



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 ¹ 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 ¹ 10/1000 µs	100 Operations	100 Operations
500 A ¹ 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

¹applies to model 1830



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REV. A

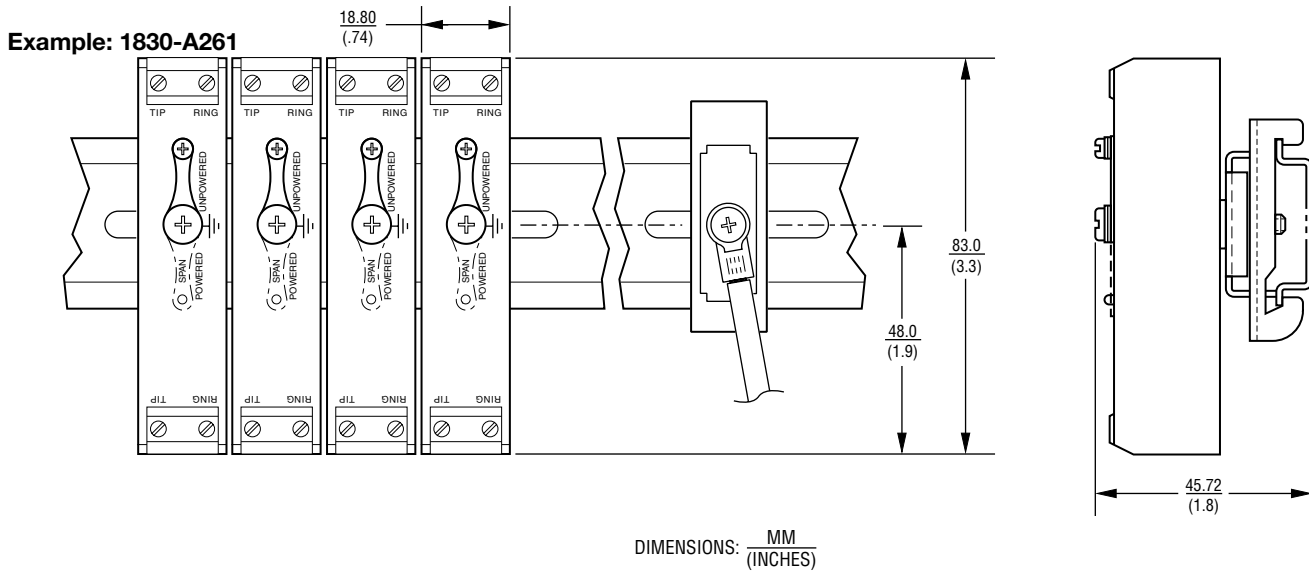
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Model 1830-A T1/E1 Protection Assembly, Rail Mounted

BOURNS®

Product Dimensions



How To Order

1830-A X X X

Model Number Designator _____

Number of Protected T1 Lines¹ _____

- 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:

¹ 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.