



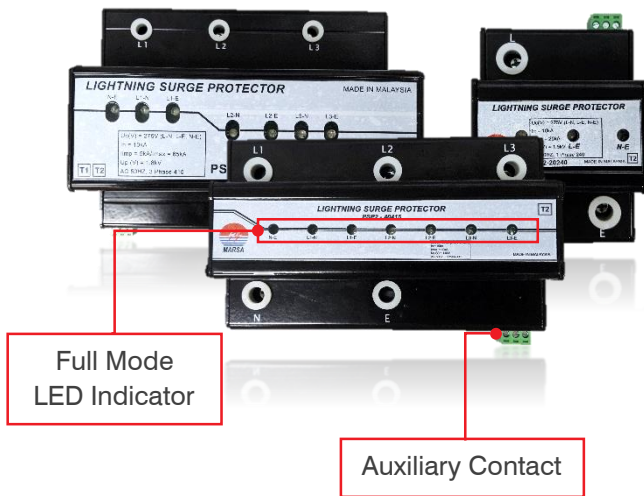
## POWER SURGE PROTECTOR

### DESCRIPTION

MARSA Power Surge Protectors, PSP2 series are designed specifically to protect single phase and three phase supply system from Malaysian Extreme Lightning Surges. Installed in parallel to incoming power feeder. PSP2 series power surge protector offers up to 65kA surge current protection per mode Live to Neutral, Neutral to Earth, and Live to Earth (Full Mode) generated in electrical power line to earth.

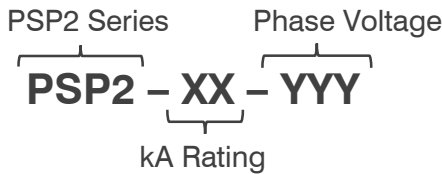
### FEATURES AND BENEFITS

- ✓ Full Mode protection. All mode protection covers Live to Neutral, Neutral to Earth, and Live to Earth.
- ✓ Monoblock type and each mode protected by single MOV with the same rating.
- ✓ Auxiliary contact for remote monitoring signal.
- ✓ With Full Mode LED indicator.



- MS IEC 61643-11
- IEEE C62.41
- BS 6651

### SELECTION GUIDE



### SINGLE PHASE

PSP2-20240, PSP2-40240

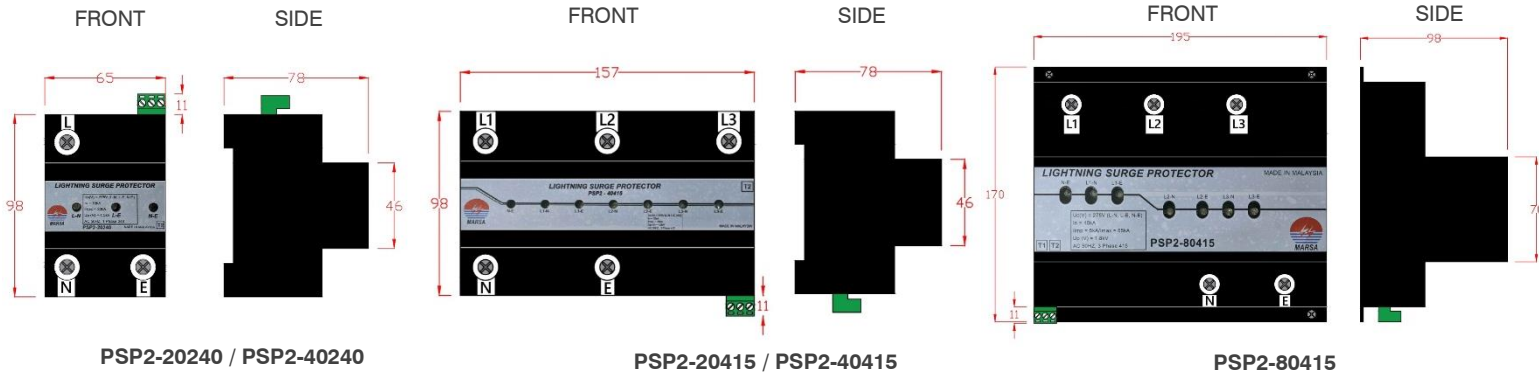
- Class II, (T2) surge protective device
- Able to withstand 20 – 40kA surge current per mode (L-N), (N-E), & (L-E)
- Designed for single phase power line. Suitable for Main Switch Board, Sub Switch Board, Distribution Board, and LED lighting feeder pillar with incoming cable <math><35\text{mm}^2</math> (PSP2-20240) and incoming cable >math>>35\text{mm}^2/<math><95\text{mm}^2</math> (PSP2-40240)
- Full Mode protection
- Monoblock type
- Full Mode LED indicator

