

# SURGITRON<sup>®</sup> PM

## Model 1457-85-PM

### 3 Phase, 400Y/230 Vac, 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)	230 Vac
Protection Modes	L-N, L-G, N-G
Maximum Continuous Operating Voltage (L-N)	255 Vac
Maximum Surge Current, 8/20 $\mu$ s (per phase)	160 kA
(L-N, L-G)	80 kA
(N-G)	160 kA
Varistor voltage, 1mA (L-N)	430 Vdc
(L-G, N-G)	680 Vdc

Suppression Voltage, ANSI/IEEE C62.41 & C62.11 Wave Shapes, tested per C62.45

		<u>L-N</u>	<u>L-G</u>	<u>N-G</u>
Location Category A	200 A, 100 kHz Ring Wave	680 V	1040 V	960 V
Location Category B	500 A, 100 kHz Ring Wave	720 V	1060 V	980 V
	3 kA, 8/20 $\mu$ s Combination Wave	760 V	1100 V	1020 V
Location Category C	10 kA, 8/20 $\mu$ s Combination Wave	920 V	1240 V	1160 V
	20 kA, 8/20 $\mu$ s Combination Wave	1240 V	1560 V	1320 V
UL Suppression Voltage (L-N)				600 V
(L-G) (N-G)				900 V
Surge Energy Capability of all MOVs				21,500 Joules
Surge Life, per phase, 230 Vac applied,	3 kA, 8/20 $\mu$ s			> 50,000 operations
	10 kA, 8/20 $\mu$ 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<sup>®</sup> based PC via supplied **SURGITRON PM/PMT** software.

# SURGITRON® PM

Model 1457-85-PM

## 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

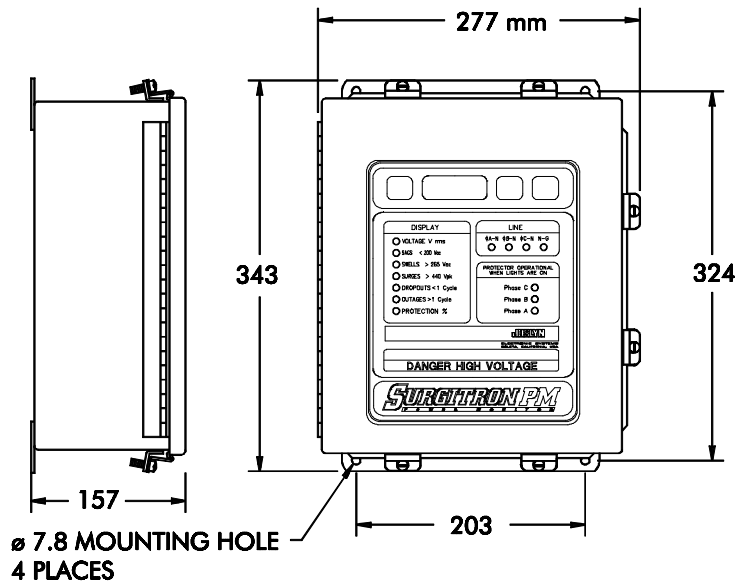
Saves counts to nonvolatile memory, maximum 999 counts per type

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

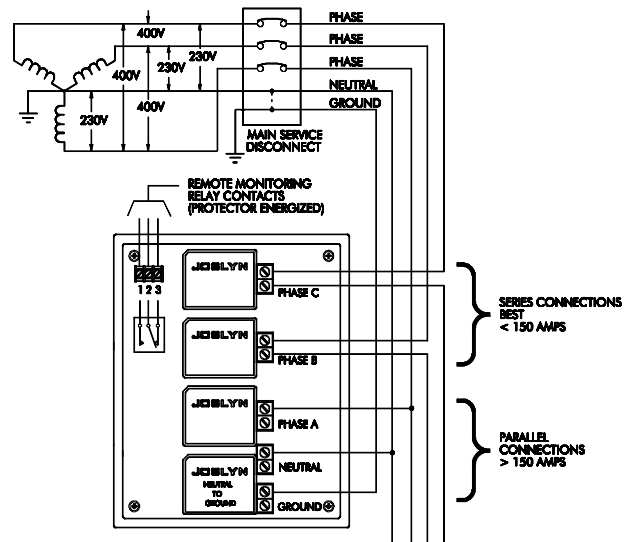
A 25% reduction of protection triggers an audible alarm that can be reset

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



SURGITRON® is a trademark of Joslyn Electronic Systems Company.

Windows95® is a trademark of Microsoft Corporation.