MCG Surge Protection

90M, 125M, and 150M Installation Instructions

Important Warranty Information

MCG surge protectors are designed to work at specific voltages and configurations, for example, at 120/208VAC, wye. Installation of the surge protector improperly on a power system will automatically void the warranty.

1. Confirm Power Service.

Measure Phase to Neutral, Phase to Ground, and Phase to Phase with voltmeter to confirm application voltage prior to installation.

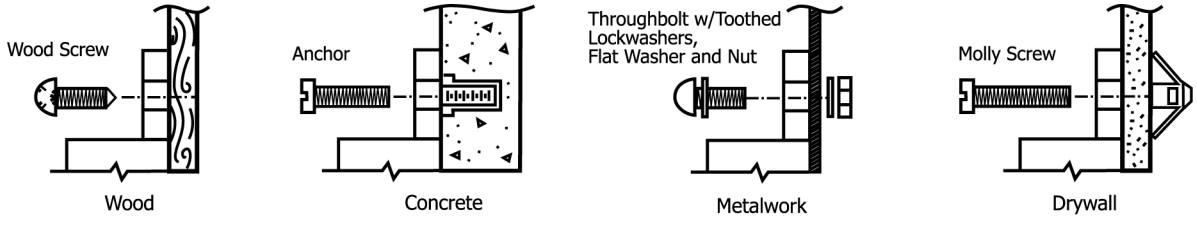
90M/125M/150M	Power Service	Description	Wiring Figure
120S	120VAC	1ph, 2W + Gnd	1
120T	120/240VAC	1ph, 3W + Gnd	1
120Y	120/208VAC	3ph, 4W + Gnd, Wye	2
220S	220VAC	1ph, 2W + Gnd	1
220Y	220/380VAC	3ph, 4W + Gnd, Wye	2
240Y	240/415VAC	3ph, 4W + Gnd, Wye	2
240DCT	240/120/120VAC	3ph, 4W + Gnd (DCT) hi-leg	3
277Y	277/480VAC	3ph, 4W + Gnd, Wye	2

2. Disconnect Power Before Installation.

All wiring to be done in accordance with National Electric Code and local codes by qualified electricians.

3. Mount The Protector. (Refer to Mounting Specs & Templates Included)

For best performance, mount protection board as close to power bus as possible.



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4. Wire To Service Panel.

For best performance, conductors should be tightly taped togther and as short as possible for the entire run.

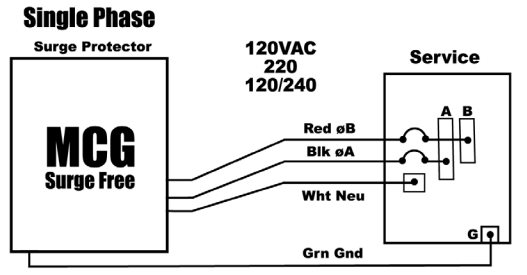
Circuit Breakers: A circuit breaker should be coordinated to protector wire size. The primary function of this breaker is to provide a means of removing power from the unit for maintenance. The circuit breakers will not trip during normal surge suppression since the response time of the circuit breaker is much longer than the duration of a transient voltage.

For AWG 12, use 20A rms circuit breaker
For AWG 10, use 30A rms circuit breaker
For AWG 8, use 50A rms circuit breaker
For AWG 6, use 60A rms circuit breaker

Recheck wiring prior to reapplying power.

If space for breakers is not available, use a fused disconnect switch (time delay fuses are recommended).

Fig. 1



Note: On S models, only the black, phase A wire is used.

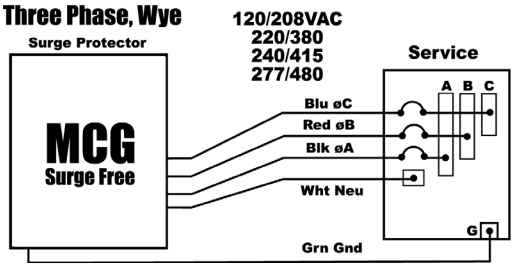
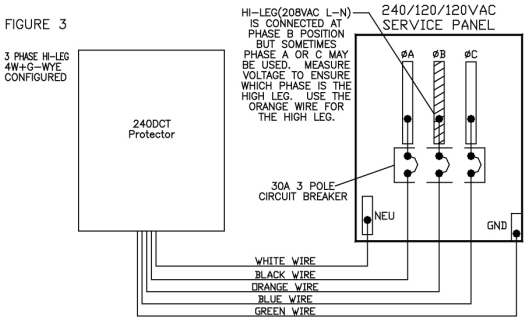


Fig. 2

Fig. 3



Note: Make sure voltage selector switch is set properly. See page 3 for details.

