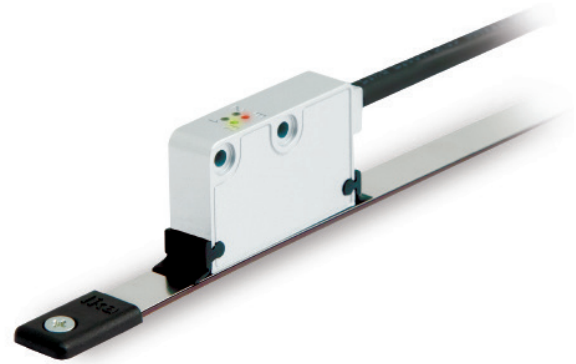




- 2 integrated limit switch sensors
- High performance encoder for linear motors
- Lika hi-flex sensor cable
- Status LED for clearance error
- Reference and limit switch marks to be installed along the magnetic tape
- Resolution up to 0,5  $\mu\text{m}$
- Optional tape cleaning wipers



SME12

### 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 M10, 2,0 m
Gap between sensor/tape (without cover strip):	0,1 ÷ 0,5 mm
Travel speed (mechanical):	max 16 m/s
Measurement length:	Tape length -5 mm each side

### ELECTRICAL SPECIFICATIONS

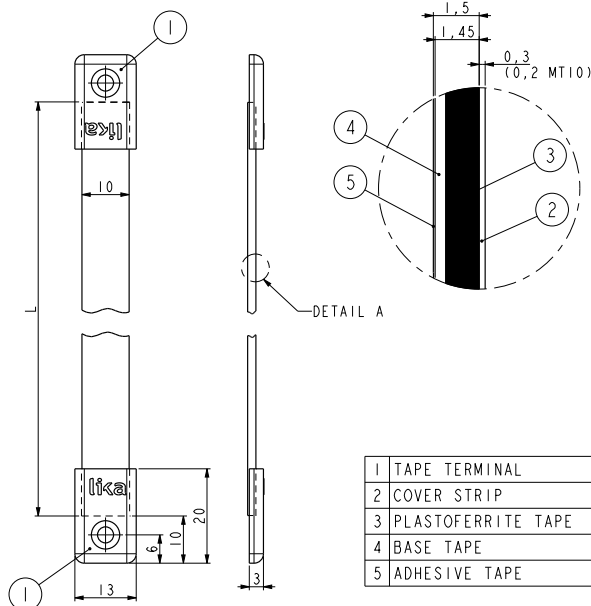
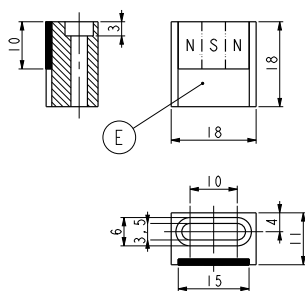
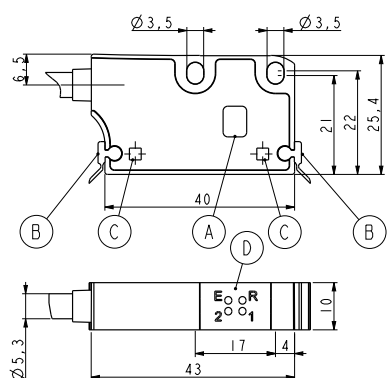
Resolution:	0,01 / 0,005 / 0,002 / 0,001 / 0,0005 mm
Sensor accuracy:	±15 $\mu\text{m}$ max.
Repeat accuracy:	±1 increment
Output circuits:	Line Driver, Push-Pull
Output signals:	AB0 /AB0 + LS1, LS2 (o.c. 50 mA)
Counting frequency:	acc. to edge distance setting
Power supply:	+5Vdc ±5%, +10Vdc ÷ +30Vdc
Power consumption:	80 mA max.
Protection:	against inversion of polarity (except 5Vdc version) and short-circuit
EMC:	acc. to EN 61000-6-2 level 3

### ACCESSORIES

MTI-0100:	Magnetic tape
LKM-1309/1:	Reference pole support
LKM-1309/LS	Limit switch support
KIT LKM-1440:	Set of tape terminals (10 pcs)
KIT WIPERS:	Wipers for SMExx/SMSxx (10 pcs)

## Edge distance selection

Order code	Edge distance ( $\mu\text{sec}$ )	Max. counting frequency (kHz)	Resolution ( $\mu\text{m}$ ) vs. max. possible speed (m/s)				
			0,5	1	2	5	10
H	0,3	3333	1,17	2,33	4,67	11,67	11,67
J	0,5	2000	0,70	1,40	2,80	7,00	7,00
A	1	1000	0,35	0,70	1,40	3,50	3,50
B	2	500	0,17	0,33	0,67	1,67	1,67
C	4	250	0,09	0,18	0,35	0,88	0,88



A	Reference sensor "R"
B	Dust wipers
C	Limit switch sensors
D	Diagnostic LEDs
E:	Gap/Speed error (red)
R:	Reference detection (green)
1:	Limit switch (green)
2:	Limit switch (green)

E: Tape position on LKMI309/LS

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

SME12

LKM-1309/1 • LKM-1309/LS

MTI-0100-10

Order code - Sensor

SME12	-	XXX	-	XXXX	-	X	-	XXXX	-	X	/Sxxx
		(a)		(b)		(c)		(d)		(e)	(f)

(a) OUTPUT CIRCUITS & POWER SUPPLY

Y2 = Push-Pull (AB), +10Vdc ÷ +30Vdc  
 YC2 = Push-Pull (AB, /AB), +10Vdc ÷ +30Vdc  
 L1 = Line Driver (AB, /AB), +5Vdc ±5%  
 L2 = Line Driver (AB, /AB), +10Vdc ÷ +30Vdc

(b) RESOLUTION

0050 = 0,05 mm (50 µm)  
 0010 = 0,01 mm (10 µm)  
 0002 = 0,002 mm (2 µm)  
 0001 = 0,001 mm (1 µm)  
 N500 = 0,0005 mm (0,5 µm)

(c) INDEX

R = unique reference signal

(d) CABLE TYPE & LENGTH

L020 = cable output 2 m  
 L050 = cable output 5 m  
 Lxx0 = cable out. x m (max. length 10m)

(e) 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  
 (\*) only with output circuit L

(g) CUSTOM VERSION

Order code - Magnetic tape

MTI	-	XXXX	-	XX	-	XXXXXX	-	X	-	X	-	X	-	XXX	/Sxxx
		(a)		(b)		(c)		(d)		(e)		(f)		(g)	(h)

(a) CODING

0100 = 1 mm pole pitch (ex MT10)

(b) WIDTH

10 = 10 mm

(c) LENGTH

001000 = 1 m  
 002000 = 2 m  
 004000 = 4 m  
 010000 = 10 m  
 020000 = 20 m  
 030000 = 30 m  
 050000 = 50 m  
 100000 = 100 m

(d) BIADHESIVE

B = supplied  
 N = not supplied

(e) PRINTING

P = standard  
 S = custom

(f) COVER STRIP

C = supplied  
 N = not supplied

(g) ACCURACY CLASS

100 = ±85 µm/m  
 050 = ±35 µm/m (up to 30 m)  
 010 = ±8 µm/m (up to 10 m)

(h) CUSTOM VERSION

Document release	Date	Description
1.0	December 2023	New order code