



ProT Series Low Voltage Surge Protection Devices



Protec ProT Series Surge Protective Device is designed for AC power protection against harmful transients that cost equipment damage and system downtime. Utilizing the Threshold Tracking Circuitry TTC technology, this device provides excellent protection against high energy surges. ProT Series is available in 30kA, 60kA, 100kA and 160kA per phase peak surge capacity with 200kAIC short circuit current rating.

Key Features

- Silicon High Temperature Voltage Power Connecting Cables.
- Independent Verification of Performance and Safety.
- Blue LED for Protection Status Indication.
- Over Current Fusing and Over Temperature Fusing.
- Individual Fused Suppression Modules, parallel redundant.
- Circuit Encapsulation Technology for safety and performance.

Applications

Ideal for application environments that depend on reliable operations of their computer systems and networks for their day to day operations, such as

- | | | |
|----------------------------|--------------------|--------------------------------|
| • Data Centers | • Office Buildings | • Banks |
| • Manufacturing Facilities | • Restaurants | • Gas Stations and Fuel Depots |
| • Office Complexes | • School Campuses | • Churches |

International IEEE Exposure Category "B" Application:

Services entrance equipment located inside a facility, feeder circuits and short branch circuit.

- Distribution Panel Boards.
- Busways and Feeder Lines
- Branch Panels
- Elevator Panels
- Lighting Systems

Light Industrial, Commercial and Residential service:

- Sub-panels within a large commercial facility or for smaller service entrances.
- Protection of mid to upper level residential applications, in particular smart homes or homes with above average computer networks or home entertainment systems.

General Product Specification

IEEE-C62.41.1 & C62.41.2-2002 Environments:

Suitable for Categories: A, B & C (Most Severe Electrical Environment)

IEC Environments:

Suitable for use in IEC 61643-11 environment

CE Environment:

Mains Terminals Disturbance Voltage, 9kHz to 30MHz

Radiated Emissions 30MHz to 300MHz

Electrostatic Discharge

IEC 61000-6-3: 2006

EN 61000-6-3: 2007

Electric Fast Transients, Surge, Power Frequency magnetic Field, Dips

Test Method, IEC 61000-4-6: 2008, EN 61000-4-6: 2009

Test Requirement, IEC 61000-6-1: 2005

EN 61000-6-1: 2007

• Protection Modes:

L – N, L - L (normal mode) and L – G, N – G (common mode).

• Frequency:

50 – 400Hz .

• Temperature Rating:

Up to 176°F(80°C).

• Standard Enclosure:

NEMA 4X Rated.

• Diagnostics:

Blue LED's, one per phase, normally on.

• Circuit Interrupt:

Internal component level thermal fusing and over current fusing.

Circuit Topology:

Individual Fused Suppression Module, parallel redundant for long life, High energy parallel design, Thermal cutout protection, Multi-stage suppression circuit, all protection circuits are encapsulated in high strength dielectric circuit compound to promote long component life and protection from the weather and vibration.

Part Numbering System

Example: ProT100-1P2

Model – Peak Surge Current per phase (kA) – Voltage code

ProT 30, 60, 100, 160 See the voltage code chart

Protec Power Solution Inc.,

Qualifications: UL1449 3rd Edition, UL1283,
CE Compliant and IEC Compliant
Warranty: 10 Years Unlimited Free Replacement
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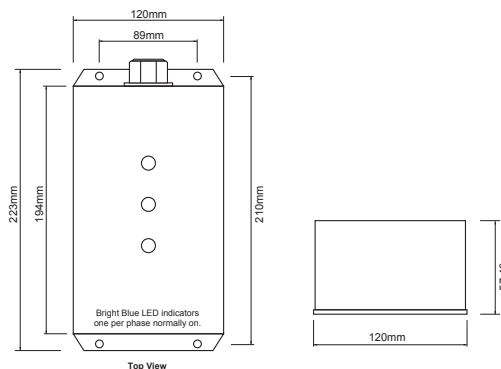
Protec-xxx Voltage Performance and Electrical specifications

Model	Circuit Type	MCOV	Test Mode	Cat B 6kV / 3kA 8/20µS
ProT-xxx-1P1	120V, 1Ø 2 wire + ground	150V	L-N	389V
		150V	L-G	418V
		150V	N-G	360V
ProT-xxx-1P2	240V, 1Ø 2 wire + ground	320V	L-N	680V
		320V	L-G	703V
		320V	N-G	650V
ProT-xxx-3Y1	120/208V, 3Ø 4 wire + ground	150V	L-N	425V
		150V	L-G	440V
		300V	L-L	789V
		150V	N-G	360V
ProT-xxx-3Y22	220/380V, 3Ø 4 wire + ground	320V	L-N	691V
		320V	L-G	714V
		550V	L-L	1,327V
		320V	N-G	650V
ProT-xxx-3Y27	277/480V, 3Ø 4 wire + ground	320V	L-N	836V
		320V	L-G	867V
		550V	L-L	1,616V
		320V	N-G	797V

Let-through Voltage Test Parameters: Positive Polarity, Net voltages are peak (±10%). All tests are static except 150V MCOV modes. Let-through voltages on static tests calculated by subtracting sinewave peak from let-through measured from zero. 150V MCOV mode let-through voltages measured from the insertion point on the sinewave. Each phase is the average of the 3 modes. In order to duplicate the results, the specified mode must be tested for all three phases (except N-G) and averaged together. (Individual mode or short results may vary by more than 10%. Scope Setting: Time Base = 10 microsecond Sampling Rate = 500 Megasamples/sec. These settings assure Let-through voltages test results are accurate). **All tests performed with 6" lead length (external to enclosure), simulating actual installed performance.**
 Surge Current Testing: Single-pulse surge current testing for all modes at rated currents as recommended by NEMA LS1-1992. Single pulse surge current capacities of 200,000 amps or less are determined by testing all suppression components within each mode as a group. Present industry test equipment limitations require testing of individual suppression component or subassemblies within a mode for a single-pulse surge capacities over 200,000 amps.

Voltage Code Chart

Voltage Code	Nominal System Voltage	# of Phases	Neutral	Ground
1P1	Single Phase 120	1	1	1
1P22	Single Phase 220	1	1	1
1P23	Single Phase 230	1	1	1
1P24	Single Phase 240	1	1	1
1S1	Split Phase 120 / 240	2	1	1
1S2	Split Phase 240 / 480	2	1	1
3Y1	Wye 120 / 208	3	1	1
3Y27	Wye 277 / 480	3	1	1
3Y22	Wye 220 / 380	3	1	1
3Y23	Wye 230 / 400	3	1	1
3Y24	Wye 240 / 415	3	1	1
3Y3	Wye 347 / 600V	3	1	1
3D1	High Leg Delta 120 / 240	3	1	1
3N2	Delta 240	3	0	1
3N4	Delta 480	3	0	1



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