



The MAGNUM-DEMO Specifications & Description

Physical Characteristics

Controller Specifications (Revision 4)

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| Dimensions | 12.0"w, 8.0"h, 2.0"d |
| Mounting Holes | Mounts on a backplane using eight #6 sheet metal screws |
| Operating Temperature | -40°F to +176°F (-40°C to +80°C) |
| Storage Temperature | -40°F to +176°F (-40°C to +80°C) |
| Microprocessor | Zilog eZ80 Acclaim! @ 50mhz |
| Sensor Inputs (SI) | 12 inputs 0-5vdc (10-bit A/D) |
| Digital Inputs | 4 inputs 0 or 5vdc only |
| Relay Outputs (RO) | 10 outputs 6.3amps @ 230vac |
| Analog Outputs (AO) | 4 outputs 0-10vdc |
| Printed Circuit Board | Six layer with separate power and ground planes |
| Input Power (Standard) | 115 or 230vac ±10% 50/60Hz @ 77°F (25°C) ambient, 20VA max (Voltage is field selectable) |
| MCS-I/O Comm Port | 1 @ 38,400 baud |
| RS-485 Comm Port | 1 @ 19,200 baud |
| RS-232 Comm Port | 1 @ 19,200 baud |
| Ethernet | 10/100 Mbps Ethernet |
| Real Time Clock | Battery backup |
| Power Detection | Automatic power fail reset |

Keypad/LCD Specifications

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|-----------------------------|--|
| Display | 128 x 64 dot pixel STN monochrome graphics LCD with 2.8" diagonal viewing area |
| Color | White characters on a blue background (Reversible) |
| Keypad Size | 7.25"w x 8.50"h (6 mounting studs) |
| Keypad Layout | 9 keys (3 function keys) |
| Connection | 6 conductor shielded cable (max length of cable is 50 feet) |
| Operating Temperature | -4°F to +158°F (-20°C to +70°C) |
| Storage Temperature | -22°F to +158°F (-30°C to +80°C) |

Product Description

The Magnum is a rugged microprocessor based controller designed for the hostile environment of the HVAC/R industry. It is designed to be the primary manager of the package it is controlling.

The Magnum provides flexibility with setpoints and control options that can be selected prior to commissioning a system or when the unit is live and functioning. Displays, alarms and other interfaces are accomplished in a clear and simple language that informs the user as to the status of the controller.



Part # **MAGNUM-DEMO**

The MAGNUM-DEMO consists of a Magnum micro controller mounted to a backplane and attached to a stand along with a keypad and display. This setup allows the user to test various software configurations in-house. Complementing the Magnum micro controller are MCS-I/O, MCS-RO8 and MCS-SI16 expansion boards. This allows for system expansion to a maximum of 48 inputs and 48 outputs. Communication to these units occur at 38,400 baud over the MCS-I/O port which is dedicated for this purpose.

A RS-485 port is also provided for communication with other manufacturers systems. Additionally, a built-in RS-485 to RS-232 converter allows communication over the RS-485 port via the RS-232 port. Other new features include the integration of BACnet and Modbus into the Magnum. A MCS-UPC is also available that allows communication via Johnson N2 and LonWorks, or the data format is available to allow the user to communicate directly.

A complete software support package is available for your PC allowing for system configuration, dynamic on-line display screens, remote communication, graphing and more.