

Encoder 40mm Size Hollow Shaft Type

EC40A Series



Less shaft wobble achieves good operation feel.

- Detector
- Push
- Slide
- Rotary
- Encoders**
- Power
- Dual-in-line Package Type
- Multi Control Devices
- TACT Switch™
- Custom-Products



Features

- Excellent operation feel when rotating.
- Incremental type.

Applications

- For adjusting temperature and fan speed in air conditioners
- For various control in car audio equipment

Typical Specifications

Items	Specifications
Rating	0.5mA 5V DC
Operating life	30,000cycles

Product Line

Actuator length (mm)	Detent torque (mN·m)	Number of detent	Number of pulse	Operating direction	Minimum packing unit (pcs.)	Product No.
22	20±11	30	15	Vertical	400	EC40A1520401

- Incremental Type
- Absolute Type

Dimensions

Unit:mm

Style	PC board mounting hole dimensions

Refer to P.214 for product specifications.

Product Specifications

		Type	EC40A	EC45A	RK45A RK45B	EC60A	EC35B	EC35AH	
Items									
Operating temperature range		-40°C to +85°C							
Detector	Rating		0.5mA 5V DC		0.05W	0.5mA5V DC	10mA5V DC		
Push	Electrical performance	Output voltage	2.5V max. at 5V DC, 0.5mA (resistive load)		—	2.5V max. at 5V DC, 0.5mA (resistive load)	2.5V max. at 5V DC, 1mA (resistive load)		
Slide		Insulation resistance	10MΩ min. 50V DC			10MΩ min. 500V DC	100MΩ min. 250V DC	250V DC 100MΩ min.	
Rotary		Voltage proof	50V AC for 1minute			500V AC for 1minute	300V AC for 1minute		
Encoders	Mechanical performance	Detent torque	20±11mN·m	Shall be in accordance with individual specifications.		40±20mN·m	20±10mN·m		
Power		Terminal strength	3N for 10s				5N for 1minute		
Dual-in-line Package Type		Actuator strength	Pushing direction	100N					
Multi Control Devices			Pulling direction	50N			100N		
TACT Switch™		Vibration		10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively					
Custom-Products		Resistance to soldering heat	Manual soldering	350°C max. 3s max.					
			Dip soldering	260°C max. 5s max.				260±5°C, 5±1s	
	Reflow soldering		—						
Incremental Type	Durability	Operating life without load	30,000cycles					50,000cycles	
		Operating life with load	30,000cycles					50,000cycles	
Absolute Type	Environmental performance	Cold	-40±3°C for 240h						
		Dry heat	85±3°C for 240h						
		Damp heat	40±2°C, 90 to 95% RH for 240h				60±2°C, 90 to 95% RH for 240h		

Self-return Switch Specifications

Items	EC35B
circuit · number of contacts	Single pole and single throw (Push-on)
Travel(mm)	2.8±0.5
Push operating force(N)	3.8±1.5
Switch ON position	15±5°
Ratational torque	40±25mN·m
Rating	10mA 5V DC
Contact resistance	200mΩ max.
Operating life	15,000cycles