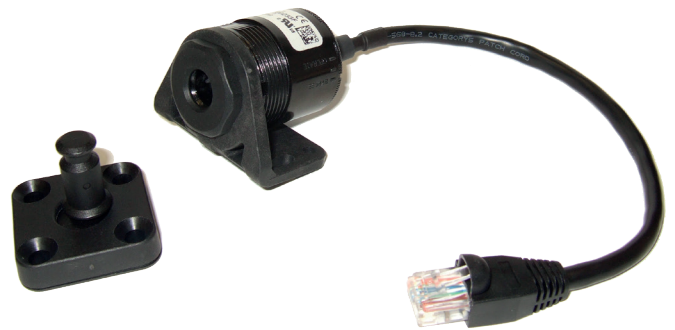# TZ RADIAL LOCK
COMPACT, HIGH-LOAD LOCKING DEVICE

PRODUCT OVERVIEW

The TZ Radial™ is a compact, lightweight, high-load locking device that uses an eight jaw locking mechanism to capture and hold an inserted mating stud.

The mechanism is controlled by a Shape Memory Alloy (SMA) actuator, which in turn is managed by integrated electronics that provides programmability, communications and control by software. The embedded intelligence at the device level enables networking, switching 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 & Benefits

- SMA actuated 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 override (key override 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.
- 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 to release 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. Unlock via manual override or keyed release.
- Virtually silent operation through energy efficient
- SMA actuation with no EMF emissions.
- IP based platform 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 & Mountings

Dimensions:	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 & Durability @ 22°C (72°F)

Max. releasable load:	70N (15.7lbs force)
Rated releasable load:	25N (5.6lbs force)
Max. tensile load w/o damage:	1000N (225lbs force)
Ultimate tensile load:	1350N (300lbs force)
Operating cycles:	MTTF > 125,000 @ 25N nominal load

Environmental & Performance

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)
Ingress protection:	IP 52
Non combustible Corrosion resistant exterior finish	

Electrical

Supply voltage:	9.0 to 32.0VDC
Power consumption (operating):	< 3.5W average
Power consumption (standby):	< 400mW

Control & Networking

Control:	Contact closure or network control RS-485 multi-drop communications interface with proprietary TZ communications protocol
Auxiliary sense input:	0 to 3.3V, 8 bit A/D sampling
Outputs:	Two auxiliary control outputs, current sink up to 2A at up to 20VDC
PCB conn pin-out:	1: Gnd, 2: +V, 3: +Coms, 4: -Coms, 5: AUX-IN1, 6: AUX-IN2, 7: AUX-OUT1, 8: AUX-OUT2
RJ-45 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