

## 12 mm Square GS Encoders

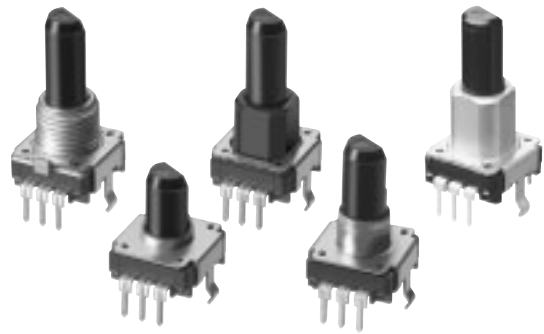
Type: **EVEG/EVEH/EVEK/EVEL**

### ■ Features

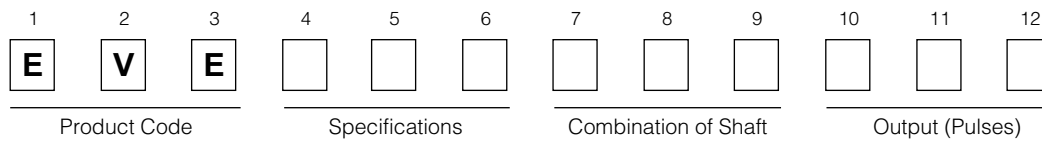
- Lineup of high rotation-torque-type (50 mN·m)
- A wide range of standard products

### ■ Recommended Applications

- Volume for audio/visual equipment
- Tuner for communication units
- Mode selection for measurement instruments



### ■ Explanation of Part Numbers



### ■ Product Chart

Torque type	Combination of Bushing	Thickness	Height					Detents (Resolution/Pulses)			
			15.0 mm	17.5 mm	20.0 mm	22.5 mm	25.0 mm	30.0 mm	12 points (12 pulses)	24 points (24 pulses)	Without detents (12 pulses, 24 pulses)
Heavy-rotation torque (10 mN·m to 50 mN·m)	Die-cast (7.0,12.0 mm)	5.5 mm					○	○			○
	Sleeve (7.0,12.0 mm)	5.5 mm					○	○			○
Standard type (3 mN·m to 20 mN·m)	Barling (5.0 mm)	5.0 mm		○	○	○	○		○	○	○
	Barling (1.6 mm)	5.0 mm	○						○	○	○
	Die-cast (7.0 mm)	5.5 mm			○	○	○		○	○	○
	Sleeve (7.0 mm)	5.5 mm			○	○	○		○	○	○

