

## 12mm Insulated Shaft Rotary Encoder

### Application

- ✓ Audio, Home appliance, Precision apparatus,  
Automotive, Communication, Industrial control, etc.

### Feature

- ✓ Incremental Output Signal Encoder



### ■Specification

|                        |                                                               |
|------------------------|---------------------------------------------------------------|
| Rotation Angle         | 360° endless                                                  |
| Rating                 | 5V DC 0.5mA                                                   |
| Operating Temperature  | -10 °C~70 °C                                                  |
| Rotational Torque      | 30 ~ 150 gf.cm                                                |
| Rotational Life        | 15,000 cycles (rotate 360° ccw and rotate 360° cw as 1 cycle) |
| Switch Circuit         | S.P.S.T. (Push on)                                            |
| Switch Stroke          | 0.5 mm                                                        |
| Switch Rating          | 5V DC 1mA                                                     |
| Switch Operating Force | 200 ~ 460 gf.cm                                               |
| Switch Operating Life  | 20,000 cycles                                                 |

### ■How to order

RE130F – 40 – 20F – 12P

[Model](#)

[Resolution](#)

| Code | Model | Pulses | Detents |
|------|-------|--------|---------|
| 12P  | RE130 | 12     | 12      |
| 24P  | RE120 | 24     | 24      |

Terminal Type

| Code | Terminal type | Push Switch    |
|------|---------------|----------------|
| 40   | Vertical      | Without switch |
| 41   | Vertical      | With switch    |

| Code | Bushing Type (D) |     | Bushing Thread |
|------|------------------|-----|----------------|
| None | Ø6.8mm           | 5mm | Without thread |
| E3   | Ø9mm             | 7mm | With thread    |

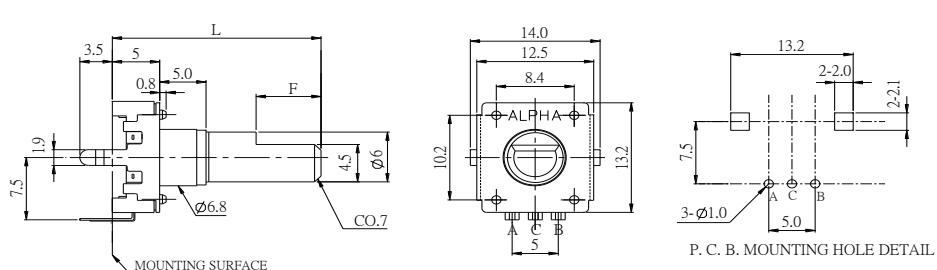
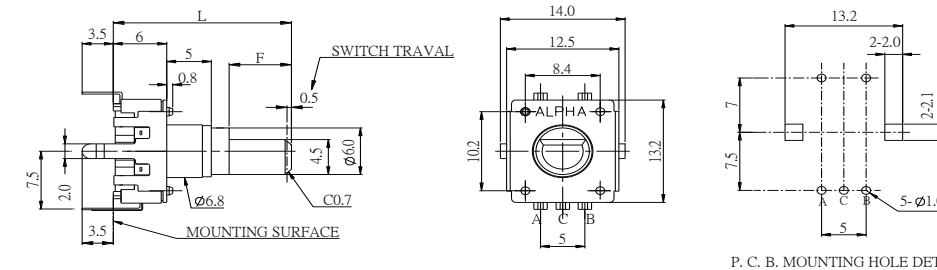
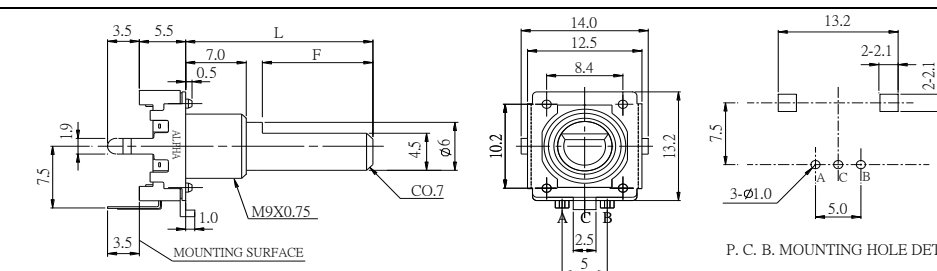
E3 Just for Terminal code '40'

