

## 12mm Rotary Encoder

### Type DP12 Series

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12mm Rotary incremental encoder for use in electronic equipment. Can be supplied with or without switch with customisation to standard options.

#### Key Features

- 12mm Rotary Encoder
- Incremental Type
- Push on Switch Option
- Various Shaft Lengths
- Pulse Options
- Detent Options

#### Characteristics - Electrical

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Pulses:                             | 12 & 24                          |
| Contact Rating:                     | 0.5mA 5VDC                       |
| Dielectric Strength:                | 300VAC / 1mA, 1 minute           |
| Insulation Resistance (min):        | 100M ohms at 250VAC              |
| Operating Speed (RPM):              | 60 RPM                           |
| Switch Power Rating (where fitted): | 5VDC, 10mA (1mA Min)             |
| Switch Contact Resistance:          | 100m ohm Max                     |
| Electrical Travel:                  | Continuous                       |
| Rotational Noise:                   | t2 = 2.0 ms max (see below)      |
| Chattering:                         | t1 & t3 = 3.0 ms max (see below) |



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

#### Characteristics - Mechanical

|                                       |                    |
|---------------------------------------|--------------------|
| Total Mechanical Travel:              | Continuous         |
| Detents:                              | 0, 12, 24          |
| Switch Operating Force:               | 500+/- 100gf       |
| Switch Travel:                        | 0.5mm              |
| Shaft Type:                           | F – Flatted        |
| Shaft Length (from Mounting Surface): | 17.5, 20, 22.5, 25 |

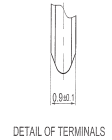
#### Characteristics - Environmental

|                       |                     |
|-----------------------|---------------------|
| Operating Temperature | -30 ~ +70 degrees C |
| Rotational Life       | 15,000 Cycles       |

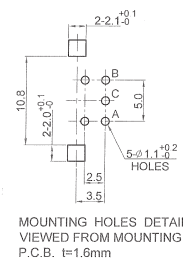
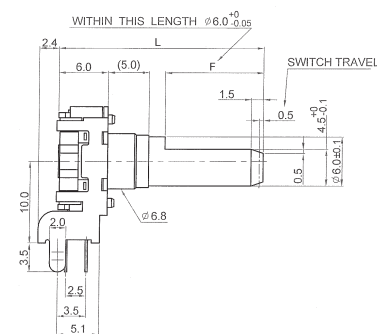
#### Output Signal Format

| 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 DP12H



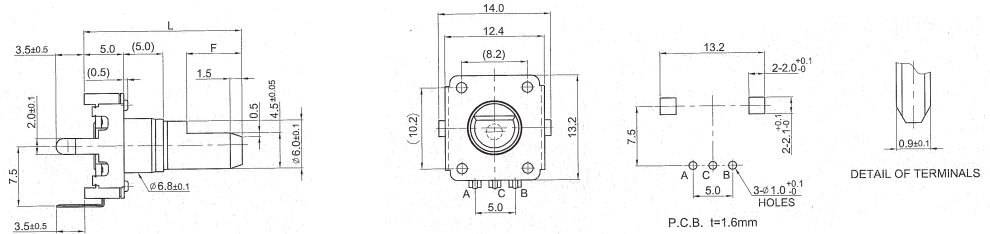
### DP12SH



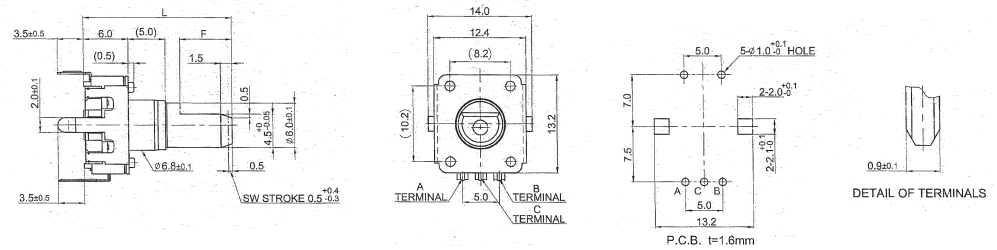
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### Dimensions DP12V



### DP12SV



### Shaft Length

| L | 17.5 | 20 | 22.5 | 25 |
|---|------|----|------|----|
| F | 5    | 7  | 7    | 12 |

### How to Order

| DP12                                    | H                              | N                                            | 12                               | A                         | 20                                                       | F           |
|-----------------------------------------|--------------------------------|----------------------------------------------|----------------------------------|---------------------------|----------------------------------------------------------|-------------|
| Common Part                             | Orientation                    | Detent                                       | Pulses                           | Bush Details              | Shaft Length                                             | Shaft Style |
| DP12 – No Switch<br>DP12S – With Switch | H - Horizontal<br>V - Vertical | N - None<br>12 – 12 clicks<br>24 – 24 Clicks | 12 – 12 Pulses<br>24 – 24 Pulses | A – 5mm V & H<br>Standard | 17.5 – 17.5mm<br>20 – 20mm<br>22.5 – 22.5mm<br>25 – 25mm | F - Flatted |

# Mouser Electronics

Authorized Distributor

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[DP12HN12A17.5F](#)