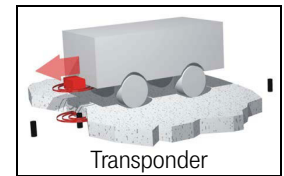


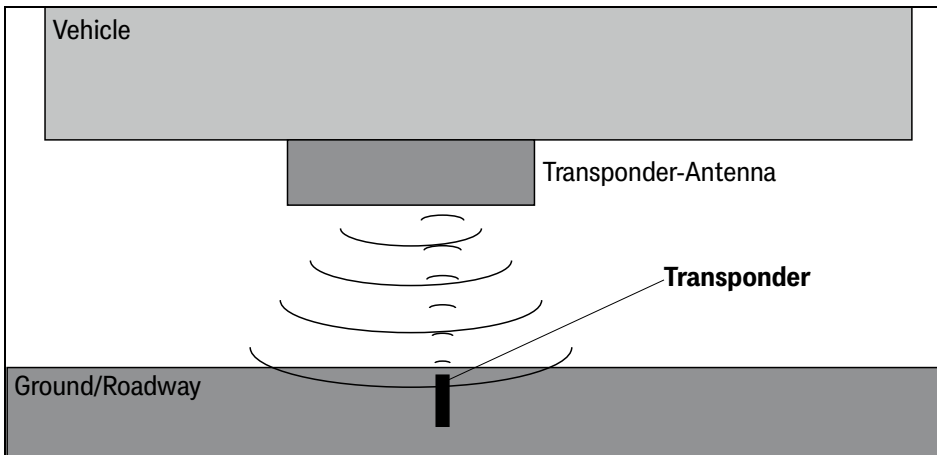


Photo without silicone cover



Transponder

Functional Description



The system utilizes the frequencies 128 kHz and 64 kHz. The transponder-antenna wirelessly 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. Using the induced energy the transponder transmits its code in full duplex mode at half the antenna's frequency. The antenna receives the code while the transponder is within its field. A normal reading cycle including all security checks is approximately 8 ms.

The system's operability is guaranteed through non-conductive material (fluid, gaseous as well as solid). However, if mounted directly on or within metal, the transponder's reading distance is influenced.

Read-Write Transponder (RW)

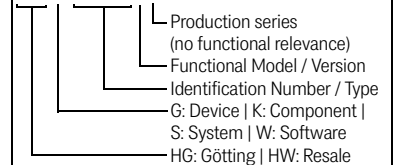
The Read-Write Transponders are equipped with an EEPROM in which the code is stored. The EEPROM may be rewritten up to 100.000 times.

Overview

- Transponder for positioning systems for automated guided vehicles (AGV)
- Indoor/Outdoor, IP 67
- Glass casing permanently protects the transponder against water and gas
- Reading distance 50 to 350 mm (depending on antenna, see table on backside)
- Operating frequency: 128/64 kHz
- R/W Transponder that can be re-programmed when mounted

Götting Product IDs (order codes)

HG G-70633ZB



📅 Date: 08.06.2022 | Revision 05 / English | Author(s): RAD / TN / GW

📄 Product page: <http://goetting-agv.com/components/70633>

GÖTTING

Mounting Recommendations

- Observe the required metal-free minimum distances (see box on the right). We recommend using the mounting tube and the cap set (see supplementary products below). The transponder must sit as vertically as possible in the ground and should face the antenna with the coil side facing the antenna (see box Dimensions on the right).
- Drill a $\varnothing 22$ mm mounting hole, depth approx. 110 mm.
 - Fill the hole to about 1/3 with epoxy resin.
 - Insert the lower cap into the mounting tube.
 - Push the mounting tube completely into the hole with the lower cap first.
 - Push the transponder completely into the mounting pipe. The epoxy resin should be distributed evenly around the mounting tube and in the mounting tube around the transponder.
 - Fill epoxy resin in mounting hole if necessary.
 - Put the upper cap on and press it into the mounting tube so that the yellow ring is flush with the ground. This allows the transponder to be quickly located later.
 - Wipe off any excess epoxy resin.

