Data Manager
Commissioning & Service Guide Using a DM

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Commissioning Directly from the Data Manager

For commissioning using a PC refer to the PC Commissioning Guide

Data Manager V2.2
CGI version V2.2

Note 1 Data Managers require an authentication code to a run. This code is put in by RDM and you should not see the page. However in some circumstances, this authentication screen may be displayed, if it is, you are required to enter the correct code. If in any doubt what the code is, call RDM technical support for assistance.

Note 2 The following screens shown in the document are for a Data Manager which is running software version V1.53.1 and has a VGA display fitted. If older software is in use or a Mono display is fitted then the displayed screens will be similar in appearance but will have a blue background and white text displayed.

Home screen

The Site ID is displayed at the top of the Home screen

System Status shows the number of current alarms and the number of controllers on and offline. (This is periodically updated)

Time, day and date are displayed.

Use the softkeys to navigate to the following sections:
- Devices
- Alarms
- Service
- More

Pressing more reveals a further two options: - Inhibit and Run-On.

Devices

Changing Parameters

From the “Home” screen, select “Devices”

Move the cursor to the controller you wish to change parameters, and then press “Enter”

Note: Use the “Page Up” and Page Down” keys to move more quickly through the controller list.
Warning

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### RC10-1 (Meat Case)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control temp.</td>
<td>-1.1</td>
<td>C</td>
</tr>
<tr>
<td>Display temp.</td>
<td>-1.1</td>
<td>C</td>
</tr>
<tr>
<td>Air on Probe</td>
<td>-1.0</td>
<td>C</td>
</tr>
<tr>
<td>Air off Probe</td>
<td>-1.2</td>
<td>C</td>
</tr>
<tr>
<td>Evaporator Probe</td>
<td>?????</td>
<td>C</td>
</tr>
<tr>
<td>Suc. Line Probe</td>
<td>-0.7</td>
<td>C</td>
</tr>
<tr>
<td>Superheat</td>
<td>?????</td>
<td>C</td>
</tr>
<tr>
<td>Defrost Probe</td>
<td>?????</td>
<td>C</td>
</tr>
</tbody>
</table>

This screen shows the selected controller values.

Press “Alarms” to view alarms relating to the controller.

Pressing “Log” allows the user to view tabular or graph data relating to the controller.

To view or change parameters, press “Set”

You will be prompted to enter your PIN at this point.

The “More…” button allows the user to set parameters for the device and initiate a remote defrost.

### RC01-4 (Produce Case)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut-in temp</td>
<td>1</td>
<td>C</td>
</tr>
<tr>
<td>Cut-in diff.</td>
<td>1.0</td>
<td>C</td>
</tr>
<tr>
<td>Control weight</td>
<td>50</td>
<td>%</td>
</tr>
<tr>
<td>Display weight</td>
<td>50</td>
<td>%</td>
</tr>
<tr>
<td>Relay 4 Mode</td>
<td>Suc.Line</td>
<td></td>
</tr>
<tr>
<td>Trim in Defrost</td>
<td>Off</td>
<td></td>
</tr>
<tr>
<td>Trim Level</td>
<td>100</td>
<td>%</td>
</tr>
<tr>
<td>Key Switch</td>
<td>KeyOff</td>
<td></td>
</tr>
</tbody>
</table>

Select the parameter to change, and press “Enter”

Key in the new value and then press “Enter”

Note the +/- and . keys at the bottom right of the screen.

### Reports

This screen allows the user to view reports relating to devices on the Data Manager.

Report Type – Select which type of report to view.

Out Of Hours – Constructs reports with data obtained from the out of hours time period. E.g. when the store is closed

Normal Hours – Normal operating hours of the DM. For example store opening hours

Select period – Define a time period from the past 24 hours, week, 2 weeks or month. It is also possible to generate reports from a specific period.
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Alarms

As shown in this example the number of alarms generated in the past month by each controller is highlighted.

It is possible to structure reports with information regarding:

- Count of alarms by device
- Count of alarms by alarms
- Count of OT alarms by controller
- Count of offline alarms by controller
- Night blinds report

Alarm Delay

Alarm delay feature has been added to allow end user to delay a specific alarm for a specified time limit which can be determined under the misc function on Data Manager.
**Alarm Inhibits**

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>Mode</th>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>Produce Case</td>
<td>Inhibit</td>
<td>Online</td>
</tr>
<tr>
<td>RC01-5</td>
<td>Meat Case</td>
<td>Inhibit</td>
<td>Online</td>
</tr>
<tr>
<td>RC01-6</td>
<td>Dairy Case</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>RC03-1</td>
<td>Deli Counter</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>RC04-1</td>
<td>Fresh Produce</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>RC05-1</td>
<td>Produce Coldroom</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>Humid1</td>
<td>Humidity</td>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>PACK02</td>
<td>HT Pack 2</td>
<td>Online</td>
<td></td>
</tr>
</tbody>
</table>

When pressing “More” from the home page of the Data Manager the user can view alarm inhibits. Here controllers and their current status, with regards to inhibits, are listed.

It shows the network status of controllers and whether inhibits have been applied or are pending.

When a case is inhibited a system alarm is generated. This alarm can be directed via alarm indexes and is configurable for each controller. The default 'Alarm Inhibit' index number is '6' and can be changed if required.

---

**Run-On**

<table>
<thead>
<tr>
<th>Ch Description</th>
<th>State</th>
<th>Mask</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Store Trading Times</td>
<td>On</td>
<td></td>
</tr>
<tr>
<td>4 case lighting</td>
<td>On</td>
<td>RC??-?</td>
</tr>
</tbody>
</table>

Pressing Run-On on a GP timer channel shows the opposite screen.

Here the user can enter a period of time to turn a channel on for or extend its current schedule.

Finish shows the end time of the run-on set.

Clear will remove a-run-on for that channel.
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Service & Configuration

Configuration screens will vary according to the mixture of daughter cards fitted. The following sections indicate generally how to set the input and output devices.

From the “Home” screen, press the Service key:

- Enter the PIN or swipe your card.

When pressing “More” the user can view Run-On. Note Run-on will not be shown if no GP Timer Channels have been set to allow a Run-on.

Run-on enables the user to turn on a GP Timer channel that is off for a given period of time or to extend the on cycle of a channel for a given duration.

Ch refers to the specific GP timer channel you wish to use Run-on with.

Description displays the GP timer channel name.

State shows the current state of a GP timer channel.

Mask indicates what controller(s) a GP timer will operate on.
Local I/O

On entering the service screen, the cursor will be over "1" Inputs,
Press "Enter" to configure the Local inputs and outputs.

Inputs

On entering the Local I/O screen, the cursor will be over "1" Inputs,
Press "Enter" to configure the Local inputs.

Configure Inputs

Using the navigation keys, move the cursor to the input you wish to configure.
Press "Enter"
Move the cursor to the parameter you wish to change.

Press "Enter"

If probe is selected it allows for monitoring with over and under temperature alarms including an alarm delay. A probe input can also be assigned to another local input configured as a defrost input. When this defrost input is active alarms are inhibited for the temperature probe input. Once the defrost input is deactivated temperatures alarms are enabled once the recovery parameter expires. An offset can also be added to each input to account for long cable runs.

Example: If you want to change the probe type, move the cursor to "Mode" and press enter. A sub menu will be displayed, move the cursor to the probe you want and press enter.

Choices are:

- Unused
- PT1000 Probe
- 2K Probe
- 470R Probe
- 700R Probe
- 3K Probe
- 2K25 Probe
- 100K Probe
- 5K Probe
- 6K Probe
- 10K Probe
- 10k(2) USA Probe
- Defrost
- Plant N/C
- Plant N/O

Press "OK" to complete the operation.

Back at the Local I/O screen, the cursor will be over "1" Inputs,

Move the cursor to "2" outputs

Press "Enter" to configure the Local outputs.
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Configure Outputs

<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Relay</td>
<td>Alarm Relay</td>
<td>Relay</td>
</tr>
<tr>
<td>02</td>
<td>Relay</td>
<td>Alarm Relay</td>
<td>Relay</td>
</tr>
<tr>
<td>03</td>
<td>Relay</td>
<td>Alarm Relay</td>
<td>Relay</td>
</tr>
<tr>
<td>04</td>
<td>Relay</td>
<td>GP Timer Relay</td>
<td>BWS Relay</td>
</tr>
</tbody>
</table>

Move the cursor to the output you wish to configure.

Press "Enter".

Note. Relay 1 – 3 are factory set to Alarm Relay mode.

Configure Output 01

<table>
<thead>
<tr>
<th>Description</th>
<th>Relay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Alarm Relay</td>
</tr>
</tbody>
</table>

Press “Enter” at the “Description” and key in the desired text. Press “Enter” to end the description.

Move the cursor to “Mode” and press “Enter”
Select one of the options:
- Unused
- Alarm Relay
- GP Timer Relay

Press “Enter” to confirm choice.
Press “OK” to complete the operation.
Alarms

Access the Alarms configuration by scrolling to “2” on the service screen and pressing enter.

The Alarm Menu has the following options:

- Alarm Indexes
- Alarm Actions
- Default Alarm Actions
- Alarm Times
- Modem Setup
- General
- Relay Setup

Alarm Indexes

Alarm indexes are used to assign alarm actions to different alarms. All alarms from controllers will have an alarm index number associated with them. To find out what the index is for the alarm types, consult the controller user guide.

Individual controllers can be selected by moving the cursor and pressing the select key. Alternatively, all controllers can be selected. Once the controllers have been selected, press the enter key to assign actions to the index numbers.

The device System will appear under the Alarm Indexes page. This allows for alarms generated by the Data Manager to be assigned actions.

Possible alarms and their index numbers are:

- Trim no probe: 3
- Disk Warning: 4
- Hard Drive Read Only: 4
- Blinds Warning: 5
- Test Fault: 6
- Pack Fail Shutdown: 7
- Dial out failed: 8
- DHCP Server Detected: 9
- Power Fail: 10

The Data Manager fixed inputs have alarm index numbers of:

Configured as a probe input:
- Probe Fault: 6
- Probe OT: 4
- Probe UT: 5

Configured as a plant input:
- Plant Fault: 3
Alarm Index Actions

The alarm index numbers on the following screen may not be what the controller is sending – these are a guide only and are not definitive. Refer to the controller user guide for index numbers.

<table>
<thead>
<tr>
<th>Index</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extern</td>
</tr>
<tr>
<td>2</td>
<td>Refrig</td>
</tr>
<tr>
<td>3</td>
<td>Pack</td>
</tr>
<tr>
<td>4</td>
<td>OT</td>
</tr>
<tr>
<td>5</td>
<td>UT</td>
</tr>
<tr>
<td>6</td>
<td>Fault</td>
</tr>
<tr>
<td>7</td>
<td>System</td>
</tr>
</tbody>
</table>

Press the enter key at the index number, and assign an action number to that index.
Use the navigate keys to move to different indexes.
Actions can be reset to their default values by pressing the default key.
Press “OK” when the changes are complete.

Alarm Actions

Alarm actions are used to activate various functions when an alarm occurs. Up to 9 actions can be configured.

<table>
<thead>
<tr>
<th>Relay</th>
<th>Modem</th>
<th>Front</th>
<th>Console</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 3</td>
<td>4 5</td>
<td>PnL 1 2 3</td>
</tr>
<tr>
<td>2</td>
<td>All All All All --- --- --- --- All All --- ---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--- --- --- --- --- --- --- --- --- --- ---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--- --- --- --- --- --- --- --- --- --- ---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--- --- --- --- --- --- --- --- --- --- ---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>--- --- --- --- --- --- --- --- --- --- ---</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Press enter at the alarm action number and then assign the items to that action.

ALL = All of the time
Day = Day only (Days can be set using Alarm Times).
Ngt = Night only (Nights can be set using Alarm Times).

