

# EGP<sup>80</sup>

ELECTRONIC GRADE PANELBOARD®

S U P P R E S S I O N F I L T E R S Y S T E M

The popular, first-ever panelboard-and-suppression/filtering combination that revolutionized the electrical industry

## TECHNICAL DATA SHEET

### STANDARD MODEL NUMBERS

EGP080-120/240-MLO-2/00-60	EGP080-120/208-MB-2/00-60
EGP080-120/240-MB-2/00-60	EGP080-277/480-MLO-2/00-60
EGP080-120/208-MLO-2/00-60	EGP080-277/480-MB-2/00-60

NOTES: **0** Insert G for General Electric, I for Siemens, S for Square D, or W for Cutler-Hammer/Westinghouse; **MB** = main breaker or **MLO** = main lug only; **0** insert ampere rating (100, 125, 225, 400, 600); **1** insert 1 for single phase or 3 for three phase; **0** insert total number of branch circuit positions including spaces; **0** insert **F** for flush mount or **S** for surface mount and **0** insert **T** for top feed or **B** for bottom feed plus option suffix(es). Examples: EGPG-120/240-MB-100/112-FT or EGPS-120/208-MLO-225/342-SB or EGPW-277/480-MB-400/384-ST-FCC

### SINGLE PULSE SURGE CURRENT CAPACITY

Protection mode	Single pulse surge current capacity per mode
Line-to-Neutral	> 80,000 A
Line-to-Ground	> 80,000 A
Neutral-to-Ground	> 80,000 A
Line-to-Line	> 80,000 A
Per Phase	> 160,000 A

In compliance with NEMA LS 1-1992, paragraphs 2.2.7, 2.2.9 and 3.9, Current Technology suppression filter systems are single pulse surge current tested in all modes at currents up to 150% of the product design rating by an industry-recognized independent test laboratory. Single pulse surge current capacities of 200,000 amps or less are established by single-unit testing of all components within each mode. Due to present industry test equipment limitations, single pulse surge current capacities over 200,000 amps are established via testing of individual components or sub-assemblies within a mode.

### REPETITIVE SURGE CURRENT CAPACITY

Protection mode	Minimum tested impulses per mode
Line-to-Neutral	> 3,500
Line-to-Ground	> 3,500
Neutral-to-Ground	> 3,500
Line-to-Line	> 3,500

Per ANSI/IEEE C62.41-1991 and ANSI/IEEE C62.45-1992, all Current Technology suppression filter systems are repetitive surge current capacity tested in every mode utilizing a 1.2 X 50 µsec 20KV open circuit voltage, 8 X 20 µsec 10 KA short circuit current Category C3 bi-wave at one minute intervals without suffering either performance degradation or more than 10% deviation of clamping voltage at a specified surge current.

### EMI/RFI NOISE REJECTION VALUES

Multiple unit installation	Frequency	Single unit installation
51 dB	100 KHz	34 dB
94 dB	1 MHz	51 dB
114 dB	10 MHz	54 dB
120 dB	100 MHz	48 dB

All Current Technology suppression filter systems EMI/RFI noise rejection or attenuation values are in compliance with test and evaluation procedures outlined in NEMA LS 1-1992, paragraphs 2.2.11 and 3.11.

### MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)

Voltage	MCOV
120V	150V
240V	275V
277V	320V
480V	640V

All Current Technology suppression filter systems maximum continuous operating voltages are in compliance with test and evaluation procedures outlined in NEMA LS 1-1992, paragraphs 2.2.6 and 3.6.

### TYPICAL CLAMPING VOLTAGE DATA

Voltage	Protection mode	A3 Ringwave	B3 Ringwave	B3/C1 Comb.Wave	C3 Comb.Wave
120 / 208	L-N	210	260	380	480
	L-G	350	365	370	540
	N-G	250	290	360	520
	L-L	360	480	700	810
277 / 480	L-N	460	580	835	980
	L-G	800	755	765	990
	N-G	500	570	785	1050
	L-L	805	1040	1555	1780

All Current Technology suppression filter systems clamping voltages are in compliance with test and evaluation procedures established in NEMA LS 1-1992, paragraphs 2.21.0 and 3.10.

### STANDARD FEATURES



**UL 1449 Suppression Filter System** — seamless technology™ design integrates matched current-sharing MOV arrays for maximum performance and reliability

**UL 1283 Extended Range Power Filter** — Removes low-level surges, sharp wavefronts and error-producing high frequency noise

**Integral Suppression Filter System Breakers** — Three single-pole circuit breakers provide safe over-current and fault current protection while minimizing installation cost

**Customer-Specified Breaker Layout** — Single, two- or three-pole breaker configuration in accordance with exact customer specifications

**Status Indicators** — Indicate suppression and over-current status

**Test Point** — Ten mode test point permits easy Diagnostic Test Set connection

**Main Lug/Main Breaker Configurations** — General Electric, Siemens, Square D and Cutler-Hammer/Westinghouse main lug or main breaker panel configurations are available to meet the requirements of any distribution system

**200% Rated Copper Neutral Bus** — Eliminates harmful neutral overheating proliferated by non-linear loads

**Safety Ground Bus** — Incorporates an Al/Cu-rated mechanical lug at input; accommodates connections equal to the number of branch breaker positions

