

Model 86F Extra Heavy Duty Machine Tool Encoder



Features

- Transverse Slotted Shaft
- Up to 3000 PPR, Opto-Asic Technology
- 90mm Round Flange with 3 4.5mm Dia fixing holes at 120° on 82mm PCD
- Double O-Ring Sealed

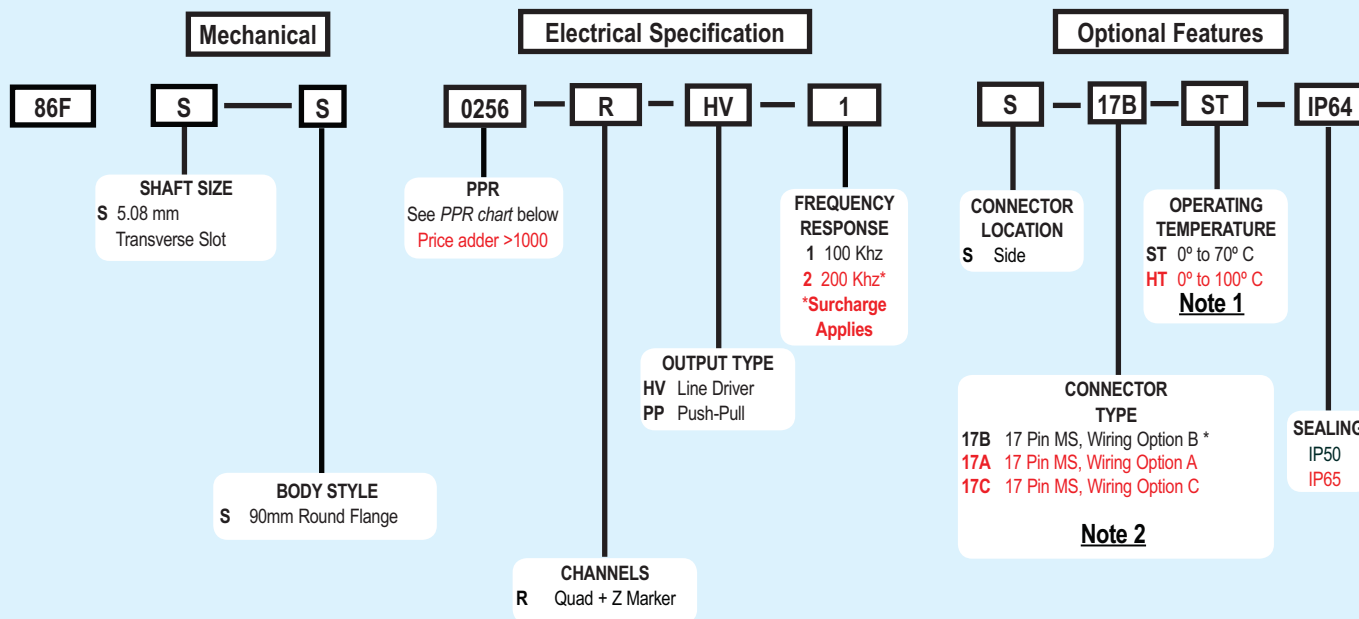
Model 86F is an extra heavy duty unit which employs a highly reliable Opto-Asic encoder module mounted within a rugged mechanical housing. The heavy duty sealed bearings, together with double O-Ring sealing makes this encoder a serious and reliable alternative to a wide range of machine tool encoders, and at an advantageous price.

Common Applications

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

Model 86F Ordering Guide

Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.



For specification assistance call Customer Service at +44 (0)1978 262100

Model 86F PPR Options

0500 0512 1000 1024 1250 2000 2048 2500 2540 3000

NOTES:

- 1 24 VCC max for high temperature option.
- 2 * Option 17B = STD Wiring Code.

