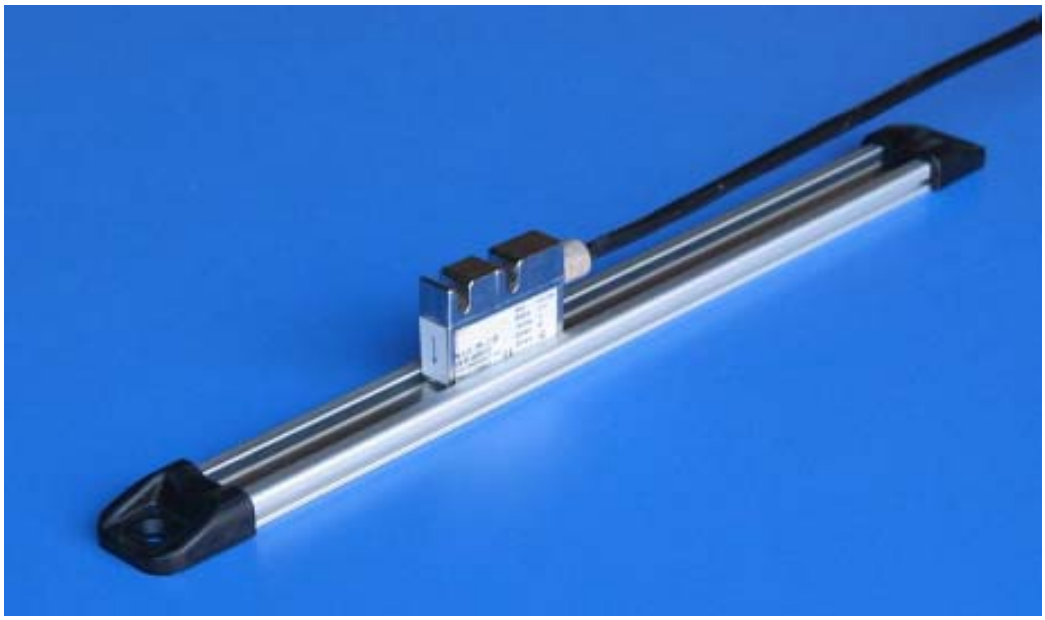


MYLES-2
MAGNETIC LINEAR ENCODER PROFILE SYSTEM

magnetic measuring scale in flat profile and unguided sensor head

- **High resolution up to 0.001 mm**
- **Tape in flat and rugged aluminum profile**
- **Stainless steel cover protect**
- **Best technology in small dimensions**
- **Shielded metal enclosure**
- **Easy mounting**
- **Contact-less and vear free system**
- **High resistance to vibrations to knocks**
- **Protection class IP67**
- **Resistant to humidity**
- **High accuracy**
- **Reliability reading transducer**
- **Measuring lengths of up to 100 m**
- **Connection cable up to 20 m**

MYLES-2 Magnetic Linear Encoder Profile System:

The MYLES-2 Magnetic Linear Encoder Profile System consist of an unguided sensor head and B5 magnetic measuring tape in PS2 Profile System. They are incremental systems without contact for linear measures. The highly rugged, flexible plastic magnetic tape is applied to a metal support profile. With a special industrial adhesive layered strip. B5 Magnetic Tape is attached to the overside of the profile system. A sturdy stainless steel sheet cover is available for additional protection. Shock-proof, PS2 Profile System (aluminium case for the model **MYLES-2**) can be used in many applications easily.

Function of the aluminium carrier:

1. Guaranteeing mechanical stability. Thermal expansion is determined by expansion of the steel carrier. This results in optimal adaption for use in machines made from a steel construction.

2. Providing magnetic closing for the magnetic system consisting of the individual poles and the ferromagnetic backing itself. Applying a ferric steel carrier results in up to 30% higher magnetic field. Special care was taken to find the optimum stainless steel alloy for our standard tape .

The MYLES-2 Magnetic Linear Encoder Profile Systems are incremental systems without contact for linear measures. The capacity to measure distances longer than a meter, easy assembling, absence of parts that contact / rub, a waterproof transducer and a water-oil-dust-shaving resistant strip make this system suitable for a large number of applications, while taking position measurements of machinery within industries such as: machine tools, automatic-, wood-, marble-, glassworking machinery, etc. The measuring transducer is integrated in the same device, a sensor sensitive to a magnetic field, an electronic signals conversion circuit, and an output circuit. The sensor running on the magnetic tape produces a signal which, opportunely amplified and worked out, is changed into an incremental position signal for interfacing with displays, PLC, CNC, axes control, etc.

Applications:

MYLES-2 Magnetic Linear Encoder Profile System is designed primarily for use on machines and installations that operates in harsh environments, such as;

- Wood Cutting Machines
- Marble Machines
- PVC Profile Cutting Machines
- CNC/NC
- Milling machines
- Drilling and boring machines
- Machining centers
- Lathes
- Grinding machines
- Electrical discharge machines
- Welding machines

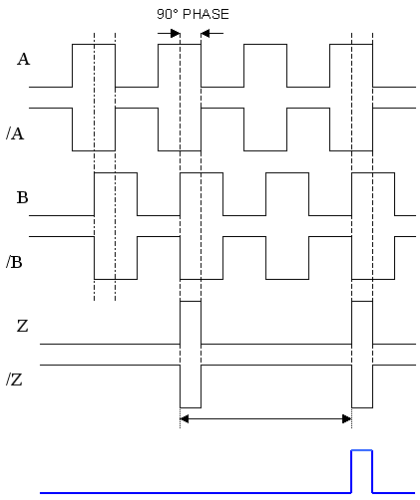
TECHNICAL SPECIFICATIONS:

