Rebling Datasheet: 750 amp XFT-style Imperial Feed-through Terminal

Our Imperial-threaded XFT-style terminal has performance characteristics identical to our Metric-threaded XFT-style terminal but is specially designed for applications which require Imperial Threads, including Avionics Power Distribution Units and Power Conversion Modules. The Imperial XFT can accept the same snap-on flexible covers as our metric terminals. The brass core is nickel plated for harsh environments and remains cool at extreme current levels. Equipping your design with these watertight, single pole, wrench disconnect terminals will enable OEMs to easily incorporate your modules into their Power Distribution System, Electric Propulsion Airframe or Power Conditioning Architecture. Whether you are coupling battery modules in series for a Jump Starter, Ground Power Unit, Airborne Motive Power Battery Pack or simply bringing DC power from the inside to the outside of any panel, our Imperial-threaded XFT-style 750 amp terminals, Covers and Accessories were designed with your application in mind.

Electrical

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

Current Profile #1	Continuous Rated Current (CRC)			750 amps
Current Profile #2	50% CRC for 60min	+ 1 sec peak	+ 50% CRC for 60 min	4,000 amps
Current Profile #3	50% CRC for 60min	+ 10 sec peak	+ 50% CRC for 60 min	3,000 amps
Current Profile #4	50% CRC for 60min	+ 30 sec peak	+ 50% CRC for 60 min	1,800 amps
Current Profile #5	50% CRC for 60min	+ 60 sec peak	+ 50% CRC for 60 min	1,500 amps

Voltage & Resistance

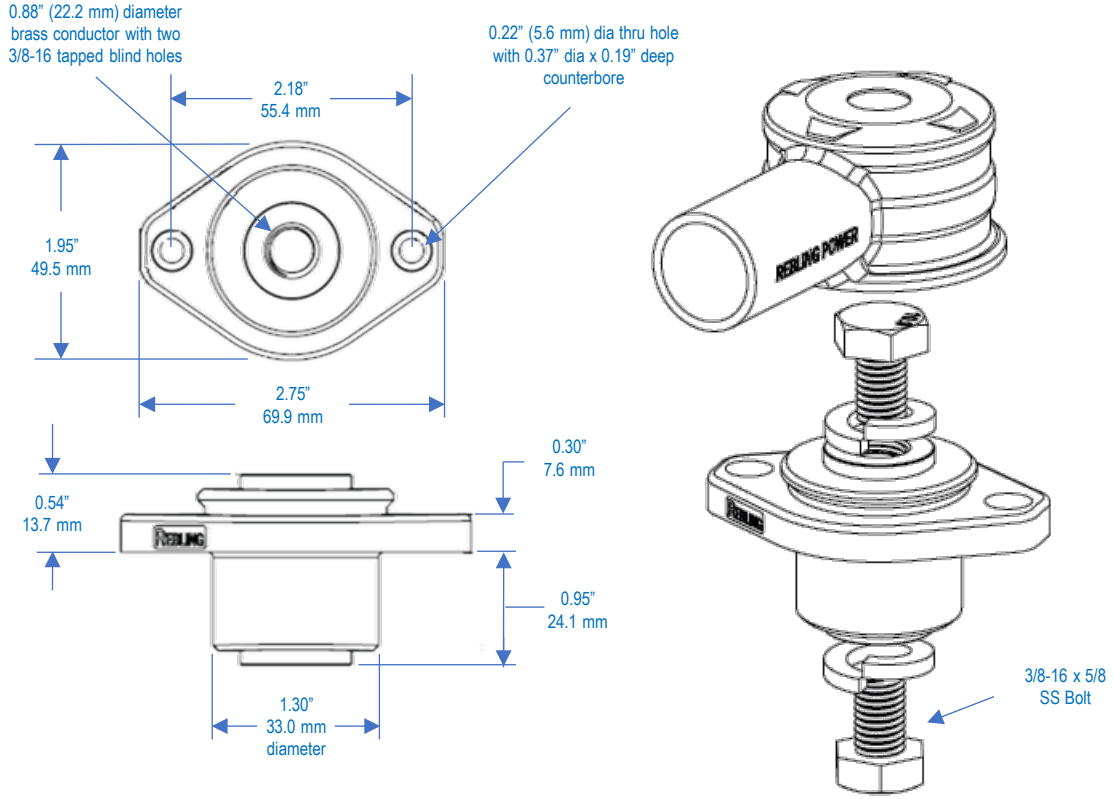
Continuous Rated Voltage	UL1977 Section 17	2,000 volts
Minimum Dielectric Withstanding Voltage	UL1977 Section 17	5,000 volts
Insulation Resistance	MIL-PRF-18148D Section 3.12.6	500 mega-ohms
Maximum Contact Resistance	MIL-STD-202H Method 307	70 micro-ohms

