



TSTLP® Type 1 Lightning Current Arrester

- ❖ **INTRODUCTION:** TS series lightning current arrester is designed according to GB 18802.1 / IEC 61643-11 for installation at LPZ 0A -1 or higher, protecting low voltage equipment against lightning and surge damages. Applied in SPD **Type 1(Class B)** or **Type 1+II (Class B+C)** for various power supply system of lightning current surge protection, specially designed for TN-S system("4-0" circuit) and installed in floor distribution-box or Class I main distribution box.



❖ TECHNICAL DATA

Model Number		TS-385B50RM/4	TS-255B50RM/4
Rated voltage (max. continuous voltage)	Uc	385VAC~	255VAC~
Lightning impulse current (10/350)	I _{imp}	50 kA(L-N)	
Lightning impulse current (10/350)	I _{imp}	200kA(L1+L2+L3+N)	
Nominal discharge current (8/20)	I _n	100 kA	
Max. discharge current (8/20)	I _{max}	200 kA	
Voltage protection level	U _p	≤ 1.8 kV (L-N)	
Follow current extinguishing capability at Uc	I _f	32A fuse will not be triggered at 10kArms	
Response time	t _A	≤ 25ns	
TOV voltage	U _T	335V / 5sec	
Max. back up fuse (L)		200AgL/gG	
Max. back up fuse (L-L')		125AgL/gG	
Operating temperature range (parallel wiring)	T _{UP}	-40°C...+80°C	
Operating temperature range (through wiring)	T _{US}	-40°C...+60°C	
Relative humidity:		≤95% (25°C)	
Cross-sectional area		35mm ² solid / 50mm ² flexible	
Mounting on		35mm DIN rail	
Enclosure material		Grey thermoplastic, UL94-V0	
Dimension		8 mods	
Type of remote signalling contact		Switching contact	
Switching capacity	U _N /I _N	AC:250V/0.5A; DC:250V/0.1A,125V/0.2A,75V/0.5A	
Cross-Section area for remote signalling contact		Max. 1.5mm ² solid / flexible	
Standards		IEC 61643-11; GB 18802.1; YD/T 1235.1	
Compliance		CE (LVD, EMC)	

❖ MAIN CHARACTER

- ✓ Three-phase protection for TN-S system.
- ✓ Adopted hermetical GDT technology, high follow current extinguish capability.
- ✓ Double thermal disconnection device , provide more reliable protection.
- ✓ Multifunctional connection for conductors & busbars.

INSTALLATION INSTRUCTION

According to lightning protection zones concept, for installation at LPZ 0A -1 or higher. It is usually installed in floor distribution-box or Class I main distribution-box.

Fuse must be installed at the upstream of the SPD or the lightning arrester to make sure that protected system has double protection. The value of the fuse used in a SPD system should be conformed to:

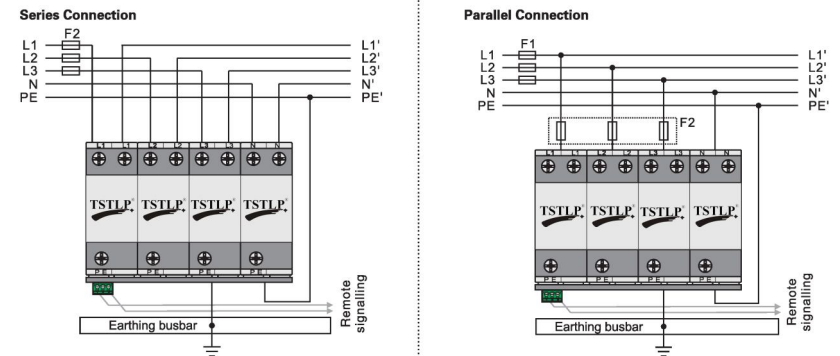
1. The value of FUSE should not be larger than the max.withstand capacity of the SPD's backup fuse value.
1. Under the status of the max. current in the power supply & close loop circuit available current, the fuse should be able to disconnect when overloaded or short-circuited.
2. Take 1 & 2 into consideration, the fuse should be as large as possible to allow the maximum surge discharge of SPD.

INSTALLATION STEPS

- 1) Check the product for integrity of the package;
- 2) Mount the SPD on 35 mm DIN rail.
- 3) Connect conductors, the cross-sectional area of cable must be larger than 16mm² . The withstand voltage value of cable is not smaller than AC500V; ensure wiring reliable.
- 4) If need remote alarm, it should be connected signal lines to remote signal terminal 1 and 2, or 2 and 3 (When normal, 1 and 2 open, 2 and 3 close; when fault, the state is reversed).
- 5) After above, switch on the power supply and turn on the circuit breaker, test the SPD does not fault appear, this indicates the unit is operating normally.

Regularly inspect the operating status, especially after lightning. Once the fuse upstream break, or the SPD's fault appear, electrician should check/replace the SPD.

INSTALLATION DIAGRAM (4+0)



WARNING:

1. The device must be installed by electrically skilled person, conforming to national standards & safety regulations.
2. It is recommended that installation should be done under power off condition.