

The E20 Series was developed to provide high precision angular position signals at an affordable price.

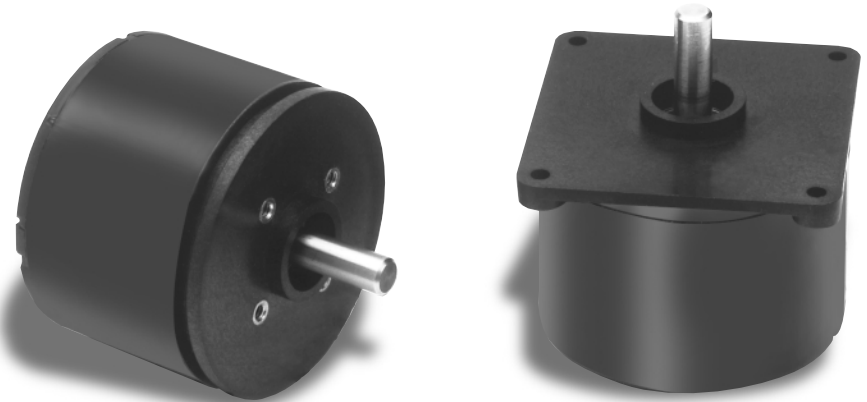
The design consists of a patented glass disc and hub assembly, focused infrared light source, a proprietary monolithic photodetector array, and signal conditioning electronics.

The models E202 and E203 encoders offer 7406 open collector outputs yielding temperature stability and the ability to transmit signals long distances with high noise immunity.

The model E206, with its 26LS31 line driver output is available for applications where RS422 compatibility is needed.

Reliability is assured through the use of a single LED source and collimating lens. Hybrid electronic circuitry and common substrate arrays further enhance long-term operation and temperature stability.

Proven design and BEI experience make the models E202, E203 and E206 bargains for the robotic, process control, instrumentation and related markets.

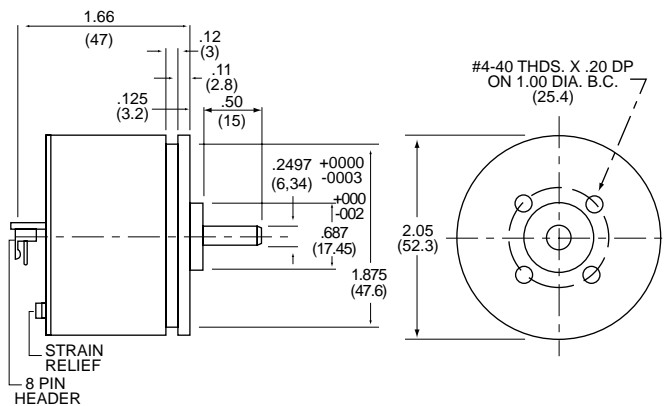


Standard Features

- Line counts up to 2540 PPR
- Open collector differential 7406 buffer driver in the E202 and E203
- RS422 compatible 26LS31 differential line driver in the E206
- Index pulse
- 3 mounting configurations
- Focused IR/LED
- 100 kHz frequency response
- 2-year warranty

Figure 1

Servo Mount

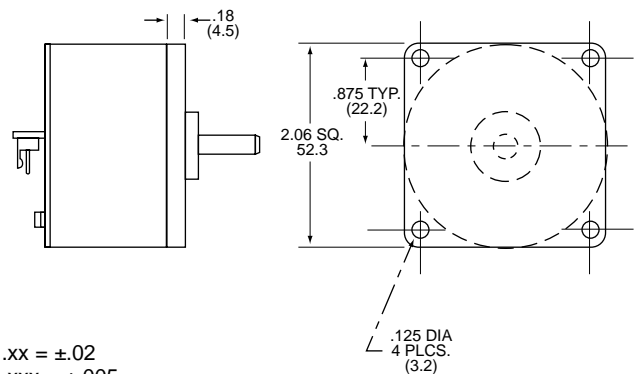


All dimensions in inches

Figure 2

Flange Mount

(Dimensions not shown, same as Figure 1)



