

Resource
Data Management

DMTouch

Commissioning/User Guide
Revision 2.7.2a



PR05XX-XX

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Commissioning and Service Guide

For commissioning using the DMTouch refer to the DMTouch Commissioning Guide

DMTouch V2.7.2
CGI version V2.7.2

Commissioning Using a PC

The following section contains information relating to the DMTouch as seen when accessed via a PC at "install" level. Note that some of the screens and operations are not available when logged in at "service" or "site" level.

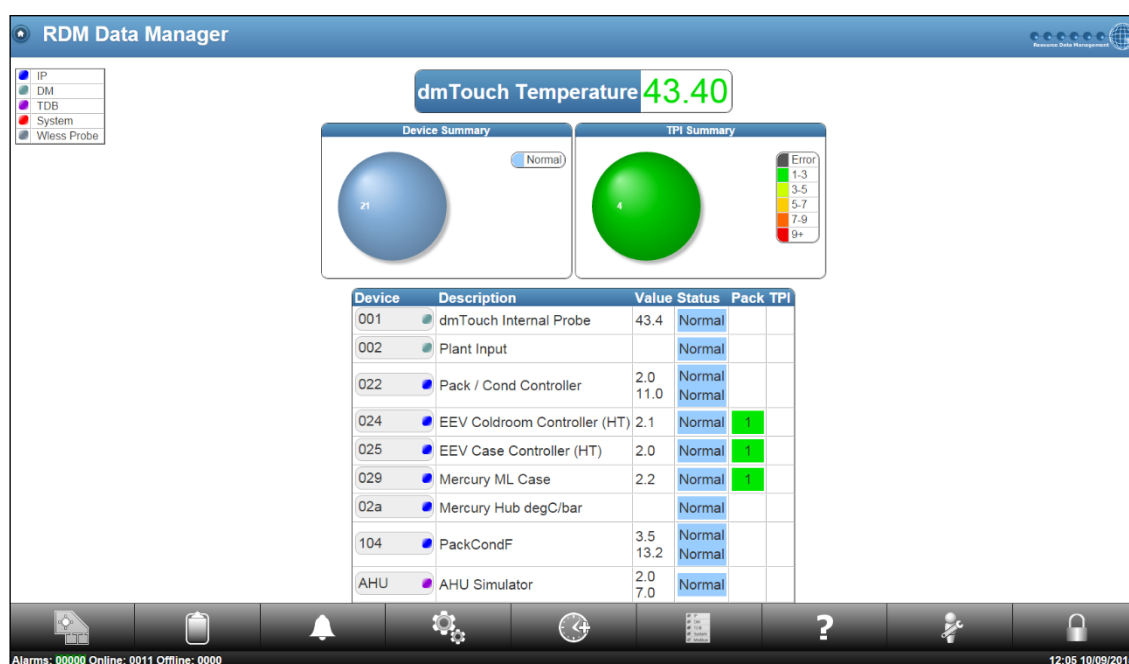
Navigation

With the PC attached to the DMTouch, start a web browser session, the Home screen will be found at **http://10.1.2.75** when connected to eth0. This is the default IP address entered into the DMTouch when it ships from the factory. This can be changed by the end user, therefore the IP address may vary from site to site. Some example web browsers are Internet Explorer or Google Chrome. For consistent results, use the DMTouch application navigation buttons rather than the standard browser buttons.

Note: The default eth0 address (10.1.2.75) may be modified to use a different DHCP range on request. Please contact the relevant RDM accounts manager for more details.

Home Screen

There are two types of screen that will appear at the home page, this will be either a Device List or a Layout. In both cases menus will appear at the bottom of the page, as shown below:



- Device List
- Layout
- Reports
- Alarm Log
- Service
- GP Run-On

- Key Legend
- Help
- Maintenance
- Logout
- Back
- Energy Monitoring

By clicking on the desired menu, it will navigate to that particular section. Selecting the 'service' icon will prompt the user to log in with their credentials. Different Log-ins have associated levels, dictating the menus accessible. The DMTouch periodically prompts the user to login, this is a security feature and will occur every 15 minutes.

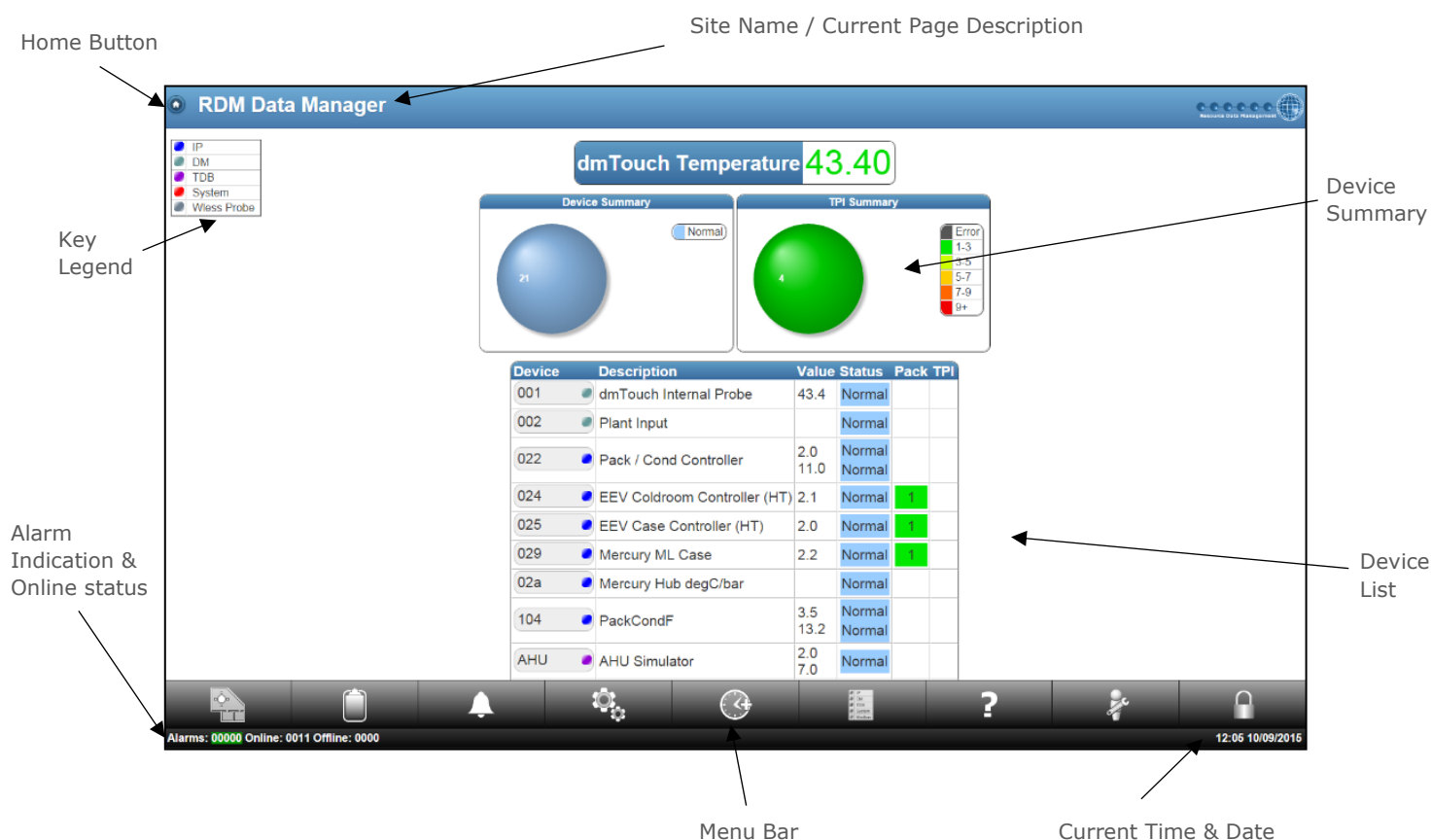


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Device List

Shown below is an example Device List from the DMTouch home screen, this is shown if no layout diagram has been uploaded to the DMTouch:



The columns shown are as follows:

Device	Device Name
Description	Device Alias
Value	Current Value (If used). For example a refrigeration cabinet's current Control Temperature
Status	Current state
Pack	Pack Optimisation Performance Indicator*
TPI	Case Temperature Performance Indicator*

*Only viewable when the necessary energy features have been enabled. Refer to DMTouch commissioning guide for full details.

The status field is colour coded to indicate the different states:

Red	Alarm
Blue	Normal
Yellow	Defrost
Green	Case Off
Orange	Alarm Inhibit

Further information on each device can be viewed by clicking on the desired device from the list. There is an indication of the system's current status at the lower left hand side of the screen. This provides Time and date, Number of current alarms & device network status.



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Device Key

The Device list has a colour coded key which highlights the different device types.

Typical device items are:

IP	IP Device e.g. RDM or 3 rd Party TCP/IP
Genus®	RS485 Genus® Device
DM	DMTouch Local IO
TDB	DMTouch TDB program
System	System Device e.g. Condenser TD Channel
Monitor	Split Monitor e.g. Mercury Monitor Split via Split Monitor Feature
BACnet®	BACnet® Device
Wireless	RDM Wireless Mesh Device
Split	Device Created from Split Device Feature
LON®	Danfoss® LON® Device
Tektroniks	Tektroniks
Wless Probe	RDM Wireless Battery Probe
Modbus	Modbus Device – Networked via USB to RS485 Adapter (PR0623)

Device	Description	Value	Status	Pack	TPI
001	dmTouch Internal Probe	43.5	Normal		
002	Plant Input		Normal		
022	Pack / Cond Controller	2.0 11.0	Normal		
024	EEV Coldroom Controller (HT)	2.1	Normal	1	
025	EEV Case Controller (HT)	2.1	Normal	1	
029	Mercury ML Case	2.1	Normal	1	
02a	Mercury Hub degC/bar		Normal		
104	PackCondF	3.5 13.2	Normal		
931	Plant TDB	25.5 25.5 25.5	Normal		
AHU	AHU Simulator	2.0 7.0	Normal		
ALARM	Alarm Testing		Normal		
CdTD01	Condenser TD		Normal		
CdTDB	Condenser TD Probes	15.0	Normal		
DISPLAY	Display	43.5	Normal		
ENERGY	Energy Meter		Normal		
PACK-1	Pressures		Normal		
PID	PID Control		Normal		
PID1	TESTING		Normal		
WPR000	Wireless Probe	24.3	Normal		1.0
WPR001	Wireless Probe	23.9	Normal		1.0
WPR002	Wireless Probe	24.0	Normal		1.0
WPR003	Wireless Probe	24.0	Normal		1.0

Layout

If a layout diagram has been loaded during commissioning, then a screen similar to the one below will appear as the home page. Clicking on a device or bay will automatically zoom to that area.



The layout screen gives an over-view of the site layout. The individual devices are colour coded to show their respective states.

Colours defining device states are:

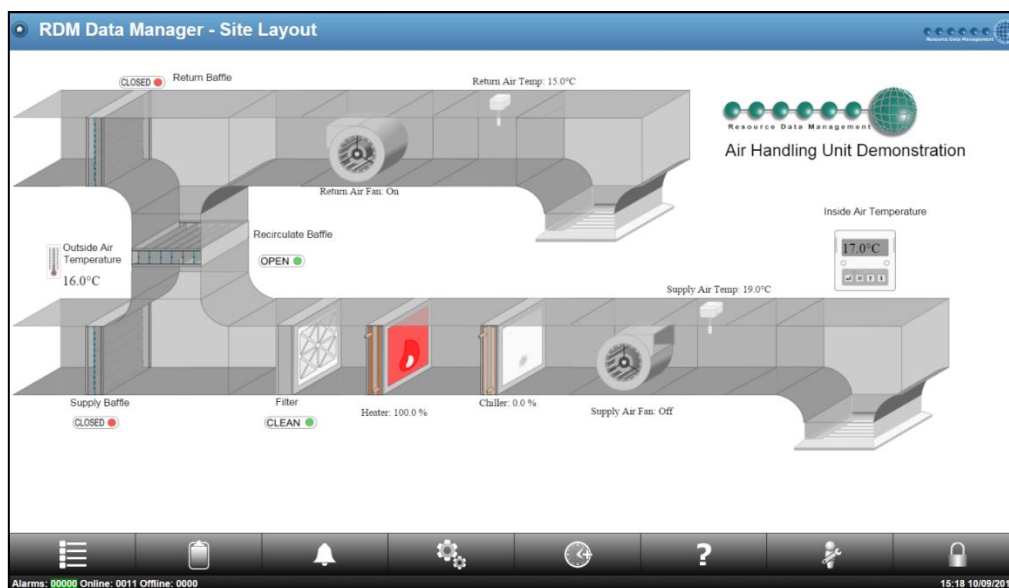
Red	Alarm
Blue	Normal
Yellow	Defrost
Green	Case Off
Orange	Alarm Inhibit



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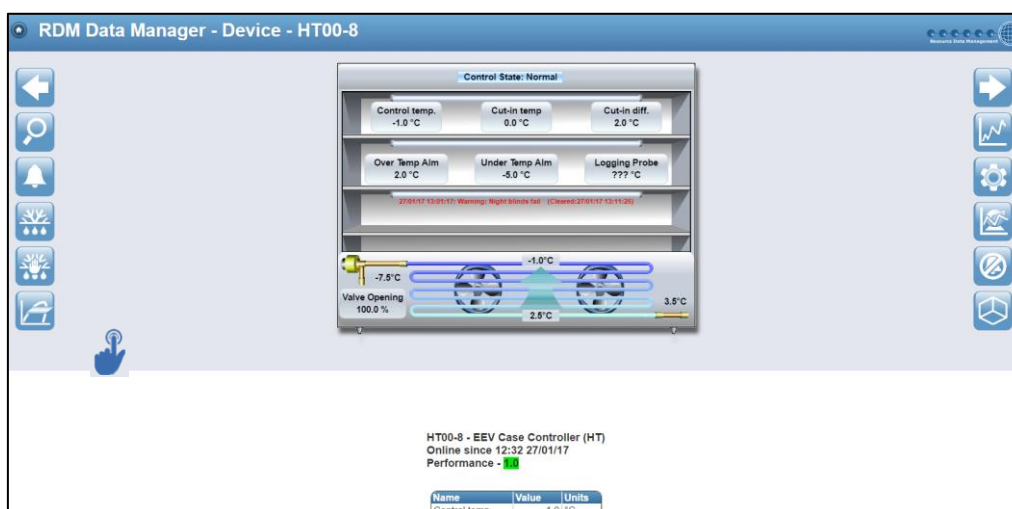
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The user can also create their own images using the RDM Layout Editor 3 program that can be displayed on the DMTouch layout screen. Below is an example of image created for an air handling unit. Contact Technical Support for further information on Layout Editor 3.



Device Values Page

From either the Device List or Layout clicking on a device will display the device values and/ or alarm status. An example is shown below.



The data on this screen will vary according to which device is being viewed. There are a further 10 device-associated screens, which can be accessed by clicking the icons on this screen:

Previous Moves back to the previous device

Settings Shows the device's parameters

Alarms Shows the device's alarm log

Defrost* Performs an immediate defrost

CoP Coefficient of performance

Next

Graph

Set

Efficiency

Profile

Moves on to the next device in the list

Shows the device history in graphical

Allows the user to change device parameters

Shows graphical reviews of case valve performance

Shows graphical performance profile

Note:** On RDM devices, defrost commands sent from the DMTouch, will only be permitted when the device is set to 'remote' defrost. *Note:** On RDM devices, the Defrost Termination command will end a defrost regardless of control state (Def Max, min etc.) or if the device is set to 'local' or 'remote'. Not all devices are compatible and those which are must have software versions matching the release date of this feature. For 3rd party devices, please check with manufacturer for compatibility.



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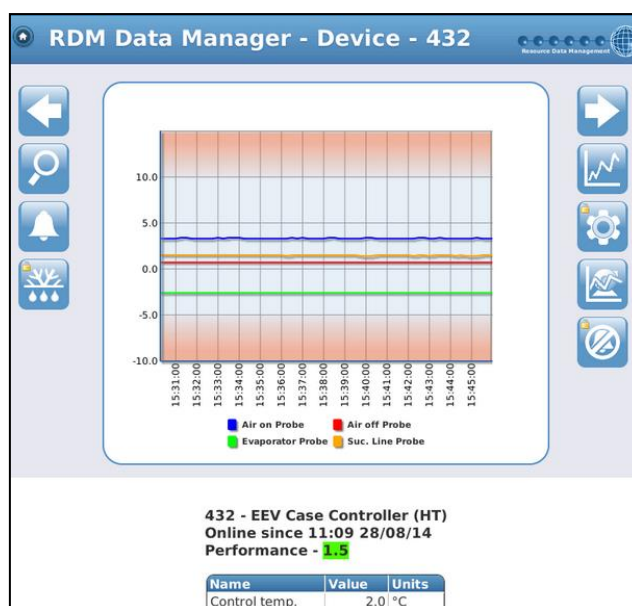
Dynamic Real Time Graphing

Dynamic real time graphing and mimics are only visible via the DMTouch front end display or when viewing it through 'Modern' web page look.

The feature will display the control values for a device on a dedicated scrolling graph which will update in real-time. The DMTouch will select up to the first four "Control values" it can automatically identify. If it can, it will preferentially select Air-on, Air-off, Suction and Evaporator temperatures (Suction & Discharge pressures for pack controllers).

If the DMTouch can identify Alarm High/Low limits or Over/Under temperature limits, it will draw these as shaded red bands on the graph.

The user can also temporarily hide certain traces by clicking on the name of the control value beneath the graph.



The scrolling update will refresh the data every 15 seconds*. The graph is time stamped and the traces are 'selectable' by clicking on the names.

Note: If the DMTouch fails to automatically identify any control values for a given device, then this feature will not be displayed. For more details on control value identification, please consult RDM technical support.

* 15 seconds is the minimum update period and is dependent on the product and network type in use. For example the wireless battery probe only updates its temperature value every 10 minutes, therefore the feature will update the data every 15secs but the user would only see values change every 10min.

Note: If there is a device mimic configured and dynamic graphing is available, the user can click in the background of the mimic to navigate between views (or swipe left and right on front panel).

Reports

From any page click on the Reports icon. The options to the right are displayed:

Report Type

From the drop down menu select the type of information to be generated in the report.

- Graph of alarms by device
- Count of alarms by device
- Graph of alarms by alarm
- Count of alarms by alarm
- Graph of OT alarms by device
- Count of OT alarms by device
- Graph of offline alarms by device
- Count of offline alarms by device
- Night blinds report
- Energy Report

The data can be viewed in tabular or graphical form. The user can also define the hours from which information is gathered to generate the reports, such as the trading hours for that site.

Out Of Hours Constructs reports with data obtained from the out of hours/ time period e.g. when the site is closed.

Normal Hours Normal operating hours of the DM e.g. site opening hours.

Select Period From the drop down menu select the time period; Last 24 Hours; Last Week; Last 2 Weeks; Last Month; Specific Period.

Once configured click the 'Submit' button to retrieve the data



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Alarm Log

From any page click on the Alarm Log icon. Shown below is an example list of alarms, where both Current and Old alarm information is shown on this page. Additionally, there is a filter menu, where All, Current and Old Alarms can be individually viewed. Details will be shown with the below details;

- Unique 'Serial' number per alarm – clicking on the link will display more details on the individual alarm such as actions taken
- The Device name which generated the alarm – clicking on the link will take the user to the device which alarmed.
- The alarm description
- The Occurred, Cleared and Accepted time/ date of the alarm.

RDM Data Manager - Alarm Log

Accepting Alarms & Appending Comments

Firstly ensure the "Allow alarm comments" feature is enabled under the [Site Setup](#) page. Navigate to the Alarm Log from the Home Page as shown above. Now select the alarm to acknowledge by clicking the "Accept" hyperlink. At this point the user will be asked to login (if not already). Once logged in, the comments can be entered and associated to the alarm by clicking 'Add Comment'.

GP Run-On

Click on the GP Run-On icon at the bottom of the screen. A page similar to the following will be displayed;

RDM Data Manager - GP Channel Run-On					
Channel	Description	Status	Duration (mins)	Finish	Run-On
2	Master Time Channel	On	20	---	Set
3	Cabinet Lighting	Off	4	---	Set
4	Stocking Lights	Off	60	---	Set
7	Warehouse Lights	Off	60	---	Set

Operation:

- If timer channel is off, the set button will turn the channel on for the given duration.
- If timer channel is on, the set button will extend the on cycle of the channel on for the given duration.
- The clear button will cancel the run-on.



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GP Run-On Operation

If a GP timer channel is off, the set button will turn the channel on for the given duration.

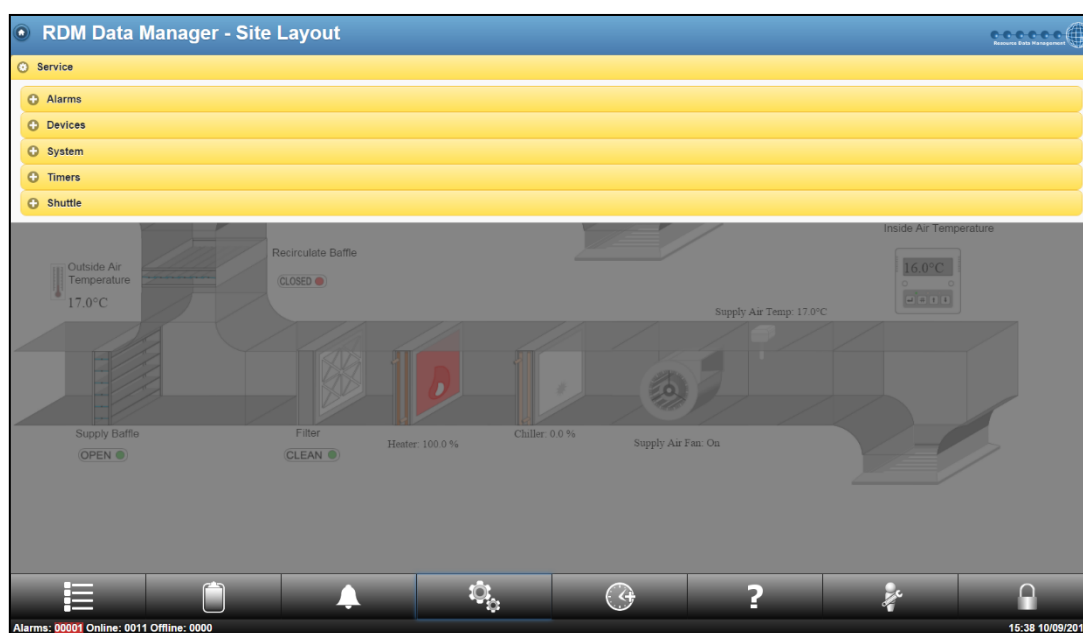
If a GP timer channel is on, the set button will extend the on cycle of the channel on for the given duration.

The clear button will cancel any run-on initiated for a given GP Timer channel.

For a GP Timer channel to appear in this list it must have its "Run-On" option set to allow. The maximum allowable run-on limit is defined on the site setup page. Enter a run-on value into the desired channel and click the "Set" button to enable the run on.

Service

The Service option provides access to the different features and configuration options available in the DMTouch. From any screen, click on the service icon (2 cogs). Five drop down menus will appear below the Service Tab as shown;



The five main service menus are as follows;

- Alarms
- Devices
- System
- Timers
- Shuttle – if enabled

Note: Icons may not be exactly the same as depicted in this document or in the same location.



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Default Username, Password & Pin

From Software version V2.7.2 and above the default username and password is unique to every individual panel. The specific credentials will be detailed in the documentation that ships with the unit.

The user name will be '**install**'.

The password will be '**PleaseChange**' followed by the panel ID (found within the log in page).

For example: **install**
 PleaseChangeBC123456

The end user MUST add their own install level user.

These default credentials will only be enabled when accessing the system locally (front panel or TouchXL) or from within the systems local subnet. Additionally, If the end user wishes to add the username and password 'install/ '1234' (not recommended), they will also only ever be enabled when accessing locally (front panel or TouchXL) or from devices within the local subnet.

Note:

In the unlikely event the front panel PIN and username and/or password is unknown, for example a new service contract is undertaken and the previous contractor has not passed across the login credentials, it is possible for RDM Technical Support to generate a Data Manager specific, time limited, 'ONCE' code which allows temporary access to only the Data Manager in question at install level allowing an engineer to add a new 'Install' level user. To do this RDM requires in writing, from the end-user/owner of the Data Manager, permission to provide access to the Data Manager. There will also be an administration charge for this request.

For further information please contact Technical Support.

Repeated Login Failures

As default, the DMTouch has in-built security whereby users are automatically locked out on repeated failed log in attempts. The default number of permitted log-in attempts is 5. If this number is reached, the user will be locked out for 1 hour.



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Alarms

Alarm Summary

From the Service Menu, select: Alarms - Alarm Summary.

This feature presents a summary of the alarm actions assigned to each alarm generated for a given device. This allows a user to easily and quickly check the alarm actions assigned on a device by device basis to ensure the appropriate alarm cover is configured. A list of every device is shown, click on the desired device to view the alarm configuration for the device. This is a 'Read Only' feature.

RDM Data Manager - Alarm Summary

Alarm summary for 024

Alarm	Actions					Modem						Front Panel			Console		
	Log	Relay Alarm A (1)	Alarm 2 (2)	Alarm 3 (3)		1	2	3	4	5	6	1	2	3	1	2	3
Missed defrost	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Plant Fault	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Case over temperature	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Case under temperature	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Probe 1 Faulty	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Probe 2 Faulty	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Probe 3 Faulty	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Probe 4 Faulty	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Probe 5 Faulty	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Probe 6 Faulty	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Door Left Open	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Product over temperature	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Product under temperature	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Person Trapped	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Monitor Probe OT	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Case Clean	No	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Remote evap temperature	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Transducer Fault	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Load Shedding	Yes	---	All	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Alarm Inhibit	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Valve Performance	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---
Warning: Case EEV Shutdown	Yes	All	---	---	---	All	---	---	---	---	---	---	All	---	All	---	---

Alarms: 00000 Online: 0011 Offline: 0000

15:43 10/09/2015

Alarm Index

From the Service Menu, select: Alarms - Alarm Index

RDM Data Manager - Alarm Indexes

Current Alarm Indexes

Showing 1 to 8 of 22 device(s)

Device	Indexes															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
001	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
002	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
022	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
024	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
025	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
029	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
02a	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Select All Deselect All

Alarm Indexes to Set

Alarms: 00000 Online: 0011 Offline: 0000 15:42 10/09/2015



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The action numbers assigned will be used later to navigate the alarm to the device(s) you want the alarm to be sent to. Note the description of alarm indexes on this page may not represent what comes through from the controller. See the device user guide for a complete description of its alarm index. **Note:** when replacing a device or communication module it is important to check that the device 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 Actions

From the Service Menu select: Alarms – Alarm Actions

Item	Value
Alarm A (1)	All
Alarm 2 (2)	---
Alarm 3 (3)	---
Modem 1	All
Modem 2	---
Modem 3	---
Modem 4	---
Modem 5	---
Modem 6	---
Front Panel	All
Console 1	All
Console 2	---
Console 3	---

Buttons: Set Actions, Reset, Relay Configuration, Modem Alarm Test, Mail Alarm Test

Status: Alarms: 0000 Online: 0011 Offline: 0000 15:45 10/09/2015

The Alarm Actions steer alarms to a variety of physical and virtual outputs, whose purpose are to highlight an alarm condition to the end user.

Factory Pre-set Actions

- Relay 1 Over-temperature (OT) and Offline alarms
- Relay 2 & 3 All alarms
- Modem 1 All alarms
- Console 1 All alarms
- Front Panel All alarms

Action

Actions range from 0 – 9 and Fail. Setting alarm index's to use action 0 will result in the alarm only going to the alarm log and nowhere else. Setting alarms index's to action 1- 9 allows the user to steer the alarms to the selected destinations. Set the "Fail" action to the destinations (such as the front panel) you wish alarms to be steered after an alarm has failed to dial out. The fail action will then be used until the next alarm has successfully dialled out.

Relays

These represent the relays that have been configured in the "Outputs Setup" section of the DMTouch. Note that the number shown in brackets is the physical relay position and that the preceding text is the name assigned to the relay in the "Outputs Setup" section.

Assign "Day" or "Night" against the action number and relay. All alarms associated with the action number will activate the relay. Note the relay is energised for no alarm and de-energised when in an alarm condition. Up to 3 relays are supported for alarm actions, but they must first be configured in the "outputs" section.

Note: If an action has a relay selected, then it must also have Front Panel or Console selected.



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Relay Configuration

Alarm relays can be configured as one of three modes:

- Accept** 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.
- Clear** 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.
- Timed** In this mode, the relay switches as soon as the alarm is received, and it stay on until the delay time has elapsed, irrespective of the alarm being accepted or cleared.

Modems

Up to 6 modems can be independently configured – similarly to relays, assign Day or Night and actions against the 6 modems. All alarms then associated with the action number will activate the modem. See [Modem](#) setup.

Front Panel

Assign “Day” or “Night” against the action number and Front Panel. All alarms then associated with the action number will be displayed on the DMTouch display. When an alarm is directed to the Front Panel the DMTouch will display an alarm message, the alarm LED will flash and an alarm sounder will operate.

Click “**Set Actions**” when the matrix has been completed to your satisfaction.

Modem Alarm Test

Click this button to do a test alarm dial out via the modems configured. **Note:** this feature will operate with any modems configured to send alarms as an SMS.

Mail Alarm Test

Click this button to send a test alarm to an email recipient.

Reset

Use the feature to reset the page to its’ original configuration after changes have been made prior to clicking the “Set Actions” button.

Default Actions

From the Service Menu select: Alarms – Default Actions. Complete this operation before bringing devices online.

Index	Action	Index	Action	Index	Action
1 (Extom)	1 9 (Low Press / Log UT)	2 17 (Thermistor)	2 25	0	
2 (Reling)	2 10 (Low Shutdown)	2 18 (Oil Pressure)	2 26	0	
3 (Pack)	1 11 (Low Discharge)	2 19 (HP Fault)	2 27	0	
4 (OT)	2 12 (High Discharge)	2 20 (General Fault)	0 28	0	
5 (UT)	2 13 (Low Liquid)	2 21	9 29	0	
6 (Fault)	1 14 (Panel Off)	2 22	9 30	0	
7 (System)	2 15 (Comp Run Fail)	2 23	9 31 (Warnings)	0	
8 (High Press / Log OT)	2 16 (Overload)	2 24	9		

Set

Alarms: 00000 Online: 0011 Offline: 0000 15:50 10/09/2015

Assign each alarm index to an action number and click the “Set” button. These actions will be used by devices as they come online before dedicated actions have been assigned. **Note:** this default process should not be relied upon and the end user must confirm that alarms are being directed to the appropriate actions.



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Alarm Times

From the Service Menu select: Alarms – Alarm Times

Times :	In 1	Out 1	In 2	Out 2
Sunday	00:00	00:00	00:00	00:00
Monday	08:00	20:00	00:00	00:00
Tuesday	08:00	20:00	00:00	00:00
Wednesday	08:00	20:00	00:00	00:00
Thursday	08:00	20:00	00:00	00:00
Friday	08:00	20:00	00:00	00:00
Saturday	00:00	00:00	00:00	00:00

Short inhibit duration (hours) 24

Long inhibit duration (hours) 72

Set Times

Alarms: 00014 Online: 0130 Offline: 0009 12:19 30/03/2016

Use this page to define the “Day” and “Night” settings used in the alarm action setup. Each day can have 2 day periods. In1 and Out 1 define period 1; In 2 and Out 2 define period 2. All times outside of these 2 periods are the “Night” times. 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.

In1	=	Day start period 1
Out 1	=	Day end period 1
In2	=	Day start period 2
Out 2	=	Day end period 2

Each day of the week can be configured to have a different Day/ Night period. Additionally, set the short and long inhibit periods from this page. The factory set defaults times are 24 Hours for the short Inhibit and 72 Hours for the long Inhibit.

Note: when a case is inhibited a system alarm is generated. This alarm can be directed via alarm indexes and is configurable for each device. The default ‘Alarm Inhibit’ index number is ‘6’ and can be changed if required.

System alarm actions

The device System will appear under the Alarm Indexes page. This allows for alarms generated by the DMTouch to be assigned actions. Possible alarms and their index numbers are:

Test fault	6
Disk warning	4
Blinds warning	5
Trim no probe	3
Dial out failed	8
Pack Fail Shutdown	7
DHCP Server Detected	9
Solid State Drive Read Only	4
Power Fail	10
Cleared Alarm Log	10
Blinds Malfunction	5
Warning: Defrost term on time	6

Power Fail

In the event of the mains power supply being interrupted the DMTouch 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.



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Condenser TD

When the Condenser TD feature is enabled a device called "CondTD" appears in the Alarm Indexes page. This allows actions to be assigned to the Condenser TD alarms. See [Condenser TD](#) setup.

Listed below are the alarms generated and their index numbers.

Cond N TD Alarm	1
Cond N TD Warning	2
Cond N TD Pre-warning	3
Cond N TD Discharge Probe Error	4
Cond N TD Liq Rtn Probe Error	5
Cond N TD Ambient Probe Error	6

Where 'N' is the condenser channel set up.

Alarm Scoring

With each alarm sent by the DMTouch an alarm score is calculated. This is exclusively for RDM Active FM remote monitoring solution. Please contact RDM for further details (Ethernet connections only).

Modem Setup

From the Service Menu select: Alarms – Modem Setup

Note: On DMT V2.5 and above, the [Site ID and Description](#) must be set prior to modem setup.

There are 6 modems to configure. Select any modem and a screen similar to the following will be displayed.

Number/URL	Type	Retries	Period (mins)	Options
1 support@resourcedm.com	Email	5	1	☒ Send Clear ☐ Send Extra
2	Modem	20	5	☒ Send Clear ☐ Send Extra
3	Modem	20	5	☒ Send Clear ☐ Send Extra
4	Modem	20	5	☒ Send Clear ☐ Send Extra
5	Modem	20	5	☒ Send Clear ☐ Send Extra

Note: The dialout will stop on the first number that succeeds.

Set Reset

Alarms: 00015 Online: 0130 Offline: 0009 12:22 30/03/2016

Enter the number/ URL or email address you wish the modem to connect to, enter the number of retries (up to 20) and the number of minutes between retries. Set the type to one of the following options:

- **Modem** Select to direct alarms to an alarm receiver such as RDM's Monitoring and Remote Station (MaRS)
- **SMS** SMS (GSM Modem) must be chosen for a GSM Modem.
- **Email** Select for the alarm to be sent to an email address. **Note:** to send an alarm as an Email you must also configure the [Mail Server Setup](#) page.
- **Other** When selected, operates the same as Modem apart from test dial out alarms are not sent to the alarm destination.

Check the "Send Clear" box to send a message when an alarm clears. Check the "Send Extra" box if required, leave unchecked unless instructed by RDM, this enables additional features for use with RDM remote monitoring applications. Please contact RDM for further details.



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Mail Server Setup

From the Service Menu select: Alarms – Mail Server Setup

Here, the user can configure the DMTouch so that alarms can be sent to an email address. Select either "Send email directly" or "Send email through server".

Send Email through Server

The following must be configured for this feature to operate.

Sender Setup

Name: Name that is appended to sent alarms.
Address: Email address appended to sent alarms.
Force TLS: If Force TLS is "No", and 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: Default port 25. May change depending on email server and security protocol it uses.
Authenticate: Some servers require this to send emails.
User Name: Enter your server account name here.
Password: Enter your server password here.

Note: The DMTouch must be able to access a Mail server to send the Email. The email is sent via a third party mail server to the destination mail server address.

Send Email Directly

Configure the Sender Setup fields.

This feature requires the DNS Name Server(s) to be defined in the Network Card Setup page. Port 53 (Name server) and port 25 (Mail server) must be open to allow the DMTouch to communicate. The DMTouch when using this feature sends the email directly to the destination mail server. It does this by contacting the Name Servers to obtain the IP address of the destination mail server before forwarding the email.



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Warning Setup – Defrosts terminating on time

From the Service Menu select: Alarms – Warning Setup

RDM Data Manager - Warning Setup

Default number of defrosts terminating on time before warning (0 - Disabled) **Change all**

Save Warning Information

Device	Description	Number
HT00-8	EEV Case Controller (HT)	4
HT00-9	Mobile Controller (HT)	4
HT01-0	EEV Case Controller (HT)	4
HT01-2	Case Controller (HT)	4
HT01-3	Case Controller (HT)	4
HT01-4	Case Controller (HT)	4
HT01-5	Case Controller (HT)	4
HT01-6	Case Controller (HT)	4

Alarms: 00033 Online: 0131 Offline: 0008 16:16 29/09/2016

Defrost warnings are to alert the user of successive defrosts that have terminated on time and not on temperature. This is an energy saving feature which highlights cases which are not performing efficiently or may have a mechanical failure.

Each device has its own individual threshold for activating the warning, however entering a 'default' number and clicking 'Change All' will set all devices to this number. Or manually amend all devices separately. Save the setup by clicking "Set Warning Information".

Note: A setting value of "0" disables this feature (This is the factory default setting).

This alarm (Warning: Defrosts term on time) can be directed via alarm indexes and is configurable for each controller on which the feature is enabled. The default 'Warning: Defrosts term on time' index number is '6' and can be changed if required.

Accept All Alarms

When used, all outstanding unacknowledged alarms are accepted by the user account that initiated the feature. This process is typically used when installing or commissioning a site and will not be required for typical day to day investigations.

Clear Alarm Log

When used, this feature deletes the current Alarm Log, resets the alarm serial numbers and removes any historical alarm information. The System alarm, 'Cleared Alarm Log' will be generated. Care should be taken when using this feature as it can't be reversed.

