



Mercury

PR0710-TWO



Intuitive

PR0750-TWO

# Mercury 2 & Intuitive Mercury Two Section Controller Installation & User Guide



Resource Data Management Ltd  
80 Johnstone Avenue, Hillington Industrial Estate,  
Glasgow, Scotland G52 4NZ UK  
☎ +44(0)141 810 2828      Switchboard  
✉ [support@resourcedm.com](mailto:support@resourcedm.com)      Technical Support  
✉ [sales@resourcedm.com](mailto:sales@resourcedm.com)      Sales Enquiries



**Table of Contents:**

**THE MERCURY & INTUITIVE RANGE ..... 4**

    Description: ..... 4

    Variants ..... 4

**Configuration ..... 4**

**Compatible Network Interfaces ..... 4**

**Front Display Features ..... 5**

**Connections ..... 5**

**Mercury Mk2 ..... 5**

**Intuitive Mercury Controller      Intuitive Mercury Network Expansion Options ..... 6**

**Input and Output Allocation Tables ..... 6**

    Input / Output allocation table ..... 6

    Switched Resistor Values ..... 7

**Setting up the controller ..... 7**

    Setup through front buttons ..... 7

    Setup Function Menu (Common to all types)..... 7

**Recommended set-up method ..... 7**

    rtc. Real time clock (This will automatically synchronise on network systems) ..... 7

    type. Set/view controller type ..... 8

    PArA. Set/view parameters (This can be achieved at the network front end) ..... 8

    Unit. Set/view temperature unit and Probe type ..... 8

    Display..... 8

**Parameter Tables ..... 8**

**Parameter Descriptions ..... 10**

**Relay State and functional operation ..... 11**

**Network Configuration ..... 11**

    RS485 Legacy module / Intuitive Internal RS485 Network card ..... 11

    Wireless Mesh Communication Module..... 12

    Fast Network Address Reset ..... 12

    IP Futura module / Intuitive Internal IP Network card ..... 12

**Data Manager Device list ..... 13**

**Mercury Switch ..... 13**

**Viewing ..... 13**

    Input / Output Table ..... 13

**Display Messages..... 14**

**Network Alarms ..... 15**

**Modifying controller states..... 15**

    Defrost “dEF” ..... 15

    Fans Only “FAnS” ..... 15

    Case Off “CASE” ..... 15

    Lights Only “LitS” ..... 15

    Probe Offset ..... 15

    Operation ..... 15

    Display Operation..... 15

**Remote Commands ..... 16**

    Power requirements ..... 17

    General..... 17

    Relay Specification..... 17

**Specification ..... 17**

    Inputs..... 18

**Switched Resistor Example Wiring ..... 18**

**Installation ..... 18**

    Fixing..... 18

**Dimensions ..... 18**

**Dimensions ..... 19**

    Intuitive Mercury Mounting Instructions ..... 19

    Cleaning ..... 19



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



Disclaimer ..... 19

APPENDIX 1 DEFROST CYCLES ..... 21

REVISION HISTORY..... 21



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

## The Mercury & Intuitive Range From Resource Data Management

### Description:

This controller is for use with a 2-section refrigeration display case with a single evaporator. It has 6 different controller types to accommodate various display cases such as HT/LT piped, integrals and cold-rooms. The controller uses the Mercury 2 6-5M or Mercury Intuitive hardware which operates the LLV using an electro-mechanical relay and is therefore not suitable for use with EEV operations.

The Intuitive Mercury range is designed to be used in a control panel or electrical tray. This range has the same features as the Mercury Mk2 controller with additional benefits such as higher rated relays each protected by an integral fuse and fuse protection for the incoming power supply, all connections are plug in socket. There are multiple network interfaces to choose from including Ethernet.

The controller supports PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25 or NTC10K temperature probes (note: probe types cannot be mixed)

### Variants

Description	Part Number
Mercury Mk2 Two Section Controller.	PR0710-TWO
Intuitive Mercury Two Section Controller.	PR0750-TWO

### Configuration

The controller gives you up to six configuration options: -

Display value	
1	Integral controller HT
2	Integral controller LT
3	Remote piped case controller LT
4	Remote piped case controller HT
5	Coldroom controller LT
6	Coldroom controller HT

The controllers are delivered pre-configured as an Integral controller HT (Type 1)

### Compatible Network Interfaces

Mercury and Intuitive Mercury controllers are capable of connecting to either a TCP/IP local area network, an RS485 Genus compatible network, an RDM wireless mesh network or they can be used in standalone mode with no network output. To connect to a network you must add the correct communications module. Connecting to any of these communication modules will automatically be detected on power up and will affect the set up screens available to you.

Description	Part Number
IP Futura (Single Mercury to IP Interface)	PR0016
RS485 Interface (Single Mercury to RS485 Interface)	PR0026
Mercury IP Switch (IP support for 10 controllers)	PR0018
Mercury IP Switch with Pressure/Humidity Inputs	PR0018-PHI
Wireless Mesh Interface (for single Mercury)	PR0730

The Intuitive Mercury Controller is supplied as standard with an internal RS232 network card, this allows connection to any of the above external network interfaces. Three alternative internal network cards are also available, these can be supplied factory fitted as an option or purchased separately as an interface kit.

Description	Part Number
Intuitive Internal IP Network Card Interface Kit	PR0770
Intuitive Internal RS485 Network Card Interface Kit	PR0771
Intuitive Internal Wireless Mesh Network Card Interface Kit	PR0772



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

## Front Display Features

LED's: -

LLV (Relay 1)



Fans (Relay 2)



Lights (Relay 3)



Defrost (Relay 5)



On-Line



Off No network attached  
Flashing Attempting to Log on to network  
Steady On-line

Service (Not used)



Alarm



HACCP (Not used)



## Keys



Enter



Up



Down



Defrost

Note: Function keys illuminate when pressed, illumination is turned off 20 seconds after the key is used. Press and hold the defrost button to force a manual defrost

## Main Display



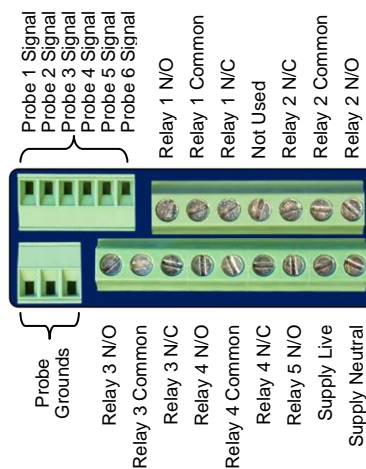
4 character LED display, used to display temperature and status messages.

**Note** the Intuitive Mercury display is Green in colour when lit.

## Connections

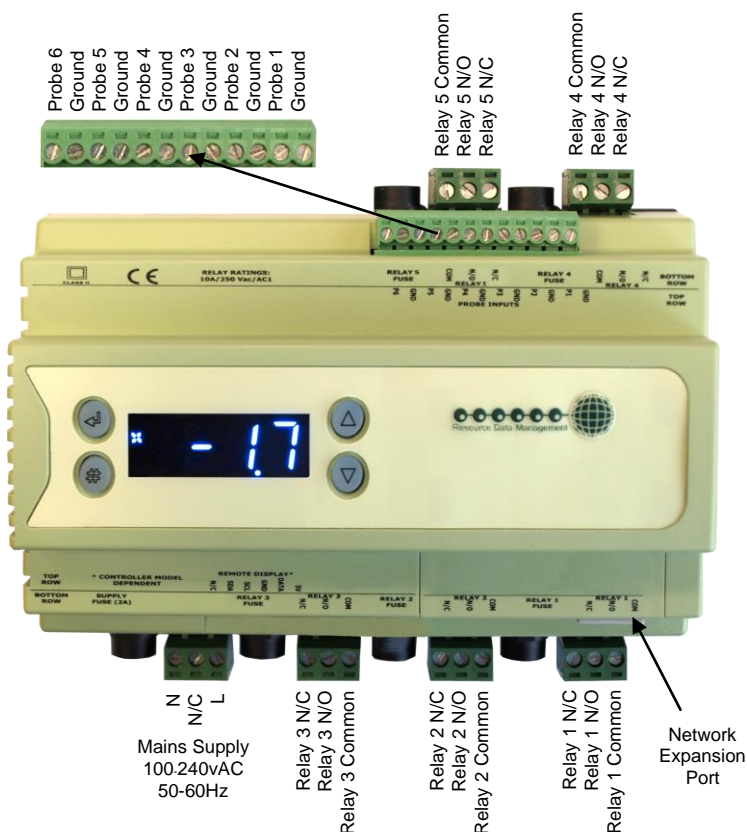
### Mercury Mk2

Input and Output connections are made to the back of the controller, the RS232 communication port is on the side. The diagram shows the connection detail. Inputs and outputs are assigned according to the chosen configuration. See [Input/Output](#) tables for further details on connections.



