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 perfornance 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 2500ppr, which ensures accurate control and application safety.

Features

- Robust metal housing against greater shock; compact structure for limited installation space
- Resolution up to 2500ppr; protection grade of IP65
- Compact hollow shaft design to save both space and cost
- Crutch arm and fixing sheet provide greater flexibility
- Stainless steel hollow shaft with diameter of Φ25/Φ30/Φ38/Φ45; installed by "C" lock ring
- Flexible connecting with cable or connector for easy maintemance; water-proof design to ensure safety
- Reverse connection / short circuit protection[1]

Mechanical Characteristics

Hollow shaft diameter (mm)	Φ25/Φ30/Φ38/Φ45H7
Protection Grade	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.15×10^{-6} kgm^2
Starting torque	<0.1Nm with oil seal
Body material	Al-alloy
Housing material	Al-alloy
Operating temperature	-20～+80°C (-40～+80°C optional)
Storage temperature	-45～+85°C
Weight	approx. 900g

Regular resolution: 1024, 2048

Note: other resolutions on request

Electrical Characteristics

Output circuit	RS422	Push-pull
Resolution	Max 2500ppr	Max 2500ppr
Supply voltage (VDC)	5±0.25 or10-30	10-30
Power consumption (no load)	≤80mA	≤125mA
Permissible load	±20mA	±40mA
Pulse frequency	Max 300kHz	Max 300kHz
Signal level high	Min 3.4V	Min Ub-1.8
Signal level low	Max 0.4V	Max 2.0V
Rise time Tr	Max 200ns	Max 1μS
Fall time Tf	Max 200ns	Max 1μS

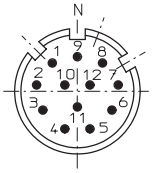
Terminal Configuration

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 premitted to connect to signal channals, 0V or U_B ;
if U_B>5V, it's premitted to connect to signal channals or 0V.

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

Topview of 12-pin plug



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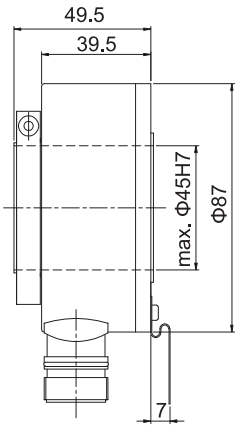
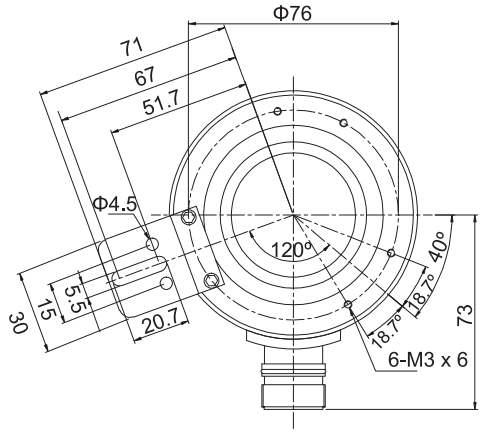
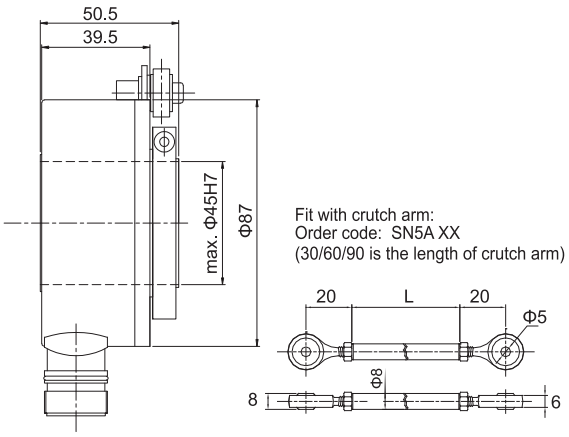
Dimensions (mm)

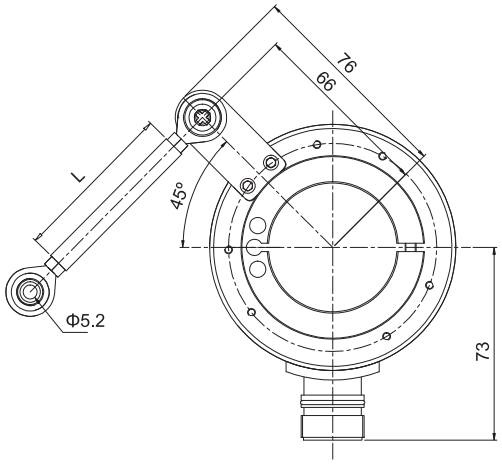
EV90P





EV90R





Order Code:

EV 90 P 30 _ L5 T R _ 1024 . XXXX

Series
EV = heavydic incremental

Housing diameter
90= housing diameter

Flange type
P= fixing sheet
R= crutch arm

Hollow shaft diameter
25=Φ25H7
30=Φ30H7
38=Φ38H7
45=Φ45H7

Output & Supply voltage

L5=RS422 (with reverse signal)	5Vdc
L6=RS422 (with reverse signal)	10~30Vdc
H6=Push-pull HTL (with reverse signal)	10~30Vdc
P6=Push-pull HTL (without reverse signal)	10~30Vdc

Standard cable length
P=1.5m
T= M23, 12-pin plug with connector
(order code for connector: TMSP1612F)

Resolution
Pulse/r: ≤2500

Outlets direction
R=radial

XXXX=Special code