This device features an internal protection that will disconnect the surge protective component at the end of its useful life but will maintain power to the load - now unprotected. If this situation is undesirable for the application, follow the manufacturer's instructions for replacing the device.

Warning: Risk of Electric Shock

Disconnect power before servicing. Service to be performed by qualified personnel only.

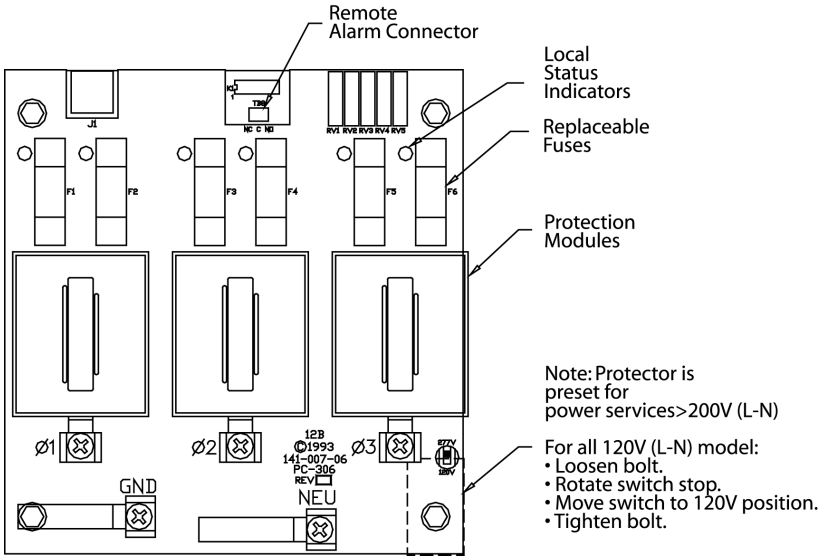
All models shall be installed using an external circuit breaker with a fault current rating no less than that of the panel the protector is connected to. Panel may not exceed 85kAIC.

5. Diagnostics & Troubleshooting

When the red “Protection Reduced” light is lit...

- Open door. **Caution:** High voltage present - Do not touch anything inside.
- Locate red lights indicating module(s) and fuses needing to be replaced.
- Remove AC power. Front panel lights will extinguish.
- Replace appropriate modules and fuses.
- Close and secure door. Reapply power.
- Green light on, red light off, full protection restored.

Consult factory for assistance: 1-800-851-1508



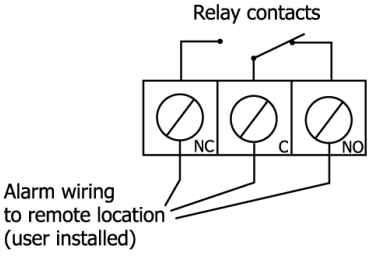
6. Remote Alarm Wiring Option

When desired, a 3-wire remote monitoring cable can be spliced to the pigtails provided on the remote alarm relay connector located within the enclosure. The relay deactivates when any section of the surge suppression modules requires replacement or when power is removed from the suppressor. This can also be used as a power failure alarm.

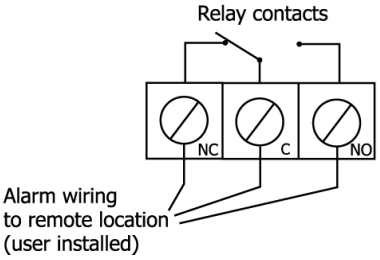
The black striped wire is common. The outer two wires provide a normally closed (blue stripe) or normally open (red stripe) contact (when deactivated). The relay is activated during normal operation. MOV's provide surge protection for alarm wiring.

Do not exceed alarm relay contact ratings: Maximum load 60ma.
Max switching voltage 100VDC or 130VAC.

Normal Operation (100% Protection)



Reduced Protection (or Power Off)



7. Mounting Dimensions