

11 mm Square GS Encoders

Type: **EVER/EVEU/EVEV/EVEY**

■ Features

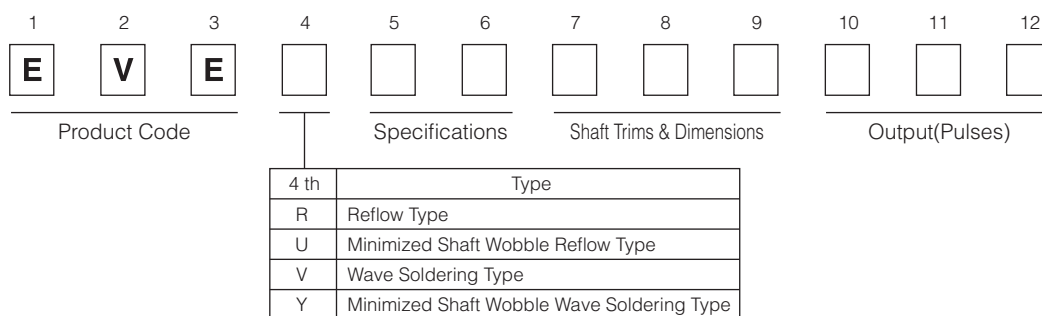
- Low Profile : Reflow Type 3.5 mm,
Wave Soldering Type 4 mm
- Minimized shaft wobble type is also available
- The reflow type allows the product to be automatically mounted and reflow-soldered



■ Recommended Applications

- Car audio, car navigation, car air conditioners

■ Explanation of Part Numbers



■ Specifications

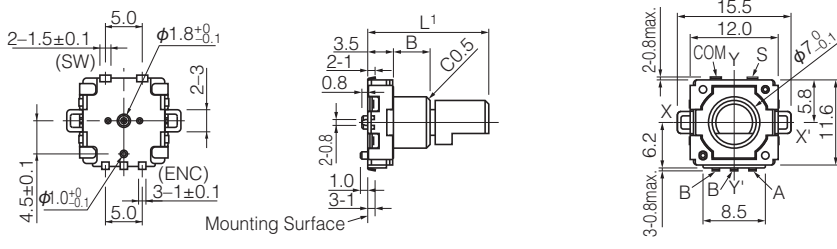
| | | EVER (Reflow Type) | EVEV (Wave Soldering Type) | EVEU (Minimized Shaft Wobble Reflow Type) | EVEY (Minimized Shaft Wobble Wave Soldering Type) |
|-------------------------------|---------------------------------|--|----------------------------------|---|---|
| Mechanical | Rotation Angle | 360 ° (Endless) | | | |
| | Shaft Pull/Push Strength | 100 N min. | | | |
| | Shaft Wobble | 0.6×L/30 (mm) max. | | 0.35×L/30 (mm) max. | |
| | Rotation Torque | 8 mN·m, 10 mN·m, 12 mN·m, 14 mN·m | | | |
| | Detents | 16 points, 24 points, 30 points, 32 points | | | |
| | Shaft Length Range | L1=15 to 20 mm | L1=15 to 30 mm | L1=16 to 20 mm | |
| Electrical | Output Signals | Phase A and B | | | |
| | Resolution | 8, 12, 15, 16 pulses/360 ° | | | |
| | Rating | 1 mA 10 V DC (at each bit) | | | |
| | Contact Resistance | 1 Ω max. | | | |
| | Chattering | 3 ms max. | | | |
| | Insulation Resistance | 50 MΩ min. (at 250 V DC) | | | |
| | Dielectric Withstanding Voltage | 300 V AC for 1 minute | | | |
| | Bouncing | 5 ms max. | | | |
| Switch Part | Type | SPST Push-on | | | |
| | Rating | 20 mA 16 V DC | | | |
| | Contact Resistance | 100 mΩ max. | | | |
| | Operating Force | 0.4 mm travel type : 3 N, 4 N , 6 N 1.5 mm travel type : 2.5 N, 4 N , 5 N | | | |
| | Travel | 0.4 mm, 1.5 mm | | | |
| Endurance | Rotation Life (Encoder) | 30,000 cycles min. | | | |
| | Operating Life (Switch) | 30,000 cycles min. | | | |
| Minimum Quantity/Packing Unit | | 50 pcs. (Tray Pack) | 100 pcs. (Tray Pack) | 50 pcs. (Tray Pack) | 100 pcs. (Tray Pack) |
| Quantity/Carton | | 250 pcs. or 300 pcs. | 500 pcs. | 250 pcs. or 300 pcs. | 500 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)

No. 1

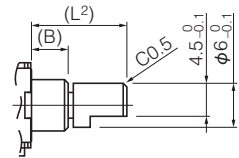
EVER (Reflow Type)



General dimension tolerance : ± 0.5
() dimensions are reference dimensions.

