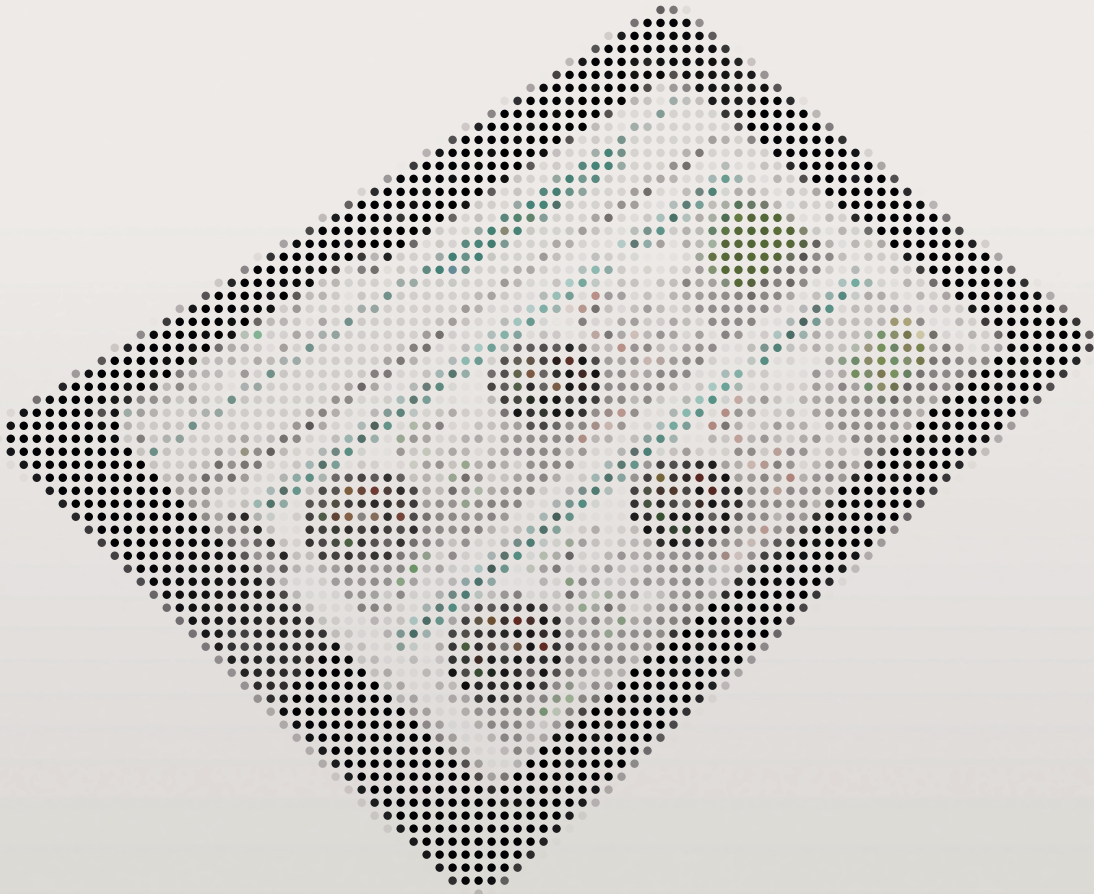


Resource
Data Management



HVACR & BEMS Solutions



Putting you in control

Gathering and monitoring data in real time, we deliver meaningful information to the right people at the right time. RDM control and predictive monitoring solutions reduce energy consumption to ensure that your business is operating at optimum levels. Our wide range of controls can be used across almost any type of BEMS infrastructure, maintaining everything from lighting and security to heating and refrigeration.

Our award winning and predictive remote monitoring and energy management software options give you complete visibility of the performance and health of your infrastructure whenever and wherever you need it. User friendly interfaces allow you to easily manipulate complex data into a highly graphical, easy to read, and interactive format. With the ability to set up text alerts, you don't even need to log in to know when the system needs your attention. Kwweb, our energy dashboard, completes the cycle – making it even easier to identify cost saving options and manage your energy usage.



5 year warranty on all
RDM manufactured products*

*Excluding OEM products and selected product lines. Warranty details for excluded products will be detailed on the respective product pages.



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Free technical support

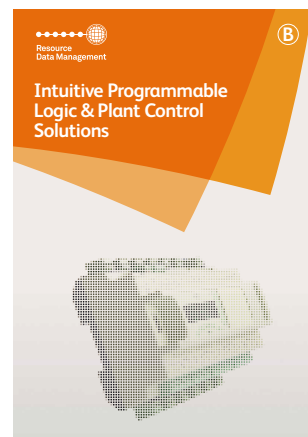
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Other RDM product ranges



Book A Temperature Control Solutions

Flexible temperature control solutions for multiple environments including Retail, Healthcare and Pharmaceutical. Our solutions ensure that your assets and/or environment is optimally maintained to help realise increased profitability and boost your ecological credentials.



Book B Intuitive Programmable Logic & Plant Control Solutions

Intuitive controllers make intelligent control simple and can be coupled with our free license PLC software – The Data Builder (TDB). Select from pre-programmed control options or easily configure your own to create bespoke solutions that precisely meet your requirements.



Book C dmTouch Management Solutions and Displays

Our control system integrators present you with only what you need to know in order to make informed decisions. We recognise that each client has their own unique requirements, and budget, which is why we have developed options that are affordable and scalable to meet the most simple or the most complex of needs.



5 year warranty on all RDM manufactured products*

While every effort is made to ensure the information given is accurate the Resource Data Management Group, including all associated companies, subsidiaries and affiliates cannot accept liability for any errors or mistakes which may arise. All are subject to change without notice. For full terms and conditions of sale please visit www.resourcedm.com

*Excluding OEM products and selected product lines. Warranty details for excluded products will be detailed on the respective product pages.

About us

It's common sense that the customer is core to our business. Your needs drive every aspect of our business from product planning, design and development to production.

Designed with reliability and longevity in mind, we develop products and solutions that challenge the way people think and change the industry. We offer the perfect mix, quality solutions that are easy to implement and products made by the best brains in the business. Each and every product is cost effective and packed with features and software that can't be matched. We also give you maximum networking flexibility and will never lock you into propriety networking systems.

Our customer commitment goes that one step further, with free after sales support, from a team of technical experts and free training sessions, tailored to individual customer needs. We ensure that our products and solutions deliver the very best results for each individual customer – which is why we are trusted by the world's leading brands.

Offices throughout Europe, USA, India, Australia and Asia, combined with a carefully selected international distributor and installer network, means that we are perfectly and strategically positioned to support our customers.

Delivering solutions for a wide range of industries



Retail



Healthcare



Public Sector
& Education



Food Production
& Processing



Data Centres



Offices &
Commercial



Leisure



RDM solutions

RDM solutions are used by the world's leading retailers and blue chip companies to control and manage a wide variety of infrastructures. Our control, energy management and asset performance strategies give you the information you need to reduce energy consumption, predict failures, and avoid expensive downtime while giving you the insight you need to accurately forecast capital expenditure and operating costs.

The dmTouch provides the ultimate gateway to interface with a number of standard and proprietary protocols including Modbus® and BACnet®. Our controls also network across industry standard protocols including CAT 5 Ethernet IP.

Quick and simple, plug and play options negate the need for proprietary setup, making for easy installation and networking, minimising both install cost and time.

At the heart of each RDM solution, our management solutions and displays interpret big data presenting you with the information needed to make informed decisions quickly. A high volume of complex, detailed information is presented in a visually stimulating, easily manipulated format, in real time, so that you can respond to potential issues before they become costly

All perfectly complimented by our award winning predictive monitoring and energy management software, our solutions consistently deliver impressive savings to help your business grow.

Remote connectivity

Some of the communication protocols that the dmTouch is capable of communicating with.

Worldwide

ADSL
Cable
Lease Line
3G
4G
GSM
Modem



Local

Wireless Mesh
BACnet®
Wi-Fi
Fibre
Modbus®
SNMP
XML

ActiveFM™

Award-winning monitoring software

RDM energy and building management solutions make it simple to control all aspects of HVACRR across your building or multi-site estate. ActiveFM™ supports your predictive, remote monitoring and asset performance strategies by giving you the information you need to identify issues, predict failures, avoid expensive downtime and accurately forecast capital expenditure and operating costs.

How it works

A dmTouch control system front end gives elected staff, contractors and engineers across your estate the ability to effectively manage, and resolve issues on site. ActiveFM™ delivers similar off-site capabilities and control by bringing together data from across your entire estate into one location in WebReporter, RDMs web based reporting and management tool.

Accessible across multiple devices WebReporter makes analysing large volumes of data simple. Pre-defined reports with filters for site, alarm type, date and time allow for statistical analysis of the data. The graphical interface makes it is easy for users to log in and make quick, informed decisions that ensure the best and most cost effective reactive action is taken.

Features:

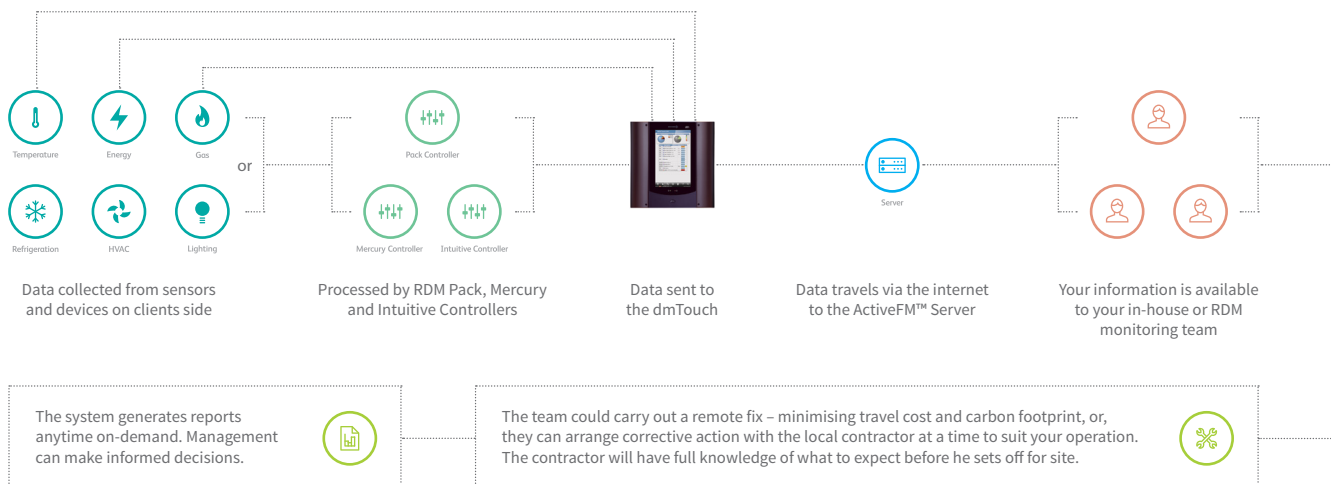
- Web based control dashboard
- Multi-site estate view
- Email alarm alerts
- Automated service and despatch requests
- Real time and historic regression analysis
- System parameter and time clock report
- Dial in Data Manager Access (Optional plug-in)
- Temperature Data Retention (Optional plug-in)
- Live Maps (Optional plug-in)
- Kw^heb (Optional standalone product)

Benefits:

- Real time access to site alarm information
- Improved asset performance
- Reduced asset lifecycle costs
- Minimal interruption to operations
- Avoid costs associated with system downtime
- Increased productivity
- Full visibility of service delivery
- Schedule maintenance at a time that suits your business and operations
- Accurately forecast expenditure and operating costs



How Active FM works



Monitor, measure, predict and react

There are four ActiveFM™ solutions to choose from W¹, W², W³ and W⁴. Each bundle has been designed to give customers the tools and flexibility they need to create a monitoring solution that specifically matches their individual needs.

Three plug-in options, Temperature Data Retention, Dial in Access and Live Maps, and one standalone energy dashboard option are also available to make it even quicker, easier and simpler to effectively manage assets and energy consumption.

To learn more about ActiveFM™ solutions please contact a member of the team on +44 (0) 141 810 2828 or sales@resourcedm.com

Feature	How it works	W1	W2	W3	W4
WebReporter	Web based reporting and management dashboard presenting real-time data from across your estate.	•	•	•	•
Alarm Forwarding by Email	Email alert when alarm is triggered. Designed for systems that are not supported with human monitoring.	•	•	•	•
Data Manager System Parameter & Time Clock Report	Daily report accessed via WebReporter highlighting any item and parameters that have changed.	•	•	•	•
Data Manager Configuration Capture & Store	Daily data capture of back-up configuration and TDB files from on-site Data Manager. Available for external download.	•	•	•	•
WebFM2 Licence	Service management software used by either RDM or third party Technical Alarm Handlers.	•	•	•	•
Monitoring Team	Team of Technical Alarm Handlers provided by RDM 24/7 to react and respond to alarms across your estate.	•	•	•	•
Dial-in Access as Standard	Ability to access and view individual Data Managers remotely.	•	•	•	•

Optional plug-in

Dial-in Access	Ability to access and view individual Data Managers remotely.	•	•	•	•
Temperature Data Retention (TDR)	Daily capture and storage of temperature data, alarm logs and parameter change data. Accessible via WebReporter.	•	•	•	•
Live Maps	Multi-site estate locations represented on an interactive map by pins. Pins change colour to highlight pre-alarm and alarm state.	•	•	•	•

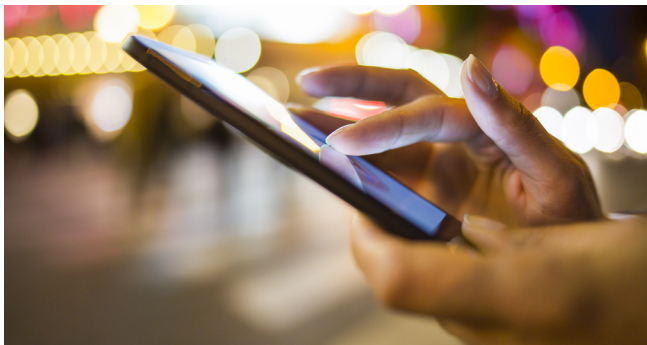
Additional Standalone Products

Kw ^{eb}	Web based dashboard presenting meter readings from on-site Data Managers. Compatible with a wide range of Gas, Water and Electricity.	•	•	•	•
------------------	---	---	---	---	---

Intelligent alarm prediction and reporting

The Data Manager or dmTouch on site communicates* with our ActiveFM™ server, sending real time data, alarms and analysis. In conjunction with the Data Manager data from sites can be critically scored to enable predictive algorithms to prioritise important alarms and data. Intelligent ActiveFM™ technology then processes your data dependent upon your selected service package.

*via an IP Network Connection



W1

Data is collected from each site, via a Data Manager. WebReporter then presents it in a highly graphical, easy to manipulate format. Accessible via the client login on the RDM website or via an un-branded WebReporter URL. Users can mine site alarm data using a series of pre-defined reports with filters for site, alarm type, date and time for statistical analysis of the data. Allowing users to identify problem sites and trends across the client estate.

Features:

- WebReporter
- Alarm forwarding by email

W2

Includes the same features as W1 with the addition of the Data Manager System parameter and time clock report plus Data Manager Configuration capture and store. ActiveFM™ collects data from client site every 24 hours, taking a snapshot of key information. The system then automatically highlights items and parameters that have changed. Resident TDB programs, and dmTouch configuration files are stored securely off site for download.

Features:

- WebReporter
- Alarm forwarding by email
- Data Manager system parameter and time clock report
- Data Manager configuration capture and store

W3

Including the same features as W2, with the addition of WebFM2 licensing. Clients have the ability to use their own, or a third party, service desk to monitor alarms and implement corrective action in real time.

Features:

- WebReporter
- Data Manager system parameter and time clock report
- Data Manager configuration capture and store
- WebFM2 licence

W4

Includes the same features as W3 with Technical Alarm Handlers and service desk provided by RDM.

Features:

- WebReporter
- Data Manager system parameter and time clock report
- Dial in Access
- Data Manager configuration capture and store
- WebFM2 licence
- Technical Alarm Handlers provided by RDM

Request a demo

Contact a member of the team to schedule a free demo:
sales@resourcedm.com
 +44 (0) 141 810 2828



A wide range of industries



Retail



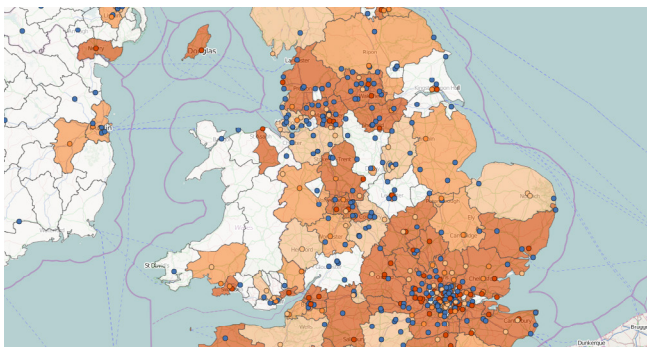
Healthcare

Public Sector
& EducationFood Production
& Processing

Data Centres

Offices &
Commercial

Leisure



Kweb*

Available as an optional plug-in with any ActiveFM™ solution or as a standalone product.

Kweb is a server based energy management software platform. It gathers information from site metering equipment and aggregates the information into a single web dashboard.

Delivering complex data in an easy and quick to interpret format it allows users to bring together essential energy information in a simple, clear and dynamic format and export the data if necessary.

Configurable for electricity or gas or water usage.

Live Maps

Available as an optional plug-in with any ActiveFM™ solution.

Client locations are represented as coloured pins. Configurable buttons change colour under pre-determined alarm parameters. When parameters are breached the associated pins change colour.

The quick view function, activated by clicking on a pin, displays a real time overview of critical data. A second click connects the user directly to site for further analysis options.

Temperature Data Retention

Available as an optional plug-in with any ActiveFM™ solution.

When due diligence is a priority the Temperature Data Retention plug-in gathers data from each location in your estate, daily extracting the temperature data from the previous 24 hour period. Your data is then retained off site, stored securely and available on demand. Data streams include:

- Device input data
- Device output data
- Device status data
- Alarm logs
- Parameter changes

Dial In Access

Available as an optional plug-in with W1, W2 and W3.

One click connection to site via WebReporter. Dial in Access allows third party call centres or third party consultants to analyse data and trends to facilitate fault finding and remote adjustment. Supports remote and time clock management, and energy saving initiatives through GP channels.

Kw^heb

Cloud based energy management

Embrace the future and be one step ahead with Kw^heb, RDMs cloud based energy dashboard. Kw^heb takes a fresh approach to energy and building management giving you the power to easily and effectively manage energy consumption to reduce energy costs and meet your sustainability objectives.

We understand that to be truly green you need to understand exactly how, when and where your building uses energy and that gathering that information can be difficult. Kw^heb overcomes that challenge. A fully configurable platform it collates data from monitoring and metering devices across your building or multi-site estate. Delivering full visibility of multiple consumables including electric, water and gas.

Presenting valuable data in an easy to interpret graphical format, Kw^heb allows you to make strategic, informed decisions. Getting that information in real-time gives you the ability to be proactive in quickly detecting irregularities and analysing energy waste, so that you can implement a solution that will reduce your energy consumption, and the associated costs, fast.

Resource Data Management HVACRR Control and Remote Monitoring solutions consistently reduce electricity costs, offer attractive returns on investment and enable far broader visibility and control of sites. Not only are our Control and Remote Monitoring systems future proof, but they also ensure savings are sustained for years to come.

Connected real-time, anywhere, anytime big data

Simply log on and have access to real-time actionable insight that is relevant to the right person at the right time. Building managers can compare individual assets. Estate Managers can compare site to site performance. Our intelligent technology filters the vast volumes of big data collected so that only the right data is presented. Saving everyone time and money.

Reporting & Benchmarking

Kw^heb has been designed to be user friendly, delivering complex data in an easy and quick to interpret format. Fully configurable the dashboard allows users to bring together essential energy information in a simple, clear and dynamic format. In a few simple steps users can select the dashboard format that matches their needs, and export data if necessary.

Reduce Energy, Boost Profits

Energy costs may only be a small percentage of turnover, but reducing them can directly increase margins without the need to increase sales. A 20% energy reduction represents the same bottom line benefit as a 5% increase in sales.* Our solutions regularly reduce energy consumption by much more than 20%. How much could you save?

*source Carbon Trust

How kw^heb works



Kw^heb is compatible with over 20 models of energy meter including Schneider, Carlo Gavazzi and Enviro

Features

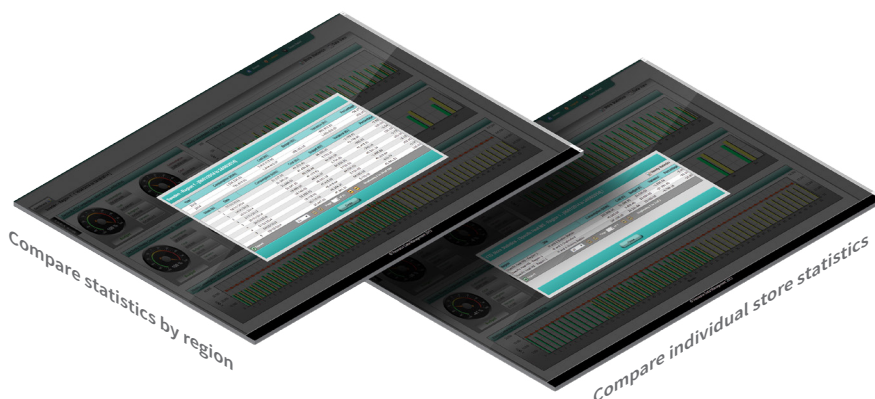
- Multi-site reports
- Budget management tool
- Asset performance tracking
- Actionable Insight and Analytics
- Historic or current data
- Data Export (to excel)
- Hierarchical structure
- Predictive analytics
- Graphic Displays
- Calculates actual consumption costs in multiple currencies
- Compatible with a broad range of consumables
- Intuitive and user friendly interface

Benefits

- Complete and in-depth overview of your entire estate at a glance
- Easily identify energy waste and inefficient assets
- Extend the lifecycle of assets
- Optimise the efficiency of your maintenance contract
- Access your data anywhere, anytime
- Make informed, reactive decisions quickly
- Accurately measure the effectiveness of your sustainability contract
- Engage staff; increase awareness and make them accountable for energy consumption levels
- Boost consumer sentiment and brand value

Why Kw^heb?

With over 30 years industry knowledge and experience, we live and breathe building and energy management. Our award-winning solutions make it simple, and cost effective, to reduce your energy costs quickly, which is why we are trusted by some of the world's biggest brands. Kw^heb takes our energy management solutions one step further to deliver even greater savings.



Request a demo

Contact a member of the team
to schedule a free demo:
sales@resourcedm.com
+44 (0) 141 810 2828

Both features allow you to benchmark performance and identify key trends and anomalies

PR0510

dmTouch

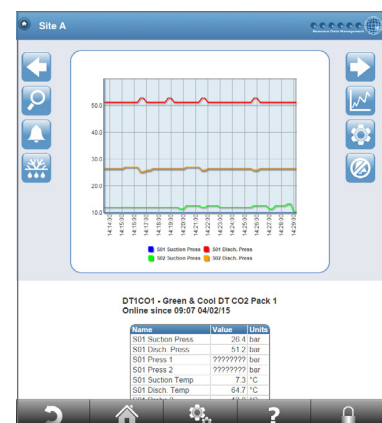
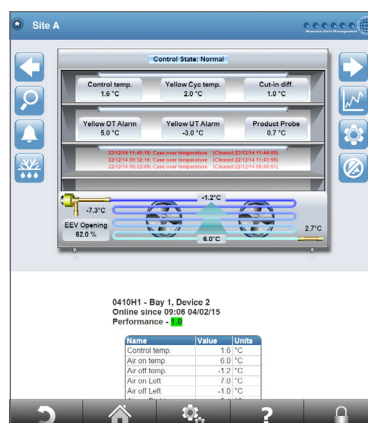
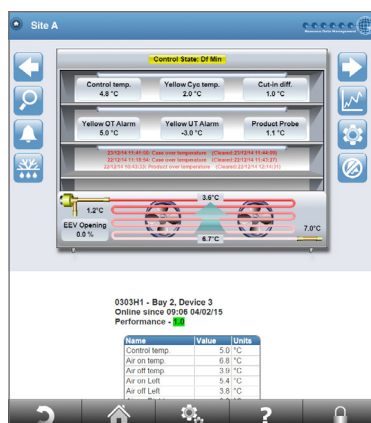
Future proof front-end control system

dmTouch provides the ultimate gateway to interface with a number of standard and proprietary HVACR (heating, ventilation, air conditioning and refrigeration) protocols including Modbus® and BACnet®. Our products also network across industry standard protocols including CAT 5 Ethernet IP. This means our customers are free to use their current control equipment to maximise the return on existing investments without becoming locked in to a new and proprietary system.

With a 10.1" HD touch screen, dmTouch processes your data into easily interpreted and actionable insights in real time. Detailed information from across your control and monitoring infrastructure is presented in a visually stimulating format and, as it's quick to read, it allows you to extract the information you need to make informed decisions about your business at a glance.

Typical Applications

BEMS (Building Energy Management System), HVAC, commercial, factories, healthcare, retail refrigeration.



Features

Hardware/Connectivity

- IP Ethernet connectivity
- Built in 4 port Ethernet Switch
- 5 USB ports: 4 internal and 1 front facing
- Alarm Sounder

Inputs/Outputs

- 12 Analogue/Digital inputs
- 4 x configurable relay outputs
- 3 x expansion board slots
- Optional fibre board

Benefits

- TDB Programmable PLC editor for any control, monitoring or alarm strategy you want, for any discipline. (optional)
- Monitors energy and can react locally to changing demand
- Networks to field devices with full two way communications.
- Scalable architecture for connection with other control systems.
- Stores log data, alarm information and device settings
- Provides predictive real time analysis with alarms and pre-warnings
- Provides centralised control in addition to local field management and event management on site
- Interacts with remote monitoring bureau, to display call status information

Specification

Onboard Storage

8GB Solid State Disk (Approx 25MB reserved for Application)

Inputs

12 Inputs Individually configurable as analogue temperature inputs or digital inputs. Probe types supported (PT1000 (default), 470R, 700R, 2K, 2K25, 3K, 5K, 6K, 10K, 10K(2), 100K)

Range: -99°C to +350°C for PT1000

Digital Input: Normally Open or Normally Closed input (Volt Free) with alarm delay.

Outputs

4 Relay Outputs: 7.5A resistive load 250Vac, 5A inductive load 250Vac COS Ø=0.4

Onboard Expansion Cards & Network Interfaces

3 x Daughter Card Slots 5 x USB A Ports

1 x RS485 Interface (Option to enable) 4 x Ethernet RJ45

*Please refer ordering information on page 16 for details of compatible expansion cards and network interfaces.

Power

Supply voltage range: 100 - 240 Vac ±10%

Supply frequency: 50 - 60 Hz

Maximum supply current: 1 Amp

Typical supply current: <1 Amp

Voltage fluctuations not to exceed ±10° of nominal voltage

Environmental

Operating temperature range: -10°C to +60°C (14°F to 140°F)

Operating humidity: 10% to 80% (non-condensing)

Storage temperature range: -20°C to +65°C

Environmental: Indoor use at altitudes up to 2000m, Pollution Degree 1, Installation Category II.

Dimensions

H x W x D 330mm x 310mm x 96mm



Better Resolution, More Control

High definition and multi-touch, dmTouch offers detailed information in a more visually stimulating and easier to read format than its competitors.



Free PLC Editing Software

TDB is the highly flexible Programmable Logic Control software. It's free and infinitely configurable to precisely meet your control requirements.



Light Speed Communications

dmTouch is available with a fibre-optic communication module, enabling high-speed and long-distance connection from RDM's other fibre-optic enabled products.



Free Site Layout Software

RDM Layout Editor gives you the ability to easily create dmTouch compatible site layouts that can be saved, modified, reused and shared across your sites.



Accessorise & Expand

dmTouch is available with a range of accessories and expansion modules to match the unique security, connectivity and presence requirements of your projects.



Remote Monitoring Tools

dmTouch comes with the ability to monitor and control your sites from anywhere, at any time, on your PC, tablet or smartphone when it's convenient for you.

Ordering information

dmTouch base unit

Description	Part number
Data Manager with 8gb SSD	PR0510

Expansion cards

Description	Part number
12 x Analogue / Digital Inputs	PR0460
3 x Relay Digital Output	PR0461
4 x 4-20mA Inputs	PR0462
4 x 4-20mA Outputs	PR0463
4 x Voltage Outputs (0-5V/0-10V)	PR0464
4 x Voltage Inputs (0-5V/0-10V)	PR0465
2 x Voltage Inputs, 2 x Voltage Outputs	PR0466
6 x Status Inputs (240 Vac)	PR0467

Other hardware options

Description	Part number
On-Board USB Analogue Modem	PR0491
Battery back-up	PR0492
USB Logger Reader Enabler	PR0499
Secondary IP Interface	PR0486
USB Magnetic Swipe Card Reader	PR0494
Data Manager USB 3G Modem	PR0496-3G

dmTouch PLC options

Description	Part number
The Data Builder (TDB) (PLC editor)	PR0485
The Data Builder (TDB) Lite	PR0485 -Lite
TDB CANBus Exp Board Interface (Hardware)	PR0489

dmTouch Energy Features

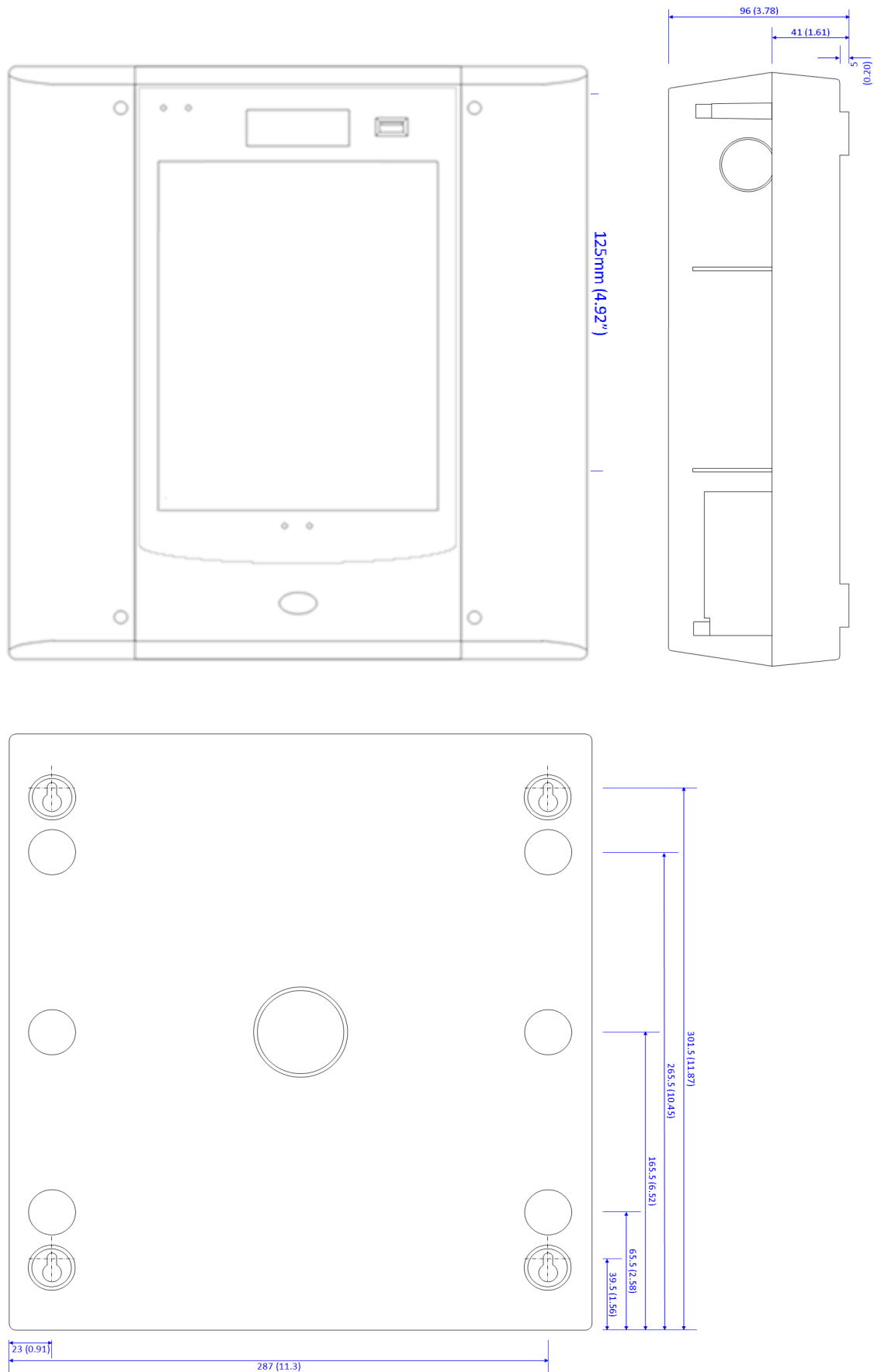
Description	Part number
Pack Optimisation	PR0474
Trim Heater Control	PR0475
Night Blinds Check	PR0476
Condenser TD	PR0477
Temperature Performance Indicator (TPI)	PR0478
Defrost warning	PR0479
Total Energy package (all of the above)	PR0484

dmTouch network interfaces

Description	Part number
NEW! 1 x 100Base-FX Fibre Networking Interface	PR0150F
1 x RS485 Genus® Compatible Network (1st 32 devices)	PR0480
1 x IP Network (32 devices)	PR0481
USB RS485 Genus® Compatible Adaptor (2 x networks)	PR0482
Parasense Gas Interface enable	PR0469
Modbus® TCP Interface enable	PR0470
Emerson® VSD Modbus® enable	PR0470-ECT
BACnet® Interface enable	PR0471
Secondary IP Interface (Hardware & Software)	PR0486
Modbus RS485 Adaptor (Hardware & Software)	PR0623
Mesh System Wireless enable (32 Devices)	PR0735
CBISS Gas Interface Enable	PR0498
Shuttle USB Logger Reader (Data Manager Software Enable)	PR0499
Wireless Mesh IP Access Point	PR0732
Wireless Mesh USB Access Point	PR0734



Mechanical — all dimensions in mm (Inches)



PR0493

dmTouch card reader

Swipe card reader interface

The swipe card reader is an easy and convenient way to control access to the dmTouch and can be used as an alternative to the PIN access method. When using the swipe card system alarms can be accepted by swiping a card, the time, date and details of the card holder will be logged automatically by the dmTouch. The same system controls access to the service menus on the dmTouch, again all details and time of access are automatically logged.

The dmTouch can learn details of an existing card by simply swiping the card through the reader, user name and access privileges can then be added. This means that a dedicated card does not need to be issued to every user, an existing card, such as a clock in card, can be used instead. The swipe card mechanism is supplied fitted to a dmTouch wing and is plugged into one of the dmTouch's four internal USB ports. The wing is held in place by two fixing screws making installation simple and quick.

Shown fitted to dmTouch (not included)



Features

- Prevent unauthorised access
- Control access to features/service levels.
- Complete logging of all access
- Can be used with any swipe card
- Powered from one of the dmTouch's USB ports
- Plug and play installation
- Tri colour LED indicator and sounder
- Dual head design allows swiping in both directions

Operating

Swipe speed: 72 to 1500mm per second

Power

Maximum Current: 40mA, powered from USB port

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

330 x 65 x 71mm (13 x 2.6 x 2.8in) Weight: 250g (8.8oz)

Ordering Information

Description	Part number
dmTouch Card Reader	PR0493

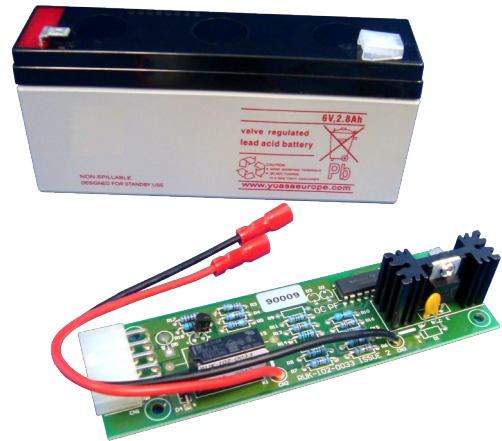
PR0492

dmTouch Battery Backup

Internal uninterruptible power supply (UPS)

The dmTouch Battery Backup unit provides power to the dmTouch in the event of a mains power failure, it comprises a heavy duty rechargeable battery and a charging control board.

