



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

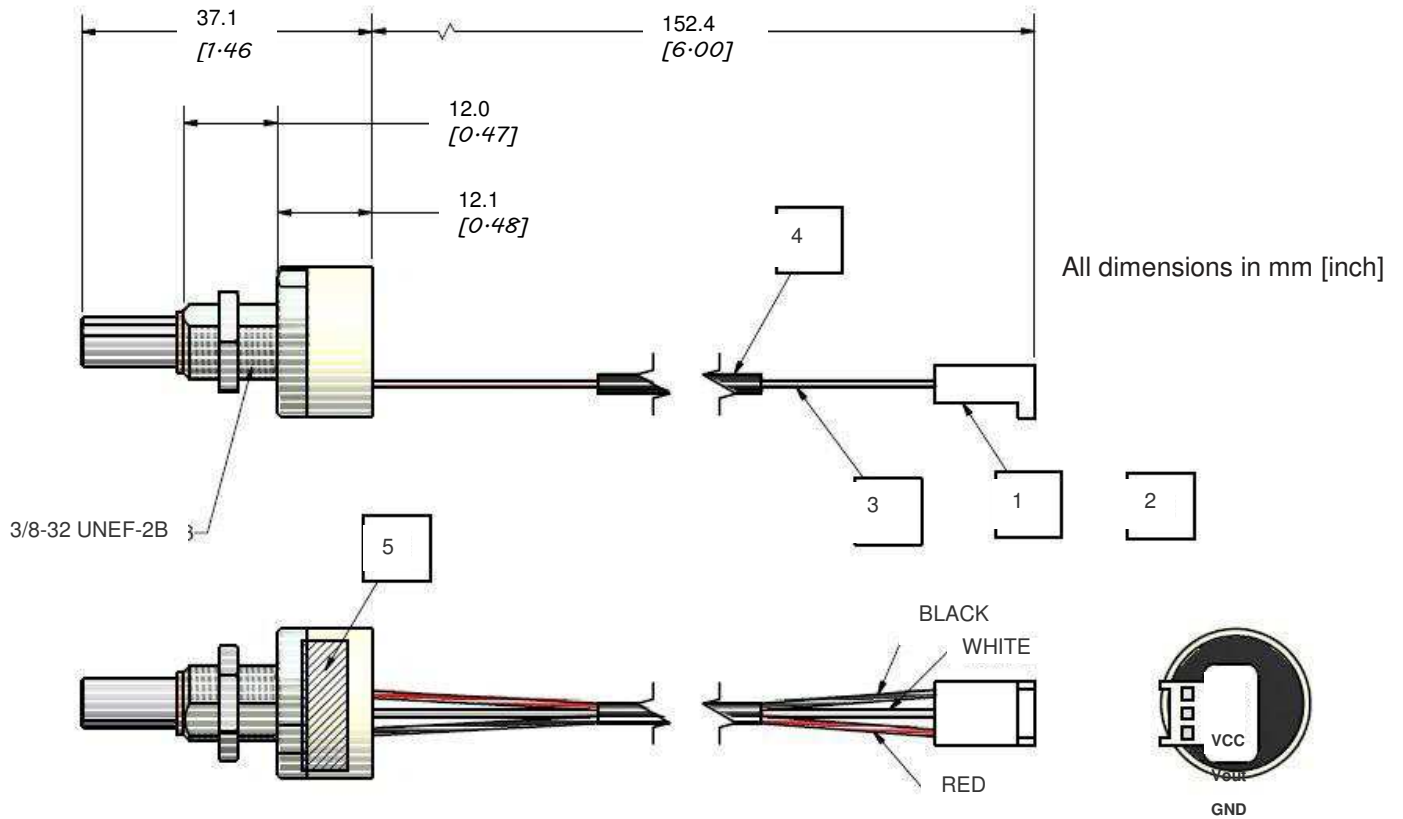
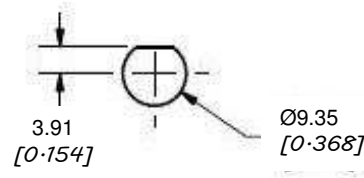


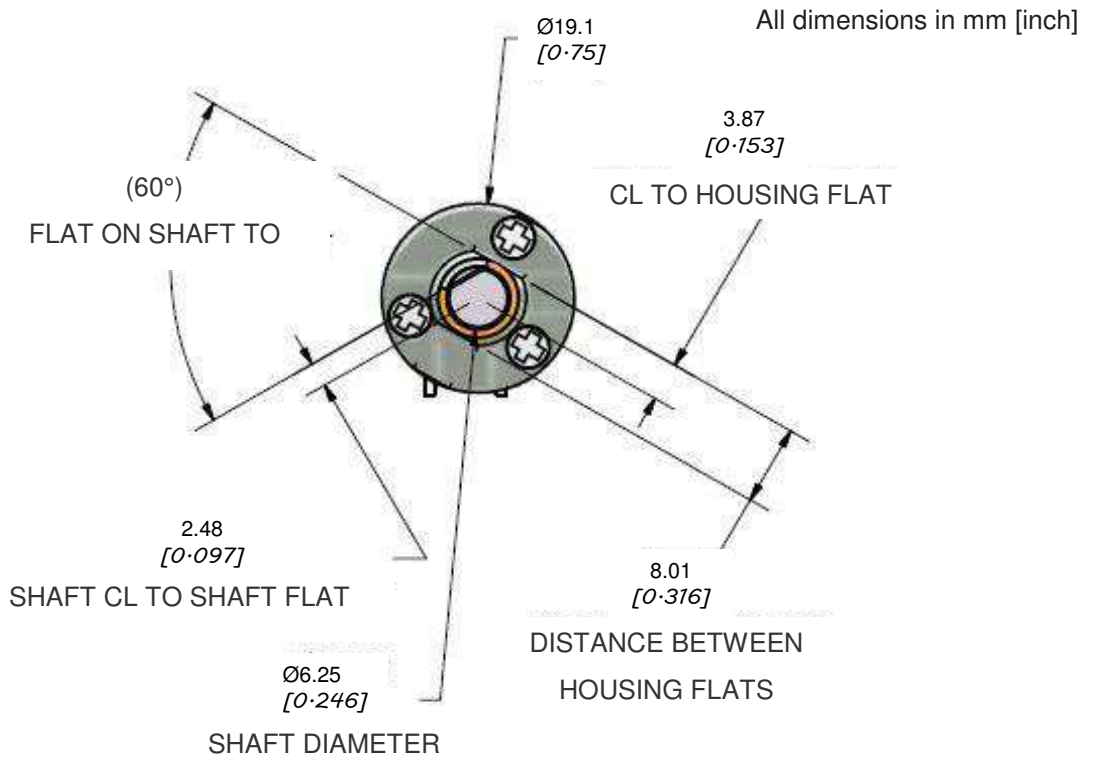
Figure 1: Dimension of the ED-22 (side view)

