



MetroTag™ Transponder

Transit Priority Equipment

Overview

The Novax MetroTag™ Transponder provides the means to transfer a signal from a moving vehicle to an inductive loop imbedded in the roadway beneath the moving vehicle.

Mounted to the under carriage of the front of the transit vehicle. The transmitter is powered by the vehicles 12-volt DC system.

Using an onboard microprocessor the MetroTag™ transmits a continuous field which is 100% compatible for use with the existing 'Streetcar Receiver Module' (SRM) technology.

Telegram

Application of optional serial equipment shall allow F.S.K. modulation of the transponder at a rate of 600 BPS to transmit a telegram to compatible wayside equipment.

Interface

An "oil tight" connector protects the transponder from contamination. Internal components and PC board are sealed with a conformal coating to protect against corrosion, and fungus.



Features:

- **Transit Priority** (with standard Rectangular Road Loops)
- **Compact** (for Low Ride type Buses)
- **Rugged** (for Extreme Weather)
- **Secure** (against Reverse Voltage)
- **Adaptable** (for Data Transmission)

Streetcar Receiver Module (SRM) interfaces to any traffic controller style and provides priority Request and Cancel signals to the traffic controller. Interfaces to in-road loops for metroTag detection.



MetroTag™ Transponder

Transit Priority Equipment

Specifications

1. Dimensions	Cylindrical Assembly L x W = 45.7 cm x 5.7 cm (18" x 2.25").
2. Voltage	11.5 - 14.8 Volts Direct Current (DC)
3. Current	Less than 1 Ampere DC
4. Operating Temperature	-40 °C to 80 °C (-40°F to 176°F)
5. Operating Humidity	98 % R.H. Condensing
6. Power Cable	12 feet (3.6 meters 4 wire). In-Line Fuse at power feed end.
7. Weight	Approximately 1.6 kg (3.5 pounds)
8. Transmission Rate	56kHz carrier (with less than 200Hz variance).
9. Mounting Location. Mounting Height	Horizontal and parallel to the road surface, perpendicular to vehicle travel. Within 61 cm (2 feet) of the road surface.
10. Installation Instructions	<p>The Novax SRM – MetroTag™ transponder shall be mounted on the underside of the vehicle parallel to the road surface and perpendicular to the long axis of the vehicle. The existing frame member shall protect the transponder, on the vehicle front side. There shall be no frame member between the Transponder and road surface.</p> <p>At each end of the cylinder two stainless steel bolts (3/8" x 16) shall fasten the transponder to the vehicle. Wiring shall consist of terminating a "red" wire (+12VDC) to source of 12 Volts DC on the vehicle and a "black" lead to the vehicle chassis ground in such a manner to achieve the potential of the negative terminal of the vehicle's battery.</p> <p>Secondary 'Serial' wires shall be capped and secured in an environmentally protected area for future termination to a variable telegram encoder.</p>
11. Water Resistance	The Novax SRM – MetroTag™ transponder shall withstand a 60°C (140°F) water blast of 10GPM at 60 psig directed perpendicular to the cylindrical body from a distance of 1.8 meters (6 feet) for a period of 12 hours with no measurable degradation to the operation.
12. Housing Materials	The Novax SRM – MetroTag™ transponder assembly is embedded within a welded PVC-S40 housing. The connector is an anodized aluminum Military grade connector hermetically sealed inside and out to prevent moisture and contaminate intrusion.
13. Maintenance	During regular scheduled maintenance the crew should look for abrasion caused by other loose cables or metal parts and keep connector end free of salt buildup.
14. Model Number	Model TTC-QX4

NOVAX INDUSTRIES CORPORATION
 658 Derwent Way, New Westminster, BC, Canada V3M 5P8
 Tel: 604.525.5644 Fax: 604.525.2739
 Email: general@novax.com

