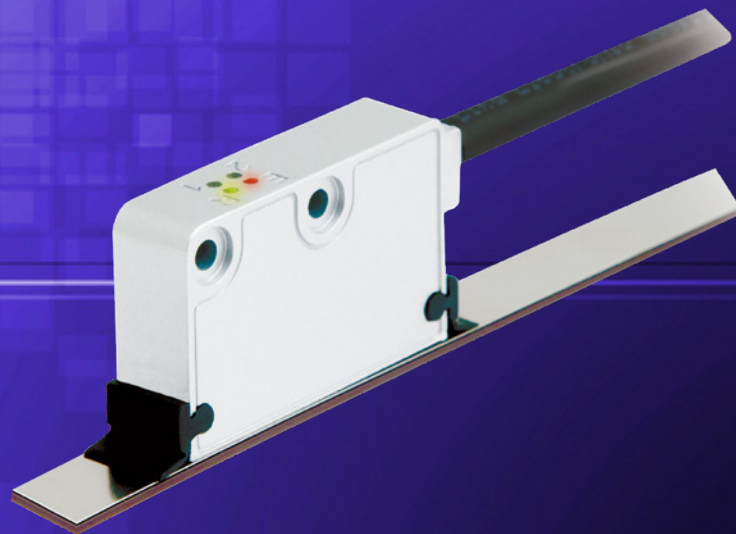


MAGNETIC SCALE



Content:

Technical Data2
Technical Drawing3
Electrical Connection3
Order Code4

Series MXI51

Key-Features:

- Measurement ranges up to 100 m
- HTL or TTL output
- Unaffected by dust, debris or liquids, IP67
- Hi-flex cable
- High performance encoder for linear motors
- Operating temperature range from -25°C to +85°C

TECHNICAL DATA

Sensor MXI51	
Measurement range	max. 99.99 m (tape length - 10 mm)
Resolution	50, 25, 10 or 5 µm
Sensor linearity	±15 µm max.
Repeat linearity	±1 increment
Output circuits	Line Driver, Push-Pull
Output signals	AB0 /AB0
Counting frequency	according to edge distance setting ¹⁾
Power supply	+5 VDC ±5 %, 10...30 VDC
Power consumption	max. 70 mA
Protection electrical	against inversion of polarity (except 5 VDC version) and short-circuit
EMC	according to EN 61000-6-2 level 3
Shock	250 g, 6 ms according to CEI EN 60068-2-27
Vibrations	10 g, 5-2000 Hz according to CEI EN 60068-2-6
Protection class	IP67
Operating temperature range	-25...+85 °C
Storage temperature range	-40...+100 °C
Housing material	die cast aluminium, UNI EN AC-46100
Electrical connection	Hi-flex cable with open wires or cable with connector M12 8 pins
Gap between sensor/tape (without cover strip)	0.1...2 mm
Travel speed (mechanical)	max. 16 m/s

¹⁾ Edge distance selection

Order code	Edge distance (µs)	Max. counting frequency (kHz)	Resolution vs. max. possible speed (m/s)			
			5 µm	10 µm	25 µm	50 µm
H	0.3	3333	11,67	23,34	25	25
J	0.5	2000	7	14	25	25
A	1	1000	3,5	7	17,5	17,5
B	2	500	1,67	3,34	8,35	8,35
C	4	250	0,88	1,75	4,38	4,38

Magnetic Tape WB20

Length	max. 100 m
Protection class	IP67
Operating temperature range	-20...+70 °C
Storage temperature range	-40...+100 °C
Thermal expansion coefficient	16 * 10 ⁻⁶ / K
Polar pitch	5 mm
Accuracy class	±85 µm/m, ±35 µm/m (up to 30 m), ±8 µm/m (up to 10 m)

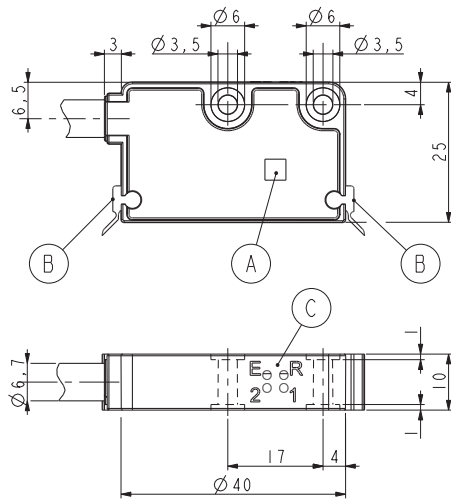
Magnetic Tape WB20 Chemical Resistance Information

