ED-22

Analog Output Series Magnetic Encoder

SPECIFICATIONS

- **Analog voltage output**
- **Low profile**
- **Standard industry package size**
- **Sleeve bearing**

The ED-22 series magnetic encoder can be used to replace a conventional potentiometer.

This product offers 270 degrees of electrical travel, integrated rotational stop system, 300 degrees of mechanical travel, utilizing a sleeve bearing and shaft fitted with an O-ring seal.

This sensor is designed for rotary human machine input (HMI) applications.

The Non-contact magnetic sensor design utilized in the ED-22 is well suited for industrial applications where extreme temperatures, high vibration and shock, and contamination are present.

The ED-22 is designed using our standard modular and flexible construction methods.

FEATURES

- Magnetic sensing technology
- Encapsulated electronics/sealed
- Harsh environment compatibility
- 0 to 5 VDC outputs
- Consistent torque
- Resistant to contamination
- Highly resistant to vibration
- Metal shaft and bushing
- Wide operational temperature range (-40 °C to 85 °C)

APPLICATIONS

- Machine tool control
- Paint spraying system control
- Medical equipment
- Industrial test and measuring equipment
- Off highway cab controls
- Marine
- Exercise equipment
- Value positioning
- Industrial joysticks

PERFORMANCE SPECS (NOTE1)

Analog voltage output:

Parameters	**ED-22-SB-0050-V-X**
Standard output range 0 - 270°	0 VDC to 5.0 VDC
Supply current	15 mA
Operating voltage (Vcc)	5 VDC ⬅ 0.25 VDC
Resolution	1.4°
Accuracy	2.8°
Operating temperature	-40°C to 85 °C

Bearing:

Parameters	**ED-22-SB-0050-V-X**
Bearings	Sleeve
Maximum speed	300 RPM
Bearing life	3,000,000 cycles

(NOTE1): Vcc = 5 V, Ambient Temperature 25 °C

MECHANICAL SPECS

Parameters	**ED-22-SB-0050-V-X**
Axial load (max.)	20 N
Radial load (max.)	10 N
Shaft end play axial (max.)	0.13 mm
Shaft radial play (max.)	0.25 mm (15.3 mm from thread)
Shaft push-in force	9 N
Shaft pull-out force	1.3 N
Run out (max.)	0.25 mm (19 mm from thread)
Bushing mounting torque	1.1 Nm

