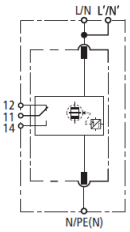
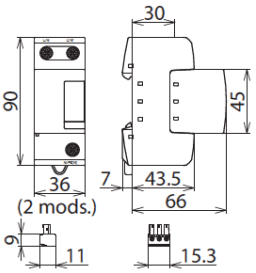
OTOWA

OTOWA Power line Class Ⅰ (Type1) SPD LD-PS2550S

Coordinated and modular single-pole SPD with high follow current limitation; with remote signalling contact for monitoring system (floating changeover contact).



Basic Circuit Diagram



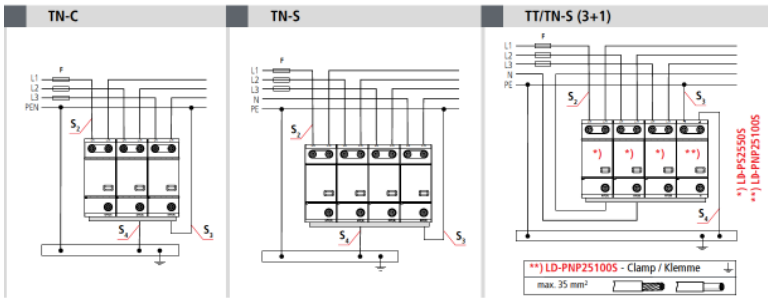
Dimension drawing

- Coordinated spark-gap-based SPD consisting of a base part and plug-in protection module
- Maximum system availability due to RADAX Flow current limitation
- No tripping of 32A gL/gG fuses up to short-circuit currents of 50 kArms
- Discharge capacity up to 50kA (10/350us)
- Directly coordinated with LS-series without additional cable length
- Low voltage protection level
- Operating state / fault indication by green / red indicator flag in the inspection window
- Easy replacement of protection modules without tools due to module locking system with module release button

Type	LD-PS2550S
SPD according to EN 61643-11/IEC 61643-11	type1 class Ⅰ
Nominal a.c. voltage (Un)	230V (50 / 60 Hz)
Max. continuous operating a.c. voltage (Uc)	255V (50 / 60 Hz)
Lightning impulse current (10/350μs) (Iimp)	50kA
Specific energy (W/R)	625.00kJ/ohms
Voltage protection level (Up)	≦2.5kV
Follow current extinguishing capbility a.c. (Ifi)	50kArms
Follow current limitation / Selectivity	no tripping of a 32 A gL/gG fuse up to 50kArms (prosp.)
Response time (tA)	≦100ns
Max. backup fuse (L) up to Ik=50kArms (ta≦0.2s)	500 A gG
Max. backup fuse (L) up to Ik=50kArms (ta≦5s)	315 A gG
Max. backup fuse (L-L')	125 A gG
Temporary overvoltage (TOV) (Ut) -Characteristic	440V 120min. -withstand
Operating temperature range (parallel connection) (Tup)	-40℃～ +80℃
Operating temperature range (series connection) (Tus)	-40℃～ +60℃
Operating state / fault indication	green / red
Number of ports	1
Cross-sectional area(L/N, L'/N', N/PE (N)) (min.)	10mm^2 solid / flexible
Cross-sectional area (L/N, N/PE (N)) (max.)	50mm^2 stranded / 35mm^2 flexible
Cross-sectional area (L'/N') (max.)	35mm^2 stranded / 25mm^2 flexible
For mounting on	35mm DIN rails acc. To EN 60715
Enclosure material	thermoplastic, gray UL 94 V-0
Place of installation	Indoor installations
Degree of protection	IP 20
Capacity	2 module(s)DIN 43880
Type of remote signalling contact	changeover contact
a.c. switching capacity	250V / 0.5A
d.c. switching capacity	250V / 0.1A ; 125V / 0.2A ; 75V / 0.5A
Cross-sectional area for remote signalling terminals	max. 1.5mm^2 solid / flexible