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

**Intuitive Mercury Controller**



All inputs and outputs are plug and socket. The supply voltage and relay outputs have individual fuse protection.

**Input and Output Allocation Tables**

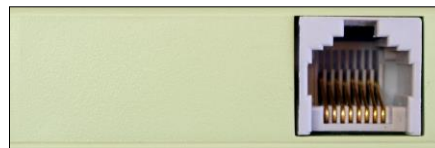
The following tables indicate; on a controller type basis, the functions of the inputs and outputs. Also shown are the digital inputs that are derived by switching in a fixed value resistor across the input.

**Input / Output allocation table**

TYPE	Integral Case Types 1&2	Remote Case Types 3&4	Coldroom Controller Types 5&6	Alarm Action	Plant Input (Switched Resistors)
Input 1	Air on Section 1	Air on Section 1	Air on Section 1	Yes	
Input 2	Air off Section 1	Air off Section 1	Air off Section 1	Yes	Man Trap (Types 5&6)
Input 3	Defrost Section 1	Defrost Section 1	Defrost Section 1	No	Plant fault 1
Input 4	Air on Section 2	Air on Section 2	Air on Section 2	Yes	Case Clean
Input 5	Air Off Section 2	Air Off Section 2	Air Off Section 2	Yes	Plant fault 2 (Types 3&4) Door Switch (Types 5&6)
Input 6	Defrost Section 2	Defrost Section 2	Defrost Section 2	No	
Relay 1	Compressor (N/C)	Liquid Line Valve (N/C)	Liquid Line Valve (N/C)	N/A	
Relay 2	Fans (N/C)	Fans (N/C)	Fans (N/C)	N/A	
Relay 3	Lights/Alarm	Lights/Alarm	Lights/Alarm	N/A	
Relay 4	Defrost Section 1 (N/O)	Defrost Section 1 (N/O)	Defrost Section 1 (N/O)	N/A	
Relay 5	Defrost Section 2 (N/O)	Defrost Section 2 (N/O)	Defrost Section 2 (N/O)	N/A	

**Intuitive Mercury Network Expansion Options**

**RS232 Network Card (Default)**



The Intuitive Mercury is supplied with an RS232 Network Card fitted as standard. Some example optional network cards are shown below

**IP Network Card (PR0770)**



Rotary Address Switches, Network Collision LED, Network Activity LED

**RS485 Network Card (PR0771)**



Ground, B-, A+, Screen, Network Activity LED

PR0772 Wireless Mesh Option also available. The network interfaces work in the same way as there external counterparts.



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

## Switched Resistor Values

For PT1000 probes use 820 Ohm switched resistors. For NTC2K, NTC2K25 and 3K probes use 590 Ohm switched resistors. For 5K and 6K use 1K Ohm switched resistors. For NTC10K probes use 2k7 Ohm switched resistors. The resistors used must have a tolerance of 1% or better and the resistor must have a power rating of 0.25W. For improved accuracy whilst using switched resistors RDM recommend resistors with 0.1% accuracy are used. Note the switched resistor features will **not** function when using 470R or 700R probes. When a resistor is switched across the appropriate input it signals to the Mercury to enable the switched resistor function described for that input whilst still recording the probe temperature on the input.

Temperature range for all probe types is -49°C to +60°C for probe inputs which do not have a secondary function (switched resistors). Inputs which have a secondary function are restricted to -42°C to +60°C. If the full temperature range is required on all inputs and no switch resistor features are needed then please see Switch Resistor parameter P-19

Note: switched resistors will operate in LT (Low Temperature) and HT (High Temperature) applications using PT1000, NTC2K or NTC2K25 probe types only. For all other probe types the switched resistor inputs will work in HT applications only.

## Setting up the controller

Access to the controller can be achieved several ways

- Through the front mounted buttons
- Direct access by PC or palm top into the rear comms port. This requires a software package available on the RDM website
- Through legacy front end panels on 485 networks
- Through the RDM Data Manager.
- Across an IP network. (Current controller IP address required)

### Setup through front buttons



To enter setup mode, hold the Enter and Down buttons together for approximately 3 seconds until the message "Ent" appears on the display. Now press the Enter button again to enter the function menu. IO will be displayed. Scroll up or down to go through the list.

### Setup Function Menu (Common to all types)

Display	Option	Explained in Paragraph	Display	Option	Explained in Paragraph
IO	View Inputs / Outputs and States	<a href="#">Input / output table</a>	nEt	Set/view network configuration	<a href="#">Network Configuration</a>
PArA	Set/View Parameters	<a href="#">Set view parameters</a>	SoFt	View software version	
Unit	Probe type and Celsius/Fahrenheit option	<a href="#">Set View Unit</a>	FANS	Toggle Fans Only mode	<a href="#">Fans</a>
diSP	Display whole units or decimal	<a href="#">Display</a>	CASE	Toggle Case Off mode	<a href="#">Case Off</a>
tyPE	Set/View Controller Type	<a href="#">Set/view controller type</a>	Lits	Toggle Lights Only mode	<a href="#">Lights</a>
rtc	Set/view Clock (rtc = Real Time Clock)	<a href="#">Real Time Clock</a>	OFSt	Probe Offset	<a href="#">Probe Offset</a>
			ESC	Exit Setup mode	

### Recommended set-up method

If you are not connecting to a network and want to set up the controller through the buttons we recommend you use the following order from the function menu.

#### rtc. Real time clock (This will automatically synchronise on network systems)

- Use the up or down buttons to scroll through the display until the display reads "rtc"
- Press enter. The display will show "t-1". press enter again
- Scroll hours up or down (0 – 23) press enter
- Use up button to select "t-2", press enter
- Scroll minutes up or down (0 – 59) press enter
- Repeat for t-3 (seconds 0 – 59)
- Repeat for t -4 (Days up to 31)
- Repeat for t -5 (months up to 12)
- Repeat for t -6 (Year up to 99)
- Use up button to display "ESC", press enter to display "rtc"  
Timeclock is now set



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

**type. Set/view controller type**

- a. From the function menu scroll to select type, press enter
- b. Use the up/down buttons to scroll through case/coldroom configuration types. (see [configuration table on](#) page 4)
- c. Press enter.
- d. Scroll to select “ESC”
- e. Press enter

Controller type configuration is now set

**PArA. Set/view parameters (This can be achieved at the network front end)**

- a. From the function menu scroll to select PArA
- b. Pressing Enter while PArA is displayed will enter the parameter menu. The first parameter option will be displayed as P-01. Pressing the Up or Down button will present the other parameter options P-02, P-03 etc. See the parameter list below to find what parameter number corresponds to which actual parameter. Pressing the Enter button will show the current value of the selected parameter. Press Up or Down to modify the value and press Enter again to save the value. The parameter list number will be displayed again. Two other options are present in the parameter menu – dFLt and ESC. Selecting ESC will exit setup mode. Selecting dFLt will reset all parameters back to the default values for the current type of controller.

c.

**Unit. Set/view temperature unit and Probe type**

From the function menu scroll to select Unit  
Press enter and the value will be displayed: -

**Probe Types**

- |                         |                           |
|-------------------------|---------------------------|
| 0 for PT1000 Celsius    | 9 for 3K Fahrenheit       |
| 1 for PT1000 Fahrenheit | 10 for NTC2K25 Celsius    |
| 2 for NTC2K Celsius     | 11 for NTC2K25 Fahrenheit |
| 3 for NTC2K Fahrenheit  | 12 for 5K Celsius         |
| 4 for 470R Celsius      | 13 for 5K Fahrenheit      |
| 5 for 470R Fahrenheit   | 14 for 6K Celsius         |
| 6 for 700R Celsius      | 15 for 6K Fahrenheit      |
| 7 for 700R Fahrenheit   | 16 for NTC10K Celsius     |
| 8 for 3K Celsius        | 17 for NTC10K Fahrenheit  |

Use the up or down keys to select the units and pres:

**This function is now complete**

**Display**

From the function menu scroll to and select diSP.

