

# NSG Spark Gap Diverters

## *Power protection Type 1*



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**NSG Spark Gap Diverters** for point of entry protection at main switchboards where direct strike protection is required.

### Multilayer Carbon Disc Technology

Carbon disk spark gaps are a robust and proven technology designed to handle long duration surges. The low resistance design minimises the energy dissipation within the device.

### Sealed Enclosure

The Novaris spark gap diverters are a sealed unit and do not exhaust hot ionised gas into the switchboard.

Note: It is highly recommended to install MOV based protection at the first layer distribution when using spark gaps for primary protection due to the arc establishment time of spark gap technology.

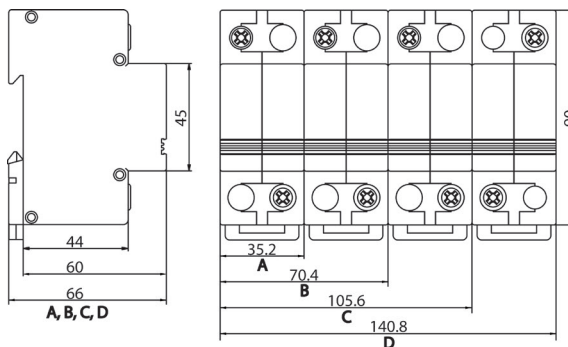
Standards
IEC 61643-11 : 2011
IEEE C62.41.2 : 2002
AS/NZS 1768 : 2007
UL 1449 3 <sup>rd</sup> edition