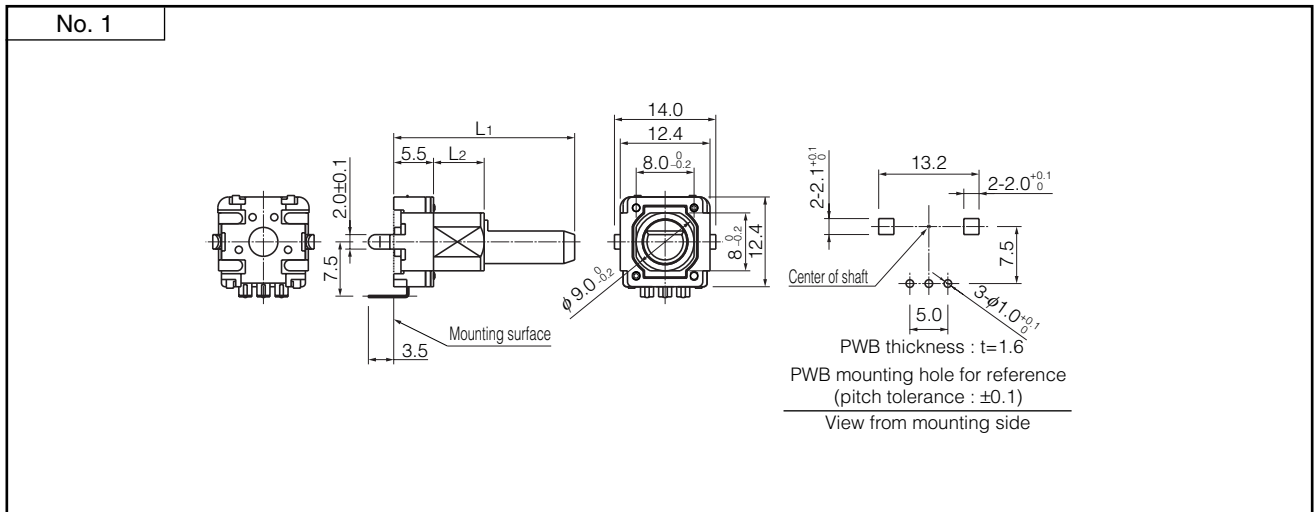
### ■ Specifications

Mechanical	Rotation Angle		360 ° (Endless)								
	Shaft Pull/Push Strength		80 N min.								
	Shaft Wobble		0.7xL/30 mm max.								
	Rotation Torque	Standard Type	3 mN·m to 20 mN·m								
		Heavy Rotation Torque	10 mN·m to 50 mN·m								
Detents		12 points, 20 points, 24 points, without detents (Heavy rotation-torque without detents)									
Electrical	Output Signals		Phase A and B								
	Resolution		12, 20, 24 pulses/360 °								
	Rating		1 mA 5 Vdc, 1 mA 10 Vdc								
	Contact Resistance		1 Ω max.								
	Chattering		2 ms max.								
	Insulation Resistance		10 MΩ min. (at 50 Vdc)								
	Dielectric Withstanding Voltage		50 Vac for 1 minute								
	Bouncing		5 ms max.								
Endurance	Operating Life	Standard Type	30000 cycles min.								
		Heavy Rotation Torque	15000 cycles min.								
	Operating Temperature		-10 °C to +60 °C								
	Storage Temperature		-40 °C to +85 °C								
Minimum Quantity/Packing Unit			L≤25.0 mm	100 pcs. Polyethylene Bag(Bulk)	L>26.0 mm	200 pcs. Polyethylene Bag(Bulk)					
Quantity/Carton			L≤25.0 mm	1000 pcs.	L>26.0 mm	2000 pcs.					

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

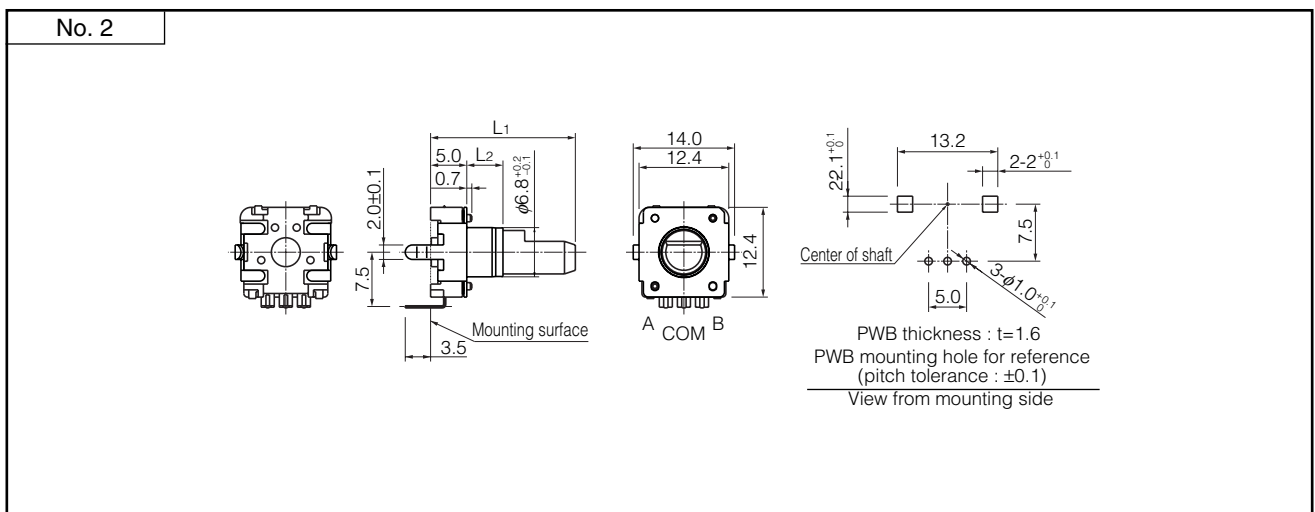
■ Dimensions in mm (not to scale)