Mechanical:	
Resolution Types	5 µm , 10 µm , 25 µm and 62,5 µm 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 ±%20 or 5VDC ±%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	± 1 Increment
Repetability	± 1 Increment
Operating temperature range	-25...+85°
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

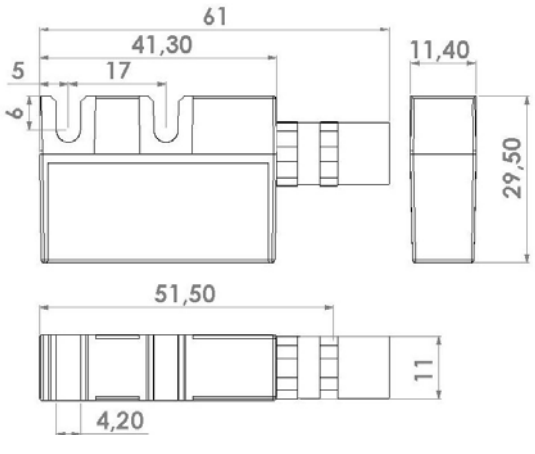
SIGNAL TYPES:



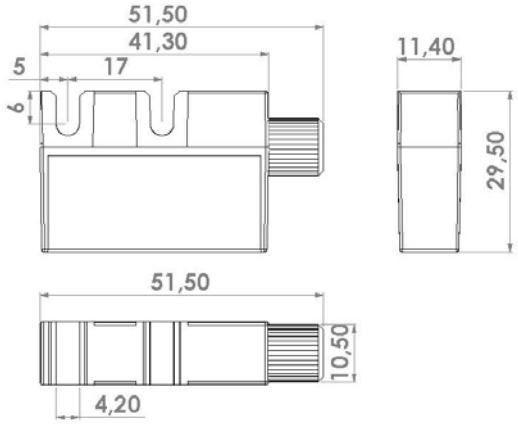
Every 5mm
Z index Pulse

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

SENSOR DIMENSIONS:



WITH SPIRAL CABLE GLAND



WITH CABLE GLAND

PS2 Profile:

- **Masking tape inside Aluminium**
- **Resistant to moisture and many fluids**
- **Extensive ruggedness against dust etc.**
- **The highly rugged, flexible**

The highly rugged, flexible plastic magnetic tape can be applied to a machine tool easily. With a special industrial adhesive layered strip, B5 MagneticTape can be attached to the overside of the profile system.
The magnetic material is magnetised in defined and even distances and works as a solid measure. The magnetic scale retains its firmness by means of a spring steel base.

The magnetic band is supplied with a non-magnetic stainless steel cover for physical protection; for its fixing an adhesive tape is pre-mounted.
As shown beside, the B5 magnetic tape is composed by three layers:

1 - A flexible magnetic tape made of plastic material
2 - A magnetised steel tape used to create a shield against any external magnetic disturb. Although, it's glued to the upper plastic layer in order to supply the correct mechanical consistency to the magnetic tape.
3 - The third part is the most rigid one and therefore is supplied separately due to transport and application needs. It must be stick to layer 1 by the user. The steel tape is magnetically neutral and employed to mechanically protect the magnetic tape.

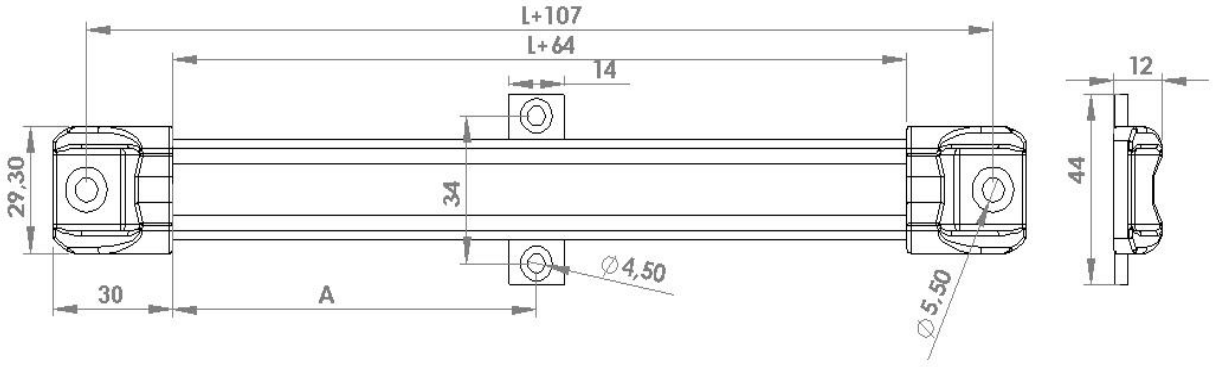
B5 Magnetic Tape

MAGNETIC TAPE SPECIFICATIONS:

Environmental conditions	
Operating temperature	**-40°C to +120°C**
Storage temperature	**-40°C to +120°C**
Water Protection	**CrNi 17 7 stainless steel carrier nitrile rubber high temp. magnetic tape**

Mechanical properties	
Width	**10 mm**
Thickness	**1,2 mm**
Length	**Up to 100 m**
Number of tracks	**1**
Pole pitch	**1 mm; 2 mm, 5 mm**
Absolute pole patern possible	**yes**
Accuracy	**±0,04mm/m up to 50m length**
Linear expansion coefficient	**(11 ±1) x 10-6 / K**

PS2 PROFILE DIMENSIONS:



ORDERING CODE:

MYLES-2	XX	X	XXX	XXX

Model

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

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

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 = 5 m
10M = 10 m

optional between 5 to 50 m

For example: MYLES-2-05-PPL-2-5M

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