

Surge Filter Catalogue





Prosurge, Inc - Florida, USA



Prosurge Electronics - Foshan, China

Prosurge is a globally competitive surge protection company and is one of the fastest growing companies in this industry. It consists of 2 companies:

Prosurge, Inc

Prosurge Electronics Co., Ltd

We start from a humble beginning by a group of experts and now we've grown into a business with more than 120 staffs. For the past 12 years, we extended our business in 6 continents and more than 60 countries. Although United States still remains our biggest single market, most of our revenue comes from international market.

Our mission is to protect millions of businesses, households and organizations from lightning & surge damages. Inspired and encouraged by this mission, we are doing things differently than many of our competitors.

We innovate. As an engineering driven company, we invest a way-above-average ratio of yearly revenue on R&D. This ensures Prosurge to be

among the very few companies who can offer the most complete SPDs on both UL and IEC standards markets.

We challenge. Using our ingenuity, we are raising the standards for SPD quality & reliability via designing, manufacturing and testing. Our SPD is one of the safest on the market.

We collaborate. The Prosurge team is one of the best in industry. We share the same value: pursue excellence in everything we do. Together, we are delivering world-class products and solutions.

We progress. Despite our accomplishment, We deem ourselves progressive instead of successful. With a continuous improving mentality, we are always bettering than we used to be.

We support. Our customers are supported and well-served in various ways: 2-hour response, technical training, video conference, regular visit, well-documented material ect. In fact, they are so loyal and satisfied that they are happy to write recommendation letters for us.

Trust us with confidence. Stay safe and sound with Prosurge!

Team



Bill Goldbach

Member of IEEE / UL 1449 Standard Board



Terry Mao

20 Years Expertise in SPD Industry

Two-port Surge Filter Introduction

Prosurge's surge filter is used to protect single/three phase electrical distribution systems, especially to protect sensitive electronics against the harmful effects of transient surges. These surges are the result of:

- Direct and indirect lightning strikes
- Power company load switching
- Upstream load switching at other facilities

It's found that electronic equipment is sensitive to both the absolute magnitude of the impulse voltage and its rise rate. The radical changes in dv/dt and di/dt , rather than the peak voltage, is the major

source of electronic circuit damages.

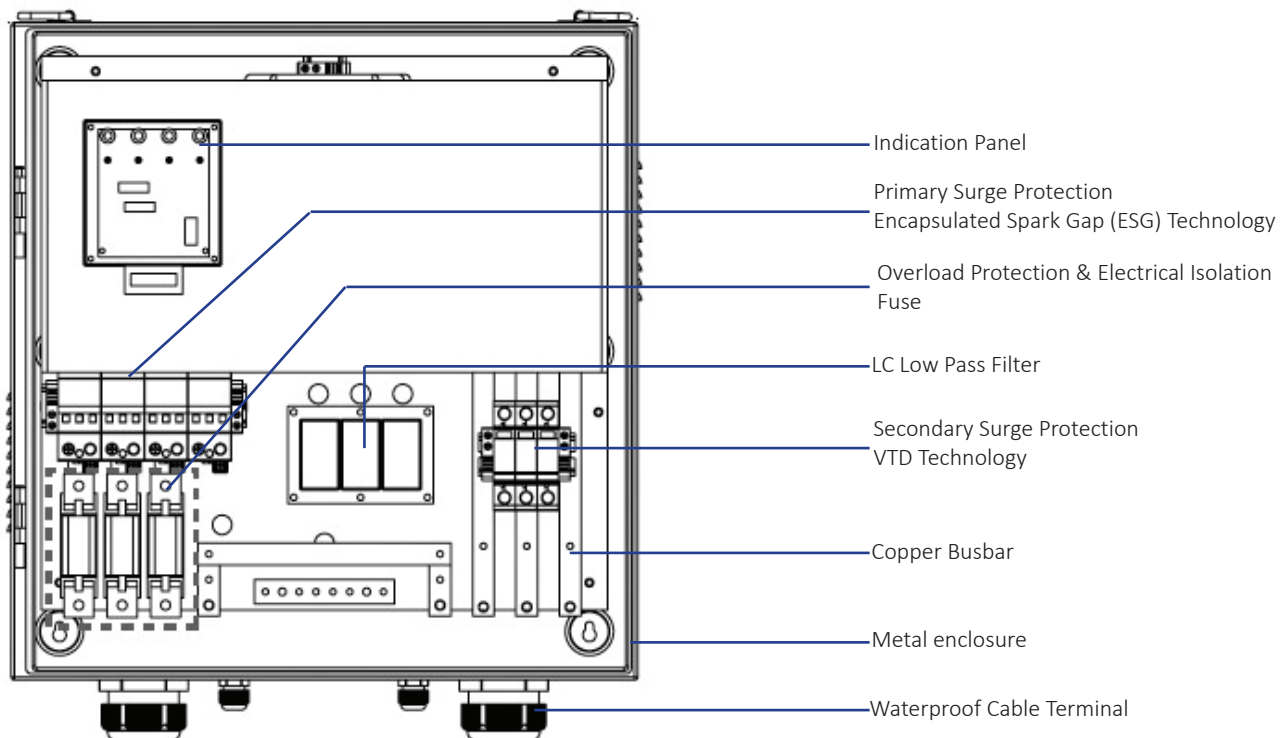
Prosurge's surge filter is designed as a 3-stage protection system which consists of primary protection & secondary protection and with a well-designed LC filter in series. The LC filter is used to slow down the inherently fast rise rate of voltage and current. The primary protection module is used to divert the strong lightning/surge current, while the secondary protection module & LC filter will limit the let-through voltage to a very low level.

