

MAGNETIC SCALE



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Series MXW11 and MXI11

Key-Features:

- Measurement ranges up to 100 m
- Sine-Cosine 1Vpp real-time output (MXW)
- HTL or TTL output (MXI)
- 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 MXW11	Sensor MXI11				
Measurement range	[m]	max. 99.99 (tape length - 10 mm)					
Resolution	[μm]	theoretically unlimited	0.5	1	2	5	10
Signal period	[μm]	1000	-				
Sensor linearity max.		1 % of period length	± 15				
Repeat linearity		± 1 increment					
Output circuits		1 Vpp	Line Driver, Push-Pull				
Output signals		sine/cosine, AB0, /AB0	AB0, /AB0				
Edge distance	[μs]	-	0.3				
Counting frequency max.	[kHz]	8	3333				
Power supply	[VDC]	+5 \pm 5 %	+5 \pm 5 %, 10...30				
Power consumption	[mA]	70	max. 70				
Protection electrical		against short-circuit	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	[$^{\circ}\text{C}$]	-25...+85					
Storage temperature range	[$^{\circ}\text{C}$]	-40...+100					
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)	[mm]	0.1...0.5					
Travel speed max. (mechanical)	[m/s]	16					
Travel speed max. (electrical)	[m/s]	-	1.17	2.33	4.67	11.67	

Magnetic Tape WB10

Length	[m]	max. 100				
Protection class		IP67				
Operating temperature range	[$^{\circ}\text{C}$]	-20...+70				
Storage temperature range	[$^{\circ}\text{C}$]	-40...+100				
Thermal expansion coefficient	[K^{-1}]	$16 \cdot 10^{-6}$				
Polar pitch	[mm]	1				
Accuracy class		$\pm 85 \mu\text{m/m}$, $\pm 35 \mu\text{m/m}$ (up to 30 m), $\pm 8 \mu\text{m/m}$ (up to 10 m)				

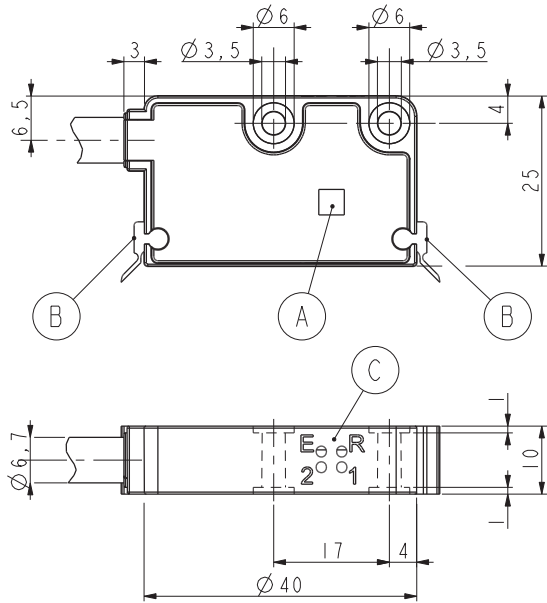
Magnetic Tape WB10 Chemical Resistance Information

