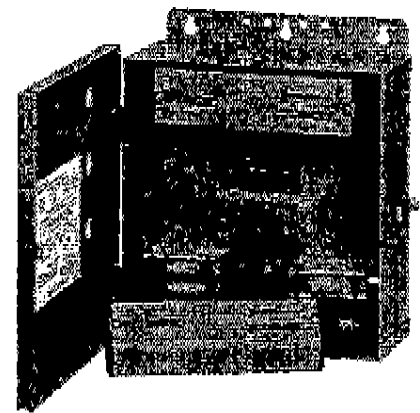
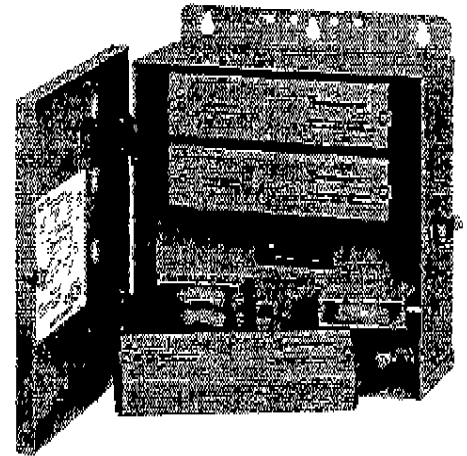




**COMMERCIAL / INDUSTRIAL  
UL1449 SECOND EDITION**

## **HARDWIRED SURGE PROTECTION DEVICES UG30 MODULAR SERIES**

- For installation in Category "C & B" locations
  - Service Entrance, Distribution Panel and Sub-panels
- Parallel installation
- 225k Amps Peak Surge Capacity per phase
  - Three phase systems with neutral
- Replaceable modules for each phase
  - 10 distinct modes for systems with a neutral
    - Line-to-Neutral, Line-to-Ground, Neutral to Ground, Line-to-Line
  - 6 distinct modes for systems with no neutral
    - Line-to-Line, Line-to-Ground
- Extruded metal housing
- LED status indicator lights
  - Through-the-door visible alarm panel
  - Individual indicators on each module
- Thermal protection for all suppression modes
  - Proprietary Intermatic Spring Fuse design
- Overlapping protection for adjacent phases
- Replaceable Internal fuses
  - 600 VAC - 100,000 Amp Interrupting Capacity
- Heavy-duty NEMA 3R type steel enclosures
  - Corrosion resistant baked enamel finish
  - Lockable hinged cover
  - ½ - ¾" multiple knockout
  - Removable mounting plates
- UL Listed to U.S. and Canadian safety standards
  - UL 1449 2nd Edition
- Tested to maximum UL fault current rating
- Ten year product warranty



### **MODEL SELECTION:**

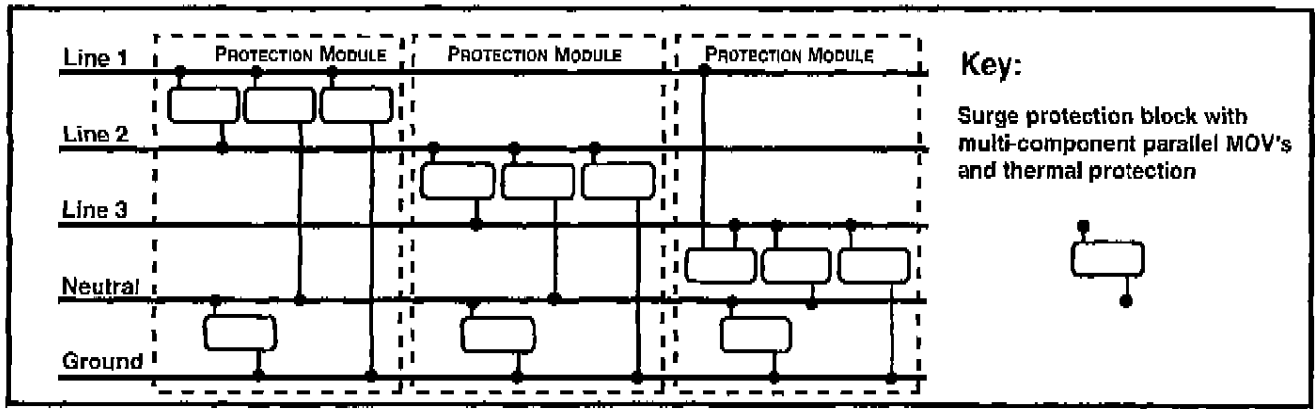
|                   |  |
|-------------------|--|
| <b>UG30A2401S</b> | 120 / 240 VAC Single Phase three wire plus ground              |
| <b>UG30A2083Y</b> | 120 / 208 VAC Three Phase Wye four wire plus ground            |
| <b>UG30A2403D</b> | 120 / 240 VAC Three Phase High-Leg Delta four wire plus ground |
| <b>UG30A2403G</b> | 240 VAC Three Phase Delta three wire plus ground               |
| <b>UG30A4803Y</b> | 277 / 480 VAC Three Phase Wye four wire plus ground            |
| <b>UG30A4803D</b> | 480 VAC Three Phase Delta three wire plus ground               |

