

DR686

Direct Replacement Encoder For
Siemens 1XP8001

BRITISH
ENCODER
PRODUCTS COMPANY



Features:

- Low profile 30.2mm (1.19") encoder body
- 2 piece construction; shaft screws into motor, then encoder attaches to shaft
- 1024 and 2048 PPR 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° C
- IP64 sealing

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 BEPC. Configurations can be ordered with either 1024 or 2048 PPR, with a 12 pin connector at the end of 457mm (18") of cable

ORDER NUMBER PPR :-

DR686-01 1024
DR686-02 2048

ACCU»CODER™
by Encoder Products Company

The Accu-Coder™ Advantage

- Get this encoder **FAST!**
- **Huge savings** in price!
- The accuracy, reliability, and quality that only come from an Accu-Coder™
- Industry Best **3-year** warranty!



Don't see the exact encoder you need?

Call +44(0)1978 262100 and our Technical Sales Department will cross-reference your encoder to the correct BEPC model.

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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
Symmetry 180° (±18°) electrical
Quad. Phasing 90° (±22.5°) electrical
Min. Edge Sep 67.5° electrical
Accuracy Within 0.01° mechanical from one cycle to any other cycle, or 0.6 arc minutes

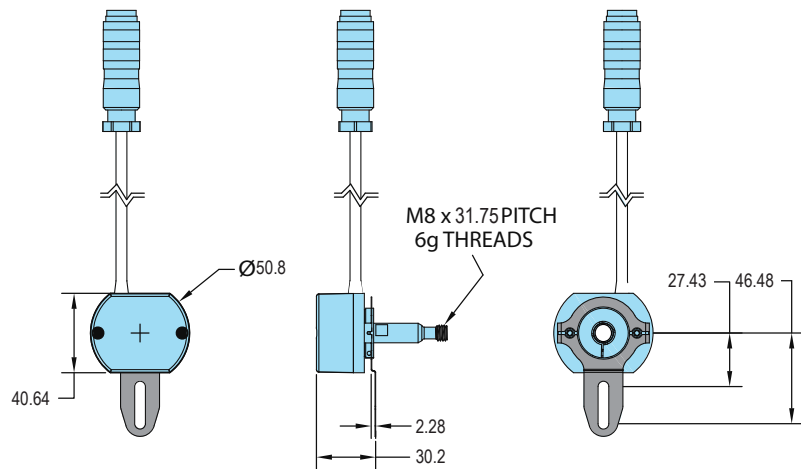
Mechanical

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 10⁻⁴ oz-in-sec²
Max Acceleration 1 X 10⁵ rad/sec²
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

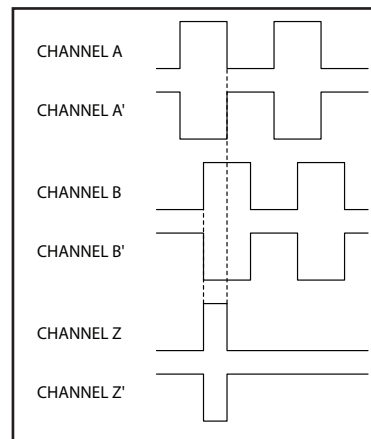
Operating Temp 0° to 100°C
Storage Temp -40° to +100° C
Humidity 98% RH non-condensing
Vibration 10 g @ 58 to 500 Hz
Shock 50 g @ 11 ms duration
Sealing IP64

DR686 Dimensions



All dimensions are in mm with a tolerance of ±0.127mm or ±0.254 unless otherwise specified

Waveform Diagram



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