

- Optical measurement
- Measuring lengths from 50 mm to 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 output 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

- | | | |
|-------------------------------------|---------------------------------------|---------------------------|
| • Manuel 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

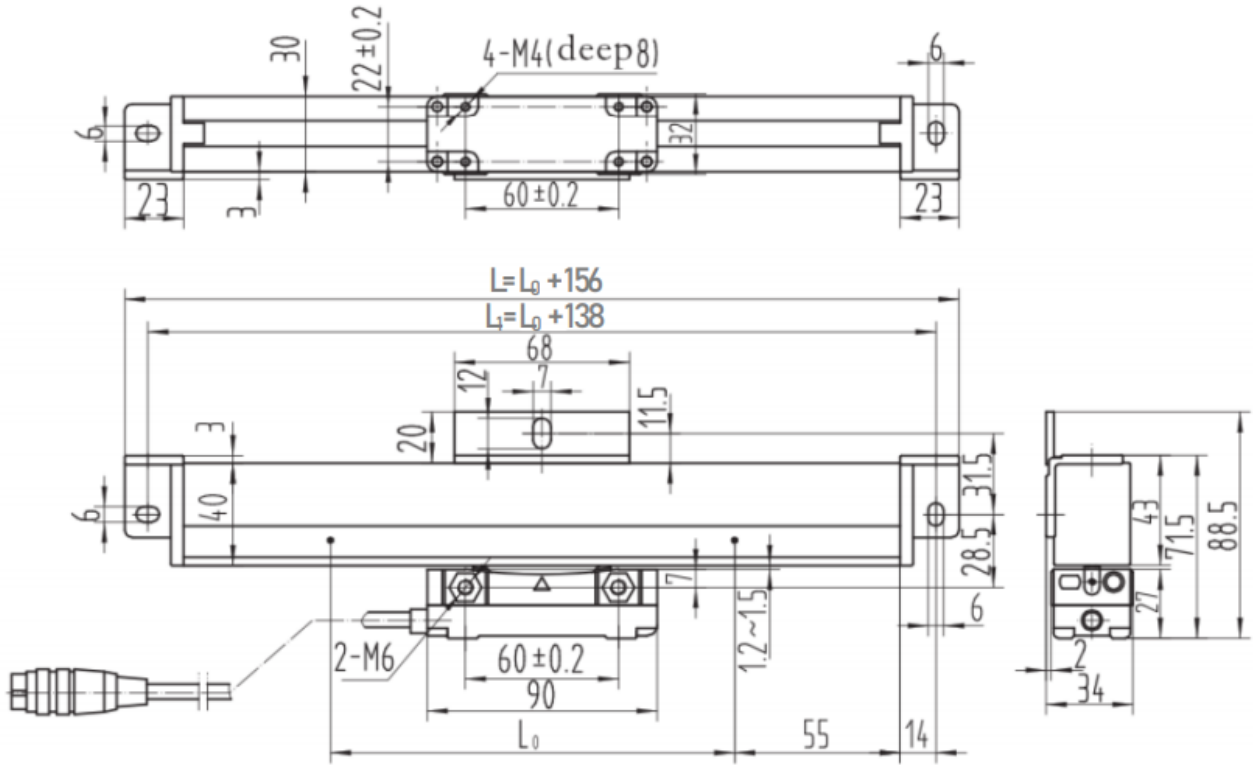
| | | | |
|----------------------------|--|------------------------------|--|
| Measuring Type | Optical | Reference Mark | 1 reference mark at every 50 mm |
| Measuring Lengths | Different lengths from 50 mm to 1500 mm | Body Material | Aluminum |
| Resolution | 1 μm , 5 μm or 1Vpp sinusoidal | Operating 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 / For Sinus Signal: M16/8 pin female socket) |
| Max traveling speed | 60m/min | | |
| Supply Voltage | 5 VDC | Max cable length | 50-500mm (3m armoured cable) 600-2000mm (5m armoured cable) |
| Output Type | 5V TTL or 1Vpp Sinusoidal | | |

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 | N/C |

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 | - | XX | - | Different lengths from 50 mm to 1500 mm | |
| | | | | Resolution | |
| | | | | 01 : 1µm | |
| | | | | 05 : 5µm | |
| | | | | S : Sinusoidal | |

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