

# DR86A

Extra Heavy Duty Machine Tool Encoder



| ORDER NUMBER | CPR  |
|--------------|------|
| DR86A-01     | 1024 |

Model DR86A is an extra heavy duty unit that employs a highly reliable Opto-ASIC encoder module mounted within a rugged mechanical housing. The heavy duty sealed bearings, together with double O-ring sealing, makes this encoder a serious and reliable alternative to a wide range of machine tool encoders, and at an economical price.

## Common Applications

Motion Control Feedback, Conveyors, Elevator Controls, Machine Control, Food Processing, Process Control, Robotics, Material Handling, Textile Machines

## Replaces

Fanuc, Sumtak, Tamagawa, Koyo, Kwangwoo

## Price: \$695

Additional discounts available for volume orders.

## Features:

- Rugged All Metal Housing
- 68 mm Flange Mount
- 1024 CPR\*
- 17-Pin MS Style Connector
- IP65 Double O-ring Seal
- Line Driver Output
- 15 mm Stainless Steel Shaft

*\*Other CPRs may be available. Contact Customer Service.*

## The Accu-Coder™ Advantage

- ✓ Get this encoder FAST – you'll get your encoders in days, not weeks.
- ✓ Huge savings in price comparison – the DR86A is your economical solution
- ✓ The accuracy, reliability, and quality that only come from an Accu-Coder™
- ✓ Industry Best 3-year warranty!

**ACCU-CODER™**  
by Encoder Products Company

# DR86A

Extra Heavy Duty Machine Tool Encoder



## Model DR86A Specifications

### Electrical

- Input Voltage ..... 4.75 to 24 VCC max for temperatures up to 70° C
- Input Current ..... 100 mA max with no output load
- Input Ripple ..... 100 mV peak-to-peak at 0 to 100 kHz
- Output Format ..... Incremental – Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting face. See Waveform Diagrams below.
- Output Types ..... Line Driver – 20 mA max per channel (Meets RS 422 at 5 VCC supply)
- Index ..... Occurs once per revolution. The index is Ungated. See Waveform Diagrams below.
- Freq Response ..... Up to 100 KHz
- Noise Immunity ..... Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DENV 50141; DENV 50204; BS EN55022 (with European compliance option); BS EN61000-6-2; BS EN50081-2
- Symmetry ..... 180° (±18°) electrical at 100 kHz output
- Quad Phasing ..... 1 to 2540 PPR: 90° (±22.5°) electrical at 100 kHz output
- Min Edge Sep ..... 1 to 2540 PPR: 67.5° electrical at 100 kHz output
- Rise Time ..... Less than 1 microsecond
- Accuracy ..... Instrument and Quadrature Error: For 1024CPR, 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle

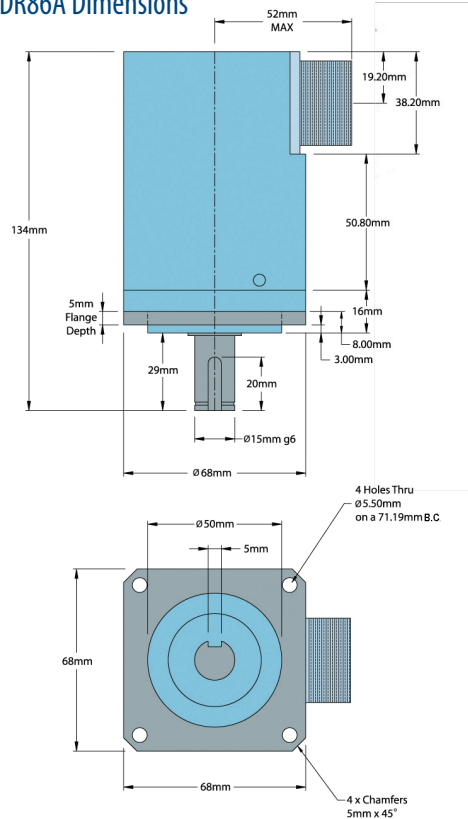
### Mechanical

- Max Shaft Speed ..... 3600 RPM. Higher shaft speeds may be achievable, contact Customer Service
- Shaft Size ..... 15 mm
- Shaft Material ..... 303 stainless steel
- Shaft Rotation ..... Bi-directional
- Radial Shaft Load ..... 35 kg max
- Axial Shaft Load ..... 35 kg max
- Starting Torque ..... 2.118 x 10<sup>-2</sup> Nm typical
- Max Acceleration ..... 1 x 10<sup>5</sup> rad/sec<sup>2</sup>
- Electrical Conn ..... 17-pin MS Style
- Housing ..... Anodized Aluminium
- Bearings ..... Precision ABEC ball bearings
- Mounting ..... Square Flange with 4 Holes 5.50 mm Dia on a 71.19 mm Bolt Circle (B.C.)
- Weight ..... 800 gms typical

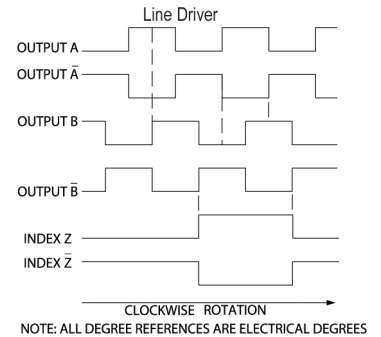
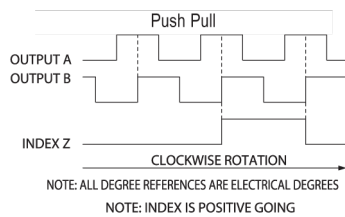
### Environmental

- Operating Temp ..... 0° to 70° C
- Storage Temp ..... -25° to 85° C
- Humidity ..... 95% RH non-condensing
- Vibration ..... 10 g @ 58 to 500 Hz
- Shock ..... 50 g @ 11 ms duration
- Sealing ..... IP65

## DR86A Dimensions



## DR86A Waveform Diagram



## DR86A Wiring Table

| 17-Pin Conn | Function |
|-------------|----------|
| A           | A        |
| B           | Z        |
| C           | B        |
| D           | ---      |
| E           | ---      |
| F           | ---      |
| G           | ---      |
| H           | +VCC     |
| J           | ---      |
| K           | 0 Volts  |
| L           | ---      |
| M           | ---      |
| N           | A'       |
| P           | Z'       |
| R           | B'       |
| S           | ---      |
| T           | ---      |