

Transponder

HG G-70661XA

Function

As the antenna passes over the transponder, it energizes the latter with an energy field of 13.56 MHz. The transponder returns its code through frequency modulation to the antenna. A normal reading cycle, including all security checks, is approximately 1 ms.

The system's operability is guaranteed through fluid, gaseous as well as solid metal-free materials. However, if mounted di-

rectly on or within metal, the transponder's reading distance is influenced.

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. It has 32 bit available for user data.

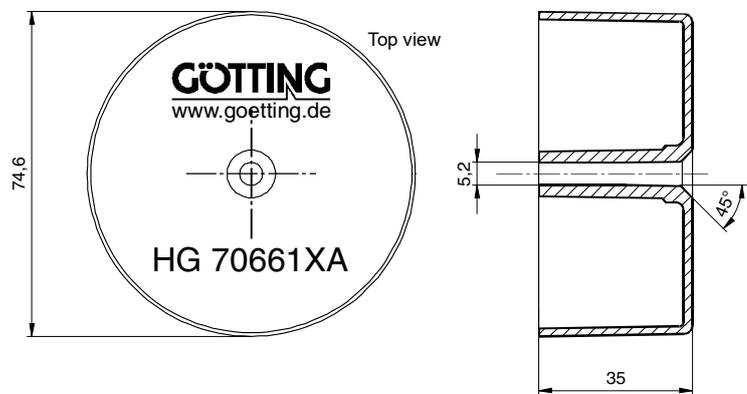


Dimensions and Specifications

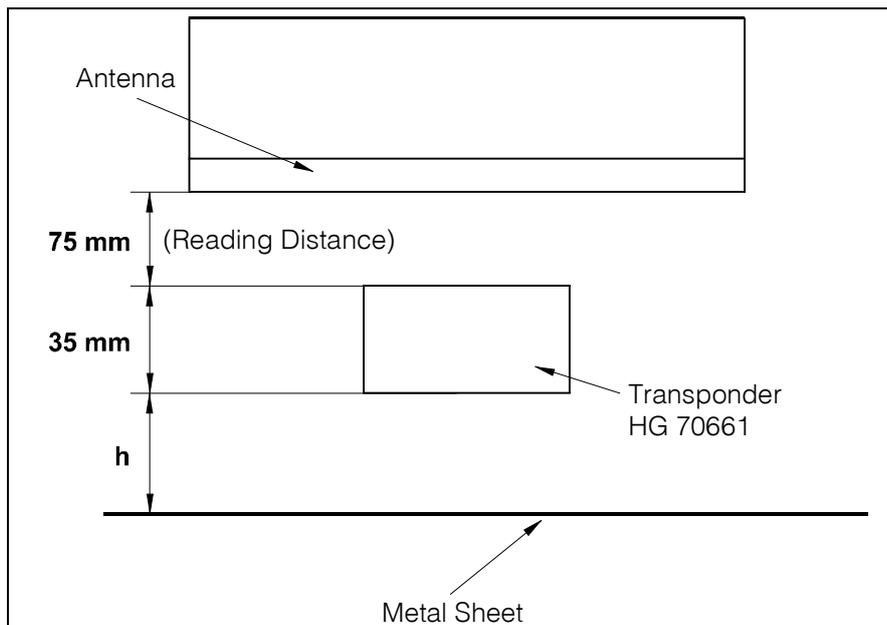
The maximum reading distance for all transponders can only be achieved when the minimum distance to the metal surface is maintained.

It is recommended to maintain the minimum distance within the metal-free area (figure below). The impact on positioning accuracy and range also depends on the size and the distance of metal parts.