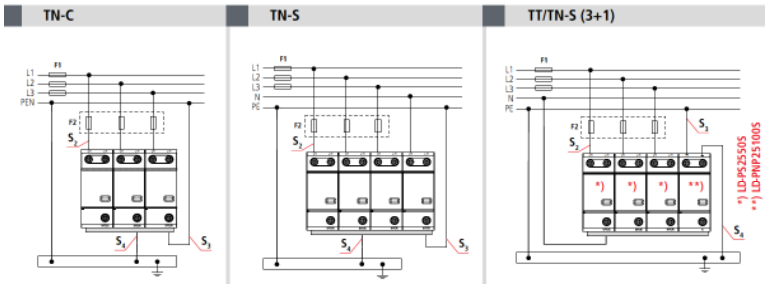
Class Ⅰ (TYPE1) SPD(GDT)　LD-PS2550S

Connection



LD-PS2550S	
F	F≤ 125 A gG ✓
	F > 125 A gG ↓ 3)

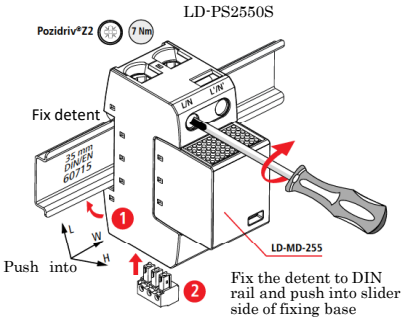
F A gG	S_2 / mm²	S_3 / mm²	S_4 / mm²
25	10	16	16
35	10	16	16
40	10	16	16
50	10	16	16
63	10	16	16
80	16	16	16
100	25	25	25
125	35	35	25



LD-PS2550S		
	$T_a \le 0,2$ s	$T_a \le 5$ s
F1	F1 ≤ 500 A ✓	F1 ≤ 315 A ✓
F2	F1 > 500 A ↓ F2 ≤ 500 A	F1 > 315 A ↓ F2 ≤ 315 A

F1 / F2 / A	S_2 / mm²	S_3 / mm²	S_4 / mm²	T_a / s
... 80	10	16	16	5
100 ... 125	16	16	16	
160	25	25	25	
200 ... 250	35	35	25	
315	50	50	25	
> 315 ... 500	50	50	25	0.2

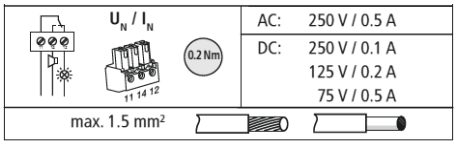
Installing the fixing base

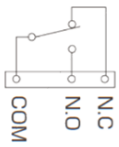


[Fixing]

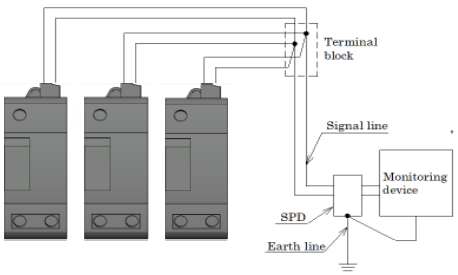
After positioning the fixing base on DIN rail, pull the slider of the fixing base and push the fixing base into DIN rail. Release the slider, locking the fixing base on to the rail.

Deterioration contact terminal





Protection of monitoring device



Installation example is shown in above diagram. If monitoring device is far from the SPDs, install the SPD adjacent to the monitoring device to protect it from the lightning surge that invades from signal line.

Recommended SPD for protection	
Voltage on signal line	Applied SPD
AC100V	LS-S1515S×2 or LT-C12G801W
AC200V	LS-N2720S or LT-C12G801W
DC12V	SL-SPM12
DC24V	SL-SPM24
DC48V	SL-SPM48

Regular maintenance

During the lightning season and after lightning strikes, maintain the SPD as follows.
Before maintenance, switch off the isolating switch for inspection (or Earth Leakage Current Breaker (ELCB)) on the electric input side of the SPD.

＜Pass criteria for SPD＞
Replace the SPD main unit if the SPD is under follow condition.
(If the fixing base has also changed color or shape, replace the fixing base.)
○Appearance check
▪The plastic housing has changed color or shape.
▪Status indicator color.
(After status indicator change red, the SPD cannot be reused.)
○Leakage current check
▪Earth Leakage Circuit Breaker (ELCB) has operated any times. (After replacing SPD, confirm the ELCB has no operation.)