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HP-2T HIGH POWER-2 TRANSPONDER

Features

- Halogen free cable is compliant with today's toxicity and flammability standards of the Light Rail Industry
- Produces a high magnetic field strength
- Custom cable length based on customer requirements

Benefits

- New shielded cable improves the protection against EMC fields

Introduction

The NEW VETAG High Power-2 Transponder (HP-2T) is specifically designed for use in AC propelled vehicles. The Transponder's output produces a sufficiently high magnetic field strength to overcome any intermediate noise level that may be present underneath the vehicle. The HP-2T now has a shielded cable made from a halogen free material complying with the toxicity and flammability standards of the Light Rail Industry. One of the many benefits of the new shielded cable is it improves the protection against EMC fields existing underneath the vehicle.

Mounting

The HP-2T is activated by the interrogation signal from the VETAG Wayside Interrogator when it passes over a VETAG or VECOM Loop Antenna. The recommended mounting method is with a bracket. Due to the variety of vehicle configurations, this bracket must be supplied by the customer to ensure the correct size. The following guidelines should be followed for mounting the unit underneath the vehicle:

- Up to 78.7" (200 cm) from the front of the vehicle
- In the middle of the vehicle
- Within the clearance gauge of the vehicle
- Must be mounted vertically
- The connection cable must be at the top of the Transponder after mounting
- The Transponder cable should be fastened every 4" (10 cm). Under no circumstances should the cable fasteners damage the cable
- The signal transmitted by the unit is weakened if placed within the vicinity of the vehicle's metal assembly. Therefore the top side of the Transponder should be located a minimum of 4" (10 cm) and the bottom side a minimum of 5.5" (14 cm) from the metal assembly of the vehicle (we recommend keeping the distance between the Transponder and assembly as large as possible)
- The distance between the bottom side of the Transponder and the road surface (Loop Antenna) should be as small as possible; a minimum of 5.9" (15 cm) and a maximum of 11.8" (30 cm) is recommended

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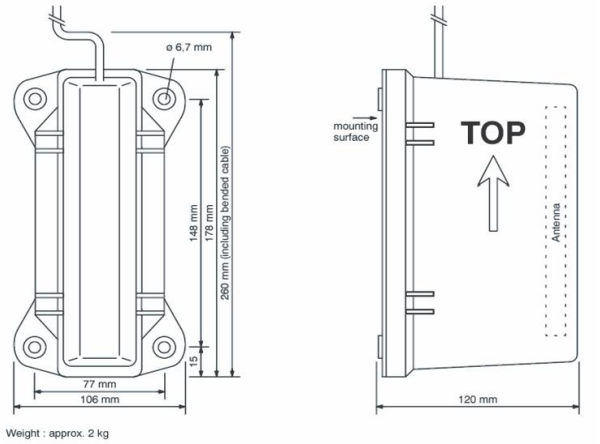
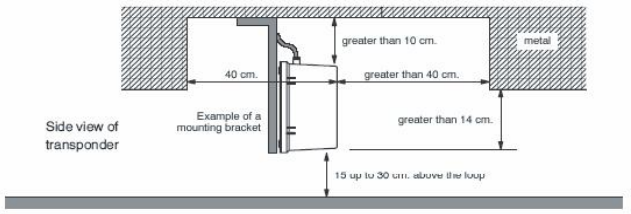
HP-2T





Mounting Diagram

Specifications

Input Data Bits 1 - 19	Low or "0" Level	-40 V < Vin < +1V
	High or "1" Level	+8 V < Vin < +45 V
	Input Resistance	> 125 KΩ
	Max. Non-destructive Input Voltage	< 300 V; tp < 500 µsec
	Transient Surge Protection V in *tp	> 3.3 mVs
Magnetic Field Output	Output Level; 100kHz	40 ATpp
	Transmission Mode Xtal controlled	FSK 90.9/100 kHz
	Transmision Bit Rate Xtal controlled	2272.7 Bits
	Duration of response	16.1 ms
	Maximum Rate of Interrogation	53.7 Hz
VX OUTPUT Load Resistance = 10MΩ Load Capacitance = 10 pF	Low Level	< 200 mV
	High Level	7.0V < V < 9.0V
	Transition Times	~ 300 µsec
	Output Resistance	< 1370 KΩ
Load Resistance = 1MΩ / 10 MΩ Load Capacitance = 1.5 nF	Low Level	< 200 mV
	High Level	3.0V < V < 3.9V
	Transition Times 10....90%	~ 2 msec
	Duration of HIGH Level; xtal cntr.	16.6 ms
Power Requirements	Power Consumption	24 VDC 400 mA (while Transponder is transmitting)
	Input Voltage	19 ~ 32 VDC, Nominal 24 VDC
Environment	Temperature	-40 ~ +140 °F (-40 ~ +60 °C), Operating
	Humidity	-95% @ 104 °F (+40 °C) (non condensing), Operating
	Vibration Resistance	1 Grms, IEC 60068-2-64, Random, 5 ~ 500 Hz, 1 Oct/min, 1 hr/axis, Operating
	Shock Resistance	20 G, IEC 60068-2-27, half sine, 11 ms, Operating
Physical Characteristics	Construction	6-POLYAMIDE K1098 housing
	Mounting	Vertical on bracket
	Dimensions (WxHxD)	4.25" x 7" x 4.72" (106 x 178 x 120mm)
	Weight	4.4 lb (2 kg)

Ordering Information

Part Number	Description

A listing of HP-2T configurations and part numbers are available upon request.

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VECOM USA is proud to be ISO 9001:2000 Certified