The surge filter should be installed in series with the supply powering the equipment.

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- High Surge capacity: Up to 50kA 10/350 μ s or 10kA~200kA 8/20 μ s per mode available
- Surge capacity of N-PE mode up to 100kA 10/350 μ s
- Different load current: 10A ~ 800A available for single phase or 3 phase
- Built-in fuse in series for overload /short circuit protection
- All mode protection
- LED failure indication
- Remote alarm function available
- Surge counter optional

Product Internal Design



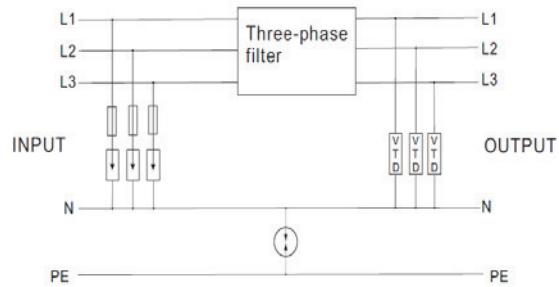
Three Phase 400A (200A ~ 800A Available)

Class I+II SPD

BSF200-3/...-400A-3PN-VTD-S



Product Picture for Reference Only

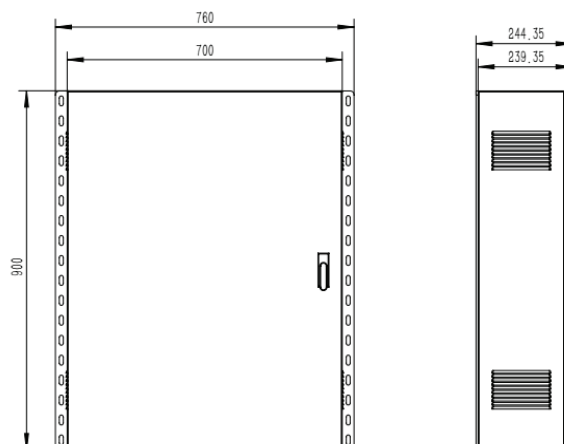


Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Prosurge ESG+VTD technology to further improve voltage clamping performance
- Application for 120~127V, 220~277V (L-N) TT/TN, or any three phase system with a grounded neutral
- Surge capacity: 25~50kA 10/350 μ s or 100~200kA 8/20 μ s (per mode)
- Surge capacity of N-PE mode up to 100kA 10/350 μ s
- Load current rating 400A. 200A~800A is available on request
- Built in backup fuse for fault current protection
- All mode protection, 3+1 protection circuit for TN-S and TT systems
- LED failure indication & remote alarm function available
- Metal enclosure, wall mounting
- Surge counter optional

Dimension Drawing



Technical Data

Model			BSF200-3/180-400A-3PN-VTD-S	BSF200-3/320-400A-3PN-VTD-S
Compliance			IEC61643-11; UL1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100	
Category IEC/EN/UL			Class I+II/ Type 1+2 / Type 2	
Ports/Protection Mode			All mode protection	
Protection Technology			ESG (primary) + VTD (secondary) technology GDT Technology for NPE mode LC filter Thermal disconnecter Built-in backup fuse	
Power System		U_n	120/208 to 127/220V three phase (TN/TT)	220/380 to 277/480 V three phase (TN/TT)
Max. Continuous Operating Voltage (AC/DC)		U_c	180V/230V	320V/420V
Rated Load Current		I_L	400A	
Nominal Discharge Current		I_n	50kA (8/20 μ s)	
Primary Surge Protection Rating	L-N		I_{imp} : 50kA (10/350 μ s), I_{max} : 150kA (8/20 μ s)	
	N-PE		I_{imp} : 100kA (10/350 μ s), I_{max} : 200kA(8/20 μ s)	
Secondary Surge Protection Rating	L-N	I_{max}	50kA(8/20 μ s)	
Total Surge Capacity Per Phase		I_{max}	200kA (8/20 μ s)	
Voltage Protection Level	L-N@6kV/3kA	VPR	<0.4kV	<0.5kV
	L-N@In(50kA, 8/20)	U_p	<0.8kV	< 1.0kV
	N-PE@1.2/50	U_p	< 1.0kV	< 1.5kV
Residual Current		I_{PE}	<0.1mA	
Voltage Drop			< 2V at 400A load	
Temporary Overvoltage TOV —Withstand Mode		U_{tov}	230V/120min	440V/120min
Response Time		t_A	≤ 1 ns	
Filter Attenuation		dB	>48dB @ 1MHz	
Built In Backup Over-Current Protection (Fuse In Primary Stage)			315A gL/gG (optional)	
Recommended External Over Current Protection In Series			400A Fuse or CB	
Lightning Counter Current			≤ 3 kA	
Protect Status Indication			4 LED display, Normal (Blue), Protection fault(Off)	
Remote Alarm			Dry contact alarm relay – 250Vac/32Vdc, 5A	
Connecting Cable			Power: 4/0 AWG(400A); Alarm: 14-22 AWG	
Environment			Temperature Range: - 40°C ~ +70°C Humidity: $\leq 95\%$ Altitude: ≤ 2000 m	
Mounting			Wall mounting	
Location Category			Indoor	
Degree of Protection			IP20	
Dimension			900mm (L) x760mm (W) x 245mm (H) approx	
Weight			82kg approx	
Approvals, Certification			CE	

