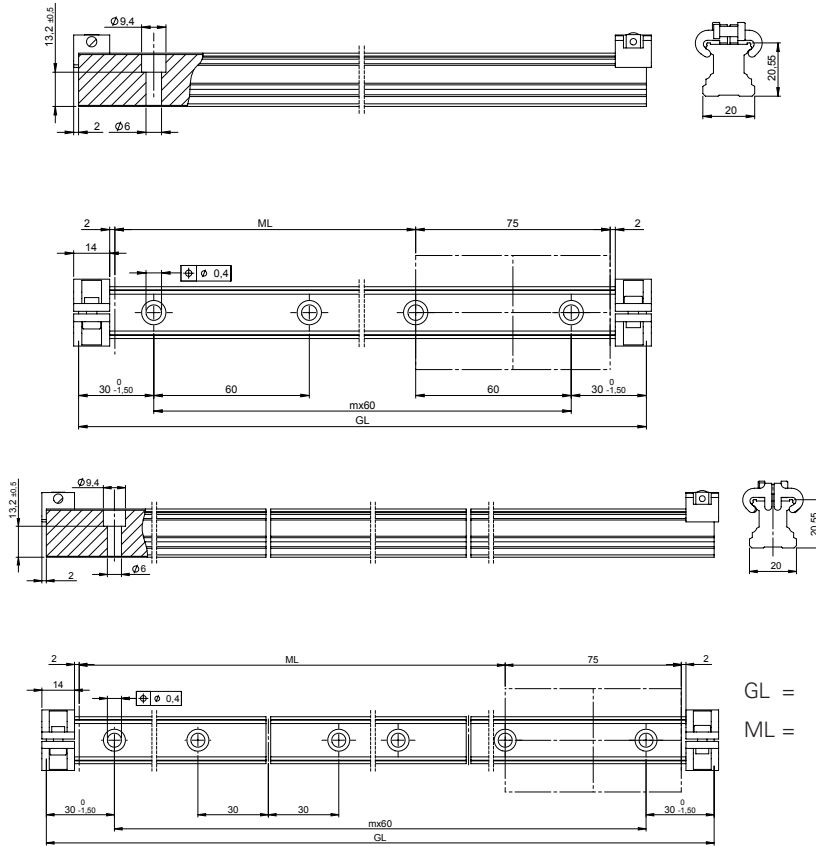


Scale tape in measuring rail LMFA 3010

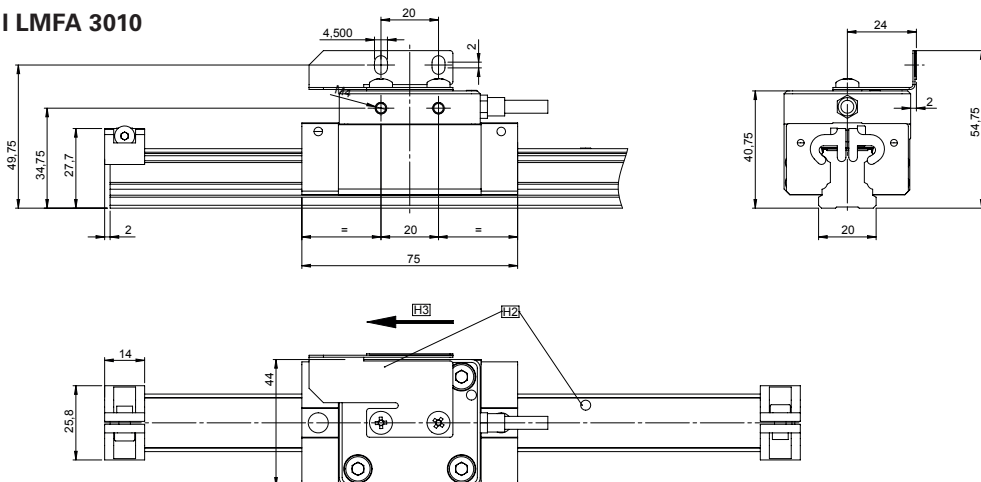
- Scale tape in measuring rail, for guided linear encoders
- Grating period 1000µm
- In combination with LMKA 3010


$$\text{BF } 30 : \text{ML} = \text{GL} - 103 \text{ mm}$$

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



Technical data

- LMFA - Measuring rail for guided linear encoders
- Grating period 1000µm

| Absolute measuring rail | LMFA 3010 | |
|------------------------------------|--|----------|
| Grating period | 1000µm | |
| Accuracy class | ± 20µm/m | ± 50µm/m |
| Accuracy after linear compensation | ± 5µm/m | ± 10µm/m |
| Total length GL | Standard length see ordering code | |
| Mechanical design | Standard guide rail with integrated scale tape | |
| Coefficient of expansion | ~ 11 ppm/K | |
| Mass | 2400 g/m Total length | |

Technical data

- LMKA - Scanning head for guided linear encoders
- Grating 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/s ² (EN 60068-2-6) | | | | | |
| Shock 6 ms | < 2000m/s ² (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 together in the encoder specific error; additional deviations caused by mounting and bearing are not considered in this error.

Ordering code

- LMFA - Measuring rail for guided linear encoders
- Grating period 1000µm

