

Rebling Datasheet: 100 amp TFT-style Feed-through Terminal

**Available
Dec 2022**



Our TFT-style terminal provides 100 amp continuous current performance, can be mounted to metal or plastic panels from 0.03" to 0.16" (0.6 to 4.0 mm) thick, it exhibits the same 2,000 volt rating and water-tight properties as the other members of our feed-through terminal family. The TFT's innovative design eliminates the need for auxiliary panel-mounting hardware and accepts optional rigid and flexible covers. Equipping your smaller lithium battery modules or power conditioning modules with the TFT enables your product to fit into the tight spaces allocated by your end users.

Electrical

Current each current profile causes a max 30° C temperature rise when tested per IEC 61984

| | | | |
|--------------------|--|-------|----------|
| Current Profile #1 | Continuous Rated Current (CRC) | ----- | 100 amps |
| Current Profile #2 | 50% CRC for 60min + 1 sec peak + 50% CRC for 60 min | ----- | 600 amps |
| Current Profile #3 | 50% CRC for 60min + 10 sec peak + 50% CRC for 60 min | ----- | 400 amps |
| Current Profile #4 | 50% CRC for 60min + 30 sec peak + 50% CRC for 60 min | ----- | 300 amps |
| Current Profile #5 | 50% CRC for 60min + 60 sec peak + 50% CRC for 60 min | ----- | 200 amps |

Voltage & Resistance

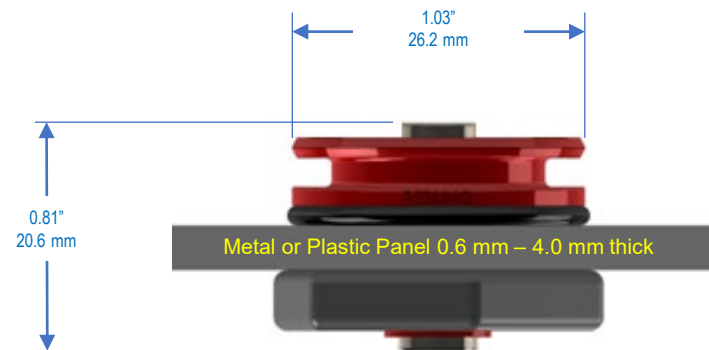
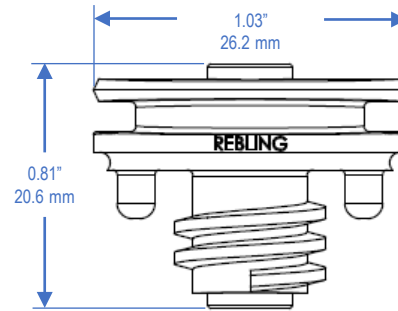
| | | |
|---|-------------------------------|---------------|
| Continuous Rated Voltage | UL1977 Section 17 | 2,000 volts |
| Minimum Dielectric Withstanding Voltage | UL1977 Section 17 | 5,000 volts |
| Insulation Resistance | MIL-PRF-18148D Section 3.12.6 | 500 mega-ohms |
| Maximum Contact Resistance | MIL-STD-202H Method 307 | 70 micro-ohms |

Mechanical & Environmental

| | | | |
|---|-------------------------------------|-----------|-----------------------------|
| Flammability Rating: Terminal and Covers | ----- | UL 94 | V-0 |
| Environmental Sealing: with Optional O-ring | ----- | IEC 60529 | IP68+ watertight |
| Environmental Sealing: without Optional O-ring | ----- | IEC 60529 | IP65 |
| Operating Temperature: Terminal and Rigid Cover | ----- | | -40 to +125 C |
| Operating Temperature: Flexible Cover | ----- | | -40 to +90 C |
| Mechanical Shock | MIL-STD-202H Method 213 Condition A | | 50 Gs – 3 axes |
| Vibration | MIL-STD-202H Method 204 Condition A | | 10 Gs – 3 axes |
| Panel Thickness Required for Mounting – Minimum | ----- | | 0.025" (0.6 mm) |
| Panel Thickness Required for Mounting – Maximum | ----- | | 0.157" (4.0 mm) |
| Maximum Wire Size: Terminal Only | ----- | | 1 AWG (40 mm ²) |
| Maximum Wire Size: with Rigid or Flexible Snap-On Cover | ----- | | 2 AWG (32 mm ²) |

Compliance & Conformance

| | |
|-----------------------|--|
| RoHS, REACH, CMRT/3TG | All parts listed on this datasheet are RoHS, REACH and CMRT/3TG Compliant |
| UL and CE Conformance | Declarations of UL and CE Conformity can be downloaded from Rebling.com |