Model 86F Extra Heavy Duty Machine Tool Encoder



**BRITISH
ENCODER**
PRODUCTS COMPANY



Model 86F Specifications

Electrical

Input Voltage4.75 to 24 VCC max for temperatures up to 70° C
 Input Current100 mA max with no output load
 Input Ripple100 mV peak-to-peak at 0 to 100 kHz
 Output FormatIncremental- 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 TypeLine Driver- 20 mA max per channel (Meets RS 422 at 5 VCC supply)
 IndexOccurs once per revolution. See *Waveform Diagrams* below.
 Freq ResponseUp to 200 KHz
 Noise ImmunityTested 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
 Symmetry180° (±18°) electrical at 100 kHz output
 Quad Phasing1 to 2540 PPR: 90° (±22.5°) electrical at 100 kHz output
 Min Edge Sep1 to 2540 PPR: 67.5° electrical at 100 kHz output
 Rise TimeLess than 1 microsecond
 AccuracyInstrument and Quadrature Error: For 0500 to 2540 PPR, 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle.

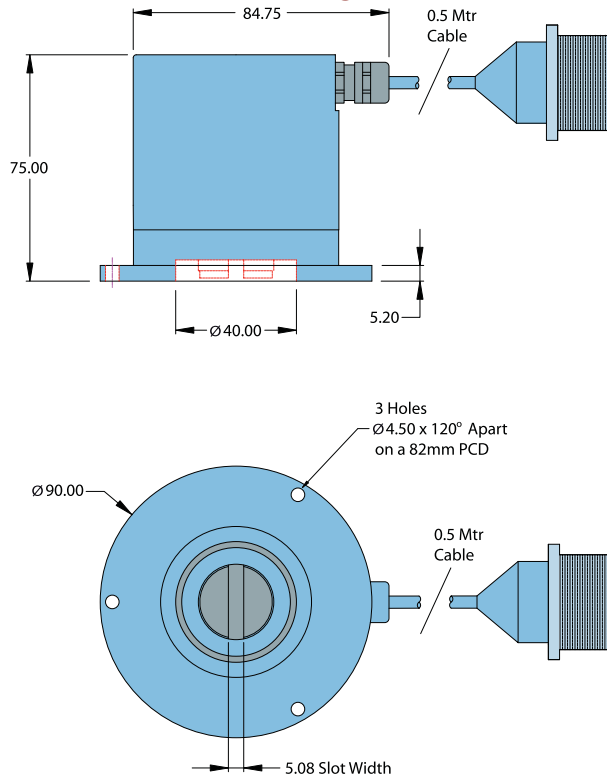
Mechanical

Max Shaft Speed3600 RPM. Higher shaft speeds may be achievable, contact Customer Service.
 Shaft TypeTransverse Slotted
 Shaft Material303 stainless steel
 Shaft RotationBi-directional
 Axial Shaft Load35kg max
 Starting Torque2.118 x 10⁻² typical.
 Max Acceleration1 x 10⁵ rad/sec²
 Electrical Conn17-pin MS Style
 HousingAnodised Aluminium
 BearingsPrecision ABEC ball bearings
 Mounting90mm Round Flange with 3 x 4.5mm Dia Holes at 120° On an 82mm PCD.
 Weight800gms typical

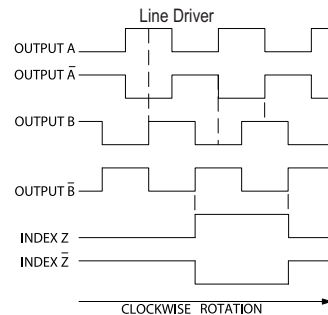
Environmental

Operating Temp0° to 70° C for standard models
 0° to 100° C for high temperature option
 Storage Temp-25° to +85° C
 Humidity95% RH non-condensing
 Vibration10 g @ 58 to 500 Hz
 Shock50 g @ 11 ms duration
 SealingIP50, IP64

Model 86F Round Flange



Waveform Diagrams



NOTE: ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES

Wiring Tables

17 Pin Connector

17 pin Conn	Option A	Option B	Option C
A	A	A	A
B	Z	B	Z
C	B	+Vcc	B
D	---	/A	---
E	---	/B	---
F	---	Z	---
G	---	/Z	---
H	+Vcc	Screen	+Vcc
J	---	+Vcc	---
K	0 Volts	+Vcc	0 Volts
L	---	---	---
M	---	---	0 Volts
N	/A	0 Volts	---
P	/Z	0 Volts	---
R	/B	---	---
S	---	---	---
T	---	0 Volts	Case