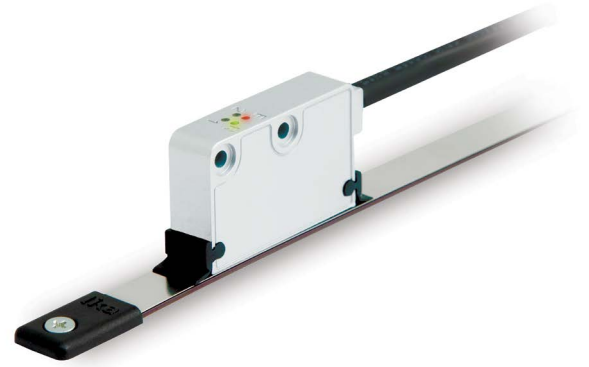




- High resolution encoder for linear measurements
- High speed and protection degree
- Speed proportional output signals (real-time)
- Resolution up to 1  $\mu\text{m}$
- Optional reference mark LKM1309/2 to be installed along the magnetic tape
- Optional tape cleaning wipers
- Error output available on request (see on page 27)



SME21

### 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 ÷ 1,0 mm
Travel speed (mechanical):	max 16 m/s
Measurement length:	Tape length -5 mm each side

### ELECTRICAL SPECIFICATIONS

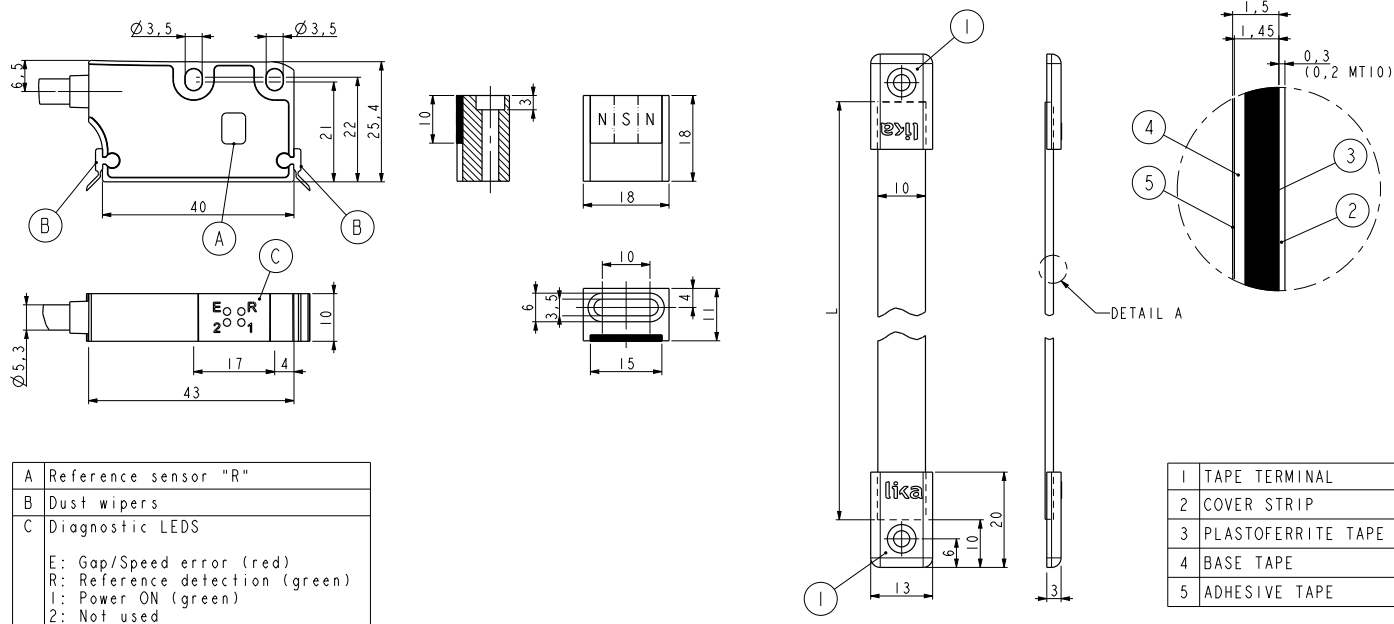
Resolution:	0,05 / 0,01 / 0,002 / 0,001 mm
Sensor accuracy:	$\pm 15 \mu\text{m}$ max.
Repeat accuracy:	$\pm 1$ increment
Output circuits:	Line Driver, Push-Pull
Output signals:	AB0 /AB0
Counting frequency:	acc. to edge distance setting
Power supply:	+5Vdc $\pm 5\%$ , +10Vdc ÷ +30Vdc
Power consumption:	70 mA max.
Protection:	against inversion of polarity (except 5Vdc version) and short-circuit
EMC:	acc. to EN 61000-6-2 level 3
Option:	Error signal output (PWM)

### ACCESSORIES

MT20:	Magnetic tape
LKM-1309/2:	Reference pole support
KIT LKM-1440:	Set of tape terminals (10 pcs)
KIT WIPERS:	Wipers for SMExx/SMSxx (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 ( $\mu\text{sec}$ )	Max. counting frequency (kHz)	Resolution ( $\mu\text{m}$ ) vs. max. possible speed (m/s)			
			1	2	10	50
H	0,3	3333	2,33	4,67	23,34	14,58
J	0,5	2000	1,40	2,80	14,00	8,74
A	1	1000	0,70	1,40	7,00	4,38
B	2	500	0,33	0,67	3,34	2,08
C	4	250	0,18	0,35	1,75	1,09



SME21

LKM-1309/2

MT20

Order code - Sensor

SME21	-	XX	-	X	-	XX	-	X	-	XX	-	X	/Sxxx
		(a)		(b)		(c)		(d)		(e)		(f)	(g)

(a) OUTPUT CIRCUITS

Y = Push-Pull (AB)  
 YC = Push-Pull (AB, /AB)  
 L = Line Driver (AB, /AB)

(b) POWER SUPPLY

1 = +5Vdc ±5% (L output circuit)  
 2 = +10Vdc ÷ +30Vdc (Y and YC output circuit)

(c) RESOLUTION

50 = 0,05 mm (50 µm)  
 10 = 0,01 mm (10 µm)  
 2 = 0,002 mm (2 µm)  
 1 = 0,001 mm (1 µm)

(d) INDEX

N = without  
 I = every 2 mm  
 R = unique reference signal

(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

(f) EDGE DISTANCE (see edge distance selection)

H = 0,3 µs  
 J = 0,5 µs  
 A = 1 µs  
 B = 2 µs (standard value)  
 C = 4 µs

(g) CUSTOM VERSION

Order code - Magnetic tape

MT20	-	XXX	-	XXX	-	X	-	/Sxxx
		(a)		(b)		(c)		(d)

(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

(b) ACCURACY CLASS

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

(c) COVER STRIP

0 = not supplied  
 1 = supplied

(d) CUSTOM VERSION