

Resource
Data Management

Humidity and Temperature Display

Installation Guide

Revision 1.1b



PR0445-LCD
PR0445-BMS

Contents

Humidity and Temperature Display	3
Front of Display.....	3
Ordering Information	3
Rear of Display (PR0445-BMS/ LCD)	4
Rear of Display (PR0445-BMS-CAN/LCD-CAN).....	4
LCD Icons.....	5
Dimensions (PR0445-BMS/ LCD)	5
Dimensions (PR0445-BMS-CAN/ LCD-CAN).....	6
Mounting bracket	6
Bit switch settings & Wiring	7
Specification	9
General	9
Power Requirements	9
Display	9
Display Sensor Accuracy.....	9
Appendix 1 Comfort Index.....	10



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

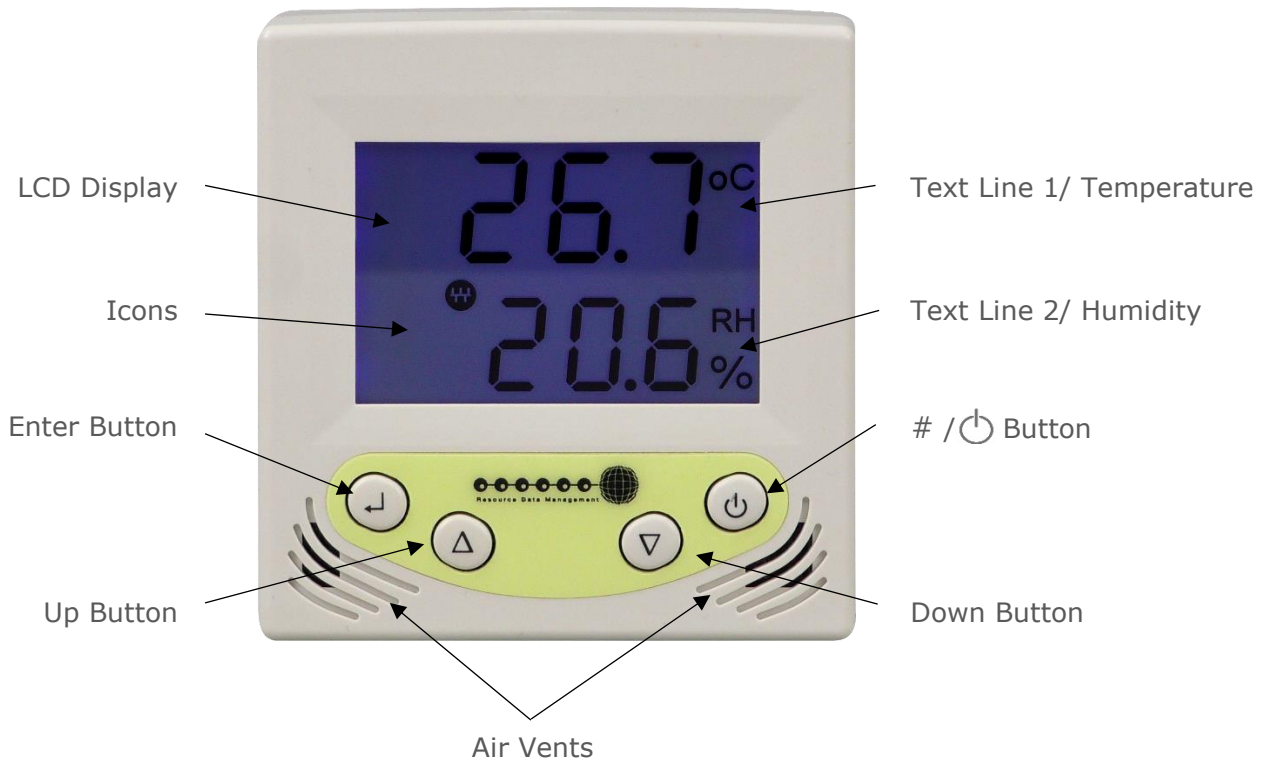
Humidity and Temperature Display

The Humidity and Temperature display comes in four hardware variants; Refrigeration, Refrigeration with CANbus, HVAC and HVAC with CANbus. All of which measure the temperature and humidity of the surrounding environment however each offer their own set of visible icons that can appear on their screen relevant to a given application.

