



MCS-NITROMAG-15.4-DEMO

Description & Specifications



Description

The **MCS-NITROMAG-15.4-DEMO** system includes an **MCS-NITROMAG-OEM** controller connected to a 15.4 capacitive touchscreen interface, along with **MCS-IO-BASE** and **MCS-IO-EXT** I/O expansion boards, **MCS-SI-BASE** and **MCS-SI-EXT** sensor input expansion boards, **MCS-RO-BASE** and **MCS-RO-EXT** relay output expansion boards, and an **MCS-EXV** Driver. The demo unit also includes an **MCS-500C** transducer with cable and an **MCS-T100-20** temperature sensor, and an **MCS-12V-90W** power supply. This configuration enables users to evaluate the system hardware and test a variety of software setups in-house.

The **MCS-CONNECT** software package is preinstalled, providing tools for system configuration, dynamic real-time display screens, remote communication, graphing, and more.

The **MCS-NITROMAG** is a robust, microprocessor-based controller engineered for the demanding environments of the HVAC/R industry. It is designed to serve as the primary control unit for the equipment it manages.

The **MCS-NITROMAG** offers flexible setpoint and control options that can be configured either prior to commissioning or while the system is operating. Its displays, alarms, and other interfaces use clear, intuitive language to provide the user with straightforward insight into controller status.

Two RS-485 interfaces and an Ethernet port are also provided, enabling communication with third-party systems and equipment from other manufacturers.

The **MCS-NITROMAG** includes built-in support for BACnet IP, BACnet MS/TP, Modbus TCP/IP, Modbus RTU (Slave and Master), and MCS IP and MCS-485 communication protocols.

Demo Box Specification

Dimensions.....	16"W x 18 "h x 8"d
Input Power.....	115/230 VAC

Temp. Range For Enclosure/Touch

Operating Temperature.....	-32°F to +158°F (-0°C to +70°C)
Operating Humidity.....	-0-95% Non-Condensing
Storage Temperature.....	-4°F to +158°F (-20°C to +70°C)

Controller

Microprocessor.....	Broadcom BCM2411 Quad core Cortex (ARMv8) 64-bit SoC @ 1.5Ghz
Flash Memory.....	16 GB EMMC
RAM.....	2 GB DDR3
MCS-I/O Comm Port.....	1 @ 38,400 baud
Ethernet.....	10 Mbps/100 Mbps/1 Gbps
WiFi.....	2.4 GHz, 5.0GHz 8.02 b/g/n/ac wireless
Bluetooth.....	Bluetooth 5.0, 24GHz Bluetooth Low Energy (BLE)
HDMI.....	2 HDMI 2.0 ports-Standard and Micro
USB.....	2 USB type B 2.0 ports 480Mbps signalling
Real Time Clock.....	Battery backup (Type BR2032)
Power Detection.....	Automatic power fail reset
Protocols.....	BACnet IP, BACnet MSTP, Modbus IP, Modbus RTU Slave, Modbus RTU Master, (BLT Certificate)

MCS-SI-BASE and MCS-SI-EXT Expansion Board

Sensor Input (SI).....	SI-BASE (16 (SI)) + SI-EX (16 (SI)) = 32 inputs, each support 0-5vdc (10-bit A/D)
Analog Outputs (AO).....	IO-BASE (4 (AO)) + IO-EXT (4 (AO)) = 8 output, each support 0-10vdc

MCS-IO-BASE and MCS-IO-EXT Expansion Board

Sensor Input (SI).....	IO-BASE (16 (SI)) + IO-EX (16 (SI)) = 32 inputs, each support 0-5vdc (10-bit A/D)
Analog Outputs (AO).....	IO-BASE (4 (AO)) + IO-EXT (4 (AO)) = 8 output, each support 0-10vdc
Relay Outputs (RO).....	IO-BASE (10 (RO)) + IO-EXT (10 (RO)) = 20 outputs, each support 5amps @ 230VAC

MCS-RO-BASE and MCS-RO-EXT Expansion Board

Relay Output (RO).....	RO-BASE (10 (RO)) + RO-EXT (10 (RO)) = 20 outputs, each support 5amps @ 230VAC
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LCD - Capacitive Touchscreen

LCD Screen.....	15.4" (16:10 Diagonal) 16 Million Colors 1280x800 Resolution Soft Touch Capacitive Stylus pen
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Kit Content



Packaging

Ship Weight.....	50 lb (approx)
Pelican Box Dimension.....	25"L x 20"W x 14"H