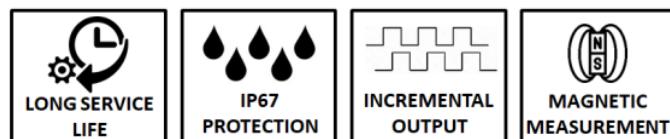


MAGNETIC READER SENSORS

MLS 120 / 121

“Small Size Magnetic Reader Sensor”



- Model with socket (MLS 120) or cable (MLS 121)
- Model with scraper or without scraper
- Easy mounting
- Resolution from 1 µm to 100 µm
- High accuracy
- Spiral or cable option
- Dust, oil and moisture resistant
- Robust aluminum body
- IP67 protection class

ML 12X series sensors can be used with magnetic stripe tape as well as PS1 profile system and PS2 profile system. Without touching the magnetic tape, it moves position 0,1 - 2 mm and precisely reads the position information and sends it as encoder pulse. Its small structure provides maximum installation convenience to the user. Due to optional integrated scraper on the sensor body, it is extra protected from dust, dirt, sawdust, etc. which may be formed on the magnetic tape or profile that it moves on. Models with socket (MLS 120) and cable (MLS 121) are available. Cable type can be requested as PUR or spiral cable.

Applications:

- Machining Centers
- PVC Cutting Machines
- Wood Cutting Machines
- Lathes, Milling, Drilling, Grinding Machines
- Sheet Metal Working Machines
- Marble Machines
- Welding Machines
- Bending Machines
- Electrical Discharge Machines
- Robotics / Material Handling
- Glass Working Machinery etc...

MLS-120 (Model with socket)

- With PUR Cable -



MLS-121 (Model with cable)