### FEATURES AND APPLICATIONS:

The UG30 Series is designed for installation in category 'C' and 'B' locations on Service Entrance, Distribution and sub-panel applications. Replaceable fusing, rated at 100k AIC, permits installation directly to power busses. The system, installed in parallel with the electric service, is transparent to the service amperage. Separate modules for each phase incorporate protection elements for all available modes. A replaceable fuse for each hot line plus the neutral line facilitates service and module replacement with minimal impact on the protected electrical service.

The UG30 Surge Protection System is manufactured using state-of-the-art components. Each module contains complete protection for all modes: Line-to-Line, Line-to-Neutral, Line-to-Ground and Neutral-to-Ground. A proprietary design spring fuse provides component-level thermal protection and immediate status indication. Thermal stress associated with component degradation or failure will activate the appropriate spring fuse, disconnect the component and activate visual alarm.

### TYPICAL PROTECTION DIAGRAMS:



### PERFORMANCE RATINGS:

| MODEL NUMBERS:                                 | UG30A2401S         | UG30A2083Y         | UG30A2403D         | UG30A2403G | UG30A4803Y         | UG30A4803D |
|--|--------------------|--------------------|--------------------|------------|--------------------|------------|
| MODES PROTECTED                                | L-N, L-G, N-G, L-L | L-N, L-G, N-G, L-L | L-N, L-G, N-G, L-L | L-G, L-L   | L-N, L-G, N-G, L-L | L-G, L-L   |
| OPERATING FREQUENCIES                          | 50, 60, 400 Hz.    |                    |                    |            |                    |            |
| MCOV *<br>(Line to Neutral or Line to Ground)  | 150 V              | 150 V              | 150/250 V**        | 275 V      | 320 V              | 550 V      |
| ACTUAL UL1449 SUPPRESSED VOLTAGE               |                    |                    |                    |            |                    |            |
| Line to Neutral                                | 405                | 405                | 405 / 649 **       | n/a        | 799                | n/a        |
| Line to Ground                                 | 433                | 433                | 433 / 615 **       | 633        | 786                | 1208       |
| Neutral to Ground                              | 389                | 389                | 389                | n/a        | 744                | n/a        |
| Line to Line                                   | 613                | 613                | 613                | 627        | 1277               | 1211       |
| SURGE CURRENT RATINGS                          |                    |                    |                    |            |                    |            |
| Line to Neutral                                | 45 kA              | 45 kA              | 45 kA              | n/a        | 45 kA              | n/a        |
| Line to Ground                                 | 45 kA              | 45 kA              | 45 kA              | 90 kA      | 45 kA              | 90 kA      |
| Neutral to Ground                              | 90 kA              | 135 kA             | 135 kA             | n/a        | 135 kA             | n/a        |
| Line to Line                                   | 45 kA              | 45 kA              | 45 kA              | 45 kA      | 45 kA              | 45 kA      |
| Total per Phase ***                            | 180 kA             | 225 kA             | 225 kA             | 180 kA     | 225 kA             | 180 kA     |
| EMI/RFI NOISE REDUCTION<br>20 kHz. to 100 MHz. | 20-30 dB           | 20-30 dB           | 20-30 dB           | 20-30 dB   | 20-30 dB           | 20-30 dB   |

\* Maximum Continuous Operating Voltage \*\* High Leg  
 \*\*\* Total Per Phase defined as L-N + L-G + N-G for three phase 4-wire systems; L<sup>1</sup>-L<sup>2</sup> + L<sup>1</sup>-L<sup>3</sup> + L<sup>1</sup>-G for three phase 3-wire systems

## **SPECIFICATIONS:**

**CONFIGURATION:** Parallel technology permits installation over a wide range of applications without sizing for service current capacity.

**COMPONENTS:** Parallel board architecture configuration permits Very Low Impedance (VLI) surge paths. Proprietary design Thermal Disconnects (TDC) feature low impedance to transient energy travel. All suppression elements are UL Recognized Components.

**PROTECTION MODES:** Dedicated suppression for all modes; line to neutral, line to ground, neutral to ground and line to line for all electric configurations with a neutral. Line to line and reinforced line to ground for Delta configurations without a neutral.

**THERMAL PROTECTION:** Thermal disconnects (TDC's) are matched to every suppression component. TDC's will detect and react to excessive heat stress at each component location. Excessive heat stress will trigger the TDC to decouple the affected suppression component, turning off the LED indicator for the affected suppression module.

