

TECHNICAL SPECIFICATION

CSFi SURGE FILTER

(Single Phase, 25A, 25kA Primary)

APPLICATIONS

- Secondary power circuits / Sub-boards
- Telecommunication Systems / Rectifiers
- Process and Control Systems / Homes & Units
- Computer Systems / Medical Systems
- All sensitive Electronic Equipment

FEATURES



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|---|---|
| ✓ Surge suppression and filtering in a single package | ✓ Enclosed in IP20 ABS Plastic housing |
| ✓ Small mounting footprint / Modular design | ✓ Protection fail alarm relay |
| ✓ 3 mode protection (L-N, L-E, N-E) | ✓ 3 stage protection (MOV, Inductor, MOV) |
| ✓ Surge suppression rating of 25kA (L-N) | ✓ 12 months warranty |

FUNCTIONAL DESCRIPTION

The CSFi 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. The unit has been designed in accordance with AS3100, AS1768, IEC61643-1, IEC61000-6-1, 2, 3, 4 and other standards and codes as applicable.

The CSFi is a 3-stage protection unit utilising primary and secondary MOV protection in conjunction with a Low-Q LC filter. The unit provides filtering of the line harmonics, noise and RF transmitters with a cut-off frequency of <10kHz and a minimum attenuation of 45dB above 1Mhz.

Secondary MOV protection (in all 3 modes) is located after the inductive coil, to provide further surge reduction and to protect against load-generated surges. An ideal device for Category B locations.

OPERATION

Indicators - The operation status of the CSFi is indicated by lamps on the front panel. The 'OK' light indicates that power is applied to the CSFi. The 'FAULT' light indicates that the surge protection circuitry is damaged and the unit should be replaced. When the fault indicator lights, the protection relay contacts change over. The power failure alarm will operate when mains voltage falls below 180VAC.

Enclosures - All models in the CSFi Series are made from quality ABS Plastic in accordance with standard UL94V2. The unit mounts onto 35mm DIN rail and is 4 pole wide.

WARRANTY

Eaton Power Quality warrants the CSFi series against faulty parts and workmanship for a period of 12 months from the date of purchase. For further information, refer to EATON Powerware warranty statement.

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Technical Specification – CSFi Rev A

Tvss Doc# 520033

PHYSICAL AND ELECTRICAL SPECIFICATIONS

Manufacturers name and model	CSFi	
Number of ports	2 Port	
Method of mounting	Fixed. DIN Rail mount	
Input voltage – Uc	200-250VAC 1Ø	
Maximum continuous voltage – MCOV	285VAC L-N	
Temporary overvoltage - TOV	300VAC L-N, 15 mins	
Service type	TT, TN, TN C-S or any 1-phase system with a grounded neutral. This unit must not be connected to an ungrounded system	
Test classification (according to IEC61643-1)	Class II	
Energy Absorption rating – per mode	Primary protection L-N = 370J Primary Common Mode protection L-E & N-E = 480J Secondary protection L-N = 225J Secondary Common Mode protection L-E & N-E = 480J Aggregate rating = 1,555J	
Current rating - continuous	25A	
Recommended maximum over current protection	25A	
Residual current	<1 mA	
Protection modes	Line-Neutral, Line-Earth, Neutral-Earth	
In 8/20us (Line-Neutral). Nominal surge life.	10kA x 20 hits	
In 8/20us (Line-Earth). Nominal surge life.	3kA x 20 hits	
In 8/20us (Neutral-Earth). Nominal surge life.	3kA x 20 hits	
Ismax 8/20us (Line-Neutral). Maximum surge level.	25kA	
Ismax 8/20us (Line-Earth). Maximum surge level.	10kA	
Ismax 8/20us (Neutral-Earth). Maximum surge level.	10kA	
Filter attenuation	45dB nominal above 1MHz	
Initial clamp voltage (Line-Neutral)	560V	
Initial clamp voltage (Line-Earth)	680V	
Initial clamp voltage (Neutral-Earth)	680V	
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)	
Internal protection (fusing)	All surge diverter connections are fused via HRC fuses to IEC269-2-1	
Thermal Fusing	On all MOV elements, 126°C	
External disconnecter requirements	Line side:	C curve MCB 25AMP
	Load side:	C curve MCB 25AMP
Terminations	6mm ² PCB mount	
Alarms/indicators	2 LED display, dry contact alarm relay output – 250VAC/32VDC, 5A, 5kV isolation. Alarm under-voltage cutoff 180VAC.	
Location Category	Indoor	
Enclosure rating	IP20	
Standards. Designed in accordance with :	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	
Installation instructions	Supplied with unit.	
Dimensions	70 x 58 x 90 mm (W x D X H)	
Weight	200g	
Environment	-10 to 60°C, 0 to 95%RH (non-condensing)	
Warranty	12 months, workmanship and materials	

NOTE:- Installation must be carried out by suitably qualified personnel. Please refer to installation instructions for details.

FRONT
PANEL
DISPLAY



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