

SERIES GMIX1A

Magnetic Incremental Linear Encoder with adjustable Resolution and Speed Monitoring



- Contactless and wear-free, magnetic measuring principle
- 5 different resolutions up to 0.01 mm selectable
- LED and signal output for speed monitoring (in compliance with the prescribed max. 25 m/min for panel saws)
- Output level switchable (HTL push/pull or TTL line driver)
- Speed proportional square wave signal outputs
- External metal box for evaluation and settings
- Status LED for each channel (A, B and Z)
- Small sensor with IP67 protection class

GMIX1A - Magnetic Linear Encoder with adjustable Resolution

Technical Data:

Mechanical Data	
Measuring principle	incremental
Repeat accuracy	± 1 Increment
System accuracy at 20°C	±(25 + 20 x L), L = measuring length in meter
Distance sensor - magnetic tape	1.5 mm
Housing material	sensor head: zinc die cast evaluation box: galvanized steel
Housing dimensions (L x W x H)	sensor head: 30 x 10 x 15 mm evaluation box: 16 x 74 x 28 mm
Necessary type	MB20-50-10-1-R
Magnetic tape pole pitch	5 mm
Maximum measuring length	theoretically unlimited
Connections	9-pin (female) D-SUB
Sensor cable	1.5 m standard cable length (others on request), drag-chain suitable
Sensor cable bending radius	min. 60 mm
Weight	sensor head: approx. 15 g (without cable), cable: approx 60 g/m evaluation box: approx. 280 g
Electrical Data	
Power supply voltage	10 ... 30 VDC ±10 %
Residual ripple	< 10 %
Current consumption	max. 300 mA
Output signals	A, A', B, B', Z
Output levels	TTL / HTL (switchable)
Resolution	0.1 0.05 0.025 0.02 0.01 mm (selectable)
Max. output frequency / channel	depending on selected resolution
Max. operating speed	depending on selected resolution
Index pulse	every 5 mm (periodically)
Output VMAX	
Output voltage	± power supply voltage (10 ... 30 VDC) -0,7 V
Output current	max. 200 mA (resistive, inductive or capacitive load)
Miscellaneous	output is permanently short-circuit proof and current limited
Environmental Conditions	
Storage temperature	-20 ... +85° C
Operation temperature	sensor head: -10 ... +70 °C (-25 ... +85 °C on request) evaluation box: -10 ... +50° C
Humidity	sensor head: max. 95 %, evaluation box: max. 80 %, each non-condensing
Protection class	sensor head: IP67 evaluation box: IP40

Typen Designation:

To order, please use the following code:

GMIX1A - $\overline{\text{AAA}} - \overline{\text{BB.B}} - \overline{\text{C}} - \overline{\text{DD}}$

A Version

000 = standard version

001 = first special version etc.

B Sensor Cable Length

01.5 = 1.5 m standard (others on request)

C Resolution

1 = 0.1 mm

2 = 0.05 mm

3 = 0.025 mm

4 = 0.02 mm

5 = 0.01 mm

D Power Supply / Output Levels

00 = 10 ... 30 VDC / HTL push-pull

01 = 5 VDC / TTL line driver

Example:

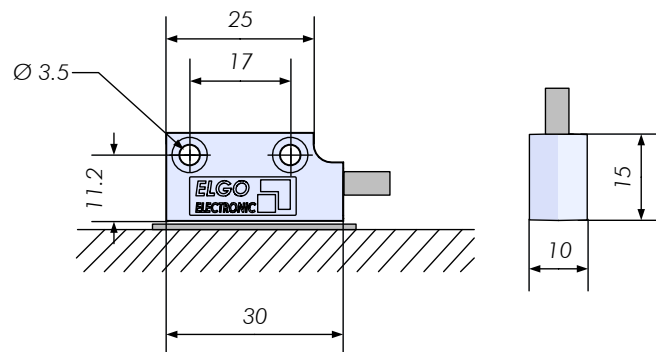
GMIX1A - 000 - 01.5 - 1 - 00
A A A - B B . B - C - D D

Standard GMIX1A with 1.5 m long cable, preconfigured resolution of 0.1mm, 10 ... 30 VDC supply and HTL as output signal level

