

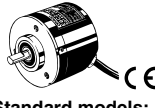
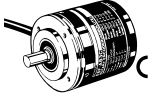
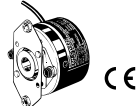



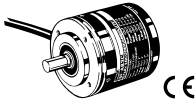
Selection Guide


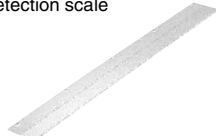
■ Rotary Encoders

Classified According to Product Model

Classification		Incremental Encoders				
Item	Model	E6A2-C	E6B2-C	E6C2-C	E6F-C	E6H-C
Appearance		 25 dia. x 29 mm Shaft diameter: 4 dia.	 40 dia. x 39 mm Shaft diameter: 6 dia.	 Standard models: 50 dia. x 40 mm Shaft diameter: 6 dia. Solid models: 50 dia. x 38 mm Shaft diameter: 8 dia.	 60 dia. x 60 mm Shaft diameter: 10 dia.	 40 dia. x 26 mm Inside diameter: 8 dia.
Features		<ul style="list-style-type: none"> 25 dia., miniature, low-cost Low and medium resolution 	<ul style="list-style-type: none"> 40 dia., general purpose Low and medium resolution Line driver output 	<ul style="list-style-type: none"> Degree of protection: IP64f (drip-proof, oil-resistant) Output types: NPN, PNP, line driver Shaft withstands heavy loads 	<ul style="list-style-type: none"> Solid model with strong shaft 	<ul style="list-style-type: none"> Hollow shaft eliminates the need for coupling Slim: 26 mm thick Line driver output
Resolution (pulses/revolution)		10 to 500	10 to 2,000 PNP open collector output: 100 to 2,000	Standard models: 10 to 2,000 Solid models: 100 to 3,600	100 to 1,000	300 to 3,600
Output phases		A; A and B; or A, B, and Z	A, B, and Z or A, \bar{A} , B, \bar{B} , Z, and \bar{Z}		A, B, and Z	A, B, and Z or A, \bar{A} , B, \bar{B} , Z, and \bar{Z}
Phase difference on output		—	90°±45°		90°±45°	90°±45°
Maximum response frequency		30 kHz	50 kHz, 100 kHz	Standard models: 50 kHz, 100 kHz Solid models: 125 kHz	83 kHz	100 kHz
Maximum admissible rotation		5,000 r/min	6,000 r/min	Standard models: 6,000 r/min Solid models: 5,000 r/min	5,000 r/min	10,000 r/min
Supply voltage		5 to 12 VDC, 12 to 24 VDC	5 VDC, 5 to 12 VDC, 5 to 24 VDC, 12 to 24 VDC	Standard models: 5 to 24 VDC, 12 to 24 VDC, 5 to 12 VDC, 5 VDC Solid models: 12 to 24 VDC, 5 to 12 VDC	12 to 24 VDC	5 to 12 VDC, 5 to 24 VDC
Current consumption		20 to 50 mA max.	70 to 130 mA max.		100 mA max.	80 to 100 mA max.
Output capacity		20 mA (voltage output) 30 mA (open collector output)	20 mA (voltage output) 35 mA (NPN/PNP open collector output and line driver output)	Standard models: 20 mA (voltage output) 35 mA (NPN/PNP open collector output) Compliance with RS-422A (line driver output) Solid models: 30 mA (complimentary output) 35 mA (voltage output) Compliance with RS-422A (line driver output)	30 mA (complimentary output)	30 mA (voltage output) 35 mA (open collector output) Conformance to RS-422A (line driver output)
Shaft loading	Radial	10 N	30 N	50 N, 80N	120 N	30 N
	Thrust	5 N	20 N	30 N, 50 N	50 N	5 N
Starting torque		1 mN·m max.	0.98 mN·m max.	10 mN·m max.	10 mN·m max.	1.5 mN·m max.
Degree of protection		IEC IP50		Standard models: IEC IP64 (JEM IP64t for drip and oil resistance) Solid models: IEC IP65 (JEM IP65f for drip and oil resistance)	IEC IP65 (JEM IP65f for drip resistance and oil resistance)	IEC IP50
Ambient operating temperature		-10 to 55 °C (with no icing)	-10 to 70 °C (with no icing)			
Coupling		E69-C04B provided	E69-C06B provided	Sold separately	Sold separately	—

Note: Only the overall specifications are provided in the above table. Be sure to refer to the page numbers given for detailed specifications and details on safety precautions.

Classification		Absolute Encoders	
Item	Model	E6C2-A	E6F-A
Appearance		 <p>50 dia. x 38 mm Shaft diameter: 8 dia.</p>	 <p>60 dia. x 60 mm Shaft diameter: 10 dia.</p>
Features		<ul style="list-style-type: none"> Degree of protection: IP64f (drip and oil resistance) Shaft twice as strong as conventional shafts Space-saving dimensions NPN/PNP output 	<ul style="list-style-type: none"> Solid model with strong shaft
Resolution (pulses/revolution)		6 to 1,024	256, 360, 720, 1024
Output code		Gray code, BCD, binary	Gray code, BCD
Accuracy		---	---
Maximum response frequency		10 kHz, 20 kHz	10 kHz/20 kHz
Maximum admissible rotation		5,000 rpm	5,000 rpm
Power supply voltage		12 to 24 VDC	5 to 12 VDC, 12 to 24 VDC
Current consumption		70/80 mA max.	60 mA max.
Output capacity		Sinking current: 35 mA max. Applied voltage: 30 VDC max. (NPN open collector output)	35 mA (open collector output)
Shaft loading	Radial	80 N	120 N
	Thrust	50 N	50 N
Starting torque		9.8 mN·m max.	9.8 mN·m max.
Degree of protection		IEC IP64 (JEM IP64f for drip and oil resistance)	IEC IP65 (JEM IP65f for drip and oil resistance)
Ambient operating temperature		-10 to 70 °C (with no icing)	-10 to 70 °C (with no icing)
Coupling		Sold separately	Provided with pre-wired models. Purchase separately for other models.

Classification		Linear Encoder	
Item	Model	E6L	
Appearance		 <p>34.5 x 38 x 44.7 mm(H x W x D)</p>	 <p>30 m x 0.3 mm x 280/475 mm (H x W x D)</p>
Features		<ul style="list-style-type: none"> Unique optical system design ensures resistance to scale rattling. (Detection is possible if the detection scale is within a range of 6 mm (±3 mm). Unique optical, circuit, and structural design ensures low costs. Resolution of 1 mm is ideal for positioning in conveyor applications. 	

Note: Only the overall specifications are provided in the above table. Be sure to refer to the page numbers given for detailed specifications and details on safety precautions.