



# MCS-NITROMAG-MLB-15.4 INDUSTRIAL CONTROL PANEL

(MCS-NITROMAG is pending acceptance by UL as a Recognized Component)



Part #  
**MCS-NITROMAG-MLB-15.4\***

## Description

The **MCS-NITROMAG-MLB-15.4 Industrial Control Panel** is made of powder coated aluminum for durability and longevity. A left hand swing door is mounted with three eight-inch hinges for strength. A key lock is provided for security on the door while still giving easy access of the display. This panel is intended for use in an environment protected from the weather.

The **MCS-NITROMAG-MLB-15.4** is a control system containing a Capacitive Touchscreen, MCS-NITROMAG Controller, MCS-IO-BASE, MCS-IO-EXT. It includes a processor, memory, eMMC Flash, and supporting power circuitry.

Panel includes the following; 20A, and a 5A Single-Pole Circuit Breaker, a 5 port 10/100/1000 Ethernet Workgroup Switch Industrial rated, Red Alarm Indicator, Yellow Warning Indicator, Emergency Stop Switch and HAND/OFF/AUTO selector Switch.

The MCS-NITROMAG controller comes with a built-in WiFi interface for Ethernet connectivity, and an onboard WiFi antenna connection mounted on the front of the touchscreen.

It features various connections ports for:

- 2 HDMI ports (1 Standard and 1 Micro port)
- 12vdc & 24vdc power input connections
- Ethernet port (10Mbps/100Mbps/1 GHz)
- MCS-IO port for communicating with expansion boards

Includes a MODBUS interface which enables it to act as a Modbus Master using the Modbus RTU protocol, allowing communication with Modbus slave devices for parameter access. Power is supplied using a MCS-12V power supply.

There is also an electrical outlet for laptop plug-in power at the panel.

## Packaging

Weight .....60 lbs(approx)  
Box .....24" x 10" x 30"

## Specifications

### NEMA Rating – Type 2 Control Panel

Enclosure is intended for indoor use primarily to provide a degree of protection against contact with the enclosed equipment and is not protected from liquids.

### Industrial Control Panel

Dimensions..... 23.5"w x 32.65"h x 8"d  
Mounting Holes..... Mounts with four pre drilled  
15/32" holes  
Rated Voltage (Standard) ..... 120VAC or 230VAC  
Phase / Frequency..... 1 Phase / 60Hz  
Full Load Current(approx) .... 40A at 120VAC or 20A at 240VAC  
Short Circuit Current Rating . 10kA

### Temp. Range for Control Panel & Touch Screen

LCD Screen..... 15.4" (16:10 Diagonal)  
16.2 Million Colors  
1280x800 Resolution  
View Angle 70°U, 70°D, 70°L, 70°R  
Capacitive Stylus pen  
White LED Backlight (Min Life 50,000 Hrs)  
Luminance Min. 350 Min. 450 Typical  
Touchscreen Surface..... UV Degradation Protection  
Operating Temperature..... -22°F to 176°F (-30°C to +80°C)  
Operating Humidity..... 90 %RH (Non Condensing)  
Storage Temperature..... -22°F to 176°F (-30°C to +80°C)

## Controller

Microprocessor ..... Broadcom BCM2711 Quad core  
Cortex (ARMv8) 64-bit SoC @ 1.5Ghz

INPUT	MINIMUM	NOMINAL	MAXIMUM
VOLTAGE	10	12	12.5
AMPS			2

Flash Memory ..... 16 GB EMMC  
RAM ..... 2 GB DDR3  
MCS-I/O Comm Port. .... 1 @ 38,400 baud  
RS-485 Ports ..... 2 @ go up to 115200 baud rate  
Ethernet..... 10Mbps/100Mbps/1Gbps  
HDMI ..... 2 HDMI 2.0 ports-Standard and Micro  
WiFi..... 2.4GHz, 5.0GHz 8.02 b/g/n/ac wireless  
USB ..... 2 USB type B 2.0 ports 480Mbps signalling  
Protocols..... BACnet IP, BACnet MSTP, Modbus IP,  
Modbus RTU Slave, Modbus RTU Master (BTL certification pending)

Real Time Clock ..... Battery backup(Type BR2032)  
Power Detection ..... Automatic power fail reset

### Power Supply - Specification

**12vdc power supply**.....85vac ~ 264vac  
AC frequency range.....47 ~ 63Hz / 7.5A / 90W  
**24vdc power supply**.....85vac ~ 264vac  
AC frequency range.....47 ~ 63Hz / 4A / 96W

5580 Enterprise Pkwy., Fort Myers, FL 33905  
Office: 239-694-0089 • Fax: 239-694-0031 [www.mcscontrols.com](http://www.mcscontrols.com)

\* Photo shown is an example of an Industrial Control Panel; some optional equipment may be shown.

\*\*The glove needs to have a conductive fabric or material to work with cap touchscreens.