- High rotation-torque / Bushing Type with Sleeve ..... Without detents : EVEKE2



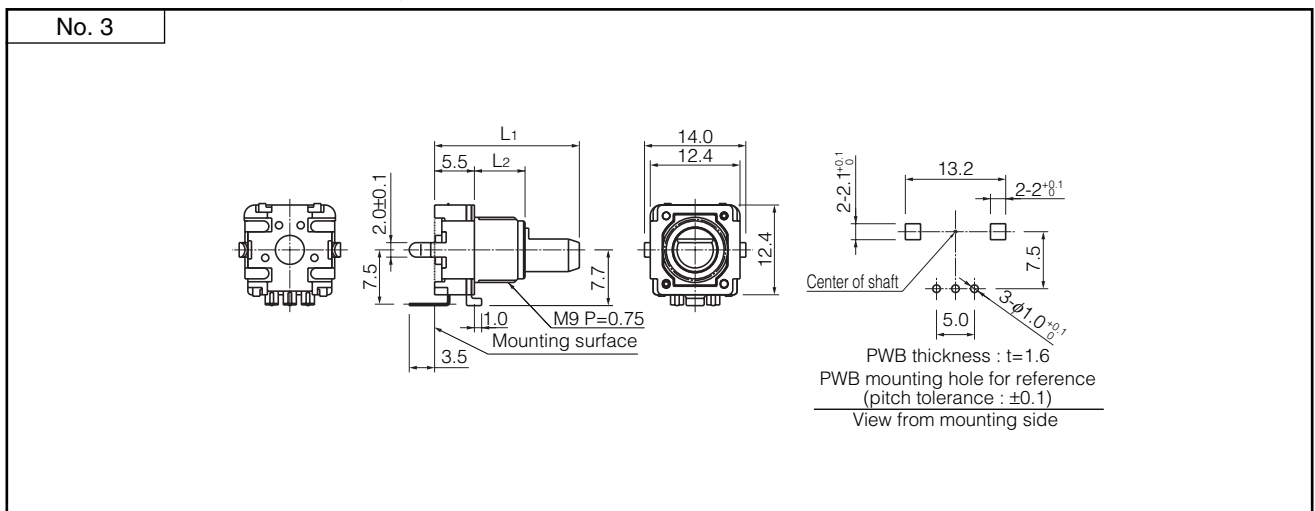
- Standard rotation-torque / Bushing Type with Barling ..... Without detents : EVEGA2

With detents : EVEGA1



- Standard rotation-torque / Bushing Type with Die-cast ..... Without detents : EVEGC2

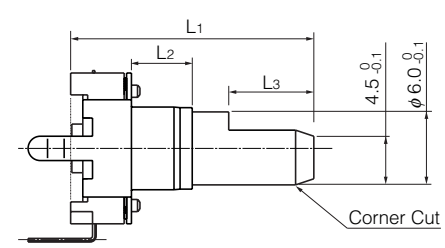
With detents : EVEGC1



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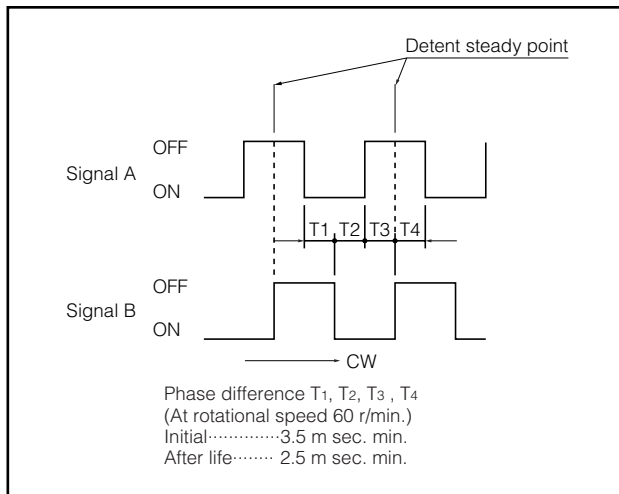
## ■ Shaft Trims and Dimensions in mm

Bushing Type	Dimensions			
	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Corner Cut
Barling	15.0 mm	1.6 mm	7.0 mm	1.5 mm
	17.5 mm	5.0 mm	5.0 mm	1.5 mm
	20.0 mm	5.0 mm	7.0 mm	1.5 mm
	22.5 mm	5.0 mm	7.0 mm	1.5 mm
	25.0 mm	5.0 mm	12.0 mm	1.5 mm
Sleeve	20.0 mm	7.0 mm	7.0 mm	1.5 mm
	22.5 mm	7.0 mm	7.0 mm	1.5 mm
	25.0 mm	7.0 mm	12.0 mm	1.5 mm
	*30.0 mm	7.0 mm	*12.0 mm	*1.5 mm
Die-cast	20.0 mm	7.0 mm	7.0 mm	1.5 mm
	22.5 mm	7.0 mm	7.0 mm	1.5 mm
	25.0 mm	7.0 mm	12.0 mm	1.5 mm
	*30.0 mm	12.0 mm	*12.0 mm	*1.5 mm



\*High-rotation torque

## ■ Phase Difference



## ■ Test Circuit Diagram