- With PUR Cable -



- With Spiral Cable -



- Without Scraper -



- With Spiral Cable -

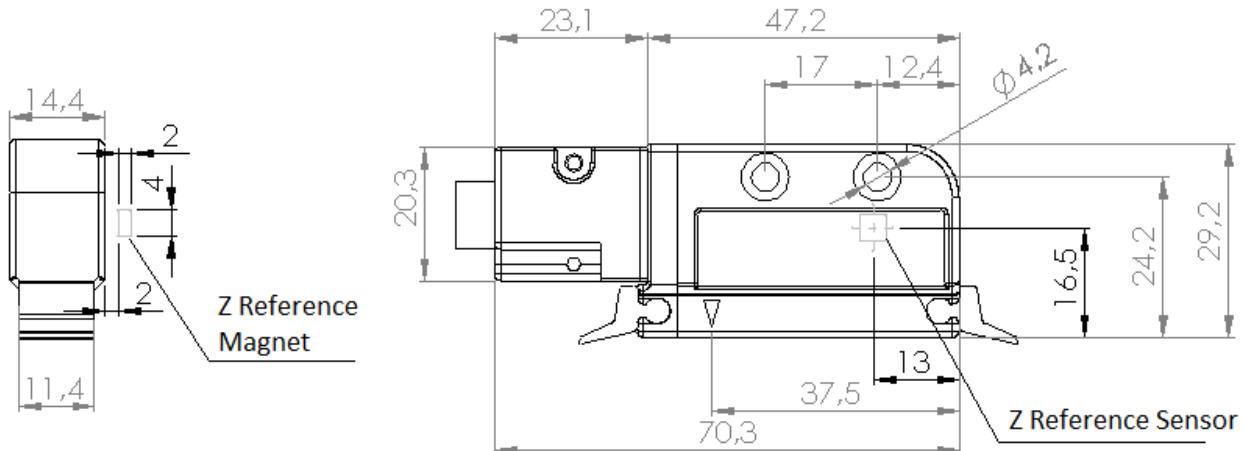


- Without Scraper -

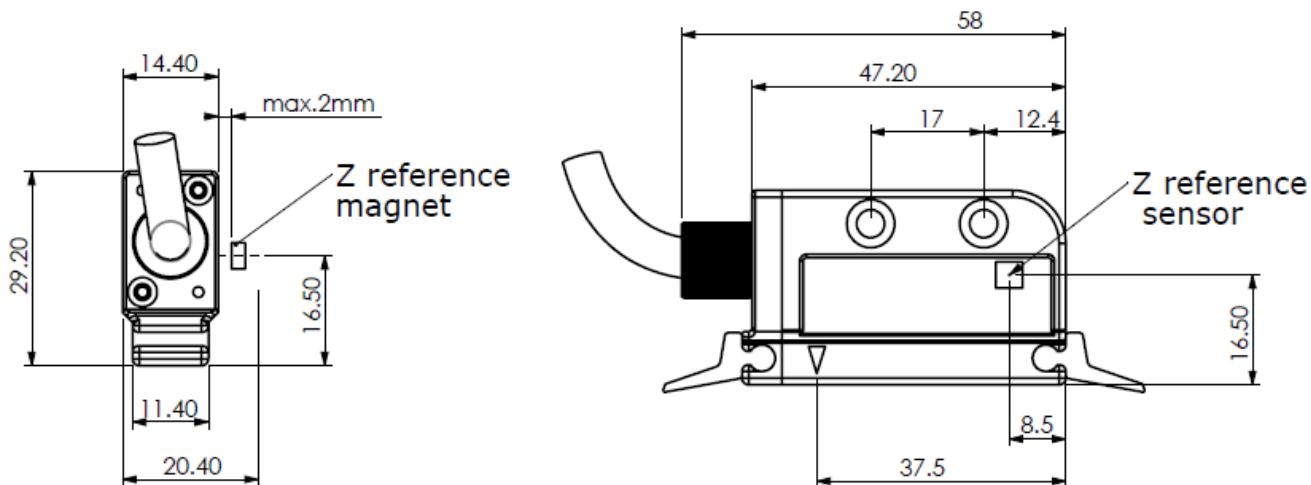


MECHANICAL DIMENSIONS (mm)

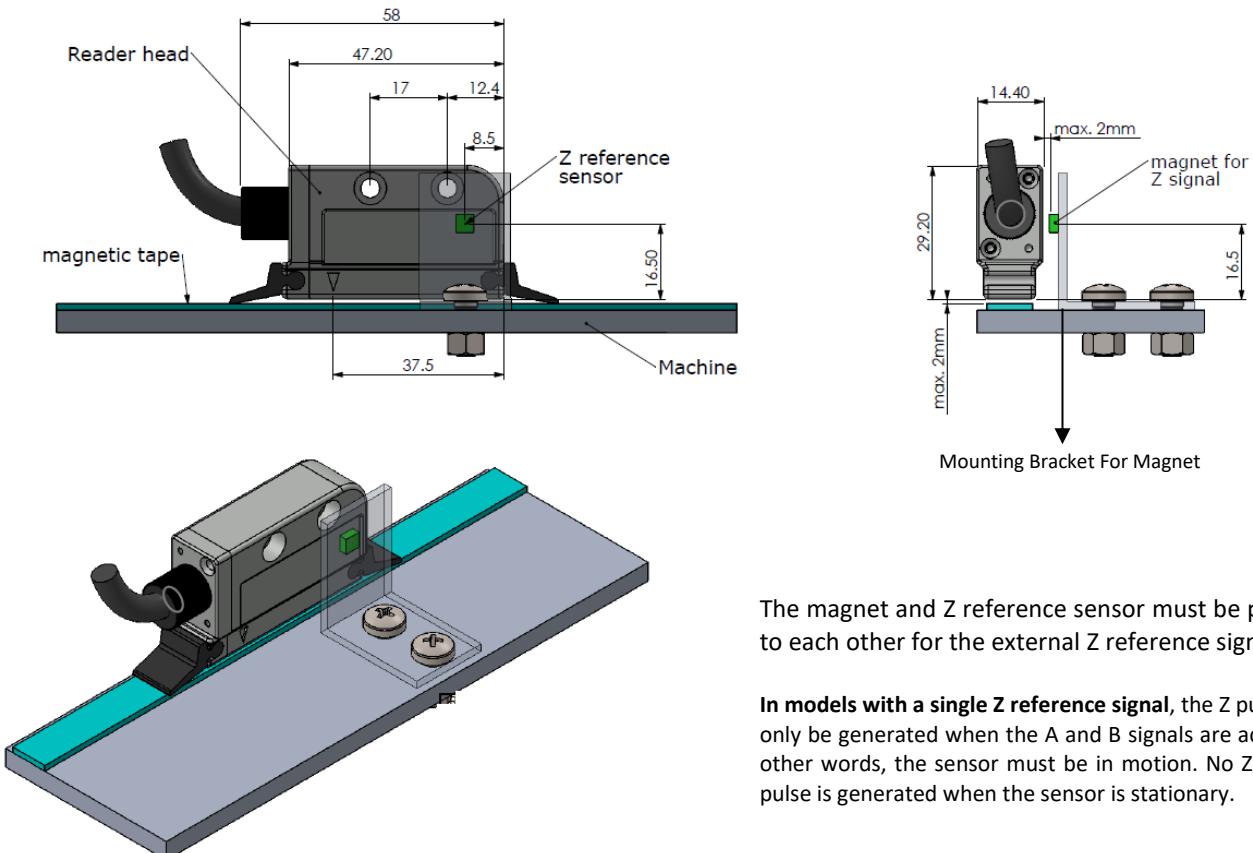
MLS-120 (with socket)



