

# Magna Slim

## Measurement made easy and compact

Magna Slim is a contact less magnetic measurement system, easy to install and highly resistant to oil, dust, dirt and vibrations, making it suitable for use under harshest of conditions. The system consists of a magnetic tape, its aluminium carrier profile. This low profile system can be installed in compact spaces.

The magnetic tape slides through the aluminium profile and is held at either ends or at center, thereby allowing the free expansion of magnetic tape due to temperature effect. This modular design also offers ease of installation as well as maintenance where longer length machines are disassembled during transportation.

Magna Slim along with EMC14 or EMC25 makes an ideal choice for high speed, non-contact, accurate measurement.



### Salient Features:

- Compact and cost effective solution for linear measurement
- Offers ease of installation due to modular design
- Offers ease of maintenance due to easy tape replacement without disturbing the assembly
- Reduced manufacturing lead times
- Available in industry accepted Ingress protection class IP68
- Available for incremental Encoders
- Available in standard 1mm, 2mm, 5mm pole pitches. Custom pole pitches available on request
- Wide variety of resolutions from 0.1µm to 100µm
- Different accuracy grades of magnetic tapes available for different applications
- Manufactured to ISO 9001:2015 standard



### Major Applications:

- Machine Tools Industry
- Automation
- Material Handling Machines
- Length Cutting Machines
- Dispensing Machines
- Medical Engineering
- Measuring/Inspection Machines
- Robotics
- Special Purpose Machines
- Pick and Place Machines
- Linear Motor Applications

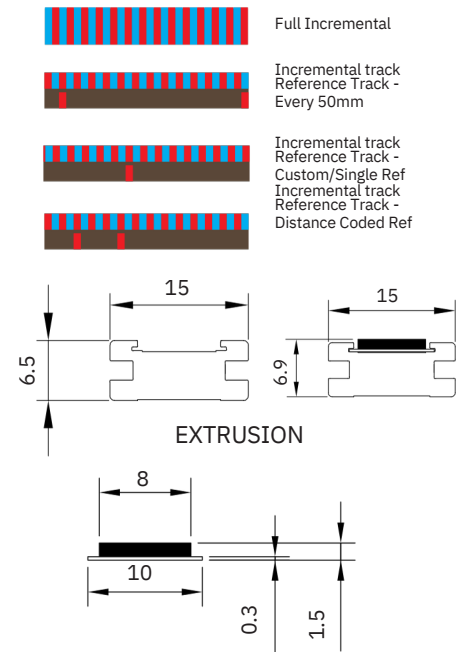


# Magna Slim Linear Encoder System

Magnetic tape Grating variety

## Specifications for Magnetic tapes:

Pole Pitch	1mm, 2mm, 5mm
Measuring type	Incremental
Accuracy grade (per mtr)	$\pm 3.5\mu^*$ , $\pm 5\mu^*$ , $\pm 10\mu$ , $\pm 15\mu$ , $\pm 20\mu$ , $\pm 40\mu$ , $\pm 100\mu$
Tape width	Metal carrier 10mm + 0.2mm, Elastomer: 8mm + 0.2mm
Tape thickness	1.5mm + 0.1mm
Protective layer types	Option 1: Vinyl protection layer (Thickness 0.1mm) Option 2: Stainless steel tape (thickness 0.3mm)
Maximum length	60mtrs
Thermal expansion coefficient	$\sim 11 \times 10^{-6}$ per $^{\circ}\text{C}$
Operating Temperature	-20 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Storage Temperature	-20 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Minimum bending radius	150mm
Standard packing length	20m rolls (Higher lengths up to 60mtrs available on request)
Reference mark options	Option 1: No reference mark (Full incremental grating) Option 2: Multiple reference mark 50mm spaced Option 3: Single mark as per requirement Option 4: Distance coded reference mark Option 5: Custom reference mark

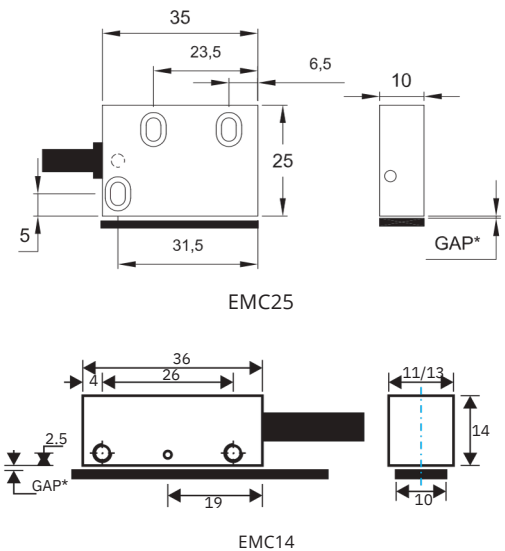


MAGNETIC TAPE DIMENSIONS (WITHOUT PROTECTIVE)

\* For accuracy grade of  $\pm 3.5\mu$  and  $\pm 5\mu$  requires special Magnetization process

## Specifications for Reader head:

	EMC25	EMC14
Type of Encoder		Incremental
Resolution (X4 edge)		0.244 to 100 $\mu\text{m}$
Accuracy		$\pm 10\mu\text{m}$
Repeat Accuracy		$\pm 1$ resolution count
Hysteresis		$< 3\mu\text{m}$
Power Supply		+5VDC, 6.5-30VDC
Current Consumption		$< 0.6\text{W}$
Output signal		Option 1 - Quadrature Differential RS422
Operating Temperature		Option 2 - 1Vpp Signal with Signal period of one pole pitch
Cable Type		-20 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Standard Cable Length		PUR Cable
Protection Class		3 meters (Max. 20 meters*)
Status LED		IP68 Available



Pole Pitch	1mm	2mm	5mm
Gap *	0.1-0.3 mm	0.1-0.8mm	0.1-2.5mm

\* Detailed specifications are available on website

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Dealer Stamp

Owing to continuous product Research and Development designs and specifications are subject to change.