

Topydic Small Shaft Incremental Encoder EV40A



Descriptions

Topydic series small shaft incremental encoder-EV40A delivers outstanding performance in mechanical shock-resistance and is capable of withstanding higher axial and radial loads so as to meet various industrial environments. Its special position of cabling fits to the limited installation space. Combining advanced signal processing technology with multiple types of electrical output, EV40A is capable of matching various upper control computers.

Features

- Stainless steel shaft ensures safety and stability in operation
- Optional types of flange connection offers more flexibility
- Metal casting housing for greater shock resistance
- Side cabling design greatly saves the installation space and simplifies wiring
- Reverse connection protection; short circuit protection

Mechanical Characteristics

Shaft diameter (mm)	Φ6g6
Protection class	IP66 standard, IP67 optional
Max. speed/ minute	6000
Max. load capacity of the shaft	60N axial 100N radial
Shock resistance	50G/11ms
Vibration resistance	10G 10...2000Hz
Bearing life	10 ⁹ revolution
Moment of inertia	1.9×10 ⁻⁶ kgm ²
Starting torque	<0.08Nm
Body material	Al-alloy
Housing material	Zn-alloy
Operating temperature	-20°C...+85°C
Storage temperature	-25°C...+100°C
Weight	110g

Regular resolution: **10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 2000,**
4000, 2500, 5000, 2048

Note: Bold part is normally in stock. Other resolution are available only upon request.

Electrical Characteristics

Output circuit	RS422	Push-pull
Resolution	Max.5000ppr	Max.5000ppr
Supply voltage (Vdc)	5±0.25 or 10-30	10-30
Power consumption (no load)	≤80mA	≤125mA
Permissible load (channel)	±50mA	±80mA
Pulse frequency	Max. 800kHz	Max. 800kHz
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

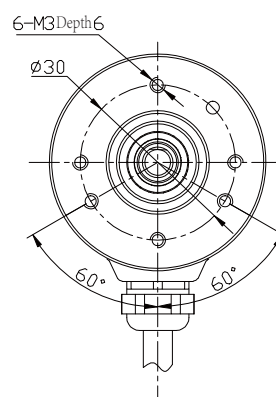
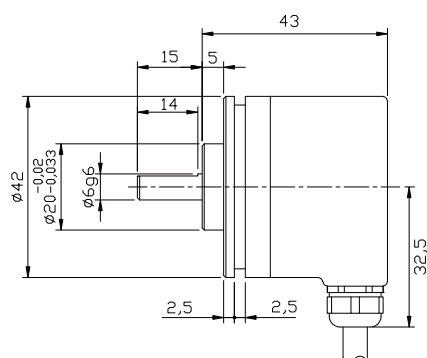
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Terminal Configuration

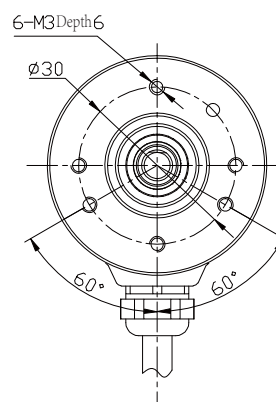
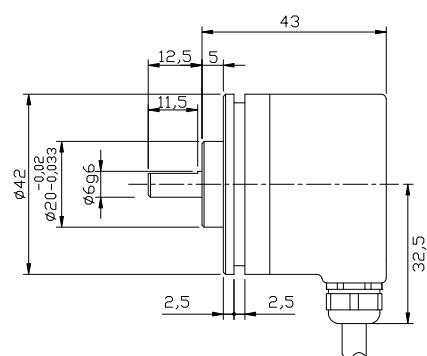
Signal	0V	+U _b	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	0V Sen	+U _b Sen	Shield
Color	WH	BN	GN	YE	GY	PK	BU	RD	GY/PK	RD/BU	\perp
Pin	10	12	5	6	8	1	3	4	11	2	PH

Dimension (mm)

EV40A



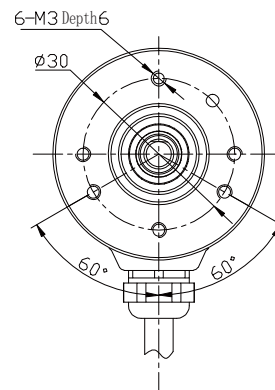
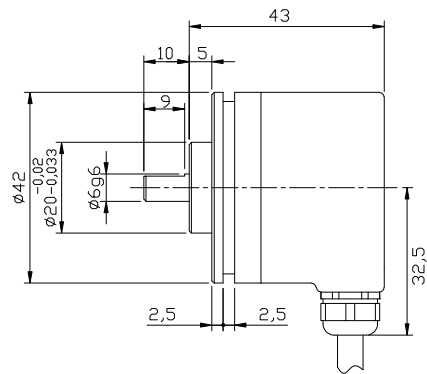
EV40B



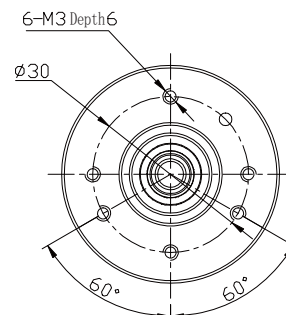
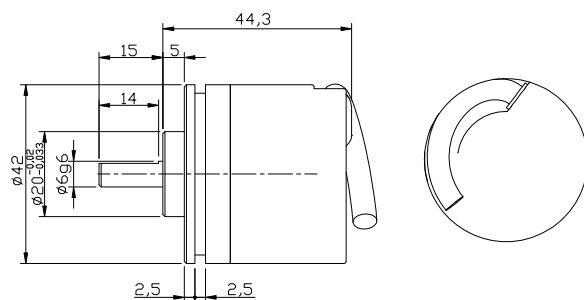
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Dimension (mm)

EV40C



EV40A side pre-wired cable



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Order Code:

EV	40	B	6	—	L5	P	R	—	1024	TP	XXXX
		<u>Shaft diameter</u> 6= Φ6mm					<u>Outlet direction</u> R=radial				<u>XXXX=Special code</u> Customized cable length CN00XX=cable length e.g. CN0010=1m CN0015=1.5m CN0020=2m <u>Side output cable length</u> TP=0.5m Note: If blank here, it means P=0.5m
		<u>Flange type</u> A=Φ20 clamping flange with synchro flange ditch, axis length 15mm B=Φ20 clamping flange with synchro flange ditch, axis length 12.5mm C=Φ20 clamping flange with synchro flange ditch, axis length 10mm					<u>Standard cable length</u> P=0.5m			<u>Resolution</u> Pulse/r: ≤5000 Note: for other available pulse options please contact us for further information.	
					<u>Output & Supply voltage¹⁾</u> 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 (without reverse signal) 10...30Vdc C6=NPN OC 10...30Vdc						
		<u>Housing diameter</u> 40mm=housing diameter									
<u>Series</u> EV= Topydic incremental											

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