



**TSTLP®/TS-385M60,50,40(RM) series Type 1 Power Surge Arrester**

❖ **INTRODUCTION:** TS-385M60,50,40(RM) Type 1 Surge Arrester ,designed according to IEC 61643-11; GB 18802.1;YD/T 1235.1 is to protect low voltage devices from surge damages. Mainly used in power supply system such as power distribution-room,distribution-cabinet and other important power supply system.

Product Photo	Dimension(mm)	BCD-(4+0)	BCD-(3+1)
Product Photo	Dimension(mm)	BCD-(2+0)	BCD-(1+1)
Product Photo	Dimension(mm)	BCD-(1P)	BCD-(N-PE)

❖ **TECHNICAL DATA**

Model Number	TS-385M60RM/4 TS-385M60RM/2 TS-385M60RM (4+0,2+0, 1P)	TS-385M50RM/4 TS-385M50RM/2 TS-385M50RM (4+0,2+0, 1P)	TS-385M40RM/4 TS-385M40RM/2 TS-385M40RM (4+0,2+0, 1P)
4+0 for TN-S system 3P for TN-C system 2+0 for TN system 3+1 for TN-S/TT system 1+1 for TN/TT system			
Rated voltage (max. continuous voltage)	Uc 385V~	385V~	385V~
Nominal discharge current (8/20)	In 60 kA	50 kA	40 kA
Max. discharge current (8/20)	I <sub>max</sub> 120 kA	100 kA	80 kA
Voltage protection level	Up ≤ 2.5 kV	≤ 2.2 kV	≤ 2 kV
Response time	t <sub>A</sub> ≤ 25ns		
Max. back up fuse (L)	200AgL/gG		
Max. back up fuse (L-L')	125AgL/gG		
Operating temperature range	Tu -40°C...+80°C		
Relative humidity:	≤95% (25°C)		
Cross-sectional area	35mm <sup>2</sup> solid / 50 mm <sup>2</sup> flexible		
Mounting on	35mm <sup>2</sup> DIN rail		
Enclosure material	White/Red thermoplastic, UL94-V0		
Dimension	8 mods		
Standards	IEC 61643-11; GB 18802.1; YD/T 1235.1		
Type of remote signalling contact	Switching contact		
Switching capacity	U/I AC:250V/0.5A DC:250V/0.1A,125V/0.2A,75V/0.5A		
Cross-sectional area for remote signalling contact	Max. 1.5mm <sup>2</sup> solid / flexible		
Compliance	CE (LVD, EMC)		

❖ **MAIN CHARACTER**

- ✓ Combined SPD for three-phase TN / TT system
- ✓ Double terminals for parallel or series(V-shape) connection
- ✓ Pluggable module, easy for installation and maintenance
- ✓ High discharge capacity, quick response
- ✓ Low residual voltage, fine protection
- ✓ Multifunctional connection for conductor and busbars
- ✓ (SPD with WINDOWS indication only) Green Window will display red when fault occurs,remote alarm terminal at the same time.
- ✓ (SPD with both WINDOWS & LIGHTS indication),provide DOUBLE indications for users to check its working status : WINDOWS display GREEN and 3 Green lights will display HIGH GREEN when it's working OK; When fault occurs, the windows display RED color and The green lights go off once the fuse upstream break.



### INSTALLATION INSTRUCTION

According to lightning protection zones concept, for installation at LPZ 0<sub>A</sub> -1 or higher. This surge protective device is usually installed in distribution-box or feeder bus of UPS, protecting devices or equipment downstream. Fuse must be installed at the upstream of the SPD or the lightning arrester to make sure that the 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.
2. 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.

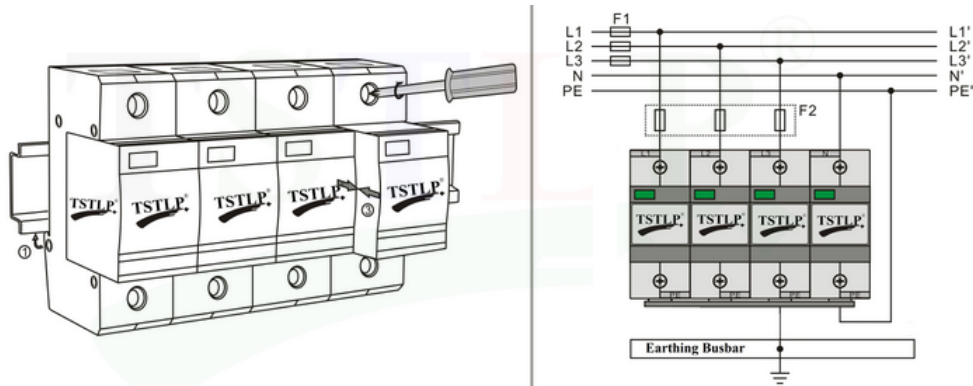
Take 1 & 2 into consideration, the fuse should be as large as possible to allow the maximum surge discharge of SPD.

