

Single Pole SPD

■ ESG Technology

G50/...-S



- Non-pluggable T1+2 SPD with Encapsulated Spark Gap (ESG) technology to guarantee reliability in rugged environment and high exposure location.
- High lightning current discharge capacity up to I<sub>imp</sub> 50kA 10/350µs
- Degradation indication & optional remote signal contact
- Low voltage protection level
- Comply with IEC/EN 61643-11, UL 1449 4<sup>th</sup>, IEEE C62.41, CSA C22.2



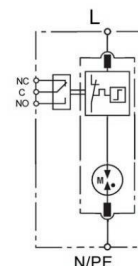
Model		G50/150-S	G50/175-S	G50/275-S	G50/320-S	G50/385-S	G50/420-S
Compliance		EN/IEC 61643-11					
Category IEC/EN		Class I+II /T1+2					
Max. Continuous Operating Voltage (AC)	U <sub>c</sub>	150V	175V	275V	320V	385V	420V
Technology		ESG technology Thermal disconnecter					
Ports/Protection Mode		1 / L-PE or L-N or N-PE					
Lightning Impulse Current (10/350µs)	I <sub>imp</sub>	50kA					
Nominal Discharge Current (8/20µs)	I <sub>n</sub>	50kA					
Max. Discharge Current (8/20µs)	I <sub>max</sub>	150kA					
Voltage Protection Level	U <sub>p</sub>	≤1.2kV	≤1.2kV	≤1.5kV	≤1.6kV	≤1.8kV	≤2.0kV
Temporary Overvoltage TOV —Withstand Mode	U <sub>toV</sub>	228V/120min	228V/120min	442V/120min	442V/120min	529V/120min	585V/120min
Residual Current	I <sub>PE</sub>	No					
Follow Current Interrupt Rating	I <sub>fi</sub>	25kA					
Short-Circuit Current Rating per IEC 61643-11	I <sub>sc</sub>	25kA					
Response Time	t <sub>A</sub>	≤100ns					
Backup Fuse (only required if not already provided in mains)		500A gL/gG					
Environment		Temperature Range: - 40°C ~ +85°C; Humidity: ≤95%; Altitude: ≤2000m					
Cross-Section of Connection Wire		Single-strand 35mm <sup>2</sup> ; multi-strand 25mm <sup>2</sup>					
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3					
Enclosure Material		thermoplastic; extinguishing degree UL94 V-0					
Degree of Protection		IP20					
Installation Width		2 modules, DIN 43880					
Failure Indication /Status		RED- Failure					
Remote Alarm Contact		Yes					
Approvals, certification		CE					
Additional Data for Remote Alarm Contacts							
Remote Alarm Contact Type		Isolated Form C					
Switching Capability U <sub>r</sub> /I <sub>n</sub>		AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5A					
Max. Size of Connecting Wire		Max. 1.5mm <sup>2</sup> (or # 16AWG)					

Note: Please see Page 13 for prewired multi-pole combination.

■ Dimension Drawing



■ Basic Circuit Diagram



T1  
T2  
T3

Single Pole SPD

■ NPE Module

G.../255NPE



- T1+2 SPD with Encapsulated Spark Gap (ESG) technology to guarantee reliability in rugged environment and high exposure location
- High lightning current discharge capacity up to  $I_{imp}$  100kA 10/350
- Low voltage protection level
- Comply with IEC/EN 61643-11, UL 1449 4<sup>th</sup>, IEEE C62.41, CSA C22.2



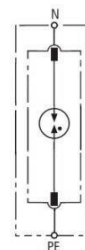
Model		G100/255NPE	G50/255NPE	G25/255NPE
Compliance			EN/IEC 61643-11	
Category IEC/EN			Class I+II /T1+2	
Max. Continuous Operating Voltage (AC)	$U_c$		255V	
Technology			ESG technology	
Ports/Protection Mode			1 / N-PE	
Lightning Impulse Current (10/350 $\mu$ s)	$I_{imp}$	100kA	50kA	25kA
Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	100kA	50kA	25kA
Max. Discharge Current (8/20 $\mu$ s)	$I_{max}$	200kA	150kA	100kA
Voltage Protection Level (1.2/50 $\mu$ s)	$U_p$		$\leq 1.5kV$	
Temporary Overvoltage TOV —Withstand Mode	$U_{tov}$		1200V/200ms	
Residual Current	$I_{PE}$		No	
Follow Current Interrupt Rating	$I_{fi}$		200A@255Vac	
Response Time	$t_A$		$\leq 100ns$	
Environment		Temperature Range: -40°C ~ +85°C; Humidity: $\leq 95\%$ ; Altitude: $\leq 2000m$		
Cross-Section of Connection Wire		Single-strand 35mm <sup>2</sup> ; multi-strand 25mm <sup>2</sup>		
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3		
Enclosure Material		thermoplastic; extinguishing degree UL94 V-0		
Degree of Protection		IP20		
Installation Width		2 modules, DIN 43880		
Approvals, certification		CE		

Note: Please see Page 13 for prewired multi-pole combination.