.xx = ±.02
.xxx = ±.005

E20 Series Enclosed Incremental Rotary Optical Encoder

Performance Specifications

Mechanical

Dimensions	see Figures 1 and 2
Weight	4 oz.
Shaft Size	0.2497 +0.0000 -0.0003
Shaft Load	axial 4 lbs., radial 8 lbs.
Torque, Starting	less than 0.4 oz. in.
Torque, Running	less than 0.2 oz. in.
Inertia	1.8×10^{-4} oz. in./sec ²

Electrical

Code	incremental
Pulses per Revolution	see "Ordering Information"
Supply Voltage	+5V \pm 5% @ 135mA max.
Output Format	dual channel quadrature with complements. Index with complements available.
Output Type (E202, E203)	TTL buffer/driver (7406)
Output Voltage	1k ohm pull-up resistor 5.5V min. breakdown
Sink Current	40mA
Output Type (E206)	TTL differential line driver (26LS31 or equiv.) should be terminated into a line receiver (26LS32, or equivalent circuit)
Frequency Response	data & index 100 kHz

Environmental

Temperature	
Less than 1800 PPR	Operating 0° to +70°C Storage -25° to +90°C
1800 PPR or greater	Operating 0° to +55°C Storage -25° to +90°C

Termination Options

Header	8 pin single row PC board header (Molex 22-23-2081 or equivalent)
Mating Connector included	Molex 22-01 3087 or equivalent with crimp terminals for 22-30 AWG wire
Terminal board	1/16" circuit board, 2 rows of 8 holes, 0.40 dia. plated through on 0.10 centers for 22-30 AWG wire

Figure 4

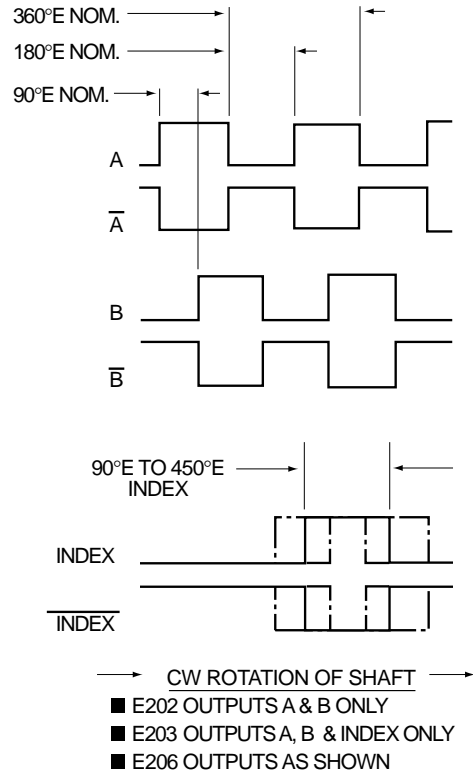
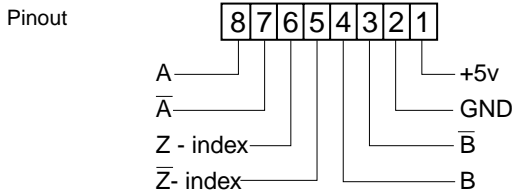


Figure 3



Ordering Information

E20 X - XXXX - X - X

Basic Model No.	_____
Output Format	_____
2 = Quadrature w/complements	
3 = Quadrature w/index & complements (7406 buffer drive)	
6 = Quadrature w/index & complements (26LS31 line driver)	
Pulses Per Revolution (PPR)	_____
See Table 1	
Mounting and Termination	_____
1 = Servo mount w/header	
2 = Servo mount w/terminal board	
3 = Flange mount w/header	
4 = Flange mount w/terminal board	
Options	_____
0 = Open Collector (E202 & E203 only)	
1 = 1k pull-up resistor (E202 & E203 only)	

EXAMPLE: E202-1000-1-1

Table 1

5	256	720	2000
10	300	1000	2048
20	360	1024	2400
80	500	1140	2500
100	510	1386	2514
120	512	1500	2540
200	625	1600	
250	640	1800	