Press enter and one of the following values will be shown: -

0. Controller display will show the whole number and tenths value of a temperature reading. (Default)
1. Controller display will show temperatures as a whole number.

**Parameter Tables**

Not all parameters apply to all controller types, for example P-06 is the anti short cycle time which applies to integral cases only (types 1 & 2), this parameter will not appear if the controller is set up as a type 3,4,5 or 6 (static case or coldroom). In the following table, the type columns on the right hand side will be greyed out if that parameter does not apply to that controller type.

Number	Parameter	Range °C ( °F )	Step	Units	Default LT °C ( °F )	Default HT °C ( °F )	Type 1&2	Type 3&4	Type 5&6
P-01	Cut-in Temp.	-42 to 30 (-43.6 to 86)	0.1	Deg	-20 (-4)	0.0 (32)		✓	✓
	Cut-in Temp. (Integral)	-42 to 30 (-43.6 to 86)	0.1	Deg	-20 (-4)	3.5 (38.3)	✓		
P-02	Diff.	0 to 10 (0 to 18)	0.1	Deg	2 (3.6)	1.5 (2.7)		✓	✓
	Diff. (Integral)	0 to 10 (0 to 18)	0.1	Deg	2.5 (4.5)	2.5 (4.5)	✓		
P-51	Control Type	0 (highest), 1 (average)	1		0	0			
P-52	Control Weight (section 1)	0 to 100	1	%	50	50		✓	✓
	Control Weight (section 1) (Integral)	0 to 100	1	%	40	30	✓		
P-53	Display Weight (section 1)	0 to 100	1	%	50	50		✓	✓
	Display Weight (section 1) (Integral)	0 to 100	1	%	40	30	✓		
P-53	Control Weight (section 2)	0 to 100	1	%	50	50		✓	✓
	Control Weight (section 2) (Integral)	0 to 100	1	%	40	30	✓		
P-54	Display Weight (section 2)	0 to 100	1	%	50	50		✓	✓
	Display Weight (section 2) (Integral)	0 to 100	1	%	40	30	✓		



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

Number	Parameter	Range °C ( °F )	Step	Units	Default LT °C (°F)	Default HT °C (°F)	Type 1&2	Type 3&4	Type 5&6
P-85	Key-switch mode	0 = case off, 1 = fans only 2 = toggle	1		0	0	✓	✓	✓
P-90	Resistor Case Off	0 (Disabled),1(Enabled)			0	0	✓	✓	✓
P-92	Fans temperature mode	0 = Off, 1 = Temperature 2 = Over-temperature 3 = Temp/OT	1		0	0	✓	✓	✓
P-93	Fans Off Temperature	-42 to 30 (-43.6 to 86)	0.1	Deg	-10 (14)	8 (46.4)	✓	✓	✓
P-16	Relay 3 mode	0 = lights, 1 = alarm	1		0	0	✓	✓	✓
P-06	Anti SC Time	00:00 to 15:00	00:05	mm:ss	03:00	03:00	✓		
P-20	OT/UT Alarm Delay	00:00 to 99:00	01:00	mm:ss	20:00	20:00	✓	✓	✓
P-21	UT Alarm	-49 to 60 (-56.2 to 140)	0.1	Deg	-30 (-22)	-2 (28.4)	✓	✓	✓
P-22	OT Alarm	-49 to 60 (-56.2 to 140)	0.1	Deg	-15 (5)	5 (41)	✓	✓	✓
P-40	Defrost Mode	0 (Local), 1 (Remote)			Local	Local	✓	✓	✓
P-41	Defrost Start	00:00 to 23:59	00:01	hh:mm	01:00	01:00	✓	✓	✓
P-42	Defrosts per Day	0 to 8	1		6	6	✓	✓	✓
P-43	No Defrost Time	0 to 25	1	hours	12	12	✓	✓	✓
P-56	Def Terminate section 1	-42 to 30 (-43.6 to 86)	0.1	Deg	14 (57.2)	10 (50)		✓	✓
	Def Terminate section1 (Integral)	-42 to 30 (-43.6 to 86)	0.1	Deg	10 (50)	10 (50)	✓		
P-57	Def Terminate section 2	-42 to 30 (-43.6 to 86)	0.1	Deg	14 (57.2)	10 (50)		✓	✓
	Def Terminate section 2 (Integral)	-42 to 30 (-43.6 to 86)	0.1	Deg	10 (50)	10 (50)	✓		
P-45	Def Min Time	00:00 to 99:00	01:00	mm:ss	05:00	05:00	✓	✓	✓
P-46	Def Max Time	00:00 to 99:00	01:00	mm:ss	24:00	24:00	✓	✓	✓
P-47	Drain Down	00:00 to 24:00	00:15	mm:ss	01:30	01:30	✓	✓	✓
P-48	Recovery Time	00:00 to 99:00	01:00	mm:ss	30:00	30:00	✓	✓	✓
P-89	Pump Down Time	00:00 to 99:00	01:00	mm:ss	00:00	00:00	✓	✓	✓
P-86	Fan Delay mode	0 = Time 1 = Temp	1		0	0	✓	✓	✓
P-49	Fan Delay Time Types (Cabinet)	00:00 to 99:00	01:00	mm:ss	00:00	00:00		✓	
	Fan Delay Time Types (Integral & Coldroom)	00:00 to 99:00	01:00	mm:ss	03:00	03:00	✓		✓
P-88	Fan Delay Temp	-42 to 30 (-43.6 to 86)	0.1	Deg	-20 (-4)	0.0 (32)	✓	✓	✓
P-50	Fans In Defrost	0 (Off), 1 (On)			On	On	✓	✓	
	Fans In Defrost (Coldroom)	0 (Off), 1 (On)			Off	Off			✓
P-91	Defrost Type	0 = Electric, 1 = Gas	1		0	0	✓		
P-94	Defrost Hold	0 (Off), 1 (On)			Off	Off	✓	✓	✓
P-80	Door alarm delay	00:00 to 99:00	01:00	mm:ss	20:00	20:00			✓
P-81	Door closes LLV	0 = No, 1 = Yes			No	No			✓
P-82	Door stops fans	0 = No, 1 = Yes			No	No			✓
P-60	Lights Mode	0 (Local), 1 (Remote), 2 (Man Off), 3(Man On)			Local	Local	✓	✓	✓
P-61	Sun Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-62	Sun Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
P-63	Mon Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-64	Mon Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
P-65	Tue Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-66	Tue Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
P-67	Wed Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-68	Wed Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
P-69	Thu Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-70	Thu Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
P-71	Fri Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-72	Fri Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
P-73	Sat Lights On	00:00 to 23:59	00:01	hh:mm	08:00	08:00	✓	✓	✓
P-74	Sat Lights Off	00:00 to 23:59	00:01	hh:mm	20:00	20:00	✓	✓	✓
dFLt	Restore defaults								



