Temperature Control 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. Kwheb, our energy dashboard, completes the cycle – making it even easier to identify cost saving options and manage your energy usage.

*Excluding OEM products and selected product lines. Warranty details for excluded products will be detailed on the respective product pages.
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Intuitive Programmable Logic & Plant Control Solutions

Intuitive controls that make intelligent control simple with the use of our free license PLC software - The Data Builder (TDB). Select from pre-programmed options or easily configure to create bespoke solutions that precisely meet your control requirements.

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.

HVAC & BEMS Solutions

RDM BEMS solutions deliver optimum control across all aspects of HVAC and lighting systems; supported by award winning predictive monitoring and energy management software, we give you everything you need to achieve your carbon reduction and sustainability objectives.

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 specifications 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.
Intelligent controls

<table>
<thead>
<tr>
<th>Applications</th>
<th>Mercury 2</th>
<th>Mercury 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Model Part Numbers</td>
<td>PR0710, PR0711, PR0712, PR0720, PR0721 &amp; PR0713</td>
<td>PR0740 MD IP CAS, PR0740 MR IP CAS, PR0740 ED IP CAS &amp; PR0740 ER IP CAS</td>
</tr>
<tr>
<td>Temperature Probe Inputs</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Supported Probe Types</td>
<td>10 (Default PT1000)*</td>
<td>10 (Default PT1000)*</td>
</tr>
<tr>
<td>Digital Inputs</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Relay Outputs</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Highest Rated Relay Current</td>
<td>6A Resistive (250Vac,30Vdc) COSφ=0.4 2A Inductive load</td>
<td>6A Resistive (250Vac,30Vdc) COSφ=0.4 2A Inductive load</td>
</tr>
<tr>
<td>Permanent Fused Live Outputs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Relay Protection</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Control Options (Model Dependent)</td>
<td>TEV or Compressor or Pulse EEV or Stepper EEV</td>
<td>TEV or Compressor or Pulse EEV</td>
</tr>
<tr>
<td>Analogue Inputs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Display</td>
<td>Internal or optional Remote</td>
<td>One 4-20mA or One 0-10Vdc</td>
</tr>
<tr>
<td>Alarm Notification</td>
<td>LED &amp; Display (via Internal or Remote display options)</td>
<td>LED &amp; Display (via Internal or Remote display options)</td>
</tr>
<tr>
<td>Status Indicators</td>
<td>LED &amp; Display (via Internal or Remote display options)</td>
<td>LED &amp; Display (via Internal or Remote display options)</td>
</tr>
<tr>
<td>Mains Isolator</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Real Time Clock (RTC)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>HACCP LED</td>
<td>Yes (Via dmTouch TDB)</td>
<td>Yes (Via dmTouch TDB)</td>
</tr>
<tr>
<td>Network Communication External Hardware</td>
<td>Standalone or IP or RS485 or Wireless Mesh</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Network Communication Integrated</td>
<td>Not Applicable</td>
<td>IP</td>
</tr>
<tr>
<td>Network Protocol</td>
<td>XML</td>
<td>XML</td>
</tr>
<tr>
<td>Power Supply</td>
<td>100-240Vac +/-10% 50-60Hz (Typ. &lt;1A)</td>
<td>100-240Vac +/-10% 50-60Hz (Typ. &lt;1A)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>5° to 50°C (41° to 122°F)</td>
<td>5° to 50°C (41° to 122°F)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>10% to 90% (non condensing)</td>
<td>10% to 90% (non condensing)</td>
</tr>
<tr>
<td>Caesium Support (Programming Tool)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Removable Connectors</td>
<td>Probe Inputs Only</td>
<td>Yes</td>
</tr>
<tr>
<td>Enclosure Type</td>
<td>Panel Mount</td>
<td>Panel Mount</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>36x78x112mm(1.42x3.1x4.4in)</td>
<td>36x78x112mm(1.42x3.1x4.4in)</td>
</tr>
<tr>
<td>Panel Cut-out (L x W)</td>
<td>71 x 29mm (2.8 x 1.2in)</td>
<td>71 x 29mm (2.8 x 1.2in)</td>
</tr>
<tr>
<td>Weight</td>
<td>170g (0.38lb)</td>
<td>180g (0.39lb)</td>
</tr>
</tbody>
</table>

* The following temperature probes are supported: - PT1000, NTC2K, 470R,700R, 3K,5K,6K,NTC2K25, NTC10K or NTC10K(2) probes

**The following temperature probes are supported: - PT1000, NTC2K, NTC2K25, 5K or NTC10K probes
<table>
<thead>
<tr>
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<th>Mercury Coldroom Panel</th>
<th>ML Controller</th>
<th>Powertray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integral Case or Remote Case or Coldroom</td>
<td>Coldroom</td>
<td>Integral Case or Remote Case</td>
<td>Remote Case</td>
</tr>
<tr>
<td>PR0750, PR0751, PR0752, PR0760, PR0761 &amp; PR0762</td>
<td>PR0150-XXX</td>
<td>PR0120, PR0121, PR0122, PR0123, PR0123E &amp; PR0123-TWI</td>
<td>PR0040 through to PR0053</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>10 (Default PT1000)*</td>
<td>10 (Default PT1000)*</td>
<td>5 (Default NTC2K)**</td>
<td>10 (Default PT1000)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>2 (Optional)</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>3 or 5</td>
<td>4 or 7</td>
</tr>
<tr>
<td>10A Resistive (250Vac,30Vdc)</td>
<td>20A Resistive (250Vac,30Vdc)</td>
<td>16A Resistive (250Vac)</td>
<td>18A Resistive (250Vac)</td>
</tr>
<tr>
<td>COSΦ=0.4 4A Inductive Load</td>
<td>COSΦ=0.4 8A Inductive Load</td>
<td>COSΦ=0.4 1.5HP (N/C) Motor Load</td>
<td>COSΦ=0.4 5A Inductive</td>
</tr>
<tr>
<td>Optional Fused</td>
<td>MCB or Fuse</td>
<td>None</td>
<td>MCB &amp; Fuse (Output dependent)</td>
</tr>
<tr>
<td>TEV or Compressor or Pulse EEV or Stepper EEV</td>
<td>TEV or Compressor or Pulse EEV</td>
<td>TEV or Compressor or Pulse EEV</td>
<td>TEV or Pulse EEV</td>
</tr>
<tr>
<td>Optional 4-20mA or 0-10Vdc</td>
<td>Internal Remote Display (Inc 5M Cable)</td>
<td>Remote Display (Inc 5M Cable)</td>
<td>Optional Remote Display</td>
</tr>
<tr>
<td>LED &amp; Display (via Internal or Remote display options)</td>
<td>Buzzer, LED &amp; Display</td>
<td>Buzzer, LED &amp; Display</td>
<td>LED &amp; Display (via Remote display options)</td>
</tr>
<tr>
<td>LED &amp; Display (via Internal or Remote display options)</td>
<td>LED &amp; Display</td>
<td>LED &amp; Display</td>
<td>LED &amp; Display (via Remote display options)</td>
</tr>
<tr>
<td>No</td>
<td>Yes (Optional)</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes (Via dmTouch TDB)</td>
<td>Yes (Via dmTouch TDB)</td>
<td>Yes (Via dmTouch TDB)</td>
<td>Yes (Via dmTouch TDB)</td>
</tr>
<tr>
<td>Standalone or IP or RS485 or Wireless Mesh or Wi-Fi</td>
<td>Standalone or IP or RS485</td>
<td>Standalone or IP</td>
<td>Standalone or IP or RS485</td>
</tr>
<tr>
<td>Optional IP or RS485 or Wireless Mesh or Wi-Fi</td>
<td>Optional IP or RS485</td>
<td>Optional IP or RS485</td>
<td>Optional IP or RS485</td>
</tr>
<tr>
<td>XML</td>
<td>XML</td>
<td>XML</td>
<td>XML</td>
</tr>
<tr>
<td>100-240Vac +/-10% 50-60Hz (Typ. &lt;1A)</td>
<td>100-240Vac +/-10% 50-60Hz</td>
<td>100-240Vac +/-10% 50-60Hz</td>
<td>220-240Vac +/-10% 50Hz</td>
</tr>
<tr>
<td>(Typical Current, model dependent. Max 50A)</td>
<td>(Typical Current, model dependent. Max 50A)</td>
<td>(Typical Current, model dependent. Max 50A)</td>
<td>(Typical Current, model dependent. Max 32A)</td>
</tr>
<tr>
<td>-10° to 60°C (14° to 140°F)</td>
<td>5° to 50°C (41° to 122°F)</td>
<td>5° to 50°C (41° to 122°F)</td>
<td>5° to 50°C (41° to 122°F)</td>
</tr>
<tr>
<td>10% to 80% (non condensing)</td>
<td>10% to 80% (non condensing)</td>
<td>10% to 80% (non condensing)</td>
<td>10% to 80% (non condensing)</td>
</tr>
<tr>
<td>Yes (Excludes Integrated Options)</td>
<td>Yes</td>
<td>Yes (Excludes Integrated Options)</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DIN RAIL</td>
<td>Bespoke Electrical Panel (Plastic)</td>
<td>Controller - Panel Mount Relay Board - Back Plate or Tiny Mountable</td>
<td>Bespoke Electrical Tray (Metal)</td>
</tr>
<tr>
<td>120x157x67mm(4.7x6.2x2.6in)</td>
<td>300 x 240 x 130mm (11.8 x 9.4 x 5.1in)</td>
<td>Controller - 36 x 78 x 112mm (1.42 x 3.1 x 4.4in)</td>
<td>70 x 160 x 300mm (2.75 x 6.3 x 11.8in)</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Controller - 29 x 71mm (1.14 x 2.8in)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>500g (1.1lb)</td>
<td>2,3kg (4.8lb)</td>
<td>170g (0.38lb) Controller + Cable</td>
<td>3.0kg (6.6lb)</td>
</tr>
</tbody>
</table>

* Optional CHS 304SS 76mm (3"") or 102mm (4"") Shut-off Valve with 1-1/2" NPT connection
** Optional 4-20mA or 0-10Vdc

** Note:** The above specifications are subject to change without notice.
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
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.

<table>
<thead>
<tr>
<th>Worldwide</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSL</td>
<td>Wireless Mesh</td>
</tr>
<tr>
<td>Cable</td>
<td>BACnet®</td>
</tr>
<tr>
<td>Lease Line</td>
<td>Wi-Fi</td>
</tr>
<tr>
<td>3G</td>
<td>Fibre</td>
</tr>
<tr>
<td>4G</td>
<td>Modbus®</td>
</tr>
<tr>
<td>GSM</td>
<td>SNMP</td>
</tr>
<tr>
<td>Modem</td>
<td>XML</td>
</tr>
</tbody>
</table>
ActiveFM™
Award-winning monitoring software

RDM energy and building management solutions make it simple to control all aspects of HVACR 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, RDM’s 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 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’eb (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

Data collected from sensors and devices on clients side
Data sent to the dmTouch
Data travels via the internet to the ActiveFM™ Server
Your information is available to your in-house or RDM monitoring team

How Active FM works

The system generates reports on-demand. Management can make informed decisions.
The team could carry out a remote fix - minimising travel cost and carbon footprint, or, they can arrange corrective action with the local contractor at a time to suit your operation. The contractor will have full knowledge of what to expect before he sets off for site.
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

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

Optional plug-in

<table>
<thead>
<tr>
<th>Feature</th>
<th>How it works</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dial-in Access</td>
<td>Ability to access and view individual Data Managers remotely.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature Data Retention (TDR)</td>
<td>Daily capture and storage of temperature data, alarm logs and parameter change data. Accessible via WebReporter.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live Maps</td>
<td>Multi-site estate locations represented on an interactive map by pins. Pins change colour to highlight pre-alarm and alarm state.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Standalone Products

<table>
<thead>
<tr>
<th>Feature</th>
<th>How it works</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kw’eb</td>
<td>Web based dashboard presenting meter readings from on-site Data Managers. Compatible with a wide range of Gas, Water and Electricity Meters.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

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

Kw®eb 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 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.
Kw²eb
Cloud based energy management

Embrace the future and be one step ahead with Kw²eb, RDMs cloud based energy dashboard. Kw²eb 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. Kw²eb 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, Kw²eb 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 HVACR 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
Kw²eb 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 Kw²eb works

Kw²eb 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 eb?

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 eb takes our energy management solutions one step further to deliver even greater savings.

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

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°C)
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.

Accessory & 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.
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 console 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](http://www.resourcedm.com/touchXL/more)
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.

#### Feature Mk2 Mk3 Intuitive Mercury

<table>
<thead>
<tr>
<th>Outputs (M Mechanical Relay)</th>
<th>Relay 1-4</th>
<th>Relay 1-4</th>
<th>Relay 1-5, 10A (250Vac,30Vdc) resistive (COSφ=0.4 3A Inductive load)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load)</td>
<td>6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load)</td>
<td>PR0750/PR0760</td>
</tr>
<tr>
<td></td>
<td>3A(250Vac) resistive (COSφ=0.4 1A Inductive load)</td>
<td>3A(250Vac) resistive (COSφ=0.4 1A Inductive load)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outputs (E Solid State Relay)</th>
<th>Relay 1</th>
<th>Relay 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SSR) – 1.5A (24-250Vac) resistive</td>
<td>Relay 1-5</td>
<td>PR0751/PR0761</td>
</tr>
<tr>
<td>6A(250Vac,30Vdc) resistive (COSφ=0.4 2A Inductive load)</td>
<td>10A (250Vac,30Vdc) resistive (COSφ=0.4 3A Inductive load)</td>
<td></td>
</tr>
<tr>
<td>3A(250Vac) resistive (COSφ=0.4 1A Inductive load)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication</th>
<th>External IP, RS485 and Wireless Mesh</th>
<th>Internal IP</th>
<th>Internal IP, RS485 and Wireless Mesh</th>
</tr>
</thead>
</table>

| 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 II Insulation |

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Operating temperature: 5°C to +50°C (41° to 122°F)</th>
<th>Operating temperature: 5°C to +50°C (41° to 122°F)</th>
<th>Operating temperature: -10°C to 60°C (14° to 140°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating humidity: 10% to 80% (non-condensing)</td>
<td>Operating humidity: 10% to 80% (non-condensing)</td>
<td>Operating humidity: 10% to 80% (non-condensing)</td>
<td></td>
</tr>
</tbody>
</table>

| Dimensions | 78 x 36 x 110mm (H x W x D) | 78 x 36 x 110mm (H x W x D) | 157 x 67 x 120mm (H x W x D) |

| Weight | 170g | 170g | 500g |

| Panel Cut Out | 71 x 29 mm | 71 x 29 mm | Not Applicable |

### 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.
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

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

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Mk3 8/5 Air Conditioning Controller Internal Display</td>
<td>PR0740-ACD</td>
</tr>
<tr>
<td>Mercury Mk3 8/5 Air Conditioning controller remote display</td>
<td>PR0740-ACR</td>
</tr>
<tr>
<td>Mercury Mk2 Air Conditioning Controller Internal Display</td>
<td>PR0710-AC</td>
</tr>
<tr>
<td>Mercury Mk2 Air Conditioning controller remote display</td>
<td>PR0720-AC</td>
</tr>
<tr>
<td>Mercury Intuitive Air Conditioning Controller Integral Display</td>
<td>PR0750-AC</td>
</tr>
<tr>
<td>Mercury Intuitive Air Conditioning controller remote display</td>
<td>PR0760-AC</td>
</tr>
</tbody>
</table>

*Please refer to pages 6 and 7 for further product ordering information
**PR0710/740/750**

**Mercury**

**Refrigeration Controller For TEV**

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

These controllers offer high-quality, reliable, affordable and high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

**Typical applications**

Supermarket, Commercial, Healthcare.

