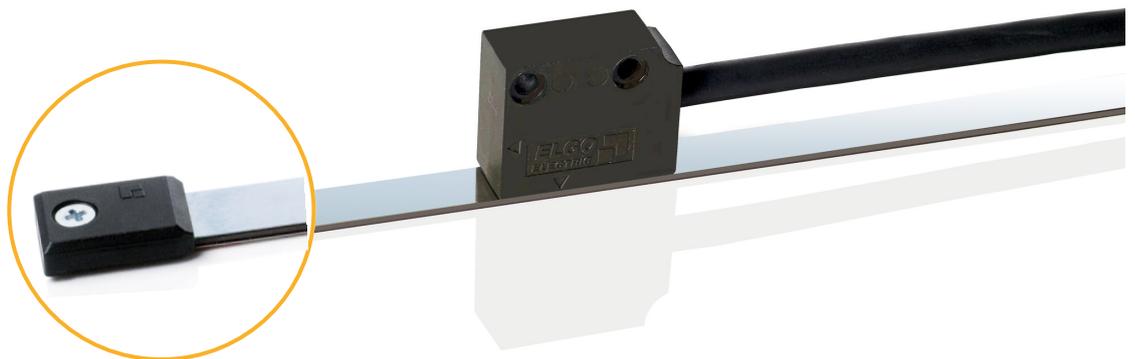


SERIES LMIX22

Magnetic incremental linear encoder with
selectable resolution and optional reference signal



- With periodic index pulse or optional reference pulse
- Distance between sensor / magnetic tape of up to 2.0 mm
- Differential HTL or TTL Line Driver outputs
- Various resolutions at 4 edge triggering available (specified by order)
- Repeat accuracy +/- 1 increment
- Small sensor with integrated evaluation electronic (translator)
- Speed proportional output of the square wave signals

LMIX22 - Magnetic incremental linear encoder with selectable resolution

General

Based on the proven LMIX2 linear encoder system, the linear encoder **LMIX22** was developed and offers two considerable advantages:

1. LMIX22 is available in many different resolutions
2. With optional reference pulse via magnetic angle (SN-007) or via a second magnetic tape track (SN-027)

Despite the small dimensions the evaluation electronic (translator) is integrated in the sensor head. Optionally, a vertically mountable LMIX22 variant is available. This must be specified as option "L" with the order.

Please note the following when ordering option "L": The position of the internal sensor board is displaced by 90°. So a horizontal mounting, respectively sensing is no longer possible!

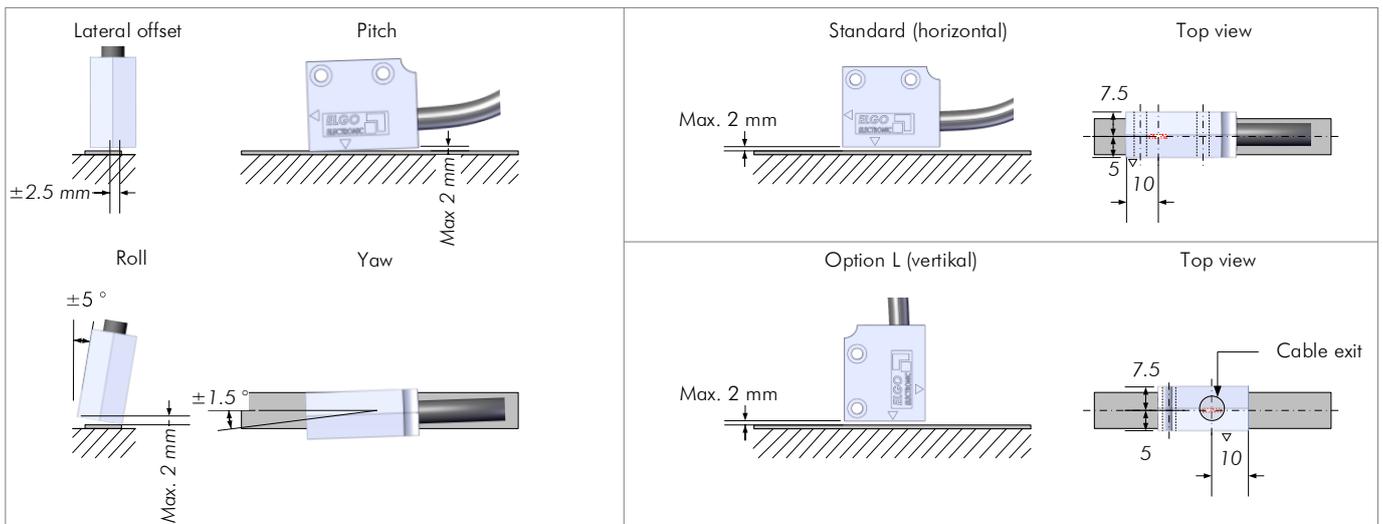
Version LMIX22-007

Instead of a periodical index pulse (channels Z / Z'), a single reference pulse (channels R / R') occurs at the position where the magnet angle MW-007 (accessorial part) is installed. See also graphical overview on last page.

