

SURGITRON[®] PM

Model 1456-85-PM

480Y/277 Vac, Three Phase, 4-Wire, Wye Surge Protector and Power Monitor

• **Unique Features:**

- Plug-in MOV modules with Patented individual thermal disconnects.
- First of its kind digital "Percent Protection Remaining" monitoring.
- Internal dial-up modem communicates with any Windows based PC and **SURGITRON PM/PMT** software.
- Internal monitor reports true RMS voltage, sags, swells, surges, sub-cycle dropouts, and multi-cycle outages.

General Specifications:

SPD Category and Type	Main Panel or Sub-panel Application
Nominal Line Voltage (L-N)	277 Vac
Protection Modes	L-N, L-G, N-G
Maximum Continuous Operating Voltage (L-N)	295 Vac
Maximum Surge Current, 8/20 μ s (per Phase)	160 kA
(L-N, L-G)	80 kA
(N-G)	40 kA
Varistor Voltage, 1mA	470 Vdc (L-N, L-G), 240 Vdc (N-G)
Suppression Voltage, ANSI/IEEE C62.41 & C62.11 wave shapes, tested per C62.45	

		<u>L-N, L-G</u>	<u>N-G</u>
Location Category A	200 A, 100 kHz Ring Wave	770 V	430 V
Location Category B	500 A, 100 kHz Ring Wave	840 V	460 V
	3 kA, 8/20 μ s Combination Wave	840 V	460 V
Location Category C	10 kA, 8/20 μ s Combination Wave	1020 V	560 V
	20 kA, 8/20 μ s Combination Wave	1250 V	730 V
UL Suppression Voltage (L-N, L-G)			800 V
(N-G)			400 V
Surge Energy Capability of all MOVs			13,957 Joules
Surge Life, per phase, 277 Vac applied,	3 kA, 8/20 μ s		> 50,000 operations
	10 kA, 8/20 μ s		> 5,000 operations
Component Response Time			< 1 nanosecond
Relay Contact Rating, N.O. and N.C.			5 A, 24 Vdc/240 Vac
Load Current Rating, Protector Series Connected (Kelvin)			150 A Maximum
Protector Parallel Connected (Shunt)			Unlimited
Operating Temperature			-40 C to +65 C
UL Listed per UL 1449 and Canadian standards			File No. E74944
Warranty:			5 years

Communications:

One Form C relay for remote alarm connections.

A nine pin (DB-9) connector for RS-232 connection to your Personal Computer serial port

Integral modular telephone jack RJ-11 to connect the dial up V.22 modem to the telephone system.

Communicates with modem equipped Windows95[®] based PC via supplied **SURGITRON PM/PMT** software.

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Power up Diagnostics:

Sounds the audible alarm, lights the visual (LED) displays, checks for the presence of protector modules, verifies and displays electrical system frequency, and verifies sub-systems operation.

Monitoring:

Provides true rms voltage readings for each line, accuracy of $\pm 2\%$ at nominal line voltage

Detects and counts sags > 5 cycles, 10% to 90% nominal voltage

Detects and counts voltage swells > 5 cycles, >110% nominal voltage

Detects and counts surges $\geq 20 \mu s$, >130% nominal peak voltage

Detects and counts fractional cycle dropouts $\geq \frac{1}{4}$ cycle

Detects and counts outages > 1 cycle

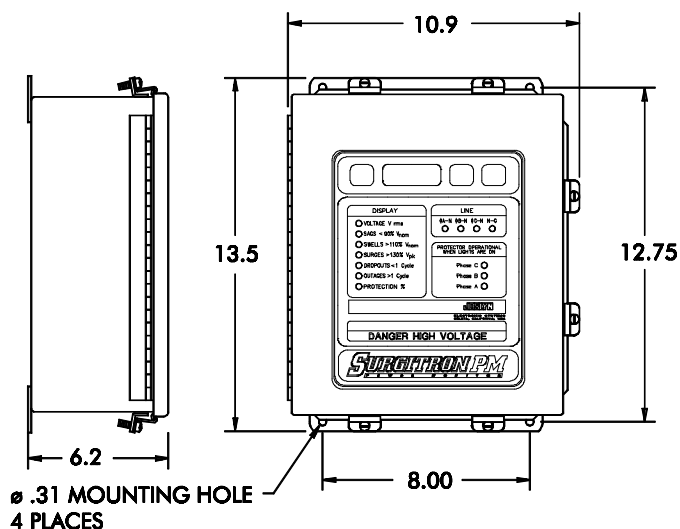
Saves counts to nonvolatile memory, maximum 999 counts per type

Detects percent protection available each protection module (MOV or SAD)

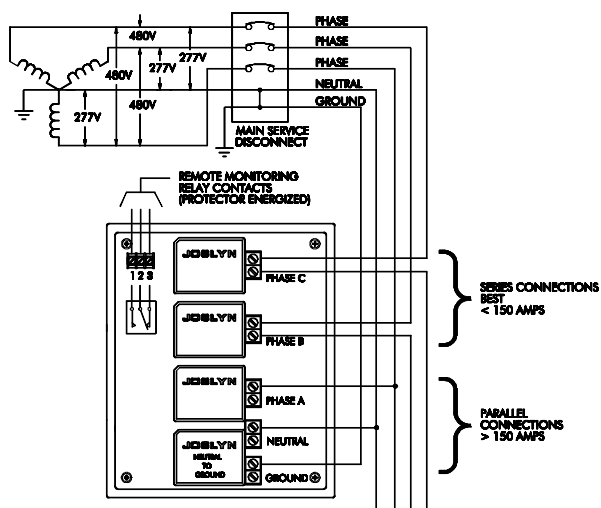
A 25% reduction of protection triggers an audible alarm that can be reset

A 50% reduction of protection triggers audible alarm, extinguish of LED associated with affected phase, and a change of state in a dual dry contact NO/NC relay output for other local alarming.

Dimensions



Installation



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Windows95® is a trademark of Microsoft Corporation.