## Micro CONTROL CYSTEMS

# **MCS-CENTRIFUGAL-KEYPAD-12**

## **Description & Specifications**



Part # MCS-CENTRIFUGAL-KEYPAD-12

## **Description**

The MCS-CENTRIFUGAL-KEYPAD-12\* enclosure 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.

The MCS-CENTRIFUGAL-KEYPAD-12 comes standard equipped with a **MCS-MAGNUM-N** controller board, LCD Keypad, three 16 amp, one 20 amp and one 5 amp circuit breakers. There is also a 15A electrical outlet for laptop plug-in power at the panel and a Ground Bar for Sensor input shields.

The MCS-CENTRIFUGAL-KEYPAD-12 has the following expansion boards installed: One(1) MCS-SI-Base, and One(1) MCS-SI-BASE with MCS-SI-EXT, ONE(1) MCS-RO-Base with MCS-RO-EXT.

Standard configuration includes: isolation relays, BMS Network connectivity, (Field selectable hardware or network BMS), and BMS Terminal block for chiller relay.

The following warning lights and switches are included in the standard panel; Alarm, Warning, Emergency Switch and Hand/ Off/Auto Switch.

UL 508A certification provides the inspection authority and your customer evidence that the control panel complies with nationally recognized safety standards. These standards ensure public safety and provide assurances that the electrical control panel is compliant with national and local electrical codes.

## **Specifications**

### NEMA Rating - Type 1 Enclosure - IP20 Rating

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.

#### **ENCLOSURE – LARGE BOX**

Dimensions of Large Box	27"w x 34.75"h x 8.0"d
Mounting Holes	Mounts with four pre-drilled
_	15/32" holes

### **TEMPERATURE RANGE ENCLOSURE/Keypad/LCD**

Operating Temp. of enclosure	4°F to +158°F (-20°C to + 70°C)
Operating Humidity	. 0-95% Non-Condensing
Storage Temp.	22°F to +185°F (-30°C to + 85°C)

#### **CONTROLLER SPECIFICATION**

MicroprocessorZilog e	
Sensor Inputs (SI) 12 inpu	ıts 0-5vdc (10-bit A/D)
Digital Inputs4 input	s 0 or 5vdc only
Relay Outputs (RO) 10 outp	outs 6.3amps @ 230vac
Analog Outputs (AO) 4 output	uts 0-10vdc
Printed Circuit Board Six layer	er with separate power
and gro	ound planes
Input Power (Standard) 12 VDC	C - 90W
MCS-I/O Comm Port 1 @ 38	3,400 baud
RS-485 Comm Port 1 @ 19	),200 baud
Ethernet10/100	Mbps Ethernet
Real Time Clock Battery	backup
Power Detection Automa	atic power fail reset

#### MCS-SI-BASE/EXT Expansion Boards

Sensor Inputs (SI) 48 inputs 0-5vdc (2 Base/1Ext)
Analog Outputs (AO) 12 outputs 0-10vdc
MCS-I/O Comm Port 1 @ 38,400 baud

## MCS-RO-BASE/EXT Expansion Boards

Relay Outputs (RO)	20 outputs 6.3amps @ 230vac
MCS-I/O Comm Port	1 @ 38,400 baud

#### KEYPAD / LCD

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
RS-485 Comm Port	1 @ 19,200 baud

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