



LPS® AC & PM Series

INSTALLATION INSTRUCTIONS

The **LPS® AC Series** and **PM Series** of Surge Protective Device (SPD) are to be installed parallel to the TN-S and TT power system at main switchboards, sub-switchboards, distribution boards and/or equipment by qualified electricians.

Before installation

- ▶ Verify the supply voltage is within 200 – 275 VAC from line to neutral or 350 – 475 VAC from line to line.
- ▶ Ensure that the power earth resistance is less than 10 ohms.
- ▶ Ensure that the voltage between neutral and earth is less than 3 volts; otherwise do not install. Check and rectify power system before proceeding.
- ▶ For power system with 4 pole changeover (e.g., genset), before proceeding further please contact our:

TECHNICAL SUPPORT

T: +603-7980 5911 E: info@lpssystem.com

Installation procedures

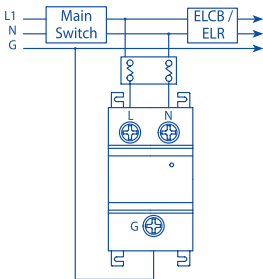
1. Turn off power supply before installation.
2. Install LPS® SPD on 35 mm Din Rail or panel mount using M3.5 pan or round head screws.
3. Ensure that the LPS® SPD is less than 500 mm away from the panel board or equipment for effective protection. If the distance exceeds 500 mm, bind all connecting leads/wires together with cable tie. All electrical wires should be rigid strand copper conductor of minimum 2.5 mm² to maximum 10 mm² for **PM Series**. The screw terminals shall be tightened with screwdriver and the applied torque shall not exceed 2.0 Nm.

Recommended HRC fuse and isolator are as follows:

- ▶ HRC Fuse of 20 A, 100 kA for AC 25, AC 40, PM 25, PM 40 and PM 75 Series.
- ▶ HRC Fuse of 32 A, 100 kA for PM 80 Series.
- ▶ HRC Fuse of 63 A, 200 kA for PM 120 and PM 320 Series.

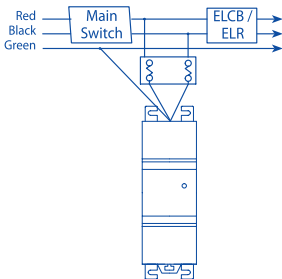
4. Connect the SPD to the load side of the Main Switch through the HRC Fuse or Isolator as illustrated in the installation diagrams below:

PM Series: Single Phase



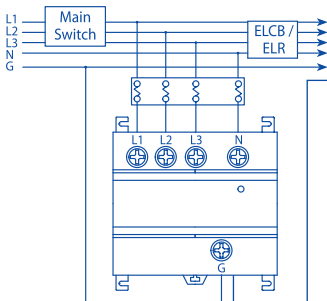
Dimensions: 56 mm x 115 mm x 71 mm

AC Series: Single Phase



Dimensions: 36 mm x 115 mm x 71 mm

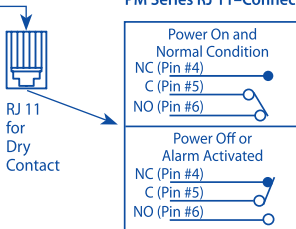
PM Series: Three Phase



Dimensions: 109 mm x 115 mm x 71 mm

Dry contact configuration for remote monitoring

PM Series RJ 11-Connector



5. Activate the unit by turning on the power supply and the LED will illuminate. If the LED does not illuminate, recheck the phase, neutral and ground connections are activated.

 **CAUTION** 

Technical Data

Nominal Voltage U_0	240V AC (Line to Neutral)
Maximum Continuous Operating Voltage U_c	270V AC (Line to Neutral)
Residual Current I_{PE}	< 1mA
Short-circuit Current Rating I_{SCCR}	25kA
Operating & Storage Temperatures	-40°C to 70°C

- ▶ All earth terminal of LPS® products must be connected to Power Earth.
- ▶ All connecting leads must be as short and as straight as possible.
- ▶ Ensure that the phase conductors are NOT connected to N (Neutral) of the SPD, otherwise the SPD will damage.
- ▶ For new power system, ensure that the SPD is isolated during power system testing.
- ▶ Failure to install the SPD before the Earth Leakage Circuit Breaker (ELCB) may cause nuisance tripping (except for transient protected RCCB and ELR).
- ▶ It is not advisable to run the system without SPD. For optimal performance, SPD should always be installed together with new equipment.

Basic troubleshooting steps

When the Green LED does not illuminate or the audible alarm is activated and the remote monitoring changes its status, check the following:

- ▶ Ensure that there is power supply
- ▶ Ensure that fuse is in good condition

Once the above have been ruled out, chances are the SPD have been damaged and need to be replaced as soon as possible.

5 YEARS LIMITED WARRANTY



The LPS® Surge Protective Devices (SPD) manufactured by Lightning Protection System Sdn. Bhd. meets the ISO 9001 Quality Management System.

LPS® warrants to the original purchaser that the LPS® products shall be free of defects in design, material and workmanship. LPS® will, at its option, repair or replace, free of charge, any properly installed LPS® SPD device that is damaged by lightning induced surge for a period of five years. This warranty does not cover damage associated with improper installation, sustained over voltage, vandalism, theft, normal wear and tear, obsolescence, abuse, unauthorised modification or alteration, misuse or catastrophic events. Except as expressly provided by this warranty, LPS® disclaims liability for any incidental, indirect, special or consequential damages arising out of the sale or use of any LPS® SPD products (including without limitation lost business profits, loss of data and all freight, mileage, travel time and insurance charges associated with warranty coverage claims).

All claims must be made within thirty (30) days and warranty seals must not be tampered.

Kindly take note that the customer has to send the 'damaged' LPS® SPD back to our Marketing Office and to collect it at his own expense for product warranty claims.

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