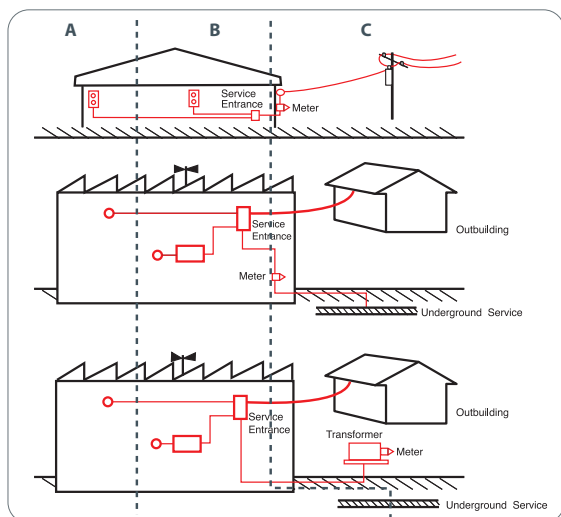


LS-series

(SDL-series)

SURGE DIVERTER

Power Line Surge Protector



Location Category A

- Outlets and long branch circuits.
- All outlets at more than 10 m (30 ft) from Category B.
- All outlets at more than 20 m (60 ft) from Category C.

Location Category B

- Feeders and short branch circuits.
- Distribution panel devices.
- Bus and feeder industrial plants.
- Heavy appliance outlets with "short" connections to service entrance.
- Lighting systems in large buildings.

Location Category C

- Outside and service entrance.
- Service drop from pole to building.
- Run between meter and panel.
- Overhead line to detached building.
- Underground line to well pump.



Tested by
Center of Excellence in Electrical Power Technology, Chulalongkorn University

SPECIFICATIONS	LS-211C (SDL3-20kA)	LS-411C (SDL3-40kA)	LS-231C (SDL5-20kA)	LS-431C (SDL5-40kA)
ELECTRICAL SYSTEM	Single phase (2 wire + earth)		Three phase (3 wire + neutral + earth)	
NOMINAL VOLTAGE	220 V or 240 V		380 V or 415 V	
APPLICATION RANGE (MCOV)	180 - 280 V		310 - 480 V	
FREQUENCY RANGE	45 - 65 Hz			
LET THROUGH VOLTAGE	600 V			
SURGE ENERGY DISSIPATION	1560 joules	3080 joules	3 x 1560 joules	3 x 3080 joules
SURGE CAPABILITY (I _{max})(8/20 μs)	20 kA	40 kA	20 kA / phase	40 kA / phase
LEAKAGE CURRENT (phase to earth)	<60 μA	<120 μA	<200 μA	<400 μA
TVSS PROTECTION MODE	L-N, L-E, N-E		L-L, L-N, L-E, N-E	
LOCATION CATEGORY	A1, A2, A3, B1, B2, B3, C1, C2			
AMBIENT TEMPERATURE	- 40 to 60 °C			
DIMENSIONS (W x H x D) (mm.)	38 x 215 x 82	44 x 251 x 106	120 x 270 x 120	120 x 270 x 120

- Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.
- Product Liability Insurance for products that use in Thailand.



TPS-series

TVSS POWER STRIP

Power Line and Signal Surge Protector

SPECIFICATIONS

ELECTRICAL SYSTEM	Single phase L-N-E
NOMINAL INPUT	200-250 Vac, 50-60 Hz
RATED POWER	2,500 VA, 10 A max.
PRINCIPLE	Multi-Surge TVSS
PROTECTION MODE	All mode; L-N, L-E, N-E
HIGH MCOV	280 Vac
SURGE CAPABILITY (Imax)	10 kA (20 kA option)
TVSS STANDARD	ANSI/IEEE C62.41 CAT. B1
OVERLOAD PROTECTION	10 A/250 Vac
NUMBER OF OUTLET	6 x LEONICS type
INDICATOR (LED)	TVSS Protected (green) Fault wiring (red)
PRIMARY STATE	Gas arrester
TVSS FUNCTION	Long discharge transient
IMPULSE SPARK OVER VOLTAGE	900 V at 100 V/μs
SECONDARY STATE	Star varistor
TVSS FUNCTION	Fast response transient
CLAMP VOLTAGE	710 / 775 V
TRANSIENT CURRENT	10-20 kA (8/20 μs wave form)
TOTAL TRANSIENT ENERGY	3,800 Joules
TRANSIENT RESPONSE TIME	less than 25 ns

SIGNAL SURGE PROTECTION

PEAK PLUSE POWER DISSIPATION	1,500 W (10/1000 μs wave form)
FAST RESPONSE TIME	5 ns
LOW LINE CAPACITANCE	less than 15 pF
HIGH SPEED BUADRATE	less than 20 MHz
DC ISOLATED GROUND	V _{ISO} = 1,000/6,000 V
REPITITIVE PEAK PLUS CURRENT	I _{ISO} = 100 A (8/20 μs wave form)
ENVIRONMENT	0-40°C 0-95% RH (non-condensing)
DIMENSIONS (WxHxD)	120 x 260 x 60 mm.
WEIGHT	1.5 kg.



2 Channels-Signal TVSS



- Easy installation for basic extension power
- 6 outlets AC protector and 2 channels signal surge protection
- LED protected status and fault wiring indicator
- All TVSS protection mode ; L-N, L-E, N-E
- Built-in signal surge protection for IT and telecom.
- AC multi-surge TVSS in location CAT. A or B
- Accordance with ANSI/IEEE C62.41-1991 and ANSI/IEEE C62.42-2000

SIGNAL SURGE PROTECTION Double state protection with DC isolated ground

MODEL	APPLICATIONS	CONNECTOR	LINE PROTECTION	BREAKDOWN VOLTAGE (V _{BR})	8/20 μs WAVE FORM		10/100 μs WAVE FORM	
					V _{CL}	A _{CL}	V _{CL}	A _{CL}
TPS-RS232	RS-232C	Modular plug RJ45-8C	1-8	33	59	169	45.7	33
TPS-RS485	RS-485/RS-422		1-8	6.8	13.4	746	10.5	143
TPS-LAN*	LAN 10Base-T		1-8	6.8	13.4	746	10.5	143
TPS-TEL.	Tel./Fax/Modem		4-5	180	1,500	100	1,000	50
TPS-ISDN*	ISDN		4-5	180	1,500	100	1,000	50
TPS-DSL	Digital lease line		4-5, 3-6	180	317	31.5	246	6.1
TPS-ADSL*	ADSL		4-5	270	1,500	100	1,000	50
TPS-HDSL	HDSL		4-5, 3-6	270	388	26	328	4.6
TPS-PLC	PLC 24 Volt	Coaxial F-type	1-8	33	59	169	45.7	33
TPS-DATA	Telecom 48 Volt		1-8	68	121	83	92	16.3
TPS-CATV	CATV 70 Volt		center-shield	90	600	10k	-	-
TPS-SOHO	Tel./Fax/Modem		4-5	180	1,500	100	1,000	50
TPS-HOME*	LAN 10Base-T		1-8	6.8	13.4	746	10.5	143
	Tel./Fax/Modem		4-5	180	1,500	100	1,000	50
TPS-MFG	CATV 70 Volt		center-shield	90	600	10k	-	-
	RS-232C		1-8	33	59	169	45.7	33
	RS-485/RS-422	Modular plug RJ45-8C		6.8	13.4	746	10.5	143

*Stock model. Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.
Product Liability Insurance for products that use in Thailand.

Authorized Distributor: