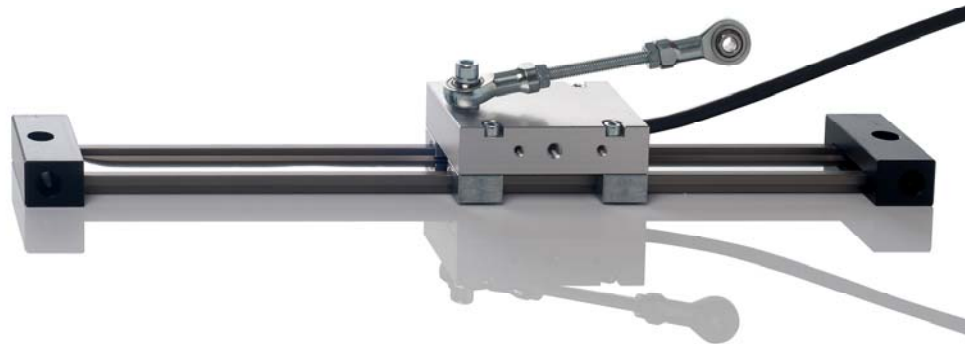


Series GSI2



Guided magnetic Incremental Length Measuring System
suitable for Press Brakes

GS12 Guided Magnetic Incremental – Length measuring system

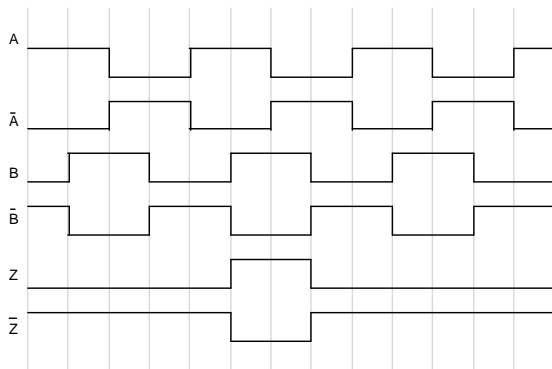
General: GS12 is a guided magnetic incremental length measuring system with free adjustable index pulse. The index impulse may adjust arbitrary with a distance of 5.0 mm. The system consists of sensor head, an integrated evaluation electronic, guide carriage and guide rail with magnetic tape. This guiding rail is available in all lengths up to one meter. The series GS12 operates with a resolution of up to 0.001 mm at 4-edge triggering. The repeating accuracy is +/- 1 incremental. The GS-I measuring system has been constructed for dynamic applications with an operating speed up to 4 m/s and has been developed for sheet metal working. The evaluation electronic evaluates the signals detected by sensor and supplies speed proportional, 90° phase shifted square waves in 5V/TTL– Line driver or 10-30 V/HTL push-pull. The sensor head is moved contactless over the magnetic tap. This will be assured through mechanical guiding system. Thus, the system is totally maintenance free and free of wear. Due to a direct measuring, tolerances like slip or pitch are balanced.

Product Features:

- Free adjustable index impulse
- *Max. resolution of 0.001 mm (at 4-edge triggering)
- Power supply / signal level 5 V or 10-30 V
- Differential signals/ reference pulse
- Measuring length up to 1 meter
- High-quality guiding system
- Speed proportional square wave outputs
- Robust, dirt- and shock resistant
- Cost-effective alternative to glass scales

* depending on order

Pulse diagram:



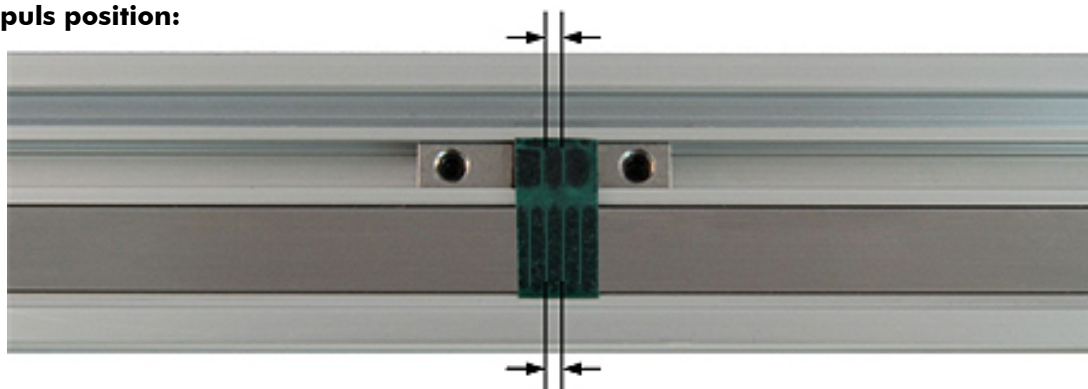
The channels A and B are 90° phase shift

Output of index impulse will still effect after adjustable index pulse platelets

Pin assignment:

Function	Colour
0V / GND	white
10-30 VDC / 5 VDC	brown
channel A	green
channel A inverted	violette
channel B	yellow
channel B inverted	orange
Channel Z	black
Channel Z inverted	grey

Index impuls position:



