

Heavydic Large Hollow Shaft Incremental Encoder EV90P



Descriptions

Heavydic large hollow shaft incremental encoder EV90P are specially designed for heavy industries and heavy-loaded shaft applications. It delivers perfect performance of mechanical shock resistance, and is capable of withstanding higher axial and radial loads. It can be directly installed onto the drive shaft with crutch arm or fixing sheet for flexible connection. Its resolution is up to 4096ppr, which ensures accurate control and application safety.

Features

- Robust metal housing against greater shock;
- Stainless steel hollow shaft with diameter of $\Phi 25/\Phi 30/\Phi 38/\Phi 45$; installed by "C" lock ring
- Resolution up to 4096ppr; protection class of IP65
- Flexible connecting with cable or connector for easy maintenance; water-proof design to ensure safety
- Compact hollow shaft design to save both space and cost
- Crutch arm and fixing sheet provide greater flexibility
- Reverse connection / short circuit protection

Mechanical Characteristics

Hollow shaft diameter (mm)	$\Phi 25/\Phi 30/\Phi 38/\Phi 45H7$
Protection class	IP65
Speed	3500 rpm
Max. load capacity of the shaft	80N axial
	140N radial
Shock resistance	50G/11ms
Vibration resistance	10G 10...2000Hz
Bearing life	10^9 revolution
Moment of inertia	approx. $15 \times 10^{-6} \text{ kgm}^2$
Starting torque	<0.1Nm with oil seal
Body material	Al-alloy
Housing material	Al-alloy
Operating temperature	-20°C...+80°C (-40°C...+80°C optional)
Storage temperature	-40°C...+85°C
Weight	approx. 900g

Regular resolution: 1024, 2048

Note: other resolutions on request

Electrical Characteristics

Output circuit	RS422	Push-pull	Push-pull 7272
Resolution	Max. 2500ppr	Max. 2500ppr	Max. 2500ppr
Supply voltage (Vdc)	5±0.25 or 10-30	10-30	5-30
Power consumption (no load)	≤80mA	≤125mA	≤125mA
Permissible load	±20mA	±40mA	±40mA
Pulse frequency	Max. 300kHz	Max. 300kHz	Max. 300kHz
Signal level high	Min. 3.4V	Min. $U_b - 1.8$	Min. $U_b - 2.5$
Signal level low	Max. 0.4V	Max. 2.0V	Max. 0.4V
Rise time Tr	Max. 200ns	Max. 1μs	Max. 1μs
Fall time Tf	Max. 200ns	Max. 1μs	Max. 1μs

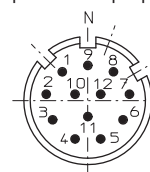
Terminal Configuration

Signal	0V	+U _b	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	0V Sen	+U _b Sen	Shield
Color Code	WH	BN	GN	YE	GY	PK1	BU	RD	GY/PK	RD/BU	⊥
Pin	10	12	5	6	8	1	3	4	11	2	PH

- 1) When the voltage supply within the limited range and only one signal channel is connected improperly at certain moment:
if $U_b = 5V$, it's permitted to connect to signal channels, 0V or U_b ;
if $U_b > 5V$, it's permitted to connect to signal channels or 0V.

Matched connector:
the compatible connector with type of connection "T" is TMS1612F.

Topview of 12-pin plug



5...30Vdc