

Smart encoders & actuators

To
all customers

k. attn. Technical Manager
Obsolescence Manager

Carrè, April 2022
Our ref.: NPC22001 SMP magnetic sensor

Subject: Notification of Change to SMP magnetic sensor

Dear Customer,

In the process of continuous improvement to the quality, reliability and competitiveness of our products it is necessary to make occasional updates or changes to one of our products.

Details thereof are given in this letter and/or attachment. We would be happy to answer any queries you might have.

Date of change:

April 2022

Classification of change:

End of life notification

Products affected:

SMP-Y-2-25-N-L5-A/S754
SMP-Y-2-250-N-L5-A/S754

Magnetic tape MT50 is not affected!

Product changes:

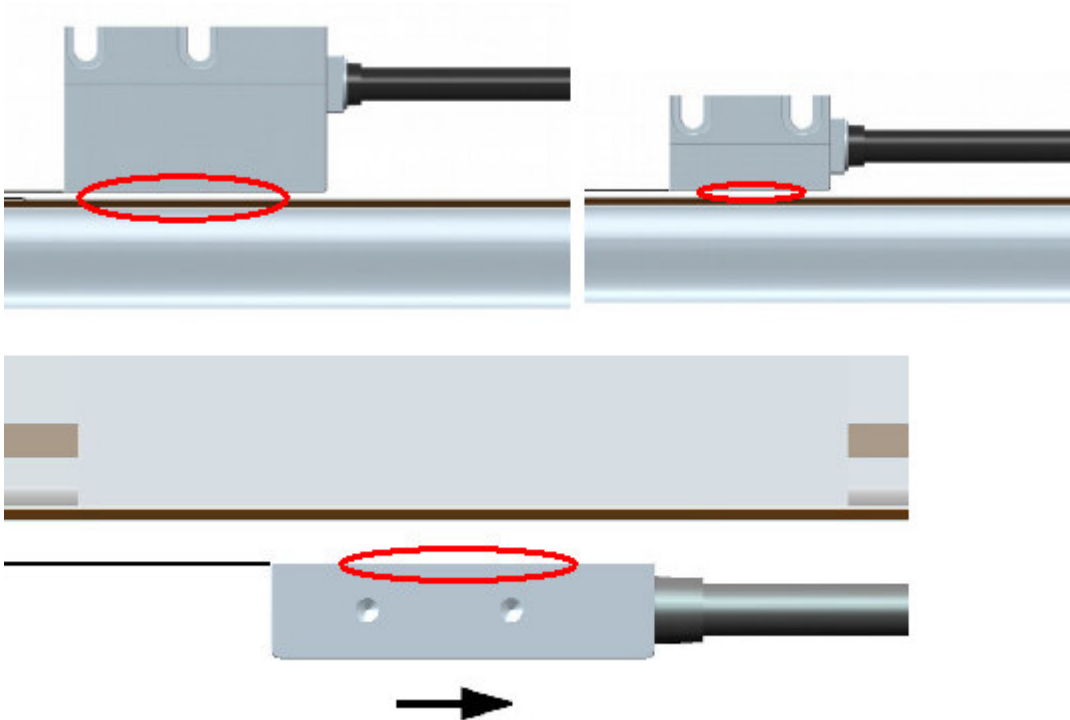
Product will no longer be manufactured.

Recommended replacement products listed below, require adaptation of the mechanical interface.

SMP type	Replacement type	Additional notes
SMP-Y-2-25-N-L5-A/S754	SMK-Y-2-25-N-L5 or SMB5-Y-2-25-N-L0,5-L5-A (*)	Magnetic tape MT50 does not need to be replaced. Requires adaptation of mechanical interface. ATTN. Active sensing surface is on the bottom of the sensor housing, not on the side (see figure below)!
SMP-Y-2-250-N-L5-A/S754	SMK-Y-2-250-N-L5 or SMB5-Y-2-250-N-L0,5-L5-A (*)	Magnetic tape MT50 does not need to be replaced. Requires adaptation of mechanical interface. ATTN. Active sensing surface is on the bottom of the sensor housing, not on the side (see figure below)!
SMP other part numbers	SMK or SMB	Please contact Lika for further information.

(*) resolution order codes "25" and "250" are available on special request, even if not listed on the datasheet

Active sensing surface is circled red.

