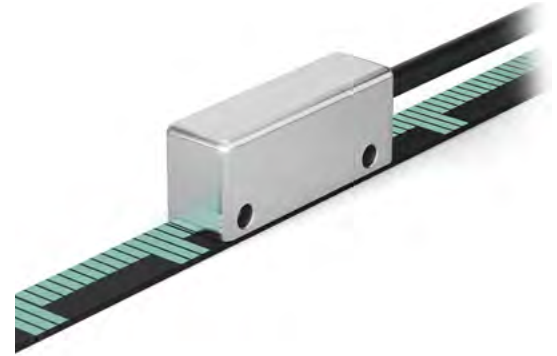


Series

SME91 • SME92

- Linear encoder for position & speed feedback
- Gap clearance up to 1 mm
- Lika hi-flex sensor cable for drag cable chains
- Optional reference mark on the magnetic tape
- Diagnostics via error LED



SME91 • SME92

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

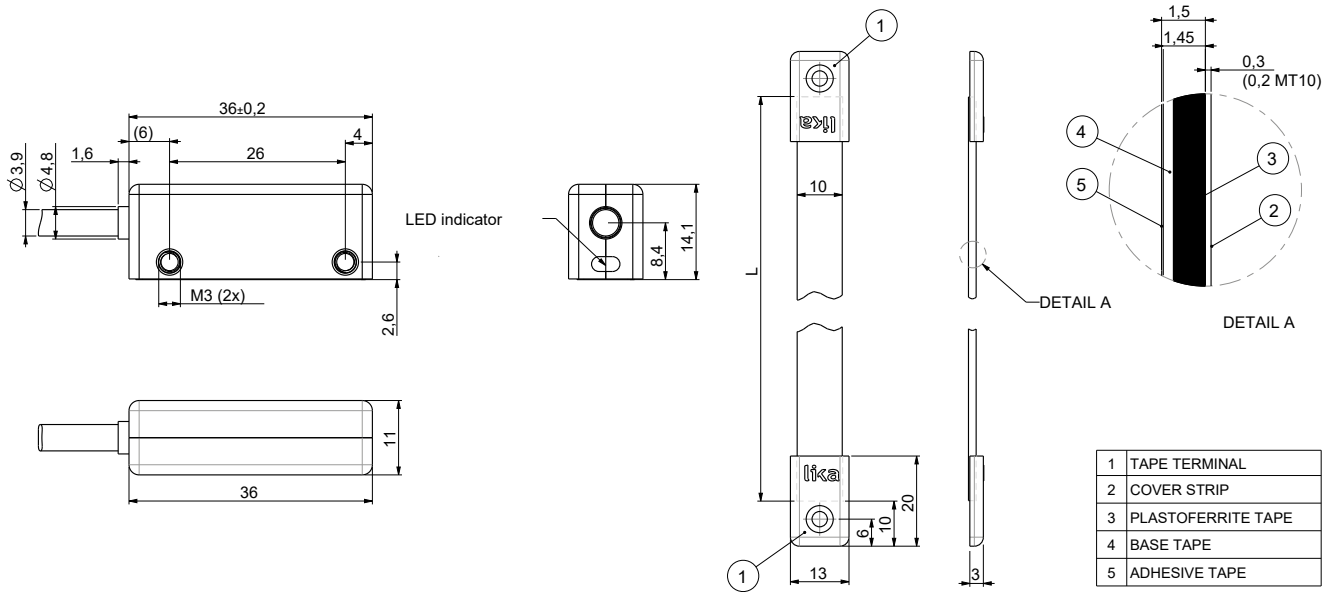
Dimensions:	see drawing
Housing material:	zinc die cast
Electrical connections:	Lika Hi-flex cable 2,0 m or M12 8 pin inline plug
Gap between sensor/tape (without cover strip):	SME91: 0,1 ÷ 0,5 mm SME92: 0,1 ÷ 1,0 mm
Travel speed (mechanical):	max 100 m/s
Measurement length:	Tape length -5 mm each side

