

TECHNICAL DATASHEET

LPI® Surge Protection Range

Surge protection devices (SPDs) designed for AC mains connected equipment are critical for protecting such equipment against damaging transients arising from external and internal sources, such as lightning strikes and switching operations.

LPI's Smart Surge Protection Range combines advanced surge protection with intelligent connectivity. Using Bluetooth low-energy technology, devices communicate directly with the LPI App, allowing real-time monitoring, diagnostics, and maintenance without opening switchboards. With remote access via the cloud and flexible connection options, the system simplifies asset management and empowers faster, smarter protection across any site.

Key Benefits & Features

Connectivity & App Integration

- Utilises Bluetooth low-energy technology for seamless wireless communication.
- Connects directly to the LPI App for real-time monitoring and diagnostics.
- Enables remote access via the Cloud, reducing the need for physical inspections.
- Compatible with iOS (v15.0+) and Android 5.0 (API 21+) devices.

Simplified Maintenance

- No need to open switchboards—status checks are done via the App.
- Maintenance can be performed by non-technical personnel, improving efficiency.
- Instant visibility of SPD status and performance metrics.

Scalable Monitoring

- Supports local and remote monitoring of multiple SPDs through optional modules.
- Data from all connected devices is automatically synced to the cloud.
- Flexible connectivity options including Ethernet and WiFi for diverse environments.

Smart Diagnostics

- Provides instant feedback on key operating variables such as:
 - Surge count, supply voltage & temperature
 - MOV status, power quality, serial number and firmware version
 - Includes time and date stamping for precise incident tracking.

For optimal performance, LPI strongly recommends using Bluetooth-enabled devices (SPDs, PPMs, DRs, and Filters) in conjunction with an AIMCB Series 2 device connected to a stable internet connection via Wi-Fi or LAN. Please note: Without a reliable internet connection, accurate data transmission or reporting is not guaranteed.




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LPI® Smart Surge Protection Device Range

	<p>SST150B (Smart Phase-to-Neutral SPD)</p> <p>LPI's SST150B is a compact, intelligent SPD designed for critical infrastructure, offering real-time monitoring, remote communication, and reliable protection against transient overvoltages in AC mains.</p>
	<p>NE-15B (Smart Neutral-to-Earth Protection)</p> <p>LPI's NE-15B is a Neutral-to-Earth (NE) SPD engineered to protect sensitive electronic equipment from lightning-induced surges. Used in conjunction with the SST150B, it ensures comprehensive protection across all conductor paths — phase-neutral, phase-earth, and neutral-earth.</p>
	<p>AIMCB (Smart "Alarm Interface Module")</p> <p>LPI's AIMCB enhances connectivity across the Smart SPD range by supporting voltage-free contacts, Ethernet, Wi-Fi and Bluetooth communications. The AIMCB Series 2 can detect and manage up to 40 separate Smart Devices (e.g. SST150B, NE-15B, LSR-MAX) enabling individual data access and seamless cloud integration via the LPI App or onboard wireless features.</p>
	<p>NE100 (Standard Neutral-to-Earth Protection)</p> <p>LPI's NE100 is a high-energy Neutral-Earth SPD featuring encapsulated spark gap technology. It is designed to safeguard critical systems from lightning-induced transients in unmeasured electrical installations.</p>

For optimal performance, LPI strongly recommends using Bluetooth-enabled devices (SPDs, PPMs, DRs, and Filters) in conjunction with an AIMCB Series 2 device connected to a stable internet connection via Wi-Fi or LAN.