The unit is mounted inside the dmTouch and only requires three plug in connections. Should the dmTouch detect a loss of mains voltage it will switch seamlessly over to battery backup without any interruption in function, a power fail alarm will also be generated. Charging of the battery is automatically controlled and regulated. The length of time the battery back up kit will power the dmTouch when no mains is available varies according to dmTouch usage and how many peripheral devices are fitted but typically it will be around 30 minutes. RDM recommend that the battery from the on-board battery backup is replaced once a year.



Features

- 2.8Ah Maintenance free rechargeable battery
- Fully automatic charging and changeover
- Plug and play installation

Ordering Information

Description	Part number
Battery Backup kit	PR0492

Power

2.8Ah, 6V

Environmental

Operating temperature: 5° to 38°C (41° to 100°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

Battery 134 x 64 x 34mm (5.3 x 2.5 x 1.3in)

Control Board 125 x 32 x 25 (4.9 x 1.2 x 1in)

Weight: 620g (21.9oz)



PR0496

USB 3G Modem

USB 3G Modem

This modem allows the dmTouch to send out alarms without the need for a phone line or IP network. Alarms can be sent out as text messages, via a mobile network, as they occur

Features

- Powered from the dmTouch
- Plug & Play installation
- No need for a dedicated landline connection
- LED Indicator Two-colour LED provides status information
- Internal antenna

Communications

Various frequency bands supported - GSM Band 850/900/1800/1900 MHz

Power

Typical operating current: 500mA

Environmental

Operating temperature: 0° to 40°C (32°F to 104°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

82 x 26 x 12 mm (3.2 x 1.0 x 0.5in) Weight modem: 50g (1.8 oz)



Ordering Information

Description	Part number
USB dmTouch 3G Modem	PR0496-3G

Note This product is currently only available in the UK. International customers should contact technical support on +44 (0) 141 810 2828 opt 2 to discuss international options. RDM supply the USB 3G modem only. Minimum software and hardware requirements apply. Data SIM card required.



PR0486

dmTouch Ethernet Adaptor

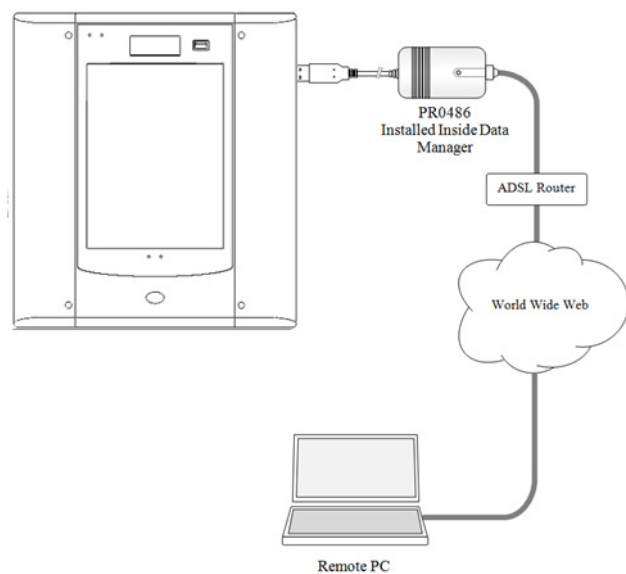
Secondary IP interface

The dmTouch has an inbuilt Ethernet interface as standard, allowing local connection to multiple IP devices including Intuitive controllers (subject to activation), an Orbit Outstation or PC. The dmTouch Ethernet Adaptor provides an additional Ethernet interface enabling the dmTouch to be connected to another IP network. This second network would typically be a building wide network or an internet router allowing users to remotely view, and log onto, the dmTouch from multiple devices.

The Ethernet adaptor utilizes one of the dmTouch's four internal USB ports, power is derived from the dmTouch so no additional power supply is required.



Typical wiring



Features

- Fast Ethernet connection up to 100Mbit/s
- Connect and Data LED display network status at a glance
- Self powered
- Plug and play installation

Ordering Information

Description	Part number
2nd Ethernet Adaptor	PR0486*

*Includes software activation.

Communications

10/100Mbit/s Ethernet USB 2.0

Power

Maximum Current: <0.1A

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

78 x 28 x 15 mm (3.1 x 1.1 x 0.6in), USB cable length 300mm

Weight: 60g (2.1 oz)

PR0491

USB Analogue Modem

This USB Analogue modem adaptor makes it easy to connect directly to a dmTouch (or Data Manager) via an existing analogue telephone line. The USB connects directly into one of the four USB ports on the dmTouch providing two way communications to a second modem.

Features

- Plug and play installation
- USB connection to dmTouch
- RJ-11 port for line connection
- 56Kbps

Communications

Receive rate 56Kbps
Transmit rate 48Kbps

Power (via USB)

USB powered

Dimensions

75 x 25 x 20mm (2.9 x 0.98 x 0.79in) Weight: 29g (1.02 oz)



Ordering Information

Description	Part number
USB to Analogue Modem	PR0491



PR0458-CLR

Remote Alarm Beacon

Features

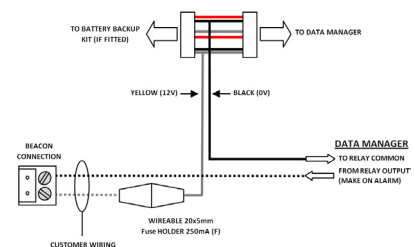
- Supplied with adaptor cable to connect straight to dmTouch
- Flash Rate—60 per minute in accordance with legal limit to avoid epileptic fits
- Waterproof IP65
- Clear Filter
- Simple Plug and Play installation.

Dc Voltage 12V
Rated Current 0.14A (Powered from dmTouch)

Mechanical

Dimensions 85 x 85 x 81mm
Weight 100g (3.4 oz)

WARNING : flashing lights may affect vision and cause epileptic fits



PR0460

Probe Input Expansion Card

12 x analogue / digital inputs

The Probe Input Expansion card provides an additional 12 temperature probes or switched inputs to the dmTouch.

Features

- 11 different probe types pre-configured
- Switched inputs can be normally open or normally closed
- Defrost signal option
- User definable high/low temp. alarm limits and delay

Inputs

12 x Probe/ digital inputs

Probe types supported PT1000, 470R, 700R, 2K, 2K25, 3K, 5K, 6K, 10K, 10K(2) & 100K)

Range: -99°C to +350°C for PT1000 configurable as degrees Celsius or degrees Fahrenheit Digital Inputs: 0V return, configurable as normally open, normally closed or defrost.

Power

Maximum Current: <0.1A, powered from dmTouch.

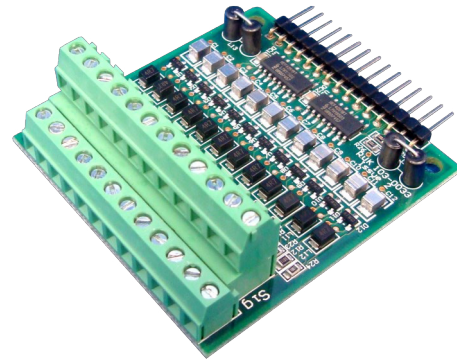
Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

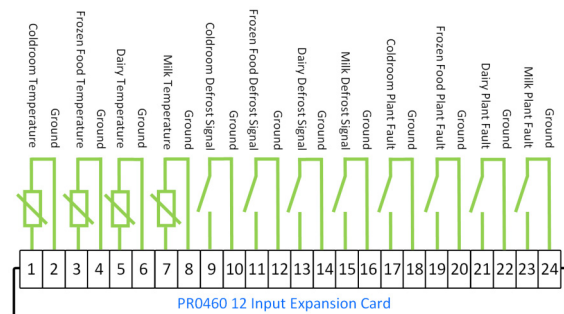
Operating humidity: 10% to 80% (non condensing)

Dimensions

62 x 52 x 20mm (2.44 x 2.05 x 0.79 in) Weight: 50g (1.76 oz)



Typical Wiring



Ordering Information

Description	Part number
12 Input Expansion Card	PR0460



PR0461

Relay Expansion Card

3 X digital outputs

Provides an additional three relay outputs on the dmTouch.

Features

- Normally open and normally closed volt free contacts
- Mains or low voltage switching (relays 2 & 3 must have the same voltage applied)
- Can be used with the dmTouch 40 channel GP timer or The Data Builder
- Plug and play installation

Outputs

3 x N/O and N/C contacts, 5A resistive, 2A Inductive (cosØ=0.3)

Power

Maximum Current: <0.1A, powered from dmTouch

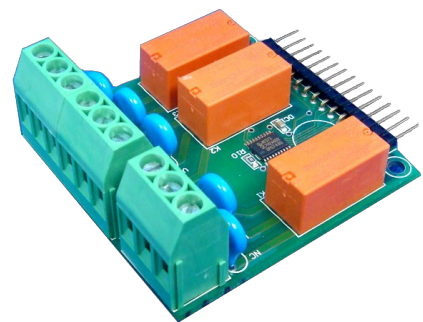
Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

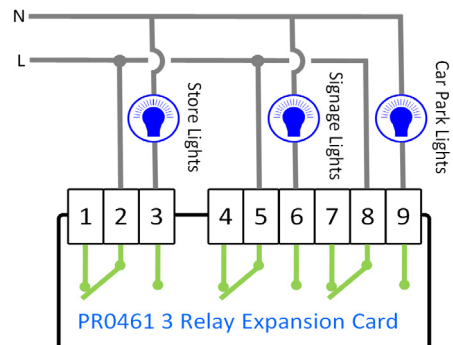
Operating humidity: 10% to 80% (non condensing)

Dimensions

62 x 52 x 22mm (2.44 x 2.05 x 0.87in) Weight: 50g (1.76 oz)



Typical Wiring



Ordering Information

Description	Part number
3 Relay Expansion Card	PR0461



PR0462

4-20mA Input Expansion Card

4 x analogue inputs

The 4-20mA input expansion card provides 4 x analogue inputs to the dmTouch. The inputs are for use with 4-20mA, two wire loop devices such as a pressure transducer.

Features

- User selectable units, %, Bar, PSI and mA.
- User definable upper and lower alarm limits with time delay
- Scalable Pressure inputs
- Provides 12Vdc supply for loop devices
- Inputs can be utilised by a TDB program running within the dmTouch

Inputs

4-20mA current loop, use 12Vdc output to feed the device

Power

Maximum Current: <0.1A, powered from dmTouch

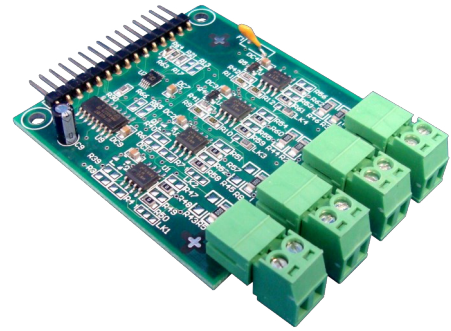
Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

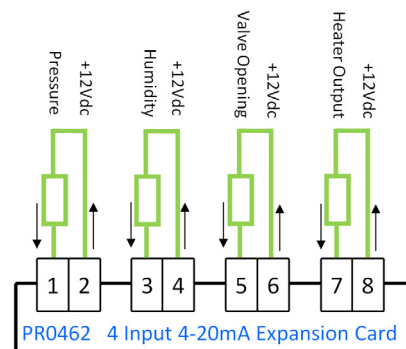
Operating humidity: 10% to 80% (non condensing)

Dimensions

73 x 52 x 12mm (2.87 x 2.05 x 0.47in) Weight: 45g (1.6 oz)



Typical Wiring



PR0463

4-20mA Output Expansion Card

4 x analogue outputs

Provides 4 x 4-20mA analogue outputs on the dmTouch which can be utilised by a TDB program running within the dmTouch.

Features

- 4-20mA loop output
- Can be used to drive devices such as an inverter drive or proportional valve
- Plug and play installation

Outputs

4-20mA current loop output

Power

Maximum Current: <0.1A, powered from dmTouch

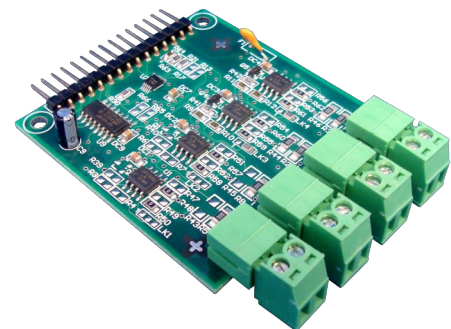
Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

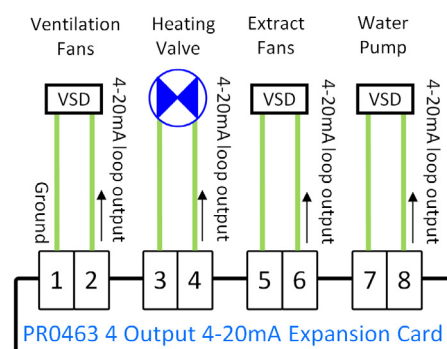
Operating humidity: 10% to 80% (non condensing)

Dimensions

73 x 52 x 12mm (2.87 x 2.05 x 0.47in) Weight: 45g (1.6 oz)



Typical Wiring



Ordering Information

Description	Part number
4-20mA Output Expansion Card	PR0463

PR0464

0-5V/0-10V Output Expansion Card

4 x analogue outputs

Provides 4 x 0-5V or 0-10V analogue outputs on the dmTouch which can be utilised by a TDB program running within the dmTouch.

Features

- 0-5V or 0-10Vdc output
- Can be used to drive devices such as an inverter drive or proportional valve
- Plug and play installation

Outputs

0-5Vdc or 0-10Vdc outputs

Power

Maximum Current: <0.1A, powered from dmTouch

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

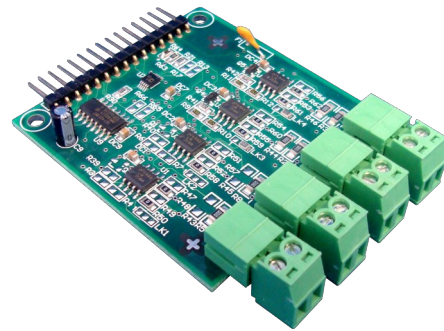
Operating humidity: 10% to 80% (non condensing)

Dimensions

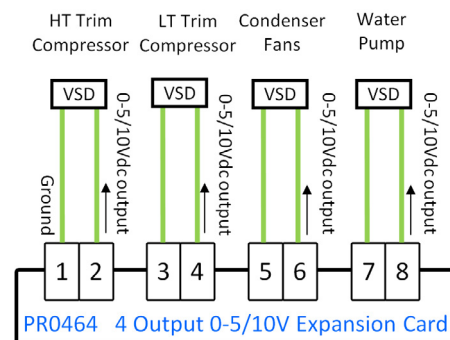
73 x 52 x 12mm (2.87 x 2.05 x 0.47in) Weight: 45g (1.6 oz)

Ordering Information

Description	Part number
0-5V/0-10V Output Expansion Card	PR0464



Typical wiring



PR0465

0-5V/0-10V Input Expansion Card

4 x analogue inputs

Provides 4 x 0-5V or 0-10V analogue inputs on the dmTouch. This can be used with two wire devices with a voltage signal output, such as a humidity sensor.

Features

- User selectable units, %, Bar, PSI and Volts.
- User definable upper and lower alarm limits with time delay
- Scalable Pressure inputs
- Plug and play installation
- Inputs can be utilised by a TDB program running within the dmTouch

Inputs

0-5Vdc or 0-10Vdc inputs

Power

Maximum Current: <0.1A, powered from dmTouch

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

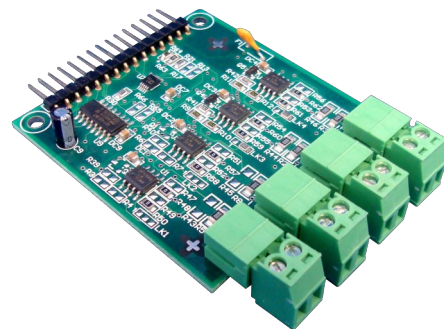
Operating humidity: 10% to 80% (non condensing)

Dimensions

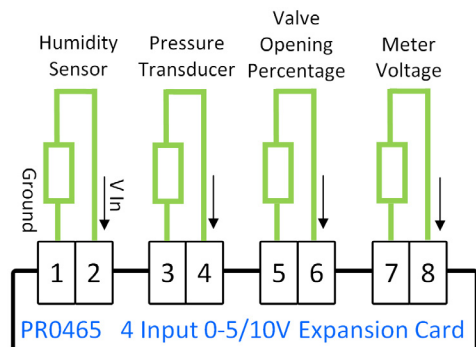
73 x 52 x 12mm (2.87 x 2.05 x 0.47in) Weight: 45g (1.6 oz)

Ordering Information

Description	Part number
0-5V/0-10V Input Expansion Card	PR0465



Typical wiring



PR0466

0-10V Input / Output Expansion Card

2 x analogue inputs / 2 x analogue outputs

Provides 2 x 0-10V inputs and 2 x 0-10V outputs to a dmTouch

Features

- User selectable input units, %, Bar, PSI and Volts.
- User definable upper and lower alarm limits with time delay on inputs
- Scalable Pressure inputs
- Plug and play installation
- Analogue Outputs are utilised from a dmTouch TDB Program
- Inputs can also be utilised by a TDB program running within the dmTouch

Inputs

2 x 0-10Vdc

Outputs

2 x 0-10Vdc

Power

Maximum Current: <0.1A, powered from dmTouch

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

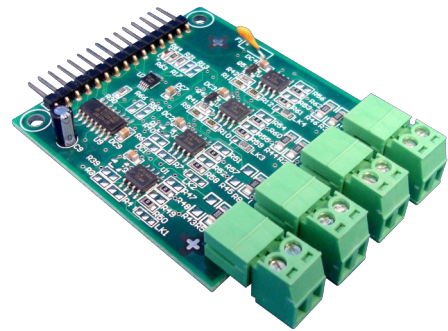
Operating humidity: 10% to 80% (non condensing)

Dimensions

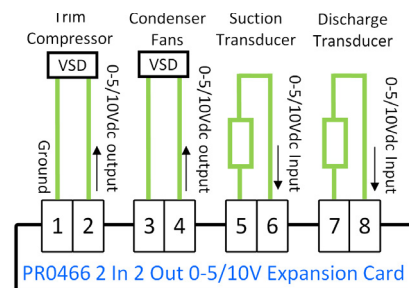
73 x 52 x 12mm (2.87 x 2.05 x 0.47in) Weight: 45g (1.6 oz)

Ordering Information

Description	Part number
0-10V 2 In / 2 Out Expansion Card	PR0466



Typical wiring



PR0467

Status Input Expansion Card

6 x 240v status inputs

Provides 6 x mains voltage status inputs into the dmTouch

Features

- Enables mains voltage digital inputs to be applied to the dmTouch
- No need for a transformer or signal relay
- Plug and play installation
- Inputs can also be utilised by a TDB program running within the dmTouch

Inputs

6 x 230Vac

Power

Maximum Current: <0.1A, powered from dmTouch

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

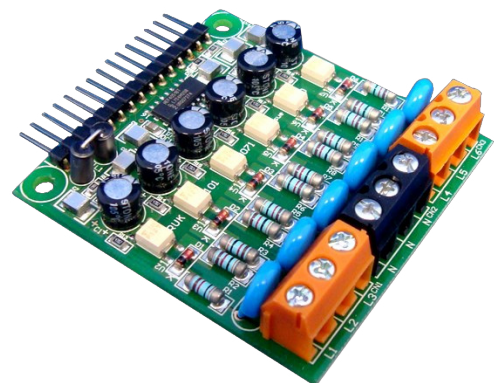
Operating humidity: 10% to 80% (non condensing)

Dimensions

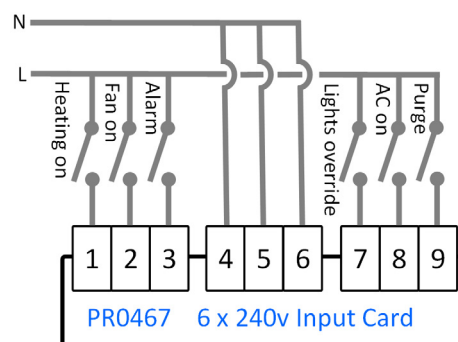
73 x 52 x 12mm (2.87 x 2.05 x 0.47in) Weight: 45g (1.6 oz)

Ordering Information

Description	Part number
6 x 240V Status Input Exp Card	PR0467



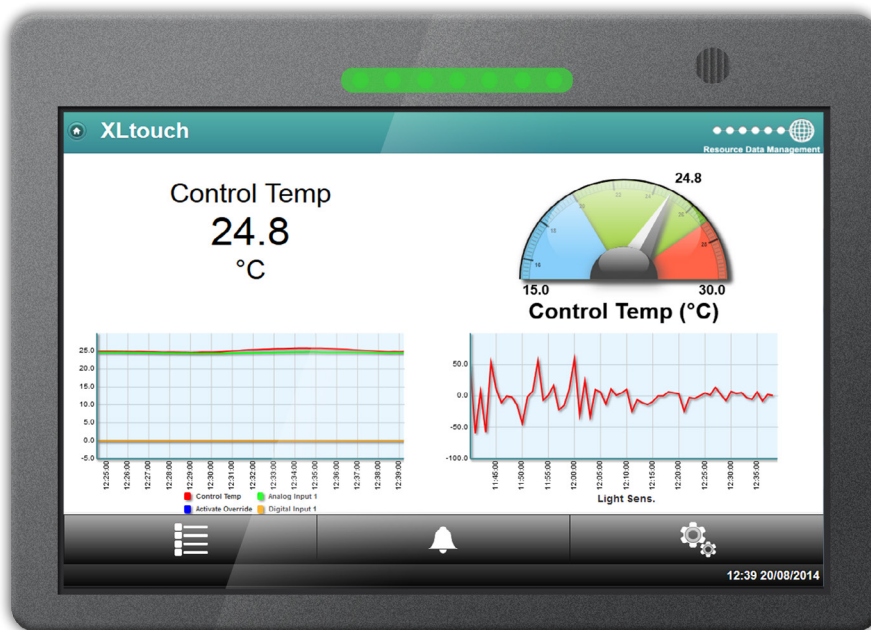
Typical wiring



touchXL

One device, three functions, maximum value for money

The newest member of RDM's pioneering Touch screen family, the slim line touchXL is a multi-function device that can act as a remote display, orbit Data Manager repeater console or stand-alone controller.



With a customisable graphic display it offers easy access to data and settings from an RDM Intuitive controller. As an orbit controller connected to a dmTouch LAN, it can act as an additional user interface and alarm console.

Flexible communication options, including IP allow the controller to be sited hundreds of meters from the controller. CANbus allows the touchXL to act as an intelligent controller and display in one, eliminating the need for two separate products.

It can also accommodate multiple power supply options, including a choice of either POE, (Power over Ethernet) or a low voltage 24v supply. Designed with you in mind to offer optimal value for money.

Features

- HD 10" Touch Screen
- Audio sounder
- Customisable graphic display
- Remote display, repeater or controller options
- Fibre, IP and CANbus connectivity
- USB port
- Wall or panel mount
- POE or low voltage

How touchXL works



Specifications

Power

Power Over Ethernet 12.95W (Class 0) or 24Vdc auxiliary supply (11W)

Output

Alarm relay, NO/NC contacts. 30Vdc/24Vac 2A

Environmental

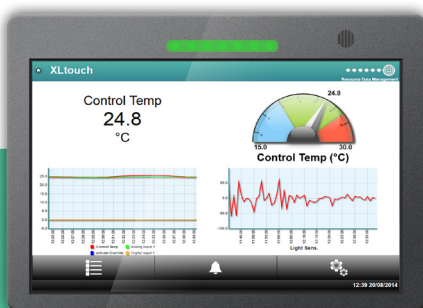
Operating temperature +5°C to +38°C
Operating humidity 80% maximum

Dimensions (HxWxD)

173 x 245 x 30.5

Benefits

- Switched Mode Power Supply (SMPS) – for operation worldwide
- Turnkey Solution
- Cost effective fixed price kit
- Advanced features and functionality
- Easy install



Released Q1 2016

For more information about the new touchXL please register your interest at www.resourcedm.com/touchXL/more

PR0450

48 Channel Temperature Monitor

Input expansion module

When used in conjunction with a dmTouch, the 48 channel expansion module allows an additional 48 inputs to be added. These inputs can be individually configured as temperature probe, switched fault input or defrost input.

Typical applications

Multi-point plant fault and temperature monitoring

Features

- IP Ethernet connectivity
- 11 different probe types
- Individual high and low temperature alarm settings
- Plug and play set up

Benefits

- Temperature data from 48 probes can be sent to the dmTouch (or data manager) using a single Cat 5 cable, greatly reducing site wiring.
- Multiple monitors can be logged onto the dmTouch (or data manager) giving the ability to monitor and log hundreds of temperature probes

Inputs

48 Inputs Individually configurable as analogue temperature inputs or digital inputs.

Probe types supported (PT1000 (default), 470R, 700R, 2K, 2K25, 3K, 5K, 6K, 10K, 10K(2), 100K)

Range: -99°C to +350°C for PT1000

Digital Input: Normally Open or Normally Closed input (Volt Free) with a 1A delay.

Power

Supply Voltage Range: 100 - 240 Vac $\pm 10\%$

Supply Frequency: 50 - 60 Hz

Maximum supply current: 1A

Environmental

Operating temperature: 5° to 38°C (41° to 100°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

310mm (W) x 325mm (H) x 95mm (D), (12.2 x 12.8 x 3.7 in.)

Weight: 1.8kg (3.97lb)

Ordering Information

Description	Part number
48 Channel Temperature Monitor	PR0450
48 Channel Temperature Monitor (°F)	PR0450-VER



PR0340-DME/PR0341-DME

Orbit Console

Remote front end repeater

The Orbit Remote Console facilitates an additional user interface and alarm console for a Data Manager of dmTouch. All of the menus and screens that are available on a Data Manager are also available on the Orbit Remote Console. For the dmTouch only critical functionality and display views are available. Up to three Orbit Remote Consoles can be connected to a single Data Manager or dmTouch.

Typical applications

Additional user interface

Features

- IP Ethernet connectivity
- Built in keypad and display
- Alarm sounder and indicator
- Alarms can be mapped to individual consoles
- Alarm relay (volt free)

Benefits

- Provides additional system access if the dmTouch is in a secure area
- Plug and play, no setting up required

Specification

Power

Supply Voltage Range: 100 - 240 Vac $\pm 10\%$

Supply Frequency: 50 - 60 Hz

Maximum supply current: 1A

Output

1 Volt Free Relay Output: 7.5A resistive load 250Vac

5A inductive load 250Vac COS $\phi=0.4$

Environmental

Operating temperature: -1°C to $+60^{\circ}\text{C}$ (14° to 140°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

310mm x 325mm x 95mm (12.2 x 12.8 x 3.7 in.) (W x H x D)

Weight: 2.4kg (5.3lb)

Ordering Information

DESCRIPTION	PART NUMBER
Orbit Console	PR0340-DME
Orbit Console with Card Reader	PR0341-DME



dmTouch Web Services

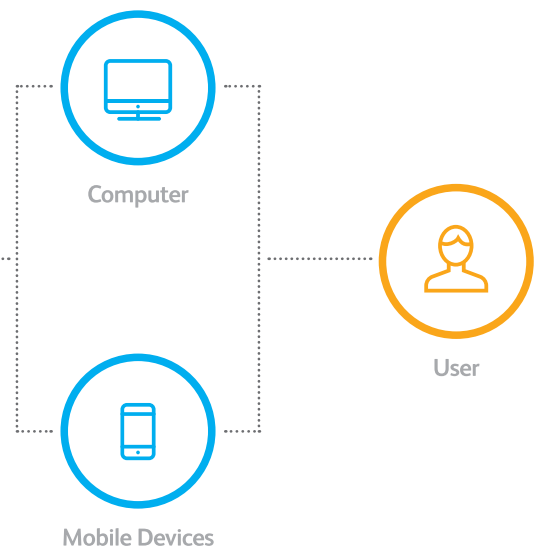
Web Services provide read/write access to information and key features found within a Data Manager or dmTouch. Web services are Extensible Markup Language (XML) based providing an open and flexible standard for communication between a third party facility management systems and a Data Manager or dmTouch.

Web Services do not have the same disadvantages as proprietary systems, giving users the ability to communicate across multiple systems it provides a transparent, flexible and cost effective interface. Users can quickly and easily integrate their Data Manager or dmTouch with their existing facilities management solution across their building or multi-site estate. It is also licence free and comes auto-enabled in a Data Manager and dmTouch.

Web Services offer a number of advantages and features, some example functions available for use in a Data Manager or dmTouch are listed below.

- Alarm Log information can be requested allowing the user to view active and historic alarm events which have occurred on a single site or multiple sites.
- The current schedules entered for a General Purpose Timer (GP Timer) Channel('s) can be requested and modified. Thus allowing users to review their current estate with the option of modifying timer schedules across multiple sites for equipment such as lighting, heating, air conditioning etc as part of an energy saving initiative.
- Real-time and historic data can be requested for any device or sensor connected to the Data Manager. With the multi-protocol options found within the Data Manager this allows a user to request information from various devices: - e.g. energy meters, gas leak detection systems, air conditioning plant, refrigeration plant using multiple protocols such as Modbus, BACnet, XML and SNMP.
- System log information can be requested enabling the user to view a variety of events which have occurred within the Data Manager or dmTouch such as service personnel logging in, when configuration changes have been made, confirmation of alarm events and their destination etc.

Web Services are also available for use with the Intuitive TDB (PR0650) range of products. For detailed information about the full list of features for either products please contact RDM Technical Support on +44 (0) 141 810 2828



MaRS

MaRS software allows users to remotely receive and monitor alarms generated by an Intuitive TDB Controller, Data Manager or a dmTouch. Easily installed on a PC or Laptop, minimal updates are required on the devices that you want to connect to, however they must be accessible remotely via a WAN/LAN structure.

software collates alarm data from multiple sites and locations to one central point designated by the user. Giving users the ability to view and manage alarms efficiently, it removes the need to view each individual alarm log on a monitored device or be inundated with emails and SMS alerts from numerous sites.

Minimum operating specification

- Windows 7 or 8
- 1GB RAM
- 2GB of free hard disk space.

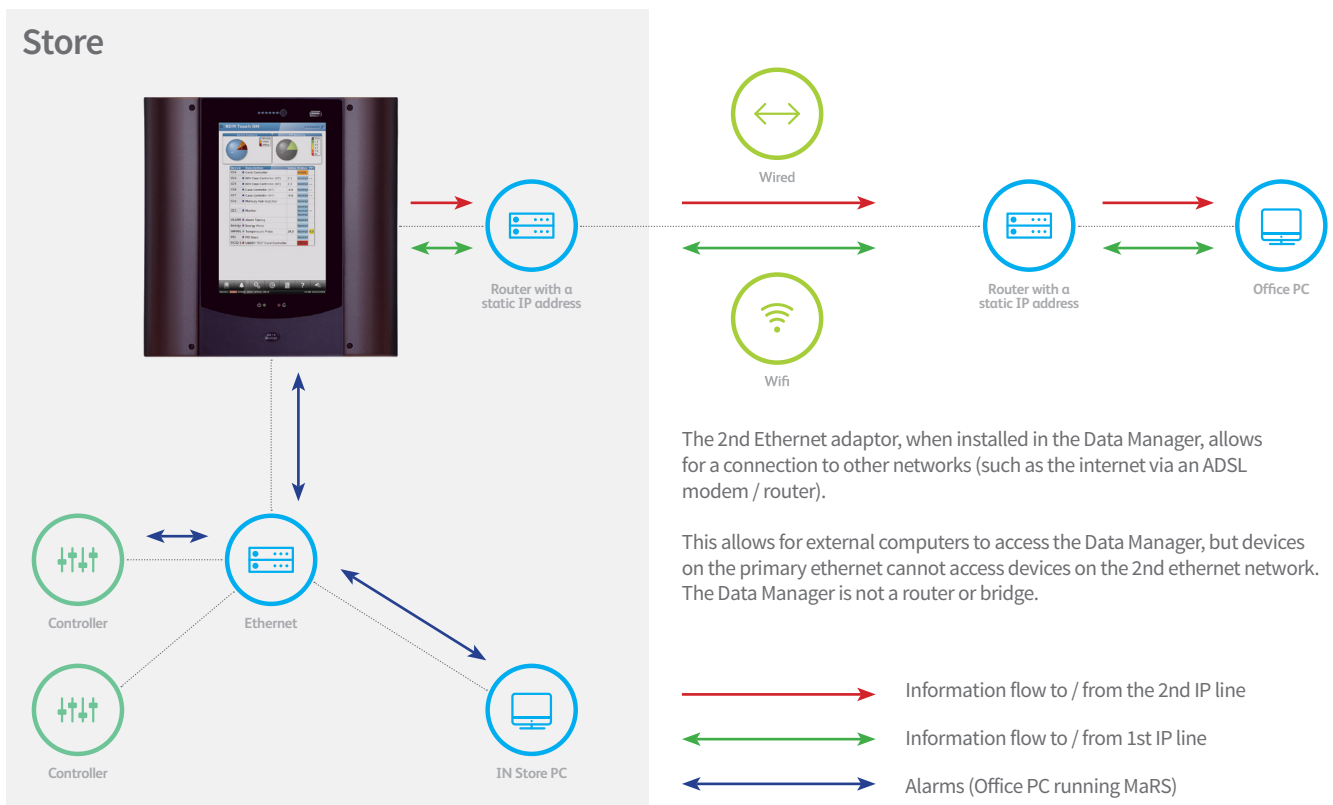
Note: a greater amount of free disk space will enable the MaRS software to store more alarm data in its database.

MaRS Software – easy set up process

- Run the MaRS set up CD on a PC or laptop, following the simple step by step instructions.
- Restart the PC or laptop.
- Contact Technical Support for response key code to complete the installation process.
- Ensure that an IP network connection is available between the MaRS software and devices to be monitored.
- Connect each device to be monitored and configure to send alarms to the PC/Laptop running MaRS.
- Monitor alarm traffic in MaRS.

Features:

- Web server port
- Audible alarm sounder
- SQL Server Set-Up
- Alarm management tools



The above diagram shows how a Data Manager or dmTouch can be connected to a wide area network allowing users to remotely access the Data Manager or dmTouch.

A static IP address is required in the modem/router connected to the PC running MaRS to the WAN/Internet. Alarms will then be directed to the static IP address. A static IP address will also be required for each site that you want to collect data from.

Note: The MaRS licence key can only be used on a single PC/Laptop, and is valid only for the life of that equipment. The licence key is non-transferable to another PC/Laptop.

The Data Builder

What is The Data Builder?

It's possible that there are times when standard 'off the shelf' controls do not provide the functionality for a specific installation, especially where the application is a one off job and it would be cost prohibitive to develop OEM embedded software. Data Builder allows you to easily create and modify the desired functionality yourself.

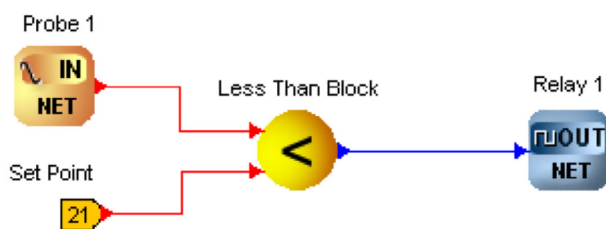
Using the data builder you can design bespoke and complex control strategies with ease. Choose inputs, add conditions to the inputs and as a result drive various outputs. Utilise logic, timers and custom functions to carry out the exact functionality that you need for your application.

