# STABILINE®

PT2 Series-Transient Voltage Surge Suppressors
Parallel-connected Design

Superior Electric


## PT2 Series Features

- *40 kA Surge Amp Capacity Protection per Mode*
- *Single Phase 120 and 220 VAC Models (2 Wire)*
- *Single Phase 120/240 VAC (Split Phase 3 Wire)*
- *Three Phase 208Y/120, 380Y/220 and 480Y/277 VAC Models*
- *Pigtail Design Makes Installation Flexible and Easy*
- *Individual Fusing and Thermal Disconnects for Each MOV*
- *LED Provides Visual Summary Status of L-N MOV Elements*
- *Form C (SPDT) Relay Contacts for Remote Monitoring*

## Pigtail Protectors for Service and Distribution Panels

PT2 Series models are housed in a compact, plastic, hermetically sealed housing that ensures weatherproof protection for outdoor and indoor installations. Color-coded wiring conforms to US and International standards and convenient pigtail design makes installation flexible and easy. Thermal disconnects and fusing for each MOV plus a sand-filled enclosure permit benign end-of-life mode during sustained line overvoltage conditions, thus eliminating smoke and fire damage to adjacent equipment.

## Method of Operation

When a transient surge exceeds the normal system voltage, the PT2 Series device responds within nanoseconds and changes state from a high-impedance open circuit to a low-impedance shunt (short circuit). Connected in parallel with the facility's loads, the PT2 Series device diverts damaging current away from sensitive loads while simultaneously reducing (clamping) the high transient voltage to harmless levels. Upon the end of the transient event, the PT2 Series device automatically returns to its normal operating condition without service interruption.

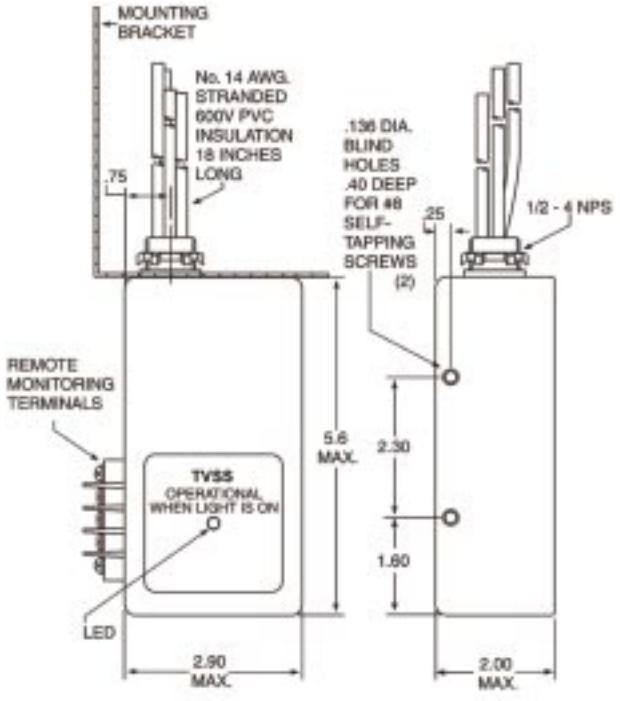



*Illustration of TVSS mounted through a panel knockout*

*Illustration of TVSS right side mounting holes*

Automatic Voltage Regulators • Power Conditioners • Uninterruptible Power Supplies