**Features**

- HT & LT Case and Coldroom Control
- Control of the Liquid Line Valve or Compressor(s)
- Internal or Remote Defrost and Lights Schedule
- Trim level control (Energy Saving)
- Logging Probe with alarm
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Defrost termination or extra monitor probe
- Switched mode power supply for input voltages ranging from 100v to 240v

**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 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**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Mk3 8/5 with Integral Display for LLV</td>
<td>PR0740 - MD IP CAS</td>
</tr>
<tr>
<td>Mercury Mk2 6/5 with Integral Display for LLV</td>
<td>PR0710</td>
</tr>
<tr>
<td>Mercury Intuitive With Integral Display for LLV</td>
<td>PR0750</td>
</tr>
</tbody>
</table>

**Compatible interfaces**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Futura (Single Mercury to IP Interface)</td>
<td>PR0016</td>
</tr>
<tr>
<td>RS485 Interface (Single Mercury to RS485 Interface)</td>
<td>PR0026</td>
</tr>
<tr>
<td>Mercury IP Switch (IP support for 10 controllers)</td>
<td>PR0018</td>
</tr>
<tr>
<td>Mercury IP Switch with Pressure/Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
<tr>
<td>Wireless Mesh Interface (for single Mercury)</td>
<td>PR0730</td>
</tr>
</tbody>
</table>

*Please refer to pages 6 and 7 for further product ordering information*
PR0711/740/751

Mercury

Refrigeration Controller For EEV

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

These controllers offer high-quality, reliable, affordable and high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

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 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.

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<tr>
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<tr>
<td>Mercury Mk3 8/5 with Integral Display for EEV</td>
<td>PR0740 - ED IP CAS</td>
</tr>
<tr>
<td>Mercury Mk2 6/5 with Integral Display for EEV</td>
<td>PR0711</td>
</tr>
<tr>
<td>Mercury Intuitive With Integral Display for EEV</td>
<td>PR0751</td>
</tr>
</tbody>
</table>

Compatible interfaces

<table>
<thead>
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<th>Description</th>
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<tr>
<td>Mercury IP Switch (IP support for 10 controllers)</td>
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</tr>
<tr>
<td>Mercury IP Switch with Pressure/Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
<tr>
<td>Wireless Mesh Interface (for single Mercury)</td>
<td>PR0730</td>
</tr>
</tbody>
</table>

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

Features
- HT & LT Case and Coldroom Control
- Solid State Relay (SSR) for control of an Electronic Expansion Valve
- Internal or Remote Defrost and Lights Schedule
- Trim level control (Energy Saving)
- Logging Probe with alarm
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Defrost termination or extra monitor probe
- Switched mode power supply for input voltages ranging from 100v to 240v

Typical wiring
Example: Refrigeration Case Control—Type 3 & 4 Mercury Mk3 Platform
PR0720/740/760

Mercury
Refrigeration Controller TEV or EEV with Remote Display

Remote display compact high performance case controls with modern styling, at a low price.

Designed for connection with a remote display this model allows flexibility in the position and style of the optional display. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

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 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.

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<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 8/5 LLV for Remote Display</td>
<td>PR0740 - MR IP CAS</td>
</tr>
<tr>
<td>Mercury Mk2 6/5 LLV for Remote Display</td>
<td>PR0720</td>
</tr>
<tr>
<td>Mercury Intuitive LLV for Remote Display</td>
<td>PR0760</td>
</tr>
<tr>
<td>Mercury Mk3 8/5 EEV for Remote Display</td>
<td>PR0740 - ER IP CAS</td>
</tr>
<tr>
<td>Mercury Mk2 6/5 EEV for Remote Display</td>
<td>PR0721</td>
</tr>
<tr>
<td>Mercury Intuitive EEV for Remote Display</td>
<td>PR0761</td>
</tr>
</tbody>
</table>

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

Features
- HT & LT Case and Coldroom Control
- Control of the Liquid Line Valve, EEV or Compressor
- Internal or Remote Defrost and Lights Schedule
- Trim level control (Energy Saving)
- Logging Probe with alarm
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Defrost termination or extra monitor probe
- Switched mode power supply for input voltages ranging from 100v to 240v

Typical wiring
Example: Refrigeration Case Control—Type 3 & 4 Mercury Mk3 Platform

Compatible interfaces

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Futura (Single Mercury to IP Interface)</td>
<td>PR0016</td>
</tr>
<tr>
<td>RS485 Interface (Single Mercury to RS485 Interface)</td>
<td>PR0026</td>
</tr>
<tr>
<td>Mercury IP Switch (IP support for 10 controllers)</td>
<td>PR0018</td>
</tr>
<tr>
<td>Mercury IP Switch with Pressure/Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
<tr>
<td>Wireless Mesh Interface (for single Mercury)</td>
<td>PR0730</td>
</tr>
</tbody>
</table>
**PR0710/740/750-TWO**

**Mercury**

**Refrigeration Controller Two Section and Single LLV**

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

This controller is for use with a two section and single LLV Refrigeration display case with two evaporators and a single LLV. It has 6 different controller types to accommodate various display cases such as HT/LT piped, integrals and cold-rooms. Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

**Typical applications**
Supermarket, Commercial, Healthcare.

**Key benefits**
Flexibility to suit your application

**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**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Mk3 8/5 Two Section</td>
<td>PR0740 MD IP TWO</td>
</tr>
<tr>
<td>Mercury Mk2 6/5 Two Section</td>
<td>PR0710-TWO</td>
</tr>
<tr>
<td>Mercury Intuitive Two Section</td>
<td>PR0750 TWO</td>
</tr>
</tbody>
</table>

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

**Features**
- HT & LT Case and Coldroom Control
- Control two sections with one liquid line valve
- Two defrost probes, one for each section
- Independent defrost termination set points for each section.
- Internal Defrost and Lights Schedule
- OT/UT Alarm levels and delays
- Fan control
- Remote defrost and light schedules
- Switched mode power supply for input voltages ranging from 100v to 240v

**Typical wiring**
Example: Refrigeration Case Control—Type 1 & 2, Mk3 Platform.
PR0710/740/750-TWI

Mercury

Refrigeration Controller Twin LLV Coil

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

These controllers are primarily intended for use in 2 section (twin evaporator) Refrigeration display cabinets. It will switch the evaporator LLV / Compressors based on the value of its temperature probe inputs. There are 2 independent thermostat functions. The Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- HT & LT Case and Coldroom Control
- Control of two evaporators
- Two Defrost termination probes, one for each section
- Defrost Skip (Energy Saving)
- Independent OT/UT Alarm levels and delays for each section
- Fan control
- Remote defrost schedules
- User configurable display for section 1 or 2
- Switched mode power supply for input voltages ranging from 100v to 240v

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

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<thead>
<tr>
<th>Description</th>
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<tr>
<td>Mercury Mk3 Twin Coil Controller</td>
<td>PR0740-MD IP TWI</td>
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<tr>
<td>Mercury Mk2 Twin Coil Controller</td>
<td>PR0710-TWI</td>
</tr>
<tr>
<td>Mercury Intuitive Twin Coil Controller</td>
<td>PR0750 TWI</td>
</tr>
</tbody>
</table>

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

Typical wiring
Example: Refrigeration Case Control—Type 1 & 2, Mercury Mk2 Platform

* IP or RS485 Networking via optional interface
PR0720/740/750-MOB
Mercury Refrigeration Controller, Mobile

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

These controllers are primarily intended for use in refrigeration display cabinets with one or two integral compressors. Compressor discharge temperatures are constantly monitored allowing the controller to switch off a compressor if it is getting too hot. Relay outputs can be used to control each compressor, lights, fans and defrost control. Inbuilt defrost and lighting timers allow the controller to be used stand alone or within a networked solution. Additionally, the unit can be switched off automatically at specific times aiding in energy saving and reducing running costs. All this is backed by a 5-year limited warranty.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- HT & LT Integral Case Control
- Control of one or two compressors
- Discharge temperature monitoring and cut out feature
- Compressor Run time monitoring
- Internal Defrost and Lights Schedule
- Fan control
- Remote defrost schedules
- Switched mode power supply for input voltages ranging from 100v to 240v

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.

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>Mercury Mk3 Mobile Controller Integral Display</td>
<td>PR0740-MOB</td>
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<tr>
<td>Mercury Mk2 Mobile Controller Integral Display</td>
<td>PR0720-MOB</td>
</tr>
<tr>
<td>Mercury Intuitive Mobile Controller Integral Display</td>
<td>PR0750-MOB</td>
</tr>
</tbody>
</table>

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

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<thead>
<tr>
<th>Description</th>
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<td>Mercury Mk3 I/O Module</td>
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<tr>
<td>Mercury Mk2 I/O Module</td>
<td>PR0710-IOR</td>
</tr>
<tr>
<td>Mercury Intuitive I/O Module</td>
<td>PR0750-IOR</td>
</tr>
</tbody>
</table>

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

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 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.

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<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 8/5 Monitor with Built-in IP</td>
<td>PR0740 MD-IP-MON</td>
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<tr>
<td>Mercury Mk2 6/5 Monitor</td>
<td>PR0710-MON</td>
</tr>
<tr>
<td>IMP2c Intuitive Mercury 6-5M Monitor</td>
<td>PR0750-MON</td>
</tr>
</tbody>
</table>

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

Typical wiring
Example: Plant Monitor—Type 1 Mercury Mk2 Platform

* IP or RS485 Networking via optional interface
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 Type 1 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

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 Mini-Pack</td>
<td>PR0740 MD IP MPA</td>
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<tr>
<td>Mercury Mk2 Mini-Pack</td>
<td>PR0710 - MPA</td>
</tr>
<tr>
<td>Mercury Intuitive Mini-Pack</td>
<td>PR0750 - MPA AiAo</td>
</tr>
</tbody>
</table>

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.

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

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.

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<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 Pulse Counter</td>
<td>PR0740 MD IP PLS</td>
</tr>
<tr>
<td>Mercury Mk2 Pulse Counter</td>
<td>PR0710.0-PLS</td>
</tr>
<tr>
<td>Mercury Intuitive Pulse Counter</td>
<td>PR0750.0-PLS</td>
</tr>
</tbody>
</table>

* IP or RS485 Networking via optional interface
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

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
<td>Mercury Mk2 6/5 Roof Top Unit</td>
<td>PR0710 - RTU</td>
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<tr>
<td>Mercury Mk3 8/5 Roof Top Unit</td>
<td>PR0740 MD IP RTU</td>
</tr>
<tr>
<td>Mercury Intuitive Roof Top Unit</td>
<td>PR0750 - RTU</td>
</tr>
</tbody>
</table>
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.

**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

**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.

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<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 Thermostat</td>
<td>PR0740 MD IP STA</td>
</tr>
<tr>
<td>Mercury Mk2 Thermostat</td>
<td>PR0710-STA</td>
</tr>
<tr>
<td>Mercury Intuitive Thermostat</td>
<td>PR0750 STA</td>
</tr>
</tbody>
</table>

* 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.

**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

**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.

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<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 5 Independent Channel Thermostat</td>
<td>PR0740 MD IP SISTA</td>
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<tr>
<td>Mercury Mk2 5 Independent Channel Thermostat</td>
<td>PR0710·5ISTA</td>
</tr>
<tr>
<td>Mercury Intuitive 5 Independent Channel Thermostat</td>
<td>PR0750·5ISTA</td>
</tr>
</tbody>
</table>
PR0712/752

Mercury
Stepper Valve Refrigeration Controller

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

This controller is primarily intended for use in refrigeration display cabinets or coldroom applications. The controller will operate the evaporator stepper valve based on the value of its temperature probe inputs or from a remote pressure command. Local & remote pressure input options for both Mercury 3 and Intuitive versions. Selectable for various pre-configured valve types. It has outputs to control lights, fans, a suction line valve, trim heaters and defrost control. Energy saving features help reduce running costs. Recommended for use with Intuitive Power Store (PR0627) and the Inline Stepper Motor Filter (PR0656) both can be found on Page 33 and Page 36 of this catalogue.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- HT & LT Case and Coldroom Control
- Stepper motor drive output, operates a bipolar stepper 24V
- 8W maximum.
- Internal and Remote Defrost and Lights Schedules
- Trim level control (Energy Saving)
- Logging Probe with alarm
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- 24v AC or DC supply

Typical wiring
Example: Refrigeration Case Control—Type 3 or 4

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.

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<th>Description</th>
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<tr>
<td>Mercury Mk2 Stepper Valve Controller</td>
<td>PR0712</td>
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<td>Mercury Intuitive Stepper Controller</td>
<td>PR0752</td>
</tr>
</tbody>
</table>

* IP or RS485 Networking via optional interface
Intuitive Mercury Stepper Package

Stepper Valve Control

RDM have partnered with Sporlan (Parker Hannifan Corp®) to offer a turnkey solution package incorporating the equipment required for your stepper valve control needs. The kits, which include the Parker stepper valve SER AA to D range of valves, deliver optimum value for money and simplicity when ordering.

Included in the kit is the new mains Intuitive Mercury Stepper hardware design. Based on the existing low voltage Intuitive Mercury Stepper platform, PR0750/PR0760, it has the same advanced features and functionality, with the addition of being mains powered. The internal switch mode power supply allows operation worldwide. Without the need for external low voltage supply, it is cost-competitive and easier to install. The mains Intuitive Mercury Stepper controller is available with an internal display (PR0753) option or remote display connection (PR0763).

The optional RDM Intuitive Power Store offers additional protection and peace of mind, closing the stepper valve in the event of power failure.