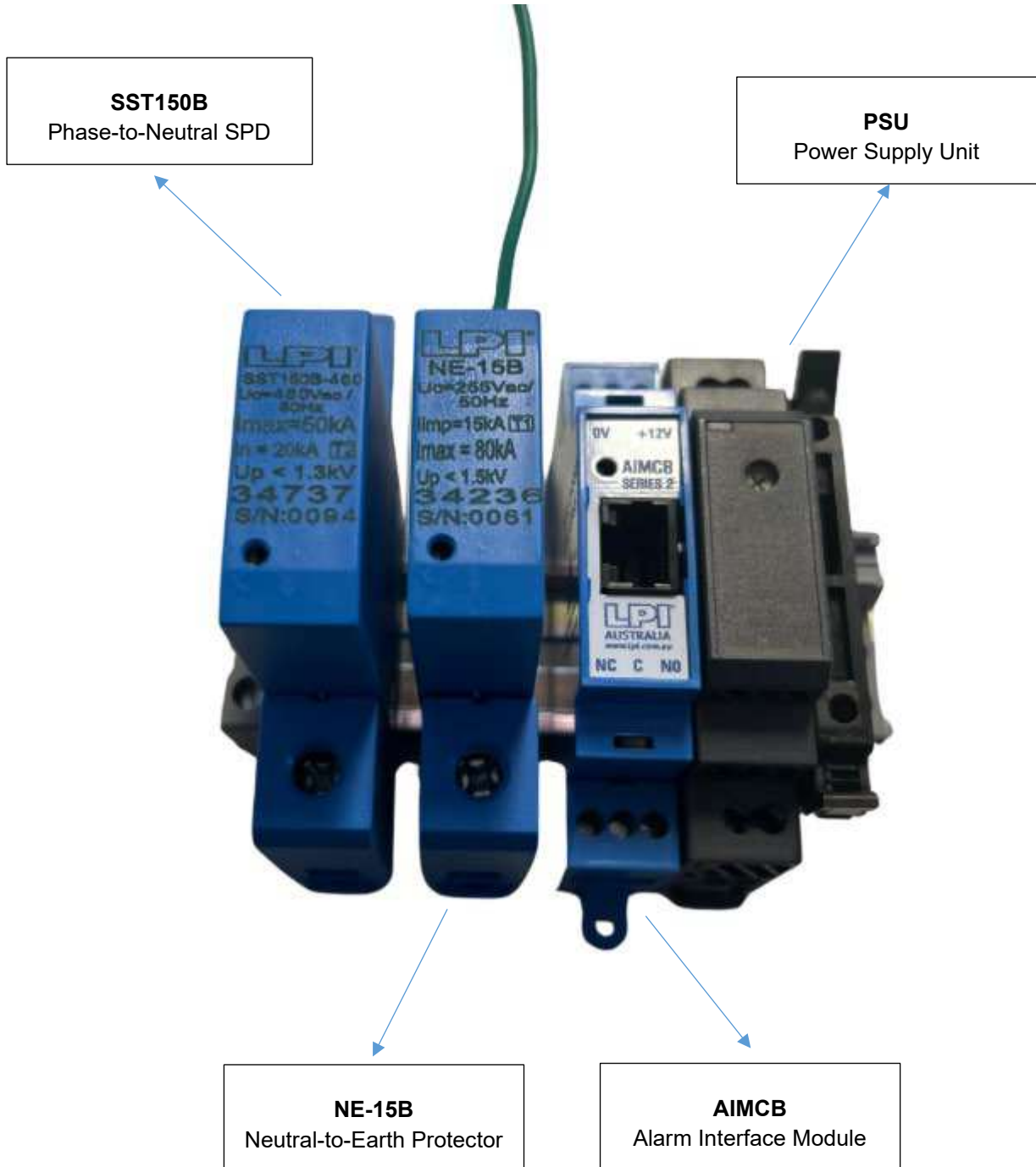
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Common Surge Protection Device Combination of Smart Devices



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LPI® Phase-to-Neutral SPD Module (Single Module and Base)



The LPI SST150B is a single-mode, power line shunt SPD rated for 50 kA (8/20 μ s). Designed for main switchboards and distribution boards in Zone 1 or 2 (Category C/B), it meets IEC 61643 standards. It offers Ph-N protection, mounts on a 35 mm DIN rail, and uses fast-acting MOVs for low let-through voltage. A plug-and-base design allows quick module replacement without disturbing wiring, ensuring easy maintenance and long service life.

Technical Specifications

Product Codes	SST150B-230	SST150B-385	SST150B-480
Nominal Operating Voltage (Un)	110-120 Vac	220-240 Vac	220-277 Vac
Surge Rating (Imax)	50 kA	50 kA	50 kA
Nominal Discharge Current (In)	20 kA	20 kA	20 kA
Max. Continuous Operating Voltage (Uc)	230 Vrms	385 Vrms	480 Vrms
Voltage Level at 20 kA	< 0.8 kV	< 1.3 kV	< 1.7 kV
Response Time	< 5 ns	< 5 ns	< 5 ns
Power Distribution Systems	TT & TN for L-N mode	TT & TN for L-N mode	TT & TN for L-N mode
Protection Modes	P-N	P-N	P-N
Status Indication	LED display showing operational condition		
Bluetooth Connectivity	Surge Count, Supply Voltage, Temperature, SPD MOV Status, Power Quality, Serial Number, Firmware version, Time and Date stamp		
Additional Monitoring	Operating voltage, Harmonic THD %, Internal temperature, Surge Impulse Count		
Mounting	TS 35 mm – DIN43880 DIN rail		
Weight	Approx. 135 grams		
Dimensions	84 (H) x 18 (W) x 92 mm (L)		
IP Rating	IP 20		
Colour	Blue		
Conductor Size	35 mm ² (Max)		
Operating Temperatures	-30 to +70 °C, 0 – 95% humidity		
Standards Compliance	IEC 61643-11 & UL 1449 Ed4 where applicable		
Surge Withstand	ANSI C62.41 Cat A, B, C; AS 1768 LPZ 0, 1, 2..n (Cat C, B, A)		
Application	Main and sub-distribution boards		
Configuration	Hardwired base and pluggable module		
Warranty	5 years		

* For replacement module units (without base), use product code SST150B-XXX-MODULE.