Send All Alarms

This feature has been added to allow all potential alarms from every device logged on to the DMTouch to be sent to an alarm receiver. Then, the alarm receiver is 'aware' of all possible alarms that can be sent to it and subsequent actions can be set up accordingly. *Please consult RDM for more information.*



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Devices

Set Parameters

From the Service Menu select: Devices – Set Parameters

Check the tick-box against the device you wish to change parameters and then click the Set Parameters button. The screen below will be displayed. **Note:** Multiple controllers of the same type can be checked and changed together. For changing multiple controllers with different types, please see [Set Shared Parameters](#).

Parameter	Value	Units	Locked
Cut-in temp	8.0	°C	☒
Cut-in diff	0.5	°C	☒
Control weight	50	%	☒
Display weight	50	%	☒
Superheat Ref	6.0	°C	☒
Response On	30		☒
Response Off	30		☒
Control Type	EEV		☒
EEV Min Opening	0	%	☒
Superheat Problem	0.0	°C	☒
EEV Prob Opening	10	%	☒

Type in the required values in the appropriate fields and click "Set Parameters". The parameters will be saved in the device's memory.

Locking Parameters

Within the Set Parameters page, the items can be "locked", preventing changes being made at the local device's display. Changes can only then be made by an authorised user via the front panel or DMTouch webpage. Check the "Locked" tick box against each parameter you require to lock and then press either "Set Parameters" or "Set Locks Only".

The DMTouch reads and writes to its Solid State Disk (SSD) every 30 minutes; on the hour and half past the hour, consequently it could take up to 30 minutes before any locked parameters that have been changed (locally on the device) to be restored.

Locking parameters can be useful for when replacing a device. If the parameters have been locked into the DMTouch, they can be restored to a new device on the basis it has been set to the same; type; probe type (units) and rotary switch address. Please see relevant documentation for the specific device.

Parameter Range Checking

The DMTouch will highlight values entered into a parameter field which are out with the valid range of the device's parameters. When the user presses the "Set Parameters" button the DMTouch will highlight any item which is out of range. Shown in the screenshot the value "200" has been entered for the parameter "S1 Span" on controller 011. This value is not a valid number, as the parameter range is -3.4 to 180. The DMTouch highlights this error in red and shows the minimum and maximum values for the parameter. The DMTouch will not change any other parameters until a valid value has been entered for the 'problem' parameter.

Parameter	Value	Units	Locked
S1 Span	200	bar	☒
S1 Offset	-1.0	bar	☒
S1 Day Trgt	3.0	bar	☒
S1 Night Trgt		bar	☒
S1 Equal Run	On		☒

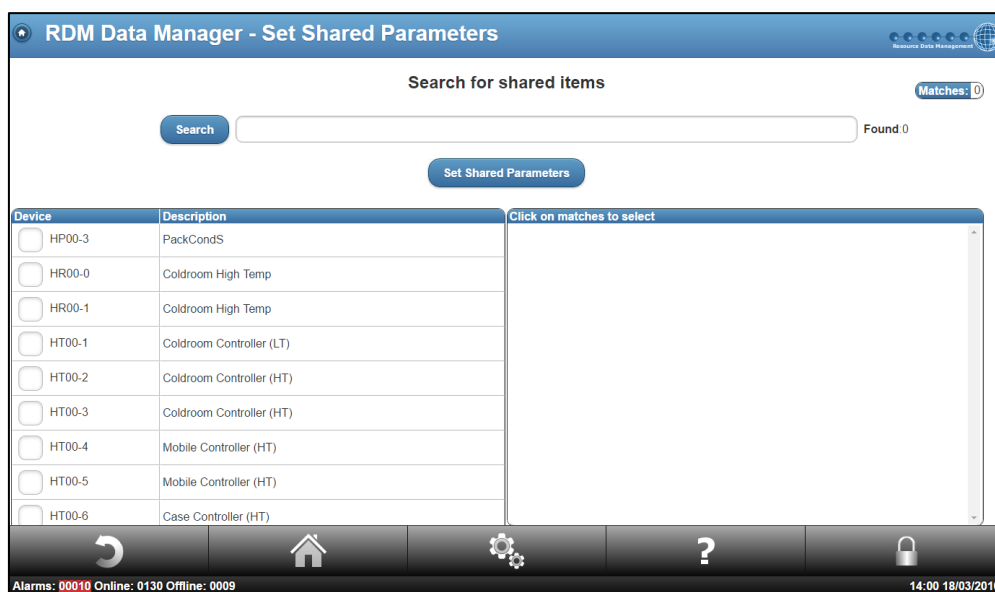


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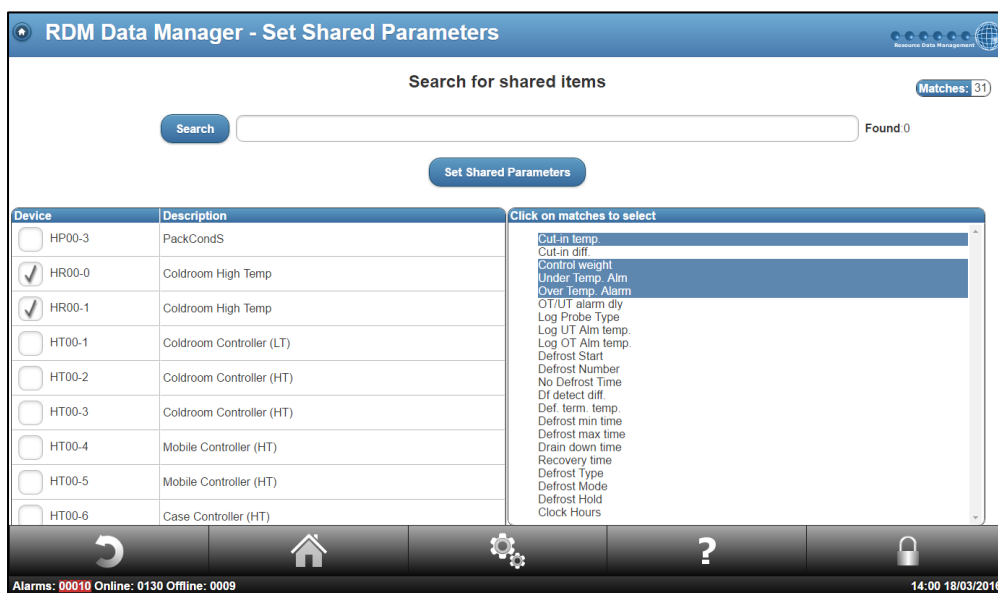
Set Shared Parameters

When there is a requirement to change parameters on multiple devices where the 'type' varies, the Set Shared Parameters feature can be used. It allows common parameters across any device type to be set. When entering the 'Set Shared Parameter' page, it will look similar to the below:



The page will list all the devices logged on to the DMTouch in the left column. There are a couple of methods to select the devices and subsequent items to be changed;

The first is to simply use the tick boxes in the left column and select the devices that require changed. While selecting them, the 'matched parameters' within the devices will be displayed on the right.

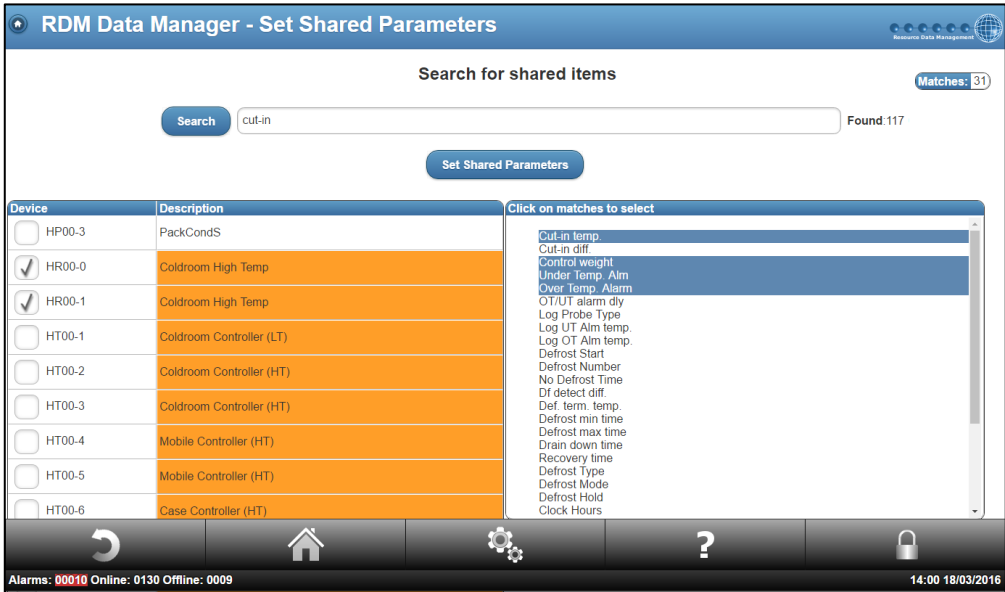


The second method is to utilise the 'search' field at the top of the page. In the field, type the parameter alias that is to be altered. For example, 'cut-in', then click 'search'. All the devices that have this parameter will be highlighted. This makes it easier to select the devices that share this common parameter. Again, select the devices to be altered using the tick boxes:

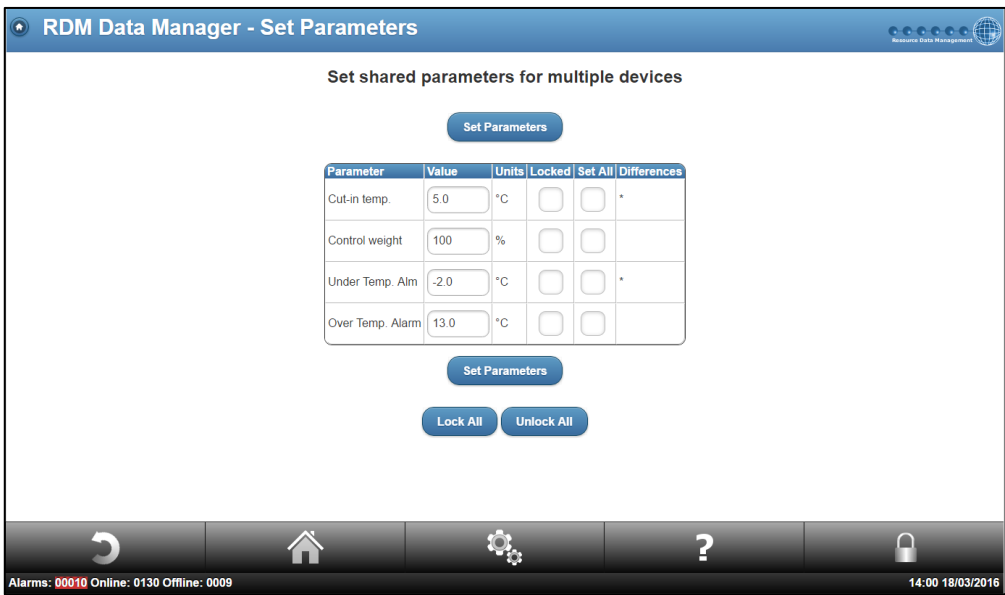


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Regardless of the method to select the devices, the common 'shared' parameters are in the box on the right. Clicking on the parameter will select it to be changed;



The following page will list all the selected parameters to be changed. Make the desired changes and click on 'set parameters'. This will update the selected parameters in all the previously selected devices.

Note: The 'differences' column will indicate if the parameter varies from the previously selected devices. Where there is no asterisk confirms the 'shared parameters' are all identical.



Aliases

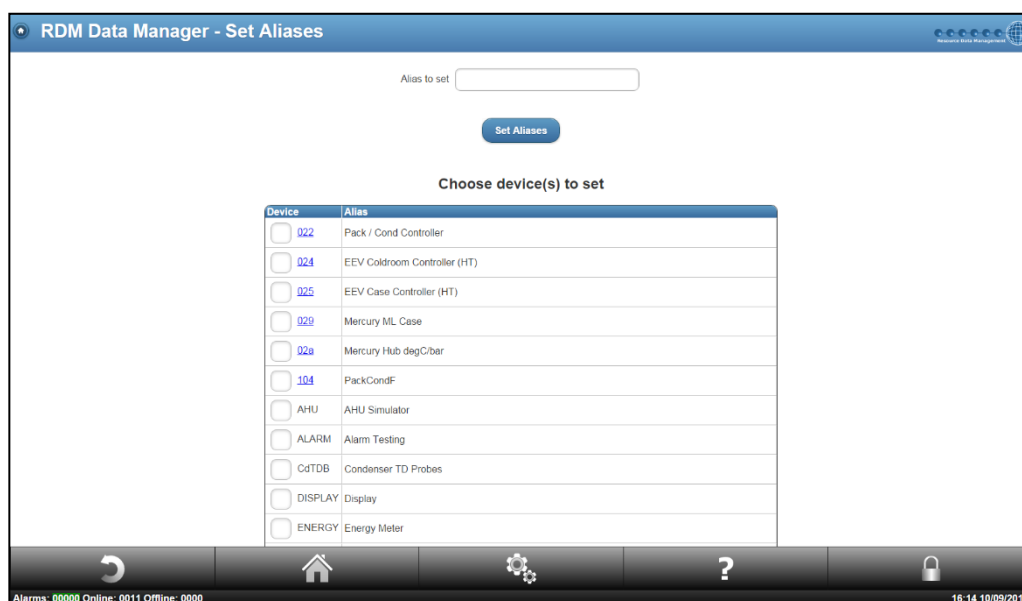
From the Service Menu select: Devices – Aliases

Four sub menus are available;

- Names (allows for the device name and/or description to be changed)
- Alarms (allows for alarm messages to be changed)
- Items (allows for individual device item names to be changed)
- 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. Site, Service or Install level.)

Names - Changing a Device Name

From the Service Menu select: Devices – Aliases - Names



Devices that allow a name change will be displayed as a hyperlink, for example see 022 on the above screen. Certain network types have fixed device names which can't be changed, for example, devices logged on to the DMTouch using the Genus protocol.

Click on this hyperlink to change the device name.

This screen will be displayed:

Enter a suitable Device name in the displayed field provided and then click "Set Name".

A maximum of 6 characters can be entered for a device name. Care should be taken when defining groups of devices as carefully selected names will allow the use of 'Wild Card' feature in a GP Timer channel or the implementation of a multiple cabinet defrost strategy using a Defrost Timer channel. Avoid the use of control characters such as &, %, * etc as well as blank spaces.



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Device Descriptions

While on the Name Alias screen, check the tick-box(s) of the device(s) you wish to alias and type in the alias name you want in the "Alias to set" field. Then click the "Set Aliases" button. The Aliases will be changed. Up to 32 characters can be used, and multiple devices can be changed together.

Alarm - Alias

From the Service Menu select: Devices – Aliases – Alarms

RDM Data Manager - Set Alarm Aliases

Choose device(s) to set

Set Aliases

Device	Description
☐ 001	dmTouch Internal Probe
☐ 002	Plant Input
☐ 022	Pack / Cond Controller
☒ 024	EEV Coldroom Controller (HT)
☐ 025	EEV Case Controller (HT)
☐ 029	Mercury ML Case
☐ 02a	Mercury Hub degC/bar
☐ 104	PackCondF
☐ AHU	AHU Simulator
☐ ALARM	Alarm Testing
☐ CdTDB	Condenser TD Probes
☐ DISPLAY	Display
☐ ENERGY	Energy Meter

Alarms: 00000 Online: 0011 Offline: 0000 16:15 10/09/2015

Tick the check-box of the device whose alarm aliases you wish to set, then click "Set Aliases". This will result in the below screen:

RDM Data Manager - Set Alarm Aliases

Set Alarm Alias for 024

Set Alarm Aliases

Alarm	Alarm Alias	Type Alias
Missed defrost	Missed defrost	15
Plant Fault	Plant Fault	3
Case over temperature	Case over temperature	4
Case under temperature	Case under temperature	5
Probe 1 Faulty	Probe 1 Faulty	6
Probe 2 Faulty	Probe 2 Faulty	6
Probe 3 Faulty	Probe 3 Faulty	6
Probe 4 Faulty	Probe 4 Faulty	6
Probe 5 Faulty	Probe 5 Faulty	6
Probe 6 Faulty	Probe 6 Faulty	6

Alarms: 00000 Online: 0011 Offline: 0000 16:15 10/09/2015

Type in the new alarm alias in the field(s) using up to 32 characters. To change the alarm type from the device default, select the new type from the drop-down box in the "Type Alias" column. The purpose of the "Type Alias" is to allow a user to separate common alarms, for example, Probe Faults. By doing this, different actions can be assigned depending on the particular probe that fails.

Click "Set Alarm Aliases" to implement any change(s) made – the DMTouch will confirm the operation and revert back to the previous screen.

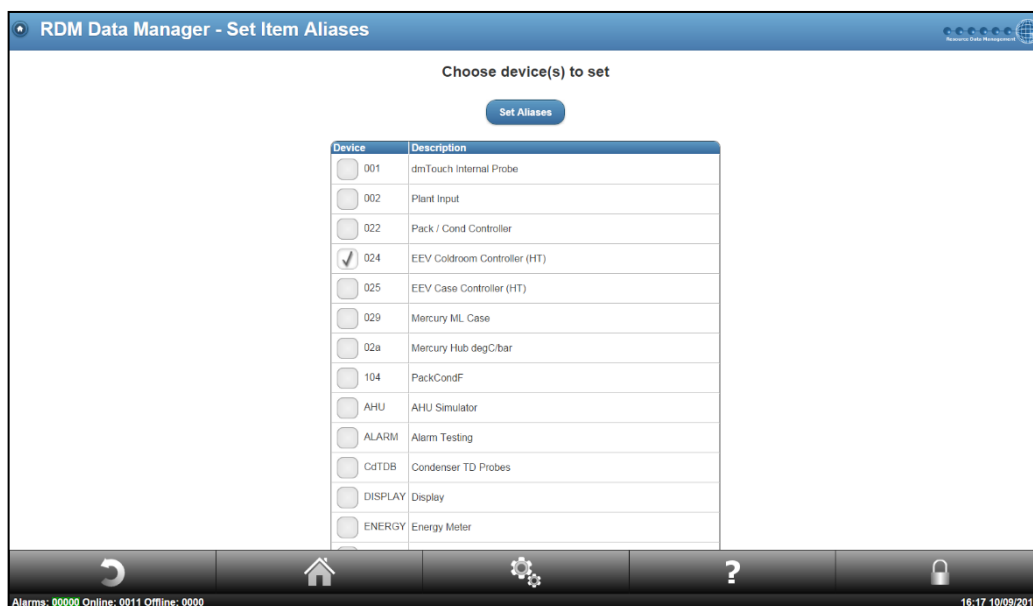


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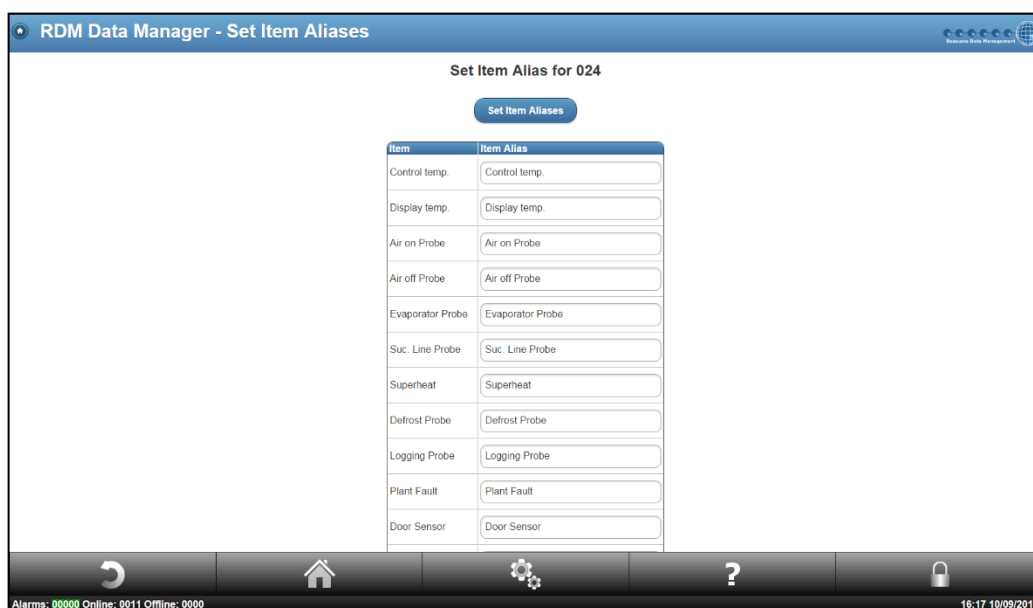
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Item - Alias

From the Service Menu select: Devices – Aliases – Items



Tick the check-box of the device whose item aliases you wish to set, then click "Set Aliases". This will result in the below screen:



Type in the new item name, up to 31 characters, in the relevant field and then click "Set Item Aliases" to complete the operation. The DMTouch will indicate the operation and revert back to the previous screen.

Alias Inheritance

On some RDM controllers, aliases can be altered from within their own User Interface, for example the Superpack. With DMT V2.5 and above, logging these devices on will inherit the set aliases from within the controller. **Note:** Subsequent amendments to aliases from the DMTouch User Interface will override the names inherited. Additionally, these changes will not filter down to the device logged on.

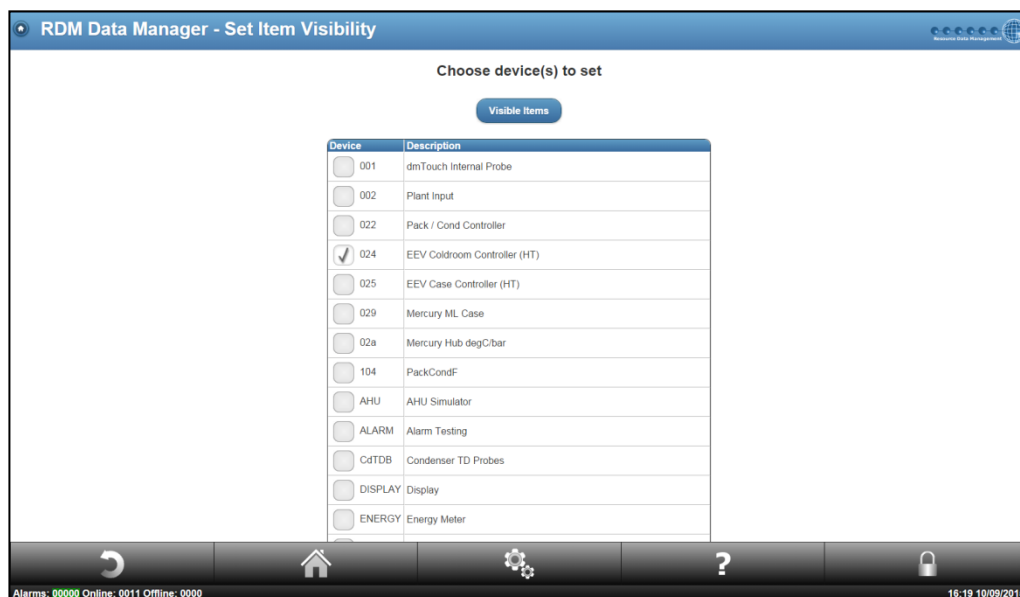


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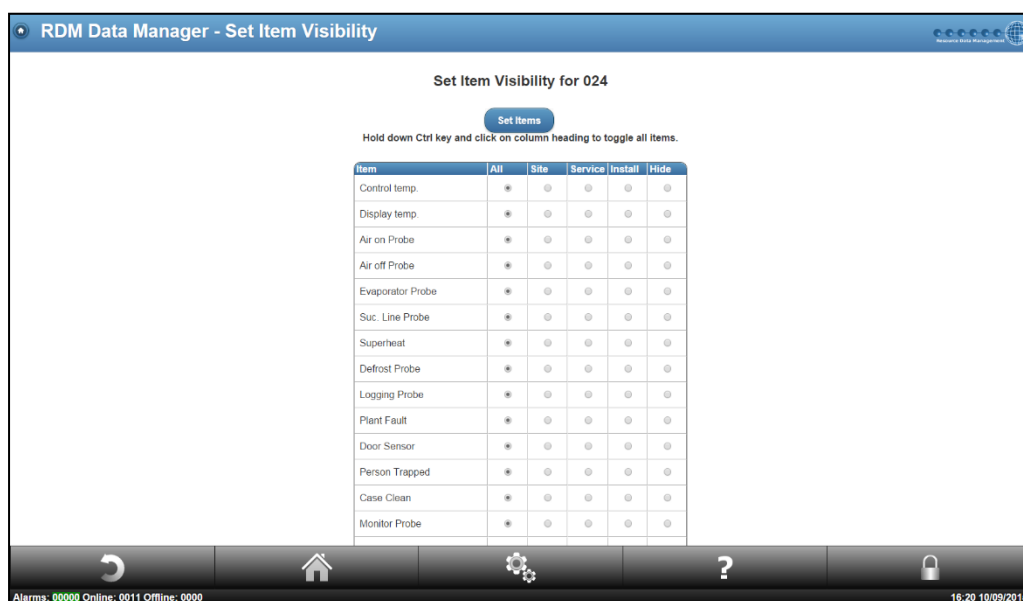
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Visibility

From the Service Menu select: Devices – Aliases – Visibility



Select a device from the list. Multiples of devices with the same type can be selected and set together.



Shown above is the list of inputs, outputs and parameters for a case controller. Configure the items required and click "Set Items" to save the changes.

All	Selected items are viewable all of the time.
Site	Selected items are viewable only when the user is logged in at Site 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.

Note: Where Intuitive Super Packs, Circuits and Intuitive Plant TDBs have been logged on to the DMTouch, the visibility (if set) will be inherited from the device itself. However setting visibility from the DMTouch will not be inherited by the devices. Please see the respective device documentation for compatibility.



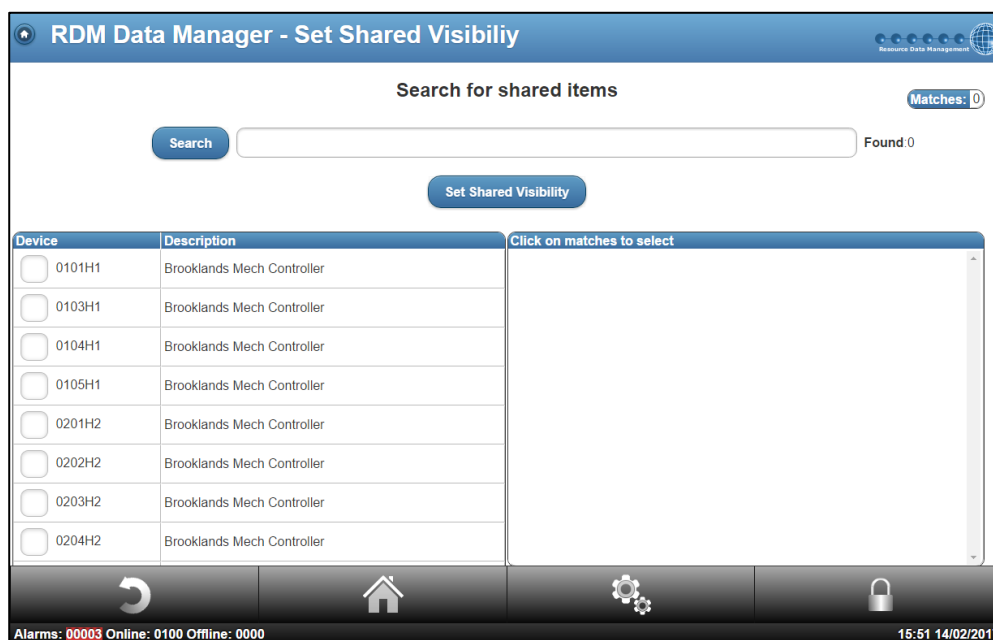
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Set Shared Visibility

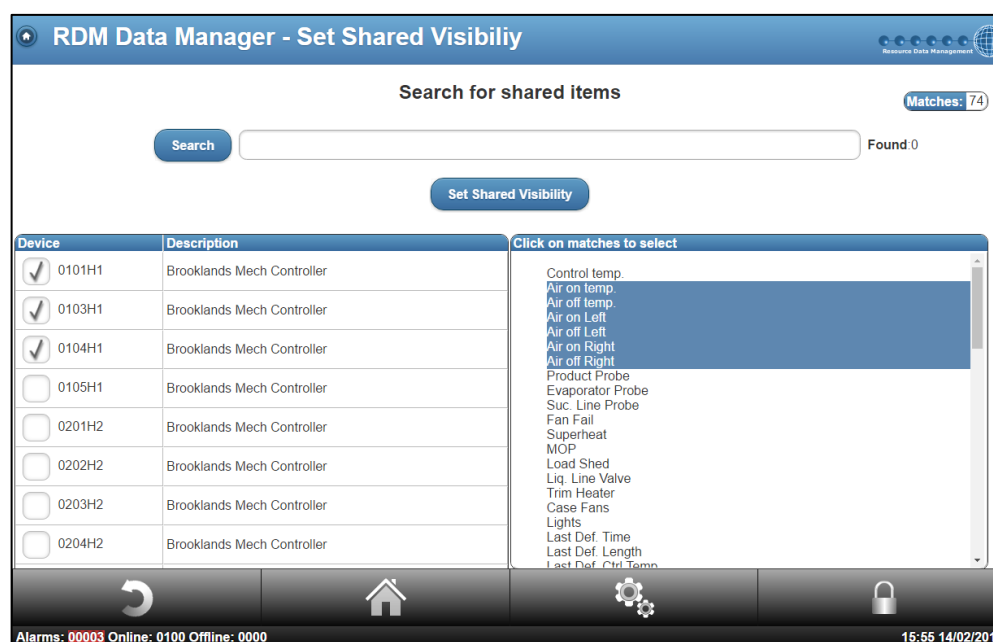
From the Service Menu select: Devices – Aliases – Set Shared Visibility

When there is a requirement to change the visibility of items across multiple devices with different types, the Set Shared Visibility feature can be used. It allows common items across any device type to have their visibility changed. The page will look similar to the below:



The page will list all the devices logged on to the DMTouch in the left column. There are a couple of methods to select the devices and subsequent items to be changed;

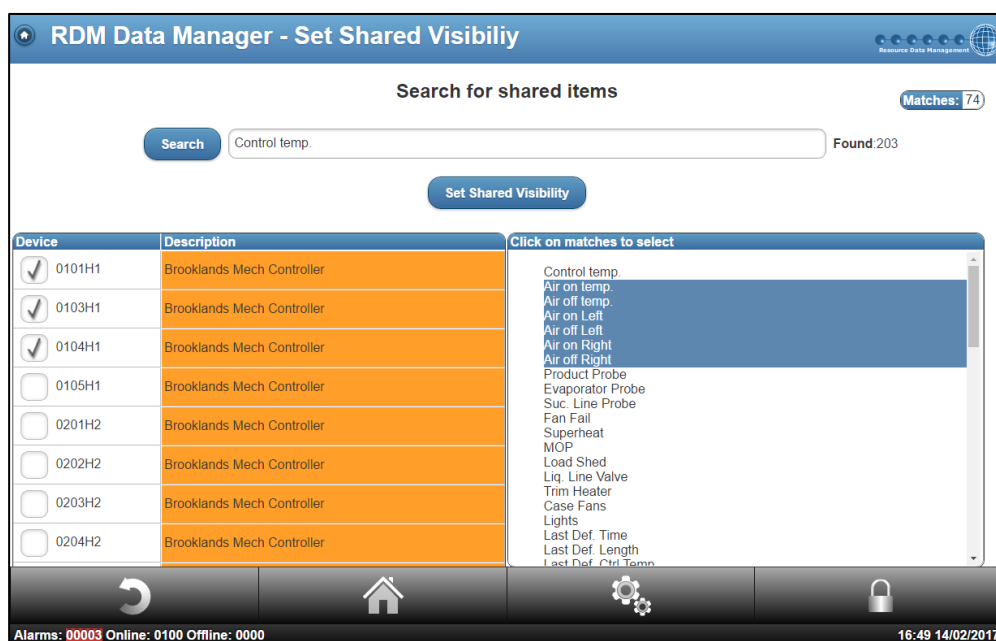
The first is to simply use the tick boxes in the left column and select the devices that require changed. While selecting them, the 'matched items' within the devices will be displayed on the right. The 'Matches' field will give the number of 'common items'.



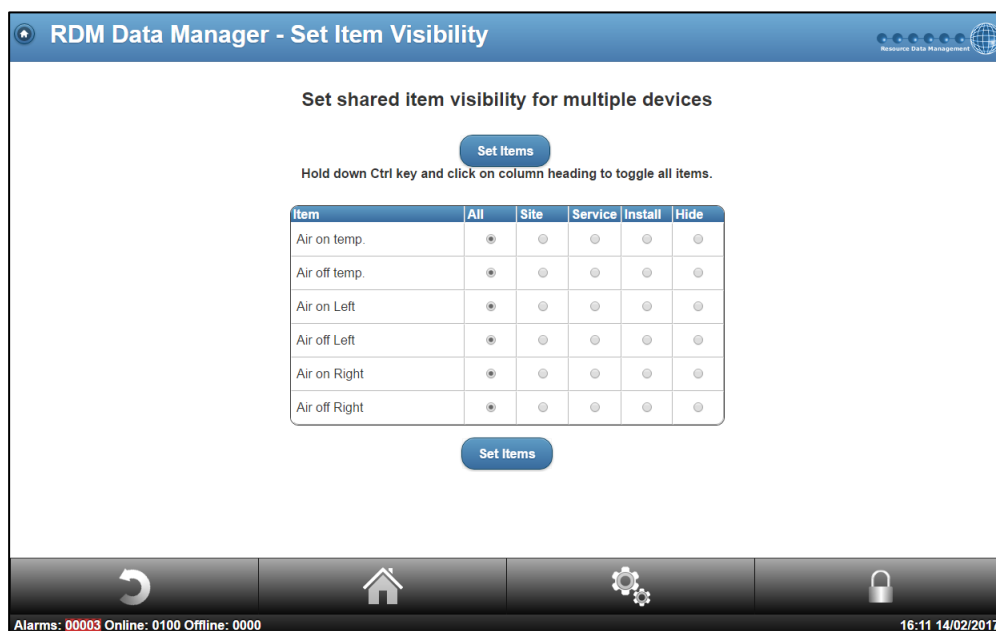
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The second method is to utilise the 'search' field at the top of the page. In the field, type the item alias that is to be altered. For example, 'Control temp.', then click 'search'. All the devices that have this item will be highlighted. This makes it easier to select the devices that share this common item. Again, select the devices to be altered using the tick boxes:



Regardless of the method to select the devices, the common 'shared items' are in the box on the right. Clicking on the items will select them to be changed. Once all items are selected (to be changed), click on 'Set Shared Visibility':



The following page will list all the selected items. Select the appropriate visibility levels for each of the items and click on 'set Items'. This will update the selected items in all the previously selected devices.



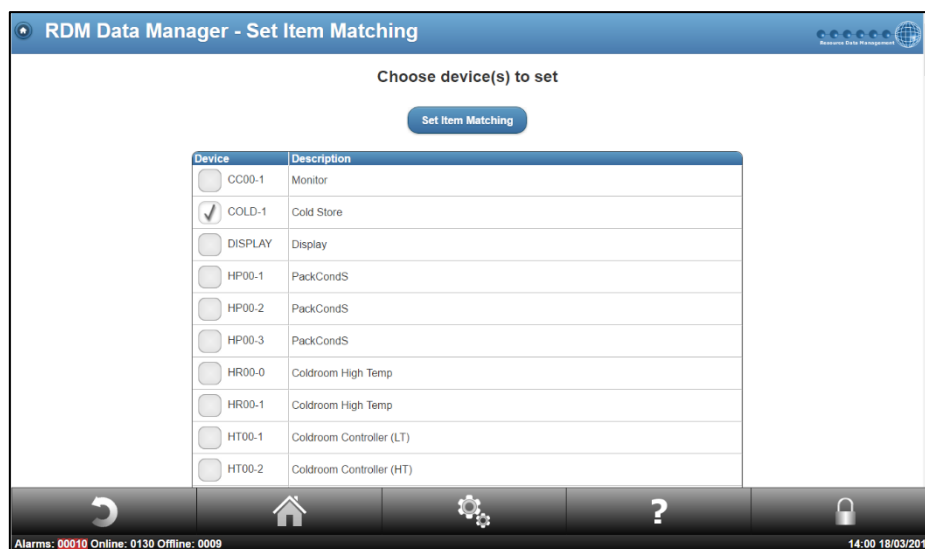
Please ensure all power is switched off before installing or maintaining this product.

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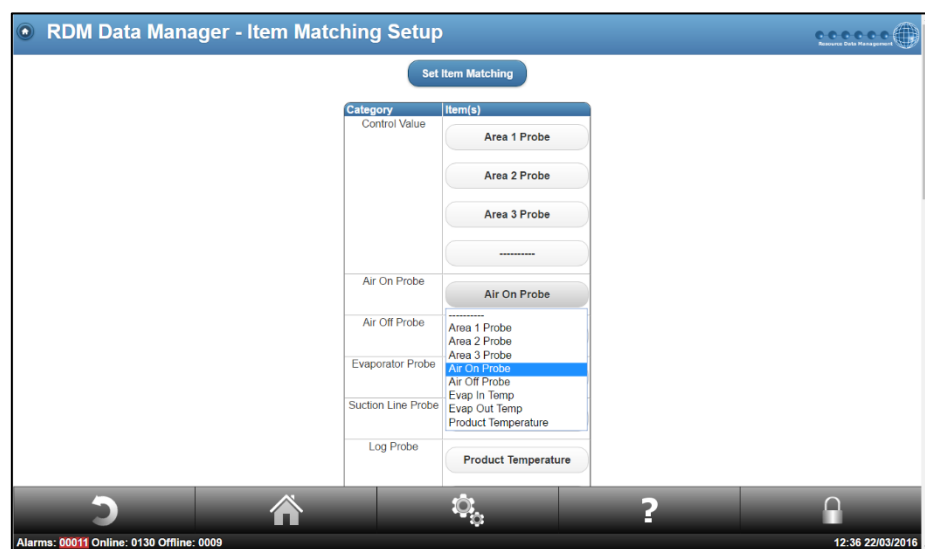
Item Matching

From the service menu, select; Devices – Aliases – Item Matching.

