

PulserPlus™ Pro – LV High Resistance Grounding

High Resistance Grounding (HRG) is a proven and often preferred method to improve process reliability. Typical electrical failures require equipment to be removed from service; with 98% of all process power system faults being line to ground faults, this creates a lot of lost downtime. Downtime costs in both productivity and profits, and Post Glover's PulserPlus™ Pro keeps plants running 24/7/365.

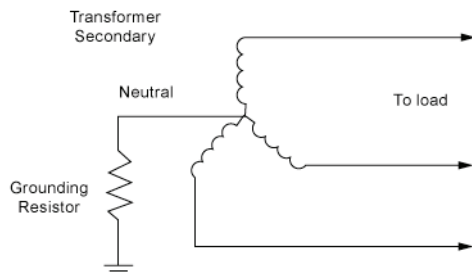
Post Glover's PulserPlus Pro is the only digital high resistance grounding system with pulsing available today. Engineered for use up to 600V available in indoor or outdoor enclosures, our HRG systems can be used to protect either wye or delta connected systems. The new third generation PulserPlus Pro represents the state of the art in network grounding protection.

Benefits of High Resistance Grounding

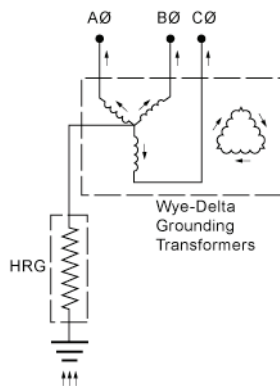
Protect Equipment	Limit ground fault current to less than 10 A, reducing damage and stress to equipment and power system components
Reduce Down Time	Process equipment can continue to operate, increasing production throughput
Increased Safety	Drastically reduces flash hazard possibility in the event of an arcing fault
Fault Location	Pulsing circuit and optional ammeter allow for easier fault location, saving time and frustrations

Features of the PulserPlus Pro

In WYE configured systems the main transformer neutral is connected to the high side of the resistor, with all of the equipment ground connections connected to the low side of the resistor. Line to ground fault current is forced to pass through the resistor, which limits it to less than 10 Amps. The PulserPlus Pro will indicate the occurrence of a fault.



A system neutral is created in DELTA connected systems using three single-phase transformers which are in turn connected to the resistor. Alternate solutions using zig-zag grounding transformers are also available.



480 V, NEMA 1
Free-Standing
PulserPlus Pro Unit



Adjustable Pulse Rate

The pulsing signal can be adjusted from 10 pulses per minute to 50 pulses per minute, permitting differentiation between noise and leakage currents.

Loss of Ground Protection

While rare, a resistor failure can rob you of the benefits of the high resistance grounding system. Using the normally present leakage current, resistor failure can be detected and alarms sounded based on fundamental under-current or under-voltage settings.

Adjustable time delays

Two separate time delay settings, one each for fundamental and third harmonic settings, prevent nuisance alarms or trips.

Generator winding protection

All generators produce a small amount of third harmonics caused by fractional pitch windings. In the event of a fault near the neutral of a wye generator, these values will drop. Separate set-points for third harmonic under-current and under-voltage levels can be used to alarm this condition.

Harmonic protection

Should normally low third harmonic content increase to potentially damaging levels, over-current and over-voltage levels are provided to allow for alarm purposes.

Communications

Factory installed options provide the ability to integrate into network monitoring and protection systems via RS232, Modbus or Ethernet protocols.

Form 'C' contacts

Three sets of dry contacts are included for indication of system changes. One set each is provided for ground fault, high harmonic content and loss of ground indication.



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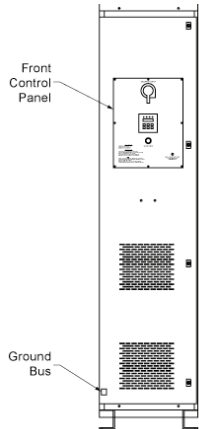
"The Resistor Specialists"



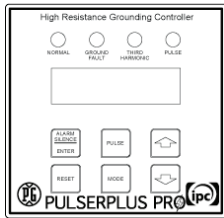
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Serving the Electrical Industry Since 1892

PulserPlus™ Pro – LV High Resistance Grounding



Free-Standing Unit

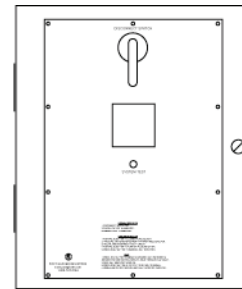


Display Interface Module

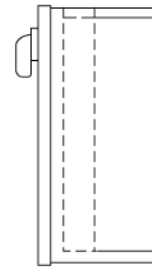
The PulserPlus Pro is available in either a full-height, free-standing enclosure or a smaller unit suitable for wall-mounting. Standard finish for both enclosures is powder-coated ANSI-61 gray. Optional stainless steel enclosures are also available. Standard designs are available up to 600 volts for low voltage models. All are manufactured for limiting fault levels up to 10 amps, with the ability to be adjusted in the field by the customer to a lesser value if so desired (and if the system charging current permits).

Access for connecting the system ground to the ground bus can be made where most convenient for your individual installation. The ground bus is located in the lower portion of the free-standing units. For the wall-mount units, the ground bus is located on the back panel. Generally, the line connections are made from either the top or bottom of the enclosures; space is provided for line cables to run down the side without any cable bends.

All settings can be accessed and adjusted on the display interface module. This includes set-points for under and over-current, under and over-voltage, time delays and pulse rate. The module can also be configured to display system status, such as fundamental current and voltage as well as third harmonic levels.

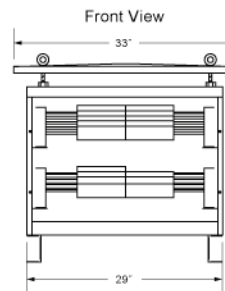


Front View

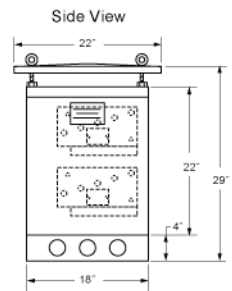


Right Side

Wall-Mounted Control Unit and Resistor



Front View



Side View

Quick-Quote Form

System Voltage	<input type="checkbox"/> 240 V	<input type="checkbox"/> 480 V	<input type="checkbox"/> 600V	<input type="checkbox"/> Other. Specify: _____
Current	1 – 10 amps, continuous			
Frequency	<input type="checkbox"/> 60 Hz	<input type="checkbox"/> 50 Hz		
System connection	<input type="checkbox"/> Wye	<input type="checkbox"/> Delta		
Enclosure	<input type="checkbox"/> Indoor	<input type="checkbox"/> Outdoor	<input type="checkbox"/> Wall-mount with separate resistor	
	<input type="checkbox"/> Mounted in switchgear	<input type="checkbox"/> Freestanding		
Enclosure finish	<input type="checkbox"/> Painted galvanized steel, ANSI-61 Gray (standard)	<input type="checkbox"/> Stainless Steel, 304	<input type="checkbox"/> Stainless Steel, 316	
	<input type="checkbox"/> Painted, other color. Specify: _____			
Accessories	<input type="checkbox"/> Control power transformer	<input type="checkbox"/> Anti-condensation heater	<input type="checkbox"/> Clamp-on ammeter for fault locating	

Other requirements:

As the industry's leading experts in high resistance grounding, we are constantly pushing the technology and product forward. Trust Post Glover to deliver faultlessly.



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