

## 12mm Size Insulated Shaft Type EC12 Series

### Detail

#### With Switch Type

Part number	EC12D1564404
-------------	--------------

Actuator length	17.5mm
Rotational torque	Standard
Number of detent	30
Number of pulse	15
Operating direction	Vertical
Operating force of switch	6N
Travel of push-on switch	0.5mm
Minimum order unit (pcs.)	2,560

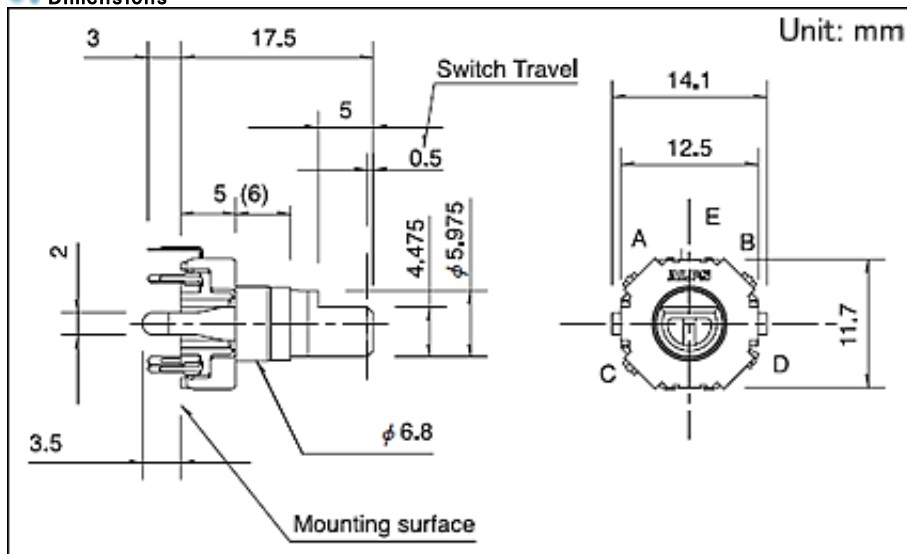
Operating temperature range		-40°C to +85°C
Maximum operating current (Resistive load)		10mA
Electrical performance	Ratings	0.5mA 5V DC
	Output signal	Output of A and B signals, proportionate to phase difference
	Insulation resistance	100M $\Omega$ min. 250V DC
	Voltage proof	300V AC for 1 minute or 360V AC for 1s
Mechanical performance	Detent torque	10 $\pm$ 5mN·m
	Push-pull strength	100N
Resistance to soldering heat	Manual soldering	350°C max. 3s max.
	Dip soldering	260 $\pm$ 5°C, 3 $\pm$ 1s
Durability	Operating life	30,000 cycles
Environmental performance	Cold	-40 $\pm$ 3°C for 10h
	Dry heat	85 $\pm$ 3°C for 10h
	Damp heat	60 $\pm$ 2°C, 90 to 95%RH for 10h
Push-on switch specifications	Contact arrangement	Single pole single throw (Push-on)
	Travel	0.5 $\pm$ 0.3mm
	Operating force	6(+2.5, -2)N
	Rating	1mA 5V DC
	Contact resistance (Initial performance/After lifetime)	100m $\Omega$ max./200m $\Omega$ max.
	Operating life	30,000 times min.

3D CAD (STEP)	
Certificate of Compliance to RoHS regulations	

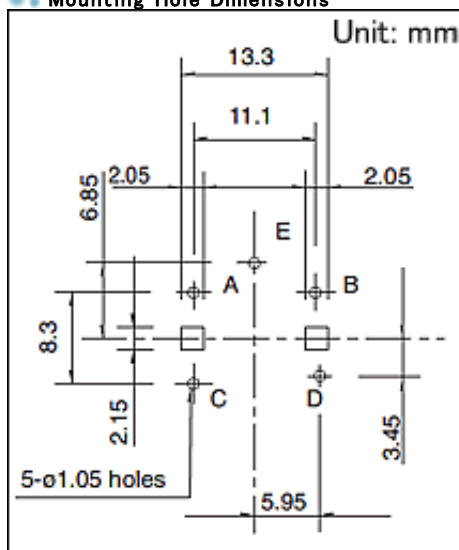
### Photo



#### • Dimensions

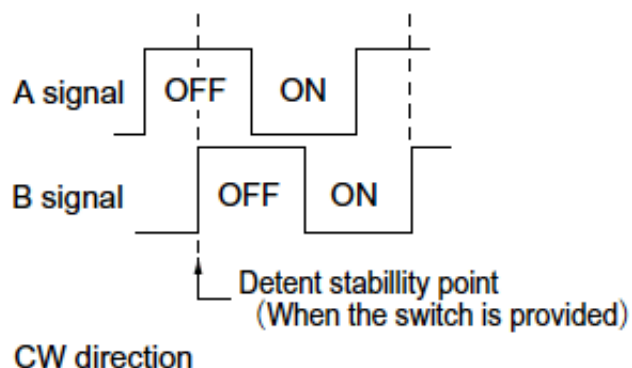


#### • Mounting Hole Dimensions



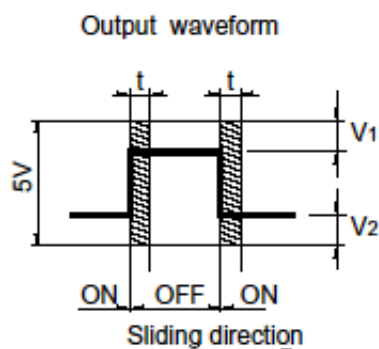
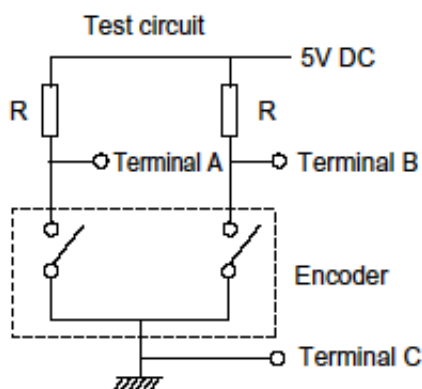
Viewed from mounting face.

#### • Output Wave



#### Sliding Noise

$$V1 = V2 = 1.5V \text{ max.}$$



Measurement condition : Rotation speed 360°/s    t : Masking time to avoid chattering

At R=5k $\Omega$  Chattering: 3ms max. Bounce: 2ms max.

#### Packing Specifications

Tray

Number of packages (pcs.)	1 case / Japan	1,280
	1 case / export packing	2,560
Export package measurements (mm)		360 × 540 × 290

#### NOTE

Notes are common to this series/models.

1. This site catalog shows only outline specifications. When using the products, please obtain formal specifications for supply.
  2. Please place purchase orders per minimum order unit (integer).
  3. Products other than those listed in the above chart are also available. Please contact us for details.
  4. Nuts and washers are not included. If required, please contact us.
  5. This products can be used in vehicles. (EC12D only)
- Although these products are designed to perform over a wide operating temperature range, please ensure that you receive and read the formal delivery specifications before use.