Benefits
- Switched Mode Power Supply (SMPS) – no need for external low voltage supply
- Turnkey Solution
- Cost effective fixed price kit
- Advanced features and functionality
- Easy install

Features
- HT & LT Case and Coldroom Control
- Stepper motor drive output, operates a bipolar stepper 24V
- 8W maximum.
- Internal and Remote Defrost and Lights Schedules
- Trim level control (Energy Saving)
- Logging Probe with alarm
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control

Included in the Kit
- Intuitive Mercury Stepper Controller (Mains Powered)
- Sporlan Stepper Valve
- Valve Cable 3m (9.8ft)
- 4 Temperature Probes (2 Air Probes & 2 Pipe Probes)

Optional Extras
- 4-20mA Pressure Input Board
- Intuitive Power Store
- Inline Stepper Filter

For full information on the Parker valves available please contact Parker or view their website to determine the valve section best suited to your application.

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

4 Relay outputs (fuses optional)
- 10A (250Vac,30Vdc) resistive load, (5A COSφ=0.4 Inductive load)

1 Stepper output
- Bipolar Stepper Motor 24V 8W Max (Chopper Drive).
- Maximum current cannot exceed 450mA

Power
- 100-240Vac +/-10% 50-60Hz (Typ. <1A) Class 2 Insulation
- Total Max current dependant on Stepper Motor used.

Environmental
- Operating temperature: -5° to +60°C (23° to 140°F)
- Operating humidity: 10% to 80% (non condensing)

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

* for stepper valve specifications please refer to relevant Parker documentation.
Ordering Information

<table>
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<th>Description</th>
<th>Part number</th>
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<td>PR0962 V</td>
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<tr>
<td>Intuitive Mercury 240v stepper KIT with valve &amp; 4 probes, 1P/AI board</td>
<td>PR0962 V 1P/AI</td>
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<tr>
<td>Intuitive Mercury 240v stepper KIT with valve &amp; 4 probes, IP board</td>
<td>PR0962 V IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper KIT with valve &amp; 4 probes, IP, 1P/AI board</td>
<td>PR0963 V 1P/AI</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper KIT with valve &amp; 4 probes, Power store</td>
<td>PR0963 V PS</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper KIT with valve &amp; 4 probes, 1P/AI board, Power store</td>
<td>PR0963 V PS 1P/AI</td>
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<tr>
<td>Intuitive Mercury 240v stepper KIT with valve &amp; 4 probes, Power Store</td>
<td>PR0963 V PS IP</td>
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<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with remote display, valve &amp; 4 probes</td>
<td>PR0964 R V</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with remote display, valve &amp; 4 probes, 1P/AI board</td>
<td>PR0964 R V 1P/AI</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with remote display, valve &amp; 4 probes, IP board</td>
<td>PR0964 R V IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with valve &amp; 4 probes, Power store</td>
<td>PR0965 R V PS</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with valve &amp; 4 probes, 1P/AI board, Power store</td>
<td>PR0965 R V PS 1P/AI</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with valve &amp; 4 probes, Power Store</td>
<td>PR0965 R V PS IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with valve &amp; 4 probes, IP board, Power Store</td>
<td>PR0965 R V IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with valve &amp; 4 probes, Power store</td>
<td>PR0965 R V PS IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote KIT with valve &amp; 4 probes, 1P/AI board, Power store</td>
<td>PR0965 R V PS 1P/AI</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes</td>
<td>PR0966 NF V</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, 1P/AI board</td>
<td>PR0966 NF V 1P/AI</td>
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<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, IP board</td>
<td>PR0966 NF V IP</td>
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<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, 1P/AI board</td>
<td>PR0966 NF V IP 1P/AI</td>
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<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, Power store</td>
<td>PR0967 NF V PS</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, IP board, Power Store</td>
<td>PR0967 NF V PS 1P/AI</td>
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<td>PR0967 NF V PS IP</td>
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<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with remote display, valve &amp; 4 probes, 1P/AI board</td>
<td>PR0968 NF R V 1P/AI</td>
</tr>
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<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with remote display, valve &amp; 4 probes, IP board</td>
<td>PR0968 NF R V IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, 1P/AI board</td>
<td>PR0968 NF R V IP 1P/AI</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, Power store</td>
<td>PR0969 NF R V PS</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, 1P/AI board, Power store</td>
<td>PR0969 NF R V PS 1P/AI</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, IP board, Power Store</td>
<td>PR0969 NF R V PS IP</td>
</tr>
<tr>
<td>Intuitive Mercury 240v stepper Remote No Fuses KIT with valve &amp; 4 probes, IP, 1P/AI board, Power store</td>
<td>PR0969 NF R V IP 1P/AI</td>
</tr>
</tbody>
</table>

*Required valve size must be specified at time of order. Valve selection is determined with the assistance of Parker. Please visit www.parker.com/sporan

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**PR0656**

**Inline Stepper Motor Filter**

**Available for the Intuitive Mercury stepper range, DIN mountable**

This optional accessory is fitted between the Intuitive Mercury Stepper and an stepper valve thus allowing the RDM stepper valve to be installed up to 50M from the Intuitive Mercury Stepper controller, compared to the normal recommended 5M maximum. Please contact RDM Technical Support for further information about this product.
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.

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.

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.

Typical wiring

Example: Plate Heat Exchanger Control Mercury Mk2 Platform.

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Mk2 Plate Heat Exchanger</td>
<td>PR0712 - PHX</td>
</tr>
<tr>
<td>Mercury Intuitive Plate Heat Exchanger</td>
<td>PR0752 - PHX</td>
</tr>
</tbody>
</table>

* IP or RS485 Networking via optional interface
PR0752-EPR

Mercury EPR
EPR Stepper Valve Refrigeration Controller

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

This controller is primarily intended for use in refrigeration display cabinets or coldroom applications. The controller will operate the EPR stepper valve fitted after the coil (suction line), based on the value of air on and air off evaporator probes. It has outputs to control lights, fans, defrost valve, and defrost heater. Energy saving features help reduce running costs.

Typical applications
Supermarket, Commercial, Healthcare.

Features
• Bi-polar EPR Stepper valve control
• Intuitive power store support on Intuitive variant.
• Built in lighting and Defrost timers
• Log probe with or without electronic slugging
• Defrost skip option (Energy Saving)
• Door switch input
• Supports 10 different temperature probe types
• Automatic stepper valve calibration

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 Mk2 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Mk2 6-5 EPR Stepper controller, integral display</td>
<td>PR0712-EPR</td>
</tr>
<tr>
<td>Intuitive Mercury EPR Stepper controller, integral display</td>
<td>PR0752-EPR</td>
</tr>
</tbody>
</table>

Typical wiring

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 Mk2 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.

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<tr>
<td>Mercury Mk2 6-5 EPR Stepper controller, integral display</td>
<td>PR0712-EPR</td>
</tr>
<tr>
<td>Intuitive Mercury EPR Stepper controller, integral display</td>
<td>PR0752-EPR</td>
</tr>
</tbody>
</table>
PR0627 DIN

Intuitive Power Store

Designed to protect your system in the event of a power failure, the Power Store sends a fail signal to the stepper controller and provides a backup power supply to enable the controller to fully close the valve. The Intuitive Power Store is compatible with a range of Intuitive Stepper controller models.

**Typical applications**
Refrigeration

**Specifications**
- **Storage Temperature:** -20ºC to +65ºC
- **Operating Temperature:** +5ºC to +50ºC
- **Maximum Cable Size:** 2.5mm (24awg)
- **Power:** 24v AC or DC, 2.5A Maximum
- **Dimensions H x W x D:** 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)
- **Weight:** 120g
- **Easy Mount:** 35mm x 7.5mm DIN Rail

**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuitive Power Store DIN</td>
<td>PR0627 DIN</td>
</tr>
</tbody>
</table>

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**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).

**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**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Intuitive Mercury Wi-Fi Daughter Card</td>
<td>PR0769 - INT</td>
</tr>
<tr>
<td>External Intuitive Mercury Wi-Fi Daughter Card</td>
<td>PR0769 - EXT</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Futura (Single Mercury to IP Interface)</td>
<td>PR0016</td>
</tr>
<tr>
<td>RS485 Interface (Single Mercury to RS485 Interface)</td>
<td>PR0026</td>
</tr>
<tr>
<td>Mercury IP Switch (IP support for 10 controllers)</td>
<td>PR0018</td>
</tr>
<tr>
<td>Mercury IP Switch with Pressure/Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
<tr>
<td>Wireless Mesh Interface (for single Mercury)</td>
<td>PR0730</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuitive Internal IP Network Card Interface Kit</td>
<td>PR0770</td>
</tr>
<tr>
<td>Intuitive Internal RS485 Network Card Interface Kit</td>
<td>PR0771</td>
</tr>
<tr>
<td>Intuitive Internal Wireless Mesh Network Card Interface Kit</td>
<td>PR0772</td>
</tr>
</tbody>
</table>

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**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.
**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.

**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

**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**

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Mercury Mk3 5 Independent Channel Timeclock</td>
<td>PR0740 MD IP TIM</td>
</tr>
<tr>
<td>Mercury Intuitive 5 Independent Channel Timeclock</td>
<td>PR0750-TIM</td>
</tr>
<tr>
<td>Mercury Mk2 5 Independent Channel Timeclock</td>
<td>PR0710-TIM</td>
</tr>
</tbody>
</table>
PR0710/740/750-COM

Mercury
Compressor Monitor

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

This monitor is designed to provide monitoring of a compressor’s values and ensure that the compressor will not start without certain safety parameters being met. Three settable types are available for use with two stage or direct on line motors.

A variety of inputs are available such as Thermistor, Oil fail and LP safety and four relay outputs are available for Alarm, Compressor and fans. The internal switch mode Power Supply allows operation worldwide. 5 year limited warranty.

Typical applications
Refrigeration, HVAC

Features
- Klaxon and thermistor inputs.
- Two speed motor control option.
- Automatic or manual thermistor reset
- Starts per hour control.
- Logging Probe with alarm.
- Oil fail & HP fail inputs.
- LP safety input.
- Reciprocal or scroll compressor option.
- Fan 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.

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

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Mercury Mk3 Compressor Monitor</td>
<td>PR0710 - MD IP COM</td>
</tr>
<tr>
<td>Mercury Intuitive Compressor Monitor</td>
<td>PR0750 - COM</td>
</tr>
<tr>
<td>Mercury Mk2 Compressor Monitor</td>
<td>PR710-COM</td>
</tr>
</tbody>
</table>

* IP or RS485 Networking via optional interface
**PR0700**

**Mercury T**

Replacement For Honeywell Elm® Tuscan Use with TEV

A drop-in legacy replacement for the Tuscan controller.

The Mercury T offers a direct drop-in replacement for most models of Honeywell-Elm® Tuscan Case/Coldroom controller for use with a mechanical expansion valve.

The Mercury T is supplied as a control board only and is designed to fit into the existing Tuscan enclosure.

For a network system with a dimTouch 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 setting. The Mercury T is supplied as standard with a built in RS485 Genus® network compatible interface allowing it to connect directly to an existing Genus® network with a Honeywell-Elm® front end or a Resource Data Management Data Manager front end. The controller can also utilise the standard RDM IP networking interfaces if required.

**Features**

- Low cost legacy replacement
- Built in Genus® compatible RS485 network interface
- Control of liquid line valve or compressor
- Trim level control (Energy Saving)
- Built in lighting and Defrost timers
- Defrost schedule (Energy Saving)
- Defrost skip option (Energy Saving)
- Door switch input
- Switched mode power supply for input voltages ranging from 100v to 240v

**Typical wiring**

![Typical wiring diagram](image)

**Specifications**

**Inputs**

- 6 Probe Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed).
- 4 Fault / Status Inputs (Depending on setup) door switch, case off, fans only, lights only, external defrost, plant fault, man-trap.

**Outputs**

- 5 Relay outputs
  - 10A resistive, 5A Inductive load (COSф=0.4) 260Vac, 30Vdc

**Power**

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

**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): 135 x 285 x 30mm (5.3 x 11.2 x 1.2in)
- Weight: 400g (0.88lb)

---

**Simple Connection**

In most cases all the connections to the original Tuscan are the same as the Mercury T so no re-wiring is required when fitting the controller. The Mercury T is compatible with eight different probe types (including the Honeywell-Elm® 2k thermistor probe). All connector sizes and pitches are the same as those on the original Tuscan controller.

**Easy setup**

The Mercury T can be set up using the keypad on a Resource Data Management temperature display, a direct PC connection, an IP or Genus network connection using a Data Manager front end or a Caesium programming module.

The Honeywell-Elm® hand held set up unit cannot be used with the Mercury T controller.

**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury T for Mechanical Expansion Valve</td>
<td>PR0700</td>
</tr>
</tbody>
</table>

**Recommended Accessories**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Mk3 Remote Display inc. 5m cable</td>
<td>PR0725</td>
</tr>
<tr>
<td>Caesium Programming Adaptor</td>
<td>PR0726</td>
</tr>
</tbody>
</table>
PR0701

Mercury T
Replacement For Honeywell Elm® Tuscan
Use with EEV

A drop-in legacy replacement for the Tuscan controller.

The Mercury T offers a direct drop-in replacement for most models of
Honeywell-Elm® Tuscan Case/Coldroom controller for use with a
electronic expansion valve.

The Mercury T is supplied as a control board only and is designed to fit into
the existing Tuscan enclosure.

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 Mercury T is supplied as
standard with a built in RS485 Genus® compatible network interface allowing
it to connect directly to an existing Genus® network with a Honeywell-Elm®
front end or an Resource Data Management Data Manager front end. The
controller can also utilise the standard RDM IP networking interfaces if
required

Simple Connection
In most cases all the connections to the original Tuscan are the same as the
Mercury T so no re-wiring is required when fitting the controller. The Mercury T
is compatible with eight different probe types (including the Honeywell-Elm® 2k
thermistor probe). All connector sizes and pitches are the same as those on the original Tuscan controller.

Easy setup
The Mercury T can be set up using the keypad on a Resource Data
Management temperature display, a direct PC connection, an IP or
Genus network connection using a Data Manager front end or a Caesium
programming module.

The Honeywell-Elm® hand held set up unit cannot be used with the
Mercury T controller.

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mercury T for Electronic Expansion Valve</td>
<td>PR0701</td>
</tr>
</tbody>
</table>

Recommended Accessories

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
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<tr>
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<td>PR0726</td>
</tr>
</tbody>
</table>

Features
- Low cost legacy replacement
- Built in Genus® compatible RS485 network interface
- Control of an Electronic Expansion Valve
- Trim level control (Energy Saving)
- Built in lighting and Defrost timers
- Log probe with or without electronic slugging
- Defrost skip option (Energy Saving)
- Door switch input
- Switched mode power supply for input voltages ranging from 100v to
240v

Typical wiring

Inputs
6 Probe Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25,
NTC10K or NTC10K(2) temperature probes (note: probe types cannot
be mixed).
4 Fault/Status Inputs (Depending on setup) door switch, case off, fans only,
lights only, external defrost, plant fault, man-trap.