Test Dial allows the user to generate a test alarm that is sent too each modem configured for use. There is also a similar feature available for the mail alarm.

The Fail actions are applied to alarms when a dial out failure has occurred. After a dial out failure subsequent alarms follow their original alarm actions as well as the Fail actions. This will only occur if the feature “Signal alarm locally if dial out fails” has been enabled.

When a dial out failure occurs an alarm is generated. This alarm should be directed to an appropriate action. When a dial out failure alarm occurs the Data Manager alarm log should be viewed to ensure all alarms have been acknowledged, as the first alarm that fails to dial out will not follow the fail actions. Subsequent alarms will follow the fail actions.

Once the dial out failure has cleared, e.g. a test dial out or alarm is successfully dialed out, then alarms will follow their original alarm actions only.

Factory Default Alarm Actions

Relay 1: Over-temperature (OT) and Offline alarms
Relay 2: All alarms
Relay 3: All alarms
Front Panel: All alarms
Console: All alarms
Default Alarm Actions

<table>
<thead>
<tr>
<th>Index</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extern</td>
</tr>
<tr>
<td>2</td>
<td>Refrig</td>
</tr>
<tr>
<td>3</td>
<td>Pack</td>
</tr>
<tr>
<td>4</td>
<td>OT</td>
</tr>
<tr>
<td>5</td>
<td>UT</td>
</tr>
<tr>
<td>6</td>
<td>Fault</td>
</tr>
<tr>
<td>7</td>
<td>System</td>
</tr>
</tbody>
</table>

Configures the default alarm index to actions. These actions will be used by controllers as they come online, before dedicated actions have been assigned.

Note: when replacing a controller or communication module it is important to check that the controller has the correct Alarm Indexes and that alarms are being directed to the appropriate Alarm Action. Ensure the appropriate response occurs when an alarm is generated.

Alarm Times

<table>
<thead>
<tr>
<th>Times:</th>
<th>In 1</th>
<th>Out 1</th>
<th>In 2</th>
<th>Out 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>07:00</td>
<td>20:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Monday</td>
<td>06:00</td>
<td>16:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Tuesday</td>
<td>08:00</td>
<td>20:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Wednesday</td>
<td>08:00</td>
<td>20:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Thursday</td>
<td>08:00</td>
<td>20:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Friday</td>
<td>08:00</td>
<td>20:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Saturday</td>
<td>08:00</td>
<td>20:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
</tbody>
</table>

Alarm times for the Alarm Action table can be set using the following screen. Different day and night times can be set for each day of the week.

Move the cursor to the day you want to change and press enter.

Note: If you set In1 and Out1 for a given day of the week to 00:00 the weekday configured would be classed as night for the 24 hour period.

Press enter at the In/Out lines and enter the appropriate times.
Modem Setup

Select the modem to configure and press enter.

Please note in addition to a “dial up” modem, which is used with the public switched telephone network, the user can purchase a GSM Modem for the Data Manager. This enables the Data Manager to be situated in an area that has no external telephone line or connection to a wide area network. The mobile telephone network is utilised by the Data Manager to send alarms and allow the user remote access to the Data Manager.

Up to 5 numbers can be configured for each of the 6 modems, but once an alarm has been successfully sent, the other numbers for that modem are disregarded.

If alarms are required to be sent to 2 or 3 locations, use modem 1 for the first number, modem 2 for the second and modem 3 for the third.

Enter the telephone number for the alarm recipient.

Enter the modem type: Modem is standard telephone line.

There is a choice of selecting the alarm to be sent as a text message to most of the mobile service providers.

Enter the number of retries before the number is disregarded and moves on to the next number.

Enter the time in minutes between retries.

If send alarm clear is required, select yes.

If URL is selected as type it allows an IP address to be entered into the Data Manager. Now alarms can be directed to e.g. a server. To receive alarms via this method would require MaRS software on the PC receiving the alarms. This would display the incoming alarms and provide information relating to the type of alarm, what site generated the alarm etc. Further information can be obtained from the MaRS user document found on the RDM website.
Mail Server Setup

1. **Sender Name:** Fred Bloggs
2. **Sender Addr:** fred@bloggs.com
3. **Server Addr:** 10.1.2.2
4. **Port:** 25
5. **Authenticate:** Yes
6. **Username:** calls
7. **Password:** ********

As shown in the mail server setup, the user can configure the Data Manager to send alarms to an email address.

**Sender Setup**
- **Name:** Name that is appended to sent alarms
- **Address:** Email address appended to sent alarms.
- **Force TLS:** If Force TLS is "No", then if TLS Authentication fails it will try Plain Authentication. If Force TLS is "Yes", it will only try TLS Authentication.

**Note:** TLS is used for secure connections and may be required to ensure successful communication with the mail server.

**Server Setup**
- **Address:** Address of mail server used to send alarms e.g. office mail server.
- **Port:** Usually port 25.
- **Authenticate:** Some servers require this to send emails.
- **User Name:** Enter your server account name here.
- **Password:** Enter your server password here.

General

**Alarm Relay Setup**

As shown in the mail server setup, the user can configure the Data Manager to send alarms to an email address.

**Sender Setup**
- **Name:** Name that is appended to sent alarms
- **Address:** Email address appended to sent alarms.
- **Force TLS:** If Force TLS is "No", then if TLS Authentication fails it will try Plain Authentication. If Force TLS is "Yes", it will only try TLS Authentication.

**Note:** TLS is used for secure connections and may be required to ensure successful communication with the mail server.

**Server Setup**
- **Address:** Address of mail server used to send alarms e.g. office mail server.
- **Port:** Usually port 25.
- **Authenticate:** Some servers require this to send emails.
- **User Name:** Enter your server account name here.
- **Password:** Enter your server password here.

**General**

1. **Offline Alarm Delay (mins):** 15
2. **Test Dialout Freq (hrs):** 24
3. **Alarms on PC:** None
4. **Swipe on Consoles:** Yes
5. **Df Time Term Warning:** 1
6. **Front Panel Alarm Accept:** Mute
7. **Signal on dial out fail:** No

**Alarm Relay Setup**

Alarm relays can be setup for 3 different modes of operation:

1. **Accept mode.** In this mode, the alarm relay activates when an alarm occurs. The relay de-activates when the alarm is accepted. A delay can be assigned to this mode which delays the activation of the relay. If the alarm is accepted before the delay period has timed out, the relay does not activate.

2. **Clear mode.** The alarm relay activates when an alarm occurs. The relay de-activates when the alarm clears. A delay can be assigned to this mode which delays the activation of the relay. If the alarm clears before the delay period has timed out, the relay does not activate.

3. **Timed mode.** The alarm relay activates when an alarm occurs, and de-activates after the timed period; irrespective of the alarm being accepted or cleared.
**Controller**

**Alias**

**Names**
Name Aliases are used to change the name and description of devices to something more meaningful. E.g. RDM IP controllers initialise with a 3 digit number such as 101, this can be aliased (renamed) to RC10-1. Aliasing of the 3 digit number is important because the Data Manager requires the device name to be 6 digits, so that the defrost scheduler can operate correctly. (The defrost scheduler uses the middle 2 digits as its channel number.)

<table>
<thead>
<tr>
<th>Device</th>
<th>Alias</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>Produce Case</td>
<td>Selected</td>
</tr>
<tr>
<td>RC01-5</td>
<td>Meat Case</td>
<td>Selected</td>
</tr>
<tr>
<td>RC01-6</td>
<td>Dairy Case</td>
<td>Selected</td>
</tr>
<tr>
<td>RC03-1</td>
<td>Deli Counter</td>
<td></td>
</tr>
<tr>
<td>RC04-1</td>
<td>Fresh Produce</td>
<td></td>
</tr>
<tr>
<td>RC05-1</td>
<td>Produce Coldroom</td>
<td></td>
</tr>
<tr>
<td>Humid1</td>
<td>Humidity</td>
<td></td>
</tr>
<tr>
<td>PACK02</td>
<td>HT Pack 2</td>
<td></td>
</tr>
</tbody>
</table>

From the service screen, scroll down to “3” Controller and press enter. Then move to Alias and press enter, Select “Names” and press enter

Press enter at the device you wish to alias.

Note that multiple devices can be given the same alias description – use the “select” key to define and then press enter.

If a single device has been selected, both the description and device name can be aliased.

Note: Genus® device names cannot be aliased.

Note 2: Avoid the use of control characters such as &, %, * etc when naming devices.

If multiple controllers have been selected, then only the description can be aliased.
Alarms

**Alarm Aliases**

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>Produce Case</td>
<td></td>
</tr>
<tr>
<td>RC01-5</td>
<td>Meat Case</td>
<td></td>
</tr>
<tr>
<td>RC01-6</td>
<td>Dairy Case</td>
<td></td>
</tr>
<tr>
<td>RC03-1</td>
<td>Deli Counter</td>
<td></td>
</tr>
<tr>
<td>RC04-1</td>
<td>Fresh Produce</td>
<td></td>
</tr>
<tr>
<td>RC05-1</td>
<td>Produce Coldroom</td>
<td></td>
</tr>
<tr>
<td>Humid1</td>
<td>Humidity</td>
<td></td>
</tr>
<tr>
<td>PACK02</td>
<td>HT Pack 2</td>
<td></td>
</tr>
</tbody>
</table>

Select the device you wish to set alarm aliases and press enter.

**Select Alarm Alias**

<table>
<thead>
<tr>
<th>Alarm Description</th>
<th>Alarm Alias</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missed defrost</td>
<td>Missed defrost</td>
<td>15</td>
</tr>
<tr>
<td>Plant Fault 1</td>
<td>Plant Fault 1</td>
<td>3</td>
</tr>
<tr>
<td>Case over temperat</td>
<td>Case over temperat</td>
<td>4</td>
</tr>
<tr>
<td>Case under temperat</td>
<td>Case under temperat</td>
<td>5</td>
</tr>
<tr>
<td>Probe 1 Faulty</td>
<td>Probe 1 Faulty</td>
<td>6</td>
</tr>
<tr>
<td>Probe 2 Faulty</td>
<td>Probe 2 Faulty</td>
<td>6</td>
</tr>
<tr>
<td>Probe 3 Faulty</td>
<td>Probe 3 Faulty</td>
<td>6</td>
</tr>
<tr>
<td>Probe 4 Faulty</td>
<td>Probe 4 Faulty</td>
<td>6</td>
</tr>
</tbody>
</table>

Press enter at the Alarm Alias line you want to change.

**Set Alarm Alias**

Alarm: Missed defrost

**Alarm Alias:** Missed defrost

**Type Alias:** 15

Note: To remove an alias leave the "Alarm Alias" blank.

Press enter at the Alarm Alias line you want to change and key in the new text. Press enter to finish.
Items

<table>
<thead>
<tr>
<th>Controller</th>
<th>Description</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>Produce Case</td>
<td></td>
</tr>
<tr>
<td>RC01-5</td>
<td>Meat Case</td>
<td></td>
</tr>
<tr>
<td>RC01-6</td>
<td>Dairy Case</td>
<td></td>
</tr>
<tr>
<td>RC03-1</td>
<td>Deli Counter</td>
<td></td>
</tr>
<tr>
<td>RC04-1</td>
<td>Fresh Produce</td>
<td></td>
</tr>
<tr>
<td>RC05-1</td>
<td>Produce Coldroom</td>
<td></td>
</tr>
<tr>
<td>Humid1</td>
<td>Humidity</td>
<td></td>
</tr>
<tr>
<td>PACK02</td>
<td>HT Pack 2</td>
<td></td>
</tr>
</tbody>
</table>

Select the controller you wish to set aliases and press enter.

