

Series

**SMI2 • SMI5**



- Resolution selector from 50 to 2  $\mu\text{m}$
- Compact reading head with IP68 protection
- Power-on and error LEDs
- Automatic output signal performance control
- Ideal for linear motors and pick & place axes



SMI2 • SMI5

### 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:	IP68 (sensor head), IP65 (connector)
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:	sensor: die cast aluminium, UNI EN AC-46100 connector: Macromelt OM646-EN
Electrical connections:	Lika Hi-flex cable M6 + DSub 9 pin inline plug
Gap between sensor/tape (without cover strip):	SMI2: 0,1 ÷ 1,0 mm SMI5: 0,1 ÷ 2,0 mm
Travel speed (mechanical):	max 16 m/s
Measurement length:	Tape length -5 mm each side

### ELECTRICAL SPECIFICATIONS

Resolution:	SMI2: 0,002 ÷ 0,02 mm SMI5: 0,005 ÷ 0,05 mm
Sensor accuracy:	±1 increment (after auto-calibration)
Repeat accuracy:	±1 increment
Output circuits:	Line Driver, Push-Pull
Output signals:	ABO /ABO
Counting frequency:	500 kHz max. (others on request)
Power supply:	+5Vdc ±5%, +10Vdc ÷ +30Vdc
Power consumption:	80 mA
Protection:	against inversion of polarity (except 5Vdc version) and short-circuit
EMC:	acc. to EN 61000-6-2 level 3

### ACCESSORIES

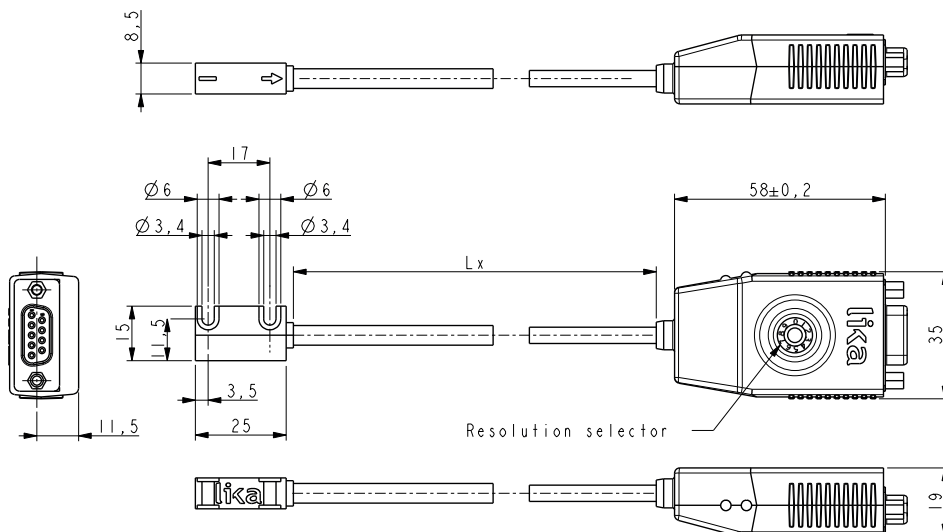
MT50:	Magnetic tape for SMI5
MT20:	Magnetic tape for SMI2
KIT LKM-1440:	Set of tape terminals (10 pcs)
EDE9P:	9 pin DSub mating connector

### Edge distance SMI5

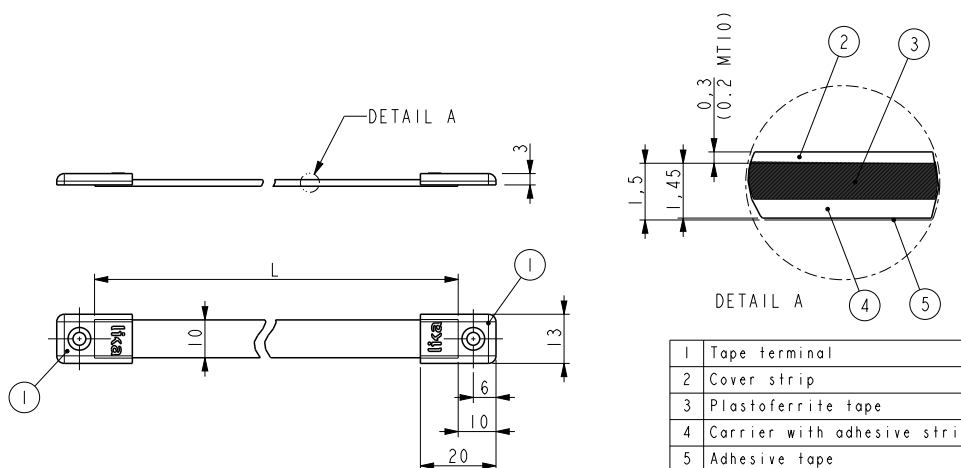
Order code	Edge distance (μsec)	Max. counting frequency (kHz)	Resolution (μm) vs. max. possible speed (m/s)							
			5	6,25	10	12,5	20	25	40	50
<b>B</b>	2	500	2,15	2,69	4,30	5,38	8,60	10,75	17,20	21,50

### Edge distance SMI2

Order code	Edge distance (μsec)	Max. counting frequency (kHz)	Resolution (μm) vs. max. possible speed (m/s)							
			2	2,5	4	5	8	10	16	20
<b>B</b>	2	500	0,86	1,08	1,72	2,15	3,44	4,30	6,88	8,60



SMI2 • SMI5



MT20 • MT50

Order code - Sensor

SMI2	-	R	-	XX-X	-	XX	-	XX
SMI5		Ⓐ		Ⓑ		Ⓒ		Ⓓ

Ⓐ R = rectangular sensor

Ⓑ OUTPUT CIRCUITS

YC-2 = Push-Pull, 10 ÷ 30Vdc (ABO /ABO)  
L-1 = Line Driver (RS422), +5Vdc ±5% (ABO /ABO)

Ⓒ CABLE LENGTH

0.5 = 0,5 m  
1 = 1 m  
2 = 2 m  
3 = 3 m  
5 = 5 m

Ⓓ EDGE DISTANCE

B = 2 µs (500 kHz) - standard  
on request:  
K = 0,125 µs (8 MHz)  
H = 0,25 µs (4 MHz)  
J = 0,5 µs (2 MHz)  
A = 1 µs (1 MHz)

Order code - Magnetic tape

MT20	-	XXX	-	XXX	-	X	-	/Sxxx
MT50		Ⓐ		Ⓑ		Ⓒ		Ⓓ

Ⓐ 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

Ⓑ ACCURACY CLASS

100 = ±85 µm/m  
50 = ±35 µm/m (up to 30 m)  
10 = ±8 µm/m (up to 10 m)

Ⓒ COVER STRIP

0 = not supplied  
1 = supplied

Ⓓ CUSTOM VERSION