Topydic Series Shaft Incremental EV50A

Description:

Topydic series shaft incremental encoder EV50A, with double-bearing and casting housing, has excellent performance to resist mechanical shocks and can be used in various industrial environments; being compatible with standard flange types-50 mm and 58 mm, it can meet different application requirements; its wide voltage range, reverse connection and short circuit protection can effectively avoid mis-wiring.

Features:

- Resolution up to 5000 ppr; pulse frequency up to 300 kHz
- Hollow shaft diameter, φ6-φ12 mm
- Compatible with standard flange types-50 mm and 58 mm
- φ50 mm metal casting housing for limited installation space
- Operating temperature, -40...+85 ℃; IP67 protection class for outdoors application
- Multi signal output interfaces to meet different types of data aquisition of upper computer
- Optional output types-with cable, M12 connector and M23 connector
- Reverse connection and short circuit protection to ensure the safety[1)]

Mechanical parameters

Shaft diameter	φ6/φ8/φ10/φ12/φ1/4”/φ3/8”
Protection class	IP65 (without oil seal)
	IP67 (withoil seal)
Speed	12000 rpm (without oil seal)
	6000 rpm (with oil seal)
Max. load capacity of the shaft	40 N axial
	80 N radial
Shock resistance	50G/ 11 ms
Vibration resistance	10G 10...2000 HZ
Bearing life	10^9 revolution
Moment of inertia	$1.9x10^{-6}$ kgm^2
Starting torque	＜0.01 Nm (IP65)
	＜0.05 Nm (IP67)
Body material	Al-alloy
Housing material	Al-alloy
Operating temperature	-40...+85 ℃
Storage temperature	-45...+90 ℃
Relative humidity/condensation	90%, Condensation not permitted
Weight	approx. 400 g

Resolution: 100, 200, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1250, 2000, 2048, 2500, 3600, 4096, 5000

Attention: the products with above resolutions are available from stock, others on request.

Electrical parameters

Output circuit	RS422	Push-pull
Supply voltage	5±0.25 or 10...30 VDC	10...30 VDC
Power consumption (no load)	typ. 40 mA	typ. 50 mA
	max. 90 mA	max. 100 mA
Permissible load (channel)	max. ±20 mA	max. ±30 mA
Pulse frequency	max. 300 kHz	max. 300 kHz
Signal level high	min. 2.5 V	min. Ub-1 V
Signal level low	max. 0.5 V	max. 0.5 V
Rise time Tr	max. 200 ns	max. 1 μs
Fall time Tf	max. 200 ns	max. 1 μs

Terminal Configuration

Signal	0V	$+U_b$	A	$\bar{A}$	B	$\bar{B}$	Z	$\bar{Z}$	Shield
Color Code	WH	BN	GN	YE	GY	PK	BU	RD	⏚
Pin (12-pin)	10	12	5	6	8	1	3	4	PH
Pin (5-pin)	1	2	3	-	4	-	5	-	PH
Pin (8-pin)	1	2	3	4	5	6	7	8	PH

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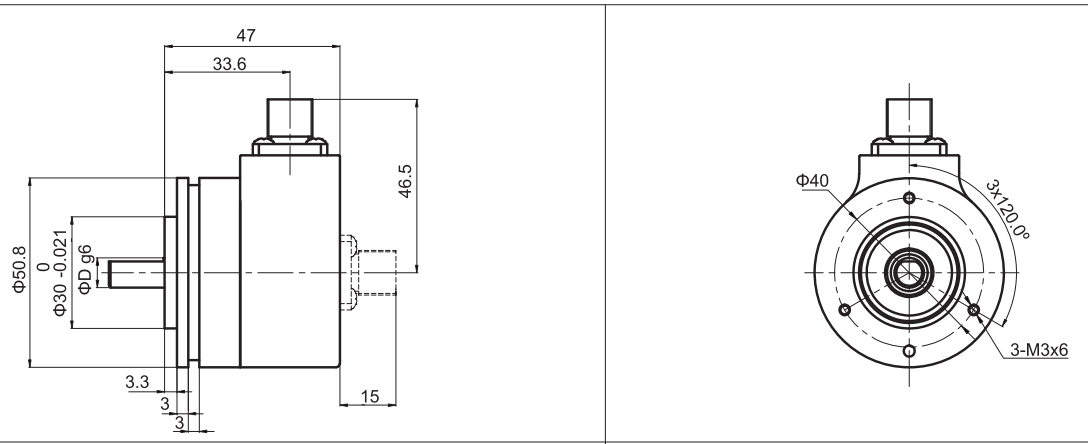
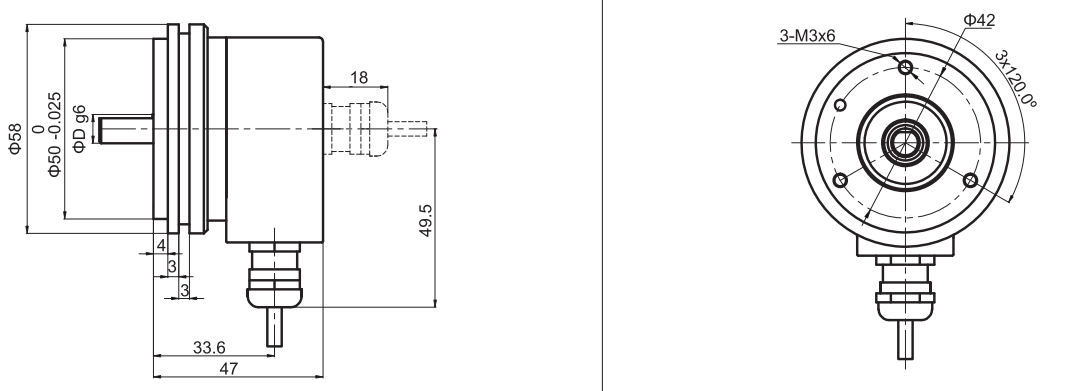
Dimensions (mm)

