

Technical Information Sheet

SFD3 - Three Phase Surge Filters



Compact DIN Surge Filter

Novaris DIN mount Surge Filter are suitable for installation in circuits up to 32A. The SFD range has been engineered to protect sensitive loads.

Compact design

Their compact design makes them an ideal choice for space restricted applications.

All Mode Protection

Protection is provided for all combinations of lines (L-N, L-E, N-E) ensuring the maximum level of protection is achieved at all times.

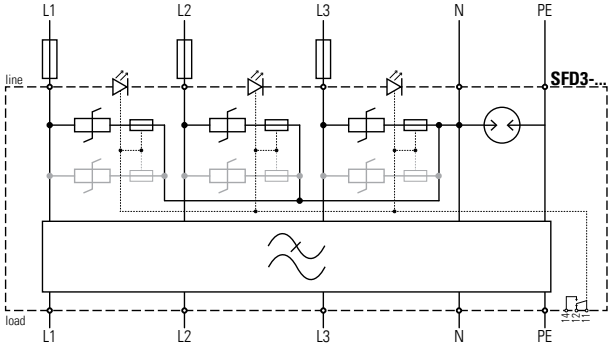
Safe Metal Enclosure

Novaris surge protection products are housed in safe, all metal enclosures. In the event of a prolonged overvoltage they will not catch fire or explode.

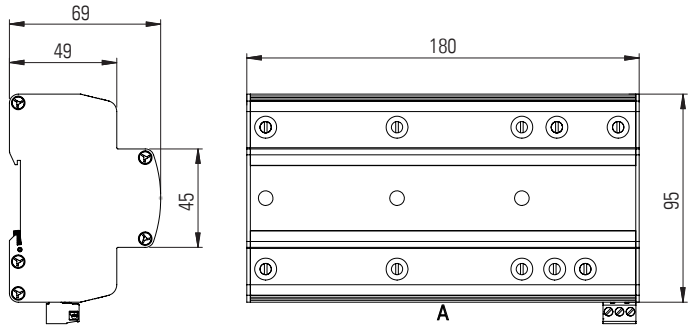
Three stages of protection

Novaris surge filters have 2 stages of varistor protection separated by a low pass LC filter. This 3 stage combination reduces the effects of high frequency noise and transients to provide the highest level of protection to sensitive loads.

Diagram / Installation



Dimensions



Ordering Information

	Low exposure		Medium exposure		Options		
	Single Phase	Three Phase	Single Phase	Three Phase	SFD Version	SPDT alarm contact	Polycarbonate enclosure
Max Load Current							
6A	SFD1-6-6.5-275	SFD3-10-50-275-A	SFD1-20-100-275	SFM-Series	—	—	-P
10 A	SFD1-10-50-275	SFD3-10-50-275-A	SFD1-20-100-275	SFM-Series	SFDx-10-50-275-A	Standard	-P
20 A	SFD1-20-50-275	SFD3-20-50-275-A	SFD1-20-100-275	SFM-Series	SFDx-20-50-275-A	Standard	-P
32 A	SFD1-32-50-275	SFD3-32-50-275-A	SFD1-32-100-275	SFM-Series	SFDx-32-50-275-A	Standard	-P



Product Specifications

Model	SFD3-10-50-275-A	SFD3-20-50-275-A	SFD3-32-50-275-A
Electrical Specifications			
Connection type	Series	Series	Series
Modes of protection	L-N, L-PE, N-PE	L-N, L-PE, N-PE	L-N, L-PE, N-PE
Phases	3	3	3
Nominal voltage	U_o 230 VAC	230 VAC	230 VAC
Short circuit withstand level	I_{SCCR} 25 kA	25 kA	25 kA
Maximum backup fuse (gL/gG)	10 A	20 A	32 A
L-N			
Maximum continuous voltage	U_c 275 VAC	275 VAC	275 VAC
Maximum load current	I_L 10 A	20 A	32 A
Maximum voltage Drop (% of U_o)	ΔU < 1%	< 1%	< 1%
3 dB Frequency at 50 Ω	2600 kHz	800 Hz	380 Hz
Maximum discharge current (8/20 μ s)	I_{max} 50 kA	50 kA	50 kA
Lightning impulse current (10/350 μ s)	I_{imp} 3 kA	3 kA	3 kA
Nominal discharge current (8/20 μ s)	I_n 20 kA	20 kA	20 kA
Voltage protection level @ 3 kA 8/20 μ s	U_p < 600 V	< 600 V	< 650 V
Voltage protection level @ I_n	U_p < 1000V	< 1000V	< 1100V
Load side surge withstand (nominal)	10 kA	10 kA	10 kA
Response time	t_A Instantaneous	Instantaneous	Instantaneous
Temporary overvoltage (TOV)	U_T	440V / 5 sec	
N-PE			
Maximum continuous voltage	U_c 255 VAC	255 VAC	255 VAC
Maximum discharge current (8/20 μ s)	I_{max} 60 kA	60 kA	60 kA
Lightning impulse current (10/350 μ s)	I_{imp} 15 kA	15 kA	15 kA
Nominal discharge current (8/20 μ s)	I_n 50 kA	50 kA	50 kA
Voltage protection level @ 1 kV/ μ s	U_p < 700 V	< 700 V	< 700 V
Voltage protection level @ I_n	U_p < 1300 V	< 1300 V	< 1300 V
Response time	t_A < 100 ns	< 100 ns	< 100 ns
Temporary overvoltage (TOV)	U_T 1200 V / 0.2 s	1200 V / 0.2 s	1200 V / 0.2 s
Follow current interrupt rating	I_{fi} 100 A	100 A	100 A
Earth leakage current	< 10 μ A	< 10 μ A	< 10 μ A
Indication			
Display	LED status per phase		
External alarm	Standard		
Display / Alarm function	segment / thermal failure, SPDT voltage free contact		
Alarm isolation	4 kV		
Mechanical Specifications			
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
Humidity Range	5 to 95% non-condensing	5 to 95% non-condensing	5 to 95% non-condensing
Terminal capacity – power	2.5 – 16 mm ²	2.5 – 16 mm ²	2.5 – 16 mm ²
Terminal capacity – alarms	0.5 – 2.5 mm ²	0.5 – 2.5 mm ²	0.5 – 2.5 mm ²
Terminal screw torque – power	2.0 Nm	2.0 Nm	2.0 Nm
Terminal screw torque – alarm	0.5 Nm	0.5 Nm	0.5 Nm
Environmental / Location	IP 20 / Indoor	IP 20 / Indoor	IP 20 / Indoor
Dimensional Drawing	A	A	A
Device width	180 mm	180 mm	180 mm
Mounting	TS35 DIN rail / Panel mount		
Enclosure / Colour	Metal / Black		
Standards			
IEC 61643-11:2011	SPD connected to low-voltage power systems - Type 2+3		
AS/NZS 1768:2007	A.C. power system SPD - Cat C1, B, A		
UL 1449 3 rd edition	Low voltage SPD - Type 3 (< 10 m from device)		
IEEE 62.41.2:2002	Low voltage SPD - Cat C (< 10 m from device)		
Shipping			
Weight	1.2 kg	1.3 kg	1.3 kg
Customs Tariff	85354010	85354010	85354010

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