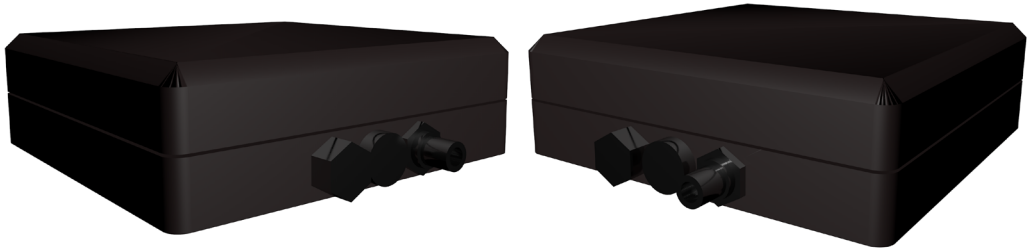


ATINGIMUS RADAR



AT-BAR 10-1111 0

RADAR BARRIERS FOR COMPOUND SECURITY



FEATURES

- **Detects stationary and moving targets in the barrier up to 70 meters of range between the two modules**
- **Open collector output**

Bar10, 24 GHz Radar barriers are based on a transmitter module and a receiver module. The barriers are used in the area of perimeter security. Distances of a few metres (e.g. train platform security, security of dangerous zones around machinery) are suitable for security as well as distances of several hundred metres (e.g. for monitoring grounds in the outer area). The radar units are easy and quick to install to set up a light weighted compound security.

GENERAL DESCRIPTION

The Radar Barrier is a system consisting of a pair of Radars communication with each other.

They can be installed at a distance between 10 and 70 meters. When activated, each Radar detects the others signal. Then the open collector output is switched on. Whenever a signal is interrupted by an obstacle, the open collector output is switched off. The state of the open collector can be received at both sides of the system. Using Radar in a barrier has the main advantage that the system is insensitive to weather conditions (such as rain, snow, fog...) as well as small animals like flying birds. Only major obstacles like humans, cars, poles on vessels etc. are detected. There are two sets of Radar pairs (BAR10-A + BAR10-B ; BAR10-C + BAR10-D) with each pair adjusted to specific frequencies, so that two Radar Barriers can be installed without interfering with each other. The system is working in the 24,000...24,250GHz band. The antenna beam is 11x11 (+/-5,5 x +/- 5,5 deg.).

INSTALLATION

The Radar Barrier shall be installed in such a way that the antenna beams are looking to each other and that the field polarization of both Radars is the same (the plugs of both Radars showing down to the ground).

The Radar is protected against reversed + and – of the power supply.

HOUSING SPECIFICATIONS

- **Material Bottom:** ALg, black anodized
- **Material Cover:** POM-Plastic black colored
- **Dimensions (lxwxh):** 100 x 100 x 42 (mm)
- **Mounting possibility:** 4x M4 holes at the back side
- **Mounting possibilities:** 82 x 82 mm in square

USERS GUIDE

The user's guide consists of the following chapters:

- **Absolute maximum value on the interfaces**
- **Module Interfaces**
- **General technical data**

ABSOLUTE MAXIMUM VALUES

- **Supply voltage:** 0V...+30V
- **Max. current on open collector:** short circuit proofed up to 5sec;
- **Short circuit current:** >40mA
- **Operating temperature:** -40...+60°C

MODULE INTERFACES

The Radar system has the following interfaces:

- Power supply +9...30V and GND (ground)
- 1 open collector outputs PNP connected to +power supply internally

GND blue

+U brown

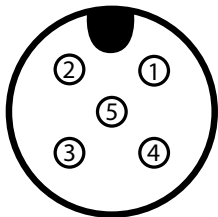
open collector: black

- The pins are available at a 4-pin cable which can be connected to the 4pin plug of the Radar. (The white wire is not used.)

The circular connectors used are industrial standard, rated IP67.

The four pin connector type is the GS04M12x1,5VA or the five pin connector type is the GS05M12x1,5VA

3- to 5-pin



the colors of the core refer to the chapter core assignment.
Euro-standard EN 50044

- 1 brown
- 2 white
- 3 blue
- 4 black
- 5 grey

GENERAL TECHNICAL DATA

- **Supply voltage 9...30V**
- **Supply current 120mA (typ.)**
- **Open collector:**
- **Switched on: <0,5V diff.-voltage to +power supply at 40mA**
- **High impedance: <5 μ A at 0V**
- **Transmit frequency: 24.000...24.250GHz**
- **Transmit power: 20dBm (EIRP) max.**

It is not necessary for persons to keep a safety distance from the running Radar because in any consideration the limits of electrical fields in the EU recommendation. 1999/519/EG are not exceeded.

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