Other Models

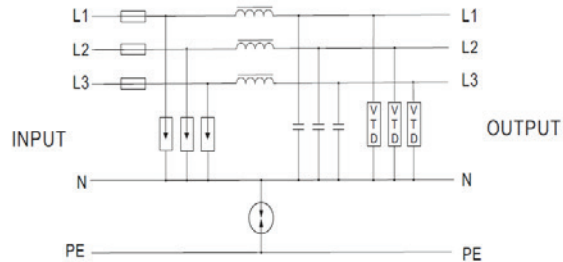
Power System	Load Current	Model Recommended	Recommended External Over Current Protection In Series	Built In Backup Over-Current Protection (Fuse In Primary Stage)
TN/TT three phase 4W+G	200A	BSF200-3/...-200A-3PN-VTD-S	200A CB/Fuse	125A gL/gG
	300A	BSF200-3/...-250A-3PN-VTD-S	300A CB/Fuse	200A gL/gG
	400A	BSF200-3/...-315A-3PN-VTD-S	400A CB/Fuse	250A gL/gG
	600A	BSF200-3/...-630A-3PN-VTD-S	600A CB/Fuse	315A gL/gG
	800A	BSF200-3/...-800A-3PN-VTD-S	800A CB/Fuse	315A gL/gG

Three Phase 125A

Class I+II SPD
BSF200-3/...-125A-3PN-VTD-S



Product Picture for Reference Only

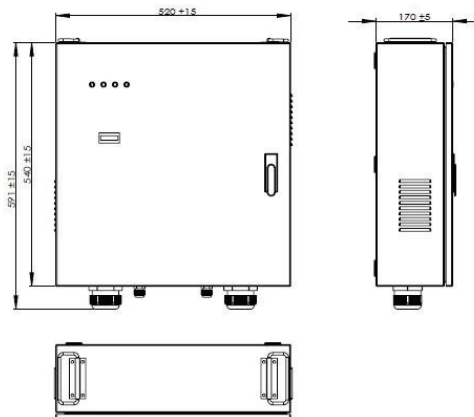


Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Prosurge ESG+VTD technology to further improve voltage clamping performance
- Application for 120~127V, 220~277V (L-N) TT/TN, or any three phase system with a grounded neutral
- Surge capacity: 50 kA 10/350 μ s or 150kA 8/20 μ s (per mode)
- Surge capacity of N-PE mode up to 100kA 10/350 μ s
- Load current rating 125A
- Built-in in series fuse for overload / short circuit protection available
- All mode protection, 3+1 protection circuit for TN-S and TT systems
- LED failure indication & remote alarm function available
- Metal enclosure, wall mounting
- Surge counter optional

Dimension Drawing



Technical Data

Model			BSF200-3/180-125A-3PN-VTD-S	BSF200-3/320-125A-3PN-VTD-S
Compliance			IEC61643-11; UL1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100	
Category IEC/EN/UL			Class I+II/ Type 1+2 / Type 2	
Ports/Protection Mode			All mode protection	
Protection Technology			ESG(primary)+ VTD(secondary) technology GDT Technology for NPE mode LC filter Thermal disconnecter Built-in over-current protection	
Power System		U _n	120/208 to 127/220V three phase (TN/TT)	220/380 to 277/480V three phase (TN/TT)
Max. Continuous Operating Voltage (AC/DC)		U _c	180V/230V	320V/420V
Rated load Current		I _L	125A	
Nominal Discharge Current		I _n	50kA (8/20μs)	
Primary Surge Protection Rating	L-N		I _{imp} : 50kA (10/350μs), I _{max} : 150kA (8/20μs)	
	N-PE		I _{imp} : 100kA (10/350μs), I _{max} : 200kA(8/20μs)	
Secondary Surge Protection Rating	L-N	I _{max}	50kA(8/20μs)	
Total surge capacity per phase		I _{max}	200kA (8/20μs)	
Voltage Protection Level	L-N@6kV/3kA	VPR	<0.4kV	<0.5kV
	L-N@ I _n (50kA, 8/20)	U _p	<0.8kV	< 1.0kV
	N-PE@1.2/50	U _p	< 1.0kV	< 1.5kV
Residual Current		I _{PE}	<0.1mA	
Voltage Drop			< 2V at 125 A load	
Temporary Overvoltage TOV —Withstand Mode		U _{tov}	230V/120min	440V/120min
Response Time		t _A	≤1ns	
Filter Attenuation		dB	>48dB @ 1MHz	
Built In Over Load/ Over-Current Protection In Series			125A (optional)	
Lightning Counter Current			≤ 3kA	
Protect Status Indication			4 LED display, Normal (Blue), Protection fault(Off)	
Remote Alarm			Dry contact alarm relay – 250Vac/32Vdc, 5A	
Connecting Cable			Power: 2-3AWG(100A/125A); Alarm: 14-22AWG	
Environment			Temperature Range: - 40°C ~ +70°C Humidity: ≤95% Altitude: ≤2000m	
Mounting			Wall mounting	
Location Category			Indoor	
Degree of Protection			IP20	
Dimension			520mm (L) x540mm (W) x 170mm (H) approx	
Weight			34kg approx	
Approvals, Certification			CE	

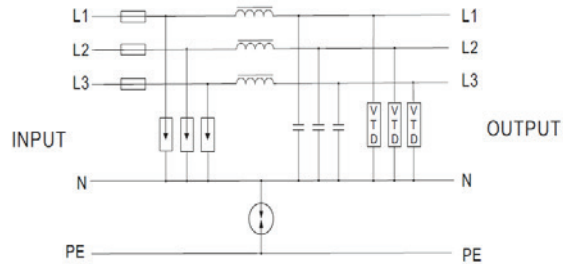
Three Phase 63A

Class I+II

BSF100-3/...-63A-3PN-VTD



Product Picture for Reference Only

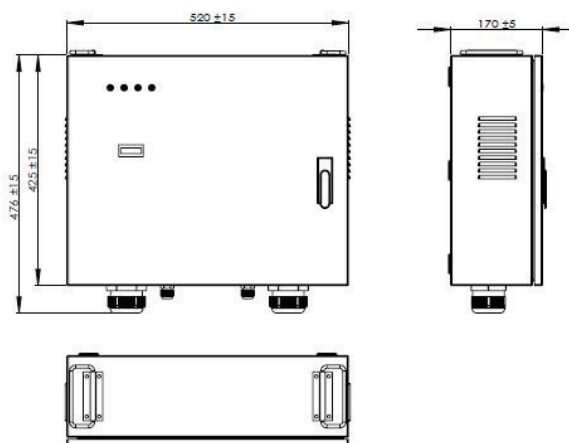


Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Prosurge ESG+VTD technology to further improve voltage clamping performance
- Application for 120~127V, 220~277V (L-N) TT/TN, or any three phase system with a grounded neutral
- Surge capability: 25 kA 10/350 μ s or 100kA 8/20 μ s (per mode)
- Surge capability of N-PE mode up to 100kA 10/350 μ s
- Load current rating 63A
- Built-in in series Fuse for overload /short circuit protection available
- All mode protection, 3+1 protection circuit for TN-S and TT systems
- LED failure indication & remote alarm function available
- Metal enclosure, wall mounting
- Surge counter optional

Dimension Drawing



Technical Data

Model			BSF100-3/180-63A-3PN-VTD-S	BSF100-3/320-63A-3PN-VTD-S
Compliance			IEC61643-11; UL1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100	
Category IEC/EN/UL			Class I+II/ Type 1+2 / Type 2	
Ports/Protection Mode			All mode protection	
Protection Technology			ESG (primary)+ VTD (secondary) technology GDT Technology for NPE mode LC filter Thermal disconnecter Built-in over-current protection	
Power System		U_n	120/208V to 127/220V Three phase (TN/TT)	220/380V to 277/480V Three phase (TN/TT)
Max. Continuous Operating Voltage (AC/DC)		U_c	180V/230V	320V/420V
Rated Load Current		I_L	63A	
Nominal Discharge Current		I_n	25kA (8/20 μ s)	
Primary Surge Protection Rating	L-N		I_{imp} : 25kA (10/350 μ s), I_{max} : 100kA (8/20 μ s)	
	N-PE		I_{imp} : 100kA (10/350 μ s), I_{max} : 200kA (8/20 μ s)	
Secondary Surge Protection Rating	L-N	I_{max}	50kA (8/20 μ s)	
Total Surge Capacity Per Line		I_{total}	150kA (8/20 μ s)	
Voltage Protection Level	L-N@6kV/3kA	VPR	<0.4kV	<0.5kV
	L-N@In	U_p	<0.7kV	< 0.85kV
	N-PE@1.2/50	U_p	< 1.0kV	< 1.5kV
Residual Current		I_{PE}	<0.1mA	
Voltage Drop			< 2V at 63 A load	
Temporary Overvoltage TOV —Withstand Mode		U_{tov}	230V/120min	440V/120min
Response Time		t_A	$\leq 1ns$	
Filter Attenuation		dB	>48dB @ 1MHz	
Built In Over Load/ Over-Current Protection In Series			63A (optional)	
Lightning Counter Current			$\leq 3kA$	
Protect Status Indication			4 LED display, Normal (Blue), Protection fault(Off)	
Remote Alarm			Dry contact alarm relay – 250Vac/32Vdc, 5A	
Connecting Cable			Power: 6-8 AWG(50A/63A); Alarm 14-22 AWG	
Environment			Temperature Range:- 40°C ~ +70°C Humidity: $\leq 95\%$ Altitude: $\leq 2000m$	
Mounting			Wall mounting	
Location Category			Indoor	
Degree of Protection			IP20	
Dimension			520mm (L) x 425mm (W) x 170mm (H) approx	
Weight			30kg approx	
Approvals, Certification			CE	