Version LMIX22-027

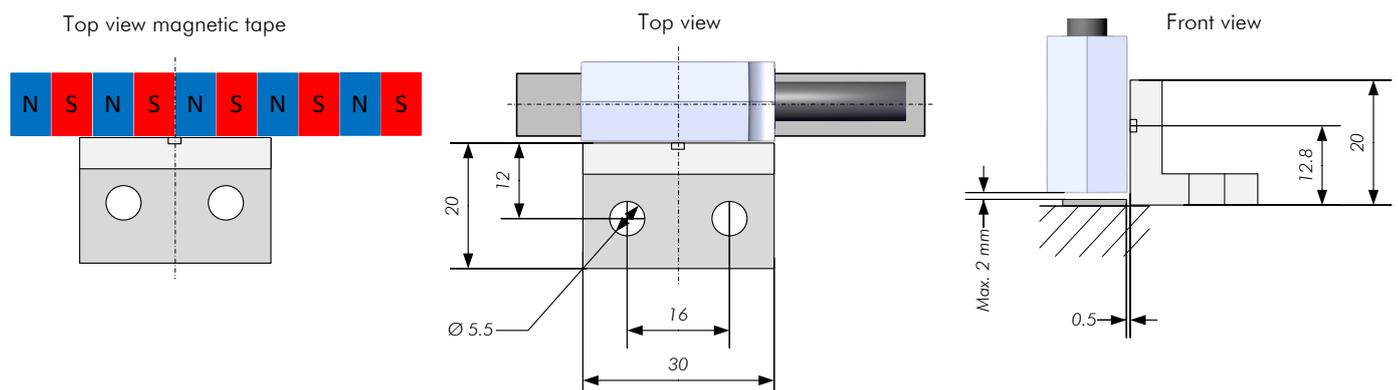
Instead of a periodical index pulse (channels Z / Z'), a single reference pulse (channels R / R') occurs at a desired position of the magnetic tape. In this case, a dual track magnetic tape (type MB20-50-10-2) must be used. The desired reference pulse position can be ordered by using the type designation of the magnetic tape. See also graphical overview on last page.

Installation LMIX22



Installation magnetic angle MW-007 (Option 007)

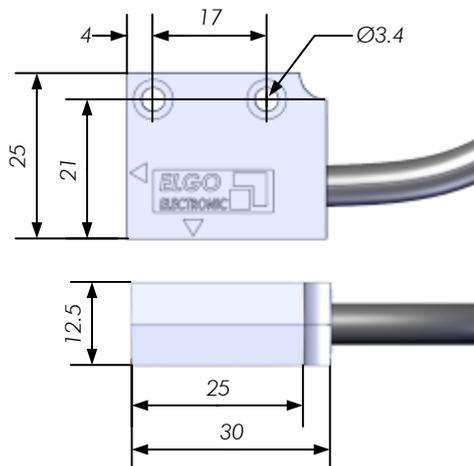
The magnetic angle must be centered to an arbitrary pole change (alignment by using the provided pole searcher film).



Technical specifications

LMIX22	
Mechanical Data	
Measuring principle	Incremental
Repeat accuracy	+/- 1 Increment
Signal output	Speed proportional
System accuracy in μm at 20°C	+/- (25 μm + 20 μm) x L (L = measuring length in meter)
Distance from sensor to magnetic tape	max. 2.0 mm
Sensor housing material	Zinc die-cast
Maximum length of wire	5 V/5 V-TTL = 10 m 10 - 30 V / 10-30 V = 30 m 10 - 30 V / 5 V-TTL = 50 m
Weight	ca. 35 g without cable; cable approx. 60 g/m
Electrical Data	
Supply voltage	5 VDC or 10... 30 VDC
Residual ripple	10 - 30 VDC: < 10 %
Power input	5 VDC: max. 200 mA 10 ... 30 VDC: max. 150 mA
Speed	max. 4 m/s (at 10 μm resolution))
Output level	TTL Line Driver or HTL
Output channels	A, A', B, B', Z, Z' (optionally R, R')
Output frequency per channel at 10 μm resolution	TTL: max. 100 KHz at 4.0 m/s HTL: max. 100 KHz at 4.0 m/s with an optional evaluation
Output current per channel	20 mA
Reference pulse R / R' (versions 007 & 027)	LMIX22-007: Output at position of the magnetic angle. LMIX22-027: Output at defined position of an additional magnetic tape track.
Index pulse Z / Z'	periodically every 5 mm
Environment Conditions	
Storage temperature	-25 ... +85 °C
Operation temperature	-10 ... +70 °C (-25 ... +85 C on request)
Humidity	max. 95 %, non-condensing
Protection class	IP67

Dimensions



Order reference

For orders, please use the following order code:

LMIX22 - $\overline{\text{A}} \overline{\text{A}} \overline{\text{A}} - \overline{\text{B}} \overline{\text{B}} \overline{\text{B}} - \overline{\text{C}} \overline{\text{C}} \overline{\text{C}} \overline{\text{C}} - \overline{\text{D}} \overline{\text{D}} - \overline{\text{E}} \overline{\text{E}} \overline{\text{E}}$