As a rule of thumb it can be said that if the metal-free area behind the transponder has to be at least of the same range as the reading distance between transponder and antenna. The reception of the transponder signal will be largely unattenuated (see table on right). It is essential, that the tran-



sponder **does not dip into the mesh/loop of steel reinforcement grids**. Single metal rods, on the other hand, hardly have any influence on the performance.



| Height h [cm] | Signal [%] |
|---------------|------------|
| 0 | 34 |
| 1 | 56 |
| 2 | 70 |
| 3 | 78 |
| 4 | 83 |
| 5 | 88 |
| 6 | 94 |
| 7 | 93 |
| 8 | 96 |
| 9 | 97 |
| 10 | 99 |
| ↓ | ↓ |
| ∞ | 100 % |

Transponder

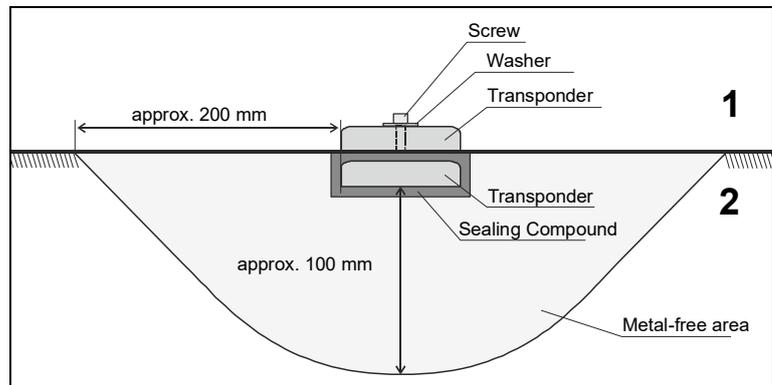
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Mounting Instructions

Do not mount a transponder directly on metal! The minimum distance around the transponder as shown to the right should be observed.

1 – On the Ground

The transponder has to be mounted on even ground using a metal screw and a washer. The maximum fastening torque is not allowed to exceed 4 Nm. The diameter of the metal washer should not extend 18 mm.



2 – In the Ground

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

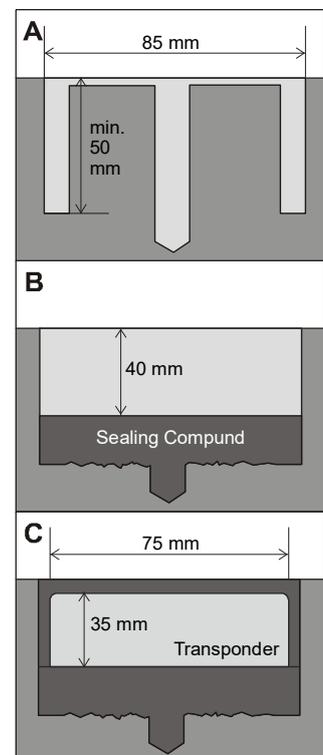
- Rotary hammer drill
- Core bit (\varnothing 85 mm)
- \varnothing 8 to 10 mm drill bit
- hammer and chisel
- suitable sealing material

1. It is recommended that a test hole be drilled prior to installing the transponder network.
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 85 mm to a depth of min. 50 mm (A). Any loose material must be removed and the floor of the hole has to be leveled out (B).

4. Afterwards fill the hole with sealing compound up to a height of 40 mm below the road (C). A delay may be necessary before placing the transponder into position, dependent upon type and viscosity of the sealing compound.

5. The transponder is then to be placed centered on the sealing compound (C). Then fill the hole up with more sealing compound.



Technical Data

| | |
|---|--|
| - Dimensions | \varnothing 74.6 mm x 35,4 mm height (\pm 1 mm) |
| - Weight | 200 g |
| - Material | Casing: ABS-PC Pulse 920MG Sealing compound: Polyurethane casting resin |
| - Mechanical Pressure | max. 490 N/cm ² |
| - Operating Temperature | -20 to +60° C |
| - Storage Temperature | -20 to +60° C |
| - Protection Class | IP 67 |
| - Data | 32 Bit useful data in EEPROM |
| - Reading distance | 50... 90 mm |
| - Nominal reading/writing distance with Antenna HG 98780: | 75 mm |