



Low Voltage Ground Protect Plus™

HIGH RESISTANCE GROUNDING FOR LOW VOLTAGE SYSTEMS



THE CASE FOR HIGH RESISTANCE GROUNDING

High resistance grounding systems, often abbreviated HRG, are a valuable asset in process applications. They allow for the continuing operations during single-phase ground faults by limiting ground fault current to less than 10 Amps and further reduce the chances for the ground fault to become a multi-phase problem.

WHY YOU SHOULD USE THE GROUND PROTECT PLUS ON YOUR LOW VOLTAGE SYSTEM

Equipment Protection - By limiting the ground fault current to less than 10 Amps there is reduced stress and less damage to electrical and other system components.

Increased Safety - The use of high resistance grounding all but eliminates any flash hazard as a result of an internal arcing fault.

Reduced Process Downtime - Your process can continue to operate should a line to ground fault occur. Communications capability raises operator awareness and faults can be located and corrected.

Quick Fault Location Capability - The built-in pulsing circuit allows operators to locate the fault in your system and quickly plan and facilitate repairs.

Increased Safety for Equipment and Personnel

Reduced Potential for Equipment Damage

Lower Downtime for Your Process

Quickly Locate Ground Fault and Implement Necessary Re mediation

Easily Integrated Into a Custom Control and Monitoring Communications Network by Powell Automation Team

AVAILABLE CONFIGURATIONS

System Voltage	240V, 480V, or 600V
Current	2-8 Amps continuous 10 Amps available for pulsing
Frequency	50 or 60 Hz
System Connection	Wye or Delta
Construction	Free-standing, wall mount or integral
Communications	Ethernet or RS-485/RS-232

POWELL GROUND PROTECT PLUS

Powell pioneered the use of high resistance grounding systems more than 45 years ago. The Ground Protect Plus provides the latest in digital technology and offers you the most comprehensive design features available in the industry.



COMPLETE PROTECTION

The Powell Ground Protect Plus™ can be purchased as a complete free-standing unit, wall mount or incorporated as an integral part of your low voltage switchgear or motor control center. Either way you are assured of the highest degree of protection from the damage an unlimited ground fault can cause and the possible arc-flash hazards created when common ground faults go undetected.

INCOMPARABLE DESIGN FEATURES

This latest in premier digital high resistance design offers you the greatest flexibility and widest set of available features available in the market today.

Data Logging - It is not enough to simply know that a ground fault exists on your system. In order to optimize the efficiency of your process we provide an extensive array of 200 event and alarm data recording with time and date stamp to help facilitate not only after-fault analysis but create awareness of developing trends and assist with predictive maintenance efforts. Include the connection of your HRG to a custom-engineered Powell Automation Control and Monitoring system and you have the ultimate tools at your finger tips.

Elimination of Harmonics to Avoid Nuisance Alarms -

Complete filtering of neutral current and voltage for 60Hz assures you that harmonic content in your system is not included in ground fault measurements. Excessive harmonics can create nuisance alarms which can lower operator response.

Alarm Settings Are Operator Friendly - Engineered into the Ground Protect Plus is the flexibility for your authorized personnel to easily access and customize and optimize such settings as alarm levels and time delays, and the ability to quickly enable or disable device features. Simple password access gives you the control you need.

Protection From Resistor Failures - The resistor, used to limit ground currents, can be subjected to heavy duty operation which can compromise safety. With the Ground Protect Plus the loss or failure of this key system element is monitored as a standard feature.

Adjustable Resistor Taps - Both during initial installation as well as a result of your electrical system changes over time, we offer as a standard the ability for you to tune your HRG for existing charging currents.

Automated Charging Current Measurement - In years past the estimation of your system charging current could be a labor intensive and time consuming effort. In today's digital world the Ground Protect Plus has changed this to an automated process. After initial installation or as your electrical system is modified, you have the ability to select the appropriate fault level for existing conditions based upon the measurements provided by the Ground Protect Plus.

Communications for Control and Monitoring - No longer is your HRG a stand alone system. The Ground Protect Plus is easily integrated into an existing supervisory network or incorporated into a Powell Automation custom-engineered network uniquely designed for your facility.

FAULT DETECTION

Fault detection takes place on an energized system and should only be performed by trained and skilled personnel. Powell Service Technicians are available to provide this function. Please consult with your sales representative regarding cost and availability.

The pulsing feature inherent in the Ground Protect Plus allows a trained operator, using an ammeter or optionally available clamp-on ammeter, to locate the ground fault problem. Once located, re mediation can be planned and implemented.

