

COAXIAL SURGE ARRESTER BULKHEAD MOUNT

SUR87 SUR88 SERIES



SUR87 and SUR88 are concentric through bulkhead/panel mounts with N type connections incorporating an ultrafast gas discharge tube surge arrester.

In addition to providing lightning protection the device is particularly suitable for NEMP (Nuclear Electromagnetic Pulse) protection since the surge arrester will typically fire at under 1 kV at 1 kV/ns rate of rise of voltage.

The close coupling of the surge arrester to the inner and outer connections of the line ensures minimum inductance in the leads and hence minimum voltage across the line even at high rates of rise of current after the arrester has fired.

The stray capacitance of the arrester is matched to the impedance of the mount to give a 50 Ω through connection for SUR87 and 75 Ω for SUR88.

Applications

SUR87 or SUR88 typically will be used in rf applications such as in a transmitter or receiver. For a receiver lower voltages, either 90 volts or 230 volts, should be used for maximum protection.

For a transmitter care must be taken to ensure that the peak rf voltage is lower than the minimum DC Sparkover of the device. This will depend on the impedance, the VSWR at the maximum frequency, and the transmitter power. If this peak voltage is under 180 volts, to allow for a safety margin, then SUR87 or 88/230 should be used. If the peak voltage is more than this, but under 380 volts, then SUR87 or 88/550 should be chosen.

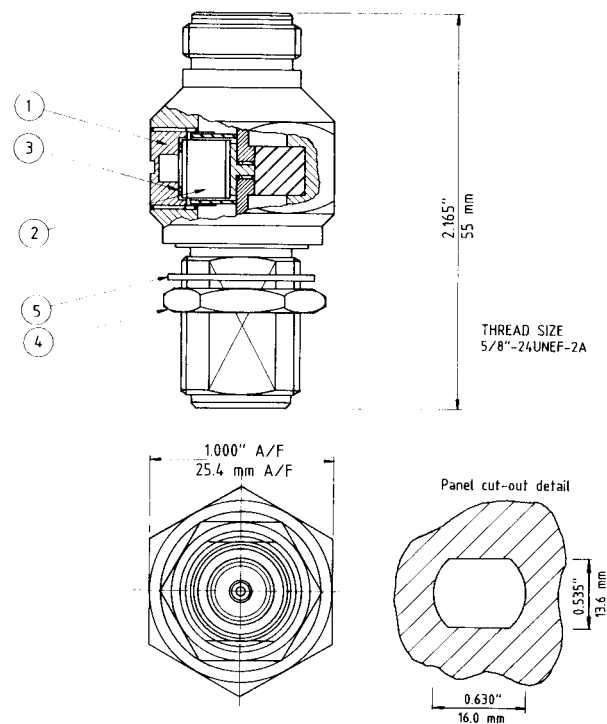
Surgetech would be pleased to give further advice on the calculation of peak voltages.

Electrical Characteristics	SUR87/90	SUR87/230	SUR87/550	
	SUR88/90	SUR88/230	SUR88/550	
DC Sparkover voltage	72 – 108	195 - 265	400 - 700	Volts
Impulse Discharge Current	5	5	5	kAmps (8/20 waveform)
AC Discharge Current	5	5	5	Amps
Impulse Sparkover Voltage	500	500	700	Volts (100V/μs)
	550	550	800	(1kV/μs)
	1000	1000	1200	(1kV/ns)
Holdover voltage	100	100	100	Volts

VSWR < 1.1 up to 500 MHz

Mounting and Dimensions

Mount the connector via hexagonal nut (4) and copper washer or supplied earth contact (5). To replace GDT (2) unscrew plug (1) and insert GDT with spring washer (3).



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