**Insulated Isolated Ground Bus** — Eliminates cross-interference between safety ground and the isolated ground associated with sensitive electronic equipment

**Suppression Filter Systems Interconnections** — Made with #8 AWG copper hypalon conductor with compression lugs and bolted to low impedance corrosion-resistant, tin-plated bus to ensure lowest possible impedance

**Standards** — UL 1449-Second Edition, UL 1283, UL67, UL50, CSA, NEMA LS 1

**Warranty** — Five Years, suppression filter module and panelboard, including breakers

### OPTIONS

Option	Suffix
Double form "C" dry contacts	-FCC
StatusWatch™ diagnostic monitoring	-SW
StatusWatch™ with display event counters	-SWC
DTS-2 Diagnostic Test Set	-DTS

All Status Watch™ options include double form "C" dry contacts, audible alarm, alarm silence/test and status indicator lights.

## INSTALLATION INSTRUCTIONS

### 1. Voltage Verification

Prior to product installation, verify that the voltage rating of the intended electrical service matches the voltage rating of the EGP® to be installed. **Warning: serious injury or damage can result from installing a product with an improper voltage rating.**

Contact Current Technology if voltage ratings are not identical. For WYE connected systems, verify neutral-ground bond on secondary side of upstream distribution or service entrance transformer.

**Warranty void if EGP is connected to incorrect voltage configuration or if neutral-ground bond is not present for WYE configured systems.**

### 2. Installation Location

Installation of EGP is similar to installation of standard panelboard.

### 3. Mounting

Mount EGP securely and rigidly to building surface or structural member.

### 4. Electrical Connections

**VERIFY THAT POWER IS DE-ENERGIZED ON ELECTRICAL LINES ASSOCIATED WITH INSTALLATION OF THIS UNIT.** EGP should be installed electrically as a standard panelboard. Current Technology provides 200% copper neutral bus, safety ground bus, and copper insulated isolated ground bus for customer use. Follow NEC guidelines and install EGP appropriately. Attach conduit and pull wires as necessary for incoming power feed and breaker loads.

### 5. Remote Monitor Contacts Option

EGP models are available with two sets of form "C" remote monitor dry contacts that may be connected to building management systems or remote annunciation alarm panels. To wire dry contacts, locate the output terminals mounted on the dry contact circuit board. Each set of contacts may be wired independently. Each set of form "C" contacts includes common (C), normally open (NO) and normally closed (NC) contacts. For normally open operation under energized conditions, connect the normally open terminal and common terminal to the monitoring input. For normally closed operation during energized conditions, connect the normally closed terminal and common terminal to the monitoring input. Upon loss of power to any or all phases, contacts will change to alarm state.

### 6. StatusWatch™ Option

EGP models are available with StatusWatch™ diagnostic monitoring. StatusWatch includes status indicator lights, battery powered audible alarm with test and disable functions, two sets of form "C" remote monitor dry contacts and optional display event counter(s). Battery is field replaceable, standard 9V alkaline. To activate battery, remove isolation strip between battery and terminal and push battery firmly into battery holder terminals.

To test audible alarm, press alarm test push-button: alarm should sound and alarm/test indicator should flash. Alarm may be silenced by moving toggle switch into upper position; alarm disable indicator will illuminate.

To wire dry contacts, locate the output terminals mounted on dry contact circuit board. Each set of contacts may be wired independently. For normally open operation under energized conditions, connect the normally open terminal and common terminal to the monitoring input. For normally closed operation during energized conditions, connect the normally closed terminal and common terminal to the monitoring input. Upon loss of power to any or all phases, contacts will change to alarm state.

StatusWatch is available with dual display event counter(s) that measure the number of Line-to-Neutral and Line-to-Ground transients occurring in WYE configurations. For DELTA systems, a single counter measures Line-to-Line transients. To reset counters, remove connector on the back of each counter and short pins 1 and 3.

### 7. Before energizing EGP

Check all connections to ensure solid electrical connection. Tighten any loose connections to appropriate torque values.

Measure voltage Line-to-Line, Line-to-Neutral, Line-to-Ground and Neutral-to-Ground to ensure that it does not exceed  $\pm 10\%$  of the nominal rated voltage for the unit. Contact factory if these tolerances are exceeded.

### 8. Final Instructions

If all voltages are in tolerance, attach necessary trims and tighten fastening screws. Apply power to the panelboard by engaging the appropriate circuit breaker(s). To provide power to suppression filter system, engage the three, 15A single pole breakers feeding unit. Illumination of status indicator lights indicates proper function.

### 9. Diagnostic Testing

In the unlikely event of unit's overcurrent protection opening, unit should be tested with a DTS-2 Diagnostic Test Set to verify operational integrity. To test, locate test point and disconnect from wiring harness. Follow DTS-2 Diagnostic Test Set instructions. If the test results are within factory specified tolerances, replace or reset overcurrent protection. **IF TEST RESULTS ARE NOT WITHIN FACTORY SPECIFIED TOLERANCES, DO NOT REPLACE OR RESET OVERCURRENT PROTECTION PRIOR TO CONTACTING CURRENT TECHNOLOGY'S "24X7" TECHNICAL SERVICE HOTLINE AT 1-888-200-6400.** Reconnect test point to wiring harness upon completion of testing and prior to re-energizing.



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