Powerware DSFi

Single Phase High Performance Surge Filter

Product Focus

Series Filter with Shunt surge diverter,
1 Phase 5-32A, 50kA Primary

Features

- Surge suppression and filtering in a single package
- 2 mode, 5 Element Series Filter
- 3 mode, 2 Stage Surge Diverter
- Modular design
- Enclosed in IP20 painted steel housing
- Protection Fail Alarm Relay
- 5 Year Warranty

Typical applications:

- Secondary power circuits/Sub-boards
- UPS Systems and Rectifiers
- Telecommunications Systems and Rectifiers
- Process and Control Systems and UPS's up to 6kVA
- Computer Systems and Medical Systems
- AV circuits for clubs and hotels
- All sensitive Electronic Equipment

The DSFi is designed to provide secondary protection against power surges caused by external sources such as lightning strikes and substation switching as well as providing a measure of protection from surge events generated on the secondary side of the filter. An ideal device for Category B locations.

The DSFi is a 3-stage protection unit utilising primary and secondary MOV protection in conjunction with a 2-stage Low-Q LC filter (i.e. 2 inductive coils) using separate differential mode and common mode circuits. The unit provides filtering of the line harmonics, noise and RF transmitters with a cut-off frequency of <1.5kHz and a minimum attenuation of >55dB to 10MHz.

Secondary MOV protection (in all 3 modes) is located after the inductive coils, to provide further surge reduction and to protect against load-generated surges.

Technical Specifications

POWERWARE CSFi

Technical Specification	DSFi
Input voltage	200-250VAC 1 Phase
Maximum continuous voltage - MCOV	300VAC
Temporary overvoltage - TOV	320VAC, 15 mins
Service type	TT, TN, TN C-S or any single-phase system with a grounded neutral.
Energy Absorption rating - per mode (Joules)	Primary Protection L-N = 740 J Primary common mode protection L-E & N-E = 780 J Secondary protection L-N = 225J Secondary common mode protection L-E & N-E = 480J Aggregate rating = 2,225J
Current rating – continuous	5 - 32A
Recommended max. overcurrent protection	32A (C curve MCCB)
Short circuit withstand (1 sec)	Suitable for use with a 6kAIC C Curve MCB
Protection modes	Line-Neutral, Line-Earth, Neutral-Earth
In 8/20us (Line-Neutral)	15kA x 20 hits
In 8/20us (Line-Earth)	10kA x 20 hits
In 8/20us (Neutral-Earth)	10kA x 20 hits
Ismax 8/20us (Line-Neutral)	50kA
Ismax 8/20us (Line-Earth)	25kA
Ismax 8/20us (Neutral-Earth)	25kA
Residual voltage (Vpl) (Line-Neutral). (Let through voltage)	<1100 (3kA, 8/20uS)
Residual voltage (Vpl) (Line-Earth). (Let through voltage)	<1400 (3kA, 8/20uS)
Residual voltage (Vpl) (Neutral-Earth). (Let through voltage)	<1400 (3kA, 8/20uS)
Filter attenuation	> 55dB to 10MHz
Initial clamp voltage (Line-Neutral)	560V (350Vac RMS)
Initial clamp voltage (Line-Earth)	680V (420Vac RMS)
Initial clamp voltage (Neutral-Earth)	680V (420Vac RMS)
Internal protection (fusing)	Thermal
Terminations	$10mm^2$ PCB Mounted Terminals
Alarms/indicators	2 LED display, Power OK & Protection OK LEDs, Dry contact alarm relay output – 250Vac/32Vdc, 5A, 5kV isolation, Alarm under-voltage cutoff 180Vac
Enclosure rating	IP20
Design Standards:	IEC61643-1, IEC610006-1,2,3,4 ANSI/IEEE C62.41 Cat B,C,D,E AS1768-1991 Cat B,C,D,E AS3000,AS3100, CE mark
Dimensions & Weight	140 x 50 x 270 mm (W x D x H), 1.5kg
Environment	-10 to 65 C, 10 to 90%RH (non-condensing)

Due to continuing product improvement programs, specifications are subject to change without notice.

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