

Ruggedized Rail Tag 870MHz

AT5436 and AT5438

TransCore's AT5436 and AT5438 Ruggedized Rail Tag is an 870MHz, beam-powered radio frequency identification (RFID) tag. This tag is designed for between-the-rails mounting, and has enhanced environmental protections against rain water effects. Packaged in a factory-sealed case, this tag is also ideal for mounting on vehicle chassis, intermodal containers, or any environment requiring a durable, weatherproof tag.

The Ruggedized Rail Tag is beam-powered, requiring no internal battery. In addition to giving the tag an extended service life, this feature limits the range of the tag and reduces the possibility of cross-reads from nearby tags.

The tag can be factory-programmed, as specified by the customer, or can be user-programmed in the field using TransCore's suite of RF tag programmers.

When used with TransCore readers, security features prevent data corruption, data alteration, and tag cloning. The Ruggedized Rail Tag supports factory locked data fields for Tag ID, customer, and user information. This tag also supports open data fields that can be written by the agency.



Features

- ▶ Supports American Trucking Associations (ATA) and Super eGo® (SeGo) protocols
- ▶ Non-battery for extended service life
- ▶ Read/write capability in SeGo mode
- ▶ Weather resistant, water shedding case
- ▶ Factory-sealed case

Applications

- ▶ Vehicle chassis
- ▶ Intermodal containers
- ▶ Harsh environments
- ▶ Rail Automatic Equipment Identification (AEI)
- ▶ Train positioning

Ruggedized Rail Tag

COMMUNICATIONS

Frequency Range
865.7 to 867.5 MHz

Typical Working Range
0.3 to 3m (1 to 10ft)
Range depends on system parameters

Polarization
Parallel with longer side

SOFTWARE FEATURES

Data Memory
ATA Mode: 60 bits half frame
120 bits full frame

SeGo Mode: 2,048 bits
User memory programmable using RF link

POWER REQUIREMENTS

Power Source
Beam powered

LIFE EXPECTANCY

Service Life
Unlimited

PHYSICAL

Dimensions
Size: 23.5 x 6.0 x 3.0cm (9.25 x 2.36 x 1.18in)
Weight: 160g (5.64oz)

Case Material
Weatherproof, sealed, UV-stabilized, gray case

Mounting Surface
Any smooth metal surface
If mounting surface is non-metallic or irregular, tag must be mounted to a metal backplate attached to the surface of the vehicle or object to be tagged

Mounting Method
Rivet Mounting: Tag must be mounted directly to any smooth metal surface using blind rivets or TIR-approved fasteners

ENVIRONMENTAL

Operating Temperature
-40°C to +70°C (-40°F to +158°F)

Storage Temperature
-55°C to +85°C (-67°F to +185°F)

Humidity
100% relative humidity, condensing

Vibration
8.4 G_{rms}, 20 to 2000 Hz

Shock
200G, half-sine pulse, 5ms duration, 3 axis
80g, half-sine pulse, 24ms duration, 3 axis

Compatibility
ATA Mode: American Trucking Associations standard

Super Ego Mode: SeGo

Mechanical Load
Tested to 1175 kg

STANDARDS

AREMA 11.5.1 Class A (Trackbed)

Ultraviolet (UV Exposure): MIL-STD 810-D, Method 505.2: 10 years of Florida-level UV radiation

Dust Ingress/Water Immersion: IP67 (≤1m of immersion)

Flammability: UL94 H-B

PROGRAMMING

Can be programmed to your specifications at the factory, or programmed by the user in the field, using TransCore's suite of RF tag programmers

MODEL PART NUMBER

13-5436-001 Half Frame
13-5438-001 Full Frame

For more information:

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