



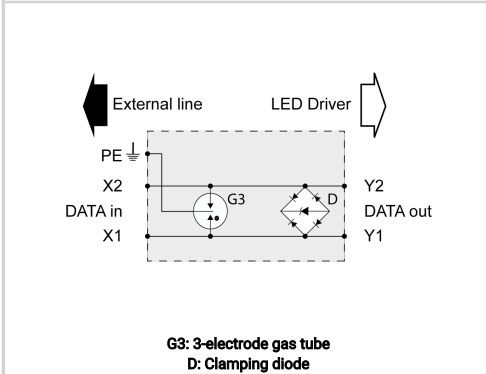
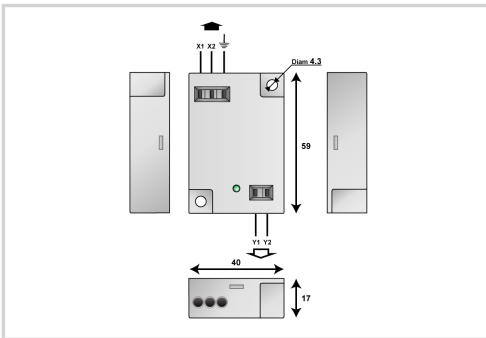
# CITEL

## 1-pair Data surge protector

### MDL-28-R



- Data line protection
- High energy protection in common-mode
- Low clamping level in differential mode
- Galvanic isolation to earth connection
- Indoor applications, IP20 (NEMA 2)
- Plastic enclosure, UL94-V0
- Certified acc. to IEC/EN 61643-21
- Location and test categories: C2, C3



Electrical Characteristics	
Network	Digital communication (2-Wire)
Protection modes (network)	CM / DM
Lightning Protection Zones (LPZ)	1 - 3
Nominal line voltage	Un 24 Vdc
Max. DC operating voltage	Uc 28 Vdc
Cut-off frequency -3dB, 100 ohm system	f max. > 30 MHz
Cut-off frequency -1dB, 100 ohm system	f max. > 10 MHz
Max. load current @25°C	IL 500 mA
Signal rise/fall times, to BS EN IEC 62386-101:2022	t, t 3 µs
Nominal discharge current C2 (1.2/50µs / 8/20µs), 10 applications X-C (Line/Earth)	In 4 kV / 2 kA
Nominal discharge current CWG (1.2/50µs / 8/20µs) with 42 ohms, X-X (Line-Line), to IEC 61000-4-5 (unshielded asymmetric)	In 800 V / 20 A
Max. discharge current C2 (1.2/50µs / 8/20µs), 10 applications, X-C (Line-Earth)	20 kV / 10kA
Protection Level C3 (10/1000µs), 300 applications@10 A, Y-Y (Line/Line)	Up < 40 V
Protection Level C2 (1.2/50µs / 8/20µs), 10 applications, Y-C (Line-Earth)	Up < 1000 V
Protection Level CWG (1.2/50µs / 8/20µs) with 42 ohms, Y-Y (Line-Line), to IEC 61000-4-5 (unshielded asymmetric)	Up < 48 V
Line resistance (± 10%)	< 0.2 ohms
Capacitance @1MHz X-C (Line/Earth)	C < 10 pF
Capacitance @1MHz X-X (Line-Line)	C < 30 pF
Mechanical Characteristics	
Technology	GDT+TVS diode
SPD configuration	Data-pair, plus PE
Connection to Network	2 spring terminals opposite side in/out - wire 1.5mm <sup>2</sup> max.
Format	Plastic Enclosure with connectors input/output
Mounting	On plate
Housing material	Thermoplastic UL94 V-0
Operating and storage temperature	-40/+85°C
Ingress Protection rating	IP20 (NEMA 2)
Failsafe mode	Transmission cut-off - Fault mode 2 (short-circuit)
Dimensions	See diagram
Weight	0.035 kg / 0.09 lbs
Standards	
Standards compliance	IEC 61643-21 / EN 61643-21/ IEC 61000-4-5 / IEC 62386-101
Certification	KEMA
Part number	<b>831611</b>