DIMENSIONS

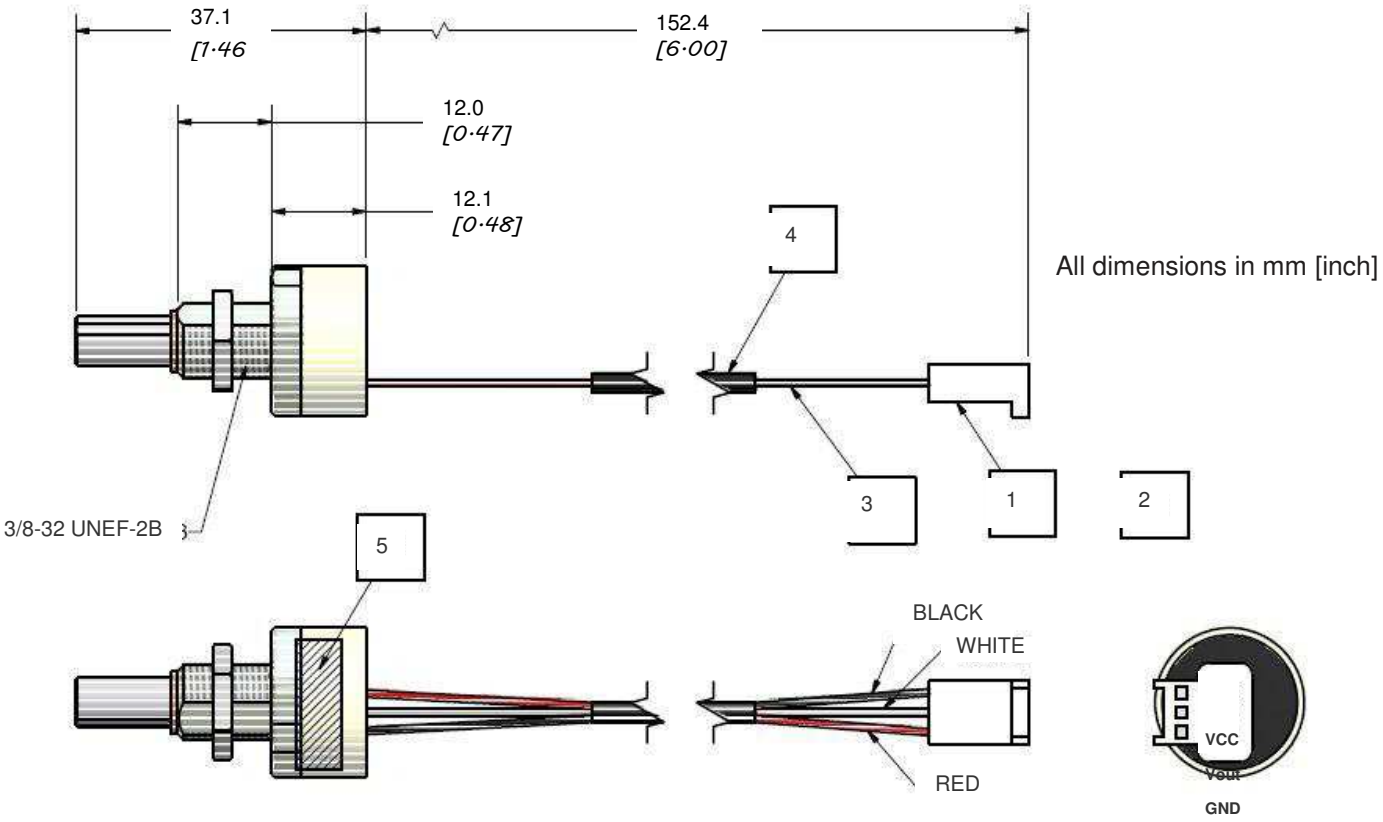

Figure 1: Dimension of the ED-22 (side view)

Notes	Description
1	Housing - MOLEX #22-01-3037
2	Terminals - (3X) MOLEX #08-55-0102 or # 08-55-0101
3	Wire - 24 AWG stranded copper with TFE or FEP insulation
4	Heat shrink wires leaving both ends exposed min 1.0” free
5	Encoder label

All dimension s in mm [ich]

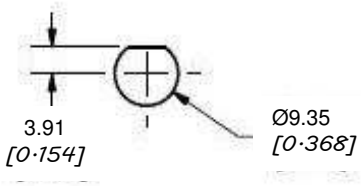

Figure 2: Recommended cutout shape for the shaft

All dimensions in mm [inch]

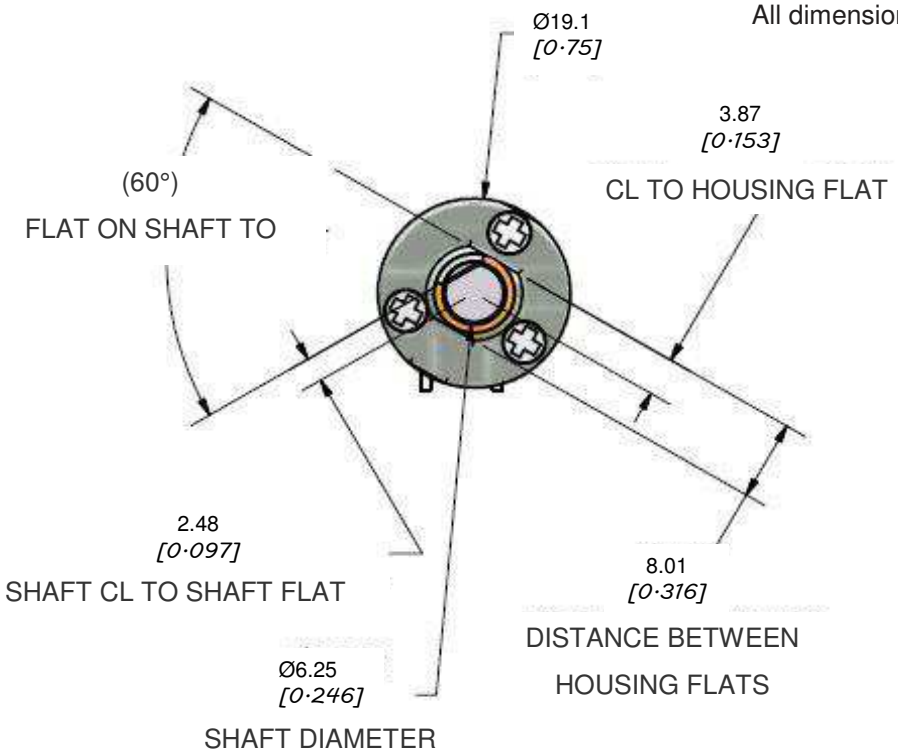

Figure 3: Dimension of the ED-22 (front view)