For optimal performance, LPI strongly recommends using Bluetooth-enabled devices (SPDs, PPMs, DRs, and Filters) in conjunction with an AIMCB Series 2 device connected to a stable internet connection via Wi-Fi or LAN.

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LPI® Neutral-to-Earth (NE) Modules

The LPI NE range is designed for high-energy protection positioned at the boundaries of lightning protection zones LPZ 0_A, 0_B and 1, in accordance with IEC 62305-4. These single-pole, neutral-to-earth devices use carbon spark gap chambers to safely divert lightning current surges and protect sensitive electronic equipment.



- Encapsulated spark gap technology
- Low follow-on current
- 35 mm DIN rail mount
- NE-15B has Bluetooth Connectivity

Technical Specifications

Product Code:	NE-15B	NE-100
Nominal Operating Voltage: U _n	230 V / 50 Hz	
Max. Continuous Operating Voltage: U _c	255 V / 50 Hz	
Voltage Protection Level at Limp: U _p	< 1.5 kV	< 2.0 kV
Max. Lightning Impulse Current: I _{imp}	15 kA (10/350 μs)	100 kA (10/350 μs)
Max. Lightning Impulse Current: I _{max}	80 kA (8/20 μs)	150 kA (8/20 μs)
Specific Energy: W/R	50 kJ/Ω	2500 kJ/Ω
Insulation Resistance: R _i	> 1000 MΩ	
Response Time: t _Δ	< 100 ns	
Status Indication:	LED display: showing operational condition	N/A
Bluetooth Connectivity:	Status indication, operating voltage, Internal temp & Surge Impulse Count	N/A
Mounting:	DIN rail 35 mm	
Weight	110 g	374 g
Dimensions:	80 (H) x 17.5 (W) x 90 mm (L)	65 (H) x 35 (W) x 90 mm (L)
IP Rating:	IP 20	
Colour:	Blue	Dark blue
Recommended Cross-Section of Connected Conductors:	10 mm ² (at 3 Nm clamping force)	50 mm ² (solid) or 35 mm ² (flexible) (at 4 Nm clamping force)
Operating Temperature Range:	-30 to +70°C	-30 to +70°C
Standard:	IEC 61643 and EN 61643	
Application:	Main and sub-distribution boards (between N & E conductors only)	Main and sub-distribution boards (between N & E conductors only)
Configuration	35 mm DIN rail mount	
Warranty:	5 years	

IMPORTANT INFORMATION ON THE NE-15B:

This SPD has “neutral” and “phase” terminals. *The latter is for powering the unit.* These terminals are polarity sensitive, so installation must be performed per the installation instructions.

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LPI® AIMCB (Alarm Interface Module)

The AIMCB Module is a smart, multi-channel communication unit designed for 35 mm DIN rail mounting. It can connect and monitor up to 40 surge protection devices. It offers versatile connectivity via Bluetooth, Ethernet and WiFi for seamless data access, remote diagnostics, and automatic cloud syncing across diverse environments.



Connectivity & Detection

- The AIMCB Series 2 can detect and manage up to 40 separate Smart Devices (e.g. SST150B, NE-15B, LSR-MAX)
- Provides individual data for each module on request.

Communication Options

- Bluetooth: For quick setup and diagnostics via the LPI App.
- Wired “voltage-free” contacts: For legacy system integration.
- Ethernet LAN: Fast, secure remote access.
- WiFi LAN: Flexible wireless access for installation and mobility.

Cloud Integration

- Automatically sends data to the cloud via:
 - LPI App
 - WiFi connectivity

Technical Specifications

Product Code:	AIMCB
Status Indication:	LED showing operational condition
Bluetooth Connectivity:	Status indication
Mounting:	TS 35 mm – DIN43880 DIN rail
Weight:	Approx. 135 g (including power supply 65 g and fuse 20 g)
Dimensions:	58 (H) x 18 (W) x 92 mm (L)
IP Rating:	IP20
Colour:	Blue
Conductor Size:	2.5 mm ²
Operating Temperatures:	-30 to +70°C, 0 – 95% humidity.
Contact Rating:	Max switching voltage: 250 Vac / 220 Vdc Max switching current: 2 A Max carrying current: 2 A Max switching power: 60 W / 125 VA
Warranty	5 years

Internet Connectivity Requirement – Operational Notes

For optimal system operation, the AIMCB Series 2 should be connected to a stable internet connection via Ethernet or Wi Fi.

Where no internet connection is available:

- Automatic time synchronisation may not be maintained
- Firmware updates for connected smart devices cannot be performed centrally
- Time setting and firmware updates will need to be carried out manually on individual devices where applicable

An internet connection is therefore strongly recommended to ensure correct system time, firmware currency, and full remote management functionality.