**OVERCURRENT PROTECTION:** Internally mounted 600 VAC - 100k AIC replaceable fuses in permanently mounted fuse blocks for easy replacement if required. Fuse activation will disconnect the suppression circuit for the affected phase and turn off the associated module operation indicator light.

**OPERATIONAL INDICATORS:** A dedicated circuit in each module monitors the status of all surge components within the module. Lighted green indicator(s) represent normal power-on and unit operating condition. One or more unlit indicator(s) signify that power has been interrupted, or protection has been reduced or lost for the specified phase(s).

**ENCLOSURE:** NEMA 3R type steel cabinet with hinged cover. Cover is secured in the closed position by a spring clasp that has an eye for lock or seal. The complete assembly is finished in a gray baked epoxy enamel. The enclosure is electrically bonded to the ground lead and safety ground.

**ENCLOSURE MOUNTING:** Two bolt-on mounting bars are shipped with each unit. The bars are attached to the back of the enclosure with bolts provided.

**MODULE ENCLOSURE:** Modules have an extruded metal housing and incorporate spring steel locking tabs for positive connection. Modules are finished in a gray baked epoxy enamel. One module is required for each phase.

**MODULE TO ENCLOSURE CONNECTIONS:** Multi-position connector blocks containing heavy-duty silver plated contacts are used to ensure lowest impedance. The contact and block assembly is rated at 600 volts, 30 amps continuous service.

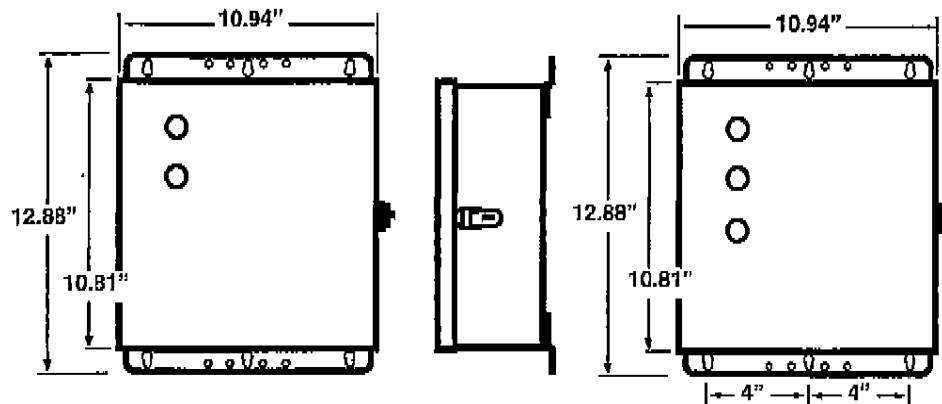
**WIRING:** A selectable ½ - ¾ " knockout is located in the bottom of the cabinet for wiring connection. # 10 gauge stranded copper wire is recommended.

**AMBIENT OPERATING TEMPERATURE:** - 40 to + 85 °C (- 40 to + 185 °F).

**AGENCY LISTINGS:** UL 1449 - Rev. 2; cULus

**WEIGHTS & DIMENSIONS:**

UG30A2401S 13 Lbs.  
 UG30A2083Y 14 Lbs.  
 UG30A2403D 14 Lbs.  
 UG30A2403G 14 Lbs.  
 UG30A4803Y 14 Lbs.  
 UG30A4803D 14 Lbs.



**REPLACEMENT MODULE INFORMATION:**

|                                    |              |              |                              |              |              |              |
|------------------------------------|--------------|--------------|------------------------------|--------------|--------------|--------------|
| <b>SYSTEM NUMBER:</b>              | UG30A2401S   | UG30A2083Y   | UG30A2403D                   | UG30A2403G   | UG30A4803Y   | UG30A4803D   |
| <b>QUANTITY &amp; PART NUMBER:</b> | 2 - UG29120A | 3 - UG29120A | 2 - UG29120A<br>1 - UG29208A | 3 - UG29240A | 3 - UG29277A | 3 - UG29480A |



**UG MODULAR SYSTEM  
 TEN YEAR PRODUCT WARRANTY**

**WARRANTY AND LIMITATION OF LIABILITY**

If within ten (10) years from the date of purchase, this surge protection device fails due to defect in material or workmanship, Intermatic Incorporated will repair or replace it free of charge. The warranty does not apply to: (a) damage caused by accident, abuse, mishandling, dropping; (b) units which have been subject to unauthorized repair, opened, taken apart; (c) units not used in accordance with directions; (d) damages exceeding the cost of the product. Some states do not allow a limitation of damages, so the foregoing limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary, from state to state. This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased, or (b) obtaining a Returned Authorization from the Intermatic Service Center at 815-675-7000. Contact the company or refer to the warranty sheet enclosed with each product for complete warranty details.

**INTERMATIC INCORPORATED**

<http://www.intermatic.com>

INTERMATIC PLAZA, SPRING GROVE, ILLINOIS 60081-9698

Printed in U.S.A.

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