

More effective - Smaller footprint
“Producing Results - Saving costs”

MCS +12 System



MCS-Keypad

Power Supply
115-230 VAC input (+-15%)
12VDC output regulated

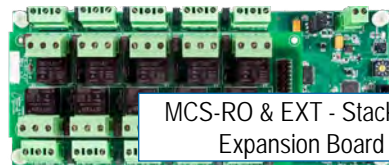


MCS Touchscreen

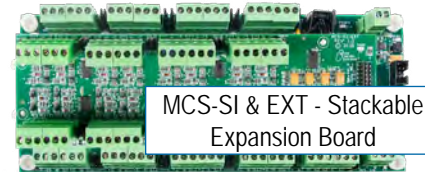
Stackable Expansion Boards Reduce Footprint
Eliminate Power Transformer



MCS-IO & EXT - Stackable
Expansion Board



MCS-RO & EXT - Stackable
Expansion Board



MCS-SI & EXT - Stackable
Expansion Board



Features . . .

The MCS-MAGNUM +12 is an expandable system

Start with the MCS-MAGNUM +12 Controller

- ◆ Add an MCS-12V Power Supply to power the system.
- ◆ Uses standard 115/230VAC to 12VDC power supply.
- ◆ Available with LCD/Keypad or Touch Screen.
- ◆ Add Stackable Expansion boards for more Analog outputs, Sensor inputs and Relay outputs.
- ◆ No power transformer on the board means smaller and lighter boards.
- ◆ Backward compatible firmware - version 7 to current version 17.
- ◆ Backward compatible - software, MCS-CONFIG and MCS-CONNECT.

+12 system is less costly to build



MCS-MAGNUM +12 LCD DISPLAYS



MCS-MAGNUM-PANL-12



MCS-MAGNUM-DOOR-12

also available

MCS-MAGNUM-DOOR-NEMA4 -WATERPROOF



MCS-MAGNUM-OEM-12



MCS-MAGNUM-10.1-12



MCS-MAGNUM-15.4-12

Features . . .

- ◆ Interface designed to simplify user access with the MCS-MAGNUM +12.
- ◆ 1280x800 LCD display with LED back-lighting.
- ◆ Preloaded with MCS-CONNECT.
- ◆ Save ALARM ALERT DATA, EXTENDED HISTORY DATA to USB stick.
- ◆ NEMA 4 rating if installed in a NEMA4 enclosure
- ◆ 12 volt power supply



MCS- Power Supply

88 VAC to 264 VAC

Ac/Dc Enclosed Switching Power Supply

Size: 2.76" x 3.54" x 2.14 (W*H*D) (70*90*54.5mm)