Outputs
Relay 1 (SSR)
3A
Relays 2-5
10A resistive, 5A Inductive load (COSφ=0.4) 260Vac,30Vdc

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

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): 135 x 285 x 30mm (5.3 x 11.2 x 1.2in)
Weight: 400g (0.88lb)
Caesium

Mercury Programming Adaptor

The Caesium programming adapter is designed to copy and store controller parameters from the RDM range of Mercury, ML and SmaRt controllers.

These stored parameters can then be downloaded into controllers of the same software type allowing for a quick and simple method for setting parameters in multiple controllers. The Caesium has two buttons for uploading or downloading parameters, two LED lights; one green and one red, which indicate the devices current status and two connector types; a 6 way pin header for Mercury ML controllers and RS232 versions of the mercury and SmaRt ranges.

Note the RJ45 socket can also be used to connect to ML controllers which have an RS232 interface. Parameters can be uploaded to the Caesium then locked in the adapter to prevent accidentally overwriting of the uploaded parameters.

Key benefits

- Rapid Control Setup
- Simple Operation
- Two button operation makes this an ideal tool for production work or installation for rapid setup of controls.
- Lock Settings
- Parameter locking option ensures that settings are not tampered with during long programming runs.

Caesium general operation guide

The Caesium derives its power supply from the controller to which it is connected therefore the controller must be powered during the programming process. When connecting the Caesium to a controller the Green LED will be on steady and this indicates that a connection has been made to the controller. If the green LED fails to light please reconnect cables and connections before retrying. If the Red LED is off it indicates the Caesium is blank and has no saved parameters. If the red LED is flashing at 1 second intervals it indicates that the Caesium has parameters stored in it. If the red LED flashing at 2 second intervals this indicates the adapter has parameters loaded and that they are locked.

Saving parameters from a Controller to the Caesium Adapter:

1. Connect the Caesium to a controller. The Green LED should be on steady and the Red LED in one of the states mentioned above. (Off = Caesium is blank. 1 second intervals = Parameters loaded. 2 second intervals = Parameters loaded and locked). If the parameters are locked they will have to be unlocked before you can upload a new set of parameters.

2. Press and hold the ‘Get button’ to begin the saving process, the green LED will flash at 1 second intervals. Wait until the Red LED goes steady and release the ‘Get button’. The saving process is now in progress.

3. During the saving process the green LED stays on steady and the Red LED in one of the states mentioned above. (Off = Caesium is blank. 1 second intervals = Parameters loaded. 2 second intervals = Parameters loaded and locked).

4. After a short delay both the red and green LEDs flash simultaneously 3 times then go off again and Red LED will flash at 1 second intervals. Parameters are now unlocked.

To Download parameters from Adapter to Controller:

1. Connect the Caesium to a controller. The Green LED should be on steady and the Red LED in one of the states mentioned above. (Off = Caesium is blank. 1 second intervals = Parameters loaded. 2 second intervals = Parameters loaded and locked).

2. Press and hold the ‘Send button’ to begin the download process, the green LED will flash at 1 second intervals. Wait until the red LED goes steady and release the ‘Send button’. The send process is now in progress.

3. During the download process the red LED will stay on steady and the green LED flashed every 0.5 seconds.

4. After a short delay both the red and green LEDs flash simultaneously 4 times. Parameters are now downloaded to Controller. Unplug adapter. Note: Both LEDs not flashing 4 times indicates the user is trying to download parameters to a controller with a different type, and parameters will not be sent to controller.

To Lock Parameters in Adapter:

1. Press and hold both buttons at the same time. Both LEDs will go off then flash simultaneously 3 times then go off again.

2. Release both buttons at this point. Green LED will now come on steady again and Red LED will flash at 2 second intervals. Parameters are now locked in Adapter.

To Unlock Parameters:

1. Press and hold both buttons at the same time. Both LEDs will go off then flash simultaneously 3 times then go off again.

2. Release both buttons at this point. Green LED will now come on steady again and Red LED will flash at 1 second intervals again. Parameters are now unlocked.

Note: Do not unplug adapter from controller while Green LED is flashing as parameter info is being transferred while the Green LED is flashing.
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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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</thead>
<tbody>
<tr>
<td>Mercury Remote Display inc. 5m cable</td>
<td>PR0325</td>
</tr>
<tr>
<td>Mercury Remote Display with Keyswitch inc. 5m cable</td>
<td>PR0326</td>
</tr>
</tbody>
</table>

PR0325

PR0326

Mechanical
**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)

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**Ordering Information**

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<thead>
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<th>Description</th>
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<tr>
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<td>Mercury Remote DIN Display with Keyswitch inc. 5m cable</td>
<td>PR0328</td>
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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

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mercury Remote Display inc. 5m cable</td>
<td>PR0725</td>
</tr>
</tbody>
</table>

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)

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 Mbts/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-568A and TIA/EIA-568B define the specification and termination colours for CAT5 networking.

Technical tip—IP networking tip 1
Mercury Mk2, Mk3 & Mercury Intuitive mechanical information

All Dimensions: mm (inch)
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.

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

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

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
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<td>Futura IP Interface Module</td>
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<td>Futura IP Interface Module DIN mountable</td>
<td>PR0016 DIN</td>
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Recommended Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5m CAT5E Patch Cable</td>
<td>PR0384</td>
</tr>
<tr>
<td>1m CAT5E Patch Cable</td>
<td>PR0385</td>
</tr>
<tr>
<td>3m CAT5E Patch Cable</td>
<td>PR0386</td>
</tr>
<tr>
<td>5m CAT5E Patch Cable</td>
<td>PR0387</td>
</tr>
<tr>
<td>15m CAT5E Patch Cable</td>
<td>PR0389</td>
</tr>
</tbody>
</table>

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.

Enviromental
Operating temperature: 5°C to 50°C (41°F 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)
Resource Data Management — Temperature Control Solutions

PR0018/PR0018-PHI-F

Mercury Switch
10 Way Ethernet Interface Module

IP networking for 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.

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

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 with have an address of 231, 232, 233 etc.

Installation
Easy panel or wall mounting using integral fixing wings.

Ordering Information

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<tr>
<th>Description</th>
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<td>Mercury IP Switch</td>
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<tr>
<td>Mercury IP Switch with Pressure/Humidity Inputs</td>
<td>PR0018-PHI</td>
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<tr>
<td>Mercury IP Switch with Fibre Connectivity</td>
<td>PR0018 F</td>
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<tr>
<td>Mercury IP Switch with Pressure/Humidity Inputs with Fibre Connectivity</td>
<td>PR0018-PHI-F</td>
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<td>PR0387</td>
</tr>
<tr>
<td>15m CAT5E Patch Cable</td>
<td>PR0389</td>
</tr>
</tbody>
</table>

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

Environment
- 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.

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 x30mm (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)

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

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<tr>
<td>5m CAT5E Patch Cable</td>
<td>PR0387</td>
</tr>
<tr>
<td>15m CAT5E Patch Cable</td>
<td>PR0389</td>
</tr>
</tbody>
</table>
**Powertray**

**Electric Defrost & TEV Control applications**

Based on Mercury controller technology these control trays provide the control power and networking of a Mercury controller in a prewired control panel with high current Outputs.

These controllers offer high-quality, reliable, affordable high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving features help reduce running costs.

**Typical applications**

Supermarket, Commercial.

---

**Flexible Network Options**

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

**Easy configuration**

Mercury 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 system frontend.

**Intergrated thermal breakers**

Thermal circuit breakers and fuses built in ensure protection for attached equipment.

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**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
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<td>Powertray Full Cycle for LLV with RS485 Networking</td>
<td>PR0040</td>
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<tr>
<td>Powertray Full Cycle for LLV with IP Networking</td>
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<td>Powertray Full Cycle for LLV with RS232 Comms</td>
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**Recommended Accessories**

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<tr>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>Weidmuller STVS 10SS - 10 Way Plug</td>
<td>NM0002</td>
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<tr>
<td>Weidmuller STVS 10ZE - 10 Way Strain Relief</td>
<td>NM0003</td>
</tr>
<tr>
<td>Weidmuller STVS 3SB - 3 Way Socket</td>
<td>NM0005</td>
</tr>
<tr>
<td>Weidmuller STVS 3ZE - 3 Way Strain Relief</td>
<td>NM0006</td>
</tr>
<tr>
<td>10 Way Connector Insulation Kit</td>
<td>NM0007</td>
</tr>
<tr>
<td>3 Way Connector Insulation Kit</td>
<td>NM0008</td>
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</table>

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**Features**

- HT & LT case control
- Control of the Liquid Line Valve
- Internal Defrost and Lights Schedule
- Trim level control (Energy Saving)
- Logging Probe with alarm option
- Control using log probe option (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Remote defrost and light schedules
- Fused and thermal breaker protection of outputs
- Remote display connector for optional display
- Lockable mains isolator for incoming supply

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**Typical wiring**

Example: Refrigeration Case Control

![Typical wiring diagram](Image)

* IP or RS485 Networking via optional internal interface

---

**Inputs**

6 Analogue Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed). Optional configuration of inputs for digital operation, secondary functions (e.g. case clean switch, plant fault alarm etc).

**Outputs**

7 Relay outputs

- Relay 1 - 18A(250Vac) resistive (COSφ=0.4 5A Inductive)
- Relay 2,6 - 1A(250Vac) resistive (COSφ=0.4 1A Inductive)
- Relays 3,5 - 2A(250Vac) resistive (COSφ=0.4 2A Inductive)
- Relay 4 - 5A(250Vac) resistive (COSφ=0.4 3A Inductive)
- Relay 7 - 7A(250Vac) resistive (COSφ=0.4 3A Inductive)

**Power**

220-240Vac +/-10% 50hz (Maximum 32A) Class 1—Unit must be Earthed.

**Environmental**

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

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

**Mechanical**

70 x 160 x 300mm (2.75 x 6.3 x 11.8in) Weight: 3.0kg (6.6lb)
PR0041/PR0043/PR0051
Powertray
Electric Defrost & EEV Control applications

Based on Mercury controller technology these control trays provide the control power and networking of a Mercury controller in a prewired control panel with high current Outputs.

These controllers offer high-quality, reliable, affordable high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving features help reduce running costs.

Typical applications
Supermarket, Commercial.

Flexible Network Options
Future proof IP connectivity is available for quick and secure networking. Flexible integrated network options also ensure compatibility on many existing sites with legacy hardware and front ends.

Easy configuration
Mercury 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 system frontend.

Intgrated thermal breakers
Thermal circuit breakers and fuses built in ensure protection for attached equipment.

Ordering Information

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<tr>
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<tr>
<td>Powertray Full Cycle for EEV with IP Networking</td>
<td>PR0043</td>
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<tr>
<td>Powertray Full Cycle for EEV with RS232 Comms</td>
<td>PR0051</td>
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Recommended Accessories

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<tbody>
<tr>
<td>Weidmuller STVS 10SS - 10 Way Plug</td>
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<tr>
<td>Weidmuller STVS 10ZE - 10 Way Strain Relief</td>
<td>NM0003</td>
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<tr>
<td>Weidmuller STVS 3SB - 3 Way Socket</td>
<td>NM0005</td>
</tr>
<tr>
<td>Weidmuller STVS 3ZE - 3 Way Strain Relief</td>
<td>NM0006</td>
</tr>
<tr>
<td>10 Way Connector Insulation Kit</td>
<td>NM0007</td>
</tr>
<tr>
<td>3 Way Connector Insulation Kit</td>
<td>NM0008</td>
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</tbody>
</table>

Features
- HT & LT case control
- Control of an Electronic Expansion Valve
- Internal Defrost and Lights Schedule
- Trim level control (Energy Saving)
- Logging Probe with alarm
- Control using log probe option (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Remote defrost and light schedules
- Fused and thermal breaker protection of outputs
- Remote display connector for optional display
- Lockable mains isolator for incoming supply

Typical wiring
Example: Refrigeration Case Control

* IP or RS485 Networking via optional interface

Inputs
6 Analogue Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed). Optional configuration of inputs for digital operation, secondary functions (e.g. case clean switch, plant fault alarm etc).

Outputs
7 Relay outputs
- Relay 1 - 18A(250Vac) resistive (COSφ=0.4 5A Inductive)
- Relays 2 (SSR) - 1A (250Vac) resistive
- Relays 3,5 - 2A(250Vac) resistive (COSφ=0.4 2A Inductive)
- Relay 4 - 5A(250Vac) resistive (COSφ=0.4 3A Inductive)
- Relay 6 - 1A(250Vac) resistive (COSφ=0.4 1A Inductive)
- Relay 7 - 7A(250Vac) resistive (COSφ=0.4 3A Inductive)

Power
220-240Vac +/-10% 50hz (Maximum 32A) Class 1—Unit must be Earthed.

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

Mechanical
70 x 160 x 300mm (2.75 x 6.3 x 11.8in) Weight: 3.0kg (6.6lb)
**PR0044/PR0046/PR0052**

**Powertray**

**Off Cycle Defrost & TEV Control applications**

Based on Mercury controller technology these control trays provide the control power and networking of a Mercury controller in a prewired control panel with high current Outputs.

These controllers offer high-quality, reliable, affordable high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving features help reduce running costs.

**Typical applications**

Supermarket, Commercial.

**Features**

- HT & LT case control
- Control of the Liquid Line Valve
- Internal Defrost and Lights Schedule
- Logging Probe with alarm
- Control using log probe option (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Remote defrost and light schedules
- Fused outputs
- Remote display connector for optional display
- Lockable mains isolator for incoming supply

**Typical wiring**

Example: Refrigeration Case Control

**Flexible Network Options**

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

**Easy configuration**

Mercury 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 system frontend.

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<td>PR0044</td>
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<td>Powertray Off Cycle for LLV with IP Networking</td>
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**Recommended Accessories**

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<tr>
<td>Weidmuller STVS 3SB – 3 Way Socket</td>
<td>NM0005</td>
</tr>
<tr>
<td>Weidmuller STVS 3ZE – 3 Way Strain Relief</td>
<td>NM0006</td>
</tr>
<tr>
<td>10 Way Connector Insulation Kit</td>
<td>NM0007</td>
</tr>
<tr>
<td>3 Way Connector Insulation Kit</td>
<td>NM0008</td>
</tr>
</tbody>
</table>

**Inputs**

6 Analogue Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed). Optional configuration of inputs for digital operation, secondary functions (e.g. case clean switch, plant fault alarm etc).

**Outputs**

4 Relay outputs
Relays 1,2 - 1A(250Vac) resistive (COSφ=0.4 1A Inductive load)
Relays 3 - 2A(250Vac) resistive (COSφ=0.4 2A Inductive load)
Relay 4 - 5A(250Vac) resistive (COSφ=0.4 3A Inductive load)

**Power**

220-240Vac +/-10% 50hz (Maximum 10A) Class 1—Unit must be Earthed.