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

## Parameter Descriptions

Number	Parameter	Description
P-01	Cut-in Temp	Temperature at which the LLV or compressor will switch on.
P-02	Diff	Differential temperature below the cut-in temperature. The LLV or Compressor switches off when below this temperature
P-51	Control Type	Uses Highest Temperature from Section 1 or 2 as Control Temperature or uses Average Temperature of Section 1 and 2 as Control Temperature
P-52	Control Weight Sect 1	Percentage of Section 1 Air-On temperature probe that is used to calculate Section 1 Control Temp. The remaining percentage will be used on Section 1 Air-Off temperature probe. Example, P-51 set to 30% Control temp = 30% Section 1 Air-on + Section 1 70% Air-off
P-53	Display Weight Sect 1	As above only applied to Section 1 Display Temperature
P-54	Control Weight Sect 2	Percentage of Section 2 Air-On temperature probe that is used to calculate Section 2 Control Temp. The remaining percentage will be used on Section 2 Air-Off temperature probe. Example, P-53 set to 60% Control temp = 60% Section 1 Air-on + Section 1 40% Air-off
P-55	Display Weight Sect 2	As above only applied to Section 2 display temperature
P-85	Key-switch Mode	Allows the keys switch to be: - Single turn for case off (Case off mode) Single turn for Fans only (Fans Mode) Single turn for case off, double turn for fans only (Toggle mode)
P-90	Resistor Case Off	Turns on/off the switched resistor case off function
P-92	Fans temperature mode	Allows the user to set the fans to turn off when: - A pre-determined temperature is reached (P93) When an over-temperature alarm is present When either P93 is reached or an OT alarm is present
P-93	Fans Off Temperature	Temperature for the above (P92) operation. Note the defrost termination probe is the source of the temperature reading used in this feature. If the defrost termination probe isn't fitted then a similar process to P-56 / P57 is used.
P-16	Relay 3 mode	This changes the function of relay 3 from Lights (default) to an alarm relay. The alarm relay is energised for no alarm. Use the NC and Common for "Loop make" on alarm or use the NO and Common for "Loop break" on alarm.
P-20	Alarm Delay	Delay for the over and under-temperature alarms
P-21	UT Alarm	Under temperature alarm set point. This alarm uses the control temperature on each section to generate the alarm. <b>Note</b> : The controller will generate Section 1 and Section 2 UT alarms independently.
P-22	OT Alarm	Over temperature alarm set point. This alarm uses the Air off temperature on each section to generate the alarm. <b>Note</b> : The controller will generate Section 1 and Section 2 OT alarms independently..
P-40	Defrost Mode	Allows the user to set the defrost mode: - Local (Uses the internal parameters P-41 and P-42) Remote (Requires a defrost schedule in the front end)
P-41	Defrost Start	When defrost mode is set to "Local", this is the start time for the 1st defrost
P-42	Defrosts per Day	When defrost mode is set to "Local", this is the number of defrosts per day equally spaced from the start time.
P-43	No Defrost Time	If the controller misses a defrost command for any reason, a defrost will initiate after this time has elapsed from the last defrost. Normally set to 2 hours over the normal defrost period.
P-56	Def Term Section 1	The defrost for Section 1 will terminate (Defrost Heater Section 1 relay off) when the temperature of Section 1 defrost termination probe reaches this value. If Section 1 Defrost Termination probe is not fitted, defrost termination will occur when: - The "air off" probe reaches the set point If the Air Off probe is faulty termination will occur on Time.
P-57	Def Term Section 2	The defrost for Section 2 will terminate (Defrost Heater Section 2 relay off) when the temperature of Section 2 defrost termination probe reaches this value. If Section 2 Defrost Termination probe is not fitted, defrost termination will occur when: - The "air off" probe reaches the set point If the Air Off probe is faulty termination will occur on Time.
P-45	Def Min Time	Minimum time that a defrost will use (Defrost can't terminate until this time has elapsed. If termination temperature is reached during this period, the defrost control relay is turned off, but the controller will not continue the defrost cycle until the end of the defrost min period)
P-46	Def Max Time	Time period after defrost minimum that defrosts are allowed to terminate
P-47	Drain Down	A period after defrost max to allow the draining of any surplus water
P-48	Recovery Time	The LLV is switched on at the start of this period to allow the temperature to recover to the normal operating point. This period also inhibits the OT alarm. Note that if the air-off temperature is still above the OT alarm setpoint when this period expires, an immediate OT alarm occurs; there is <b>not</b> a further alarm delay.
P-89	Pump Down Time	Time period before the defrost min period to allow for a pump down
P-86	Fan Delay mode	This parameter allows the fans start after a drain-down period to be delayed, either by time (P-49) or when the temperature point (P-88) is reached. This parameter uses the same probe strategy as the



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

		defrost terminate.
P-49	Fan Delay	Time after a drain-down period before the fans start if P-86 is set to time
<b>Number</b>	<b>Parameter</b>	<b>Description</b>
P-88	Fan Delay Temp	Temperature at which the fans start after a drain-down period when P-86 is set to temperature.
P-50	Fans In Defrost	Allows the user to set the fans on or off in defrost. Note if the fans are set to on in defrost, they will go off for the drain-down period and then follow the P-86 rules.
P-94	Defrost Hold	Turns the defrost hold feature on and off. When switched on, the controller can be held in defrost until a remote command from the front end starts the recovery process.
P-80	Door alarm delay	Delay after the door open input is activated before the alarm occurs.
P-81	Door Closes Valve	This parameter is used to close the LLV or EEV if the door opens. If the door remains open then the valve will resume normal operation on the expiry of the door alarm delay (P-80).
P-82	Door Stops Fan	This parameter is used to stop the fans if the door opens. If the door remains open then the fans will resume normal operation on the expiry of the door alarm delay (P-80).
P-60	Lights Mode	Allows the user to set the lights mode: - Always off Always on Use a local schedule P-61 to P-74) Use a remote schedule (Set up in the system front end)
P-61	Sun Lights On	When P-60 is set to Local, Sunday on time
P-62	Sun Lights Off	When P-60 is set to Local, Sunday off time
P-63	Mon Lights On	When P-60 is set to Local, Monday on time
P-64	Mon Lights Off	When P-60 is set to Local, Monday off time
P-65	Tue Lights On	When P-60 is set to Local, Tuesday on time
P-66	Tue Lights Off	When P-60 is set to Local, Tuesday off time
P-67	Wed Lights On	When P-60 is set to Local, Wednesday on time
P-68	Wed Lights Off	When P-60 is set to Local, Wednesday off time
P-69	Thu Lights On	When P-60 is set to Local, Thursday on time
P-70	Thu Lights Off	When P-60 is set to Local, Thursday off time
P-71	Fri Lights On	When P-60 is set to Local, Friday on time

**Relay State and functional operation**

Relay 1-3 State	Function State	Wired contact
Relay 1 off	Valve / Compressor on	N/C
Relay 1 on	Valve / Compressor off	N/C
Relay 2 off	Fans on	N/C
Relay 2 on	Fans off	N/C
Relay 3 off	Lights on	N/C
Relay 3 on	Lights off	N/C

Relay 4-5 State	Function State	Wired contact
Relay 3 off	Alarm Relay = Alarm	N/C
Relay 3 on	Alarm Relay = OK	N/C
Relay 4 off	Defrost Heater 1 off	N/O
Relay 4 on	Defrost Heater 1 on	N/O
Relay 5 off	Defrost Heater 2 off	N/O
Relay 5 on	Defrost Heater 2 on	N/O

**Network Configuration**

The final section to setup is the network address. In all instances, this must be done before the controller is plugged into the site network. The controllers have an auto-initialise function, which will automatically log the device onto the site network. If the wrong address has been entered onto the network, you will have to reset the controller address by setting the address to 00-0, and then re-enter the correct address. (You may have to deregister the wrong address from the home system as well).

When logging a Mercury or Intuitive Mercury with an RS232 interface onto a network you must first connect the controller to a communications module, this is either a 485 Legacy, RDM Wireless Mesh system, IP Futura or Mercury Switch. When using an Intuitive Mercury controller, the controller has to have the correct network card fitted (see "compatible network interfaces"). For connection to a Mercury Switch (Hub) or an external network interface, the standard fitment RS232 network card is utilized.

**RS485 Legacy module / Intuitive Internal RS485 Network card**

Connecting an RS485 legacy Module or an Intuitive Internal RS485 network card to the controller will govern which set up screens are made available. Both modules support the "Genus" protocol only.

Display	Option
485t	485 Network Type
485A	485 Address/Name
gAdd	Show underlying network address assigned to controller
rLog	Re-log the controller back onto the network
CLrA	Clear the address/name from the controller
ESC	Exit network menu. <b>N.B.</b> this option <b>must</b> be selected to save any changes made in this menu



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

The 485t option shows a value representing the network type. The possible values are:

Value	Network Type
1	Genus compatible (all versions)
2	RDM Wireless Mesh System (Wireless Mesh)

The 485A option shows a value representing either the name of the controller in a Genus compatible or Wireless Mesh network.

### Wireless Mesh Communication Module

RDM Wireless Mesh System, please refer to the RDM Wireless Mesh Communication Module user guide, which can be obtained from the RDM website, for information regarding connecting a controller to a Wireless Mesh network. The value shown in 485A is of the form 05-6. This means the controller would try to log onto a Genus compatible or RDM Wireless Mesh network using the name 'RC05-6'.

