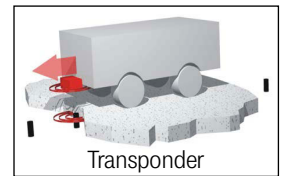


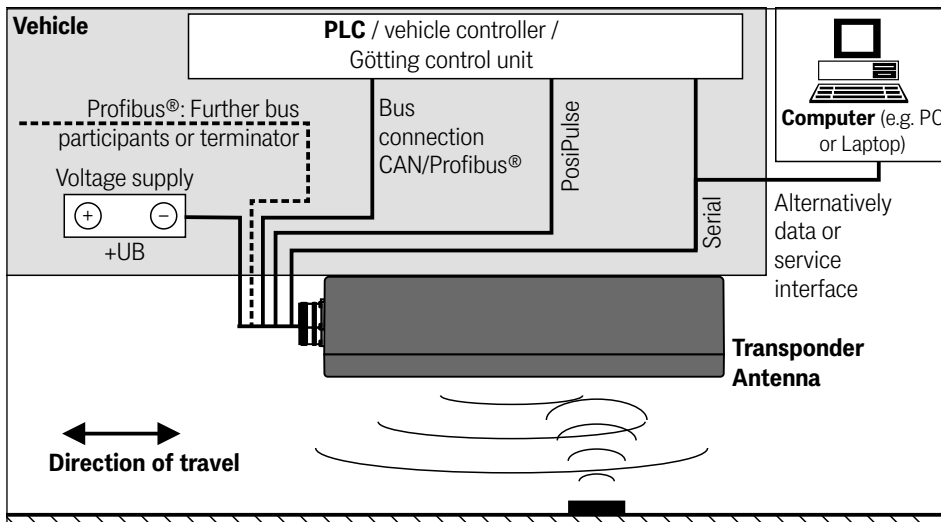


Photo shows variant
HG G-98760ZC



Transponder

Functional Description



Overview

- Transponder antenna for rail-mounted cranes (AGV)
- Encapsulated electronics
- Indoor & outdoor, IP 67
- Frequency range 128 kHz
- Reading distance depending on transponder 30 to max. 200 mm
- Active area for positioning 280 x 110 mm
- Max. Crossing speed 3 m/s
- Voltage supply 24 V $\pm 10\%$
- Bus interface: CAN or Profibus®, see table of variants
- PosiPulse when crossing the center of the antenna in driving direction
- Serial interface serves as service interface for configuration or data interface
- Programming of transponders

Variants HG G-98760

| | Profibus | CAN | RS422 | RS232 |
|----|----------|-----|-------|-------|
| ZC | | X | X | |
| YC | X | | | X |
| XC | X | | X | |
| WC | | X | | X |

The transponder antenna is used for localizing and tracking rail-mounted cranes with the aid of ground marks (transponders). The antenna described here is particularly suitable for vehicles in outdoor areas, since the electronic units are sealed in the antenna housings. All important settings, adjustments and software updates can be carried out via a serial interface.

When the antenna passes over a transponder, the transponder is powered by an energy field of 128 kHz and transmits its code back to the antenna at half the frequency. The interpreter integrated in the antenna decodes the code.

When the center of the antenna is crossed (at right angles to the direction of travel), a high-precision positioning pulse (PosiPulse) of adjustable duration is output.

Furthermore, various characteristics of the antenna – such as current consumption and supply voltage etc. – are measured and added to the serial output protocol on request.

The serial signal is output as a potential-separated RS 422 or RS 232. The positioning pulse is also galvanically isolated. Further interfaces are CAN bus or Profibus®. An overview of the available variants of the antenna is given in the adjacent table.

Mounting Notes

- In the housing of the antenna there are preparations for four M5 screws (see adjacent picture).
- Keep the mounting space around or above the antenna "metal-free" with a distance of 80 mm.
- In the frequency range 64 ±4 kHz there may be no interfering signals from clocked motors, etc.
- Transponder track centered under the antenna (max. ±4 cm tolerance).
- When used at temperatures below 0° C, use the built-in heater.
- Only max. one transponder at a time in the detection range of the antenna. Minimum distance between transponders therefore 500 mm.