Select Item Alias

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Alias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control temp.</td>
<td>Control temp.</td>
</tr>
<tr>
<td>Display temp.</td>
<td>Display temp.</td>
</tr>
<tr>
<td>Air on Probe</td>
<td>Air on Probe</td>
</tr>
<tr>
<td>Air off Probe</td>
<td>Air off Probe</td>
</tr>
<tr>
<td>Evaporator Probe</td>
<td>Evaporator Probe</td>
</tr>
<tr>
<td>Suc. Line Probe</td>
<td>Suc. Line Probe</td>
</tr>
<tr>
<td>Superheat</td>
<td>Superheat</td>
</tr>
<tr>
<td>Defrost Probe</td>
<td>Defrost Probe</td>
</tr>
</tbody>
</table>

Select the Item you wish to alias and press enter.

Set Item Alias

Item: Air on Probe

Item Alias: Probe 1

Move to the Item Alias line and press enter, then key in the desired text. Press enter to finish.

Note: To remove an alias leave the "Item Alias" blank.
Visibility

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>Produce Case</td>
<td></td>
</tr>
<tr>
<td>RC01-5</td>
<td>Meat Case</td>
<td></td>
</tr>
<tr>
<td>RC01-6</td>
<td>Dairy Case</td>
<td></td>
</tr>
<tr>
<td>RC03-1</td>
<td>Deli Counter</td>
<td></td>
</tr>
<tr>
<td>RC04-1</td>
<td>Fresh Produce</td>
<td></td>
</tr>
<tr>
<td>RC05-1</td>
<td>Produce Coldroom</td>
<td></td>
</tr>
<tr>
<td>Humid1</td>
<td>Humidity</td>
<td></td>
</tr>
<tr>
<td>PACK02</td>
<td>HT Pack 2</td>
<td></td>
</tr>
</tbody>
</table>

Visibility allows the user to hide inputs, outputs or parameters completely for a given device or make them viewable to authorised users only e.g. Store, Service or Install level.

Select a device(s) from the list.

---

Visibility allows the user to hide inputs, outputs or parameters completely for a given device or make them viewable to authorised users only e.g. Store, Service or Install level.

Select the item you wish to configure

Select one of the following and press OK

- **All** - Selected items are viewable all of the time.
- **Store** - Selected items are viewable only when the user is logged in at Store level or above.
- **Service** - Selected items are viewable only when the user is logged in at Service level or above.
- **Install** - Selected items are viewable only when the user is logged in at Install level.
- **Hide** - Selected items are hidden from the user completely and are not viewable.

---

Ensure that all power is switched off before installing or maintaining this product.
Network

Network Errors

<table>
<thead>
<tr>
<th>Device</th>
<th>Offline</th>
<th>Online</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NoRep</td>
<td>Error</td>
<td>NoRep</td>
</tr>
<tr>
<td>RC01-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RC01-5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RC05-1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PACK02</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PLC001</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Network errors are now shown for RS485 and IP controllers.

This screen accumulates the errors from the time the DM is powered on. The screen can be cleared to zero so that new errors can be observed, by restarting the DM.

Please note that Offline and Online errors relate to RS485 controllers only. Data errors are shown for both IP and RS485 controllers.

The more option will list the Type file and network address associated to each device to assist with fault finding.

Remove Device

From the Controller menu, press enter at the "2" Remove Device.

Press enter to remove devices.

Select the device you wish to remove and press Enter. – The user will be prompted to confirm the operation.

Press OK and the device will be removed.

Ensure that all power is switched off before installing or maintaining this product.
Add Device

1 NW Errors
2 Remove Device
3 Add Device
4 Network Scan
5 USB RS485 Adapters

Network Status:
IP: 7 / 32 Addresses Used
RS-485: 0 / 160 Addresses Used

Highlight and press enter on "Add Device" from the controller menu.

The following message is displayed and the user must press either "Back/OK" to continue.

Select the Device Type from the drop down list.
Enter the IP address of the device.
Generally use the range 10.1.2.2 to 10.1.2.79  Check the number you wish to use has not been allocated.
Enter a 6 Character device name.
Enter an appropriate alias for the device.
Press "Add" to complete the process.

Note please check the Data Manager System Config to ensure the appropriate network interface is enabled for the devices you wish to manually add. For example to logon Modbus® devices the Modbus® interface must be enabled.
Adding a Modbus® Device

Modbus® devices can be connected to the Data Manager using a USB/RS485 Modbus® Adapter. This device connects to one of the Data Managers USB ports. Each Modbus® adapter has 2 RS485 network lines and each network line allows up to 32 Modbus® devices per line. The Data Manager currently supports a single USB/RS485 Modbus® adapter (PR0623) only.

**Configuration**

Select the "Modbus® /Usb Device" from the drop down list.

- **Name** - Enter a six character name.
- **Alias** - Enter an appropriate description.
- **Type** - Select the desired Modbus® device type from the list.
- **USB Line** - Select the network line on which the device is physically connected.
- **Modbus® Address** - Enter the Modbus® address of the device.

**Note** please check the Data Manager System Config to ensure the appropriate network interface is enabled for the controllers you wish to manually add. For example to logon Modbus® devices the Modbus® interface must be enabled.

**RS485 Configuration**

Note the RS485 configuration of the Adapter is fixed and uses the following:

- Baud rate 9600
- Data bits 8
- Parity No
- Stop Bits 1

**PR0623**

*Optional dependant on application*
Currently the following Modbus® devices are supported:

<table>
<thead>
<tr>
<th>Modbus® Energy Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elcomponent Flash D Power Monitor (4 Wire)</td>
</tr>
<tr>
<td>Elcomponent Flash D Power Monitor (3 Wire)</td>
</tr>
<tr>
<td>Elcomponent VIP396 Energy Meter</td>
</tr>
<tr>
<td>4MOD Pulse Counter</td>
</tr>
<tr>
<td>Autometer IC970</td>
</tr>
<tr>
<td>Socomec Diris A20</td>
</tr>
<tr>
<td>Dent Industries Powerscout Energy meter</td>
</tr>
<tr>
<td>Rayleigh Instruments IME Nemo 96HD</td>
</tr>
<tr>
<td>Carlo Gavazzi EM24-DIN</td>
</tr>
<tr>
<td>Janzita UMG 604</td>
</tr>
<tr>
<td>Janzita UMG 96S</td>
</tr>
<tr>
<td>Enviro ENV900</td>
</tr>
<tr>
<td>Enviro ENV901</td>
</tr>
<tr>
<td>Compact NSX</td>
</tr>
<tr>
<td>Socomec Diris A40</td>
</tr>
<tr>
<td>Enviro ENV910 Single Phase</td>
</tr>
<tr>
<td>Schneider Masterpack NW16 H1</td>
</tr>
<tr>
<td>Carlo Gavazzi EM21</td>
</tr>
<tr>
<td>Countis E13, E23, E33, E43, E53</td>
</tr>
<tr>
<td>Enviro ENV903-DR-485</td>
</tr>
<tr>
<td>Enviro ENV910 Three Phase</td>
</tr>
<tr>
<td>ICT Energy Meter El Flex – 1phase</td>
</tr>
<tr>
<td>ICT Energy Meter El Flex – 3phase</td>
</tr>
<tr>
<td>Integra 1530</td>
</tr>
<tr>
<td>Integra C3/R3 Energy Meter</td>
</tr>
<tr>
<td>Measurlogic DTS</td>
</tr>
<tr>
<td>Nautil 910 Energy Meter</td>
</tr>
<tr>
<td>Schneider PM750</td>
</tr>
<tr>
<td>Shark Energy Meter</td>
</tr>
<tr>
<td>Socomec Diris A20</td>
</tr>
<tr>
<td>VIP396 Energy Meter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Modbus® Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPC Infrared RLDS Unit 1</td>
</tr>
<tr>
<td>TQ4200 Mk 11 (16 Chan)</td>
</tr>
<tr>
<td>TQ4200 Mk II (24 Chan)</td>
</tr>
<tr>
<td>TQ4000 (4 Chan)</td>
</tr>
<tr>
<td>TQ4300 (12 Chan)</td>
</tr>
<tr>
<td>TQ8000 (12 Chan)</td>
</tr>
<tr>
<td>TQ8000 (16 Chan)</td>
</tr>
<tr>
<td>TQ100 (30 Chan)</td>
</tr>
<tr>
<td>Safety Gas Detection System</td>
</tr>
<tr>
<td>Carel Gas Detection</td>
</tr>
<tr>
<td>MGS Gas 404A Detector</td>
</tr>
<tr>
<td>Toshiba FDP3 A/C Interface</td>
</tr>
<tr>
<td>Polin Bakery Controller</td>
</tr>
<tr>
<td>Ispeed Inverter Drive</td>
</tr>
<tr>
<td>Sabroe Unisab III</td>
</tr>
<tr>
<td>AirBloc SmartElec2</td>
</tr>
<tr>
<td>Daikin ZEAS Remote Condensing units 11-26</td>
</tr>
<tr>
<td>NXL Vacon Inverter Template</td>
</tr>
</tbody>
</table>

If you have a Modbus® device which is not listed please contact RDM Technical Support.

**Network Scan**

Network scan is a useful tool to detect RS485 devices on the network (for example if a Data Manager is replacing another manufacturers’ front end system).

Using the network scan on each network line, will detect the device’s name and network address (gAdd) and use the settings in the Data Manager.

From the Controller menu, press enter at the “4” Network Scan.
**Network Scan**

Do not use unless you understand the effects, otherwise you may cause network problems

Select network and press Enter to start scan:

<table>
<thead>
<tr>
<th>Network</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Built-in connector</td>
</tr>
<tr>
<td>8</td>
<td>Adapter 1 Channel 1</td>
</tr>
<tr>
<td>9</td>
<td>Adapter 1 Channel 2</td>
</tr>
<tr>
<td>18</td>
<td>Adapter 3 Channel 1</td>
</tr>
<tr>
<td>19</td>
<td>Adapter 3 Channel 2</td>
</tr>
</tbody>
</table>

Select a network line to scan and press “enter”

**Please Note**

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Ensure that all power is switched off before installing or maintaining this product.

This operation may take up to 30-45 seconds.

---

**USB RS485 Adapters (Genus® Compatible Networks)**

A USB RS485 adapter connects to one of the Data Manager’s USB ports. Each adapter has 2 RS485 network lines and each network line allows up to 32 Genus® compatible devices per line.

Use this option to see which adapter is being used.

Select the adapter you wish to identify and press “Identify”

The adapter in question will flash its network lights together for about 5 seconds, then go back to normal LED activity.

---

<table>
<thead>
<tr>
<th>Adapter</th>
<th>Status</th>
<th>Network(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Present</td>
<td>4,5</td>
</tr>
<tr>
<td>2</td>
<td>Present</td>
<td>6,7</td>
</tr>
<tr>
<td>3</td>
<td>Present</td>
<td>8,9</td>
</tr>
<tr>
<td>4</td>
<td>Not Present</td>
<td></td>
</tr>
</tbody>
</table>
Case Setup Information

1. Select the pack the case is on.
2. Set the valve type.
3. Set the case length.
4. Set to enable defrost termination warnings.
5. Set to use the “Check Night Blind” feature.
6. Set this to use the “Case Performance” feature.
7. CPT Value
8. DF Day Limit

Please note when a device is configured for case performance or pack optimisation then additional values and parameters will be available for these devices.

