MCS-NITROMAG-CENTRIFUGAL
INDUSTRIAL CONTROL PANEL

MICRO CONTROL SYSTEMS

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

RoHS Compliant

MCS-NITROMAG CONTROLLER

*Photo shown with options

Part # **MCS-NITROMAG-CENTRIFUGAL**

Description

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

Control panel includes the following; 20A, 16A and a 5A Single-Pole Circuit Breaker. A 5-port 10/100/1000 Mbps Ethernet Workgroup Switch Industrial rated, Red Alarm Indicator, Yellow Warning Indicator, Emergency Stop Switch with guard and 3 Position Run/Stop Selector Switch.

The Capacitive touchscreen interface designed to simplify user access with the MCS Expansion Boards and utilizing MCS-Connect to provide both graphics and service mode access to technicians. Highly accurate and does not require calibration - easy to clean glass surface. Works outdoors, bright screen, water resistant, Exceptional Optics - 1280x800 resolution, sharp and vibrant images.

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 (10 Mbps/100 Mbps/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.

Specifications

NEMA Rating – Type 2 IP30 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 of control panel .. 27"w x 39.75"h x 8.0"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................................ 10 Mbps/100Mbps/1Gbps
HDMI .... 2 HDMI 2.0 ports-Standard and Micro
WiFi...2.4 GHz, 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

Crossover Cable (orange) .....used for connecting to a Laptop

Packaging

Weight .... 90 lbs(approx)
Box .... 29"W X 10-1/2"D X 42"H

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

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