Acetone	••	Kerosene	•	Seawater	••
Acetylene	••	Ketone	•••	Steam heat	•
Antifreeze (Glacial acetic acid)	•	Mineral / Motor oil	•	Thinner	•••
Benzene	•••	Petrol	••	Turpentine	••
Heptane	•••				

• No effect or low effect •• Low to Medium effect ••• Strong effect

TECHNICAL DRAWING

Sensor MXI51



MXI51

A Reference sensor „R“

B Dust wipers

C Diagnostic LEDs

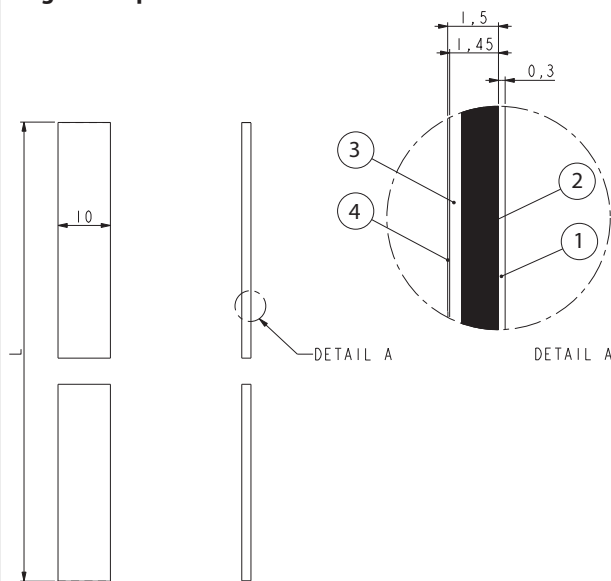
E: Gap/Speed error (red)

R: Reference detection (green)

1: LED 1 (not used)

2: LED 2 (not used)

Magnetic Tape WB50



1 Cover strip

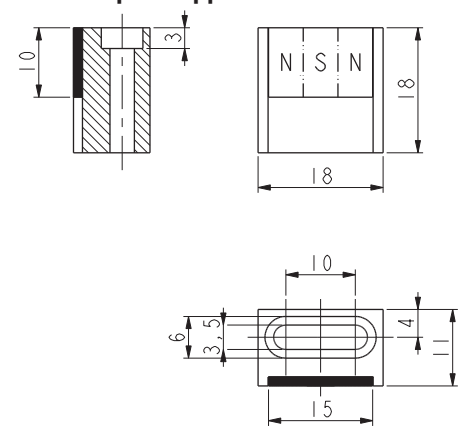
2 Plastoferrite tape

3 Carrier with adhesive strip

4 Adhesive tape

L Magnetic tape length

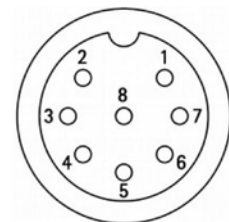
Reference pole support WKM-1309-5



ELECTRICAL CONNECTION

Signals MXI51	cable output	connector output	K8PXM-S-M12 ⁴ cable colour
0 VDC	BK	1	WH
+VDC ²	RD	2	BN
A	YE	3	GN
/A	BU	4	YE
B	GN	5	GY
/B	OG	6	PK
0 ³	WH	7	BU
/0 ³	GY	8	RD
Shielding	Shield	Case	Shield

connector output, M12, male

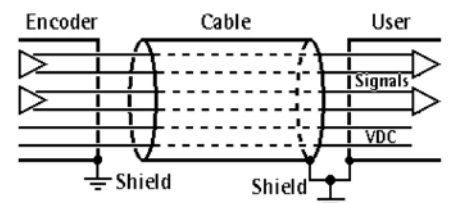


¹ Index (I, K) or Reference (R, T), see the order code; with "N" order code the signal is not provided

