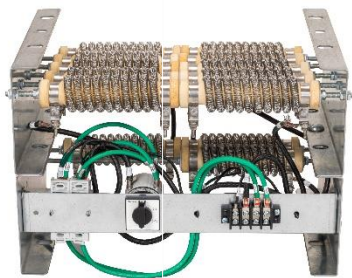
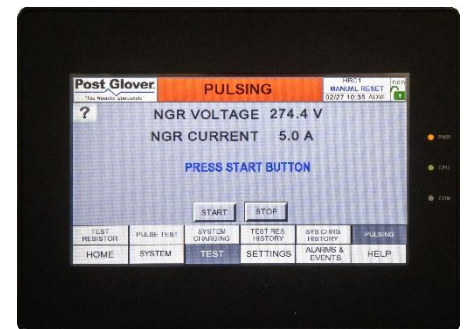




The new SmartPulse family provides unparalleled flexibility through a modular approach to the HRG product, maximizing productivity and safety for users. SmartPulse provides all the known advantages of high resistance grounding with added ease of use. Communication using Modbus RTU or TCP/IP (both standard) gives real-time access to the health of your network. Opt for Feeder Monitoring and further increase your ability to quickly find and remove faulted equipment. PGR can provide two HRG units in a single enclosure, both monitored on a single HMI, making installation and operation much easier while also saving floor space. Contact your local representative or Territory Manager for more information.



Top-mounted resistor with selector switch for adjusting taps



7" color touchscreen HMI



Easier access for data retrieval and firmware upgrades

Available space for optional second HRG unit or feeder monitoring



SmartPulse comparison vs PulserPlus.Net

Comparison of Features

Feature	PulserPlus.Net	SmartPulse
Charging Current Measurement	Menu driven, calculated upon request and value displayed and stored with a time/date stamp.	Menu driven, calculated upon request and value displayed and stored with a time/date stamp.
Resistor Tap Selection	Multiple taps for fault current and pulsing current via terminal strip within the resistor compartment.	Multiple fault/pulsing current combinations via selector switch, eliminating the need to physically make wiring changes.
Resistor Placement	Bottom of the enclosure, venting heat toward the front.	Mounted above the controls and HMI, venting away from most operators.
Update Firmware/Download Data tables	Accessible from Modbus/Ethernet connection or from the PLC after powering down the unit.	Accessible from Modbus/Ethernet connection or from door mounted user connection (does not require powering down).
HMI	2.5" (diagonal) B&W screen with membrane switches.	7" (diagonal) color touchscreen with day/night settings.
Modularity	Single HRG system per enclosure.	Ability for single HRG system, single with faulted feeder detection or two HRG systems in the same enclosure (ideal for dual source line-ups).
Connectivity	Standard Modbus and optional Ethernet connectivity.	Standard Modbus and Ethernet connectivity included.
Data Logging	Records 200 events and 200 alarms in separate tables, each with time/date stamp.	Records 200 events and 200 alarms in separate tables, each with time/date stamp. Charging current measurements (50 instances) and ground fault tests (100 instances) are logged separately with time/date stamp.
User Settings	All alarm settings and time delays are accessible via the HMI for operator customization.	All alarm settings and time delays are accessible via the HMI for operator customization.
Resistor Path Monitoring	Neutral current and voltage are continuously monitored and compared to detect open circuits in the neutral-grounding resistor-ground path. Requires two cables from source neutral to the HRG enclosure.	In addition to monitoring neutral current and voltage, a brief ground fault test is performed daily to ensure the integrity of the neutral-grounding resistor-ground path.
Phase Monitoring	If connected, each phase monitored for low voltage (< 50 volts).	Removed from current design – did not aid operator in finding a ground fault. Simplifies installation by requiring fewer connections.
Start-Up/Commissioning Procedure	Self-directed, following the checksheet in the IOM Manual.	Guided by the firmware via the HMI, supported by the checksheet in the IOM Manual.