

## INDICATOR STATUS

INPUT PWR LED turns green when the Universal Input has been connected and power is applied.  
LINE LED turns green when the Lines have been connected and power is applied (input power is also required).

STATUS LED turns green when the controller is in a run state. If the LED is flashing orange, the controller has a Warning Alarm. If the LED is red, there is an Inhibit Alarm. Note: The LED will be off if there are no alarms but the controller is not in a "Run" state.



Standard



Modbus RTU  
(RS 485)



Modbus TCP  
(Ethernet)  
Ethernet/IP  
PROFINET



DeviceNet

## TROUBLESHOOTING

### Warning Alarm

The controller will typically operate depending on the alarm.  
STATUS LED is flashing ORANGE  
An example of this is CURRENT LIMIT or VOLTAGE LIMIT.

The display will show:

**\* WARNING ALARM \*  
VOLTAGE LIMIT**

This warning will not let the controller exceed the preset limit.

### Inhibit Alarm

The controller will shut down with an alarm present.  
STATUS LED is RED  
An example of this is AC LINE SYNC PLL.

The display will show:

**\* INHIBIT ALARM \*  
AC LINE SYNC PLL**

This warning says that line voltage is not present or too low for the controller to operate

If alarms are present, check connections and controller settings. This guide has minimal troubleshooting procedures, check the user manual troubleshooting section for more information.



# FUSION SCR POWER CONTROLLER THREE PHASE TWO LEG 50 - 400 AMP QUICK INSTALL GUIDE

## OPERATING SEQUENCE

1. Install the controller in desired location with appropriate clearance as shown in the Panel Layout section.
2. Make connections as shown in the Wiring Diagram section.
  - a. Line
  - b. Load
  - c. Ref
  - d. Ground
  - e. Universal Input Power (100-240 Vac)
3. Make communication connections as shown in the Connectors section.
  - a. Command Connector
  - b. Relay Connector (Optional)
  - c. Auxiliary I/O Connector (Optional)
4. Apply Power
  - a. Universal Input Power (100 - 240 Vac)
  - b. Line (24 - 600 Vac)
5. Place the controller in Run mode via pin 9 as shown in the Connectors section.
6. Check LEDs and Display as shown in the Indicators Status section.
  - a. INPUT PWR - green when control power present
  - b. LINE - green when input power and line power present
  - c. STATUS - green when operating
  - d. Display - Alarms will display if present and status LED will be red or flashing orange
7. Apply command signal to adjust setpoint / output



**WARNING:** Disconnect all high voltage before attempting to wire. Wire in accordance with local codes.

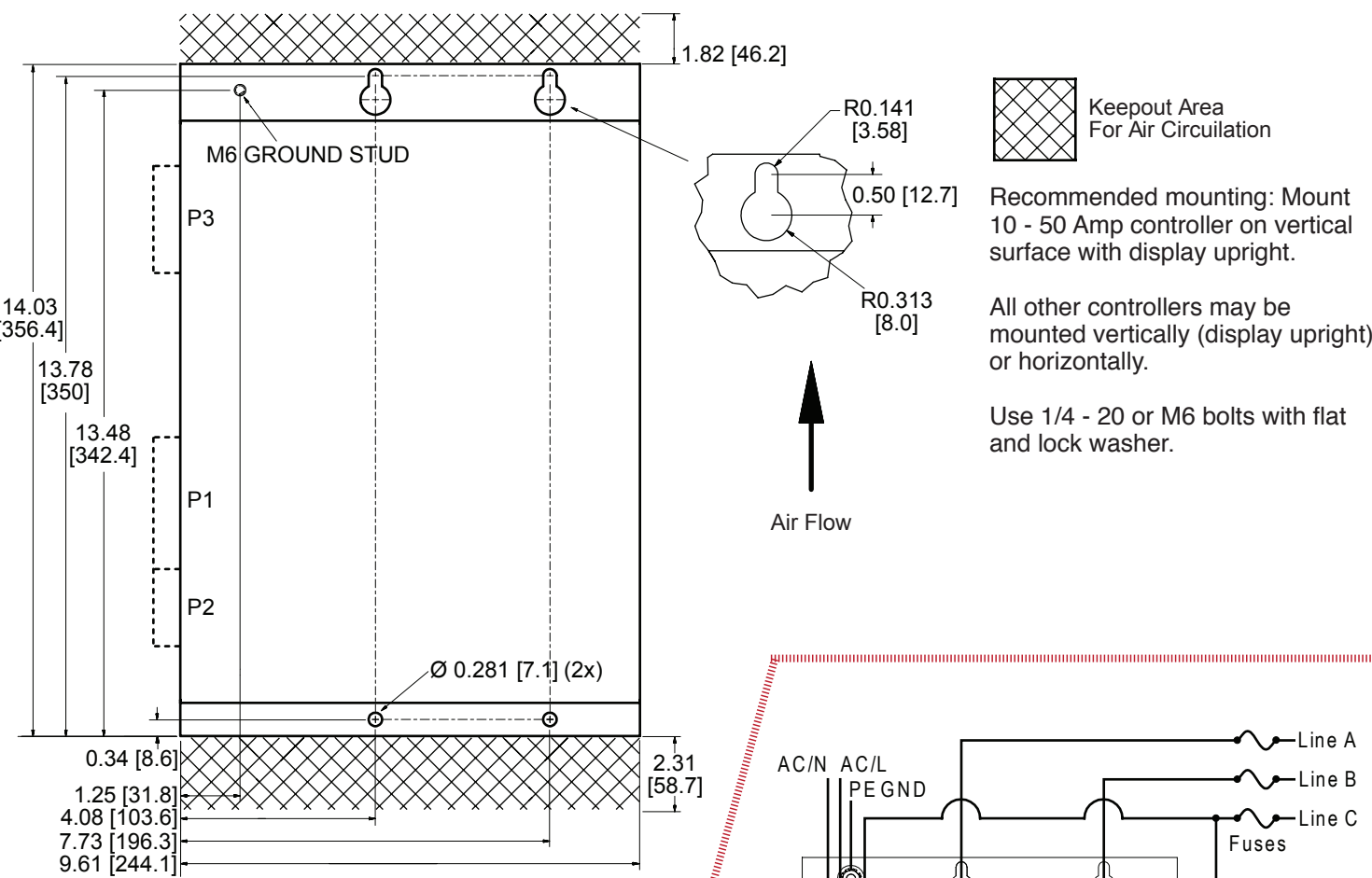
If alarms are present, check connections and controller settings. This guide has minimal troubleshooting procedures. Please check the user manual troubleshooting section for more information.