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LPI® Module Combination DIN Rail Mount (DR)



- Single or 3-phase combinations
- Pre-wired, DIN-Rail mounted, ready for quick install
- Customisable to kA rating capacity
- Dedicated neutral-to-earth protector

Technical Specifications

Product Codes	xDR50KA-xxx-NExxx-AIMCB	xDR100KA-xxx-NExxx-AIMCB	xDR150KA-xxx-NExxx-AIMCB
Nominal Operating Voltage (U _n)			
Surge Rating (I _{max})	50 kA	100 kA	150 kA
Nominal Discharge Current (I _n)	20 kA	20 kA	20 kA
Max. Continuous Operating Voltage (U _c)		230 Vrms 385 Vrms 480 Vrms	
Voltage Level at 20 kA			
Response Time	< 5 ns	< 5 ns	< 5 ns
Power Distribution Systems	TT & TN for L-N mode	TT & TN for L-N mode	TT & TN for L-N mode
Protection Modes	P-N	P-N	P-N
Status Indication	LED display showing operational condition		
Bluetooth Connectivity	Surge Count, Supply Voltage, Temperature, SPD MOV Status, Power Quality, Serial Number, Firmware version, Time and Date stamp		
Additional Monitoring	Operating voltage, Harmonic THD %, Internal temperature, Surge Impulse Count		
Mounting	Pre-wired, DIN-Rail mounted		
Weight	1.10 kg	1.20 kg	1.30 kg
IP Rating		IP 20	
Colour		Blue	
Conductor Size		35 mm ² (Max)	
Operating Temperatures		-30 to +70 °C, 0 – 95% humidity	
Standards Compliance		IEC 61643-11 & UL 1449 Ed4 where applicable	
Surge Withstand		ANSI C62.41 Cat A, B, C; AS 1768 LPZ 0, 1, 2..n (Cat C, B, A)	
Application		Main and sub-distribution boards	
Warranty		5 years	

For optimal performance, LPI strongly recommends using Bluetooth-enabled devices (SPDs, PPMs, DRs, and Filters) in conjunction with an AIMCB Series 2 device connected to a stable internet connection via Wi-Fi or LAN.

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LPI® Compact Enclosure Power Protection Module (PPM)



- Single or 3 phase applications
- With or without integrated connection leads
- Connection leads Flexible multi-core (4 core + earth), 16 mm², Earth 4 mm², XHF-110 supplied as 1.5 m length. Installer should cut to length to suit installation
- Screw down lid
- IP67 base complete with gasket, aluminium light grey painted, surface mount via external feet

Technical Specifications

Product Codes	xPPM50KA-xxx-NExxx-AIMCB	xPPM100KA-xxx-NExxx-AIMCB	xPPM150KA-xxx-NExxx-AIMCB
Nominal Operating Voltage (Un)			
Surge Rating (Imax)	50 kA	100 kA	150 kA
Nominal Discharge Current (In)	20 kA	20 kA	20 kA
Max. Continuous Operating Voltage (Uc)		230 Vrms 385 Vrms 480 Vrms	
Voltage Level at 20 kA			
Response Time	< 5 ns	< 5 ns	< 5 ns
Power Distribution Systems	TT & TN for L-N mode	TT & TN for L-N mode	TT & TN for L-N mode
Protection Modes	P-N	P-N	P-N
Status Indication	LED display showing operational condition		
Bluetooth Connectivity	Surge Count, Supply Voltage, Temperature, SPD MOV Status, Power Quality, Serial Number, Firmware version, Time and Date stamp		
Additional Monitoring	Operating voltage, Harmonic THD %, Internal temperature, Surge Impulse Count		
Mounting	Surface mount via external feet		
Weight	2.40 kg	2.70 kg	3.00 kg
Dimensions	173 (H) x 100 (W) 274 mm (L)		
IP Rating	Grey		
Colour	35 mm ² (Max)		
Conductor Size	-30 to +40 °C, 0 – 95% humidity		
Operating Temperatures	IEC 61643-11 & UL 1449 Ed4 where applicable		
Standards Compliance	ANSI C62.41 Cat A, B, C; AS 1768 LPZ 0, 1, 2..n (Cat C, B, A)		
Surge Withstand	Main and sub-distribution boards		
Application	Hardwired base and pluggable module		
Warranty	5 years		

For optimal performance, LPI strongly recommends using Bluetooth-enabled devices (SPDs, PPMs, DRs, and Filters) in conjunction with an AIMCB Series 2 device connected to a stable internet connection via Wi-Fi or LAN.

