

DYNA-BEACON TAG INSTRUCTIONS FOR USE

MODELS : DBT-900-0-1-GB-XX DBT-901-0-1-GB-XX
DBT-900-0-2-GB-XX DBT-901-0-2-GB-XX
DBT-900-0-3-GB-XX DBT-901-0-3-GB-XX

INTRODUCTION TO THE DYNA-BEACON TAG

The Dyna-Beacon Tag is a member of the Impro Dyna range of products. The Tag is a fully self-contained, battery-operated UHF Active Tag which operates over a range of up to 30 metres. The Tag operates at a fixed UHF frequency. A choice of three UHF frequencies is available.

The Tag is powered from an internal lithium battery, giving a typical life expectancy of 3 years. The Tag has a low battery monitor and the Tag is discarded once the battery is exhausted.

The Tag is housed in the Impro V-mould plastic enclosure, and encapsulated in potting compound for protection from the environment.

INTRINSIC SAFETY QUALIFICATION

The Dyna Beacon Tag has been successfully tested for compliance with South African Standard Specification **SANS 60079 (Part 11) "Intrinsically safe electrical apparatus"**, which qualifies it as being safe for use in group I gasses and for use in a hazardous location in a mine.

INSTALLATION PROCEDURE

Install the Dyna-Beacon Tag on the vehicle as described below.

Locating the Tag on a Vehicle

Locate the Tag near the front grill close to the radiator.

Locating the Tag on a Fixed Support

The Tag may be mounted on any convenient support. The position chosen should be the optimum for a clear line of sight to the receiver antenna. The Tag should be located as high above the ground as possible.

Mounting the Tag

Mount the Tag in position either vertically or horizontally using pop-rivets, self-tapping screws or cable ties.

Activating the Tag

The Tag is equipped with an external magnet which deactivates the Tag when placed as shown in Figure 1. To activate the Tag, remove this magnet.

DYNA-BEACON TAG FEATURES

Low Battery Indication

The Tag transmits a warning indication when the battery voltage is low.

Multi-Tag Capability

The Dyna-Beacon Tag/Dyna Receiver system multi-tag capability allows several tags to be detected within a brief time period.

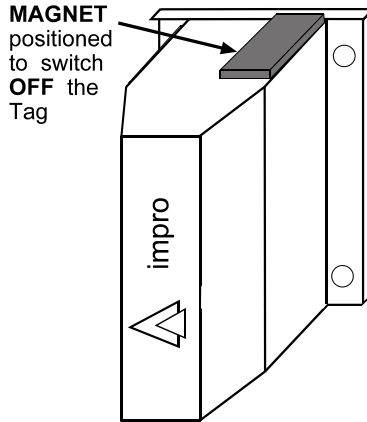


Figure 1 : Positioning the magnet on the Tag

BRIEF TECHNICAL SPECIFICATIONS

NOTE : *The complete specifications are included in the Dyna-Beacon Tag catalogue. Brief specifications relevant to the installation and use of the tag are provided below.*

Dimensions

Length : 60 mm. Width : 45 mm. Height : 42 mm.

Temperature Range

Operating : -10°C to +70°C. Storage : -20°C to +80°C.

Humidity Range

0 to 95% Relative Humidity non-condensing @ 35°C.

Dust and Splash Resistance

This unit incorporates technology designed to provide dust and splash protection equivalent to that required by IP30.

Frequency/Data Rate Options

The Tag is available with the following six options :

DYNA-BEACON TAG OPTIONS						
FREQ (MHz)	433.92	403.55	418.00	433.92	403.55	418.00
DATA RATE	Fast			Medium		

RF Output Power : < 1 mW ERP.

Data Content : The transmitted data comprises the Tag ID and "battery low" indication.

Aerial : Omni-directional.

Operating Range : 10 - 30 m (typical). The actual range achieved depends on the operating environment.

Multi-Tag Capability : Typical periods in which several tags within range can successfully be read are shown in the table below.

MULTI-TAG DATA CAPTURE TIMES	
NUMBER OF TAGS	TOTAL DETECTION TIME
100	45 seconds
200	60 seconds
400	110 seconds
800	220 seconds

Power Supply : An internal battery, with a typical life expectancy of 3 years.

GUIDELINES ON DATA RATE OPTIONS

The optimal data rate for a particular application can be determined from the following guidelines :

- The Fast Data Rate Tag option (see table below for codes) should be used where there is a high tag density with a shorter range requirement, for example in mine tunnel applications.
- The Medium Data Rate option (see table below for codes) should be used where there is a low tag density with a relatively long range, for example in access control applications.

ORDERING INFORMATION

The Tag Options can be ordered under the following codes :

DYNA-BEACON TAG ORDERING INFORMATION		
OPTION		Impro PRODUCT STOCK CODE
Data Rate	Frequency	
Medium	433.92 MHz	DBT-900-0-1-GB-XX
	403.55 MHz	DBT-900-0-2-GB-XX
	418.00 MHz	DBT-900-0-3-GB-XX
Fast	433.92 MHz	DBT-901-0-1-GB-XX
	403.55 MHz	DBT-901-0-2-GB-XX
	418.00 MHz	DBT-901-0-3-GB-XX
NOTE : <i>In practice, the characters XX are replaced by digits which indicate the product revision status.</i>		

RELATED PRODUCTS :

The Dyna-Beacon Tag is designed specifically to operate in conjunction with the **Impro Dyna** range of receivers, which presently includes the Dyna-Track Receiver and the Dyna-Link/Scan Receiver.

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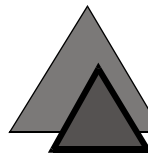
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