MLS-121 (with cable)



EXTERNAL Z REFERENCE SIGNAL



The magnet and Z reference sensor must be parallel to each other for the external Z reference signal.

In models with a single Z reference signal, the Z pulse can only be generated when the A and B signals are active. In other words, the sensor must be in motion. No Z output pulse is generated when the sensor is stationary.

WARNING (!) The sensor and magnetic tape must be away from magnetic areas. The proximity of the band with comparator, magnet or similar instruments having a magnetic effect, disrupts the working structure of the band.

TECHNICAL FEATURES

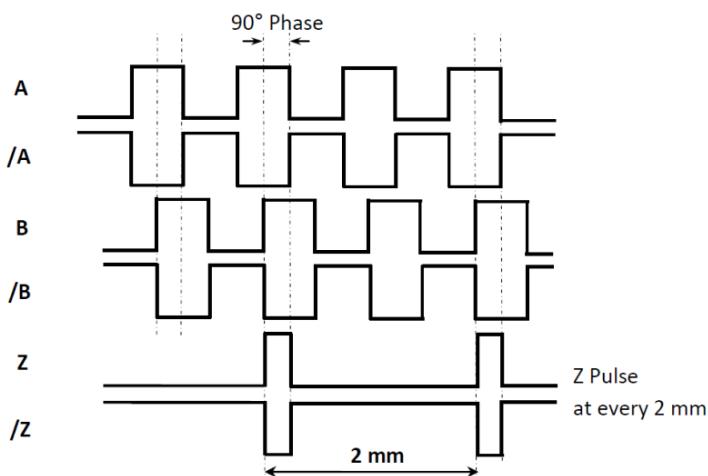
Measurement Principle	Magnetic, non-contact				
Resolution	1µm, 5µm, 10µm, 25µm, 50µm, 62.5µm, 80µm, 100µm (Optional others)				
Supply And Output	PP	10...30 VDC	TTL	10...30 VDC	HPL
	Supply	5 VDC		5 VDC TTL RS422 Line Driver	5...30 VDC
	Output	10...30 VDC Push-pull		5 VDC TTL RS422 Line Driver	5...30 VDC Push-pull
Output Signals	A, /A, B, /B, Z, /Z				
Current Consumption	40 mA / channel max.				
Repeatability	± 1 Pulse				
Gap between tape and sensor	0,1 mm to 2 mm				
Operating Speed	3 m/s				
Operating Temperature	-25...+85 °C				
Storage Temperature	-40...+100 °C				
Electrical Connection	D-Sub 9 pin connector, 5 or 8 x 0,14 mm ² shielded cable				
IP Protection Class	IP67				
Material	Aluminum				