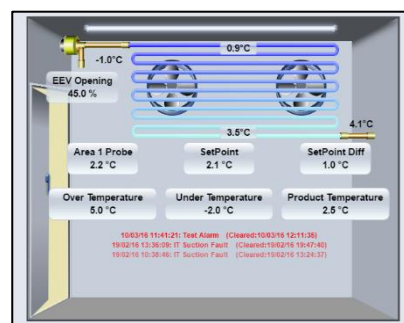
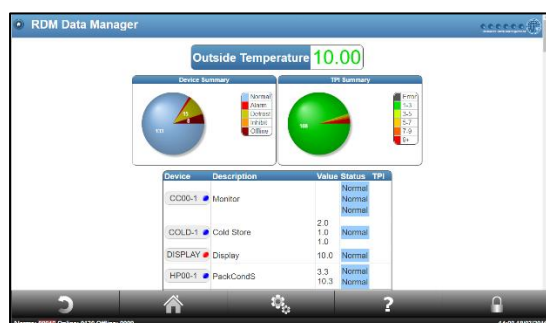
This feature allows the user to customise which 'tags' are used by the DMTouch to display certain information. For example select which input should be visible in the "Value" column in the device list or appear within the mimics. From the list of devices (within the item matching page), select which one is to be set and click 'Set Item Matching'. **Note:** multiple devices that share the same 'typefile' can be set together.



This will then take you to the 'Item Matching Setup' page. From here, select which items should be matched to the category then click on 'Set Item matching':



When matched, the DMTouch will use them and display them accordingly. For example in the device list or mimics:



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Network

Network Errors

From the Service Menu select: Devices – Network – Network Errors.

RDM Data Manager - Device Errors									
Device	Type	Addr	Offline		Online		Data		
			No Reply	Error	No Reply	Error	No Reply	Error	
022	00003577	10.2.2.81	0	0	0	0	0	0	
024	000036C2	10.2.2.87	0	0	0	0	0	0	
025	000036C0	10.2.2.85	0	0	0	0	0	0	
029	000037C1	10.2.2.93	0	0	0	0	0	0	
02a	0008002E	10.2.2.84	0	0	0	0	0	0	
104	0000379E	10.2.2.86	0	0	0	0	12	0	
RC01-1	08152A48	10.2.2.80	0	0	0	0	0	0	
WPR000	2F000004	000a6f000000e07	0	0	0	0	0	0	
WPR001	2F000004	0021ed0000035131	0	0	0	0	0	0	
WPR002	2F000004	0021ed00000453bc	0	0	0	0	0	0	
WPR003	2F000004	000a9f0000045696	0	0	0	0	0	0	

There are three categories of Network Errors reported, **Offline**, **Online** and **Data**.

Each of the categories has "No Reply" errors and "Errors" reported. The errors reported are an accumulation of the errors since the last power-on or reset of the DMTouch. The network errors page gives an indication to the health of a given network. If for example there are 6 controllers connected to an RS485 network and all six have a high number of data no reply error's then this may indicate an issue with the network. Firstly check the Belden cable connections are secure, no cables have been damaged and so forth. Now clear the network errors and check to see if the network errors are still be generated. Please note that Offline and Online errors relate to RS485 and RDM wireless mesh controllers only. Data errors are shown for IP, RS485 and RDM wireless mesh controllers. The Device Type file and network address are also shown for each device.

Remove Device

From the Service Menu select: Devices – Network - Remove Device

RDM Data Manager - Remove Device	
Remove Device(s)	
Choose device(s) to remove	
Device	Description
☒ 022	Pack / Cond Controller
☐ 024	EEV Coldroom Controller (HT)
☐ 025	EEV Case Controller (HT)
☐ 029	Mercury ML Case
☐ 02a	Mercury Hub degCiber
☐ 104	PackCondF
☐ RC01-1	Plant TDB
☐ WPR000	Wireless Probe
☐ WPR001	Wireless Probe
☐ WPR002	Wireless Probe
☐ WPR003	Wireless Probe
Remove Device(s)	

Check the tick-box of the device(s) you wish to remove and click the "Remove device(s)" button.

Note: If an RS485 device is removed from the devices list by mistake then it needs to have its network setting purged (CLRA) and re-registered to get it back online. If an IP device is removed from the devices list by mistake then it will come back online without any operator intervention.

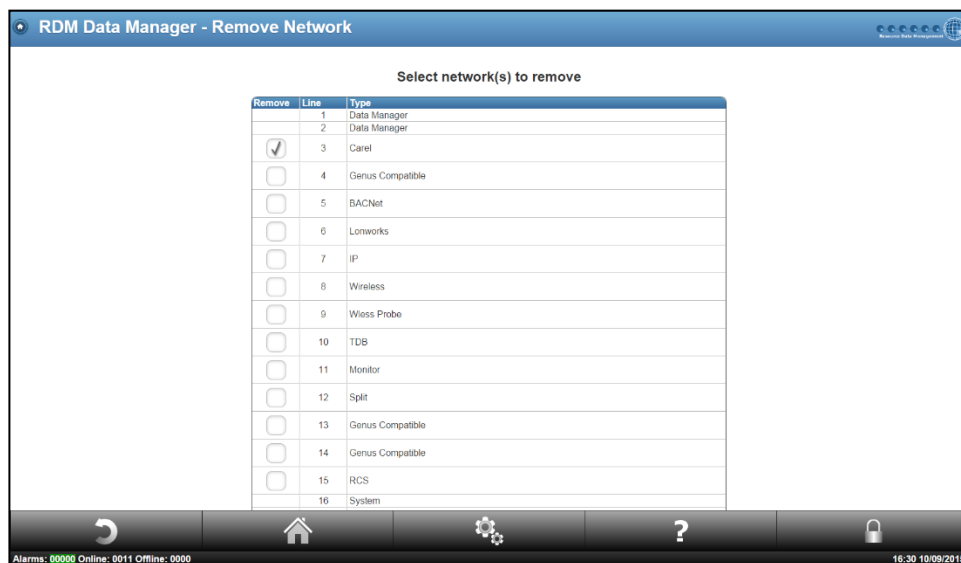


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Remove Network

From the Service Menu select: Devices – Network - Remove Network



An entire network line can be removed rather than removing all the controllers on that network line individually. Check the tick-box of the network(s) you wish to remove and click the "Remove" button. **Extreme** caution should be exercised when using this feature.

Add Device

From the Service Menu select: Devices – Network – Add Device

Use this to add devices that cannot handle DHCP addressing. (Not necessary for RDM controllers, unless used in IP-L mode).

From the drop down menu select a "Device type". Examples include; Other, SNMP, Modbus USB Device. Depending on the selected type, other necessary fields, for adding the controller, will be displayed. **Some specific devices have their own documentation for being added to a DMTouch, please visit the RDM website (www.resourcedm.com) for more details.** Below is an example for adding an RDM IP device, using the static addressing method:



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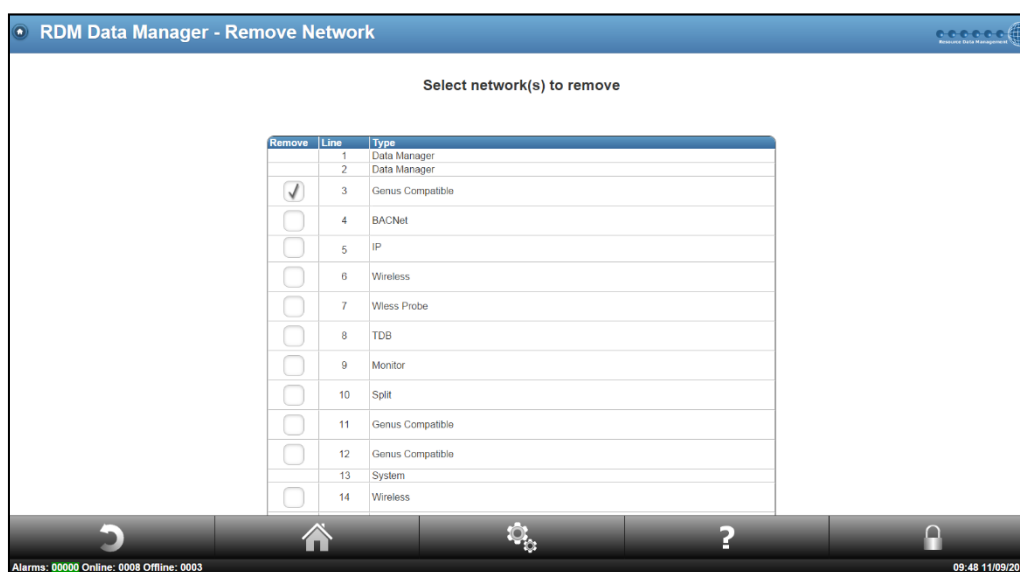
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- Select 'Other Device'
- Type in the IP address of the device, such as 10.1.2.55. **Note:** when the DMTouch uses DHCP, it hands out addresses between 10.1.2.80 – 10.1.2.254. We recommend using the range 10.1.2.2 – 10.1.2.79. But confirm within the "Device Information" page to check the address you intend to use has not previously been allocated.
- Type in the controller name (up to 6 characters only) such as "MERC-3"
- Type in the alias such as "Mercury Case Controller"
- Click the "Add Device" button to execute the command.

Note: please check the DMTouch [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.

Network Scan

From the Service Menu select: Devices – Network – Network Scan



Check the tick-box on the network line you want to scan and then click the start button. The scan will start, then after a period of time (varies according to number of devices on the network) will conclude with compatible devices found put online.

Use this feature with extreme caution as it could return with some already online devices not being found. Please do not use this option unless you understand the effect it will have or have been asked to use it by RDM Technical Support. You may cause severe network problems otherwise.

Network scan feature supports, IP, LONworks® and Genus® networks. Network scan can be used to scan an IP network and bring on a number of devices which have been assigned static IP addresses. **Note:** Some Genus® compatible devices do not support this feature and may drop offline.

Automatically Logging-on Devices

RDM's equipment is based around the IP communication network. This allows our devices to communicate at high speeds and log on to our networks automatically. For explanations of logging on the controllers please see the separate documentation listed on our web pages.



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Wireless Mesh Setup

From the Service Menu select: Devices – Network – Wireless Mesh Setup

The following guide should be used to configure either an Ethernet or USB RDM Wireless Mesh Base unit for use with a DMTouch. Up to 4 wireless mesh base units can be connected to the DMTouch Ethernet 0 network. This is advantageous should the wireless network be split across multiple floors in a building.

Shown on the right is an example screen shot from the DMTouch's "Wireless Mesh Setup" page. It shows two wireless mesh base units, Interface 1&2, which are configured and operating on the DMTouch. It also shows a third base unit awaiting setup.

Warning: Changing either value in this table will require all connected wireless devices to be power cycled, so that they acquire the new network settings.

Interface	Address	Rf Mac	Net Id	RF Chan	
1	USB0	0021ED00000357E6	Net 0	Auto (23)	Remove
2	USB1	0021ED00000357E3	Net 1	Auto (22)	Remove

Set

Address	Rf Mac	Action	
10.2.2.80	0021ED00000357E7	---	Go

Warning: Changing either value in this table will require all connected wireless devices to be power cycled, so that they acquire the new network settings.

Interface	Address	Rf Mac	Net Id	RF Chan	
1	USB0	0021ED00000357E6	Net 0	Auto (23)	Remove
2	USB1	0021ED00000357E3	Net 1	Auto(22)	Remove

Set

Address	Rf Mac	Action	
10.2.2.80	0021ED00000357E7	---	Go

Auto
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

To add a new or additional base unit to a DMTouch select a network number from the "Network" drop down box and click the "Add" button.

Select the desired RF channel for the new base unit from the drop down list. **Note:** using the "Auto" option allows the wireless mesh base unit to scan the existing site and select an RF Channel not in use.

Select the desired Net ID from the drop down menu. **Note:** any wireless mesh device you wish to log onto the DMTouch via this base unit must have its network channel switch set to the same Net ID selected for the base unit.

Press "Set" to save any changes made.

Now configure the wireless mesh controllers you wish to log on to the DMTouch. Please refer to the Wireless Mesh User documents on the RDM website for additional information. The software feature "DMTouch Wireless Mesh Software Enabler" has to be enabled for each base unit you wish to configure.

Warning: Changing either value in this table will require all connected wireless devices to be power cycled, so that they acquire the new network settings.

Interface	Address	Rf Mac	Net Id	RF Chan	
1	USB0	0021ED00000357E6	Net 0	Auto (23)	Remove
2	USB1	0021ED00000357E3	---	Auto (22)	Remove

Net 0
Net 1
Net 2
Net 3

Address	Rf Mac	Action	
10.2.2.80	0021ED00000357E7	---	Go



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Philips Envision Setup

From Service Menu, select: Devices – Network – Philips Envision Setup

Following the DMTouch feature for controlling Philips Envision Lighting panels being enabled, areas and pre-sets can be configured from this menu (please consult RDM technical support for details). **Note:** Prior knowledge of the Philips system is required to configure the setup. Within the Lighting system, different areas must already be configured from 1 -99 along with pre-sets 1-x. These predefined areas/ pre-sets can be added to match and then aliased within this page.

To add an area, click 'Add area...'. The area will be temporarily added as '99' and 'New Area', click on 'Edit' to amend. Assign the area an 'Area number' and a 'Description', then click 'Update' to save/ apply. Similarly, to add a 'Pre-set', click on 'Add pre-set...'. Again the pre-set will be added, temporarily, as '99' and 'New Pre-set', click on 'Edit' to amend. Assign the area a Pre-set Number and a Description. **Note:** the areas and pre-sets must be defined before the device will log on.

RDM Data Manager - Envision Setup

Area List

Area	Description	Edit	Delete
1	External Signs	Go Edit	Go Delete
2	Car Park Lights	Go Edit	Go Delete
3	Cafe 1	Go Edit	Go Delete
4	Cafe 2	Go Edit	Go Delete
5	Food Prep	Go Edit	Go Delete
6	Deli	Go Edit	Go Delete
7	Bakery	Go Edit	Go Delete
8	Travel	Go Edit	Go Delete
9	Warehouse	Go Edit	Go Delete
10	Food Hall	Go Edit	Go Delete
11	Banking	Go Edit	Go Delete
12	Pharmacy	Go Edit	Go Delete
13	Utility Toilet	Go Edit	Go Delete

Preset List

Preset	Description	Fade (ms)	Edit	Delete
1	High	3000	Go Edit	Go Delete
2	Medium	2000	Go Edit	Go Delete
3	Low	2000	Go Edit	Go Delete
4	Off	3000	Go Edit	Go Delete

To add the Envision system to the DMTouch, navigate to 'Add Device' (Service/Devices/Network/). Within the Device Type, select 'Philips Envision System', insert its IP address and give it a name and description. This will then log on to the device list:

RDM Data Manager - Device - ENV006

ENV006 - Philips Lighting Control Panel
Online since 11:38 04/10/16

Name	Value	Units
External Signs	High	
Car Park Lights	Off	
Cafe 1	High	
Cafe 2	High	
Food Prep	High	
Deli	High	
Bakery	High	
Travel	High	
Warehouse	High	
Food Hall	High	
Banking	High	
Pharmacy	High	
Utility Toilet	High	

The control of the lighting system is carried out by utilising the DMTouch's GP Timer channels. By using a specific mask, all areas can have their own schedule for switching conditions:



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RDM Data Manager - GP Timer Channel 7 Setup

Channel Type: **Master**

Channel Name:

Input Type: **Unused**

Output Type: **General** Output Mask: Output Channel:

Invert Output: ☐ Run-On: **Not Allowed**

Schedule

Remove All **Remove** **Add Schedule**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Key

- Daily
- Weekly
- Yearly
- Once

Alarms: 00003 Online: 0136 Offline: 0001 14:14 07/10/2016

The mask used to control the device is: **XXXXXX[0,1]{a,b,c,d-f}** where;

- XXXXXX - Device name (e.g. ENV-06)
- [0,1] - Pre-set values to take during 'off' condition and 'on' condition (e.g. low/ high or off/ low etc.)
- {a,b,c,d-f} - Output channel numbers. On the Device's IO (accessed via device list) it will list all the areas. The area's associated output number is defined by its position in the IO list. The first item is output 0, second is 1 and so on.



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BACnet/ RDM-485 Setup

From the Service Menu select: Devices – Network – BACnet setup

When BACnet has been enabled on the DMTouch it opens the menu for BACnet configuration, navigating to the menu will show the above page. Firstly, select the type of BACnet communications to be used by 'ticking' the interface. The subsequent options will allow the network configuration:

Device Instance
Network Number
BACnet/IP Port
RDM-485 Address

Unique instance number of the DMTouch. Default 280028.
 Network number the DMTouch is to communicate on. Default 10280.
 Virtual port number for IP protocol to communicate on. Default 47808.
 Unique address for the DMTouch while communicating over RDM-485. Default 126.

RDM-485 Max Master
RDM-485 Max Info Frames
RDM-485 Speed
COV Lifetime
Save Priority

RDM-485 Max Master. Default 127.
 RDM-485 Max Info Frames. Default 1.
 Select the RDM-485 network speed; 9600 or 38400.
 Change of Value period in seconds.
 The BACnet priority field is selectable between 1 and 16. It sets the priority level, at which an override with this priority number or above, is treated as a non-volatile parameter 'set' and so will be set and saved as that item's parameter value. So, when set to a value of 8, any override of priority 8-16 will be saved as a parameter.

Periodically find new devices

Check box to allow DM to periodically search for any new devices on the network (5 minute frequency).

Automatically add new devices

Check box to either add newly discovered BACnet devices automatically to the device list or to use the 'BACnet pending' feature, giving the user the ability to select inputs/ outputs/ parameters etc. See [BACnet/ RDM-485 Pending](#) section for more details.

Allow time synch from network

Select from; UTC/ Local, Local, UTC or None. Permits time synchronisation from another networked device.

Send broadcast time synch

Select from; UTC/ Local, Local, UTC or None. Broadcasts time stamps to other networked devices.

Send time synch to device

Select from; UTC/ Local, Local, UTC or None.

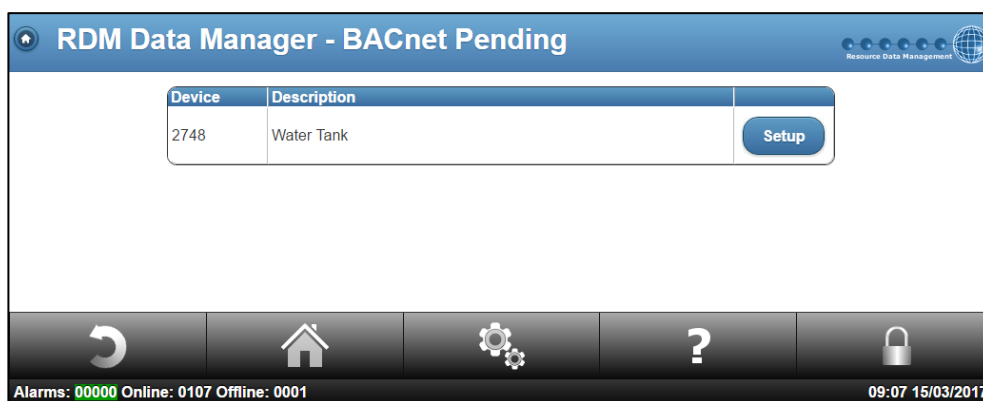
Note: Only users with a detailed knowledge of the BACnet protocol should amend these details as altering them can have detrimental affects on the communications.



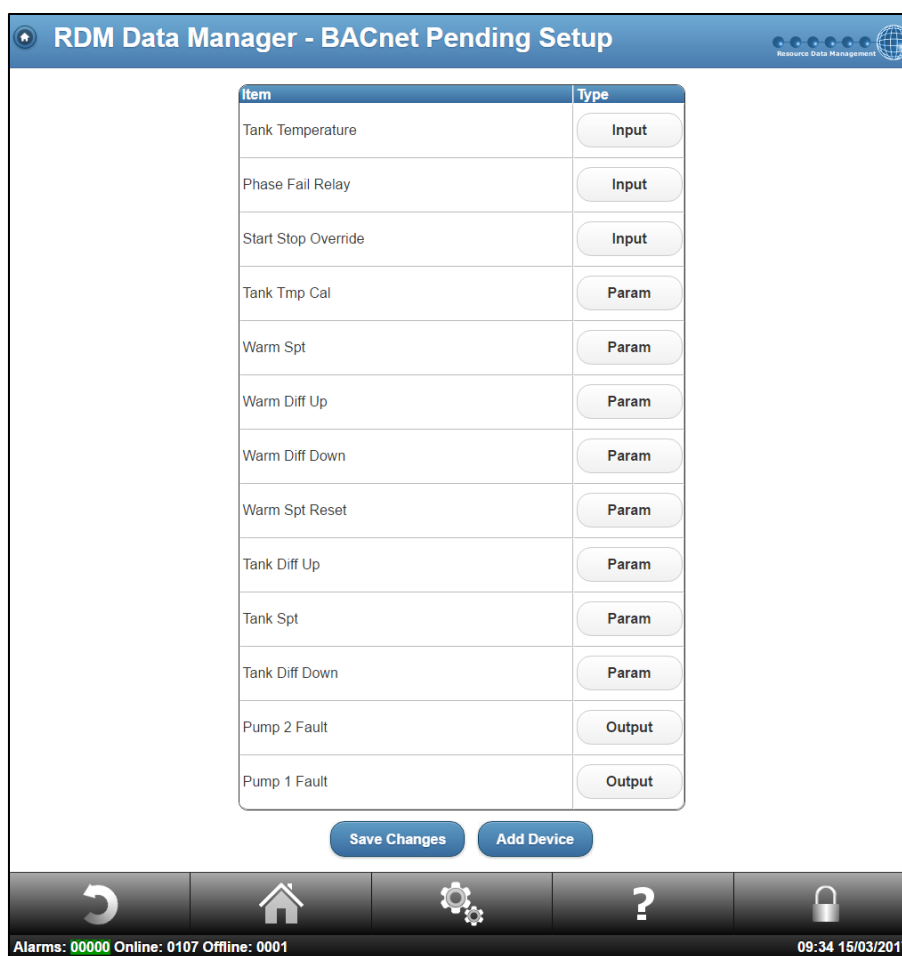
Please ensure all power is switched off before installing or maintaining this product.

BACnet/RDM-485 Pending

With the 'Automatically add new devices' box checked within the BACnet setup pages, newly discovered BACnet devices (whether over BACnet/ IP or RDM-485) will automatically be added to the device list. This is default. When the checkbox is unchecked, the newly discovered devices will firstly be placed into a pending section, awaiting user interaction before being added. Upon entering the menu, where a new BACnet device has been found, it will look similar to the below;



'Pending' devices will be shown here and will remain here, until the user enters the 'setup' section and confirms the BACnet points' type. Select from; 'inputs', 'Outputs', 'Parameter', 'State' or 'Constant Parameter';



Once the points from the BACnet device have been confirmed with their type, click on 'Save Changes'. Then to add the device to the DM's device list, click on 'Add Device'. Once the device has been 'added' the individual points cannot have their type changed. If changes are required, the device must be removed and re-logged on using the same method.



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BACnet Type Files

When a BACnet device is detected by a DMTouch, it will automatically create an associated typefile. This typefile will list all the points that the device has and allows the DMTouch to log it on to its device list.

When a device is updated subsequently altering/ moving points, then the DMTouch must have the associated type file deleted for it to re-learn the new ones. To carry this out please see the [Delete Type File](#) section. This action will remove all type files associated to that device.

Note: If an unconfigured BACnet device is connected to the DMTouch's network, it will create a zero-size (or very small) type file which will not log on. To remove this unassociated type, a restart of the DMTouch will remove it (soft V2.4 and above).

Type Writer

For Modbus devices that are not listed in the 'Add Device' section, the 'Type Writer' feature allows a user to write their own 'typefile' (or template) to allow communications (read only) to a 3rd party device. For successful communications, the device must be compatible with either RDM's USB RS485 dongle (please see the [Appendix 6](#) for configuration) or RDM's Modbus RS485 to IP communications module (PR0020 MOD). **Note:** Modbus RS485 to IP communications with Type Writer template is only compatible with DMTouch V2.6 and above.

The DMTouch can have multiple user-generated types enabled, activated one at a time with part number PR0655-TYPDM. The Type Editor User Guide can be found in [Appendix 7](#). The created user type will then be selectable in the [Add Device](#) Section.

The Modbus template generation feature, Type Editor, requires the user to have a full understanding and working knowledge of the Modbus protocol. RDM Technical Support cannot provide training or assistance in relation to the Modbus protocol and the commands implemented therein. Support will only be provided to those conversant with Modbus and in relation to the Type Editor functionality specifically.

For users unfamiliar with Modbus, RDM provide a template creation service allowing for a template to be generated for the 3rd party device in question. A nominal fee will apply for each template created by RDM

Note: the above process relates to creating "Read Only" templates. For Read/Write templates please contact RDM Technical Support.

Broadcast Receive List

The broadcast receive list is an informative tool that assists users by providing details on all devices broadcasting values across the network. It will provide information on the broadcasting device's name, items, current values and the last updated time stamp. An example is shown below:

RDM Data Manager - Broadcast Receive List			
First Floor Boiler Controller			
Amb Temp Enable	On		9:52:54 AM
Back Office Temp	23.9		9:52:54 AM
Boil Run Sig 1CC	Off		9:52:54 AM
Boiler Run Sig 2	Off		9:52:54 AM
Call Cen Valve	Off		9:52:54 AM
Eng Valve	Off		9:52:54 AM
Engineering	24.9		9:52:54 AM
Lobby	21.4		9:52:54 AM
Lobby Valve	Off		9:52:54 AM
Main Call Centre	25.0		9:52:54 AM
Net Test 3	24.9		9:52:54 AM
Net Test 4	25.0		9:52:54 AM
Outside Air Temp	15.4		9:52:54 AM
Pos Soln Valve	Off		9:52:54 AM
Recreation Rm Valve	Off		9:52:54 AM
Recreation Room	22.2		9:52:54 AM
Sales	25.2		9:52:54 AM
Sales Valve	Off		9:52:54 AM
Toilet Valve	Off		9:52:54 AM
Toilets	23.6		9:52:54 AM
Ground Floor Boiler Controller			
Analog Display	25.2		9:52:55 AM
Boiler Run Sig	Off		9:52:55 AM
Kitchen	25.2		9:52:55 AM
Net Test 1	25.2		9:52:55 AM
Net Test 2	23.3		9:52:55 AM
Pos Soln Valve	Off		9:52:55 AM

If any new devices are added to the network with broadcasting values, the list will automatically be updated.



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Device Info

From the Service Menu select: Devices – Device Info

Device	Type	Version	CRC	Bitswitches	Address	ID
LA01-1	0000356d	MERC2E2.4	----	----	10.1.2.144	011
LA02-1	0000356d	MERC2E2.4	----	----	10.1.2.145	012
LA03-1	0000356d	MERC2E2.4	----	----	10.1.2.146	013
LA04-1	0000356d	MERC2E2.4	----	----	10.1.2.122	021
LA05-1	0000356d	MERC2E2.4	----	----	10.1.2.148	022
LA06-1	0000356d	MERC2E2.4	----	----	10.1.2.139	023
LA07-1	0000356d	MERC2E2.4	----	----	10.1.2.140	024
LA08-1	0000356d	MERC2E2.4	----	----	10.1.2.141	025
LA09-1	0000356d	MERC2E2.4	----	----	10.1.2.142	026
LA10-1	0000356f	MERC2E2.4	----	----	10.1.2.132	101
HB16-1	0000356e	MERC2E2.4	----	----	10.1.2.172	031
HB17-1	0000356e	MERC2E2.4	----	----	10.1.2.173	032
HB17-2	0000356e	MERC2E2.4	----	----	10.1.2.174	033
HB18-1	0000356e	MERC2E2.4	----	----	10.1.2.175	034
HB19-1	0000356e	MERC2E2.4	----	----	10.1.2.164	041
HB20-1	0000356e	MERC2E2.4	----	----	10.1.2.165	042
HB20-2	0000356e	MERC2E2.4	----	----	10.1.2.166	043
HB20-3	0000356e	MERC2E2.4	----	----	10.1.2.167	044
HB20-4	0000356e	MERC2E2.4	----	----	10.1.2.168	045

The columns give the following information relating to controllers;

Device	Name of the device as it appears in the DMTouch Device List. When the device name appears in red it indicates the device in question is currently "offline".
Type	Unique number identifying each different type of controller.
Version	Software revision.
CRC	Error check code (not always used).
Bit-switches	Genus® 3 rd party controller bit-switch settings.
Address	Assigned network address. Note: for a Split device the parent device name is displayed.
ID	Device ID (e.g. Mercury IP module switch settings).

Device Reset

From the Service Menu select: Devices – Device Reset

Resource Data Management WILL NOT be held responsible for damage to plant / controllers when this feature is used. This function should only be used if there is a competent person on site.

Device username:

Device password:

Choose device to reset:

Use this feature with a compatible RDM device to force a remote reset of the equipment. Enter the device's log-in credentials (user name & password) and select it from the drop down list below.

Note: RDM recommend that there should be a competent engineer on site while performing this task. RDM will not be held responsible for any damage to plant and or controller when the feature is used.



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Case Setup

From the Service Menu select: System – Energy – Case Setup

Device	Description	Pack	Optimise	Size (kW)	Priority	Valve Type	Length	Check Blinds	Df Warn	Df Limit	CPT Value
HP00-3	PackCondS	---	No	0.00	---	Auto	---	No	No	0	Unused
HR00-0	Coldroom High Temp	1	Yes	0.00	1	LLSV	---	No	Yes	5	Meat, fish, poultry
HR00-1	Coldroom High Temp	1	Yes	0.00	1	LLSV	---	No	Yes	5	Meat, fish, poultry
HT00-1	Coldroom Controller (LT)	2	Yes	0.00	1	LLSV	---	No	Yes	3	Frozen food
HT00-2	Coldroom Controller (HT)	1	Yes	0.00	2	LLSV	---	No	Yes	5	Produce
HT00-3	Coldroom Controller (HT)	1	Yes	0.00	2	LLSV	---	No	Yes	5	Produce
HT00-4	Mobile Controller (HT)	---	No	0.00	---	Auto	6ft	Yes	Yes	7	Provisions, bakery, ready...
HT00-5	Mobile Controller (HT)	---	No	0.00	---	Auto	6ft	Yes	Yes	7	Provisions, bakery, ready...
HT00-6	Case Controller (HT)	1	Yes	0.00	2	LLSV	12ft	Yes	Yes	7	Meat, fish, poultry
HT00-7	EEV Case Controller (HT)	1	Yes	0.00	2	EPR	12ft	Yes	Yes	7	Meat, fish, poultry
HT00-8	EEV Case Controller (HT)	1	Yes	0.00	2	EPR	12ft	Yes	Yes	7	Meat, fish, poultry
HT00-9	Mobile Controller (HT)	---	No	0.00	---	Auto	6ft	Yes	Yes	7	Provisions, bakery, ready...

Alarms: 00015 Online: 0130 Offline: 0009 12:38 30/03/2016

Case setup for energy saving, provides the below fields for configuration;

Pack Used with the DMTouch Pack Optimisation feature (see [Pack setup](#) for more details), assign the desired pack number to each device. If the optimisation feature is not in use, this feature can be used to highlight pack groupings for information purposes only.

Optimise Enable Pack Optimisation feature on a case by case basis regardless of pack association. See [Pack Setup](#) for further details.

Size Enter in kW the cooling capacity of the refrigeration cabinet. For use with the [Intelligent Load Shedding](#) feature.

Priority Assign a priority to each case, this can be set from 1 to 10. A value of 1 is the highest and a value of 10 is the lowest priority. Cabinets with a lower priority will be turned off first when the [Intelligent Load Shedding](#) feature is active.

Valve Type For use with Pack optimisation energy feature.

- If Mercury 6-5M set to LLSV
- If Mercury 6-5E using EEV control set to EEV
- If Mercury 6-5E using EET or EET/EEV control set to EPR
- If unknown set the valve type to "Auto"

Length Enter the case length if known. **Note:** for information purposes only, not used in calculations.

Check Blinds Select 'yes' to enable Night Blind's check. See [Night Blinds](#) section for further details.

DF Warn Select Yes for warning alarm if consecutive defrosts terminate on time. See [Warning Setup – Defrosts Terminating on Time](#) section for further details.

DF Limit Defrost limit is an energy feature and is configurable on a cabinet by cabinet basis. It signals an alarm should the cabinet controller perform X number of defrosts in a particular day, where X is user definable. The feature observes a devices control state to determine the number of defrosts. If a cabinet performs 4 defrosts per day then the feature would be set to 5. If the cabinet performs 5 defrosts, in a day, then an alarm is generated. The alarm index number is 6.



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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 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 is 9. If the probe(s) used to calculate the CPT go faulty then an 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. See [CPT Setup](#) section for further details.

Note: Hold down Ctrl key and click on "Check Blinds" or "Df Warn" heading to toggle all items from either Yes to No or from No to Yes.

Split Monitor

RDM multi-channel monitors, such as the Mercury 2 – 6 Channel Monitor, can be split into individual channels. Once the monitor has been split, each channel takes on the form of an individual controller, this allows a user to more easily identify the status of a particular input on the device. This process must be followed should the user wish to inhibit any of the inputs or include the device on a Layout. After the split, the channels names are identified by the addition of the channel number after the original monitor name. These names must be aliased in the normal way to create the 6 character device name.

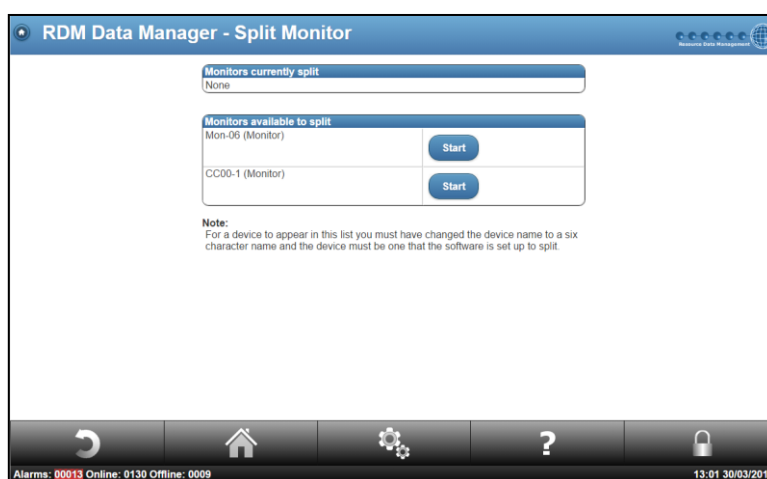
Example: If a Mercury 2 – 6Ch Monitor has been named **Mon-06**, (**note:** the device name must not exceed 6 characters) after the split, Mon-06 will not be seen on the devices list, instead all active channels of Mon-06 will be shown as;

Mon-06.01	Channel 1
Mon-06.02	Channel 2
Mon-06.03	Channel 3
Mon-06.04	Channel 4
Mon-06.05	Channel 5
Mon-06.06	Channel 6

If a channel is **off**, it will **not** appear on the devices page.

These devices now function as "virtual" devices, and can be setup and operated like a normal device. If for some reason the channels are required to be re-combined back to a single device, this can be done by selecting the "stop" button on the "split monitors" screen. Performing this operation will reset all of the split aliases back to the single monitor defaults. If a monitor has previously been configured (item aliases, alarm aliases, alarm index numbers etc.) the split monitor function will retain these values and settings.

Clicking on the Split Monitor icon will result in a page similar to this being displayed;



Click the Start button on any Monitor that is available to split. For a device to appear in this list the device must be one that the software is set up to split. For example Mercury 2 Monitor or 48 Channel Data monitor.



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After a "split", to activate an "off" channel, or change the channel function, click on the edit button and select the desired function. Example of "Edit Monitor" on a 6 channel Mercury Monitor.



Note: on a 48 channel Data Monitor after the split: defrost channels are not shown as controllers, but the associations to the probe channels are retained. Use the normal set "Parameters" function to complete the channel set-up.

Split Device

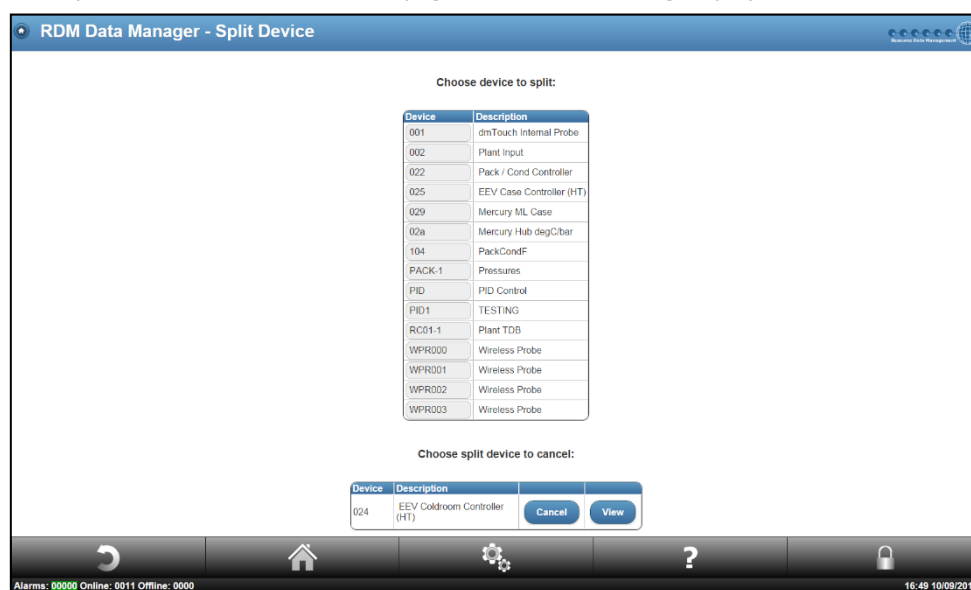
From the Service Menu select: Devices – Split Device

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 DMTouch device list. One controller could have the inputs, outputs and the parameters for Section 1, the pack control, with the second controller having the inputs, outputs and parameters for Sections 2 the condenser control.