Save programs to your PC and re-use them to provide rapid deployment of custom control across your sites.

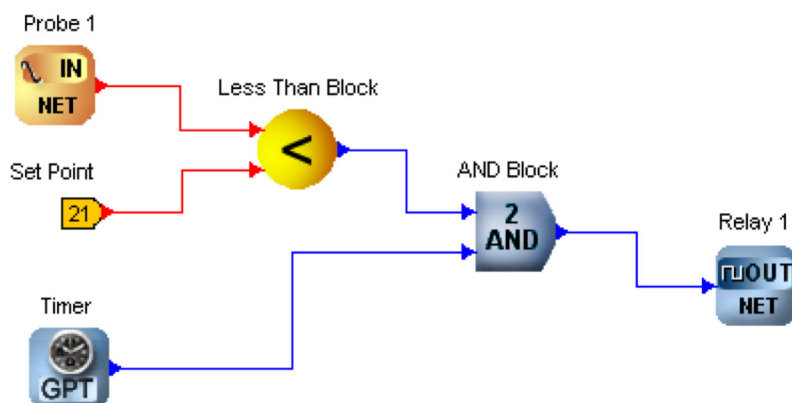
Sounds complicated?

Whilst an incredibly powerful tool, the Data Builder programming application software is really quick and easy to use.

Below is the simple drag and drop of a few blocks to give control that when Probe 1 is 'Less than' 21°C then Relay 1 is turned on. For example this could be a temperature probe being used to control a central heating boiler.



However we now decide that we don't want the heating boiler to be on all day. So let's add a timer to the control:



So now we have a timer function which can be set and when the timer is on AND the room temperature is below 21°C then the boiler will come on.

As the timer is a basic feature of the dmTouch, if your dmTouch is connected to an internet enabled network then you can access and modify this timer remotely from your PC anywhere in the world. It really is that simple.

This is just a basic thermostat function, but what if you need an override switch? Also frost protection? What about comfort control on humidity? And sending out an alarm when something goes wrong? How about load shedding for energy reduction? It's as simple as dropping in the functionality that you want, giving you total control.

How do I get it?

There are three versions of Data Builder for the dmTouch:

Free 90 days trial	Full access
Lite	1 program / 100 block maximum
Full	16 programs / up to 4096 blocks per program.

The Data Builder Editor

The Data Builder (TDB) application is supplied embedded within a TDB enabled dmTouch, an Intuitive TDB controller or as a stand alone PC package. When connected directly to a dmTouch or Intuitive TDB controller, the “Online“ mode allows real time viewing of the controller’s inputs, outputs and parameters allowing easy fault diagnosis and system overview.

Applications are developed by selecting from a comprehensive but straightforward selection of blocks. Blocks are then linked using virtual “wires” which are automatically coloured red for analogue or blue for digital, built in safety features prevent accidental analogue to digital connections.



TDB applications can be fully password protected to prevent unauthorised users from copying or amending applications. Settings and parameters are also fully pass-code protected in the same way as all other RDM controllers. Applications can be easily uploaded to a PC (subject to password protection) and transferred to one or more dmTouches.

A maximum of 4096* control blocks and interconnects can be added to any single application and up to 16 applications can be run simultaneously on the dmTouch. Blocks are categorised under the subsections I/O, Logic, Mathematical, Time, Functional, Diagnostic, Custom, Text, Shortcut and Setting.

*Full version required.

Examples of TDB design blocks

I/O

Analogue in



This allows an analogue input to be brought into the application, this is typically a temperature probe, a lux sensor or a pressure transducer.

Logic

4 input AND gate



This is a simple logic gate which allows 4 digital inputs to give a single digital output if all 4 inputs are “On”, for example if 4 different conditions need to be satisfied before an alarm is

Mathematical Algebra Block



The algebra block can perform Calculations on up to 5 different analogue values. Calculations include addition, multiplication, division, raise to the power of and a variety of trig. and log equations.

Time

Daylight block



By entering the longitude and latitude of any location on the planet, this block will calculate whether it is currently daytime, night time or twilight at that location.

Functional

Direct PID



This block calculates a percentage output based on the rate of change of an input against a target set point. This is useful for controlling the speed of an inverter drive with relation to an analogue value.

Diagnostic

Analogue display



Analogue displays can be added at any point in an application and will show the instantaneous value of the item it is connected to. This can be used in real time using the online mode, or in the simulation mode.

Custom

4 stage block



This allows the user to create their own simplified block to suit a particular application which can then be used repeatedly as required. In this example, an application which contains 20 blocks has been saved as a single custom block.

I/O

Analogue in block



The Analogue In block allows an analogue value to be brought in from the outside world and used in the application. This would typically be a temperature probe or pressure transducer connected to the dmTouch.

Setting block



This block allows a setting to be added to an application, settings can be analogue or digital. This setting can be internal to the application such as a starting or default value, or can be used externally as a set point, such as “target pressure”.

Static text

A Static text block can be added anywhere in the application to add a description to a particular section or as a reminder to the user. Text font and size can be selected as required.

Shortcut



The shortcut block allows two or more points to be connected anywhere in the application without having to draw a connection line between them. This makes larger applications easier to work with and simpler to follow.

Functional

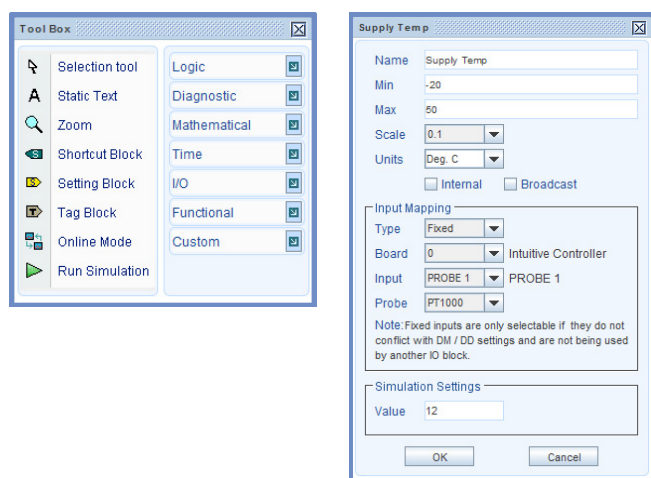
Pressure to Temperature Block



this block converts the pressure of a refrigerant gas to temperature. Look up tables for all the common refrigerants are contained within this block.

STEP 1 — Define your inputs and outputs

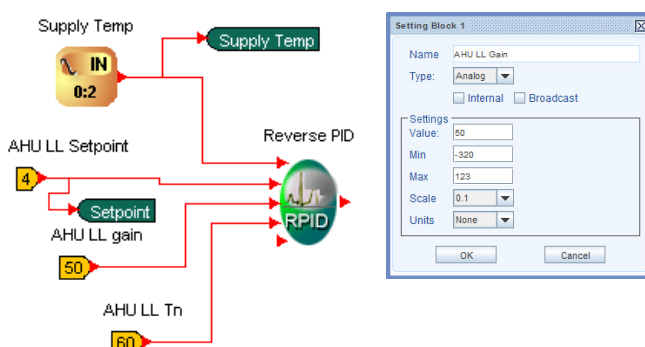
Selecting the I/O menu on the toolbox allows input and output blocks to be selected and dropped into the workspace, each block can then be named and its function defined, the example below shows a PT1000 temperature probe. Any unused inputs and outputs can be deleted, they can be easily added again at a later date if required.



STEP 2 — Connect your blocks to define operation

Once all the inputs and outputs have been allocated and named, all the other blocks required can be selected from the floating toolbar and dropped into the workspace. In this example set points, shortcuts and a reverse PID Functional block are to be used. An example of defining a set point is shown below right, this menu is displayed by clicking on the set point block.

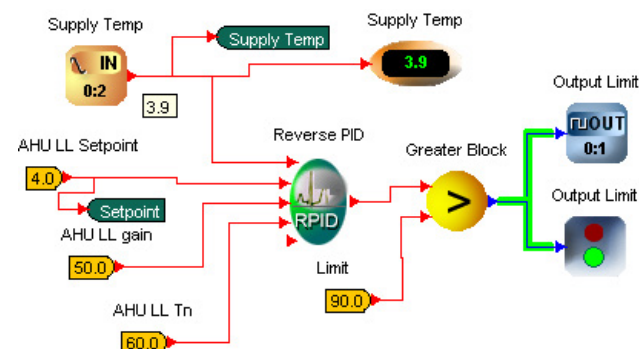
All the blocks can now be connected together as required, this is a simple drag and drop procedure.



STEP 3 — Test your program

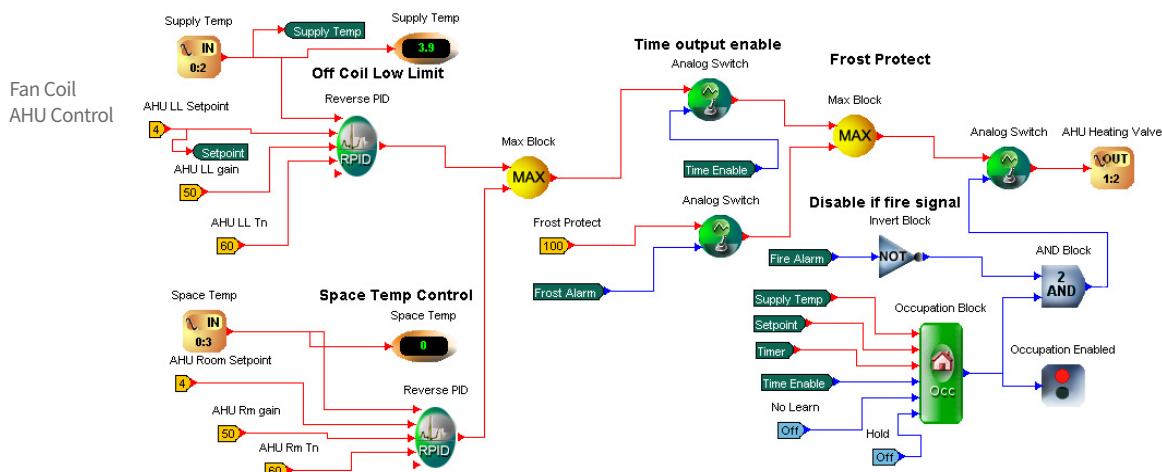
At any point whilst developing the application or when the application is complete, a simulation can be run using the simulation tab on the floating toolbox. Diagnostic displays can be added to make fault finding easier. Digital signals which are on will be highlighted in green, as shown to the right. Analogue values can be displayed on a virtual display or by placing the pointer at the input or output of a block.

If the controller has all the physical inputs connected (such as temperature probes), then using the online mode enables all the values to be viewed in real time.



STEP 4 — Expand as required and Save complete application

Additional blocks added to complete the program. Static notes can be added for easy editing at a later date. The complete program can then be saved (to PC or direct to controller). Password protection can be set if required to prevent unauthorised changes/copying or viewing of code.



Layout Editor gives you the ability to easily create site layouts compatible with the dmTouch.

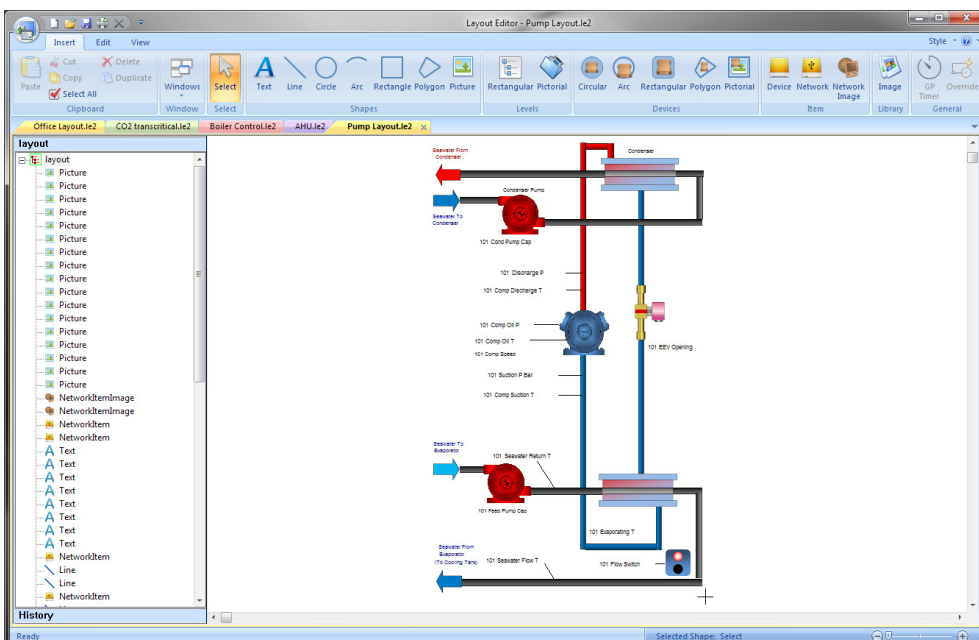
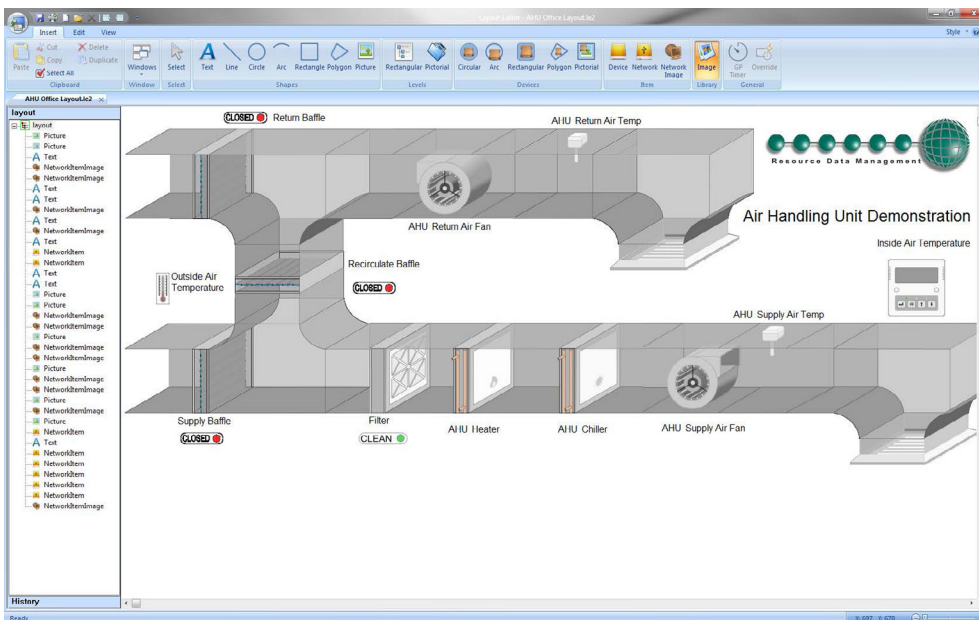
Once created layouts are visible on the dmTouch or a local/remote PC. Giving a clear, and easily interpreted, visual indication of device locations across your site compared to a traditional list format.

Layout Editor enhances the user experience, informing users at a glance if a device has changed state by changing colour. Bespoke parameters can be set to each individual requirement. For example red could indicate an alarm condition and blue could indicate normal.

Features include:

- Layouts can be created without the need for imported drawings, or from an imported AutoCAD DXF file
- Multi or single level/floor design options
- Easy to use interface

For more information please contact our team of technical experts on +44 (0) 141 810 2828



3rd Party Interface Enablers

The Data Manager can provide the definitive gateway to your connect your networks together. In addition to standard IP Ethernet and Genus® compatible RS485 networking, the Data Manager offers a range of network options for connection to 3rd party devices.

Below are just a few of the Interface types available on the Data Manager:

Parasense gas interface enabler

This allows the Data Manager to communicate with the GRM 16 channel refrigerant gas monitor over the IP network. The Data Manager can then log gas concentration levels over 16 channels and can generate an alarm should a leak occur.

Ordering Information

Description	Part number
Parasense Gas Interface Enabler	PR0469

Modbus® tcp interface enabler

The Data Manager can communicate with Modbus® devices logged onto its IP network via a third party Ethernet TCP/IP to serial converter, this allows an interface to a range of energy meters pre configured in the Data Manager. Other Modbus® TCP devices, such as variable speed drives or gas monitors, can be added subject to a software interface enable. To be used in conjunction with the PR0020-MOD or PR0020 DIN-MOD

When an RDM USB Modbus® converter (PR0623) is being used instead of a 3rd party device, the PR0470 interface enabler does not need to be purchased.

Ordering Information

Description	Part number
Modbus® TCP Interface Enabler	PR0470

BACnet® interface enabler

BACnet® is standard communications protocol mainly used by HVACR and BEMS control systems. The Data Manager BACnet® interface enables up to 32 BACnet compatible devices to log onto its IP network. No additional hardware or software interfaces are required.

Ordering Information

Description	Part number
BACnet® Interface Enabler	PR0471

Siemens® NetRS/NetPX interface enabler

This interface enabler specifically allows Siemens® NetRS/NetPX controllers to log onto the Data Manager's IP network, no additional hardware is required.

Ordering Information

Description	Part number
Siemens® NetRS/NetPX Interface Enabler	PR0483

Data Manager and dmTouch software upgrade

Both Data Managers and the dmTouch can be easily updated with the most recent version of the application software by using a file on a USB memory stick. The low upgrade cost allows you to enjoy the benefits of new functions and features, developed after your Data Manager unit was purchased, without having to replace the unit.

Ordering Information

Description	Part number
Data Manager Software Upgrade Code	DMSWUPG

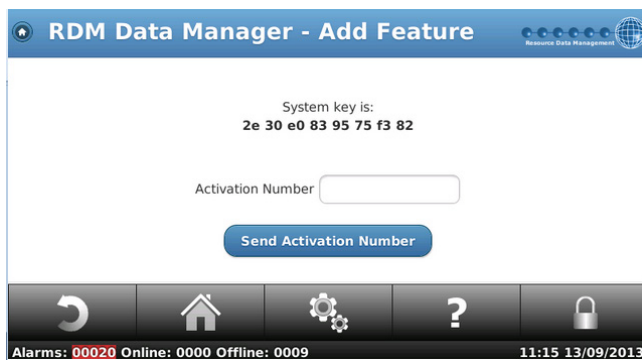
dmTouch Enhanced Software Updates

The dmTouch has a wide range of software enhancements which can be factory installed or easily added at a later date as required. Providing total flexibility and cost effectiveness it allows users to select exactly what they need, rather than pay for features that are not necessary to their specific application or project. For example, if a site only requires the logging of 12 temperature probes with local alarms, and energy saving features (such as pack optimisation), networking capabilities and third party interfaces whilst not be activated and charged for.

Software enhancements are available in three categories:

- Energy saving features
- Network options
- Third party interfaces

Enhanced features can be activated remotely by RDM if the dmTouch has remote access capabilities, otherwise the features can be activated by the user entering a unique 16 digit activation code using the dmTouch's keypad.



Each dmTouch has a unique system key. When this key is quoted to RDM technical support an activation will be generated. The user then simply needs to type the activation code into the dmTouch and the unit will automatically restart with the new feature(s) enabled.

In most cases a number of features can be added with a just single activation key.

for more information about energy saving features please refer to pages 26 and 27.



Monitoring software

dmTouch and displays

Intuitive Controls

Mercury Controls

Wireless Mesh

Sensors

Ancillaries

PR0623

USB to RS485 Modbus® Interface

Features

- Modbus® RS485 Interface
- USB Connection to dmTouch
- Simple Plug and Play installation.

Dc Voltage 5V
Rated Current 0.1A (USB Powered)

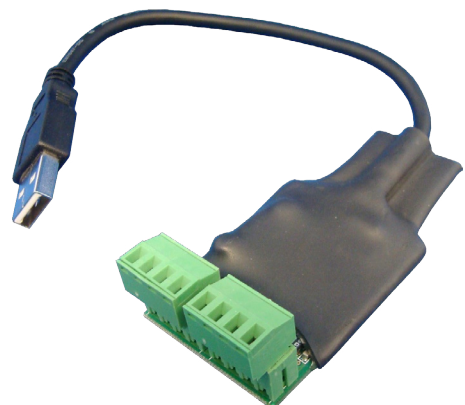
Mechanical

Dimensions 35 x 22 x 260mm
Weight 50g (1.7 oz)

Ordering Information

Description	Part number
USB Plant Modbus® Adaptor	PR0623

Note: This product is also available in a DIN mount enclosure. The DIN mount enclosure is typically used with the Intuitive range of controllers.



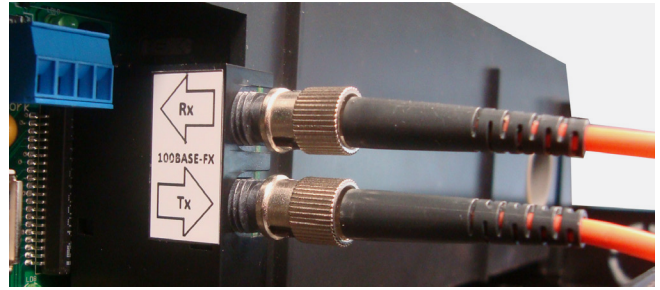
PR0510F

Fibre Interface

100Base-FX Fibre Networking

Fibre optics have a long proven track record of providing data transmission backbones all around the globe. The Data Manager Fibre Interface allows the Data Manager to be run over very long distances using low cost fibre optic cable without the need for repeaters to boost signals.

Fibre optic cables provide high reliability network connections which are not effected by electromagnetic noise, removing the need, and associated costs, for special segregation between data and power cables. Cable cost and distance restrictions can make copper network wiring prohibitively expensive. Wireless networking can often overcome these issues, dependent upon site conditions; however wireless networking can be less reliable and create security concerns. A fibre optic network is intrinsically very secure and reliable by design and does not require complex security settings to be configured on installation.

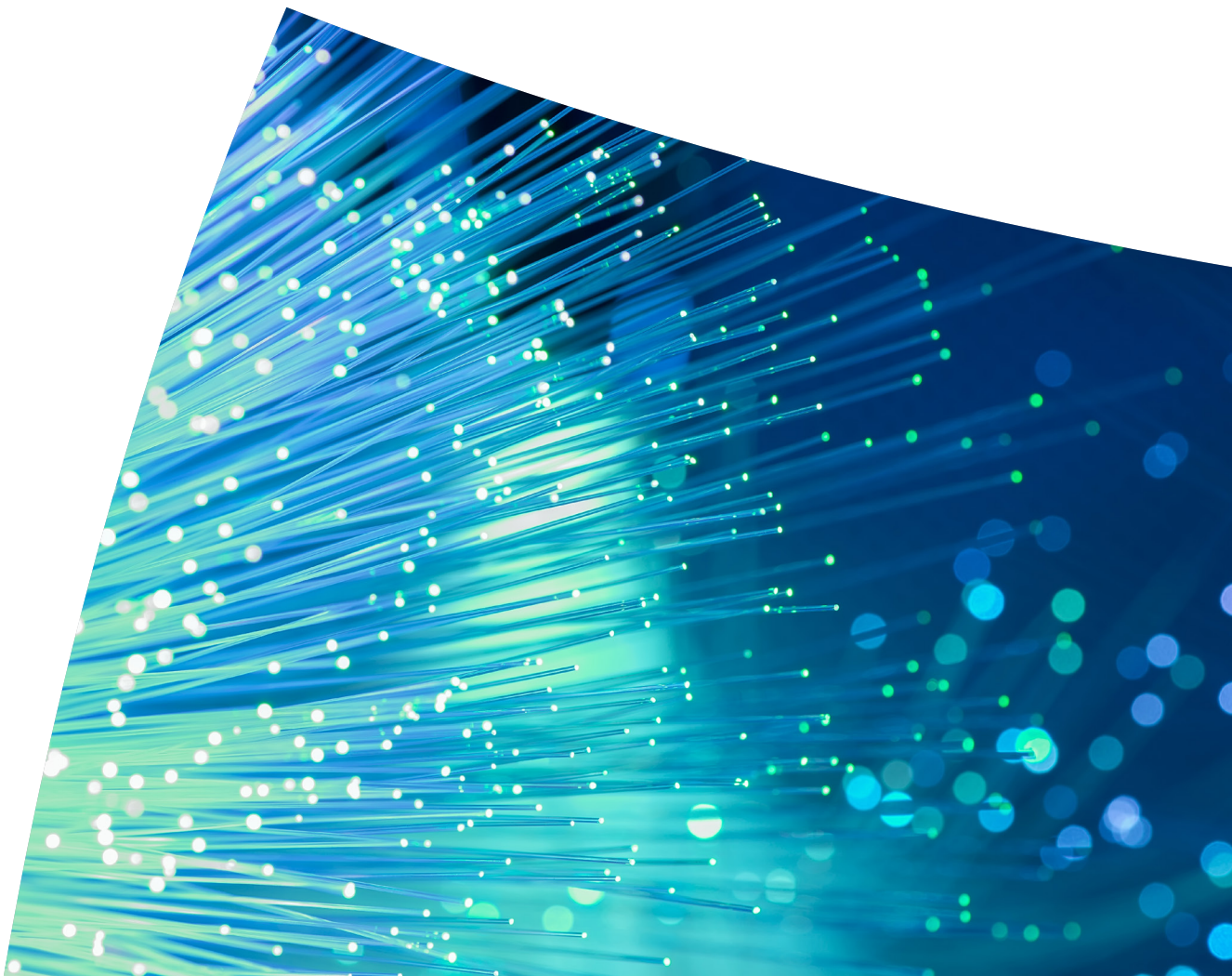


Features and Benefits

- Bayonet style (stick and twist) connections for easy installation
- Immune to Electromagnetic Interference
- Very long distance (> 2000m)
- Non Conductive Cables
- Ease of cable installation due to small cable size and low weight (typically 3mm OD / approx. 8kg per 1000m).

Specification

- Multimode Duplex Fibre Optic Interface
- Connectors: IEC 61754-2 ST Connections
- Maximum Recommended Conn

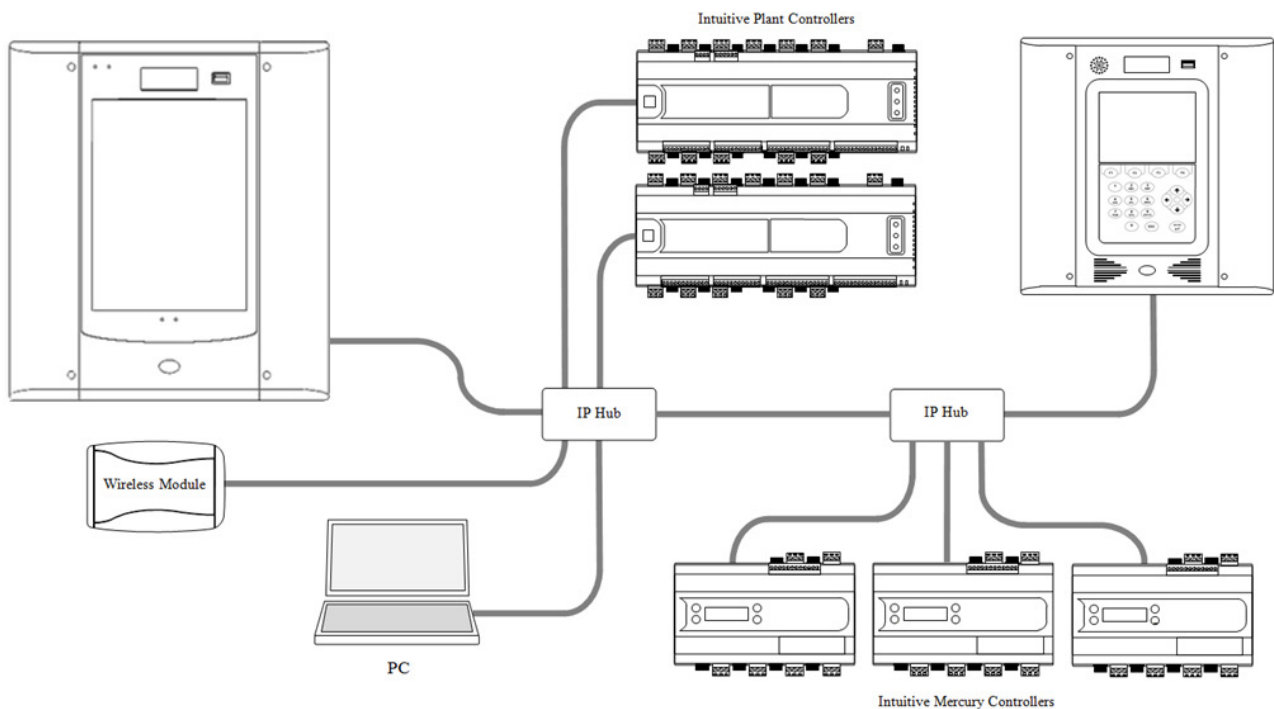


IP Network Option

PR0481 IP Network

The dmTouch primary IP network is used to connect to a wide range of networkable devices such as the RDM range of Intuitive and Mercury controllers, Orbit remote consoles and on site PCs.

The IP network uses the Cat 5 wiring system which is the worldwide standard in computer networking. Cat5 cables are widely available and are supplied with latching connectors fitted at both ends, cables can be up to 100m long. As with normal IP networks, cabling can be greatly reduced and simplified by using network hubs, again these are widely available in high street stores as well as from RDM. Typically a group of controllers would be connected to a single hub and a single Cat 5 cable run back to a dmTouch or Data Manager directly or via another hub.



The above example shows a simple dmTouch IP network, a typical system may have well over 100 remote devices.

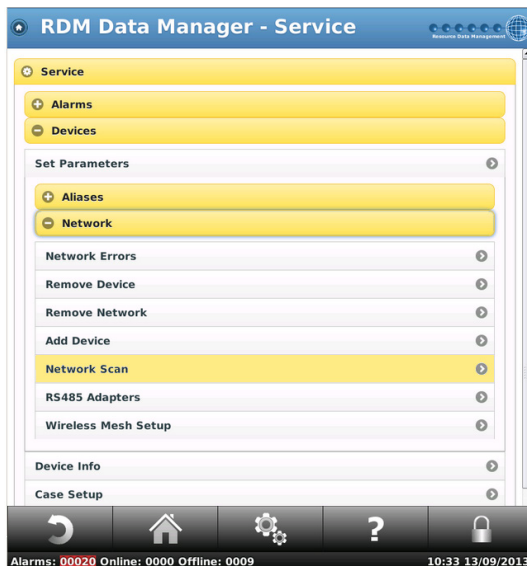
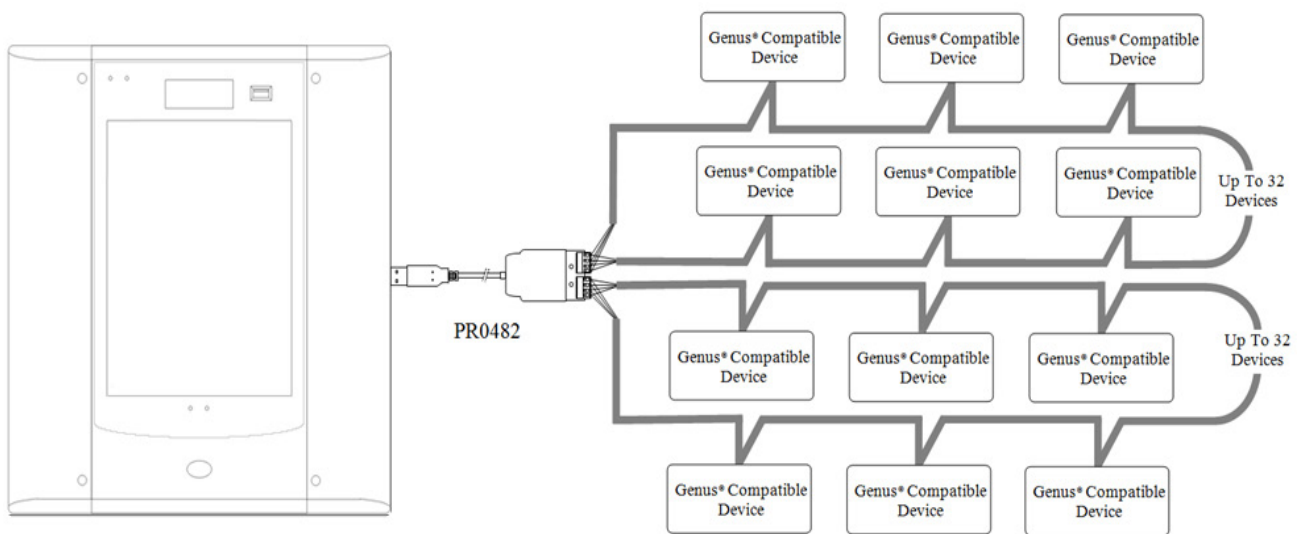
The Data Manager has a built in DHCP server which automatically issues a unique IP address to each IP device. Intuitive devices have three rotary switches which gives each one a unique ID to differentiate them on the Data Manager's device list.

RS485 Network Option

PR0480 RS485 Network

RS485 is a data network standard which is robust, has high immunity to electrical noise and can transfer data up to a distance of 1200 metres, making it ideal for use in industrial and commercial applications.

A dmTouch or Data Manager is equipped with one RS485 network interface as standard, more can be added using the RDM USB Network adaptor (PR0482). RS485 network capability is optional and can be activated using product code PR0480



RS485 communications ability means that a dmTouch or Data Manager can be used with existing networked Genus® compatible controllers without the need to replace network wiring.

Once the network is connected, using the Network Scan option will, in most cases, locate all the Genus® Compatible devices and log them onto the dmTouch or Data Manager. Genus® compatible devices can also be logged on manually.

PR0488

USB to LON[®] Adaptor

XLON[®] adaptor

This USB adaptor allows connection of certain LON enabled devices to the dmTouch (or Data Manger). Currently there is provision for Danfoss[®] LON devices only (subject to change).

Features

Available with RS485 Transceiver for Twisted pair network or FTT-10A transceiver for Free Topology

Communications

USB 1.1 12Mbit/s

LON[®] via FTT-10A or RS485 Transceivers

Power (via USB)

5V DC +/- 5%, 100mA typical

Environmental

Operating temperature: 0° to 70°C (32° to 158°F)

Operating humidity: 0% to 90% (non condensing)

Dimensions

123 x 68 x 30mm (4.8 x 2.7 x 1.2in) Weight: 100g (3.5 oz)

Warranty

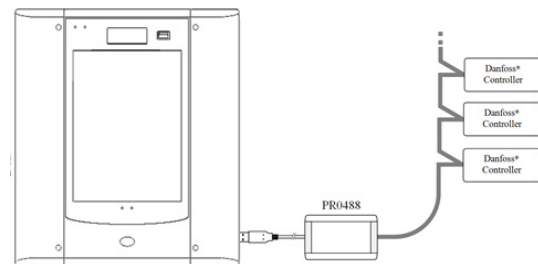
6 month manufacturer warranty



Ordering Information

Description	Part number
USB to LON [®] Adaptor RS485	PR0488-485
USB to LON [®] Adaptor FTT-10A	PR0488-FTT

Typical wiring



PR0489

USB to CANbus Adaptor

This adaptor allows a variety of RDM Intuitive expansion boards to be connected directly to a dmTouch (or Data Manger) running a TDB application, this greatly increases the amount of inputs and outputs available to the user.

