



# CITEL

## Surge protector for LED lighting system Class 1

### MLP1-230L-P/20K



Specially developed spd with combined protection for 2-phase power supply (control phase):

- Many variants available depending on application
- With screw terminals or cable wiring
- IP65 versions
- For protection class I or II application
- Developed for Uoc: 20 kV and I<sub>max</sub>: 20 kA for highest outdoor requirements according to IEEE & ANSI
- Optical error signalling



	<b>Electrical Characteristics</b>		
	SPD type	2 (or 3)	
	Network	220-240 V Single-phase	
	AC system	TT-TN	
	Nominal line voltage	Un	230-277 Vac
	Max. AC operating voltage	Uc	320 Vac
	Max. frequency	f max.	10 MHz
	Max. load current @25°C	IL	5 A
	Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection	UT	335 Vac withstand
	Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection	UT	440 Vac disconnection
	Residual Current Leakage current to Ground	I <sub>pe</sub>	None
	Follow current	I <sub>f</sub>	None
	Nominal discharge current 15 x 8/20 μs impulses	I <sub>n</sub>	10 kA
	Max. discharge current max. withstand @ 8/20 μs by pole	I <sub>max</sub>	20 kA
	Total Maximum discharge current max. total withstand @ 8/20 μs	I <sub>max</sub> Total	20 kA
	Withstand on Combination waveform IEC 61643-11 Class III test: 1.2/50μs - 8/20μs	Uoc	20 kV
	Withstand on overvoltages IEEE C62.41.1		10 kV / 10 kA
	Protection mode(s)		Common/Differential mode
	Protection level L/N @ I <sub>n</sub> (8/20μs)	Up L/N	1.5 kV
	Protection level L/PE @ I <sub>n</sub> (8/20μs)	Up L/PE	1.5 kV
Protection level CM/DM @ I <sub>n</sub> (8/20μs)	Up mc /md	1.5 kV / 1.5 kV	
Admissible short-circuit current	I <sub>sc</sub>	10 000 A	
<b>Mechanical Characteristics</b>			
Technology		MOV+GDT	
Connection to Network		By screw terminal: 1.5mm <sup>2</sup> max.	
Mounting		On plate	
Housing material		Thermoplastic UL94 V-0	
Operating temperature	Tu	-40/+85°C	
Protection rating		IP20	
Failsafe mode		Disconnection and AC line cut-off	
Disconnection indicator		LED green OFF and AC network cut-off	
Voltage/operating indicator		Green Led ON	
Remote signaling of disconnection		No	
Dimensions		See diagram	
Weight		0.086 kg	
<b>Disconnectors</b>			
Thermal disconnector		Internal	
Installation ground fault breaker		Type 'S' or delayed	
<b>Standards</b>			
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 ed.5	
Part number		721213	

