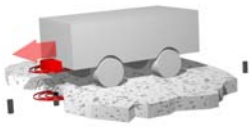
Transponder

HG 70652ZA

Mounting Instructions



The minimum distance to metal parts should be approx. 200 mm, as the influence on positioning accuracy and range is dependent upon size and distance of metal parts.

- Central hole for screw-on mounting provided.
- Exact alignment is required, otherwise there will be positioning errors.

Range and accuracy of positioning are influenced by:

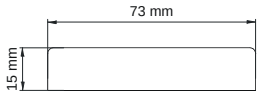
- Any large metal pieces (sheets) in the ground.
- Inductive loops, as they are created e. g. by steel building mats, have a greater influence. Individual metal poles have little effect. Those may partially be within the metalfree area.

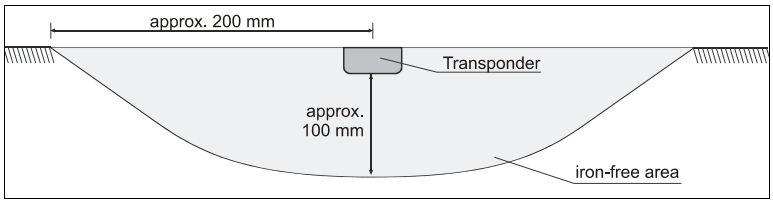
The following environmental conditions have no effect on the system:

- Snow, ice, water.
- Oil, tar, earth, dirt, etc.

Minimum iron free distances around the transponders (in mm)

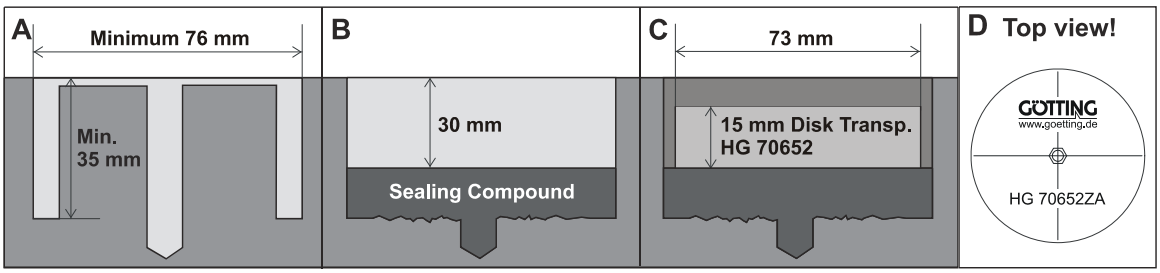
Do not mount a transponder directly over metal! The minimum distance around the transponder as shown in the box below should be observed.





The following equipment will be required (not included in the scope of supply):

- Rotary hammer drill
- Core bit (ø 85 mm)
- ø 8 to 10 mm drill bit
- hammer and chisel
- suitable sealing material (epoxy resin)



1. It is recommended that a test hole be drilled prior to installing the transponder.
2. The position of the transponder should be premarked and a centering hole should be drilled with an appropriate drill bit.
3. A hole may then be drilled with a diameter of 76 mm to a depth of approx. 35 mm (A).
4. Any loose material must be removed and the floor of the hole has to be as even as possible (B).
5. Afterwards fill the hole with sealing compound up to a height of 30 mm below the road and let the resin harden (B).
6. Place the transponder into position with its label uppermost (C and D).
7. Fill up the hole with epoxy resin.

Transponder

HG 70652ZA

Functional Description

The transponders are operated at 128 kHz.

The transmitting antenna of the reading unit supplies the transponder with energy by using an alternating field of 128 kHz. This induces a voltage within the coil of the transponder, which generates a current that is sufficient power supply for the micro chip.

The system‘s operability is guaranteed through fluid, gaseous as well as solid material.

However, if mounted directly on or within metal, the transponder‘s reading distance is influenced and the positioning signal may be distorted.

Read-Write-Transponder (RW)

The Read-Write transponders are equipped with an EEPROM in which the code is stored. The EEPROM may be rewritten up to more than 100,000 times.

Technical Data

Function	Antennas HG 98760, HG 98850
Outer diameter	ø 73 mm
Mounting hole	ø 5 mm
Thickness	15 mm
Weight	290 g
Material	Durethan casing filled with Polyurethan compound
Reading time	8 ms
Operating temperature	-20 to +60° C
Storage temperature	-20 to +60° C
Mechanical pressure	max. 490 N/cm²
Protection class	IP 67
Reading system, read write	PSK
Operating frequency	128 kHz / 64 kHz
Useful data	20 Bit
Min. distance between two transponders	1.5-times the antenna width
Programming device	HG 81830YA
Reading distance	90 - 250 mm please refer to the data sheets of the individual antennas

Application Examples from the Automation Industry

- **Automated Guided Vehicles (AGV):**
  - Positioning
  - Track Guidance
  - Identification

Götting KG, Celler Straße 5, D-31275 Lehrte/Röddensen (Germany), Tel.: +49 (0) 51 36 - 80 96 -0,
Fax: +49 (0) 51 36 - 80 96 -80, E-Mail: info@goetting.de, Internet: www.goetting.de

Date: 11.10.2011
English, Revision: 03
Author(s): RAD/SIS