12Volts @ 7.5Amps

+12 system is less costly to build

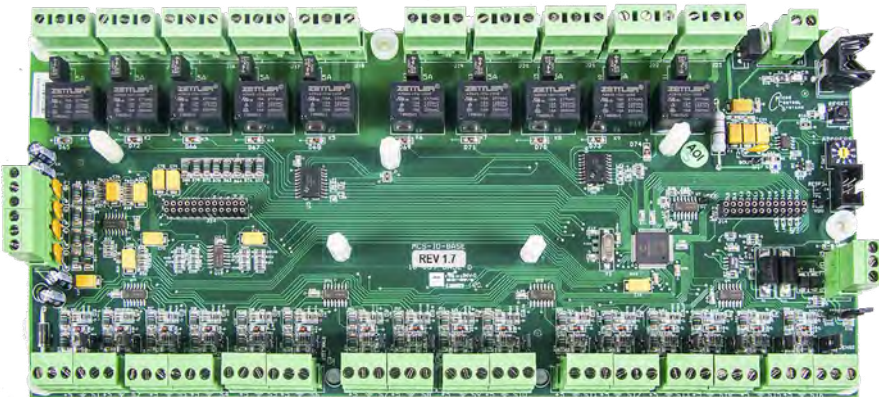


MCS-MAGNUM +12 Stackable Expansion Boards

Doubles your Inputs and Outputs in the same footprint

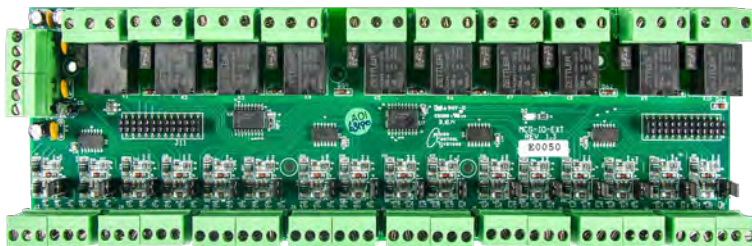


MCS-IO-BASE AND MCS-IO-EXT



MCS-IO-BASE

- Sensor Inputs 16 inputs 0-5vdc
- Analog Outputs..... 4 outputs 0-10VDC
- Relay Outputs..... 10 outputs
5amps @ 230VAC
- Input Power (Standard) 12VDC Regulated
power supply
- MCS-I/O Comm Port 1 @ 38,400 Baud
- Printed Circuit Board - Four layer with separate
power & ground planes

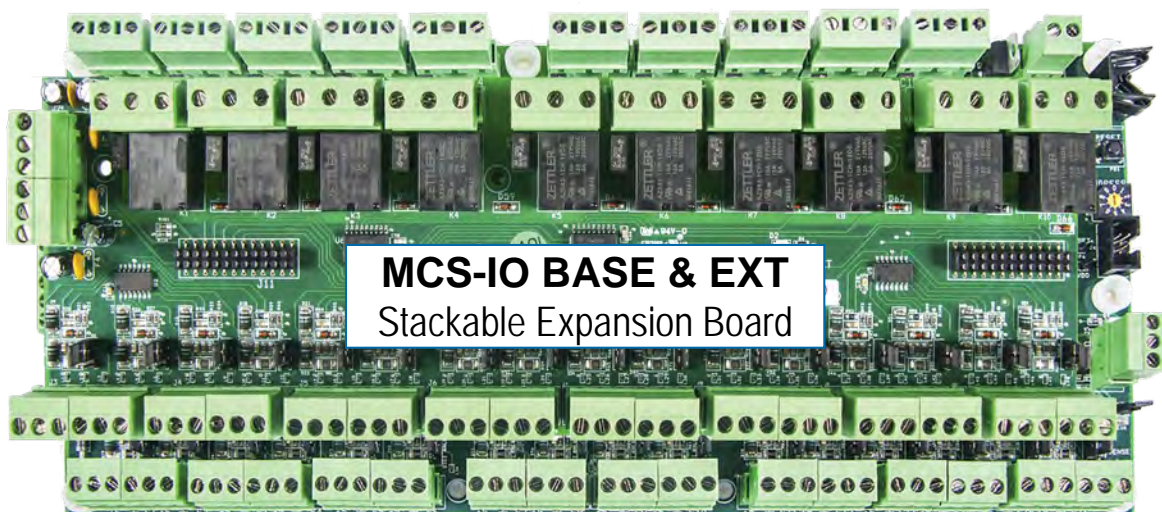


MCS-IO-EXT

- Mounts on top of the MCS-IO-BASE by 5 nylon
standoffs and 2 stacker headers (included on
MCS-IO-BASE)
- Sensor Inputs..... 16 inputs 0-5vdc
- Analog Outputs..... 4 outputs 0-10VDC
- Relay Outputs..... 10 outputs
5amps @ 230VAC
- Input Power (Standard)
Powered by MCS-IO-BASE

Compatible with MCS-MAGNUM and MicroMag (MicroMag V18 Firmware)

- ◆ No power transformer on the board means smaller and lighter boards.
- ◆ Backward compatible MAGNUM firmware - version 7 to current version 17.
- ◆ Backward compatible - software, MCS-CONFIG and MCS-CONNECT.



