

case study

World-Class Automotive Supplier Turns to I-Gard

A world-class global parts supplier to the automotive industry recognizes the importance of high-resistance grounding. To remain ahead of the game, process continuity is an absolute must when your customers operate on a “just-in-time” inventory. Lean processes and any unscheduled outage can negatively affect all processes.

unparalleled protection

Industry

Automotive

Need

Need to increase revenue

Benefit

Increased uptime, avoid service interruption; run critical processes with 2nd ground fault



About Automotive Supplier

Most diversified automotive supplier in the world. Design, develop and manufacture automotive systems, assemblies, modules and components; and engineer and assemble complete vehicles. There are 256 manufacturing operations and 82 product development, engineering and sales centers in 26 countries on five continents as of December 2010.

About I-Gard

I-Gard provides both industrial and commercial customers with the products and application support they need to protect their electrical equipment and the people that use them. Since 1982, I-Gard is committed to electrical safety and reliability.

To optimize the continuity of their manufacturing process, this automotive supplier standardized high-resistance grounding for their electrical distribution systems, first across North America and then across all global operations.

An independent electrical consultant who counts this world-class automotive supplier among his clients, notes “all HRG products offer process continuity under first ground fault conditions but only the DSP Relay system from I-Gard provides process continuity for your most critical process under second ground fault condition. With all other HRG systems, the second ground fault results in the entire system being interrupted. With the DSP from I-Gard, you only isolate a low-priority feeder and your most important processes just keep running.”

The majority of automotive facilities in North America operate on an ungrounded system. The reasoning behind the prevalence of ungrounded systems in automotive industrial facilities appears to be historical. Prior to the emergence of high-resistance grounding in the late 1980s, the only choice when process continuity was required was an ungrounded system.

However, ungrounded systems offer no advantage over high-resistance grounded systems in terms of continuity of service. Their disadvantage is the inability to locate the first ground fault without shutting down the entire system and excessive over voltages. The over voltages can cause insulation failure and equipment damage, as well as the potential for a second fault to occur before the first one is removed leading to severe burn downs. (See IEEE Standard 242 - 1986 7.2.4.)

DSP-OHMNI

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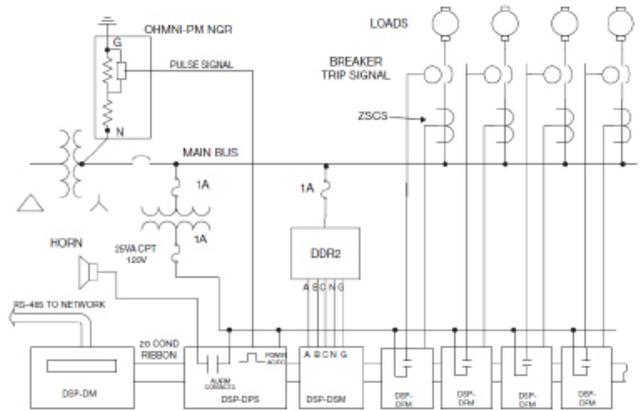
Phase and feeder indication resulting in quicker fault location

Monitors and protects up to 50 feeders on one relay

Available 1st fault alarm, 1st fault trip or 1st fault delay trip

Integral resistor monitoring module eliminates requirement for separate monitoring relay

Unique selective instantaneous feeder trip (sift) on occurrence of 2nd ground fault



FEATURES	BENEFITS
DIN-rail parts	Compact mounting reduces space requirements.
Compact Feeder Modules DSP-DFM	Large systems up to 50 circuits / DSP-OHMNI can be accommodated.
Selectable MUTE ON/OFF function	Allows alarm contact to be used for other applications.
Selectable trip on 1 st fault or 2 nd fault operation	Provides user the option of maximizing continuity of service (2 nd fault trip) or minimizing fire/damage risk (1 st fault trip). Both can be used on the same system.
0-99 min. delay setting on 1 st fault trip	Allows time to locate fault and/or orderly shutdown of equipment.
10-90% Alarm Level setting	User selected sensitivity in 10% increments, allows maximum sensitivity to be used while preventing nuisance alarms.
Switching Modules DSP-CAS	Provides co-ordination between systems either vertically (between zones) or horizontally (same zone) on multi-zone or main-tie-main systems.
NGR monitor DSP-DRM	Monitors the status of grounding resistor in one DSP-OHMNI compatible unit.
Password Protected Setup	Four digit codes selectable by user prevent unauthorized setup changes while still allowing self-test and read-only data.
Self-Test of Modules	Internal self-test of DSP-DFM, DSP-DSM verifies connections to provide assurance of functionality.
MODBUS Communications	Allows the operator to remotely monitor which feeder has faulted as well as the leakage currents of all feeders for trending purposes.