**Environmental**

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

**Mechanical**

70 x 160 x 300mm (2.75 x 6.3 x 11.8in) Weight: 2.8kg (6.2lb)
PR0045/PR0047/PR0053

Powertray

Off Cycle Defrost & EEV Control applications

Based on Mercury controller technology these control trays provide the control power and networking of a Mercury controller in a prewired control panel with high current Outputs.

These controllers offer high-quality, reliable, affordable high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving Features help reduce running costs.

Typical applications
Supermarket, Commercial.

Features
- HT & LT case control
- Control of an Electronic Expansion Valve
- Internal Defrost and Lights Schedule
- Logging Probe with alarm
- Control using log probe option (Energy Saving)
- OT/UT Alarm levels and delays
- Fan control
- Remote defrost and light schedules
- Fused outputs
- Remote display connector for optional display
- Lockable mains isolator for incoming supply

Typical wiring
Example: Refrigeration Case Control

Flexible Network Options
Future proof IP connectivity is available for quick and secure networking. Flexible integrated network options also ensure compatibility on many existing sites with legacy hardware and front ends.

Easy configuration
Mercury 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 system frontend.

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powertray Off Cycle for EEV with RS485 Networking</td>
<td>PR0045</td>
</tr>
<tr>
<td>Powertray Off Cycle for EEV with IP Networking</td>
<td>PR0047</td>
</tr>
<tr>
<td>Powertray Off Cycle for EEV with RS232 Comms</td>
<td>PR0053</td>
</tr>
</tbody>
</table>

Recommended Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weidmuller STVS 10SS - 10 Way Plug</td>
<td>NM0002</td>
</tr>
<tr>
<td>Weidmuller STVS 10ZE - 10 Way Strain Relief</td>
<td>NM0003</td>
</tr>
<tr>
<td>Weidmuller STVS 3SB - 3 Way Socket</td>
<td>NM0005</td>
</tr>
<tr>
<td>Weidmuller STVS 3ZE - 3 Way Strain Relief</td>
<td>NM0006</td>
</tr>
<tr>
<td>10 Way Connector Insulation Kit</td>
<td>NM0007</td>
</tr>
<tr>
<td>3 Way Connector Insulation Kit</td>
<td>NM0008</td>
</tr>
</tbody>
</table>

Inputs
6 Analogue Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed). Optional configuration of inputs for digital operation, secondary functions (e.g. case clean switch, plant fault alarm etc).

Outputs
7 Relay outputs
Relay 1 (SSR)—1A(24 to 250Vac) resistive
Relay 2—2A(250Vac) resistive (COSφ=0.4 2A Inductive load)
Relay 3 - 5A(250Vac) resistive (COSφ=0.4 3A Inductive load)
Relay 4 - 1A(250Vac) resistive (COSφ=0.4 1A Inductive load)

Power
220-240Vac +/-10% 50hz (Maximum 10A) Class 1—Unit must be Earthed.

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

Mechanical
70 x 160 x 300mm (2.75 x 6.3 x 11.8in) Weight: 2.8kg (6.2lb)
PR0054/PR0055/PR0056
Powertray
Hot Serve Over

Based on Mercury controller technology these control trays provide the control power and networking of a Mercury controller in a prewired control panel with high current outputs.

These controllers offer high-quality, reliable, affordable high performance case control that will satisfy the most demanding refrigeration cabinet applications. Energy saving features help reduce running costs.

Typical applications
Commercial, Bars, Restaurants.

Flexible Network Options
Future proof IP connectivity is available for quick and secure networking. Flexible integrated network options also ensure compatibility on many existing sites with legacy hardware and front ends.

Easy configuration
Mercury 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 system frontend.

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Powertray Hot Serve Over with RS485 Networking</td>
<td>PR0054</td>
</tr>
<tr>
<td>Powertray Hot Serve Over with IP Networking</td>
<td>PR0055</td>
</tr>
<tr>
<td>Powertray Hot Serve Over with RS232 Comms</td>
<td>PR0056</td>
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</table>

Recommended Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weidmuller STVS 10SS - 10 Way Plug</td>
<td>NM0002</td>
</tr>
<tr>
<td>Weidmuller STVS 10ZE - 10 Way Strain Relief</td>
<td>NM0003</td>
</tr>
<tr>
<td>Weidmuller STVS 3SB - 3 Way Socket</td>
<td>NM0005</td>
</tr>
<tr>
<td>Weidmuller STVS 3ZE - 3 Way Strain Relief</td>
<td>NM0006</td>
</tr>
<tr>
<td>10 Way Connector Insulation Kit</td>
<td>NM0007</td>
</tr>
<tr>
<td>3 Way Connector Insulation Kit</td>
<td>NM0008</td>
</tr>
<tr>
<td>Mercury Mk3 Display</td>
<td>PR0725</td>
</tr>
</tbody>
</table>

Features
- High Temperature case control
- Control of Ceramic Heaters
- Control of Main Oven
- Control of Top Heater
- Control of Halogen Lamps
- Optional Fan Control or Alarm Relay
- Main Oven Door Open Alarm
- OT/UT Alarm levels and delays
- Local Time Schedule for Halogen Lamp
- Fuse and MCB Protection
- Remote display connector for optional display
- Lockable mains isolator for incoming supply

Typical wiring
Example: Hot Serve Over Case
* IP or RS485 Networking via optional interface

Inputs
6 Analogue Inputs supporting PT1000 temperature probes

Outputs
7 Relay outputs
- Relay 1 - 18A(250Vac) resistive (COSφ=0.4 5A Inductive)
- Relay 2 - 8A(250Vac) resistive (COSφ=0.4 1A Inductive)
- Relays 3 - 5A(250Vac) resistive (COSφ=0.4 2A Inductive)
- Relay 4 - 5A(250Vac) resistive (COSφ=0.4 3A Inductive)
- Relay 7 - 7A(250Vac) resistive (COSφ=0.4 3A Inductive)

Power
220-240Vac +/-10% 50hz (Maximum 10A) Class 1—Unit must be Earthed.

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

Mechanical
(H x W x D) 70 x 160 x 300mm (2.75 x 6.3 x 11.8in) Weight: 2.8kg (6.2lb)
Power Tray mechanical information

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

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 T568A and T568B. Either standard can be used but for good wiring practice it is recommended to keep wiring consistent during installation.

Technical tip—IP networking tip 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 T568A and T568B. Either standard can be used but for good wiring practice it is recommended to keep wiring consistent during installation.
PR0940

SmaRt Controller

Economical temperature control

Our economically priced SmaRt temperature controllers are available in DIN or Panel mount hardware with three build options: 1 probe input with 1 relay, 2 probe inputs with 1 relay, and 2 probe inputs with 3 relays.

A simple to read three digit display provides a clear and concise user interface and with pre-programmed software for mainstream refrigeration applications (for example chill - medium, chill - low, and frozen) the SmaRt refrigeration controller is quick and easy to set up.

End users can change the set-up and device parameters using the four push buttons on the front of the display. With an RDM Caesium programming key (sold separately), during initial setup, users can program multiple controllers with the same parameters; saving time during large commissioning runs. Optional networking modules will enable commun

Features

- Switched Mode Power Supply for worldwide operation (90Vac – 250Vac)
- Optional add-on IP or RS485 Modbus communication interface to allow networking to a Data Manager
- Built-in three digit display
- Status notification LED’s (Defrost and Alarm indicators)
- OT/UT alarm levels with associated alarm delay
- PIN password protection
- Defrost skip energy saving feature
- Defrost timer

Typical wiring diagram

For direct connection to a Mercury Switch, IP or RS485 Network Module a SmaRt cable will be required. Please refer to ordering information for further details.

Please Note: The SmaRt controller does not support electronic expansion valve control or stepper valve control and does not have a specific cold-room configuration. For these applications please refer to our Mercury controller range.

2 Probe Inputs
Supporting NTC2K.

3 Relay outputs
1x 8A (250Vac,30Vdc) resistive load, (5A COSφ=0.4 Inductive load)
2x 3A (250Vac,30Vdc) resistive load, (2A COSφ=0.6 Inductive load)

Power
90-240Vac +/-10% 50-60Hz  (Typ. <1A) Class II Insulation

Environmental
Operating temperature: 0°C to 50°C (32°F to 122°F)
Operating humidity: 10% to 80% (non condensing)

Panel Mount Dimensions
Dimensions (H x W x D): 36 x 78 x 112mm (1.42 x 3.1 x 4.4in)
Weight: 100g (0.22lb)

Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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</thead>
<tbody>
<tr>
<td>SmaRt IP Network Module *</td>
<td>PR0944-DIN</td>
</tr>
<tr>
<td>SmaRt RS485 Modbus® Comms Module *</td>
<td>PR0945-DIN</td>
</tr>
</tbody>
</table>

Flexible network options
IP network or RS485 Modbus network options enables compatibility with Data Managers or frontends on existing sites

Easy Configuration
Quick and easy to setup – using pre-programmed software selections for mainstream refrigeration applications.

Warranty
2 year limited warranty

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmaRt 2 probe 3 relay M Panel Mount Controller</td>
<td>PR0940 2-3</td>
</tr>
<tr>
<td>SmaRt 1 probe 1 relay M Panel Mount Controller</td>
<td>PR0940 1-1</td>
</tr>
<tr>
<td>SmaRt 2 probe 1 relay M Panel Mount Controller</td>
<td>PR0940 2-1</td>
</tr>
</tbody>
</table>

SmaRt controllers are available to order with and without pre-wired probes. When ordering, please append ‘P’ (probes included) or ‘NP’ (no probes included) - e.g. PR0940 2-3 NP - as required.
PR0942
SmaRt Controller
Economical temperature control

Our economically priced SmaRt temperature controllers are available in DIN or Panel mount hardware with three build options: 1 probe input with 1 relay, 2 probe inputs with 1 relay, and 2 probe inputs with 3 relays.

A simple to read three digit display provides a clear and concise user interface and with pre-programmed software for mainstream refrigeration applications (for example chill - medium, chill - low, and frozen) the SmaRt refrigeration controller is quick and easy to set up.

End users can change the set-up and device parameters using the four push buttons on the front of the display. With an RDM Caesium programming key (sold separately), during initial setup, users can program multiple controllers with the same parameters; saving time during large commissioning runs. Optional networking modules will enable commun

Features
- Switched Mode Power Supply for worldwide operation (90Vac – 250Vac)
- Optional add-on IP or RS485 Modbus communication interface to allow networking to a Data Manager
- Built-in three digit display
- Status notification LED’s (Defrost and Alarm indicators)
- OT/UT alarm levels with associated alarm delay
- PIN password protection
- Defrost skip energy saving feature
- Defrost timer

Typical wiring diagram

Flexible network options
IP network or RS485 Modbus network options enables compatibility with Data Managers or frontends on existing sites

Easy Configuration
Quick and easy to setup – using pre-programmed software selections for main stream refrigeration applications.

Warranty
2 year limited warranty

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>SmaRt 2 probe 3 relay M DIN Mount Controller</td>
<td>PR0942 2-3</td>
</tr>
<tr>
<td>SmaRt 1 probe 1 relay M DIN Mount Controller</td>
<td>PR0942 1-1</td>
</tr>
<tr>
<td>SmaRt 2 probe 1 relay M DIN Mount Controller</td>
<td>PR0942 2-1</td>
</tr>
</tbody>
</table>

SmaRt controllers are available to order with and without pre-wired probes. When ordering, please append ‘P’ (probes included) or ‘NP’ (no probes included) - e.g. PR0940 2-3 NP - as required.

For direct connection to a Mercury Switch, IP or RS485 Network Module a SmaRt cable will be required. Please refer to ordering information for further details.

Please Note: The SmaRt controller does not support electronic expansion valve control or stepper valve control and does not have a specific cold-room configuration. For these applications please refer to our Mercury.

2 Probe Inputs
Supporting NTC2K.

3 Relay outputs
1x 8A (250Vac,30Vdc) resistive load, (5A COSφ=0.4 Inductive load)
2x 3A (250Vac,30Vdc) resistive load, (2A COSφ=0.6 Inductive load)

Power
90-240Vac +/-10% 50-60Hz (Typ. <1A) Class II Insulation

Environmental
Operating temperature: 0°C to 50°C (32°F to 122°F)
Operating humidity: 10% to 80% (non condensing)

DIN Mount Dimensions
Dimensions (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)
Weight: 156g (0.34lb)

Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>SmaRt Cable</td>
<td>PR0949</td>
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<tr>
<td>Mercury Switch / (with Fibre)</td>
<td>PR0018 / F</td>
</tr>
<tr>
<td>SmaRt Controller Caesium Adapter*</td>
<td>PR0948</td>
</tr>
<tr>
<td>SmaRt IP Network Module *</td>
<td>PR0944-DIN</td>
</tr>
<tr>
<td>SmaRt RS485 Modbus® Comms Module</td>
<td>PR0945-DIN</td>
</tr>
</tbody>
</table>

* Accessories require SmaRt Cable to interface with controller.
PR0942 / PR0940

SmaRt Controller
Clever Probes & Relays

Primarily intended for use in refrigerated display cabinets, but with a wide range of potential applications, the SmaRt range can manage up to two temperature probe inputs: one being an ‘air on evaporator’ probe and the other being user selectable between ‘air off evaporator’ or ‘defrost termination’.

All of the SmaRt build options come with mappable relays. From the factory, the 3 relay build has relay one and two for cooling and fan control respectively, whilst relay three is user selectable as defrost control, trim heater control or alarm relay.

Relay 1 on the SmaRt controller has changeover contacts with ‘common’, ‘normally open’ and ‘normally closed’ connections. A relay invert feature allows relay 1 to be reversed by the end user depending on the plant under control. Relays 2 and 3 have ‘common’ and ‘normally open’ connections.

Features
• Highly economical pricing
• Suitable for markets worldwide (°C and °F settings)
• Can be connected to a Data Manager with add-ons
• Clear and concise user interface
• Quick and easy set up
• Adaptable to multiple different requirements
• Can be mass configured with an RDM Caesium key (sold separately)
• Secure from tamper/accidental change
• Energy saving features built in

PR0940

SmaRt Caesium
Mercury Programming Adaptor

The Caesium programming adapter is designed to copy and store controller parameters from the RDM range of SmaRt controllers.

These stored parameters can then be downloaded into controllers of the same software type allowing for a quick and simple method for setting parameters in multiple controllers. The Caesium has two buttons for uploading or downloading parameters, two LED lights; one green and one red, which indicate the devices current status.

Parameters can be uploaded to the Caesium then locked in the adapter to prevent accidentally overwriting of the uploaded parameters.

Key benefits
• Rapid Control Setup
• Simple Operation
• Two button operation makes this an ideal tool for production work or installation for rapid setup of controls.
• Lock Settings
• Parameter locking option ensures that settings are not tampered with during long programming runs.