ELECTRICAL SPECIFICATIONS

Resolution:	20 nm max. (see order codes)
Sensor accuracy:	±10 µm max.
Repeat accuracy:	±1 increment
Output circuits:	Line Driver RS422
Output signals:	ABO /ABO
Counting frequency:	acc. to edge distance setting 5 MHz max. cable 1 m
Power supply:	+5Vdc ±5%
Power consumption:	65 mA max.
Protection:	against inversion of polarity and short-circuit
EMC:	acc. to EN 61000-6-2 level 3

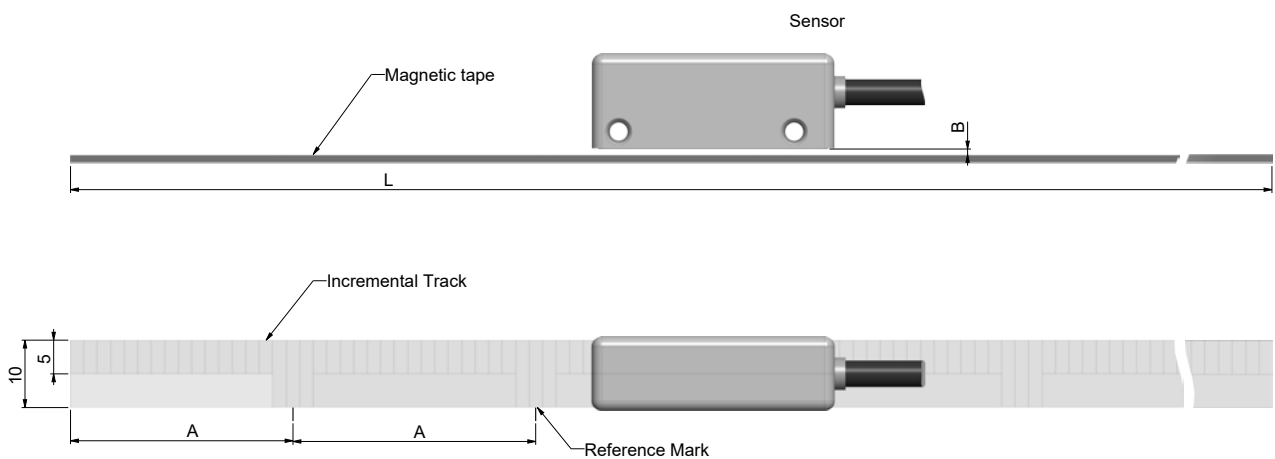
ACCESSORIES

MTI-0100:	Magnetic tape
MTI-0200:	Magnetic tape
KIT LKM-1440:	Set of tape terminals
E-M12F8:	M12 8 pin mating connector
EC-M12F8-LK-M8-050:	cordset 5 meters with M12 conn.
EC-M12F8-LK-M8-100:	cordset 10 meters with M12 conn.



SME91 • SME92

MTI-0x00



Reference marks

Reference marks can be provided directly on the tape at intervals of 20 mm or 50 mm. Custom intervals can be provided on request.

Edge distance selection

Order code	Edge distance (µsec)	Max. counting frequency (kHz)	Model	Resolution (µm) vs. max. possible speed (m/s)						
				N050 (50 nm)	N500 (500 nm)	0001 (1µm)	0002 (2µm)	0005 (5 µm)	0010 (10 µm)	0100 (100 µm)
H	0,28	3500	SME91	0,7	7	14	28	70	>100	>100
			SME92	0,7	7	14	28	70	>100	>100
J	0,6	1750	SME91	0,35	3,5	7	14	35	70	>100
			SME92	0,35	3,5	7	14	35	70	>100
A	1	1000	SME91	0,2	2	4	8	20	40	>100
			SME92	0,2	2	4	8	20	40	>100
B	2	500	SME91	0,1	1	2	4	10	20	>100
			SME92	0,1	1	2	4	10	20	>100