Note 1: The Split Device feature should only be used with physical networked controllers and not with a DMTouch TDB program or a local I/O. The user cannot split a device that is offline.

Note 2: When logging on a circuit controller with software V3.9 and above on to the DMTouch with V2.6 and above, the split will be automated and specified under the setup of the circuit controller. Please consult the Circuit Controller's documentation for more details.

Clicking on the Split Device icon will result in a page similar to this being displayed;



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Care should be taken when splitting a controller that has a defrost control strategy or multiple defrost control strategies configured to receive remote defrost signals from the DMTouch. In this instance a DMTouch defrost timer channel(s) will be required for each of the split devices/sections created depending on the naming convention applied to the split devices. **Note:** Before splitting a Parent device its name must be one which will not be affected by defrost.

Clicking on the "Cancel" button associated to a controller from the "Choose split controller to cancel" list will allow the user to stop a split currently operating on a controller. Clicking on the "View" button associated to a controller will allow the user to see the split details for that controller.

Click on the device you wish to split which will result in the screen opposite.

In this example a device RC01-0 was selected.

Enter characters in the Prefix Box which will make up the first part of the device(s) name (e.g. CASE). Enter a maximum of six 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.

The Suffix column can be filled in automatically by selecting from the drop down menu, selecting up to the first 6 characters or last 6 characters of the item.

It can also be filled in manually. So if you have Prefix: CASE and type 01 in the Suffix for everything to do with Probe 1, Plant 1 etc. Everything with Suffix 01 will appear on device list as one controller

Once the appropriate fields have been filled in

Click "Set Split Configuration" to begin the device split.

This will take you to Enhance Split: See next page;

Enhance Split

The 'Enhance Split' screen will be displayed, as per example on right.

Within the "Enabled" column;

Hold the **control key** and click a checkbox to remove all selections with the same Child Input Name.

e.g. clicking on the top 'Enabled' checkbox (CASE01) would remove all Inputs with the name "CASE01".

Hold the **Alt key** and click a checkbox to enable/disable all children not already mentioned (from top of list).

e.g. If only CASE01 to CASE03 are required then Holding Alt key and clicking 'Enabled' checkbox at CASE04 would delete everything below that has child Input CASE04 to CASE06

Hold **Shift key** and click a checkbox to enable/disable all items

e.g. Holding Shift key and clicking any checkbox will disable every Child Input

Within the "Child Item" or "Child Input" columns



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Hold **Control Key** and click in Child Item Box or Child Input and a box will appear with the “Old Name” and “New Name” You would type in what you want the new name to be. This would change all Child Items or Child Inputs with the same name for the old name to the new name.

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 split device.

Note: Do not change any alarm aliases before splitting device. Alarm alias must be left at default as this may cause further issues after the device has been split. Alarms should only be re-aliased after the split is complete.

Note: On DMTouch version 2.5 and above, split BACnet device items can be overridden using the DMTouch’s overrides feature.

Note: Some items may not be visible when split, for example probe offsets.

Viewing a Split Device

Once split the new devices will appear in the device list. This is in the screen opposite with CASE01, CASE02 and CASE03 from our example. The device list also indicates how many devices have been split or are hidden by the “Hide Device” feature. MONI01 would now count as a hidden device.

By clicking on CASE01 its values are displayed. CASE01 has its own inputs, outputs, parameters and alarms. The split device name and description can now be aliased.

CASE01 - Monitor		
Online since 13:21 09/09/15		
Name	Value	Units
Probe 1	????????	°C
Defrost 1	Off	
Plant 1	OK	
Remote Relay 1	Off	
Control State 1	Normal	
Split		

Device	Description	Value	Status	Pack	TPI
001	dmTouch Internal Probe	43.6	Normal		
002	Plant Input		Normal		
022	Pack / Cond Controller	2.0 11.0	Normal Normal		
024	EEV Coldroom Controller (HT)	2.1	Normal	1	
025	EEV Case Controller (HT)	2.1	Normal	1	
029	Mercury ML Case	2.0	Alarm	1	
02a	Mercury Hub degC/bar		Normal		
104	PackCondF	3.5 13.2	Normal Normal		
931	Plant TDB	25.7 25.7	Normal Normal		
AHU	AHU Simulator	6.0 11.0	Normal		
ALARM	Alarm Testing		Normal		
CASE01	Monitor		Normal		
CASE02	Monitor		Normal		
CASE03	Monitor		Normal		
CASE04	Monitor		Normal		
CASE05	Monitor		Normal		
CASE06	Monitor		Normal		
CdTD01	Condenser TD		Normal		

Removing a Split Device

Once a Parent device has been split, should the parent device be removed from the DMTouch, the split must also be cancelled. In future occurrences, the user must ensure the device split is firstly stopped.

Edit Split

To enter the ‘Edit Split’ page, there must be a device which has already been split. If any alterations are to be made, then the edit split feature allows the changes to be made without the need of cancelling and re-splitting the device. This is also convenient in the situation where a TDB program is perhaps split and new IO is added to the program. Entering the edit split page will allow the new points/ IO to be added to the already split ‘devices’.



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Merge Devices

From the Service Menu select: Devices – Merge Devices

Users can use this feature to create one single 'device' from multiple others.



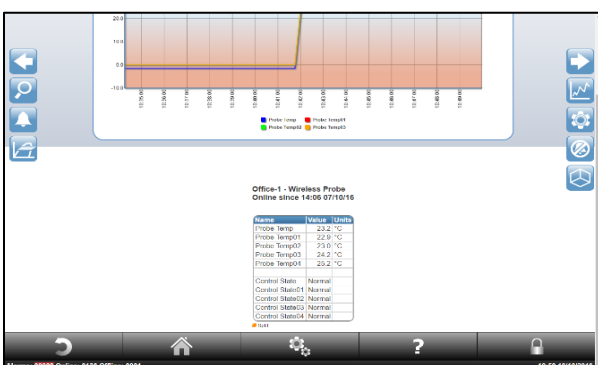
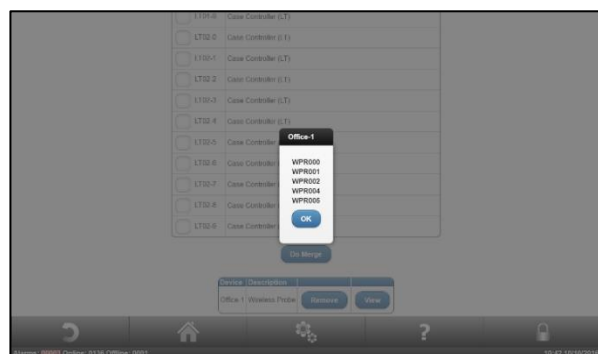
Device	Description	Temp	Status	Value
LT02-5	Case Controller (LT)	-19.6	Normal	1.1
LT02-6	Case Controller (LT)	-20.0	Normal	1.0
LT02-7	Case Controller (LT)	-19.2	Normal	1.0
LT02-8	Case Controller (LT)	-20.2	Normal	1.0
LT02-9	Case Controller (LT)	-23.1	Normal	1.0
WPR000	Wireless Probe - Desk 1	23.2	Normal	4.6
WPR001	Wireless Probe - Desk 2	23.0	Normal	5.3
WPR002	Wireless Probe - Desk 3	23.1	Normal	5.1
WPR004	Wireless Probe - Desk 4	24.4	Normal	1.4
WPR005	Wireless Probe - Desk 5	25.4	Normal	1.2
XX01	CirCon	-1.6	Normal	
XX02	CirCon	-1.8	Normal	
XX03	CirCon	-2.0	Normal	
XX04	CirCon	-1.7	Normal	
XX05	CirCon	-2.0	Normal	
XX06	CirCon	-1.6	Normal	



At the top of the page type the alias of the merged device.

From the list of devices, use the check boxes to indicate which devices to merge, then click 'Do Merge'.

Once completed, the user can click to view the devices that have been previously merged together.



Viewing the new 'device' will be the same as viewing any other single device. Aliases can be altered when required.

To 'un-merge' any device, navigate to the same setup page and click 'Remove'.

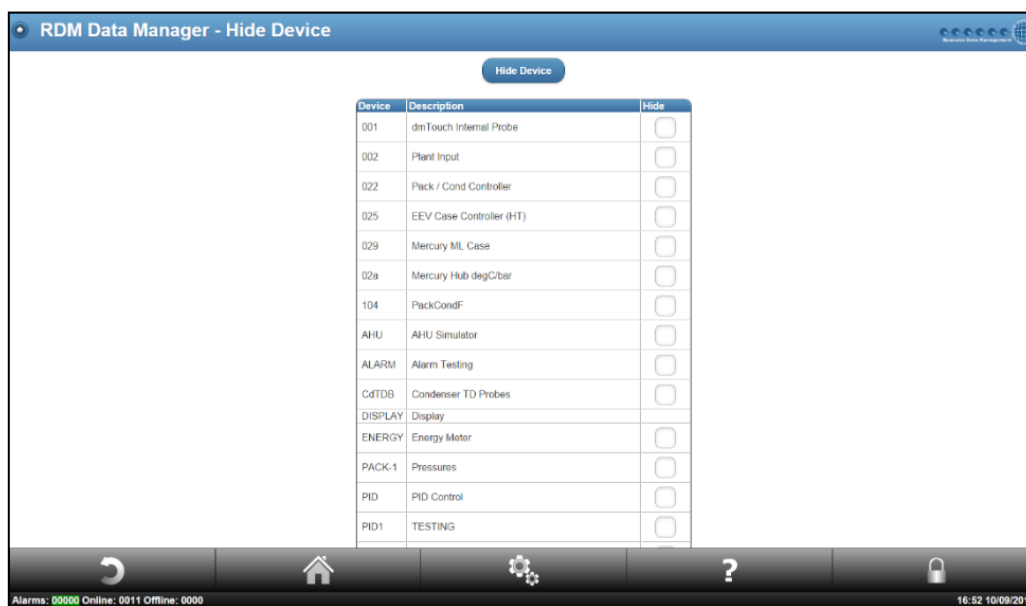


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Hide Device

From the Service Menu select: Devices – Hide Device



Select the devices you wish to hide by ticking the appropriate box and clicking the "Hide Device" button. Any device which is hidden will not appear in the 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. The DMTouch Device list also indicates the number of Hidden devices. This feature is intended for use in conjunction with the Split Device feature. The DHCP page shows hidden devices by greying out the device name.

TDB Editor

From the Service Menu select: Devices – TDB Editor

The DMTouch has the facility to run the RDM Data Builder (TDB). This is a program that allows the user to design and run programs using both the DMTouch internal I/O and I/O through network devices. Refer to the Data Builder User Guide for full instructions on how to use the Data Builder features.

Due to the flexibility of the TDB Editor and the complex control strategies it allows a user to create, RDM recommend that the developer of the TDB application carry out functionality tests prior to installation to ensure the control strategy designed operates as expected. E.g. all inputs can be read, all outputs activate when operated by the TDB program and so forth.

Data Builder can be enabled in the DMTouch in two configuration options:

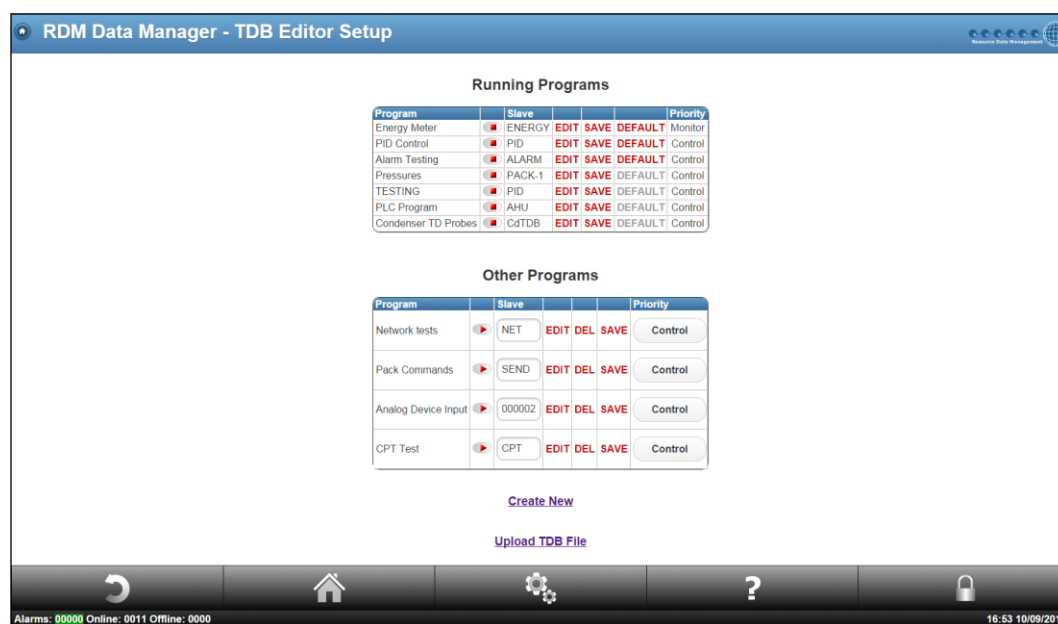
TDB (PR0485) or TDB-LITE (PR0485-LITE)



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TDB Setup



Click the hyperlink "Create New" to create a new Data Builder design.

Click the hyperlink "Upload PLC File" to bring in a previously created TDB file.

Once a TDB program has either been uploaded or created within the online editor, the plc will be listed in the 'Other Programs' table.

There, the user has the option to Edit, Delete or Save (local copy) the TDB program.

Before a program can be started a 6 character "Slave" name must be entered for the TDB program. This name will be assigned to the TDB program when it appears in the device list. Additionally, the priority of the TDB program must be selected, either; 'Control' or 'Monitor'. When set to 'Monitor', the processing time for the plc is reduced. This will aid when running large plc programs in, for example, older hardware models of Data Managers. Once the program has a slave name and priority assigned, click the 'play' icon to start the program.

With the 'full' TDB option enabled, a maximum of 16 programs can be running at any one time, each with the capability of utilising up to 4096 blocks. If the maximum allowable number of blocks is exceeded then the "Start" button for the program will be greyed out until the number of blocks used is reduced below 4096. When creating a TDB program anything placed onto the TDB canvas would constitute a block, for example static text, a setting block, a mathematical block, the interconnecting lines between one block and another etc.

TDB Lite

TDB Lite has the same features as the full TDB option but has the following restrictions applied; Only **1** TDB program can be running at any time; each program is allowed a maximum of 100 blocks. Blocks include such items as Static text, Interconnecting lines between one item and another, Functional Blocks, Mathematical Blocks etc. If the maximum allowable number of blocks is exceeded then the "Start" button for the program will be greyed out until the number of blocks used is reduced below 100.

TDB Trial

If neither TDB nor TDB-Lite is enabled when the user clicks on the Control Editor button then the option to start a free 90 day trial is shown. Once activated the user will have full access to the TDB application suite. This allows for 16 TDB programs to be running at any one time with each program having a maximum of 4096 blocks. The DMTouch webpage shows a running countdown and highlights the number of days remaining for the trial.

Note: Once the 90 day trial expires all TDB programs running will stop operating. The user will be unable to use any of the features of TDB, for example save a TDB program from the DMTouch. When the trial expires clicking on the Control Editor icon will result in a message "Not Enabled". To enable the feature permanently please contact RDM Sales quoting part number PR0485 or PR0485-LITE for an activation key which can be used during the trial or once the 90 day period has expired. Once enabled any TDB programs previously running on the panel during the trial will still be available, however it is always prudent to keep a backup copy.



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TDB Application Note

DMTouch TDB and Plant Controller TDB application software may not always have the same features or functionality at any given time. Please refer to the relevant user document to confirm what blocks and features are present for a particular software version.

Care should be taken when using a more modern version of TDB editor to create a TDB program for a DMTouch using an older version of TDB editor i.e. selecting a block found in the most modern editor and trying to use it in a version of the editor which doesn't have that block as an option. This will have adverse effects.

Plant TDB Upload/Download

From the Service Menu select: Devices – Plant TDB Upload/Download

Device	Description	Panel ID	Action
588	PLC Program	BC360178	Send Get

Use this feature to upload or download a TDB file to either a Plant TDB or Intuitive TDB Controller that is logged on to the DMTouch. Enter the device's user name and password in the fields provided. Then use the 'Send' or 'Get' buttons to upload or download the program to the device. **Note: the user name and password are the same credentials to enter the device's web page menus.**

Mercury TDB Upload/Download

From the Service Menu select: Devices – Mercury TDB

Device	Description	Panel ID	Action
589	Mercury 2 TDB Program	BC21007F	Send Get

Use this feature to upload or download a TDB file to a Mercury Intuitive TDB controller that is logged on to the DMTouch. If the TDB file within the device has no associated read/ write password, leave the 'Mercury Password' field blank. Where the TDB file is to be downloaded, enter the 'read' password and click 'Download'. Where a TDB file is to be uploaded to the device, enter the 'write' password and click 'Send'. **Note: For the plc to be sent to the Mercury controller via the DMTouch, the program must be in the binary (.btodb) format.**



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Device Backup

From the Service Menu select: Devices – Device Backup

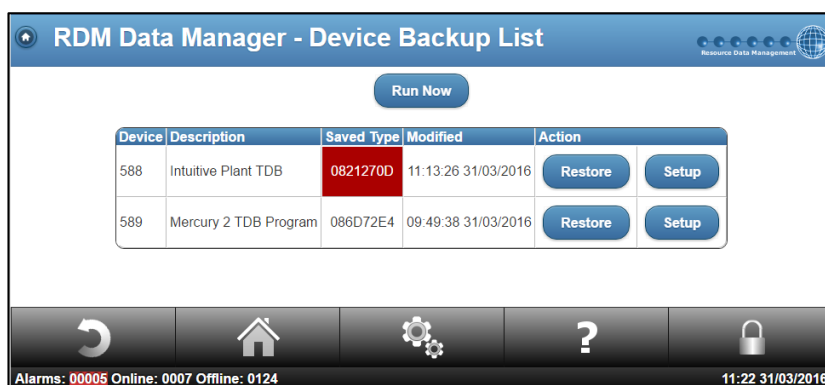
This feature allows for backups of TDB devices to be stored within the DMTouch. Where there are Mercury TDB or Plant TDB devices logged on to the DMTouch, this feature can be used to backup and restore, where necessary, the TDB program from the device.



When the user enters the Device Backup page, it will list all 'TDB Devices' logged on to the DMTouch which are available to use the feature with. Along with the device ID/ alias and description it will also detail the last saved 'type' and date it was saved. If the feature has never been setup, these details will be blank. To setup, click on the 'Setup' button next to the device. A page similar to below page will be displayed. **Note:** The Mercury platforms will only show the 'Read Password' field;

If the TDB program requires a read password, enter it here, if not ensure the field is left blank. Once entered, click 'save'. The result will show the main Device Backup list again. **Click on 'Run Now' to perform the backup** so the current TDB program is saved. The type and modified date details will now be filled in.

If the TDB program has been changed and as a result, differs from the saved TDB program, the DMTouch will highlight the type field in red;



In the example where the current type (TDB program) differs from the saved version, the user has the option to start the setup process again and save the 'altered' program as the new Backup. Or the option to 'Restore' will be available. Clicking this option will prompt the user for a 'Write' password before overwriting the TDB program on the device. **Note: use with caution, as restoring the program will overwrite all previous changes.**



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CPT Setup (Calculated Product Temperature)

From the Service Menu select: Service – Devices – CPT Setup

The Calculated Product Temperature is calculated using a mix of the air on/off probes from a controller in conjunction with a time constant. 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 DMTouch is restarted the CPT calculation uses the last known value for each case as a starting point, providing the saved value is no more than 1 hour old. If older than 1 hour the default value used for the initial CPT calculation is halfway between the UT and OT Alarm limits. The ability to manually default the CPT value on a device by device basis is available via the WebServices feature only. When initiated CPT calculation will be reset and will be halfway between the UT and OT Alarm limits. When a case CPT type is changed on a device the CPT parameters will default to the CPT type selected.

When CPT is enabled a further six parameters appear for the enabled device, these are:

- Air On Over temp.
- Air On Under temp.
- Air On Alarm Delay.
- Air Off Over temp.
- Air Off Under temp.
- Air Off Alarm Delay.

The Air on and Air off probes of a device are used to generate over and under temperature alarms. When enabling CPT for a given device a further item “TD Value” will appear in the Device values page along with supplementary parameters for the controller. 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. The feature generates an alarm when the superheat rises above the Superheat High parameter. When enabled an additional alarm setpoint and delay parameter appear.

Allows the user to configure and adjust the factors used to calculate the various CPT product options.

Name	Type	Weighting	Constant	OT Value	Critical	UT Value	Critical	Delay
Meat, fish, poultry	CPT	55	2000	3	Yes	-1	Yes	10
	Air On			6	Yes	-1	Yes	60
	Air Off			1	Yes	-10	Yes	60
Provisions, bakery, ready meals	CPT	55	2000	5	Yes	0	Yes	10
	Air On			9	Yes	1	Yes	60
	Air Off			3	Yes	-8	Yes	60
Produce	CPT	55	2000	9	Yes	1	Yes	10
	Air On			12	Yes	3	Yes	60
	Air Off			5	Yes	.5	Yes	60

Buttons: Set CPT Information, CPT Offsets

Status: Alarms: 00000 Online: 0011 Offline: 0000 Time: 16:56 10/09/2015



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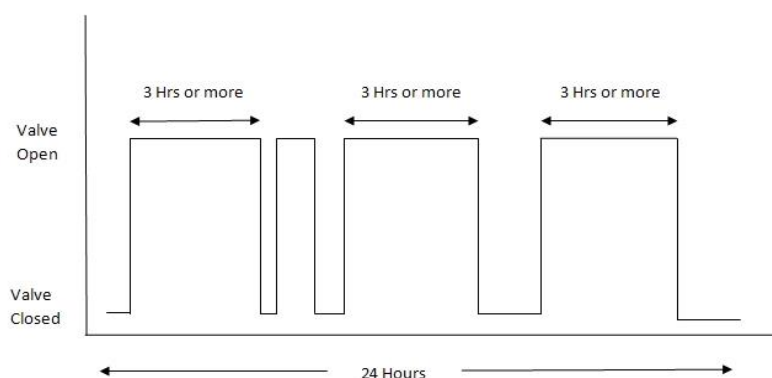
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Name	Enter a description for the desired CPT product type.
Weighting	Percentage of the Air-On temperature that is used to calculate the CPT. The remaining percentage will be Air-Off temperature. Example, a weighting of 30% would result in CPT = 30% Air-on + 70% Air-off.
Constant	The value used in the CPT calculation to generate CPT's for varying product types such as Meat, Fish, Dairy etc. For further information on CPT please contact RDM Technical Support. The sample screen shot above shows the factory default settings.
OT/UT Value	The Over Temperature or Under Temperature alarm limit assigned to a CPT product. Note: an OT or UT alarm event can be triggered from either the CPT value or the Air On probe or the Air Off probe temperature. Setting the limit to 99 or -99 will disable the alarm for that temperature source.
OT/UT Critical	CPT alarms which are set as non-critical generate alarms with the text "Non Critical" in the alarm message.
Delay	The alarm delay applied to an OT and UT alarm for a given CPT product.

Valve Open Too Much

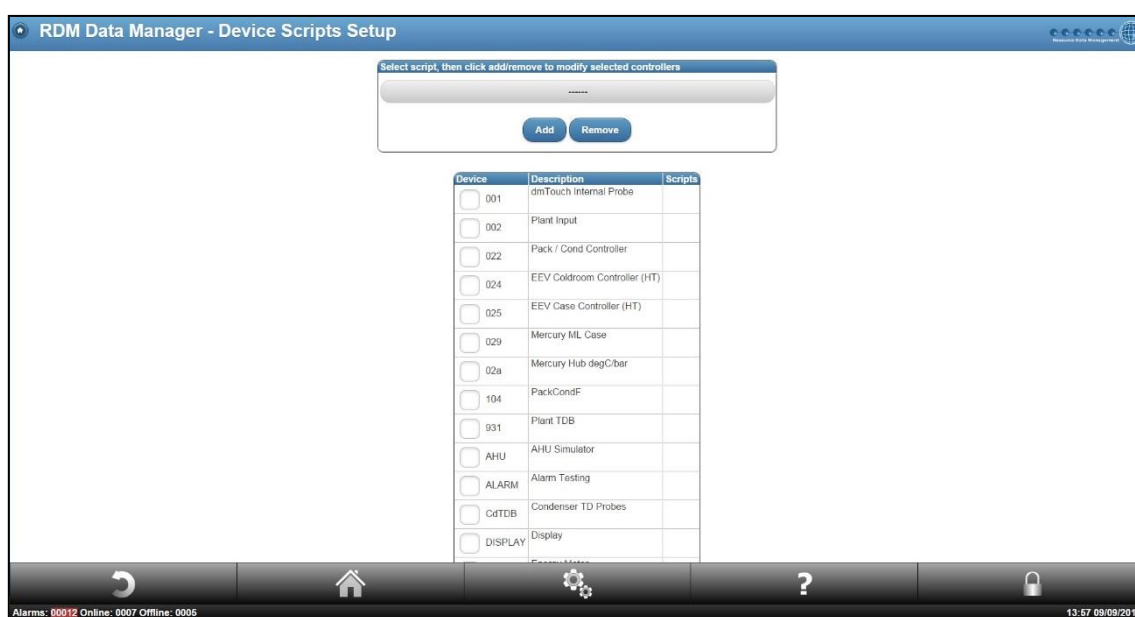
This feature below is enabled when a CPT is assigned to a controller and a valve state is available from the controller. In the parameters for the warning there is an open count and open length. If the valve is constantly open for the open length for the count number of times in 24 hour period, then 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 period you will still get this alarm as this counts as 3 x 3 hour periods.



Script Setup

From the Service Menu select: Devices – Script Setup



Allows the user to assign selected scripts to devices, please contact RDM Technical for more information.

This feature is not required on RDM devices and is required for a handful of third party devices.



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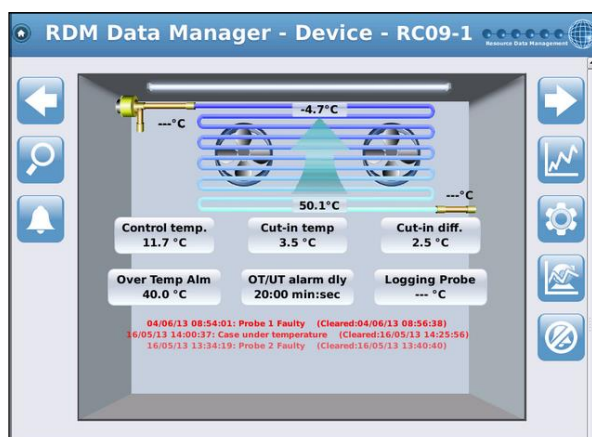
Mimic Setup

From the Service Menu select: Devices – Mimic Setup

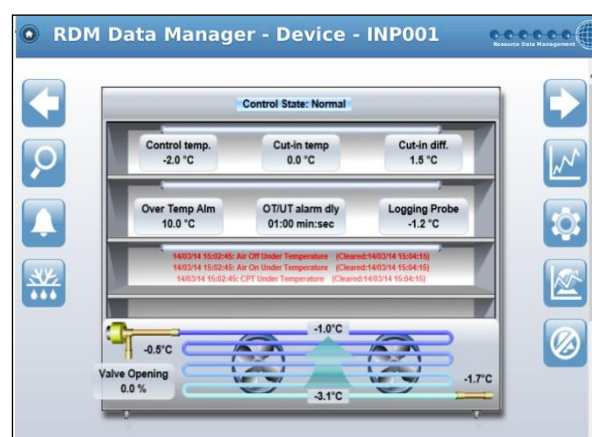
The user can configure mimic diagrams on a device by device basis. Mimics are used to provide a graphical overview for a device and uses 'real-time' data.

There are four Mimics that can be configured, these are Case, Coldroom, Probe and Energy Meter. Once configured they will appear at the top of each device Values page as seen from the front panel (or if the Web Page Look is set to 'Modern'). The four options are shown below.

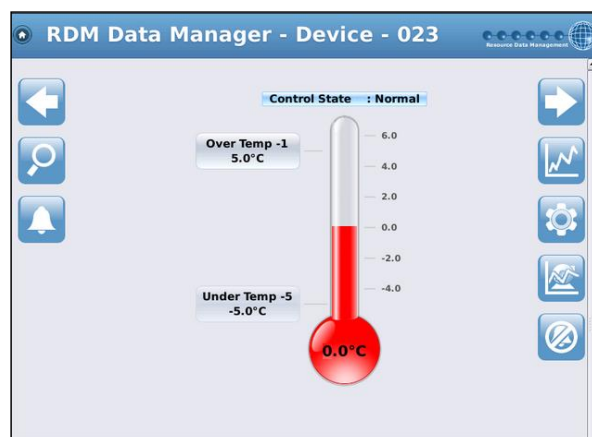
Coldroom



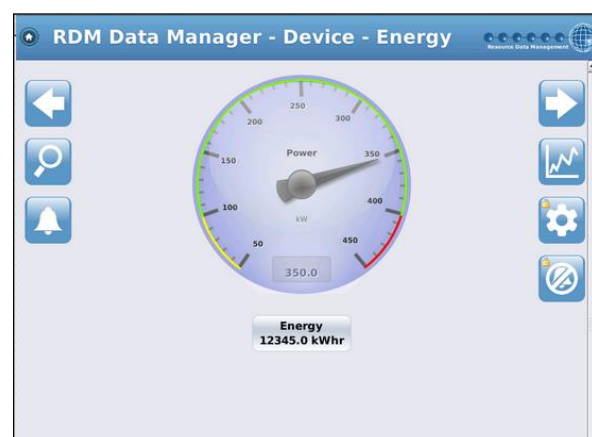
Case



Probe



Energy Meter



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System

Local I/O

Inputs Setup

From the Service Menu select: System – Local I/O – Input Setup

The Base model of DMTouch has 12 analogue inputs, these can be used for a variety of probe types, as well as plant or defrost inputs. In addition to these 12 inputs, there are 3 expansion board positions. A variety of input and output boards are available for these positions, the DMTouch will automatically recognise what board has been used and display the available inputs and/or outputs on the appropriate screen. Please see Appendix 3 [Related Part Numbers](#) for the additional local IO available. Input Setup Page;

Input	Name	Type	Mode	Description
01	RC10-1	Probe	Unused	F freezer Coldroom
02	002	Probe	Plant N/O	Plant input
03		Probe	Unused	probe
04		Probe	Unused	
05		Probe	Unused	
06		Probe	Unused	
07		Probe	Unused	
08		Probe	Unused	
09		Probe	Unused	
10		Probe	Unused	
11		Probe	Unused	
12	001	Probe	PT1000 Probe	dmTouch Internal Probe
13		Probe	Unused	Override Switch
14		Probe	Unused	
15		Probe	Unused	
16		Probe	Unused	
17		Probe	Unused	
18		Probe	Unused	
19		Probe	Unused	
20		Probe	Unused	
21		Probe	Unused	
22		Probe	Unused	

To setup an input, click on the Input Number, the setup page for that input will be displayed. An example of an input setup screen is below. In the example, a PT1000 probe input has been selected from one of the DMTouch's 12 analogue inputs.

Probe Types Supported

PT1000, NTC2K, 470R, 700R, NTC3K , NTC2K25, 100K, 5K, 6K, NTC10K & NTC10K(2) USA

The above probe types are supported. This 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 account for long cable runs.

Input temperature range -99 degrees Celsius to +350 degrees Celsius for PT1000 probes.

Inputs can also be configured as a Normally Open or Normally Closed plant fault input with alarm delay.

An Input can also be configured as a defrost input.

The DMTouch fixed inputs have default 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

Name:	HT01-1
Description:	Dairy Coldroom
Type:	Probe
Mode:	PT1000 Probe
OT Alarm:	5.0
UT Alarm:	1.0
Alarm Delay:	0
Defrost Input:	0
Recovery:	20
Offset:	0.0
Set Input Information	

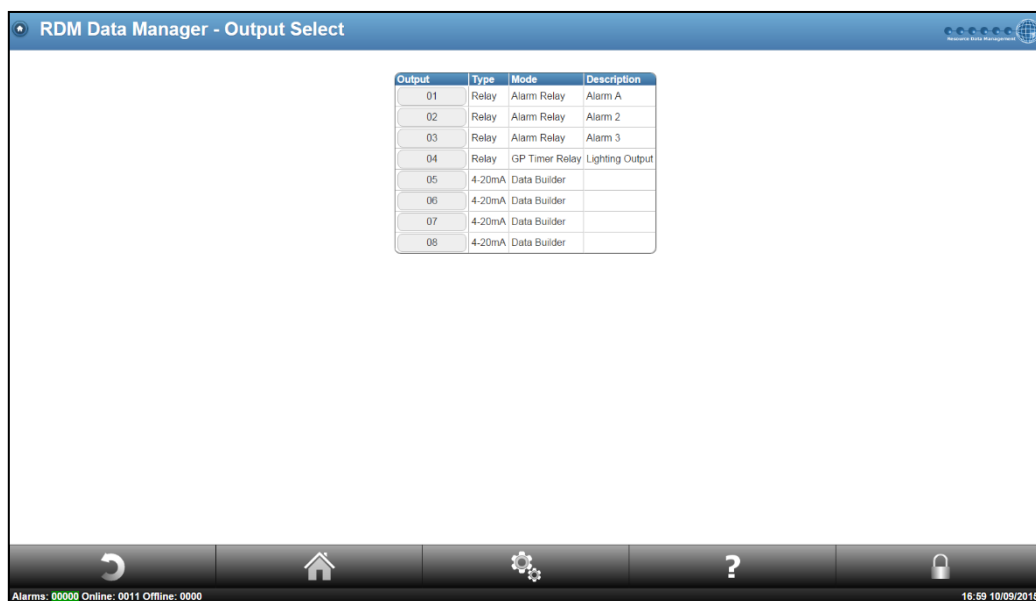


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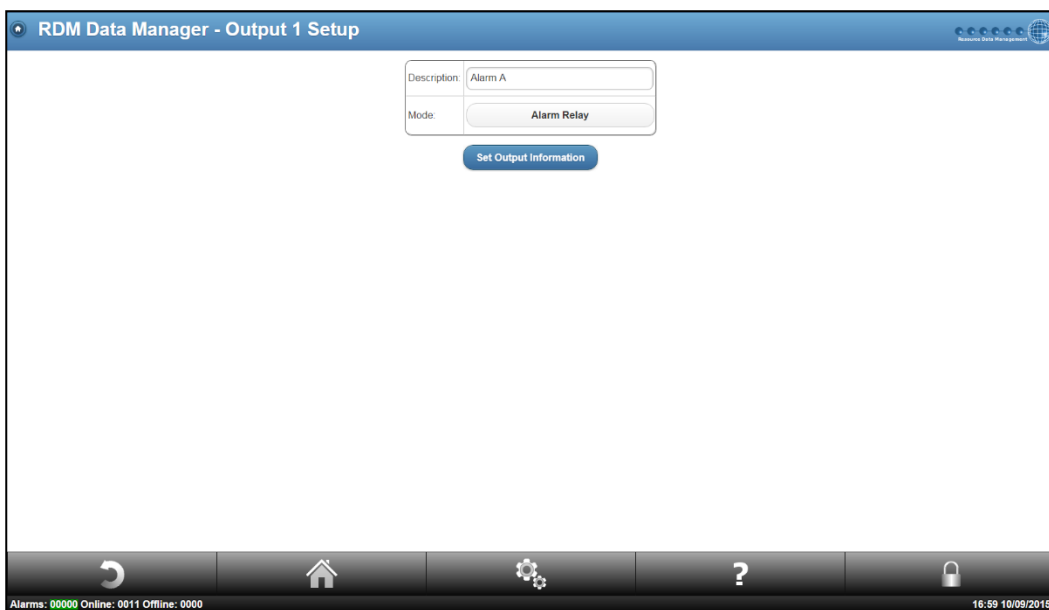
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Outputs Setup

From the Service Menu select: System – Local IO – Output Setup



Select an output to change by clicking on the Output 'number'.



Select the mode required, enter a description for the output and click "Set Output Information"

Mode options are:

- GP Timer Relay - For use with a GP Timer channel.
- Alarm Relay - Alarms can be directed to this output via the Alarm Actions
- Unused - Relay is available for use by the Data Builder program.

Other Output types have similar screens.



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Input Information

This screen provides the input information for the analogue inputs on the DMTouch. If Daughter cards are fitted then they will appear in the list also.