Mechanical data	
Measuring principle	Incremental
Repeating accuracy	+/- 1 Incremental (depending on order)
System accuracy in μm at 20 °C	+/- (25 + 20 x L) L = effektive measuring length in meter
Sensor distance to magnetic tape	designed by guide carriage
Pole length	5 mm (>0,001 mm resolution) 2 mm (0,001 mm resolution)
Housing material	steel
Sensor housing size (guide carriage)	L x B x H = 80 x 55 x 33 mm
Necessary magnetic tape	MB20-50-10-1-R (>0.001 mm resolution) MB20-20-10-1-R (0.001 mm resolution)
Max. measuring length	1 Meter
Cable connection	open cable ends (option connector possible)
Weight	ca. 620 g at 330mm measuring length
Ambient Temperature	
Stock temperature	-25... +85 °C
Operation tempera- ture	-10... +70 °C (-25... +85 °C) on request
Protection class	IP54 (Sensor head)
Electrical Data	
Power supply	10... 30 VDC / 5 VDC, stabilized
Ripple	10 - 30 V < 10% +/- (5V +/- 25 mV)
Current consumption	10...30 VDC: max. 50 mA 5 VDC: max. 100 mA
Output signals	A/B 90° shifted +/- 20%
Output level	HTL 10... 30 VDC Push/Pull or 5 V TTL line driver
Resolution (4-edge triggering)	up to 0.001 mm (regarding reference code)
Reference pulse	Position is adjustable
Max. output fre- quency per channel	20 mA
Max. operating Speed	4 m/s at 0,1 mm resolution
Sensor cable	1,5 m standard, Further on request, drag chain compliant

Order reference:

For orders, please use the following order code:

GS12 -

A A - B B . B - C - D D - E E E E - F F - G G G

A SN-number

- 00 ELGO Standard
- 01 First special version
- 02 Second special version

B Signal cable length in XX . X m

- 01.5 1.5 m Standard cable length

C Resolution

- | | | | |
|---|----------|---|-----------|
| 1 | 0.1 mm | 5 | 0.05 mm |
| 2 | 0.01 mm | 6 | 0.0025 mm |
| 3 | 0.005 mm | 8 | 0.001 mm |
| 4 | 0.5 mm | | |

D Supply / signal level

- 00 10-30 V DC / 10-30 V DC
- 01 10-30 V DC / 5 V-TTL
- 11 5 V DC / 5 V-TTL

E Measuring length in XXXX mm

- e.g. 0220 = 220 mm
- max. 1 meter (1000 mm)

F Connector

- X without connector
- 1 M23 pin terminal 12 Pin
- 2 M12 pin terminal 8 Pin
- 3 D-SUB 9 Pin

Example:

GS12 - 00 - 01.5 - 1 - 11 - 0220 - 1

A A - B B . B - C - D D - E E E E - F

GS12 ELGO standard, signal cable length of 1.5 m, 0.005 mm resolution, a supply of 5 VDC push/pull, 5 VDC signal level, a measuring length of 220 mm and M12 pin terminal.

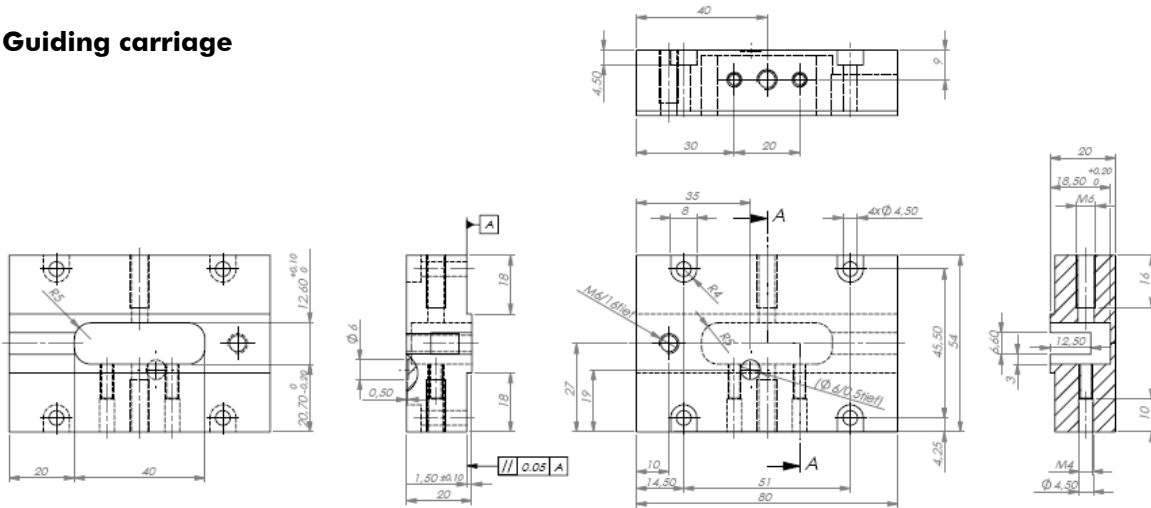
Your order:

GS12-

A A - B B . B - C - D D - E E E E - F

Mechanical drawing:

Guiding carriage



Guiding rail