When enabled on a device, Case Performance and Valve Performance appear as an input in a device’s value page. Each has a settable alarm limit to warn the user should the performance deteriorate to a set level. The settable range for the parameter is 0 – 10. The default alarm index number, for both case and valve performance alarms, on a single case controller is 6.
## Device Information

<table>
<thead>
<tr>
<th>Device</th>
<th>Type</th>
<th>Version</th>
<th>CRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>00003471</td>
<td>MERC2M1.8</td>
<td>------</td>
</tr>
<tr>
<td>RC01-5</td>
<td>00003471</td>
<td>MERC2M1.8</td>
<td>------</td>
</tr>
<tr>
<td>RC01-6</td>
<td>20000001</td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>RC03-1</td>
<td>20000001</td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>RC04-1</td>
<td>20000001</td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>RC05-1</td>
<td>00003460</td>
<td>MERC2S1.7</td>
<td>------</td>
</tr>
<tr>
<td>Humid1</td>
<td>30000001</td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>PACK02</td>
<td>088a466e</td>
<td>intDBpre-</td>
<td>------</td>
</tr>
</tbody>
</table>

Device information allows the user to see:
- Type Number
- Software Version
- CRC

Press “More” to view:
- Bitswitch settings
- Network Address
- Network ID

---

## Split Device

**Set Split**

1. Select a device from the list that you wish to split.

**Cancel Split**

2. Cancel Split is used to remove any current splits configured.

---

The Split Device feature can be used to split the inputs, outputs and parameters of one device to create multiple devices. For example, a Pack/Condenser controller can be split so that it appears as two controllers on the Data Manager's device list. One controller could have the inputs, outputs and the parameters for Section 1, the pack control, while the second controller having the inputs, outputs and parameters for Sections 2 the condenser control.

To start select Set Split.

Select a device from the list that you wish to split.
Warning

Please Note
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Ensure that all power is switched off before installing or maintaining this product.

Note: Care should be taken if splitting a controller that can have defrosts. If a controller is logged on with a 3 digit number say 100 then split and defrost channels set up for each of the split sections. The main controller (100) will still get defrosts from channel 10, so the first section of the split will get defrosts from whatever defrost channel it is set up on and also defrosts from defrost channel 10.

It is best to rename the main controller 100 to something different that does not have numbers that tie up with defrost channels before splitting the controller. It is probably best to rename any controller that is being split from a 3 digit number to something that is not affected by the defrost timer. So there is no chance of it being affected by the defrost timer.

Firstly use the Prefix page to assign four characters which will make up the first part of the split device names. For example “MONT”

Select an input, output or parameter and assign it a two character suffix. As shown below.

<table>
<thead>
<tr>
<th>Item</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display temp.</td>
<td>01</td>
</tr>
<tr>
<td>Air on Probe</td>
<td>02</td>
</tr>
<tr>
<td>Air off Probe</td>
<td>01</td>
</tr>
<tr>
<td>Evaporator Probe</td>
<td>02</td>
</tr>
<tr>
<td>Succ. Line Probe</td>
<td>01</td>
</tr>
<tr>
<td>Superheat</td>
<td>02</td>
</tr>
<tr>
<td>Defrost Probe</td>
<td>01</td>
</tr>
<tr>
<td>Logging Probe</td>
<td>02</td>
</tr>
</tbody>
</table>

Enter a maximum of three characters into the suffix field for each item you wish to group together to create a new device when the split feature is used.

For example any item which has a 01 in the suffix column will be grouped together to create a device. Any item which has a 02 in the suffix column will be grouped together to create a device.

Once each item has been assigned a suffix select “Split” to begin the device split. As per the above example two new devices will appear in the DM device list MONT01 and MONT02.

The options under Auto are as follows:

- **Clear Suffix** - Characters in all suffix fields are deleted.

- **Populate with first character** - First character from an item name is placed in the corresponding suffix field.

- **Populate with first two characters** - First two characters from an item name are placed in the corresponding suffix field.

- **Populate with first three characters** - First three characters from an item name are placed in the corresponding suffix field.

- **Populate with last character** - Last character from an item name is placed in the corresponding suffix field.

- **Populate with last two characters** - Last two characters from an item name are placed in the corresponding suffix field.

- **Populate with last three characters** - Last three characters from an item name are placed in the corresponding suffix field.

To find out the parent device of a split device please refer to the Device Information page and view the Address column for a given device.
Hide Device

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>Hide</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01-4</td>
<td>Produce Case</td>
<td>No</td>
</tr>
<tr>
<td>RC01-5</td>
<td>Meat Case</td>
<td>No</td>
</tr>
<tr>
<td>RC01-6</td>
<td>Dairy Case</td>
<td>No</td>
</tr>
<tr>
<td>RC01-7</td>
<td>Deli Counter</td>
<td>No</td>
</tr>
<tr>
<td>RC04-1</td>
<td>Fresh Produce</td>
<td>No</td>
</tr>
<tr>
<td>RC05-1</td>
<td>Produce Coldroom</td>
<td>No</td>
</tr>
<tr>
<td>01a</td>
<td>Mercury Hub degC/bar</td>
<td>Yes</td>
</tr>
<tr>
<td>10aHub</td>
<td>ML Hub degC/bar</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Highlight the device you wish to hide and press enter. Any device which is hidden will not appear in the controller device list and it will not be configurable via the Alarm Indexes page, Device Parameter page and so forth. The device will still appear under the Device Info page. This feature is intended for use in conjunction with the Split Device feature.

Set “Hide” to yes to hide the device highlighted.

Wireless Mesh

Up to 4 wireless mesh base units can be connected to the Data Manager Ethernet 0 network. This is advantageous should the wireless network be split across multiple floors in a building.

Shown opposite is the “Wireless Interfaces” page. It shows two wireless mesh base units, Interface 1 and 2, which are configured and operating on the Data Manger.

Please refer to the Wireless Mesh User documents on the RDM website for additional information. The software feature “Data Manager Wireless Mesh Software Enabler” has to be enabled for each base unit you wish to configure.

The “Add” button on the Wireless Interfaces page allows the user to add and configure the first wireless mesh base unit or add additional units to an existing site setup. The Data Manager will list the available mesh base units when the user clicks Add.

The current IP address of each wireless mesh base unit available to configure is shown along with its unique RF MAC address. Select the desired unit from the list and press “Add”.

The unit will now appear in the Wireless Interfaces page. Select the unit from the list to view the “Set Wireless Interfaces” page.
Timers

GP Timer

Configure the desired Net ID. Note any wireless mesh device you wish to log onto the Data Manager via this base unit must have its network channel switch set to the same Net ID selected for the base unit. No two base units can have the same Net ID.

Now select an RF Channel. Note using the “Auto” option allows the wireless mesh base unit to scan the existing site and select an RF Channel not in use.

There are 40 General Purpose timer channels; 32 channels can be programmed as either a master or a slave channel. 8 channels are dedicated master channels. 2 On/Off times can be programmed for each channel.

Select a channel to program, and press enter

- **Type**
  
  Press return: Select either master or slave from the sub-menu. If slave is selected, choose a master channel and enter the +/- offset.

- **Name**
  
  Press return: Type in a meaningful name for the channel.

Note: for Global Channels the Channel Type, Master, and the channel name, e.g. Global GP Channel 1, cannot be changed.
Set GP Channel 1

1 Type: Master
2 Name: Store Trading Times
3 I/P Type: Unused
4 O/P Type: General : Ch 2
5 Invert: Yes
6 Run-On: Allowed

Press on “Events” to configure the times.

GP Timer Schedule

<table>
<thead>
<tr>
<th>Day/Date</th>
<th>From/To</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
<tr>
<td>Monday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
<tr>
<td>Tuesday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
<tr>
<td>Wednesday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
<tr>
<td>Thursday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
<tr>
<td>Friday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
<tr>
<td>Saturday</td>
<td>08:00 - 19:00 00:00 - 00:00</td>
<td>Weekly</td>
</tr>
</tbody>
</table>

Add GP Schedule - Start

Select Frequency:
- Daily
- Weekly
- Yearly
- Once

Add GP Schedule - Start

Press enter at the “Select Frequency” message.

I/P Type
Press return: Select from the sub-menu.

O/P Type
Press return: Select from the sub-menu.

Case: Requires an output mask
General: Requires an output mask and relay number
Local relay: Requires a relay number
Transmit: Requires a Plant TDB controllers mask.

Invert
Press return: Select from the sub-menu.

Run – On:
Lets user allow/disallow whether the GP run-on feature can operate on this channel.

Press Add key to set-up a schedule:

To set up a schedule such as the one illustrated, press the “Add” key and follow the on-screen instructions.

Press the Add key to set-up a schedule:

Until the timer channel has been set-up, this screen will display no data.

Please note if an event is set to happen “Once” then the schedule for this will be removed 30 days after the event has occurred.

Press enter at the “Select Frequency” message.

Daily, weekly, yearly or a once only schedule can be configured. Select the desired frequency from the drop-down menu and press enter.

Please note if an event is set to happen “Once” then the schedule for this will be removed 30 days after the event has occurred.
Press Next to continue the schedule configuration:

There are 100 channels for defrost scheduling

To configure a remote defrost schedule, move the cursor to “2” on the Timer Menu page and press enter.

Press enter on each day and select “No” or “Yes”

Selecting “Yes”, will group these days together and will have the same on/off times.

Selecting “No”, will exclude these days from the timer set-up. (They can be set-up later by running through the process again.)

Press “Next” to continue:

Press on the On/Off's and key in the desired times.

To complete the set-up of the channel, press “Finish”

The screen will display the “GP Timer Schedule” screen, with the days and times that have just been configured.

Repeat the procedure to add other days.
Defrost Timer

**Timer Menu**

- 1 GP Timer
- 2 Defrost Timer
- 3 Defrost Timer Device Setup

---

**Defrost Timer Channels**

<table>
<thead>
<tr>
<th>Chan</th>
<th>Description</th>
<th>Status</th>
<th>Last Df</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DF Timer Channel 1</td>
<td>Off</td>
<td>14:00</td>
</tr>
<tr>
<td>2</td>
<td>DF Timer Channel 2</td>
<td>Off</td>
<td>01:30</td>
</tr>
<tr>
<td>3</td>
<td>DF Timer Channel 3</td>
<td>Off</td>
<td>13:30</td>
</tr>
<tr>
<td>4</td>
<td>DF Timer Channel 4</td>
<td>Off</td>
<td>14:00</td>
</tr>
<tr>
<td>5</td>
<td>DF Timer Channel 5</td>
<td>Off</td>
<td>10:30</td>
</tr>
<tr>
<td>6</td>
<td>DF Timer Channel 6</td>
<td>Off</td>
<td>11:00</td>
</tr>
<tr>
<td>7</td>
<td>DF Timer Channel 7</td>
<td>Off</td>
<td>12:00</td>
</tr>
<tr>
<td>8</td>
<td>DF Timer Channel 8</td>
<td>Off</td>
<td>09:32</td>
</tr>
</tbody>
</table>

Use the up or down key to select the desired channel and press enter.

---

**Set Defrost Channel 1**

- **Channel Name**: DF Timer Channel 1
- **Defrost hold**: No
- **Max Df (mins)**: 5
- **Valve Ctrl**: -----
- **Valve Item**: -----
- **Defrost every**: 1
- **Num Per Day**: 4

Select Channel name and give the channel a meaningful description such as:
- "Defrost Timer for Bay 1"

Defrost hold prevents any single controller from entering the recovery process until all the controllers operating from that defrost timer channel have completed their defrost. See also Length parameter below. Case controller setup required, see Mercury user document for further details.

8 defrosts can be scheduled.
When a device channel type is set to auto the defrost timer channel will operate on devices whose names have their middle 2 characters the same as the configured defrost timer channel number. For example defrost timer channel 22 will operate on all devices that have 22 as their middle characters, such as RC22-1, RC22-2 & RC22-3.

When a device channel type is set to a defrost timer channel number between 1 and 100 then the defrost timer channel mapped will operate on the devices configured. As shown in the above example defrost timer channel 3 will operate on controllers RC65-1, RC65-2 & RC65-3 as they are all set to channel 3.