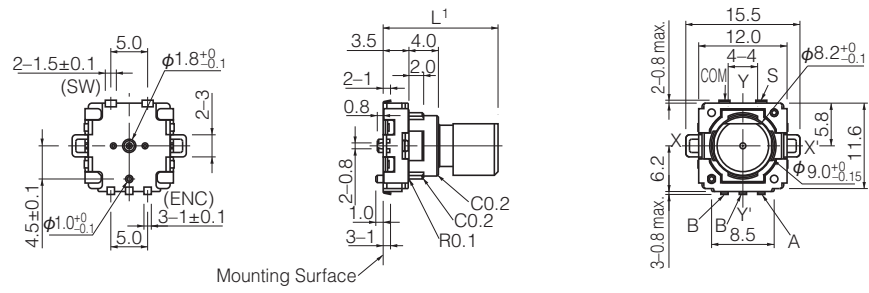
| Bushing length | | L ¹ | (L ²) |
|----------------|--------|-----------------------|-----------------------|
| B | 5.0 mm | 15.0 mm to 17.0 mm | 11.5 mm to 13.5 mm |
| | 7.0 mm | 17.0 mm to 20.0 mm | 13.5 mm to 16.5 mm |

Shaft shape and dimension



No. 2

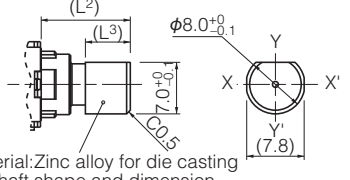
EVEU (Minimized Shaft Wobble Reflow Type)



General dimension tolerance : ± 0.5
() dimensions are reference dimensions.

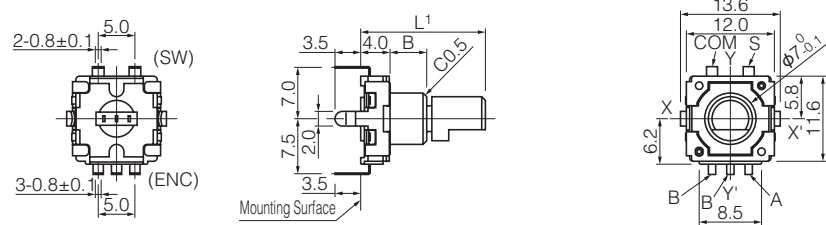
| L ¹ | (L ²) | (L ³) |
|-----------------------|-----------------------|----------------------|
| 16.0 mm to 20.0 mm | 12.5 mm to 16.5 mm | 6.5 mm to 10.5 mm |

Material: Zinc alloy for die casting
Shaft shape and dimension



No. 3

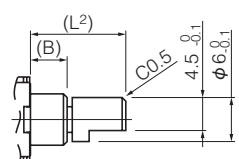
EVEV (Wave Soldering Type)



General dimension tolerance : ± 0.5
() dimensions are reference dimensions.

| Bushing length | | L ¹ | (L ²) |
|----------------|--------|-----------------------|-----------------------|
| B | 5.0 mm | 15.0 mm to 17.0 mm | 11.0 mm to 13.0 mm |
| | 7.0 mm | 17.0 mm to 30.0 mm | 13.0 mm to 26.0 mm |

Shaft shape and dimension



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■ Dimensions in mm (not to scale)

No. 4

EVEY
(Minimized Shaft Wobble
Wave Soldering Type)

General dimension tolerance : ± 0.5
() dimensions are reference dimensions.

| L ¹ | (L ²) | (L ³) |
|-----------------------|-----------------------|----------------------|
| 16.0 mm to 20.0 mm | 12.0 mm to 16.0 mm | 6.0 mm to 10.0 mm |

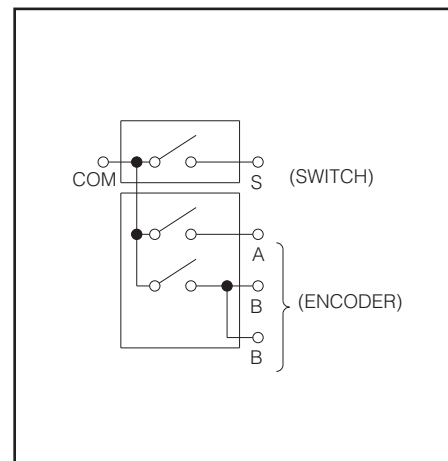
Material: Zinc alloy for die casting

■ PWB mounting hole for reference

(Reflow Type)

(Wave Soldering Type)

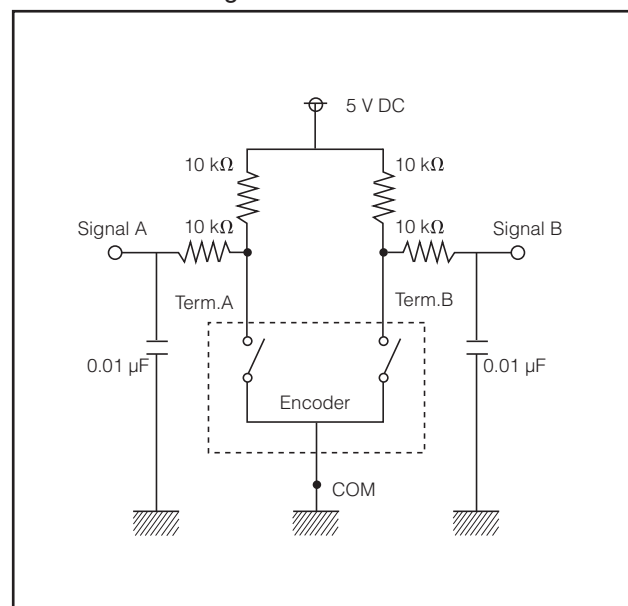
■ Encoder / Switch Circuit



■ Phase Difference



■ Test Circuit Diagram



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