

Description

Our track travelling data transmission is used to create a radio data link between vehicles and a central guidance computer.

The vehicles equipment consists of a transmitter/receiver as well as an antenna. On the system side, a transmitter/receiver is used plus an induction loop as antenna.

The induction loop may be laid in or on the roadway. This work is normally carried out by the customer or the vehicle supplier.

The assembly HG 751 consists of transmitter and receiver, each of which operate on various frequencies. Doing so gives two channels for simultaneous operation in both transmitting and receiving directions (full duplex).

The inductive data transmission system from Götting KG is of modular construction. Customer specific variants are realised with little development and production costs.

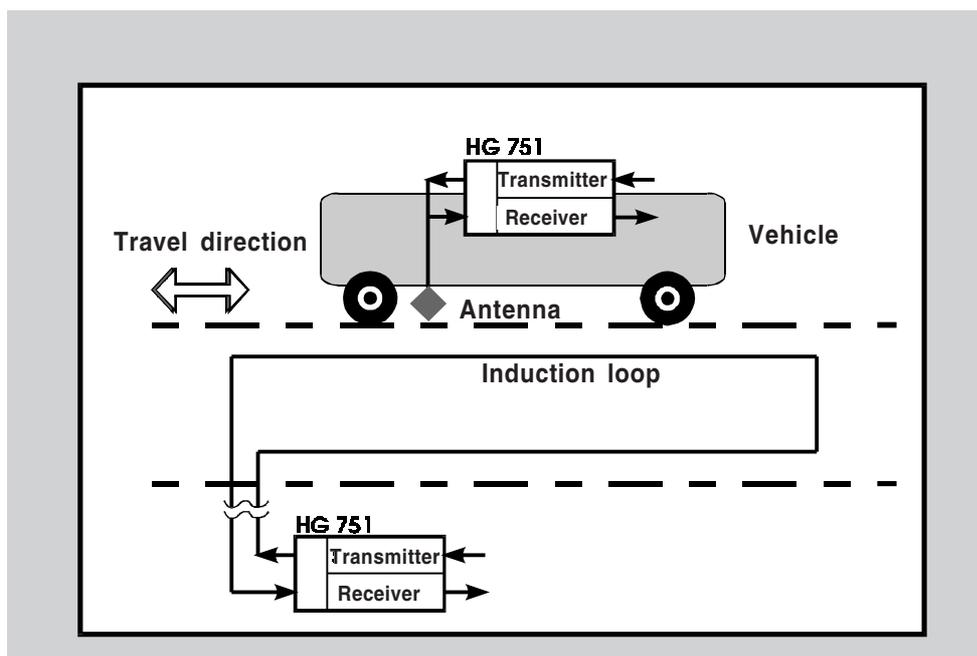
Data transmission systems using the range of frequencies around 100kHz have, in general, a limited range (typically 0.1-5m). This is advantageous if the transmission area has to be separated from a neighbours when several are located close to one another (local selectivity).

They are therefore predominantly used for track travelling vehicles (AGVs, suspended electric hoists, public transport rail vehicles, cranes).

The inductive modem HG 751 has, to our knowledge, the greatest market share in AGVs.

Applications

- ◆ Unmanned transport vehicles in production lines
- ◆ Warehouse service vehicles
- ◆ Crane controlling
- ◆ Tracked vehicles
- ◆ Van carriers