Defrost header control

- Length – Maximum period the valve is opened for (Minutes). If all devices operating from this defrost timer channel complete their defrost before this value is reached then the selected relay will be turned off. Note this is also the maximum defrost length used in Defrost Hold. If the Data Manager doesn’t receive confirmation from all devices operating on the defrost timer channel that they have successfully completed their defrost then the Data Manager will send a defrost termination network command to those devices when this value is reached.
- Valve Ctlr – From the drop down menu select the appropriate defrost header controller.
- Valve Item – Enter the number of the relay to operate on. E.g. 1 would operate relay 1.
Defrost every

Select how often a defrost should occur. For example if set to 3 "n" number of defrosts will occur every 3 days. Where "n" is dependent on the number per day selected. **Note:** in software V1.14.0 the defrost every "n" number of days feature allows for only 1 defrost every "n" days. The ability to do more than 1 defrost will be included in a future release.

Enter the number of defrosts per day.

Once the number of defrosts per day have been selected scroll down to view a number of new fields.

If you want equal intervals, insert the start time of the first defrost into “Defrost 1” and press “Recalculate”. This will then insert times into the remaining defrost fields.

If you want unequal intervals, each defrost time must be individually entered.

To complete the defrost schedule setup, press “Save”

System

From the service screen, move the cursor down to “System” and press return:

To select any of the system menu items, move the cursor to the item number and press enter.

Or

Press the item number
Site

Users, adding or changing

To select any of the Site menu items, move the cursor to the item number and press enter.

Or

Press the item number

<table>
<thead>
<tr>
<th>User</th>
<th>Name</th>
<th>Level</th>
<th>Expired</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>install</td>
<td>Install</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>store</td>
<td>Accept</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td>service</td>
<td>Accept</td>
<td>N</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Unused</td>
<td>N</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Unused</td>
<td>N</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Unused</td>
<td>N</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Unused</td>
<td>N</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Unused</td>
<td>N</td>
</tr>
</tbody>
</table>

From the system menu, select “2” Users and press enter.

Move the cursor to the user you wish add or change.

Press “Enter”.

Users can add other users at the same level of access or lower.

Move the cursor to the field you wish add or change.

Press “Enter”, key in the text (use the softkeys to change between upper and lower case) Press enter when your text line is complete, and move on to the next field.

Note: user levels are:

- Install: Unlimited access
- Service: Limited access
- Accept: Store use, accept alarms and view only

If swipe cards are not used, the PIN is required to accept alarms.
If swipe cards are used, press enter at the swipe card line – you will be prompted to swipe the card. Once the card has been successfully swiped, the swipe card field displays “Got card”.

By setting Expiration to on will allow the User to set in a date and time that the User will be no longer be able to gain access to the panel menu options.

Press “OK” to complete the operation.

Note: Users can only add other users at the same level of access or lower.
**Warning**

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Ensure that all power is switched off before installing or maintaining this product.

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### Site Information

- **From the System menu, press enter at the “3” Site Info line.**
- **Enter the site details** – note that the information in the Site ID field is attached to alarms when dialled out.
- **Do not use control characters such as &,% etc in the site ID**
- **The other description fields; Desc1 -7 can be used for the address and other site details.**

### Language

- **Select the Language from the drop list.**
- **Note:** If there are no translation files on the Data Manager, the Language option will not be present.
Inhibits (Setup times)

**Configure Inhibits**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Short Inhibit: 1 hours</td>
</tr>
<tr>
<td>2</td>
<td>Long Inhibit: 24 hours</td>
</tr>
</tbody>
</table>

**Current Configuration**

Select “1” to view the current configuration of the Data Manager.

**Add feature**

Select “2” to add features.

Relay the system number to RDM and the feature you want adding. A number to enable this feature will be given to you and then add activation number and Data Manager will restart, then feature has been enabled.

**Configuration**

This is a “View only” screen and gives the current features enabled in the Data Manager.

RS485 allows the user to view the RS485 configuration.

Modbus® allows the user to view the currently installed Modbus® templates.

Inhibits are used to stop alarms from a device. There are 3 kinds of inhibit:

1. Short inhibit (Short time is programmable)
2. Long inhibit (Long time is programmable)
3. Online inhibit (Inhibit at the next offline, stay on inhibit until the next online)

To set the short and Long inhibit times perform the following operations:

**Set Short Inhibit Time:**
With the cursor on “1” press “Enter”. Key in the desired value, press “Enter”.

**Set Long Inhibit Time:**
Move the cursor to “2”, press “Enter”. Key in the desired value, press “Enter”.

Press the softkey “Back” to complete the operation.
### Add Feature

**System key is:**
ff 69 15 c5 07 4a 9c 93

**Enter new activation number:**

Use this screen to add a feature to the Manager.

Give the “System Key number” to RDM, then after payment for the new feature, RDM will supply a activation number that will enable the feature after restart of Data Manager.

### Miscellaneous

**Misc Site Settings**

<table>
<thead>
<tr>
<th>#</th>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Device sort order</td>
<td>Stub-Case</td>
</tr>
<tr>
<td>2</td>
<td>GP Run-on</td>
<td>Install</td>
</tr>
<tr>
<td>3</td>
<td>GP Run-on limit (mins)</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>Backlight (mins)</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Log thin age (days)</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>Log thin freq (mins)</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Modem port</td>
<td>Internal</td>
</tr>
<tr>
<td>8</td>
<td>Alarm delay time (mins)</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Panel Colour</td>
<td>Green</td>
</tr>
</tbody>
</table>

Device sort order will determine the order devices appear on the screen in the “Devices List”. If Stub-Case is selected, the list is sorted alpha/numerically starting with the middle 2 characters (Stub) and then the last 2 characters (Case).

If Alphabetical is selected, the sort will be based on alphabetical order starting with the first character and ending with the last. Press enter and select either Stub-Case or Alphabetical.

GP Override allows the user to set an access level to use this feature.

- **None** - No pin is required to use GP Run-on.
- **Store** - Store level pin or above required.
- **Service** - Service level pin or above required.
- **Install** - Only an install user can use this feature.

GP run-on limit allows the user to set a maximum run-on period. The maximum on period is 3600 mins (60 hours).

Backlight is used to determine when the Data Manager screen enters power save mode (turns off).

Log thin age – The Data manager will thin out stored log data after this time period. Minimum value 100 days.

Log thin freq - Select between 5, 15 or 60 Minute intervals. Any data greater than the Log Thin Age parameter will be stored at this frequency. Warning once data is removed it is impossible to retrieve.

**Note** by default the Log Thin Age is set to 180 days and Log Thin Freq is set to 5 minutes.

Modem port - Select between internal or USB for outgoing data. When configured as internal the Data Manager will utilise its onboard analogue modem or GSM modem, if either is fitted, for sending alarm information. The USB option enables a 3G USB modem to be connected to one of the Data Managers USB ports. This device will allow the Data Manager to send alarm information as an SMS text message to a mobile telephone. Please contact RDM to confirm compatible devices. Note the 3G USB modem does not allow remote access to the Data Manager. When using either a GSM modem or USB 3G Modem to send SMS text messages select SMS (GSM Modem) under Modem Setup. When set as USB an internal analogue modem or GSM modem can still be utilised to connect to the Data Manager however outgoing traffic will be routed through the USB 3G modem.

Alarm delay time – Allows user to delay accepting a specific alarm for specified time.
Time Zone

This screen allows the user to set the time zone in which the Data Manager is operating.

The Data Manager time and date will change according to the options selected.

General

Time & Date

Press return at the Date/Time line to set/change the date and time.

Here the current time and date can be manually entered. It is recommended that the user restart the panel when altering the time or date manually. Note the "Time-zone" option, found under System and then Site, should be changed if the Data Manager is in a location other than the default zone “Europe, London” before editing the time and date via this page.

If the option "Use NTP" is used then the IP address of an NTP time server can be entered. The Data Manager will then periodically synchronise with the NTP server time/date.

Run Calibration- This function is used in the factory to calibrate the internal time clock prior to shipping. Do not use unless instructed by the RDM Technical Support department.

Note you must seek the permission from the owner of the NTP time server before directing the Data Manager to it.

Network Setup

On selecting Network Settings the user is prompted with a warning message and on screen instructions.

Ensure that all power is switched off before installing or maintaining this product.
**Network Settings**

1. Run DHCP server on eth0: Yes
2. Consoles: Yes
3. Default gateway: 10.1.2.254
4. Eth0 - Address: 10.2.2.75
5. Eth0 - Netmask: 255.255.255.0
6. Eth1 - Address: 10.1.2.73
7. Eth1 - Netmask: 255.255.255.0

Setup the Network fields:

If the primary Ethernet port (eth0) is not for controllers, but for connection to other systems, select DHCP to off and consoles to No. Note the DHCP server operates on Eth 0 only.

If a secondary IP network card is not present or the feature has not been enabled then the user will only see Eth0 on this screen.

Set “Consoles” to “No” if the primary Ethernet port (eth0) is used for an external LAN connection and not controllers.

**Note** when setting Eth 1 Address and Eth 1 Netmask the Default Gateway address must be 0.0.0.0. Once Eth 1 Address and Netmask are set the Default Gateway address can be entered.

**System Test**

**Test Menu**

1. Front panel tests
2. Input A/D tests
3. Outputs tests

**System Info**

**System Info 1**

- **Version:** Data Manager V1.54.4
- **DM Addr:** 10.2.2.74
- **External Boards:**
  1. 4-20mA Out
  2. None
  3. 0-10V In

- **Mains Supply:** Ok
- **Battery:** Not fitted

System info outlines the current software version etc. Use the more button to show the Hard Disk Drive status.
**System Maintenance**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clear Alarms</td>
</tr>
<tr>
<td>2</td>
<td>Clear Type</td>
</tr>
<tr>
<td>3</td>
<td>Restart System</td>
</tr>
<tr>
<td>4</td>
<td>Internal Save Config</td>
</tr>
<tr>
<td>5</td>
<td>Internal Restore Config</td>
</tr>
</tbody>
</table>

**System Maintenance**

1. Clears the Alarm log *
2. Clear Type Files
3. Restart System
4. Internal Save Config to save the DM config**
5. Internal Restore Config to restore previously saved internal DM config

* Use this with caution as it will clear the entire alarm history.
** At midnight each day the Data Manager will do an internal save of the Data Manager configuration.

When deleting a single type file the Data Manager will restart

**System Log**

The last 100 entries can be seen in the System Log, press enter on any line to expand the information.

**Energy**

**Pack Setup**

The refrigeration system can be “optimised” for energy saving. To setup for optimisation, the pack controller optimisation settings need to be configured correctly. See below.

**Press enter at “1” Pack Setup**

**Select Pack Number**

- Pack Number 1
- Pack Number 2
- Pack Number 3
- Pack Number 4
- Pack Number 5
- Pack Number 6
- Pack Number 7
- Pack Number 8

Select a pack and press enter
Warning

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Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period (mins)</td>
<td>Used to define the period over which optimisation is based</td>
</tr>
<tr>
<td>Opt Up Value</td>
<td>% efficiency below which will optimise up</td>
</tr>
<tr>
<td>Opt Down Value</td>
<td>% efficiency above which will optimise down</td>
</tr>
<tr>
<td>Opt Zero Value</td>
<td>% efficiency for no optimisation</td>
</tr>
<tr>
<td>Single case zero count</td>
<td>Number of Periods a single case reaches the “Opt Zero Value” before optimisation is turned off</td>
</tr>
<tr>
<td>Multiple case zero count</td>
<td>Number of cases that reach the “Opt Zero Value” during a single period before optimisation is turned off</td>
</tr>
</tbody>
</table>
Pack recovery can be used in the event of a pack failure. When the selected input is activated all the case controller refrigeration valves, operating from that pack as selected in Case Setup, are forced closed. When the failure has cleared the Data Manager will begin a recovery process and allow a pre-determined number of devices to begin opening their valves over a set period of time. Note Mercury case controllers must have the appropriate software to use this feature, see Mercury user document for further details.

