Lightning and Surge Protective Devices for the SMPS based Power Plant

Surge protective devices shall be suitable for operation on 230V, 50Hz, 1 phase OR 415 volts, 50 Hz, 3 phase, 4 wire AC supply in TT configuration, housed in a thermo plastic Polycarbonate box, Enclosure type IP21, complying with IEC 61024, IEC 61312 and VDE 0100-534 and tested as per IEC 61643 and VDE 0675 standards.

Model name DY LT1 : For Single Phase Operation.
Consists of 1 no. each of Lightening Current Arrestor (Phase to Neutral), Lightening Current Arrestor (Neutral to Earth) & Surge Arrestor (Phase to Neutral).

Model Name DY LT2 : For Three Phase Operation.
Consists of 3 nos. Lightening Current Arrestor (Phase to Neutral), 1 no. Lightening Current Arrestor (Neutral to Earth) & 3 nos. Surge Arrestors (Phase to Neutral).

Class B/Class I: (Phase to Neutral)

1) Lightning current arrester (Encapsulated spark Gap Class B/Class I type) for the connection between Phase and Neutral with the following ratings:

#	Parameters	Specifications
1.	Type	Encapsulated/Non-extinguishing Spark Gap
2.	Nominal Voltage, Un	230V, 50/60 Hz
3.	Over Voltage withstanding capacity	400V
4.	Lightning Impulse Current (10/350 μsec) between R, Y, B & N, Iimp	≥ 50 KA
5.	Voltage Protection Level, Up	≤ 1.5 KV
6.	Follow current extinguishing capacity without back-up fuse	≥ 10 KA
7.	Response Time	≤ 100 nano seconds
8.	Operating temperature range	-40°C to +85°C
9.	Mounting on	Din Rail
10.	Degree of Protection	IP 20

Class B/Class I: (Neutral to Earth)

2) Lightning current arrester (Encapsulated spark Gap Class B/Class I type) for the connection between Neutral and Earth with the following ratings:

#	Parameters	Specifications
1.	Type	Encapsulated/Non-extinguishing Spark Gap
2.	Nominal Voltage, Un	230V, 50/60 Hz
3.	Over Voltage withstanding capacity	400V
4.	Lightning Impulse Current (10/350 μsec) between R, Y, B & N, Iimp	≥ 100 KA
5.	Voltage Protection Level, Up	≤ 1.5 KV
6.	Follow current extinguishing capacity without back-up fuse	≥ 100 A
7.	Response Time	≤ 100 nano seconds
8.	Operating temperature range	-40°C to +85°C
9.	Mounting on	Din Rail
10.	Degree of Protection	IP 20

Class C/Class II: (Phase to Neutral)

3) Pluggable type surge arrester (Class C/Class II type) with potential free contact, thermal disconnector & provision for inbuilt common remote visual indication for defective arresters including base element & plug arresters of following ratings to be connected between Phase to Neutral with:

#	Parameters	Specifications
1.	Type	Single MOV
2.	Nominal Voltage, Un	230V, 50/60 Hz
3.	Maximum Continuous Operating Voltage, Uc	≥320V
4.	Nominal Discharge Current (8/20 μsec) between R, Y, B & N, In	20 KA
5.	Maximum Discharge Current (8/20 μsec) between R, Y, B & N, Imax	40 KA
6.	Voltage Protection Level at In, Up	≤ 1.6 KV
7.	Response Time	≤ 25 nanoseconds
8.	Operating temperature range	-40°C to +80°C
9.	Mounting on	Din Rail
10.	Degree of Protection	IP 20
11.	Back-up fuse if required	125 A gL/gG