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Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation, and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

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## Type DP09 Series



9 mm 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

9mm Rotary Encoder
Type DP09 Series

## Characteristics -

Electrical

| Pulses: | $12 \& 15$ |
| :--- | :--- |
| Contact Rating: | $10 \mathrm{~mA} \mathrm{5VDC}$ |
| Dielectric Strength: | $300 \mathrm{VAC} / 1 \mathrm{~mA}, 1$ minute |
| Insulation Resistance (min): | 100 M ohms at 250VAC |
| Operating Speed (RPM): | 60 RPM |
| Switch Power Rating (where fitted): | $12 \mathrm{VDC}, 0.5 \mathrm{~A}$ |
| Switch Contact Resistance: | 100 m ohm |
| Electrical Travel: | Continuous |
| Rotational Noise: | $\mathrm{t} 2=5.0 \mathrm{~ms}$ max (see below) |
| Chattering: | $\mathrm{t} 1 \& \mathrm{t} 3=5.0 \mathrm{~ms}$ max (see below) |



Code Off area $\mathrm{V}=3.5 \mathrm{~V}$ or more. Code on area $\mathrm{V}=1.5 \mathrm{~V}$ or less

## Characteristics -

Mechanical

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

Characteristics -
Environmental

| Operating Temperature | $-10-+65$ degrees $C$ |
| :--- | :--- |
| Rotational Life | 30,000 Cycles |

## Output Signal Format

| Shaft Rotational Direction | Signal | Format |
| :---: | :---: | :---: |
| Clockwise | A (Terminal A-C) |  |
|  | B (Terminal B-C) |  |
| Anticlockwise | A (Terminal A-C) |  |
|  | B (Terminal B-C) |  |

Dimensions
DP09H-K


P.W.B Mounting detail (Tolerances $\pm 0.1$ ) Viewed from mounting side


Location lug detail


DP09H-F


P.W.B Mounting detail (Tolerances $\pm 0.1$ ) Viewed from mounting side


Location lug detail

DP09SH-K

$\frac{\text { P.W.B Mounting detail }}{\text { (Tolerances } \pm 0.1 \text { ) }}$
Viewed from mounting side


## Dimensions

DP09SH-F


Shaft Dimensions

| Shaft | Dim. |  |  | 30 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{K}$ | L | 15 | 20 | 25 | 12 |
|  | T | 7 | 12 | 25 | 30 |
| F | L | 15 | 20 | 12 | 12 |
|  | F | 7 | 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> DP09S With Switch | H- Horizontal | N - None <br> 12-12 clicks <br> 24-24 clicks <br> 30 - 30 clicks | $\begin{aligned} & 12-12 \text { Pulses } \\ & 15-15 \text { Pulses } \end{aligned}$ | $\begin{gathered} \mathrm{A}-\mathrm{M} 7 \times 5 \mathrm{~mm} \\ \mathrm{~B}-\mathrm{M} 7 \times 7 \mathrm{~mm} \\ \text { (standard) } \end{gathered}$ | 15-15mm FMF <br> 20-20mm FMF <br> 25-25mm FMF <br> 30 - 30 mm FMF | K - Knurled <br> F - Flatted |