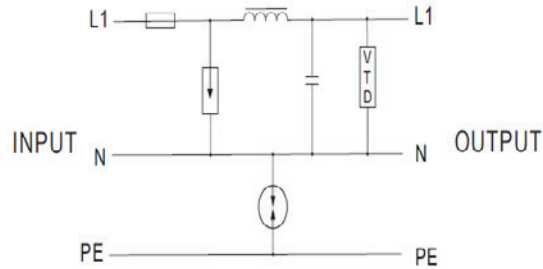
Single Phase 63A/125A

Class I+II

BSF100-1/...-63A-PN-VTD-S



Product Picture for Reference Only

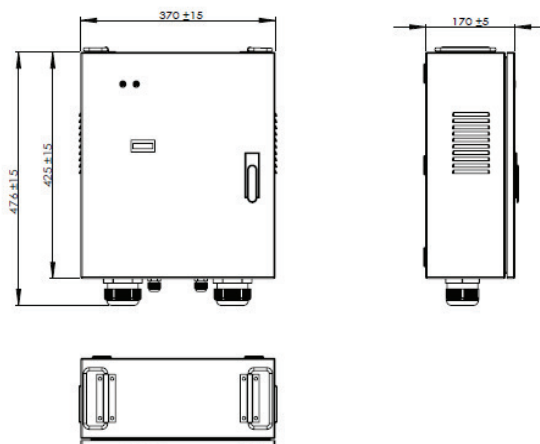


Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Prosurge ESG+VTD technology to further improve voltage clamping performance
- Application for 120~127V, 220~277V (L-N) TT/TN, or any single phase system with a grounded neutral
- Surge capacity: 25 kA 10/350 μ s or 100kA 8/20 μ s (per mode)
- Surge capacity of N-PE mode up to 100kA 10/350 μ s
- Load current rating 63A. 125A is available
- Built-in in series fuse for overload /short circuit protection available
- All mode protection, 1+1 protection circuit for TN-S and TT systems
- LED failure indication & remote alarm function available
- Metal enclosure, wall mounting
- Surge counter optional

Dimension Drawing



Technical Data

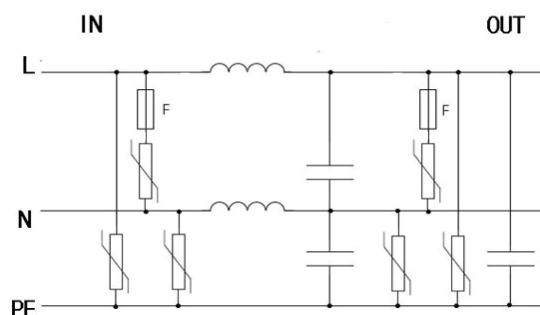
Model			BSF100-1/180-63A-PN-VTD-S	BSF100-1/320-63A-PN-VTD-S
Compliance			IEC61643-11; UL1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100	
Category IEC/EN/UL			Class I+II / Type 1+2 / Type 2	
Ports/Protection Mode			All mode protection	
Protection Technology			ESG(primary)+ VTD(secondary) technology GDT technology for NPE mode LC filter Thermal disconnecter Built-in over-current protection	
Power System		U_n	120~127V single phase	220-277V single phase
Max. Continuous Operating Voltage (AC/DC)		U_c	180/230V	320/420V
Rated Load Current		I_L	63A	
Nominal Discharge Current		I_n	25kA (8/20μs)	
Primary Surge Protection Rating	L-N		I_{imp} : 25kA (10/350μs), I_{max} : 100kA (8/20μs)	
	N-PE		I_{imp} : 100kA (10/350μs), I_{max} : 200kA (8/20μs)	
Secondary Surge Protection Rating	L-N	I_{max}	50kA(8/20μs)	
Total Surge Capacity Per Line		I_{total}	150kA (8/20μs)	
Voltage Protection Level	L-N@6kV/3kA	VPR	<0.4kV	<0.5kV
	L-N@ I_n	U_p	<0.7kV	< 0.85kV
	N-PE@1.2/50	U_p	< 1.0kV	< 1.5kV
Residual Current		I_{PE}	<0.1mA	
Voltage Drop			< 2V at 63 A load	
Temporary Overvoltage TOV — Withstand Mode		U_{tov}	230V/120min	440VAC/120min
Response Time		t_A	≤1ns	
Filter Attenuation		dB	>48dB @ 1MHz	
Built In Over Load/ Over-Current Protection In Series			63A (optional)	
Lightning Counter Current			≤ 3kA	
Protect Status Indication			2 LED display, Normal (Blue), Protection fault(Off)	
Remote Alarm			Dry contact alarm relay – 250Vac/32Vdc, 5A	
Connecting Cable			Power: 6-8 AWG(50A/63A); Alarm: 14-22 AWG	
Environment			Temperature Range: - 40°C ~ +70°C Humidity: ≤95% Altitude: ≤2000m	
Mounting			Wall mounting	
Location Category			Indoor	
Degree of Protection			IP20	
Dimension			425mm (L) x370mm (W) x 170mm (H) approx	
Weight			20kg approx	
Approvals, Certification			CE	