Index	Board	Type	Raw	Value
1	Built-in	Probe	65507	7042.0 K
2	Built-in	Probe	65497	5188.0 K
3	Built-in	Probe	65506	6799.0 K
4	Built-in	Probe	65496	5054.9 K
5	Built-in	Probe	65496	5054.9 K
6	Built-in	Probe	65513	8963.3 K
7	Built-in	Probe	65500	5633.0 K
8	Built-in	Probe	65496	5054.9 K
9	Built-in	Probe	65497	5188.0 K
10	Built-in	Probe	65491	4480.1 K
11	Built-in	Probe	65496	5054.9 K
12	Built-in	Probe	18319	1.168 K

Index	Unique number associated to the input position.
Board	The location of the input. If 'Built-in' is shown it refers to one of the 12 analogue inputs that come as standard with the DMTouch. If '2' is shown, this would indicate Daughter Board position 2, equating to the middle Daughter board position on the right hand side of the DMTouch.
Type	The type of input configured. For example 'Probe' is a resistive temperature probe input, '0-10V' is a 0-10Vdc input.
RAW	This shows the raw count obtained from the A/D. Not normally required information.
Value	The current status or value of the input. For example a resistance is shown for a temperature probe.

Output Information

This screen shows you the output information from the relays on the DMTouch. If Daughter cards are fitted then they will appear in the list also.

Index	Board	Type	Value
01	Built-in	Relay	Off
02	Built-in	Relay	Off
03	Built-in	Relay	On
04	Built-in	Relay	Off

Index	Unique number associated to the output position.
Board	The location of the output. If 'Built-in' is shown it refers to one of the 4 outputs that come as standard with the DMTouch. If '2' is shown, this would indicate Daughter Board position 2, equating to the middle Daughter board position on the right hand side of the DMTouch.
Type	The type of output configured. For example 'Relay' signifies the output is either on or off depending on the command it's given.
Value	The current status or value of the output. For example 'off'.



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Extension Boards

From the Service Menu select: System – Local IO – Extension

Expansion boards can be attached to the DMTouch (Hardware dependant) via CANbus. The extra IO they provide can be utilised from within the TDB feature (PR0485). If expansion boards have been configured in the TDB program, the expected boards will be listed along with their status and versions etc, similar to below;

ID	Expected	Status	Present	Version
1	I/O	Normal	I/O	1.3
2	Stepper	Normal	Stepper	1.2
3	Invalid	Unused	Invalid	---
4	Invalid	Unused	Invalid	---
5	Invalid	Unused	Invalid	---
6	Invalid	Unused	Invalid	---
7	Invalid	Unused	Invalid	---
8	Invalid	Unused	Invalid	---
9	Invalid	Unused	Invalid	---
10	Invalid	Unused	Invalid	---

The user can further click into individual boards to see all associated physical IO;

RDM Data Manager - Hardware									
Board ID 1: I/O									
Wed Feb 15 16:50:18 2017									
Status Input Mode: 0V									
Probe	Resistance	Status	Input	State	Universal	Type	Value	Unit	Relay
1	1093.8	1	On		1	In	0.02	mA	1
2	8573527.0	2	On		2	In	0.02	mA	2
3	1216.4	3	Off		3	In	0.02	mA	3
4	1196.3	4	Off		4	In	0.01	mA	4
5	9860007.0	5	Off		5	In	0.02	mA	5
6	9860007.0	6	Off		6	In	0.02	mA	6
7	9860007.0	7	Off		7	In	0.02	mA	7
8	10379114.0	8	Off		8	In	0.02	mA	8
									9
									10
									11
									12

Depending on the attached board, the physical IO will be listed with all the current values.



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User Setup

User List

The user list provides details of all those who can access secure areas of the system.

To view active users or edit a current user's profile, navigate from the Service Menu: System - User Setup - User List

User	Access Level	Expired	Password	Level	PIN	Maintenance	Expiry	Elevation
install	Installer	---						
store	Site	---						
service	Service	---						

User	The name that the user has been given (this can be changed by clicking on the name)
Access Level	The privileges the user has been given. Note: Increased access levels permit access to more functionality.
Expired	When created, Users can have an expiry date and time against it. This can also be set by clicking on the Expiry button
Password	The password of the user can be altered by clicking this box.
Level	The level can be altered for the individual user (installer, service or site). Note: Only users logged in with similar privileges can view users of the same level or below to make amendments e.g. if logged in at site level the user will not be able to view user accounts of a higher level.
PIN	Clicking on the PIN box will allow you to change the users PIN (used to log in to front end panel). Note: No two user accounts are permitted to have the same PIN.
Expiry	This allows the user to set an expiry date and time for a user log in to be disabled. This can also be set to auto remove the password when the date and time expire. (Please see screen shot of setup below Fig 1.)
Elevation	This allows the user to allow another user a higher access level for a predetermined time period. After that period has elapsed the user will be set to the original access level (Please see screen shot of setup below Fig 2.)

Fig 1.

Change user expiration for install

Enable Expiration	☒
Expiry Date	09/09/2015
Expiry Time	12 00
Auto Removal	☒

Change Expiration

Fig 2.

Change Timed Elevation for install

Enable Elevation	☒
Level	Installer
From	09/09/2015 00 00
Until	10/09/2015 00 00

Change Elevation



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Add User

From the Service Menu select: System – User Setup – Add User

Enter a User Name and password. (Password is for PC access)

Select an access level; Site, Service or Install.

Enter a card number. Only required when a card swipe is fitted on the DMTouch or an orbit out station (*this field is not seen if card swipe on Orbit 1 is unchecked*).

Enter a PIN. (PIN is for DMTouch front panel access)

On initial setup the user can also be set with an Expiry date and time by clicking on the Enable Expiration box.

Note: to assign a swipe card to a user when an Orbit MKII or MKIII console is in use please refer to the Orbit Console installation and commissioning guide found on the RDM website.

Remove User

To remove a user, navigate from the Service Menu: System – User Setup – Remove User

From this menu it will list all the users available to edit/ remove. Simply click the appropriate tick box and select 'Remove User(s)'.

Elevations

The user can also check on any elevations that are set. This screen will show the user, the original access level and the level they are to be elevated to. The page also shows the start and end time of the elevation. The current access level that the user is allowed will be highlighted in green.

User	Access Level	Elevated Level	Start Date	Start Time	End Date	End Time
store	Site	Installer	09/09/2015	09:00	11/09/2015	10:00
service			29/05/2015	09:00	29/05/2015	10:00

Login Activity

User activity can be checked by using the Login Activity screen this will show how many times users have logged on the DMTouch and when they last logged in. The generated list can be sorted by User name, last login and Login count.

Username	Last Login	Login Count
install	09/09/2015 15:17:49	38
service	24/04/2015 16:05:43	14
store	23/04/2015 15:20:21	9

Please note that these screens will only show users with the same access level or lower.



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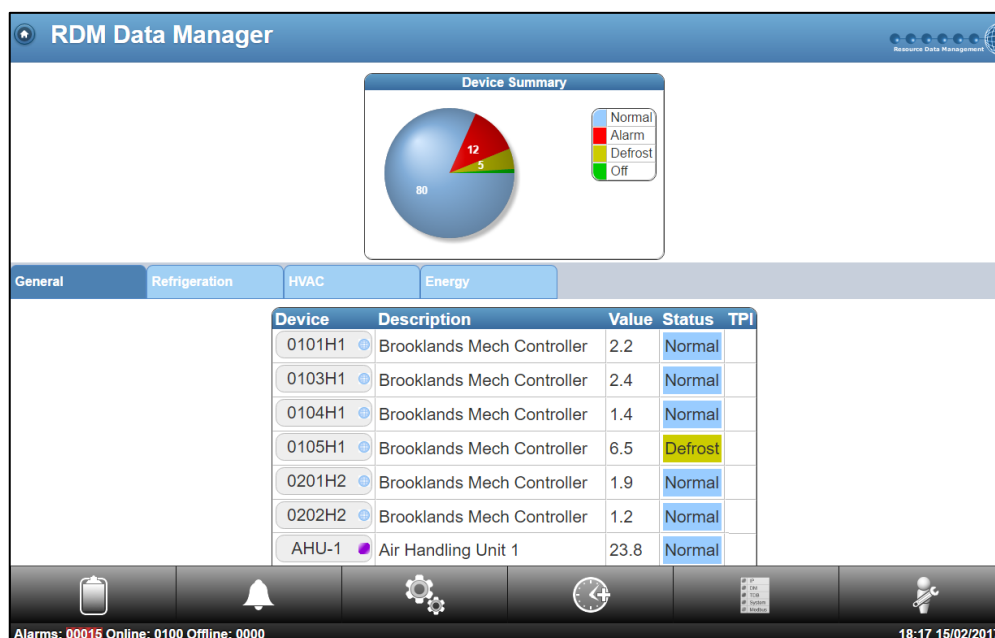
Disciplines

The Disciplines feature allows devices to be segregated into different groups or categories. The disciplines are user-definable and the users at either 'site' or 'service' level can be associated to them. This results in specific users, only having visibility of the devices assigned to them

The 'Disciplines' menu allows install-level users to view and edit the list of disciplines. It will look similar to the below;

Discipline	Global
1 General	☒
2 Refrigeration	☒
3 HVAC	☒
4 Energy	☒
5	☐
6	☐
7	☐
8	☐
9	☐
10	☐

There can be up to 32 separate disciplines however the first listed (General) cannot be edited. When 'Global' is checked, all devices associated to that discipline will be visible on the device list regardless of whether a user is logged in. Furthermore, if the setting 'Tabs on Device List' is checked from within [Site Setup](#) then the disciplines will appear in tabs along the top of the device list. For example, with the above settings, the device list would look similar to the below:



Where 'Tabs' on Device List' is unchecked, it will not have tabs and will simply show all devices in the disciplines marked 'Global' (see next section).

Note: A discipline can only be removed if there are no associations to it by either a device or a user (see next sections).

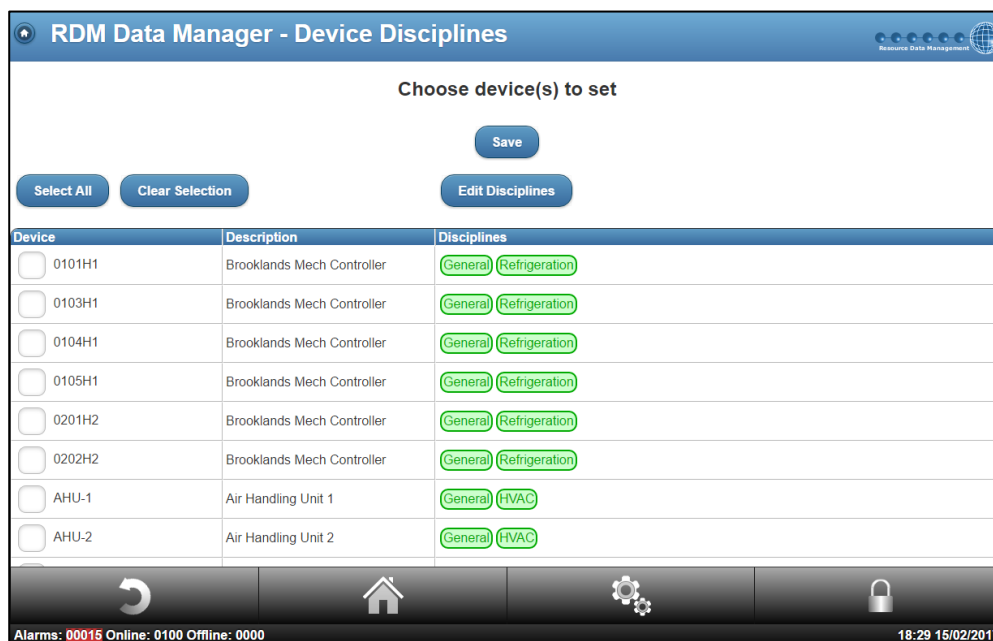


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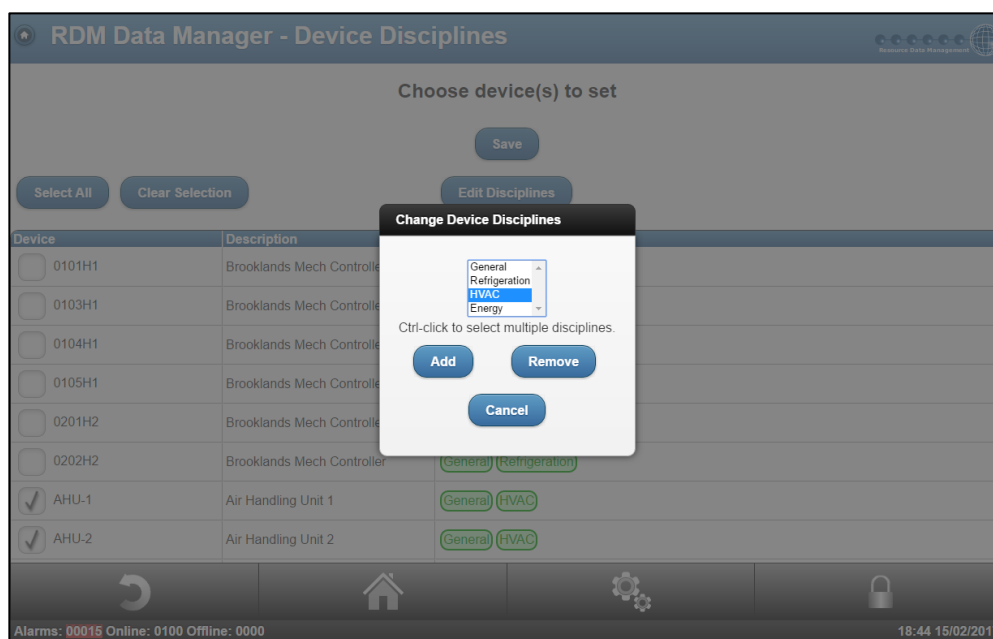
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Device Disciplines

The Device Disciplines page allows all devices logged on to the DMTouch to be associated to specific disciplines set up in the previous 'Discipline' page. It will look similar to the below;



As default, all devices are pre-set to have 'General' associated to them, meaning all will be visible to any user, logged in or out. Disciplines coloured in 'Green' are Global where 'Red' are not (see previous section for info). Each device can be individually selected by clicking the 'check-box' or using the buttons 'Select All' / 'Clear Selection'. Once selected the devices can have the disciplines associated by clicking 'Edit Disciplines'.



Within the 'Change Device Disciplines' window, a single or multiple disciplines can be selected. Clicking 'Add' will add the discipline to the previously selected devices. To remove disciplines already associated to devices, click 'Remove'. 'Cancel' will exit the window without applying changes.

Back in the list of devices and once complete, click on 'Save' to save all changes.

Note: When logging on a new device to the DMTouch, it will automatically be associated to the 'General' discipline. The removal of the device will permanently remove all other disciplines it has been associated to.



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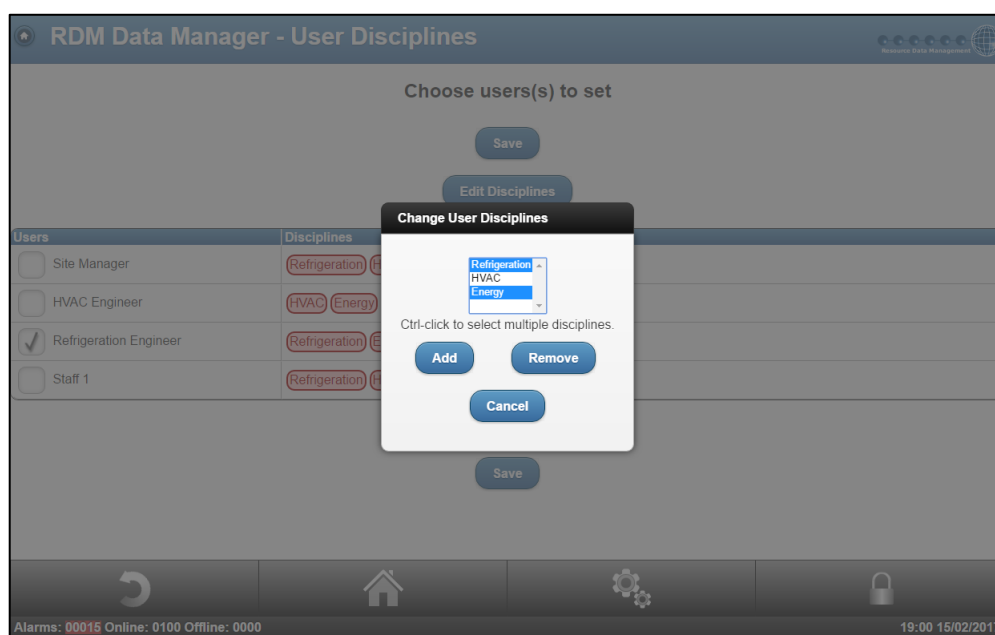
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User Disciplines

The User Disciplines page allows all 'Service' or 'Site' level users to have disciplines associated to them. It will look similar to the below;



It will list all site and service users along with the associated disciplines. By default, all users will have none. To edit the disciplines for a user either select one or multiple by clicking the 'check box' next to the user name, then click 'Edit Disciplines'.



Within the 'Change User Disciplines' window a single or multiple discipline can be selected. Clicking 'Add' will add the discipline to the previously selected user(s). To remove disciplines already associated to the user(s), click 'Remove'. 'Cancel' will exit the window without applying changes.

Back in the list of users and once complete, click on 'Save' to save all changes.

Note: Disciplines set to 'Global' will not be listed in the selection box, as by default they are visible to any user.



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Site

Site Setup

From the Service Menu select: System – Site – Site Setup

Site ID

Enter the Name of the site (Avoid using control characters such as &, *, ',).

Site Description

Enter the description, usually this is the site address.

Offline Alarm Delay

Enter the Offline Alarm delay (default is 15 mins). The Alarm index number for an offline device is 7.

Note: Setting a short alarm delay can result in spurious offline alarms.

Test dial-out frequency

Enter the time in hours (default is 24 hrs). Any Modem configured as "Modem" will send a test dial out alarm every x number of hours. **Note:** That any Modem set to Email, SMS, GSM or other does not use the test dial-out feature.

Web page look

Set the look when the DM is viewed through a web browser. This can be set to; Standard, Modern or Dark. Note: The 'Modern' and 'Dark' webpage look is supported on the latest version of Chrome and Firefox and Internet Explorer 9 or above. **Note:** 'Original' theme removed from V2.5 onward.

Alarm comments

Select how alarm comments can be appended to alarms. The three options are; Off, On or Forced. When off, the acceptance of the alarm will not prompt for additional comments. On will prompt for a user comment, however not compulsory to have one. Forced will not allow acceptance or progress past accepting alarm unless a comment has been selected. Once entered, comments cannot be edited or removed from an alarm. However, subsequent comments can be appended to an accepted alarm.

Card swipe on Orbit 1 option

Check this option if cards are required to accept alarms on Orbit Outstation 1.

Unrestricted notepad access

The notepad feature is explained in the [Notepad](#) section. This option changes the permissions required to access it. The options are;

- None – does not permit access to the notepad without the user being logged in on any interface.
- Panel – gives 'unrestricted' access to the Front End panel (touch screen) interface. Every other access is restricted with a login.
- Local – gives 'unrestricted' access to the PC's that share the same local subnet.
- Remote – gives 'unrestricted' access i.e. Front Panel or web interface.

PIN/Swipe alarm accept on Panels

Check this option if Pin's are required to accept alarms on the DMTouch – uncheck this option to use the "Mute" key to accept alarms.

Log Probe on Layouts

Check this option if the Log Probe temperature value is required on the layout instead of the control temperature value.



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Service Lockout

Check this option to prevent service level logons changing parameters.

Closure codes in Maintenance

Check this option for M&S sites, otherwise uncheck.

Enable console support

Uncheck this option if the primary Ethernet port (Eth0) is used for external LAN and not controllers.

Sort devices in alphabetical order

Check this option to sort the devices in alphabetical order otherwise the devices will be sorted by bay-case number. **Note:** *Will also sort devices with numerical names in ascending order.*

Calls by contractor not discipline

Calls displayed via the Maintenance icon are shown by contractor and not discipline. Check this option for M&S sites, otherwise uncheck.

Signal alarm locally if dial out fails

The DMTouch will generate an alarm locally, informing the user of a failed alarm dial out. Any subsequent alarms which follow will be directed to the "Fail" action. *Please see Alarm Actions for further details.*

Web Services Enable

Offers the option to enable or disable both web services features (defaulted to off). **Note:** *For further details on the features available please contact RDM.*

Authentication on Web Service

Check this box if authentication is required when accessing the Web services features. **Note:** *For further details on the features available please contact RDM.*

Static Namespace on Web Service

Check this box for a static namespace when using web services. Please contact RDM Technical Support for further details if required.

No layout on phone

When viewing the DMTouch via a mobile phone interface, check this option to remove the layout and only show the device list.

Note: *Correct operation of this feature is dependent upon information supplied by your device browser.*

Force CGI Login

This feature allows the user to restrict viewing access to the DMTouch front end and the web interface. Note this does not affect normal log in procedures. The options are;

- Off** Unrestricted viewing of the device list and layouts
- Local** Forces the user to log in at the Front End (touch screen), TouchXL (if connected) and any device connected on the panel's local subnet before they can view either device list or layout.
- Remote (Default)** Forces the user to log in from any device connected from out with the panel's subnet before they can view either the device list or layout. **Note:** Accessing the DM via the secondary IP port will be counted as remote access.
- Local and remote** Regardless of how the panel is accessed it will always force the user to log in before any site details can be viewed.

Panel login User/ Password

When unchecked, to log in to a DMTouch, it requires the user's pin to log in to the service menus. Check this box to enable a username and password log in to access the menus. **Note:** *Please see User setup section for more details.*

Log Thin Age (days)

The DMTouch will thin out stored data after this time period. The minimum value available to set is 100 days. Any data older than the "Log Thin Age" parameter will be conditioned using the "Log Thin Freq" parameter. For example if the DMTouch has a SSD fitted, the "Log Thin Age" parameter is set to 100 days and the "Log thin Freq." is set to 60 minutes then graph data older than 100 days will be stored at 60 minute intervals instead of 15 seconds.

Warning: *Once data is removed it is impossible to retrieve.*



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General Note:

The DMTouch has a Solid State Drive (SSD) fitted (PR0510) and graph data is stored at 15 second intervals. On older systems without either a Hard Disk Drive (HDD) or SSD (PR0500), graph data is stored at 15 second intervals for a finite period of time. Out with this period, data is stored at 15 minute intervals. The period of time at which data is saved at 15 seconds is dependent on the hardware issue of the panel and will vary. For current shipping DMTouch's it will store data at 15 second intervals until the log thin age is reached.

Log Thin Freq (mins)

Frequency of the logging in memory once the 'Log thin days' value is met. Select between 5, 15 or 60 Minute intervals. **Note:** By default the Log Thin Age is set to 180 days and Log Thin Freq is set to 5 minutes.

Alarm Delay Time (mins)

Only active if "Swipe System" feature is enabled in the DMTouch System Configuration. The swipe system is use in conjunction with RDM's Active FM feature and allows engineers to login when arriving onsite. When an alarm occurs on the front panel and an engineer needs to login to the DMTouch, a delay option appears. Pressing the delay button will temporally delay any active alarms on the front panel only, so that an engineer can log in and will regenerate the alarms when the "Alarm Delay Time" has expired. **Note:** It doesn't clear the alarm so if the alarm has been directed to an alarm relay, modem etc. then these processes will still operate as expected and will not be affected.

GP Run-on Permission

Selects the access level permitted to 'run on' a GP timer channel. Choose between; None, Site, Service and Install. Once set, only users with this access level or above will be able to override the GP timer channel.

Note: Please see [GP run on](#) section for details.

GP Run-on Limit (mins)

Set this to limit the GP Timer run-on period which the end user can enter. (Range is 0 mins to 1440 mins).

Note: Please see [GP run on](#) section for details.

CGI Compression Option

Used to speed-up web page information to a browser. If your browser supports compressed web page data, this option can be selected to on, if unsure, leave the setting on Auto.

Web Page Refresh

Allows the user to determine, in seconds, the refresh rate of the DMTouch web pages e.g. Device Values page, Device List etc. Default is 5 seconds, 0 disables the feature (in general it is not advisable to disable).

Web Page Status Refresh

Allows the user to determine, in seconds, the refresh rate of the time and date, current alarms and online /offline status found on the banner at the bottom of the Web Pages (original look has the information in the Home Page). Default is 15 seconds, 0 disables the feature (in general it is not advisable to disable the feature).

Summary on layout

When a layout has been uploaded to a panel this option allows the user to select if the 'Device Summary' charts are displayed when viewing the layout via the DMTouch or using modern look in a web browser.

Optimisation ignore inhibited

This option is only used in conjunction with the 'Optimisation Energy saving features'. For setup details see the [Energy](#) section. When checked, the optimisation 'case running count' will ignore all cases that have been placed on inhibit. If unchecked, the 'case running count' will include the inhibited cases.

Tabs on Device List

Used in conjunction with the 'Disciplines' feature. When this option is 'checked', the disciplines setup will be listed in tabs at the top of the device list. Depending on the user logged in and discipline associations (to user), will dictate the tabs shown. See Disciplines section for more details.

Graph Device Format

Select from; Device Name, Description or Device Description. While a user views a device's graph and requires to add another trace from a second device, this option dictates the format of the list to select from.

Secondary Web Port

(0 - disabled, must be greater than 1024)

HTTP connections by default are made on Port 80 of the DMTouch and Port 80 is permanently enabled regardless of the port number entered in this feature. Define a second port number if required, which as



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described, must be above 1024. **Note:** For permanent solutions RDM recommend the use of a third party network device to perform this task. This option is provided for temporary access only.

Console Language

Select the language to be displayed on the console (Language files must be present). Contact RDM for further details.

Time-Zone

Select the appropriate location for where the DMTouch installation is located. The unit's time will adjust automatically.

Modem Port

This is for information only. When a USB GSM modem is connected to one of the DMTouch's USB ports it will provide information on the connection, for example the signal strength. The GSM modem will allow the DMTouch to send alarm information as an SMS text message to a mobile telephone. Please contact RDM to confirm compatible devices.

Note 1: When using a USB GSM Modem to send SMS text messages select SMS (GSM Modem) under Modem Setup.

Note 2: the GSM USB modem does not allow remote access to the DMTouch.

Save Site Setup

From the Service Menu select: System – Site – Save Site Setup

Use this feature to save the DMTouch's full site configuration to a file. The two options are to save the configuration internally to the DMTouch or to a local file (on PC). The page will also provide a choice to either include layouts or not. See [Appendix 2](#).

To prove a 'human' is interacting with the system to obtain a site setup, the user must enter the 'captcha' code.

Note: DMTouch V2.6 and above includes BACnet 'user-set' type files, generated from using the BACnet pending feature, in the saved configuration file.

Restore Site Setup

From the Service Menu select: System – Site – Restore Site Setup

Use this option to restore the full site configuration (**Note:** use with caution). See [Appendix 2](#).

There is also an option to restore the site configuration from a file saved internally, if this is selected then the site configuration will be restored from the last saved configuration, this is saved automatically at midnight every day.

Note: If using a system configuration from an original Data manager and using a 485 network, please contact RDM Technical for further details before uploading on a DMTouch.

DM Configuration Files

NEVER attempt to install a configuration file from a newer Data Manager Software version into a Data Manager with an older software version as this could result in complete system failure.

RDM will not be liable for anything that occurs as a result of this action having been carried out.

For further information or for questions regarding this matter please feel free to contact RDM Technical Support.



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System Config.

From the Service Menu select: System – Site – System Config.

This is a view only screen; it allows the user to see what features are currently enabled on the DMTouch. Click on the Modbus TCP/USB Interface links to view the currently enabled pay for use Modbus templates.

Add Feature

From the Service Menu select: System – Site – Add Feature

This is a utility to enable features that are currently disabled. Please refer to [Appendix 3: Related Part Numbers](#) for the full list of features.

This requires an authorisation code from RDM to activate new feature Note: Once a valid activation code has been entered the DMTouch will restart.



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Energy

Pack Setup

Select the pack you wish to configure from the list (up to 50 can be configured). **Note:** Packs which have been configured already will be highlighted blue. The set up page will be similar to the following.

Optimisation Setup

Field	Description
Pack Device	Use the drop-down menu to select the pack (Device name) you wish to optimise with.
Pack Input	Use the drop-down menu to select the suction transducer for the section you wish to optimise.
Pack Command	Use the drop-down menu to select the section you wish to optimise. For a Dual Pack Section 1 is Optimise 1 and Section 2 is Optimise 2.
Condenser Device	Currently unused, may be used in the future
Condenser Input	Currently unused, may be used in the future
Liquid Temperature Device	Controller which you are monitoring liquid temperature.
Liquid Temperature Input	Probe selected on controller to measure liquid temperature.
Refrigerant	Select refrigerant type for the system.
Pressure readings	Bar, PSI, Absolute or Gauge can be selected for displayed pressures.
Isentropic Efficiency	Enter the calculated Isentropic Efficiency of the system.
Pack CPT Limit	When the number of CPT OT alarms generated for the cases associated to the pack reach this limit a "Pack CPT Fault" alarm is generated. Any subsequent CPT OT alarms associated to this pack do not appear in the DMTouch alarm list and no further action is taken. The Pack CPT Fault alarm clears when one of the initial CPT OT alarms clear. Note: The Pack CPT Fault will reoccur immediately if there are additional cases with CPT OT alarms. If set to 0 then the feature is disabled. The Pack CPT Fault alarm is generated from the pack controller configured, the alarm index number is 3. There is no alarm delay.
Period	Use to define the period over which optimisation is based
Opt Up Value	% efficiency below which will optimise up (% of controller valve opening)
Opt Down Value	% efficiency above which will optimise down (% of controller valve opening)
Opt Zero Value	% efficiency for no optimisation (% of controller valve opening)
Single case zero count	Number of Periods a single case reaches the "Opt Zero Value" before optimisation is turned off
Multiple case zero count	Number of cases that reach the "Opt Zero Value" during a single period before optimisation is turned off
Cases Running (%)	Percentage of cases which must be online before optimisation is enabled. For example if this is set to 100% then every controller assigned to the Pack setup would have to be online before the feature operated.
Pack Fail Setup	See Pack Fail Setup



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Pack Recovery Setup

Pack recovery can be used in the event of a pack failure. When the selected input is activated, all the case controllers operating from the pack (set up in [Case Setup](#) page) can either be placed into 'Case Off' or have their refrigeration valves forced closed. When the input has cleared, the DMTouch will begin a recovery process and allow a pre-determined number of controllers to begin opening their valves over a set period of time. Mercury case controllers must have the appropriate software to use this feature. The software must have the Remote Command "EEV Command" present before this feature will work. Consult appropriate case controller user document to determine software version required.

Pack Fail Ctrlr	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	If the Pack Fail Ctrlr selected is a pack controller then ticking the Use Standby option will force controller valves closed whenever the pack controller is in standby instead of using a dedicated input. Note: If both the Fail Input and 'use standby' is selected then the Pack Fail will be triggered by either.
Recovery Count	The number of controllers allowed to open their valves, once the recovery process starts, in a given period. Each period is fixed at one minute. If this parameter is set to 3 then 3 case controllers would begin refrigeration once the pack fail input has cleared, after a one minute delay a further 3 controllers will start the refrigeration process until all cases resume normal refrigeration control.
Fail Type	This field dictates what command is sent to the controller. 'EEV Close' will send a command to close the valve of the controller. 'Case Off' will send the command to put the unit in the 'Case off State'.

Note: When input equals "1" then pack is ok and when input equals "0" then pack fail.

Defrost Valve Setup

Valve Device	Select the appropriate defrost header station controller from the drop down list.
Valve Output	Determines the relay that will be operated, from the above device, when any case mapped to the pack setup configured is in defrost. Select the relay output from a drop down list. Note: only relays which allow remote operation should be selected.

Pack Fail Setup – Intelligent Load Shedding

The following feature can be used in standard refrigerant systems or CO2 installations. This software feature provides a higher level of safety and resilience within a refrigeration system by automatically turning off cases intelligently, starting with the least critical assets when it detects pack compressor problems which threaten the whole system. The feature assists in preventing stock loss, ensures continuation of site trading and reduces the urgency of an engineer attending the site.

If the pack pressure goes too high or there are compressor failures on the pack associated to the system the DMTouch can place the case controllers associated with the system into a "Case Off" mode. The purpose of this is to reduce the duty on the pack by dropping a proportionate amount of load then recovering it once the pressure is stable or the compressor failure resolved.

The order in which cases are shutdown are identified from a pre-determined list that specifies the case duty and the case priority, so to find a 20% load reduction the software may be configured to first turn off all beers, wines and spirit cases and then 16ft of produce cases, affecting produce which will not be spoiled by temperature raises.

If the condition deteriorates and another compressor is lost then the software turns off more case sections based on the priority list whilst maintaining operation in the rest of the system. At all times the RDM DMTouch front end informs the site of the situation and confirms the cases that have been shut down and since the Intelligent Load Shedding case shutdown ensures that the least critical cases are removed first this reduces the risk of stock loss and gives more time and notice to the site staff should they need to close night blinds or to remove stock for storage elsewhere.



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RDM Data Manager - Fail Setup

Fault	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Relative Size (%)	20	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0

In the above table you should put the relative size of the compressors against the total size of all the compressors.
So for example if you have 10hp, 20hp, 20hp compressors then you need to put in 20, 40, 40. The total must come to 100%.

Depending on selection of pack type below the definitions of the faults will change.
For the old type the fault numbers relate to the inputs used for compressor fault on the pack controller. So if compressor 1 uses fault input 5 then put a size in the table at fault 5.
For the new type the fault numbers relate directly to the compressor numbers. So compressor 1 will be fault 1 etc., depending on the section of the controller the pack type setting would be section 1, 2 or 3.

Ambient	Capacity (%)
10°C	150
15°C	125
20°C	120
25°C+	100

In the above table you should put the proportion of full capacity that the plant will supply at the given temperature.

Other settings:

Ambient Temperature Device	001	Load Pressure Limit 1	8
Ambient Temperature Input	Probe Temp	Load Pressure Off	1
Pressure Device	SPack321	Load Pressure Time 1 (s)	30
Pressure Item	Press1	Load Pressure Limit 2	10
Pack Type	New (Section 1)	Load Pressure Time 2 (s)	30
		Load Pressure Start Stage 2	2

Set fail information

Alarms: 00000 Online: 0140 Offline: 0000 10:44 22/06/2016

Fault 1 to 16 and Relative Size (%)

Fault Compressor Fault Inputs being used on the pack device.
Relative Size (%) Percentage of capacity that will be lost when the fault input is activated, this must total 100%.

Ambient Capacity (%)

Uses the ambient temperature to determine how much capacity is available, for example: -

Based on the above screen shot, at 25 Degrees C there will be 100% capacity. But as the ambient temperature drops, the pack does not have to work as hard therefore overall there is spare capacity available.

Note: Where the pack has more capacity than the refrigeration on the sales floor total capacity requires, this can be allowed for in these settings. For example if the pack is 20% oversized then the starting point at 25 Degrees would be 120%.

Example: With above settings if the ambient temperature is above 25 Degrees (100% Capacity) and say fault input 1 is activated, then 20% of the capacity has to be dropped and X number of cases have to be placed into CO2 Case Off.

If the ambient temperature is below 10 degrees (150% Capacity) then there is not the same requirement to load shed and therefore zero cases will be placed into Case Off. A further 2 fault inputs would have to activate before the capacity will drop below 100% thus requiring cases to be placed into Case Off.-

In this example we are using 10 cases and 5 status fault inputs to demonstrate the operation of load shedding

Active Input	25 Degrees (100% Capacity)	10 Degrees (150% Capacity)
Comp Fault 1	2 Cases to Case Off (80% Left)	0 Cases to Case Off (120% Left)
Comp Fault 1 & 2	2 Cases to Case Off (60% Left)	1 Case to Case Off (90% Left)
Comp Fault 1, 2 & 3	2 Cases to Case Off (40% Left)	3 Cases to Case Off (60% Left)
Comp Fault 1, 2, 3 & 4	2 Cases to Case Off (20% Left)	3 Cases to Case Off (30% Left)
Comp Fault 1, 2, 3, 4 & 5	2 Cases to Case Off (0% Left)	3 Cases to Case Off (0% Left)



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Other Settings

Ambient Temperature Device	The DMTouch or Device probe being used to measure ambient temperature for the ambient capacity calculation.
Ambient Temperature Input	Ambient Probe input from the 'Ambient Temperature Device'.
Pressure Device	Enter the Pack controller name which is being monitored. If this device is a Plant/Intuitive TDB controller then this name is the Network name used for peer to peer broadcasts. If this device is an RDM Pack controller then it is the rotary switch values on the device, appended with a "\$Pack" sign. This name is case sensitive. E.g. "\$Pack321".
Pressure Item	Using a TDB Pressure Device, this has to match TDB block which is set to broadcast the value i.e. the "Broadcast" box in properties for the TDB block will be ticked. If using pack pressure from an RDM Plant/Intuitive pack controller then use one of the following; Press1 or Press2 or Press3 . Both methods are case sensitive.
Pack Type	Select the pack controller 'type' for use with the compressor fault/ relative size section. For Intuitive Super packs, select from; 'New Section 1', 'New Section 2' or 'New Section 3' depending on which section is being monitored. For standard pack controllers, select 'old'.
Load Pressure Limit 1	If pressure reaches this value it will start to load shed at intervals set at "Load Pressure Time 1".
Load Pressure Diff	If the pressure drops by this amount below the limit it will recover load at same time intervals.
Load Pressure Time 1 (S)	The time limit between shedding load and recovering load.
Load Pressure Limit 2	If pressure reaches this value it will skip stages and go the stage set in "Load Pressure Start 2".
Load Pressure Time 2 (S)	The time limit between shedding load and recovering load after limit 2 is reached.
Load Pressure Start Stage 2	The stage that it will go to if "Load Pressure Limit 2" is reached.