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Part Code Structure - DR (Din Rail) PPM (Power Protection Module)

	Description	Options
PHASE	Number of phases	1 = Single Phase 2 = Split Phase 3 = Three Phase
TYPE	Type of product	PPM = Power Protection Module DR = DIN Rail
SURGE	Surge rating	50KA 100KA 150KA
MCOV (Uc)	Max Continuous Operating Voltage	230V 385V 480V
NEUTRAL/EARTH	Neutral/Earth rating	NE15 = 15A NE100 = 100A
AIMCB	Always included	AIMCB

Example Code	Explanation
1PPM50KA-230-NE15-AIMCB	Single-phase, Power Protection Module, 50kA, 230V, Neutral/Earth 15A, AIMCB included
3DR150KA-480-NE100-AIMCB	Three-phase, DIN Rail, 150kA, 480V, Neutral/Earth 100A, AIMCB included

Connection Lead for PPM

- Connection lead is supplied as a 1.5 m length
- Installation contractor should cut length of lead to suit installation
- If connection lead is required to be supplied with PPM add "T" to product code following "PPM"
Example: 1PPMT100KA-385V-NE15-AIMCB

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LPI® Bluetooth Smart Range of Surge Filters



- High-performance surge protection for operating voltages between 220–277 Vac
- Utilises SST150B technology for both primary and secondary protection for load currents from 32 A to 2000 A (Single & Three Phase)
- Encapsulated spark gap and SST150B technology ensure reliable operation under fault and overvoltage conditions up to 480 Vrms (for 200 A filters and above)
- Three-stage protection delivers maximum safety for sensitive electronic equipment

Product Description

- Compatible with TT, TN-C, TN-S, and TN-C-S distribution systems
- Inductive filtering reduces rate of rise of transient voltage (dV/dt) of incoming surges by up to 1000 times
- Surge protection ratings:
 - 32–125 A filters:
 - Primary: 150 kA (8/20 μ s)
 - Secondary: 50 kA (8/20 μ s)
 - 200–630 A filters:
 - Primary: 50 kA (10/350 μ s), 135 kA (8/20 μ s)
 - Secondary: 50 kA (8/20 μ s)
 - 800 A and above:
 - Primary: 100 kA (10/350 μ s)
- High N-E protection rating:
 - 100 kA (10/350 μ s), 150 kA (8/20 μ s)
- Includes LED indicators, remote alarm contacts, and MOV status monitoring

Advanced Protection Technology

The LPI Bluetooth Series Surge Filter offers multi-stage protection that goes beyond basic shunt clamping. It effectively limits the steep wavefront of incoming surges, reducing the rate of voltage rise to values well below the tolerable level of sensitive equipment.

For optimal performance, LPI strongly recommends using Bluetooth-enabled devices (SPDs, PPMs, DRs, and Filters) in conjunction with an AIMCB Series 2 device connected to a stable internet connection via Wi-Fi or LAN.

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LPI® Bluetooth Smart Range of Surge Filters 32-125 A (Single and Three Phase)

Technical Specifications

Description	LPI® Bluetooth Range of Surge Filters 32-125 A (Single and Three Phase)		
Nominal Operating Voltage U_n :	220 – 240	V AC P-N @ 50/60 Hz	220 - 277
Max Continuous Operating Voltages U_c :	385 Vrms	385 Vrms	480 Vrms
Operating Time:	< 1 ns		
Power Distribution Systems:	TT, TN-S, TN-C, TN-C-S (MEN)		
Primary Surge Protection Rating P-N:	Configurable 50 kA 8/20 μ s single shot rating replaceable modules* ¹		
Secondary Surge Protection Rating P-N:	Configurable 50 kA 8/20 μ s single shot rating replaceable modules* ²		
N-E Protection:	100 kA 10/350 μ s I_{imp} Class 1 to IEC 61643-11 255 V rms or 150 kA 8/20 μ s I_{max}		
Protection Modes:	Transverse and common mode		
Inductor:	Non-saturating, low pass, power and noise filtering		
Capacitor Type:	Separately fused, self-healing, X-grade rating at high voltage ratings		
Surge Counter:	Build-in memory retained surge counter displayed via LPI App		
Efficiency:	99 %		
Overload / Short Circuit Protection:	In-line circuit breaker, for 32 A, 40 A and 63 A only		
Performance:	Typical let-through voltage < 700 V		
Filter 3 dB Point:	Approximately 4000 Hz		
Status Indication	LED display showing operational condition		
Bluetooth Connectivity	Surge Count, Supply Voltage, Temperature, SPD MOV Status, Power Quality, Serial Number, Firmware version, Time and Date stamp		
Mounting:	Wall mount		
IP Rating:	IP 45		
Enclosure:	Metal enclosure with durable powder coat finish. Protective faceplate (Escutcheon panel) for added safety in compliance to AS/NZS 3000 or similar international standards		
Colour:	Grey		
Conductor Size:	Accepts up to 35 mm ² (M8 Studs)		
Operating Temperatures:	-30 to +40°C, 0 – 95% humidity		
Standards Compliance (Primary and Secondary) :	IEC 61643-11 and UL1449 Ed 3		
Standards Compliance (N-E):	IEC 61643-11		
Surge Withstand:	ANSI/IEEE C62.41, AS 1768 LPZ 0, 1, 2..n (Cat C, B, A)		
Warranty:	5 years		

