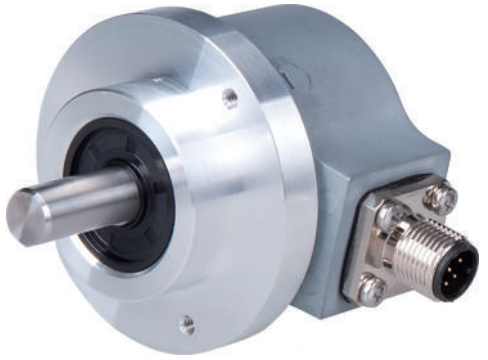
Topydic Series Shaft Incremental EV50A



Descriptions

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

Features

- Resolution up to 5000ppr; pulse frequency up to 300kHz
- Hollow shaft diameter, Φ6~Φ12mm
- Be compatible with standard flange types-50mm and 58mm
- Φ50mm metal casting housing for limited installation space
- Operating temperature, -40~+85℃; IP67 protection grade for outdoors application
- Multi signal output interfaces to meet different types of data aquisition of upper computer
- The power indicator on the back cover ensures correct power supply
- Optional output types-with cable, M12 connector and M23 connector
- Reverse connection and short circuit protection to ensure the safety [1)]

Mechanical Characteristics

Shaft diameter	Φ6/Φ8/Φ10/Φ12/Φ1/4"/Φ3/8"
Protection Grade	IP65 (without oil seal)
	IP67 (with oil seal)
Speed	12000 rpm (without oil seal)
	6000 rpm (with oil seal)
Max. load capacity of the shaft	40N axial
	80N radial
Shock resistance	50G/11ms
Vibration resistance	10G 10～2000HZ
Bearing life	10^9 revolution
Moment of inertia	$1.9\chi10^{-6}$ kgm²
Starting torque	<0.01Nm (IP65)
	<0.05Nm (IP67)
Body material	Al-alloy
Housing material	Al-alloy
Operating temperature	-40～+85°C
Storage temperature	-45～+90°C
Weight	approx. 400g

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 standing inventory; others on request.

Electrical Characteristics

Output circuit	RS422	Push-pull	Push-pull 7272	NPN open collector
Supply voltage (VDC)	5±0.25 or 5~30	10~30	5~30	5~30
Power consumption (no load)	typ. 40mA	typ. 50mA	typ. 50mA	typ. 40mA
	max. 90mA	max. 100mA	max. 100mA	max. 90mA
Permissible load (channel)	max. ±20mA	max. ±30mA	max. ±20mA	max. ±20mA
Pulse frequency	max. 300kHz	max. 300kHz	max. 300kHz	max. 300kHz
Signal level high	min. 2.5V	min. Ub-1V	min. Ub-1V	min. Ub-2.5V
Signal level low	max. 0.5V	max. 0.5V	max. 0.5V	max. 0.5V
Rise time Tr	max. 200ns	max. 1μs	max. 1μs	max. 1μs
Fall time Tf	max. 200ns	max. 1μs	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	PK	BU	RD	GY/PK	RD/BU	⏚
Pin (12-pin)	10	12	5	6	8	1	3	4	11	2	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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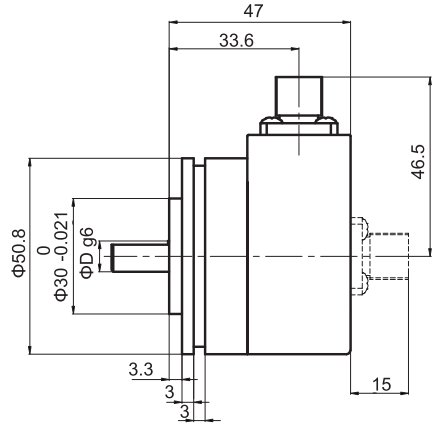
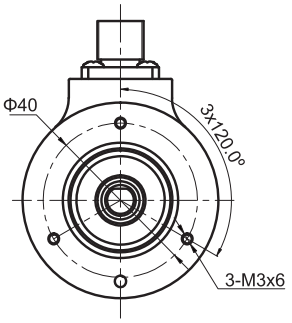
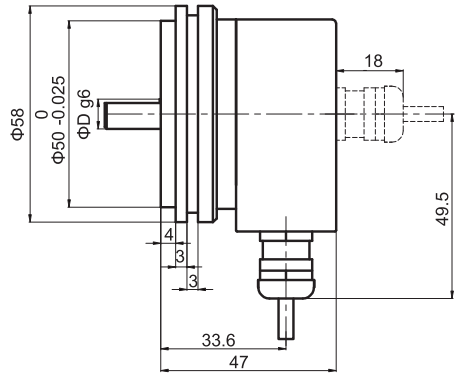
Dimensions (mm)

