AT5419
Externally-Powered Signal Tag

The AT5419 Externally-Powered Signal Tag is used for rail traffic monitoring and automatic data capturing. When the AT5419 tag is connected to a flashing rail signal light system, reader equipment can verify the status of the signal light.

This tag is RF programmable, and may be programmed by the customer using TransCore’s AP4600 Multifunction Tag Programmer with the specialized programming bracket.

Data on this tag can be configured to match reader systems that are compatible with Association of American Railroads (AAR), American Trucking Associations (ATA), and the Internal Organization for Standardization (ISO).

The AT5419 tag uses AC or DC power. It comes with a 37-inch (0.94m) two-wire interface cable. The conductor leads are left bare for convenient connection to a terminal strip, microcomputer, or power supply.

TransCore’s RFID-based systems are trusted worldwide by mass transit agencies to provide precise location and accurate data as part of their rail system control and signal systems.

Features
- Compatible with Association of American Railroads (AAR), American Trucking Associations (ATA), Internal Organization for Standardization (ISO) reader systems
- Uses AC or DC power
- Customer programmable using the AP4600 multifunction tag programmer and programming bracket
- Weather-resistant and factory-sealed case

Applications
- Rail traffic monitoring
- Automatic data capture
## AT5419 Externally-Powered Signal Tag

### Communications
- **Frequency Range**: 902 to 928 MHz
- **Typical Working Range**: Determined by reader
- **Polarization**: Parallel with longer side

### Timing
- **On Timing**: Tag switches to a continuous ON state after a maximum of 1400 ms of the signal decision assertion (request turn on the flashing signal)
- **Off Timing**: Tag switches to a continuous OFF state within 1500 ms of the signaling decision negation (request turn off the flashing signal)

### Power Requirements
- **Power Source**: Externally powered through wire interface
  - **AC**: 5 V to 10 V RMS at 50-60 Hz
  - **DC**: 5 V to 24 V at ≤ 5 mA

### Software Features
- **ATA Mode**: 60 bits
  - 10 six-bit ASCII characters
  - User memory programmable using RF link

### Physical
- **Dimensions**
  - **Size**: 9.3 x 2.4 x 0.8 in (23.6 x 61 x 2 cm)
  - **Weight**: 7.9 oz (225 g), including cable
- **Case Material**: Weatherproof, sealed, UV-stabilized, olive-drab case
- **Mounting Surface**: Any smooth metal surface
  - If mounting surface is non-metallic or irregular, tag must be mounted to a metal backplate
- **Mounting Method**
  - **Rivet Mounting**: Tag must be mounted directly to any smooth metal surface using blind rivets or TIR-approved fasteners
  - **Tape Mounting**: VHB Double-sided tape
- **Interface Cable**: Tag is hardwired with a jacketed, two-conductor, twisted-pair 37 in (0.9 m) interface cable

### Environmental
- **Operating Temperature**: -40°F to +158°F (-40°C to +70°C)
- **Storage Temperature**: -67°F to +185°F (-55°C to +85°C)
- **Humidity**: 0 to 95% non-condensing at 86°F (30°C) during operation
- **Vibration**: 5 to 20 Hz, sine wave, 0.2 in peak to peak
  - 20 to 2000 Hz, 4.2 G peak
- **Harsh Vibration**: 20 G, 20 to 2000 Hz
- **Shock**: 10 G terminal peak sawtooth, 1 ms duration, 3 axes
- **Harsh Shock**: 200 G, half-sine pulse, 3 ms duration, 3 axes

### Compliance
- **Electromagnetic Compatibility (EMC)**: Tested and verified to EN50121-4:2006/AC:2008 Railway Applications - Electromagnetic Compatibility Part 4
- **RF Interference**: Tested and verified to FCC Part 15, Subpart B, Class B

### Options
- **Labeling**: Identification information, custom logos and/or organization name can be marked on tag case. Model number and ID number can be indelibly marked on tag case top surface

### Accessories
- **AP4600 Multifunction Tag Programmer**: Designed for use in an office environment and connects to a host PC’s USB port. External power required
- **AP4600 Programming Bracket**: Required for programming AT5417 and AT5419 signal tags. Holds tag in position for accurate programming (sold separately).

### Model Part Numbers
- **13-5419-NNN Signal Tag**
- **14-4600-001 AP4600 Desktop Programmer**
- **54-4600-001 AP4600 Programming Bracket**

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**For more information:**
- **Sales Support**: 800.923.4824
- **Technical Support**: 505.856.8007
- **transcore.com**