

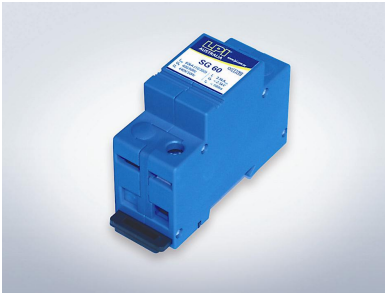


### LPI® Spark Gap Shunt Protector - SG Range

#### Features

- Encapsulated Spark Gap Technology
- Low follow on current
- 35mm DIN rail mount

#### Thiết bị chống sét LPI SGT50-25



#### Product Description

The LPI Spark Gap Protector is a high performance encapsulated spark gap offering a high surge rating with low follow on current, ideal for point of entry protection. It is intended for installation within the lightning protection zone concept at the boundaries LPZ O<sub>A(B)</sub> -1 according to IEC 62305.

The LPI Spark Gap Protector has been designed for the protection of Phase to Neutral, Phase to Earth, or Phase to Neutral-Earth protection in LV supply systems.

Follow on current performance for these devices is kept within acceptable levels by the rapid extinguishment of the arc allowing transients to be clamped without activating upstream protection devices.

Ordering Code		LPI® SGT50-25	LPI® SG60
Nominal voltage:	$U_N$	230V/50Hz	400V/50(60)Hz
Max. continuous operating voltage:	$U_C$	255V/50Hz	440V/50(60)Hz
Follow current extinguishing capability at $U_C$ :	$I_f$	25kArms	3.5kArms
Voltage protection level at $I_{imp}$ :	$U_P$	<1.3kV	<2.5kV
Max. lightning impulse current:	$I_{imp}$	50kA (10/350µs)	60kA (10/350µs)
Max. discharge current	$I_{max}$	135kA (8/20µs)	135kA (8/20µs)
Max. lightning charge:	$Q$	25As	30As
Specific energy:	W/R	600kJ/Ω	900kJ/Ω
Insulation resistance:	$R_i$	>100MΩ	
Response time:	$t_A$	<100ns	
Standard:		IEC 61643 and EN 61643	
Recommended backup fuse:		315AgL/gG	
Operating temperature range:		-40 to +80 °C	
Recommended cross-section of connected conductors:		50mm <sup>2</sup> (solid) or 35mm <sup>2</sup> (flexible) (at 4Nm clamping force)	
Protection type:		IP20	
Mounting:		DIN rail 35mm	
Housing material:		SLOVAMID 6FRC2	
Weight:		224g	
Application:		Main and sub-distribution boards (>100A capacity)	
Configuration:		Hardwired base and pluggable module with built-in changeover alarm contacts.	
Warranty:		5 Years	

**INSTALLATION INSTRUCTION SHEET**

LIGHTNING PROTECTION INTERNATIONAL PTY LTD ABN 11 099 190 897



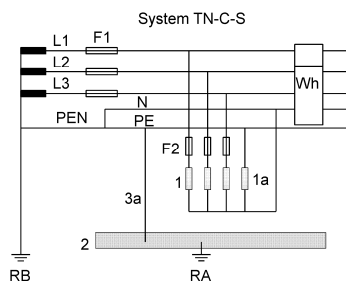
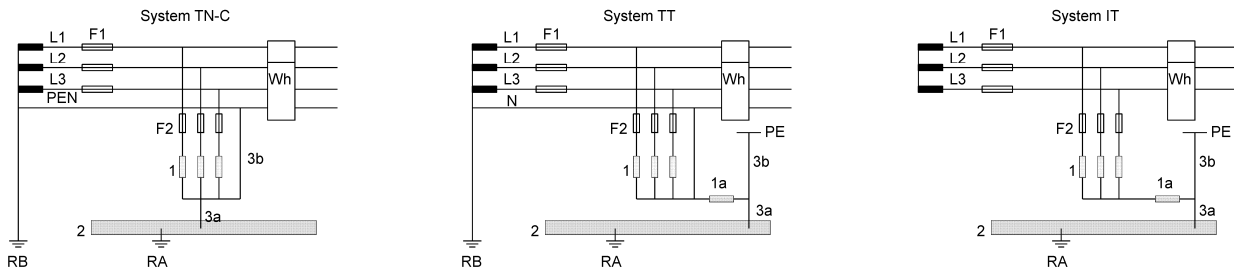
**Installation**

The use of a closed, high performance spark gap (gas filled) renders the blow-out vent superfluous. A safety gap between adjacent components for fire protection reasons is unnecessary. The installation of this unit is normally in the main distributor at the building entrance. The protection circuit is contained in a snap-on housing for installation on 35mm DIN rail (in compliance with EN 50022) with multi-function terminals for wires and wiring bridges.

As this protector has to discharge lightning currents of up to 50kA or 60kA (10/350µs), we recommend the use of stranded copper cable of 35mm<sup>2</sup>. Connections should preferably be tightened to 3Nm. The entire length of the cable should not exceed 0.5m. But if it does exceed 0.5m, the PE line should be installed with a Kelvin connection. This device must not be bonded exclusively via the wiring bridge. Lightning currents must be discharged via a cable with an adequate cross-sectional area. Protected and unprotected lines must not be laid together.

The LPI® SGT range may only be mounted and installed by suitably qualified personnel in compliance with the applicable standards. This device may only be used in the 3 + 1 circuit as an N/PE lightning current protector. We recommend that after the period when thunderstorms are most frequent, the connections for this lightning current protector be re-tightened.

**Schematic Diagram for different distribution system**



**Legend**

- 1 LPI SGT50-25/ SG60
- 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 <sup>2</sup> connection at F2	C3 mm <sup>2</sup> connection to ground	Fuse F2 gL/gG
100A-125A	16	16	-
160A	25	25	-
200A-315A	35	35	-
≥ 500A	35	35	315A

*LPI® has a policy of continuing product development. Therefore, the above specifications are subject to change without notice.*

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