EGPE100

ELECTRONIC GRADE PANELBOARD® EXTENSION

SUPPRESSION FILTER SYSTEM

Easily mounts with most major brands of non-linear, six-wire panelboards — compatible with all Current Technology MasterPLAN™ facility-wide suppression filter system products

TECHNICAL DATA SHEET

STANDARD MODEL NUMBERS

EGPE100-120/240-2G-F or S	EGPE100-120/240-3GHD-F or S
EGPE100-120/208-3GY-F or S	EGPE100-240-3D-F or S
EGPE100-277/480-3GY-F or S	EGPE100-480-3D-F or S
EGPE100-347/600-3GY-F or S	EGPE100-600-3D-F or S

*Contact factory for other voltages and configurations. Add **F** for Flush mount or **S** for Surface Mount plus option suffix(es).*

SINGLE PULSE SURGE CURRENT CAPACITY

Protection mode	*Single pulse surge current capacity per mode*
Line-to-Neutral	> 100,000 A
Line-to-Ground	> 100,000 A
Neutral-to-Ground	> 100,000 A
Line-to-Line	> 100,000 A
Per Phase	> 200,000 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	> 4,000
Line-to-Ground	> 4,000
Neutral-to-Ground	> 4,000
Line-to-Line	> 4,000

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*	*Voltage*	*MCOV*
120V	150V	347V	420V
240V	275V	480V	640V
277V	320V	600V	840V

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	200	260	360	470
	L-G	340	365	355	530
	N-G	240	280	350	510
	L-L	360	475	675	800
277 / 480	L-N	460	580	825	950
	L-G	800	740	765	930
	N-G	500	535	775	1000
	L-L	795	1000	1545	1710

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.

MECHANICAL SPECIFICATIONS

Connection method	Parallel
Enclosure type/mount	NEMA 1/surface or flush
Temperature operating range	-40˚C to 60˚C
Humidity operating range	5% - 95% non-condensing
Dimensions	12.00"H x 20.00"W x 5.75"D
Weight	35 lbs.

STANDARD FEATURES

Suppression filter technology	*seamless technology™*
Internal construction	All suppression filter components are bolted to corrosion-resistant tin-plated copper bus bar
Status indicators	Neon status indicators indicate suppression and overcurrent status
Test point	Diagnostic ten mode test point allows easy DTS-2 Diagnostic Test Set connection
Standards	UL 1449-Second Edition, UL 1283, CUL, NEMA LS 1
Warranty	Five Years

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
Remote StatusWatch™	-RSW
Remote StatusWatch™ with Counters	-RSWC
Remote Alarm Panel (Monitors 1 unit)	-RAP1
Remote Alarm Panel (Monitors 1 – 5 units)	-RAP5
Remote Alarm Panel (Monitors 1 – 12 units)	-RAP12

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

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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 unit 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 EGPE100 is connected to incorrect voltage configuration or if neutral-ground bond is not present for WYE configured systems.**

2. Installation Location

To minimize installed system impedance, install EGPE100 in a location that minimizes electrical wire bends and wiring distance from point of connection. Typically, EGPE100 is installed above or below standard panelboard.

3. Mounting

Utilizing the hardware supplied with the unit, mount the EGPE100 securely and rigidly to building surface or structural member. Attach conduit and pull wires as necessary.

4. Electrical Connections

VERIFY THAT POWER IS DE-ENERGIZED ON ELECTRICAL LINES ASSOCIATED WITH INSTALLATION OF THIS UNIT.
EGPE100 should be installed in parallel with the electrical distribution system via a three-pole 15 Amp breaker or three single-pole 15 Amp breakers. For best results, locate these breakers as close as possible to EGPE100. Use #8 AWG copper conductor or larger for all connections including neutral and ground connections. Connect phase, neutral and ground conductors from EGPE100 to the corresponding breakers, neutral bar and ground bar inside the panelboard. Tighten lugs appropriately.

5. Remote Monitor Contacts Option

EGPE100 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 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

EGPE100 models are available with StatusWatch™ diagnostic monitoring. StatusWatch includes status indictor 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 EGPE100

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 ±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, replace the cover of the unit and tighten fastening screws. Apply power to the unit by engaging the appropriate circuit breaker(s). Illumination of status 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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