The gAdd option displays (in hexadecimal format) the underlying network address assigned to the controller when it was logged onto the network.

The rLog option allows the controller to be logged back onto the network with its current name. The 'rLog' message will flash for confirmation. Press the Enter button to execute the command, Up or Down buttons to cancel.

### Fast Network Address Reset

The CLrA option will clear out the network address and name in the controller. The 'CLrA' message will flash for confirmation. Press the Enter button to execute the command, Up or Down buttons to cancel.

To enter this mode, hold the Enter, Up and Down buttons together for approximately 3 seconds until the message CLrA appears on the display. CLrA is the first option in the menu consisting of the following options:

Display	Option
CLrA	Clear the address/name from the controller
ESC	Exit Setup mode

Pressing the Enter button to select the CLrA option will cause the 'CLrA' message to flash for confirmation, if the network type is set to Genus compatible. Press the Enter button to execute the command, Up or Down buttons to cancel. If the network type is not set to Genus compatible then the CLrA message will not flash and the ESC option can be used to exit the menu.

### IP Futura module / Intuitive Internal IP Network card

In an IP system there are two options,

- IP-L
- IP-r

IP-L allows you to fix an IP address into the controller, which you would use when you are connecting the controllers onto a customer's local area network. This would allow the customer to view each controller using Internet Explorer

IP-r allows you to give each controller on the system a unique number. This number is then allocated a dynamic IP address by the system DHCP server (such as the RDM Data Manager or Data Director)

### IP-L

To configure the communication module or network card for IP-L, set all three rotary switches to zero. The module should then be connected to the controller. In the case of an Intuitive Mercury controller where the network card is already fitted, the controller should be powered off, all three rotary switches set to zero and the controller powered on.

1. nEt. From the function menu you can now select nEt
  - Press enter and the display will show "IP-L", press enter
  - You can now set the address using the table below

Display	Option
IP-1	IP Address byte 1
IP-2	IP Address byte 2
IP-3	IP Address byte 3
IP-4	IP Address byte 4
nL	Network Mask Length
gt-1	Gateway Address byte 1
gt-2	Gateway Address byte 2
gt-3	Gateway Address byte 3
gt-4	Gateway Address byte 4
ESC	Exit network menu. <b>N.B.</b> this option <b>must</b> be selected to save any changes made in this menu



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

## IP-r

To configure the communication module for IP-r, set the three rotary switches to give each controller a unique identifier. The module should then be connected to the controller and the network. In the case of an Intuitive Mercury controller where the network card is already fitted, the three rotary switches must be set when the controller is powered off, the controller should then be powered on to connect to the network.

2. nEt. From the function menu you can now select nEt
  - Press enter and the display will show "IP-r", press enter
  - You can now view only the address given by the DHCP server

To ease setup, a single network mask length value is used. If the address has been specified with a network mask value in dotted IP format e.g. 255.255.255.0 then the table below gives the conversion:

Mask	Length	Mask	Length	Mask	Length
		255.255.254.0	23	255.254.0.0	15
255.255.255.252	30	255.255.252.0	22	255.252.0.0	14
255.255.255.248	29	255.255.248.0	21	255.248.0.0	13
255.255.255.240	28	255.255.240.0	20	255.240.0.0	12
255.255.255.224	27	255.255.224.0	19	255.224.0.0	11
255.255.255.192	26	255.255.192.0	18	255.192.0.0	10
255.255.255.128	25	255.255.128.0	17	255.128.0.0	09
255.255.255.0	24	255.255.0.0	16	255.0.0.0	08

## Data Manager Device list

Temperatures as they are shown on the Data Manager's device list,

RC22-1	2 Section Case (HT)	3.2	Normal	Control temperature
		4.4	Normal	Section 1 control temperature
		2.1	Normal	Section 2 control temperature

Where:-

Section 1 Control Temperature is the weighted average of Section 1 Air On and Air Off probes (P-52)

Section 2 Control Temperature is the weighted average of Section 2 Air On and Air Off probes (P-54)

Control Temperature is the average of Section 1 Control Temperature and Section 2 Control Temperature. This is the temperature used to control the opening and closing of the LLV/Compressor to Set-Point (P-01)

## Mercury Switch

Please refer to the Mercury Switch user guide, which can be obtained from the RDM website, for information regarding connecting a controller to a network.

## Viewing

Apart from setting up the controller, you can also view the status of the inputs and outputs and controller states.

From the function menu, select "I/O", press enter. You can now scroll through the IO table as set out below. Inputs and outputs that do not apply to a particular controller type will be greyed out.

## Input / Output Table

Number	IO	Range* °C ( °F )	Step	Units	Types 1&2	Types 3&4	Types 5&6
I-01	Control Temp.	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
I-10	Plant Fault 1	0 (OK), 1 (Alarm)			✓	✓	✓
I-11	Case Clean	0 (Off), 1 (On)			✓	✓	✓
I-12	Door Sensor	0 (Closed), 1 (Open)					✓
I-13	Person Trapped	0 (Ok), 1 (Alarm)					✓
I-14	Plant Fault 2	0 (Off), 1 (On)			✓		
I-30	Section 1 Control temp	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
I-31	Section 1 Display temp	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
I-32	Air on Probe Section 1	-49 to 60 (-56.2 to 140)	0.1	Deg	✓	✓	✓
I-33	Air off Probe Section 1	-49 to 60 (-56.2 to 140)	0.1	Deg	✓	✓	✓
I-34	Defrost term temp Section 1	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
I-35	Section 2 Control temp	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓



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

Number	IO	Range* °C ( °F )	Step	Units	Types 1&2	Types 3&4	Types 5&6
I-36	Section 2 Display temp	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
I-37	Air on Probe Section 2	-49 to 60 (-56.2 to 140)	0.1	Deg	✓	✓	✓
I-38	Air off Probe Section 2	-49 to 60 (-56.2 to 140)	0.1	Deg	✓	✓	✓
I-39	Defrost term temp Section 2	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
O-01	LLV	0 (Off), 1 (On)				✓	✓
O-03	Compressor	0 (Off), 1 (On)			✓		
O-06	Lights	0 (Off), 1 (On)			✓	✓	✓
O-07	Fans	0 (Off), 1 (On)			✓	✓	✓
O-10	Last Defrost Time	00:00 to 23:59	hh:mm	O-10	✓	✓	✓
O-13	Last defrost Type	0=None,1=Internal 2=External, 3=Network 4=Display, 5=Timed			✓	✓	✓
O-16	Alarm Relay	1 (Ok), 2 (Alarm)			✓	✓	✓
O-20	Door Open Time	00:00 to 23:59		hh:mm			✓
O-21	Door Open Length	00:00 to 03:00		hh:mm			✓
O-30	Setpoint Offset	-49 to 60 (-56.2 to 140)	0.1	Deg	✓	✓	✓
O-31	Section 1 Defrost Heater	0 (Off), 1 (On)			✓	✓	✓
O-32	Section 2 Defrost Heater	0 (Off), 1 (On)			✓	✓	✓
O-33	Section 1 Last Defrost Length	00:00 to 03:00	hh:mm	O-33	✓	✓	✓
O-34	Section 2 Last Defrost Length	00:00 to 03:00	hh:mm	O-34	✓	✓	✓
O-35	Section 1 Last Defrost Temp	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
O-36	Section 2 Last Defrost Temp	-42 to 60 (-43.6 to 140)	0.1	Deg	✓	✓	✓
S-01	Section 1 Control State	0=Stabilise,1=Normal 2=Df Min, 3=Df Max 4=Drain Down, 5=Fan Delay 6=Recovery, 7=OT Alarm 8=UT Alarm, 9=Fans Only 10=Lights Only,11=Case Off 12=Pump Down,13=Df Hold)			✓	✓	✓
S-02	Section 2 Control State	0=Stabilise,1=Normal 2=Df Min, 3=Df Max 4=Drain Down, 5=Fan Delay 6=Recovery, 7=OT Alarm 8=UT Alarm, 9=Fans Only 10=Lights Only,11=Case Off 12=Pump Down,13=Df Hold)			✓	✓	✓

Display Messages

The following alarms and messages can appear on the Mercury or Intuitive display.

