

Guidance Antenna

HG 19200YC

These Guidance Antennas are designed for the operation with the Guidance Controllers HG 73350/HG 73351. They are used for inductive guidance of vehicles.



Operational Description

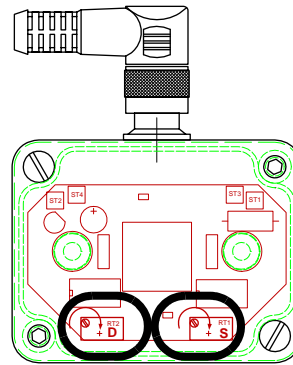
A frequency generator induces a current into a guidance wire installed in the ground. Along this guidance wire, an alternating magnetic field is generated.

The Guidance Antenna has been factory set to the values listed in this data sheet (please refer to the table on the back side).

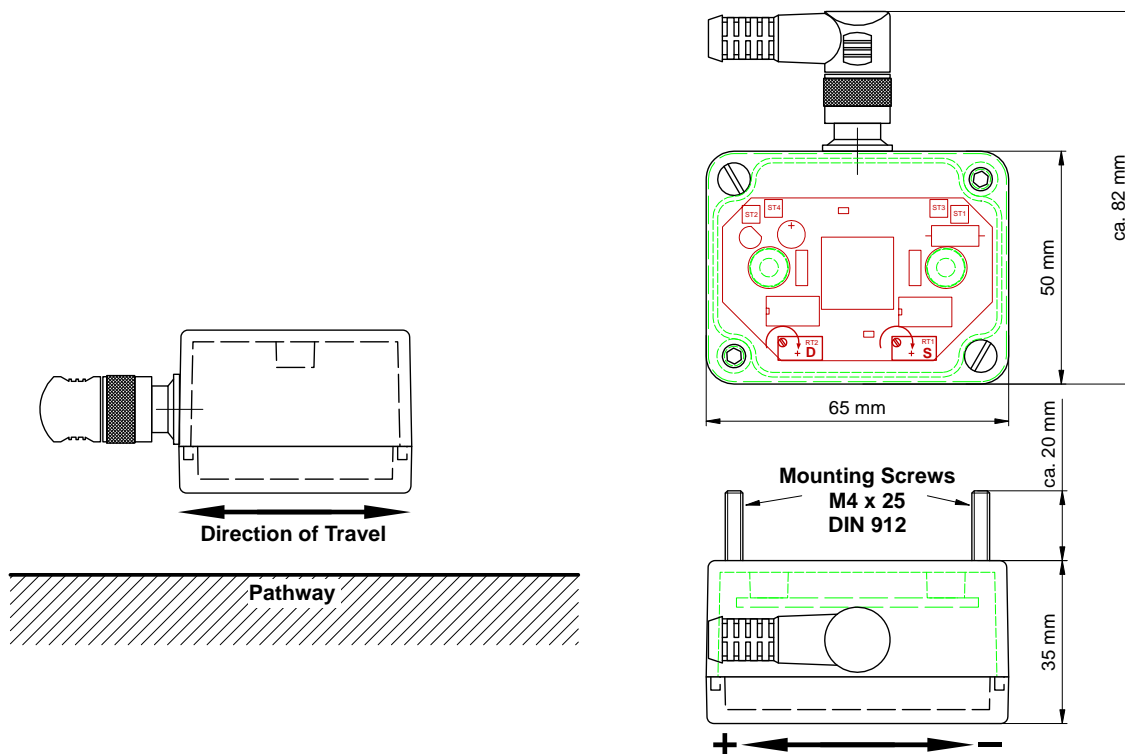
The Guidance Antenna detects lines of electric flux in horizontal and vertical direction. The voltage characteristic of the horizontal lines of flux (= sum voltage), rectangular to the guidance wire, is a bell-shaped curve.

The voltage characteristic of the vertical lines of flux (= difference voltage) shows maxima at certain distances to the right and the left of the wire and crosses 'zero' directly above the wire.

The Guidance Antenna is designed for a frequency range between 3 and 25 kHz. Accessible trim-potis enable adjusting the output voltage (see drawing to the right).



Casing and Dimensions



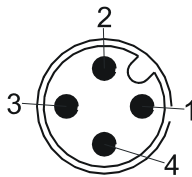
Monting Instructions

The Guidance Antenna should be attached to a plastic mounting plate. Tests with a massive metal plate have shown that the following metal-free areas around the antenna have to be obeyed for a reading distance of 60 mm:

Direction	Min. metal-free	Comment
left, right	≥ 75 mm	shortfall will lead to changes in the distance output
front, rear	≥ 50 mm	shortfall will lead to signal attenuation
above	≥ 30 mm	shortfall will lead to signal attenuation
below	metal free!	detection side

Pin Allocation

4-pin M12 built-in connector, A-coded

Connector	Pin	Signal
	1	+24 V
	2	GND
	3	Usum
	4	Udifference

Technical Data

- Reading distance	30 to 100 mm
- Wire current	50 to 200 mA
- Internal height	35 mm
- Frequency	3 to 25 kHz
- Factory set tuning	60 mm reading distance, 10 kHz, 100 mA, for 1 Vss output voltage
- Dimensions	65 x 50 x 35 mm W x H x D Height including annex connector approx. 82 mm
- Weight	80 g
- Protection class	IP 65 (completely sealed)
- Relative humidity at 25° C	95 % (non-condensating)
- Operating temperature	-20° C to +50° C
- Storage temperature	-20° C to +70° C
- Power Supply	+24 V \pm 25 %
- Current consumption	10 mA