*1 Configurable 50, 100, 150 or 200 kA 8/20 μ s

*2 Configurable 50 or 100 kA 8/20 μ s

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**LPI® Bluetooth Smart Range of Surge Filters 200 A and Above
(Three Phase)**

Technical Specifications

Description	LPI® Bluetooth Range of Surge Filters 200 A and Above		
Nominal Operating Voltage Un:	220 – 240	V AC P-N @ 50/60 Hz	220 - 277
Max Continuous Operating Voltage Uc:	385 Vrms	480 Vrms	
Operating Time:	< 1 ns		
Power Distribution Systems:	TT, TN-S, TN-C, TN-C-S (MEN)		
Primary Surge Protection Rating per Phase:	135 kA 8/20 µs single shot surge capacity between phase and neutral. 800 A and above, phase to neutral protection is 100 kA 10/350 µs (270 kA 8/20µs).		
Secondary Surge Protection Rating per Phase:	50 kA 8/20 µs single shot surge capacity between phase and neutral, Bluetooth Technology		
Total Surge Protection per Phase:	185 kA 8/20 µs		
N–E Protection:	100 kA 10/350 µs, 150kA 8/20µs.		
Protection Modes:	Transverse and common mode		
Inductor:	Air-Cored, low pass, power and noise filtering		
Capacitor Type:	Self-healing X grade		
Surge Counter:	Build-in memory retained surge counter displayed via LPI App		
Current Crest Factor:	> 3:1		
Voltage Drop:	< 2 V at full load		
Efficiency:	99 %		
Frequency Response:	3 dB point below 3000 Hz		
Performance:	Typical let-through voltage for all models < 2 x mains peak voltage		
Status Indication	LED display showing operational condition		
Bluetooth Connectivity	Surge Count, Supply Voltage, Temperature, SPD MOV Status, Power Quality, Serial Number, Firmware version, Time and Date stamp		
Mounting:	Wall mount		
IP Rating:	IP 45		
Enclosure:	Metal enclosure with durable powder coat finish. Protective faceplate (Escutcheon panel) for added safety in compliance to AS/NZS 3000 or similar international standards		
Colour:	Grey		
Conductor Size:	Accepts up to 35 mm ² (M8 Studs)		
Operating Temperatures:	-30 to +40°C, 0 – 95% humidity		
Standards Compliance (Primary and Secondary) :	IEC 61643-11 and UL1449 Ed 3		
Standards Compliance (N-E):	IEC 61643-11		
Surge Withstand:	ANSI/IEEE C62.41, AS 1768 LPZ 0, 1, 2..n (Cat C, B, A)		
Warranty:	5 years		

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Surge Filter Weights and Dimensions

Surge Filter Type	Enclosure Dimensions mm (Unpacked: W x H x D)	Weight (kg, unpacked)
SF132	300 x 300 x 150	7
SF140	300 x 300 x 150	7
SF163	300 x 300 x 150	7
SF1125	300 x 300 x 150	7
SF332	400 x 400 x 150	13
SF340	400 x 400 x 150	13
SF363	400 x 400 x 150	13
SF3125	400 x 400 x 150	13
SF3200	600 x 700 x 200	64
SF3315	600 x 700 x 200	64
SF3400	600 x 700 x 200	64
SF3630	1200 x 800 x 350	136
SF3800	1200 x 800 x 350	136
SF31000	1200 x 800 x 350	136
SF31250	1200 x 800 x 350	136
SF31500	1200 x 800 x 350	153
SF31750	1200 x 800 x 350	153

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LPI® Bluetooth Range of Surge Filters

Single Phase Surge Filters

Surge Filter Type:	Nominal Operating Voltage U_n : @ 50/60 Hz	Surge Rating (I_{max}): @ 8/20 μ s Per SST150B module primary/secondary	Secondary Nominal Discharge Current (I_n): @ 8/20 μ s	Max. Continuous Operating Voltage (U_c):	Response Time:	Power Distribution Systems:
SF1-230	110-120 Vac	50 kA	20 kA	230 Vrms	< 5 ns	TN, TT & IT for L-N mode
SF1-385	220-240 Vac	50 kA	20 kA	385 Vrms	< 5 ns	TN & TT for L-N mode
SF1-480	220-277 Vac	50 kA	20 kA	480 Vrms	< 5 ns	TN, TT & IT for L-N mode

Split Phase Surge Filters (32A – 125A)

