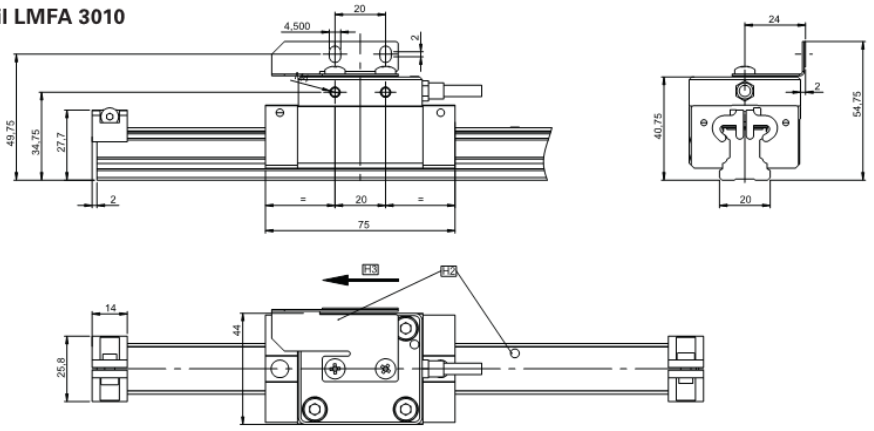
Scanning head - LMKA 3010 series

- **Absolute, guided linear encoder**
- **Grating period 1000µm**
- **Guided scanning head with integrated electronics**
- **In combination with measuring rail LMFA 3010**

Design 30
with measuring rail LMFA 3010



Tolerance principle in accordance withSO8015
General tolerances in accordance with ISO 2768-fH
All dimensions in mm

H2 = Absolute track marking
H3 = Direction of scanning head movement for positive counting

Technical data

- LMKA - Scanning head for guided linear encoders
- Greating period 1000µm

Scanning head	**LMKA 3010**					
Interface	EnDat 2.2	Fanuc α	BiSS/C	Mitsubishi (full duplex)	Mitsubishi (half duplex)	SSI + 1Vpp
Designation	EnDat 2.2	Fanuc02	BiSS	MitA1-4	MitA1-2	SSI - 1Vpp
Clock frequency	≤ 16 MHz	-	≤ 2,5 MHz	5 Mbps	5 Mbps	≤ 1 MHz
Measuring step						
Standard	1µm or 0,25µm					
High Accuracy	0,1µm					-
Position deviation per grating pitch[1)]						
Standard	± 2µm					
High Accuracy	± 0,5µm					-
Max. speed	5m/s, limited by the mechanics					
Cable length on scanning head	0,5m to 6m					
Electrical Connection	Cable with M12 coupling, 8pin male					Cable with M23 coupling, 12pin male
Voltage supply	DC 3,6V at 14V					
Power consumption	≤ 1,5W at 5V					
Typical current consumption	300mA at 5V					
Vibration 55 to 2000 Hz	< 200m/s² (EN 60068-2-6)					
Shock 6 ms	< 2000m/s² (EN 60068-2-27)					
Operating temperature	-10°C to 85°C					
Storage temperature	-20°C to 85°C					
Protection	IP67					
Mass	200g					

[1)] The position error per grating period and the accuracy of the grating results toghether in the encoder specific error; additional deviations caused by mounting and bearing are not considered in this error.

Ordering code

- LMKA - Scanning head for guided linear encoders
- Grating period 1000µm

LMKA □□10□□.□□□□□□□□□□ - 30 - □,□□ - □□□□□□ - □□

Scanning

30 = ML ≤ 9200 mm
31 = ML > 9200 mm

Performance

S = Standard
HA = High Accuracy

Interface

01 = EnDat 2.2
02 = Fanuc Serial Interface - α Interface
15 = SSI, additional incremental signals 1Vpp
16 = BiSS/C
21 = Mitsubishi High Speed Serial Interface (full duplex)
22 = Mitsubishi High Speed Serial Interface (half duplex)

Measuring step

10 = 1 µm
12 = 0,25 µm
14 = 0,1 µm [2)]

Functional safety

.. = No
FA = Analog signal (1Vpp) can be used for safety-related equipment [1)]

Dividing factor 1Vpp

		SSI
01	1-fold	×
25	25-fold	×
NN	Without incremental signals	

Pin configuration

C4 = 1SS08
IS = 03S17, 01

Electrical connection

01 = Free cable end
1SS08 = M12 8pin coupling male
03S17 = M23 17pin coupling male

Cable length

0,50 = 0,50 m
1,00 = 1,00 m
1,50 = 1,50 m
2,00 = 2,00 m
2,50 = 2,50 m
3,00 = 3,00 m
4,00 = 4,00 m
5,00 = 5,00 m
6,00 = 6,00 m

[1)] Option „FA“ only used for SSI and 1Vpp interface with dividing factor „01“.
[2)] Not for SSI interface.