Features

- Communicates with up to 10 RDM Intuitive Expansion boards.
- Self powered from any one of the dmTouch's USB ports.
- Plug and play installation

Communications

Up to 1Mbit/s CAN bitrate, USB 2.0 Full Speed

Power

Maximum Current: <0.1A

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Dimensions

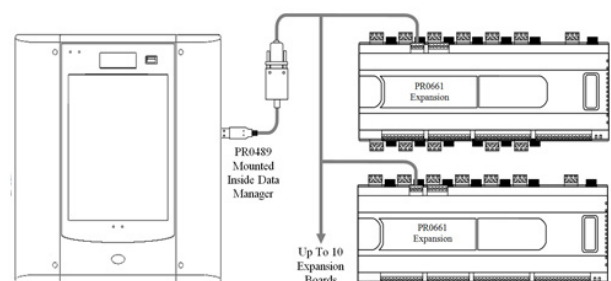
55x 36 x 16mm (2.2 x 1.4 x 0.6 in) Weight: 65g (2.3 oz)



Ordering Information

Description	Part number
USB to CANbus adaptor	PR0489

Typical wiring



PR0020

RS485 to IP Communications Module

MODBUS® Variant

The RS485 to IP module is used to convert RS485 Modbus® traffic, from a third party network, into Modbus TCP/IP traffic for use with an RDM dmTouch. This will allow RS485 Modbus devices, such as energy meters, to an IP network thus reducing wiring costs and complexity onsite.

Features

- 10/100 Base-T port with Auto MDI-X feature allowing either a standard or cross over patch cable to connect directly
- Rotary switches to allow easy static IP addressing
- DHCP option to allow automatic IP addressing
- Allows up to 32 Modbus devices to be networked using one gateway
- Gateway can be used as a standard RS485 Modbus to Modbus TCP/IP module without the use of a dmTouch.
- Powered from low voltage supply (included in kit)
- DIN or panel mount options

Power

5Vdc, <500mA

5V / 90-230Vac Switch module power supply included in kit

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 80% max

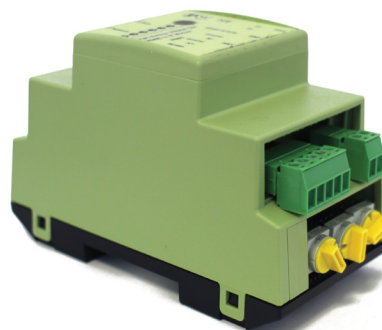
Panel Mount

Dimensions (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)

Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)



Ordering Information

Description	Part number
RS485 to IP Module—Modbus Variant	PR0020-MOD
RS485 to IP Module—Modbus Variant	PR0020-MOD DIN

Possible RS485 Network Configurations

MODBUS Setup	Value
Type	RTU / ASCII
Baud Rate	9600/ 19200
Data Bits	7/ 8
Parity	None/ even/ odd
Stop Bits	1/ 2

Intuitive Controls

Intuitive controls are designed to be powerful without the fuss of being complicated to programme or set up. With the added benefit of being quick to install with DIN rail mount.

Designed to be fully configurable the Intuitive PLC controller can be programmed using The Data Builder software package giving the user complete control of all aspects of the device. This enables users to develop their own control strategies, allowing them to rapidly develop bespoke site specific applications for their customer with the minimal of time and cost.

With a modular design the Intuitive Control range can be configured with a main control unit and up to 10 expansion modules offering huge application possibilities.

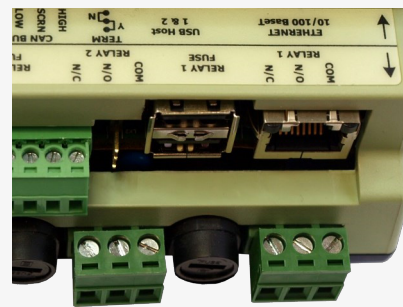
Easy to install, easy to configure and easy to operate, a truly Intuitive product range.

Intuitive Features (included features vary depending on specific product within the range)

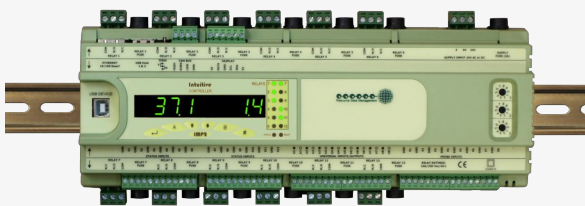
Flexible Display Options



Built in IP Communications & USB Ports



DIN Rail Mount



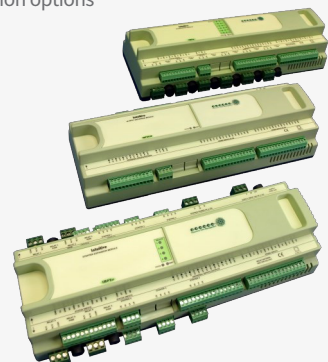
Front USB interface



Fused Supply Input. Optional on-board fusing for Relay Outputs providing the greatest flexibility and cost effective solution.



Wide range of expansion options



PR075x/PR076x TDB

Intuitive Mercury

TDB Programmable Logic Controller

Advanced flexible controls

Based on the proven technology of the Mercury controller range, the Intuitive TDB Mercury is a fully programmable controller in a compact and quick to mount DIN enclosure. It is typically used across multiple HVACRRR and BEMS applications e.g. to control a boiler, fan coil or air handling unit. With optional on-board fusing and network interface slot, there are multiple variants of the Intuitive TDB Mercury available to suit flexible requirements.

Offering high-quality, reliable, affordable and high performance control that will satisfy the most demanding applications.

Typical applications

HVACRR, Process control, BEMS systems, Industrial automation.



Flexibility to suit your application

Flexible network options*

Future proof IP connectivity is available for quick and secure networking. IP connectivity allows for the Intuitive Mercury TDB controller to be monitored by a Resource Data Management Data Manager which provides remote access to data, alarms and settings.

* Networking via optional network interface module

Easy configuration

The Data Builder editor suite allows the user to develop their own control strategies to exactly match the application. Easy to understand and quick to customise. When using Data Builder with an Intuitive Mercury it is configured with a standalone Windows application. Password protection of your programs means you can avoid unauthorised changes to the design as well as preventing copying of the design by others.

The Data Builder standalone programming application for Windows can be downloaded for free from the RDM website. This allows complex control strategies consisting of hundreds of blocks to be designed, developed and simulated before being downloaded into an Intuitive Mercury TDB controller. The Data Builder standalone application also has an "Online" mode. Here values are updated in real time which allows the user to confirm or fault find their control strategy.

For details on the TDB programming application see pages 21 to 23.

Ordering Information

Description	Part number Integral Display / Remote Display
Intuitive Mercury TDB, Mechanical Relays	PR0750 TDB / PR0760 TDB
Intuitive Mercury TDB, Solid State Relay	PR0751 TDB / PR0761 TDB
3 x Temperature Probe Expansion Card*	3P
1 x 0-5V/0-10Vdc Input & 1x 0-5V/0-10Vdc Output Exp Card*	Vi/Vo
2 x 0-5V/0-10Vdc Input Expansion Card*	2xVi
2 x 0-5V/0-10Vdc Output Card*	2xVo
1 x 0-5/0-10Vdc Input & 1 x Probe Input Expansion Card*	1PVi
1 x 4-20mA Input & 1 x Probe Input Expansion Card*	1PAi
2 x 4-20mA Output board Expansion Card*	2xAo
3 x Input High Speed Pulse Counter Expansion Card*	3HSP
1 x 4-20mA Input & 1 x 4-20mA Output Board	Ai/Ao

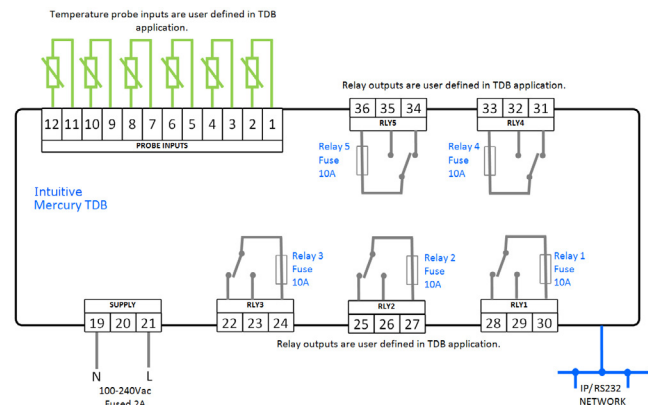
*Optional expansion cards are factory fit only, quote the desired expansion card part reference at the end of your controller part number when ordering.

Note: Intuitive Mercury controllers are available with or without on-board fusing. When ordering please include NF to indicate "Non-Fused", for example, PR0750.

Features

- 5 Configurable Relay Outputs
- Switch mode power supply for use in any country
- 6 User definable inputs (Temperature probe or digital input)
- Solid State Relay (SSR) output options
- Optional Expansion card to provide additional I/O

Typical wiring



Inputs

6 Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K NTC10K(2) user defined temperature probes or volt free digital inputs

Outputs

5 Fused Relay outputs (fuses are optional)

10A (250Vac,30Vdc) resistive load, (5A COSφ=0.4 Inductive load)

Power

100-240Vac +/-10% 50-60hz (Typ. <1A) Class 2 Insulatfon

Environmental

Operating temperature: -10° to +60°C (14° to 140° F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions: 120 x 157 x 67mm (4.7 x 6.2 x 2.6in)

Weight: 500g (1.1lb)



Intuitive Mercury

Networking

Intuitive Mercury controls offer the ultimate in network flexibility to suit your application.

Want to use external network modules? No problem. Want the network internal? No problem.

Intuitive Mercury ships as standard with an RS232 interface allowing external network modules to be connected. However the Intuitive design includes an onboard network interface slot with the ability to install internally an IP or WiFi network module.

This can be factory fitted for your convenience or alternatively if you have parts already in the field (or your stock), you can install the network module yourself simply by purchasing an upgrade kit.

Optional cables

Description	Part number
0.5m CAT5E Patch Cable	PR0384
1m CAT5E Patch Cable	PR0385
3m CAT5E Patch Cable	PR0386
5m CAT5E Patch Cable	PR0387
15m CAT5E Patch Cable	PR0389

IP Internal Network Option



Ordering Information

Mercury Intuitive Internal IP Module	PR0770
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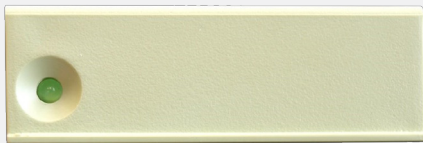
IP External Network Options



Ordering Information

Futura IP Module	PR0016
Futura IP Module DIN Mount	PR0016 DIN
Mercury IP Switch / Switch with Pressure/ Humidity Inputs	PR0018 / PR0018-PHI
Mercury IP Switch / Switch with Pressure/ Humidity Inputs with Fibre Connectivity	PR0018 F

Wifi – Internal Antenna Option



Ordering Information

Mercury Intuitive WiFi Daughter Card - Internal Antenna	PR0769-INT
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Wifi – External Antenna Option



Ordering Information

Mercury Intuitive WiFi Daughter Card - External Antenna	PR0769-EXT
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PR0657

Intuitive Wi-Fi Interface

The introduction of an RDM USB Wi-Fi adapter allows the PR0650 TDB Intuitive range to interact with a standard Wi-Fi network, offering greater choice and flexibility for network installations. The USB Wi-Fi adapter is an optional plug and play communication accessory.

Optional cables

Description	Part number
Intuitive Wi-Fi Interface	PR0657

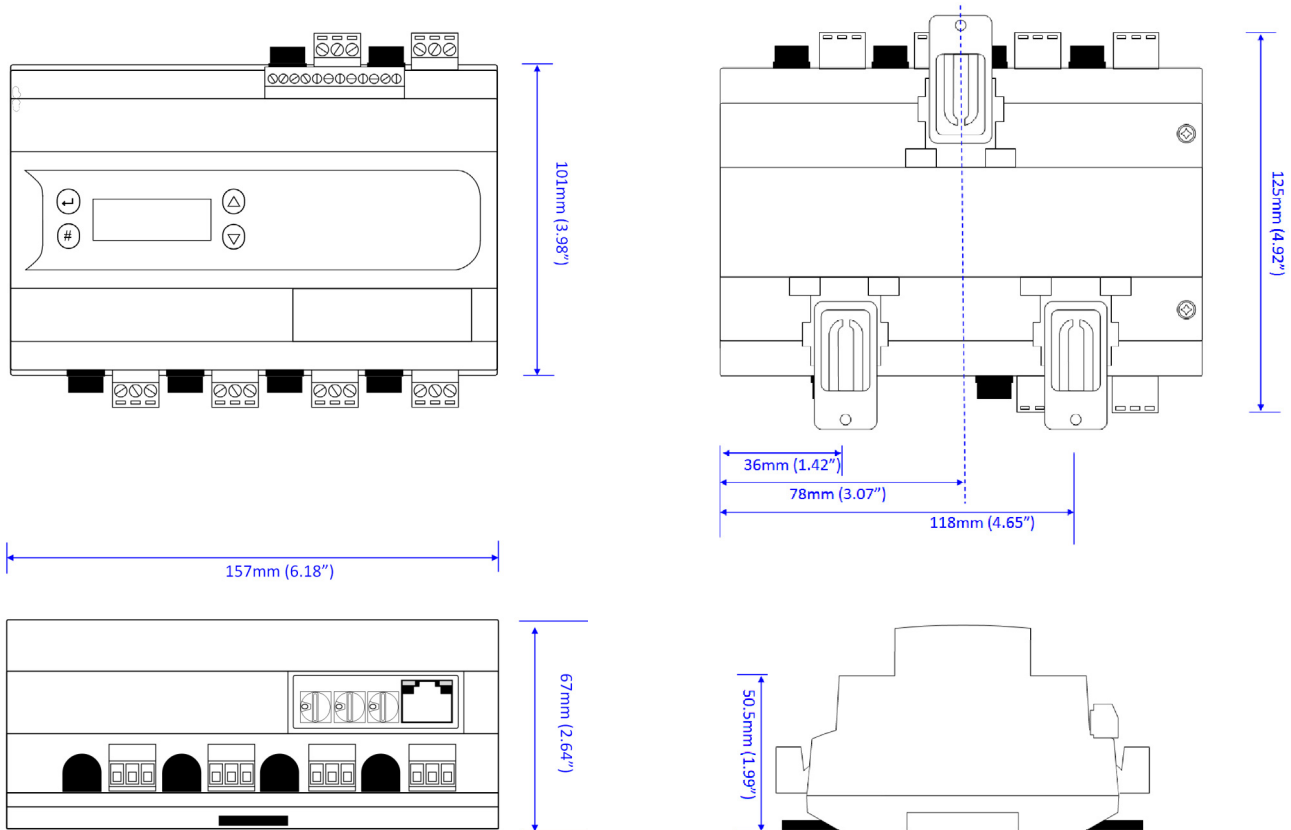
Typical applications

HVACR, Process control, BEMS systems, Industrial automation.



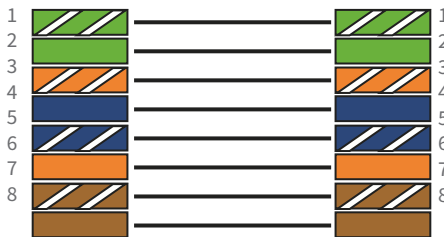
Note: contact technical support if you are outwith Europe and wish to purchase this product.

Intuitive Mercury mechanical information

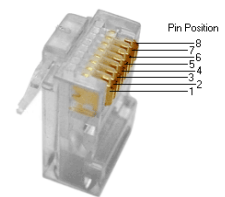
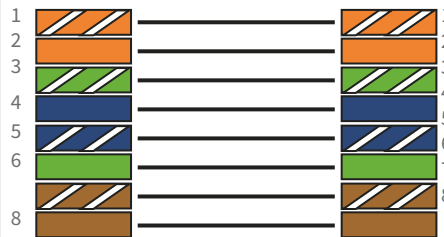


All Dimensions: mm (inch) - Please note that designs vary slightly depending on version purchased.

T568A Straight Through Wiring



T568B Straight Through Wiring



Technical Tip—IP Network Wiring 2

Question

Is wiring of CAT5 cables important?

Answer

Yes it is very important due to the design of CAT5/CAT5E cables that the end/connectors are wired to ensure that the twisted pairs are in the right order. The position of these twisted pairs provides the noise reduction to ensure that there is no data loss on long cable runs. Cables are most commonly wired to one of two International standards T586A and T586B. Either standard can be used but for good wiring practice it is recommended to keep wiring consistent during installation.

PR0650 TDB

Intuitive Controller

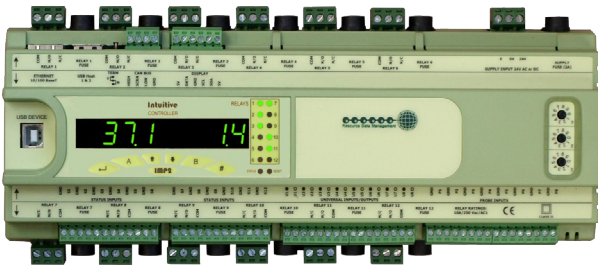
TDB Programmable Logic Controller

The flagship product in the Intuitive range, the Intuitive TDB Controller, is a fully-featured, high performance unit with an impressive variety of inputs and outputs. The controller is contained within an easy mount, compact DIN enclosure and with flexible network and display options it can facilitate the most demanding HVACRR (heating, ventilation, air conditioning and refrigeration) and BEMS (building energy management system) applications. It can be used with up to 10 expansion I/O modules to control up to 480 points across a site.

The Data Builder (TDB) allows you to develop your own control strategies to exactly match your application. Easy to understand and quick to customise, The Data Builder can be used as a stand alone Windows application or by direct connection to a Data Builder enabled Intuitive Controller. Password protection of your program means you can avoid unauthorised changes to the design as well as preventing copying of the design by others. The TDB programming application is provided pre-installed with the Intuitive TDB Controller at no extra cost. The PC

Typical applications

BEMS systems, heating and ventilation, energy management, process control, lighting, refrigeration.



Features

- 8 x Temperature Inputs (resistive)
- 12 x Digital Inputs
- 12 x Configurable Relay Outputs (optional fusing)
- 8 x Universal I/O (0-20mA / 0-10Vdc, in or out)
- 2 x USB-A Ports for Ancillary Equipment
- 1x USB-B Port for local Laptop connection
- CANbus Interface & IP Ethernet connectivity
- Built in simulation feature for easy testing & fault finding
- 24V ac/dc supply
- Web browser enabled
- Data Builder Software Pre-installed
- RDM Wireless Mesh - Relay Control
- TLS Support
- Configurable Remote XML Access
- Test Dialout Functionality^{New}
- Item Visibility^{New}
- Mobile Network Compatibility^{New}

Optional Extras

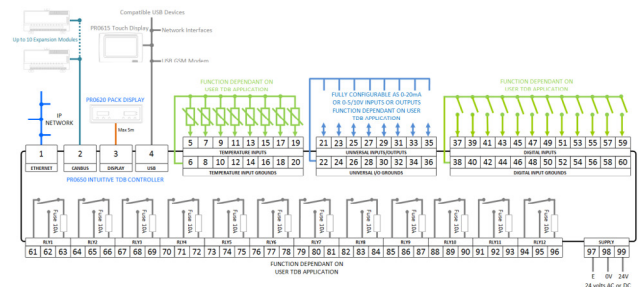
- Expansion cards*
- BACnet Interface
- Options for internal or remote displays including Intuitive Touchscreen Display-IMPt PR0615
- Communication with third party Modbus® based Energy meters using the USB Plant Modbus adapter PR0623/PR0625
- Count pulses using the Plant USB Pulse Reader PR0622 (typically from a utility meter or flow measurement device)
- Fused or Non-Fused options
- Type Editor - for the creation of read-only Modbus® templates^{New}
- Read/Write Template Support^{New}

Ordering Information

Description	Part number
Intuitive Controller With TDB	PR0650 TDB
Intuitive Stepper Expansion Board	PR0660
Intuitive I/O Expansion Board	PR0661
Intuitive 48 Channel Expansion Board	PR0662
Intuitive TDB BACnet Interface Enabler	PR0655
24V 2A DIN rail Power Supply	PR0625

*Note: Intuitive controllers are available with or without on-board fusing. When ordering please include NF to indicate "Non-Fused or Fused", for example, PR0650 NF TDB. **Add E1 to the end of a part number to substitute an electromechanical relay for an SSR. Use E2 for two relays etc.

Typical wiring



Specification

Inputs

8 Temperature Inputs

Probe types supported (PT1000 (default), 470R, 700R, 2K, 2K25, 3K, 5K, 6K, 10K, 10K(2), 100K) Range: -99°C to +127°C or user definable -240°C to +350°C Configurable as Deg Celsius or Deg Fahrenheit

12 Digital Inputs

0V return or 24Vac (configurable as normally open or normally closed)

8 Universal I/O: 0-20mA / 0-10Vdc in or out

Outputs

12 Fused Relay Outputs (fuses are optional)

10A (250Vac, 30Vdc) resistive load, (5A COSφ=0.4 Inductive load)

Power

Supply Voltage Range: 24 Vac ±10% or 24 Vdc ±10%

Supply Frequency: 50 – 60 Hz ±10% or dc

Maximum supply current: <1.0 Amp

Typical supply current: 0.3 Amp

Environmental

Operating temperature: -10° to +60°C (14° to 140° F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions: 122 x 280 x 67mm (4.8 x 11 x 2.6in)

Weight: 0.75Kg (1lb 10.5oz)



The Data Builder (TDB) programming application

The Data Builder application is an Intuitive, graphics based programming tool which is supplied embedded in an Intuitive TDB controller, a dmTouch with TDB enabled or available as a stand alone PC package. When connected directly to an Intuitive TDB controller or dmTouch, the “Online” mode allows real time viewing of the controller’s inputs, outputs and parameters which provides easy fault diagnosis and system overview.

Applications are developed by selecting from a comprehensive but straightforward selection of blocks. Blocks are then linked using virtual “wires” which are automatically coloured red for analogue or blue for digital, built in safety features prevent accidental analogue to digital connections.



TDB applications are fully password protected to prevent unauthorised users from copying or amending applications. Applications can be easily uploaded to a PC (subject to password protection) and transferred to one or more controllers.

A maximum of 10,000 control blocks (Up to 2000 if using an Intuitive Mercury controller) and interconnects can be added to any single application. Blocks are categorised under the subsections I/O, Logic, Mathematical, Time, Functional, Diagnostic, Custom, Text, Shortcut and Setting. Blocks available will vary slightly depending on the hardware platform being used.

Examples of TDB design blocks

I/O Analogue in

Allows an analogue input to be brought into the application, typically a temperature probe, a lux sensor or a pressure transducer. The block has 11 different probe tables built in or the option to add a custom table.



4 Input AND gate

A simple logic gate it allows 4 digital inputs to give a single digital output if all 4 inputs are “On”, for example if 4 different conditions need to be satisfied before an alarm is generated.



Mathematical algebra block

The algebra block can perform calculations on up to 5 different analogue values. Calculations which can be carried out are addition, subtraction, multiplication, division, raise to the power of and a variety of trigonometric and log equations.



Time daylight block

By entering the longitude and latitude of any location on the planet, this block will calculate whether it is currently daytime, night time or twilight at that location. This is useful for switching lighting on when it gets dark when no light sensor is being used.



Functional direct PID

This block calculates a percentage output based on the rate of change of an input against a target set point. This is useful for controlling the speed of an inverter drive with relation to an analogue value such as pressure or temperature.



Diagnostic analogue display

Analogue displays can be added at any point in an application and will show the instantaneous value of the item it is connected to. This can be used in real time using the on line mode, or in the simulation mode.



Custom 4 stage block

Allows the user to create their own simplified block to suit a particular application which can then be used repeatedly as required. In this example, an application which contains 20 blocks has been saved as a single custom block, this makes development of future applications much simpler and quicker.



I/O Plant display block

The plant display block allows two different analogue values to be displayed on an RDM plant display as well as giving the ability to illuminate a fault LED for each display section. The button presses from the six push buttons on the display can also be read and used as required in the application.



Setting block

Allows a setting to be added to an application, settings can be analogue or digital. This setting can be internal to the application such as a starting or default value, or can be used externally as a set point, such as “target pressure”. When used externally, the setting will appear as a settable value on the user interface (PC or data manager for example).



Static text

A static text block can be added anywhere in the application to add a description to a particular section or as a reminder to the user. Text font and size can be selected as required.

Shortcut

The shortcut block allows two or more points to be connected anywhere in the application without having to draw a connection line between them. This makes larger applications easier to work with and simpler to follow.



Functional display cascade

When used in conjunction with an Intuitive Touchscreen, the cascade block, when triggered by the TDB application, displays a user definable text message with two option buttons. Depending on which button is pressed, the appropriate output will be activated.



PR0661

Intuitive I/O Module

Modular expansion for Intuitive Controller

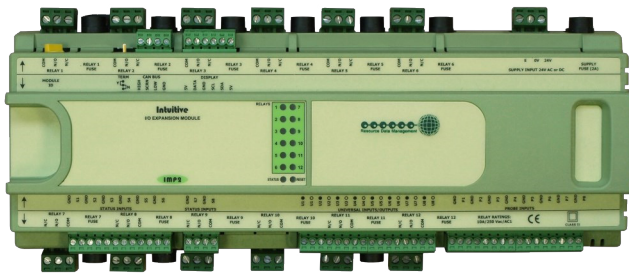
The Intuitive I/O Expansion Module provides an impressive array of additional inputs and outputs for the Intuitive Controller, all within a small footprint which is DIN rail mountable.

The I/O Expansion Module provides an additional 12 relay outputs, 8 status inputs, 8 universal analogue inputs and outputs, and 8 temperature probe inputs. This module can be used with Intuitive Controller variants which can be expanded, such as TDB, CO2 or Circuit Controller.

Optional integrated fusing on the controller for all relays provides additional protection for both the attached hardware and the controller itself.

Typical applications

BEMS Systems, HVACR, Refrigeration, Process Control



- Expands the capability of the Intuitive Controller
- Automatic detection and seamless integration with a range of master Intuitive controllers
- Robust CANbus communications with up to 10 expansion modules and the main plant controller
- Can be situated up to 500m from the main plant controller

Ordering Information

Description	Part number
Intuitive IO Expansion Module	PR0661 NF

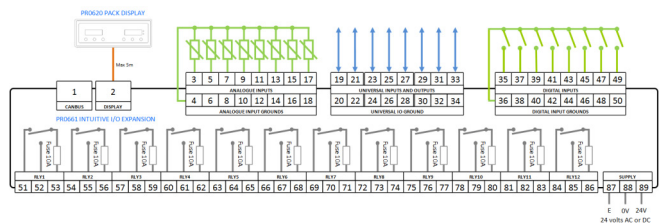
Options	Part number
Plant Controller Panel Mountable Display	PR0620
24V 2A DIN / Panel mountable Power Supply	PR0625

Note: Intuitive controllers are available with or without on-board fusing.
When ordering please include NF to indicate "Non-Fused" e.g. PR0661 NF

Features

- 8 x Temperature Inputs
- 8 x Digital Inputs
- 8 x Universal 0-20ma or 0-5/10Vdc Inputs or Outputs
- 12 x Relay Outputs (fusing optional)
- CANbus Interface
- Built in CANbus termination resistor
- 24V ac/dc supply
- Options for remote displays
- All connections plug and socket

Typical wiring



Communications

CANbus (Bit rate 125kbits/s). Maximum cable length = 0.5km (0.3mi)

Inputs

8 Temperature Inputs

Probe types supported PT1000, 470R, 700R, 2K, 2K25, 3K, 5K, 6K, 10K, 10K(2) & 100K) Range: -99°C to +127°C for PT1000
Configurable as Deg Celsius or Deg Fahrenheit

8 Digital Inputs:

0V return or 24Vac (configurable as normally open or normally closed)

Outputs

12 Relay Outputs (fusing optional)

10A (250Vac,30Vdc) resistive load, (5A COSφ=0.4 Inductive load)

Universal I/O (Inputs/Outputs)

8 x 0-5/10Vdc, 0-20mA Input or Output

Power

Supply Voltage Range: 24 Vac ±10% or 24 Vdc ±10% Class 2 Insulation
Supply Frequency: 50 – 60 Hz ±10% or dc

Environmental

Operating temperature: -10° to +60°C (14° to 140°F)
Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions: 122 x 280 x 67mm (4.8 x 11 x 2.6in)
Weight: 0.75Kg (1.65lb)

PR0662

Intuitive 48ch Module

Modular expansion for Intuitive Controller

The Intuitive 48 Channel Expansion Module provides an impressive array of additional inputs for the Intuitive Controller, all within a small footprint which is DIN rail mountable.

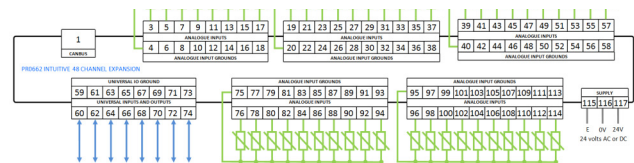
The 48 Channel Expansion Module provides an additional 8 universal analogue inputs and outputs, and 48 temperature probe or plant fault inputs. This module can be used with Intuitive Controller variants which can be expanded, such as TDB or the Circuit Controller.

Typical applications

BEMS Systems, HVACR, Refrigeration, Process Control



Typical wiring



- Expands the capability of the Intuitive Controller
- Robust CANbus communications with up to 10 expansion modules and the main plant controller
- Can be situated up to 500m from the main plant controller

Ordering Information

Description	Part number
Intuitive 48 Channel Expansion Module	PR0662

Options	Part number
Plant Controller Panel Mountable Display	PR0620
24V 2A DIN / Panel mountable Power Supply	PR0625

Features

- 48 x Temperature / Plant Fault Inputs
- 8 x Universal 0-20mA or 0-5/10Vdc Inputs or Outputs
- CANbus Interface
- Built in CANbus termination resistor
- 24V ac/dc supply
- All connections plug and socket

Communications

CANbus (Bit rate 125kbits/s). Maximum cable length = 0.5km (0.3mi)

Inputs

48 Temperature Inputs

Probe types supported (PT1000 (default), 470R, 700R, 2K, 2K25, 3K, 5K, 6K, 10K, 10K (2), 100K) Range: -99°C to +127°C for PT1000
Configurable as Deg Celsius or Deg Fahrenheit

Universal I/O

8 x 0-20mA, 4-20mA, 0-5Vdc or 0-10Vdc, User definable

Power

Supply Voltage Range: 24 Vac $\pm 10\%$ or 24 Vdc $\pm 10\%$ Class 2 Insulation
Supply Frequency: 50 – 60 Hz $\pm 10\%$ or dc
Maximum supply current: <1.0 Amp Typical supply current: 0.3 Amp

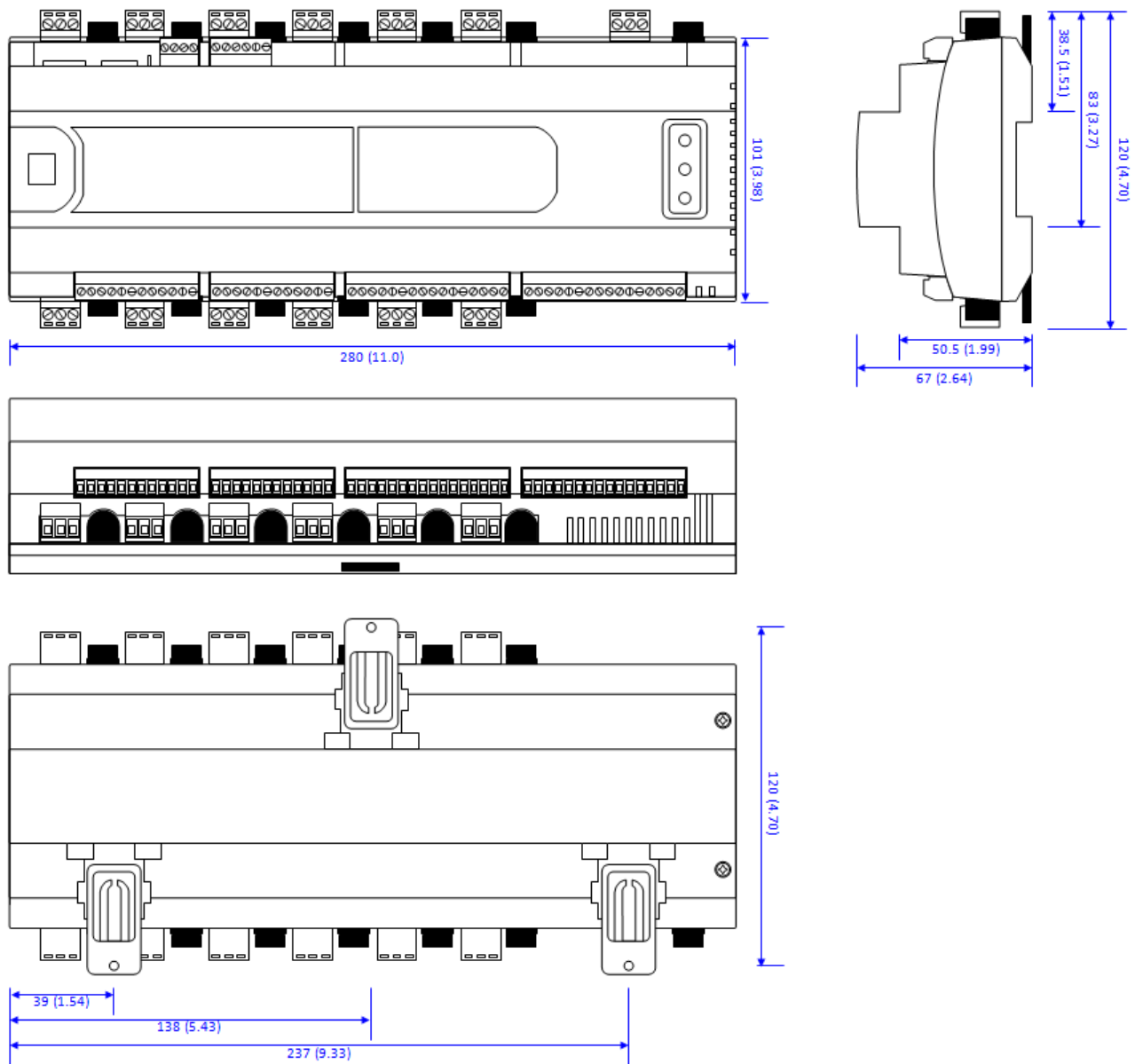
Environmental

Operating temperature: -10° to +60°C (14° to 140°F)
Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions: 122 x 280 x 67mm (4.8 x 11 x 2.6in)
Weight: 0.75Kg (1lb 10.5oz)

Mechanical (PR0650 all versions, PR0660, PR0661, PR0662)



All Dimensions in mm (Inches)

PR0615

Intuitive Display

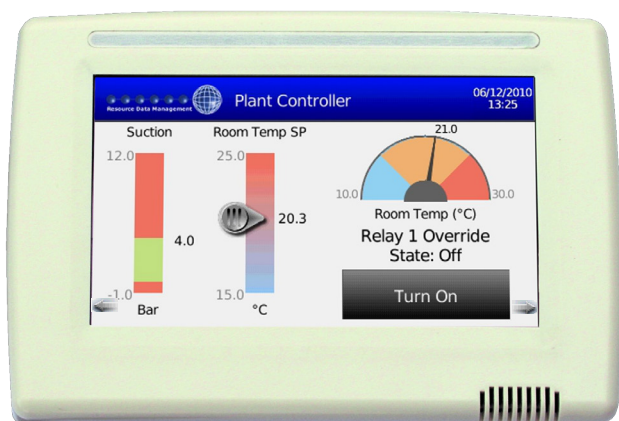
Touchscreen display

Intended for use with Intuitive and Plant controller ranges, the Intuitive Display offers a flexible customisable graphic display to provide easy access to data and settings.

Utilising an industry standard USB cable the display can be mounted up to 5m away from the controller.

All power for the device comes from the controller its connected to via the USB connection, so no additional power supply is needed and there are no batteries to worry about replacing or recharging.

The Intuitive display is offered at a low price yet still includes the standard Resource Data Management 5 year limited warranty.



Intuitive menus to suit your application

Plug and play connections at both controller and display allow installers easy options for routing of cables.