The displays can be connected with many hardware platforms including the Mercury Hub* (PR0018-Phi), Mercury* (PR07XX TDB) and Intuitive* (PR06XX TDB) TDB along with Humidistat* (PR0440) controllers. Depending on the connected hardware, will dictate the use of buttons and icons on the display. Please consult the individual device documentation for more details.

***Note:** Compatible with software variants; PR0018-PHI V2.6 and above, PR07XX-TDB V2.5 and above, PR06XX-TDB V3.3.0 and above, PR0440 2.1 and above.

Front of Display



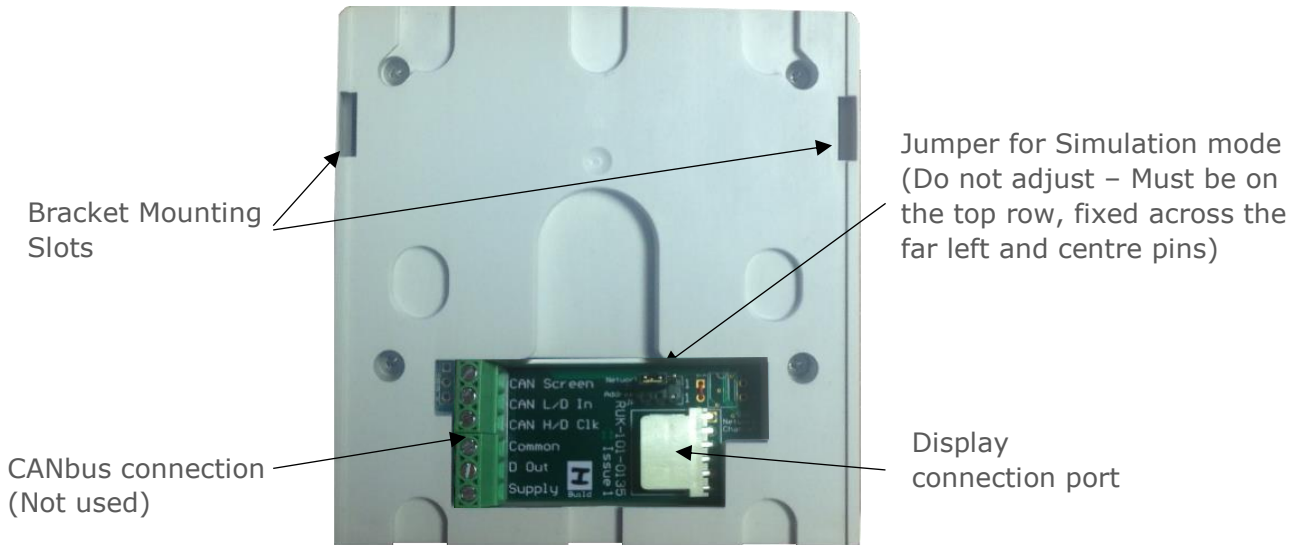
Ordering Information

Part Number	Description
PR0445-BMS	HVAC - Humidity/ Temperature BMS Display with 5m Cable
PR0445-BMS-CAN	HVAC - Humidity/ Temperature BMS Display with CANBUS interface
PR0445-LCD	Refrigeration - Humidity/ Temperature Display with 5m Cable
PR0445-LCD-CAN	Refrigeration - Humidity/ Temperature Display with CANBUS interface

