

Topydic Series Shaft Incremental Encoder EC40A



Application

Topydic series encoders EC40A, small in size $\Phi 40$, are used in industrial environments which require limited installation space, high precision and high IP protection class. Perfect mechanical shock resistance, and also could afford higher axial and radial load. The specially designed gear shaft could meet specific customer requirements. The special outline design is convenient for operation, and the variant mechanical structure & electrical circuit design could match various standard flanges and all control computers.

Characteristics

- Compact $\Phi 6$ shaft encoder, E type flange gear shaft, 24 wheels, 0.6mm ditch depth
- Stainless steel shaft ensures high safety and stability. Various shaft length could meet different requirements.
- Metal housing for shock resistance, compact structure suitable for tight mounting space
- Cable output or connector, more flexible and easy for maintenance. The waterproof end rubber ensures safety
- Reverse connection protection
- Short circuit protection

Mechanical Characteristics

Shaft diameter (mm)	$\Phi 6g6$ E type flange gear shaft, 24 wheels, 0.6mm ditch depth
Protection acc. to EN 60529	IP64standard, IP66optional
Speed	12000(IP64); 6000(IP66)
Max load capacity of the shaft	60Naxial
	100Nradial
Shock resistance	50G/11ms
Vibration resistance	10G 10~2000HZ
Bearing life	10^9 revolution
Moment of inertia	approx. 1.9×10^{-6} kgm ²
Starting torque	<0.03Nm(without oil seal), <0.08Nmwith oil seal
Body material	AL-alloy
Housing material	AL-alloy + green paint
Operating temperature	-20~+90°C
Storage temperature	-25~+100°C
Weight	110g

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**

Attention: Bold part is in stock, others on request

Electrical Characteristics

Output circuit	RS422	Push-pull	Push-pull
Resolution	Max. 5000ppr	Max. 5000ppr	Max. 5000ppr
Supply voltage(VDC)	5±0.25 or 5 (10) -30	10-30V	5-30V
Power consumption (no load)	≤80mA	≤125mA	≤125mA
Permissible load (channel)	±50mA	±80mA	±80mA
Pulse frequency	Max. 800kHz	Max. 800kHz	Max. 800kHz
Signal level high	Min.3.4V	Min.Ub-1.8	Min.Ub-1.8
Signal level low	Max.0.4V	Max.2.0V	Max.0.4V
Rise timeTr	Max 200ns	Max 1μs	Max 1μs
Fall timeTf	Max 200ns	Max 1μs	Max 1μs

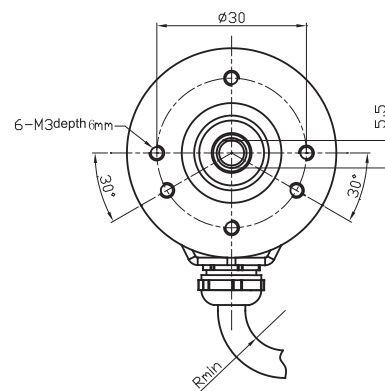
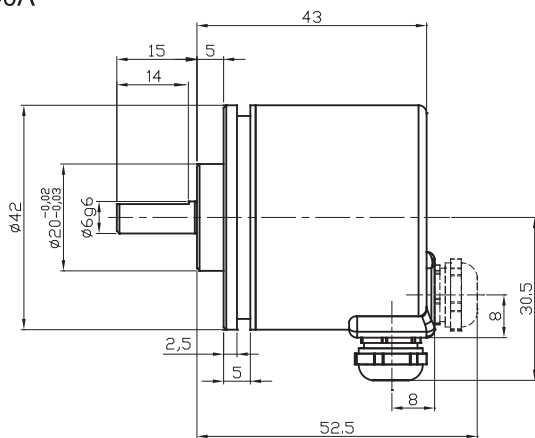
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Terminal Assignment

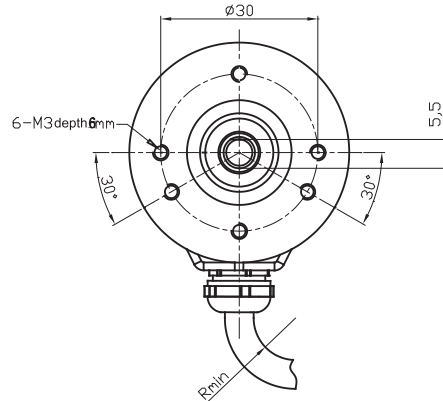
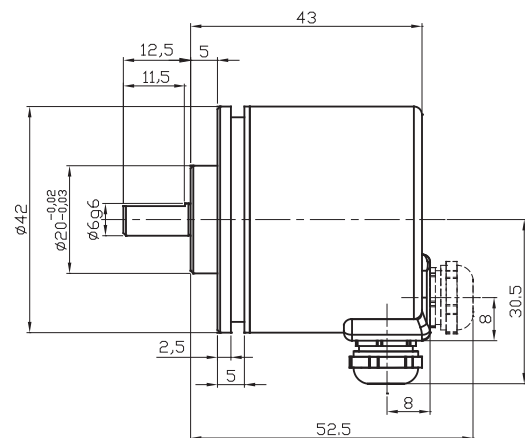
Signal	0V	+U _b	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	0V Sen	+U _b Sen	Shield
Color	WH	BN	GN	YE	GY	PK	BU	RD	GY/PK	RD/BU	\perp
Pin	10	12	5	6	8	1	3	4	11	2	PH

