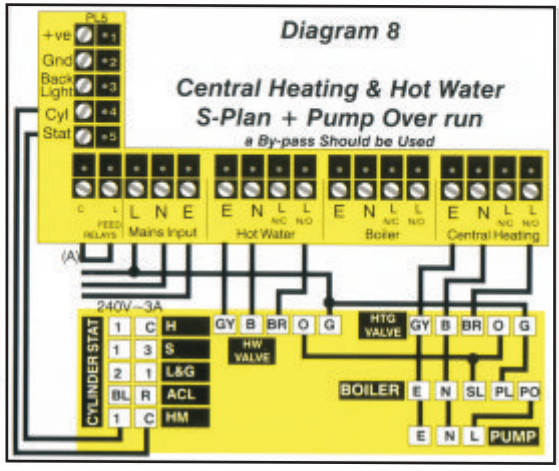


Diagram 8
Central Heating & Hot Water
S-Plan + Pump Over run
a By-pass Should be Used
+ve
Gnd
Back Light
Cyl Stat
Mains Input
Hot Water
Boiler
Central Heating
240V~3A
CYLINDER STAT
H
S
L&G
ACL
HM
GY B BR O G
HW VALVE
HTG VALVE
BOILER E N SL PL PO
E N L PUMP