



- Compact absolute linear encoder
- BiSS-B, BiSS-C or SSI interface
- Additional 1Vpp incremental output (sin/cos)
- Resolution programmable up to 5  $\mu\text{m}$
- Diagnostic LED for clearance/gap error
- Unaffected by dust, debris or liquids



SMA1

### ENVIRONMENTAL SPECIFICATIONS

|                              |  |
|------------------------------|--|
| Shock:                       | 250 g, 6 ms acc. to CEI EN 60068-2-27    |
| Vibrations:                  | 10 g, 5-2000 Hz acc. to CEI EN 60068-2-6 |
| Protection:                  | IP67                                     |
| Operating temperature range: | -25°C +85°C (-13°F +185°F)               |
| Storage temperature range:   | -40°C +100°C (-40°F +212°F)              |

### MECHANICAL SPECIFICATIONS

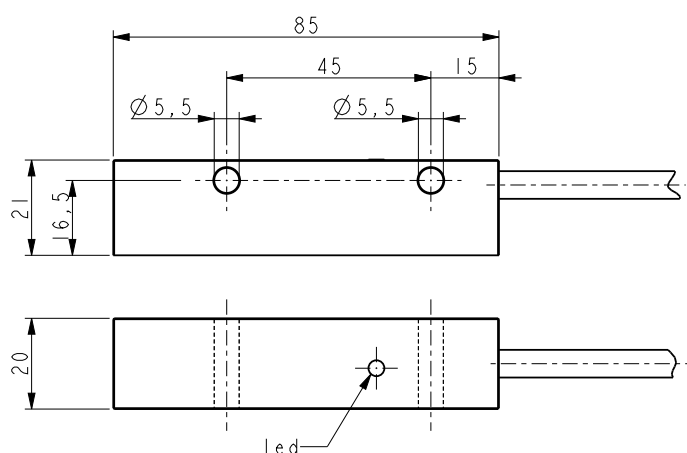
|                            |   |
|----------------------------|---|
| Dimensions:                | see drawing   |
| Housing material:          | anticorrosive, UNI EN AW-6082                           |
| Electrical connection:     | Lika Hi-flex cable T12 2,0 m                            |
| Gap between sensor/tape:   | 0,1 ÷ 0,3 mm  |
| Travel speed (mechanical): | 5 m/s max.  |
| Measurement length:        | 5,03 m max.<br>Measurement length = tape length - 85 mm |

### ELECTRICAL SPECIFICATIONS

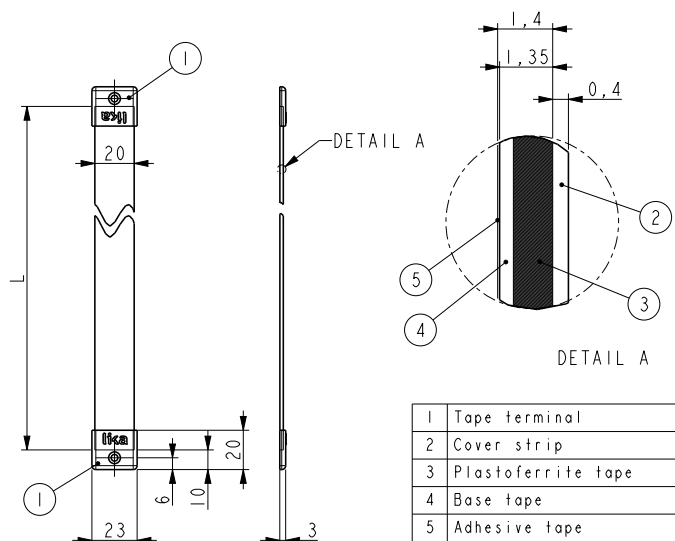
|                                   |  |
|-----------------------------------|--|
| Resolution:                       | absolute: 5 $\mu\text{m}$<br>incremental: sin/cos 1000 $\mu\text{m}$ |
| Sensor accuracy:                  | $\pm 20 \mu\text{m}$ max.  |
| Repeat accuracy:                  | $\pm 1$ increment  |
| Output circuits:                  | absolute: BiSS-B, BiSS-C, SSI<br>incremental: sin/cos 1Vpp (AB)      |
| Position refresh (absolute):      | 170 $\mu\text{s}$  |
| Counting frequency (incremental): | 8 kHz  |
| Power supply:                     | +5Vdc $\pm 5\%$ , +10Vdc $\div$ +30Vdc                               |
| Power consumption:                | 1,5 W max.   |
| Protection:                       | against inversion of polarity and short-circuit                      |
| EMC:                              | acc. to EN 61000-6-2 level 3   |

### ACCESSORIES

|               |                                |
|---------------|--------------------------------|
| MTA1:         | Magnetic tape                  |
| KIT LKM-1439: | Set of tape terminals (10 pcs) |



SMA1



MTA1

Order code - Sensor

|      |   |          |   |        |   |         |            |
|------|---|----------|---|--------|---|---------|------------|
| SMA1 | - | XXX<br>a | - | X<br>b | - | XX<br>c | /Sxxx<br>d |
|------|---|----------|---|--------|---|---------|------------|

a OUTPUT CIRCUIT

SC1 = BiSS-C + AB sin/cos, +5Vdc ±5%  
 SC2 = BiSS-C + AB sin/cos, +10Vdc +30Vdc  
 SB1 = BiSS-B + AB sin/cos, +5Vdc ±5%  
 SB2 = BiSS-B + AB sin/cos, +10Vdc +30Vdc  
 GA2 = SSI LSB aligned + AB sin/cos, Gray, +10Vdc +30Vdc

b RESOLUTION

5 = 0,005 mm

c CONNECTIONS

L2 = cable output 2 m  
 L5 = cable output 5 m  
 Lx = cable output x m

d CUSTOM VERSION

Order code - Magnetic tape

|      |   |         |   |         |   |        |            |
|------|---|---------|---|---------|---|--------|------------|
| MTA1 | - | XX<br>a | - | XX<br>b | - | X<br>c | /Sxxx<br>d |
|------|---|---------|---|---------|---|--------|------------|

a TAPE LENGTH

0,1 = 0,1 m      1 = 1 m  
 0,2 = 0,2 m      1,5 = 1,5 m  
 ... = ...      ... = ...  
 0,5 = 0,5 m      5,1 = 5,1 m

b ACCURACY CLASS

50 = ±35 µm

c COVER STRIP

0 = not supplied

d CUSTOM VERSION