

## 11mm Rotary Encoder

### Type DP11 Series

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11mm Rotary incremental encoder for use in electronic equipment. Can be supplied with or without switch with customisation to standard options

#### Key Features

- 11mm Rotary Encoder
- Incremental Type
- Push on Switch Option
- Various Shaft Lengths
- Pulse Options
- Detent Options

#### Characteristics - Electrical

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Pulses:                             | 15, 20                           |
| Contact Rating:                     | 10mA 5VDC                        |
| Dielectric Strength:                | 300VAC / 1mA, 1 minute           |
| Insulation Resistance (min):        | 100M ohms at 250VAC              |
| Operating Speed (RPM):              | 60 RPM                           |
| Switch Power Rating (where fitted): | 16VDC, 3A (10mA 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, 20, 30                                           |
| Switch Operating Force:               | 612+/- 306gf (for 1.5mm Switch Travel 400+/- 200gf) |
| Switch Travel:                        | 0.5mm (1.5mm available on request)                  |
| Shaft Type:                           | F – Flatted, K – Knurled, S – Slotted, P – Plain    |
| Shaft Length (from Mounting Surface): | 15, 20, 25, 30 (FMF)                                |

#### Characteristics - Environmental

|                       |                     |
|-----------------------|---------------------|
| Operating Temperature | -10 ~ +45 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 DP11H



**DP11SH**



## Dimensions DP11V



**DP11SV**



## Shaft Dimensions

| Bush  |      | 5mm |    |    |    | 7mm |    |    |    |
|-------|------|-----|----|----|----|-----|----|----|----|
| Shaft | Code |     |    |    |    |     |    |    |    |
| K     | L    | 15  | 20 | 25 | 30 | 15  | 20 | 25 | 30 |
|       | T1   | 7   | 7  | 11 | 14 | 6   | 7  | 11 | 14 |
|       | T    | 6   | 6  | 10 | 12 | 5   | 6  | 10 | 12 |
|       | M    | 2   | 2  | 2  | 4  | 1   | 1  | 2  | 4  |
| F     | L    | 15  | 20 | 25 | 30 | 15  | 20 | 25 | 30 |
|       | F    | 7   | 12 | 12 | 12 | 5   | 7  | 12 | 12 |

## How to Order

| DP11                                        | H                                  | N                                            | 15                                   | A                                           | 15                                                               | F                                                      |
|---------------------------------------------|------------------------------------|----------------------------------------------|--------------------------------------|---------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------|
| Common Part                                 | Orientation                        | Detent                                       | Pulses                               | Bush Details                                | Shaft Length                                                     | Shaft Style                                            |
| DP11 – No Switch<br><br>DP11S – With Switch | H - Horizontal<br><br>V - Vertical | N - None<br>20 – 20 clicks<br>30 – 30 clicks | 15 – 15 Pulses<br><br>20 – 20 Pulses | A – M7 x 5mm<br><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<br>S - Slotted<br>P - Plain |