AA3233-002 Rail Antenna with Subway Modification

The AA3233-002 Rail Antenna is a rugged 915 MHz antenna specifically designed for the rail industry. The antenna is designed for mounting between track rails. The antenna’s optimal performance is achieved when used with a TransCore AT5000-series transportation tag mounted to the underside of rail vehicles. The AA3233-002 operates with a TransCore radio frequency (RF) module. The AA3233-002 has built-in RF circuitry for checktag antenna-to-reader system performance checks. These system built-in-tests can be directed by the host software.

The AA3233-002 is provided with all-weather isolators that dampen shock and vibration. The design features a heavy aluminum back plate and a watertight conduit junction box.

The AA3233-002 has a read pattern that is designed to read an AT5000-series transportation tag at close distances of 45 cm to 90 cm (17.7 in. to 35.4 in.) and at high speeds of 120 km/hr (74.56 mph).

The AA3233-002 is provided with mounting hardware and a full-size mounting template. The installation guide, available at transcore.com, includes detailed installation instructions.
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COMMUNICATIONS

Frequency Range
902 to 928 MHz

Gain
10 dBi

Polarization
Linear

VSWR
< 2.0:1

Impedance
50 ohms nominal

HARDWARE FEATURES

Connector
N-type female and jam nut connector inside waterproof box

PHYSICAL

Antenna Dimensions
Size: 26.9 x 4.9 x 11.25 in. (68.8 x 12.5 x 28.8 cm)
Overall Length: 34 in. (85.4 cm)

Junction Box Dimensions
Size: 6.1 x 5.3 x 2.2 in
(15.5 x 13.5 x 5.6 cm)
Size does not include mounting flange

ENCIRONMENTAL

Operating Air Temperature
-40°F to +167°F (-40°C to +75°C)

Humidity
100% condensing

Vibration Tolerance
4 G rms, 5 to 500 Hz, flat random spectrum

Shock Tolerance
10 G zero to peak x 7 ms
Isolated from 100 G, high-frequency, wheel shocks

Antenna Field Patterns