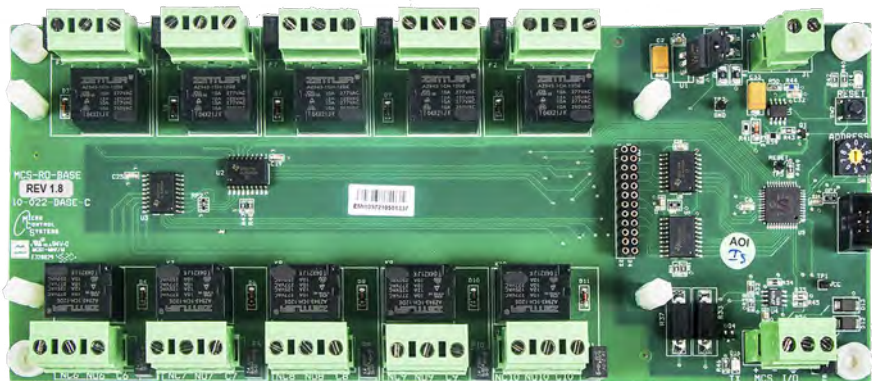


MCS-MAGNUM +12 Stackable Expansion Boards

Doubles your Inputs and Outputs in the same footprint



MCS-RO-BASE AND MCS-RO-EXT



MCS-RO-BASE

Relay Outputs..... 10 outputs
(5amps @ 230VAC)

Input Power (Standard) 12VDC Regulated
power supply

MCS-I/O Comm Port 1 @ 38,400 Baud

Printed Circuit Board - Four layer with separate
power & ground planes

MCS-RO-EXT

Mounts on top of the MCS-RO-BASE by 5 nylon
standoffs and 2 stacker headers (included on
MCS-RO-BASE)

Relay Outputs..... 10 inputs
(5 amps @ 230VAC)

Input Power (Standard)
Powered by MCS-RO-BASE

Printed Circuit Board - Four layer with separate
power & ground planes



Compatible with MCS-MAGNUM and MicroMag (MicroMag V18 Firmware)

- ◆ No power transformer on the board means smaller and lighter boards.
- ◆ Backward compatible MAGNUM firmware - version 7 to current version 17.
- ◆ Backward compatible - software, MCS-CONFIG and MCS-CONNECT.



**MCS-RO BASE & EXT
Stackable Expansion Board**



MCS-MAGNUM +12 Stackable Expansion Boards

Doubles your Inputs and Outputs in the same footprint

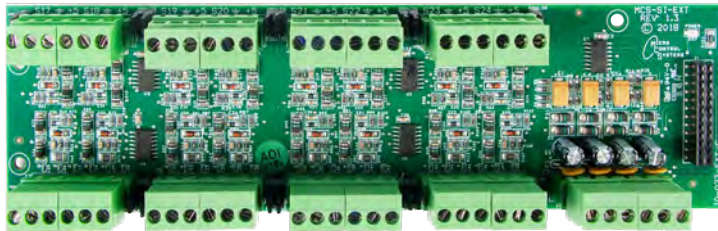


MCS-SI-BASE AND MCS-SI-EXT



MCS-SI-BASE

- Sensor Inputs 16 inputs 0-5vdc
- Analog Outputs..... 4 outputs 0-10VDC
- Relay Outputs..... 10 outputs
5amps @ 230VAC
- Input Power (Standard) 12VDC Regulated
power supply
- MCS-I/O Comm Port 1 @ 38,400 Baud
- Printed Circuit Board - Four layer with separate
power & ground planes