Dimensions

EC40A



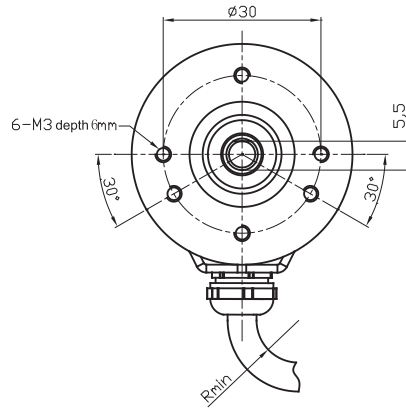
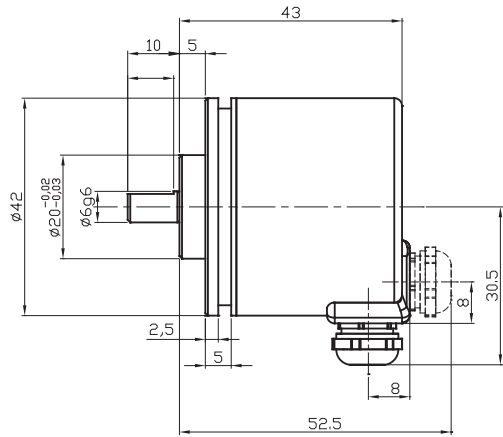
EC40B



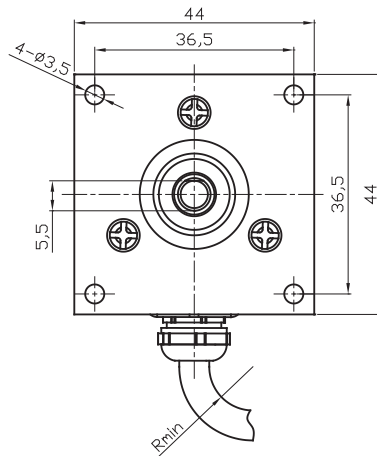
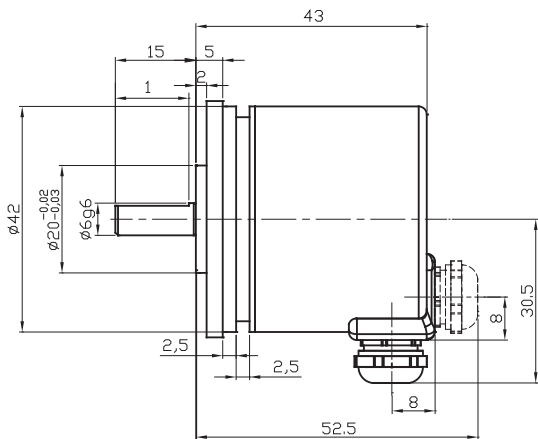
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Dimensions

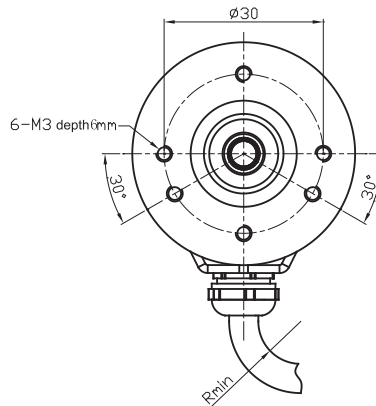
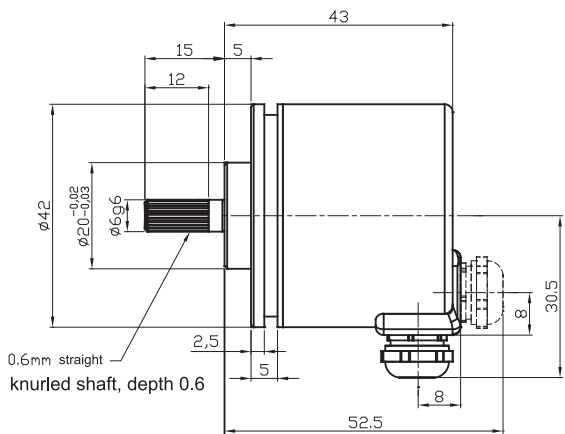
EC40C



