OPTICAL LINEAR ENCODERS

"Thick Body, Long Distance Measurement"

ALS-6

- Optical measurement
- Measuring lengths between 50 mm and 3200 mm
- High resolution up to 1 µm
- ±10 µm 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. ALS6 series, which has optical measuring principle with glass ruler, can measure between 50 and 3200 mm.

APPLICATIONS

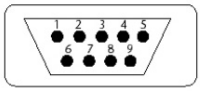
- Manual Benches
- Press Brakes and Bending Machines
- Robotic / Material Packaging
- Linear Bearing Systems
- Automation and Robotic Applications
- Textile Machinery
- Transfer Machines
- Turning, Milling
- Woodworking machines etc.

TECHNICAL FEATURES

Measuring Principle	Optical
Measuring Lengths	Different lengths from 50 mm to 3200 mm
Resolution	1µm, 5µm, or 1Vpp Sinusoidal
Signal Period	20 µm
Accuracy	±10 µm
Repeatability	±1 pulse
Max traveling	60m/min
Supply Voltage	5 VDC
Output Type	5VDC TTL Quadrature or 1Vpp Sinusoidal
Output Signals	TTL: A, /A, B, /B, Z, /Z

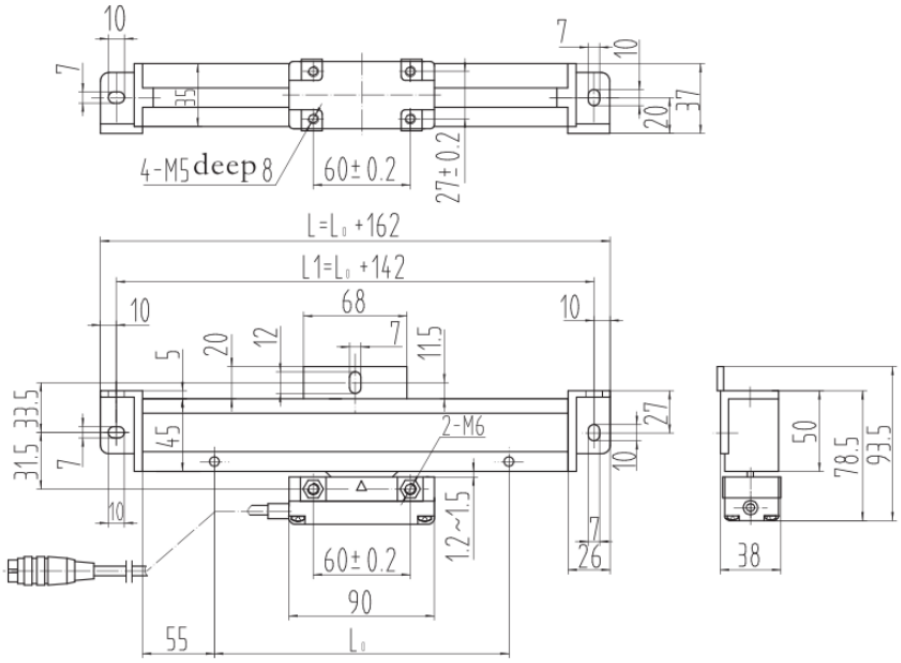
Reference Mark	1 Reference Mark every 50 mm
Body Material	Aluminum
Operating Temperature	0°C…50 °C
Storage Temperature	-20°C…70 °C
Protection Class	IP54
Electrical Connection	Spiral cable and Socket (for TTL signal: D-SUB 9 pin male socket / Sine signal for: M16 8 pin female socket)
Max. Cable Length	50 – 500 mm (3m armored cable) 600 – 2000mm (5m armored cable)

ELECTRICAL CONNECTIONS

Pin No	 CABLE COLOR	D-SUB 9 PIN SOCKET  TTL SIGNAL	M16/8 PIN FEMALE SOCKET  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 3200 mm
L_1: Distance between mounting holes (mm)
L : Body Length (mm)

ORDER CODE

Model				Measuring Length
				Different lengths from 50 to 3200 mm
ALS 6	**-**	**X**	**-**	**XXX**

Resolution

01 : 1µm
05 : 5µm
S : Sinusoidal