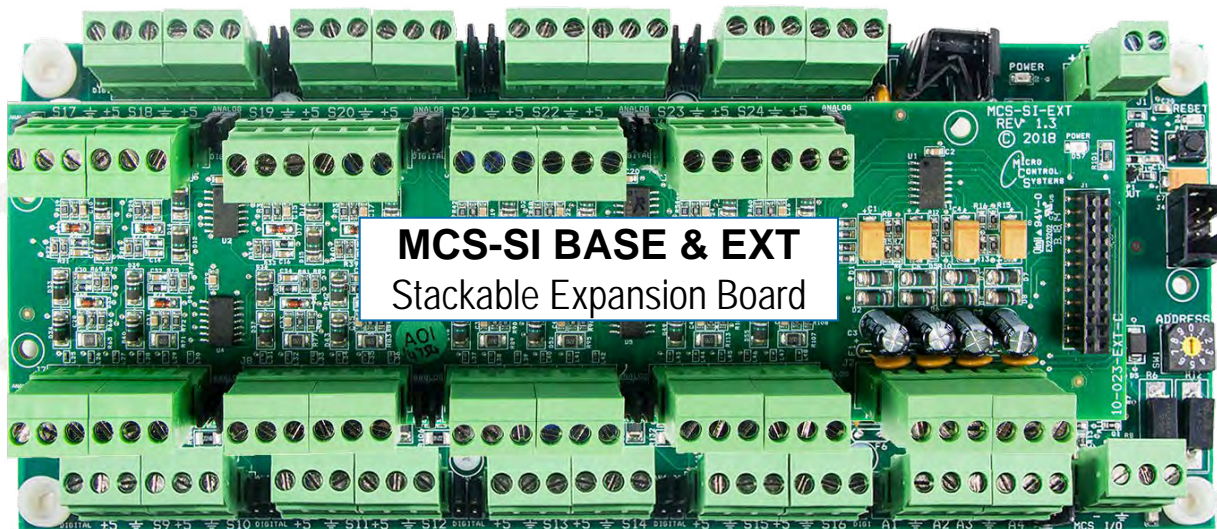


MCS-SI-EXT

- Mounts on top of the MCS-SI-BASE by 5 nylon
standoffs and 2 stacker headers (included on
MCS-SI-BASE)
- Sensor Inputs..... 16 inputs 0-5vdc
- Analog Outputs..... 4 outputs 0-10VDC
- Relay Outputs..... 10 outputs
5 amps @ 230VAC
- Input Power
Powered by MCS-SI-BASE Power

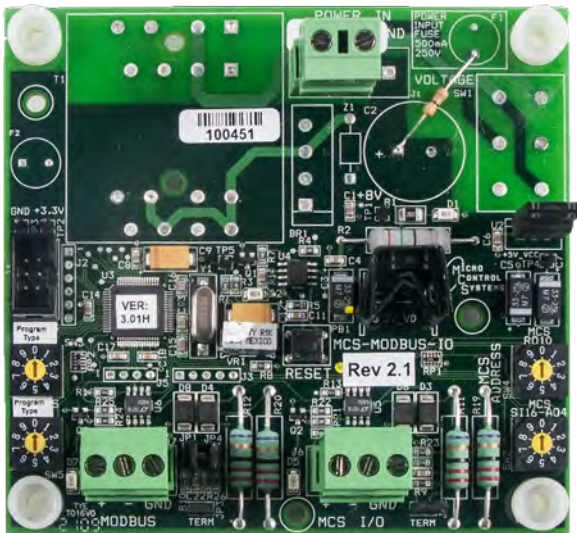
Compatible with MCS-MAGNUM and MicroMag (MicroMag V18 Firmware)

- ◆ No power transformer on the board means smaller and lighter boards.
- ◆ Backward compatible MAGNUM firmware - version 7 to current version 17.
- ◆ Backward compatible - software, MCS-CONFIG and MCS-CONNECT.





MCS-MAGNUM +12 ADDITIONAL BOARDS



MCS-MODBUS-I/O-12

Gives the MCS-MAGNUM+12 the ability to act as a Modbus Master using the Modbus RTU Protocol.

This allows the **MCS-MAGNUM-N-12** to communicate to Modbus slave devices (such as Variable Frequency Drives, Compressors, etc.) to send and access parameters.

Input Power	12VDC Regulated power supply
Power Detection	Automatic power fail reset
MCS-I/O Comm Port	1 at 38,400 baud
Modbus Comm Port.....	RS485 with optional baud rates of 9600, 19200, and 38400
Printed Circuit Board	Four layer with separate power and ground planes

The MCS Commitment

The founders of Micro Control Systems Inc. have been in the manufacture of Microprocessor Controls their entire careers and have over eight decades of combined HVAC/R Microprocessor Controls experience. MCS was founded to meet the needs of the Utility and HVAC/R Industries with products based on the following design criteria:

- ◆ Quality & Service
 - ◆ Cost Effectiveness
 - ◆ Ease of Use

Our commitment is to provide practical solutions for the industries needs and to be both a leader and partner in the effective use of Microprocessor Controls.



Visit our web site at:
www.mcscontrols.com
For more information send email
to: sales@mcscontrols.com

Directions

- ◆ Interstate 75 to exit 139, West on Lockett Road
- ◆ Right at 1st light into Billy Creek Commerce Center
- ◆ Bear right with Enterprise Parkway
- ◆ Follow Enterprise as it parallels Interstate 75

5580 Enterprise Pkwy. Fort Myers, FL 33905
Office: (239) 694-0089 Fax: (239) 694-0031



Providing HVAC/R Solutions
Worldwide