Display Message	System status
Ft	Control Fault
Prb1	Probe 1 Fault
Prb2	Probe 2 Fault
Prb3	Probe 3 Fault
Prb4	Probe 4 Fault
Prb5	Probe 5 Fault
Prb6	Probe 6 Fault
rEC	Control State in Recovery
dEF	Control Sate in Defrost

Display Message	System status
AL	Control State in Alarm
FAnS ONLY	Controller in Fans Only
LitS ONLY	Controller in Lights Only
CASE OFF	Controller in Case Off
Ot	Over Temperature Alarm
Ut	Under Temperature Alarm
door	Door Open Alarm
TrAP	Person Trapped Alarm
PLnt	Plant Fault



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

**Network Alarms**

The table below shows the text and associated type number that is sent to the system "front end". The type number is normally used to provide different alarm actions.

Alarm text	Type # (index)
Missed defrost	1
Section 1 Over Temperature	4
Section 2 Over Temperature	4
Section 1 Under Temperature	5
Section 1 Under Temperature	5

Alarm text	Type # (index)
Probe 1,2,3,4,5 or 6 Faulty	6
Door Left Open	2
Person Trapped	7
Plant Fault 1 or 2	3
Alarm Inhibit	6

**Modifying controller states**

During normal operation you can change the following states from the function menu

**Defrost "dEF"**

Selecting the defrost option starts a defrost cycle. Selecting this option will exit the setup menu automatically. The display will show "dEF". There is also a remote defrost command which starts a defrost cycle from the network front end or remote system.

**Fans Only "FAnS"**

Selecting the Fans Only option will put the controller into the Fans Only state if the current state is not Fans Only. If the current state is Fans Only then the controller will change to the Normal state. Selecting this option will exit the setup menu automatically. The display will show "FAnS OnLy"

If a remote display with key switch is being used, this function can be invoked by turning the key switch to the fans only position (90 degrees clockwise) with parameter P85 set to "fans"

**Case Off "CASE"**

Selecting the Case Off option will put the controller into the Case Off state if the current state is not Case Off. If the current state is Case Off then the controller will change to the Normal state. Selecting this option will exit the setup menu automatically. The display will show "CASE OFF". An alarm is generated, fixed delay of 1 minute, when the controller is placed into the Case Off state.

If a remote display with key switch is being used, this function can be invoked by turning the key switch to the case-off position. (Clockwise 90 degrees) with parameter P85 set to "case".

**Lights Only "LitS"**

Selecting the Lights Only option will put the controller into the Lights Only state if the current state is not Lights Only. If the current state is Lights Only then the controller will change to the Normal state. Selecting this option will exit the setup menu automatically. The display will show "LitS OnLy"

Note. When lights are being used in "Remote" mode with a timing channel: -

If the controller goes offline, the lights are turned ON after a delay of 5 minutes. The lights will stay on until the controller comes back on-line where they will revert to the state of the timing channel being used.

**Probe Offset**

This feature allows each probe value to be modified by an "offset". Offset values are from -10°C (-18°F) to +10°C (+18°F) and on a channel basis. Example C1 = Probe 1.

**Operation**

The LLV (or compressor) relay will operate a thermostatic function based on values of the air probes of the 2 sections. If "Highest" is set, then the relay will operate on the greater of the 2 section values. If "Average" is selected, then it will operate on the combined average of the 2 sections.

Note

The section control temperature is the summation of the section air-on and air-off temperatures, weighted by the value set by the section control weight parameter.

Example: If 30% weighting is selected, the control temperature will be: - (30% of air-on + 70% of air-off). The display temperature of each section can be weighted similarly.

Once a defrost has been initiated, the normal defrost states will apply to both sections, although both sections must terminate before a drain down occurs.

**Display Operation**

The display indication will be either the highest value of the two sections or average of the 2 sections, depending on the parameter P-51.



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

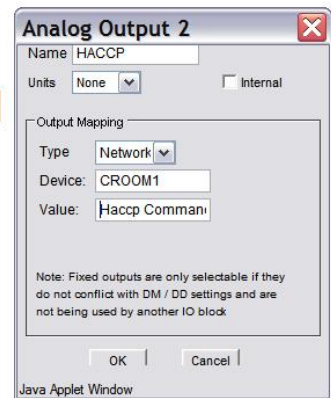
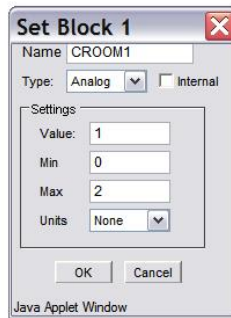
Remote Commands

The following commands can be used by a Data Builder program: -

Command	Value to send	Description	Conditions
Defrost Command	1	Initiates a defrost cycle	Defrost mode: remote
Defrost Command	3	Terminates the defrost	Defrost mode: remote Defrost hold: On Defrost min state complete
Setpoint Command	$\pm 18^{\circ}\text{C}$	Is added to or subtracted from the setpoint	
Case Off Command	5	Sets the controller to Case Off	
	0	Restores the controller from Case Off to Normal	
Haccp Command	0	HACCP LED OFF	
	1	HACCP LED On	
	2	HACCP LED Flashes	
Button Command	0	Buttons backlights Off	
	1	Buttons backlights On	
	2	Buttons Backlights Flash	
Valve Command	2	Shuts the valve off	
	1	Restores the valve to normal operation	

Use an "Analogue Out" block configured to the controller name and in the value field type in the command you require. Use a "Setting block" as the input to the "Analogue Out" block to send the Value.

See Example on the right, which switches on the Haccp LED on CROOM1



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

## Specification

	Mercury Mk2 Controller PR0710-TWO	Intuitive Mercury controller PR0750-TWO
<b>Power requirements</b>		
<b>Supply Voltage Range</b>	100 - 240 Vac $\pm 10\%$	100 - 240 Vac $\pm 10\%$
<b>Supply Frequency</b>	50 - 60 Hz	50 - 60 Hz
<b>Maximum supply current</b>	5.2 Amps (when relay 5 is fully loaded)	2 Amps
<b>Typical supply current</b>	<1 Amp	<1 Amp
<b>General</b>		
<b>Operating temperature range</b>	+5°C to +50°C	-10°C to +60°C
<b>Storage temperature range</b>	-20°C to +65°C	-20°C to +65°C
<b>Environmental</b>	Indoor use at altitudes up to 2000m, pollution degree 1, installation category II. Voltage fluctuations not to exceed $\pm 10\%$ of nominal voltage.	Indoor use at altitudes up to 2000m, pollution degree 1, installation category II. Voltage fluctuations not to exceed $\pm 10\%$ of nominal voltage.
<b>Size</b>	78mm (W) x 36mm (H) x 110mm (D)	157mm (W) x 67mm (H) x 120 (D)
<b>Approx Weight</b>	170 grams	500 grams
<b>Safety</b>	EN61010	EN61010
<b>EMC</b>	EN61326-1 : 2013	EN61326; 1997 +Amdt. A1; 1998
<b>Ventilation</b>	There is no requirement for forced cooling ventilation	There is no requirement for forced cooling ventilation
<b>Class 2 Insulation</b>	<b>No</b> protective Earth is required and <b>none</b> should be fitted	<b>No</b> protective Earth is required and <b>none</b> should be fitted
<b>Supply Fuse</b>	The host equipment must provide a suitable external over-current protection device such as: - Fuse: 6.3A 240 Vac Antisurge (T) HRC conforming to IEC 60127	Built in fuse holder, fuse 2A 240Vac Antisurge (T) HRC conforming to IEC60127, 32 x 6.3mm
<b>Or MCB</b>	6A, 240 VAC Type C conforming to BS EN 60898	2A, 240 VAC Type C conforming to BS EN 60898 (Note: controller has integral 2A fuse)
<b>Relay Fuse</b>	Not Fitted	10A 240Vac Antisurge (T) HRC conforming to IEC60127, 32 x 6.3mm
<b>Relay Specification</b>		
<b>Relays 1-4 Mechanical Type (M) Exclusive common</b>		
<b>Max current</b>	6A Resistive (Cos $\phi$ = 1) 2A Inductive ( Cos $\phi$ = 04)	10A Resistive (Cos $\phi$ = 1) 3A Inductive ( Cos $\phi$ = 04)
<b>Max voltage</b>	250Vac, 30V dc	250Vac, 30V dc
<b>Relay Fuse</b>	N/A	10A 240Vac Antisurge (T) HRC conforming to IEC60127, 32 x 6.3mm
<b>Relay 1 Solid State Type <math>\epsilon</math> Exclusive common</b>		
<b>Max current</b>	1.5A	1.5A
<b>Max voltage</b>	280Vac	280Vac
<b>Relay 5 Mechanical Type (M) Common connected to supply live</b>		<b>Relay 5 Mechanical Type (M) Exclusive common</b>
<b>Max current</b>	3A (non inductive), COS $\phi$ =0.4 2A (inductive load) 200,000 operations	10A Resistive (Cos $\phi$ = 1) 3A Inductive ( Cos $\phi$ = 0.4)
<b>Max voltage</b>	250Vac (Internal supply)	250Vac, 30V dc (external supply)
	For compliance with the LVD, relays 3, 4 and 5 commons must be at the same potential as the supply voltage	All relays are independent and can operate at different potentials to the supply voltage.