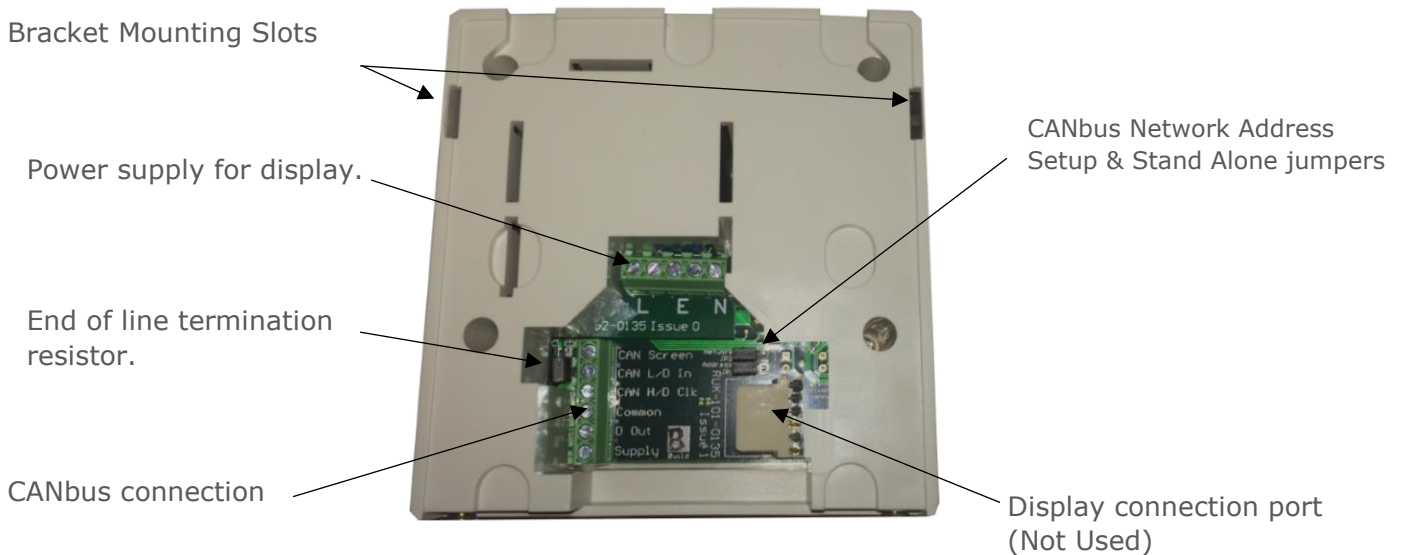


Please ensure all power is switched off before installing or maintaining this product.

Rear of Display (PR0445-BMS/ LCD)



Rear of Display (PR0445-BMS-CAN/LCD-CAN)















See [Bit Switch & Wiring diagram](#) for more information on the jumper positioning and wire connections.



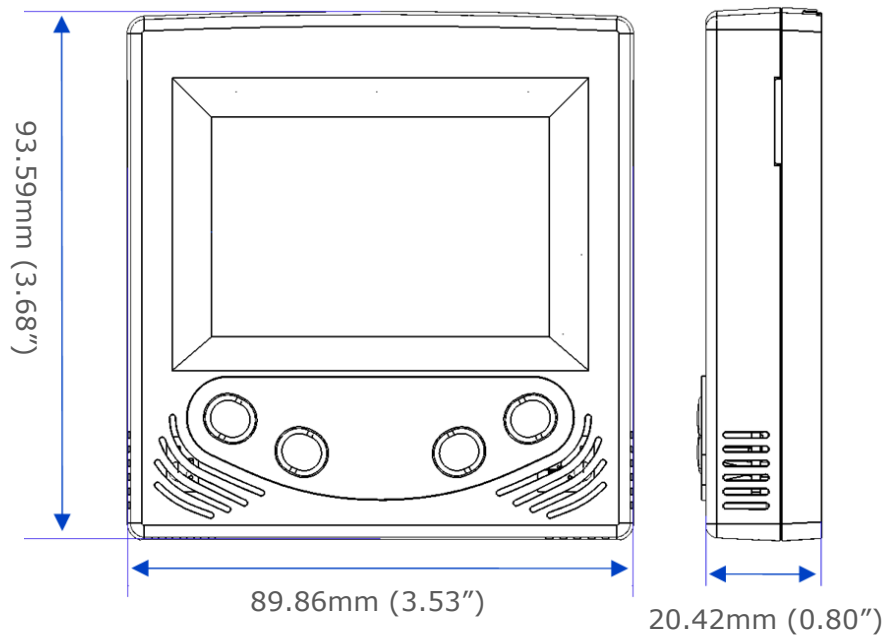
Please ensure all power is switched off before installing or maintaining this product.