Shaft

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### Model Description

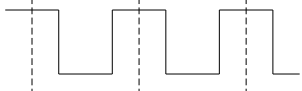
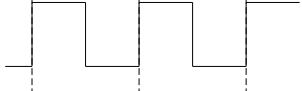
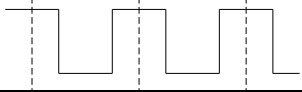
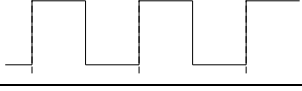
| Model       | Terminal Type | Push Switch    | Bushing Type (D) |     | Bushing Thread |
|-------------|---------------|----------------|------------------|-----|----------------|
| RE130F-40   | Vertical      | Without switch | Ø6.8mm           | 5mm | Without thread |
| RE120F-40   | Vertical      | Without switch | Ø6.8mm           | 5mm | Without thread |
| RE130F-41   | Vertical      | With switch    | Ø6.8mm           | 5mm | Without thread |
| RE12CF-41   | Vertical      | With switch    | Ø6.8mm           | 5mm | Without thread |
| RE130F-40E3 | Vertical      | Without switch | Ø9mm             | 7mm | With thread    |
| RE120F-40E3 | Vertical      | Without switch | Ø9mm             | 7mm | With thread    |

| Order Code                                                                                                                          | Outline Drawing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |      |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|------|----|----|---|----|----|----|----|----|----|------|----|------|----|----|---|---|---|---|----|----|
| RE130F-40-(L)F-12P<br>RE120F-40-(L)F-24P<br>      |  <p>P. C. B. MOUNTING HOLE DETAIL</p> <div><div>RE130F</div><table><tr><td>L</td><td>20</td><td>25</td></tr><tr><td>F</td><td>7</td><td>12</td></tr></table></div> <div><div>RE120F</div><table><tr><td>L</td><td>20</td><td>25</td><td>30</td></tr><tr><td>F</td><td>7</td><td>12</td><td>12</td></tr></table></div>                                                                                                                    | L  | 20   | 25 | F    | 7  | 12 | L | 20 | 25 | 30 | F  | 7  | 12 | 12   |    |      |    |    |   |   |   |   |    |    |
| L                                                                                                                                   | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 25 |      |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| F                                                                                                                                   | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12 |      |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| L                                                                                                                                   | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 25 | 30   |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| F                                                                                                                                   | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12 | 12   |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| RE130F-41-(L)F-12P<br>RE12CF-41-(L)F-24P<br>     |  <p>P. C. B. MOUNTING HOLE DETAIL</p> <div><div>RE130F</div><table><tr><td>L</td><td>17.5</td><td>20</td><td>22.5</td><td>25</td><td>30</td></tr><tr><td>F</td><td>5</td><td>7</td><td>7</td><td>12</td><td>12</td></tr></table></div> <div><div>RE12CF</div><table><tr><td>L</td><td>17.5</td><td>20</td><td>22.5</td><td>25</td><td>30</td></tr><tr><td>F</td><td>5</td><td>7</td><td>7</td><td>12</td><td>12</td></tr></table></div> | L  | 17.5 | 20 | 22.5 | 25 | 30 | F | 5  | 7  | 7  | 12 | 12 | L  | 17.5 | 20 | 22.5 | 25 | 30 | F | 5 | 7 | 7 | 12 | 12 |
| L                                                                                                                                   | 17.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20 | 22.5 | 25 | 30   |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| F                                                                                                                                   | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7  | 7    | 12 | 12   |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| L                                                                                                                                   | 17.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20 | 22.5 | 25 | 30   |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| F                                                                                                                                   | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7  | 7    | 12 | 12   |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| RE130F-40E3-(L)F-12P<br>RE120F-40E3-(L)F-24P<br> |  <p>P. C. B. MOUNTING HOLE DETAIL</p> <div><div>RE130F</div><table><tr><td>L</td><td>15</td><td>20</td></tr><tr><td>F</td><td>7</td><td>12</td></tr></table></div> <div><div>RE120F</div><table><tr><td>L</td><td>15</td><td>20</td><td>25</td></tr><tr><td>F</td><td>7</td><td>12</td><td>12</td></tr></table></div>                                                                                                                   | L  | 15   | 20 | F    | 7  | 12 | L | 15 | 20 | 25 | F  | 7  | 12 | 12   |    |      |    |    |   |   |   |   |    |    |
| L                                                                                                                                   | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20 |      |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| F                                                                                                                                   | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12 |      |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| L                                                                                                                                   | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20 | 25   |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |
| F                                                                                                                                   | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12 | 12   |    |      |    |    |   |    |    |    |    |    |    |      |    |      |    |    |   |   |   |   |    |    |

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## 12mm Insulated Shaft Rotary Encoder

### ■Resolution and Output Signal

| Model | Resolution<br>(Pulses/Rotation) | Detent<br>Number | Output Signal Format          |                  |                                                                                                             |
|-------|---------------------------------|------------------|-------------------------------|------------------|-------------------------------------------------------------------------------------------------------------|
|       |                                 |                  | Shaft Rotational<br>Direction | Signal           | Output                                                                                                      |
| RE130 | 12/360°                         | 12               | C.W.                          | A (Terminal A-C) | <div> OFF<br/>ON </div>  |
|       |                                 |                  |                               | B (Terminal B-C) | <div> OFF<br/>ON </div>  |
| RE120 | 24/360°                         | 24               | C.W.                          | A (Terminal A-C) | <div> OFF<br/>ON </div>  |
|       |                                 |                  |                               | B (Terminal B-C) | <div> OFF<br/>ON </div>  |

Design and specifications presented here are for the standard parts only. Please kindly contact us for your special requests and ask for the current technical specifications before purchase and/or use.

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