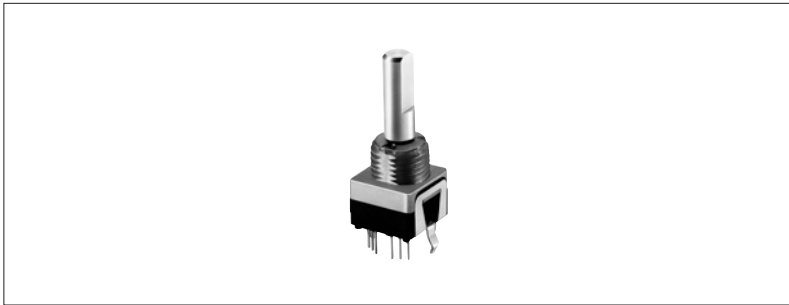


11mm Size Metal Shaft Magnetic Type Encoder

EM11B Series

The miniaturization of the externals of 11mm and the operational longevity of one million times are achieved.



Car Use

Power

Push

Slide

Rotary

Encoders

Detector

Dual-in-line
Package Type

Multi Control
Devices

TACT

Custom-
Products

Incremental
Type

Absolute
Type

Features

- Compact, non-contact type (magnetic type) encoder.
- Non-contact provides zero-chattering and high reliability.
- With a highly reliable push switch.

Applications

- For various controls such as car audio and car navigation systems
- For various controls of audio mixer and broadcast equipment

Typical Specifications

Items	Specifications
Rating	5V±5% DC
Operating life	1,000,000 cycles

Products Line

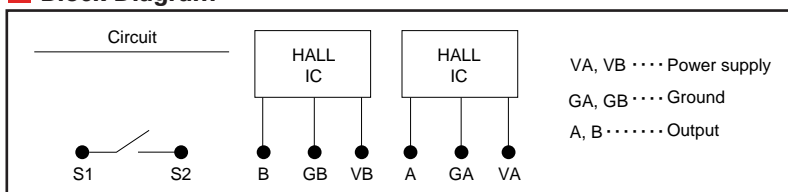
Length of operating section (mm)	Detent torque (mN·m)	Number of detent	Resolution	Operating direction	Push switch	Response time	Switch contact resistance	Switch operating force (N)	Minimum packing unit (pcs.)	Products No.
15	10±5	16	16	Vertical	With	1.3 μsec. (TYP)	500mΩ or less	5±3	1,000	EM11B16140A4

Dimensions

Unit:mm

Style	PC board mounting hole dimensions (Viewd from mounting side)

Block Diagram



Notes

1. This product uses a Hall IC. Be aware of ESD damages.
2. The shaft specifications can be customized.

For other detailed specifications, see P.222

Products Specifications

Series		EM11B	EM20B	
Power	Operating temperature range	-20°C to +85°C	-10°C to +70°C	
Push	Electrical performance	Rating	5V±5% DC	
Slide		Output signal	V _{HI} : +4.0Vmin. V _{LO} : 0.5V max. (I _{sink} =5mA)	
Rotary		Output phase	A, B (Square wave)	
Encoders		Output type	Incremental	
Detector		Insulation resistance	100MΩ min. 100V DC	100MΩ min. 250V DC
Dual-in-line Package Type		Voltage proof	300V AC	
Multi Control Devices	Mechanical performance	Rotational torque	—	
TACT		Detent torque	10±5 mN·m	
Custom-Products		Puch-pull styrength	100N	
		Resistance to soldering heat	Manual soldering	350°C max. 3s max.
			Dip soldering	260°C max. 3s max.
Incremental Type	Durability	Operating life	1,000,000 cycles	
Absolute Type	Environmental performance	Cold	-40±3°C for 500h	
		Dry heat	85±3°C for 500h	
		Damp heat	60±3°C, 90 to 95%RH for 500h	
			500,000 cycles	
			-30±3°C for 240h	
			80±3°C for 240h	
			40±2°C, 90 to 95%RH for 240h	