## PERFORMANCE SPECIFICATIONS

| | Single Phase Models | | | Three Phase Models | | |
|---|---|---|---|---|---|---|
| | 120 VAC 2 Wire + Ground | 220 VAC 2 Wire + Ground | 120/240 VAC 3 Wire + Ground | 208Y/120 VAC 4 Wire + Ground | 380Y/220 VAC 4 Wire + Ground | 480Y/277 VAC 4 Wire + Ground |
| | PT2-40-120-1G-L1 | PT2-40-220-1G-L1 | PT2-40-120/240-2G-L1 | PT2-40-120/208-3GY-L1 | PT2-40-220/380-3GY-L1 | PT2-40-277/480-3GY-L1 |
| **Nominal Frequency** | 50/60 Hz | | | 50/60 Hz | | |
| **Surge Protection Device & Category** | Service Entrance or Distribution Panel-Permanently Connected | | | Service Entrance or Distribution Panel-Permanently Connected | | |
| **Technology** | Parallel Design-Multiple Metal Oxide Varistors (MOVs) | | | Parallel Design-Multiple Metal Oxide Varistors (MOVs) | | |
| **Upstream Overcurrent Device** | None Required | | | None Required | | |
| **Maximum Surge Current, Single-Pulse 8/20µs Capacity per Mode** | 40,000A | | | 40,000A | | |
| **Maximum Continuous Operating Voltage (MCOV), L-N, 50 or 60 Hz** | 132 V | 255 V | 132 V | 132 V | 255 V | 293 V |
| **Protection Modes** | L-N, N-G | | | L-N, N-G | | |
| **Varistor MCOV** | 150 V | 300 V | 150 V | 150 V | 300 V | 320 V |
| **Varistor Voltage @ 1mAdc** | 240 V | 470 V | 240 V | 240 V | 470 V | 495 V |
| **Leakage, L-G** | | | | | | |
| *at 120 VAC* | < 100 µA | N/A | < 100 µA | < 100 µA | N/A | N/A |
| *at 220 VAC* | N/A | < 250 µA | N/A | N/A | < 250 µA | N/A |
| *at 277 VAC* | N/A | < 250 µA | N/A | N/A | N/A | < 300 µA |
| **UL Suppression Voltage L-N, N-G using ANSI/IEEE C-62.41 Waveshapes** | | | | | | |
| *200A, 100KHz (6kV)* | 410 V | 735 V | 410 V | 410 V | 735 V | 765 V |
| *500A, 100KHz (6kV)* | 460 V | 800 V | 460 V | 460 V | 800 V | 840 V |
| *500A, 8/20 µs (6kV)* | 370 V | 690 V | 370 V | 370 V | 690 V | 730 V |
| *3kA, 8/20 µs (6kV)* | 480 V | 845 V | 480 V | 480 V | 845 V | 900 V |
| *5kA, 8/20 µs (10kV)* | 560 V | 900 V | 560 V | 560 V | 900 V | 955 V |
| *10kA, 8/20 µs (20kV)* | 740 V | 1095 V | 740 V | 740 V | 1095 V | 1175 V |
| **UL 1449 Suppression Voltage L-N, N-G** | 400 V | 800 V | 400 V | 400 V | 800 V | 800 V |
| **Surge Energy Capability - Total** | 1250 joules | 2080 joules | 1875 joules | 2500 joules | 4160 joules | 4160 joules |
| **Surge Life** | 120 VAC, L-N applied | 220 VAC, L-N applied | 120 VAC, L-N applied | 120 VAC, L-N applied | 220 VAC, L-N applied | 277 VAC, L-N applied |
| *3kA, 8/20 µs* | 3000 times | 3000 times | 3000 times | 3000 times | 3000 times | 3000 times |
| *10kA, 8/20 µs* | 100 times | 100 times | 100 times | 100 times | 100 times | 100 times |
| **Component Response Time** | <1 ns | | | <1 ns | | |
| **Form C Relay Contact Rating** | * See Footnote 1 | *See Footnote 2 | * See Footnote 1 | * See Footnote 1 | * See Footnote 2 | * See Footnote 2 |
| **Connection Means** | In Parallel with Load | | | In Parallel with Load | | |
| **Minimum Wire Size** | #14 AWG THHN | | | #14 AWG THHN | | |

## GENERAL SPECIFICATIONS

| | |
|---|---|
| **Special** | Individual Fusing and Thermal Disconnects for Each MOV<br>LED Provides Visual Summary Status of L-N MOV Protection<br>Form C (SPDT) Relay Contacts for Remote Monitoring<br>Housed in a NEMA 6, I.P. 67 Plastic Enclosure |
| **Warranty** | Five Years |
| **Protection Present Status** | Illuminated LED Indicates Proper Operation of the L-N MOV Elements |
| **Operating Temperature** | -40˚C to 80˚C (-40˚F to 176˚F) |
| **Max. Operating Altitude** | 5000 meters |
| **Weight (Shipping)** | 1 lb (0.45 kg) |
| **Standards Compliance and Safety Approvals** | Complies with 25 Amp "Loss of Neutral" Test of IEEE C62.34<br>UL Listed per UL 1449, XUHT<br>cUL Certified per Canadian codes XUHT7<br>CE Compliant with Directive 73/23/EEC |

## Connections

1 / 3 **PT2-40-120-1G-L1**

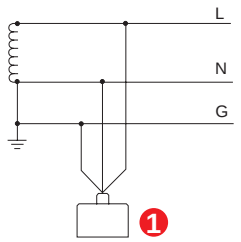
2 **PT2-40-120/240-2G-L1**

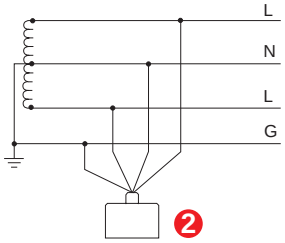
1 / 3 **PT2-40-220-1G-L1**

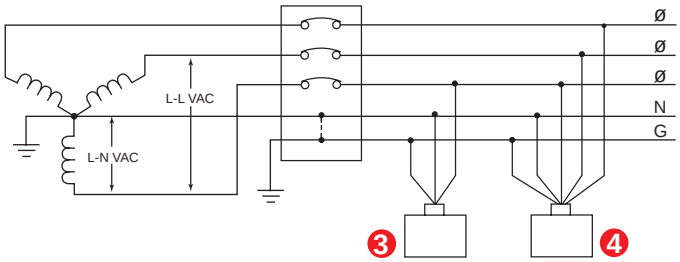
4 **PT2-40-120/208-3GY-L1**
**PT2-40-220/380-3GY-L1**
**PT2-40-277/480-3GY-L1**

The information and specifications stated in this document are subject to change without notice.

1. Minimum 50mVA (>2mA or >5 VDC) Maximum 5A, 250 VAC & 30 VDC
2. Minimum 50mVA (>1mA or >5 VDC) Maximum 5A, 250 VAC & 28 VDC





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