

# TECHNICAL DATA SHEET

## LPI® Signal & Data Protectors - DD Range



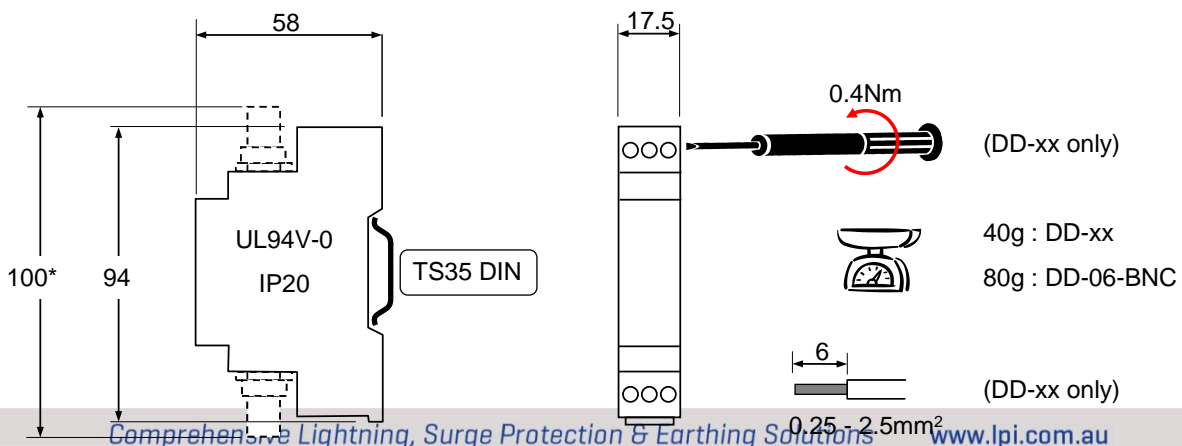
### Features

- High performance, low voltage surge protector
- Suitable for protection of data, signal and telecommunication pairs
- 3-stage protection ensures lowest let-through voltage to protected equipment
- Protects loads of up to 2 A
- High impulse discharge current rating – 20 kA, 8/20  $\mu$ s
- Provides protection in both common and differential modes
- TS35 DIN rail mounting
- Suitable for fire alarm panels, RS232/485, process control signals, telephone lines and security networks

### Technical Data

Ordering Code		* DD-06	* DD-06-BNC	* DD-12	* DD-24	* DD-48	* DD-1T
Nominal Operating Voltage	$U_N$	6 V	6 V	12 V	24 V	48 V	Telephone
Max. Continuous Operating Voltage	$U_C$	6.6 V <sub>DC</sub> 4.7 V <sub>RMS</sub>	6.6 V <sub>DC</sub>	15.6 V <sub>DC</sub> 11.0 V <sub>RMS</sub>	29 V <sub>DC</sub> 20 V <sub>RMS</sub>	62 V <sub>DC</sub> 44 V <sub>RMS</sub>	190 V <sub>DC</sub>
Surge Current rating (8/20 $\mu$ s)	$I_{MAX}$	20 kA					
Response Time	$T_r$	<5 ms					
Operating Current (DC or RMS)	$I_L$	2 A					150 mA
Voltage Protection Level @ 3 kA, 8/20 $\mu$ s	$U_P$	16 V	16 V	28 V	60 V	120 V	240 V
Loop Resistance		< 0.1 $\Omega$					6.6 $\Omega$
Bandwidth		5 MHz					1 MHz
Protection Modes		Line-Line & Line-Ground					
Operating Temperature		-40°C to 60°C					
Customised options available on request Warranty		5 Years – Contact LPI for full warranty details					

\* PRODUCT ORDER CODE: Please add '-BOX' to the product code for supply in boxes of 10 units per box.  
Example: DD-xx-BOX or DD-xx-BNC-BOX where xx denotes the voltage.