### NSG 1 - 50 - 255 - [N]



### Dimensions

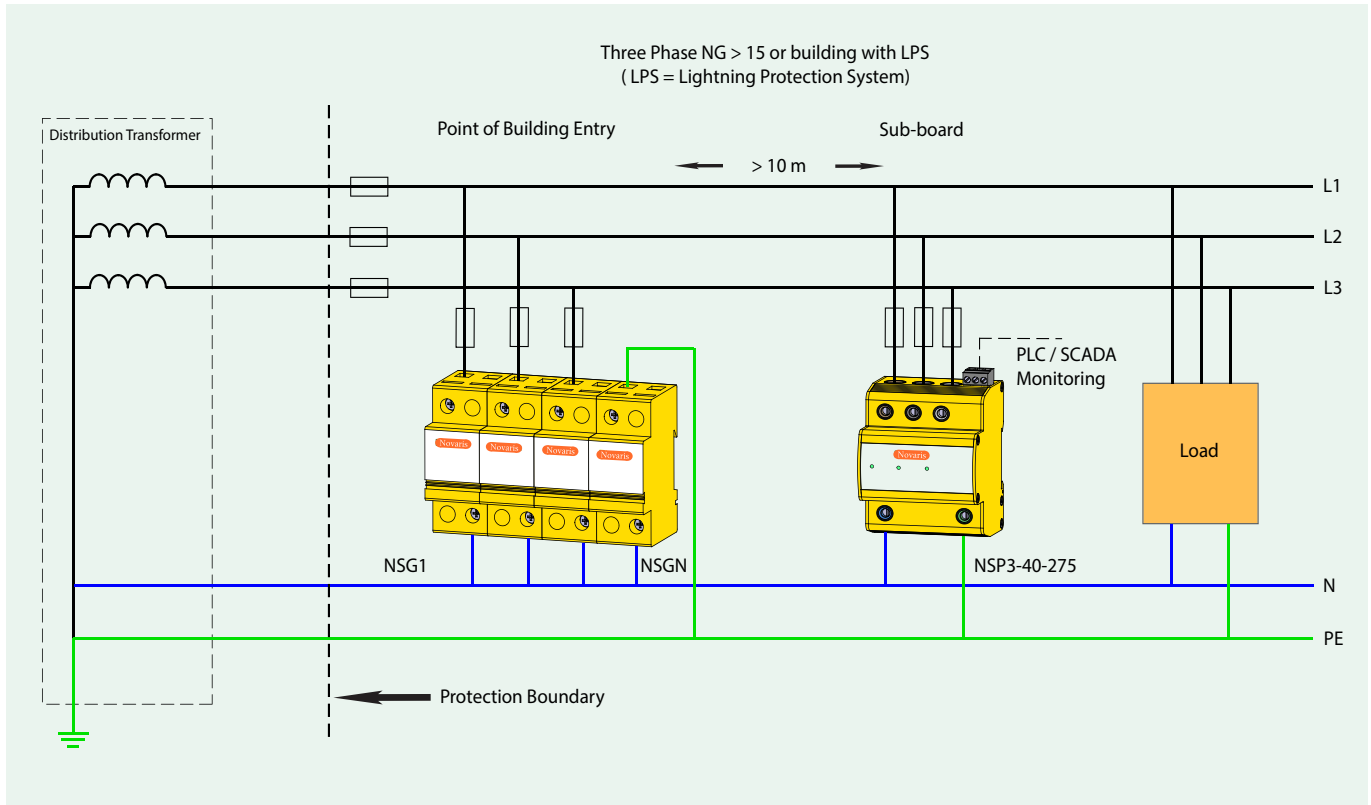


Type	NSG1-50-255		NSGN-100-255	
<b>Electrical Specifications</b>				
Connection type	Shunt			
Modes of protection	L-N		N-PE	
Phases	1		-	
Nominal voltage	$U_0$	230V / 50Hz		
Short circuit withstand level	$I_{SCCR}$	25 kA		
Maximum backup fuse (gL/gG)		500 A	-	

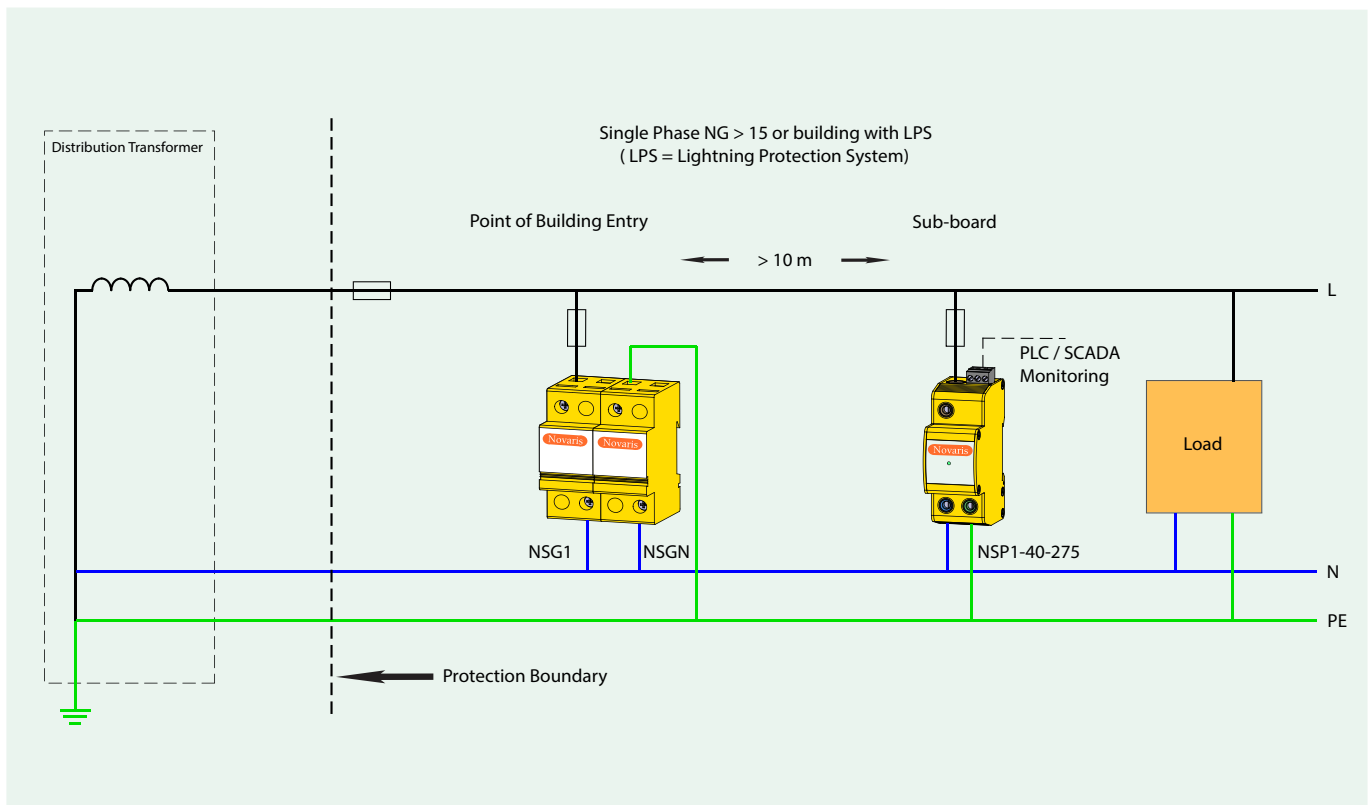
<b>L-N</b>				
Maximum continuous voltage	$U_c$	255 V / 50 Hz	-	
Maximum discharge current (8/20 $\mu$ s)	$I_{max}$	120 kA	-	
Ligthing impulse current (10/350 $\mu$ s)	$I_{imp}$	50 kA	-	
Nominal discharge current (8/20 $\mu$ s)	$I_n$	50 kA	-	
Voltage protection level @ 3 kA (8/20 $\mu$ s)	$U_p$	< 2000 V	-	
Voltage protection level @ $I_{imp}$	$U_p$	< 2000 V	-	
Respons time	$T_A$	< 100 ns	-	
Temporary overvoltage (TOV)	$U_T$	334 V / 5 sec	-	

