The AT5417 Externally-Powered Signal Tag is used for rail traffic monitoring and automatic data capturing. When the AT5417 tag is connected to a 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 AT5417 tag uses AC or DC power. It comes with a three-foot (0.9m) 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
AT5417 Externally-Powered Signal Tag

**COMMUNICATIONS**

**Frequency Range**
902 to 928MHz

**Typical Working Range**
Determined by reader

**Polarization**
Parallel with longer side

**TIMING**

**On Timing**
Tag is functional and ready for interrogation by the reader within 60ms of receiving external power

**Off Timing**
After tag has been powered-up for 10 seconds or more and the power is discontinued, tag is functional and can be interrogated by the reader for an additional 170ms to 320ms

**POWER REQUIREMENTS**

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

**SOFTWARE FEATURES**

**Data Memory**
ATA Mode: 60 bits
10 six-bit ASCII characters
User memory programmable using RF link

**PHYSICAL**

**Dimensions**
Size: 9.3 x 2.4 x 0.8in (23.6 x 61 x 2cm)
Weight: 79oz (225g), including cable

**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.

**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 36in (0.9m) interface cable

**ENVIROMENTAL**

**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 20Hz, sine wave, 0.2in peak to peak
20 to 200Hz, 4.2G peak

**Harsh Vibration**
20G$_{rms}$, 20 to 2000Hz

**Shock**
10G terminal peak sawtooth, 1ms duration, 3 axes

**Harsh Shock**
200G, half-sine pulse, 3ms 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**

13-5417-NNN Signal Tag
14-4600-001 AP4600 Desktop Programmer
54-4600-001 AP4600 Programming Bracket

For more information:

**Sales Support**
800.923.4824

**Technical Support**
505.856.8007

transcore.com