

# **FMAX**



Guided Absolute Length Measuring System

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**General:** The magnetic absolute length measuring system *FMAX* consists of the guide rail with integrated magnetic tape and a guide carriage, in which the three sensors and the translator are accommodated. The advantage of the absolute measurement is that position modifications are detected also in the dead status. This is a substantial safety aspect.

As interfaces for the time being RS422 and RS232 are available. Further planned SSI, CAN open, PROFI-Bus DP and RS485. All interfaces are accommodated in the housing with the sensors and the translator.

The resolution of the system amounts to 0.01 mm. With the max. measuring length of 650 mm it can be used with short length-movements, where a reference run is not possible or required. At the same time it offers the advantage of the complete guidance, which brings a substantially smaller expense of installation with itself.

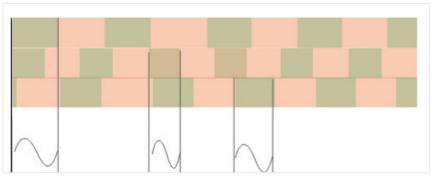
**Function principle:** Three sensors sliding across a magnetic tape with following north- and south pole magnetization, described with three tracks. Due to the different lengths of the three magnetic tracks always develope is a same phase offset which supplies the absolute value together with the signals of the sensors. Coding on the magnetic tape repeats itself all 650 mm.

#### **Product features:**

- No reference nesessary
- Direct measuring
- Measuring lengths up to 650 mm
- High resolution of 0,01 mm
- Repating accuracy +/- 0,01 mm
- Very robust against dust and dirt
- Easy installation

#### **Applications:**

- Handling systems
- Conveyor- and storage techniques
- Paper cutting machines
- Hydraulic presses
- Pick and Place Systems

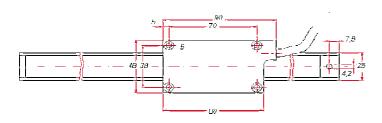


Fine interpolation track Fine interpolation track Fine interpolation track

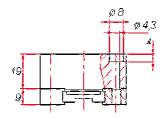
#### **Technical specifications:**

Power supply	10-30 VDC +/- 10 %,
	ripple < 5 %
Consumption	max.150 mA
Output level	5 V-TTL (RS422) - 5 V + 5 V (RS232)
Repeating precision	+/- 0,01 mm
Precision of the System in mm for 20°C	+/- (50 + 20 x L), L = measuring length in meters
Resolution	0,01 mm
Output frequency	500 Hz
Measuring length	650 mm max.
Operating temperature	-10 +70 °C (-25 +85 °C) on request
Storage temperature	-25 +85 °C
Humidity	non condensing, 80 % max.
Protection class	IP 54 (standard), IP67 (Option V)
Housing (L x W x H)	90 x 48 x 28 mm
Cable	
Wire lengths	max. 30,0 m
Wire exit (Radius of bending)	minimal 60 mm

## **Dimensions:**







#### **Order reference:**

For orders, please use the following order code:

## 

# A Version

000 ELGO standard001 First special version

B Cable length in XX.X m (Standard length: 1,5 m)

# C Resolution

**2** 0,01 mm

#### D Interface

- 422 RS422 232 RS232
- SSI SSI Interface

#### E Interface protocoll

0 ELGO standard

## F Options

- V casted version
- D1 Connection over D-SUB 9 pol

#### For Example:

FMAX - 000 - 01.5 - 2 - 422 - 0 - V

FMAX *ELGO* standard with standard cable length 1,5 m, with a resolution 0,1 mm, with interface RS422, interface protocoll *ELGO* standard in casted version.

Your order:

#### Accessories:

AB20-50-20-3-R Magnetic tape

FSMAB Guiding rail

Doc.-No. 799000392 FMAX-E\_16-10 Subject to modifications - © 2010 - ELGO Electronic GmbH & Co. KG ELGO Electronic GmbH & Co. KG Measure - Control - Position Carl - Benz - Straße 1, D-78239 Rielasingen Fon: +49 (7731) 9339-0, Fax: +49 (7731) 28803 Internet: www.elgo.de. Mail: info@elgo.de



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