Intuitive plug and play operation

Customisation of the display resides within the controller so when distributing your custom Data Builder applications it is simply the case of plugging in a standard Intuitive Display and downloading the configuration to get access to your custom menus.

Intuitive functionality

The Intuitive display can allow access to key menus and settings of the controller to provide the greatest flexibility.

Intuitive installation

The Intuitive Display can be fitted directly to a wall or panel using the supplied mounting bracket or fitted to a number of standard wall pattresses. The cable has multiple routing options to suit your application.

Reliability

5 year limited warranty

Ordering Information

Description	Part number
Intuitive Touchscreen Display—IMPt	PR0615

Features

- Multi-coloured light bar for indication of operation or alarms.
- Up to 5 customised screens can be configured to show just the information required.
- Wall and panel mounting.
- Flexible cable routing options
- 1m & 5m USB cable supplied.
- Provides access to key features of the controller
- Password protection when changing parameters
- Built in alarm sounder

Screen

Resolution: 480*272 (4.3" WQVGA) TFT

Colour: 24bit RGB

Touch: Resistive. Rated for >1million operations

Connections

Micro USB

Power

5V Supplied from controller. ENVIRONMENTAL

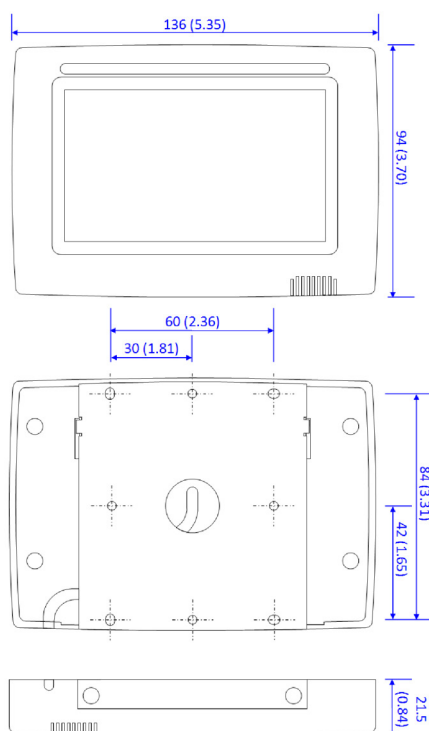
Operating temperature: -1° to +60°C (14° to 140°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions (Excl cable) H X W X D: 98 x 136 x 22mm (3.86 x 5.35 x 0.87 in)

Weight: Display only 170g (6oz), display with cable & mounting bracket 345g (12.1oz)



All Dimensions: mm (inches)

Customised displays

When the Intuitive Display is connected to a controller for the first time and no custom screen has been set up, the display will show a list of current values available.

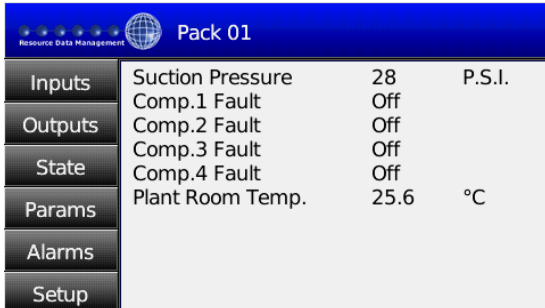


Fig 1

Up to four different customisable graphics can be added to each screen and up to five custom screens can be used on each display.

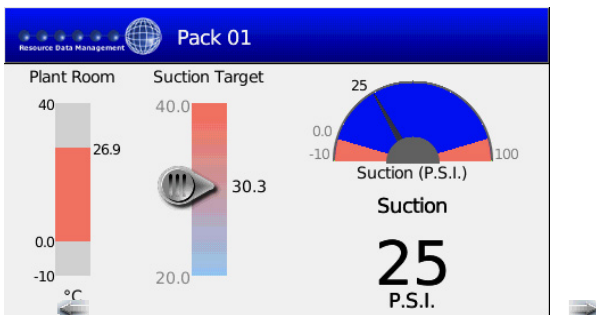


Fig 2

Analogue values can be displayed in the form of a gauge, a bar or a numerical value as shown below.

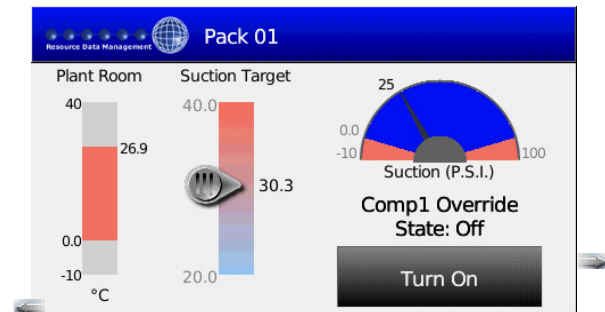


Fig 3

If used in conjunction with a controller running a TDB application, a slide icon can be used to alter an analogue parameter within the application or an override icon can be used to switch a digital value in the application on or off.

When using more than one custom screen, an arrow will appear in the bottom left or right hand corners, this indicates another screen is available to the left or right of the current screen. Touching the appropriate arrow or swiping left or right across the screen will scroll onto the next custom screen.

The power and flexibility of the Intuitive Display gives the user a quick and simple method to produce custom screens to show just the information required in a simple uncluttered form which are touch control ready.

Custom display example

A custom display can be created by selecting "Custom" from the setup tab. For security this is pass code protected.

A blank screen is displayed with a list of available icons on the left hand side, these are Value, Bar, Gauge, Override and Slide controls. The appropriate button can be touched and simply dragged across to the blank area and dropped into the desired position.

In the following example, a Gauge icon has been selected and dropped into the top right hand area of the display.

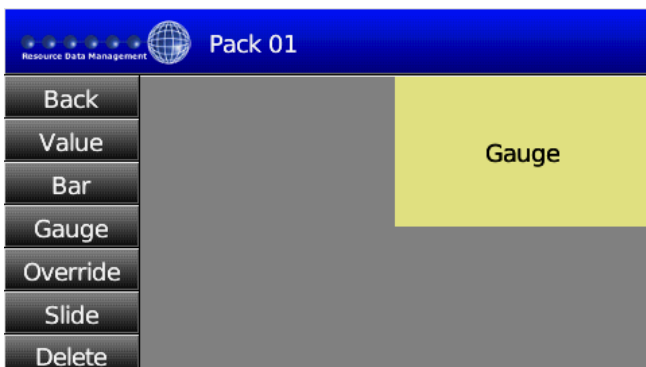


Fig 4

By touching the Gauge box all the parameters relating to it can be set up.

In the case of the Gauge these are:- the analogue value which the gauge is to display, the minimum and maximum values on the gauge scale, the high and low band values on the scale and the colours associated with the different regions on the gauge.



Fig 5

The other 3 available spaces on the custom display can now be filled in as required to complete a custom display.



Fig 6

The display will now show the custom display as default, as shown above in Fig 2. All the controller's parameters and values can still be viewed in list form if required.

PR0440-NF

Intuitive Humidistat

Humidity Thermostat

The Humidistat is a two piece controller with a separate display and relay control unit.

The display is designed to be located in the area to be measured. It is panel mountable and also compatible with a standard UK wall pattress. The display includes integral temperature and humidity sensors. The display is connected by the supplied cable to the relay control unit which can be mounted out of sight.

Typical applications

Temperature and Humidity Control



Integrated IP

Integrated Ethernet IP network option allows you to connect the Humidistat directly to your IP network without the need for an additional interface module.

Dual sensor display

Panel mountable display includes integrated temperature and humidity sensors to minimise wiring.

Easy configuration

Humidistat controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection and by remote connection from a Data Manager frontend.

Ordering Information

Description	Part number
Humidistat 3 Relay Stat with Display	PR0440-NF

Recommended Cables

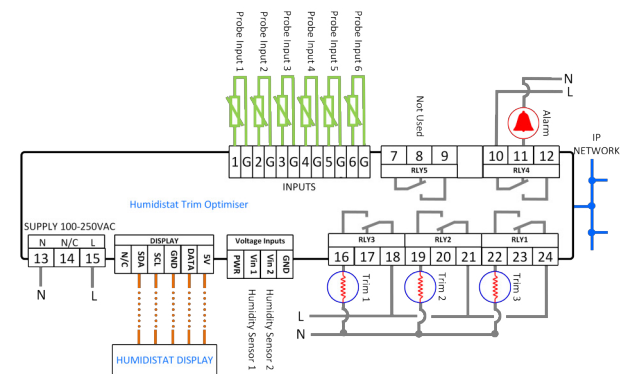
Description	Part number
0.5m CAT5E Patch Cable	PR0384
1m CAT5E Patch Cable	PR0385
3m CAT5E Patch Cable	PR0386
5m CAT5E Patch Cable	PR0387
15m CAT5E Patch Cable	PR0389

Features

- 3 Thermostat Functions
- Control on temperature and humidity
- Can be configured to control each stage off and on
- independent input or for all stages to control off a single probe.
- 7 day timer with 2 on and off times per day.
- High and Low alarms levels with delay
- Integrated Ethernet connection
- Display includes integral temperature and humidity sensors
- Supplied with display and 5m cable
- Switched mode power supply for input voltages ranging from 100v to 240v
- Panel mounting or DIN rail mounting on standard 'top-hat' DIN rail (EN 50022, BS 5584, DIN 46277-3)

Typical wiring

Example: Temperature Thermostat with Timer



Inputs

4 Resistive Probe Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed).
2 Voltage Inputs, 1-3Vdc, for a 3rd party Humidity sensor.

Outputs

5 relay outputs
Relays 1-5, 10A(250Vac,30Vdc) resistive (COSφ=0.4 3A Inductive load)

Power

100-250Vac +/-10% 50-60hz (Typ. <1A) Class 2 Insulation

Environmental

Operating temperature: -10° to +60°C (14° to 140°F)
Operating humidity: 10% to 80% (non condensing)

Dimensions

Dimensions : 120 x 157 x 67mm (4.7 x 6.2 x 2.6in)
Weight: 500g (1.1lb)

PR0620

Plant display

Remote panel mountable display

Modular display for the RDM Intuitive and Plant controller ranges.

The Plant Panel Mount Display is plug and play compatible with both the controllers and expansion modules and the 5m cable provides flexibility in positioning of the user interface away from the control panel.

Flexibility to suit your application

Plug and play connections allow for easy routing of cables.

Full functionality

The remote display gives you access to all the menus and settings of the controller as well as displaying readings and alarms.

Quick fit

The Mercury Plant Remote Display is fitted to the panel and retained in place with M3 screws (supplied).

Ordering Information

Description	Part number
Plant Panel Display	PR0620



Features

- Dual 4 segment display with 6 buttons
- Allows display to be mounted remotely from the controller
- 5m prewired display cable supplied as standard
- Provides access to key features of the controller
- Supplied with pre-printed fascia label for pack applications and a blank label for custom applications created with The Data Builder application.

Power

5V Supplied from controller.

Environmental

Operating temperature: 5°to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

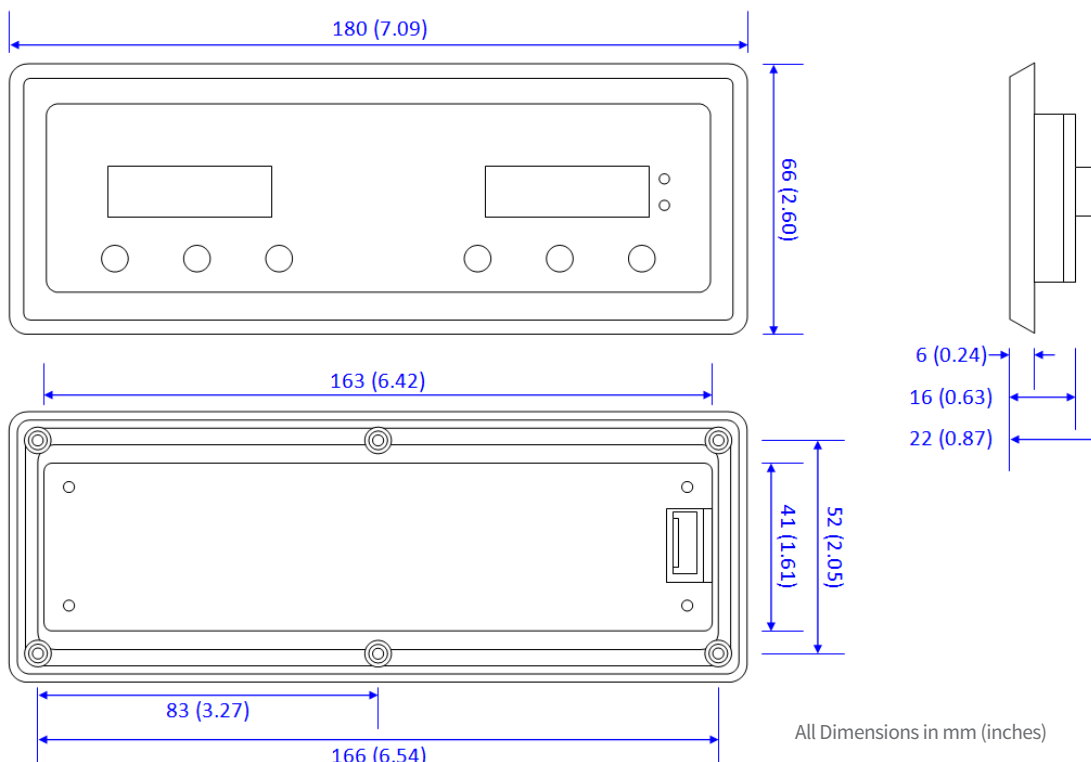
Dimensions (Excl cable) H x W x D: 66 x 180 x 22mm (2.6 x 7 x 0.9in)

Weight: 310 g (11oz)

Panel cut-out: 42 x 165 mm (1.2 x 2.8in)



Plant Display Mechanical Information



PR0445

Plant temperature/humidity display

Remote display with built in humidity and temperature sensors

Modular display for RDM Intuitive and Plant controllers.

The Plant Temperature/Humidity Display is plug and play compatible with a range of controllers and expansion boards and the 5m cable provides flexibility in positioning of the user interface away from the control panel.



Flexible connection options

Plug and play connections at both controller and display allows users easy options to routing of cables.

Flexible mounting options

The display is designed to be mounted onto a standard UK pattress box providing flush or surface mount options.

Built in humidity and temperature sensors

Provides a convenient method of reading the humidity level and temperature at the display without the need for additional sensors and wiring.

User definable push buttons

When used with a TDB controller, the 4 pushbuttons on the display can be user defined.

Ordering Information

Description	Part number
Plant Temperature/Humidity Display	PR0445

Features

- 4 segment display with 4 buttons
- 3 Status LEDs
- Allows display to be mounted remotely from the controller
- 5m prewired display cable supplied as standard
- Built in humidity and temperature sensors
- Standard pattress box mounting
- Powered from the host controller, no additional supply required.

Power

5V Supplied from controller.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

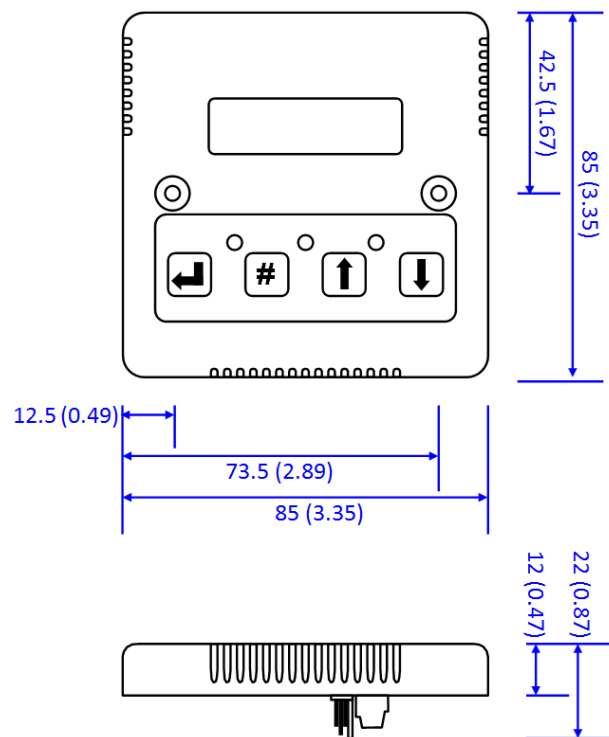
Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions (Excl cable) : 85 x 85 x 22mm (3.35 x 3.35 x 0.87in)

Weight (Excl cable) : 75 g (2.65 oz)

Mounting Centres: 60mm (2.36in)



All Dimensions in mm (inches)

PR0178

Wall mounted temperature sensor

Remote 2k temperature sensor

Modular temperature sensor for use with a wide range of RDM products.

The wall mounted Temperature sensor is compatible with a wide range of RDM controllers and monitors. It provides a convenient and neat way to mount a temperature sensor when room temperature needs to be measured.



Flexible connection options

Simple 2 wire screw terminal connection provides easy options to routing of cables.

Flexible mounting options

The sensor is designed to be mounted in a standard UK pattress box providing flush or surface mount options.

Wide range of compatible products

The sensor can be used with any RDM product that has a 2K temperature probe option such as a Data Manager, Intuitive and Mercury controller.

Ordering Information

Description	Part number
Wall Mountable Temperature Sensor (2K)	PR0178

Features

- Robust ABS plastic housing
- Utilises a 2K sensor which is less affected by long cable runs
- Simple 2 wire connection
- Standard pattress box mounting
- Negligible power consumption, supplied by controller, no additional supply required.

Environmental

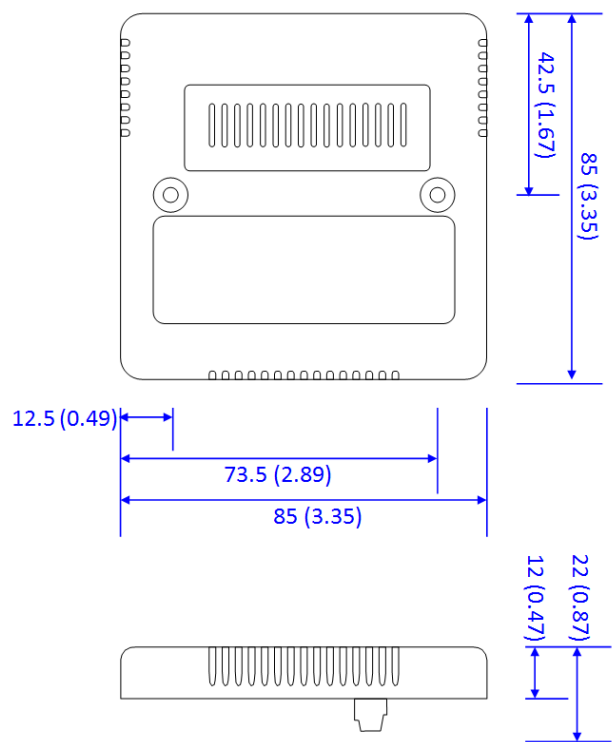
Operating temperature: -40° to 80°C (-40° to 176°F)
Operating humidity: 10% to 80% (non condensing)

Temperature sensor

Nominal resistance: 2000 ohms at 25°C
Tolerance: 1.0%

Mechanical

Dimensions : 85 x 85 x 22mm (3.35 x 3.35 x 0.87in)
Weight 50 g (1.78oz)
Mounting Centres: 60mm (2.36in)



All Dimensions in mm (inches)

PR0622

Plant USB Pulse Reader

8 channel pulse input module

The pulse reader module can be used with the RDM Intuitive TDB controller and TDB program('s) operating within the Data Manager. The module allows 8 pulse inputs to be read simultaneously and used by the TDB program operating in a controller, up to 3 modules can be used with a single controller giving a maximum of 24 pulse inputs. Pulse inputs are volt free switching, typically from a utility meter or flow measurement device.



Flexible connection options

Plug and play connections at both controller and pulse module allows users easy options to routing of cables.

USB connection

Utilises a standard USB A to USB B connection lead.

High speed pulse reading

Pulses as short as 10ms can be read.

Self powered

Up to 2 modules can be powered from the two USB host ports found on a controller without the need for an external power supply. However to use a third module the 4 port USB Hub (PR0624) will be required.

Ordering Information

Description	Part number
USB Pulse Reader	PR0622
USB Pulse Reader DIN Mount	PR0622 DIN

Features

- Compact enclosure for DIN or panel mount
- Simple rotary switch identification
- Standard USB connections
- Powered from the host controller, no additional supply required.

Power

5V Supplied from controller.

Inputs

8 x 0V return switching.

Maximum speed 10ms mark to 10ms space per channel

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

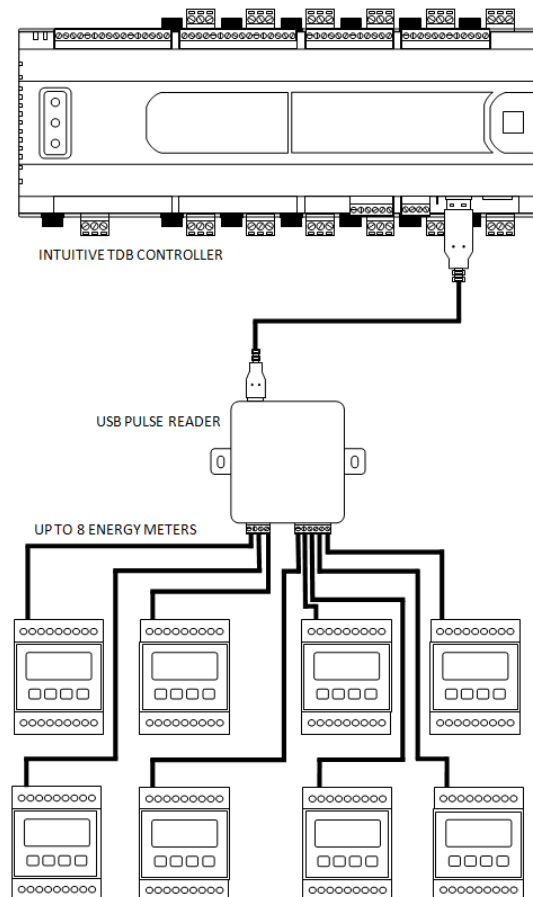
Dimensions (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)

Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

Typical wiring



PR0626

USB Current Monitor

5 channel current monitor

The current monitor can be used with the RDM Intuitive Superpack controller. The module allows up to 5 current measurements to be made, via current transducers, with the resultant current consumption of each compressor logged by the Superpack.

Alarm limits can be configured to indicate when a compressor is drawing too much or too little current. This will provide an indication of a compressor related failure or highlight potential inefficient operation. This information can also be utilised by the Superpack to act as a run proof signal to validate a compressor.



Flexible connection options

Plug and play connections at both controller and current monitor allows users easy options to routing of cables.

USB connection

Utilises a standard USB A to USB B connection lead.

Scaleable current inputs

Measures industry standard current transformers with 5A secondary's which are then scaled in software

Self powered

Up to 2 modules can be powered from the two USB host ports on the Superpack controller without the need for an external power supply. Additional modules can be integrated using the RDM 4 Port USB Hub (PR0624).

Ordering Information

Description	Part number
USB Current Monitor	PR0626
USB Current Monitor DIN Mount	PR0626 DIN

Features

- Compact enclosure with DIN or panel mount options
- Simple rotary switch identification
- Standard USB connections
- Powered from the host controller, no additional supply required.

Power

5Vdc 100mA, Supplied from controller.

Inputs

5 x 5A Maximum from current transformer's secondary connection.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

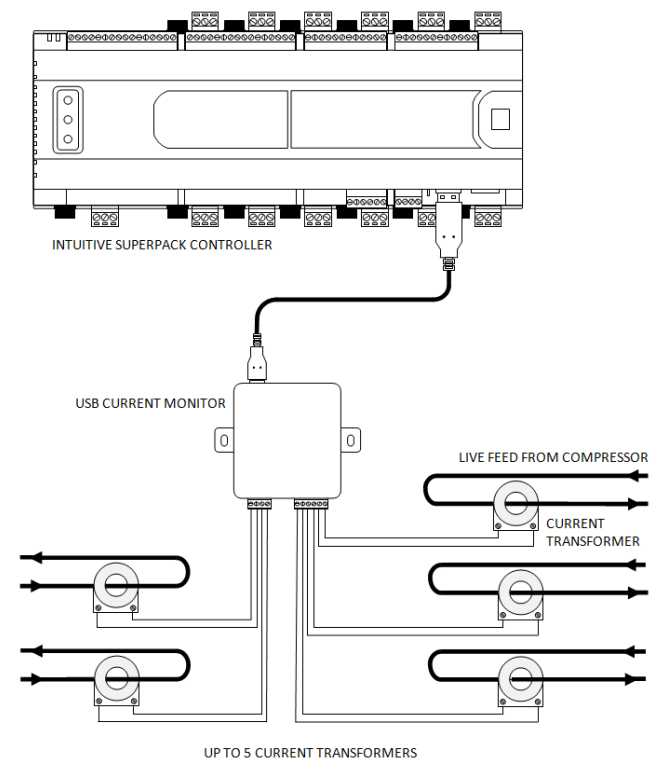
Dimensions (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)

Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

Typical wiring



PR0624

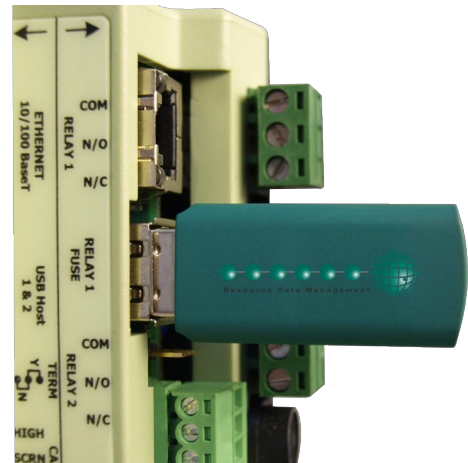
Flexible expansion with USB connections

The Intuitive and Plant controllers are fitted with 2 x USB type A sockets which provides a highly flexible connection to a variety of devices.

These can be any one or more of the following*:

- When a USB memory stick is inserted (as shown on the right), it can be used to upgrade firmware. It can also be used, along with TDB software to log data. The controller's data can be logged every 15 seconds, normally every 15 minutes without a memory stick. The amount of extra logging will be dependant on the USB memory stick size and number of inputs being logged. For example a 4GB memory stick would offer 10+ years of logging (at 15 second intervals) every input on an Intuitive Controller and 10 expansion modules.
- Intuitive Touchscreen Display (PR0615 DIN)
- Pulse Reader Module (PR0622 DIN) allows pulses from a device such as a utility meter to be read into the controller.
- Modbus Adaptor (PR0623 DIN) enables interfacing to certain Modbus devices such as an energy meter.
- Wi-Fi Module enables wireless connectivity instead of using a data cable.

*Note some features are available with certain application software only.



4 Port USB Hub

USB port expansion module

If more USB sockets are required on an Intuitive Controller or Data Manager then an RDM 4 port USB hub can be easily added. Unlike most other USB hubs the unit is powered by a 24Vac or dc supply, allowing it use the same power supply as an Intuitive Controller removing the need for an additional power supply.



USB connection

Utilises a standard USB A to USB B connection lead to connect to the controller or Data Manager.

Ordering Information

Description	Part number
4 Port USB Hub	PR0624
4 Port USB Hub	PR0624 DIN

Features

- Compact enclosure with DIN or panel mount options
- Status LEDs for each port
- Standard USB connections
- Can be powered from the Intuitive Controller power supply.
- Supplied with USB A to USB B Cable (150mm)

Power

24V ac or dc, typical supply current < 1Amp.

Input

1 x USB type B

Outputs

4 x USB type A

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

Dimensions (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)

Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

PR0623 DIN

Plant MODBUS® Adaptor

Features

- Modbus® RS485 Interface
- USB Connection to Intuitive Controller
- Simple Plug and Play installation
- 5 year warranty

Dc Voltage: 5V
Rated Current: 0.1A (USB Powered)

Panel Mount

Dimensions (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)
Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)



Ordering Information

Description	Part number
Plant Modbus® Adaptor	PR0623 DIN

NOTE: This product is also available as a USB adaptor, please refer to Book C for further information. The USB version is typically used with a Data Manger/dmTouch.

PR0625

24V Power Supply



Features

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment) approved
- LED indicator for power on
- 100% full load burn-in test
- Fix switching frequency at 100KHz
- 3 year manufacturer warranty

Output

Dc Voltage: 24V
Rated Current: 2.5A
Rated Power: 60W
Ripple & Noise: 150mVp-p

Input

Voltage Range 88-264Vac 124-370Vdc
Frequency Range 47-63Hz
Ac Current (Typ.) 1.5A@115Vac 0.75A@230Vac
Inrush Current (Typ.) 18A@115Vac 36A@230Vac (cold start)

Protection

Overload 105 ~ 160% rated output power
Over voltage 27.6 ~ 32.4V

Environment

Working temp. -20°C to 45°C
Humidity 20 to 90% RH non-condensing

Safety and emc

Safety Standards: UL60950-1, TUV EN60950-1
EMI: Compliance to EN55011, EN55022 (CISPR22) Class B
Harmonic Current: Compliance to EN61000-3-2, -3
EMS Immunity: Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A
MTBF 364.6K hrs min. MIL-HDBK-217F (25oC)

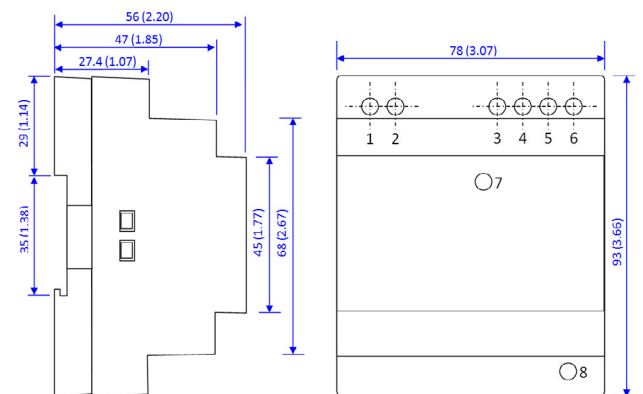
Mechanical

Dimensions 93 x 78 x 56mm (3.7 x 3.1 x 2.2in)
Weight 0.31Kg (10.9oz)

Ordering Information

Description	Part number
24V 2.5A DIN rail Power Supply	PR0625

NOTE: Care should be taken not to overload this power supply, it should not be used to power more than 2 Intuitive Controllers and/or expansion modules at the same time.



All Dimensions in mm (inches)

Connections

Terminal	Assignment	Terminal	Assignment
1	Input Ac Neutral	5,6	DC Output -V
2	Input Ac Live	7	Power LED
3,4	DC Output +V	8	+V ADJ

PR0193

Light Level Sensor

Wall mounted Light Level Sensor

The Resource Data Management light level sensor consists of a photodiode housed in a clear water resistant enclosure with two spring loaded connections on the underside. The unit is intended for use with an RDM Data Manager, Intuitive controller or Mercury Intuitive controller using a TDB application.

The resistance measured across the terminals will vary depending on the light level. This can be easily converted into a lux reading, for example, and used to switch lighting on and off when a particular light level is reached. When using an Intuitive controller, resistance measured by the sensor can be converted to a lux reading by using a TDB algebra block. When using a Data Manager or Intuitive Mercury, a custom probe table is used to convert resistance to lux level.



Energy saving

By measuring indoor and outdoor light levels, lighting loads can be switched on and off depending on how much daylight is available thus preventing lights being left on unnecessarily.

No power supply required

Using a light dependant resistor means that the sensor is powered from the TDB device it is being used with and no additional power supply is required, this simplifies installation and reduces costs.

Easy integration with TDB software

The light sensor can be easily integrated into TDB control strategies using a single probe input and can be used in conjunction with blocks such as run on timers, override inputs and GP timers. The sensor can also be used in conjunction with a daylight block which gives a backup switching method should the sensor become disconnected or damaged.

Ease of installation

The sensor has two low voltage spring loaded terminals which gives quick and secure cable connection.

Ordering Information

Description	Part number
Wall Mounted Light Level Sensor	PR0193
Wall Mounted Light Level Sensor (Box of 10)	PR0194
Wall Mounted Light Level Sensor (Box of 100)	PR0195

Features

- Robust water resistant housing
- No power supply required
- Quick and secure 2 wire connection
- Low voltage operation
- Single mounting point
- Low cost
- Negligible power consumption

Illuminance

Resistance	LUX	Typical conditions
9.8MΩ	1 lux	Nighttime with minimal street lighting
9.3MΩ	3.4 lux	Twilight with a clear sky
3.3MΩ	100 lux	Daytime, cloudy and overcast in a shaded area
1.1MΩ	400 lux	Daytime, sunset on a clear day
128kΩ	4000 lux	Daytime, Indoors well lit room
52kΩ	10,000 lux	Daytime, midday scattered cloud
9.5kΩ	40,000 lux	Direct sunlight

Measurement range

9.5kΩ to 9.8MΩ, 1 to 40,000 lux.

Environmental

Operating temperature: -40° to 75°C (-40° to 167°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions: 56 x 24 x 21mm (2.2 x 0.94 x 0.83in)

Weight: 45 g (1.6oz)

Mounting Hole: 4mm diameter (0.16in)

Maximum cable size: 2.5mm (14awg)

The Mercury Controller range

The Mercury controller is available in two main hardware platforms, the choice of platform used depends on various factors including relay switching capacity and mounting location. Both platforms run similar software applications.



Mercury Controller

The Mercury controller is a compact, panel mount controller with up to 6 Amp (resistive) relays.

Internal IP network communication is optional.

Mercury Controllers come with a range of communication options, including IP built-in or RS232. Built-in IP provides a compact networking solution, RS232 allows the controller to be connected to a range of external network modules providing IP, Genus® RS485 or Wireless network communication. When space is limited behind the display it can be supplied with a remote display and keypad on a 5m flying lead. The alternate build with the display and keypad on the front fascia is shown above.

Intuitive Mercury Controller

The Intuitive Mercury controller is a DIN rail mounted unit fitted with 10 Amp (resistive) relays.

The controller can be supplied with an internal RS232 card which allows connection to a variety of RDM networking interfaces. Alternatively, the controller can be supplied with an IP or Genus® RS485 network card installed eliminating the need for an external network module.

The Intuitive platform also has the option of installing a daughter card providing additional inputs and outputs, there are several varieties including a 4-20mA card and a High Speed Pulse Counter card. Functionality of these daughter cards is dependant on software application. Please note that the cards are factory fitted, and not user installable.

As with the Mercury controller, the Intuitive controller can be supplied with the display and keypad built into the front fascia, as shown, or can be supplied with a remote display and keypad on a 5m flying lead.



Feature	Mk2	Mk3	Intuitive Mercury
Outputs (M Mechanical Relay)	Relay 1-4 6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load) Relay 5 3A(250Vac) resistive (COSφ=0.4 1A Inductive load)	Relays 1-4 6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load) Relay 5 3A(250Vac) resistive (COSφ=0.4 1A Inductive load)	5 Relay outputs Relays 1-5, 10A(250Vac,30Vdc) resistive (COSφ=0.4 3A Inductive load) PR0750/PR0760
Outputs (E Solid State Relay)	Relay 1 (SSR) – 1.5A(24-250Vac) resistive Relays 2,3 & 4 6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load) Relay 5 3A(250Vac) resistive (COSφ=0.4 1A Inductive load)	Relay 1 (SSR) – 1.5A(24-250Vac) resistive Relays 2,3 & 4 6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load) Relay 5 3A(250Vac) resistive (COSφ=0.4 1A Inductive load)	5 Relay Outputs Relay 1 (SSR) – 1.5A(24-250Vac) resistive Relays 2-5 10A(250Vac,30Vdc) resistive (COSφ=0.4 3A Inductive load) PR0751/PR0761
Communication	External IP, RS485 and Wireless Mesh	Internal IP	Internal IP, RS485 and Wireless Mesh
Inputs	6 resistive temperature probe inputs	10 inputs - 6 resistive temperature probe inputs, 2 dedicated volt-free digital inputs, 1 x 0-10Vdc and 1 x 4-20mA analogue inputs	6 or 8 Inputs
Supported Probes	PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes	PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes	PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes
Power	100-240Vac +/-10% 50-60hz (Typ. <1A) Class II Insulation	100-240Vac +/-10% 50-60hz (Typ. <1A) Class II Insulation	100-240Vac +/-10% 50-60hz (Typ. <1A) Class 2 Insulation
Environmental	Operating temperature: 5°C to +50°C (41° to 122°F) Operating humidity: 10% to 80% (non-condensing)	Operating temperature: 5°C to +50°C (41° to 122°F) Operating humidity: 10% to 80% (non-condensing)	Operating temperature: -10° to 60°C (14° to 140°F) Operating humidity: 10% to 80% (non-condensing)
Dimensions	36 x 78 x 112mm (1.42 x 3.1 x 4.4in)	36 x 78 x 112mm (1.42 x 3.1 x 4.4in)	120 x 157 x 67mm (4.7 x 6.2 x 2.6in)
Weight	170g	170g	500g
Panel Cut Out	29 x 71mm (1.14 x 2.8in)	29 x 71mm (1.14 x 2.8in)	Not Applicable

PR0710/740/750-AC

Mercury

Air Conditioning Controller

Compact, high performance air conditioning controls with modern styling, at a low price.