ELECTRICAL CONNECTIONS

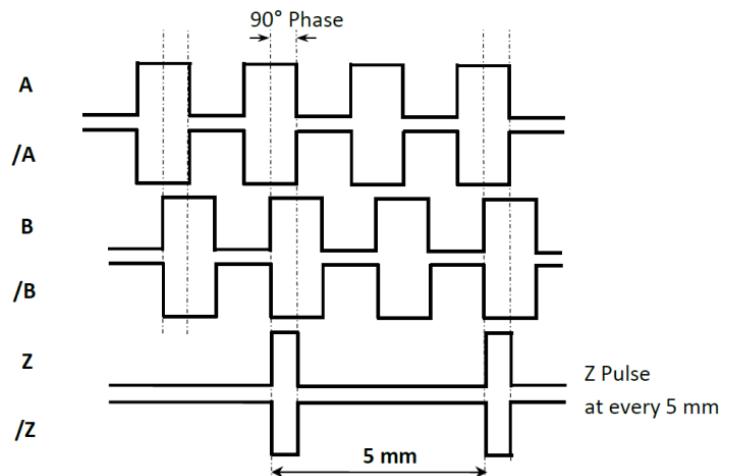
SIGNAL	CABLE COLOR	D-SUB 9 PIN / SOCKET PIN NO
A	YELLOW	1
/B	WHITE	2
+V	RED	3
OV	BLACK	4
/A	BLUE	5
B	GREEN	6
/Z	GREY	7
Z	PINK	8
-	SHIELD	9

In the left table the cable colors of sensors output signals are given. If the control circuit is suitable in the Line Driver sensors of the not output signals (/A, /B, /Z) have to be added to the system. If it is not suitable /A, /B, /Z signal cables must be fixed as insulated separately. Don't forget that these edges have electricity too.

- B2 Tape -



- B5 Tape -



MAGNETIC TAPE AND PROFILE SYSTEMS USED WITH MLS 120 SERIES



- [PS1 Profile System](#)
- [PS2 Profile System](#)
- [B Series Magnetic Tape](#)
- [RB Series Magnetic Ring](#)

ORDER CODE

Magnetic Tape		Power Supply and Output				Cable Length		Z Signal	
BS		TTL : 5VDC Supply Voltage, 5 VDC TTL RS422 Line Driver Signal Output	PP : 10...30 VDC Supply Voltage, 10...30 VDC Push-Pull Signal Output	HTL : 10...30 VDC Supply Voltage, 5 VDC TTL RS422 Line Driver Signal Output	HPL : 5...30 VDC Supply Voltage, 5...30 VDC Push-Pull Signal Output	3M : 3 meters	3.5M : 3.5 meters	No code : Standard*	
B2						4M : 4 meters	5M : 5 meters	Z : Single Z signal	
MLS12X	-	XX	-	XXX	-	X	-	XX	-
Model	Resolution	Signal Output Type				Sensor / Cable Type			
MLS 120 : With socket	For B5: 05 : 5µm 10 : 10µm 25 : 25µm 50 : 50µm 62 : 62.5µm 100: 100µm	For B2: 01 : 1µm 05 : 5µm 10 : 10µm 25 : 25µm 50 : 50µm 80 : 80µm	2 : A, B 4 : A, /A, B, /B	3 : A, B, Z 6 : A, /A, B, /B, Z, /Z	2 : A, B, Z 4 : A, /A, B, /B, Z, /Z	C : Cable S : Shielded Spiral CSL : Cable and with Scraper SSL : Spiral and with Scraper			
MLS 121 : With cable			*Standard: Z reference signal at every 5 mm for B5 Tape or every 2 mm for B2 tape						