TZ Radial™

Model Number: 4110CF

infrastructure
protection

ixp.tz.net

The TZ Radial is a compact, lightweight, high-load locking device using an eight-jaw locking mechanism to capture and hold an inserted mating stud. The mechanism is controlled by a Shape Memory Allow (SMA) actuator which in turn is managed by integrated electronics, which provides programmability, communications and control by software.
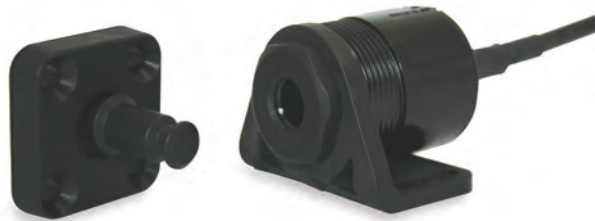
The embedded intelligence at the device level enables networking, swtiching and the ability to control other devices and connect with smart objects such as sensors.

The TZ Radial locking device can be operated via a range of triggers, including internal sensor, push button, contact closure, or RS-485 serial communications network command. The device features a manual override and one-foot cable with an RJ-45 coupler for connection to standard patch cables.

Features

> SMA actuaated intelligent locking mechanism with built-in locked/unlocked status sensor and embedded microprocessor controlled via software command.

> Unique device ID enables serial RS-485 communication networking of multiple devices.

> Vibration proof, multi-jaw, high load radial locking mechanism with built-in mating stud ejector.

> Integrated manual release over-ride (key over-ride and optional key release stud available).

> Two inputs for external sensors and two outputs (2 amps) for control of external devices including in-cabinet task lighting and fans.

> Multiple mounting options with various dimensionally tolerant mating studs.

Benefits

> Compact and lightweight form makes it suitable for a wide range of applications.

> Releasable under pre-loads of up to 70N enables spring loaded release.

> Unique push function with time-out default to lock option for improved security.

> In the event of power disruption, device maintains its locked state to ensure functional integrity and unlocks via manual over-ride or keyed release.

> **Offers** virtually silent operation through energy efficient SMA actuation with no EMF emissions.

> IP based paltform enables it to be programmed and remotely controlled by any software system.

> External sensors can be configured to provide automated responses to alert situations.

> Integrates into RS485 structured cable networks for simple and reliable installation.

Specifications Overview

Specifications subject to change to suit particular application requirements.

Physical And Mountings

> Dims: ø32.5 x 42mm (ø1.25" x 1.65")

> Weight: 35g (1.2oz)

> Mounting:
  Radial: 4 x M4 (#8) pan head screws (not included)
  Stud: 4 x M5 (#10) flathead screws (not included)
        1.2mm (0.050") over-travel needed to latch from locked position
   Spanner nut: 25.4mm(1"), 3.4N-m (30 in-lb) max torque

Performance and Durability @ 22ºC (72ºF)

> Max releasable load: 70 N (15.7 lbs force)

> Rated releasable load: 25 N (5.6 lbs force)

> Max tensile load w/0 damage: 1000 N (225 lbs force)

> Ultimate tnesile load: 1350 N (300 lbs force)

> Operating cycles: MTTF > 125,000 @ 25N nominal load

> Contact TZ or MTTF at lower/higher load requirements

Environmental

> Operating temperature: -15°C to +45°C (5°F to 113°F)

> Survival temperature: -55°C to +85°C (-67°F to +185°F)

> Humidity (operating): 95% RH at 50°C (122°F)

> Non-combustible.
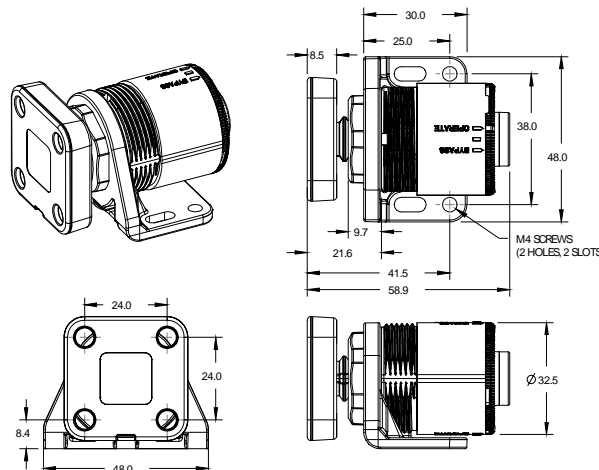
> Corrosion resistant exterior finish

> Ingress protection (when closed): IP 52

Electrical

> Supply voltage: 9.0 to 32.0 VDC

> Power consumption (operating): <3.5 W average

> Power consumption (standby): < 400 mW

Control and Networking

> Contact closure or network control

> RS-485 multi-drop communications interface with proprietary TZ communications protocol

> Auxillary sense input: 0 to 3.3 V, 8 bit A/D sampling

> Two auxillary control outputs, current sink up to 2 A at up to 20 VDC

> PCB conn pin-out: 1: Gnd | 2: +V | 3: +Coms | 4: -Coms | 5: AUX-IN1 | 6: AUX-IN2 | 7: AUX-OUT1 | 8: AUX-OUT2

> RJ45 cable pin-out: 1: +Coms | 2: -Coms | 3: AUX-OUT1 | 4: AUX-IN1, 5: Gnd | 6: AUX-OUT2, 7: AUX-IN2 | 8: +V

Standards Compliance

> FCC Part 15, CE, UL/CUL 60950 Listed File E325346

> RoHS compliant

> One year limited warranty

Dimensions (mm)

30.0 — 25.0 — 8.5 — 38.0 — 48.0 — 9.7 — 21.6 — 41.5 — 58.9 — M4 SCREWS (2 HOLES, 2 SLOTS) — OVERRIDE — BYPASS

24.0 — 24.0 — 8.4 — 48.0 — Ø 32.5