

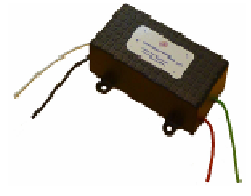


SurgeTek

Surge Energy Absorb & Transfer

SEAT Device for AC

Category C2 of IEEE/ANSI C62.41



PAW4-C2-15-480

SEAT device is a unique surge protection device (SPD). Surge interference only occurs when electrical loads are under working condition (i.e. there is a power supply); when loads are stored in a warehouse without a power supply, there is no interference problem. Therefore, a power system is required to prove that the installed surge protection device (SPD) can actually protect the loads when doing surge-testing and in service. There are many SPD in the market that have undergone testing without a power source. Then it neither prove SPD protect the load nor to ensure the load will still function well when surge interference invading.

Features :

- Applicable for ON-line surge test.
- Surge Protection for EMP, LFS, PSS and SIC.
- Excellent surge protection even in poor ground resistance.
- Tested by combination wave surge (1.2x50µs, 10KV / 8x20µs, 5KA) under ON-line condition with load.
- True series mode SPD.
- Wide operating voltage.
- Meet standard ANSI C62.41, level C2 (10KV/5KA), and IEC 61000-4-4, IEC 61000-4-5, IEC 61643-1, CNS 14676-4, CNS 14676-5.
- Enclosed metal case gives good EMI protection & high quality appearance.
- Surge Counter (MART) with sensitive adjustment.

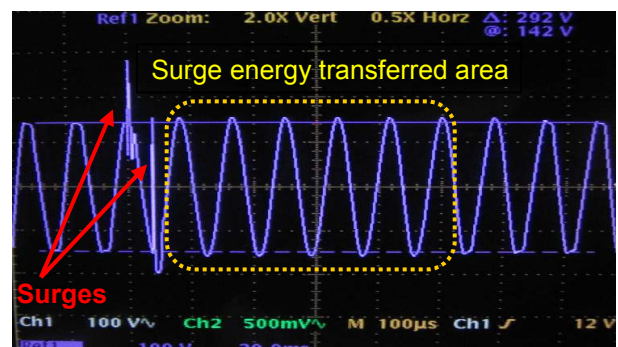
Thanks to new patented surge energy absorb and transfer circuits (SEAT) to produce various surge SEAT devices. It effectively suppresses interference sources such as lightning flash surges (LFS), power switching surges (PSS), switching inrush current (SIC), electric magnetic pulses (EMP) etc. Even under poor ground resistance condition, giving the load perfect protection.

We test SEAT device under a powered (on-line) condition and connect it to a laptop or PC as a load. This method ensures that SEAT does increase the facilities' immunity to interference and the loads can thus function normally with the presence of interference.


Surge-testing is done powered (on-line), under ungrounded condition and coupled with a 1.2 x 50µs, 10kV、 8 x 20µs, 5kA combination wave. (in accordance with ANSI/IEEE C62.41 category C2) SEAT absorbs surge energy and transferres it to AC waveform of loads. From the area marked in yellow in the diagram bellow, we can see that the peaks of the AC wave is approximately 6% higher than the peaks before surge coupling. Also note that the duration time affected by surge is less than 10 ms.

How does SEAT protect important loads?

We can see how it works from the waves produced when SEAT is operating.



SPECIFICATIONS

Model	PAW4		
	- C2 - 15-250	- C2 - 12-300	- C2 - 12-480
Material of Enclosed Case	Plastic case with IP68 against water		
Max. Current #	15A, 1ph 2W	12A, 1ph 2W	12A, 1ph 2W
AC Power Voltage	100~250V	100~300V	380~480V
Frequency	50Hz / 60Hz		
Max. Power Capacity	3.75KW	3.6KW	5.7KW
Method of Handling Surge Energy	Series Connection Surge Energy Absorb and Transfer		
Suppressing Surges	Lightning Flash Surge (LFS) ; power switching surges (PSS) ; Switching Inrush Current (SIC) ; Electric Magnetic Pulse (EMP)		
Max. Surge Current Ability	20KA		
Module Temperature at Max Current	< 40 °C		
Surge Immunity Test	More than 3 times continuous in 20 sec interval, at 1.2x50µs,10kV/ 8x20µs, 5kA Bi*_wave surge		
Surge Energy Absorbing Rate	≥ 97% , at 1.2x50µs,10kV / 8x20µs, 5kA , Combination wave surge (unground condition)		
AC Waveform Affected by Surge	≤ 10 mS, on-line and with load conditions		
AC Waveform Correction Ability	≥ 3 cycles , at 1-3A load current		
EMP Immunity Test & Absorbing Rate	≥ 93% , 4.5kV in 5x50ns waveform (unground condition)		
Residue Voltage	775V ±20%		1150V±20%
System Ground Resistance Demand	None		
Protective Mode	Line – Neutral		
Operation Temperature / Humidity Range	-10 ~ +85°C / 35 ~ 95% (non-condensation)		
Applicable Standards	ANSI C62.41 Category C2* ; ANSI C37.90-1 ; IEC 61643-1 X level of IEC 61000-4-4 ; IEC 61000-4-5 ; CNS 14676-4 and CNS 14676-5		
Dimension, mm	74 L 37 W 23 H	74 L 37 W 23 H	74 L 37 W 23 H
Weight, gram	85	85	85
Number of Connecting Terminals	4 L_{IN}, N_{IN}, L_{OUT}, N_{OUT}		
Surge Counter with Sensitive Adjustment	Not include		
Appearance			

Do not over current !

* Category C3 (1.2x50µs 20KV / 8x20µs 10KA), on request