A Version

- 000 = ELGO Standard
- 001 = First special version
- 007 = Reference pulse with magnetic angle (MW-007)
- 027 = Reference pulse on second magnetic tape track

B Signal cable length in XX.X m (1.5 m Standard)

C Resolution in μm

- 2N50 = 2.5
- 3N12 = 3.125
- 0005 = 5
- 0010 = 10
- 0020 = 20
- 0025 = 25
- 0040 = 40
- 0050 = 50
- 0100 = 100
- 0125 = 125
- 0200 = 200
- 0625 = 625

D Supply / Output level

- 00 = 10-30 VDC / HTL
- 01 = 10-30 VDC / TTL line driver
- 11 = 5 VDC / TTL line driver

E Options

(Multiple nominations possible)

- D1 = Connection D-SUB 9pol (standard)
- D2 = Connection D-SUB 9pol (18-50 pin assignment)
- D3 = Connection plug (MIX pin assignment)
- L = Vertical position

For Example:

LMIX22 - 000 - 01.5 - 2N50 - 00 - D1
AAA - BB.B - CCCC - DD - EE

ELGO standard LMIX22 with 1.5 m sensor cable, 2.5 μm resolution, 10-30 VDC power supply / HTL output levels and standard connection by 9 pin D-SUB.

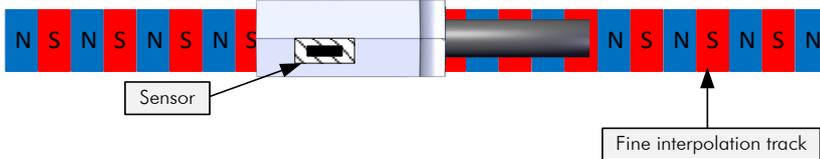
Your order:

LMIX22 - $\overline{\text{A}} \overline{\text{A}} \overline{\text{A}} - \overline{\text{B}} \overline{\text{B}} \overline{\text{B}} - \overline{\text{C}} \overline{\text{C}} \overline{\text{C}} \overline{\text{C}} - \overline{\text{D}} \overline{\text{D}} - \overline{\text{E}} \overline{\text{E}} \overline{\text{E}}$

Versions and differences

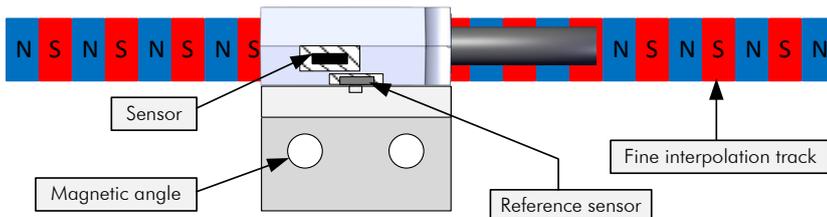
Standard 000:

Standard, without reference pulse (single track tape)
Magnetic tape: MB20-50-10-1-R



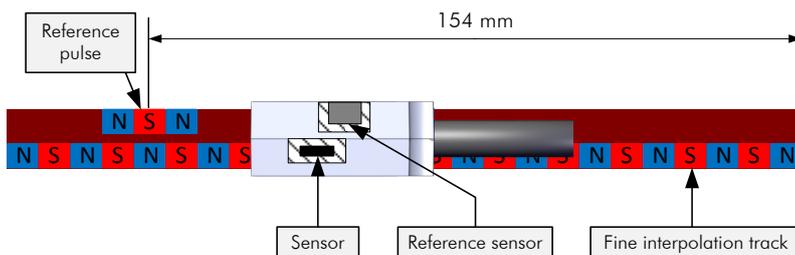
Version 007:

Reference pulse from magnetic angle (single track tape)
Magnetic tape: MB20-50-10-1-R



Version 027:

Reference pulse from magnetic tape (dual track tape required)
Magnetic tape: MB20-50-10-2-R-REF0154 (example position)



Accessories

MB20-50-10-1-R	Single track magnetic tape for LMIX22-000 and LMIX22-007
MB20-50-10-2-R	Dual track magnetic tape for LMIX22-027 (with reference pulse track).
MW-007	1 magnetic angle with reference pulse for special version LMIX22-007 (Article No. 733282100)
End cap 10 mm	1 end cap (10 mm) for magnetic tape (Article No. 731031000)
End cap set 10 mm	2 end caps (10 mm) and two M3 screws, additional fixation in the radial and linear area as well as a protection of the magnetic tape (Article No. 731031002)
AP1.0	Aluminum cover profile
FW2070	Guide carriage for LMIX22
FS2050-000-XXXX	Guide rail for LMIX22 (incl. magnetic tape)
FS-1000	Guide rail without magnetic tape
FBK80	Guide rail for magnetic tape BK80
AFBK80	Connection profile for the connection of FBK80
POSU	Magnetic magnifying glass 15 x 15 mm