LCD Icons

There are two hardware variants of the Humidistat & Temperature sensor and as such have their own icons that can appear on the LCD display. Below shows the available icons for HVAC / Refrigeration;

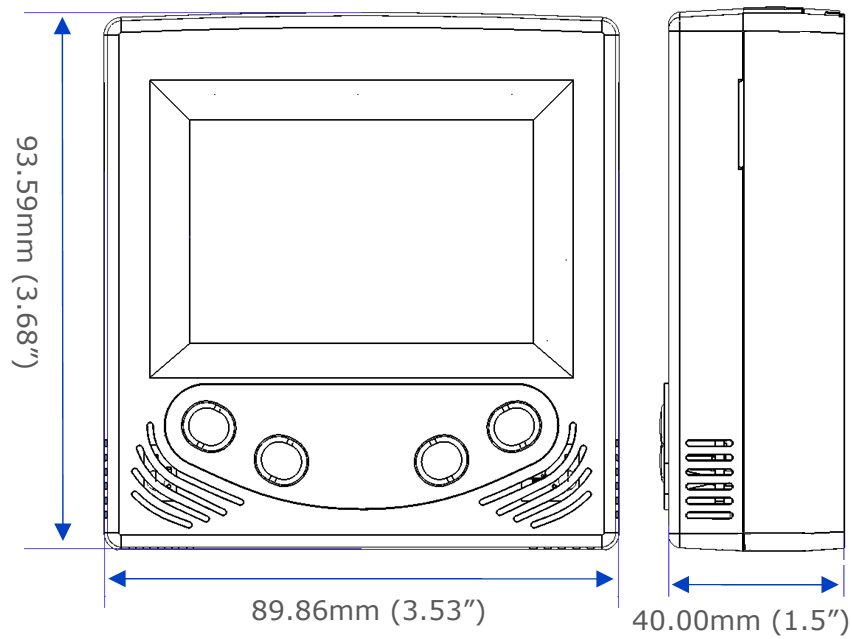
Cool / Valve	 	Service / HACCP	 HACCP
Fans		Alarm	
Valve / Light	 	Units C	oC
Unused / Network		Units F	oF
Heat / Defrost	 	Units rH	RH
Network / Service	 	Units %	%

Dimensions (PR0445-BMS/ LCD)



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

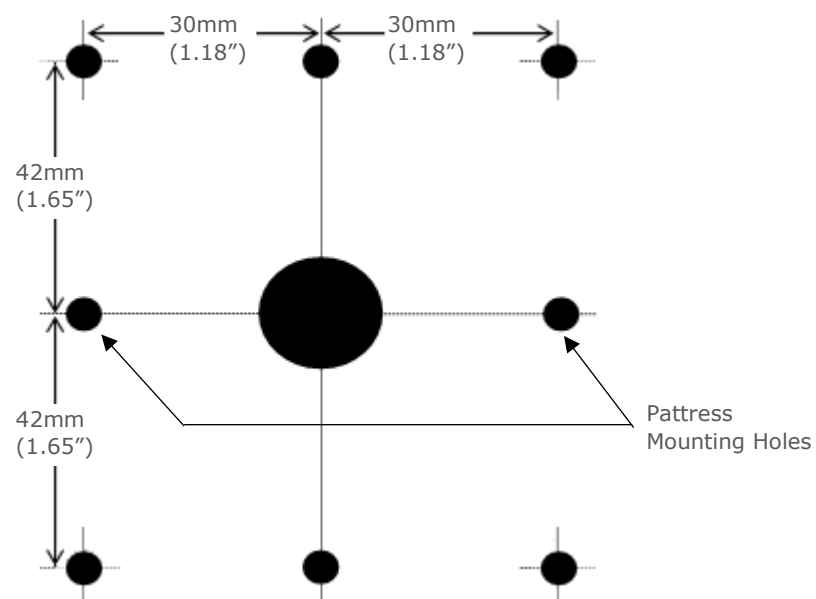
Dimensions (PR0445-BMS-CAN/ LCD-CAN)



Mounting bracket

The display is supplied with a mounting bracket. The bracket is removed from the display by removing the two screws on the underside of the display and sliding the bracket downwards then away from the display.