Surge Filter Type:	Nominal Operating Voltage U_n : @ 50/60 Hz	Surge Rating (I_{max}): @ 8/20 μ s Per SST150B module primary/secondary	Secondary Nominal Discharge Current (I_n): @ 8/20 μ s	Max. Continuous Operating Voltage (U_c):	Response Time:	Power Distribution Systems:
SF2-230	110-120 Vac	50 kA	20 kA	230 Vrms	< 5 ns	TN, TT & IT for L-N mode

3 Phase Surge Filters (32 A – 125 A)

Surge Filter Type:	Nominal Operating Voltage U_n : @ 50/60 Hz	Surge Rating (I_{max}): @ 8/20 μ s Per SST150B module primary/secondary	Secondary Nominal Discharge Current (I_n): @ 8/20 μ s	Max. Continuous Operating Voltage (U_c):	Response Time:	Power Distribution Systems:
SF3-230	110-120 Vac	50 kA	20 kA	230 Vrms	< 5 ns	TN, TT & IT for L-N mode
SF3-385	220-240 Vac	50 kA	20 kA	385 Vrms	< 5 ns	TN & TT for L-N mode
SF3-480	220-277 Vac	50 kA	20 kA	480 Vrms	< 5 ns	TN, TT & IT for L-N mode

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3 Phase Surge Filters (200 A – 630 A)

Surge Filter Type:	Nominal Operating Voltage U_n : @ 50/60 Hz	Primary Surge Rating (I_{max}): @ 8/20 μ s	Secondary Surge Rating (I_{max}): @ 8/20 μ s	Secondary Nominal Discharge Current (I_n): @ 8/20 μ s	Max. Continuous Operating Voltage (U_c):	Response Time:	Power Distribution Systems:
SF3-230	110—230 Vac	135 kA	50 kA	20 kA	230 Vrms	< 5 ns	TN, TT & IT for L-N mode
SF3-385	220-240 Vac	135 kA	50 kA	20 kA	385 Vrms	< 5 ns	TN & TT for L-N mode
SF3-480	220-277 Vac	135 kA	50 kA	20 kA	480 Vrms	< 5 ns	TN, TT & IT for L-N mode

3 Phase Surge Filters (800 A – 2000 A)

Surge Filter Type:	Nominal Operating Voltage U_n : @ 50/60 Hz	Primary Surge Rating (I_{imp}): @ 10/350 μ s	Secondary Surge Rating (I_{max}): @ 8/20 μ s	Secondary Nominal Discharge Current (I_n): @ 8/20 μ s	Max. Continuous Operating Voltage (U_c):	Response Time:	Power Distribution Systems:
SF3-230	110—230 Vac	100 kA	50 kA	20 kA	230 Vrms	< 5 ns	TN, TT & IT for L-N mode
SF3-385	220-240 Vac	100 kA	50 kA	20 kA	385 Vrms	< 5 ns	TN & TT for L-N mode
SF3-480	220-277 Vac	100 kA	50 kA	20 kA	480 Vrms	< 5 ns	TN, TT & IT for L-N mode

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Product Code Structure - Surge Filters

	Description	Options
TYPE	Surge Filter	SF
PHASE	Number of Phases	1 = Single Phase 2 = Two Phase 3 = Three Phase
LOAD CURRENT	Rated load current in Amps	32, 40, 63, 125, 200, 315, 400, 630, 800, 1000, 1250, 1500, 1750
MCOV (Uc)	Maximum Continuous Operating Voltage	230V, 385V, 480V
PRIMARY PROTECTION	Surge protection capacity	100kA or 150kA, ≥200A:135kA, ≥800A:100kA (10/350µs)
SECONDARY PROTECTION	Additional surge protection	50kA, 100kA
ALARM MODULE	Always included	AIMCB

Example Code	Explanation
SF132-230-100-50-AIMCB	Single phase, 32A load, 230V MCOV, primary 100kA, secondary 50kA, AIMCB included
SF3400-385-150-100-AIMCB	Three phase, 400A load, 385V MCOV, primary 150kA, secondary 100kA, AIMCB included

Notes:

- All filters are fitted with 100 kA 10/350 µs or 200 kA 8/20 µs neutral earth protection.
- Filters rated from 630 to 2000 A feature a redesigned busbar network that integrates the inductor directly into the L-C filter, eliminating the need for a separate steel core.
- Busbars are no longer tinned for filters rated at 1500 A and above
- All filters are supplied with cable ties securing SST150B modules for transport purposes. Remove all cable ties when installing.

We take the hits, so you don't have to!

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TECHNICAL DATASHEET

LPI® Spark Gap Shunt Protector



Features

- Encapsulated Spark Gap Technology
- Low follow-on current
- 35 mm DIN rail mount

The LPI Spark Gap Protector is a high-performance encapsulated spark gap offering a high surge rating with low follow-on current, ideal for point-of-entry protection. It is intended for installation within lightning protection zone LPZ 0_{A(B)} according to IEC 62305-4.