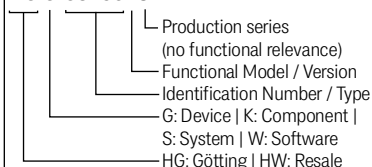
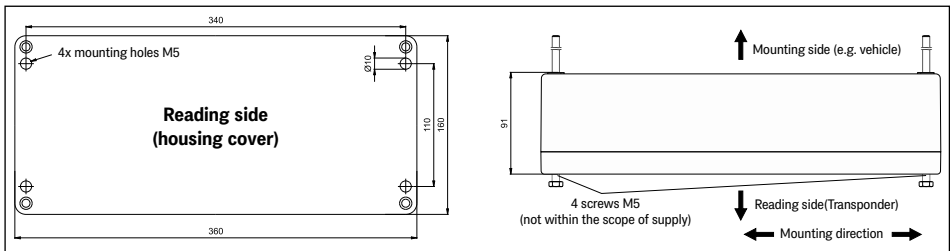
Bus Interface

- CAN bus (HG G-98760ZC/WC): according to ISO/DIS 11898, identifier, data rate, basic/extended CAN, configurable via serial interface
- Profibus® (HG G-98780YC/XC): According to DIN 19245 / EN 50170 Autom. baud rate search, supported baud rates: 9.6kBd, 19.2kBd, 93.75kBd, 187.5kBd, 500kBd, 1.5MBd, 3MBd, 6MBd, 12MBd, LED for Profibus® state "data exchange"

Complementary Products

| | |
|--------------|---|
| CONSET00001 | Profibus® connector set M23 incl. terminator *) |
| CONSET00002 | CAN connector set M3 *) |
| HG Z-09870ZB | CAN connection cable, connector M3 on one side, other side open, specify length |
| HG Z-09878ZA | Profibus® connection cable POWER, connector M23 on one side, other side open, specify length |
| HG Z-09879ZA | Profibus® connection cable Profibus®, one side connector M23, other side open, specify length |
| HW DEV00095 | Disc Transponder |
| HW DEV00098 | Reading dist. 30-80 mm |
| HG G-70633ZB | Glass Transponder |
| | Reading dist. 50-150 mm |
| HG G-70652ZC | Puck Transponder |
| HG G-70653ZA | Reading dist. 90-200 mm |
| HG G-71325XA | Rod Transponder |
| | Reading dist. 30-80 mm |

*) = supplied with the matching antenna variant

Götting Product IDs (order codes)**HG G-98760ZC****Housing Dimensions (without connectors) / Mounting Arrangements****Pin Allocations**

| Type | CAN – M3 Socket | | Profibus® – M23 Socket | | |
|-----------|-----------------|------------|------------------------|---------------|-------------|
| Connector | | | X1 + X2 | X3 | |
| Variant | ZC | WC | YC + XC | YC | XC |
| 1 | +Ub (Antenna) | | Signal Ground | +Ub (Antenna) | |
| 2 | GND (Antenna) | | Line A | GND (Antenna) | |
| 3 | +Ub (Heating) | | – | +Ub (Heating) | |
| 4 | GND (Heating) | | Line B | GND (Heating) | |
| 5 | +RX (RS422) | RX (RS232) | – | RX (RS232) | +RX (RS422) |
| 6 | -RX (RS422) | – | +5V Signal | – | -RX (RS422) |
| 7 | +TX (RS422) | TX (RS232) | +Ub / 0.6A (Antenna) | TX (RS232) | +TX (RS422) |
| 8 | -TX (RS422) | – | GND (Antenna) | – | -TX (RS422) |
| 9 | +PosiPulse | | Shield | +PosiPulse | |
| 10 | -PosiPulse | | – | -PosiPulse | |
| 11 | CAN+ | | – | – | |
| 12 | CAN- | | RTS | Signal Ground | |
| Casing | Shield | | Shield | Shield | |

The pin numbers are printed on the connectors. On Götting cables, the pin numbers are attached to the strands.

Technical Data

| | |
|--------------------------|---|
| Dimensions | 360 (without connectors) x 160 x 91 mm (L x B x H) |
| Casing | Glass fiber reinforced polyester |
| Weight | approx. 6 kg |
| Effective antenna area | 280 x 110 mm (positioning range) |
| Reading distance | Depending on the Transponder, s. table "Complementary Products" |
| Voltage supply | 24 V ±10 % |
| Current consumption | approx. 600 mA, during transponder programming max. 2A for 500 ms, about 2A heater |
| Temperature ranges | Storage and operation: -25° C to +50° C with heating Warm-up time heating: approx. 60 min at -20° C Turn-on temperature heating: 0 to +5° C |
| Protection class | IP 67 |
| Relative humidity | 95 % at 25° C (without condensation) |
| Mechanical load capacity | 5 g 11 ms / 2 g 10 to 55 Hz |
| Signal processing time | 8 ms |
| Max crossing speed | 3 m/s |
| Positioning accuracy | ±3 mm on the center axis |
| Return accuracy | 3 mm |
| Connection | – HG G-98760ZC/WC: 1x 12 Pin M3 Socket Power & CAN-Bus – HG G-98760YC/XC: 3x 12 Pin M23 Socket, 1x Power, 2x Profibus® |
| Interfaces | – output with 9600 or 19200 baud; Content of telegram adjustable; procedure 3964R or transparent can be chosen as protocol – CAN resp. Profibus®: s. box in the left sidebar – PosiPulse: 24 V 20 mA power source, isolated |