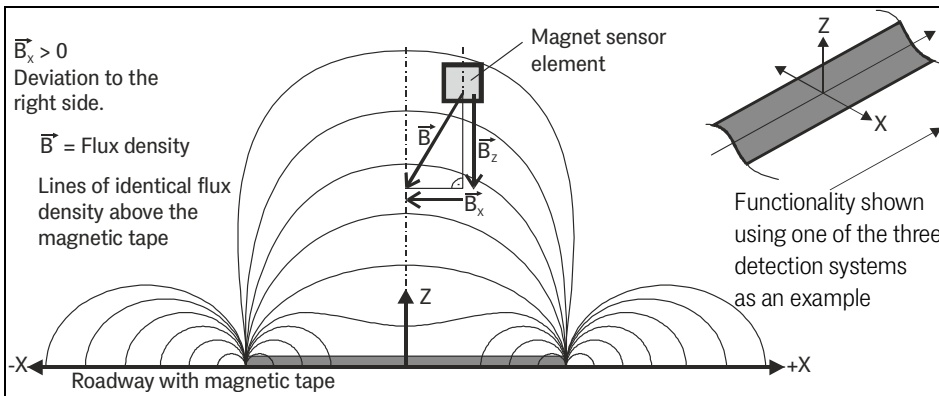


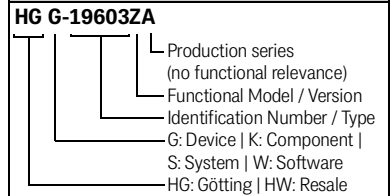
Functional Description



Main Features

- Magnet sensor for AGV guidance
- Indoor / IP 54
- Digital Magnetometer Technology
- For axially polarized magnet tapes, nominal reading height 60 mm
- Interfaces
 - CAN/CANopen® (data)
 - USB (service & configuration)
- Three independent systems for the detection of turnoffs, track selection via CAN/CANopen®
- Display of operating status via 5 LEDs

Götting Product IDs (order codes)



The magnet sensor HG G-19603ZA detects the magnetic field above a magnetic tape in horizontal and vertical direction and continuously calculates the actual deviation diagonally to the direction of travel. The values are continuously output via the CAN/CANopen® bus interface.

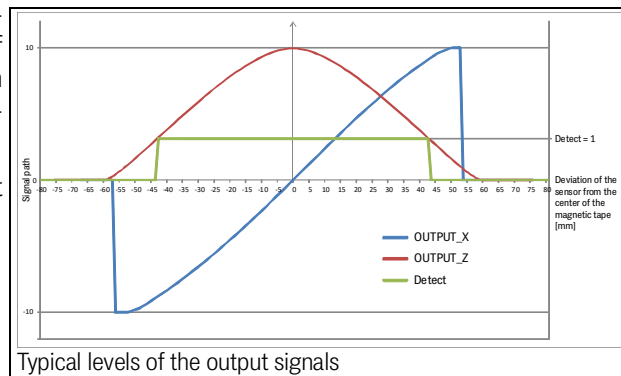
The detection range depends on the reading height (mounting position of the sensor) and the type of the magnetic tape. As shown in the image above the sensor uses the magnetic flux density to calculate the deviation X of the center of the track. The higher the deviation the higher the value output via the CAN/CANopen® interface.

The sensor is based on digital magnetometer technology for the detection of the magnetic field above the magnetic tape. This technology is robust and maintenance free. The magnetic tape is easy to install and unaffected by dirt.

The image below shows typical levels of the output signals: Via the CAN/CANopen® interface the deviation from the track as well as the current level of the magnetic field are output. Additionally a detect signal is generated on the bus when a magnetic tape is detected underneath the sensor.

The sensor contains three independent detection systems. It can thus detect junctions (second track) and follow turnoffs. Via the interface one of max. two tracks underneath the sensor is dynamically selected.




Five LEDs show the current operating state.



Mounting
<ul style="list-style-type: none"> Sensor is designed for reading distance of 60 mm above magnet tape Please avoid strong magnetic fields near the sensor.

