



- Standard encoder for linear position measurement
- Two integrated limit switch sensors
- Gap clearance up to 2.0 mm
- Lika hi-flex sensor cable for drag cable chains
- Status LED for clearance and gap error
- Reference (LKM1309/5) and limit switch mark (LKM1309/LS) to be installed along the magnetic tape
- Optional tape cleaning wipers



SME52

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 ÷ 2,0 mm
Travel speed (mechanical):	max 16 m/s
Measurement length:	Tape length -5 mm each side

ELECTRICAL SPECIFICATIONS

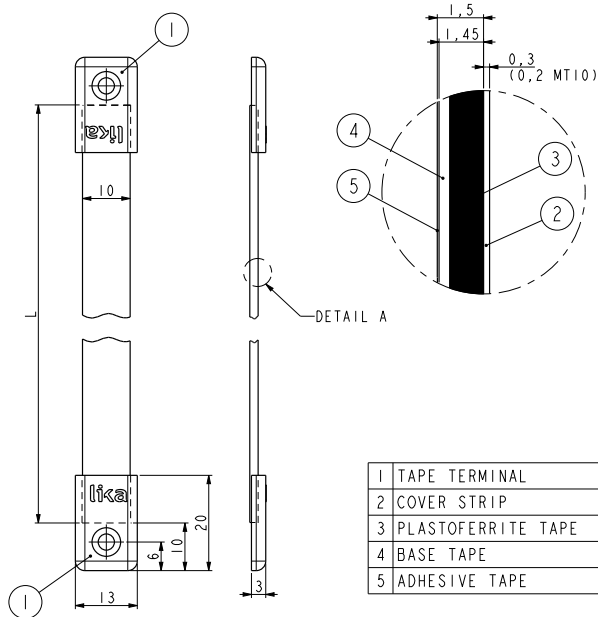
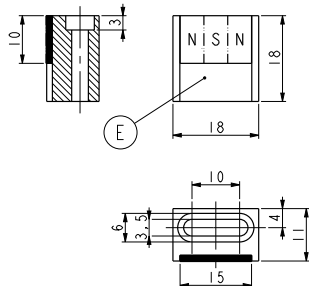
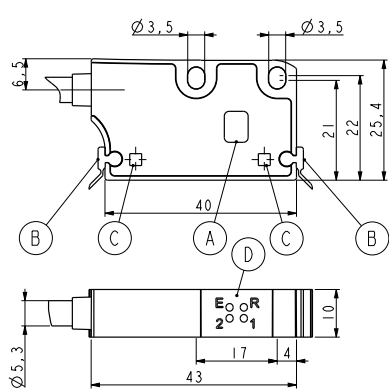
Resolution:	0,05 / 0,025 / 0,01 / 0,005 mm
Sensor accuracy:	±15 µm max.
Repeat accuracy:	±1 increment
Output circuits:	Line Driver, Push-Pull
Output signals:	AB0 /AB0 + LS1, LS2 (o.c. 50 mA)
Counting frequency:	acc. to edge distance setting
Power supply:	+5Vdc ±5%, +10Vdc ÷ +30Vdc
Power consumption:	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-0500:	Magnetic tape
LKM1309/5:	Reference pole support
LKM1309/LS	Limit switch support
KIT LKM-1440:	Set of tape terminals
KIT WIPERS:	Wipers for SMExx/SMSxx (10 pcs)

Edge distance selection

Order code	Edge distance (µsec)	Max. counting frequency (kHz)	Resolution (µm) vs. max. possible speed (m/s)			
			5	10	25	50
H	0,3	3333	11,67	23,34	25,00	25,00
J	0,5	2000	7,00	14,00	25,00	25,00
A	1	1000	3,50	7,00	17,50	17,50
B	2	500	1,67	3,34	8,35	8,35
C	4	250	0,88	1,75	4,38	4,38



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

SME52

LKM-1309/5 • LKM-1309/LS

MTI-0500-10

Order code - Sensor

SME52	-	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)
 0025 = 0,025 mm (25 µm)
 0010 = 0,01 mm (10 µm)
 0005 = 0,005 mm (5 µm)

(c) INDEX
 R = unique reference signal
 (in combination with LKM1309/5)

(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

(f) 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
 0500

(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	September 2023	New order code