

Power Line Special-Type SPD



RS485



SPD Power Meter

Function

Surge Counter

Rated voltage (3-phase: R-S, S-T, R-T/single-phase: L-N, L-G N-G), Individual leakage current display

External display connected (RS485 data transmitted)

Specification

Product Features

Voltage	AC 460V/440V/380V/220V/110V DC 600V/440V/380V/200V	CE certificate, KS certificate, Patents High-performance, High-capacity SPD (Total 800, 500, 400, 360, 320, 240kA) Full mode protection (Line-Neutral, Line-Ground, Line-Line) Performance in compliance with KS C IEC 61643-11
Type	3-Phase 4-Wire/3-Phase 3-Wire Single-Phase 2-Wire (Serial/Parallel)	Surge counter memory (non-volatile) Surge protector diagnosis (Leakage current measurement by phase, Failure indicator, Buzzer) Dual safety design (current & thermal fuse)
Capacity	800KA/500KA/400KA/ 360KA/320KA/240KA Total	Rated voltage measurement (3-phase: R-S, S-T, R-T/single-phase: L-N, L-G N-G) Communication function Surge Protector information Display (PD Power Meter) (optional) Aluminum case for proven safety against surge protector failure

Class I Surge Protector

SPD Class	Class I Surge Protector (Class I SPD)
Model	KOP-B-50KI [3-Phase 4-Wire, Parallel]
SPD Type	Special 2
Application	[*LPZO, *LPZ1] Power and earthing line lightning, Switching surge protection
Application Field	Incoming panel, Distribution board, 3-phase UPS, Inverter, Motor driver, Actuator power and other 3-phase power devices



Electrical property

Rated voltage	Un	380~460V AC [Ph-Ph], 220~260V AC [Ph-N]
Rated current		N/A
Power system configuration		3-Phase 4-Wire, Parallel connection
Max Continuous Operating Voltage (MCOV)	Uc	320V AC [L-N], 255V AC [N-G]
Rated frequency	f	50 / 60 Hz
Leakage current (@Uc)	IL	Less than 1 mA
Insulation resistance (@500V DC)	RIN	Above 10 MΩ

Protection property

Protection mode		L1-N	L2-N	L3-N	N-G
Voltage protection level [CE Class 1 test] (Iimp 50kA @ 10/350μs) – IEC 61643-11	Up	≤ 2,500V	≤ 2,500V	≤ 2,500V	≤ 1,500V
Max current capacity (@Current 8/20μs) [Total : 800kA]		200kA	200kA	200kA	200kA
Impulse discharge current (@Current 10/350μs) – IEC 61643-11	Iimp	50kA	50kA	50kA	50kA
Nominal discharge current (@Current 8/20μs)	In	50kA	50kA	50kA	50kA
Response time (@10kV/μs)	ta	Less than 5 ns			
Power noise filter (Frequency band and Damping rate)	Fc	N/A			

Features

Special II	Operation status	Run = green lamp / Fault = red lamp [L1-N, L2-N, L3-N]
	Safety	Dual safety design [current & thermal fuse]
	Surge information display	Surge counter (Back light LCD)
	Alarm	Fault buzzer
	Measurement	Rated voltage display, Individual leakage current display, Temperature measurement and display, Cumulative operating time display
	Condition record display	Surge event memory, Over voltage event memory, Under voltage event memory (Line to Line)
	Communication function	RS 485, Ethernet Modbus RTU Protocol (ASCII not Supported), APP(Bluetooth)

Mechanical property

Protection rating level	IP20 (@IEC 60529), NEMA1
Operating temperature and humidity	-40~ 90°C, ≤ 95%
Terminal	150A IEC type [Awg 6-1 / 0 / 0.5~50mm ²]
Size	[SP-2] (W)264 x (L)294 x (H)160 mm cf. p36 A-1
Installation	Bolt mounting
Weight	Less than 4.5kg

Test standard & Reference

IEC 61643-11 [2017] Performance and Test Criteria for Power Line Surge Protector
IEC 61643-12 [2017] Lightning Protection Zone 1,2,3
IEC 62305-1,2,3,4 [2017]
ANSI/IEEE Std C62.45 [2002] Guide to Surge Test for Low-pressure Device
ANSI/IEEE Std C62.41 [2002] Category A, B, C
IEEE Std C62.34 [2017] Power line surge protector performance standard
IEEE Std C62.62 [2018] Power line surge protector standard test specification

*LPZ : Lightning Protection Zone(lightning protection area)

Size

Power Line Class I SPD Special I , II Type



Model List A-1
(W)264 x (L)294 x (H)160

Single-phase

- KOP-A-50KI

3-phase

- KOP-B-50KI

[Unit : mm]