## CONTACT INFORMATION

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PANEL LAYOUT



WIRING DIAGRAM

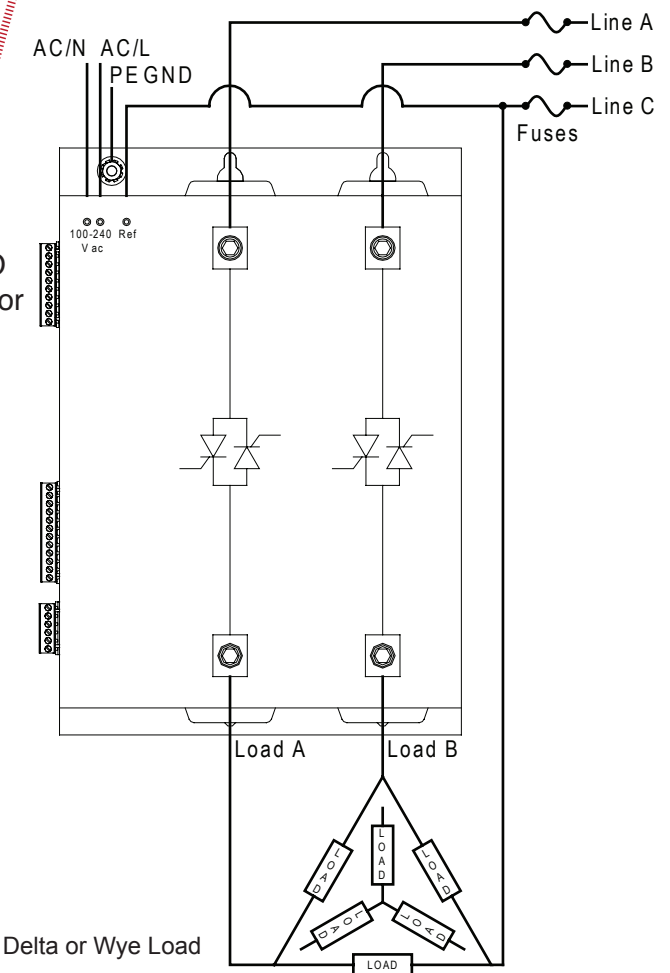
Ground must be connected for proper operation.

See manual for recommended fusing.

P3: Auxiliary I/O 10 Pin Connector (Optional - See Manual)

P1: Command Connector Figure 1 & 2

P2: Relay Connector Figure 3



Dimensions: Inches [mm]

KEYPAD INTERFACE



Examples of Adjustable Parameters:  
Current Limit  
Digital Setpoint  
Feedback type  
(See full list in User Manual)

Use the and buttons to navigate between parameters.

