

SDD - DINsafe Surge Diverter



Distribution Board Surge Protection

Use DIN compliant SDD Surge Diverters for distribution boards or for point of entry protection in small industrial and domestic applications. Two layers of surge protection devices greatly improve the performance and reliability of the surge protection system.

All Mode Protection

Protection is provided for all combinations of lines ensuring the maximum level of protection is achieved at all times.

Thermal Sensing

Sustained overvoltages can cause components to overheat and degrade. Thermal sensing warns of this condition without disconnecting the protection.

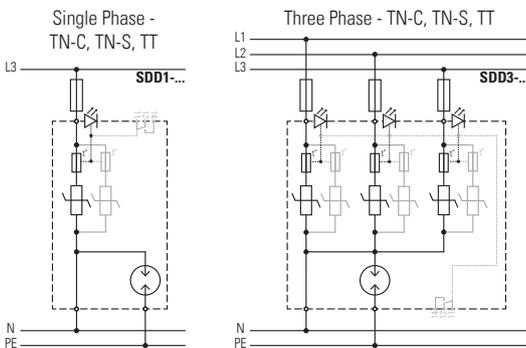
LED Status Active Display

The LED display indicates phase status and normal operation when all LEDs are lit. An extinguished LED indicates a component failure or thermal overload, also initiating the optional external alarm.

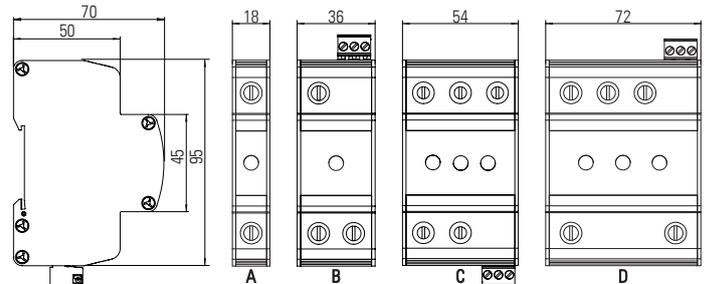
Safe Metal Enclosure

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

Diagram / Installation



Dimensions



Ordering Information

	Low exposure		Medium exposure		High Exposure	
	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
Device Location						
Domestic Main Switchboard	SDD1-50-275	SDD3-50-275	SDD1-100-275	SDD3-100-275	—	—
Distribution Board	SDD1-20-275	SDD3-20-275	SDD1-50-275	SDD3-50-275	SDD1-100-275	SDD3-100-275
Options	SDD1-20-275	SDD3-20-275	SDD1-50-275	SDD3-50-275	SDD1-100-275	SDD3-100-275
SPDT alarm contact	—	—	-A	-A	-A	-A
Polycarbonate enclosure	-P	-P	-P	-P	-P	-P