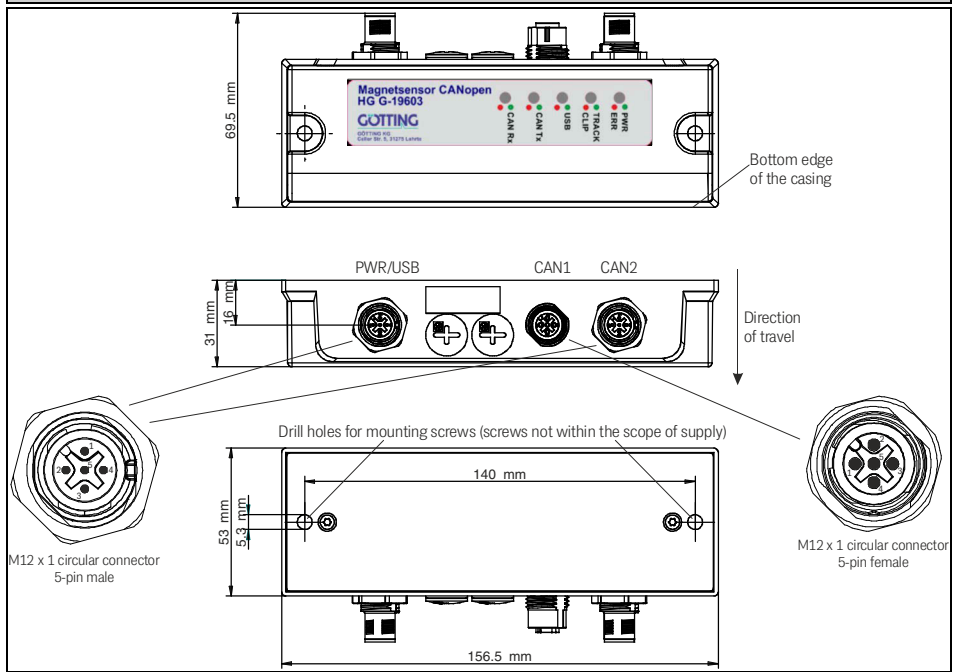
Adjustments / Trimming
<ul style="list-style-type: none"> Configuration of the interface parameters (CAN/CANopen®) as well as sensitivity and threshold values via USB Track selection via CAN/CANopen® interface

Connections

PWR/USB		M12, male, 5 pin, A coded
1	+Ub	Supply Voltage
2	-	Not connected
3	D+	USB
4	D-	
5	GND	Ground (Supply and USB)
CAN1		M12, female, 5 pin, A coded
1	Shield	Ground (Chassis)
2	+Ub	Supply Voltage
3	GND	Ground (Supply)
4	CAN_H	CAN-High
5	CAN_L	CAN-Low
CAN2		M12, male, 5 pin, A coded
1	Shield	Ground (Chassis)
2	+Ub	Supply Voltage
3	GND	Ground (Supply)
4	CAN_H	CAN-High
5	CAN_L	CAN-Low

Optional Accessories	
Magnetic tape	see table to the right
HG G-20960	Connection Box M12-5-8-USB
HW CAB00001	PWR/USB: Cable PUR, 5 m, one-sided M12 elbow socket
HW CON00055	CAN1: CAN terminator Plug M12 5 pin, A coded
HW CON00100	CAN1: Closing plug M12 5 pin, A coded, shieldable
HW CAB00064	CAN2: CAN Bus cable, 10 m, with shielding, one-sided M12 socket straight

Casing Dimensions



Götting magnetic tape types

Order No.	Description	Order No.	Description
HW MAT00003	Magnetic tape on a roll, W X H 50 x approx. 1.2 mm, length 15.2 m	HW MAT00007	Magnetic tape curve segment, 30° segment of circle, radius 1.000 mm
HW MAT00004	Embedded magnetic bar, W X H 6 x 10 mm, quote length	HW MAT00008	Magnetic tape junction, right, radius 1.000 mm
HW MAT00005	Magnetic tape curve segment, 30° segment of circle, radius 600 mm	HW MAT00009	Magnetic tape junction, left, radius 1.000 mm
HW MAT00006	Magnetic tape curve segment, 30° segment of circle, radius 800 mm		

Technical Data

Nominal reading distance	60 mm when using the Götting magnetic tape HW MAT00003
Dimensions	156.5 mm x 31 mm x 53 mm (W x H x D)
Casing	Polycarbonate
Weight	200 g
Protection class	IP 54
Relative humidity	95 % at 25° C (without condensation)
Temperature ranges	Operation: -20° to +50° C Storage: -20° to +70° C
Supply voltage	+ 24 VDC
Current consumption	< 30 mA
Connectors	<ul style="list-style-type: none"> PWR / USB: M12 circular connector, 5 pin, A coded, male CAN1: M12 circular connector, 5 pin, A coded, female CAN2: M12 circular connector, 5 pin, A coded, male
Display elements	5 LEDs
Output/Resolution	<ul style="list-style-type: none"> Position of the track (Output_X): -10.00 to +10.00 in steps of 0.01 Field strength (Output_Z): 0.00 to +10.00 in steps if 0.01
Repeatability	0.05 of the output (without external interferences)
Working range	<ul style="list-style-type: none"> Height above magnetic tape: 40 to 70 mm Detection range track: ±80 mm Effective detection range track: ±55 mm



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