

### **Features**

- UL listed dataline protector per UL 497B standard
- Signal transmission is not interrupted when exchanging modules
- Two-stage protection circuit limits the transients associated with gas discharge tubes and diodes
- Complies with UL 497B, and IEC 61643-21, category D1/C1/C2/C3
- Pluggable surge protection for DIN-Rail mounting
- Impulse current capacity up to 2.5 kA, 10/350 µs

# 2520 Series Data and Signal Surge Protective Device

### **General Information**

The Bourns® Model 2520 Series is a Data and Signal Surge Protective Device (SPD) designed to protect datalines, providing surge protection for 2-pair lines or 4 single lines with common reference potential in the data, signal and communication systems.

### **Additional Information**

Click these links for more information:









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### **Electrical Characteristics**

Characteristic		2520-4L1-xx			
		5	12	24	48
Compliance		UL 497B; IEC 61643-21			
Nominal Voltage (VDC)	Un	5	12	24	48
Max. Continuous Operating Voltage (VDC/VAC)	U <sub>c</sub>	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal Discharge Current (8/20 $\mu$ s) per Line	In	10 kA			
C2 Max. Discharge Current (8/20 µs) per Line	I <sub>max</sub>	20 kA			
D1 Lightning Impulse Current (10/350 $\mu$ s) per Line	l <sub>imp</sub>	2.5 kA			
Voltage Protection Level (V)	L-L@I <sub>n</sub> , C2 (8/20 <i>µ</i> s) U <sub>p</sub>	≤30	≤45	≤55	≤100
	L-PG@I <sub>n</sub> , C2 (8/20 <i>µ</i> s) U <sub>p</sub>	≤30	≤45	≤55	≤100
Nominal Current	IL	1 A			
Cut-off Frequency	f <sub>G</sub>	100 MHz			
Series Impedance per Line		0.68 Ohm			
Protection Line		2-pair or 4 single lines			

### **Agency Recognition**

Agency	Category	Agency File No.	
UL) LISTED	UL 497B	E153537	

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## **Applications**

- RS-232, RS-422 and RS-485 interfaces
- Telecommunications
- Low voltage alarm circuits
- High-frequency transmission systems
- Analog/digital communications

# 2520 Series Data and Signal Surge Protective Device

### **Electrical Characteristics (continued)**

Characteristic		2520-4L2-xx			
		5	12	24	48
Compliance		UL 497B; IEC 61643-21			
Nominal Voltage (VDC)	Un	5	12	24	48
Max. Continuous Operating Voltage (VDC/VAC)	U <sub>c</sub>	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal Discharge Current (8/20 $\mu$ s) per Line	In	10 kA			
C2 Max. Discharge Current (8/20 µs) per Line	I <sub>max</sub>	20 kA			
D1 Lightning Impulse Current (10/350 $\mu$ s) per Line	I <sub>imp</sub>	2.5 kA			
Voltage Protection Level (V)	L-L@I <sub>n</sub> , C2 (8/20 <i>µ</i> s) U <sub>p</sub>	≤30	≤45	≤55	≤100
	L-PG@I <sub>n</sub> , C2 (8/20 <i>µ</i> s) U <sub>p</sub>	≤500	≤500	≤500	≤500
Nominal Current	IL	1 A			
Cut-off Frequency	f <sub>G</sub>	100 MHz			
Series Impedance per Line		0.68 Ohm			
Protection Line		2-pair or 4 single lines			

Characteristic		2520-4L3-xx			
		5	12	24	48
Compliance		UL 497B; IEC 61643-21			
Nominal Voltage (VDC)	Un	5	12	24	48
Max. Continuous Operating Voltage (VDC/VAC)	U <sub>c</sub>	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal Discharge Current (8/20 $\mu$ s) per Line	In	L-L: 300 A, L-G: 10 kA			
C2 Max. Discharge Current (8/20 $\mu$ s) per Line	I <sub>max</sub>	L-L: 500 A, L-G: 20 kA			
D1 Lightning Impulse Current (10/350 $\mu$ s) per Line	I <sub>imp</sub>	2.5 kA			
Voltage Protection Level (V)	L-L@I <sub>n</sub> , C2 (8/20 <i>µ</i> s) U <sub>p</sub>	≤30	≤45	≤55	≤100
	L-PG@I <sub>n</sub> , C2 (8/20 <i>µ</i> s) U <sub>p</sub>	≤500	≤500	≤500	≤500
Nominal Current	IL	2 A			
Cut-off Frequency	f <sub>G</sub>	100 MHz			
Series Impedance per Line		0 Ohm			
Protection Line		2-pair or 4 single lines			

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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# 2520 Series Data and Signal Surge Protective Device

2520 - 4L n - xx

### **General Characteristics**

Characteristic	2520-4Lx-xx	
Mounting	35 mm DIN-Rail in accordance with EN 50022/DIN46277-3	
Type of Connection IN/OUT	screw/screw	
Dimensions (mm)	90 x 12 x 74	
Operating Temperature Range	-40 °C ~ +85 °C	
Enclosure Material	Thermoplastic, extinguishing degree, UL 94V-0	

### **Standards Compliance**

IEC 61643-21 ...... Category D1/C1/C2/C3 **UL497B** 

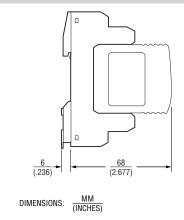
IEEE C62.41 RoHS ...... RoHS Directive 2015/863, Mar 31, 2015 and Annex

### **Product Dimensions**

90 (3.543)

00

00



### **How to Order**

Model Designator 2520 = Data and Signal SPD

Number of Datalines

4L = 2-Pair or 4 Single Lines

Circuit Configuration (Refer to Product Schematics)

1 = Circuit Type 1

2 = Circuit Type 2

3 = Circuit Type 3

Nominal Voltage

05 = 5 VDC

12 = 12 VDC

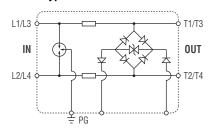
24 = 24 VDC

48 = 48 VDC

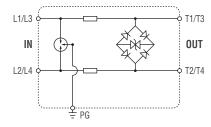
### **Product Schematics**

(.492)

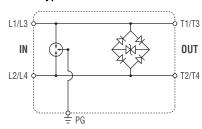
### Circuit Type 1



### Circuit Type 2



### **Circuit Type 3**



### REV. 11/23

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