



## Features

- Convenient kit for T1/E1 stations
- Meets the T1 pulse mask as per ANSI T1.403 and the E1 mask per ITU G.703
- The protectors utilize PTC resistor technology for automatic resetting overcurrent protection and gas discharge tube technology for overvoltage protection
- Both protectors can be on-site configured for either powered or unpowered spans
- Simplicity of DIN-3 rail mounting; the rail also serves as protector ground
- Vibration proof screw-type clamping connector interface

## Model 1830-A T1/E1 Protection Assembly, Rail Mounted

Bourns Model 1830-A T1/E1 Protection Assemblies provide secondary overvoltage protection for multiple T1 or E1 lines. DIN-3 Rail Mounted and able to accommodate future add-on modules, the assembly is designed to provide maximum surge protection caused from direct and induced lightning surges, power line disturbances and ground potential rises.

Common installations of the 1830-A are power cabinets located in wireless base stations or other larger telecom service entrance terminals.

### Characteristics

	Powered Span	Unpowered Span
Maximum System Voltage		
Tip-Ring .....	12 Vp-p .....	12 Vp-p
Tip/Ring-Gnd .....	170 Vpk .....	6 Vpk
DC Breakdown Rating @ <2000V/s (Tip-Ring-Gnd) .....	6.5 Vdc .....	15 Vdc
Impulse Voltage Rating @ 100V/ms (Tip/Ring-Gnd) .....	475 Vpk .....	20 Vpk
Peak Clamping Voltage (Tip-Ring)		
14 A <sup>1</sup> 10/1000µs .....	20 Vpk .....	20 Vpk
1 kA 8/20µs .....	30 Vpk .....	30 Vpk
5 kA 8/20µs .....	45 Vpk .....	45 Vpk
Maximum Current, per line		
@ 65°C .....	100 mA .....	100 mA
@ 85°C .....	66 mA .....	66 mA
Surge Life Tip/Ring-Gnd		
14 A <sup>1</sup> 10/1000 µs .....	100 Operations .....	100 Operations
500 A <sup>1</sup> 2/10 µs .....	1 Operation .....	1 Operation
100 A 10/1000 µs .....	300 Operations .....	300 Operations
10 kA 8/20 µs .....	10 Operations .....	10 Operations
20 kA 8/20 µs .....	1 Operation .....	1 Operation
Pulse Mask		
ANSI T1.403(1.544 Mbits/s) .....	Complies .....	Complies
CCITT G.703 (2.048 Mbits/s) .....	Complies .....	Complies
Data Attenuation		
1.544 Mbits/s .....	0.6 dB .....	0.6 dB
2.048 Mbits/s .....	1.4 dB .....	1.4 dB
Capacitance @ 1.0 MHz, Tip-Ring .....	<75 pF .....	<75 pF
Series Resistance, per line .....	10 Ω .....	10 Ω
Operating Temperature .....	-40°C to +85°C .....	-40°C to +85°C
Response Time .....	< 1 ns .....	< 1 ns
Wire Size, Input and Output .....	AWG 14 – 22 .....	AWG 14 – 22
Warranty .....	1 Year .....	1 Year

<sup>1</sup>applies to model 1830



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#### Asia-Pacific:

TEL +886- (0)2 25624117 • FAX +886- (0)2 25624116

#### Europe:

TEL +41-41 7685555 • FAX +41-41 7685510

#### North America:

TEL +1-909 781-5500 • FAX +1-909 781-5700

**bourns.com**

REV. A

Specifications are subject to change without notice.

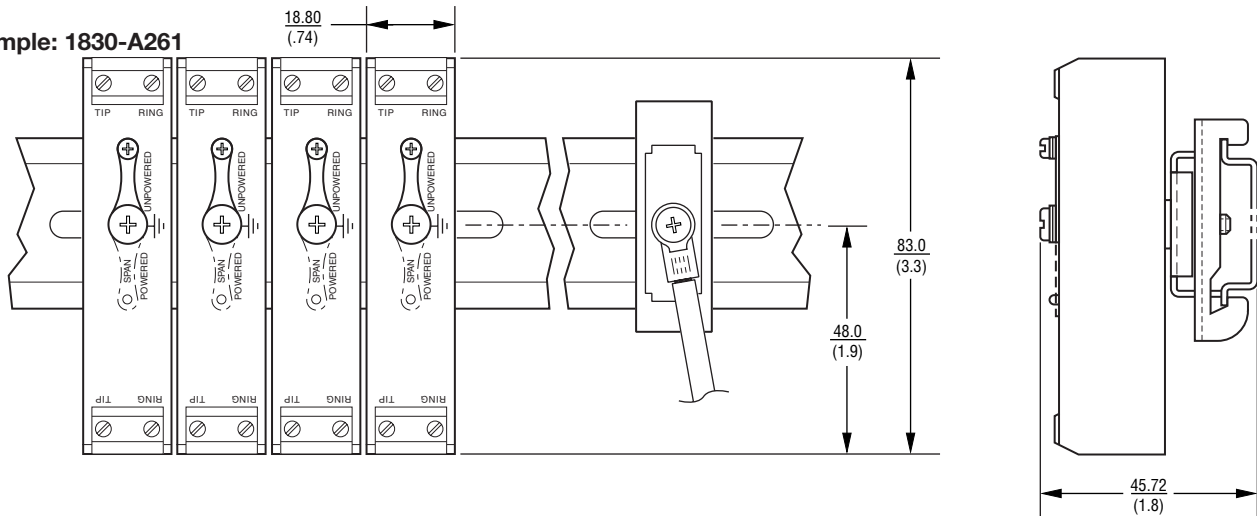
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# Model 1830-A T1/E1 Protection Assembly, Rail Mounted

**BOURNS®**

## Product Dimensions

Example: 1830-A261



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## How To Order

1830-A X X X

**Model Number Designator** \_\_\_\_\_

**Number of Protected T1 Lines<sup>1</sup>** \_\_\_\_\_

- 1 = One line (two protectors)
- 2 = Two lines (four protectors)
- 3 = Three lines (six protectors)
- 4 = Four lines (eight protectors)
- 5 = Five lines (ten protectors)

**Rail Length** \_\_\_\_\_

- 1 = 2.8" long - Accommodates **one** pair of protectors **without** ground wire clamp
- 2 = 4.2" long - Accommodates **one** pair of protectors with ground wire clamp
- 3 = 5.6" long - Accommodates **two** pair of protectors with ground wire clamp
- 4 = 7.0" long - Accommodates **three** pair of protectors with ground wire clamp
- 5 = 8.4" long - Accommodates **four** pair of protectors with ground wire clamp
- 6 = 9.8" long - Accommodates **five** pair of protectors with ground wire clamp

Without ground wire clamp, use next shorter rail.  
For smaller spaces, use next shorter rail.  
(Rail mounting screw heads will be partially hidden under clamps.)

**Ground Wire Clamp and 24" AWG #12 Insulated Ground Wire** \_\_\_\_\_

- 0 = Without clamp and wire
- 1 = With clamp and wire

### Notes:

- <sup>1</sup> Two protectors are required for each T1 line, one for transmit and one for receive.  
Slots in rail are .21" wide; will accommodate #10 screw. Drill enlarge for bigger screw.

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