### THREE PHASE

PSP2-20415, PSP2-40415, PSP2-80415

- Class I & II, (T1, T2) surge protective device
- Able to withstand 20 – 65kA surge current per mode (L-N), (N-E), & (L-E)
- Designed for three phase power line. Suitable for Main Switch Board, Sub Switch Board, Distribution Board, and LED lighting feeder pillar with incoming cable <math><35\text{mm}^2</math> (PSP2-20415), incoming cable <math><95\text{mm}^2</math> (PSP2-40415), and incoming cable >math>>95\text{mm}^2</math> (PSP2-80415)
- Full Mode protection
- Monoblock type
- Full Mode LED indicator

## DIMENSION



## ELECTRICAL SPECIFICATION

	PSP2-20240	PSP2-40240	PSP2-20415	PSP2-40415	PSP2-80415
REFERENCE STANDARD / METHOD OF TEST	MS IEC 61643-11				
TEST CLASSIFICATION	CLASS II (T2)				CLASS I+II (T1+T2)
PROTECTION MODE	FULL MODE [L-N, L-E, N-E]				
CONNECTION TYPE	PARALLEL				
OVERHEAT PROTECTION [L-N, L-E, N-E]	THERMAL FUSE				
REQUIRED EXTERNAL DISCONNECTOR	SWITCH FUSE, 32A (min.)				
NOMINAL VOLTAGE, $U_o$ [L-N, L-E, N-E]	240V				
MAX. WORKING VOLTAGE, $U_c$ [L-N, L-E, N-E]	275V				
EARTH LEAKAGE CURRENT, $I_{PE}$	< 1mA				
WORKING FREQUENCY	40 - 60 Hz				
NOMINAL DISCHARGE CURRENT, $I_n$ [L-N, N-E, L-E]	10kA				
MAX. DISCHARGE CURRENT, $I_{max}$ [L-N, N-E, L-E]	20kA	40kA	20kA	40kA	65kA
PROTECTIVE COMPONENT RATING (PER ANY 2 CONDUCTOR)	20kA	40kA	20kA	40kA	80kA
TOTAL COMBINATION DISCHARGE CURRENT, $I_{total/ph}$ [L-N + N-E]	40kA	80kA	40kA	80kA	160kA
IMPULSE DISCHARGE CURRENT, $I_{imp}$ @ 10/350 $\mu$ s	N/A				5kA
LET-THROUGH VOLTAGE, $U_p$ ( $I_n$ 10kA @ 8/20 $\mu$ s), [L-N, N-E, L-E]	< 1.1kV	< 1.1kV	< 1.1kV	< 1.1kV	< 1.2kV
LET-THROUGH VOLTAGE, $U_p$ ( $I_{sc}$ 5kA @ 8/20 $\mu$ s), [L-N, N-E, L-E]	N/A	N/A	N/A	N/A	N/A
LET-THROUGH VOLTAGE, $U_p$ ( $I_{sc}$ 3kA @ 8/20 $\mu$ s), [L-N, N-E, L-E]	N/A	N/A	N/A	N/A	N/A
RESPONSE TIME	25ns				
TEMPORARY OVERVOLTAGE (TOV), $U_T$ FOR LOW VOLTAGE SYSTEM FAULTS	337V / 5sec. - WITHSTAND [L-N] 440V / 5sec. - WITHSTAND [L-E]				
TEMPORARY OVERVOLTAGE (TOV), $U_T$ FOR HIGH (MEDIUM) VOLTAGE SYSTEM FAULTS	337V / 120min. - SAFE FAILURE [L-E] 440V / 120min. - SAFE FAILURE [L-N] 1455V / 200ms - SAFE FAILURE [L-E] 1200V / 200ms - SAFE FAILURE [N-E]				

## FEATURE

	PSP2-20240	PSP2-40240	PSP2-20415	PSP2-40415	PSP2-80415
OPERATION STATUS INDICATION [L-N, N-E, L-E]	LED				
AUXILIARY CONTACT FOR REMOTE MONITORING SIGNAL	EQUIPPED				

## MECHANICAL SPECIFICATION

	PSP2-20240	PSP2-40240	PSP2-20415	PSP2-40415	PSP2-80415
SIZE [W x L x H]	78 x 65 x 98	78 x 65 x 98	78 x 157 x 98	78 x 157 x 98	98 x 195 x 170
WEIGHT	540g	540g	920g	920g	1.4kg
WORKING TEMPERATURE	-40 ~ 85°C				
WORKING HUMIDITY	0 ~ 90%				
CASE MATERIAL	ALUMINIUM				
DEGREE OF PROTECTION (IEC 60529)	IP20				
INSTALLATION	DIN RAIL				MOUNTING SCREW
RECOMMENDED CONDUCTOR SIZE (STRANDED)	10mm <sup>2</sup> - 25mm <sup>2</sup>				