Order code - Sensor

SME91 SME92	-	XXX Ⓐ	-	XXXX Ⓑ	-	X Ⓒ	-	XXXX Ⓓ	-	X Ⓔ	/Sxxx Ⓕ
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<p>Ⓐ OUTPUT CIRCUITS & POWER SUPPLY L1 = Line Driver (AB, /AB), +5Vdc ±5%</p> <p>Ⓑ RESOLUTION SME91 0010 = 0,01 mm (10 µm) 0005 = 0,005 mm (5 µm) 0002 = 0,002 mm (2µm) 0001 = 0,001 mm (1 µm) N500 = 0,5 µm (500 nm) N050 = 0,05 µm (50 nm)</p>	<p>Ⓑ RESOLUTION SME92 0100 = 0,1 mm (100 µm) 0010 = 0,01 mm (10 µm) 0005 = 0,005 mm (5 µm) 0002 = 0,002 mm (2µm) 0001 = 0,001 mm (1 µm) N500 = 0,5 µm (500 nm)</p>	<p>Ⓒ INDEX N = without I = every 1 mm (SME91), 2 mm (SME92) R = unique reference signal</p> <p>Ⓓ CABLE TYPE & LENGTH L020 = cable output 2 m Lxx0 = cable out. x m (max. length 10m) M005 = 0,5 m cable + M12 inline plug M020 = 2 m cable + M12 inline plug</p>	<p>Ⓔ EDGE DISTANCE (see edge distance selection) H = 0,28 µs J = 0,6 µs A = 1 µs B = 2 µs</p>	<p>Ⓕ CUSTOM VERSION</p>
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Order code - Magnetic tape without reference track

MTI	-	XXXX Ⓐ	-	XX Ⓑ	-	XXXXXX Ⓒ	-	X Ⓓ	-	X Ⓔ	-	X Ⓕ	-	XXX Ⓖ	/Sxxx Ⓗ
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<p>Ⓐ CODING 0100 = 1 mm pole pitch (SME91) 0200 = 2 mm pole pitch (SME92)</p> <p>Ⓑ WIDTH 10 = 10 mm 5 = 5 mm</p>	<p>Ⓒ LENGTH 001000 = 1 m 020000 = 20 m 002000 = 2 m 030000 = 30 m 004000 = 4 m 050000 = 50 m 010000 = 10 m 100000 = 100 m</p>	<p>Ⓓ BIADHESIVE B = supplied N = not supplied</p> <p>Ⓔ PRINTING P = standard S = custom</p>	<p>Ⓕ COVER STRIP C = supplied N = not supplied</p>	<p>Ⓖ ACCURACY CLASS 040 = ±40 µm/m 020 = ±20 µm/m 010 = ±10 µm/m (up to 10 m)</p>	<p>Ⓗ CUSTOM VERSION</p>
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Order code - Magnetic tape with reference track (to be used in combination with Index option "R")

MTI	-	XXXX Ⓐ	-	XX Ⓑ	-	XXXXXX Ⓒ	-	X Ⓓ	-	X Ⓔ	-	X Ⓕ	-	XXX Ⓖ	/Sxxx Ⓗ
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<p>Ⓐ CODING 01R2 = 1 mm pole pitch + reference every 20 mm (SME91) 01R5 = 1 mm pole pitch + reference every 50 mm (SME91) 02R2 = 2 mm pole pitch + reference every 20 mm (SME92) 02R5 = 2 mm pole pitch + reference every 50 mm (SME92)</p> <p>Ⓑ WIDTH 10 = 10 mm</p>	<p>Ⓒ LENGTH 000500 = 0,5 m 001000 = 1 m 001500 = 1,5 m 002000 = 2 m 002300 = 2,3 m</p>	<p>Ⓓ BIADHESIVE B = supplied N = not supplied</p> <p>Ⓔ PRINTING P = standard S = custom</p>	<p>Ⓕ COVER STRIP C = supplied N = not supplied</p>	<p>Ⓖ ACCURACY CLASS 040 = ±40 µm/m 020 = ±20 µm/m 010 = ±10 µm/m</p>	<p>Ⓗ CUSTOM VERSION</p>
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Document release	Date	Description
1.1	09.09.24	Description update (gap clearance)
1.0	September 2024	First issue