Product Specifications

Model		SDD1-20-275	SDD3-20-275	SDD1-50-275	SDD3-50-275	SDD1-100-275	SDD3-100-275
Electrical Specifications							
Connection type		Shunt	Shunt	Shunt	Shunt	Shunt	Shunt
Modes of protection		L-N, L-PE, N-PE	L-N, L-PE, N-PE	L-N, L-PE, N-PE	L-N, L-PE, N-PE	L-N, L-PE, N-PE	L-N, L-PE, N-PE
Phases		1	3	1	3	1	3
Nominal voltage	U_o	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC
Short circuit withstand level	I_{SCCR}	25 kA	25 kA	25 kA	25 kA	50 kA	50 kA
Maximum backup fuse (gL/gG)		20 A	20 A	32 A	32 A	63 A	63 A
L-N							
Maximum continuous voltage	U_c	275 VAC	275 VAC	275 VAC	275 VAC	275 VAC	275 VAC
Maximum load current	I_L	–	–	–	–	–	–
Maximum discharge current (8/20 μ s)	I_{max}	20 kA	20 kA	50 kA	50 kA	100 kA	100 kA
Lightning impulse current (10/350 μ s)	I_{imp}	–	–	–	–	–	–
Nominal discharge current (8/20 μ s)	I_n	10 kA	10 kA	20 kA	20 kA	40 kA	40 kA
Voltage protection level @ 3 kA 8/20 μ s	U_p	< 800 V	< 800 V	< 800 V	< 800 V	< 800 V	< 800 V
Voltage protection level @ I_n	U_p	< 1500 V	< 1500 V	< 1500 V	< 1500 V	< 1500 V	< 1500 V
Response time	t_A	< 5 ns	< 5 ns	< 5 ns	< 5 ns	< 5 ns	< 5 ns
Temporary overvoltage (TOV)	U_T	334 V / 5 s (Withstand)					
N-PE							
Maximum continuous voltage	U_c	255 VAC	255 VAC	255 VAC	255 VAC	255 VAC	255 VAC
Maximum discharge current (8/20 μ s)	I_{max}	25 kA	25 kA	25 kA	25 kA	60 kA	60 kA
Lightning impulse current (10/350 μ s)	I_{imp}	–	–	–	–	–	–
Nominal discharge current (8/20 μ s)	I_n	10 kA	10 kA	10 kA	10 kA	50 kA	50 kA
Voltage protection level @ 1 kV/ μ s	U_p	< 1200 V	< 1200 V	< 1200 V	< 1200 V	< 700 V	< 700 V
Voltage protection level @ I_n	U_p	< 1500 V	< 1500 V	< 1500 V	< 1500 V	< 1300 V	< 1300 V
Response time	t_A	< 100 ns	< 100 ns	< 100 ns	< 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	1200 V / 0.2 s	1200 V / 0.2 s	1200 V / 0.2 s
Follow current interrupt rating	I_n	100 A	100 A	100 A	100 A	100 A	100 A
Earth leakage current		< 10 μ s	< 10 μ s	< 10 μ s	< 10 μ s	< 10 μ A	< 10 μ A
Indication							
Display		LED status per phase			LED status per phase		
External alarm		–			Active alarm optional		
Display / Alarm function		Power fail safe, thermal overload			Power fail safe, thermal overload, SPDT voltage free contact		
Alarm isolation		–			4 kV		
Mechanical Specifications							
Operating temperature		-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
Humidity Range		5 to 95% non-condensing					
Terminal capacity – power		2.5 – 16 mm ²	2.5 – 16 mm ²	2.5 – 16 mm ²	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	0.5 – 2.5 mm ²
Terminal screw torque – power		2.0 Nm	2.0 Nm	2.0 Nm	2.0 Nm	2.0 Nm	2.0 Nm
Terminal screw torque – alarm		–	–	0.5 Nm	0.5 Nm	0.5 Nm	0.5 Nm
Environmental / Location		IP 20 / Indoor	IP 20 / Indoor	IP 20 / Indoor	IP 20 / Indoor	IP 20 / Indoor	IP 20 / Indoor
Dimensional Drawing		A	C	A (B with alarm)	C	B	D
Device width		18 mm	54 mm	18 mm (36 mm/alarm)	54 mm	36 mm	72 mm
Mounting		TS35 DIN rail	TS35 DIN rail	TS35 DIN rail	TS35 DIN rail	TS35 DIN rail	TS35 DIN rail
Enclosure / Colour		Metal / Black	Metal / Black	Metal / Black	Metal / Black	Metal / Black	Metal / Black
Standards							
IEC 61643-11:2011		SPD connected to low-voltage power systems - Type 2					
AS/NZS 1768:2007		A.C. power system SPD - Cat C, B					
UL 1449 3 rd edition		Low voltage SPD - Type 2					
IEEE 62.41.2:2002		Low voltage SPD - Cat B					
Shipping							
Weight		120 g	300 g	150 g	355 g	250 g	485 g
Customs Tariff		85354010	85354010	85354010	85354010	85354010	85354010