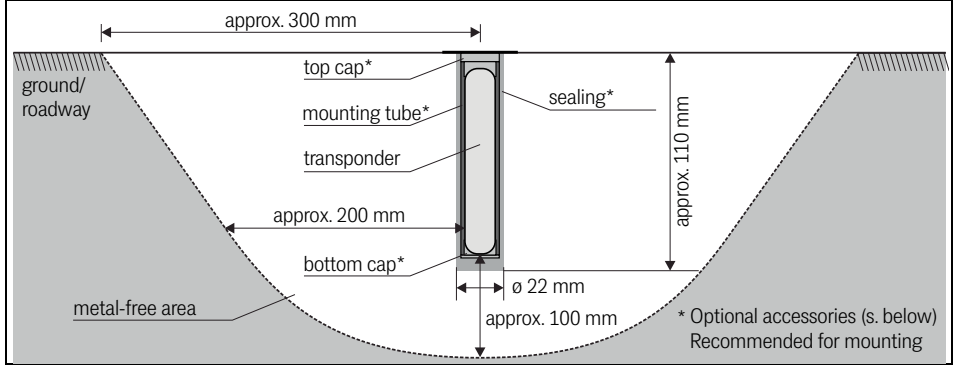
Range and accuracy of positioning are influenced by:

- Any large metal objects (sheets) on the ground.
- The proximity of any floor reinforcement.
- Induction loops, such as those created by structural steel mats, have a greater influence. Individual metal bars have little influence. These can be partially in the metal-free area.

The following environmental conditions have no influence on the system:

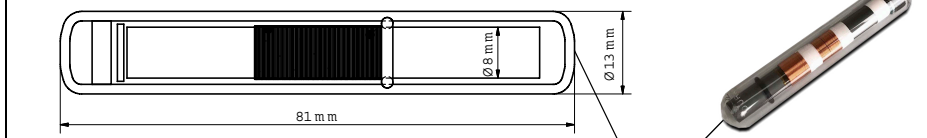
- Snow, ice, water.
- Oil, tar, earth, dirt, etc.

Mounting Position / Metal-Free Area

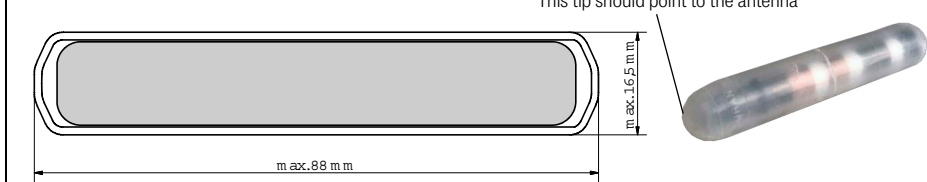


Dimensions / Mounting Notes

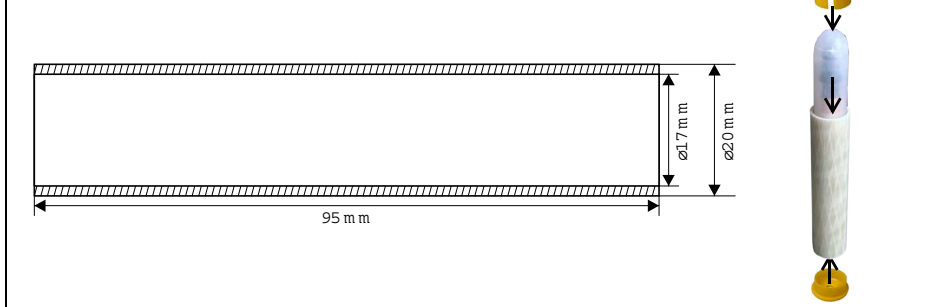
Transponder (always delivered with the Silicone Cover, see below)



Transponder with Silicone Cover HG G-70633ZB



Mounting Tube HW ACC00015 with mounting cap set HW ACC00023



Complementary Products / Accessories

HW ACC00015	Mounting Tube, Fibre-Glass Reinforced Plastic
HW ACC00023	Set of caps for mounting tube HW ACC00015, PP, yellow, inner diameter 17 mm, upper cap (32 mm diameter) also for marking the laying position
HG G-98760 HG G-98810 HG G-98850 HG G-98860	Transponder-Antennas
HG G-81840	Transponder Programmer
Elan-tech ADH 141.242	Example for a two component epoxy resin that we used successfully

Transponder-Antenna	Possible Reading Distances
HG G-98760	50 – 150 mm
HG G-98810	50 – 150 mm
HG G-98850	150 – 250 mm
HG G-98860	150 – 350 mm

Technical Data	
Dimensions	$\varnothing 16.5$ mm x 88 mm (\varnothing x L)
Casing material	♦ Transponder: Duran glass encapsulated ♦ Cover: Silicone
Weight	25 g
Protection class	IP 67
Relative humidity	100% @ 25° C (without condensation)
Temperature ranges	Operation: -20° C to +50° C / Storage: -20° C to +50° C
Operating frequency	128 kHz antenna system, 64 kHz transponder
Code length	20
Reading distance	Distance between antenna and top of transponder 50 to 350 mm, depending on the antenna, see table above
Writing distance	Depending on the programming device