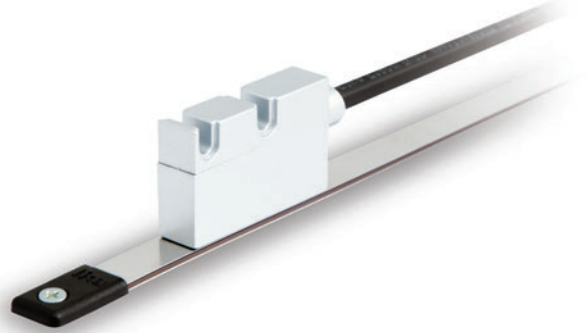


You are welcome to address your sales engineer for technical issues, and certainly our sales assistants for any ordering issue.

Best Regards
LIKA ELECTRONIC Srl
Sales & Marketing team



- Robust linear encoder for position measurement
- Large mounting tolerance with gap clearance up to 4.0 mm
- IP67 protection
- Resolution up to 0.01 mm
- Special resolutions possible



SMK

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

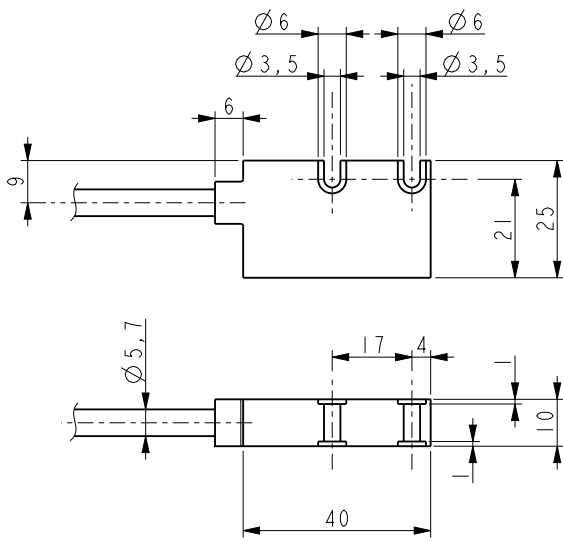
Dimensions:	see drawing
Housing material:	die cast aluminium, UNI EN AC-46100
Electrical connections:	Lika Hi-flex cable M8 2,0 m or M12 8 pin inline plug
Gap between sensor/tape (without cover strip):	0,1 ÷ 4,0 mm
Travel speed (mechanical):	max 2,5 m/s
Measurement length:	Tape length -5 mm each side

ELECTRICAL SPECIFICATIONS

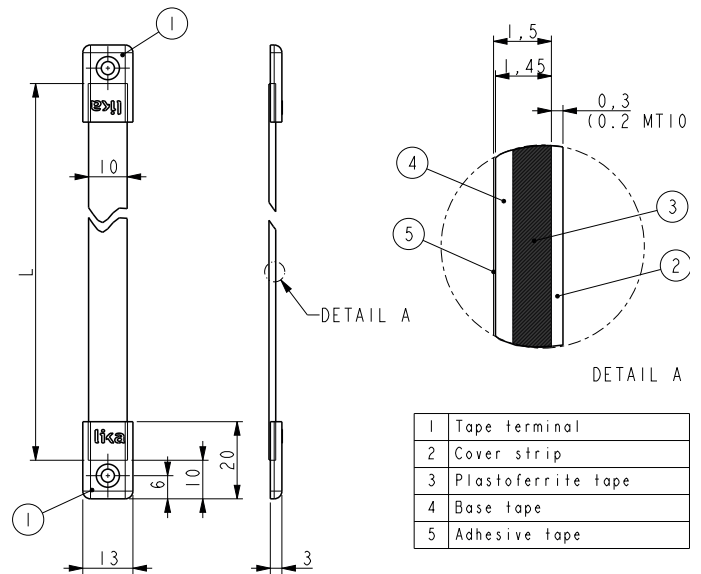
Resolution:	1 / 0,5 / 0,1 / 0,05 / 0,025 / 0,01 mm
Sensor accuracy:	±25 µm max.
Repeat accuracy:	±1 increment
Output circuits:	Line Driver, Push-Pull
Output signals:	AB0 /AB0
Counting frequency:	20 kHz max.
Power supply:	+5Vdc ±5%, +10Vdc ÷ +30Vdc
Power consumption:	70 mA max.
Protection:	against inversion of polarity (except 5Vdc version) and short-circuit
EMC:	acc. to EN 61000-6-2 level 3

ACCESSORIES

MT50:	Magnetic tape
KIT PS1-1,0:	Protection profile (10 pcs)
KIT LKM-1440:	Set of tape terminals (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.



