

Encoder 11mm Size Metal Shaft Magnetic Type

EM11B Series



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



Features

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

Applications

- Controls for such as car audio and car navigation systems
- Controls of audio mixer and broadcasting devices

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Typical Specifications

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

Products Line

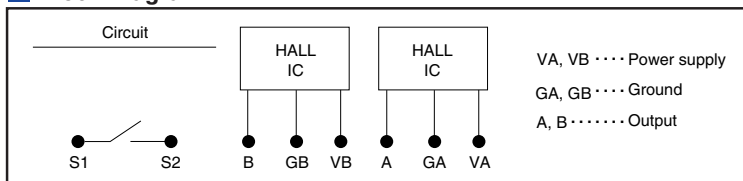
Length of operating section (mm)	Detent torque (mN·m)	Number of detent	Resolution	Operating direction	Push switch	Response time	Switch contact resistance	Switch operating force (N)	Minimum packing unit (pcs.)	Products No.
15	10±5	16	16	Vertical	With	1.3μsec.(TYP)	500mΩ or less	5±3	1,000	EM11B16140A4

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. Custom designs for shaft shape and installation height are possible.

For other specifications, see P.222

Products Specifications

Items		Series	EM11B	EM20B	
Detector	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		
Power		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	—————	7 mN · m max.	
TACT Switch™		Detent torque	10±5 mN·m	8±5 mN·m	
Custom-Products		Puch-pull styrength	100N		
Incremental Type		Resistance to soldering heat	Manual soldering	350°C max. 3s max.	
			Dip soldering	260°C max. 3s max.	
Absolute Type	Durability	Operating life	1,000,000 cycles	500,000 cycles	
Environmental performance		Cold	-40±3°C for 500h	-30±3°C for 240h	
		Dry heat	85±3°C for 500h	80±3°C for 240h	
		Damp heat	60±3°C, 90 to 95%RH for 500h	40±2°C, 90 to 95%RH for 240h	