These controllers offer high-quality, reliable, affordable and high performance air conditioning control that will satisfy the most demanding cooling applications. The internal switch mode power supply allows operation worldwide. 5 year limited warranty.

Typical applications

Offices, Supermarket, Commercial, Domestic



Flexible network options

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module.

Easy configuration

Mercury controls ship with standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, remote connection from a system frontend and using a Caesium programmer module.

Quick fit

The Mercury Mk2 and Mk3 controllers are installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 8/5 Air Conditioning Controller Internal Display	PR0740-ACD
Mercury Mk3 8/5 Air Conditioning controller remote display	PR0740-ACR
Mercury Mk2 Air Conditioning Controller Internal Display	PR0710-AC
Mercury Mk2 Air Conditioning controller remote display	PR0720-AC
Mercury Intuitive Air Conditioning Controller Integral Display	PR0750-AC
Mercury intuitive Air Conditioning controller remote display	PR0760-AC

*Please refer to pages 6 and 7 for further product ordering information

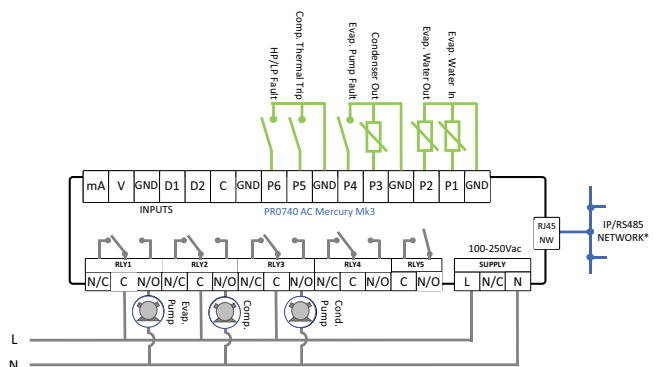
Features

- Evaporator and Condenser Pump Control
- Compressor Control
- Built In Frost Protection Thermostat
- Built In 7 Day Timer
- Multiple Temperature Probe Option With Alarm Limits
- HP/LP Fault inputs
- Compressor Thermal Overload Fault Input
- Pump Fault Input
- Adjustable Starts Per Hour Limit
- Adjustable Pump Trip Reset Timer
- Switch mode power supply for use in any country



Typical wiring

Example: Air Conditioning Control—Mercury Mk3 Platform



*RS485 and RS232 networking for the Mk3 available Q4 2015

PR0710/740/750-IOR

Mercury

Remote Input/Output Module

Compact, high performance controls with modern styling, at a low price.

The Mercury 3 I/O module is fully flexible programmable logic module. It is intended for use with the Data Builder Program to access networked I/O. While there is no functional program inside the I/O module, its Inputs and Outputs are all available to be used as remote I/O by the Data Builder running on a Data manager. The internal switch mode power supply allows operation worldwide.

Typical applications

Customer specific control or monitoring.



Flexible network options

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

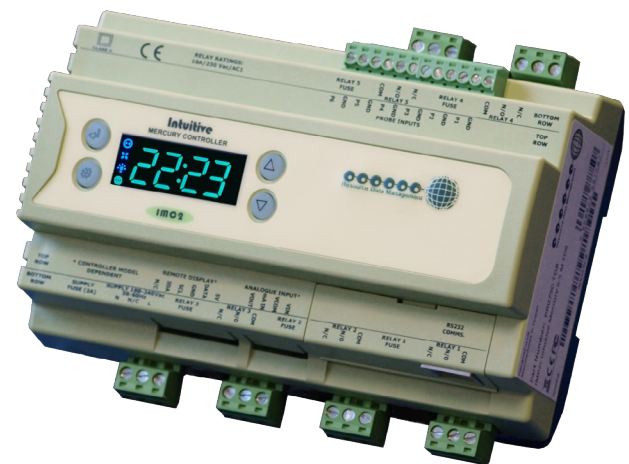
Ordering Information

Description	Part number
Mercury Mk3 I/O Module	PR0740 - MD IP IOR
Mercury Mk2 I/O Module	PR0710 - IOR
Mercury Intuitive I/O Module	PR0750 - IOR

*Please refer to pages 6 and 7 for further product ordering information

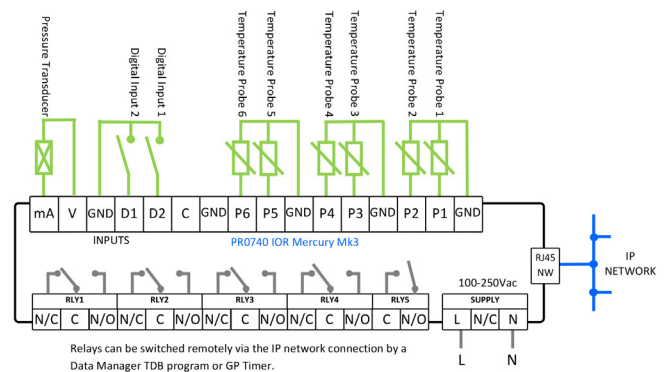
Features

- Networked module for use with a Data Manager TDB (The Data Builder) program
- 6 Inputs configurable for analogue and digital operation
- 5 Relay outputs
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Remote Input/Output Mercury Mk3 Platform



* RS485 and RS232 networking for the Mk3 available Q4 2015

PR0710/740/750-MON

Mercury

6 Channel Temperature/Plant Monitor

Compact, high performance case controls with modern styling, at a low price.

The Mercury Monitor is designed for temperature or plant fault monitoring. Outputs can be used as remote switched relays over the network from the Data Manager's GP timer or The Data Builder program. In addition the controller can be configured as a probe tester which simply records values without generating alarms.

Typical applications

Process fault monitoring, temperature monitoring, probe testing.



Flexible network options

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 8/5 Monitor with Built-in IP	PR0740 MD IP MON
Mercury Mk2 6/5 Monitor	PR0710 - MON
IMP2c Intuitive Mercury 6-5M Monitor	PR0750 - MON

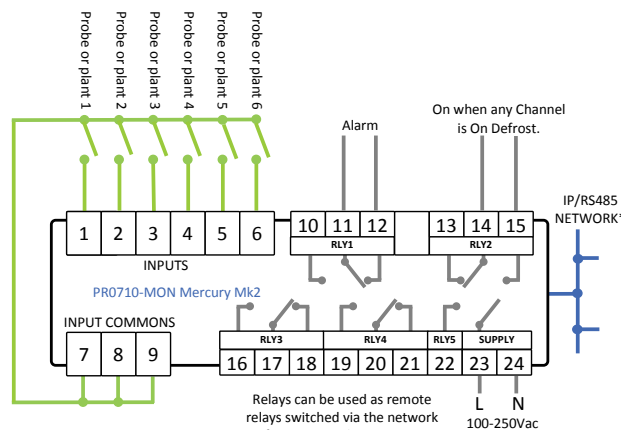
Features

- 6 Channel temperature or fault monitor, probe tester or low temperature monitor
- Independent OT/UT Alarm levels with delays for each channel
- Remote relays available for use with a GP Timer channel or The Data Builder control
- Plant fault alarms, with delays
- Temperature offset compensation for long cable runs
- Defrost monitoring with recovery period
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Plant Monitor—Type 1 Mercury Mk2 Platform



* IP or RS485 Networking via optional interface

*Please refer to pages 6 and 7 for further product ordering information

PR0710/740/750-MPA

Mercury

5 Stage Compressor/Fan Controller

Compact, high performance pack controls with modern styling, at a low price.

This Mercury Mini Pack controller is primarily intended for use in Pack or Condenser control applications. The controller has 5 relay outputs that are configurable as Compressors, when set as Type1 or Condenser Fans when set as Type 2. The controller has 5 status inputs which can be assigned as a Stage Input, General Alarm, Standby Mode or Temperature Probe. Energy saving features help reduce running costs.

Typical applications

Pack or Condenser control.



Flexible network options

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

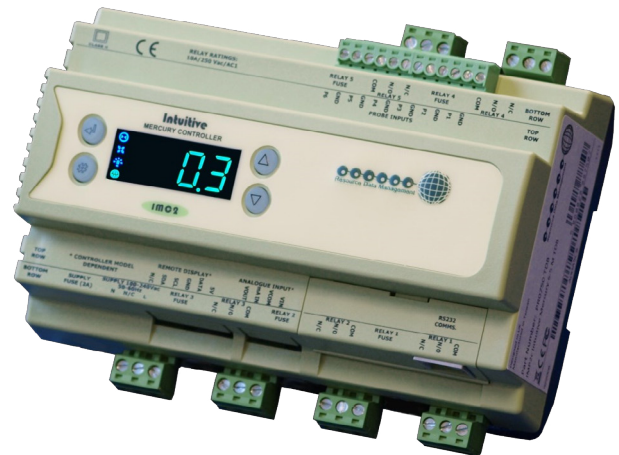
The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 Mini-Pack	PR0740 MD IP MPA
Mercury Mk2 Mini-Pack	PR0710 - MPA
Mercury Intuitive Mini-Pack	PR0750 - MPA AiAo

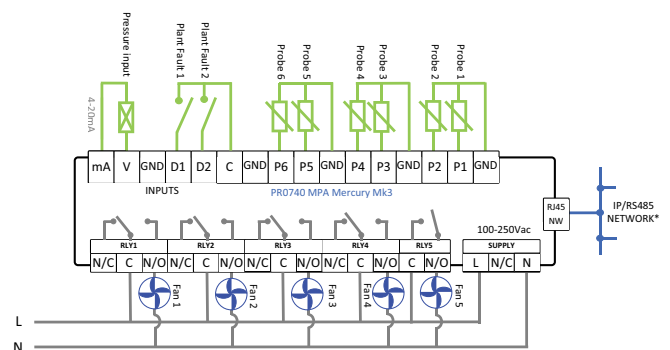
Features

- Control pressure
- 5 Staged control logic
- Optional Run Proof feature
- Compatible with Data Manager Optimisation features
- High Pressure (HP) / Low Pressure (LP) Alarms
- Options for 0-10Vdc or 4-20mA Transducer Inputs
- Optional alarm relay
- LP Shutdown
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: 5 Stage Condenser Control Mercury Mk3 Platform



* IP or RS485 Networking via optional interface

NOTE. Relays can be software configured for normally open or normally closed operation.

PR0710/740/750-PLS

Mercury

6 Channel Pulse Counter

Compact, high performance monitoring with modern styling, at a low price.

The Mercury Pulse Reader has 6 independent inputs that can be configured for pulse counting from the pulse relay of most utility meters. The input is activated by the use of a 0 volt return through the normally open and common contacts of the relay inside the utility meter.

In addition to the 6 inputs, the 5 on board relays can be used remotely by "The Data Builder" or a GP Timer channel. The Pulse Reader will accumulate pulses on a per channel basis to give a running total. It also has 3 time slots (cans) on a per channel basis that counts the number of pulses during the time interval. The internal switch mode power supply allows operation worldwide.

Typical applications

Energy Monitoring, water usage.



Flexible network options

Flexible network options ensure compatibility with legacy hardware and for ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 Pulse Counter	PR0740 MD IP PLS
Mercury Mk2 Pulse Counter	PR0710 - PLS
Mercury Intuitive Pulse Counter	PR0750 - PLS

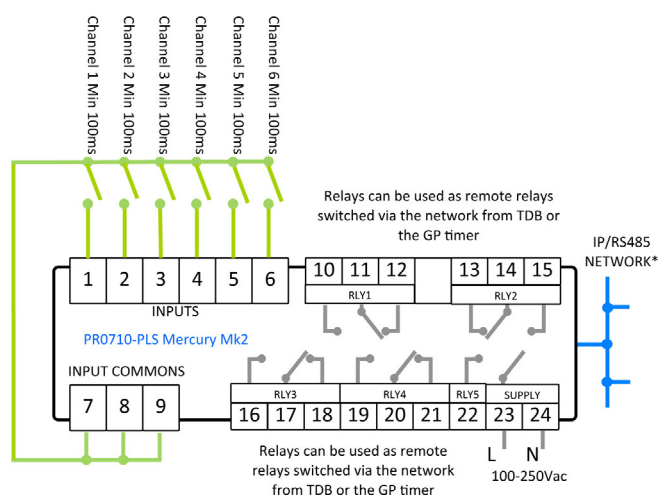
Features

- 6 Independent pulse inputs for connection to many manufacturers standard energy meters
- Reads 100mS or longer pulses
- 5 configurable relay outputs
- Running total counters
- Alarm function
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Energy Monitor Mercury PLS



* IP or RS485 Networking via optional interface

PR0710/740/750-RTU

Mercury

Heating/Cooling & Fan Controller

Compact, high performance thermostat with modern styling, at a low price.

The Mercury Roof Top Unit (RTU) can be configured for heating and/or cooling applications. Control can be achieved from either temperature probe input 1 or by a percentage weighting of input 1 and input 2. There is a 7-day timer with two on and off times per day.

The Mercury RTU Controller has a number of energy saving features one of which allows a user to offset the heating and cooling differentials from a TDB program. For example when the building is unoccupied the differentials can be adjusted to reduce the required level of heating/cooling. Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

Typical applications

Heating and cooling control.



Flexible network options

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

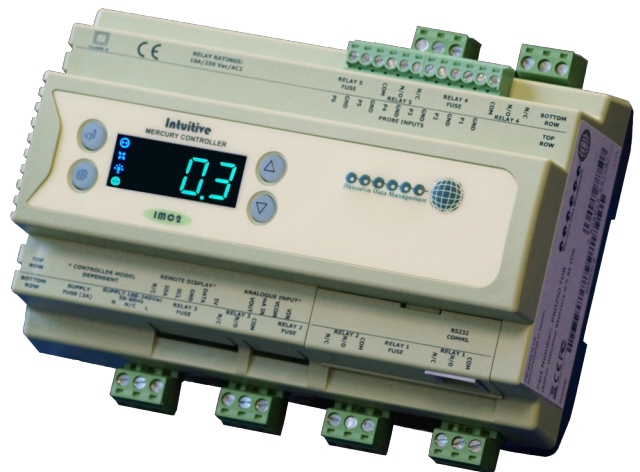
The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk2 6/5 Roof Top Unit	PR0710 - RTU
Mercury Mk3 8/5 Roof Top Unit	PR0740 MD IP RTU
Mercury Intuitive Roof Top Unit	PR0750 - RTU

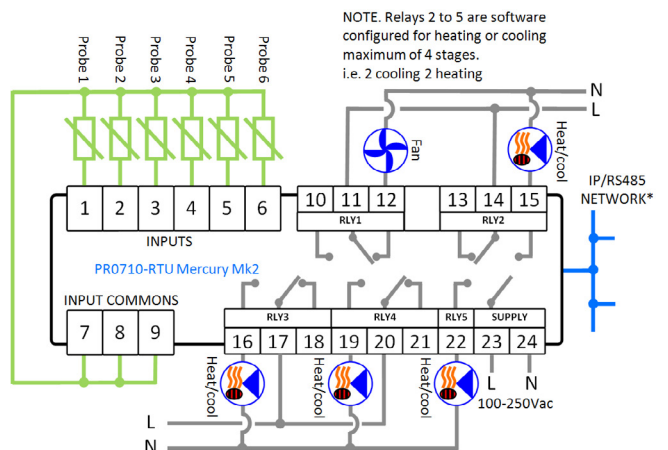
Features

- Controls heating and cooling applications
- Probe 2 multifunction—monitor or control probe
- 5 Configurable relays
- OT/UT Alarm levels and delays
- Fan Control
- Timer Schedules
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Thermostat Mercury Mk2 Platform



* IP or RS485 Networking via optional interface

PR0710/740/750-STAT

Mercury

Multi Purpose Thermostat

Compact, high performance thermostat with modern styling, at a low price.

The Mercury Control Stat is a multi-purpose thermostat controller that can be used in heating/cooling applications. Control can be achieved from either input 1 or 2 or by a percentage weighting of the two inputs. The remaining inputs can be configured as either override, fault or run inputs.

The Stat allows for two heating and two cooling differentials to be set with an optional time or temperature delay on the second stage of heating/cooling. Included in the controller is a frost detect parameter. This overrides the timer function, when the timer is off, to begin heating should the temperature reach the frost detect value. Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

Typical applications

Heating and cooling control.



Flexible network options

Future proof IP connectivity is available for quick and secure networking. Flexible network options also ensure compatibility on many existing sites with legacy hardware and front ends. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

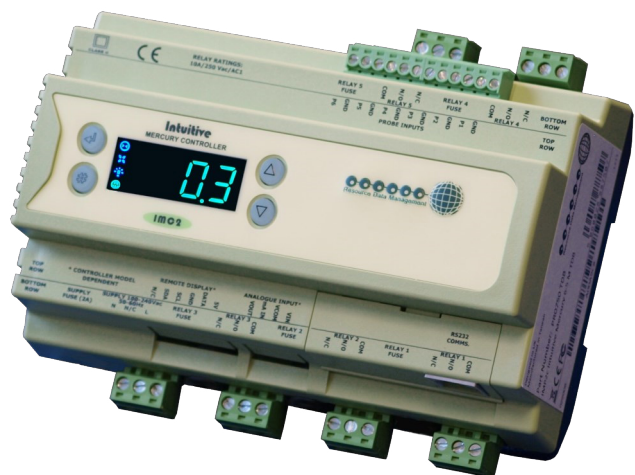
The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 Thermostat	PR0740 MD IP STA
Mercury Mk2 Thermostat	PR0710-STA
Mercury Intuitive Thermostat	PR0750 STA

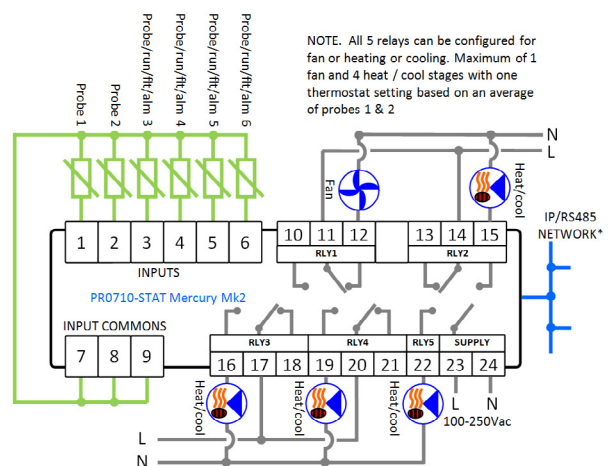
Features

- Control of heating and cooling
- Frost detect
- 4 Configurable inputs
- 5 Configurable relays
- Configurable for 2 heating and 2 cooling stages
- Option for manual over-ride input
- 7 day timer with two on/off's per day
- OT/UT Alarm levels and delays
- Fan control
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Four stage heater with fan control.



* IP or RS485 Networking via optional interface

PR0710/740/750-5ISTA

Mercury

5 Channel Thermostat

Compact, high performance thermostat with modern styling, at a low price.

The Mercury 5 Channel Thermostat has 5 thermostat functions. They can be configured for independent use, where each function is controlled by an individual probe or the controller can be configured to operate selected thermostats from one temperature probe.

Each channel can be individually configured for heating or cooling applications with a selection of parameters. Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

Typical applications

Heating and cooling control.



Flexible network options

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

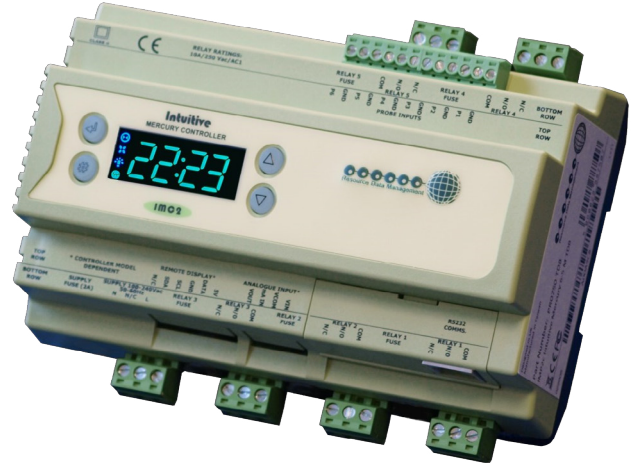
The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 5 Independent Channel Thermostat	PR0740 MD IP 5ISTA
Mercury Mk2 5 Independent Channel Thermostat	PR0710 - 5ISTA
Mercury Intuitive 5 Independent Channel Thermostat	PR0750 - 5ISTA

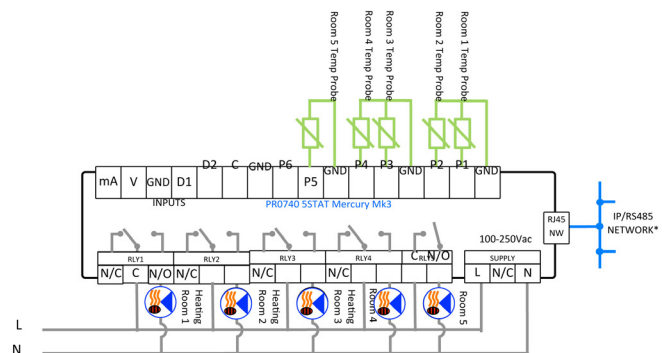
Features

- 5 individual channels heating or cooling
- Option to operate multiple relays from a single temperature probe
- Frost Detect
- OT/UT Alarm levels and delays
- Relay Invert option for increased wiring flexibility
- 7 day timer with two on/off's per day
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Refrigeration Case Control Mercury Mk3 Platform



* RS485 and RS232 networking for the Mk3 available Q4 2015

PR0712/PR0752-PHX

Mercury

Stepper Valve Plate Heat Exchanger Controller

Compact, high performance case controls with modern styling, at a low price.

This controller is primarily intended for use in Plate Heat Exchanger (PHX) applications. The controller will operate the plate heat exchanger stepper valve to maintain superheat based on the value of its temperature probe inputs or from a remote pressure command.

Typical applications

Plant Control



Flexible network options

Future proof IP connectivity is available for quick and secure networking. Flexible network options also ensure compatibility on many existing sites with legacy hardware and front ends. The controller also supports wireless mesh networking.

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk2 Plate Heat Exchanger	PR0712 - PHX
Mercury Intuitive Plate Heat Exchanger	PR0752 - PHX

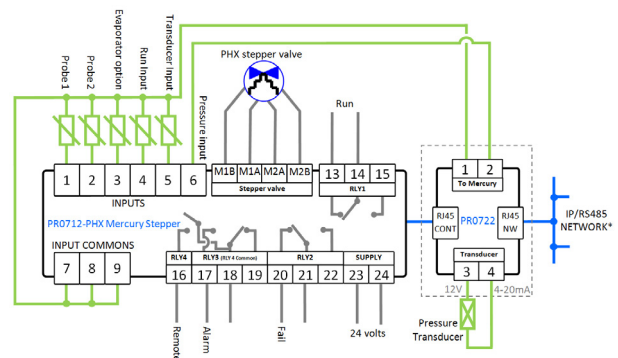
Features

- Superheat control
- Control of Plate Heat Exchanger stepper valve
- Run input
- Fail Output
- Alarm Output
- Remote relay output can be switched via network using TDB or GP timer
- Monitor probes
- 24v AC or DC supply
- Stepper motor drive output, operates a bipolar stepper 24V
- 8W maximum.



Typical wiring

Example: Plate Heat Exchanger Control Mercury Mk2 Platform.



* IP or RS485 Networking via optional interface

PR0769 INT/EXT

Intuitive Mercury Wi-Fi Daughter Card

Further enhancing the already comprehensive communication options available with the Intuitive Mercury the Wi-Fi daughter cards are an optional extra that can be fitted to the Intuitive Mercury controller to allow interaction with a standard Wi-Fi network. Two options of the Wi-Fi daughter cards are available dependent upon application – internal or external.

The PR0769-INT option has an internal antenna offering a streamlined enclosure solution. The PR0769-EXT has an external antenna which protrudes from the Intuitive Mercury enclosure offering a high gain signal, leading to increased coverage (dependent on the site conditions and variables).

Typical applications

Refrigeration

Features

- Higher transmission speeds and greater range compared to older wireless technologies.
- Negates need for a full site wired infrastructure.
- Provides greater flexibility where a conventional wired network would be cost prohibitive or infeasible.
- Secure networking, utilising industry standard WPA2 encryption
- Reduced installation time
- Support for Static or Dynamic IP addressing.

Ordering Information

Description	Part number
Internal Intuitive Mercury Wi-Fi Daughter Card	PR0769 - INT
External Intuitive Mercury Wi-Fi Daughter Card	PR0769 - EXT

*Daughter cards should be specified when ordering the Intuitive Mercury, however they can be retrofitted onsite.



PR0770/771/772

Intuitive Mercury Network Options

The Intuitive Mercury Controller range is supplied as standard with an internal RS232 network card installed, this allows connection to any of the external network interfaces listed below.

External Network Interfaces

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

Three alternative internal network cards are also available, these can be supplied factory fitted as an option or purchased separately as an interface kit.

Ordering Information

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

Before working on this equipment, ensure that the device is fully isolated from any supply voltage, including connections to all relays and other I/O connectors.

Installation of this part must be carried out by competent personnel. RDM will not be held responsible for any damage incurred to the equipment through mishandling or faulty installation of this part

Removing a network card

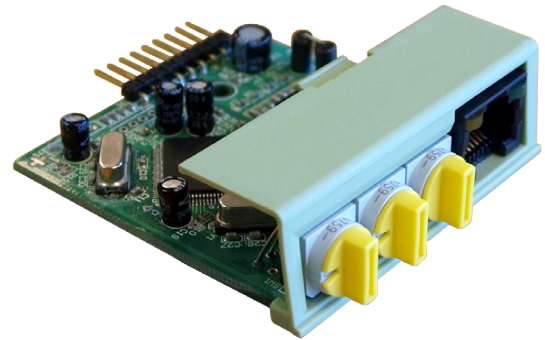
The controller shown has an RS232 network card fitted as standard. To remove the network card, Carefully insert a screwdriver or similar flat object into the removal slot Push down slightly and pull the network card away from the controller The network card can then be fully removed.

Fitting a Network Card

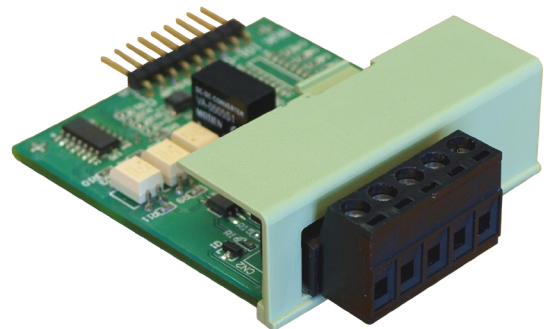
Insert the network card at right angles to the controller using the card slots as a guide Gently push the card into the controller until the pins engage inside, the card will lock into place

If any resistance is felt, do not force the card in, remove the card and check that all the pins are straight, re-insert the card using the card slots as a guide. When the controller is powered on, the network card will be automatically detected and the appropriate set up menus will be shown on the display.

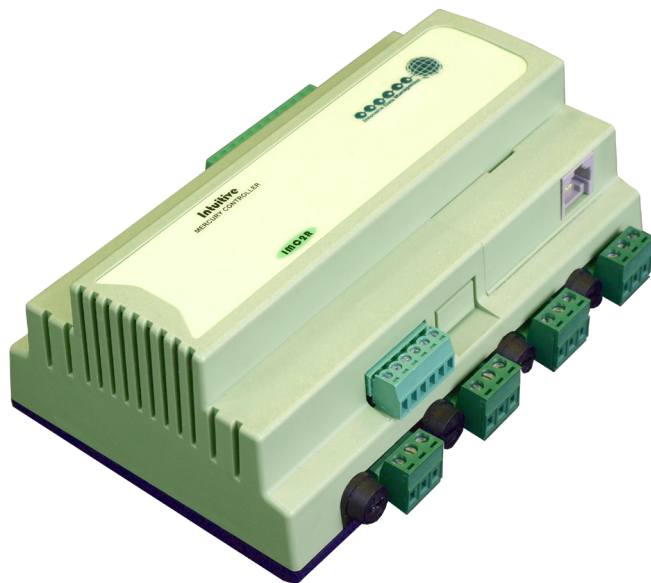
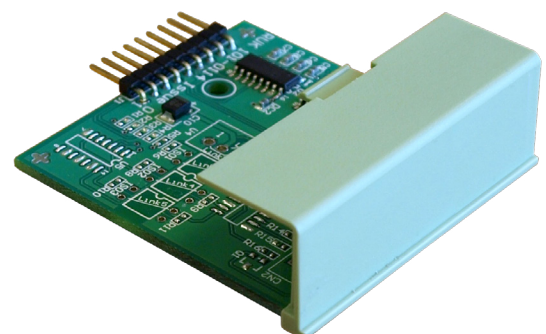
PR0770



PR0771



PR0772



PR0710/740/750-TIM

Mercury

5 Channel Timeclock

Compact, high performance control with modern styling, at a low price.

These controllers offer a high-quality, reliable, affordable and high performance 5- channel timer module. Each channel (relay output) has an independent time clock, which gives a single on/off per day. Each relay can be configured for local or remote operation.

The remote operation option allows the unit to work from time channels running on front end such as a GP timer on the RDM Data Manager. The internal switch mode power supply allows operation worldwide.

Typical applications

Lighting, Heating & Process Control.



Flexible network options*

Flexible network options ensure compatibility with legacy hardware and front ends on existing sites. The built-in IP option available with the Mk3 negates the need for an external IP module. The controller also supports wireless mesh networking.

* Networking via optional network interface module

Easy configuration

Mercury controls ship with multiple standard default configurations. Customisation can easily be carried out via the controller display, by direct PC connection, by remote connection from a system frontend and using a Caesium programmer module.

Quick fit

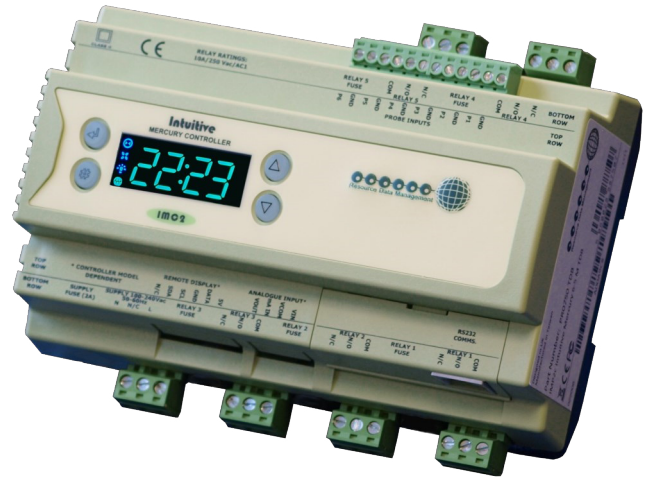
The Mercury controller is installed with friction fitting clips, no screw or additional fixing holes required. The Mercury Intuitive controller is supplied with DIN rail mounting clips.

Ordering Information

Description	Part number
Mercury Mk3 5 Independent Channel Timeclock	PR0740 MD IP TIM
Mercury Intuitive 5 Independent Channel Timeclock	PR0750-TIM
Mercury Mk2 5 Independent Channel Timeclock	PR0710-TIM

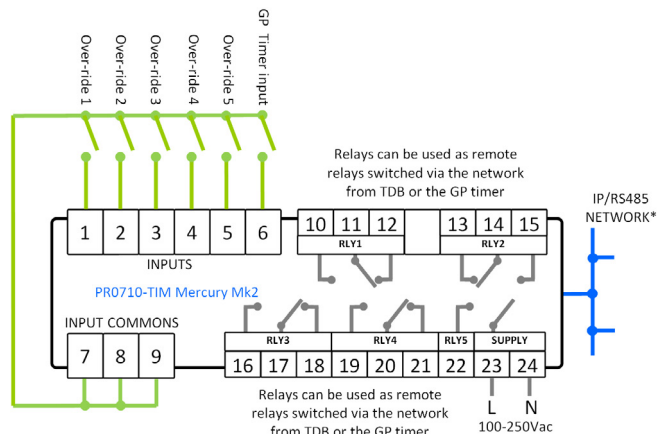
Features

- 5 channel timer module
- Independent timer on each output
- Relays can be configured for local or remote operation.
- Individual channel manual over-ride inputs.
- General Purpose (GP) Input Channel.
- Seamless integration with Data Manager
- Switched mode power supply for input voltages ranging from 100v to 240v



Typical wiring

Example: Refrigeration Case Control Mercury Mk2 Platform



* IP or RS485 Networking via optional interface

PR0380

Mercury Download Cable

Serial Download Cable for Mercury Mk1 & 2

The Mercury Download Cable allows a direct connection from a PC or laptop to many RDM controls.

Direct connection to controllers

When no network is available the download cable provides the ability to connect a PC or laptop to RDM controls with serial ports. Using RDM's Communicator software gives the ability to view control information, change settings, types and parameters and update software*.

For PC or laptops without 9 way D-Type serial ports, the cable will operate seamlessly with any standard USB to Serial adaptor.

* Features may be restricted.

Ordering Information

Description	Part number
Mercury Download Cable	PR0380

Features

- 9 Pin D-Type serial connection to PC
- RJ45 connection for direct connection to controls serial port.
- Low cost, plug and play cable.

Environmental

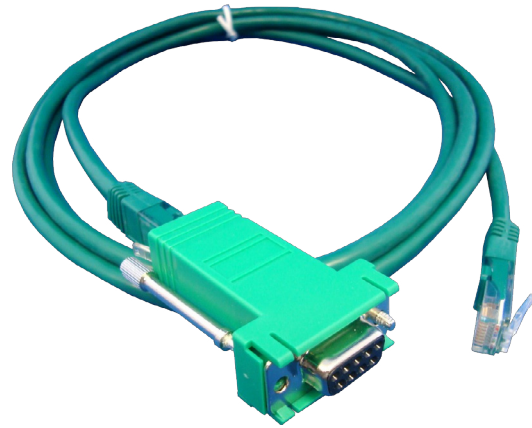
Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Cable length: 2m

Weight: 100g (0.22lb)



PR0325/PR0326

Mercury Display

Remote Case Display

The Mercury Remote Case Display is a low cost option designed for connection to the Mercury Mk2 & Mk3 controls – for example PR0720, PR0721 & PR0740, and Powertrays.

Flexible connection Options

Plug and play connections at both controller and display allows case manufacturers easy options to routing of cables.

Full functionality

The remote display retains all the functionality of the integral displays ensuring that you still have full access to all the menus and settings of the controller.

Quick fit

The Mercury Remote Display is fitted to the panel and retained in place with just two screws (supplied).