SMK



MT50

Order code - Sensor

SMK	-	XX ⓐ	-	X ⓑ	-	XXXX ⓒ	-	X ⓓ	-	XX ⓔ	-	/Sxxx ⓕ
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ⓐ OUTPUT CIRCUITS

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

ⓑ POWER SUPPLY

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

ⓒ RESOLUTION

1000 = 1 mm
 500 = 0,5 mm
 100 = 0,1 mm
 50 = 0,05 mm
 25 = 0,025 mm
 10 = 0,01 mm

ⓓ INDEX

N = without
 I = every 5 mm

ⓔ 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

ⓕ CUSTOM VERSION

Order code - Magnetic tape

MT50	-	XXX ⓐ	-	XXX ⓑ	-	X ⓒ	-	/Sxxx ⓓ
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ⓐ 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

ⓒ COVER STRIP

0 = not supplied
 1 = supplied

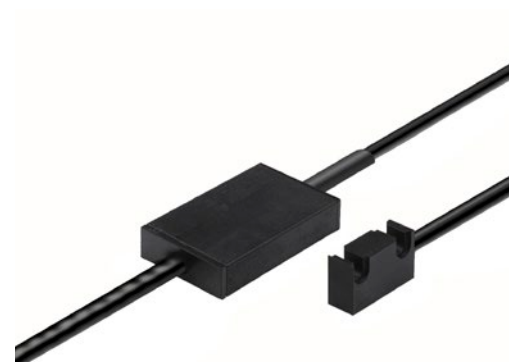
ⓓ CUSTOM VERSION

Series

SMB2 • SMB5



- Compact encoders with in-line external interpolator
- IP67 protection
- Resolution up to 5 μm



SMB2 • SMB5

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
Gap between sensor/tape (without cover strip):	SMB2: 0,1 ÷ 1,0 mm SMB5: 0,1 ÷ 2,0 mm
Travel speed (mechanical):	max 16 m/s
Measurement length:	Tape length -5 mm each side

ELECTRICAL SPECIFICATIONS

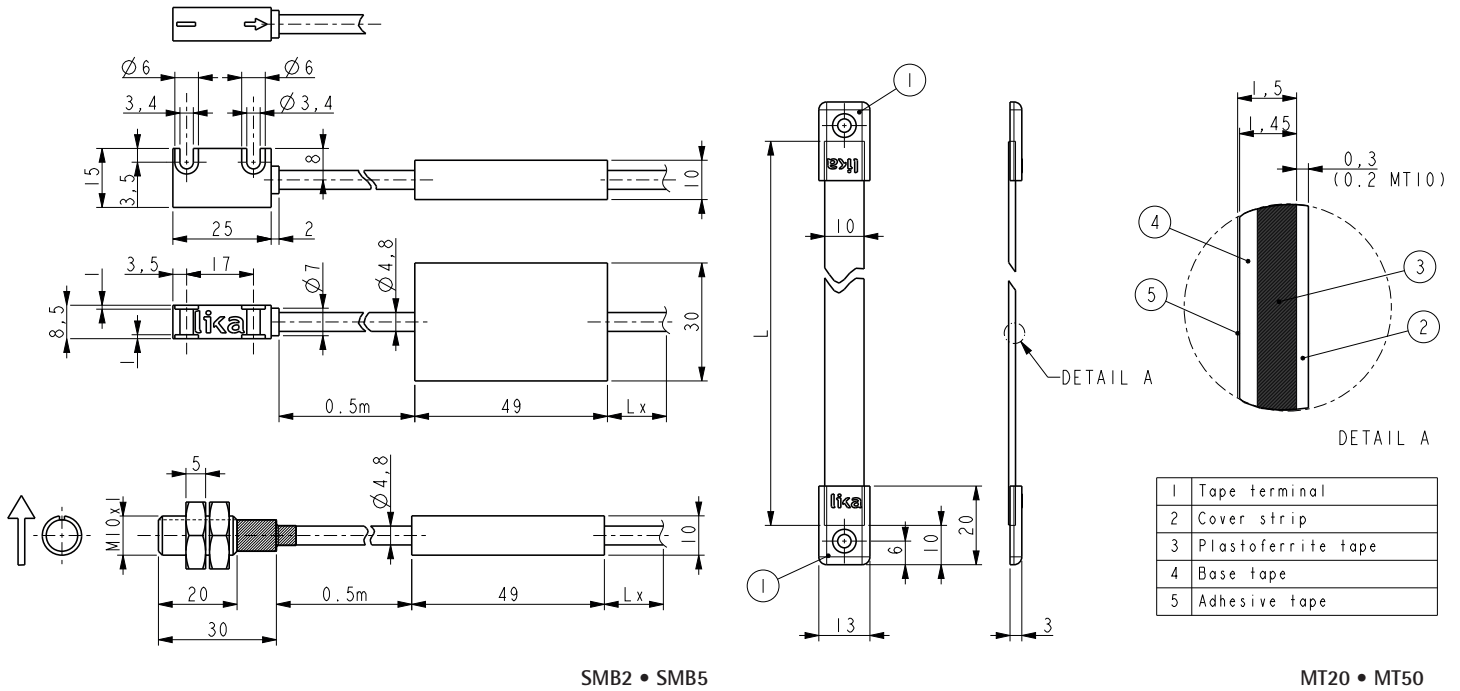
Resolution:	0,01 / 0,005 mm
Sensor accuracy:	$\pm 15 \mu\text{m}$ max.
Repeat accuracy:	± 1 increment
Output circuits:	Line Driver, Push-Pull
Output signals:	AB0 /AB0
Counting frequency:	acc. to edge distance setting
Power supply:	+5Vdc $\pm 5\%$, +10Vdc ÷ +30Vdc
Power consumption:	70 mA
Protection:	against inversion of polarity (except 5Vdc version) and short-circuit
EMC:	acc. to EN 61000-6-2 level 3

