

Laser Scanner

HG G-43600-A

AGV Guidance using a Laser Scanner



Most vehicles used for internal transportation are more or less guided by a fixed system. This includes railbound systems as well as systems that are guided by an inductive wire. Using inductive transponders within the track already offers more flexibility. However, navigation via laser scanners has proved to be even more advantageous.

Our laser scanner system HG G-43600-A enables very flexible guidance of a vehicle. Apart from the necessary reflection marks, the vehicle is more or less guided autonomously, depending on the program. In connection with sensors for obstacle detection

(ultrasonic or optical systems) obstacles, when emerging, can be avoided and the vehicle is guided to its destination using alternative routes.

Within the whole range of the path the vehicle's position is checked frequently at a high measuring rate, which guarantees reliability. The positioning accuracy is good enough so that it even meets the higher demands required when transferring loads automatically.

For accurate position determination additional rotary encoders are necessary.

Variants / Signals

HG G-43600ZA

- ♦ **Electrical connections compatible with previous model HG 43400-B:**

Signal	Description
Index	Index pulse of rotary encoder (zero mark of angular measurement)
Track A	Tracks A and B of rotary encoder (single-step pulses of angular measurement)
Track B	
Mark	Mark registered (digitized signal of mark recognition)
IRQ	Event indication generated by "mark" or "index"
Null	"Index pulse" occurred

HG G-43600YA

- ♦ **Pre-processing and filtering of signals**
- ♦ **Serial output of reflection marks date**
- ♦ **Interfaces: RS 232, RS 422, RS 485, CAN, 6 inputs**

HG G-43600XA

- ♦ **Orientation computer completely integrated**
- ♦ **Output of position and angle**
- ♦ **Interfaces: RS 232, RS 422, RS 485, CAN, 6 inputs**

Technical Data

- Dimensions	diameter 153 mm, height 150 mm
- Weight	approx. 2.3 kg
- Protection class	IP 67
- Connection	plug connector Type M23
- Temperature range	-25 to +50° C (with heating)
- Power supply	18 to 30 VDC
- Current consumption	approx. 0.6 A (without heating) approx. 1.2 A (with heating)
- Transmitting power	1 mW (laser class 1)
- Range	1 to 30 m
- Measuring rate	6 to 18 s ⁻¹
- Angular resolution	up to 65536 increments/360°
- Accuracy	better than ±5 mm repeating accuracy for absolute positioning (min. 4 marks visible & read, mark distance min. 15°, distance to sensor max. 15 m)
- Ambient light	< 10.000 Lux