



MLS-3 MAGNETIC LINEAR ENCODER SYSTEM

**magnetic measuring scale and
free floating unguided sensor head**



Features;

- Incremental Encoder output A,B
- Contact-less and wear free system
- Robust shielded metal enclosure
- Protection class IP67
- Resistant to dirt, humidity and dust
- Compact design
- Requires no cleaning or Maintenance
- High tolerance to shock and vibration
- Measuring lengths of up to 100 meters

MLS-3 Magnetic Linear Encoder Scale;

- The encoder forms a compact unit. The scanning unit is guided within the housing along scale.
- Long-life linear motion guide bearing system
- The scale, scanning unit and guide are protected against contamination by an aluminum extrusion and elastic sealing lips.
- The coupling elements between the scanning carriage and transfer web are designed to transfer motion in the measuring direction only.

Pitch or other motion of the connecting web in a direction perpendicular to measurement is compensated without affecting accuracy

MLS-3 Sealed Magnetic Measuring Scale in Guidance Profile and Guided Sensor Head:

MLS-3 Sealed Magnetic Measuring Scale system consists of a slide carrier determining position with sealed rugged aluminium profile. It operates without friction. The scanning head and scale are adjusted to each other during mounting. Sealed linear encoder is protected from dust, chips and splash fluids and ideal for operation on machine tools. **MLS-3 Sealed Magnetic Measuring Scale** is a contactless and wearless linear position measuring system. It is suitable for many applications where other measuring systems would disappoint.

An aluminium housing and elastic sealing lips protect the magnetic tape, scanning carriage and guideway from chips, swarf, dirt and splashwater. The scanning carriage travels in a low-friction guide within the scale unit. It compensates unavoidable misalignment between the scale and machine guideways. **MLS-3 Sealed Magnetic Measuring Scale** can be suitable for many installation conditions.

APPLICATIONS:

The areas of application for MLS-3 position sensors are wide and varied. Sealed linear encoders are ideal for applications requiring measurement of length with high accuracy and resolution in harsh environments with airborne liquids and particles such as coolants, lubricants, chips and swarf.

Typical areas of application:

- Machining centers
- Lathes
- Milling machines
- Drilling machines
- Grinding machines
- Electrical discharge machines
- Sheet metal working machines
- Welding machines
- Bending presses
- Robotics/materials handling
- Measuring machines installed near production equipment
- Linear units/linear drives
- Linear guides
- Marble Machines
- Wood Cutting Machines/PVC Profile Cutting Machines
- Glassworking machinery etc.

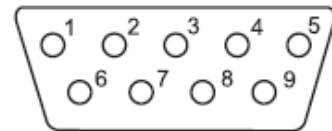
TECHNICAL SPECIFICATIONS :

Mechanical properties

Resolution Types	5 μ m , 10 μ m , 25 μ m and 62,5 μ m or on request
Output Circuit	Push-Pull or TLL RS 422 Line Driver
Output Signals	A, /A, B, /B, Z, /Z
Input Current	Max. 40mA per channel
Power Supply	10...30VDC \pm %20 or 5VDC \pm %5
Dimension	See drawing
Housing Material	Aluminium
Connections	Up to 100m cable length on request
Gap between tape and sensor	Up to 2.5mm (Depend on pole pitch)
Travel Velocity	3 m/s
Magnetic Tape Type	B5 nitrile rubber temperature magnetic tape
Measure Accuracy	\pm 1 Increment
Repetability	\pm 1 Increment
Operating temperature range	-25...+85 $^{\circ}$
Protection Class	IP67

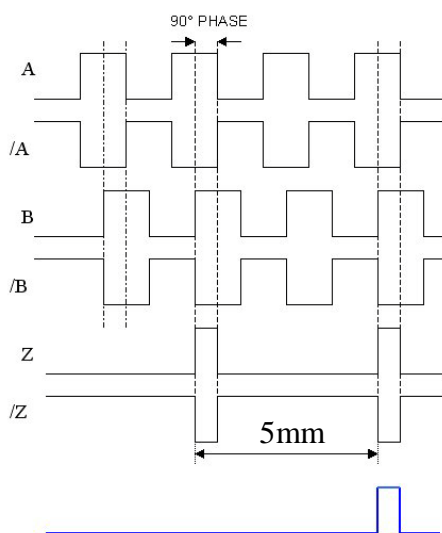
ELECTRICAL CONNECTIONS :

Signal Name	Open cable end Cable Colour	Conn. D-sub, (9 pin) Pin no.
A	YELLOW	1
/B	WHITE	2
+V	RED	3
5V or 24V	BLACK	4
/A	BLUE	5
B	GREEN	6
/Z	GRAY	7
Z	PINK	8
GROUND	SHIELD	9



