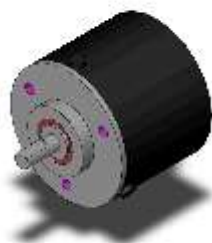


Slim Incremental 50-mm-dia. Rotary Encoder

E6C2-CWZ5B 2000P/R 2M

Rotary Encoder, Incremental, External Diameter: 50 dia., PNP Open-collector output, 2000 P/R, 12 to 24 VDC, Phases A/B/Z, Pre-wired model, 2 m



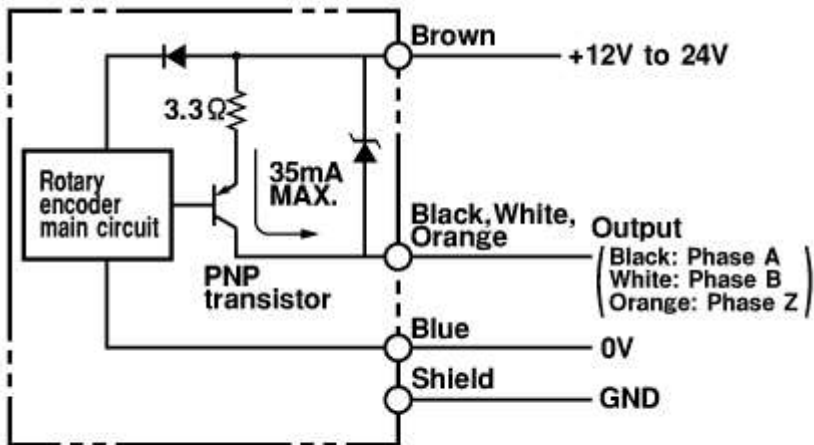
Image

Encoding method	Incremental Shaft model
Resolution	2000 P/R
Output phases	A, B and Z
Control output	PNP open collector
Connection method	Pre-wired models (Cable length: 2 m)

Ratings / Performance

As of July 25, 2024

Categorise		Incremental Shaft model
Diameter		50 mm dia.
Power supply voltage		12 to 24 VDC (-10% to +15%) Ripple (p-p) 5% max.
Current consumption		100 mA max.
Resolution		2000 P/R
Inrush current		Approx. 9 A (0.3 ms)
Output phases		A, B and Z
Control output	Output type	PNP open collector
	Load power supply voltage	30 V max.DC
	Source current	35 mA max.
	Residual voltage	0.4 V max. (at source current 35 mA)
Starting positional point		Equipped
Max. response frequency		50 kHz
Phase difference on output		90±45 ° between A and B (1/4 T ± 1/8 T)
Rise and fall times of output		1 µs max. (Cable length: 2 m, load current: 10 mA)
Starting torque		10 mN.m max.
Moment of inertia		1 x 10 ⁻⁶ kg.m ² max.
Shaft loading		Radial: 50 N Thrust: 30 N
Max. permissible rotation		6000 r/min
Protective circuit		Output short-cut protection Power supply reverse polarity protection
Ambient temperature		Operating: -10 to 70 °C (with no icing) Storage: -25 to 85 °C (with no icing)



- *1.The shielded cable outer core is not connected to the inner area or the case.
 2.Normally, connect GND to 0V or to an external ground.

As of July 25, 2024

Connected specification chart

As of July 25, 2024

Color	Terminal
Brown	Vcc
Black	Phase A
White	Phase B
Orange	Phase Z
Blue	0V(COMMON)
Shield	GND

As of July 25, 2024

Timing chart

As of July 25, 2024

Output phase	Direction of rotation	Output mode
Phase A Phase B Phase Z	CW as viewed from the end of the shaft	Phase A ON OFF Phase B ON OFF Phase Z ON OFF $T(360^\circ)$ $1/4T \pm 1/8T(90^\circ \pm 45^\circ)$ CW
	CCW as viewed from the end of the shaft	Phase A ON OFF Phase B ON OFF Phase Z ON OFF $T(360^\circ)$ $1/4T \pm 1/8T(90^\circ \pm 45^\circ)$ CCW

*CW direction: Phase A is $1/4 \pm 1/8T$ faster than phase B.
 CCW direction: Phase A is $1/4 \pm 1/8T$ slower than phase B.

As of July 25, 2024