

# SD3 - MULTIMOV Surge Diverters



## Main Switchboard (MSB) Surge Protection

Use SD3 - MULTIMOV high energy surge diverters for three 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-L, 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.

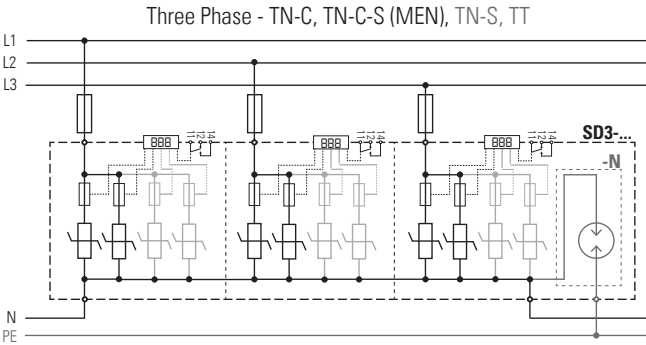
### Active Monitoring

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.

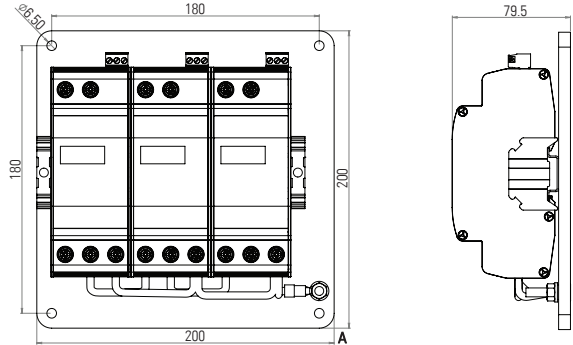
### Safe Metal Enclosure

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
<b>Network Type</b>						
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
<b>Options</b>						
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	SD3-100-275	SD3-100-275-N	SD3-150-275	SD3-150-275-N	SD3-200-275	SD3-200-275-N
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### Electrical Specifications

Connection type		Shunt	Shunt	Shunt	Shunt	Shunt	Shunt
Modes of protection		L-L, L-N	L-L, L-N, N-PE	L-L, L-N	L-L, L-N, N-PE	L-L, L-N	L-L, L-N, N-PE
Phases		3	3	3	3	3	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)		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 $\mu$ s)	$I_{max}$	100 kA	100 kA	150 kA	150 kA	200 kA	200 kA
Lightning impulse current (10/350 $\mu$ 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 $\mu$ s)	$I_n$	40 kA	40 kA	60 kA	60 kA	80 kA	80 kA
Voltage protection level @ 3 kA 8/20 $\mu$ 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 s (Withstand)					

### N-PE

Maximum continuous voltage	$U_C$	–	255 VAC	–	255 VAC	–	255 VAC
Maximum discharge current (8/20 $\mu$ s)	$I_{max}$	–	60 kA	–	150 kA	–	150 kA
Lightning impulse current (10/350 $\mu$ s)	$I_{imp}$	–	15 kA	–	30 kA	–	30 kA
Nominal discharge current (8/20 $\mu$ s)	$I_n$	–	50 kA	–	100 kA	–	100 kA
Voltage protection level @ 1kV/ $\mu$ 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 $\mu$ A	–	< 10 $\mu$ A	–	< 10 $\mu$ A

### Indication

Display	Digital display of % active					
External alarm	Active alarm standard					
Display / Alarm function	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 <sup>2</sup>	2.5 – 16 mm <sup>2</sup>	2.5 – 16 mm <sup>2</sup>	2.5 – 16 mm <sup>2</sup>	2.5 – 16 mm <sup>2</sup>	2.5 – 16 mm <sup>2</sup>
Terminal capacity – alarms	0.5 – 2.5 mm <sup>2</sup>	0.5 – 2.5 mm <sup>2</sup>	0.5 – 2.5 mm <sup>2</sup>	0.5 – 2.5 mm <sup>2</sup>	0.5 – 2.5 mm <sup>2</sup>	0.5 – 2.5 mm <sup>2</sup>
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					
Device width	200 mm					
Mounting	Panel mount					
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 <sup>rd</sup> edition	Low voltage SPD - Type 2					
IEEE 62.41.2:2002	Low voltage SPD - Cat B					

### Shipping

Weight	1800 g	1800 g	1800 g	1800 g	2000 g	2000 g
Customs Tariff	85354010	85354010	85354010	85354010	85354010	85354010

