

Series Surge Protection Device - SSPD

DPT-250C3-16 (DC, 250V, 16A) DIN rail



Thanks to new developed technology-*Energy Absorb & Transfer circuits* (EAT) to produce various SSPD devices. The Theory of EAT is to absorb and transfer surge energy to voltage (EAT2V) and then release to on top of later consecutive voltage sine wave (as below recorded wave), so that the sine wave voltage will rise up little bit, approx. 3~6%. Obviously, the theory of

EAT2V is unrelated to the earth resistance.

SSPD are able to effectively suppresses interference lightning flash surges(LFS), power switching surges(PSS), switching inrush current(SIC), and electric magnetic pulses(EMP) etc., even under poor ground resistance or no ground condition which is market like placebo lightning surge protection products cannot compare .

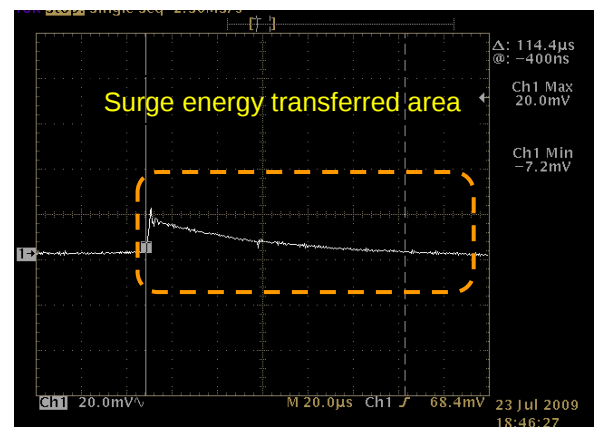
Feature :

- Excellent lightning & surge suppression performance **with NO ground conditions.**
- New effective suppresses interference technology - EAT2V.
- Surge Protection for LFS, EMP, PSS and SIC.
- Meet ANSI/IEEE C62.41 cat. C high exposure, IEC 61000-4-4, IEC 61000-4-5, IEC 61643 standards.
- DIN rail installation

Surge-testing is done powered (on-line), with no grounded condition and coupled with a $1.2 \times 50 \mu\text{s}$, 10 kV · $8 \times 20 \mu\text{s}$, 5 kA combination wave. (in accordance with ANSI/IEEE C62.41) SSPD absorbs surge energy and transferred it to DC waveform of loads. From the area marked in yellow in the diagram on left, we can see that the DC wave is higher than before surge coupling. Also note that the duration time affected by surge is less than 10 ms.

How does SSPD protect important loads?

Let's see how SSPD works from wave below measured when SSPD is operating.



SPECIFICATIONS

Model	DPT-250C3-16
Max. Load Current	16 A
Operating DC Voltage	100 Vdc ~ 250 Vdc
Connection	In series connection
Method of Handling Surge Invaded From Line	Energy Absorb and Transfer to Voltage (EAT2V)
Suppressing Surges	Lightning Flash Surge ; power switching surges ; Switching Inrush Current ; Electric Magnetic Pulse
Input Impedance in No Load	> 10 MΩ
Module Core Temperature at Max Load Current	< 40 °C
Max Impulse voltage test	15KV @ 1.2x50μs wave form
Surge Energy Absorbing Rate	98 % , at 1.2x50 μs,10 kV / 8x20 μs, 5 kA , Combination wave (no ground condition)
DC Waveform Recovering Time After Surge invasion	< 10 mS , ON-line and with load conditions
EMP Immunity Test & Absorbing Rate	95 % , 4.5 kV in 5x50 ns EFT (Burst) waveform
Residue Voltage on Load	660 Vp ±20 % (Combination wave surge)
Grounding Resistance Requirement	None
Connecting Terminals	In(+) , In(-) , Out(+) , Out(-)
Applicable Standards	ANSI C62.41 Category C High exposure ; ANSI C37.90 ; IEC 61643-1; IEC 61000-4-4 (X level); IEC 61000-4-5 (X level)
Dimension / Weight	78 L x 41 W x 39/52 H, mm / 320 g
Operation Temperature / Humidity Range	-40 °C ~ +85 °C / 35 % ~ 95 % (non-condensation)
Material of Enclosed Case	QMFZ2 fire proof plastic case
Installation	DIN rail
Applicable Connection	Able to parallel connection by 2 or 3 units to extend the capacity and the capability of surge suppression in DC application
Appearance	