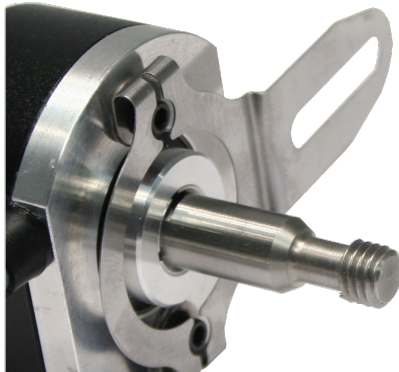


# DR686

Direct Replacement Encoder for Siemens 1XP8001



Designed as a drop in replacement for the Siemens 1XP8001 encoder, the DR686 is ready for delivery. The unique threaded shaft made this encoder hard to find, but it is a standard order at EPC.

Configurations can be ordered with either 1024 or 2048 CPR, with a 12 pin connector at the end of 18" of cable. Save time and money looking for a replacement encoder; The DR686 is the perfect solution!

#### Features:

- Low profile (1.19") encoder body
- 2 piece construction; shaft screws into motor, then encoder attaches to shaft
- 1024 and 2048 CPR available
- Line Driver output
- Flex Arm mounting system makes installation easy and allows for insulation and isolation from vibration
- 12-pin connector at the end of 18" of cable
- Advanced Opto-ASIC technology for superior noise immunity
- Withstands temperatures up to 100<sup>o</sup> C
- Sealing of IP64

Typical Price: for Comparable Encoder: \$575 - \$1500

**DR686 Price: \$550**

Additional discounts available for volume orders.

Order Number	CPR
DR686-01	1024
DR686-02	2048

### The Accu-Coder™ Advantage

- ✓ Get this encoder FAST – you'll get your encoders in days, not weeks.
- ✓ Huge savings in price comparison – the DR686 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

# DR686

Direct Replacement Encoder for Siemens 1XP8001

## Model DR686 Specifications

### Electrical

- Input Voltage..... 4.75 to 28 VDC (16 VDC Max at 100° C)
- Input Current..... 100 mA max with no output load
- Output Format..... Incremental – Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the mounting face. See Waveform Diagram below.
- Output Types..... Line Driver – 20 mA max per channel (Meets RS 422 at 5 VDC supply)
- Freq. Response ..... 200 kHz standard
- Noise Immunity..... Tested to BS EN61000-6-2; BS EN50081-2; BS EN61000-4-2; BS EN61000-4-3; BS EN61000-4-6, BS EN55011
- Quadrature ..... 67.5° electrical or better is typical, 54°
- Edge Separation ..... electrical minimum at temperatures > 99° C
- Accuracy ..... Within 0.01° mechanical from one cycle to any other cycle, or 0.6 arc minutes

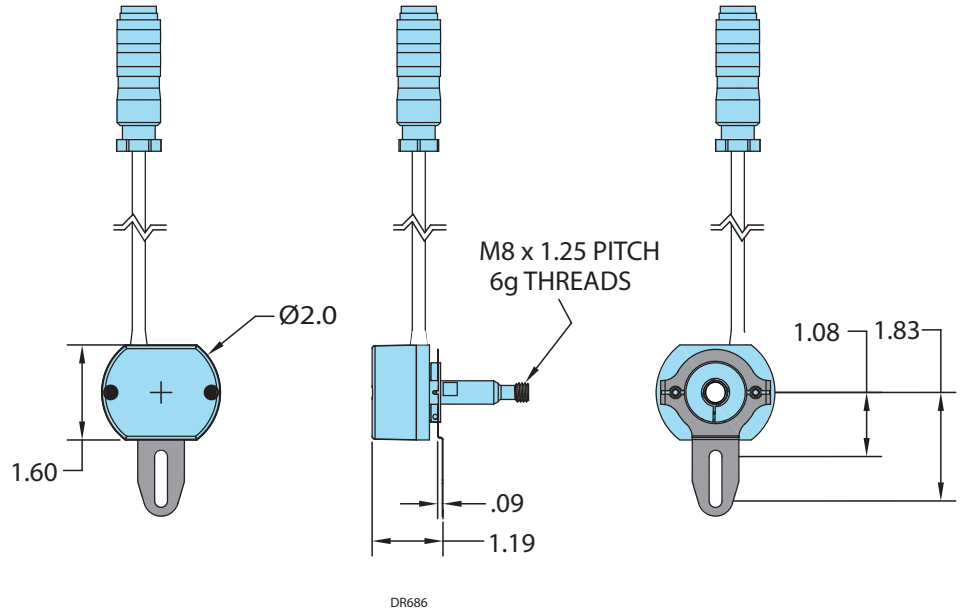
### Mechanical

- Max Shaft Speed..... 7500 RPM
- User Shaft Tolerances
  - Radial Runout ..... 0.007" max
  - Axial Endplay ..... ±0.030" max
- Starting Torque..... 0.50 oz-in
- Moment of Inertia .... 3.9 X 10<sup>-4</sup> oz-in-sec<sup>2</sup>
- Max Acceleration..... 1 X 10<sup>5</sup> rad/sec<sup>2</sup>
- Electrical Conn..... 18" cable (foil and braid shield, 24 AWG conductors) with 12-pin connector
- Housing ..... Black non-corrosive finish
- Mounting..... Flex Arm Mount standard
- Weight..... 3.5 oz typical

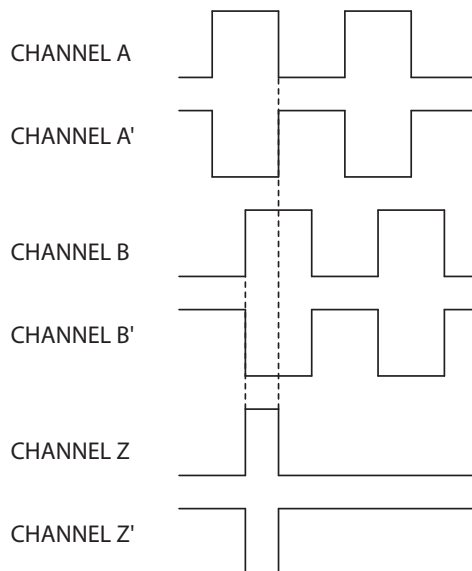
### Environmental

- Operating Temp..... 0° to 100°C
- Storage Temp..... -40° to 100° C
- Humidity ..... 98% RH non-condensing
- Vibration..... 10 g @ 58 to 500 Hz
- Shock..... 50 g @ 11 ms duration
- Sealing ..... IP64

## DR686 Dimensions



## DR686 Waveform Diagram



## DR686 Wiring Table

DR686 WIRING	
PIN	FUNCTION
A	CHANNEL B'
B	+VDC
C	CHANNEL Z
D	CHANNEL Z'
E	CHANNEL A
F	CHANNEL A'
G	+VDC
H	CHANNEL B
J	N/C
K	COMMON
L	COMMON
M	+VDC