Inductive Modem

HG 751

Construction and Function

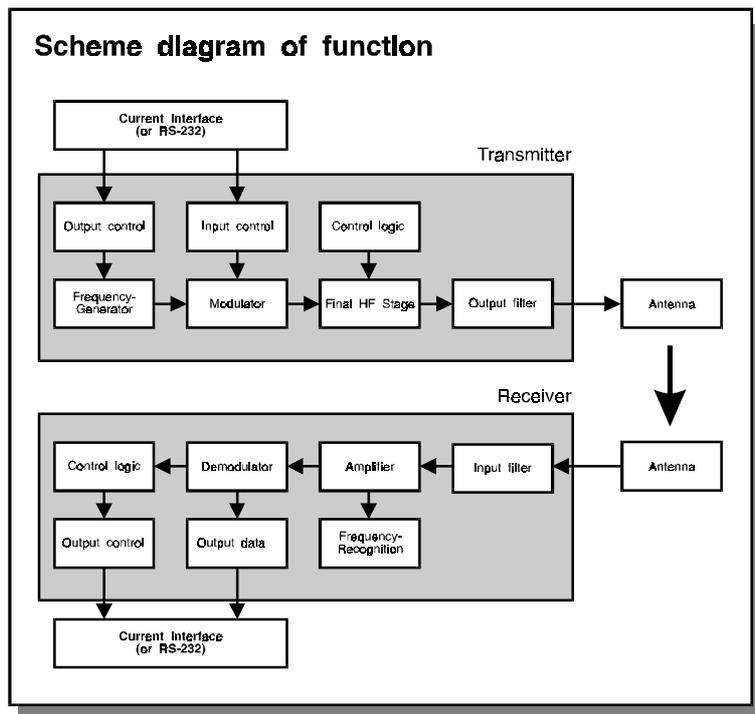
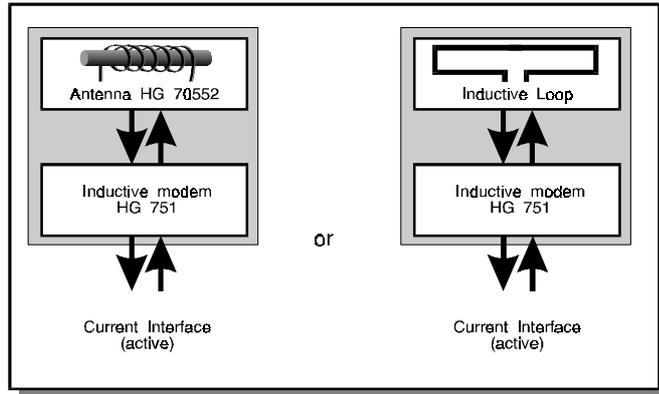
The system consists of the following components:

- ◆ Inductive modem HG 751
- ◆ T/R antenna HG 70552
- ◆ Inductive loop (not supplied)

Explanation of Function

The data to be transmitted is sent to the data input of the modem HG 751. When the control input receives the appropriate preset code, the HF signal is generated, data modulated and then output from the final HF stage. The transmission system is tested to ensure functionality (tests for loop fractures). The result of this test is indicated on the front panel.

A reception antenna that is situated within range of the vehicle modems HF signal will carry out signal processing involving data reclamation. If the receptor's control logic recognises a sufficient level of reception, this is indicated on the front panel, and the data is communicated from the serial output of the modem to the vehicles computer.



Technical Data

Inductive modem HG 751

Dimensions: Euro-card, depth 25.4mm
 Material: Epoxy circuit board FR4
 Frontpanel: Aluminium, anodised
 Weight: ca. 250g

Operating temperature range: 0 to 55°C
 Storage temperature range: -20 to 70°C
 Relative humidity at 25°C (without condensation): 95%

Operating voltage range: 22 - 26 V
 max. remaining ripple: 0.1 V_{rms}
 Power consumption: typ. 100 mA (standby)
 typ. 300mA (transmtr. on)

System frequency: 55 kHz / 95 kHz

T/R Antenna HG70552

Dimensions: Varies depending on use
 Material: Plastic PVC
 Weight: ca. 240 g

Operating temperature range: 0 to 55°C
 Storage temperature range: -10 to 70°C
 Relative humidity at 25°C (without condensation): 95%

Protection class: IP40, IP64

Cable (Modem - antenna): 2 core with shielding
 Max. cable length: 10 m with shielded cable