

EMIX23 Magnetic Encoder for Velmex Linear Assemblies (Part # ENCMAGL1-xx)

Magnetic linear encoder 1 μ m resolution

- With periodic index pulse
- Differential 5 V-TTL line driver outputs
- Resolution 0.001 mm (using 4 times edge multiplier)
- Repeating accuracy +/- 0.001 mm
- Small sensor with integrated translator



Technical Specifications 5V TTL output version

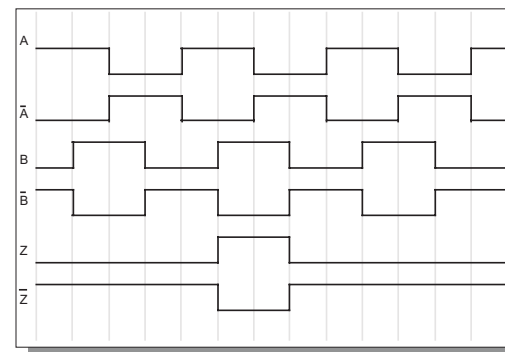
SENSOR electrical data	
Measuring principle	Incremental
Signal output	Speed proportional
Resolution at 4 edge triggering	0.001 mm
Repeat accuracy	+/- 0.001 mm
Accuracy of the system in μ m at 20 ° C	+/- 25 + 20 x L (L = measuring length in meters)
Max. permitted distance to the tape	0.8 mm
Power supply	5 VDC
Tolerance of power supply	5 VDC: +/- 2.5 %, remaining ripple < 50 mV
Consumption	5 VDC: max. 200 mA
Translator circuit intern/extern	intern
Output levels	5 VDC - TTL Line Driver
Output channels	A, A', B, B', Z, Z'
Output characteristics	Push/pull, durable short circuit proof
Max. output frequency per channel	TTL: 100 KHz at 0.4 m/s resp. 500 KHz at 2.0 m/s
Output current per channel	20 mA
Max. operating speed	2.0 m/s
Index pulses	Periodic output of channels Z and Z'
Cable length	5 VDC / 5 V-TTL = 3 m (10 m max allowable)
Min. bend radius of sensor cable	60 mm' s
Operation temperature	0... + 50 ° C
Stock temperature	-20... + 70 ° C
Humidity	95 %, not condensing

Connections

	Unterminated Cable Standard	Bendix PTO 6A-10-6P (For Metronics DROs)
Function	Color	Pin no.
0V (GND)	White	D
5VDC VDC in	Brown	C
Channel A	Green	A
Channel B	Yellow	B
Channel Z	Black	F
Channel A'	Violet	N/C
Channel B'	Orange	N/C
Channel Z'	Gray	N/C
Shield	PE	E

NOTE: A', B', Z' are for differential encoder interfaces. For single ended interfacing leave A', B', Z' unconnected.

A/B Quadrature Pulse diagram



The channels A and B are 90 ° phase shifted

The output of the index pulse is periodically after 2 mm's