■ Dimension Drawing



■ Basic Circuit Diagram



T1  
T2  
T3

Prewired Multi-pole SPD

Part No.	Pole	Combination	Power System	Max. Operating Voltage U <sub>c</sub>	Lightning Impulse Current (10/350µs) I <sub>imp</sub>	Voltage Protection Level U <sub>p</sub>	Diagram
G50/150-S/2P	2	2 x G50/150-S	Single phase 2W+G	150Vac	50kA	L/N-G: 1.2kV	4
G50/175-S/2P	2	2 x G50/175-S	Single phase 2W+G	175Vac	50kA	L/N-G: 1.2kV	4
G50/275-S/2P	2	2 x G50/275-S	Single phase 2W+G	275Vac	50kA	L/N-G: 1.5kV	4
G50/320-S/2P	2	2 x G50/320-S	Single phase 2W+G	320Vac	50kA	L/N-G: 1.6kV	4
G50/385-S/2P	2	2 x G50/385-S	Single phase 2W+G	385Vac	50kA	L/N-G: 1.8kV	4
G50/420-S/2P	2	2 x G50/420-S	Single phase 2W+G	420Vac	50kA	L/N-G: 2.0kV	4
G50/150-S/PN50	2	G50/150-S + G50/255NPE	Single phase 2W+G	150Vac	50kA	L-N: 1.2kV, N-PE: 1.5kV	3
G50/175-S/PN50	2	G50/175-S + G50/255NPE	Single phase 2W+G	175Vac	50kA	L-N: 1.2kV, N-PE: 1.5kV	3
G50/275-S/PN50	2	G50/275-S + G50/255NPE	Single phase 2W+G	275Vac	50kA	L-N: 1.5kV, N-PE: 1.5kV	3
G50/320-S/PN50	2	G50/320-S + G50/255NPE	Single phase 2W+G	320Vac	50kA	L-N: 1.6kV, N-PE: 1.5kV	3
G50/385-S/PN50	2	G50/385-S + G50/255NPE	Single phase 2W+G	385Vac	50kA	L-N: 1.8kV, N-PE: 1.5kV	3
G50/420-S/PN50	2	G50/420-S + G50/255NPE	Single phase 2W+G	420Vac	50kA	L-N: 2.0kV, N-PE: 1.5kV	3
G50/150-S/3P	3	3 x G50/150-S	Three phase 3W+G	150Vac	50kA	L-G: 1.2kV	2
G50/175-S/3P	3	3 x G50/175-S	Three phase 3W+G	175Vac	50kA	L-G: 1.2kV	2
G50/275-S/3P	3	3 x G50/275-S	Three phase 3W+G	275Vac	50kA	L-G: 1.5kV	2
G50/320-S/3P	3	3 x G50/320-S	Three phase 3W+G	320Vac	50kA	L-G: 1.6kV	2
G50/385-S/3P	3	3 x G50/385-S	Three phase 3W+G	385Vac	50kA	L-G: 1.8kV	2
G50/420-S/3P	3	3 x G50/420-S	Three phase 3W+G	420Vac	50kA	L-G: 2.0kV	2
G50/150-S/3PN100	4	3 x G50/150-S + G100/255NPE	Three phase 4W+G	150Vac	50kA / 100kA(NPE)	L-N: 1.2kV, N-PE: 1.5kV	1
G50/175-S/3PN100	4	3 x G50/175-S + G100/255NPE	Three phase 4W+G	175Vac	50kA / 100kA(NPE)	L-N: 1.2kV, N-PE: 1.5kV	1
G50/275-S/3PN100	4	3 x G50/275-S + G100/255NPE	Three phase 4W+G	275Vac	50kA / 100kA(NPE)	L-N: 1.5kV, N-PE: 1.5kV	1
G50/320-S/3PN100	4	3 x G50/320-S + G100/255NPE	Three phase 4W+G	320Vac	50kA / 100kA(NPE)	L-N: 1.6kV, N-PE: 1.5kV	1
G50/385-S/3PN100	4	3 x G50/385-S + G100/255NPE	Three phase 4W+G	385Vac	50kA / 100kA(NPE)	L-N: 1.8kV, N-PE: 1.5kV	1
G50/420-S/3PN100	4	3 x G50/420-S + G100/255NPE	Three phase 4W+G	420Vac	50kA / 100kA(NPE)	L-N: 2.0kV, N-PE: 1.5kV	1

Diagram	Basic Circuit Diagram	Dimension Drawing
<p><b>1) 3+1</b></p>		
<p><b>2) 3+0</b></p>		
<p><b>3) 1+1</b></p>		
<p><b>4) 2+0</b></p>		