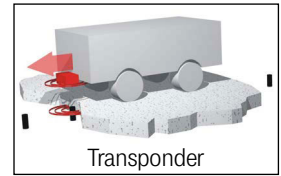




Photo shows variant
HG G-98820YC (PROFINET®)



Transponder



Functional Description

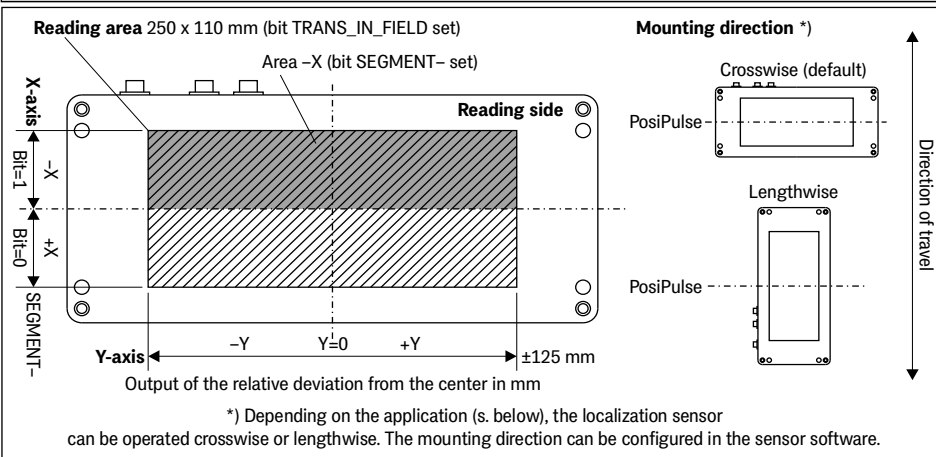
The RFID localization sensor HG G-98820 exclusively measures the position of a passive RFID tag (transponder) relative to the center of the sensor along the Y-axis. Depending on the application (see table below), the sensor is mounted crosswise or lengthwise to the direction of travel; the mounting direction can be configured in the sensor software. The sensor and transponder are largely insensitive to dirt and moisture and can also be used in harsh environments.

As long as a transponder is in the reading range of the sensor, the relative position information of the transponder is continuously output. Its code is also output so that it can be identified. If the absolute position of the identified transponder is known, the absolute position of the sensor can be calculated from the relative measurement. When crossing the center axis in the direction of travel (see illustration below), a high-precision positioning pulse (PosiPulse) is also output.

Main Features

- RFID localization sensor for automation applications (s. table below left)
- Direction of travel adjustable crosswise or lengthwise depending on application (see illustration)
- Indoor & Outdoor, IP 65
- Mounting side may be mounted directly on metal
- Reading distance depending on the transponder type in use 20 to 160 mm
- Max. crossing speed depending on the mounting direction 4 m/s (crosswise) respectively 6 m/s (lengthwise)
- Bus interface depending on variant CAN/CANopen® or PROFINET® (see below)
- PosiPulse when crossing the center axis in driving direction
- Serial interface serves as service interface for configuration (also for updating the antenna software) or data interface (configurable telegram contents)
- Programming of transponders

Definitions / Mounting Direction



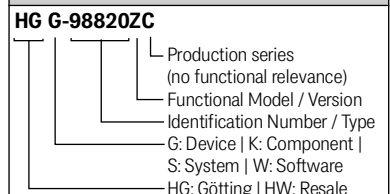
Application Examples

Localization of AGV	In these applications, the sensor is installed crosswise to the direction of travel. The PosiPulse is triggered when the long center axis (Y-axis) is crossed.
Localization of rail vehicles (ASC, RMG)	In these applications, the sensor is installed lengthwise to the direction of travel. The PosiPulse is triggered when the short center axis (X-axis) is crossed.
Contact-free measurement of the displacement of workpieces	Due to the high reproducible measuring accuracy and measuring rate, contact-free length measurements can be carried out between moving or displaceable workpieces lengthwise to the direction of movement.

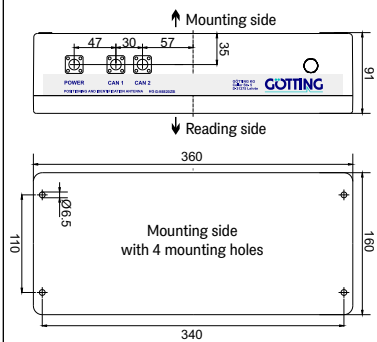
Versions/Variants

HG G-98820	ZB	CAN/CANopen®
	ZC	CAN/CANopen®, stainless steel connectors
	YC	PROFINET®, stainless steel connectors

Götting Product IDs (order codes)



Mounting Guidelines



- The localization sensor can be mounted crosswise or lengthwise (see picture on the right).
- The mounting side of the sensor can be mounted directly on metal.
- No closed electrically conductive loops within 300 mm of the sensor, especially in the area of the cover.
- No metal surfaces or metallic objects closer than 50 mm.
- No interference signals in the frequency range 64 ±4 kHz from clocked motors etc.
- Depending on the power and frequency, current-carrying cables must be far enough away from the sensor so that they do not affect reception (at least 150 mm).
- RFID localization sensors with the same energy field frequency influence each other if they are installed closer than 200 mm to each other.
- Reinforcements installed close to the road surface can distort the measured transponder position.