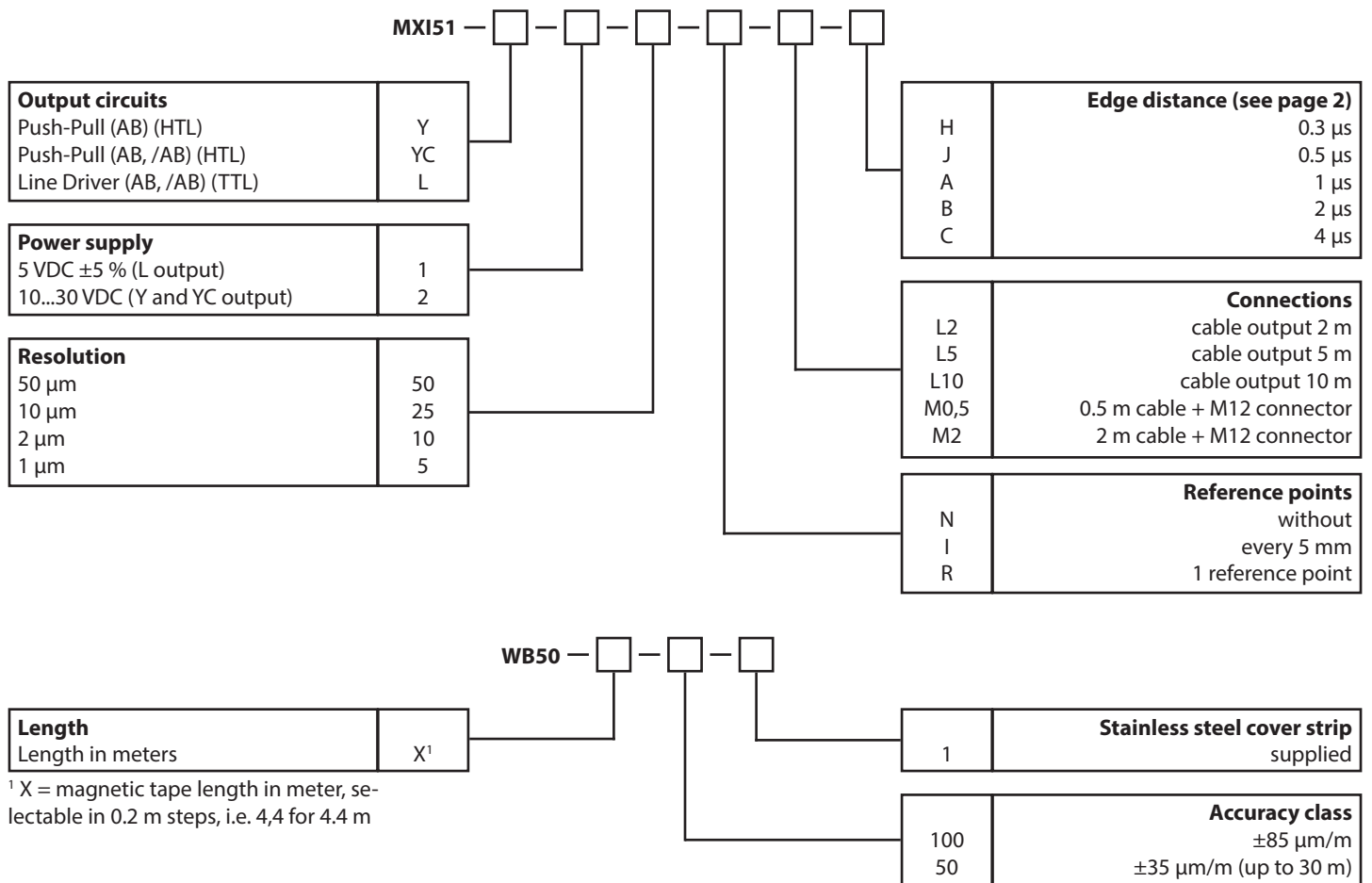
² See "order code" page 4.

³ Index (I) or Reference (R), see the order code; with "N" order code the signal is not provided

⁴ See "accessories" page 4. X is cable length in m, e.g. cable length 2 m = K8P2M-S-M12.



ORDER CODE



ACCESSORIES

Cables and connectors

D8-G-M12-S	M12 8 pin mating connector, straight
D8-W-M12-S	M12 8 pin mating connector, angular
K8P2M-S-M12	2 m, connector straight, M12, IP67
K8P5M-S-M12	5 m, connector straight, M12, IP67
K8P10M-S-M12	10 m, connector straight, M12, IP67

Other accessories

WKM-1309-5	Reference pole for option R and T
KIT WIPERS	Wipers (10 pcs)

Subject to change without prior notice.

WayCon Positionsmesstechnik GmbH

email: info@waycon.de

internet: www.waycon.biz

WayCon

Positionsmesstechnik

Head Office

Mehlbeerenstr. 4

82024 Taufkirchen

Tel. +49 (0)89 67 97 13-0

Fax +49 (0)89 67 97 13-250

Office Köln

Auf der Pehle 1

50321 Brühl

Tel. +49 (0)2232 56 79 44

Fax +49 (0)2232 56 79 45