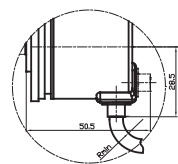
EC40D



EC40E



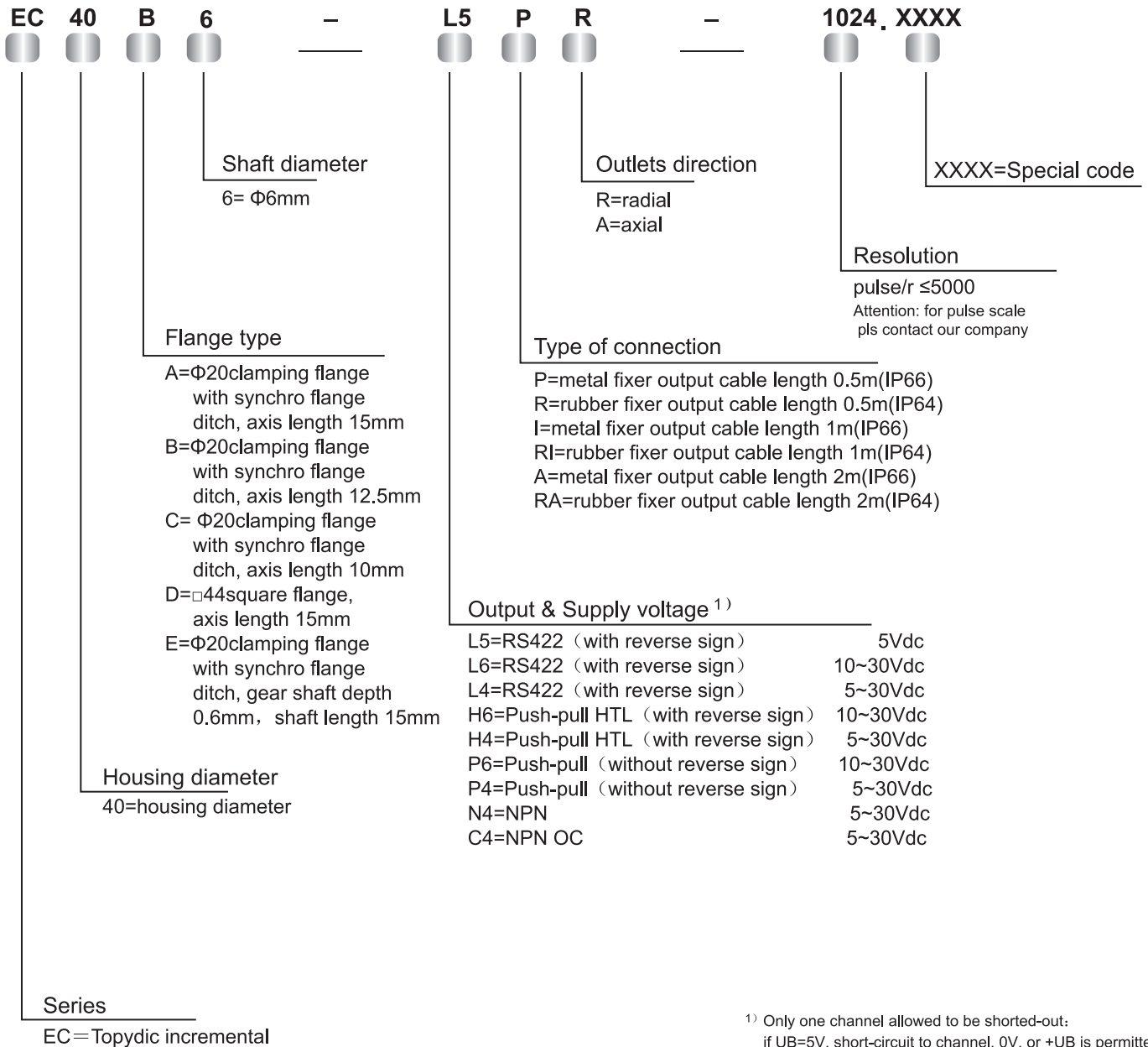
Rubber fixer output



$Rmin$
Fix installation: 55mm
Draw installation: 70mm

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Order Code



¹⁾ Only one channel allowed to be shorted-out:
 if UB=5V, short-circuit to channel, 0V, or +UB is permitted
 if UB=10...30V, short-circuit to channel or 0V is permitted