

# OPTICAL LINEAR ENCODER

## “Thick Body, Accurate Measurement”

ALS-5



- Optical measurement
- Measuring lengths from 100 mm to 1500 mm
- High resolution up to 1  $\mu\text{m}$
- $\pm 10 \mu\text{m}$  accuracy
- 5 ball bearing system
- Single seal protection
- TTL RS-422 or 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 100 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

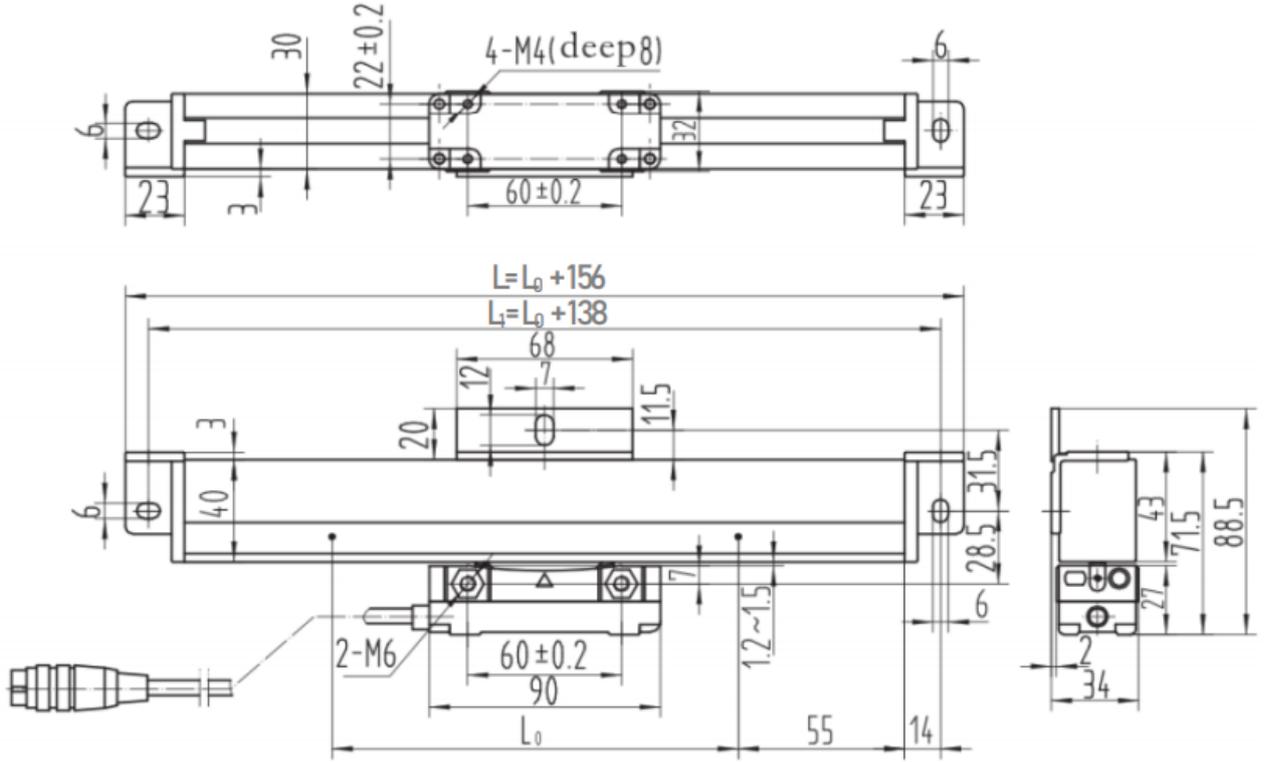
<b>Measuring Type</b>	Optical	<b>Reference Mark</b>	1 reference mark at every 50 mm
<b>Measuring Lengths</b>	Different lengths from 100 mm to 1500 mm	<b>Body Material</b>	Aluminum
<b>Resolution</b>	1 $\mu\text{m}$ , 5 $\mu\text{m}$	<b>Operating Temperature</b>	0°C...50 °C
<b>Signal Period</b>	20 $\mu\text{m}$	<b>Storage Temperature</b>	-20°C...70 °C
<b>Accuracy</b>	$\pm 10 \mu\text{m}$	<b>Protection Class</b>	IP54
<b>Repeatability</b>	$\pm 1$ pulse	<b>Electrical Connection</b>	Spiral cable and socket (For TTL RS- 422 Signal:D-SUB 9 pin male socket / For Sinus Signal: M16/8 pin female socket)
<b>Max traveling speed</b>	60m/min		
<b>Supply Voltage</b>	5 VDC	<b>Max cable length</b>	50-500mm (3m armoured cable) 600-2000mm (5m armoured cable)
<b>Output Type</b>	TTL RS-422 or 11 $\mu\text{A}$ pp Sinusoidal		

### ELECTRICAL CONNECTIONS

PIN NO	CABLE COLOR	D-SUB 9 PIN SOCKET	M16/8 PIN FEMALE SOCKET
		TTL RS-422 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
9	-	Shield	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 100 to 1500mm)

$L_1$ : Distance between mounting holes (mm)

$L$ : Body Length (mm)

## ORDER CODE

Model		Measuring Length		
		Different lengths from 100 mm to 1500 mm		
ALS 5	-	XX	-	XXX
		Output		
		1 : TTL RS-422 (1 $\mu$ m)		
		5 : TTL RS-422 (5 $\mu$ m)		
		S : Sinusoidal 11 $\mu$ App (1 $\mu$ m)		

Atek Elektronik Sensör Teknolojileri Sanayi ve Ticaret A.Ş.

 Gebze OSB, 800. Sokak, No:814 Gebze/KOCAELİ/TURKEY

 Tel: +90 262 673 76 00

 Fax: +90 262 673 76 08

 [www.ateksensor.com](http://www.ateksensor.com)

 [info@ateksensor.com](mailto:info@ateksensor.com)