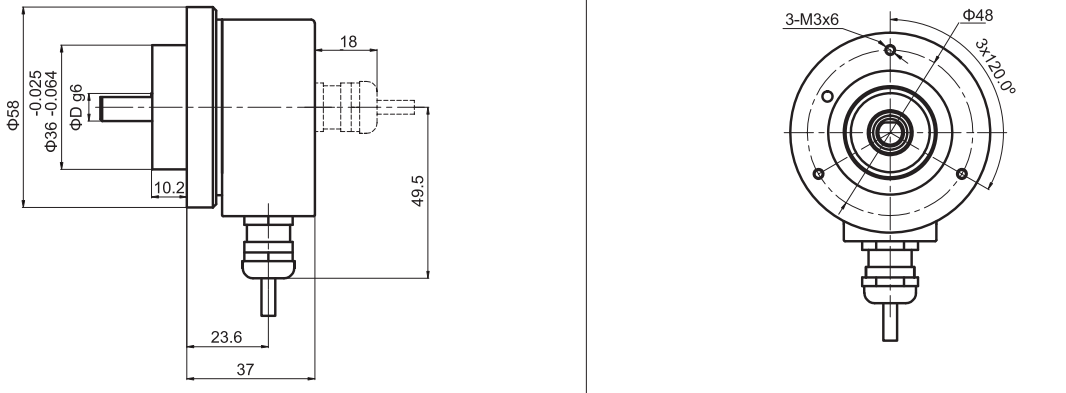
EV50A



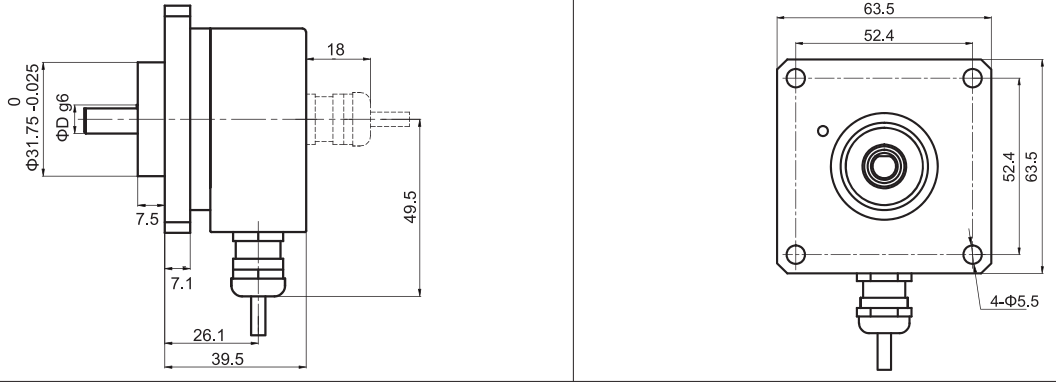
EV50B



EV50C



EV50D



Topydic Series Shaft Incremental EV50A

Order Code

EV 50 B 6 – L5 P R – 1024 XX . XXXX

Shaft diameter
6= Φ6 mm x 10 mm
7= Φ1/4" x 5/8"
8= Φ8 mm x 15 mm
9= Φ3/8" x 5/8"
10= Φ10 mm x 20 mm
12= Φ12 mm x 20 mm
(8R,9R,10R,12R=IP67)

Flange type
A=φ50.8 synchro flange
B=φ58 synchro flange
C=φ58 clamping flange
D=φ63.5 synchro flange

Housing diameter
50= Housing diameter

Series
EV=Topydic incremental

Output & Supply voltage[1)]

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

Standard cable length
P=1.5 m

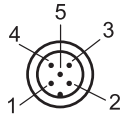
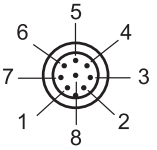
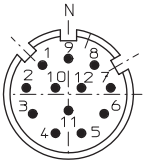
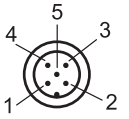
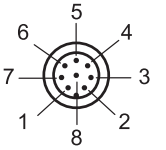
Outlets direction
R= radial
A=axial

Optional functions
M5=M12, 5-pin plug without connector
M8=M12, 8-pin plug without connector
T=M23, 12-pin plug without connector
(for other cable length, it's on request)

Resolution
Pulse/r: 1-5000

XXXX=Special code
Customized cable length
CN00XX=cable length
e.g. CN0010=1 m
CN0020=2 m

Top view of pin plug:

Connector Type	5-pin M12 Connector	8-pin M12 Connector	12-pin M23 Connector	5-pin M12 Connector	8-pin M12 Connector
Pin plug					
Matched connector	M125PSF-0020-W 5-core pre-molded connector with 2m PUR cable	M128PSF-0020-W 8-core pre-molded connector with 2m PUR cable	TMSP1612F Field attachable connector	TMSP125PF Field attachable connector	TMSP128PF Field attachable connector