Mechanical & Environmental

Flammability Rating:	Terminal	UL 94	V-0
	Flexible Cover	UL 94	V-0
Environmental Sealing:	with optional gasket	IEC 60529	IP68+ watertight
	without gasket	IEC 60529	IP65
Operating Temperature:	Terminal		-40 to +125 C
	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
Minimum Panel Thickness Required for Mounting			0.025" (0.64 mm)
Maximum Wire Size:	Terminal only		750 MCM (380 mm^2)
	with Flexible Cover		4/0 (110 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 # **
XFT-P-B-38	Terminal Kit*, Brass, Nickel Plated	Black	183	2.5	V-0	E121562-220886
639A1830-B	Flexible Cover (3.50" OAL, 0.82" ID)	Black	25	2.0	V-0	E80017-250533
850A1991-B	Angled Cover for Two Cables, Black	Black	20	1.5	V-0	E121562-220886
850A1992-B	Straight Cover for Two Cables, Black	Black	20	1.5	V-0	E121562-220886
XFT-P-R-38	Terminal Kit*, Brass, Nickel Plated	Red	183	2.5	V-0	E121562-220886
639A1830-R	Flexible Cover (3.50" OAL, 0.82" ID)	Red	25	2.0	V-0	E80017-250533
850A1991-R	Angled Cover for Two Cables, Red	Red	20	1.5	V-0	E121562-220886
850A1992-R	Straight Cover for Two Cables, Red	Red	20	1.5	V-0	E121562-220886
720A1817	Gasket for XFT Terminal	Black	4	2.0	V-0	E80017-250535

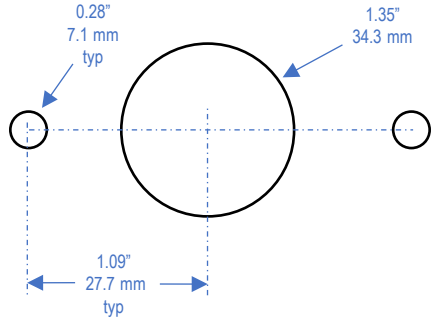
*Terminal Kit = one Terminal + two Bolts + two Split Washers, all parts in a small poly bag
**UL Material Yellow Cards can be downloaded from ULprospector.com

Mounting and Assembly

Minimum Panel Thickness	0.025" (0.64 mm)	
Mounting Hole Pattern (see diagram below)	Three Circular Holes	
Torque on M10 Bolts:		
Recommended	60 to 80 in-lbs (6.8-9.1 Nm)	electrical performance does not get better or worse above 60 in-lbs (6.8 Nm)
Maximum Recommended	320 in-lbs (36 Nm)	a Grade 4, M10 stainless bolt will snap at 490 in-lbs (55 Nm)
Torque on M5 panel mount screws:		
Recommended	10 to 15 in-lbs (1.1 - 1.7 Nm)	mechanical performance does not improve above 10 in-lbs (1.1 Nm)
Maximum Recommended	22 in-lbs (2.5 Nm)	the terminal's mounting ear will begin to deform at 36 in-lbs (4.0 Nm)

Application Notes

1. 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.
2. Cable Pulling Lubricant: when using 4/0 (110 mm^2) cable with the flexible cover, crimp the lug to the cable then push the lug into the cover using lubricant
3. **Loctite (Thread Locking Fluid) Warning: some thread-locking fluids can cause a terminal's plastic body to crack.** Loctite's datasheets warn that its products should not be used near any thermoplastic because their fluid (or its vapor) can change the chemical structure of thermoplastic, causing stress cracks to appear weeks or months after the fluid was applied to metal bolts on or near a terminal.
4. Panel Mounting Hardware: to achieve watertight sealing, the McMaster Carr P/Ns shown below can be used
   - 92855A516 M5 stainless socket head screw
   - 91828A241 M5 stainless nut
   - 9452K16 M5 O-Ring



Mounting Hole Pattern