Other Models

Power System	Load Current	Model Recommended	Recommended External Over Current Protection In Series	Built In Over Load/ Over-Current Protection in Series
Single phase 2W+G	125A	BSF100-1/...-125A-PN-VTD-S	\	125A gL/gG

Single Phase 45A/32A/20A

Class II+III SPD
BSF50-1/...-45A-3P-S



Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Application for 120~127V, 220~277V (L-N) TT/TN, or any single phase system with a grounded neutral
- Surge capacity 50kA 8/20 μ s
- Load current rating 45A, 20~32A is available
- Built in backup fuse for fault current protection
- All mode protection
- LED failure indication & remote alarm function available
- Metal enclosure, wall mounting

Technical Data

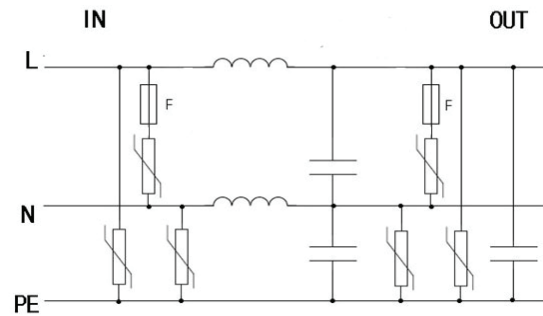
Model			BSF50-1/180-45A-3P-S	BSF50-1/320-45A-3P-S	BSF50-1/420-45A-3P-S	BSF50-1/550-45A-3P-S
Compliance			IEC61643-11; UL1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100			
Category IEC/EN/UL			Class II+III / Type 2+3 / Type 2			
Ports/Protection Mode			All mode protection			
Protection Technology			MOV technology Thermal protection LC filter Built-in backup fuse			
Power System		U _n	120~127V single phase	220-277V single phase	347V single phase	480V single phase
Max. Continuous Operating Voltage (AC/DC)		U _c	180/230V	320/420V	420/560V	550/745V
Rated Load Current		I _L	45A			
Nominal Discharge Current(8/20μs)		I _n	L-N 20kA, N-E 10kA, L-E 10kA			
Max. Discharge Current(8/20μs)		I _{max}	L-N 50kA, N-E 25kA, L-E 25kA			
Voltage Impulse (1.2/50μs)		U _{oc}	20kV			
Total Surge Capacity Per Line		I _{total}	150kA (8/20μs)			
Voltage Protection Level	L-N @6kV/3kA	VPR	<0.6kV	<1.0kV	<1.4kV	<2.0kV
	L/N-PE@6kV/3kA	VPR	<0.7kV	<1.2kV	<1.6kV	<2.2kV
	L-N @In	U _p	<0.8kV	<1.2kV	<1.6kV	<2.3kV
	L/N-PE@In	U _p	<0.9kV	<1.4kV	<1.8kV	<2.5kV
Residual Current		I _{PE}	<1mA			
Voltage Drop			< 2V at rated load current			
Temporary Overvoltage TOV —Withstand Mode		U _{toV}	240V/5s	400V/5s	600V/5s	690V/5s
Response Time		t _A	<5ns			
Filter Attenuation		dB	>60dB @ 1MHz >15dB @ 100kHz >0.5dB @ 1kHz			
Recommended External Over Current Protection In Series			45A Fuse or CB			
Protect Status Indication			2 part display, Power OK, Protection fault			
Remote Alarm			Dry contact alarm relay – 250Vac/32Vdc, 5A			
Connecting Cable			Power: 8-10 AWG; Alarm: 14-22 AWG			
Environment			Temperature Range: - 10°C ~ +60°C Humidity: ≤95% Altitude: ≤2000m			
Mounting			Wall mounting			
Location Category			Indoor			
Degree of Protection			IP20			
Dimension			220mm (L) x 143mm (W) x48 mm (H) approx			
Weight			1.2kg approx			
Approvals, Certification			CE			

Other Models

Power System	Load Current	Model Recommended	Recommended External Over Current Protection In Series
Single phase 2W+G	20A	BSF50-1/...-20A-3P-S	20A CB/Fuse
	32A	BSF50-1/...-32A-3P-S	32A CB/Fuse