Requirements

- RDM DMTouch, Case controllers and Pack controllers are required for this feature to operate.
- The case controllers in use must have the appropriate parameters configured and software installed which allows remote Case Off and CO2 Case Off shutdown states. See case controller document for further information.
- The pack controller in use must have the appropriate parameters configured and software installed which allows it to broadcast the suction pressure. See pack controller document for further information.
- The case controllers must be assigned to the Pack being monitored, have their Duty in kW entered and their priority assigned via the Case Setup page in the DMTouch.

Case Setup

Please see earlier [Case Setup](#) section.



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Night Blinds

From the Service Menu select: System – Energy – Night Blinds

From the blinds feature, the standard of Blind Check can be either 'Basic' or 'Advanced', selected in the 'Test Type' field. The advanced selection will show more detail of why units passed or failed the test.

Advanced Blinds Check



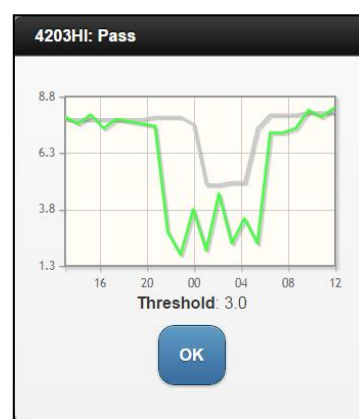
The Advanced Night Blinds check will show more detailed information to why a check passed or failed for a specific device.

- Change Threshold** In Deg, each case has an expected 'threshold' that represents the expected change (drop or rise) in temperature the cabinet will have when the night blinds are in use. By using the 'Change threshold' button it will alter every threshold for all cabinets (NB to set the values the 'Set Blinds' still needs set).
- Blinds Period (Hrs)** The expected length of time the night blinds will be in use for.
- Case Count** This is the parameter for the number of cases to fail the Night Blind test before an alarm will be generated.
- GP Channel** This would be set to the GP Timer Channel where the 'core' building operating (e.g. site trading) times are set. In instances where the site is closed for the day, and therefore the night blinds will not be raised/lowered, the detection process will not run.

On the controller list, select the controllers that you want to be checked by using the 'Check Blinds' button on the right hand side of the screen.

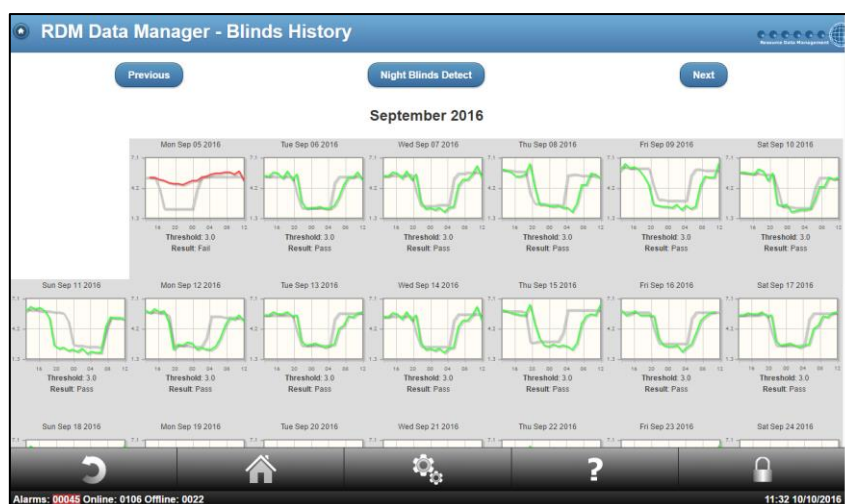
To view the general behaviour of the case temperature and the expected trend, click on the 'Show' icon in the Graph column. Alternatively click on 'History' to view all recent night blind graphs (below). You can also run reports on the night blinds from the Home Screen by selecting the 'Reports' option.

The Night Blinds graphic (see example on right) will show the expected trend of the Temperature Difference (TD) in grey and the actual difference in green (or red if fails). The Y-axis is temperature, X-axis is time.

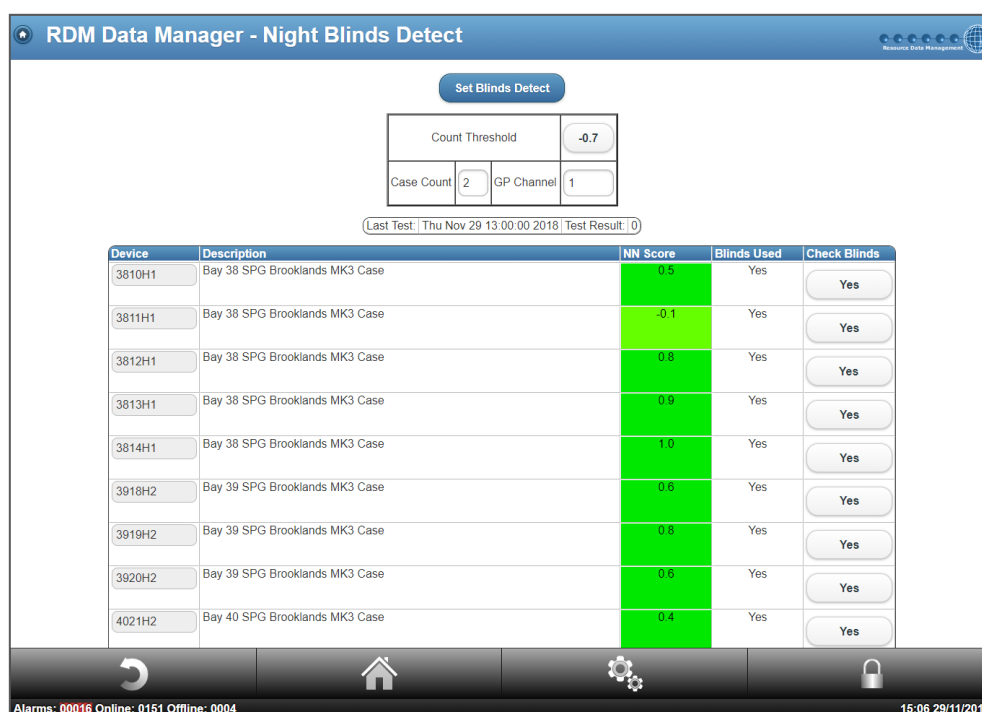


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Basic Blinds Check



Count Threshold: This is the value below which, a controller blinds "NN Score" counts as a fail and thus will appear as a "No" in the Blinds Used" column. **Note:** This was previously fixed at 0

Case Count: This is the parameter for the number of cases to fail the Night Blind test before an alarm will be generated

GP Channel: This would be set to the GP Timer Channel where the 'core' building operating (e.g. site trading) times are set. The Channel would be 'looked at' to aid the algorithm with discrepancies. For instance if a site is closed all day.

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.

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.



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Condenser TD

From the Service Menu select: System – Energy – Condenser TD

This feature allows for the early warning of problems associated with a condenser. 3 temperature probes are used; Ambient, Liquid Return and Discharge. The probes can be any 3 probes in the system and their source is mapped using this page. 3 levels of alarms can be set, Pre-warning, Warning and Alarm. This feature highlights a condenser which is not operating efficiently thus wasting energy. Up to 25 condenser channels can be monitored. Each channel enabled appears as a virtual controller in the Device List which allows for graphing of data, changing of parameters and so forth.

There are two methods available to monitor condenser performance;

Discharge – Liquid Return OR Liquid Return – Ambient

Discharge – Liquid Return

The Condenser Temperature Differential (TD) value is calculated by subtracting the Liquid Return from the Discharge Temperature

Channel Enabled	Used to activate the condenser warning for this channel. Set to "Yes" to enable.
Ambient Cut in	Temperature above which the condenser TD warnings are active.
Alarm Temp	Temperature difference level at which the Alarm is activated once the calculated TD value drops below this value and the alarm delay has expired.
Warning Temp	Temperature difference level at which the Warning is activated once the calculated TD value drops below this value and the alarm delay has expired.
Pre-Warning Temp	Temperature difference level at which the Pre-warning is activated once the calculated TD value drops below this value and the alarm delay has expired.
Time Parameters	Each of the above has an associated delay time that can be set from 00-99 minutes. Probe Error Time: If there is a probe fault, the alarm can be delayed by 00-99 minutes.



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Liquid Return – Ambient

When the channel type is set to “Liquid Return- Ambient”, the Condenser TD value is calculated by subtracting the Liquid Return temperature from the Ambient Air On temperature.

Channel Enabled	Used to activate the condenser warning for this channel. Set to “Yes” to enable.
Ambient Cut in	Temperature above which the condenser TD warnings are active.
Design TD	Enter the Design TD of the condenser.
Warning Temp	Figure added to the Design TD parameter and is used to generate the Warning Temp alarm. The alarm occurs once the calculated Condenser TD rise above this value and the alarm delay has expired.
Pre-Warning Temp	Figure added to the Design TD parameter and is used to generate the Pre-warning Temp alarm. The alarm occurs once the calculated Condenser TD rise above this value and the alarm delay has expired.
Alarm Temp	Figure added to the Design TD parameter and is used to generate the Alarm Temp alarm. The alarm occurs once the calculated Condenser TD rise above this value and the alarm delay has expired.

Each of the above has an associated delay time that can be set from 00-99 minutes. Kelvin (K) is used to denote a temperature difference.

Probe Error Time: If there is a probe fault, the alarm can be delayed by 00-99 minutes.

Note: The Discharge temperature source is a monitor probe only and isn’t utilised by the feature.



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Performance

From the Service Menu select: System – Energy – Performance

RDM Data Manager - Case Performance

Set Performance Information

Device	Description	Pack	Performance	Enable
001	dmTouch Internal Probe			No
002	Plant Input			No
022	Pack / Cond Controller			No
024	EEV Coldroom Controller (HT)	1	1.0	Yes
025	EEV Case Controller (HT)	1	1.0	Yes
029	Mercury ML Case	1	1.0	Yes
02a	Mercury Hub degC/bar			No
104	PackCondF			No
AHU	AHU Simulator			No
ALARM	Alarm Testing			No
CdTDB	Condenser TD Probes			No
DISPLAY	Display			No
ENERGY	Energy Meter			No
MON-EI				No
PACK-1	Pressures			No

Alarms: 0000 Online: 0007 Offline: 0005 16:27 09/09/2015

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. The performance indicator is also displayed in the Device List as shown below (TPI = Temperature Performance Indicator). If this feature is enabled on a device then an extra parameter becomes available, "TPI Alarm level" which has a range of 0 – 10, to set and alarms can be generated to alert users of cases which are under performing. The default 'Case Performance' alarm index number for each device is 6. **Note:** By holding down the Ctrl key and click on the "Enable" heading then the case performance feature can be turned on or off for all cases.

If the energy feature Pack Optimisation has been enabled there will be an additional column "Pack", as shown on the right. This also has a similar performance indicator for each case and gives an indication as to which case is holding optimisation off. Red indicates a case holding optimisation off. Green is ok.

When a device is assigned to a pack then an extra parameter becomes available for that controller "Valve Performance Alarm". This can be used to flag up any device that has a high valve opening level (Range is 0 – 10). The default 'Valve Performance' alarm index number for each controller is 6.

RDM Data Manager

dmTouch Temperature **43.40**

Device Summary

21

Normal

TPI Summary

4

Error: 1-3, 3-5, 5-7, 7-9, 9+

Device	Description	Value	Status	Pack	TPI
001	dmTouch Internal Probe	43.4	Normal		
002	Plant Input		Normal		
022	Pack / Cond Controller	2.0 11.0	Normal Normal		
024	EEV Coldroom Controller (HT)	2.1	Normal		
025	EEV Case Controller (HT)	2.0	Normal		
029	Mercury ML Case	2.2	Normal		
02a	Mercury Hub degC/bar		Normal		
104	PackCondF	3.5 13.2	Normal Normal		
AHU	AHU Simulator	2.0 7.0	Normal		

Alarms: 00000 Online: 0011 Offline: 0000 12:05 10/09/2015



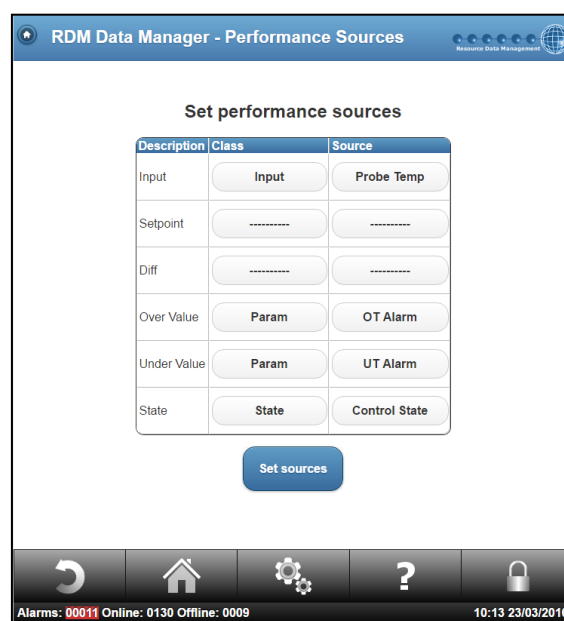
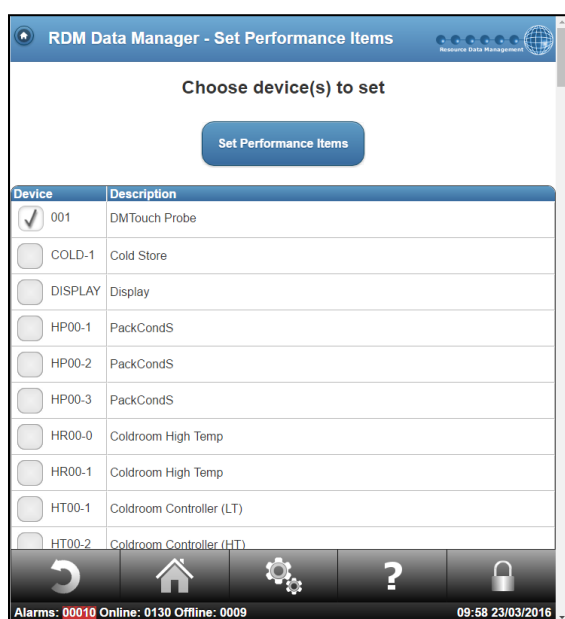
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Configure Sources

This feature allows the user to select the source of the items used to calculate the Case Performance figures. This introduces flexibility and allows the DMTouch to calculate TPI values for devices other than Mercury refrigeration controllers. One such item could be a DMTouch local temperature probe input. Click on 'Configure Source' and the screen below is shown.

The page will list all devices logged on to the DMTouch. Select the device by clicking in the 'check-box'. Devices of the same 'type' can be selected together, if they are different, the checkbox will be greyed out. In the example, device 001 – DMTouch Probe has been selected.



Input Setpoint

Diff

Over Value

Under value

State

Select the source of the Temperature Input used for calculation.

Select the Setpoint the device is trying to maintain (If available).

Select the operating Diff of the controller (If available).

Select upper limit e.g. Over Temperature setpoint.

Select lower limit e.g. Under Temperature setpoint.

Select the control state (if available). Allows the algorithm to take into account special events e.g. Defrost. Therefore input temperature will not have an effect on the calculated performance figure during this period.

If the device has no 'setpoint' or 'diff' to select. The calculation would assume the mid-way value between the 'Over Value' and 'Under Value' as the setpoint. To calculate a performance figure, the minimum required items are 'Input', 'Over Value' and 'Under Value'.

Note: if Mercury or ML Case controllers are used with Case Performance you will not have to edit this feature.

Trim Control

From the Service Menu select: System – Energy – Trim Control

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



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Trim Control - Humidity

On Humidity Control, the screen will display the values of;

- Humidity
- Trim Level
- Trim Power (used power / full power)

Also shown are the various options required to configure the Trim Control. Depending on the method chosen will dictate the available options. To set up the Humidity based control alter the following settings;

Control Type
No Probe Time
GP Channel

Select Humidity.

Probe fault delay time (in minutes).

Allows a GP channel to set the trims to a pre-determined level (normally Site opening times).

GP Off Level

Trim level when the above GP channel is off.

Humidity (%rH) Source

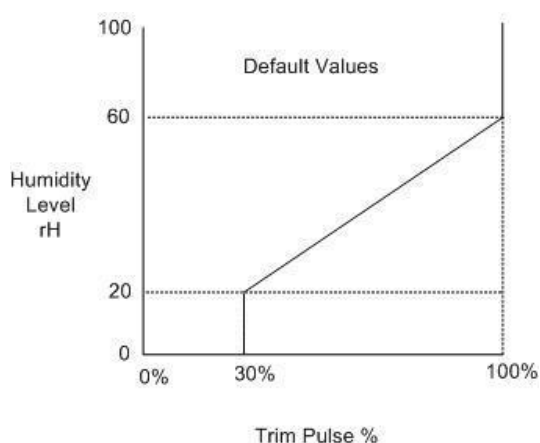
Slave/ Input - Map this to the controller that has the humidity sensor.

Humidity (%rH) Level

Minimum and maximum levels (see graph below).

Trim %

Minimum and maximum trim power (see graph below).



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.

DMTouch Network Trim control, when enabled, overrides the controller's local trim level setting. The DMTouch will send network commands to the selected controllers to pulse their trim relay to the level determined by the values shown on the graph. The trim optimisation period is 5 minutes. **(Note: if the trim maximum value is set to 70% an immediate 30% saving can be made)**

The trims can be mapped to a GP timer, for example Site trading hours. By setting the GP Timer Off percentage determines the trim output level when the GP Timer is 'Off'. This allows the user to further limit the power of the trim heaters or it can completely disable the heaters when the Site is not trading. **Note:** setting GP channel to 0 will disable this feature.

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



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Trim Control - Dewpoint

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 Dew point temperature, thus preventing condensation from forming on case doors. The DMTouch will send network commands to the selected controllers to pulse their trim relay.

Note: The mullion is the vertical part of the case door frame.

Control type	Select Dewpoint.
No Probe Time	Probe fault delay time (in minutes).
GP Channel	Allows a GP channel to set the trims to a pre-determined level.
GP Off Limit	Trim level when the above GP channel is off.
Mullion Offset	Depending on the placement of the probe the mullion offset may have to be adjusted.
Mullion Increment	Percentage by which trim power is increased/decreased depending on the Mullion temperature.
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.
Humidity (%rH) Source	Slave/ Input - Map this to the controller that has the humidity sensor.
Ambient Temp source	Map this to a controller or DMTouch input to measure the ambient temperature.
Both of the above values are required to calculate the Dewpoint.	

Trim Control – Selecting Devices

Move to the bottom of the page and you will find the device list.

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

Once configured press 'Set Values'.

Device	Description	Enable	Source	Trim (%)	Power (kW)
001	Temperature Probe	No	-----	----	----
024	EEV Case Controller (HT)	Yes	-----	----	1
025	EEV Case Controller (HT)	Yes	-----	----	1
026	Case Controller (HT)	Yes	-----	----	1



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Edit Mullion Sources

By clicking 'Edit Mullion Settings' you can define the source of the Mullion temperature readings. For example one of the 12 Analogue inputs that come as standard on the DMTouch 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.

Energy Monitoring

The DMTouch can be setup to monitor 'consumables' usage and display the data in a user friendly way. It can calculate savings or overspending from the user's budget and give detailed analysis on usage. The tabulated views offer varied analysis of weekly/ monthly/ yearly usage and spending along with live data and graphing.

Note: Only viewable with 'Modern' and 'Dark' web page looks or directly on Front Panel.



To enter the setup menu;

From the Service Menu select: System – Energy – Energy Monitoring

The screenshot shows the 'RDM Data Manager - Energy Monitoring Setup' screen. It contains a table of configuration fields for two energy sources:

Default home page	None
Source #1 Description	Electricity
Source #1 Device	000002
Source #1 Energy Item	Energy 1
Source #1 Power Item	Power 1
Source #1 Cost (per energy unit)	1.23
Source #1 Carbon Footprint (kg CO ₂ /energy unit)	0.50
Source #1 Estimated Daily (energy units)	420.0
Source #1 Start Day	2
Source #2 Description	Gas
Source #2 Device	000002

The bottom of the screen shows a navigation bar with icons for home, settings, help, and lock. The status bar at the very bottom indicates 'Alarms: 00014 Online: 0130 Offline: 0009' and the date '08.04 30/03/2016'.

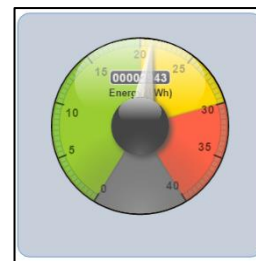


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The Energy Monitoring feature can be setup from two sources that are logged on to the DMTouch. The fields along with their descriptions, within the setup page, are listed below;

Default Home Page	- Allows the user to select the 'primary' page that will be displayed upon entering the 'Energy Monitor' Home page. Choose between; Summary, Today, Month, Budget, Graph, Live Data or Profile.
Source #1 Description	- Enter a Description of the energy monitor. For example 'Gas Usage', 'Electrical Meter 1' etc. This will be seen in the headings of the graphs and displays.
Source #1 Device	- Select the device the energy feature is to use to gather the data from.
Source #1 Energy Item	- Select the specific item the energy feature looks at to gather the 'Energy Data'. This should be the item that accumulates the total energy consumption e.g. kWhr.
Source #1 Power Item	- Select the specific item the energy feature looks at to gather the 'Power Data'. This should be the item that displays the real time power usage e.g. kW.
Source #1 Cost (per energy unit)	- Enter the cost associated to the energy unit (Energy Item). This value will be used to calculate usage costs etc.
Source #1 Carbon Footprint (kg CO2/ energy unit)	- Enter the weight in kg of the CO2 usage per energy unit. This is used to calculate the CO2 usage of the energy source.
Source #1 Estimated Daily (Energy units)	- Enter the total estimated daily usage for the energy item. This will be used for comparison budget calculations.
Source #1 Start Day	- Enter the day of the month for which billing starts.
Source #2	- The above fields will also be available for a second source.
Currency	- Enter the currency symbol used.
Gauge Max Power	- For the 'Live Data' gauge and graphs, enter the maximum expected value of the 'Power Item'. E.g. '40' in image to the right.
Gauge Min Power	- For the 'Live Data' gauge and graphs, enter the minimum expected value of the 'Power Item'. E.g. '0' in image to the right.
Gauge Red Level	For the 'Live Data' gauge and graphs, enter the level at which the gauge shows a red section. E.g. '30' in image to the right.
Gauge Amber Level	For the 'Live Data' gauge and graphs, enter the level at which the gauge shows an amber section. E.g. '20' in image.



Summary Tab

The Summary tab is a general overview of the sites carbon footprint showing the amount of CO2 used for both Energy Sources. The 'foot' indicator will change colour to either green or red depending on if the amount of CO2 is below or above the estimated usage from the 'Start day'.

Today Tab

The Today tab gives an indication of the energy consumption and corresponding CO2 from midnight up until the current time. The gauges show the percentage over or under the daily target the current consumption value is.

Month Tab

The Month tab provides an overview for the current month (specified from the 'start day' up until the current time/ date). It will show the total consumption with the associated cost and CO2 usage. It will also show the budgeted values and the variance (in currency). The gauges will indicate the percentage over or under the monthly estimate the current consumption value is.

Budget Tab

Under the Budget tab Yearly, Weekly and Daily comparisons to both budgeted values and previous year values are shown. The comparison can be for either the costs or the CO2 consumption. The data for each chart is taken from the last full day's/ week's/ month's worth of data and compared to the budgeted estimates. It will then compare it to the previous year's data for the same period.

Graph Tab

For both Energy Sources it will graph the consumption Hourly, Daily and Weekly.

Live Data Tab

The Live data is a real time view of the two current Power Items. The gauge (colour bands) itself is user-defined in the setup page. It will also provide two real time graphs depicting the trend of the value over 15minutes and 6 hrs.

Profile Tab

The profile tab provides a 3D view of the Power item's general trend across either 1 month, 2 months or 3 months. The varying colours make it easy to see periods of high usage.



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Display Setup

From the Service Menu select: System – Energy – Display Setup

The feature allows the user to map up to 8 items for reporting purposes. The items' values are then processed (depending on setup) to show the desired data on the home screen of both the DMTouch and the web CGI.

RDM Data Manager - Display Setup

Description: Average Site Temperature

Type: Average

Select items to use:

- AHU-1: Ambient Temp 1
- AHU-2: Ambient Temp 2
-
-
-
-
-
-

High alarm limit: 24

High warning limit: 23

Low warning limit: 17

Low alarm limit: 16

Warning delay: 5 mins

Alarm delay: 1 mins

Set

Alarms: 00004 Online: 0098 Offline: 0002 09:48 16/02/2017

Description	Enter a name which best identifies the process.
Type	Select between Total, Minimum, Maximum and Average to create the process value.
Total	The total of all items configured is used as the process value.
Minimum	The minimum value from the items configured is used as the process value.
Maximum	The maximum value from the items configured is used as the process value.
Average	The average of all items configured is used as the process value.
Items To Use	Up to 8 sources can be mapped. Select the device 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. Alarm Index number 4.
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. Alarm Index number 8.
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. Alarm Index number 9.
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. Alarm Index number 5.
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.

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.



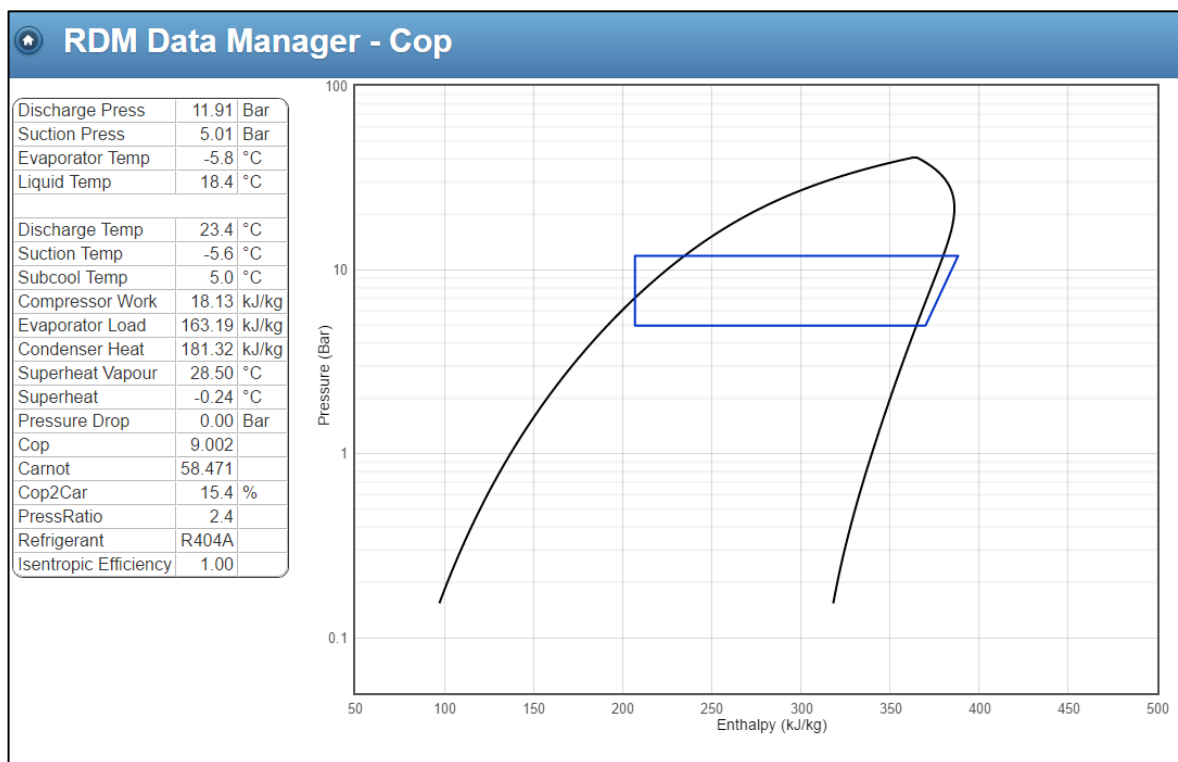
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CoP (Coefficient of performance)



The CoP feature provides useful information on how well a system is performing and provides a real time pressure/enthalpy graph for individual fixtures (evaporators). The CoP tab, shown above, will appear on the controller overview page (see: [Device Values Page](#))



In order to carry out the CoP calculations, the DMTouch requires certain pressure and temperature readings as well as certain system information, such as refrigerant gas type. This information is entered in the pack setup page (See: [Pack Setup](#)).

Pack Setup:	
Pack Device	HT05-1
Pack Input	Sect 1 Suc Press
Pack Command	Optimisation 1
Condenser Device	HT05-1
Condenser Input	Sect 2 Dis Press
Liquid Temperature Device	HP00-1
Liquid Temperature Input	Probe 2
Refrigerant	R404A
Pressure readings	Bar (Gauge)
Isentropic Efficiency	1
Pack CPT Limit	0

- Pack Device:** Selects the pack controller to be used in the CoP calculations.
- Pack Input:** Selects the suction pressure input on the pack controller.
- Condenser Device:** Selects the condenser controller used in the CoP calculations.
- Condenser Input:** Selects the discharge pressure input on the condenser controller.
- Liquid Temperature Device** Selects the device which has the liquid temperature probe fitted.
- Liquid Temperature Input** Selects the individual probe being used for liquid temperature measurement.
- Refrigerant:** Selects the gas type being used.
- Pressure Readings:** Selects the units Bar or Psi and Gauge or Absolute.
- Isentropic Efficiency:** This is the ideal value and will normally be quoted by the compressor manufacturer.



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Information

System Log

This allows the System Log to be viewed. Clicking the "Older" icon allows the user to view older system log entries. Entries can be filtered and the log can be searched by using the functions at the top of the page.

Software Version

This shows the current software version of the DMTouch.

DHCP Information

Table of device information: Mac Address, IP address, Expiry Time and device name. A device's name which is greyed out is a hidden device. Please see Hide Device feature.

Touch XL Status

The table shows a list of consoles, with network details and their current status', attached to the DMTouch.

Network Statistics

Table shows information relating to the 'transmit and receive' information for the different networks (i.e. Local, USB and Ethernet ports). It shows how many bytes and packets have been sent and received and if there have been errors or communication issues.



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Notepad

This allows the user to put notes on to the DMTouch (e.g. any work carried out, site specific issues or any ongoing issues with the panel or devices). Clicking on the ID number allows the user to edit or delete the note. **Note:** Users of the same level, Site, Service or Install, can only edit or delete a notepad entry.

RDM Data Manager - Notepad Entries				
Add Entry				
ID	User	Date/Time	Engineer Name	Message
3	Stephen	30/03/2016 09:59:00	RDM Technical Support	Reviewed Energy Monitoring
2	Mark	30/03/2016 09:57:51	Remote Engineer	Tested alarms, sent successfully
1	Douglas	30/03/2016 09:56:35	RDM Technical Support	Reviewed system, working efficiently

Documents

This feature allows the user to upload and manage pdf documents so they are viewable within the DMTouch.

To access, navigate to: System – Information – Documents

RDM Data Manager - Documents				
Upload				
	Name	Description	Size	
Open	Intuitive Mercury Trim Heater Optimiser Installation & User Guide V2.0b.pdf		1259 KB	Manage
Open	Mercury 2 & Intuitive Mercury 5 Channel Thermostat Installation & User Guide V1.0a.pdf		1446 KB	Manage
Open	TDB 2 Desktop Editor User Guide V2.1a.pdf		4280 KB	Manage
Open	Mercury 2 Compressor Supervisor Installation Guide Iss 1-4A.pdf		462 KB	Manage
Open	Mercury Intuitive Thermostat and Humidistat User Guide Iss 2.0b.pdf		1594 KB	Manage
Open	manual.pdf	DMTouch User Guide	9322 KB	Manage
Open	Intuitive Mercury & Mercury 2 Case Controller User Guide V2.3.pdf		1778 KB	Manage
Open	Mercury 2 Intuitive Mercury 5 Channel Timer Installation User Guide Issue 1.0a.pdf	5 Channel User Guide	1205 KB	Manage
Open	Layout Editor 3 User Guide V3.0a.pdf		3012 KB	Manage
Open	Mercury 2 & Intuitive Mercury Air Conditioning User Guide V1.8a.pdf		1460 KB	Manage
Open	Intuitive Mercury & Mercury 2 Two Section Case Controller User Guide V1.0a.pdf		1349 KB	Manage

The Documents page will look similar to the above screen when accessed. The 'Manage' options will only be visible when the user logs in with an 'install' access level. When clicked, the 'manage' button will show options;

RDM Data Manager - Manage Document	
Layout Editor 3 User Guide V3.0a.pdf	
Delete	
Visibility	Site
Description	
Save	

Within the 'Manage Document' page, the document chosen can be permanently deleted by clicking on 'Delete'. The access level, to which the document can be viewed, is selectable by using the 'Visibility' drop down menu (Site, Service, Install or Everyone) and a description can also be given to the document. **Note:** The Documents feature, only supports files in pdf formats. There is no limitations to the number of documents however they will utilise the space on DMTouch's SSD memory.



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Layouts

Manage Layouts

To access, navigate to: System – Information – Layout - Manage Layouts

This utility is used to upload and configure multiple pre-prepared layouts created on the RDM Layout editor program. To upload a layout, click on 'Upload Layout' and select it from within your PC.

Note: for more information on creating layouts, please consult relevant documentation or your RDM accounts manager.

RDM Data Manager - Layout Manage

Manage Layouts

Upload Layout

Description	Default	Visibility	CGI	Front Panel	Console(s)
CO2 Plant	No	Install	Yes	Yes	Console 1 Console 2 Console 3
Main AHU	No	Everyone	Yes	Yes	Console 1 Console 2 Console 3
Site Layout	No	Site	No	Yes	Console 1 Console 2 Console 3

Buttons for each layout: Configure, Set Default, Get, Remove, Preview.

Alarms: 00014 Online: 0130 Offline: 0009 10:43 30/03/2016

Once uploaded, the layout can be configured to restrict viewing access to user levels, web CGI, Front End Panel and consoles. To edit these restrictions, click on 'Configure'.

RDM Data Manager - Configure Layout

Configure Layout

Visibility	Installer
Description	CO2 Plant
Show on CGI	☒
Show on Front Panel	☒
Show on Console 1	☒
Show on Console 2	☒
Show on Console 3	☒

Save

Alarms: 00014 Online: 0130 Offline: 0009 10:44 30/03/2016



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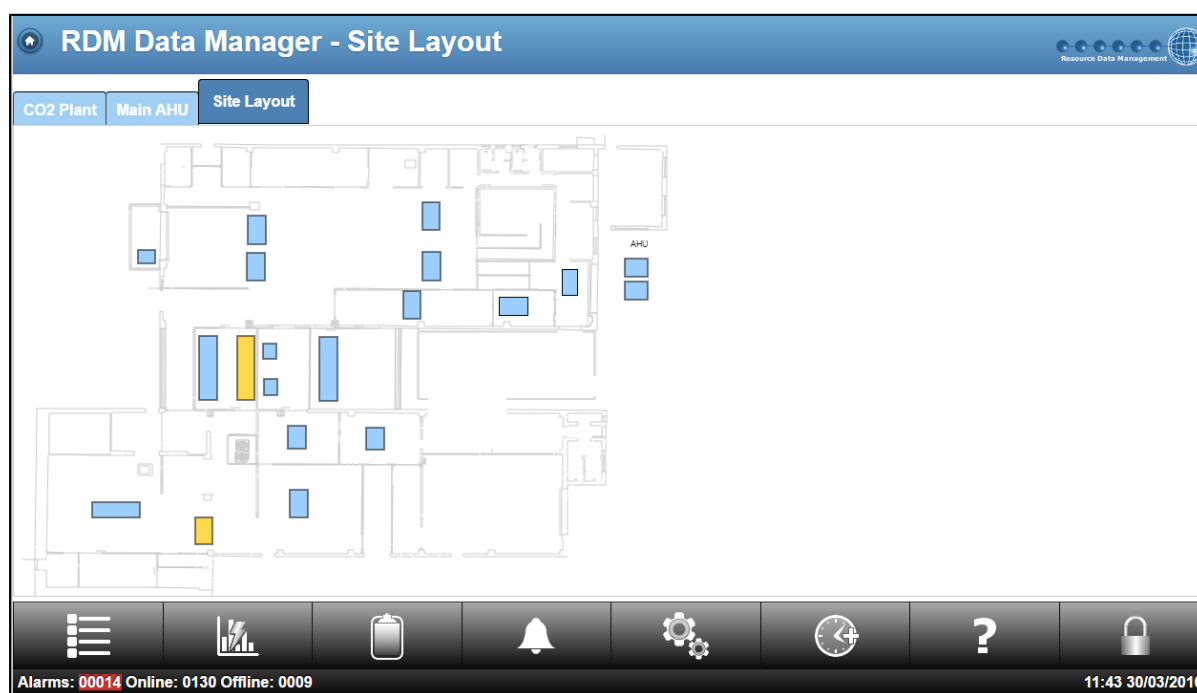
Within the 'Configure' page, the options are as follows;

Visibility	Select which user level or specific user, can view the layout. For all users to view, leave as 'Everyone'.
Description	Add a description to the layout. Note: If none is entered, the layout tab will be aliased 'Layout'.
Show on CGI	Select this option to make layout visible on the web interface (via PC).
Show on Front Panel	Select this option to make layout visible on the DMTouch's screen.
Show on Console 1-3	Select this option to make layout visible on certain Consoles (if connected). Note: For future use.