**Pack Recovery Setup**

1. Pack Fail Ctr
2. Pack Fail Input
3. Use Standby
4. Recovery Count

**Pack Fail Controller** - Select the source of the pack failure from a controller in the device list.

**Pack Fail Input** - Select the source of the pack failure input from the controller selected above.

**Use Standby** – Use Pack standby, from Pack Fail Controller field, to enable feature.

**Recovery Count** - The number of devices allowed to open their valves during each period once the recovery process starts. If set to 3 then 3 devices would begin refrigeration, after a period of time a further 3 devices will start the refrigeration process etc until all devices resume normal refrigeration control.

Note when input equals “1” then pack ok and when input equals “0” then pack fail.

**Pack Defrost Valve**

1. Valve Device
2. Valve Output

**Valve controller**

Select the appropriate defrost header station controller from the drop down list.

**Valve output**

Determines the relay that will be operated. Valve open command sent to the selected controller relay when any case on the network is in defrost.

**Case Setup**

**Energy Menu**

1. Pack Setup
2. Case Setup
3. Night Blinds
4. Blinds Report
5. Condenser TD Warning
6. Case Performance
7. Trim Control
8. Display Setup

Select “2” Case Setup option and press enter
Case Setup Information

DF Limit: Defrost day limit is an energy feature and is configurable for each individual device. It signals an alarm should the controller perform X number of defrosts per day. The feature observes a device's control state to determine the number of defrosts. The alarm index number is 6.

CPT Value: Calculated Product Temperature (CPT) available for each device. The CPT is calculated using a mix of the air on/off probes from a controller in conjunction with a time constant. Note: A CPT can be derived from a single temperature probe also. Once enabled, a CPT value will appear in the associated Device Values page with settable OT & UT limits and alarm delay. The OT alarm index number is 8 and the UT alarm index number is 9. If the probe(s) used to calculate the CPT go faulty then a CPT Fault alarm, index number 6, is generated. The Value column from the Device List will show the CPT and not the Control Temp when CPT is enabled for a device.

The CPT value generated is an estimated value only and may not accurately represent the actual product temperature in the case as it can be affected by a number of variables such as probe position, refrigeration case characteristics etc. Use the CPT Setup page to "calibrate" the feature to a specific case and site setup. When the Data Manager is restarted, the default value used for the initial CPT is half way between the UT and OT Alarm limits. The ability to manually reset the CPT value for an individual controller is available in the controller's settings page.

When enabling CPT for a given device an additional item "TD Value" will appear in the Device values page. This TD Value is the temperature difference between the Air On and Air Off probes. There is a high and low alarm limit and each has its own alarm delay. When the TD rises above the high alarm limit and the delay has expired an alarm will be generated. When the TD drops below the low limit and the delay has expired then an alarm will be generated. High limit alarm index number is 11 and the low limit number is 12. For EEV control there is also a Superheat alarm, this feature generates an alarm when the superheat rises above the Superheat High parameter. When enabled, an additional alarm setpoint and delay parameter will appear.
Valve open too much

This feature below is enabled when a CPT type is selected for a controller. Note the item "valve state" must be available from the controller.

In the parameters for the warning there is an "Open Count" and "Open Length".

If the valve is constantly open for the open length for the count number of times in a 24 hour period, then you get valve open too much alarm.

Example: If the valve is continuously open for 3 hours, 3 times in the last 24 hours then you will get this alarm. Similarly, if the valve is continuously open for 9 hours in one go you will still get this alarm as this still counts as 3 x 3 hour periods.

Night Blinds

Select "3" Night Blinds option and press enter
1. Set this value to the Case Threshold number (number of cases that have predicted no night blinds) before alarm.

2. Set this value to the GP timer that is used for exception conditions. (normally store “core” opening times or “case lights”)

Select “4” Blinds Report option and press enter.

Note the default thresholds used for the Night Blind calculation may not be compatible with all case types and design. Therefore calibration may be required to ensure the correct operation of the feature. RDM cannot guarantee the correct operation in every instance due to variations in case design, probe positioning, onsite conditions etc. For further information please contact RDM Technical Support.
Night Blinds Report

Night Blinds report page:
A score below 0 indicates blinds not used. A score above 0 indicated blinds used.
The “Score” at the top, indicates the number of “No’s” or blinds not used.

Condenser TD warnings

Select “5” Condenser TD warning option and press enter
This feature allows for the early warning of problems associated with the condenser. 3 temperature probes are used; ambient, Liquid Return and Discharge. The probes can be any 3 probes in the system; their source is mapped using this feature. 3 levels of alarms can be set, pre-warning, warning and alarm.
Set Condenser TD Parameters

Condenser TD Menu page:

Ambient and condenser TD values are displayed.

1. Use this to set the parameters for condenser TD warnings.
2. Use this to select the temperature probe sources.

Enter the required parameters and press “OK” to continue.

Select between Discharge – Liquid Return or Liquid Return – Ambient.

When the Condenser TD feature is enabled a device called “CondTD” appears in the Device List and the Alarm Indexes page. Actions can be assigned to the Condenser TD alarms for each CondTD device.

Listed below are the alarms generated and their index numbers.

- Cond N TD Alarm
- Cond N TD Warning
- Cond N TD Pre-warning
- Cond N TD Discharge Probe Error
- Cond N TD Liq Rtn Probe Error
- Cond N TD AmbientProbe Error

Where N is the condenser channel set up.

Temperature Sources

Condenser Temperature Sources

Select the source for each of the required temperatures.

Network or Data Manager internal probes can be used.
Case Performance

Select "6" Case Performance option and press enter

Performance Report

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC01:4</td>
<td>Produce Case</td>
<td>1.0</td>
</tr>
<tr>
<td>RC01:5</td>
<td>Meat Case</td>
<td>10.0</td>
</tr>
<tr>
<td>RC01:6</td>
<td>Dairy Case</td>
<td>2.8</td>
</tr>
<tr>
<td>RC03:1</td>
<td>Deli Counter</td>
<td>2.2</td>
</tr>
<tr>
<td>RC04:1</td>
<td>Fresh Produce</td>
<td>2.1</td>
</tr>
<tr>
<td>RC05:1</td>
<td>Produce Coldroom</td>
<td>5.0</td>
</tr>
<tr>
<td>CDTD01</td>
<td>Condenser TD TEST</td>
<td>---</td>
</tr>
<tr>
<td>Humidity</td>
<td>Humidity</td>
<td>---</td>
</tr>
</tbody>
</table>

The performance feature; if enabled, will monitor the performance of the case and give it a score. The score is based on the set-point, differential, over-temperature alarms and under-temperature alarms.

A score of 1 equates to a good performance, a score of 10 equates to a poor performance.

Trim Control

Select "7" Trim Control option and press enter
Humidity Based Trim Control

Trim Control

- Humidity: 3 % rH
- Trim Level: 10 %
- Trim Power: 0 / 0 kW

1. Set Parameters
2. Humidity Source
3. Devices

Trim control can be achieved in two ways either by Humidity or Dewpoint control. Humidity control is outlined below followed by Dewpoint control.

This screen displays:
- Humidity
- Trim Level
- Trim Power (used power / full power)

Also shown are the various options required to configure Humidity based trim control.

On entering “Set Parameters” the user can configure the Trim Settings. Select the parameter to change and press “Return”. Key in the new value and press “OK”. Here the user can select between Humidity and Dewpoint Trim control.

Settings 7 & 8 allow the user to obtain additional energy savings. The trims can be mapped to a GP timer, for example store trading hours. A trim percentage, this determines the amount of time the trims are on when the GP timer is off, can be set. This allows the user to further limit the power the trim heaters use or it can completely disable the heaters when the store is not trading. Note setting GP channel to 0 will disable this feature.

This screen displays:
- Humidity
- Trim Level
- Trim Power (used power / full power)

On selecting Humidity Source the following page is displayed. The page allows the user to select the source of the humidity readings.

Highlight the desired controller and use the enter button to select a controller as the humidity source. This page also shows the network status of the controller. The mode column indicates which controller is currently the source of humidity readings.

Note: If the humidity sensor fails the alarm “Trim no probe” is generated by the System.
WARNING

Please Note

The specifications of the product detailed on this Set-Up Guide may change without notice. RDM Ltd. shall not be liable for errors or for incidental or consequential damages, directly and indirectly, in connection with the furnishing, performance or misuse of this product or document.

Ensure that all power is switched off before installing or maintaining this product.

**Dewpoint Based Trim Control**

Highlight and press enter on “Devices”

On viewing this menu the user can select which cases to apply trim control. The user can select an individual case, a group of cases or all of the cases displayed to be configured for trim control.

By pressing enter on a case the user can turn trim control on and enter the power of each case trim heater in KW.

**Humidity Trim Control Operation:**

If the relative humidity (rH) is below its low setting, the trims will be at their low setting. If the rH is above its high setting, the trims will be at their high setting. Between the low and high rH settings the relationship between the rH and Trim level is linear, as per the graph opposite.

If the sensor fails, the trims will operate at the “Trims High” value.

This feature when enabled, over-rides the controllers local trim level setting.

This screen displays:

- **Humidity**
- **Ambient Temperature**
- **Dewpoint Temperature**
- **Trim Power (used power / full power)**

Also shown are the various options required to configure Dewpoint based Trim control.

The Dewpoint is calculated on a regular basis from the Ambient Temperature and Humidity of the surrounding shop floor area. The trims are pulsed to maintain the Mullion temperature above the calculated Dewpoint temperature thus preventing condensation from forming on case doors.

Note: - The mullion is the vertical part of the case door frame.
On entering “Set Parameters” the user can configure the Trims settings.

Mullion Offset – Depending on the placement of the probe the mullion offset may have to be adjusted. (As the probe is on the mullion and not the centre of the glass door).

Mullion Start Level – Percentage at which the trims are pulsed when Dewpoint control is started. Note this is also the percentage at which the trims will pulse should a probe fault occur.

Mullion Increment – Percentage by which trim power is increased/decreased depending on the Mullion temperature.

From “Humidity/Ambient Source” the user can configure the temperature and humidity sources required to calculate the Dewpoint temperature.

Selecting “Devices” allows the user to select which cabinets to apply trim control and define the trim heater power rating. Selecting a device displays the screen opposite.

The user can select the source of the Mullion temperature readings for each case.
Display Setup

Here the user can define the source of the Mullion temperature readings. For example one of the 12 Analogue inputs that come as standard on the Data Manager could be mapped as a Mullion temperature source for a case Mullion.

When trim control is enabled for a case an additional value will appear in the controller value page which shows the trim relay percent operation.

From the Energy page, select “8” Display Setup and press Enter
Data Manager interaction with memory a stick

**Memory Stick**

- Found memory stick
- Free space = 1115048 KB

1. Export Log Data
2. System Dump
3. Save Site Configuration
4. Restore Site Configuration
5. Upgrade Firmware

On placing a memory stick into one of the Data Manager USB ports the screen on the left is displayed. When selecting one of the listed options the user should follow the on screen instructions.

1. Option to save logged data to a file.
2. Option to save system information to a file.
3. Option to save a Data Manager’s full site configuration. See Appendix 2
4. Option to restore a previously saved site configuration. **Note:** use with caution. See Appendix 2
5. Allows user to upgrade the Data Manager software. Note an upgrade file and activation code is required from RDM to enable the upgrade and Data Manager will Restart when feature used.

