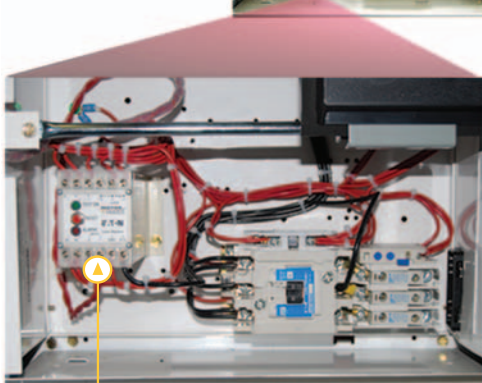


Motorguard—automatic insulation tester

Motor insulation protection



Megohm Panel Meter



Motorguard

The solution to motor failure problems

Introduction

Unscheduled equipment downtime can ruin your day and your production schedule. Moisture, contamination and heat combine to break down motor winding insulation, shorten motor life, and threaten your critical processes with catastrophic motor failure.

Motorguard™ is an automatic insulation resistance tester that monitors and protects critical-duty motors. Originally offered in medium voltage applications, Motorguard is now available in a cost-effective 480 and 600V design in Eaton motor control centers (MCCs). This low voltage design tests the integrity of motor winding insulation during idle cycles and triggers alarms to signal unsafe conditions. Maintenance personnel can then initiate early corrective action before motor failure occurs, avoiding costly downtime.

Motorguard's current installed base is diverse and includes utilities, OEMs, oil/chemical refineries and ships. Most oil and gas platforms in the Gulf of Mexico use Motorguard technology to protect their motors and generators for the same reason. Eaton is proud to introduce this patented, cost-effective and proven technology to the industrial marketplace in our MCC product line.

Value-added benefits

- Reduced downtime of critical processes
- Permanent installation—replaces manual testing
- Reduced maintenance staff time and cost
- Continuous testing of offline motors
- Significant safety/exposure improvement
- Increased operating efficiency
- Extended motor life
- Planned motor reconditioning vs. motor rewind



Motorguard—Automatic Insulation Tester



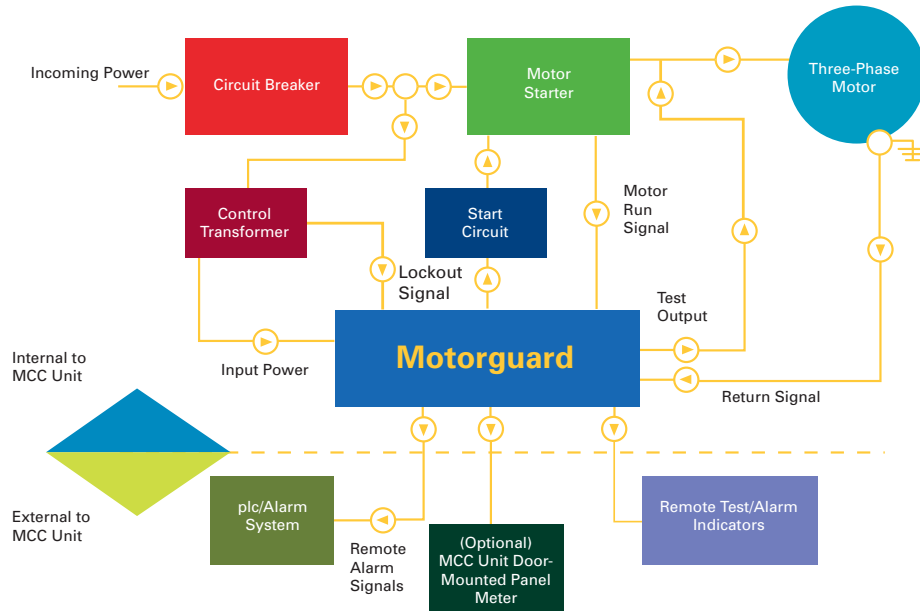
Powering Business Worldwide

Features

- Auto/manual test operation
- Flashing LED display with test and alarm indication
- Adjustable alarm set point with latching contacts and manual reset capability
- Full 500 Vdc test voltage
- Fused input and test leads
- Mounting bracket
- Shock and vibration-resistant construction
- Five-year limited warranty
- Optional MCC unit door-mounted megohm panel meter

Operation

Motorguard applies a current limited, fixed Vdc to the motor windings during idle periods. A solid-state comparator circuit monitors measured leakage current to ground. An adjustable set point, factory preset to customer specifications, can be programmed to signal an alarm and lockout to prevent the equipment from operating if the set point is exceeded (default factory preset threshold value is 1.5 megohms). The manual reset feature enables a return to operational status only after the alarm condition has been corrected. Motorguard will not impair normal operation of equipment being monitored.



Megohm Panel Meter



Motorguard Power Supply

Motorguard MGRDGP500 Specifications

Input power	115–125 Vac 50/60 Hz @ 0.05A max.
Test voltage	500 Vdc @ 200 uA max.
Alarm contacts	2.5A @ 240 Vac or 28 Vdc
Lockout contacts	5A @ 240 Vac or 28 Vdc
LED display	Test on: green; alarm: red (flash)
Control accuracy	2% overall
Ambient temp.	25.5°C to 60°C (–14°F to 140°F)
Dimensions	H 6.98 cm x W 5.71 cm x D 11.43 cm (H 2.75 in x W 2.25 in x D 4.50 in)
Weight	0.45 kg (1 lb)
Assembly	Meets UL® 508 specifications integral mounting bracket. Shock and vibration-resistant construction.



Eaton Corporation
5050 Mainway
Burlington, ON L7L 5Z1
Canada
1-800-268-3578
www.eatoncanada.ca

© 2009 Eaton Corporation
All Rights Reserved
Printed in Canada
Publication No. PA04305001K / Z8281
April 2009