

TECHNICAL DATA SHEET

LPI[®] SG Surge Protection Devices - SGT50-25 + NE-100



Features

- High performance surge protector for an operating voltage of 220 – 240 V AC
- Easy Installation
- DIN rail mounting

Product Description

The LPI Spark Gap Protector consists of high-performance, encapsulated spark gap modules for P-N and N-E. The Spark Gap Protector comes in 3 ranges: 1-Phase, 2-Phase and 3-Phase. Each SG provides Class I surge protection rated for 50 kA, 10/350 μ s (135 kA, 8/20 μ s) between P-N, and 100 kA, 10/350 μ s (150 kA, 8/20 μ s) between N-E.

The protector is designed for installation in mains power switchboards and distribution boards in Lightning Protection Zones 0 and 1 per IEC 62305-4. The unit is supplied with IEC 61643-11 Class I Spark Gap Surge Diverters which provide the most effective surge protection with low let-through voltage.

TECHNICAL DATA SHEET

Technical Data

Ordering code:	1xSGT50-25+NE100	2xSGT50-25+NE100	3xSGT50-25+NE100
Surge rating (I_{max}):	50 kA 10/350 μ s P-N, 100 kA 10/350 μ s N-E	2 x 50 kA 10/350 μ s P-N, 100 kA 10/350 μ s N-E	3 x 50 kA 10/350 μ s P-N, 100 kA 10/350 μ s N-E
Nominal Operating Voltage U_n :	230 V AC @ 50/60 Hz		
Max Continuous Operating Voltage U_c :	265 V rms		
Voltage protection level at I_{imp} :	< 1.3 kV		
Response time:	< 100 ns		
Protection Modes:	P-N and N-E		
Dimensions:	105 x 97 x 66 mm	185 x 97 x 66 mm	185 x 97 x 66 mm
Mounting:	Standard 35 mm – DIN43880 Din rail		
Weight:	0.6 kg	0.9 kg	1.2 kg
IP rating:	IP 20		
Colour:	Blue		
Conductor size:	P: 35 mm ² (max) N: 35 mm ² (max) E: 35 mm ² (max)		
Operating temperatures:	-40 to +80°C, 0 – 95% humidity		
Standards:	IEC 61643-11		
Surge withstand:	ANSI C62.41 Cat A, Cat B, Cat C AS/NZS 1768-2007 Cat A, Cat B, Cat C		
Application:	Main distribution and sub-distribution boards		
Warranty:	5 years		