**Display Setup**

- Description: Total kW Hours
- Type: Total
- High alarm: Minimum
- High warn: Maximum
- Low warn: 0
- Low alarm: 0
- Warn delay: 0 mins
- Alarm delay: 0 mins

**Display Values**

- Device 1: TEMP01
- Item 1: Probe Temp
- Device 2: ------
- Item 2: ------
- Device 3: ------
- Item 3: ------
- Device 4: ------
- Item 4: ------

Description - Enter a name which best indentifies the process.
Type - Select between Total, Minimum, Maximum and Average to create the process value.
Items To Use - Up to 8 sources can be mapped. Select the controller and item required for use.
High Alarm - When the process value is above this limit and the Alarm delay has expired a High Alarm is created. Onscreen text colour changes to Red at this point.
High Warning - When the process value is above this limit and the Warning delay has expired a High Warning alarm is created. Onscreen text colour changes to Orange at this point.
Low Warning - When the process value is below this limit and the Warning delay has expired a Low Warning alarm is created. Onscreen text colour changes to Orange at this point.
Low Alarm - When the process value is below this limit and the Alarm delay has expired a Low Alarm is created. Onscreen text colour changes to Red at this point.
Warning Delay - Delay applied to High/Low Warning alarms. Set to 0 to disable alarm feature.
Alarm Delay - Delay applied to High/Low Alarms. Set to 0 to disable alarm feature.
Note when no alarms are present the process value text colour is shown as Green

**Item Selection**

Pressing the “Items” key allows the user to select which device(s) and which item on the device(s) are used to calculate the process value.
When the feature is enabled a system device entitled DISPLAY appears in the Device List. If a fault occurs on anyone of the items e.g. a probe failure, then it is discounted until the fault is rectified.
DHCP Detect Feature

The DHCP server will be turned off in the Data Manager should another DHCP server be detected on the Ethernet 0 network. An alarm is created and system log entries are added to show when this occurred/cleared. If the Data Manager detects no DHCP server for 15 minutes, after the initial detection, then it will clear the alarm and re-enable its DHCP server.

Power Fail

In the event of the mains power supply being interrupted the Data Manager will revert to its on-board battery backup hardware (PR0492), if fitted, and generate a “Power Fail” alarm. RDM recommend that the battery from the on-board battery backup is replaced once a year. Note the battery backup hardware is required for an alarm to be created.

Please note if the Data Manager has a battery backup kit fitted and the Data Manager is being transported then the battery must be removed from the Data Manager and fitted in the cardboard retaining filler which ships with the Data Manager to prevent damage during transit.

Keypad Description

Soft keys: function is defined by the on-screen text

Keys:
1 space
2 ABC a b c
3 DEF d e f
4 GHI g h i
5 JKL j k l
6 MNO m n o
7 PQRSP q r s
8 TUVt u v
9 WXYZ w x y z
0. - ?

Disclaimer

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Appendix 1: Related Part Numbers

* IP Network Enabler required. Once the interface is enabled each device which logs on to the Data Manager takes up one position out of a block of 32 IP devices. Doesn't apply to Computer/Laptop or Orbit Outstation connections.

Please note if the Data Manager has a battery backup kit fitted and the Data Manager is being transported then the battery must be removed from the Data Manager and fitted in the cardboard retaining filler which ships with the Data Manager to prevent damage during transit.

**Note** – Not All features or functionality are available by default, please find below the list of hardware parts/software feature activations which can be ordered when purchasing a Data Manager.

<table>
<thead>
<tr>
<th>Hardware Related Part Numbers</th>
<th>Software Related Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM Base model with on board PSU (Obselete) PR0500</td>
<td>Energy Saving – Optimisation Features Only PR0474</td>
</tr>
<tr>
<td>DM Base model with on board PSU &amp; SSD PR0510</td>
<td>Energy Saving – Network Trim Heaters Control Features only PR0475</td>
</tr>
<tr>
<td>On-board modem PR0491</td>
<td>Energy Saving – Night Blinds Features only PR0476</td>
</tr>
<tr>
<td>On-board battery back up PR0492</td>
<td>Energy Saving – Condenser TD Features only PR0477</td>
</tr>
<tr>
<td>12 Analogue probe input expansion card PR0460</td>
<td>Energy Saving – Performance Features only PR0478</td>
</tr>
<tr>
<td>3 Relay digital output expansion card PR0461</td>
<td>Energy Saving – Defrost Warning Features only PR0479</td>
</tr>
<tr>
<td>4 x 4 – 20mA Input expansion card PR0462</td>
<td>Energy Saving – All Features PR0484</td>
</tr>
<tr>
<td>4 x 4 – 20mA Output expansion card PR0463</td>
<td>485 Genus® compatible network PR0480</td>
</tr>
<tr>
<td>4 x 0 – 5 or 0 – 10 Volt Output expansion card PR0464</td>
<td>IP Network Enabler – Each 32 devices PR0481</td>
</tr>
<tr>
<td>4 x 0 – 5 or 0 – 10 Volt Input expansion cards PR0465</td>
<td>Wireless Mesh Software Enabler – Each 32 devices PR0735</td>
</tr>
<tr>
<td>2 x 0-10 V Input &amp; 2 x 0-10 V Output PR0466</td>
<td>Data Manager Software Upgrade to Latest Version DMSWUPG</td>
</tr>
<tr>
<td>6 Input (240V Status) PR0467</td>
<td>Wireless Mesh Software Enabler PR0735</td>
</tr>
<tr>
<td>USB to RS485 Network Adapter - 2 x 32 devices PR0482</td>
<td>ActiveFM PR0487</td>
</tr>
<tr>
<td>USB card reader kit with DM wing cover PR0493</td>
<td>The Data Builder PR0485</td>
</tr>
<tr>
<td>DM 4 Port hub I/O board upgrade kit PR0459</td>
<td>The Data Builder Lite PR0485-LITE</td>
</tr>
<tr>
<td>Data Manager GSM Modem PR0496</td>
<td>Modbus® Interface Enabler PR0470*</td>
</tr>
<tr>
<td>Secondary IP Interface PR0486</td>
<td>BACnet® Interface Enabler – Each 32 devices PR0471</td>
</tr>
<tr>
<td>USB/485 Modbus® Dongle for Data Manager PR0623</td>
<td>Siemens® NetRS/NetFX Interface Enabler PR0483*</td>
</tr>
<tr>
<td>Care® Template PR0490-OWG*</td>
<td>Cbiss Gas Interface PR0498*</td>
</tr>
<tr>
<td>CPT and Predictive Alarming Functions PR0487-CPA</td>
<td>Pack Shutdown Support (Intelligent Load Shedding) PR0484-PSL</td>
</tr>
<tr>
<td>RCS Interface Enabler PR0470-RCS</td>
<td>Shuttle USB Logger Interface Enabler PR0499</td>
</tr>
<tr>
<td>USB/485 Tektronics® Adapter for Data Manager PR0470-TEK</td>
<td></td>
</tr>
</tbody>
</table>

* IP Network Enabler required. Once the interface is enabled each device which logs on to the Data Manager takes up one position out of a block of 32 IP devices. Doesn't apply to Computer/Laptop or Orbit Outstation connections.

Please note if the Data Manager has a battery backup kit fitted and the Data Manager is being transported then the battery must be removed from the Data Manager and fitted in the cardboard retaining filler which ships with the Data Manager to prevent damage during transit.

Please note RDM recommend that the Data Manager is restarted, once the installation is complete, if any new hardware is connected for example part PR0482. Please refer to the appropriate installation guide, found on the RDM website, before installing any of the above additional hardware.

**USB Hardware**

Note any Data Manager built pre-February 2010, Issue 7.0 or lower, will require a RDM USB Hub, PR0624, to operate high power USB devices such as a 3G USB Modem or Wireless Mesh USB adapter.
Appendix 2: Save/Restore Data Manager Configuration Guide

Data Manager software V1.13.0 and above has the ability to save or restore a Data Manager site configuration. This feature allows the end user to copy a system configuration from one Data Manager to another. This should help reduce the commissioning time should a Data Manager need to be replaced onsite.

Caution should be taken when using this feature. Do not proceed if you are unsure of its consequences.

To save the Data Manager site configuration, with a USB memory stick, use the following procedure:

1. Ensure all alarms are accepted before proceeding.
2. Insert a memory stick into a USB port on the Data Manager. The Data Manager will detect the memory stick and list a series of options.
3. Select “Save Site Configuration” from the list. The message “Please wait” will be shown whilst the Data Manager complies the configuration. Once finished “Configuration Backup Complete” will be shown and the Data Manager will then return to the list of options.
4. The site configuration will now be saved on the memory stick. The file name given to the saved configuration will be the Data Manager Site ID. This configuration can now be copied to another Data Manager.

To restore a Data Manager configuration, with a USB memory stick, use the following steps:

1. Ensure all alarms are accepted before proceeding.
2. Insert a memory stick that has the desired Data Manager configuration saved into a USB port and select “Restore Site Configuration”. An install level pin is required to proceed beyond this point.
3. Using the cursor keys select the Data Manager site configuration from the list of site configurations saved on the memory stick and press the "Restore" button.
4. Please wait will be shown whilst the site configuration is copied to the Data Manager. Once complete the message “Configuration Restored – Restarting” will be shown and the Data Manager will re-start momentarily.
5. The Data Manager will now be running the selected configuration.

Please note if you are copying a configuration on to a Data Manager which has already been configured then there is no way to revert to the previous site configuration once this process has been completed (unless the previous site configuration has been saved before hand).

The same procedure can be completed from the Data Manager web pages. Firstly login, to the old Data manager, via the Service icon and click on General. Here the save/restore options are displayed. Click on “Save Site Setup” and follow the on-screen instructions. Once complete connect to the new Data Manager to upload the site configuration. Click on restore, follow the instructions and once complete the Data Manager will restart.

Note if replacing one Data Manager onsite for another Data Manager firstly copy the old Data Manager configuration. Isolate the old Data Manager from its power supply and remove the unit. Now affix the new Data Manager in position. Before turning on the new Data Manager do not connect any of the controller RS485/IP networks, if fitted, this should be done once the site configuration has been copied across to the Data Manager. If daughter boards are fitted to the old Data Manager make sure they are fitted to the new Data Manager before uploading the configuration. The 'new' Data Manager must have the same system configuration options enabled as the Data Manager that it is replacing e.g. if the 'old' Data Manager has all the energy features and 2 IP Networks enabled then the 'new' Data Manager must have this also.

The site configuration should contain the current Data Manager set up e.g. GP timer channels, defrost timer channels, alarm indexes, alarm actions, usernames/passwords etc. You must however review the Data Manager configuration once complete to ensure the desired set up has been achieved. Care should be taken when using a configuration that hasn’t been saved recently as the Data Manager configuration may have been edited/changed since saving the setup e.g. the modification of a GP timer channel.
### Appendix 3: Trim Heater Control

Energy savings via the Mercury range of case controllers can be achieved in a number of ways. One of which is pulsing the trim heater relay off for a given period of time. This can be achieved by utilising the Trim Heater Control energy feature in the Data Manager. RDM recommend that the Trim Heater Pulse Module (PR0723) is used in all instances of trim control. This module is fitted in between the trim heater of the case and the relay output of the Mercury case controller which is pulsing the trim heater. The trim heater module output provides a smoother power distribution, compared to using the Mercury case controller trim relay output direct, as it switches at the zero voltage crossover point. Switching the trim heater on and off via a normal relay, without using the RDM trim heater pulse module, may damage the trim heater and reduce the operational life of the heater. Please see the Trim Heater Pulse Module user guide for further details.

