

SD1 - MULTIMOV Surge Diverters



Main Switchboard (MSB) Surge Protection

Use SD1 - MULTIMOV high energy surge diverters for single phase point of entry protection at main switchboards. Models are available for all wiring systems worldwide.

All Mode Protection

Models containing N-E protection (-N versions) feature 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.

Redundant Segments

MULTIMOV surge diverters feature a parallel redundant arrangement of high energy metal oxide varistors (MOVs), thus promoting long life and exceptional surge handling capacity. In the event of a varistor failure the remaining segments continue to provide protection.

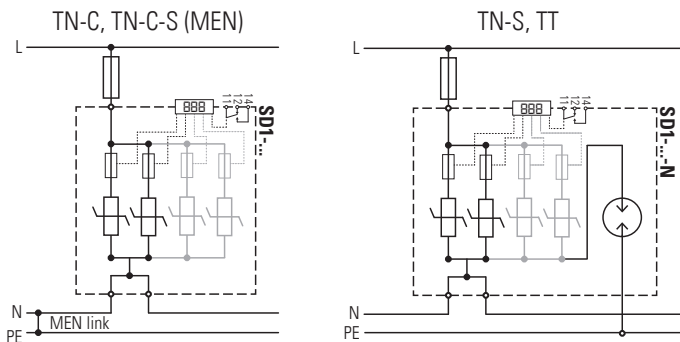
Active Monitoring

A digital display confirms the device rating by displaying the percentage active of the redundant segments. The display indicates segment status and thermal overload. A failsafe alarm contact allows for remote monitoring.

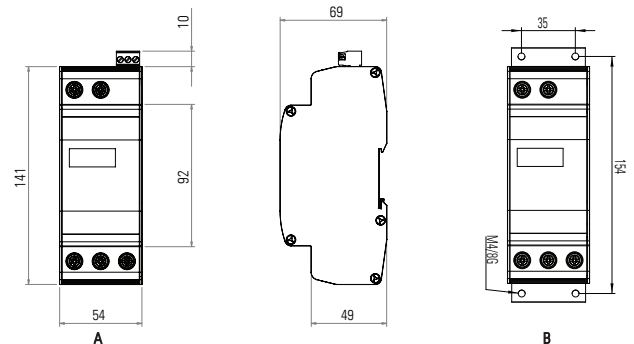
Safe Metal Enclosure

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

Lightning Protection Level (LPL)	IV: Low exposure		II, III: Medium exposure		I: High exposure	
	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
Network Type						
Main Switchboard TN-C-S (MEN)	SD1-100-275	SD3-100-275	SD1-150-275	SD3-150-275	SD1-200-275	SD3-200-275
Main Switchboard TN-S and TT	SD1-100-275-N	SD3-100-275-N	SD1-150-275-N	SD3-150-275-N	SD1-200-275-N	SD3-200-275-N
Options						
Polycarbonate enclosure	-P	-P	-P	-P	-P	-P
Metal enclosure (IP65)	-M	-M	-M	-M	-M	-M
L-PE Protection (non MEN)	-U	-U	-U	-U	-U	-U

Product Specifications

Model		SD1-100-275	SD1-100-275-N	SD1-150-275	SD1-150-275-N	SD1-200-275	SD1-200-275-N
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Electrical Specifications

Connection type		Shunt	Shunt	Shunt	Shunt	Shunt	Shunt
Modes of protection		L-N	L-N, N-PE	L-N	L-N, N-PE	L-N	L-N, N-PE
Phases		1	1	1	1	1	1
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)		63 A	63 A	80 A	80 A	100 A	100 A

L-N

Maximum continuous voltage	U_C	275 VAC	275 VAC	275 VAC	275 VAC	275 VAC	275 VAC
Maximum discharge current (8/20 μ s)	I_{max}	100 kA	100 kA	150 kA	150 kA	200 kA	200 kA
Lightning impulse current (10/350 μ s)	I_{imp}	6.25 kA	6.25 kA	9.35 kA	9.35 kA	12.5 kA	12.5 kA
Nominal discharge current (8/20 μ s)	I_n	40 kA	40 kA	60 kA	60 kA	80 kA	80 kA
Voltage protection level @ 3 kA 8/20 μ s	U_p	< 800 V	< 800 V	< 750 V	< 750 V	< 700 V	< 700 V
Voltage protection level @ I_n	U_p	< 1500 V	< 1500 V	< 1600 V	< 1600 V	< 1700 V	< 1700 V
Response time	t_A	< 25 ns	< 25 ns	< 25 ns	< 25 ns	< 25 ns	< 25 ns
Temporary overvoltage (TOV)	U_T	440 V / 5 sec (Withstand)					

N-PE

Maximum continuous voltage	U_C	–	255 VAC	–	255 VAC	–	255 VAC
Maximum discharge current (8/20 μ s)	I_{max}	–	60 kA	–	150 kA	–	150 kA
Lightning impulse current (10/350 μ s)	I_{imp}	–	15 kA	–	30 kA	–	30 kA
Nominal discharge current (8/20 μ s)	I_n	–	50 kA	–	100 kA	–	100 kA
Voltage protection level @ 1 kV/ μ s	U_p	–	< 700 V	–	< 1200 V	–	< 1200 V
Voltage protection level @ I_n	U_p	–	< 1300 V	–	< 1800 V	–	< 1800 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		Digital display of % active					
External alarm		Active alarm standard					
Display / Alarm function		Power fail safe, thermal overload, SPD 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	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	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 - DIN rail, B - Panel mount (optional)					
Device width		54 mm					
Mounting		TS35 DIN rail / Panel mount (optional)					
Enclosure / Colour		Metal / Black					

Standards

IEC 61643-11:2011		SPD connected to low-voltage power systems - Type 1+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		500 g	500 g	500 g	500 g	500 g	500 g
Customs Tariff		85354010	85354010	85354010	85354010	85354010	85354010

