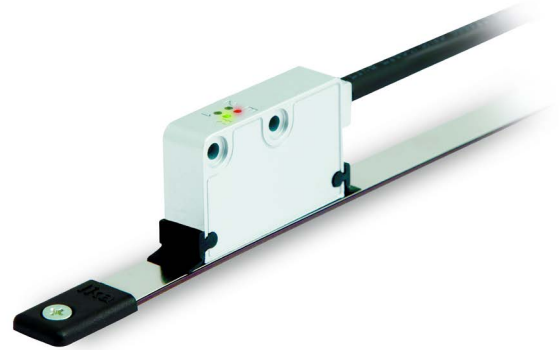


Series

SME53



- High resolution encoder for linear position measurement
- Gap clearance up to 2 mm
- Lika hi-flex sensor cable for drag cable chains
- Status LED for gap and speed
- Optional reference mark LKM1309/5 to be installed along the magnetic tape
- Optional tape cleaning wipers



SME53

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: | die cast aluminium, UNI EN AC-46100 |
| Electrical connections: | Lika Hi-flex cable M8, 2,0 m or M12 8 pin inline plug |
| Gap between sensor/tape (without cover strip): | 0,1 ÷ 2,0 mm |
| Travel speed (mechanical): | max 16 m/s |
| Measurement length: | Tape length -5 mm each side |

ELECTRICAL SPECIFICATIONS

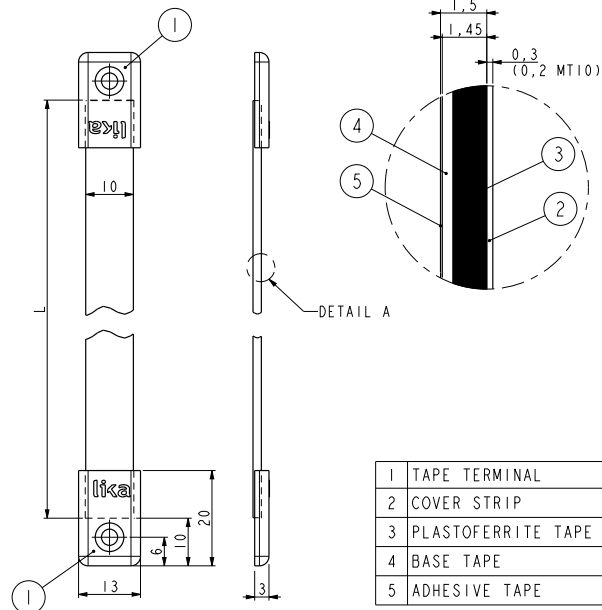
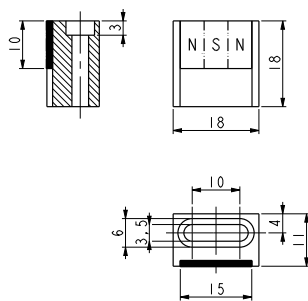
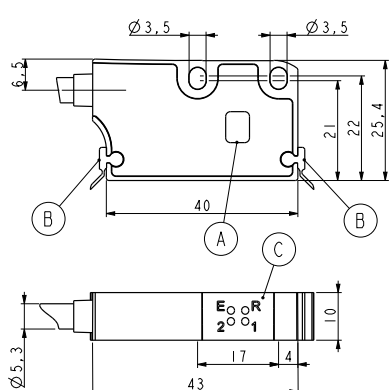
| | |
|---------------------|---|
| Resolution: | 5 / 2 / 1 / 0,5 / 0,08 µm |
| Sensor accuracy: | ±10 µm max. |
| Repeat accuracy: | ±1 increment |
| Output circuits: | Line Driver, Push-Pull |
| Output signals: | AB0 /AB0 |
| Counting frequency: | Push-Pull: 3 MHz max. @ 24Vdc, cable 1 m Line Driver: 5 MHz max. @ 5Vdc, cable 1 m |
| Power supply: | +5Vdc ±5%, +10Vdc ÷ +30Vdc |
| Power consumption: | 70 mA max. |
| Protection: | against inversion of polarity and short-circuit |
| EMC: | acc. to EN 61000-6-2 level 3 |