### Appendix 4: Terms of Use

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- Modbus® is a registered trademark of Modbus® Organization Inc
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- Danfoss® is a registered trademark of Danfoss® A/S
- Siemens® is a registered trademark of Siemens® AG
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### Change History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Changes/Additions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.6</td>
<td>12/04/2006</td>
<td>Addition of “Network Scan” and “USB RS485 Adapter” screens</td>
</tr>
<tr>
<td>4.8</td>
<td>19/04/2006</td>
<td>Addition of “Alphabetical Sort” for the devices list. Alarm and item Aliases added. Alarm relay delays added. System Log screen added. Support for Modbus® (Siemens® Net-LS template added). Probe range extended; now 99°C to +350°C. Local I/O now come through as items in the device list. Case performance extended to include 3rd party controllers (Tuscans). 48 channel Data Monitor split support after 10K probe added. Local I/O can now be set-up via a PC page.</td>
</tr>
<tr>
<td>4.9</td>
<td>19/05/2006</td>
<td>Defrost Timer channels have been enhanced to allow for individual times to be added. Foreign language support for the system log. Number handling changed from 16 bit to 32 bit. Added more text for setting GP timer mask.</td>
</tr>
<tr>
<td>5.0</td>
<td>16/04/2007</td>
<td>Generation of Site Reports added. Offset parameter for DM analogue probe input’s added. Number of moderns increased to 6. Inclusion of GSM modem. Ability to send alarms to an email address. Addition of add controller feature. Inclusion of case performance report. Addition of parameter to set Trim level when out with store trading hours. Ability to save/store site configurations by memory stick introduced. Alarm Inhibit key added to home page. Revision of Network Settings page. Ability to operate Mercury controller Trim’s from Humidity or Dewpoint control. Addition of 8 Global GP Timer channels. Default alarm actions page added. The Time Zone in which the DM is operating can be defined. System alarm “Trim no probe” added. Siemens® NetRS/NetPX support added. BACnet® Interface can be enabled. Signal alarm locally if dial out fails. Test Mail and Test dial out button added to alarm actions page. Addition of System and CondTD and their alarm index numbers.</td>
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<tr>
<td>5.1</td>
<td>18/04/2007</td>
<td>Alterations made to selected Data Manager screens in user document.</td>
</tr>
<tr>
<td>5.3</td>
<td>10/08/2007</td>
<td>Added IP range info on the “add controller” page.</td>
</tr>
<tr>
<td>5.3A</td>
<td>31/08/2007</td>
<td>Additional text added to Defrost Hold operation explaining its interaction with the Length parameter from Defrost Header Control.</td>
</tr>
<tr>
<td>1.50.0</td>
<td>05/03/2008</td>
<td>General underlying operating system improvements. “More” option now shown on DM home page. Additional system alarms and index numbers created. Web services added. Support for RDM wireless communications added for future development. GP Timer Run-on feature added. DHCP detect feature added. Additional action “Fail” has been added to alarm actions”. Network errors are reported for both RS485 &amp; IP controllers. Case/Valve performances appear as inputs under the controller values page and both have a settable alarm limit. Case performance, valve performance &amp; trim control history can now be graphed. System info page now accessible at Service level. When trim control enabled on a controller trim % value is shown under outputs on controller values page. Option to extract log data with date and time information in separate columns. Export log data now extractable in a HTML format. System dump file includes alarm &amp; energy feature setup. Dial out fail feature now operates with test dial out’s. CBISS &amp; Modbus® controller support added. Save Site Setup feature now copies TDB programs residing in the Data Manager.</td>
</tr>
<tr>
<td>Revision</td>
<td>Date</td>
<td>Description of Changes</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>V1.50.0-A</td>
<td>26/03/2008</td>
<td>Save/Restore Data Manager configuration guide added.</td>
</tr>
<tr>
<td>1.50.1</td>
<td>17/06/2008</td>
<td>Ability to point the Data Manager to an NTP time server introduced. Revision number in change history altered to follow that of Data Manager software version. Network errors description updated regarding IP controllers. Additional information added regarding inhibit, case performance and valve performance alarms.</td>
</tr>
<tr>
<td>1.51.0</td>
<td>01/04/2009</td>
<td>Ability to enable/disable feature “signal on dial out fail” from FP introduced, Visibility feature introduced, controller type file and network address now shown on Network Errors page, Split Controller feature added, Shuttle Support included, Hide Controller feature introduced, System info page option shows HDD Status, Log thin age and log thin frequency parameter introduced, Network Scan feature operates on both IP and Genus® networks, there are now 25 packs available to configure for the pack optimisation feature, Use Standby option introduced for pack recovery option, fail input for a given pack can be allocated to any controller, a number of inputs and outputs for controllers are now selectable from a drop down list instead of entering a number which corresponds to an Input or Output, Condenser TD feature now has 25 channels to configure, each channel enabled appears as a virtual controller in the device list, Split controller feature added, Hide controller feature included, Visibility feature introduced, Warning Setup: - Defrost terminating on temp alarm now created by each controller, support for 10K(2) USA probe added (Range -40 Deg C to 150 Deg C), changing/enabling of Pack Optimisation, Night Blinds, Defrost Warning and Case Performance are more explicit in the system log, more explicit logging of Alias changes in System Log, ability to calculate Case Performance figure for DM local Inputs, Split Monitor etc, Configure Sources option available under Case Performance, With Battery Backup kit fitted then a power fail alarm is generated the DM, internal save and restore feature introduced (Save/Restore Site Setup), when software restart carried out DM saves any outstanding data to the HDD/SSD before restarting, % Cases Running feature added to Pack optimisation, adjustable delay for DM display entering power save mode, choice of screen/text colour (if DM has colour display fitted).</td>
</tr>
<tr>
<td>1.51.1</td>
<td>03/07/09</td>
<td>Unused Plant TDB files are deleted on restart of Data Manager. Parent device of Controller Split is now displayed in Controller Information page, Modbus® Interface link on the System Config page shows which templates are present even if they are not enabled, “Transmit” output option added to GP Timer channels.</td>
</tr>
<tr>
<td>1.52.0</td>
<td>07/12/09</td>
<td>Condenser TD energy feature enhanced with second configuration option, support for up to x4 Wireless Mesh Base units introduced.</td>
</tr>
<tr>
<td>V1.52.1</td>
<td>09/02/10</td>
<td>Appendix 4 introduced, Related Part Numbers table updated.</td>
</tr>
<tr>
<td>V1.53.0</td>
<td>25/06/2010</td>
<td>Monochrome screen images replaced with colour screen images. Energy display setup page added. Data Manager VGA display graphics enhanced, USB 3G modem support, USB/RS485 Modbus® adapter supported added, Wireless Mesh USB adapter support added, Defrost Timer feature enhanced, Send Extra feature included for modern configurations, Energy usage/monitoring feature introduced, USB CAN adapter, ordering, split/delete wire and find/replace options added to TDB.</td>
</tr>
<tr>
<td>V1.53.1</td>
<td>12/10/2010</td>
<td>Alarm Delay Feature Added.</td>
</tr>
<tr>
<td>V1.54.0</td>
<td>11/02/2011</td>
<td>Screens and text updated to show device instead of controller, CPT feature added, Defrost Day Limit option added, RDM Wireless probe support added.</td>
</tr>
<tr>
<td>V1.54.0c</td>
<td>09/06/2011</td>
<td>Note on split controllers being affected by defrost timer added.</td>
</tr>
<tr>
<td>V1.54.1</td>
<td>22/07/2011</td>
<td>Changes to pack setup, added support for additional 3rd party networks. Script setup feature added, CPT to allow 25 options to configure.</td>
</tr>
<tr>
<td>V1.54.5</td>
<td>23/03/2012</td>
<td>Option added to put case into defrost through FP, Case Setup is now accessible at Service level, the units for a given input/output on a device are now included in export log, a controllers current network status, online or offline, is now included in Export Log data along with the current CPT type for the case, CPT parameters return to default when case CPT type changed.</td>
</tr>
<tr>
<td>V1.54.7</td>
<td>27/06/2012</td>
<td>Support for revised USB to RS485 adapter.</td>
</tr>
<tr>
<td>V1.55</td>
<td>31/08/2012</td>
<td>Improved System Log entries describing changes made when modifying Alarm Indexes, Console Support and the DHCP Server, number of active Type Files in current use increased from 250 to 4096, software activation added to enable CPT (PR0487-CPA) or Pack shutdown (Intelligent Load Shedding) features (PR0484-SSS) within the Data Manager, enhancement to Case Setup page to enable Pack Optimisation feature on a case by case basis regardless of pack association, new Web Service functionality added: - Alarm accept, CPT Reset command, Set Virtuals and Get Virtuals, general CGI browsing speed enhanced (webpage’s), enhancements to the Split Device feature, TDB Control Editor Peer to Peer feature introduced to allow exchange of data between Data Manager’s on the same Eth 0 LAN, Degree F support added for Wireless Battery Probe (PR0733), enhancements and improved reliability to graphical interface when using a tablet PC or mobile telephone, alarm predictive scoring feature exclusively for RDM Active FM remote monitoring solution added.</td>
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<td></td>
<td></td>
<td>New TDB blocks added: - Push Text, Two-Way Switch, Analogue Edge, Digital Edge, Nw Param Block, Date/Time Block, Match Date Block, Alarm Input and GP Timer 3 Block. See separate Data Manager TDB Control Editor document for further details.</td>
</tr>
<tr>
<td>V1.55.2</td>
<td>21/11/2012</td>
<td>Additional functionality added to allow a minitype item to be used in a devices TPI calculation, default CPT values updated.</td>
</tr>
<tr>
<td>V1.55.3</td>
<td>16/01/2013</td>
<td>Feature added to highlight if alarm actions set to 0. PC view only.</td>
</tr>
<tr>
<td>Version</td>
<td>Date</td>
<td>Changes</td>
</tr>
<tr>
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<tr>
<td>V1.55.5</td>
<td>19/03/2013</td>
<td>JavaScript graphical interface given a new look and feel (JavaScript provides a graphical interface for non JAVA based devices such as mobile telephones &amp; tablet PC’s.) Support added to Calculated Product Temperature (CPT) feature to account for third party device probe failures. Support added for Tektroniks protocol. Whilst Resource Data Management makes every effort to ensure compatibility with the majority of Tektronik devices we cannot guarantee the operation of every device with the Data Manager. Please contact our Technical Support department for further information.</td>
</tr>
<tr>
<td>V2.0.2</td>
<td>09/12/2013</td>
<td>New software, dmTouch compatible.</td>
</tr>
<tr>
<td>V2.0.3</td>
<td>28/01/2014</td>
<td>Enhanced BACnet support added, new auto split feature added, Night Blinds threshold.</td>
</tr>
<tr>
<td>V2.0.4</td>
<td>06/02/2014</td>
<td>TDB Lite amended from a maximum of 40 blocks to 100 blocks.</td>
</tr>
<tr>
<td>V2.0.5</td>
<td>31/03/2014</td>
<td>User elevations and TLS mail support added.</td>
</tr>
<tr>
<td>V2.0.6</td>
<td>07/04/2014</td>
<td>Enhancements to Swipe System (Active FM Only)</td>
</tr>
<tr>
<td>V2.0.7</td>
<td>24/04/2014</td>
<td>Added TPI support for client specific OEM Brooklands controller, Enhanced Minitype for split controllers using night blinds, Enhancement to BACNET Interface to prevent devices logging on which have no name or description.</td>
</tr>
<tr>
<td>V2.0.8</td>
<td>23/06/2014</td>
<td>Support added that if the RCS gateway comes back with no values in a controller, it will not create a type file.</td>
</tr>
<tr>
<td>V2.1</td>
<td>11/09/2014</td>
<td>TPI summary chart (modern view only) and alarm comments using keypad / display added. Internal file compression re-structuring.</td>
</tr>
<tr>
<td>V2.1.1</td>
<td>09/03/2015</td>
<td>Updating of USA address</td>
</tr>
<tr>
<td>V2.2</td>
<td>16/06/2015</td>
<td>New settings for night blind monitoring. Added 'Send All Alarms' function for alarm monitoring centres. Allows you to modify the parameters of a CPT type, via TDB. Updated Modbus energy meters table.</td>
</tr>
</tbody>
</table>