



- Optical measurement
- Measuring lengths between 50 mm and 1500 mm
- High resolution up to 1 μm
- $\pm 10 \mu\text{m}$ accuracy
- 5 ball bearing system
- Single seal protection
- 5 VDC TTL quadrature or 1vpp sinusoidal signal
- Easy mounting
- 60 m/min traveling speed

ALS series optical linear encoder systems are protected from factors such as dust, shavings, dirt and coolant with its compact design. ALS5 series, which has optical measuring principle with glass ruler, can measure between 50 and 1500 mm.

APPLICATIONS

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|-------------------------------------|---------------------------------------|-----------------------------|
| • Manual Benches | • Linear Bearing Systems | • Transfer Machines |
| • Press Brakes and Bending Machines | • Automation and Robotic Applications | • Turning, Milling |
| • Robotic / Material Packaging | • Textile Machinery | • Woodworking machines etc. |

TECHNICAL FEATURES

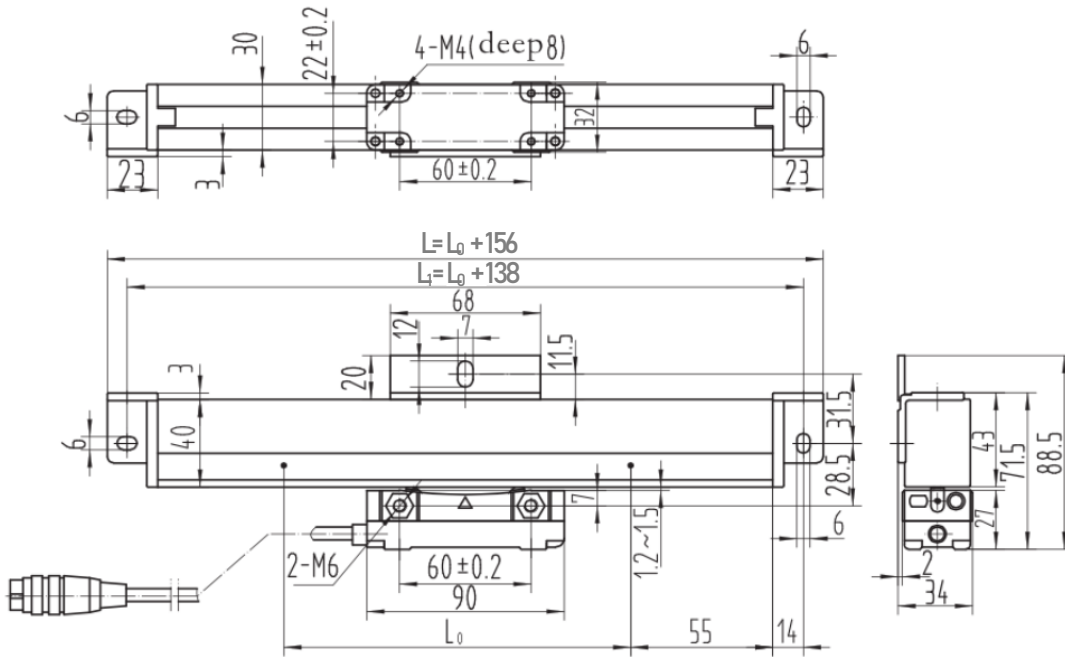
Measuring Principle	Optical	Reference Mark	1 Reference Mark every 50 mm
Measuring Lengths	Different lengths from 50 mm to 1500 mm	Body Material	Aluminum
Resolution	1 μm , 5 μm , or 1Vpp Sinusoidal	Operating Temperature	0°C...50 °C
Signal Period	20 μm	Storage Temperature	-20°C...70 °C
Accuracy	$\pm 10 \mu\text{m}$	Protection Class	IP54
Repeatability	± 1 pulse	Electrical Connection	Spiral cable and Socket (for TTL signal: D-SUB 9 pin male socket / Sine signal for: M16 8 pin female socket)
Max traveling speed	60m/min		
Supply Voltage	5 VDC	Max. Cable Length	50 – 500 mm (3m armored cable) 600 – 2000mm (5m armored cable)
Output Type	5VDC TTL Quadrature or 1Vpp Sinusoidal		
Output Signals	TTL: A, /A, B, /B, Z, /Z		

ELECTRICAL CONNECTIONS

Pin No	CABLE COLOR	D-SUB 9 PIN SOCKET	M16/8 PIN FEMALE SOCKET
		TTL SIGNAL	SINUS SIGNAL
1	WHITE	A	0°
2	BROWN	/B	180°
3	RED	+5VDC	+5VDC
4	BLACK	0V-GND	0V-GND
5	BLUE	/A	90°
6	GREEN	B	270°
7	YELLOW	/Z	Z
8	GREY	Z	-
9	-	Shield	Shield

In the table, the cable colors of sensors output signals are given. If the control circuit is suitable, in the line driver sensors, the not 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.

MECHANICAL DIMENSIONS





- L_0** : Measuring Length (mm) (Different lengths from 50 to 1500 mm)
 L_1 : Distance between mounting holes (mm)
 L : Body Length (mm)


ORDER CODE

Model				Measuring Length
ALS 5	-	X	-	XXX
Resolution				Different lengths from 50 to 1500 mm
01 : 1µm				
05 : 5µm				
S : Sinusoidal				

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