Features

- Allows display to be mounted remotely from the controller
- 5m prewired display cable
- Provides access to all features of the controller
- Network, Defrost and Alarm LEDs
- PR0326 includes Case Clean mode keyswitch

Power

5V Supplied from controller.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

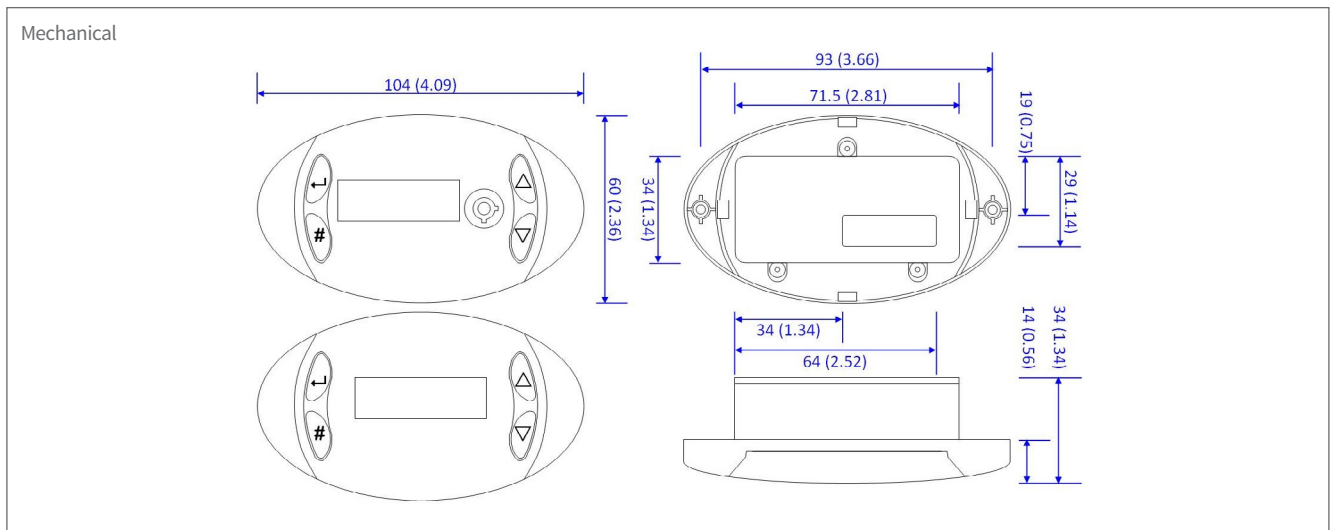
Dimensions (excl. cable) (H x W x D): 60 x 104 x 34mm (2.36 x 4.09 x 1.34in)

Weight: 350g (0.77lb)

Panel cut-out: 36 x 72mm (1.4 x 2.8in)

Ordering Information

Description	Part number
Mercury Remote Display inc. 5m cable	PR0325
Mercury Remote Display with Keyswitch inc. 5m cable	PR0326



PR0327/PR0328

Mercury Display

Remote Case Display

Modular display module for Mercury controllers.

The Mercury Remote Case Display is a low cost option designed for connection to the Mercury Mk2 and Mk3 “R” controls — for example PR0720 & PR0740 and Powertrays.

Flexible connection Options

Plug and play connections at both controller and display allows case manufacturers easy options to routing of cables.

Full functionality

The remote display retains all the functionality of the integral displays ensuring that you still have full access to all the menus and settings of the controller.

Quick fit

The Mercury Remote DIN Display is fitted to the panel and retained in place with friction fit clips.

Features

- Allows display to be mounted remotely from the controller
- 5m prewired display cable
- Provides access to all features of the controller
- Network, Defrost and Alarm LEDs
- PR0328 includes Case Clean mode keyswitch

Power

5V Supplied from controller.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions (H x W x D): 47 x 95 x 30mm (1.85 x 3.75 x 1.18in)

Weight: 330g (0.73lb)

Panel cut-out: 89 x 43.5mm (3.5 x 1.7in)

Ordering Information

Description	Part number
Mercury Remote DIN Display inc. 5m cable	PR0327
Mercury Remote DIN Display with Keyswitch inc. 5m cable	PR0328



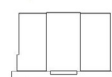
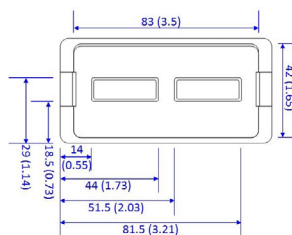
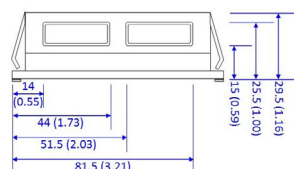
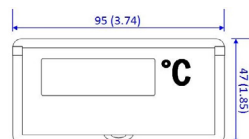
PR0327



PR0328



Mechanical



PR0725

Mercury Display

Remote Case Display

Modular display module for Mercury controllers. The Mercury Remote Case Display is a low cost option designed for connection to the Mercury Mk2, Mk3 and Intuitive controls — for example PR0720, PR0740 and PR0750/760.

Flexible connection Options

Plug and play connections at both controller and display allows case manufacturers easy options to routing of cables.

Full functionality

The remote display retains all the functionality of the integral displays ensuring that you still have full access to all the menus and settings of the controller.

Quick fit

The Mercury Remote Display is fitted to the panel and retained in place with friction fit clips.

Ordering Information

Description	Part number
Mercury Remote Display inc. 5m cable	PR0725

Features

- Allows display to be mounted remotely from the controller
- 5m prewired display cable
- Provides access to all features of the controller
- Network, Defrost, Alarm, Valve, Fans, Lights, Service and HACCP LEDs (functionality depends on controller model).



Power

5V Supplied from controller.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions (Excl cable) (H x W x D): 36 x 78 x 30mm (1.4 x 3 x 1.2in)

Weight: 330g (0.72lb)

Panel cut-out: 29 x 71mm (1.2 x 2.8 in)

Technical tip—IP networking tip 1

Question

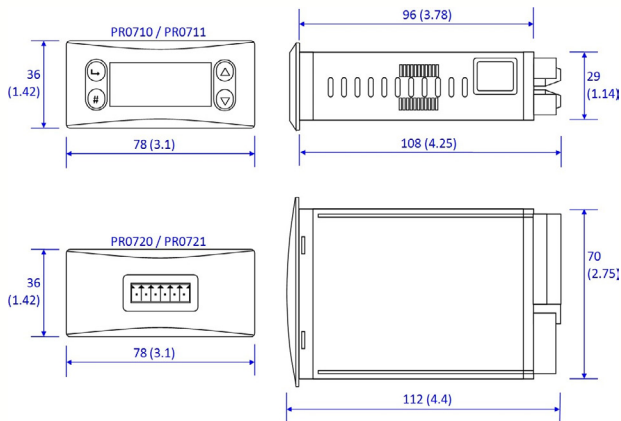
What are 'CAT 5' network cables?

Answer

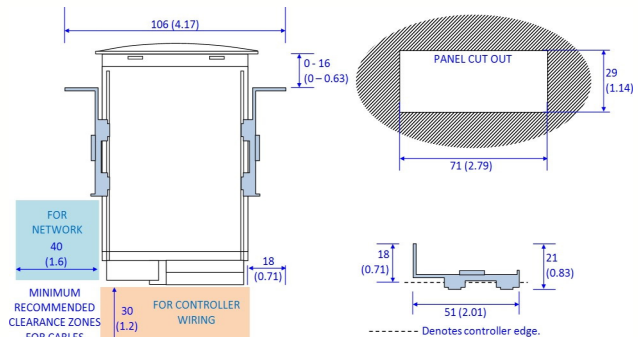
Category 5 (or more commonly CAT 5e) cables consist of 4 twisted pair inner signal cables wrapped in an outer jacket. The ends of the cable can be terminated to 8P8C modular connectors (8 pole / 8 conductors). Typically unshielded, these high signal integrity cables allow data at speeds up to 100 Mbits/s to be transmitted over distances up to 100m between devices. These cables rely on twisted pair design for noise reduction and as such it is important how the ends of the cables are terminated. International standards TIA/EIA-586A and TIA/EIA-586B define the specification and termination colours for CAT5 networking.

Mercury Mk2, Mk3 & Mercury Intuitive mechanical information

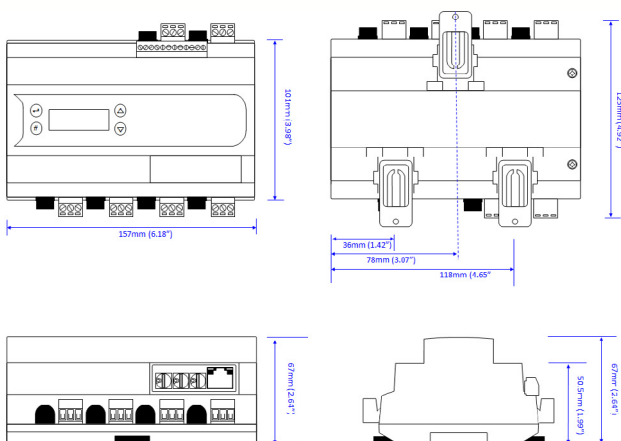
PR0740, PR0711, PR0712, PR0720, PR0721, PR0740 (All variants)



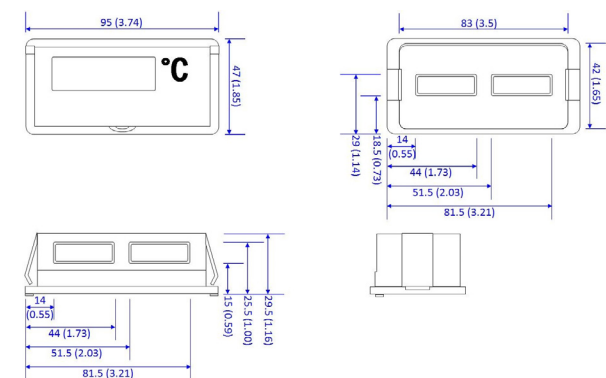
Mercury Mk3 Panel Cut-out and Clearance



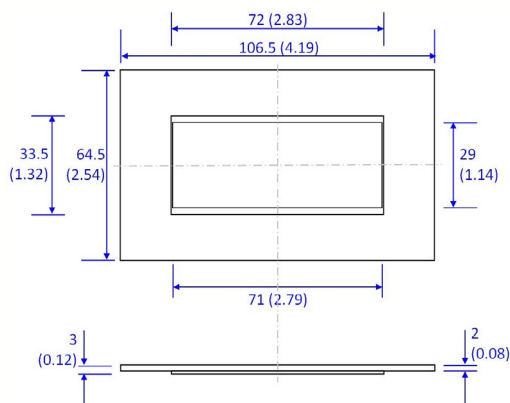
PR0750 / PR0751



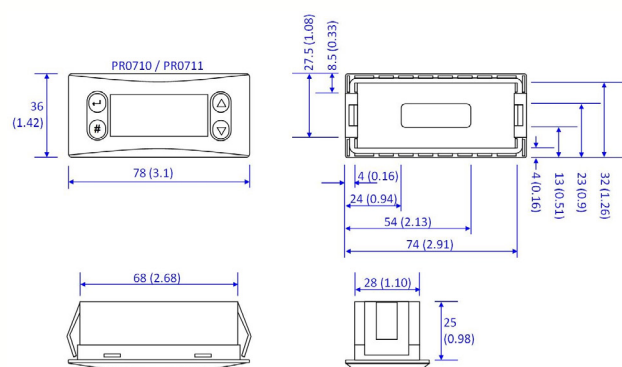
PR0327 / PR0328



PR0724—Mercury mk1—Mk3 conversion plate



PR0725



All Dimensions: mm (inch)

PR0016

IP Futura

Single Ethernet Interface Module

Add IP networking to RDM Mercury range of controllers.

The network modules offer an easy to fit, reliable and affordable interface to Resource Data Management controls to allow them to be connected to an IP Ethernet network.

For a network system with a dmTouch or Data Manager front end the interface will allow controllers to be 'logged on' to the front end to provide full remote access to data, alarms and settings.

The IP Futura module can provide the gateway to controllers allowing them to be fully configured remotely and in a system with full Internet access, this can be done from anywhere in the world. In addition the interface provides the ability to easily update software in the controller remotely.



Simple Connection

Plug and play operation by using industry standard CAT 5 network cables.

Easy setup

Three easy to set rotary switches allow the controller to use either DHCP (an IP address assigned by the Data Manager) or static IP address. For DHCP the rotary switches will provide a unique identifier which can be used to quickly find the controller details on the Data Manager front end.

Installation

Panel or DIN mount options available.

Ordering Information

Description	Part number
Futura IP Interface Module	PR0016
Futura IP Interface Module DIN mountable	PR0016 DIN

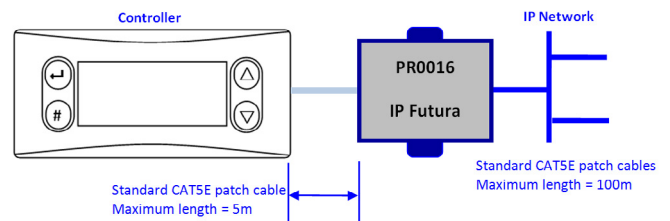
Recommended Accessories

Description	Part number
0.5m CAT5E Patch Cable	PR0384
1m CAT5E Patch Cable	PR0385
3m CAT5E Patch Cable	PR0386
5m CAT5E Patch Cable	PR0387
15m CAT5E Patch Cable	PR0389

Features

- Low cost IP networking
- Plug and play installation
- Easy retro-fit to existing non-networked or RS485 Mercury installations
- No proprietary cables required. Use industry standard CAT 5 patch cables for both Ethernet and controller connection
- No additional power supply required. Device is powered by the attached controller
- RS232 communications with controller
- 10 base T Ethernet network connection
- Compatibility with many RDM controllers— Including Mercury Mk1 - Mk3, Coldroom controls, Powertray and others
- 3 rotary switches for easy configuration of network address
- Panel or DIN mount

Typical wiring



Connections

RS232:- 8 pin RJ45 connection to controller
Maximum recommended length = 5m

IP:- 8 pin RJ45 connection to Ethernet Network
Maximum recommended length = 100m

Power

5Vdc Supplied directly from controller.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

Dimensions : 95 x 97 x 30mm (3.74 x 3.82 x 1.18in)

Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions : 101x52.5x67mm (3.98 x 2.1 x 1.26in)

PR0018/PR0018-PHI-F

Mercury Switch

10 Way Ethernet Interface Module

Add IP networking to the RDM range of Mercury controllers.

The network modules offer an easy to fit, reliable and affordable interface to RDM controls, facilitating connection to an IP Ethernet network.

For a network system with a Data Manager/dmTouch front end the interface will allow controllers to be 'logged on' to the front end to provide full remote access to data, alarms and settings.

The Mercury switch can provide the gateway to controllers to allow them to be fully configured remotely and in a system with full Internet access, from anywhere in the world. In addition the interface provides the ability to easily update software remotely. With optional transducer input the PHI version can be used to feedback pressure readings to Mercury EEV controls to provide accurate Superheat control either locally or from central plant.



Simple Connection

Plug and play operation by using industry standard CAT 5 network cables or Fibre, which allows for communication across significantly greater distances.

Easy setup

Simply select a unique ID using the rotary switches (eg 23) then any controller plugged in to the module will have an address of 231, 232, 233 etc.

Installation

Easy panel or wall mounting using integral fixing wings.

Ordering Information

Description	Part number
Mercury IP Switch	PR0018
Mercury IP Switch with Pressure/Humidity Inputs	PR0018-PHI
Mercury IP Switch with Fibre Connectivity	PR0018 F
Mercury IP Switch with Pressure/Humidity Inputs with Fibre Connectivity	PR0018-PHI-F

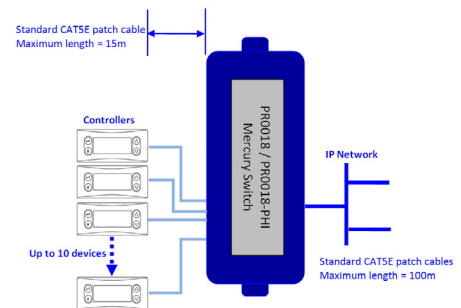
Recommended Accessories

Description	Part number
0.5m CAT5E Patch Cable	PR0384
1m CAT5E Patch Cable	PR0385
3m CAT5E Patch Cable	PR0386
5m CAT5E Patch Cable	PR0387
15m CAT5E Patch Cable	PR0389

Features

- 4-20mA input (-PHI version only) for transducer
- Trim control feature when using optional PR0445 display (-PHI version only)
- PHI version offers MOP (Maximum Operating Pressure) enabling suction pressure limiting
- No proprietary cables required. Use industry standard CAT 5 patch cables for both Ethernet and controller connections.
- Fibre connectivity available as an optional extra.
- Internal universal Switched mode power supply for input voltages ranging from 100v to 240v
- RS232 communications with up to 10 controllers
- 3 x 10/100 base T Ethernet network connections
- Compatibility with many Resource Data Management controllers – Including Mercury, Coldroom controls, Powertray and others
- 2 rotary switches for easy configuration of network addresses
- Support for static IP addresses
- Panel mountable

Typical wiring



Connections

RS232:- 8 pin RJ45 connection to controller

Maximum recommended length = 15m

IP:- 8 pin RJ45 connection to Ethernet Network Maximum recommended length = 100m

Power

100-240Vac +/- 10% @ 50/60Hz Max Supply: 650mA

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

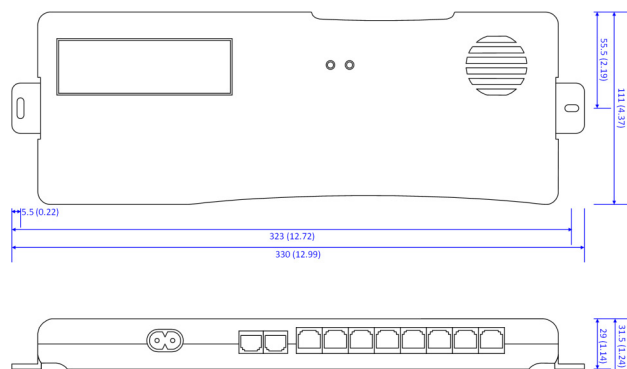
Operating humidity: 10% to 80% (non condensing)

Mechanical

Dimensions (H x W x D): 110 x 330 x 35mm (4.3 x 13 x 1.4in)

Weight: 500g (1.1lb)

Panel fixings: 316mm between centres (12.5in)



PR0026

RS485 Module

Single RS485 Interface Module

Add RS485 networking to the RDM range of Mercury controllers.

The network modules offer an easy to fit, reliable and affordable interface to Resource Data Management controls to allow them to be connected to an RS485 network.

For a network system with a dmTouch or Data Manager front end the interface will allow controllers to be 'logged on' to the front end to provide full remote access to data, alarms, setting etc.



Simple Connection

Plug and play operation by using industry standard CAT 5 network cables. Twisted pair RS485 network cables can be wired to the removable 5 pole network connector.

Easy setup

Simple setup of network type and address using the front panel of a RDM controller. On a Data Manager enabled RS485 network the controls will log on automatically to the panel once a unique network address is set.

Installation

Panel or DIN mount options available.

Ordering Information

Description	Part number
RS485 Interface Module	PR0026
RS485 Interface Module DIN mountable	PR0026 DIN

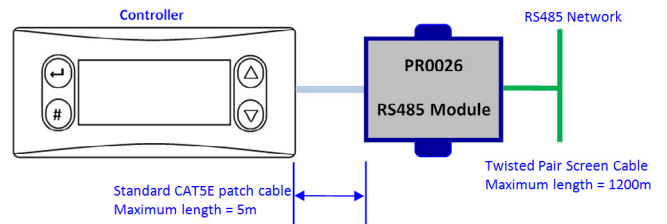
Recommended Accessories

Description	Part number
0.5m CAT5E Patch Cable	PR0384
1m CAT5E Patch Cable	PR0385
3m CAT5E Patch Cable	PR0386
5m CAT5E Patch Cable	PR0387
15m CAT5E Patch Cable	PR0389

Features

- Network activity indicator LED
- Use industry standard CAT 5 patch cables for RS232 connection
- No additional power supply required. Device is powered by the attached controller
- RS232 communications with controller
- RS485 Network connection (protocols dependant on controller)
- Panel or DIN mount
- Genus compatible RS485 Network connection

Typical wiring



Connections

RS232:- 8 pin RJ45 connection to controller

Maximum recommended length = 5m

RS485:- 5 Pole user wireable 5.08mm pitch connector Maximum recommended length = 1200m

Power

5Vdc Supplied directly from controller.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

Dimensions (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)

Panel fixings 84mm between centres (3.3in)

DIN Mount

Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

PR0730

Wireless Mesh

Wireless Mesh Interface Module

The wireless mesh interface module allow many RDM controls to be connected to a wireless mesh network. This makes installation easier in areas to which it would be difficult or impossible to run hardwired network cables.



Wireless Networking

Using the latest ZigBee® wireless mesh technology this module allows many of Resource Data Management standard controls to be instantly connected to a wireless mesh network.

Easy configuration

Plug and play operation ensures quick and easy setup of devices. Simply plug the controller in to the wireless mesh communications module using a standard CAT5E patch cable, power your controller on and enter a three digit address through the controller display. In a mesh enabled dmTouch system the controller will automatically log online.

Ordering Information

Description	Part number
Wireless Mesh Module Interface	PR0730
Wireless Mesh Module Interface DIN Mount	PR0730 DIN

What Is Wireless Mesh Technology?

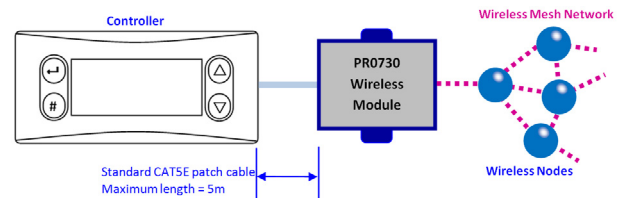
Wireless mesh technology provides a mechanism to transmit wireless data over large areas without the need for powerful transmission antennas.

Each element of the mesh system acts as a relay point ensuring that maximum wireless coverage is achieved. Generally this system will include a gateway device such as the Resource Data Management wireless mesh access point, which enables an IP Ethernet network to communicate with the wireless devices.

Features

- ZigBee® wireless mesh communications
- Network Channel ID with four settings allows segregation of network systems
- Panel or din mount
- RJ45 RS232 Port for connection to RDM controls
- Interconnect with off the shelf CAT5E patch cables

Typical wiring



Communications

RJ45 Connector. RS232 Protocol.

** Maximum 5m from controller to wireless mesh communications module

Radio Specification

Radio Frequency specification: 16 Channels selectable from 2400MHz to 2483.5MHz

Wireless Protocol: ZigBee®

FCC ID: T7VEM250A

Output Power: +3dBm

Maximum Number Hops: 30 Hops to the Wireless Mesh Base Unit.

Range: Typically 30M from one wireless mesh device to another. (Range dependant on site conditions. Obstacles such as metal structures and the presence of other 3rd party wireless devices operating in the same frequency range affect the maximum range achievable.)

Power

Maximum Supply Current: <1A

Powered from the controller it is connected to

Enviromental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

Dimensions (Lx W x D) 95 x 73 x 29mm (3.7 x 2.9 x 1.1in)

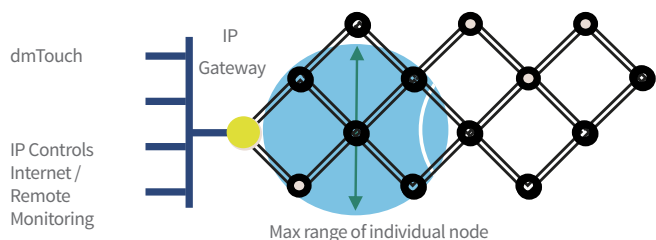
Weight: 110g (0.24lb)

Fixing centres: 84mm (3.3in)

DIN Mount

Dimensions : 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

Weight: 156g (0.34lb)



PR0731-2I2O

Wireless Mesh

Wireless Mesh Input/Output Module

The wireless mesh 2I2O module has 2 inputs which support analogue and digital signals for temperature or plant fault monitoring and 2 relay Outputs which can be operated from a dmTouch GP timer channel or TDB program.



Monitoring with no wires

Wireless monitoring

The wireless mesh 2I2O module uses the latest ZigBee® wireless mesh technology. The 2I2O module negates the need for a full site wired network infrastructure. This provides greater flexibility for monitoring and control solutions for applications where the installation of a wired network isn't feasible or cost effective.

Easy configuration

The Plug and play operation ensures quick and easy setup of devices. Simply power on the 2I2O module, enter a unique 3 digit network address via the built-in rotary switches and when in range of a mesh enabled dmTouch system the device will automatically log online.

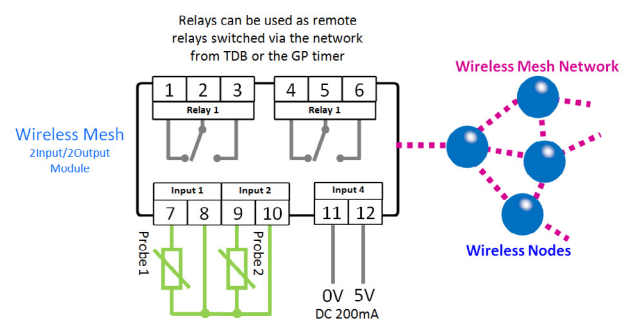
Ordering Information

Description	Part number
Wireless Mesh Module °C 2 input / 2 output	PR0731-C-2I2O
Wireless Mesh Module °F 2 input / 2 output	PR0731-F-2I2O
Wireless Mesh Monitor °C (2I/ 2O) for 2K Probe DIN Mount	PR0731-DIN-C-2I2O
Wireless Mesh Monitor °F (2I/ 2O) for 2K Probe DIN Mount	PR0731-DIN-F-2I2O

Features

- ZigBee® wireless mesh communications
- Network Channel ID with four settings allows segregation of network systems
- Panel mountable enclosure
- 2 inputs can be individually configured for temperature input or plant fault input.
- 2 relay outputs for remote switching via network
- Over and under temperature alarms with delay
- Plant fault alarm with associated delay
- Powered from low voltage supply (included in kit)
- Seamless integration in to dmTouch using The Data Builder PLC programming software

Typical wiring



Inputs

2 Inputs supporting NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed) and digital plant fault.

Outputs

Relay 1 & 2 – 5A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive)

Radio specification

Radio Frequency specification: 16 Channels selectable from 2400MHz to 2483.5MHz

Wireless Protocol: ZigBee®

FCC ID: T7VEM250A

Output Power: +3dBm

Maximum Number Hops: 30 Hops to the Wireless Mesh Base Unit.

Range: Typically 30M from one wireless mesh device to another. (Range dependant on site conditions. Obstacles such as metal structures and the presence of other 3rd party wireless devices operating in the same frequency range affect the maximum range achievable.)

Power

5Vdc, Maximum Supply Current: <1A

5V / 90-230Vac Switch module power supply included in kit.

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

Dimensions : 95 x 97 x 30mm (3.74 x 3.82 x 1.18in)

Weight: 100g (0.22lb)

Panel fixings: 84mm between centres (3.3in)

DIN Mount

Dimensions : 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

Weight: 156g (0.34lb)

PR0731-4I

Wireless Mesh

Wireless Mesh Input Module

The wireless mesh input module supports up to 4 Inputs which can be configured as either analogue temperature inputs or as digital Inputs for plant fault monitoring.



Wireless monitoring

The wireless mesh 4I module uses the latest ZigBee® wireless mesh technology. The 4I module negates the need for a full site wired network infrastructure. This provides greater flexibility for monitoring solutions in applications where the installation of a wired network isn't feasible or cost effective.

Easy configuration

Plug and play operation ensures quick and easy setup of devices. Simply power on the 4I module, enter a unique 3 digit network address via the built-in rotary switches and when in range of a mesh enabled dmTouch system the device will automatically log online.

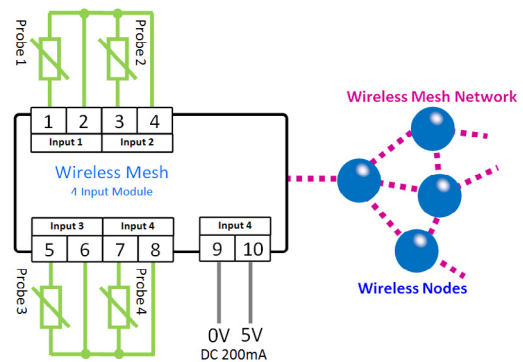
Ordering Information

Description	Part number
Wireless Mesh Module °C 4 input	PR0731-C-4I
Wireless Mesh Module °F 4 input	PR0731-F-4I
Wireless Mesh Monitor °C (4 Input) for 2K Probe DIN Mount	PR0731-DIN-C-4I
Wireless Mesh Monitor °CF(4 Input) for 2K Probe DIN Mount	PR0731-DIN-F-4I

Features

- ZigBee® wireless mesh communications
- Network Channel ID with four settings allows segregation of network systems
- Panel or din mount
- 4 inputs can be individually configured for temperature input or plant fault input
- Over and under temperature alarms with delay
- Plant fault alarm with associated delay
- Powered from low voltage supply (included in kit)
- Seamless integration in to dmTouch using The Data Builder PLC programming software.

Typical wiring



Inputs

4 Inputs supporting NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed) and digital plant fault.

Radio Specification

Radio Frequency specification: 16 Channels selectable from 2400MHz to 2483.5MHz

Wireless Protocol: ZigBee®

FCC ID: T7VEM250A

Output Power: +3dBm

Maximum Number Hops: 30 Hops to the Wireless Mesh Base Unit.

Range: Typically 30M from one wireless mesh device to another. (Range dependant on site conditions. Obstacles such as metal structures and the presence of other 3rd party wireless devices operating in the same frequency range affect the maximum range achievable.)

Power

5Vdv, Maximum Supply Current: <1A

5V / 90-230Vac Switch module power supply included in kit.

Enviromental

Operating temperature: 5° to 50°C (41° to 122°F)

Operating humidity: 10% to 80% (non condensing)

Panel Mount

Dimensions : 95 x 97 x 30mm (3.74 x 3.82 x 1.18in)

Weight: 100g (0.22lb)

Panel fixings: 84mm between centres (3.3in)

DIN Mount

Dimensions : 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)

Weight: 156g (0.34lb)

Technical tip—Controller networking

Question

I have a Data Manager, a Mercury Mk3 controller and an Futura IP module, how do I log the controller on to the Data Manager.

Answer

This can be done in 3 quick and easy steps.

- 1) With the Mercury powered down, connect the Futura to the Mercury Mk3 using a standard CAT5E patch cable (length < 15m).
- 2) Connect the Futura to the IP network (usually to an Ethernet hub/switch) using a standard CAT5E cable.
- 3) Set a unique address using the 3 rotary switches on the Futura and turn the power back on to the Mercury.

Within a few seconds the Mercury Mk3 will automatically log on to the Data Manager. Note 1 : Address 000 is reserved for Static IP address operation.

PR0732

Wireless Mesh

Wireless Mesh Access Point

This module allows the RDM wireless mesh systems to connect directly to an Ethernet network. For use with PR0730 wireless mesh interface and PR0731-2I2O, PR0731-4I wireless mesh modules and PR0733 wireless sensor.



Networked controls with no wires

Wireless Networking

Providing an Ethernet gateway to a wireless mesh system, this module allows easy connection of wireless controls and sensors to a dmTouch enabled network.

No Configuration Required

The module is completely plug and play. There is no configuration required.

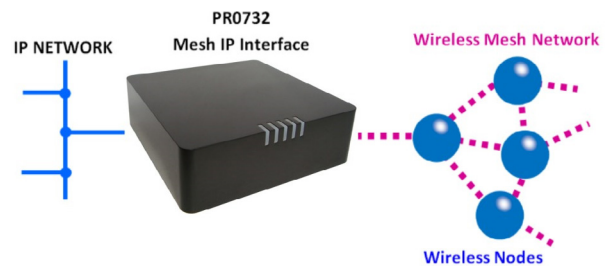
Ordering Information

Description	Part number
Wireless Mesh Access Point	PR0732-NI
Wireless Mesh Access Point with Power over Ethernet Injector	PR0732-POE

Features

- Plug and play operation. No configuration required.
- For use with PR0730, PR0731-2I2O, PR0731-4I and PR0733
- ZigBee® wireless mesh communications
- 10/100Base-T Ethernet connection
- Link and activity indicator LED's
- 30m range
- Interconnect with off the shelf CAT5E patch cables
- x2 Power options; Power Over Ethernet (POE) Injector or 5Vdc micro USB power connection

Typical wiring



Power

5V DC Micro USB connection Maximum Supply Current: 500mA or Power Over Ethernet

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)
Operating humidity: 10% to 80% (non condensing)

Dimensions

85 x 85 x 30mm (3.3 x 3.3 x 1.2in)
Weight: 95g (0.2lb)



Technical tip—Controller setup

Question

How can I configure RDM controls?

Answer

Depending on the type of control and how it is networked, generally there are five ways you can quickly and easily setup and configure RDM controls.

Note: There may be access control restricting modification of settings, access control or parameters lock down restricting modification of settings

1) Using built in display.

For any RDM control with a built in display, you can access the settings menu to manually configure any parameters to change control type.

2) Using PC connected directly

A PC or laptop can usually be connected directly to an RDM control with an appropriate cable. For IP based controls this will be a cross over patch cable.

For Plant or Intuitive Controls this is a USB cable. For others it will be a Serial Download cable. Using RDM communicator or a web browser then gives you full access to setup the control.

3) Using Data Manager

Where controls are networked and connected to a Data Manager front end, it is simple to select the Devices menu and choose the device. The settings can then be altered as required.

4) Using PC connected to Data Manager

Again where controls are networked and connected to a Data Manager front end, using a PC and web browser, it is a simple case of connecting to the Data Manager and using the onscreen menu to locate and modify settings.

5) Using Caesium programming adaptor

For many controllers (Mercury and ML) you can preload settings from a controller on to the Caesium programming adaptor. To transfer the settings to another controller it is simply the case of plugging the adaptor in to the new controller and push a button. For added security Caesium will ensure that the setting are only programmed on to a compatible controller.

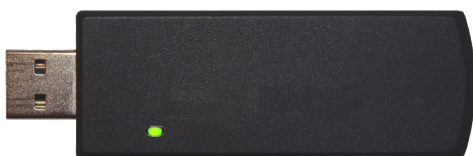
Wireless Mesh

USB Wireless Mesh Access Point

The USB wireless mesh access point allows RDM wireless mesh devices to connect directly to the Data Manager.

This allows the Data Manager to communicate with a variety of devices such as a Mercury controller fitted with the PR0730 wireless mesh interface, the PR0731-2I2O and PR0731-4I wireless mesh input/output modules and the PR0733 battery powered wireless temperature sensor. All this is done without the need for network cables.

This module simply plugs into the Data Manager or dmTouch and requires no cabling or power supply. It is ideal where space is limited and the start of the wireless network is within 30m of the Data Manager/dmTouch.



Networked controls with no wires

Wireless networking

Providing a direct gateway to a wireless mesh system, this module allows easy connection of wireless controls and sensors to a Data Manager/dmTouch enabled network.

No configuration required

The module is completely plug and play. There is no configuration required.

Installed within the data manager

The module is installed within the Data Manager and is self powered so no cabling or additional power supplies are required.