The other options within the Manage Layout pages are;

Set Default	This option is only necessary when the site's 'Web Page Look' is set to 'Original'. Within the 'Original' look, it only permits 1 layout to be viewed (using java). Only one layout can be set as the default.
Get Remove	This option allows the layout to be downloaded to the user's PC. Select this option to permanently remove the layout from the DMTouch. Note: Once removed the layout cannot be recovered.
Preview	Use this option for a quick view of the selected layout without leaving the setup page.

When uploaded to the DMTouch, a layout can offer a visual indication of all the devices' current states. When devices are 'associated' to the objects within the layout (see layout editor user guide), the object's colour will change according to the state. For example, red would indicate an alarm condition, yellow a defrost state and blue normal. Instantaneous device values are also displayed on the layout diagram.



Note 1: When viewing layouts directly on a DMTouch V1, only the first layout with 'Show on Front Panel' ticked will be visible. When viewing layouts directly on a DMTouch V2 and above, the first 4 layouts with 'Show on Front Panel' ticked will be visible.

Note 2: Only DMTouch V2.6 and above will support layouts with coloured backgrounds.



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Miscellaneous

System Restart

From the Service Menu select: System – Miscellaneous- System Restart

Use this to reset the DMTouch.

System Dump

From the Service Menu select: System – Miscellaneous- System Dump

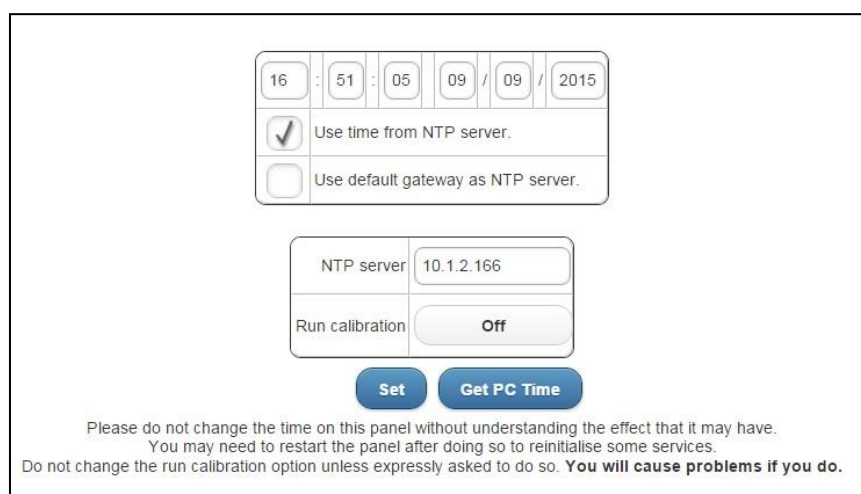
This is a utility to save the system information to a file, follow the on-screen instructions.

Set Time

From the Service Menu select: System – Miscellaneous- Set Time

Here the current time and date can be entered or if the “Get PC Time” is used the fields will be filled using the current time and date from the PC/ Laptop. It is recommended that the user restart the panel when altering the time or date manually.

Note: the “Time-zone” option, found under site setup, should be changed if the DMTouch is in a location other than the default zone “Europe, London” before editing the time and date via this page.



If the option “Use time from NTP Server” is ticked then the IP address of an NTP time server can be entered. The DMTouch will then periodically synchronise with the NTP server time/date. **Note:** you must seek the permission from the owner of the NTP time server before directing the DMTouch to it.

Clear Consoles

From the Service Menu select: System – Miscellaneous- Clear Consoles

This feature is generally only required for use by RDM. The DMTouch supports a maximum of three TouchXLs at any one time. Use this feature when adding a new TouchXL to a DMTouch network if the new TouchXL has been assigned an IP address but will not connect to the DMTouch.



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Network Card Setup

From the Service Menu select: System – Miscellaneous- Network Card Setup

Please **DO NOT** change any values on this page if you are unsure of the effect it may have.
Use of the wrong values may make it impossible for you to talk to the Data Manager.

Interface	Settings
eth0	Address: 10.1.2.75 Netmask: 255.255.255.0
eth1	Address: 192.168.1.2 Netmask: 255.255.255.0
wlan0	Address: 50.50.10.10 Netmask: 255.255.255.0 Mode: AP Channel: 8 SSID: RDMWiFi Key:

The options below are global settings.

Default gateway:	10.1.2.254
Name servers:	10.1.2.5
	10.1.2.12
Run DHCP server on eth0:	☒

Set

Alarms: 00000 Online: 0119 Offline: 0005 14:48 27/11/2017

Entering the Network card setup page will result in a page similar to the above. Here the user can configure the network settings on all connections.

Eth0

'Eth0' refers to the Ethernet ports located on the DMTouch's network card. This can be either 3 or 4 ports depending on the configuration ordered. The default IP address of the DMTouch is 10.1.2.75 with subnet mask 255.255.255.0. If there is no secondary IP network adapter connected or it has not been enabled then this screen will display "eth0" only.

When checked, the DHCP server will operate on eth0 (only) issuing IP addresses in its range (10.1.2.x). Uncheck the "Run DHCP server" if the primary Ethernet port is used to connect the DMTouch to another system. **Note:** Not running DHCP will prevent IP controllers automatically coming online.

Eth1

When a secondary IP network adapter has been ordered (PR0486) and inserted into one of the USB ports on the DMTouch, the fields to configure 'eth1' will be shown. The network Address, Netmask and Default Gateway are assigned by the end user. This will vary depending on the site IT configuration.



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Wlan0

When the DMTouch has the necessary Wi-Fi adapter (PR0657-EXT) attached, the fields for the wireless LAN network will be shown. The adapter can be configured as either an 'Access Point' or 'Client'. When swapping between the two options, the DMT will need restarted.

- Access Point:** Used to connect directly to the DMTouch by other Wi-Fi enabled devices.
 Address/ Netmask: Input a unique IP address and netmask the DMTouch WLAN is to use.
 Mode: AP (Access Point).
 Channel: Select a channel number the AP will use.
 SSID: Input a unique SSID for the wireless network to be identified.
 Key: Enter a password required for devices to authenticate with.
- Client:** Used where the user wishes to connect two networks via a wireless connection.
 Address/ Netmask: Give the DMTouch a unique IP address and netmask the WLAN is to use when connecting to the other network.
 Mode: Client.
 SSID: Input the SSID to be used to connect with the other wireless network.
 Key: Enter a password used to authenticate the two networks.

Note: Please be aware the Wi-Fi adapter (PR0657-EXT) is only compatible with DMTouch's purchased in January 2018 or later, with version 2.6.2 or above.

Name Servers

The name server is used by the [mail setup](#) page and the [Auto Export](#) feature (when configured to use FTP), should the server address be entered as a URL (as oppose to an IP address). Enter either a single name server address or enter two name server addresses to provide a primary and secondary connection should the primary be unobtainable.

DHCP Server Detected

If the DMTouch detects another DHCP server operating on its primary IP network, Eth 0, then a DHCP server detected alarm will be generated. The DMTouch will also stop its own DHCP server. The alarm will clear and the DMTouch DHCP server will resume normal operation once the other DHCP server has been removed from Eth 0.

USB Analogue Modem

The DMTouch can be used with a USB analogue modem. This device is plug and play and therefore no setup is required. Part number for the modem is PR0491, please consult RDM sales for more information.

3G Dongle Setup

A USB GSM modem is only currently supported when sending an alarm as an SMS. This page must be filled in for the GSM modem to operate correctly and the details required, can be found by contacting the service provider. Below is an example with Vodafone details entered (**note:** these details may be changed at any time by the service provider).

Number/URL	Type	Retries	Period (mins)	Options
1 0000000000	SMS (Vodafone)	2	1	☒ Send Clear ☐ Send Extra
2	Email	2	1	☒ Send Clear ☐ Send Extra
3	Modem	0	1	☒ Send Clear ☐ Send Extra
4	Modem	0	1	☒ Send Clear ☐ Send Extra
5	Modem	0	1	☒ Send Clear ☐ Send Extra

Note: The dialout will stop on the first number that succeeds.

Service Centre Address	+447785016005
APN	internet
The options below may not be needed, if not then leave them blank	
PIN Number	
Username	
Password	
Save Setup	

In order to send text messages, the number for them to be sent must be entered into the modem setup page (shown below). Enter the number, along with the type set to 'SMS (GSM Modem)'. See the [Modem Setup](#) section for more details.



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Export Log Data

From the Service Menu select: System – Miscellaneous - Export Log Data

Saves logged data to a file in either CSV or HTML format. Data is exported at fixed 15 Minute intervals.

- Click > to advance 1 month
- Click >> to advance 1 year
- Click < for previous month
- Click << for previous year

Use the above to select the desired start/end month and year.

Now select the start and end date before pressing Export Data.

Tick the “Export all devices” option to export log data for all devices logged on to the DMTouch from the timeframe selected. If this option is un-ticked then the user will be presented with the DMTouch Device List. At this point a single device can be selected or by pressing and holding the “Ctrl” button on the PC keyboard multiple devices can be highlighted for export.

Automatic Export Setup

From the Service Menu select: System – Miscellaneous- Automatic Export Setup

This feature allows for logged data to be sent to a remote destination periodically. On viewing this page a list of the current automatic export schedules will be shown. If no schedules have been configured then “No export jobs currently defined.” will be displayed.

Click “Add New Job...” to create a new automatic export schedule. A screen similar to the one below will be shown.

- Type:** Select between Log, Print and Custom Export;
- Log Export** Data is sent as CSV files.
 - Print Export** Data is sent as raw text. Print export is advantageous when using the mail option as the recipient can immediately print the data from the email to obtain a hard copy.
 - Custom Export** Data is sent as CSV files. Selecting this option expands sub menus offering the user the option to select specific devices and furthermore, items (from the selected device). Only the selected devices/ items will be extracted and sent in the data ‘packet’.

Frequency: Select either 5mins, 15mins, 30mins, hourly, 4 hourly, 12 hourly, Daily, Weekly and Monthly from the drop down list. Now enter a start time and date. Please note sample frequencies below;

- 5 min frequency:** 1 minute samples
- 15 min frequency:** 1 minute samples
- 30 min frequency:** 5 minute samples
- 4hr+ frequency:** 15 minute samples



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Method: Select from;

Mail: Send the data as part of an email. **Note:** The mail server must be configured.

FTP: Send data using the File Transfer protocol. See format below.

HTTP Post*: Send data using the post function of the HTTP protocol. Enter the URL/ IP address of the server that can accept such posts.

HTTPS Post*: Send data using the post function of the HTTPS protocol. Enter the URL/ IP address of the server that can accept such posts.

***Note:** Prior knowledge of function is required and RDM cannot support setup of a receiving server. Also, when sending to a URL, the [name server](#) must be completed.

Format of FTP: username:password@host/path/
e.g. support:12345@10.1.2.10/receiver/log/

Note: Username and password must not contain and non-alpha numeric characters (}[#>).

The file format sent will be a compressed CSV file with split date/ time.

Note 1: If the data held within the DMTouch does not match the current type of the device, the entry will not be sent.

Note 2: If the automatic export should fail, it will continue to retry, incrementing the period of time between retries each time.

Delete Type Files

From the Service Menu select: System – Miscellaneous- Delete Type Files

Click this option to clear the selected type file. The type file will reload after the reset. **Note:** Unused Plant TDB files are deleted on restart of the DMTouch. The DMTouch supports over 4000 active type files.

Upgrade Software

From the Service Menu select: System – Miscellaneous - Upgrade Software

This can be done using an update file stored on a PC, simply browse to the file you wish to load.

SSL Setup

The DMTouch offers the facility to allow SSL (Secure Sockets Layer) encrypted connections, offering a more secure link to the DM's IP/ URL. As with any SSL server/ client technology there is a strict process to set it up.

Note: To configure this feature requires specialist knowledge, please consult with an IT professional or your support team for further assistance if you are unsure.

The SSL setup page allows the user to do this. Entering the feature will show the below page;



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To begin, click in 'Add New San' (Subject Alternative Name). This will allow the user to enter the DMTouch's IP address or hostname used to access it;

Click on 'Add'. This will add the URL/IP address to the table. When it's entered and listed, click on 'Generate CSR' (Certificate Signing Request). To which will produce something similar to the below;

The lines of text generated is what's required to be sent to the Certificate Authority (CA), therefore copy and paste the code into a text file and send it direct to them.

The CA will send back a 'CRT' file containing the public and private key pair used for encryption. When received, click on 'Upload CRT', select the file and upload.

The signing CA should publically make available on their website a trust chain file, use the 'Upload CA Chain' to upload the file.

Once completed the DMTouch will be accessible using the SSL encryption.

Note: The DM will still be accessible using the <https://<IP address>> without a certificate, however unless the user installs a properly signed certificate as outlined above, most browsers will display warnings and security precautions.



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Timers

GP Timers

From the Service Menu select: Timers – GP Timers

Channel	Description	Status	Type	Output Type	Mask
1	Trading Times	On	Master	Case	
2	Cafe Lights	On	Slave (1)	Case	01?
3	Cabinet Lights	On	Slave (1)	Case	02?
4	Stocking Lights	On	Master	General	LIGHTS
5	Warehouse Lights	Off	Master	Case	LIGHTS
6	External Lights	Off	Master	Case	LIGHTS
7	GP Timer Channel 7	Off	Master	Case	
8	GP Timer Channel 8	Off	Master	Case	
9	GP Timer Channel 9	Off	Master	Case	
10	GP Timer Channel 10	Off	Master	Case	
11	GP Timer Channel 11	Off	Master	Case	
12	GP Timer Channel 12	Off	Master	Case	
13	GP Timer Channel 13	Off	Master	Case	
14	GP Timer Channel 14	Off	Master	Case	
15	GP Timer Channel 15	Off	Master	Case	

Alarms: 00014 Online: 0130 Offline: 0009 12:02 30/03/2016

Click on the channel you wish to configure, a set up screen similar to the one below will be shown;

Select "Master" or "Slave".

Select the "Input Type" if required

Select 'Invert' if required

Remove selected days or all schedules

Period bars with slide control or on/ off fields. Period 1 & 2 allows for two 'on' periods and two 'off' periods for a given day.

Channel Type: **Master**

Channel Name:

Input Type: **Unused**

Output Type: **Case** Output Mask:

Invert Output: ☐ Run-On: **Not Allowed**

Schedule

Remove All **Remove** **Add Schedule**

September 2015

Key:
■ Daily
■ Weekly
■ Yearly
■ Once

Period 1: 08:30 - 12:30

Period 2: 13:30 - 17:00

Set Channel

Enter a meaningful channel

Select an "Output Type", "Mask" and "Channel" (if required)

Select 'run-on' permissions

Run the "Add Schedule"

Colour coded key



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Channel Type

Channel type can be selected as either "Master" or "Slave".

If selected as a Master, the timer operates on the selected output(s) and schedule.

If selected as "Slave", the timer will track the associated Master with the selected offset periods.

Channel Name

The field allows for the timer channel to have a meaningful name.

Input Type

Input types are selected from the drop-down menu; choices are:

- Unused select when no input type is required.
- Force-on select when a network device is used as an override on.
- Force-off select when a network device is used as an override off.
- And select when a network device is used "and" the schedule.
- Toggle select when a network device is used to toggle the output(s).

Select the source device and the input from that device using the drop down list once any of the above has been selected.

Output Type

Output types are selected from the drop-down menu; choices are: -

- Case Timer activates the lights relay.
- General Timer activates the selected network device relay. Output Channel is the relay output the GP Timer channel will operate on. **Note:** 0 equates to Relay 1 on a device, 1 equates to relay 2 etc. The relay selected for operation must be a remote relay. Please check appropriate device user document for confirmation.
- Local Relay Activates the selected relay on the DMTouch. **Note:** Local relays are required to be setup as "GP Timer" relays in the DMTouch.
- Transmit Allows the DMTouch GP timer channel to control the output of a GP Timer 2 block found in a Mercury TDB Plant Controller. The GP Timer 2 output will follow the current status of the DMTouch GP timer channel configured. Enter the mask of the desired Plant TDB controller and configure the controller appropriately.

Output Mask

The output mask field is used to steer the timer output to network device(s). Alphanumerical characters are inserted to control specific devices that follow the same 'mask'. In addition, the control characters '?' and ',' can be used. See examples below.

Example 1:

The timer would operate the lights relay on RC10-1 if the output type was 'Case' and the mask set to 'RC10-1'

Example 2:

The timer would operate the lights relay on all network devices of the format ****-*, if the output type was 'Case' and the mask set to '????-?'. The '?' acts as a wildcard. The wildcard should be used with caution so that only the appropriate devices receive a network command from a GP timer.

Example 3:

The timer would operate the lights relay on specific devices if the type was 'Case' and the mask set to 'RC01-1, RC01-2, RC01-4, RC01-6'.

Note: 'Case' command should only be used to operate case controllers that have lights relay. It is inadvisable to hit other controllers with this command e.g. a Pack controller.

Output Channel

This is the channel to be switched on the remote device, for example, a Mercury 5 channel timer has 5 relays, selecting channel 0 would switch relay 1, selecting channel 1 would switch relay 2 and so on.



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Add Schedule Wizard

Run the "Add Schedule Wizard" to quickly setup up the channel times.

There is a selection of: -

- Daily every day has the same times.
- Weekly separate days of the week can be selected and setup.
- Yearly used for annual events, such as Christmas Day.
- Once used for a once only event.

When the channel has been setup, set-up modes are indicated on the calendar colour coded to show the respective events. Two GP timer channels should not be configured to operate the same output on a single controller.

Invert Output

Check this box to invert the associated relay output operation.

Run-On

Select an option from the drop-down menu; choices are: -

- Allowed Run-on feature allowed to operate on this GP Timer channel.
- Not Allowed Run-on feature not allowed to operate on this GP Timer channel and GP Timer channel will therefore not appear in the Run-On screen.

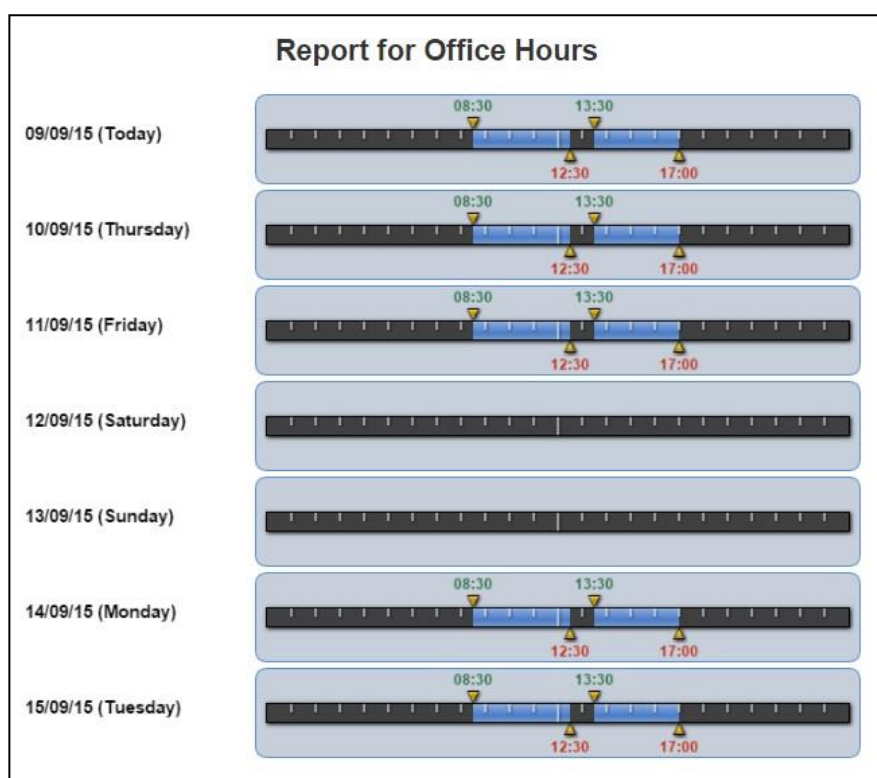
Global GP Timer Channels

In addition to the 32 GP timer channels there are 8 global GP timer channels, these are numbered 33 to 40. These global GP channels are pre-configured as master channels and are appended with "Global GP Channel 1" and cannot be changed.

GP Timers Report

From the Service Menu select: Timers – GP Timer Report

Selecting a channel shows an overview of the current channel setup.



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Defrost Timers

From the Service Menu select: Timers – Defrost Timers

There are 100 channels for defrost scheduling. Click on the “Defrost Timers” icon to navigate to the screen shown below.

Channel	Description	Status	Last Defrost
1	HT Cases - Section 1	Off	00:00
2	HT Cases - Section 2	Off	00:00
3	LT Cases - Section 1	Off	00:00
4	LT Cases - Section 2	Off	00:00
5	HT Coldroom 1	Off	00:00
6	LT Coldroom 1	Off	00:00
7	Df Timer Channel 7	---	---
8	Df Timer Channel 8	---	---
9	Df Timer Channel 9	---	---
10	Df Timer Channel 10	---	---
11	Df Timer Channel 11	---	---
12	Df Timer Channel 12	---	---
13	Df Timer Channel 13	---	---

Clicking on “Defrost Timer Device Setup” results in a similar screen as the one below;

Device	Description	Channel
CdTD01	Condenser TD	Auto
DISPLAY	Display	Auto
HT00-1	Coldroom Controller (LT)	6
HT00-2	Coldroom Controller (HT)	5
HT00-6	Case Controller (HT)	2
HT00-7	EEV Case Controller (HT)	2
HT00-8	EEV Case Controller (HT)	2
HT00-9	Mobile Controller (HT)	2
HT01-0	EEV Case Controller (HT)	Auto
HT01-2	Case Controller (HT)	Auto

As default, all devices listed will have their designated defrost ‘channel’ set as ‘Auto’. With this setup, they will automatically be assigned a defrost channel based on the middle 2 characters of their device name. So for example, defrost timer channel 22 will operate on all devices that have 22 as their middle characters, such as RC**22**-1, RC**22**-2 & RC**22**-3.

To assign devices to specific defrost timer channels, use the drop down menu (next to the device) and select a channel number between 1 and 100 for each device.

When a device has been ‘mapped’ to a defrost timer channel number between 1 and 100, the defrost timer channel will operate that device.

As shown in the example image on the left, devices HT00-6, HT00-7, HT00-8 and HT00-9 have all been mapped to defrost channel 2. Devices HT01-0 and HT01-2 will automatically be mapped to defrost channel 1.



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Clicking the back tab will go back to the previous page showing the defrost channel list, now select a channel to configure. The following defrost setup page will be displayed;

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.

Once a controller has reached its defrost termination temperature it enters a defrost hold state. When the last controller reaches its termination temperature the DMTouch sends a network command to the controllers to exit defrost hold and continue with the defrost process.

If the defrost hold release command is not received by the controllers, e.g. a controller doesn't reach its defrost termination temperature, then the cases will exit defrost hold when either the controller defrost max time expires or when the parameter Length expires on the defrost timer channel. Please see the parameter "Length" below for further details.

This feature requires the defrost hold parameter in the case controller to be enabled. See Mercury controller user guide on the RDM website for further details.

Defrost Header Station Control

Max Df (mins) Maximum period the valve is opened for (Minutes). If all controllers 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 DMTouch doesn't receive confirmation from all controllers operating on the defrost timer channel that they have successfully completed their defrost then the DMTouch will send a defrost termination network command to those controllers when this value is reached.

Valve Device 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, 2 would operate relay 2 etc.

Note: Do not select a refrigeration case controller when configuring the Valve Device and Valve Item.

Defrost Every

From the drop down menu, 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.

Number per Day

Use the drop-down selector on "Number per day" to select a value. This will result in additional fields being displayed.

Once the number of defrosts per day have been selected, that number of new fields will be displayed. If you want equal intervals, insert the start time of the first defrost into "Defrost 1" and click "Recalculate". This will then insert times into the remaining defrost fields.

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

Enter a meaningful name in the "Channel Name" field such as: - Defrost Timer for bay 10.

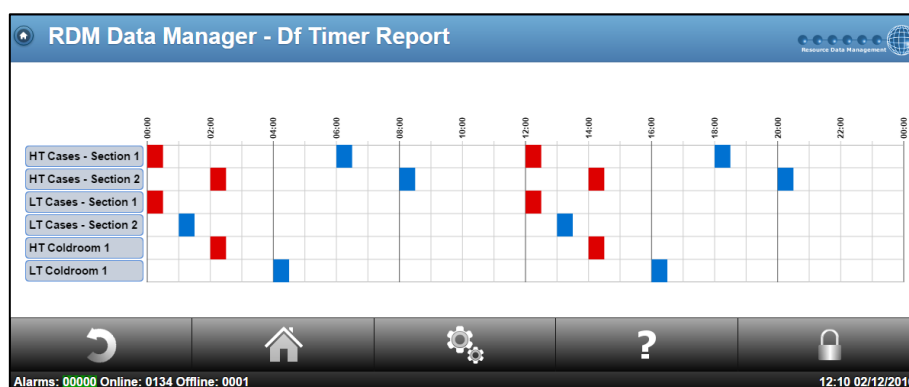
To complete the defrost schedule setup, press "Set Channel".



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Defrost Report



Allows the user to view all the defrost timer channels which have been configured and their scheduled defrost start times. The blue block for each channel indicates the start time of a defrost for a particular channel. A red block indicates that two or more defrosts will occur at the same time on different defrost timer channels. If a defrost has been set to occur every "n" days, where "n" is a number between 1-7, then a colour coded key is displayed at the bottom of the page. This indicates what defrost channels have been configured to perform defrosts every "n" days.

Note: If a channel is set to perform a defrost every day then the channel name will not be highlighted with a colour.

Defrost Sources

For use with Altierre equipment only, included for future development.

Shuttle - USB Temperature Logger

From the Service Menu select: Shuttle

The RDM USB Shuttle temperature logger can be used in a range of applications and allows for remote temperature recording. Please see the USB Shuttle temperature logger user document for further details and the steps required to programme the device for operation.

Shuttle Limits

From the Service Menu select: Shuttle – Shuttle Limits

This results in the page opposite.

Here the user can enter the temperature limits for a number of temperature monitoring applications. When the user inserts the Shuttle into one of the DMTouch's USB ports the DMTouch will ask the user to select between Produce or Chill or Frozen from its display menu. The corresponding alarm limits will then be applied to the data stored within the Shuttle. If any of the data points are out with these limits an alarm will be created to warn the user.

The Produce Simulation option allows the DMTouch to electronically slug the response of the Shuttle temperature data points recorded, by adding a damping value, to simulate the actual product temperature during the logging time period.

Saved Data

From the Service Menu select: Shuttle – Saved Data

Saved data allows you to graph data which has been saved from a Shuttle to the DMTouch.

Log

From the Service Menu select: Shuttle – Log

Shows log data pertaining to changes made to the options available under the Shuttle icon.

Parameter	Value	Unit
Produce Simulation	No	
Produce OT	0.0	°C
Produce UT	0.0	°C
Produce Const	0	secs
Chill OT	0.0	°C
Chill UT	0.0	°C
Chill Const	0	secs
Frozen OT	0.0	°C
Frozen UT	0.0	°C
Frozen Const	0	secs



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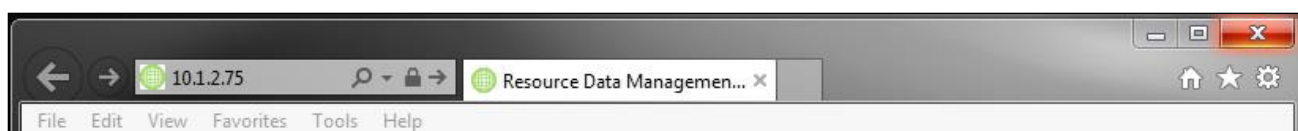
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Appendix 1: Connecting a PC to the DMTouch

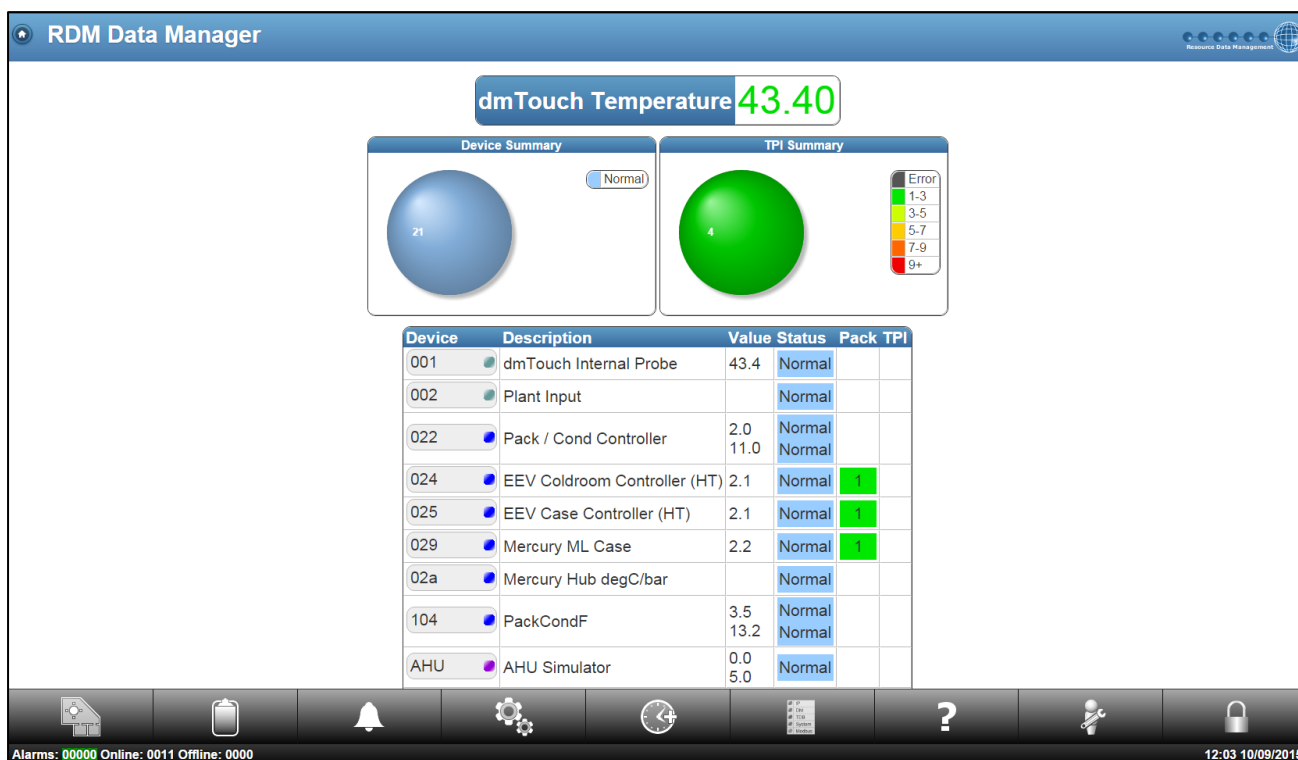
Ethernet Connection

The PC or laptop must have a functional Ethernet network adapter. Using an Ethernet patch lead (CAT5/CAT6), connect the Ethernet adapter on the PC/ laptop to a spare port on the DMTouch. Alternatively connect via a 3rd party IP switch or an RDM Mercury hub (Ethernet ports) connected on the network. As default the DMTouch's DHCP server will be running and will issue IP addresses in the range 10.1.2.x. Where x will be a number between 80 and 254.

Start an Internet Browser session and in the address field, type in `http://10.1.2.75` and press return or click the go button:



The DMTouch Home page will be displayed:



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Possible Problems

If the home page does not display, it may be because the Internet Explorer and/or the PC is not configured correctly for this operation. Some fundamental checks would be as follows;

DMTouch

Ensure DHCP is on

Confirm the IP address 10.1.2.75 is configured within eth0 (or the correct IP address of site).

Check for any alarms stating another DHCP server was detected.

PC/ Laptop

Ensure the PC is configured to pick up an IP address automatically with Network settings.

Ensure the PC is not connected to any other networks, VPNs or has any proxy settings setup.

If the Home page is still not displayed, it may be because the PC/laptop has previously been connected to an Ethernet network and its settings are still present. To change the settings for the DMTouch, perform the following commands on the PC.

Open a command prompt (may need to be run as admin).

At the command prompt, type in the following command;

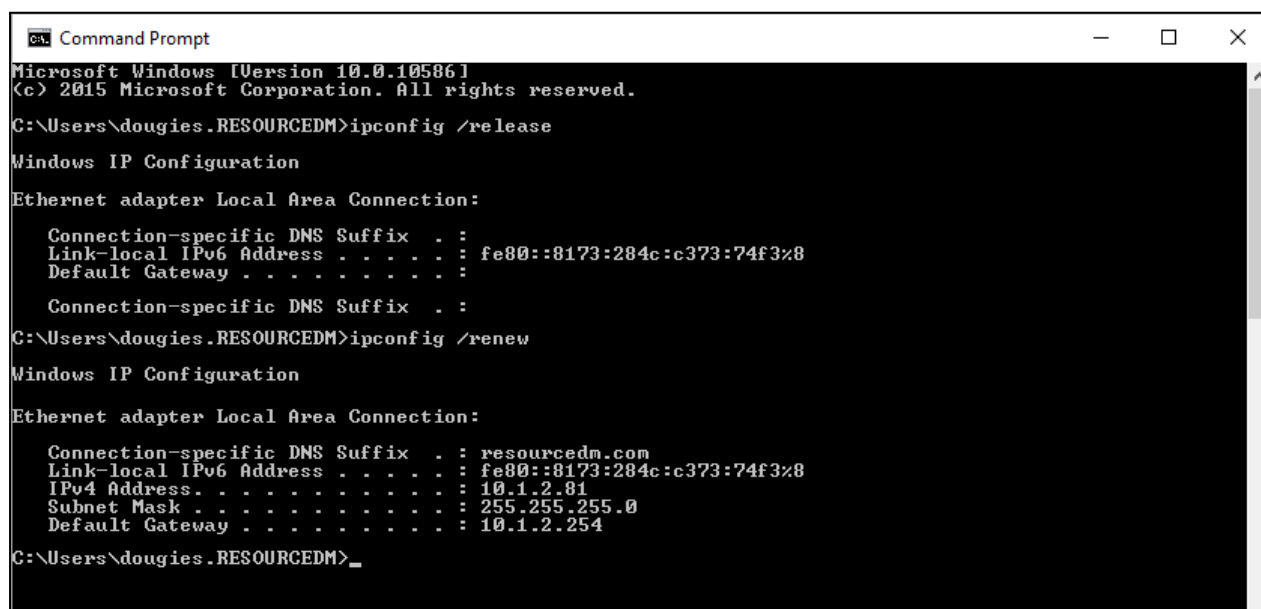
ipconfig – this will show the current states of all network connections. Look for 'Ethernet Adapter Local Area Connection' and the IPv4 address. It should be in the range 10.1.2.x. If it is not use the following command;

ipconfig /release – this will end the lease of the current IP address

Wait for the command to complete, and then type in the following command;

ipconfig /renew – this will request a new IP address

Below is an example of the above commands:



```

C:\Users\dougies.RESOURCEDM>ipconfig /release

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::8173:284c:c373:74f3%8
    Default Gateway . . . . . : 

C:\Users\dougies.RESOURCEDM>ipconfig /renew

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : resourcedm.com
    Link-local IPv6 Address . . . . . : fe80::8173:284c:c373:74f3%8
    IPv4 Address. . . . . : 10.1.2.81
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.1.2.254

C:\Users\dougies.RESOURCEDM>_

```

If for any reason the above does not work, please consult RDM Technical support.



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Appendix 2: Save/ Restore DMTouch Configuration Guide

Important

NEVER attempt to install a configuration file from a newer Data Manager Software version into a Data Manager with an older software version as this could result in complete system failure.

RDM will not be liable for anything that occurs as a result of this action having been carried out.

For further information or for questions regarding this matter please feel free to contact RDM Technical Support.

Process via USB

The DMTouch has the ability to save or restore a DMTouch site configuration. This feature allows the end user to copy a system configuration from one DMTouch to another. This should help reduce the commissioning time should a DMTouch need to be replaced onsite. Please note that this feature can also be used with the Data Manager, allowing you to copy and restore site configurations from and to older panels.

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

To save the DMTouch 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 DMTouch. The DMTouch will detect the memory stick and list a series of options.
3. Select "Save Site Configuration" from the list. The user will then be prompted to enter a service level or higher user name and password.
4. Choose from the two locations listed; 'Force Internal Save' or 'Save to file'. The latter will allow the configuration to be saved on the USB stick. Press 'Save to file'. The result will show the message 'Download Complete', confirming the save. The DMTouch will then return to the list of options.
5. The site configuration will now be saved on the memory stick. The file name given to the saved configuration will be the DMTouch 'Site ID'. This configuration can now be copied to another DMTouch.

To restore a DMTouch configuration, with a USB memory stick, use the following steps;

1. Ensure all alarms are accepted before proceeding.
2. Insert the memory stick that has the desired DMTouch configuration saved, into a USB port.
3. Select "Restore Site Configuration" from the list. The user will then be prompted to enter a service level or higher user name and password.
4. The screen shown will offer two options; 'Restore internal backup' or 'Select file to upload'. Selecting the 'Choose file' under the 'Select File to upload' will result in a screen listing the files held on the USB memory stick. Select the correct config file and press the green tick on the top right corner.
5. The screen shown will now indicate the previously selected file in the 'Upload field'. To complete the process press 'Upload'
6. The timer icon' will be shown while the site configuration is copied to the DMTouch. Once complete the DMTouch will re-start momentarily. The DMTouch will now be running the selected configuration.

Note: if you are copying a configuration on to a DMTouch which has already been configured, 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).