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

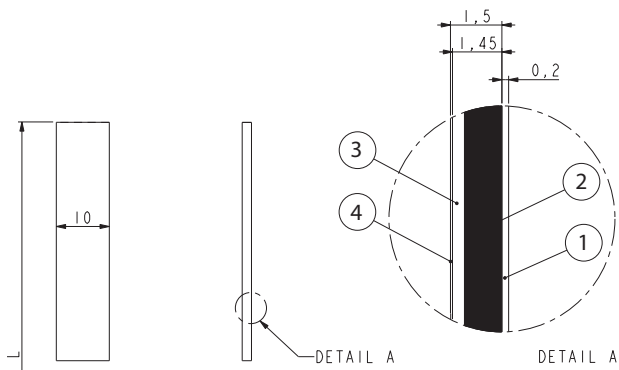
TECHNICAL DRAWING

Sensor MXW11 / MXI11



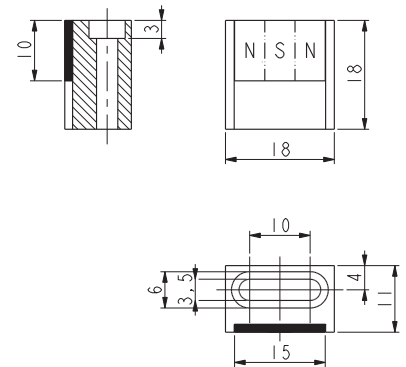
	MXW11	MXI11
A	Reference sensor „R“	
B	Dust wipers (not included in delivery)	
C	Diagnostic LEDS	Diagnostic LEDS
	E: Gap/Speed error (red) R: Reference detection (green) 1: Output A (green) 2: Output B (green)	E: Gap/Speed error (red) R: Reference detection (green) 1: LED 1 (not used) 2: LED 2 (not used)

Magnetic Tape WB10

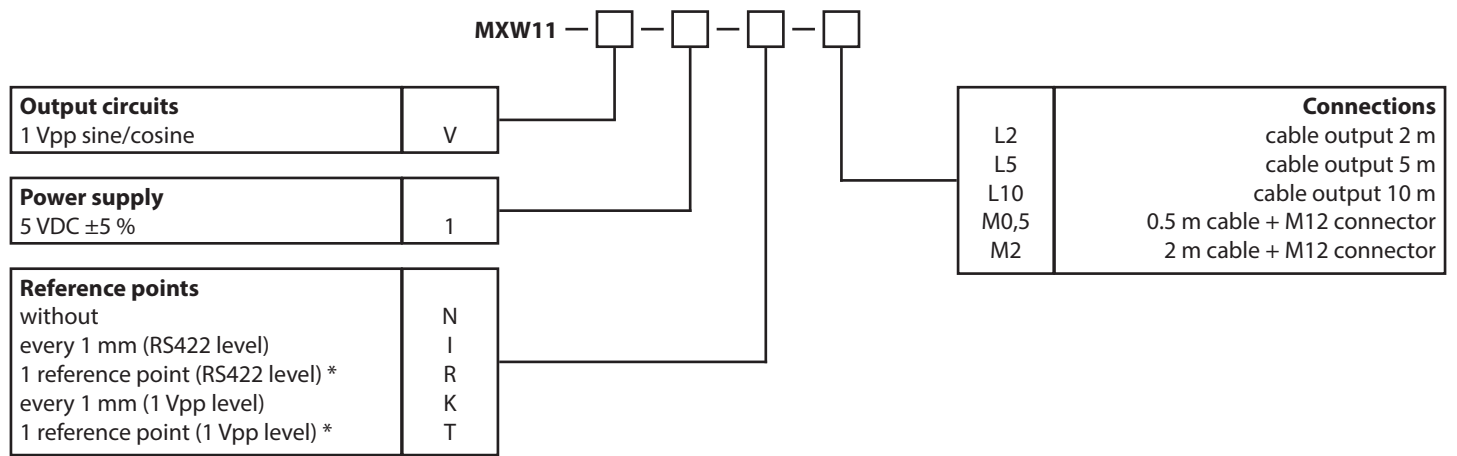


- | | |
|---|-----------------------------|
| 1 | Cover strip |
| 2 | Plastoferrite tape |
| 3 | Carrier with adhesive strip |
| 4 | Adhesive tape |
| L | Magnetic tape length |