For complete dimensions, download 3D Step files of Terminal and Accessories at Rebling.com

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| P/N | Description | Plastic Color | Weight (Grams) | Min Thick (mm) | UL 94 Rating | UL Material Yellow Card # ** |
|------------|-------------------------------------|---------------|----------------|----------------|--------------|------------------------------|
| TFT-P-B | Terminal Kit*, Brass, Nickel plated | Black | 17 | 1.5 | V-0 | E121562-220886 |
| 815A1927-B | Flexible Cover | Black | 6 | 1.5 | V-0 | E121562-220886 |
| 814A1926-B | Rigid Cover | Black | 7 | 1.5 | V-0 | E121562-220886 |
| TFT-P-R | Terminal Kit*, Brass, Nickel plated | Red | 17 | 1.5 | V-0 | E121562-220886 |
| 815A1927-R | Flexible Cover | Red | 6 | 1.5 | V-0 | E121562-220886 |
| 814A1926-R | Rigid Cover | Red | 7 | 1.5 | V-0 | E121562-220886 |
| TFT-P-E | Terminal Kit*, Brass, Nickel plated | Blue | 17 | 1.5 | V-0 | E121562-220886 |
| 815A1927-E | Flexible Cover | Blue | 6 | 1.5 | V-0 | E121562-220886 |
| 814A1926-E | Rigid Cover | Blue | 7 | 1.5 | V-0 | E121562-220886 |
| 812A1925 | O-Ring for TFT Terminal | Black | 0.2 | 1.5 | V-0 | Material = EPDM |
| ----- | Panel Nut | Black | 4 | 1.5 | V-0 | E121562-220886 |

*Terminal Kit = one Terminal + one Panel Nut + two Bolts + two Split Washers, all parts in a small poly bag
 **UL Material Yellow Cards can be downloaded from ULprospector.com



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Mounting and Assembly

| | | |
|---------------------------------|------------------------------|--|
| Panel Thickness - Minimum | 0.025" (0.6 mm) | |
| Maximum | 0.157" (4.0 mm) | |
| Torque on M5 Bolts: | | |
| Recommended | 15 to 20 in-lbs (1.7-2.3 Nm) | electrical performance does not get better or worse above 15 in-lbs (1.7 Nm) |
| Maximum Recommended | 25 in-lbs (2.8 Nm) | a Grade 4, M5 stainless bolt will snap at 50 in-lbs (5.6 Nm) |
| Recommended Torque on Panel Nut | | |
| With or without O-Ring | 15-20 in-lbs (1.7-2.3 Nm) | |
| Maximum Crimp Lug Tongue Width: | | |
| with Flexible Cover | 0.90" (23 mm) | |
| with Rigid Cover | 0.80" (20 mm) | |

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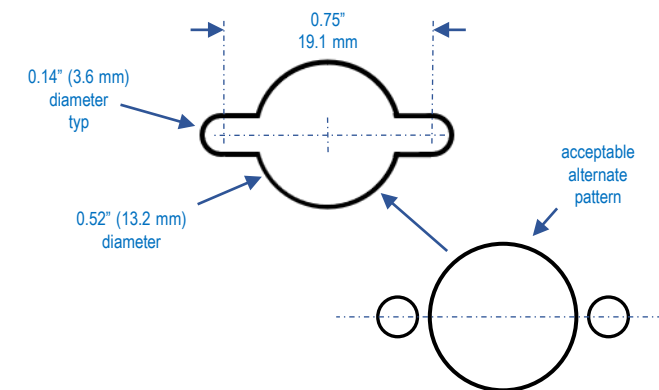


Application Notes

- Watertight is superior to IP68: Rebling terminals are completely watertight to a depth of 20 meters which is superior to any IP Rating. The definitions of IP67, IP68 and IP69k per IEC 60529 state that "water may penetrate the seal but shall do no harm", a condition that is unacceptable to lithium battery designers.
- Recommended crimp lug P/Ns

| Mfg | 2 AWG (32 mm ²) | 4 AWG (19 mm ²) | 6 AWG (13 mm ²) | 8 AWG (8 mm ²) |
|---------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| TE | 330301 | 33114 | 52197 | 31807 |
| T&B | G926 | F10261 | E10261 | D10361 |
| Panduit | P2-10R | P4-10R | P6-10R | P8-10R |
| Burndy | ----- | YAD4CM 5E10 | YAD6CM 5E10 | YAD8CM5 E10 |

Values on this
datasheet will be
updated when the
product is released



Mounting Hole Pattern