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Process via PC

The same procedure can be completed from the DMTouch web pages;

To save and restore a site configuration from a PC, use the following steps;

1. Firstly, login to the old DMTouch by clicking on 'Service' and navigate to 'System', 'Site' and click 'Save site setup'.
2. The two options will be shown; 'Force Internal Save' and 'Save to file'. Selecting the 'internal save' will save the configuration on the DMTouch's internal memory; the other will allow you to save the file to your pc/laptop. Select 'Save to File'.
3. Once the above is complete, connect to the new DMTouch to upload the site configuration. This time navigate to 'Service', 'System', 'Site' and click on 'Restore Site setup'.
4. The options will be to restore from the 'internal backup' or choose it from a file on the pc/ laptop. To select a file, browse to it using the window provided. The file will then show in the field on the screen, from here click on 'Upload'.
5. The DMTouch will restart once complete.

Note: if replacing one DMTouch onsite for another DMTouch firstly copy the old DMTouch configuration. Isolate the old DMTouch from its power supply and remove the unit. Now affix the new DMTouch in position. Before turning on the new DMTouch **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 DMTouch. If daughter boards are fitted to the old DMTouch make sure they are fitted to the new DMTouch before uploading the configuration. The 'new' DMTouch must have the same system configuration options enabled as the DMTouch that it is replacing e.g. if the 'old' DMTouch has all the energy features and 2 IP Networks enabled then the 'new' DMTouch must have this also.

The site configuration should contain the current DMTouch set up e.g. GP timer channels, defrost timer channels, alarm indexes, alarm actions, usernames/passwords etc. You must however review the DMTouch 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 DMTouch configuration may have been edited/changed since saving the setup e.g. the modification of a GP timer channel.



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Appendix 3: Related Part Numbers

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 DMTouch.

Feature Description	Part Number	Feature Description	Part Number
DMTouch Base model with on board PSU & SSD	PR0510	Energy Saving - Optimisation Features Only	PR0474
DMTouch Base model with on board PSU, SSD & Fibre network interface	PR0510F	Energy Saving - Network Trim Heaters Control Features only	PR0475
On-board battery backup (UPS)	PR0492	Energy Saving - Night Blinds Features only	PR0476
12 Analogue probe input expansion card	PR0460	Energy Saving - Condenser TD Features only	PR0477
3 Relay digital output expansion card	PR0461	Energy Saving - Performance Features only	PR0478
4 x 4 - 20mA Input expansion card	PR0462	Energy Saving - Defrost Warning Features only	PR0479
4 x 4 - 20mA Output expansion card	PR0463	Energy Saving - All Features	PR0484
4 x 0 - 5 or 0 - 10 Volt Output expansion card	PR0464	Energy Monitoring Feature Enabler	PR0484-EMON
4 x 0 - 5 or 0 - 10 Volt Input expansion cards	PR0465	485 Genus compatible network	PR0480
2 x 0-10 V Input & 2 x 0-10 V Output	PR0466	IP Network Enabler - Each 32 devices	PR0481
6 Input (240V Status)	PR0467	Wireless Mesh Software Enabler - Each 32 devices	PR0735
USB to RS485 Network Adapter -2 x 32 devices	PR0482	DMTouch Software Upgrade to Latest Version	DMSWUPG
USB card reader kit with DMTouch wing cover	PR0493	Wireless Mesh Software Enabler	PR0735
DMTouch 4 Port hub I/O board upgrade kit	PR0459	ActiveFM	PR0487
USB to CANbus Adapter (For use with TDB)	PR0489	The Data Builder	PR0485
Remote Alarm Beacon (Operated from DMTouch Relay).	PR0458-CLR	The Data Builder Lite	PR0485-LITE
USB analogue Modem	PR0491	Modbus TCP/IP Interface Enabler	PR0470*
Touch XL – Orbit Out Station	PR0617-XXXX	BACnet Interface Enabler - Max 32 devices	PR0471
Wi-Fi adapter	PR0657-EXT	Philips Envision Lighting Interface	PR0471-PHENV
Secondary IP Interface (USB Adapter)	PR0486	Siemens NetRS/NetPX Interface Enabler	PR0483*
USB/485 Modbus Adapter for DMTouch	PR0623	Cbiss Gas Interface	PR0498*
USB/485 Tektronics® Adapter for DMTouch	PR0470-TEK	Shuttle USB Logger Interface Enabler	PR0499
Wireless Mesh USB Adapter	PR0734	Pack Shutdown Support (Intelligent Load Shedding)	PR0484-PSS
XLON RS485 or FTT-10A Adapter	PR0488-485 or FTT	Carel® Webgate Enabler	PR0490-CWG
Wireless Mesh Ethernet Router	PR0732	RCS Interface Enabler	PR0470-RCS

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

The options below indicate if the part number is software only, hardware only or hardware & software.

Hardware only, plug and play. No software activation required.

Hardware & Software activation required. Software activation included in price.

Software only.

CPT and Predictive Alarming Functions	PR0487-CPA
Plant Backup	PR0468-PB
Modbus Type Editor (per type)	PR0655-TYPDM
Modbus Type Editor OEM activation	PR0655-OEMDM
Enhanced Web Services	PR0490-EWS



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Appendix 4: 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 DMTouch. 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 5: Terms of Use

Software running on this equipment is licensed for use. In using this equipment you are agreeing to Resource Data Management Ltd's standard Terms and Conditions for Software Licensing. To obtain a copy of the Terms and Conditions please visit our website www.resourcedm.com and select Technical Documentation.

Appendix 6: USB/ RS485 Modbus Adapter PR0623

Modbus® devices can be connected to the dmTouch using a USB/RS485 Modbus® Adapter. This device connects to one of the DMTouch's USB ports. Each Modbus® adapter has 2 RS485 network lines and each network line allows up to 32 Modbus® devices per line. The dmTouch currently supports a single USB/RS485 Modbus® adapter (PR0623) only. For Modbus template creation requests, please consult RDM accounts manager. **Note:** the DMT will only support reading Modbus registers of 32bits or less.

Configuration

From the Add Device page enter the following.

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

Device type

Modbus/Usb Device

Name

MOD001

Alias

Mains Energy Meter

Type

SIRIO Energy Meter

USB Line

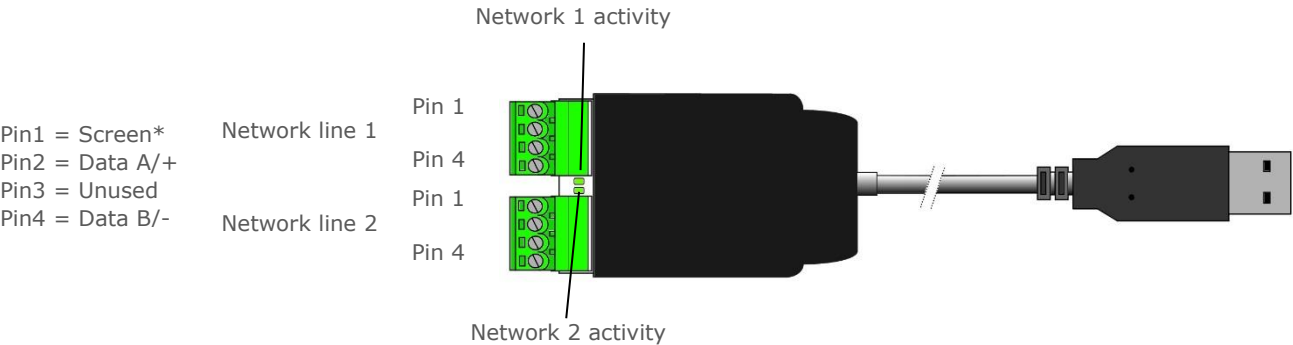
Line 1

Modbus address

01

Add Device

This method of adding a device should not normally be required, but may be used for adding either a third party device or one with a static IP address



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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

Current Supported Modbus templates

Modbus® Energy Meters	Other Modbus® Devices
4MOD Pulse Counter	Gas Detection
AcuDC 240	CPC Infrared RLDS Unit 1
AEM33 Power Monitor	TQ4200 Mk 11 (16 Chan)
Autometer IC970	TQ4200 Mk II (24 Chan)
Carlo Gavazzi EM21	TQ4000 (4 Chan)
Carlo Gavazzi EM24-DIN	TQ4300 (12 Chan)
Carlo Gavazzi WM14	TQ4300 (16 Chan)
Compact NSX	TQ8000 (24 Chan)
Countis E13, E23, E33, E43, E53	TQ8000 (16 Chan)
Cube 350	TQ8000 (8 Chan)
Dent Powerscout Energy meter	TQ100 (30 Chan)
EMM R4h Energy meter	Safety Gas Detection System
Enviro ENV900	Carel Gas Detection
Enviro ENV901	MGS Gas 404A Detector
Enviro ENV901-THD	Others
Enviro ENV903-DR-485	Toshiba FDP3 A/C Interface
Enviro ENV910 Single Phase	Polin Bakery Controller
Enviro ENV910 Three Phase	ISpeed Inverter Drive
Flash D Power Monitor	RESI Dali Lighting System
Flash D Power Monitor (3 Wire)	Sabroe Unisab III
ICT Energy Meter EI	AirBloc SmartElec2
ICT Energy Meter EI Flex – 1phase	Emerson Control Techniques VSD
ICT Energy Meter EI Flex – 3phase	Daikin ZEAS Remote Condensing units 11-26
IME Nemo 96HD	NXL Vacon Inverter Template
Integra 1530	NSL Vacon Inverter Template
Integra Ci3/Ri3 Energy Meter	Climatic 60
Janitza UMG 604	IntesisBox Interface for Mitsu.
Janitza UMG 96S	Daikin Convenipack
Kamstrum Multical 602	DeepSea Gen Com
Measurlogic DTS	Aermac
Nautil 910 Energy Meter	Measurlogic DTS
Schneider Masterpact NW16 H1	Weirgrove
Schneider PM710	Star Azane Chiller
Schneider PM750	TQ4300 (24 Chan)
Shark Energy Meter	Daikin ZEAS 24 Units
SIRIO Energy Meter	RDM Energy Meter
Socomec Diris A20	
Socomec Diris A40	
SPN ILC Energy Meter	
VIP396 Energy Meter	
VIP396 Energy Meter (IEEE)	
E44 Countis Energy Meter	
Measurlogic DTS	
Socomec Diris A14	

Note: Please be aware that the templates listed above were generated on request and designed to the customers' requirements. Please contact RDM Technical Support for information regarding the template. Furthermore, if you have a Modbus® device which is not listed please contact RDM Technical Support.



Please ensure all power is switched off before installing or maintaining this product.

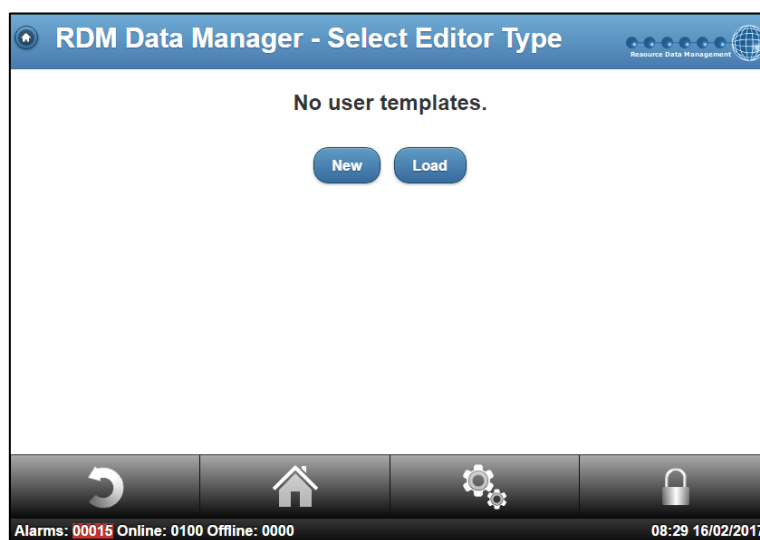
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Appendix 7 – Type Writer User Guide

Before any template can be added to the DMTouch, the feature must be enabled using part number PR0655-TYPDM. Multiple user type 'slots' can be added using the same part number. It can either be ordered when purchasing the DMTouch, or later activated by RDM tech support. If the DMTouch is not remotely accessible then using the '[Add Feature](#)' menu, an activation code can be given.

Note: Before using this feature, a full understanding of Modbus and the 3rd party unit is required. RDM tech support will not offer assistance out with the bounds of our product.

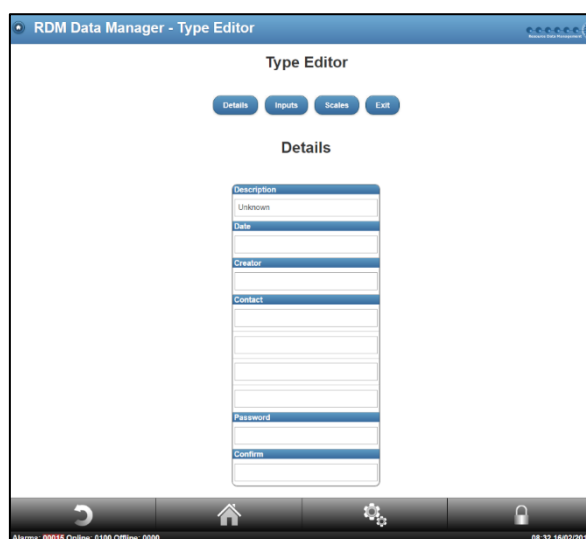
The Editor



Opening the Type Editor will result in the above page. At this point there are only two options, to either start a new 'template' or load a previously created one.

New template

Having clicked on 'New' it will launch the below;



As shown, there are four tabs to select from; Details, Inputs, Scales and Exit.

Note: with 'OEM' (PR0655-OEMDM) enabled, there will be three additional tabs; Outputs; Parameters; Alarms. For more information please consult RDM Technical Support.



Please ensure all power is switched off before installing or maintaining this product.

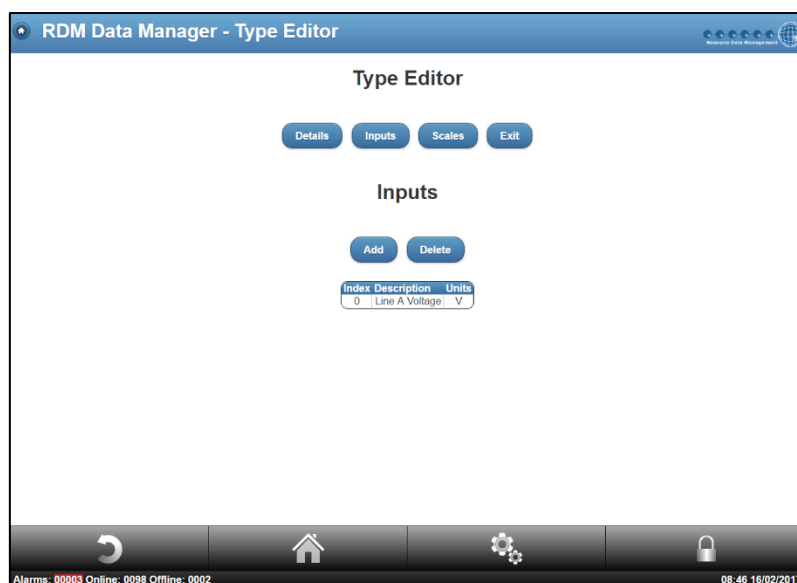
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Details Tab

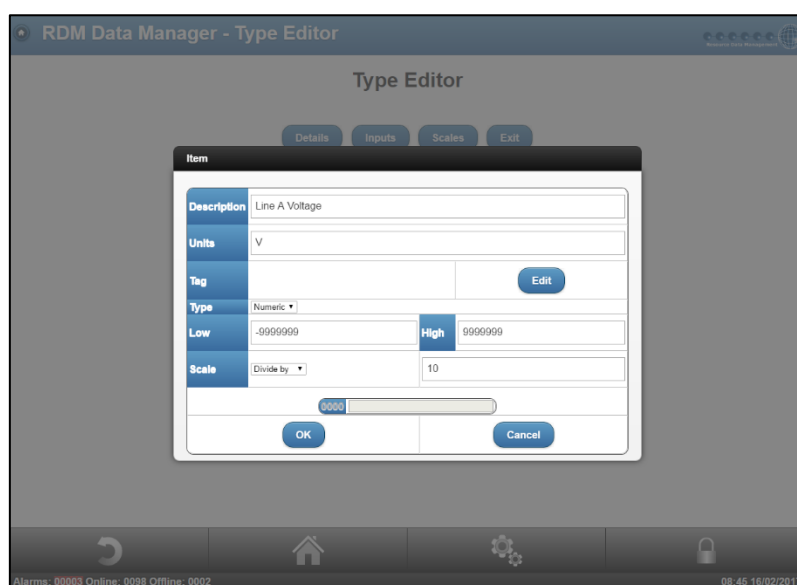
This allows general information relating to the template's description, date, creator's name along with the option to insert a password. Leave blank if no password is necessary.

Inputs Tab

The input section is where the viewable IO of the device is listed and configured with the corresponding Modbus register, type etc.



By either using the 'Add' button to add a new item, or by double clicking on the item already listed it will open a window to change the item's details.



Description

This is the text string that is shown to identify the item.

Units

Inset the unit type associated to the value. E.g. V, A, kWhr, Lux etc.



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Type

The type will either be 'numeric' or 'string'.

When set to numeric it will simply show the number from the register. The high and low fields should be used to indicate the potential limits to the value.

If set to 'string' it will associate the text (inserted in the fields) to the numerical value in the register. By using the fields at the bottom of the window, beginning at 0000, enter the text you want to appear in the field next to it. Pressing the 'Return' key will create a new field with a '0001' next to it. Again, enter the text to be associated to the value.

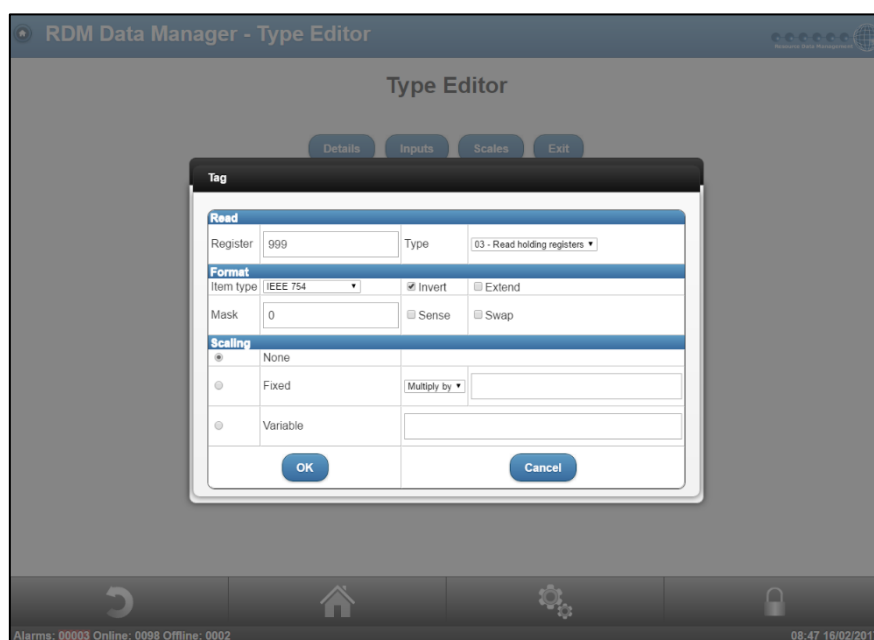
E.g. having the following inserted; '0000' – Off; '0001' – On. When the register reads either a 0 or a 1, it will show in the IO list either, 'Off' or 'On'.

Scale

Provides the option of scaling the register value by dividing or multiplication.

Tag

The 'tag' requires all the details of how to read the Modbus register and the type of data it holds so it can be translated to the relevant information when extracted;



Register

Insert the register number for the template to look at.

Type

Select the Modbus function to read from the register. The editor only supports functions 01 to 04.

Item type

Select the type of data that the Modbus register holds. The options are;

- Word – reads 16bits
- DWord – reads x2 16bit registers (32 bits)
- IEEE 754 – reads x2 16bit registers and treats as a 32 bit floating point number
- Coil – reads a single bit
- None – no type selected.
- Large-64 – reads a 64bit register but only uses the lower 32bits
- Large-64/x – reads a 64bit register, divides by x but only uses the lower 32bits

Note: when using any of the 'large-64' item types, it reads in all 64 bits but can only use the lower 32bits.



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Mask

Insert the mask required. For example this may be required if the Modbus register holds individual bits to be read from a register containing a word. For example if a register (16 bits) returned 1111 0000 1010 1000, to read bit 3, insert the mask '8' (decimal). To read bit 4, enter 16 etc.

Invert

Refers to how the byte data is read from the register. Whether it is big-endian or little-endian. It can be used in either 16 or 32 bit registers. For example;

Example 1 – 16 bits

If the returned data is in the byte sequence:

AA BB

With Invert off it will be read as:

BBAA

With Invert on it will be read as:

AABB

Example 2 – 32 bits

If the returned data is in the byte sequence:

AA BB CC DD

With Invert off it will be read as:

DDCCBBAA

With Invert on it will be read as:

AABBCCDD

Extend

If the value read can be a negative value then tick this box, for example, a signed integer. When ticked, it will use Two's Complement to decipher if the number is negative or not. If unticked, it will assume the full word/register is positive.

Sense

Inverts the 'sense' of a binary value. I.e. when ticked, it interprets a returned '0' value as 'on', '1' as 'off'. Normally only used with coils or 'masked' values reading single bits.

Swap

The 'Swap' function can only be used with 32bit registers. When checked, it will swap the ordering of the returned 'words'. For example;

Example 1

If the returned data is in the byte sequence:

AA BB CC DD

With Swap off it will be read as:

DDCCBBAA

With Swap on it will be read as:

BBAADDCC

If required, both Invert and Swap functions can be used, for example;

Example 2

If the returned data is in the byte sequence:

AA BB CC DD

With Invert Off Swap Off it will be read as:

DDCCBBAA

With Invert Off Swap On it will be read as:

BBAADDCC



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With Invert On Swap Off it will be read as:
AABBCCDD

With Invert On Swap On it will be read as:
CCDDAABB

Scaling

Scaling has 3 types; None, Fixed or Variable.

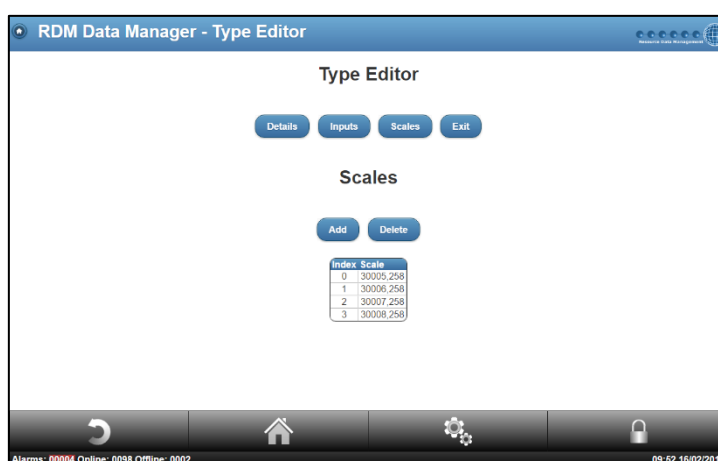
- None:** No scaling will be applied to the value.
- Fixed:** Choose between 'multiply' or 'divide' by the value entered.
- Variable:** Used in conjunction with the '[Scales](#)' section. In the field the variables; \$V, \$0, \$1, \$2.... \$N can be used to manipulate the value. \$V refers to the value taken from the register. \$0, \$1, \$2...\$N refer to the indexed scale registers (in Scale Tab) where index 0 is \$0, index 1 is \$1, index 2 is \$2 and so on.

The operands; '+' (plus); '-' (minus); '*' (multiply); '/' (divide); '%' (mod); '&' (bitwise and); '^' (bitwise xor) 'eq'; 'noteq'; 'pow'; 'log' 'log 10'; 'exp' and 'sqrt' can be used in the 'variable' field.

E.g. with the variable scale set to "\$V*\$0" it will multiply the value in the register by that of the value in the scaling register '\$0'.

Scales Tab

In some devices, there are dedicated registers advising of the scale applied to the values in other registers. In this section insert the details of how to read these registers. It uses the same format as the input section to define the registers.



Once created, the scaling values taken can be applied to the values by using the method described in the variable scaling section. The scales, as mentioned can be referred to by using \$0, \$1, \$2, \$3.

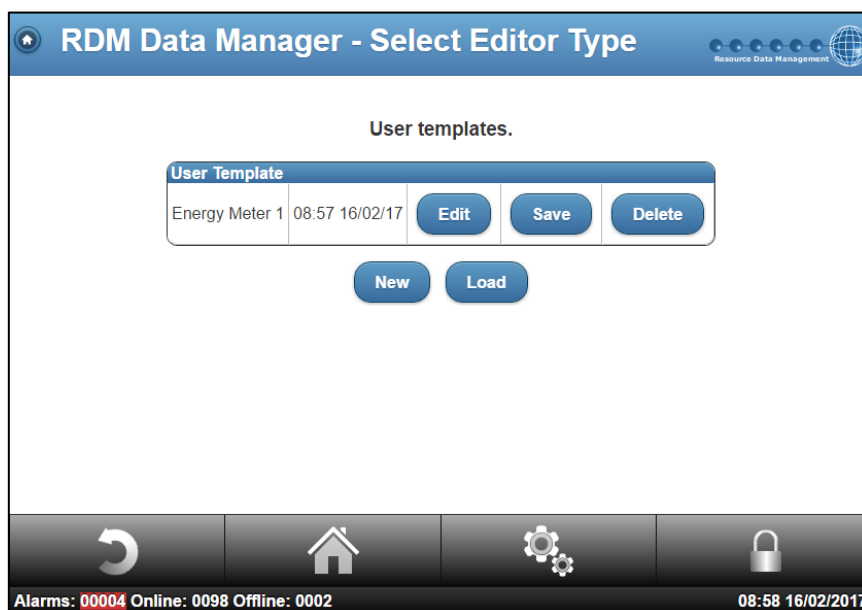


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Exit Tab

Once the template is complete, click the 'Exit' button, this will confirm the save. It will also offer the options to exit without saving or 'cancel' the exit. The template will be saved and accessible through the Type Writer menu;



Following the creation, the template can be saved to a local PC, using the 'Save' button. The format will be saved as an xxxx.typ. When saved, the template can be re-used on other devices as long as the User Template feature is activated.

Load

The 'Load' feature can be used to utilise a previously generated (and saved) type file on another device. When clicked, navigate to the saved type file on your local PC and load it on.

Now that the type file has been generated it can be used to communicate with the third party device. Using the method outlined in [Add Device](#) section, the type will be in the drop down menu to select.

Note:

In the unlikely event the front panel PIN and username and/or password is unknown, for example a new service contract is undertaken and the previous contractor has not passed across the login credentials, it is possible for RDM Technical Support to generate a Data Manager specific, time limited, 'ONCE' code which allows temporary access to only the Data Manager in question at install level allowing an engineer to add a new 'Install' level user. To do this RDM requires in writing, from the end-user/owner of the Data Manager, permission to provide access to the Data Manager. There will also be an administration charge for this request.

For further information please contact Technical Support.



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DMTouch Reset

On versions of DMTouch manufactured after December 2016, there is a manual reset button located on the front, below the power and alarm LEDs. Pressing it in continuously for 30 seconds will cause the unit to perform a full system reset.

Note: This button must be left uncovered.

Surge Protection

Installations subject to high levels of electrical transients (Voltage spikes/lightning strikes) may require the fitting of protection devices to the external wiring of device's Mains supply input, RS485 ports, CAN port, or Ethernet ports. Please refer to document DM & Network Surge Protection for information on suitable devices and their application. Refer to the device manufacturers directions for detailed fitting instructions.

DMTouch Battery Transportation

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

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DM Configuration Files

NEVER attempt to install a configuration file from a newer Data Manager Software version into a Data Manager with an older software version as this could result in complete system failure.

RDM will not be liable for anything that occurs as a result of this action having been carried out.

For further information or for questions regarding this matter please feel free to contact RDM Technical Support.



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One Time Access Codes

In the unlikely event the front panel PIN and username and/or password is unknown, for example a new service contract is undertaken and the previous contractor has not passed across the login credentials, it is possible for RDM Technical Support to generate a Data Manager specific, time limited, 'ONCE' code which allows temporary access to only the Data Manager in question at install level allowing an engineer to add a new 'Install' level user. To do this RDM requires in writing, from the end-user/owner of the Data Manager, permission to provide access to the Data Manager. There will also be an administration charge for this request.

For further information please contact Technical Support.

Software, Software drivers and software features and function licences

RDM product Software Licences and drivers are non-transferable. They are purchased with hardware or separately and once added to hardware for use on that hardware only. If hardware is returned and deemed out of warranty all software driver licences terminate with the hardware.

Disclaimer

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



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Change History

Date	Version	Update No	Changes
22/10/2013	2.0		First Release.
27/11/2013	2.0.1	01	3G Dongle support added.
		02	If alarm log is cleared an alarm is generated.
		03	Network Statistics information added.
06/12/2013	2.0.2		3G Modem information amended.
28/01/2014	2.0.3	01	Enhanced BACnet support added.
		02	New auto split feature added.
		03	Night Blinds threshold support.
		04	USB menu support added.
06/02/2014	2.0.4		TDB Lite amended from a maximum of 40 blocks to 100 blocks.
27/03/2014	2.0.5	01	Notepad feature added.
		02	Device summary chart.
		03	USB analogue modem support added.
		04	User elevations.
		05	TLS mail support added.
07/04/2014	2.0.6		Enhancements to Swipe System (Active FM Only).
24/04/2014	2.0.7	01	Added TPI support for client specific OEM Brooklands controller.
		02	Enhanced Minitype for split controllers using night blinds.
		03	Enhancement to BACNET Interface to prevent devices logging on which have no name or description.
23/06/2014	2.0.8		Support added that if the RCS gateway comes back with no values in a controller, it will not create a type file.
11/09/2014	2.1	01	Added features for graphs including quick view graphs from device list and dynamic real time graphs are available.
		02	TPI summary chart and alarm comments using keypad / display added.
		03	Internal file compression re-structuring.
06/03/2015	2.1.1		Note to confirm binary tdb format is required if using the feature Mercury TDB upload.
16/06/2015	2.2	01	New settings for night blind monitoring.
		02	Improved viewing for layouts.
		03	Added 'Send All Alarms' function for alarm monitoring centres.
		04	Allows you to modify the parameters of a CPT type, via TDB.
		05	Updated Modbus energy meters table.
18/08/2015	2.2.2		Description of dynamic real time graphing updated.
10/09/2015	2.2.2a		Modern Look interface updated in all images.
30/09/2015	2.2.2b		Description of Advanced Night Blinds amended.
15/10/2015	2.2.3		Internal changes for multiple CPUs.
02/05/2016	2.3	01	Console compatibility for Touch XL Orbit.
		02	Manage layouts feature.
		03	Enhanced graphing interaction with export option.
		04	Graph can scale height of digital inputs when displayed along with analogue inputs.
		05	New Dark theme.
		06	Support for Canbus interface.
		07	Individual device night blind alarms.
		08	Smart parameter setting which enables bulk parameters to be set on different device types.
		09	System log search.
		10	Edit tags feature.
		11	Updated temperature performance setup.
		12	Enhanced split update.
		13	Edit split option.
		14	Device profile graphs.
		15	Document manager.
		16	Energy monitoring feature.
		17	Plant/ mercury TDB backup feature.
		18	SSL encrypted access.
22/06/2016	2.3.2	01	Updated export log data description to include sampling time.
		02	Updated Intelligent Load Shedding setup description.
		03	Note added to item visibility
15/08/2016	2.3.3	01	Enhancements to split devices
		02	Confirmation of maximum number of bits Modbus type files can read.



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19/10/2016	2.3.4	01	Captcha tests for saving site setup
26/10/2016	2.4	01	RDM-485 interface
		02	Advanced Night Blind History graphs
		03	Individual Defrost Warning numbers per case
		04	New TDB Pump Block
		05	New TDB custom units support
		06	New mini IO expansion board support
		07	Merge Device feature
		08	Custom automatic export
		09	Philips Envision Lighting support
		10	Device descriptions in Alarm Entry Details
		11	Add support for URL rather than just IP addresses in auto export
		12	Modbus 64 bit input support added
		13	Mimic tags updated.
		14	Code optimisation
		15	Updated Drivers
1/11/2016	2.4a	01	Added to ECA Energy Technology List.
7/11/2016	2.4.1	01	Updated defrost warning page.
02/12/2016	2.4.2	01	Amendment to Service Menu aliases
		02	Defrost Timer Device Setup description updated
13/12/2016	2.4.2a	01	Defrost Termination feature
20/01/2017	2.4.2b	01	DMTouch reset button explanation added
25/01/2017	2.4.2c	01	Site setup description updated.
31/01/2017	2.4.2d	01	Coefficient of performance Section Added (CoP)
20/02/2017	2.5.0	01	Support for Superpack item aliases to be inherited by the DMTouch
		02	Modem setup requires Site ID and description to be setup before dialout
		03	Support for HTTPS posting of automatic exports
		04	Added to Auto and manual exports – alarm slave aliases
		05	Defrost termination button where supported
		06	Graphing has option to show device ID and description in device selection
		07	Ability to set the visibility of shared parameter names across different types.
		08	Removed Original web theme
		09	BACnet overrides permitted in split devices
		10	New TDB block support – String Input
		11	Support for RDM-485 networking
		12	Type Editor feature
		13	Extension board status menu
		14	Include device description in alarm log entries.
		15	Removed self-extracting option for data exports
		16	New Disciplines feature
		17	Add support for automatic certificates from Let's Encrypt
		18	Enhancements to layout functionality.
15/03/2017	2.5.1	01	Enhancement to interface when viewed by a mobile device
		02	Improvement made to split device functionality
		03	Modern webpage look as set as default
		04	Enhancements to layout functionality
		05	TPI - Support for dual temp feature on RDM Circuit Controller
		06	New BACnet pending feature.
02/10/2017	2.6.0	01	Added separate web services cgi.
		02	Support added for Superpack aliasing inheritance.
		03	Enhanced auto-export checks so exported device matches current type file.
		04	Circuit controller auto-split feature.
		05	Enhancements to Layouts supporting Superpack aliases.
		06	Enhancement to TDB network output block to permit the use of wildcard entries.
		07	Support for Layout background colours.
		08	Site configuration saves provides option to include layouts.
		09	GP Run On limit increase.
		10	System configuration saves BACnet /RDM-485 user-set types (used with BACnet/RDM-485 pending).
		11	Support added for user generated type files to be used with Modbus/ IP.
		12	Support added to allow alarms in user generated type files.
		13	Support added for AK SC255, SC355 and AK SM800.
		14	Enhancements to reading alarm database on CGI.
		15	Improvements to discipline feature in "standard look".



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		16	Improvements to text handling for old style layout files.
		17	Graphs will now take into account of visibility.
		18	Support added to reset an RDM controller remotely.
		19	Enhancement to interface when viewed by a mobile device.
		20	Improvement to custom Automatic export supporting item aliases.
		21	Improvements to Philips Envision Lighting support.
		22	Option added to remove layout when doing a save site configuration.
		23	New Broadcast receive list feature.
		24	TDB Editor – drop down menus when using network blocks.
		25	TDB Editor – New blocks – Analogue Sensor, DOF2, ROF2, DPID2, RPID2, Occupation 2, P2T2.
		26	TDB Editor – update to Pump block to ignore run proofs.
		27	TDB Editor – Analogue Input block with automatic defining of values.
		28	TDB Editor – Light Sensor option in Analogue input block.
		29	TDB Editor – Support added for 4Uni 4Relay expansion module.
		30	New Layout feature incorporating GP Overrides.
		31	New Layout feature allowing slide mimic, states, overrides and GP run on.
16/10/2017	2.6.0a	01	Surge Protection Note added
26/10/2017	2.6.1	01	Added support for BACnet Accumulator object.
		02	Enhancements to handling of bigger BACnet devices.
27/11/2017	2.6.2	01	Improved support when using old browsers to access DMT
		02	Enhancements to loading Genus type files
		03	Support added for Wi-Fi adaptor.
		04	Added export log enhancement to allow export in current 30 minute cycle.
06/12/2017	2.6.3	01	Enhancements to setting multiple devices
15/01/2018	2.6.4	01	New Enhanced web services functions; GetDevices; SetDevices; SetDeviceName; SetDeviceAliases; SetItemAliases.
		02	Update to BACnet accumulator object
		03	Enhancements to handling blank BACnet digital objects
		04	Support added to allow scan over LONworks network
08/02/2018	2.6.5	01	Optimisation of memory allocation when using TDB blocks
		02	Support added to Visibility page to grey out items automatically hidden by the DM.
07/03/2018	2.6.5a	01	Added BACnet Type section
30/03/2018	2.6.6	01	Fix to memory leak if auto-split feature is used with Circuit Controller or New Superpack.
26/04/2018	2.7.0	01	Enhancements to Modbus driver
		02	Updates to BACnet interface
		03	Increase protection to exports when null characters used in devices.
13/06/2018	2.7.0a	01	Note added under split device menu
26/09/2018	2.7.0b	01	Note added on site configurations
30/11/2018	2.7.0c	01	Update to Night blind description
07/12/2018	2.7.0d	01	Update to GP Timer description
		02	Update to US Group Office address
08/02/2019	2.7.1	01	Enhanced XLON support
19/02/2019	2.7.2	01	Force CGI login page will now remove logos and site information when viewing.
		02	Unable to remove and add expiry to last install user.
		03	Add new local / remote user checking to second web port
		04	Web Services to follow Force CGI Login checkbox
		05	User account disabled for 1 hr after 5 failed login attempts.
		06	Removed the ability for Install, service and store to login remotely if set as default.
14/03/2019	2.7.2a	01	Update to Name server description



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