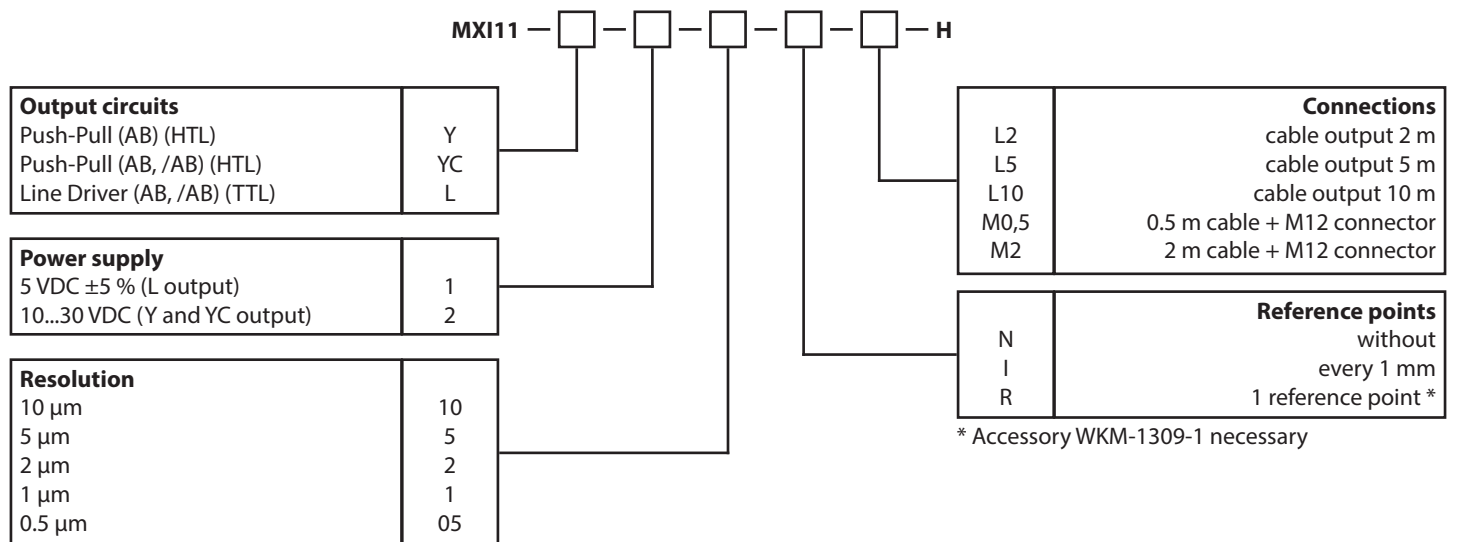
Reference pole support WKM-1309-1



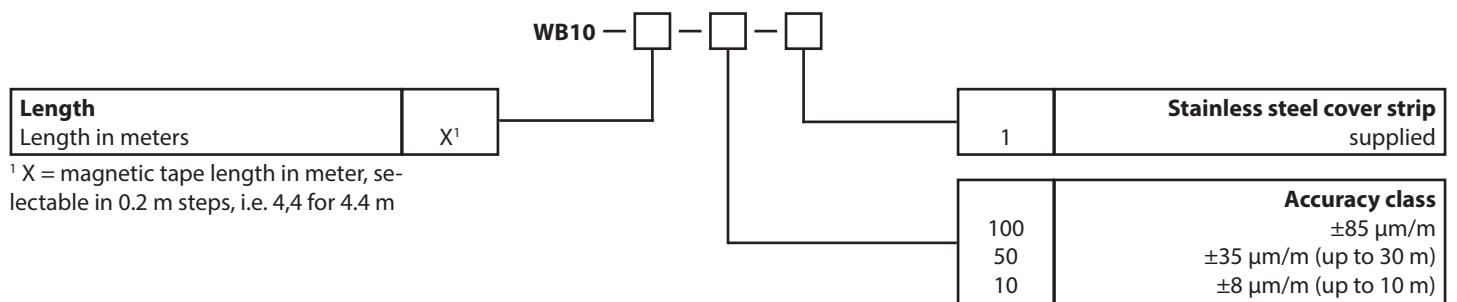
ORDER CODE



* Accessory WKM-1309-1 necessary



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¹ X = magnetic tape length in meter, selectable in 0.2 m steps, i.e. 4,4 for 4.4 m

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-1309-1	Reference pole for option R and T *
KIT WIPERS	Wipers (10 pcs) *

* not included in delivery

Subject to change without prior notice.

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