Interface
RS232 Serial

Power
5V Powered 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): 72 x 25 x 20mm (2.8 x 1 x 0.8in)
Weight: 25g (0.9oz)

Ordering Information

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<tr>
<th>Description</th>
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</tr>
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<tbody>
<tr>
<td>SmaRt Caesium Adaptor</td>
<td>PR0948</td>
</tr>
</tbody>
</table>

Not compatible with on-board IP versions of the Mercury 3
SmaRt Controller mechanical information

PR0944 – SmaRt controller DIN Mount

PR0940 – SmaRt controller

All Dimensions: mm (inch)
PR0120
ML Controller
3 Relay Refrigerated Case Controller

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

The ML controller is a single stage thermostat with adjustable parameters, incorporating a defrost scheduling timer, lights control, fan control and an alarm handler. The controller can be networked back to an RDM Data Manager. Operation and aesthetics are based on the Mercury controller range.

The ML relay module has an electro-mechanical relay for switching Compressors/Liquid Line Valves and has an option for a solid state relay for switching Electronic Expansion Valves.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- Supplied with 2 x NTC 2k air probes
- Remote mounting of control head. 5m display cable included
- Single stage thermostat using on/off relay or EVV mode
- 4 Inputs with input 3 & 4 configurable as Monitor, Defroost or Plant Fault input
- Relay 2 multi-function fully user configurable
- Internal Defrost and Local Lights Schedule
- Trim level control (Energy Saving)
- Integrated high volume alarm buzzer (85dB)
- OT/UT Alarm levels and delays
- Remote defrost and light schedules
- Out of hours secondary control setpoint (Energy Feature)
- Fan control
- Quick view & change current temperature range

Flexible network options
Future proof connectivity is available for quick and secure networking. Flexible network options allow non-networked units to be easily upgraded at a future date if the site requires RS485 or IP networking.

Easy configuration
ML 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
ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

Typical wiring
Example: Refrigeration Case Control

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number*1</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML 3 Relay Controller (Non-Networking)</td>
<td>PR0120</td>
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<tr>
<td>PSU upgrade options</td>
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<tr>
<td>ML Power Supply - 3 Relay, RS485 Network &amp; Screw Terminals</td>
<td>PR0125</td>
</tr>
<tr>
<td>ML Power Supply - 5 Relay, RS485 Network &amp; Screw Terminals</td>
<td>PR0126</td>
</tr>
<tr>
<td>ML Power Supply - 5 Relay, RS232 Comms &amp; Screw Terminals</td>
<td>PR0127</td>
</tr>
</tbody>
</table>

*2 Requires RS232 compatible PSU—PR0127

*1 Volume discounts available on boxed multiples of 20 and 50pcs. Add –20 and –50 to part number.
**PR0120-HOT**

**ML Controller**

3 Relay Hot Cabinet Controller

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

The ML Hot Case controller is a single stage thermostat intended for hot cabinet control. The hot controller incorporates adjustable parameters, lights control, fan control and an alarm handler. Operation and aesthetics are based on the Mercury controller range.

The ML relay module has 3 electro-mechanical relays one of which is used to operate a heating element and the remaining relays are configurable as fans, lights or an alarm relay. The internal switch mode power supply allows operation worldwide.

**Typical applications**

Commercial, Bars, Restaurants.

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**Features**

- Remote mounting of control head. 5m display cable included
- Single stage thermostat using on/off control
- 4 Inputs with input 3 & 4 configurable as Temperature Monitor or Plant Fault input
- Internal Lights Schedule
- OT/UT Alarm levels and delays
- Remote light schedules
- Integrated high volume alarm buzzer (85dB)
- Fan control
- Quick view & change current temperature range

**Typical wiring**

Example: Hot Cabinet Case

---

**Inputs**

4 Inputs supporting PT1000, NTC2K, NTC2K25, NTC10K, temperature probes (note: probe types cannot be mixed)

**Outputs**

3 Relay outputs
- Relay 1 - 16A(250Vac) resistive (COSφ=0.4 2HP(N/O) 1.5HP(N/C) Motor Load)
- Relays 2,3,-10A(250Vac) resistive (COSφ=0.4 3A Inductive)

**Power**

Controller: 100-240Vac +/-10%  50-60hz  (<1A) CLASS 2
Maximum Supply Current: 35A (Relays fully loaded)

**Environmental**

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

**Dimensions**

Controller  36 x 78 x 112mm (1.42 x 3.1 x 4.4in) Weight: 170g (0.38lb)
(Panel cut-out: 71 x 29mm (2.8 x 1.2in))

**Power Supply**

170 x 130 x 50mm (6.7 x 5.1 x 2.0in) Weight: 1.4kg (3.1lb) (Controller + Cable)

---

**Easy configuration**

ML controllers ship with multiple standard default configurations. Customisation can easily be carried out via the controller display.

**Quick fit**

ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

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**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ML 3 Relay Controller (Non-Networking)</td>
<td>PR0120-HOT</td>
</tr>
</tbody>
</table>

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**Mercury**

Powertray

ML & Smart

Coldroom

Humidicast

Wireless Mesh

Shuttle

Sensors

Ancillaries
PR0121
ML Controller
3 Relay Refrigerated Case Controller for RS485 Networking

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

The ML controller is a single stage thermostat with adjustable parameters, incorporating a defrost scheduling timer, lights control, fan control and an alarm handler. The controller can be networked back to an RDM Data Manager. Operation and aesthetics are based on the Mercury controller range.

The ML relay module has an electro-mechanical relay for switching Compressors/Liquid Line Valves and has an option for a solid state relay for switching Electronic Expansion Valves. The internal switch mode power supply allows operation worldwide.

**Typical applications**
Supermarket, Commercial, Healthcare.

**Features**
- Built in RS485 networking
- Supplied with 2 x NTC 2K air probes
- Single stage thermostat using on/off relay
- 4 Inputs with input 3 & 4 configurable as Monitor, Defrost or Plant Fault input
- Relay 2 multi-function fully user configurable
- Internal Defrost and Local Lights Schedule
- Trim level control (Energy Saving)
- Integrated high volume alarm buzzer (85dB)
- OT/UT Alarm levels and delays
- Remote defrost and light schedules
- Out of hours secondary control set-point (Energy Feature)
- Fan control

**Typical wiring**
Example: Refrigeration Case Control

---

**Flexible network options**
Future proof connectivity is available for quick and secure networking. Flexible network options allow non networked units to be easily upgraded at a future date if the site requires IP networking.

* With appropriate base module option.

**Easy configuration**
ML 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**
ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

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**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML 3 Relay Controller (RS485 Networking)</td>
<td>PR0121</td>
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<table>
<thead>
<tr>
<th>PSU upgrade options</th>
<th>Part number*1</th>
</tr>
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<tbody>
<tr>
<td>ML Power Supply - 5 Relay, RS485 Network &amp; Screw Terminals</td>
<td>PR0126</td>
</tr>
<tr>
<td>ML Power Supply - 5 Relay, RS232 Comms &amp; Screw Terminals</td>
<td>PR0127</td>
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<table>
<thead>
<tr>
<th>Network modules*2</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Futura (Single controller to IP Interface)</td>
<td>PR0016</td>
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<tr>
<td>IP Switch (IP support for 10 controllers)</td>
<td>PR0018</td>
</tr>
<tr>
<td>IP Switch with Pressure / Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
</tbody>
</table>

*1 Volume discounts available on boxed multiples of 20 and 100pcs. Add –20 and –100 to part number.

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**Inputs**
4 Inputs supporting PT1000, NTC2K, NTC2K25, NTC10K, temperature probes (note: probe types cannot be mixed)

**Outputs**
3 Relay outputs
- Relay 1 - 16A(250Vac) resistive (COSφ=0.4 2HP(N/O) 1.5HP(N/C) Motor Load)
- Relays 2, 3 - 10A(250Vac) resistive (COSφ=0.4 3A Inductive)

**Power**
- Controller: 100-240Vac +/-10% 50-60hz (<1A) CLASS 2
- Maximum Supply Current: 35A (Relays fully loaded)

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

**Dimensions**
- Controller: 36 x 78 x 112mm (1.42 x 3.1 x 4.4in) Weight: 170g (0.38lb) (Controller + Cable)
- Panel cut-out: 71 x 29mm (2.8 x 1.2in)

**Power Supply**
- 170 x 130 x 50mm (6.7 x 5.1 x 2.0in) Weight: 1.4kg (3.1lb) (Controller + Cable)
- (H x W x D)
PR0122
ML Controller
5 Relay Refrigerated Case Controller for RS485 Networking

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

The ML controller is a single stage thermostat with adjustable parameters, incorporating a defrost scheduling timer, lights control, fan control and an alarm handler. The controller can be networked back to an RDM Data Manager. Operation and aesthetics are based on the Mercury controller range. The ML relay module has an electro-mechanical relay for switching Compressors/Liquid Line Valves and has an option for a solid state relay for switching Electronic Expansion Valves. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

Flexible network options*
Future proof connectivity is available for quick and secure networking. Flexible network options allow non networked units to be easily upgraded at a future date if the site requires IP networking.

Easy configuration
ML 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
ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

Ordering Information

<table>
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<tr>
<th>Description</th>
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<td>ML 5 Relay Controller (RS485 Networking)</td>
<td>PR0122 (For LLV) PR0122E (For EEV)</td>
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<tr>
<td>PSU upgrade options</td>
<td>Part number*</td>
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<tr>
<td>ML Power Supply - 5 Relay, RS232 Comms &amp; Screw Terminals</td>
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</tr>
<tr>
<td>Network modules**</td>
<td>Part number**</td>
</tr>
<tr>
<td>IP Futura (Single controller to IP Interface)</td>
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<tr>
<td>IP Switch (IP support for 10 controllers)</td>
<td>PR018</td>
</tr>
<tr>
<td>IP Switch with Pressure / Humidity Inputs</td>
<td>PR018-PHI</td>
</tr>
</tbody>
</table>

*1 Volume discounts available on boxed multiples of 20 and 50pcs. Add –20 and –50 to part number.

**Requires RS232 compatible PSU— PR0127

Features
- Built in RS485 networking
- Supplied with 2 x NTC 2k air probes
- Remote mounting of control head. 5m display cable included
- Single stage thermostat using on/off relay or EEV mode
- 4 Inputs with input 3 & 4 configurable as Monitor, Defrost or Plant Fault input
- Relay 2,3 & 5 multi-function fully user configurable
- Internal Defrost and Local Lights Schedule
- Trim level control (Energy Saving)
- Integrated high volume alarm buzzer (85dB)
- OT/UT Alarm levels and delays
- Remote defrost and light schedules
- Out of hours secondary control setpoint (Energy Feature)
- Fan control

Typical wiring
Example: Refrigeration Case Control

4 Inputs supporting PT1000, NTC2K, NTC2K25, NTC10K, temperature probes (note: probe types cannot be mixed)

Outputs
- Relay 1 (PR0122) - 16A(250Vac) resistive (COSφ=0.4 2HP(N/O) 1.5HP(N/C) Motor Load)
- Relay 1 (PR0122E) - 1.5A(24 to 250Vac) resistive
- Relays 2-5,-10A(250Vac) resistive (COSφ=0.4 3A Inductive)

Power
Controller: 100-240Vac +/-10% 50-60hz  (<1A) CLASS 2
Maximum Supply Current: 56A (Relays fully loaded)

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

Dimensions
Controller: 36 x 78 x 112mm (1.42 x 3.1 x 4.4in) Weight: 170g (0.38lb) (Controller + Cable)
Panel cut-out: 71 x 29mm (2.8 x 1.2in)

Power Supply
170 x 130 x 50mm (6.7 x 5.1 x 2.0in) Weight: 1.4kg (3.1lb) (Controller + Cable)
(H x W x D)

*2 Requires RS232 compatible PSU— PR0127

Mercury
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ML & Smart
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Sensors
Ancillaries

www.resourcedm.com | sales@resourcedm.com
**ML Controller**

5 Relay Thermostat for RS485 Networking

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

The ML Stat is a multi-stage thermostat with adjustable parameters, incorporating a fan relay with adjustable over-run time. The ML Stat has four stages which can be set-up for heating or cooling. The internal switch mode power supply allows operation worldwide.

**Typical applications**

Supermarket, Commercial, Healthcare.

**Features**

- Built in RS485 networking
- Supplied with 2 x NTC 2k air probes
- Remote mounting of control head. 5m display cable included
- Multi stage thermostat using on/off relay
- 2 Control probes
- 2 Monitoring probes
- OT/UT Alarm levels and delays
- Fan control with over-run feature
- Integrated high volume alarm buzzer (85dB)

**Typical wiring**

Example: 4 Stage Oven

*Flexible network options*  
Future proof connectivity is available for quick and secure networking. Flexible network options allow non networked units to be easily upgraded at a future date if the site requires IP networking.

* With appropriate base module option.

**Easy configuration**

ML 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**

ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

**Ordering Information**

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<tbody>
<tr>
<td>ML 5 Relay Controller (RS485 Networking)</td>
<td>PR0122-STA</td>
</tr>
<tr>
<td>PSU upgrade options</td>
<td>Part number*</td>
</tr>
<tr>
<td>ML Power Supply - 5 Relay, RS232 Comms &amp; Screw Terminals</td>
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<tr>
<td>Network modules**</td>
<td>Part number</td>
</tr>
<tr>
<td>IP Futura (Single controller to IP Interface)</td>
<td>PR0016</td>
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<tr>
<td>IP Switch [IP support for 10 controllers]</td>
<td>PR0018</td>
</tr>
<tr>
<td>IP Switch with Pressure / Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
</tbody>
</table>

*1 Volume discounts available on boxed multiples of 20 and 50pcs.
Add –20 and –50 to part number.

**Requires RS232 compatible PSU— PR0127**

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**Inputs**

4 Inputs supporting PT1000, NTC2K, NTC2K25, NTC10K, temperature probes (note: probe types cannot be mixed)

**Outputs**

5 Relay outputs
- Relay 1 - 16A(250Vac) resistive (COSφ=0.4 2HP(N/O) 1.5HP(N/C) Motor Load)
- Relays 2-5, 10A(250Vac) resistive (COSφ=0.4 3A Inductive)

**Power**

Controller: 100-240Vac +/-10%  50-60hz  (<1A) CLASS 2
Maximum Supply Current: 56A (Relays fully loaded)

**Environmental**

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

**Dimensions**

Controller 36 x 78 x 112mm (1.42 x 3.1 x 4.4in) Weight: 170g (0.38lb)
(Controller + Cable)
Panel cut-out: 71 x 29mm (2.8 x 1.2in)

**Power Supply**

170 x 130 x 50mm (6.7 x 5.1 x 2.0in) Weight: 1.4kg (3.1lb) (Controller + Cable)
(H x W x D)
PR0123

ML Controller

5 Relay Refrigerated Case Controller with RS232 Interface (For IP Comms)

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

The ML controller is a single stage thermostat with adjustable parameters, incorporating a defrost scheduling timer, lights control, fan control and an alarm handler. The controller can be networked back to an RDM Data Manager. Operation and aesthetics are based on the Mercury controller range.