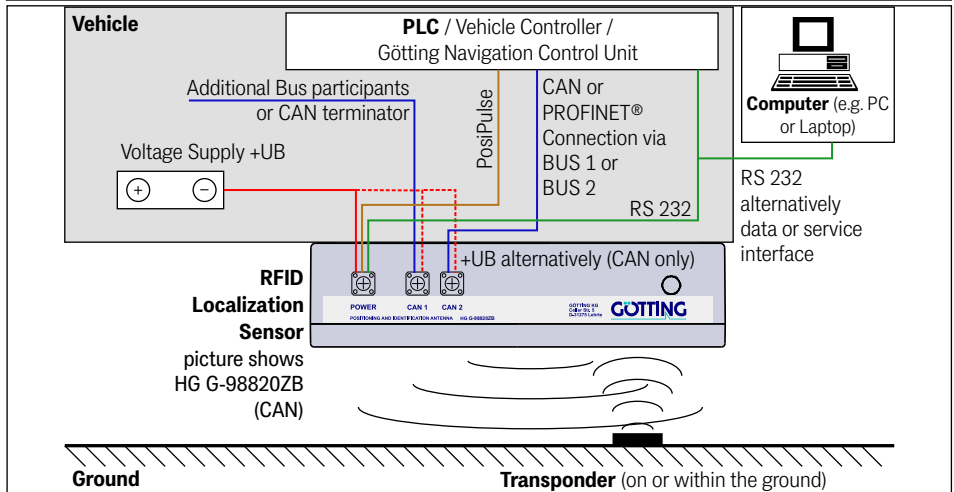
Settings via RS 232/Bus

- Configuration of sensor and interface parameters (only via RS 232).
- Adjustment of detection thresholds to compensate for slight disturbances.
- Software update (only via RS 232).

Complementary Products

HW CAB00001	Power: Cable PUR, 5 m, M12 elbow socket, open end
HW CON00055	CAN 1: CAN Terminator, M12 plug, 5 pin, A coded
HW CAB00064	CAN 2: CAN-Bus cable, 10 m, with shielding, M12 socket straight, open end
HW DEV00095	Disc Transponder
HW DEV00098	Reading dist. 20-50 mm
HG G-70633ZB	Glass Transponder
HG G-70652ZC	Puck Transponder
HG G-70653ZA	Reading dist. 50-160 mm
HG G-71325XA	Rod Transponder
HG G-81840ZA	Transponder Programming Device
HG G-06150YA	Serial -> Parallel Interface

Connection Example



Pin Allocations, all connectors M12

	All Variants	HG G-98820ZB/ZC	HG G-98820YC
Pin	Power 5 pin, A-coded, male	CAN 1 5 pin, A-coded, female	CAN 2 5 pin, A-coded, male
1	+UB	Not connected	TX+
2	PosiPulse output	+UB	RX+
3	TxD RS 232 data output	GND	TX-
4	RxD RS 232 data input	CAN_H	RX-
5	GND	CAN_L	

Technical Data

Work Safety	According to the German norm BGV B11 Area 1
Dimensions	360 mm x 160 mm x 91 mm (L x W x H)
Casing	Plastic
Weight	approx. 3.2 kg
Reading area	250 mm x 110 mm (L x W)
Frequencies	Sensor: 128 kHz / Transponder: 64 kHz
Reading distance	Depending on the transponder type, s. table "Complementary Products"
Voltage supply +UB	18 to 36 V, nominal voltage 24 V
Current consumption	- 370 mA @ 24 V - up to 1 A while programming Transponders
Temperature ranges	Operation & storage: -25° to +50° C
Protection class	IP 65
Signal processing time	- Positioning: 1 ms - Code reading: 8 ms
Measuring resolution	1 mm
Max. crossing speed depending on the mounting direction	- Crosswise: 4 m/s - Lengthwise: 6 m/s
Static positioning accuracy	±1 mm at a height of 40 mm along the Y-axis
Connectors	- All Variants: 1x M12 5-Pin A-coded: Power (male) - HG G-98820ZB/ZC: 2x M12 5-Pin A-coded: CAN 1 (female) CAN 2 (male) - HG G-98820YC: 2x M12 4-Pin D-coded: PROFINET 1 & 2 (female)
Interfaces	- RS 232: Output with 19200, 38400 (standard) or 115200 Bd. The telegram content is configurable. Protocol "transparent" - PosiPulse: 24 V, 20 mA power source, not electrically isolated - CAN (HG G-98820ZB/ZC): Not electrically isolated, terminating resistor not integrated, Full CAN - Basic CAN: According to ISO/DIS 11898, identifier, data rate, standard/extended frames; adjustable via serial interface - CANopen®: Device Profile DS 401, Node ID and data rate adjustable via serial interface or SDOs - PROFINET® (HG G-98820YC): With integrated switch