**Warning: Relay 5 output has hazardous voltages (Supply input voltage potential)**  
This does not apply to the Intuitive Mercury controller



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

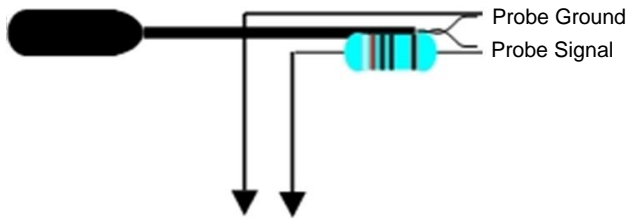
### Inputs

Input resistance: 3.01K Ohms (for PTC or NTC type probes)  
 Input type: PT1000 or NTC2K or NTC2K25 or NTC10K (selectable)

Comms: RS232 with flow control

### Switched Resistor Example Wiring

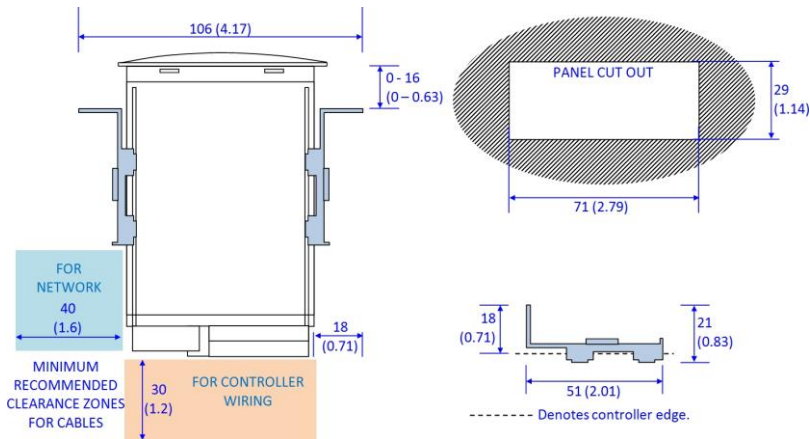
Example of resistor fitted on a probe input. Connect to remote switch or relay



### Installation

#### Panel Cut-out and Clearances

#### Mercury Mk2 (Flush mount controller)



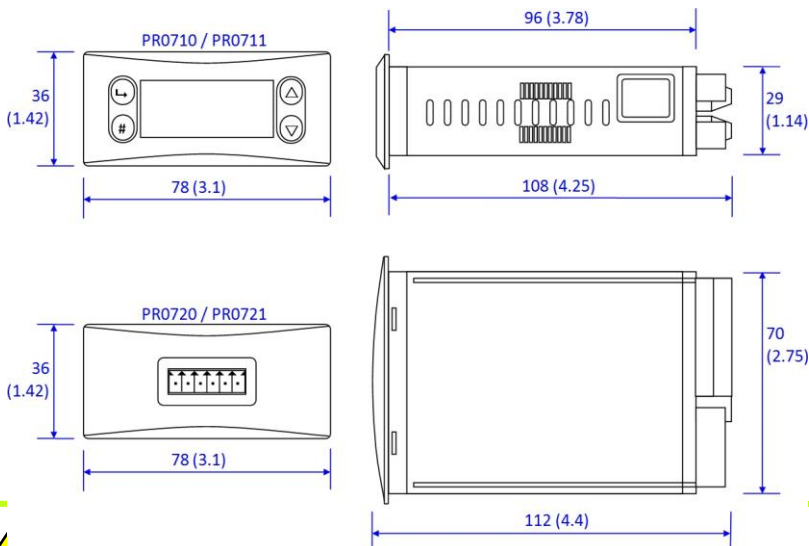
### Fixing

The controller is fixed by sliding the 2 plastic retaining clips up to rear of the panel. These clips have a ratchet action and can be removed by holding in the clip sides and sliding back.

There is no requirement for forced cooling ventilation

### Dimensions

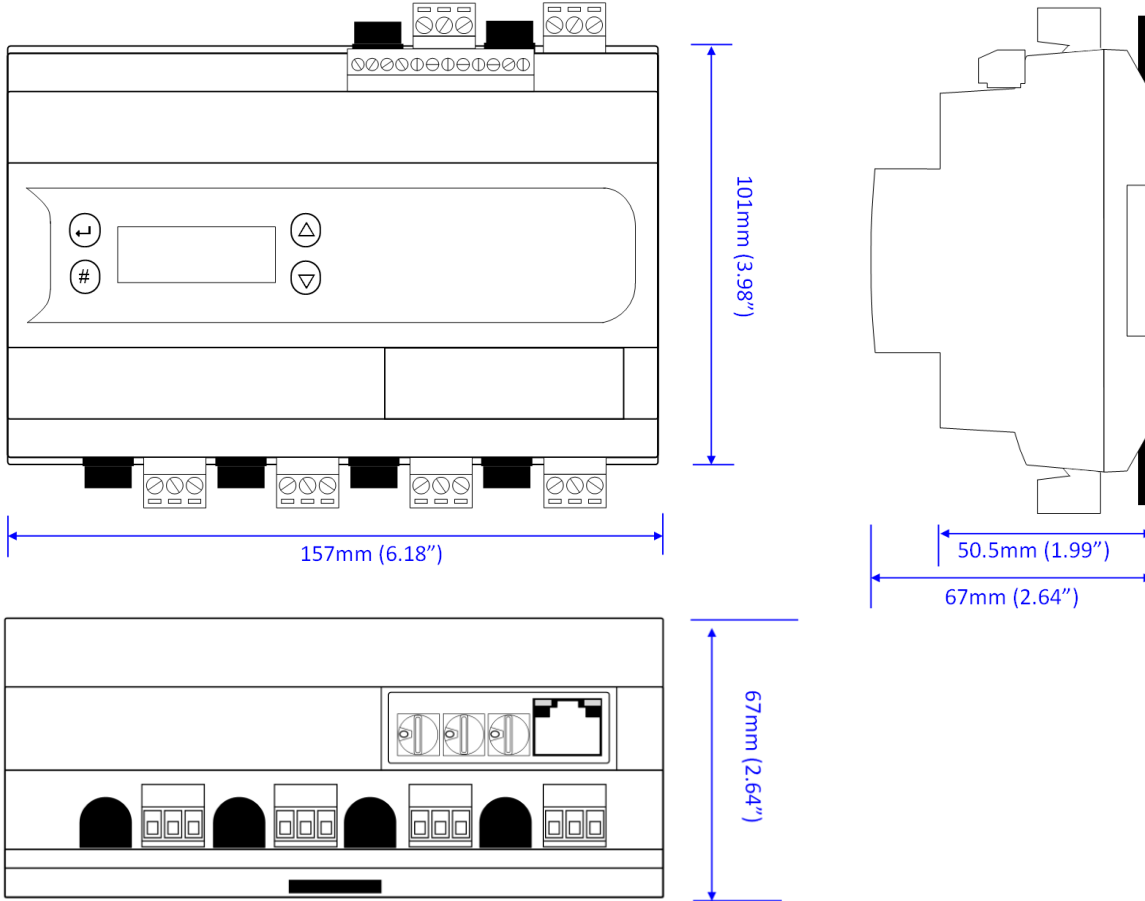
#### Mercury Mk2



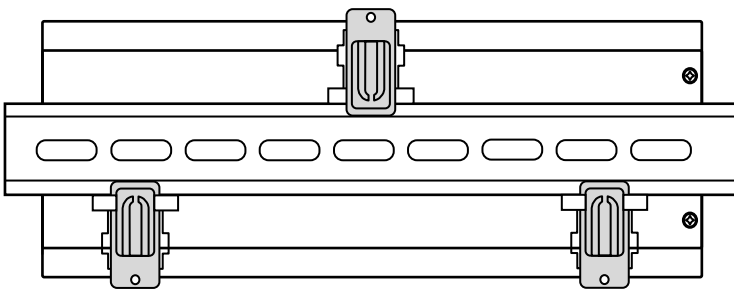
Switched on before installing or maintaining this product