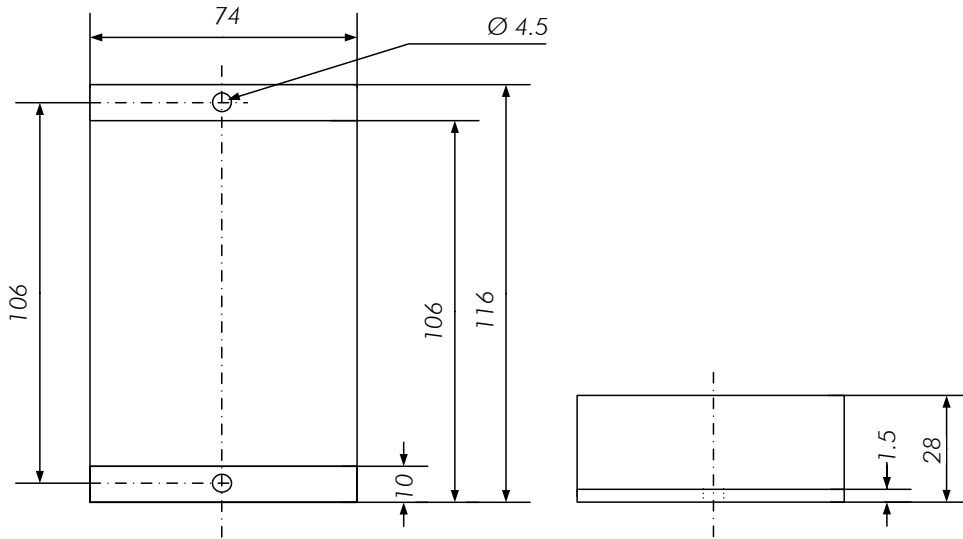
Your order:

GMIX1A - $\overline{\text{AAA}} - \overline{\text{BB.B}} - \overline{\text{C}} - \overline{\text{DD}}$

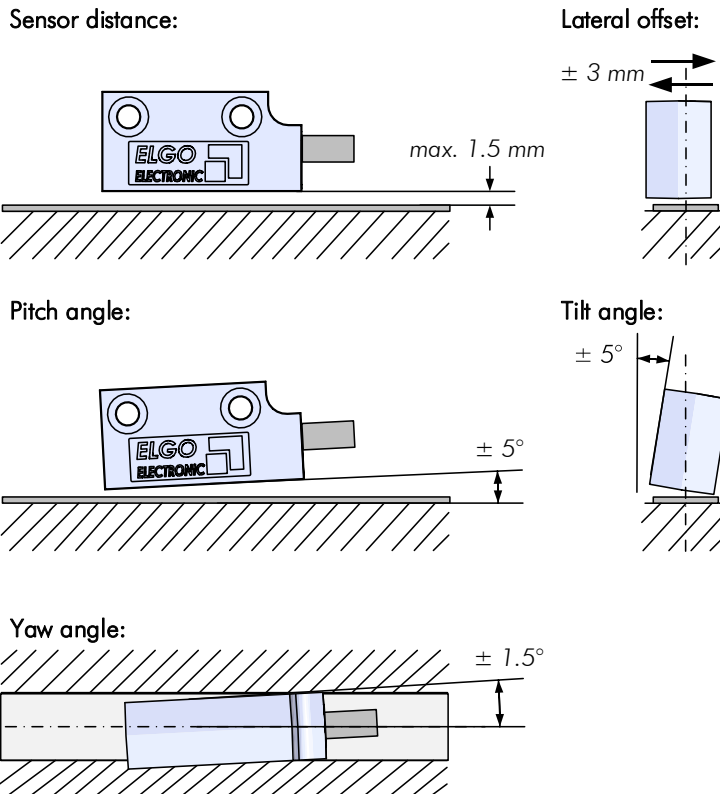
Dimensions Sensor:



Dimensions Evaluation Box:



Mounting Tolerances Sensor:



Accessories:

Order Designation	Description
MB20-50-10-1-R-XX.X*	Magnetic tape with 5 mm pole pitch *) please indicate length in XX.X m
10 mm end cap set	2 end caps (10 mm) for magnetic tape. Two M3 screws included. Additional fixation in the radial and linear range to protect the ends of the magnetic tape.
FS1000, FS1500 or FS2000	Guide rail for magnetic tape (length: 1.0 m, 1.5 m and max. 2.0 m available). For longer measuring lengths the rails can be lined up together.
FW2060	Guide carriage for sensor head as ideal supplement to FS guide rails. The carriage is made of special sliding plastic. Dimensions L x W x H = 80 x 48 x 24 mm.
AP-00-XX**	Aluminium cover-profile for magnetic tapes (as alternative to the cover tape). **) AP-00-1m = 1 m long / AP-00-2m = 2 m long
POSU	Pole finder card 85 x 55 mm