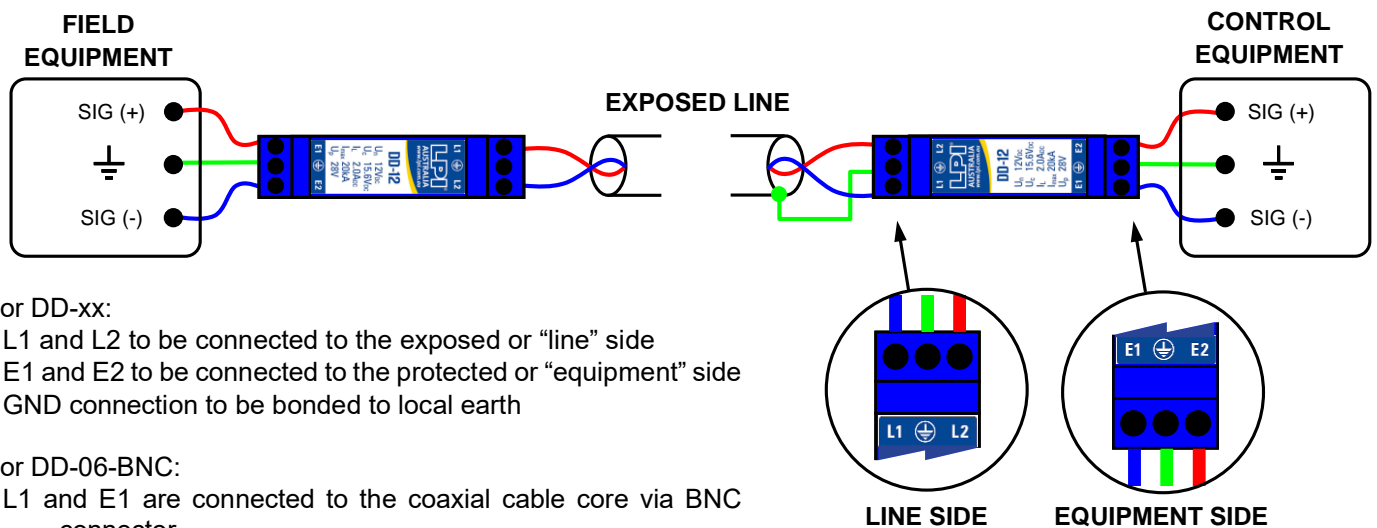
\* Applies to DD-06-BNC model only  
Commercial in Confidence

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## Application

	DD-06	DD-06-BNC	DD-12	DD-24	DD-48	DD-1T
RS-232				✓		
RS-422	✓					
RS-485			✓			
Fire Alarm Panels				✓		
Security Systems			✓	✓		
Process Control loops				✓		
C-BUS					✓	
Analogue telephone line						✓
Digital telephone line						✓
CCTV		✓				

## Installation



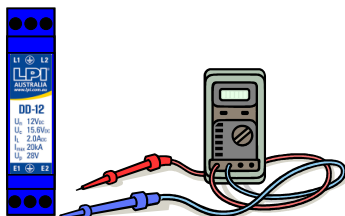
For DD-xx:

- L1 and L2 to be connected to the exposed or "line" side
- E1 and E2 to be connected to the protected or "equipment" side
- GND connection to be bonded to local earth

For DD-06-BNC:

- L1 and E1 are connected to the coaxial cable core via BNC connector
- L2 and E2 are connected to the coaxial cable screen via BNC connector
- GND connection to be bonded to local earth

## Testing



A PASS result is obtained if measurements meet the specifications listed in the adjacent tables.

	DD-06, -12, -24, -48	DD-1T
L1-E1	≤ 0.5 Ω	≤ 10 Ω
L2-E2	≤ 0.5 Ω	≤ 10 Ω
GND-GND	≤ 0.5 Ω	≤ 0.5 Ω
E1-E2	> 1 MΩ	> 1 MΩ
E1-GND	> 1 MΩ	> 1 MΩ
E2-GND	> 1 MΩ	> 1 MΩ

	DD-06-BNC
CORE (L) - CORE (E)	≤ 0.5 Ω
SCREEN (L) - SCREEN (E)	≤ 0.5 Ω
GND-GND	≤ 0.5 Ω
CORE (E) - SCREEN (E)	> 1 MΩ
CORE (E) - GND	> 1 MΩ
SCREEN (E) - GND	> 1 MΩ

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