**Dimensions**

**Intuitive Mercury controller**



**Intuitive Mercury Mounting Instructions**



Three clips fix the Intuitive Mercury securely to DIN rail. Pull each clip until it “clicks” to remove the controller. Each clip has a mounting hole to provide an alternative fixing mechanism to DIN mounting.

**Cleaning**

Do not wet the controller when cleaning. Clean the front by wiping with slightly dampened lint free cloth.

**Disclaimer**



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

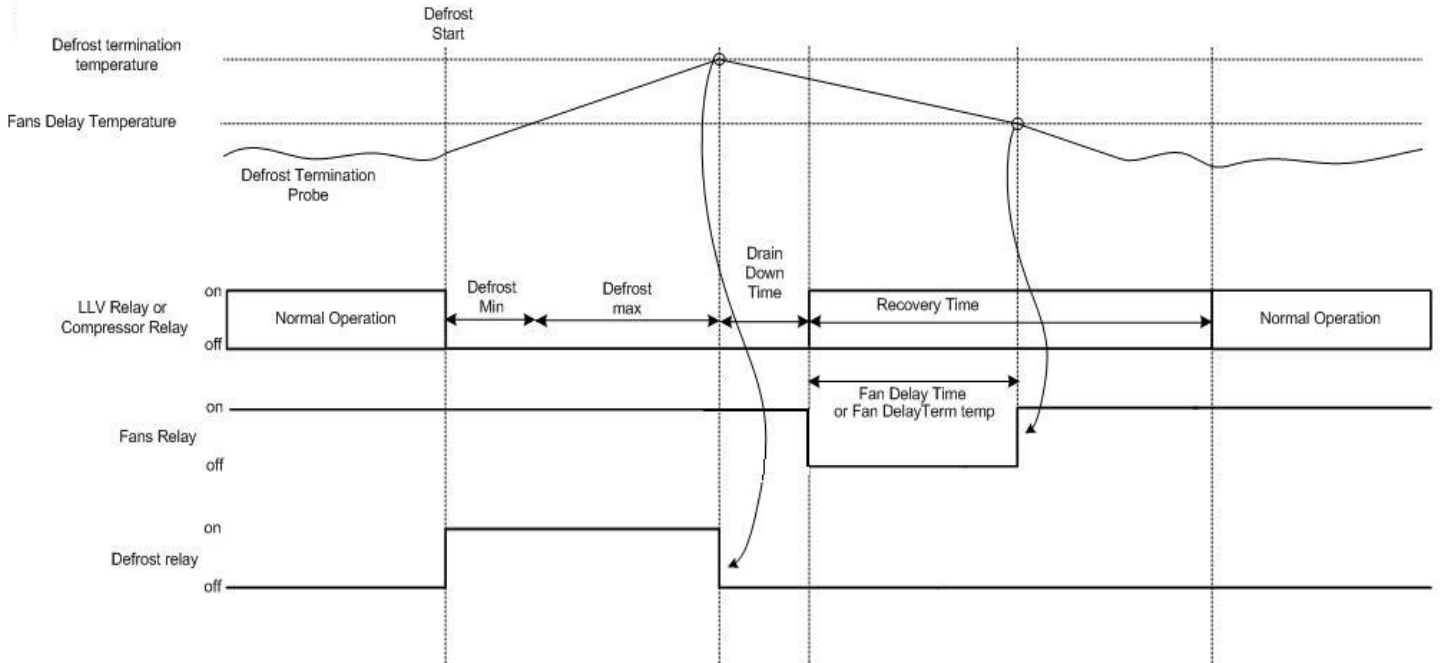
The specifications of the product detailed in this document may change without notice. RDM Ltd shall not be liable for errors or omissions, for incidental or consequential damages, directly or indirectly, in connection with the furnishing, performance or misuse of this product or document.



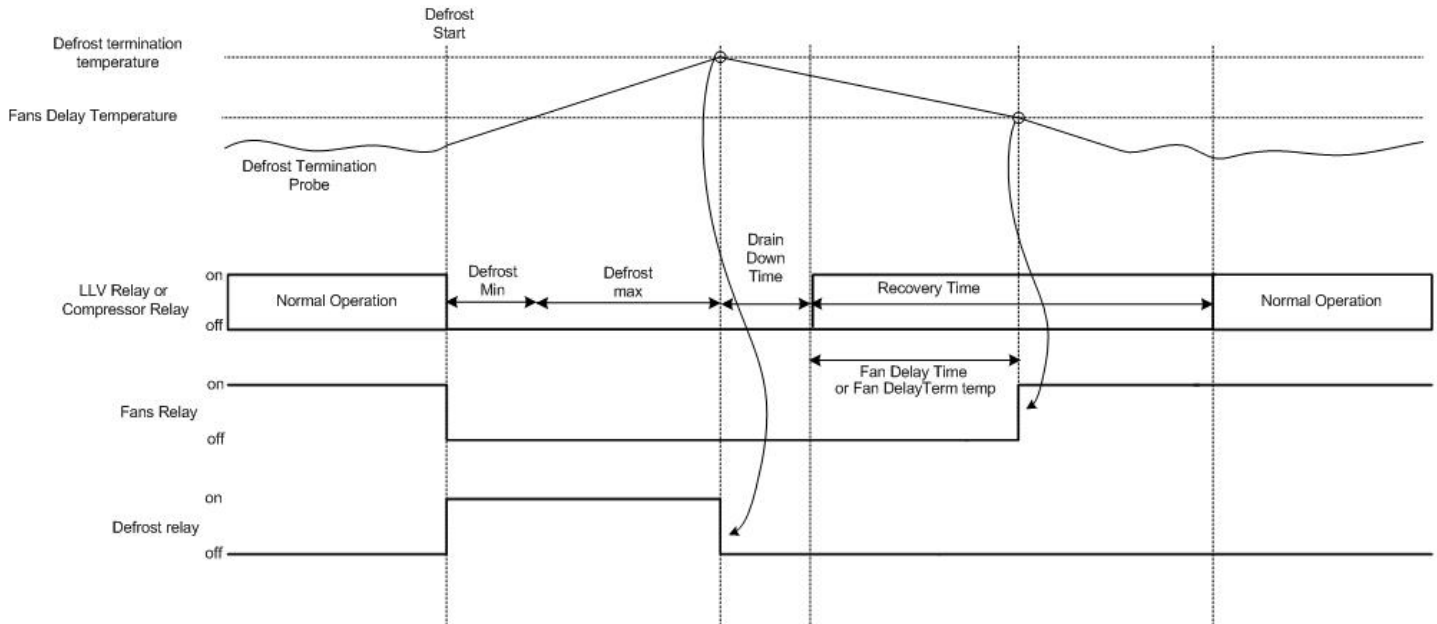
Ensure that all power is switched off before installing or maintaining this product

## Appendix 1 Defrost Cycles

### Fans On in Defrost



### Fans Off in Defrost



## Revision History

Revision	Date	Changes
1.0	28/04/2011	Introduction of Intuitive range
1.0a	17/02/2012	Probe allocation table updated
1.0b	27/11/2013	Correction to P-93 information.
1.0c	23/12/2014	Intuitive operating temperature updated.
1.0d	01/06/2013	EMC standard updated.
1.0e	27/08/2015	Modified Network alarm table.



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



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