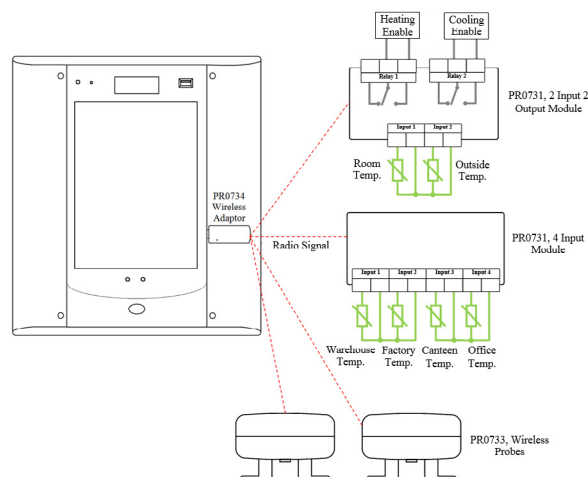
Ordering Information

Description	Part number
Wireless Mesh Access Point	PR0734

Features

- Plug and play operation. No configuration required.
- For use with PR0730, PR0731-2I2O, PR0731-4I and PR0733
- ZigBee® wireless mesh communications
- USB 2.0 full speed.
- Link and activity indicator LED
- 30m range
- Integrated 4.7GHz antenna

Typical wiring



Power

5V DC—Supplied via the Data Manager USB port
Typical Supply Current: 68mA

Environmental

Operating temperature: 5° to 50°C (41° to 122°F)
Operating humidity: 10% to 80% (non condensing)

Dimensions

82mm x 26mm x 8.5mm (3.2 x 1.0 x 0.3in)
Weight: 45g (0.1lb)

PR0733

Wireless Mesh Sensor

Wireless Battery Powered Probe

Features

- Standalone wireless temperature monitoring
- Compatible with ZigBee® wireless mesh communications
- Logging of temperatures even when mesh communications is unavailable
- Automatic syncing of data when network communications is re-established
- Battery powered for maximum flexibility
- 10 minute temperature sample frequency
- Temperature reporting to a dmTouch wireless mesh enabled network
- Over and under temperature alarm with delay
- Magnetic fixing for quick and easy Installation



Mechanical

Radio specification

Radio Frequency specification: 16 Channels selectable from 2400MHz to 2483.5MHz

Wireless Protocol: ZigBee® FCC ID: T7VEM250A

Output Power: +3dBm

Maximum Number Hops: 30 Hops to the Wireless Mesh Base Unit.

Range: Typically 30M from one wireless mesh device to another. (Range dependant on site conditions. Obstacles such as metal structures and the presence of other 3rd party wireless devices operating in the same frequency range affect the maximum range achievable.) TOLERANCE: 1%

Operating temperature

-5°C to 50°C (-22°F to 122°F)

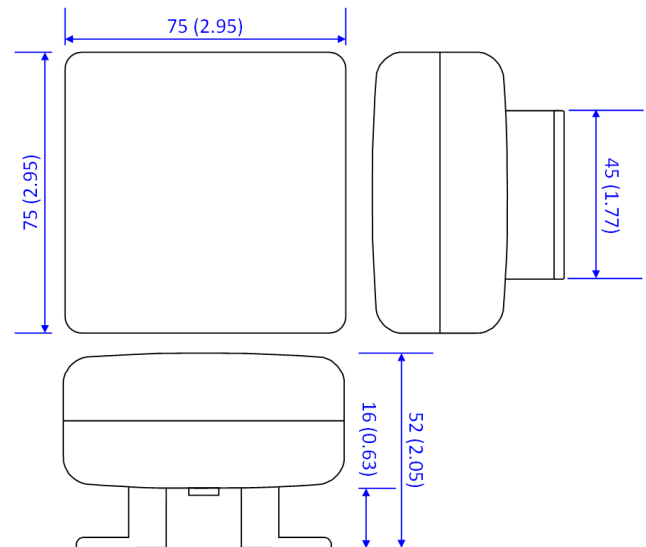
Operating humidity

0% to 100% (non condensing)

Dimensions

75 x 75 x 52mm (2.95 x 2.95 x 2.05in)

Weight: 154g (5.4oz)



Ordering Information

Description	Part number
Wireless Mesh Sensor	PR0733

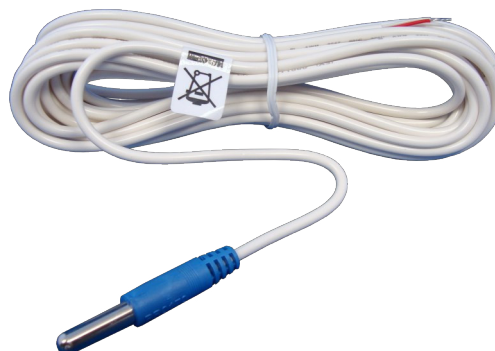
PR0170-PR0172

PT1000 Sensor

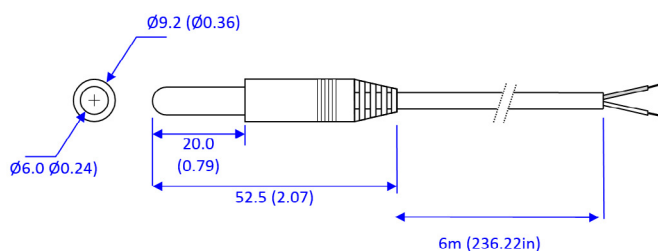
Temperature Air Probe

Features

- PT1000 element to DIN EN 60751
- 6 meter cable length
- Printing along the length of the probe cable to identify numbers/type for ease of installation and maintenance. For example “A1”, “A2” etc.
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Nickel-plated brass head for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.
- Noryl over-mould to secure the cable and eliminate moisture ingress.



Mechanical



Nominal resistance:	1000 ohm at 0°C tolerance: 0.5%, class b
Standards:	DIN EN60751 (according to IEC751)
Accuracy:	±0.5 °C (±0.9°F)
Operating temperature:	-40°C to 80°C (-40°F to 176°F)
Operating humidity:	0% to 100% (non condensing)
Dimensions (sensor head):	52.5mm x 9.2mm (2.1in x 0.36in)
Cable length:	6m ± 0.05m (236in ± 2in)
Weight:	110g (3.9oz)

Ordering Information

Description	Part number
PT1000 Air Probe 6m	PR0170
PT1000 Air Probes 5pcs (Set of probes numbers 1-5)	PR0171
PT1000 Air Probe 100pcs (20 sets of 5)	PR0172

PR0190-PR0192

PT1000 Sensor

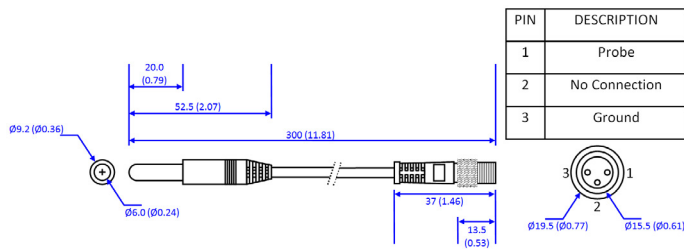
Temperature Air Probe with 3 pole sensor connector

Features

- PT1000 element to DIN EN 60751
- 0.3 meter cable length terminating in 3 pole M8x0.5 connector
- Industry standard M8x0.5 connector conforms to DIN/VDE 0660 part 208A2
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Nickel-plated brass head for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.
- Noryl over-mould to secure the cable and eliminate moisture ingress.



Mechanical



Nominal resistance:	1000 ohm at 0°C TOLERANCE: 0.5%, Class B
Standards:	DIN EN60751 (according to IEC751)
Connector:	3 Pole M8x0.5 conforms to DIN/VDE 0660 part 208A2
Accuracy:	±0.5°C (±0.9°F)
Operating temperature:	-40°C to 80°C (-40°F to 176°F)
Operating humidity:	0% to 100% (non condensing)
Dimensions (Sensor Head):	2.5mm x Ø9.2mm (2.1in x 0.36in)
Cable length:	300mm ± 5mm (11.8in ± 0.2in)
Weight:	18g (0.6oz)

Ordering Information

Description	Part number
PT1000 Air Probe 0.3m with 3 pole connector	PR0190
PT1000 Air Probe 0.3m with 3 pole connector 10pcs	PR0191
PT1000 Air Probe 0.3m with 3 pole connector 100pcs	PR0192

PR0240-PR0242

NTC 2K Sensor

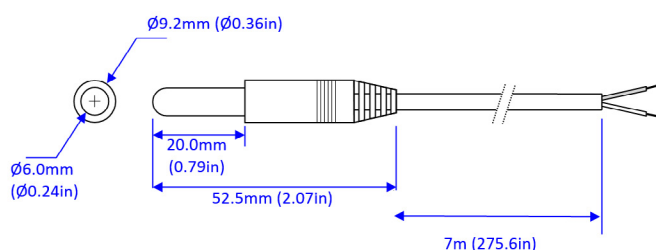
Temperature Air Probe

Features

- NTC 2K Temperature sensor
- 7 meter cable length
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Nickel-plated brass head for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.
- Noryl over-mould to secure the cable and eliminate moisture ingress.



Mechanical



Nominal resistance: 2000 ohm at 25°C TOLERANCE: 1.0%
 Operating temperature: 40°C to 80°C (-40°to 176°F)
 Operating humidity: 0% to 100% (non condensing)
 Dimensions (Sensor Head): 52.5mm x 9.2mm (2.1in x 0.36in)
 Cable length: 7m ± 0.05m (197in ± 2in)
 Weight: 110g (3.9oz)

Ordering Information

Description	Part number
2K Air Probe 7m	PR0240
2K Air Probes 5pcs (Set of probes numbers 1-5)	PR0241
2K Air Probe 100pcs (20 sets of 5)	PR0242

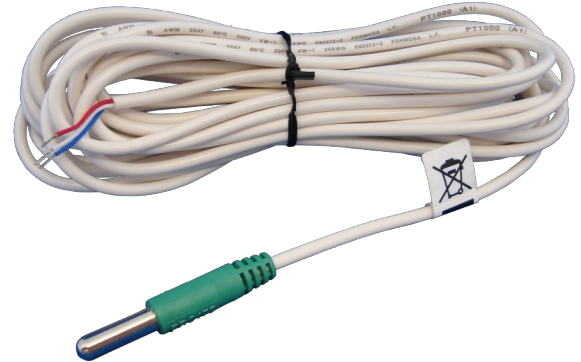
PR0175-PR0177

PT1000/2K Twin Sensor

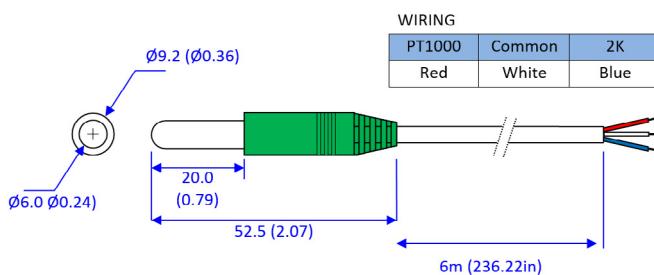
Twin Sensor Temperature Air Probe

Features

- Combined PT1000/NTC 2K Temperature sensor, eliminates the need to carry two different probe types
- 6 meter cable length
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Nickel-plated brass head for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.
- Noryl over-mould to secure the cable and eliminate moisture ingress.



Mechanical



Nominal resistance (2K):	2000 ohm at 25°C
Tolerance (2K):	1.0%
Nominal resistance:	(PT1000): 1000 ohm at 0°C TOLERANCE
	(PT1000): 0.5%, Class B
Standards (pt1000):	DIN EN60751 (according to IEC751)
Accuracy (pt1000):	±0.5 °C (±0.9°F)
Operating temperature: -	40°C to 80°C (-40°F to 176°F)
Operating humidity:	0% to 100% (non condensing)
Dimensions (sensor head)	: 52.5mm x Ø9.2mm (2.1in x 0.36in)
Cable length:	6m ± 0.05m (236in ± 2in)
Weight:	110g (3.9oz)

Ordering Information

Description	Part number
PT1000/2K Air Probe 6m	PR0175
PT1000/2K Air Probes 5pcs (Set of probes numbers 1-5)	PR0176
PT1000/2K Air Probe 100pcs (20 sets of 5)	PR0177

PR0180-PR0182

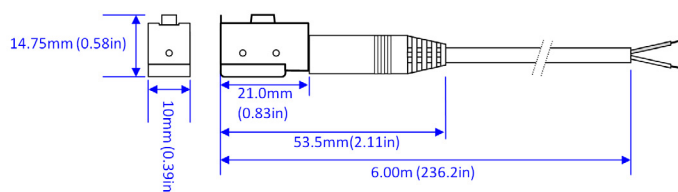
PT1000 Sensor

Temperature Pipe Probe

Features

- PT1000 element to DIN EN 60751
- 6 meter cable length
- Profiled head with integral tensioning spring to give superior contact with the curved surface of a pipe.
- Printing along the length of the probe cable to identify numbers/type for ease of installation and maintenance. For example “P3”, “P4” etc.
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Nickel-plated brass head for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.
- Noryl over-mould to secure the cable and eliminate moisture ingress.

Mechanical



Nominal resistance:	1000 ohm at 0°C
Tolerance:	0.5%, Class B
Standards:	DIN EN60751 (according to IEC751)
Accuracy :	±0.5 °C (±0.9°F)
Operating temperature:	40°C to 80°C (-40°to 176°F)
Operating humidity:	0% to 100% (non condensing)
Dimensions (Sensor Head):	53.5mm x 14.75mm x 10mm (2.11in x 0.58in x 0.39in)
Cable length:	6m ± 0.05m (236in ± 2in)
Weight:	110g (3.9oz)

Ordering Information

Description	Part number
PT1000 Air Probe 6m	PR0180
PT1000 Air Probes 10pcs (5 sets of numbers 3,4)	PR0181
PT1000 Air Probe 100pcs (10 sets of 10)	PR0182



PR0183-PR0185

PT1000 Sensor

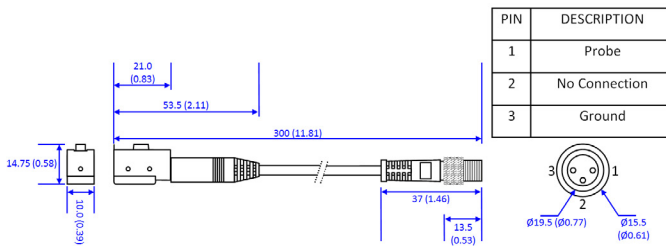
Temperature Pipe Probe with 3 pole connector

Features

- PT1000 element to DIN EN 60751
- 0.3 meter cable length terminating in 3 pole M8x0.5 connector
- Industry standard M8x0.5 connector conforms to DIN/VDE 0660 part 208A2
- Profiled head with integral tensioning spring to give superior contact with the curved surface of a pipe.
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Nickel-plated brass head for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.
- Noryl over-mould to secure the cable and eliminate moisture ingress.



Mechanical



Nominal resistance:	1000
ohm at 0°C tolerance:	0.5%, Class B
Standards:	DIN EN60751 (according to IEC751)
Connector:	3 Pole M8x0.5 conforms to DIN/VDE 0660 part 208A2
Accuracy :	±0.5 °C (±0.9°F)
Operating temperature::	-40°C to 80°C (-40°to 176°F)
Operating humidity:	0% to 100% (non condensing)
Dimensions (Sensor Head):	53.5mm x 14.75mm x 10mm (2.11in x 0.58in x 0.39in)
Cable length:	300mm ± 5mm (11.8in ± 0.2in)
Weight:	26g (0.9oz)

Ordering Information

Description	Part number
PT1000 Pipe Probe 0.3m with 3 pole connector	PR0183
PT1000 Pipe Probes 0.3m with 3 pole connector 10pcs	PR0184
PT1000 Pipe Probe 0.3m with 3 pole connector 100pcs (10 boxes of 10pcs)	PR0185

PR0206

PT1000 Sensor

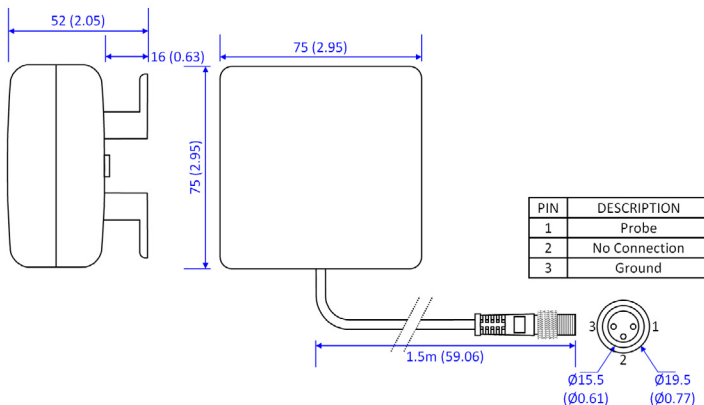
Product Simulator Probe

Features

- PT1000 element to DIN EN 60751
- 1.5 meter cable length terminating in 3 pole M8x0.5 connector
- Industry standard M8x0.5 connector conforms to DIN/VDE 0660 part 208A2
- Thermal mass similar to 1.5kg/3lb Chicken is designed to mirror the temperature changes of produce rather than just the air around it.
- Very high reliability construction. Unique internal construction using surface mount components inside a plastic sub-frame ensures complete consistency of sensor position inside the tube.
- Magnetic fixing for quick and easy installation.
- Probe tip housing potted with heat conductive paste for good thermal conductivity.
- Back filled with epoxy and vacuumed to eliminate air pockets.



Mechanical



Nominal resistance:	1000 ohm at 0°C TOLERANCE: 0.5%, Class B
Standards:	DIN EN60751 (according to IEC751)
Connector:	3 Pole M8x0.5 conforms to DIN/VDE 0660 part 208A2
Accuracy :	±0.5 °C (±0.9°F)
Operating temperature:	-40°C to 80°C (-40°F to 176°F)
Operating humidity:	0% to 100% (non condensing)
Dimensions (Sensor Head):	75mm x 75mm x 52mm (2.95in x 2.95in x 2.05in)
Cable length:	1.5m ± 0.025m (59in ± 1in)
Weight:	300g (10.5oz)

Ordering Information

Description	Part number
Product Probe PT1000	PR0206

PR0374-PR0389

Ethernet Patch Cables

CAT5E

Industry standard Ethernet patch cables for networking and controller interconnects.

Easy fit

Plug and play connectors allow for simple, rapid fit connection to any RJ45 socket.

Full functionality

Dual purpose, suitable for connecting controls to interface modules as well as inter-connects on Ethernet networking.

Robust design

Constructed with four twisted pair core to minimise noise and interference with a durable outer PCV jacket.

Ordering Information

Description	Part number
0.5m CAT5E Patch Cable	PR0384
1m CAT5E Patch Cable	PR0385
3m CAT5E Patch Cable	PR0386
5m CAT5E Patch Cable	PR0387
15m CAT5E Patch Cable	PR0389

Features

- Guaranteed 100% compatible with Resource Data Management controls
- Available in 0.5m, 1m, 3m, 5m & 15m
- Simple plug and play installation

**Category / wiring**

CAT5E / STRAIGHT

Plug types

RJ45—RJ45

Conductors

AWG 24

Insulation

Polyethylene / PVC

Environmental

Operating temperature: 0° to 60°C (32° to 140°F)
Max Operating humidity: 90% (non condensing)

Mechanical

Weight: 50g to 650g (0.1 to 1.4lb) 0.5 to 15m

PR0377-379

Network Switches

5 to 16 port Ethernet Network Switches

Compact and low cost Ethernet Switches.

These switches are designed for applications requiring high network performance to exchange large data files and to access real-time information. Featuring internal power supplies plus autosensing and auto MDI/MDIX on all ports, these switches are delivered in compact streamlined enclosures.

The fastest connection speed is found automatically, all that is needed is to connect the power and Ethernet cables. There is no software to configure. Easy to set up, these switches feature a fanless design which provides silent operation. With a choice of five, eight or sixteen ports you can expand your network by adding more devices with speeds up to 200 Mbps per port in full-duplex mode.

Optimal network connectivity**Auto speed sensing 10/100Mbps connectivity**

Enables connection from 10 to 100Mbps ensuring optimum throughput while retaining compatibility with legacy equipment.

Full duplex support

Allows full two way data transfer doubling the effective bandwidth.

Ordering Information

Description	Part number
5 Port Ethernet Switch	PR0377
8 Port Ethernet Switch	PR0378
16 Port Ethernet Switch	PR0379

Features

- Guaranteed compatibility with RDM controls
- Front panel LEDs indicate network use
- Suits industry standard CAT5E cables
- Non fan design ensures maintenance free, silent operation

Regulatory and agency approvals

Safety: UL 60950-1, EN 60950-1, CSA 22.2 60950-1, IEC 60950-1
Emissions: CFR Title 47, FCC Part 15, Subpart B Sections 15, 107 and 15, 109 Class B; ICES-003 Class B; EN 55022 Class B; EN 61000-3-2: 2000; EN 61000-3-3: 1995; EN 61000-3-11; CISPR 22: 2003-04-10 Class B; RRL

Power

100-240Vac, 50/60Hz

Power consumption: PR0377—3.6W, PR0378—4.7W, PR0379— 5.9W

Environmental

Operating temperature: 0° to 40°C (32° to 105°F)

Operating humidity: 10% to 90% (non condensing)

Mechanical

5 Port Dimensions : 143 x 108 x 30mm (5.6 x 4.3 x 1.2in)
Weight: 470g (1.0lb)

8 Port Dimensions : 178 x 108 x 30mm (7 x 4.3 x 1.2in)
Weight: 525g (1.2lb)

16 Port Dimensions : 208 x 160 x 40mm (8.2 x 6.3 x 1.6in)
Weight: 640g (1.4lb)

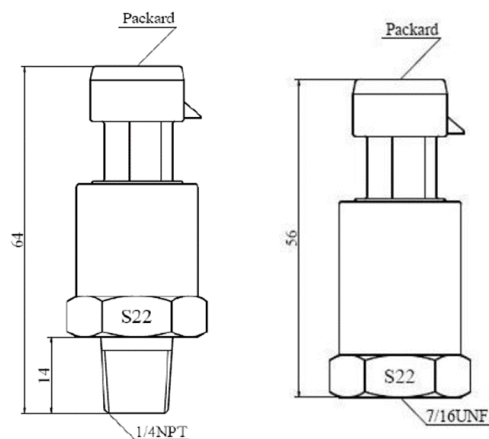
PR0160-PR0164

Pressure Transducers

'RDM have a range of pressure transducers with varying providing solutions for a wide range of applications. All transducers operate with the variable output 4~20mA with a 2m cable as standard.

Typical applications

Refrigeration and HVACR systems with varying gas types. See compatible refrigerants in Specification table.



Pressure Range	-1-20 bar, -1-65 bar, 0-125 bar
Pressure Type	Gauge pressure, Absolute pressure
Overload	200% F.S
Burst Pressure	300% F.S
Accuracy (Linearity Hysteresis Repeatability)	$\leq \pm 0.5\% \text{ F.S}$ $\leq \pm 1\% \text{ F.S}$
Stability	$0.5\% \text{ F.S} \pm 0.05\%$
Working Temperature	-40°C~95°C
Storage Temperature	-40°C~125°C
Temperature Compensation	-10°C~60°C (standard)
Thermal effect on zero	+/- 0.05%
Thermal effect on span	+/- 0.005%
Medium compatible	Compatible with 304/316 Stainless steel
Electronic wire	2/ 3 Wires
Output	4~20mA
Power supply	12~36V DC
Short Circuit protected	Yes
Overvoltage protection	45 V DC
Insulate resistance	>100M Ω @50V
Electronic connection	Packard 3 pin connector with 2.0m cable
Pressure connect port	1/4" NPT male, 7/16in 20UNF(F)
Response time	$\leq 10\text{ms}$
Certificate approving	CE Certificate
EMC standard	Electromagnetic radiation: EN50081-1/-2 Electromagnetic susceptibility: EN50082-2
Water proof	IP67
Weight	Net weight 0.2Kg.Full packaging weight 0.35Kg (includes 2.0m cable)
Compatible Refrigerants	R12, R21, R22, R31, R32, R113, R114, R154a, R404a, R407a, R407c, R410a, R502, R507, R744.

Ordering Information

Description	Part number
Transducer -1 to 20 BAR (-14.5 to 290 PSI) with 1/4in NTP male fitting	PR0160
Transducer -1 to 20 BAR (-14.5 to 290 PSI) with 7/16in 20UNF(F)	PR0161
Transducer -1 to 65 BAR (-14.5 to 940 PSI) with 1/4in NTP male	PR0162
Transducer -1 to 65 BAR (-14.5 to 940 PSI) with 7/16in 20UNF(F)	PR0163
Transducer 0 to 125 BAR (0 to 1810 PSI) with 1/4in NTP male	PR0164

Warranty

1 year warranty

PR0455

Shuttle

USB Temperature Logger

The Shuttle is a stand-alone battery powered device which monitors and stores the temperature in applications that would be difficult / cost prohibitive to monitor with hard wired controls.

The small size of the Shuttle makes it ideal to be packed with goods to provide full history of temperature conditions during transportation or storage. This makes it ideal for food produce, health care applications and more. It is capable of reading both Fahrenheit and Centigrade temperatures. The temperature logs can be easily transferred to a PC via USB for analysis and graphing.

Typical applications

Temperature Monitoring and Analysis



Portable and lightweight

Temperature analysis

The USB Temperature Logger is capable of producing more than 16,000 log entries. Depending on your application this device can run continuously over a 21 month period. The log entries can then be transferred via USB to a PC allowing in depth temperature analysis.

Easy configuration

Using the USB Temperature Logger interface you can set device names for identification purposes. To supplement this they come supplied with four interchangeable different coloured caps for an easy visual identification when in use. This device can start logging by a swipe of the magnet found in the USB lid. Alternatively this can also be done by setting start dates and times using the PC interface.

Ordering Information

Description	Part number
USB Temperature Logger	PR0455
USB Temperature Logger (Box of 100)	PR0455-100
USB Temperature Logger (Box of 1000)	PR0455-1000
USB Temperature Logger with Custom Logo (Box of 1000)	PR0455-CUST

Features

- Stand-Alone temperature logging
- Battery powered
- Can record more than 16,000 logs
- Fahrenheit and centigrade logging
- Colour coded caps help reduce cross-contamination and complies with food hygiene regulations
- Timed or manual initiation of logging
- Adjustable sample periods
- Adjustable OT/UT temperature alarms
- Seamless integration with Data Manager
- Analyse and download data via PC

Input

2k 202AT Temperature Sensor

Range: -35° to 80°C (-31° to 176°F) Accuracy: -35 to -10°C: ±1.0°C
Accuracy: -10 to +40°C ±0.5°C Accuracy: +40 to +80°C ±0.6°C

Power

High Energy Lithium Battery: 3.6V

Environmental

Operating temperature: -35° to 80°C (-31° to 176°F)

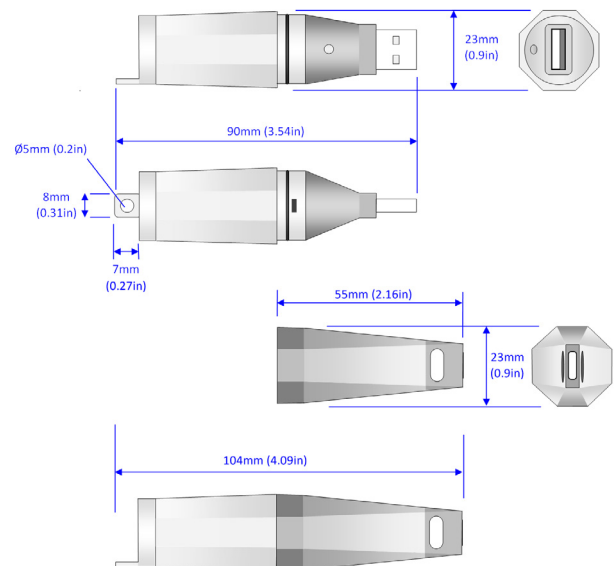
Moisture Protection: IP67 (When the protective cover is fitted)

Storage Temperature: -40° to +80°C (-40° to 176°F)

Dimensions

104 x 23 x 23mm (4.1 x 0.9 x 0.9in)

Weight: 37g (1.3oz)



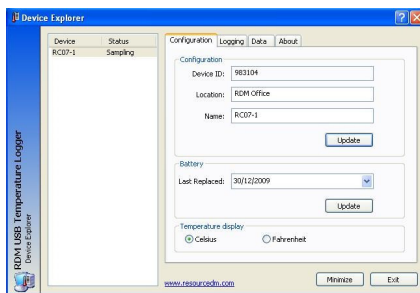
Shuttle Device Explorer

Device operation

With the Shuttle connected to a Windows based PC, the device can be started by selecting the preferred start method within the Logging tab. If Swipe is chosen temperature logging will not begin until the lid is removed and the point is held close to the LED.

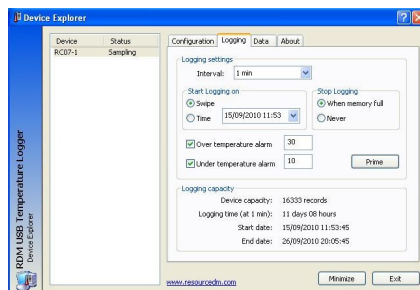
You could also choose to start the device using the Time option. This gives you more flexibility on exactly when you want the temperature logging to begin. The LED fitted to the temperature logger indicates what state the device is in and is shown in the table below.

LED Colour	Flashes	Status
GREEN	5 times (1 sec interval) followed by 5 rapid flashes	Logging has been initiated
OFF	None	Normal Operations / No Alarms
AMBER	Double flash (15 sec interval)	Under temperature alarm
RED	Double flash (15 sec interval)	Over temperature alarm
RED	Single flash (15 sec interval)	Low battery warning



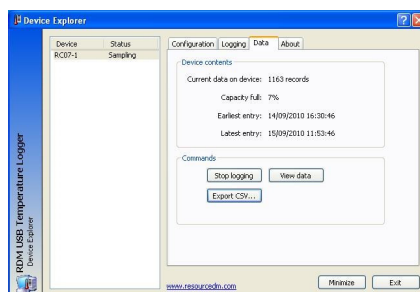
Please Note: Over and under temperature alarm indications continue until the device is inserted into a PC, even if the temperature falls back to within its normal range.

The Configuration tab allows you to easily set up basic identification information including the name and intended location of the device. Once the relevant information has been inputted the “Update” button retains the information entered by the user. This screen also allows the user to keep track of the last battery replacement with the relevant Update button retaining the information inputted by the user. Finally this screen also gives the user the opportunity to select what temperature scale the Shuttle uses whether that be Celsius or Fahrenheit.



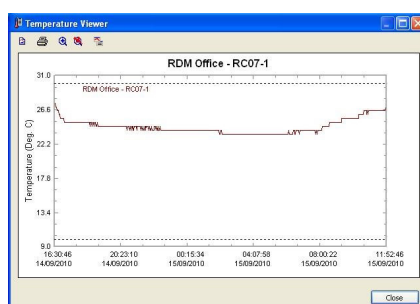
The Logging tab allows you to customise the logging intervals, start /stop methods and to determine what the Shuttle will report as over and under temperature alarms. The table below shows the expected continuous duration of the logger in relation to the Logging Interval selected by the user.

Loggin Interval	Logging Period	Loggin Interval	Logging Period
15 seconds	2 days 20 hours	5 minutes	56 days 17 hours
30 seconds	5 days 16 hours	15 minutes	170 days 3 hours
1 minute	11 days 8 hours	30 minutes	340 days 6 hours
2 minutes	22 days 16 hours	60 minutes	680 days 12 hours



You can also set your preferred starting method, swipe or timed, and what the logger will do when the memory is full. If the memory is full you can choose to stop logging at this point. You can also choose the Never option, however, the logger will then start to overwrite the earliest logs it has recorded. Finally you can pre-determine what constitutes an over and under temperature alarm dependant on your application. When all the requirements have been inputted the Prime button will program the Shuttle with the settings.

The Data tab allows you to stop the device and analyse the logs recorded by the Shuttle. There is an option available to Export CSV file which allows the user to manipulate the results as required. Click the View Data button to draw a printable graph in a separate window.



Once the graph has been drawn you can use the toolbar to extract the required information. There is an option to Add Temperature Curve which allows you to compare against a previously saved CSV file or the graph from another device. There is also a Zoom function which allows you to scrutinise a particular time period. The graph can be printed in either a zoomed or non zoomed state. Finally there is an option to toggle the information on the graph into a table format allowing you to look more accurately at the dates and temperatures in numerical format.

Notes

Training

At Resource Data Management as well as supplying high quality, feature packed cost-effective products we believe that it is essential that our customers have the best understanding of how to install and use our products to gain the best possible results. Not only does this reduce initial investment costs, as customers will have the knowledge to confidently select the most appropriate products for their solution, it also ensures seamless and quick installation and effective maintenance.

Free bespoke training sessions, inform users how to optimise controls, reduce running costs and extend service life of the equipment for optimal value for money. Training sessions are available to all of our customers at our dedicated training facilities in Glasgow and Minneapolis. Other training solutions include live web based training, webinars, and on-site training sessions at customer premises.*

Training programmes can be tailored to suit your exact requirements and will typically last from one to three days depending on your requirements.

Topics covered include

- Refrigeration Applications
- Heating Ventilation & Air Conditioning Applications
- Lighting Applications
- Energy Monitoring and Reduction
- Controls Applications Using The Data Builder (TDB) Software Platforms
- Temperature and Plant Monitoring Applications
- dmTouch Installation and Setup
- Networking

To discuss your requirements and to arrange training please contact:

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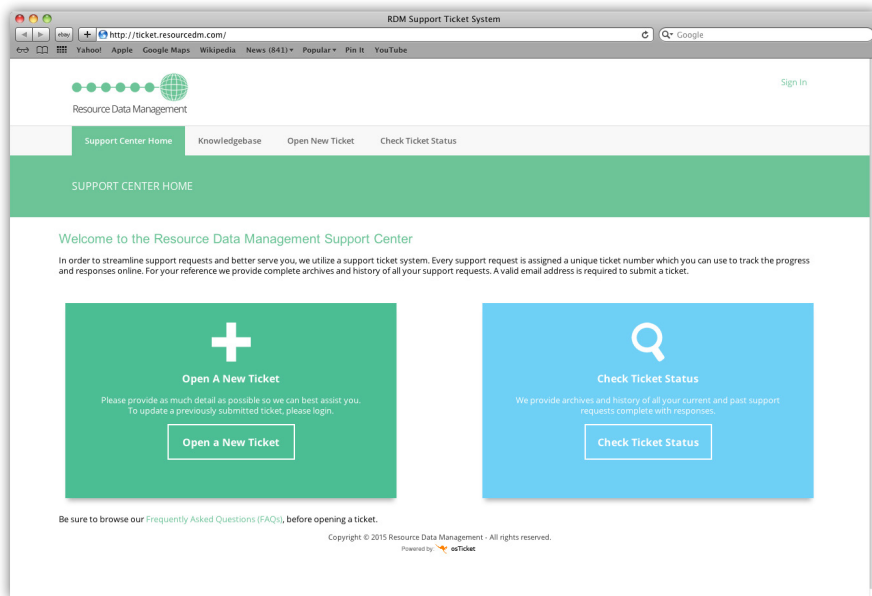
*Training at customer's premises will be chargeable to cover travel/accommodation costs.



Technical support

RDMs Technical Support department offers free after sales support. The resourcedm.com website offers a highly efficient support ticket system, making it easy to submit enquiries at a time convenient to you.

The ticketing system can be found under the **Support** menu



Once the ticket has been submitted it will be routed to the best available person with knowledge of that product, an answer will then be promptly delivered to you. To make it easy to reference your enquiry in the future, or over the phone, you will be issued with a unique ID number that will also allow you to track the progress of your enquiry online.

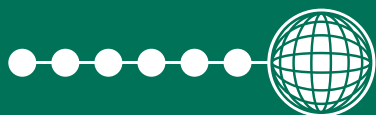


Instant live chat

Visit www.resourcedm.com during office hours and simply click on the link on the left side of any page of the RDM site, you will then be connected instantly with an expert from our Technical Support Team.

Free downloads

To ensure each and every customer has the opportunity to maintain their assets at optimum levels and reduce energy consumption fast we give you access to free license software and documentation downloads including function programmes and The Data Builder (TDB) our highly flexible Programmable Logic Control software.



5 year warranty on all
RDM manufactured products*



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Visit www.resourcedm.com for more information on RDM solutions

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*Excluding OEM products and selected product lines. Warranty details for excluded products will be detailed on the respective product pages.

