

Surge Suppressors By:

ST-FDV-x/x-DC-3WP



"Power Quality is Our Business"

Parallel DC Connected Protection

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The ST-FDV-x/x-DC-3WP products provide the best transient protection available for critical DC loads. This device is intended for dual DC voltages in high to medium level exposure applications at locations feeding sensitive/critical equipment. It boasts a robust 20 kA per mode peak surge current rating. Its unique design makes installation a breeze and the product warranty is the best in the industry. Add to all that, encapsulated **Optimal Response Network™** circuitry, and you get a device that defines effective and reliable surge suppression. We offer the most versatile TVSS devices on the market with superior performance specifications and a warranty that is second to none.

GENERAL

Description:	Parallel-connected transient voltage surge suppressor with encapsulated Optimal Response Network™ circuitry.
Application:	Designed for use at ANSI/IEEE Category C3 locations with susceptibility up to the highest exposure levels to protect sensitive/critical loads.
Warranty:	25 Years Unlimited Free Replacement

MECHANICAL

Enclosure:	Plastic, UL 94 V-0
Mounting:	External mounting feet / DIN mounting feet (DIN option)
Connection Method:	# 12 AWG integrated wire leads provided
Shipping Weight:	< 1 lbs

CIRCUITRY

Circuit Design:	Parallel wired hybrid design incorporating discrete all mode protection and utilizing our encapsulated Optimal Response Network™ design to provide lowest possible let-through voltages. All suppression circuits are encapsulated in our high dielectric compound to assure long component life and complete protection from the environment and/or vibration.
Protection Modes:	Dedicated protection components and circuitry for each mode. Discrete P-N (Normal Mode) and P-G, N-G (Common Mode on 3 wire models only)

PERFORMANCE

Nominal Operating Voltages:	12 Vnom, 24 Vnom, 125 Vnom, 160 Vnom (other voltages available upon request)
Frequency Range:	DC
Peak Surge Current per Pair:	L-L 20 kA, L-G 20 kA

Table of Maximum Continuous Operating Limits:					
VERSIONS: ST-FDV-x/x-DC-3WP	Nominal System (Vdc)	Pos. to Neg. (Vdc)	Pos./Neg. to Gnd. (Vdc)	*Number of connections	Max. Breaker or Fuse Size
ST-FDV-12-DC-3WP	12 V.	15 V.	31 V.	3	15 Amp
ST-FDV -24-DC-3WP	24 V.	30 V.	60 V.	3	15 Amp
ST-FDV -125-DC-3WP	125 V.	150 V.	300 V.	3	15 Amp
ST-FDV -160-DC-3WP	160 V.	190 V.	380 V.	3	15 Amp

SAMPLE LET-THROUGH VOLTAGE PERFORMANCE AND ELECTRICAL SPECIFICATIONS					
Model	MCOV	Mode	*ANSI/IEEE C62.41.1 & C62.41.2 Measured Limiting Voltage Test Categories		
			A3 Ring Wave (6 kV, 200 A) 90° Phase Angle	B3/C1 Impulse Wave (6 kV, 3 kA) 90° Phase Angle	
ST-FDV-24/160-DC-3WP	30	P-N	190 (S)	300 (S)	
	190	P-N	450 (S)	600 (S)	

***Let-Through Voltage Test Environment:** All voltages are peak, positive polarity ($\pm 10\%$), Time Base = 10 μ sec. Tests performed at 90° are measured from the zero crossing point (reference) line) to the peak of the surge. Tests performed at 180° or 270° are measured from the insertion point to the peak of the surge. Static measurements (S) are made without power applied. Dynamic measurements (D) are made with power applied.

Note: (P-G, N-G) mode data is only applicable to 3-wire models.



Actual unit may vary from picture