Single Phase 16/10A

Class II+III SPD
BSF40-1/320-16A (-10A)-3P



Basic circuit diagram

Features

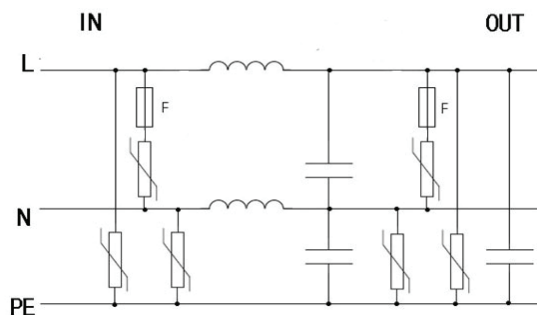
- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Application for 220~277V (L-N) TT/TN, or any single phase system with a grounded neutral
- Surge capacity: 40kA 8/20 μ s
- Load current rating 16A, 10A is available
- Built in backup fuse for fault current protection
- All mode protection
- IEC socket for easy wiring
- LED failure indication

Technical Data

Model			BSF40-1/320-10A-3P	BSF40-1/320-16A-3P
Compliance			IEC61643-11; UL1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100	
Category IEC/EN/UL			Class II+III / Type 2+3 / Type 2	
Ports/Protection Mode			All mode protection	
Protection Technology			MOV technology Thermal protection LC filter Built-in backup fuse	
Power System		U _n	220-277V single phase	220-277V single phase
Max. Continuous Operating Voltage (AC/DC)		U _c	320/420V	320/420V
Rated Load Current		I _L	10A	16A
Nominal Discharge Current (8/20μs)		I _n	L-N 20kA, N-E 5kA, L-E 5kA	
Max. Discharge Current (8/20μs)		I _{max}	L-N 40kA, N-E 10kA, L-E 10kA	
Voltage Impulse (1.2/50μs)		U _{oc}	20kV	
Total Surge Capacity Per Line		I _{total}	100kA (8/20μs)	
Voltage Protection Level	L-N @6kV/3kA	VPR	<1.0kV	
	L/N-PE@6kV/3kA	VPR	<1.2kV	
	L-N @In	U _p	<1.2kV	
	L/N-PE@In	U _p	<1.4kV	
Residual Current		I _{PE}	<1mA	
Voltage Drop			< 2V at rated load current	
Temporary Overvoltage TOV —Withstand Mode		U _{tov}	400V/5s	
Response Time		t _A	<5ns	
Filter Attenuation		dB	>40dB @ 1MHz	
Recommended External Over Current Protection In Series			10A Fuse or CB	16A Fuse or CB
Protect Status Indication			2 part display, Power OK, Protection fault	
Connecting Cable			IEC320 10A input x 1, IEC320 10A output x 1	IEC320 16A input x 1, IEC320 16A output x 1
Environment			Temperature Range: - 10°C~ +60°C Humidity: ≤95% Altitude: ≤2000m	
Mounting			Portable	
Location Category			Indoor	
Degree of Protection			IP20	
Dimension			152mm (L) x 133mm (W) x 48mm (H) approx	
Weight			0.8kg approx	
Approvals, Certification			CE	

Single Phase 25/16A

Class III SPD
DSF25/...-25A/3P/C-S

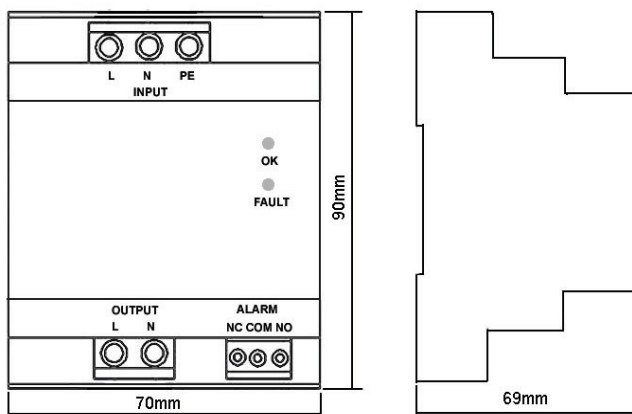


Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Application for 120~127V, 220~277V (L-N) TT/TN, or any 1-phase system with a grounded neutral
- Surge capacity 25kA 8/20 μ s
- Load current rating 25A, 16A is available
- Built in backup fuse for fault current protection
- All mode protection
- LED failure indication
- Remote alarm function available
- Easy installation on DIN rails