Connector D-sub (Pin)
View to connector pins

SIGNAL TYPES :

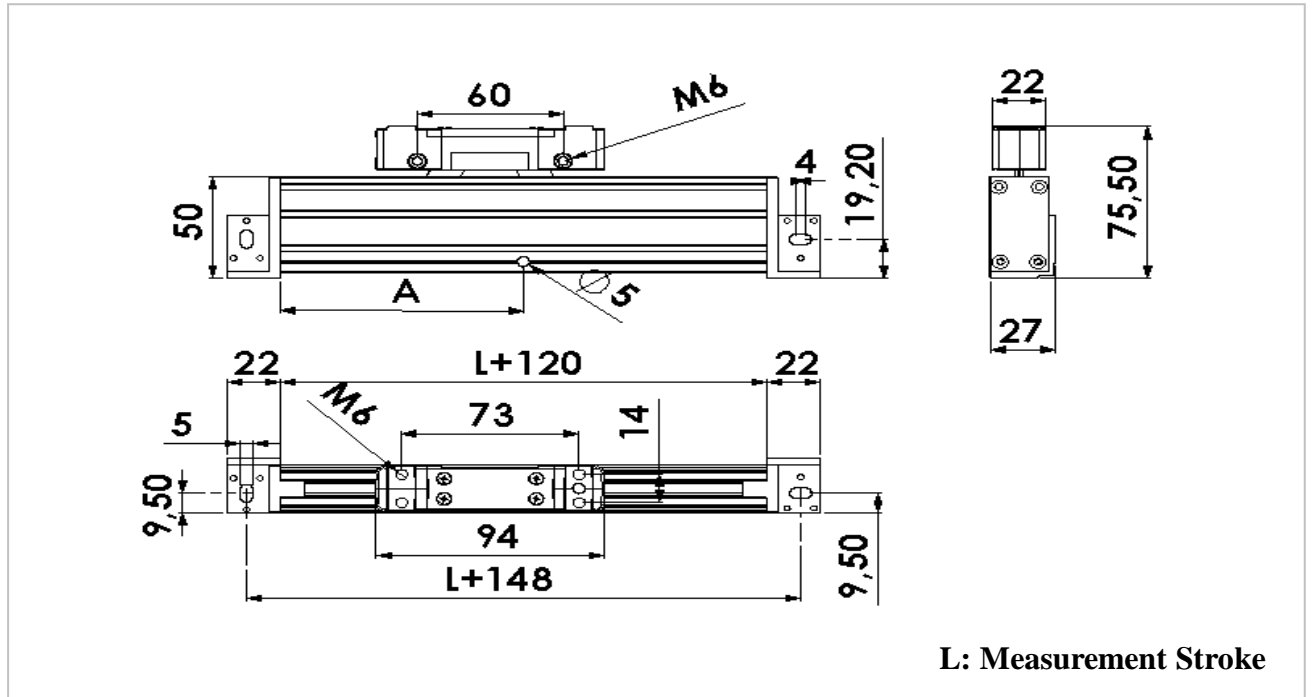


Z-Signal: Standart = every 5mm
* Optional = One Z reference signal (for example on Startpoint)

Every 5mm
Z index Pulse

Optional 'Z' Signal
ONE Z
REFERENCE SIGNAL
(for example on the
Startpoint)

SENSOR DIMENSIONS :



STROKE TABLE :

Measurement Stroke (mm)																			
100	120	150	170	200	220	250	270	300	320	350	370	400	420	450	470	500	520	550	570
Measurement Stroke (mm)																			
600	650	700	750	800	850	900	950	1000	1100	1200	1300	1400	1500	1600	1700	1800	2000	3000	4000

* For over the 2000 mm strokes please inquire us.

ORDERING CODE :



Model

Resolution
 05 = 5 μm
 10 = 10 μm
 25 = 25 μm
 62 = 62,5 μm

Power Supply and Output
PPL : 24 VDC ±%20 Power Supply
 : 24 VDC Push-Pull Output

TTL : 5 VDC ±%5 Power Supply
 : 5 VDC TTL RS422 Line Driver Output

Option : 24 VDC ±%20 Power Supply
 : 5 VDC TTL RS422 Line Driver Output
 Please on request !

Signal Output Type
 2 = A, B
 3 = A, B, Z
 4 = A, /A, B, /B
 6 = A, /A, B, /B, Z, /Z

 Z-Signal: Standart = every 5mm
 * Optional = One Z reference signal (for example on Startpoint)

Cable Length
5M = 5M
10M = 10M

 * optional between 5M to 50M

E.g. = MLS305-PPL-2-5M

MLS3 = MLS3 Series
 05 = 5 μm resolution
 PPL = Push Pull signal output and 24 VDC Power Supply
 2 = A, B signal output
 5M = 5 meter cable

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