Recommended Connection

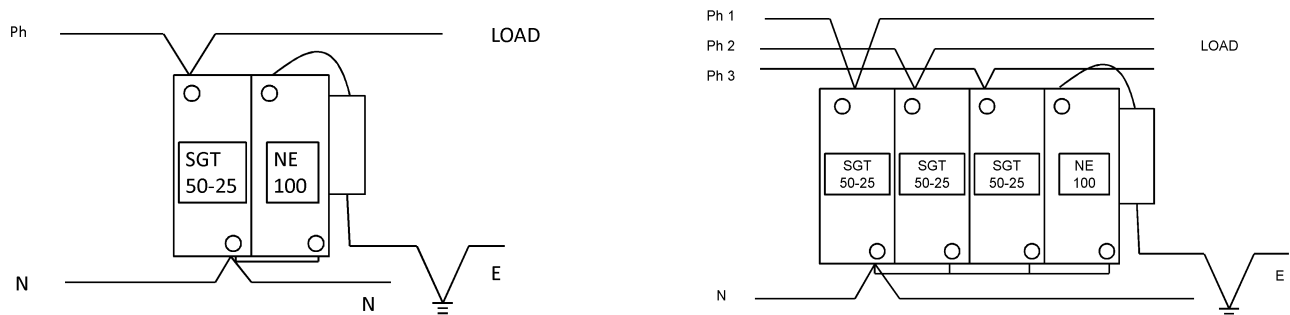
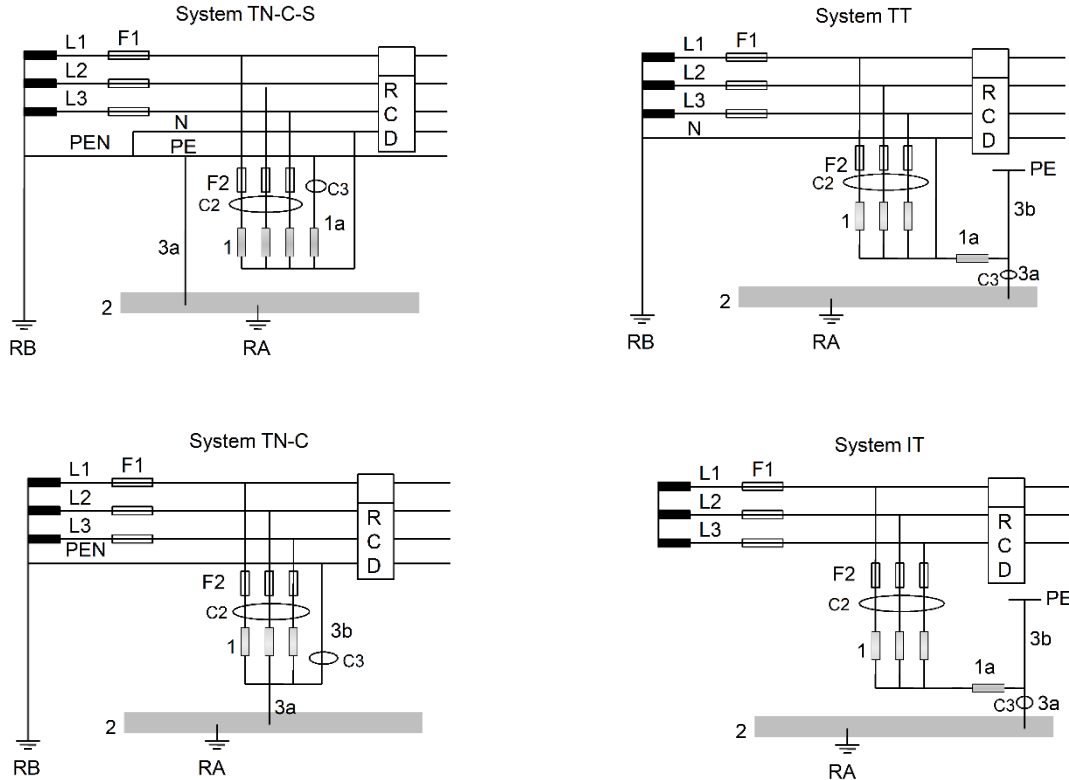


Fig 1: Connection and Wiring Method (Kelvin Method)

TECHNICAL DATA SHEET

Schematic Diagram for Different Distribution System



Legend

- 1 LPI SGT50-25
- 1a LPI NE100
- 2 Main equipotential bus bar
- 3a, 3b Grounding wires for arresters
- F1 Main back-up fuse of service main
- F2 Recommended back-up fuse 315AgL/gG
(only if the main back-up fuse F1 is fitted with back-up fuses >315AgL/gG)
- RA Equipment grounding
- RB Grounding system

Recommended Fuse and Cable Sizes

Fuse F1 gL/gG	C2 mm ² connection at F2	C3 mm ² connection to gnd	Fuse F2 gL/gG
100-125 A	16	16	-
160 A	25	25	-
200-315 A	35	35	-
≥ 500 A	35	35	315 A

TECHNICAL DATA SHEET

Connection Options:

1. It is recommended that the “V” or Kelvin connection is employed, as shown in Fig. 2a, to minimise the overvoltage applied on the protected equipment. Ensure that input and output wiring is not run in parallel.
2. If a “V” connection is not possible, a “T” connection can be used, as shown in Fig. 2b. With this connection method, the input lead length should be kept as short and thick as possible, and the wires should be bundled together.



Figure 2: Connection methods. (a) V (Kelvin) connection (preferred).
(b) T connection (alternative).

Note and Remarks