Dimension Drawing



Technical Data

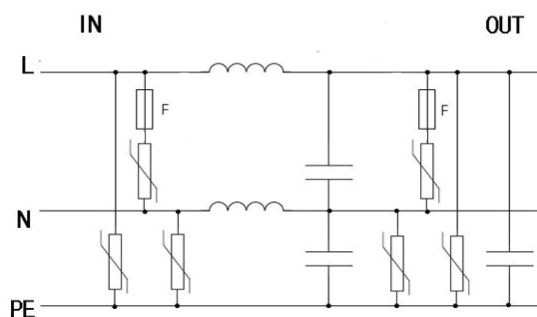
Model			DSF25/175-25A/3P/C-S	DSF25/320-25A/3P/C-S
Compliance			IEC61643-11; UL 1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991; AS3100	
Category IEC/EN/UL			Class III / Type 3	
Ports/Protection Mode			All mode protection	
Protection Technology			MOV technology Thermal protection LC filter Built-in backup fuse	
Power System		U_n	120-127V single phase	220-277V single phase
Max. Continuous Operating Voltage (AC/DC)		U_c	175/230V	320/420V
Rated Load Current		I_L	25A	
Nominal Discharge Current (8/20μs)		I_n	L-N 10kA, N-E 3kA, L-E 3kA	
Max. Discharge Current (8/20μs)		I_{max}	L-N 25kA, N-E 6kA, L-E 6kA	
Voltage Impulse (1.2/50μs)		U_{oc}	10kV	
Total Surge Capacity Per Line (8/20μs)		I_{total}	31 kA	
Voltage Protection Level	L-N @6kV/3kA	VPR	<0.7kV	<1.0kV
	L-N @In	U_p	<0.8kV	<1.2kV
Residual Current		I_{PE}	<1mA	
Voltage Drop			< 2V at rated load current	
Temporary Overvoltage TOV — Withstand Mode		U_{tov}	195V/5s	370V/5s
Response Time		t_A	<5ns	
Filter Attenuation		dB	>45dB @ 1MHz	
Recommended External Over Current Protection In Series			25A Fuse or CB	
Protect Status Indication			2 part display, Power OK, Protection fault	
Remote Alarm			Dry contact alarm relay – 125Vac 1A; 30Vdc, 2A	
Connecting Cable			Power: single-strand 6mm ² ; multi-strand 4mm ² Remote: 1.5 mm ² (16 AWG)	
Environment			Temperature Range: - 10°C ~ +60°C Humidity: ≤95% Altitude: ≤2000m	
Mounting			35mm DIN-rail in accordance with EN 50022/DIN46277-3	
Location Category			Indoor	
Degree of Protection			IP20	
Dimension			90mm (L) x 70mm (W) x 69mm (H) approx	
Approvals, Certification			CE	

Other Models

Power System	Load Current	Model Recommended	Recommended External Over Current Protection In Series
Single phase 2W+G	16A	DSF25/...-16A/3P/C-S	16A CB/Fuse

Single Phase 10A

Class III SPD
DS10/...-10A/3P/C

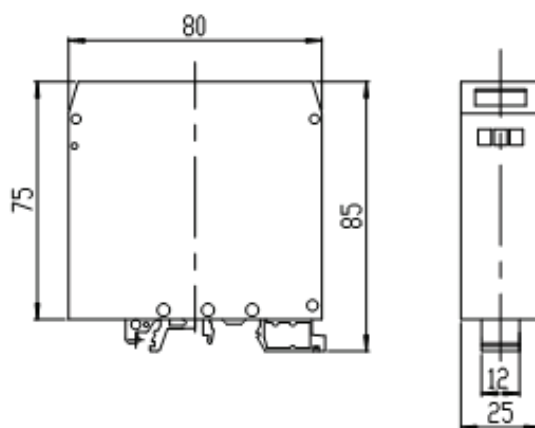


Basic circuit diagram

Features

- Multi-stage protection circuit with LC Filter design to protect sensitive electronics
- Provides extensive high frequency & RF filtering
- Application for 120~127V, 220~277V (L-N) TT/TN, or any 1-phase system with a grounded neutral
- Surge capacity 10kA 8/20 μ s
- Load current rating 10A
- Built in backup fuse for fault current protection
- All mode protection
- LED failure indication
- Easy installation on DIN rails

Dimension Drawing



Technical Data

Model			DSF10/175-10A/3P/C	DSF10/320-10A/3P/C
Compliance			IEC 61643-11; UL 1449 4 th ; IEC61000-6; ANSI/IEEE C62.41; AS1768-1991;AS3100	
Category IEC/EN/UL			Class III/ Type 3	
Ports/Protection Mode			All mode protection	
Protection Technology			MOV technology Thermal protection LC filter Built-in backup fuse	
Power System		U_n	120-127V single phase	220-277V sing phase
Max. Continuous Operating Voltage (AC/DC)		U_c	175/230V	320/420V
Rated Load Current		I_L	10A	
Nominal Discharge Current (8/20μs)		I_n	5kA	
Max. Discharge Current (8/20μs)		I_{max}	10kA	
Voltage Impulse (1.2/50μs)		U_{oc}	10kV	
Total Surge Capacity Per Line (8/20μs)		I_{total}	40 kA	
Voltage Protection Level	L-N @6kV/3kA	VPR	<0.7kV	<1.0kV
	L-N @In	U_p	<0.8kV	<1.2kV
Residual Current		I_{PE}	<1mA	
Voltage Drop			< 2V at rated load current	
Temporary Overvoltage TOV —Withstand Mode		U_{tov}	195V/5s	370V/5s
Response Time		t_A	<5ns	
Filter Attenuation		dB	>40dB @ 1MHz	
Recommended External Over Current Protection In Series			10A Fuse or CB	
Protect Status Indication			LED Alarm, Green- Normal, LED off- fail	
Connecting Cable			multi-strand 2.5mm ²	
Environment			Temperature Range: - 10°C ~ +60°C Humidity: ≤95% Altitude: ≤2000m	
Mounting			35mm DIN-rail in accordance with EN 50022/DIN46277-3	
Location Category			Indoor	
Degree oOf Protection			IP20	
Dimension			80mm(L)×25mm(W)×85mm(H) approx	
Approvals, Certification			CE	

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