The LPI Spark Gap Protector has been designed for the protection of Phase-to-Neutral, Phase-to-Earth, or Phase-to-Neutral-Earth protection in AC mains supply systems.

Follow-on current performance for these devices is kept within acceptable levels by the rapid extinguishment of the arc, allowing transients to be clamped without activating upstream protection devices.

Product Code	SGT50-25
Nominal Operating Voltage (Un)	230 Vac @ 50/60 Hz
Max. Continuous Operating Voltage (Uc)	255 Vrms (up to 480 Vrms, however with lower follow current extinguishing capability)
Follow current extinguishing capability at (In)	25 kA rms
Voltage protection level at (Imax)	< 2.0 kV
Max. lightning impulse current (Imax)	50 kA (10/350 μs)
Max. discharge current (Imax)	135 kA (8/20 μs)
Max. lightning charge (Q)	25 As
Specific energy (W/R)	625 kJ/Ω
Insulation resistance (Ri)	> 100 MΩ
Response time (Ta)	< 100 ns
Standard:	IEC 61643 and EN 61643
Recommended backup fuse:	315 AgL/gG
Operating temperature section of connected conductors range:	-40 to +70°C
Recommended cross-section	50 mm (solid) or 35 mm (flexible) (at 4 Nm clamping force)
Protection type:	IP 20
Mounting:	DIN rail 35 mm
Housing material:	SLOVAMID 6FRC2
Weight:	224 g
Application:	Main and sub-distribution boards (> 100 A capacity)
Dimensions:	65 mm (H) x 35 mm (W) x 90 mm (L)
Warranty:	5 years

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TECHNICAL DATASHEET

LPI® DLSF Surge Filters



- 3-Stage protection ensures lowest let-through voltage to protected equipment
- Suitable for single phase TT, TN-S and TN-C-S distribution systems
- Impulse discharge current rating of 25 kA + 25 kA 8/20 μ s P-N
- Provides protection in all modes: L1-L2, L1-GND, L2-GND
- Designed to withstand fault and over-voltage conditions as per IEC 61643 standards
- Non-saturating inductors – dV/dt of the incoming surge is reduced by up to 100 times
- Internal thermal fusing of protection elements ensures safe end-of-life operation
- Power and status indication with voltage-free alarm contacts
- DLSF must be matched to (exceed) the load current of the circuit – refer to the table below for load current options up to 20 A (for higher load currents, use a Surge Filter from the Bluetooth Range starting at 32 A)

Technical Specifications

Product Codes	DLSF-XXA-385V	DLSF-XXA-480V
Nominal Operating Voltage, U_n :	240 V _{AC} (50/60 Hz)	277 V _{AC} (50/60 Hz)
Max Continuous Operating Voltage: U_c	385 V _{AC}	480 V _{AC}
Maximum Load Current: I_L		
DLSF-8A-xxxV		8 A
DLSF-16A-xxxV		16 A
DLSF-20A-xxxV		20 A
Voltage Protection Level: U_P	< 1200 V	< 1500 V
Power distribution systems:	TT, TN-S, TN-C-S (MEN)	
Maximum Surge Rating: $I_{MAX}(8/20\mu s)$		
L – L	25 kA + 25 kA	
L – GND	25 kA	
Nominal Surge Rating, $I_n(8/20\mu s)$		
L – L	10 kA + 10 kA	
L – GND	10 kA	
Operating time:	< 1 ns	
Protection status indication:	LED indicators for POWER and PROTECTION OK	
Remote Status indication:	Normally Closed voltage free alarm contact	
Operating Environment:	-30°C to +50°C, 0 – 95% humidity	
Warranty:	5 years	

TECHNICAL DATA SHEET

Product Code	Description	Rated Voltage L-L	Rated Current
DLSF-8A-385V	Surge Filter, 1Ph, 385 VAC, 8 A, 25 kA+25 kA 8/20 μ s L-L, Power & Status Indication, Alarm Contacts	200 – 240 V _{AC} (50-60 Hz)	8 A
DLSF-16A-385V	Surge Filter, 1Ph, 385 VAC, 16 A, 25 kA+25 kA 8/20 μ s L-L, Power & Status Indication, Alarm Contacts	200 – 240 V _{AC} (50-60 Hz)	16 A
DLSF-20A-385V	Surge Filter, 1Ph, 385 VAC, 20 A, 25 kA+25 kA 8/20 μ s L-L, Power & Status Indication, Alarm Contacts	200 – 240 V _{AC} (50-60 Hz)	20 A
DLSF-20A-480V	Surge Filter, 1Ph, 480 VAC, 20 A, 25 kA+25 kA 8/20 μ s L-L, Power & Status Indication, Alarm Contacts	220 – 277 V _{AC} (50-60 Hz)	20 A