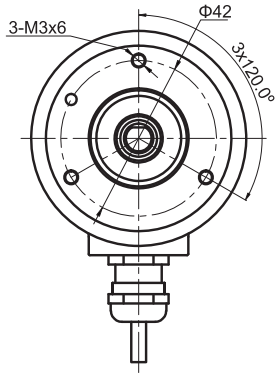
EV50A



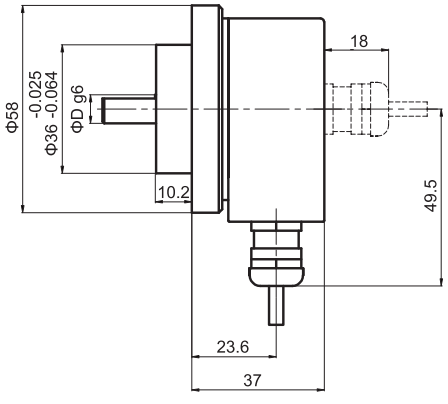


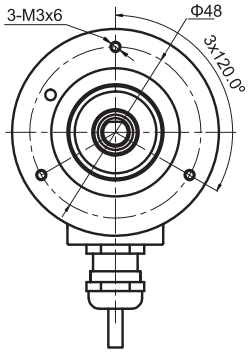
EV50B



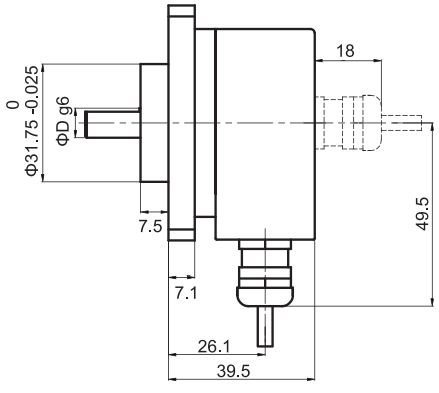


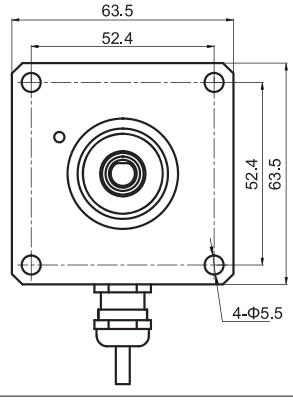
EV50C





EV50D





Topydic Series Shaft Incremental EV50A

Order Code:

EV 50 B 6 – L5 P R – 1024 XX . XXXX

Shaft diameter
6= Φ6mm x 10mm
7= Φ1/4" x 5/8"
8= Φ8mm x 15mm
9= Φ3/8" x 5/8"
10= Φ10mm x 20mm
12= Φ12mm x 20mm
(8R,9R,10R,12R=IP67)

Flange type
A=Φ50.8 synchro flange
B=Φ58 synchro flange
C=Φ58 clamping flange
D=Φ63.5 square flange

Housing diameter
50=Housing diameter

Series
EV=Topydic incremental

Output & Supply voltage[1)]

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
E4= Push-pull 7272 HTL (with reverse signal)	5~30Vdc
C6= NPN OC	10~30Vdc

Standard cable length
P=1.5m

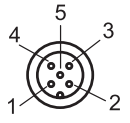
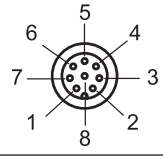
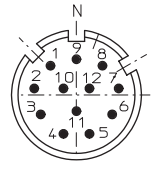
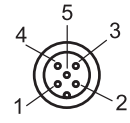
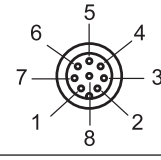
Outlets direction
R= radial
A=axial

Resolution
Pulse/r: 1-5000

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 requested)

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

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 5-core pre-molded connector with 2m PUR cable	TMSP1612F Field attachable connector	TMSP125PF Field attachable connector	TMSP128PF Field attachable connector