TYPICAL PERFORMANCE CURVES

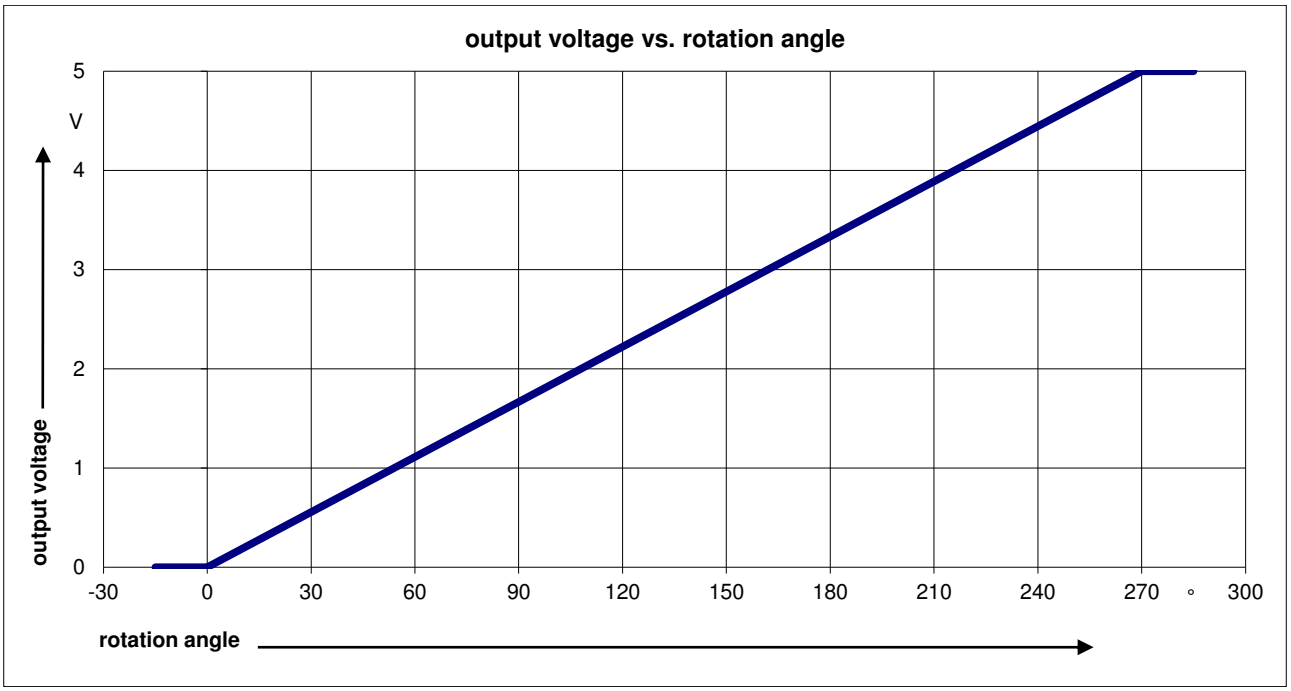

Figure 4: Output voltage vs. rotation angle

ENVIRONMENTAL

Vibration	MIL-STD-202F Method 204D Test Condition B
Shock	MIL-STD-202F Method 213B Test Condition C
Humidity	MIL-STD-202F Method 103B Test Condition A
Thermal Shock	MIL-STD-202F Method 107G Test Condition A
Operating Temperature	-40 to 85°C
Storage Temperature	-55 to 125°C

ORDERING INFORMATION

PART NUMBERING Model Number - Bearing - Range - Analog Output - Connection

ED-22-SB-0050-V-X

Connection	Options:	
	P = Pin header	
	C = Cable	
Analog Output	V = Voltage	
Output Range	0050 = 0 VDC to 5.0 VDC	
Bearing	SB = Sleeve bearing	

Example: ED-22-SB-0050-V-P

Model ED-22, sleeve bearing, analog output voltage from 0 Vdc to 5 VDC, pin header

STANDARD CONFIGURATION: ED-22-SB-0050-V-C

Consult factory for other available models.

NORTH AMERICA
Measurement Specialties, Inc.,
a TE Connectivity Company
Phone +1-800-522-6752
Email: customercare.hmpt@te.com

EUROPE
MEAS Deutschland GmbH(Europe)
a TE Connectivity Company
Phone: +49-800-440-5100
Email: customercare.lcsb@te.com

ASIA
Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Phone: +86-400-820-6015
Email: customercare.shzn@te.com

TE.com/sensorsolutions