### INSTALLATION STEPS

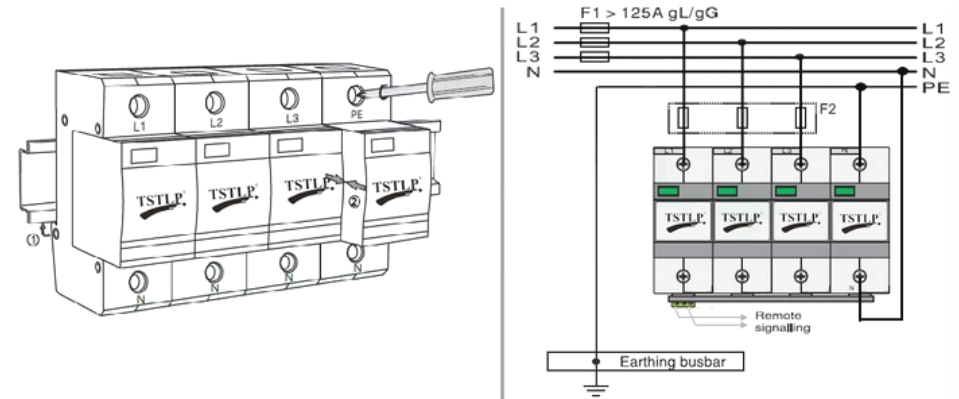
- 1) Check the product for integrity of the package; make sure the product window indicates green.
- 2) Mount the SPD on 35 mm DIN rail.
- 3) Connect conductors, the cross-sectional area of cable must be larger than 16mm<sup>2</sup>. The withstand voltage value of cable is not smaller than AC500V; ensure 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) Remote Contact: When the Green window display RED, 1 & 2 are connected; And the extra light will be on if the both terminals are connected with light.
- 6) After above, switch on the power supply and turn on the circuit breaker,if the SPD's window does not appear red, this indicates the unit is operating normally.
- 7) For the SPD with 3 Green lights, it displays HIGH GREEN when it's working normal; The green lights go off once the fuse upstream break.

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

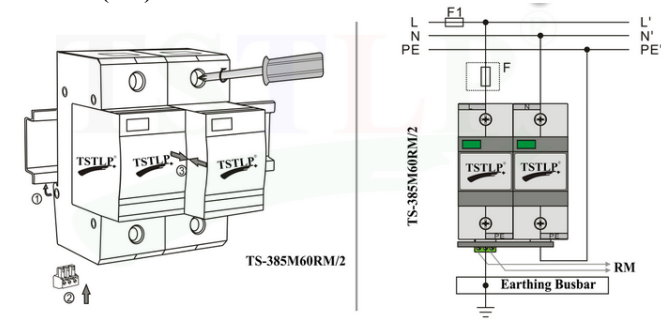
### INSTALLATION DIAGRAM FOR REFERENCE (4+0)



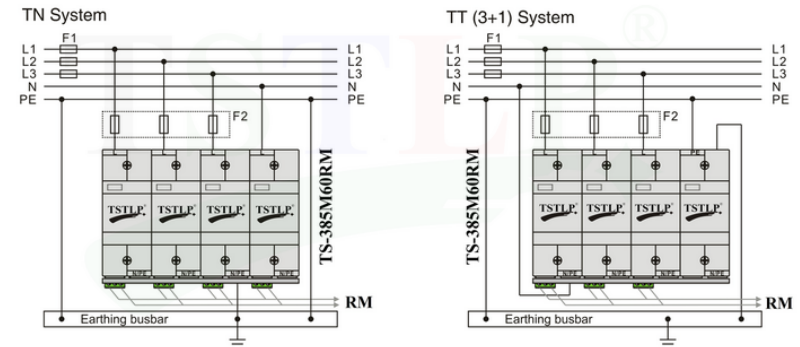
### INSTALLATION DIAGRAM FOR REFERENCE (3+1)



### INSTALLATION DIAGRAM (2+0)



### INSTALLATION DIAGRAM (L-N/PE)



### WARNING:

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