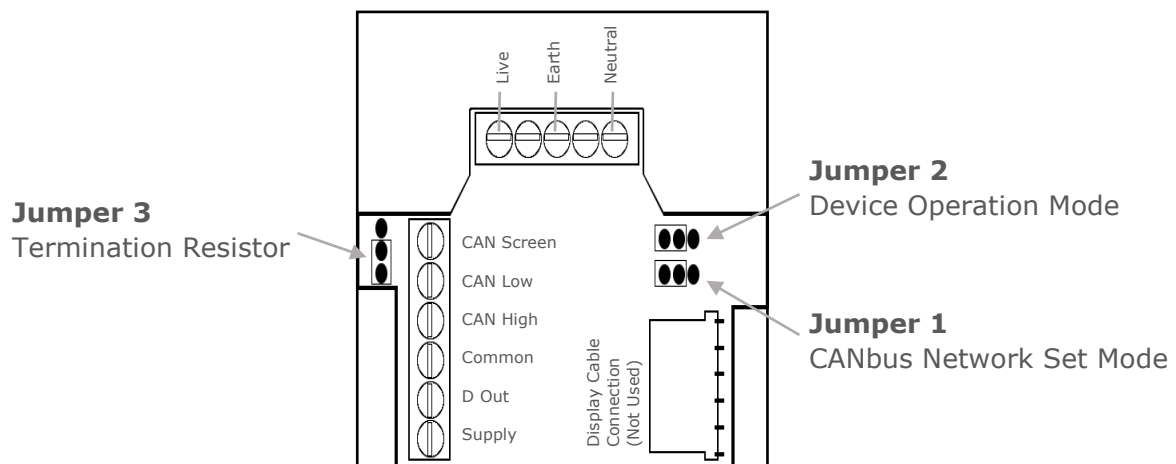
The mounting plate can then be fitted to the desired surface using the mounting holes shown below. Two of the mounting holes match the position of the threaded inserts on a standard UK pattress box, with the other holes providing additional mounting options.



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

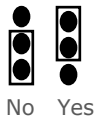
Care should be taken with regards to plug orientation when re-connecting. The display should be positioned on the bracket so that the two mounting lugs on the bracket fit in the two slots in the back of the display. The display is then moved down so that the two screw holes at the bottom of the bracket meet up with the two threaded inserts at the bottom of the display. The two mounted screws are then fitted to secure the display onto the bracket.

Bit switch settings & Wiring (PR0445-BMS-CAN/ LCD-CAN)



Note: Before moving any Jumper position, remove any power to the device.

Jumper 3 – CANbus Line Termination Resistor



If the display is the last device on the CANbus network, then it must have the jumper set to 'yes', otherwise set to no.

Jumper 2 – Device Operation Mode

- Connecting to Device via CANbus
- Stand-alone Operation

If the device is to be used in a stand-alone mode, whereby simply monitoring and displaying the current temperature and humidity the Jumper 2 position should be linked over the right 2 pins. If the device is to be connected to a device (e.g. TDB controller) then the Jumper should be over the left 2 pins

Jumper 1 - CANbus Network Address Setup

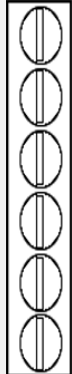
- Normal Operation
- CANbus Address Setup

To configure the device with a specific CANbus address place Jumper 1 on the right 2 pins. Upon powering the unit, the user can select the CANbus ID address (0 -15) using the 'Up' and 'Down' arrow keys. Once complete, power down the device and return the Jumper to the left 2 pins for Normal Operation.



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

Communications Connections

	CANbus	I2C
	CANbus Screen	NA
	CANbus Low	Data In
	CANbus High	Data Clock
	Common/ 0V Ground	Common/ 0V Ground
	NA	Data Out
	Optional 5Vdc Supply	Optional 5Vdc Supply



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

Specification

General

Operating temperature range	+5°C to +50°C 41°F to +122°F
Operating Humidity	20% to 80%
Storage temperature range	-10°C to +60°C 14°F to +140°F
Size (H x W x D)	93.59 x 89.86 x 20.42 mm 3.68 x 3.53 x 0.8 inches 93.59 x 89.86 x 40.00 mm 3.68 x 3.53 x 1.5 inches
Weight	117g 0.25 lbs
EMC	Europe: EN 55014-1:2006 + A2:2011; EN 55014-2:1997 + A2:2008; ETSI EN 301 489-17: v2.2.1 (2012) US: FCC CFR 47 Part 15B:2014.
Ventilation	There is no requirement for forced cooling ventilation.
Disposal	Please observe local legislation with regards to electrical products.
Origins	Product designed in the UK manufactured in Taiwan.