ACCESSORIES

| | |
|--------------------|----------------------------------|
| MT50: | Magnetic tape |
| LKM-1309/5: | Reference pole support |
| KIT LKM-1440: | Set of tape terminals |
| KIT WIPERS: | Wipers for SMExx/SMSxx (10 pcs) |
| KIT PS1-1,0: | Protection profile (10 pcs) |
| E-M12F8: | M12 8 pin mating connector |
| EC-M12F8-LK-M8-5: | cordset 5 meters with M12 conn. |
| EC-M12F8-LK-M8-10: | cordset 10 meters with M12 conn. |

Edge distance selection

| Order code | Edge distance (µsec) | Max. counting frequency (kHz) | Resolution (µm) vs. max. possible speed (m/s) | | | | |
|------------|----------------------|-------------------------------|---|------|------|-------|-------|
| | | | 0,08 | 0,5 | 1 | 2 | 5 |
| K | 0,20 | 5000 | 0,40 | 2,50 | 5,00 | 10,00 | - |
| H | 0,30 | 3333 | 0,27 | 1,67 | 3,33 | 6,66 | - |
| J | 0,50 | 2000 | 0,16 | 1,00 | 2,00 | 4,00 | 10,00 |
| A | 1,00 | 1000 | 0,08 | 0,50 | 1,00 | 2,00 | 5,00 |



| | |
|---|-----------------------------------|
| A | Reference sensor "R" |
| B | Dust wipers |
| C | Diagnostic LEDs |
| E | Gap/Speed error (red) |
| R | Reference detection/Index (green) |
| 1 | Power ON (green) |
| 2 | Gap/Speed warning (red) |

| | |
|---|--------------------|
| 1 | TAPE TERMINAL |
| 2 | COVER STRIP |
| 3 | PLASTOFERRITE TAPE |
| 4 | BASE TAPE |
| 5 | ADHESIVE TAPE |

SME53

LKM-1309/5

MT50

Order code - Sensor

| | | | | | | | | | | | | | |
|-------|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|-------|
| SME53 | - | XX | - | X | - | XX | - | X | - | XX | - | X | /Sxxx |
| | | (a) | | (b) | | (c) | | (d) | | (e) | | (f) | (g) |

| | | |
|--|--|--|
| <p>(a) OUTPUT CIRCUITS Y = Push-Pull (AB) YC = Push-Pull (AB, /AB) L = Line Driver (AB, /AB)</p> <p>(b) POWER SUPPLY 1 = +5Vdc ±5% (L output circuit) 2 = +10Vdc ÷ +30Vdc (Y and YC output circuit)</p> | <p>(c) RESOLUTION 5 = 0,005 mm (5 µm) 2 = 0,002 mm (2 µm) 1 = 0,001 mm (1 µm) 05 = 0,0005 mm (0,5 µm) 008 = 0,00008 mm (0,08 µm)</p> <p>(d) INDEX N = without I = every 5 mm R = unique reference signal</p> | <p>(e) CONNECTIONS L2 = cable output 2 m Lx = cable output x m M0,5 = 0,5 m cable + M12 inline plug M2 = 2 m cable + M12 inline plug</p> <p>(f) EDGE DISTANCE (see edge distance selection) K = 0,2 µs H = 0,3 µs J = 0,5 µs A = 1 µs</p> <p>(g) CUSTOM VERSION</p> |
|--|--|--|

Order code - Magnetic tape

| | | | | | | | | |
|------|---|-----|---|-----|---|-----|---|-------|
| MT50 | - | XXX | - | XXX | - | X | - | /Sxxx |
| | | (a) | | (b) | | (c) | | (d) |

| | | |
|--|---|--|
| <p>(a) LENGTH 1 = 1,0 m 20 = 20,0 m 2 = 2,0 m 30 = 30,0 m 4 = 4,0 m 50 = 50,0 m 10 = 10,0 m 100 = 100,0 m</p> | <p>(b) ACCURACY CLASS 100 = ±85 µm/m 50 = ±35 µm/m (up to 30 m) 10 = ±8 µm/m (up to 10 m)</p> | <p>(c) COVER STRIP 0 = not supplied 1 = supplied</p> <p>(d) CUSTOM VERSION</p> |
|--|---|--|