The ML relay module has an electro-mechanical relay for switching Compressors/Liquid Line Valves and has an option for a solid state relay for switching Electronic Expansion Valves. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- Supplied with 2 x NTC 2k air probes
- Remote mounting of control head. 5m display cable included
- Single stage thermostat using on/off relay or EEV mode
- 4 Inputs with input 3 & 4 configurable as Monitor, Defrost or Plant Fault input
- Relay 2, 3 & 5 multi-function fully user configurable
- Internal Defrost and Local Lights Schedule
- Trim level control (Energy Saving)
- Integrated high volume alarm buzzer (85dB)
- OT/UT Alarm levels and delays
- Remote defrost and light schedules
- Out of hours secondary control setpoint (Energy Feature)
- Fan control

Typical wiring
Example: Refrigeration Case Control

Flexible Network Options
Future proof connectivity for quick and secure networking. Plug and play compatibility with ML IP Module and ML IP Switch using industry standard CATSE cables.

Easy configuration
ML 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
ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

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<td>PR0123 (For LIV)</td>
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<tr>
<td>ML 5 Relay Controller (EEV)</td>
<td>PR0123E (For EEV)</td>
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*1 Volume discounts available on boxed multiples of 20 and 50pcs. Add –20 and –50 to part number.

**Requires RS232 compatible PSU— PR0127

Power Supply
170 x 130 x 50mm (6.7 x 5.1 x 2.0in) Weight: 1.4kg (3.1lb) (Controller + Cable)

(H x W x D)
PR0123-STA
ML Controller
5 Relay Thermostat with RS232 Interface (For IP comms)

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

The ML Stat is a multi-stage thermostat with adjustable parameters, incorporating a fan relay with adjustable over-run time. The ML Stat has four stages which can be set-up for heating or cooling. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- Supplied with 2 x NTC 2k air probes
- Remote mounting of control head. 5m display cable included
- Single stage thermostat using on/off relay
- 4 inputs
- Integrated high volume alarm buzzer (85dB)
- OT/UT Alarm levels and delays
- Fan control with adjustable over-run time

Typical wiring
Example: 4 Stage Thermostat

Flexible Network Options
Future proof connectivity for quick and secure networking. Plug and play compatibility with ML IP Module and ML IP Switch using industry standard CAT5E cables.

Easy configuration
ML 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
ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

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*Volume discounts available on boxed multiples of 20 and 50pcs. Add –20 and –50 to part number.

** Requires RS232 compatible PSU— PR0127

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</tr>
<tr>
<td>IP Switch with Pressure / Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
</tbody>
</table>

Inputs
4 Inputs supporting PT1000, NTC2K, NTC2K25, NTC10K, temperature probes (note: probe types cannot be mixed)

Outputs
5 Relay
Relay 1 - 16A(250Vac) resistive (COSΦ=0.4 2HP(N/O) 1.5HP(N/C) Motor Load)
Relays 2-5, 10A(250Vac) resistive (COSΦ=0.4 3A Inductive)

Power
Controller: 100-240Vac +/-10% 50-60hz (<1A) CLASS 2
Maximum Supply Current: 56A (Relays fully loaded)

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

Dimensions
Controller 36 x 78 x 112mm (1.42 x 3.1 x 4.4in) Weight: 170g (0.38lb)
Controller + Cable Panel cut-out: 71 x 29mm (2.8 x 1.2in)

Power Supply
170 x 130 x 50mm (6.7 x 5.1 x 2.0in) Weight: 1.4kg (3.1lb) (Controller + Cable)

(H x W x D)
PR0123-TWI

ML Controller

5 Relay Twin Compressor Controller With RS232 Interface (For IP Comms)

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

The ML Twin Compressor Controller is a dual stage thermostat with adjustable parameters, incorporating a defrost scheduling timer, lights control, fan control, trim heater control and an alarm handler. The controller can be networked back to an RDM Data Manager. The User Interface is similar to that of the Mercury range.

The ML relay module has five electro-mechanical relays. The internal switch mode power supply allows operation worldwide.

Typical applications
Supermarket, Commercial, Healthcare.

Features
- Supplied with 2 x NTC 2k air probes
- Remote mounting of control head. 5m display cable included
- 4 Inputs with input 3 & 4 configurable as Monitor, Defrost or Plant Fault input
- Internal Defrost and Local Lights Schedule
- Trim level control (Energy Saving)
- Integrated high volume alarm buzzer (85dB)
- OT/UT Alarm levels and delays
- Remote defrost and light schedules
- Out of hours secondary control setpoint (Energy Feature)
- Fan control

Typical wiring
Example: Refrigeration Case Control

Flexible Network Options
Future proof connectivity for quick and secure networking. Plug and play compatibility with ML IP Module and ML IP Switch using industry standard CAT5E cables.

Easy configuration
ML 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
ML controller display head is installed with friction fitting clips, no screw or additional fixing holes required, and is supplied as standard with a 5m display cable. The power supply board is easily mounted using the integral fixing holes provided and has various knockouts available for flexible wiring options.

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<tbody>
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<td>ML 5 Relay Controller (RS232 Interface)</td>
<td>PR0123-TWI</td>
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<table>
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<th>Network modules</th>
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<tbody>
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<tr>
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<tr>
<td>IP Switch with Pressure / Humidity Inputs</td>
<td>PR0018-PHI</td>
</tr>
</tbody>
</table>

*Volume discounts available on boxed multiples of 20 and 50pcs. Add –20 and –50 to part number.
ML mechanical information

ML Controller

ML Power Supply

All Dimensions: mm (inch)
Flexible Network Options
Optional integrated Ethernet IP or RS485 networking option allows you to connect the Coldroom directly to your network without the need for an additional interface module.

Remote Display
Removable panel display can be wall mounted remotely from control box. Supplied as standard with 5m cable.

Easy configuration
Coldroom 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 front end.

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<th>Description</th>
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<td>PR0150-ESB</td>
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<tr>
<td>Coldroom Control for EEV, Isolator Switch, Fused</td>
<td>PR0150-ESF</td>
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<tr>
<td>Coldroom Control for EEV, Isolator Switch, Fused &amp; IP Comms</td>
<td>PR0150-ESFIP</td>
</tr>
<tr>
<td>Coldroom Control for EEV, Isolator Switch, Breakers &amp; IP Comms</td>
<td>PR0150-ESBIP</td>
</tr>
<tr>
<td>Coldroom Control for EEV, Isolator Switch, Breakers &amp; RS485 Comms</td>
<td>PR0150-ESB485</td>
</tr>
<tr>
<td>Replacement Coldroom Display with SM Cable</td>
<td>PR0152</td>
</tr>
</tbody>
</table>

Features
- HT & LT Coldroom Control
- Control of an Electronic Expansion Valve (EEV)
- Internal Defrost and Lights Schedule
- Integrated high volume alarm buzzer (85dB)
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Standard Fan control or Fan Pulse option (Energy Saving)
- Remote defrost and light schedules
- Defrost termination probe
- Mini-circuit breaker (MCB) protection of outputs.
- Switch for mains isolation during maintenance
- Internal IP or RS485 network (Option)

Typical wiring
Example: Coldroom

* IP or RS485 Networking via optional interface

Inputs
6 Analogue Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed). Optional configuration of inputs for digital operation, secondary functions (e.g. case clean switch, plant fault alarm etc).
2 Digital Inputs for Door open and Entrapment switch.

Outputs
5 Relay outputs (Relay 2, 3 & 5 protected by MCB)
Relay 1 (SSR) - 1.5A (24 to 250Vac, 30Vdc) resistive
Relay 2 (Fans) - 8A (250Vac, 30Vdc) resistive (COSφ=0.4 8A Inductive load)
Relay 3 (Lights) - 8A (250Vac, 30Vdc) resistive (COSφ=0.4 6A Inductive load)
Relay 4 (Alarm) - 3A (250Vac, 30Vdc) resistive, configured for volt free operation
Relay 5 (Defrost) - 20A (250Vac, 30Vdc) resistive (COSφ=0.4 8A Inductive load)
2 Permanent Live outputs
Output 1—Fused 5A(T), Output 2—Fused 1A(T)

Power
100-240Vac +/-10% 50hz Maximum 40A with relays fully loaded.

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

Dimensions
300 x 240 x 130mm (11.8 x 9.4 x 5.1in)
Weight: 2.2kg (4.8lb) (Final weight depends on selected option) (H x W x D)
PR0150

Coldroom Panel

Wall Mounted Coldroom Controller for LLV

The Coldroom panel has been specifically developed to suit a variety of coldroom needs.

The purpose developed enclosure has a detachable display/keypad for applications where it is desirable to mount the power supply panel away from the user controls. The panel is available with or without a main isolator switch. Each internal circuit has circuit breaker protection.

Based on Mercury technology, the controller has parameters that give this product complete flexibility for controlling either high temperature produce (HT) or low temperature freezer coldrooms (LT). Energy saving features help reduce running costs. The internal switch mode power supply allows operation worldwide.

Typical applications
Coldroom

Flexible Network Options
Optional integrated Ethernet IP or RS485 networking option allows you to connect the Coldroom directly to your network without the need for an additional interface module.

Remote Display
Removable panel display can be wall mounted remotely from control box. Supplied as standard with 5m cable.

Easy configuration
Coldroom 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 front end.

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<td>PR0150-MSB</td>
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<tr>
<td>Coldroom Control, Isolator Switch, Breakers</td>
<td>PR0150-MSF</td>
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<tr>
<td>Coldroom Control, Isolator Switch, Breakers &amp; IP Comm's</td>
<td>PR0150-MSBIP</td>
</tr>
<tr>
<td>Coldroom Control, Isolator Switch, Breakers &amp; IP Comm's</td>
<td>PR0150-MSFIP</td>
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<tr>
<td>Coldroom Control, Isolator Switch, Breakers &amp; RS485 Comm's</td>
<td>PR0150-MSB485</td>
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<td>Coldroom Control, Isolator Switch, Breakers &amp; RS485 Comm's</td>
<td>PR0150-MSF485</td>
</tr>
<tr>
<td>Replacement Coldroom Display with 5M Cable</td>
<td>PR0152</td>
</tr>
</tbody>
</table>

Features

- HT & LT Coldroom Control
- Control of a Liquid Line Valve (LLV)
- Internal Defrost and Lights Schedule
- Integrated high volume alarm buzzer (85dB)
- Defrost Skip (Energy Saving)
- Control using log probe (Energy Saving)
- OT/UT Alarm levels and delays
- Standard Fan control or Fan Pulse option (Energy Saving)
- Remote defrost and light schedules
- Defrost termination probe
- Mini-circuit breaker (MCB) protection of outputs
- Switch for mains isolation during maintenance
- Internal IP or RS485 network (Option)

Typical wiring
Example: Coldroom

*IP or RS485 Networking via optional interface

Inputs
6 Analogue Inputs supporting PT1000, NTC2K, 470R, 700R, 3K, 5K, 6K, NTC2K25, NTC10K or NTC10K(2) temperature probes (note: probe types cannot be mixed). Optional configuration of inputs for digital operation, secondary functions (e.g. case clean switch, plant fault alarm etc). 2 Digital Inputs for Door open and Entrapment switch.

Outputs
5 Relay outputs (Relay 1,2,3 & 5 protected by MCB)
Relay 1 - 10A(250Vac,30Vdc) resistive (COSφ=0.4 8A Inductive load / COSφ=0.6 0.5 HP Motor load)
Relay 2 (Fans) - 8A(250Vac,30Vdc) resistive (COSφ=0.4 8A Inductive load)
Relay 3 (Lights) - 8A(250Vac,30Vdc) resistive (COSφ=0.4 6A Inductive load)
Relay 4 (Alarm) - 3A(250Vac,30Vdc) resistive, configured for volt free operation
Relay 5 (Defrost) - 20A(250Vac,30Vdc) resistive (COSφ=0.4 8A Inductive load) (Note: relay 1 and 5 MCB can be swapped depending on application)
2 Permanent live outputs Output 1—Fused 5A(T), Output 2—Fused 1A(T)

Power
100-240Vac +/-10% 50Hz Maximum 50A with relays fully loaded.

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

Dimensions
300 x 240 x 130mm (11.8 x 9.4 x 5.1in)
Weight: 2.2kg (4.8lb) (Final weight depends on selected option)
Coldroom mechanical information

PR0150 - Coldroom with Isolator

Mounting Details—Fixing Centres— 175 x 200 (6.9 x 7.87) Maximum fixing Ø = 6mm (0.25)

All Dimensions: mm (inch)
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

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

Intergrated 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humidistat 3 Relay Stat with Display</td>
<td>PR0440-NF</td>
</tr>
</tbody>
</table>

Recommended Cables

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5m CAT5E Patch Cable</td>
<td>PR0384</td>
</tr>
<tr>
<td>1m CAT5E Patch Cable</td>
<td>PR0385</td>
</tr>
<tr>
<td>3m CAT5E Patch Cable</td>
<td>PR0386</td>
</tr>
<tr>
<td>5m CAT5E Patch Cable</td>
<td>PR0387</td>
</tr>
<tr>
<td>15m CAT5E Patch Cable</td>
<td>PR0389</td>
</tr>
</tbody>
</table>

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: -5° to +60°C (23° to 140°F)
Operating humidity: 10% to 80% (non condensing)

Dimensions
Dimensions (H x W x D):120 x 157 x 67mm (4.7 x 6.2 x 2.6in)
Weight: 500g (1.1lb)
**PR0442-NF**

**Intuitive Humidistat**

**Trim Heater Optimiser**

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

This Trim optimiser is for the control of refrigeration display cabinet trim heaters. By pulsing the trim heaters to a value other than 100% saves energy. Based on the local humidity value, that’s read in from either the integrated display sensor or a remote sensor, the trim heater(s) will be pulsed on/off to a pre-determined percentage based on the current humidity conditions.