Power Requirements

PR0445-BMS/ LCD

Supply Voltage Range	N/A. Power supplied by display connection lead
Supply Frequency	N/A. Power supplied by display connection lead

PR0445-BMS-CAN/ LCD-CAN

Supply Voltage Range	90-264 VAC or 120-370 VDC
Supply Frequency	47-440 Hz

Display

Backlight	LED
Screen	LCD

Display Sensor Accuracy

Temperature Range	+/- 0.4 Degrees Celsius
Humidity Range	+/- 3% rH



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

Appendix 1 Comfort Index

Apparent Temperature for Values of Room Temperature and Relative Humidity (Shown in Degree F).

	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
115	117.1	118.0	119.0	119.9	120.8	121.6	122.5	123.5	124.4								
110	111.1	112.0	113.0	113.9	114.8	115.6	116.5	117.5	118.4	119.3	120.1						
105	105.1	106.0	107.0	107.9	108.8	109.6	110.5	111.5	112.4	113.3	114.1	115.0	116.0				
100	99.2	100.1	101.0	101.9	102.8	103.7	104.6	105.5	106.4	107.3	108.2	109.1	110.0	110.9	111.8		
95	93.1	94.0	95.0	95.9	96.8	97.6	98.5	99.5	100.4	101.3	102.1	103.0	104.0	104.9	105.8	106.6	107.5
90	87.1	88.0	89.0	89.8	90.7	91.6	92.5	93.4	94.3	95.2	96.1	97.0	97.9	98.8	99.7	100.6	101.5
85	81.1	82.0	83.0	83.9	84.8	85.6	86.5	87.5	88.4	89.3	90.1	91.0	92.0	92.9	93.8	94.6	95.5
80	75.1	76.0	77.0	77.9	78.8	79.6	80.5	81.5	82.4	83.3	84.1	85.0	86.0	86.9	87.8	88.6	89.5
75	69.2	70.1	71.0	71.9	72.8	73.7	74.6	75.5	76.4	77.3	78.2	79.1	80.0	80.9	81.8	82.7	83.5
70	63.1	64.0	65.0	65.8	66.7	67.6	68.5	69.5	70.3	71.2	72.1	73.0	74.0	74.8	75.7	76.6	77.5

Apparent Temperature for Values of Room Temperature and Relative Humidity (Shown in Degree C).

	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
46.1	47.3	47.8	48.3	48.8	49.3	49.8	50.3	50.8	51.3								
43.3	43.9	44.4	44.9	45.1	45.9	46.4	46.9	47.4	47.9	48.4	48.9						
40.6	40.7	41.2	41.7	42.2	42.7	43.2	43.7	44.2	44.7	45.2	45.7	46.2	46.7				
37.8	37.3	37.8	38.3	38.8	39.3	39.8	40.3	40.8	41.3	41.8	42.3	42.8	43.3	43.8	44.3		
35.0	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0
32.2	30.6	31.1	31.6	32.1	32.6	33.1	33.6	34.1	34.6	35.1	35.6	36.1	36.6	37.1	37.6	38.1	38.6
29.4	27.2	27.7	28.2	28.7	29.2	29.7	30.2	30.7	31.2	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2
26.7	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0
23.9	20.6	21.1	21.6	22.1	22.6	23.1	23.6	24.1	24.6	25.1	25.6	26.1	26.6	27.1	27.6	28.1	28.6
21.1	17.3	17.8	18.3	18.8	19.3	19.8	20.3	20.8	21.3	21.8	22.3	22.8	23.3	23.8	24.3	24.8	25.3



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

Group Offices

RDM Group Head Office
80 Johnstone Avenue
Hillington Industrial Estate
Glasgow
G52 4NZ
United Kingdom
+44 (0)141 810 2828
support@resourcedm.com

RDM USA
9441 Science Center Drive
New Hope
Minneapolis
MN 55428
United States
+1 612 354 3923
usasupport@resourcedm.com

RDM Asia
Sky Park at One City
Jalan USJ 25/1
47650 Subang Jaya
Selangor
Malaysia
+603 5022 3188
asiatech@resourcedm.com



Visit www.resourcedm.com/support for more information on RDM solutions, additional product documentation and software downloads.

While every effort is made to ensure the information given within this document is accurate, Resource Data Management 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. All specifications are subject to change without notice.

See www.resourcedm.com for terms and conditions of sales.

Copyright © Resource Data Management