

# 9mm Rotary Encoder

## Type DP09 Series

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9mm Rotary incremental encoder for use in electronic equipment. Can be supplied with or without switch with customisation to standard options

### Key Features

- 9mm Rotary Encoder
- Incremental Type
- Push on Switch Option
- Various Shaft Lengths
- Pulse Options
- Detent Options

### Characteristics - Electrical

|                                            |                                  |
|--------------------------------------------|----------------------------------|
| <b>Pulses:</b>                             | 12 & 15                          |
| <b>Contact Rating:</b>                     | 10mA 5VDC                        |
| <b>Dielectric Strength:</b>                | 300VAC / 1mA, 1 minute           |
| <b>Insulation Resistance (min):</b>        | 100M ohms at 250VAC              |
| <b>Operating Speed (RPM):</b>              | 60 RPM                           |
| <b>Switch Power Rating (where fitted):</b> | 12VDC, 0.5A                      |
| <b>Switch Contact Resistance:</b>          | 100m ohm                         |
| <b>Electrical Travel:</b>                  | Continuous                       |
| <b>Rotational Noise:</b>                   | t2 = 5.0ms max (see below)       |
| <b>Chattering:</b>                         | t1 & t3 = 5.0 ms max (see below) |



Code Off area V = 3.5V or more. Code on area V=1.5V or less

### Characteristics - Mechanical

|                                              |                          |
|----------------------------------------------|--------------------------|
| <b>Total Mechanical Travel:</b>              | Continuous               |
| <b>Detents:</b>                              | 0, 12, 24, 30            |
| <b>Switch Operating Force:</b>               | 400 + 400/- 200 gf       |
| <b>Switch Travel:</b>                        | 1.5mm                    |
| <b>Shaft Type:</b>                           | F – Flatted, K – Knurled |
| <b>Shaft Length (from Mounting Surface):</b> | 15, 20, 25, 30           |

### Characteristics - Environmental

|                              |                     |
|------------------------------|---------------------|
| <b>Operating Temperature</b> | -10 - +65 degrees C |
| <b>Rotational Life</b>       | 30,000 Cycles       |

### Output Signal Format

| Shaft Rotational Direction | Signal           | Format    |
|----------------------------|------------------|-----------|
| Clockwise                  | A (Terminal A-C) | OFF<br>ON |
|                            | B (Terminal B-C) | OFF<br>ON |
| Anticlockwise              | A (Terminal A-C) | OFF<br>ON |
|                            | B (Terminal B-C) | OFF<br>ON |

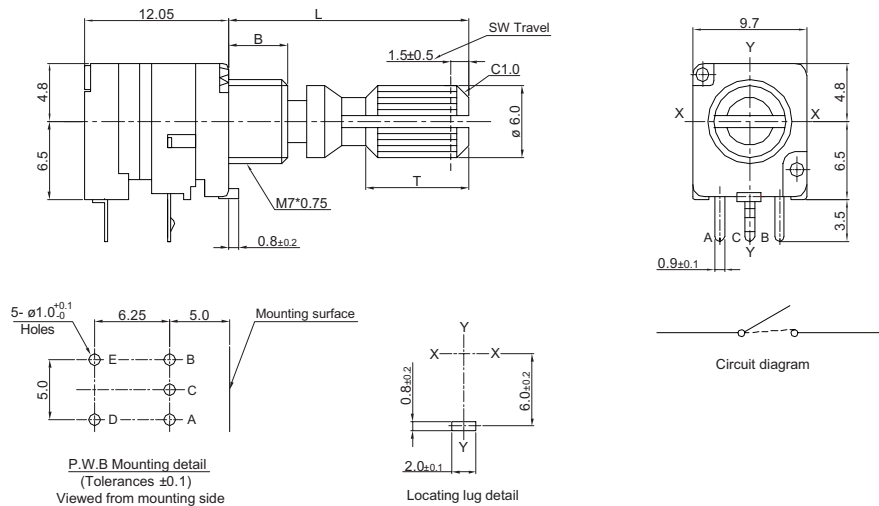
### Dimensions DP09H-K



### DP09H-F



### DP09SH-K



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### Dimensions DP09SH-F



### Shaft Dimensions

| Shaft | Dim. |    |    |    |    |
|-------|------|----|----|----|----|
| K     | L    | 15 | 20 | 25 | 30 |
|       | T    | 7  | 12 | 12 | 14 |
| F     | L    | 15 | 20 | 25 | 30 |
|       | F    | 7  | 12 | 12 | 12 |
| B     | B    | 5  | 7  | -  | -  |

### How to Order

| DP09                                        | H              | 24                                                             | 12                               | A                                       | 20                                                               | K                          |
|---------------------------------------------|----------------|----------------------------------------------------------------|----------------------------------|-----------------------------------------|------------------------------------------------------------------|----------------------------|
| Common Part                                 | Orientation    | Detent                                                         | Pulses                           | Bush Details                            | Shaft Length                                                     | Shaft Style                |
| DP09 – No Switch<br><br>DP09S – With Switch | H - Horizontal | N - None<br>12 – 12 clicks<br>24 – 24 clicks<br>30 – 30 clicks | 12 – 12 Pulses<br>15 – 15 Pulses | A – M7 x 5mm<br>B – M7 x 7mm (standard) | 15 – 15mm FMF<br>20 – 20mm FMF<br>25 – 25mm FMF<br>30 – 30mm FMF | K - Knurled<br>F - Flatted |

# Mouser Electronics

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[DP09H2412A30F](#)