



SurgeFree™

MODEL

PT160 (Delta)

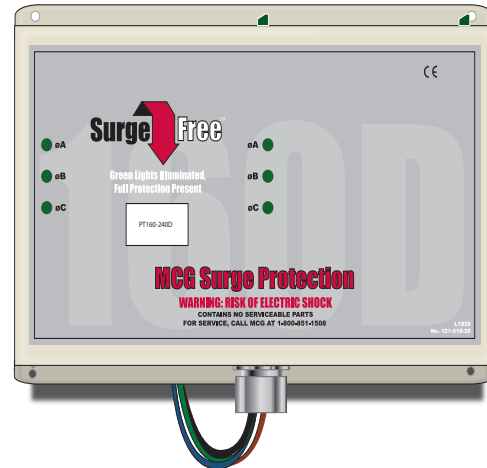
Main/Branch Panel Protection

The reliable PT160 Delta protector is designed to be used at the service entrance of small to medium sized facilities, in motor control centers, or dedicated to a single piece of critical equipment. The unit diverts lightning induced surges, utility surges, and everyday surges generated from loads within a facility. Units employ dual independent protection assemblies rated at 80kA per phase each, packed with 40kA thermally protected protection elements and high headroom varistors.

In the rare event that a protection element fails, protection is maintained due to redundancy. Comprehensive monitoring shows unit status. Comes with MCG's 20-year "No Nonsense" warranty.

FEATURES

- I peak: 160,000A/Phase
- Thermally Protected Varistors with Integral Fuse Element
- Redundant - Two Fused Surge Paths Per Phase
- Surge Event Counter Optional
- Dual Remote 1 Form C Relay Contacts with Status LED
- Front Panel Status Monitoring
- 10 AWG Connection Cable
- EMI/RFI Filter Standard in the 240D and 480D
- NEMA 1, Powder Coated Steel Enclosure
- DIN-Rail Mounting Kit Available
- Optional outdoor non-metallic enclosure kit - NEMA 4X



I peak: 160,000A

UL 1449, 3rd Ed. Listed

20-Year Warranty

Filter Attenuation

MIL STD 220A (50 Ohm):	120VAC	240VAC	277VAC
-30db	50kHz	50kHz	80kHz
-40db	130kHz	130kHz	180kHz
-50db	195kHz	195kHz	270kHz
-60db	230kHz	230kHz	300kHz

SPD Type:	Type 2
I_n :	5kA
Maximum Continuous Operating VAC (MCOV):	115% Rated Line Voltage
Varistor MCOV:	125% Rated Line Voltage Minimum
SCCR:	100kA AIC
Surge Current/Phase (8/20 μ s):	1 Event - 160kA.
Surge Life/Phase (8/20 μ s):	10,000 Events: 6kA.
Surge Current/Mode (8/20 μ s):	L-L: 160kA; L-G: 160kA
Response Time:	< 5ns
Status Indicators:	LED Status Indicators
Modes of Protection:	L-L, L-G
Operating Altitude:	13,000ft. (4000m)
Temp. (Operating/Storage):	-40° to +70°C/-40° to +85°C
Enclosure:	NEMA 1, 16 gauge steel (0.050" thick) powder coated
Cable Connection:	10 AWG (5.27mm ²) cable, 3 ft. (91.4cm) provided, except model -120D-400Hz, 8ft (243cm) cable included
Conduit Connector:	3/4" Compression Connector
Dimensions:	13.25" x 9.0" x 4.25" (336.55 x 228.60 x 107.95mm)
Mounting:	12.00" x 8.25"/.220"ID - 4 holes (304.80 x 209.55mm/5.6mm ID) - 4 holes
Weight:	10 lbs. (4.53 kg)
UL File Number:	E322161
UL Certification:	UL Listed to 1449 3rd Edition
ARRA Certification:	Complies with ARRA 1605 requirements



Specifications

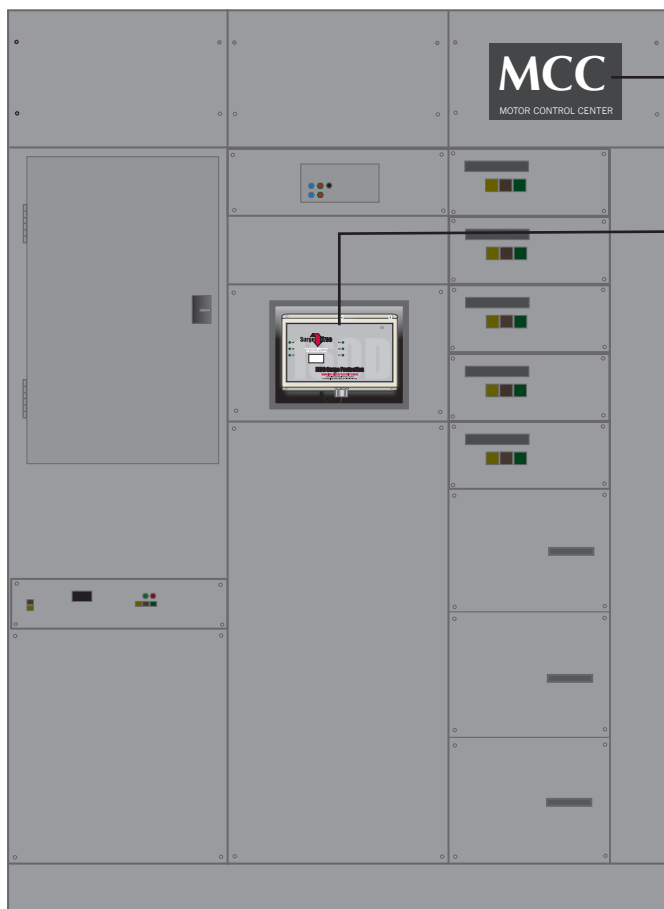
- ANSI/IEEE C62.41-2002
- IEC 61643-1-1998
- UL 1449, 3rd Ed.

Model PT160 Delta

Model PT160D	Service	MOV Voltage (MCOV) VAC	VPR L-G	VPR L-L	Cat. B3** 6kV, 3kA Let-Thru V	
					L-G	L-L
-240	240, 3 ϕ , 3W+Gnd	390	1200	2000	960	
-480	480, 3 ϕ , 3W+Gnd	620	1800	4000	1770	
-600*	600, 3 ϕ , 3W+Gnd	750	n/a	n/a	1920	
-120D-400Hz*	120, 3 ϕ , 3W+Gnd	140	n/a	n/a	630	

* Not Tested to UL1449

**Note: All let-thru levels measured with 6" lead length.



Motor Control Center

MCG Protector

Shown to the left is a PT160 Delta protecting a motor control center. Often installed behind a clear panel, the protector's status LEDs (and optional surge event counter) can easily be viewed without having to open an access door. With redundancy and high headroom thermally protected varistors, the PT160 Delta offers reliability, performance, and safety in a compact package that is easy to install within motor control centers as well as other equipment.

A Note On Headroom A surge protector responds to increases in voltage. Surge protectors triggered by the nominal line voltage are undesirable, consequently headroom is always factored into surge protector design. Long duration voltage swells occur on power lines and can damage a surge protector, leaving facility equipment vulnerable. By employing higher headroom, continuity of surge protection is guaranteed. This feature is standard in MCG surge protectors. Higher headroom allows varistors to ride out voltage swells while ensuring that let-through voltage remains within CBEMA (now ITIC) guidelines. The CBEMA curve is the most accepted graph worldwide for equipment susceptibility analysis.