On user-adjustable parameters a dot will precede the parameter. (As shown with Current Limit.)

To edit the value press The dot will change to an arrow as shown.

and will adjust values up or down. When the desired value is reached, press the green button to accept.

• Current Limit 140.0

➔ Current Limit 140.0

CONNECTORS

| FRAME SIZE | LINE & LOAD LUGS   | WIRE ACCEPTANCE (AWG)                  |
|------------|--------------------|----------------------------------------|
| 50-100 A   | Slotted Screw      | 14 - 1/0                               |
| 130-240 A  | 3/8 Hex Drive [9]  | 6 - 350 MCM                            |
| 320-400 A  | 3/8 Hex Drive [10] | (2) 1/0 - 250 MCM<br>(1) 350 - 750 MCM |

| RECOMMENDED TIGHTENING TORQUE FOR LINE / LOAD CONNECTORS |           |            |
|----------------------------------------------------------|-----------|------------|
| WIRE SIZE (AWG)                                          | SCREW     | HEX DRIVE  |
| 14 - 10                                                  | 35 IN-LBS | 75 IN-LBS  |
| 8                                                        | 40 IN-LBS | 75 IN-LBS  |
| 6 - 4                                                    | 45 IN-LBS | 110 IN-LBS |
| 2 - 1                                                    | 50 IN-LBS | 150 IN-LBS |
| 1/0 - 2/0                                                | 50 IN-LBS | 180 IN-LBS |
| 3/0 - 4/0                                                | -         | 250 IN-LBS |
| 250 - 350 MCM                                            | -         | 325 IN-LBS |
| 500 - 750 MCM                                            | -         | 611 IN-LBS |

| RECOMMENDED TIGHTENING TORQUE FOR UNIVERSAL INPUT 100-240 VAC, 50/60 Hz |            |
|-------------------------------------------------------------------------|------------|
| WIRE SIZE (AWG)                                                         | TORQUE     |
| 12 - 18 GA                                                              | 5.0 IN-LBS |

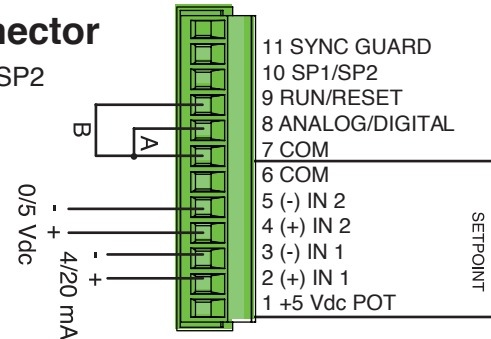
| RECOMMENDED TIGHTENING TORQUE FOR GREEN CONNECTORS: |            |
|-----------------------------------------------------|------------|
| WIRE SIZE (AWG)                                     | TORQUE     |
| 12 - 26 GA                                          | 5.0 IN-LBS |

P1 Command Connector

Depicts SP1 with 4/20 mA and SP2 with 0/5 Vdc command.

A: Connection A sets the controller for a digital setpoint

B: Connection B places the controller in Run mode\*

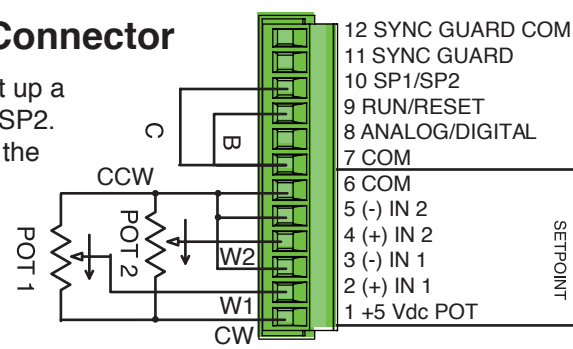


P1 Command Connector

Demonstrates how to set up a POT input into SP1 and SP2.

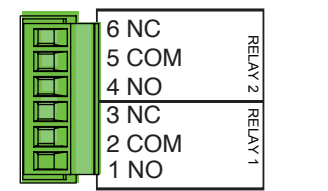
B: Connection B places the controller in Run mode\*

C: Connection C selects setpoint 2 as the analog command.



P2 Relay Connector

Depicts a labeled relay connector. No connections required.



For Auxiliary I/O Connector see manual.

\*Run/Reset has open or closed logic to place the controller in Run mode. The default value is closed. This correlates to connection B in Figure 1. With closed logic selected connection B must be connected to place the controller in run mode. Similarly, with open logic selected, remove connection B to place the controller in run mode.