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**

Trim Heater Optimisation

---

**Features**

- Display includes integral temperature and humidity sensors
- Control on Humidity or Dewpoint
- Control multiple case trim heaters
- 7 day scheduler for additional energy saving.
- Option to use remote humidity sensor or display sensor
- Integrated Ethernet connection
- Helps to reduce energy use
- 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: Case Trim Control (Energy Saving)**

---

**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.

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**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humidistat 3 Relay Thermostat</td>
<td>PR0442-NF</td>
</tr>
</tbody>
</table>

**Recommended Cables**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5m CATSE Patch Cable</td>
<td>PR0384</td>
</tr>
<tr>
<td>1m CATSE Patch Cable</td>
<td>PR0385</td>
</tr>
<tr>
<td>3m CATSE Patch Cable</td>
<td>PR0386</td>
</tr>
<tr>
<td>5m CATSE Patch Cable</td>
<td>PR0387</td>
</tr>
<tr>
<td>15m CATSE Patch Cable</td>
<td>PR0389</td>
</tr>
</tbody>
</table>

---

**Inputs**

6 Resititve Probe Inputs supporting PT100, 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**

4 Relay outputs
Relays 1-4, 10A(250Vac,30Vdc) resistive (COSφ=0.4 3A Inductive load)

**Power**

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

**Environmental**

Operating temperature: -5° to +60°C (23° to 140° F)
Operating humidity: 10% to 80% (non condensing)

**Dimensions**

Dimensions (H x W x D): 120 x 157 x 67mm (4.7 x 6.2 x 2.6in)
Weight: 500g (1.1lb)
Humidistat mechanical information

Humidistat Controller

All Dimensions: mm (inch)
PR0730

Wireless Mesh

Wireless Mesh Interface Module

The wireless mesh interface module allows 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.

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
- ** 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

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

Panel Mount
- Dimensions (L x 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 (H x W x D): 130 x 52.5 x 67mm (6.2 x 4.9 x 2.6in)
- Weight: 156g (0.34lb)

Ordering Information
<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless Mesh Module Interface</td>
<td>PR0730</td>
</tr>
<tr>
<td>Wireless Mesh Module Interface DIN Mount</td>
<td>PR0730 DIN</td>
</tr>
</tbody>
</table>

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.

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.
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.

### 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

### Order Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless Mesh Module °C 2 input / 2 output</td>
<td>PR0731-C-2I2O</td>
</tr>
<tr>
<td>Wireless Mesh Module °F 2 input / 2 output</td>
<td>PR0731-F-2I2O</td>
</tr>
<tr>
<td>Wireless Mesh Monitor °C (2I/2O) for 2K Probe DIN Mount</td>
<td>PR0731-DIN-C-2I2O</td>
</tr>
<tr>
<td>Wireless Mesh Monitor °F (2I/2O) for 2K Probe DIN Mount</td>
<td>PR0731-DIN-F-2I2O</td>
</tr>
</tbody>
</table>

### 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.

### 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 (H x W x D): 97 x 114 x 30mm (3.8 x 4.5 x 1.2in)
- Weight: 100g (0.22lb)
- 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)
- 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless Mesh Module °C 4 input</td>
<td>PR0731-C-4I</td>
</tr>
<tr>
<td>Wireless Mesh Module °F 4 input</td>
<td>PR0731-F-4I</td>
</tr>
<tr>
<td>Wireless Mesh Monitor °C (4 Input) for 2K Probe DIN Mount</td>
<td>PR0731-DIN-C-4I</td>
</tr>
<tr>
<td>Wireless Mesh Monitor °C (4 Input) for 2K Probe DIN Mount</td>
<td>PR0731-DIN-F-4I</td>
</tr>
</tbody>
</table>

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.

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.

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
5Wd, 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 (H x W x D): 97 x 114 x30mm (3.8 x 4.5 x 1.2in)
Weight: 100g (0.22lb)
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)
Weight: 156g (0.34lb)
PR0732

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.

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

Key benefits
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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless Mesh Access Point</td>
<td>PR0732-NI</td>
</tr>
<tr>
<td>Wireless Mesh Access Point with Power over Ethernet Injector</td>
<td>PR0732-POE</td>
</tr>
</tbody>
</table>

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.
PR0734

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.

Key benefits
- 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>Wireless Mesh Access Point</td>
<td>PR0734</td>
</tr>
</tbody>
</table>

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) (H x W x D)
- Weight: 45g (0.1lb)
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

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) (H x W x D)
Weight: 154g (5.4oz)

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
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<tbody>
<tr>
<td>Wireless Mesh Sensor</td>
<td>PR0733</td>
</tr>
</tbody>
</table>
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

Key benefits
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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
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<tr>
<td>USB Temperature Logger</td>
<td>PR0455</td>
</tr>
<tr>
<td>USB Temperature Logger (Box of 100)</td>
<td>PR0455-100</td>
</tr>
<tr>
<td>USB Temperature Logger (Box of 1000)</td>
<td>PR0455-1000</td>
</tr>
<tr>
<td>USB Temperature Logger with Custom Logo</td>
<td>PR0455-CUST</td>
</tr>
</tbody>
</table>

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°C to 80°C (-31°F 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°C to 80°C (-31°F to 176°F)
Moisture Protection: IP67 (When the protective cover is fitted)
Storage Temperature: -40°C to +80°C (-40°F to 176°F)

Dimensions

104 x 23 x 23mm (4.1 x 0.9 x 0.9in) (H x W x D)
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.

<table>
<thead>
<tr>
<th>LED Colour</th>
<th>Flashes</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN</td>
<td>5 times (1 sec interval) followed by 5 rapid flashes</td>
<td>Logging has been initiated</td>
</tr>
<tr>
<td>OFF</td>
<td>None</td>
<td>Normal Operations / No Alarms</td>
</tr>
<tr>
<td>AMBER</td>
<td>Double flash (15 sec interval)</td>
<td>Under temperature alarm</td>
</tr>
<tr>
<td>RED</td>
<td>Double flash (15 sec interval)</td>
<td>Over temperature alarm</td>
</tr>
<tr>
<td>RED</td>
<td>Single flash (15 sec interval)</td>
<td>Low battery warning</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Logging Interval</th>
<th>Logging Period</th>
<th>Logging Interval</th>
<th>Logging Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 seconds</td>
<td>2 days 20 hours</td>
<td>5 minutes</td>
<td>56 days 17 hours</td>
</tr>
<tr>
<td>30 seconds</td>
<td>5 days 16 hours</td>
<td>15 minutes</td>
<td>170 days 3 hours</td>
</tr>
<tr>
<td>1 minute</td>
<td>11 days 8 hours</td>
<td>30 minutes</td>
<td>340 days 6 hours</td>
</tr>
<tr>
<td>2 minutes</td>
<td>22 days 16 hours</td>
<td>60 minutes</td>
<td>680 days 12 hours</td>
</tr>
</tbody>
</table>

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.
This energy saving module can either be fitted between the trim control relay and the Display Case trim heater or work solely connected to the trim heater. Can be used with Mercury Mk3, Powertray or ML. New functionality added to the Trim Triac allows it to be set to one of two modes; Remote or Local. When using the local control setting, the output to the trim heater is fixed at a set level enabling energy saving without an RDM controller present in the refrigeration case. The other, remote, samples the pulsed output from a controller’s relay and sets the Trim Triacs output to the appropriate level.

The local selection is a variable setting which increases turning by turning the dial clockwise. The thickness of lines surrounding the dial represents the scale, ranging from 10% (thin) to 100% (broad). Once set the output of the module will remain at this fixed value.

**Typical applications**
Refrigeration

**Specifications**
- Pulse detect Input (Pins 1&2): 24 - 240 Vac
- Triac Output (Load): 240 Vac, 6.25A and 1.5KW
- Power: 24v AC or DC, 2.5A Maximum
- Dimensions: 110mm (H) x 55mm (D) x 75mm (W)
- Mount: DIN Rail

**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trim Heater Triac Module</td>
<td>PR0723</td>
</tr>
</tbody>
</table>
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 Ø9.2mm (2.1in x 0.36in)
Cable length: 6m ± 0.05m (236in ± 2in)
Weight: 110g (3.9oz)

Ordering Information
<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT1000 Air Probe 6m</td>
<td>PR0170</td>
</tr>
<tr>
<td>PT1000 Air Probes 5pcs (Set of probes numbers 1-5)</td>
<td>PR0171</td>
</tr>
<tr>
<td>PT1000 Air Probe 100pcs (20 sets of 5)</td>
<td>PR0172</td>
</tr>
</tbody>
</table>
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° to 176°F)
Operating humidity: 0% to 100% (non condensing)
Dimensions (Sensor Head): 2.5mm x Ø9.2mm (0.1in x 0.36in)
Cable length: 300mm ± 5mm (11.8in ± 0.2in)
Weight: 18g (0.6oz)

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT1000 Air Probe 0.3m with 3 pole connector</td>
<td>PR0190</td>
</tr>
<tr>
<td>PT1000 Air Probe 0.3m with 3 pole connector 10pcs</td>
<td>PR0191</td>
</tr>
<tr>
<td>PT1000 Air Probe 0.3m with 3 pole connector 100pcs</td>
<td>PR0192</td>
</tr>
</tbody>
</table>
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**

![Diagram of NTC 2K Sensor](image)

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 Ø9.2mm (2.07in x 0.36in)

Cable length: 7m ± 0.05m (197in ± 2in)

Weight: 110g (3.9oz)

**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>2K Air Probe 7m</td>
<td>PR0240</td>
</tr>
<tr>
<td>2K Air Probes 5pcs (Set of probes numbers 1-5)</td>
<td>PR0241</td>
</tr>
<tr>
<td>2K Air Probe 100pcs (20 sets of 5)</td>
<td>PR0242</td>
</tr>
</tbody>
</table>
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° to 176°F)

### Operating humidity:
0% to 100% (non condensing)

### Dimensions (sensor head):
- Ø2.5mm x Ø0.2mm (0.1in x 0.08in)
- 6m ± 0.05m (23.6in ± 0.2in)

### Weight:
110g (3.9oz)

**Ordering Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
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</thead>
<tbody>
<tr>
<td>PT1000/2K Air Probe 6m</td>
<td>PR0175</td>
</tr>
<tr>
<td>PT1000/2K Air Probes 5pcs (Set of probes numbers 1-5)</td>
<td>PR0176</td>
</tr>
<tr>
<td>PT1000/2K Air Probe 100pcs (20 sets of 5)</td>
<td>PR0177</td>
</tr>
</tbody>
</table>
**Resource Data Management — Temperature Control Solutions**

**PR0180-PR0182**

**PT1000 Sensor**

**Temperature Pipe Probe**

**Features**

- PT1000 element to DIN EN 60751
- 6 meter cable length
- Profilled 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°F 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**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT1000 Air Probe 6m</td>
<td>PR0180</td>
</tr>
<tr>
<td>PT1000 Air Probes 10pcs (5 sets of numbers 3,4)</td>
<td>PR0181</td>
</tr>
<tr>
<td>PT1000 Air Probe 100pcs (10 sets of 10)</td>
<td>PR0182</td>
</tr>
</tbody>
</table>
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 confirms 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT1000 Pipe Probe 0.3m with 3 pole connector</td>
<td>PR0183</td>
</tr>
<tr>
<td>PT1000 Pipe Probes 0.3m with 3 pole connector 10pcs</td>
<td>PR0184</td>
</tr>
<tr>
<td>PT1000 Pipe Probe 0.3m with 3 pole connector 100pcs (10 boxes of 10pcs)</td>
<td>PR0185</td>
</tr>
</tbody>
</table>
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 ± 0.02.5m (59in ± 1in)
Weight: 300g (10.5oz)

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Probe PT1000</td>
<td>PR0206</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Download Cable</td>
<td>PR0380</td>
</tr>
</tbody>
</table>

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

Protocol: RS232

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)
PRO374-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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5m CAT5E Patch Cable</td>
<td>PR0384</td>
</tr>
<tr>
<td>1m CAT5E Patch Cable</td>
<td>PR0385</td>
</tr>
<tr>
<td>3m CAT5E Patch Cable</td>
<td>PR0386</td>
</tr>
<tr>
<td>5m CAT5E Patch Cable</td>
<td>PR0387</td>
</tr>
<tr>
<td>15m CAT5E Patch Cable</td>
<td>PR0389</td>
</tr>
</tbody>
</table>

**Features**
- Guaranteed 100% compatible with Resource Data Management controls
- Available in 0.5m, 1m, 3m, 5m & 15m
- Simple plug and play installation

**Specifications**

- **Category / wiring**: CAT5E / STRAIGHT
- **Plug types**: RJ45—RJ45
- **Conductors**: AWG 24
- **Insulation**: Polyethylene / PVC
- **Environmental**
  - Operating temperature: 0°C to 60°C (32°F to 140°F)
  - Max Operating humidity: 90% (non condensing)
- **Mechanical**
  - Weight: 50g to 650g (0.1 to 1.4lb) 0.5 to 15m

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PRO377-379

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.

### Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Port Ethernet Switch</td>
<td>PR0377</td>
</tr>
<tr>
<td>8 Port Ethernet Switch</td>
<td>PR0378</td>
</tr>
<tr>
<td>16 Port Ethernet Switch</td>
<td>PR0379</td>
</tr>
</tbody>
</table>

**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

**Power**
100-240Vac, 50/60Hz
Power consumption: PR0377—3.6W, PR0378—4.7W, PR0379—5.9W

**Environmental**
- Operating temperature: 0°C to 40°C (32°F to 105°F)
- Operating humidity: 10% to 90% (non condensing)

**Mechanical**
- 5 Port Dimensions (H x W x D): 143 x 108 x 30mm (5.6 x 4.3 x 1.2in)
  Weight: 470g (1.0lb)
- 8 Port Dimensions (H x W x D): 178 x 108 x 30mm (7 x 4.3 x 1.2in)
  Weight: 525g (1.2lb)
- 16 Port Dimensions (H x W x D): 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 specifications 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 HVAC systems with varying gas types. See compatible refrigerants in Specification table.

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transducer -1 to 20 BAR (-14.5 to 290 PSI) with 1/4in NPT male fitting</td>
<td>PR0160</td>
</tr>
<tr>
<td>Transducer -1 to 20 BAR (-14.5 to 290 PSI) with 7/16in 20UNF(F)</td>
<td>PR0161</td>
</tr>
<tr>
<td>Transducer -1 to 65 BAR (-14.5 to 940 PSI) with 1/4in NPT male</td>
<td>PR0162</td>
</tr>
<tr>
<td>Transducer -1 to 65 BAR (-14.5 to 940 PSI) with 7/16in 20UNF(F)</td>
<td>PR0163</td>
</tr>
<tr>
<td>Transducer 0 to 125 BAR (0 to 1810 PSI) with 1/4in NPT male</td>
<td>PR0164</td>
</tr>
</tbody>
</table>

Warranty
1 year warranty

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) ±0.5% F.S ±1% F.S]
Stability    [0.5% F.S ± 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    [±10ms]
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]
**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:

**UK Office**  
**RDM Group Head Office**  
80 Johnstone Avenue  
Hillington Industrial Estate  
Glasgow, Scotland G52 4NZ  
UK  
Tel: +44(0)141 810 2828  
Email: sales@resourcedm.com

**US Office**  
**Resource Data Management Inc**  
100 North Sixth Street  
Suite 630B  
Minneapolis, MN 55403  
USA  
Tel: +1 612 354 3923  
Email: usasales@resourcedm.com

*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*

Visit www.resourcedm.com for more information on RDM solutions

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