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

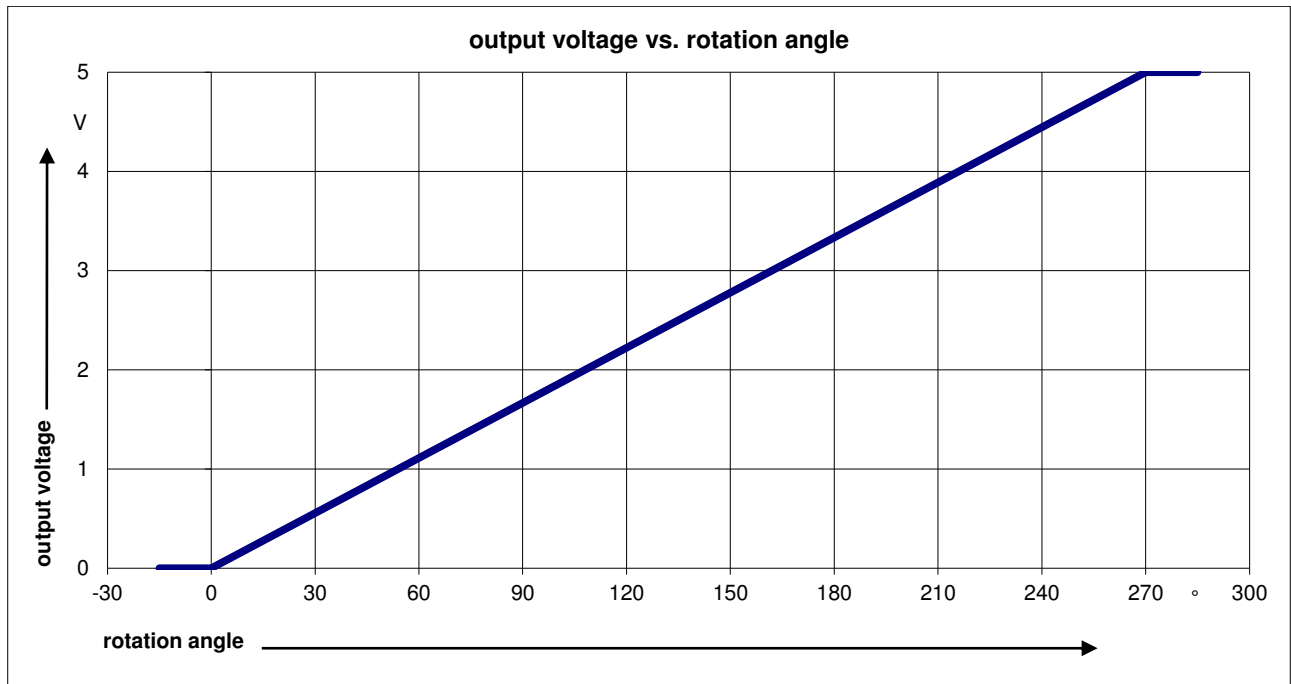


Figure 4: Output voltage vs. rotation angle

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

Analog Output
Output Range

Bearing

Options:

P = Pin header

C = Cable

V = Voltage

0050 = 0 VDC to 5.0 VDC

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

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
1000 Lucas Way
Hampton, VA 23666
United States
Phone: +1-800-745-8008
Fax: +1-757-766-4297
Email: sales@meas-spec.com

EUROPE

MEAS Deutschland GmbH (Europe)
a TE Connectivity Company
Hauert 13
D-44227 Dortmund
Germany
Phone: +49-(0)231-9740-0
Fax: +49-(0)231-9740-20
Email: info.de@meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Phone: +86-755-33305088
Fax: +86-755-33305099
Email: info.cn@meas-spec.com

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.

DEALER / REVENDEDOR

Brazil and South America / Brasil e América do Sul



Address / Endereço:

Rua Sete de Setembro, 2656
13560-181 - São Carlos - SP
Brazil / Brasil

Phone / Telefone:

+55 (16) 3371-0112
+55 (16) 3372-7800

Internet:

www.metrolog.net
metrolog@metrolog.net

www.metrolog.net