<b>N-PE</b>				
Maximum continuous voltage	$U_c$	-	255 V / 50 Hz	
Maximum discharge current (8/20 $\mu$ s)	$I_{max}$	-	150 kA	
Ligthing impulse current (10/350 $\mu$ s)	$I_{imp}$	-	100 kA	
Nominal discharge current (8/20 $\mu$ s)	$I_n$	-	75kA	
Voltage protection level @ 3 kA (8/20 $\mu$ s)	$U_p$	-	< 800 V	
Voltage protection level @ $I_{imp}$	$U_p$	-	< 1300 V	
Respons time	$T_A$	-	< 100 ns	
Temporary overvoltage (TOV)	$U_T$	-	1200 V / 0,2 sec	
Interrupting follow current @ $U_c$	$I_{fi}$	-	100 A	
Earth leakage current		-	< 10 $\mu$ A	

<b>Mechanical Specifications</b>				
Operating temperature / humidity	-40 to +70°C/5 to 95 % non-condensing			
Terminal capacity	35 mm <sup>2</sup>			
Terminal screw torque	2.5 Nm			
Environmental	IP 20			
Type system	1 phase	1 phase + N	3 phase	3 phase + N
Dimensional drawing	A	B	C	D
Device width	35,2 mm	70,4 mm	105,6 mm	140,8 mm
Device heigth	90 mm			
Device depth	68 mm			
Mounting	TS35 DIN rail			
Enclosure/colour	Flame retardant Polyamide 6/Yellow			
Weight	230 g	460 g	690 g	920 g