ACCESSORIES

MT20:	Magnetic tape for SMB2
MT50:	Magnetic tape for SMB5
KIT PS1-1,0:	Protection profile (10 pcs)
KIT LKM-1440:	Set of tape terminals (10 pcs)

Edge distance selection

Order code	Edge distance (μsec)	Max. counting frequency (kHz)	Resolution (μm) vs. max. possible speed (m/s)	
			5	10
H	0,3	3.333	11,67	23,34
J	0,5	2.000	7,00	14,00
A	1	1.000	3,50	7,00
B	2	500	1,67	3,34
C	4	250	0,88	1,75



SMB2 • SMB5

MT20 • MT50

Order code - Sensor

SMB2	-	X	-	XX	-	X	-	XX	-	XX	-	XX	-	X	/Sxxx
SMB5		(a)		(b)		(c)		(d)		(e)		(f)		(g)	(e)

<p>(a) SENSOR R = rectangular C = circular</p> <p>(b) OUTPUT CIRCUITS Y = Push-Pull (AB) YC = Push-Pull (AB, /AB) L = Line Driver (AB, /AB)</p>	<p>(c) POWER SUPPLY 1 = +5Vdc ±5% (L output circuit) 2 = +10Vdc ÷ +30Vdc (Y and YC output circuit)</p> <p>(d) RESOLUTION 10 = 0,01 mm 5 = 0,005 mm (only SMB5) <i>(others on request)</i></p> <p>(e) CONNECTIONS 0,5 = cable length between sensor and converter 0,5 m <i>(others on request)</i></p>	<p>(f) CONNECTIONS L2 = cable output 2 m L5 = cable output 5 m Lx = cable output x m</p> <p>(g) EDGE DISTANCE <i>(see edge distance selection)</i> H = 0,3 µs J = 0,5 µs A = 1 µs B = 2 µs (standard value) C = 4 µs</p>	<p>(h) CUSTOM VERSION</p>
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Order code - Magnetic tape

MT20	-	XXX	-	XXX	-	X	-	/Sxxx
MT50		(a)		(b)		(c)		(d)

<p>(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</p>	<p>(b) ACCURACY CLASS 100 = ±85 µm/m 50 = ±35 µm/m (up to 30 m) 10 = ±8 µm/m (up to 10 m)</p>	<p>(c) COVER STRIP 0 = not supplied 1 = supplied</p>	<p>(d) CUSTOM VERSION</p>
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