

LED lighting protection

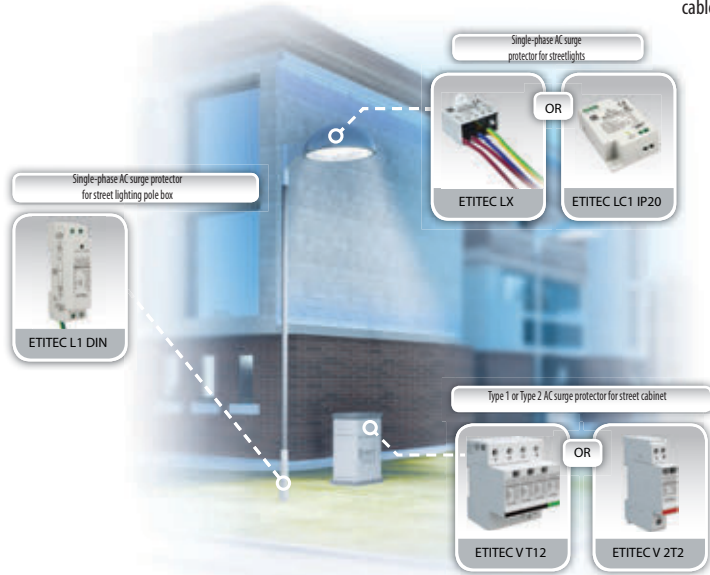
ETITEC LC1 IP20 range is a compact solution surge protectors to be installed in small spaces. These devices are available in 2 types of connectors (screw terminal or spring) and in two orientations wiring (input / output opposite or input / output on the same side) in order to adapt to the installation as much as possible. In cases of extreme aggression, lightning LC1 will be in a state of safe end of life: the indication of failure (disconnection) of the surge protector is performed by the extinction of an indicator and switching off the AC (extinction street luminaire) inform the user of the need for maintenance.

ETITEC LX range is an ultra compact surge protection solution for installation in extremely tight spaces. These surge protectors are available with an output by drivers and fixing bracket. In the end of life of security the LX indicates its failure (disconnection) by the extinction of an indicator and AC power supply switching off (extinction of the candelabra) inform the user of the need for maintenance. They are available in IP67.

ETITEC LP range is a complete range of AC surge protectors specifically designed for the protection of LED lighting systems at the lantern. Many versions have been proposed to meet the various existing configurations : surge protection devices are available in different isolation classes (Class 1, Class 2) and connection type (wire or screw terminal). Some versions are equipped with additional protection for data line option (RS485,DALI, 0-10V) to provide a complete solution for LED systems with control lines. In cases of extreme aggression, the surge protector will be in a state of retirement security: according to the different versions available, an indication of the failure of the surge protector is performed by the extinction of an indicator, a AC power supply failure and / or through a remote signalisation.

ETITEC L1 DIN device is installed inside the bottom of the lighting pole: its very compact dimension allows a easy integration with the connection box, on DIN rail . L1 is based on a powerful association of MOV and GDT components, secured by thermal disconnecter and connection light indicator.

Type	Description	Characteristics	Properties	Network
ETITEC L1 DIN	DIN surge protector type 2 or 3	Compact. Montage DIN	Type 2+3, CM/DM, mounted in connection box on DIN rail.	
ETITEC LP1 IP20	Hard-wired surge protector type 2 or 3	Remote signaling and data in option	Type 2 + 3, protection class I (GDT to earth), screw terminal.	Supply 230 V AC
ETITEC LP2 IP20			Type 2 + 3, protection class II, screw terminal for double insulated fixtures.	
ETITEC LC1 IP20	Compact, hard-wired surge protector type 2 and type 3	Compact. Many configurations	Type 2 + 3, protection class I (GDT to earth), screw terminal, very compact	
ETITEC LX1 IP67	Ultra-compact hard-wired surge protector type 2+3	Ultra compact IP67 VG Technology	Type 2 + 3, protection class I (GDT to earth), connection cable, IP67.	
ETITEC LX2 IP67			Type 2 + 3, protection class II for double insulated fixtures, connection cable, IP67.	



Type 3 (weak type2) multipole SPDs

ETITEC V 2T3							
Description	Compact 1-phase Type 2 (or 3) surge protector - 230 V - Pluggable			Compact 3-phase+N Type 2 surge protector - 230/400 V - Pluggable			
Network	230 V single phase	230 V single phase	230 V single phase	230/400 V 3-phase	230/400 V 3-phase	230/400 V 3-phase	
Connection mode	L/PE and N/PE	L/PE and N/PE	L/N and N/PE	L/N and N/PE	L/N and N/PE	L/N and N/PE	
AC system	IT	TN	TT-TN	IT	TN	TT-TN	
Max. AC operating voltage	U_c 440 VAC	255 VAC	255 VAC	440 VAC	255 VAC	255 VAC	
Temporary Over Voltage (TOV) Characteristics - 5 sec.	U_T 580 Vac withstand	335 Vac withstand	335 Vac withstand	580 Vac withstand	335 Vac withstand	335 Vac withstand	
Temporary Over Voltage (TOV) Characteristics - 120 mn	U_T 770 Vac disconnection	440 Vac disconnection	440 Vac disconnection	770 Vac disconnection	440 Vac disconnection	440 Vac disconnection	
Temporary Over Voltage N/PE (TOV HT)	U_T -	-	1200 V/300A/200 ms withstand	-	-	1200 V/300A/200 ms withstand	
Residual current - Leakage current at U_c	I_{pe} < 1 mA	< 1 mA	x	< 1 mA	< 1 mA	x	
Max. Load current (if connection serie)	I_L 20 A	20 A	20 A	-	-	-	
Nominal discharge current - 15 x 8/20 μ s impulses	I_n 5 kA	5 kA	5 kA	5 kA	5 kA	5 kA	
Max. discharge current - max. withstand @ 8/20 μ s by pole	I_{max} 15 kA	15 kA	15 kA	15 kA	15 kA	15 kA	
Withstand on overvoltages IEEE C62.41.1	U_{sc} 10 kV	10 kV	10 kV	10 kV	10 kV	10 kV	
Protection level CM/DM* @In (8/20 μ s) and @ 6kV (1.2/50 μ s)	U_p 1.3 kV	0.9 kV	1.5/0.9 kV	1.3 kV	0.9 kV	1.5/0.9 kV	
Admissible short-circuit current	I_{scst} 10000 A	10000 A	10000 A	10000 A	10000 A	10000 A	
Associated disconnectors							
Thermal disconnector	internal						
Fuses	Fuses Type gG - 20 A						
Installation ground fault breaker	Type "S" or delayed						
Mechanical characteristics							
Dimensions	see diagram						
Connection to Network	by screw terminals: 1,5-10mm ² (L/N) or 2,5-25mm ² (PE)						
Disconnection indicator	4 mechanical indicators						
Remote signaling of disconnection	output on changeover contact						
Mounting	Symmetrical rail 35 mm (EN60715)						
Operating temperature	-40 ... +85°C						
Protection rating	IP20						
Housing material	Thermoplastic UL94-V0						
Standards compliance	IEC 61643-11 / EN 61643-11						

Dimensions