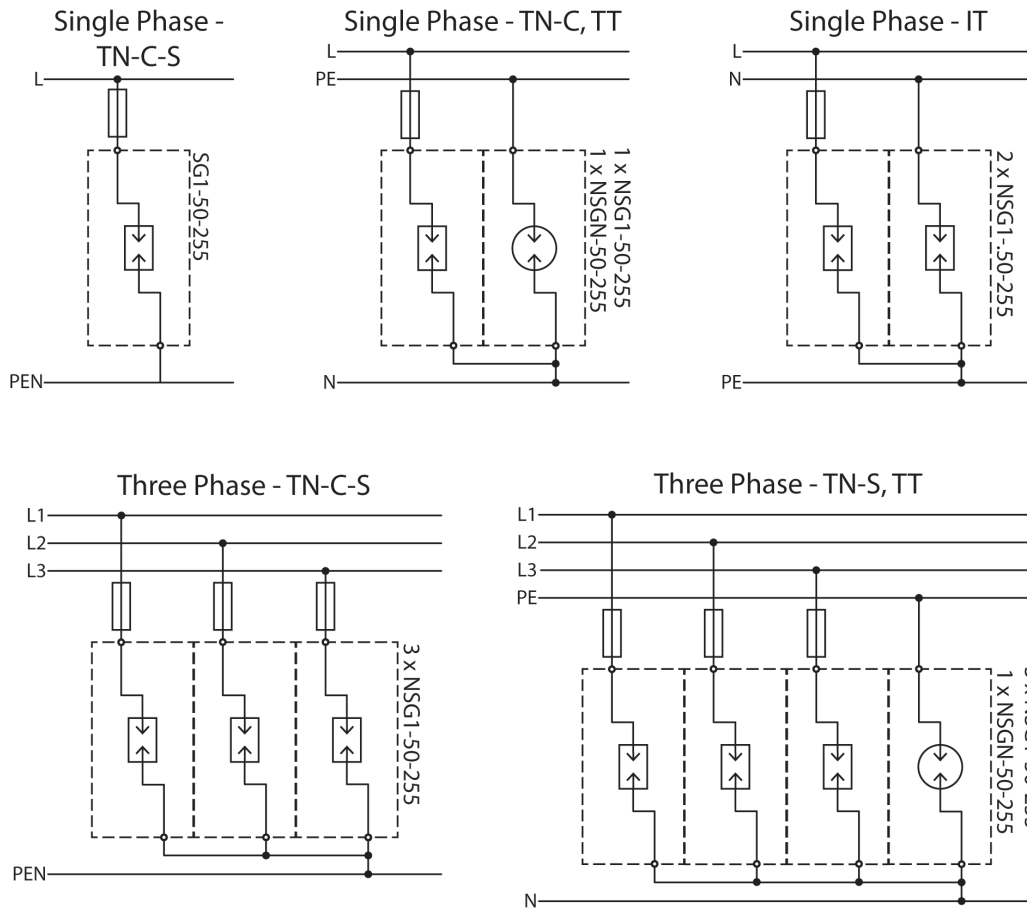


**How to use the NSG3-50-255-N example in a three phase system**



**How to use the NSG1-50-255-N example in a single phase system**

## Diagram / installation



## Ordering information

Useable for system	Type	Art. No.
TN, TT and IT	<b>NSG1-50-255</b>	<b>BG-50-255</b>
TN, TT	<b>NSGN-100-255</b>	<b>BG-100-255</b>

Type of system	NSG1-50-255	NSGN-100-255
<b>1 phase IT</b>	2	-
<b>1 phase TN-S, TT</b>	1	1
<b>1 phase TN-C</b>	1	-
<b>3 phase TN-C</b>	3	-
<b>3 phase TN-S, TT</b>	3	1



**Bender Benelux B.V.**

Takkebijsters 54 • NL-4817 BL Breda • Nederland  
Tel.: +31 (0)76 5878713 • Fax: +31 (0)76 5878927  
E-Mail: [benderbenelux@benderbenelux.com](mailto:benderbenelux@benderbenelux.com)  
[www.benderbenelux.com](http://www.benderbenelux.com)



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