

## Spindle Operated Potentiometers (Carbon)

### Type CP16 Series

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Specify the type CP16 for applications where high insulation resistance and voltage proof are key requirements. The materials used in the all-plastic body and spindle construction make it an ideal component for domestic appliances and control systems where safety is of prime importance. This popular low cost potentiometer is suitable for industrial and professional applications.

#### Key Features

- High Reliability
- Small Versatile Size
- All Plastic Body
- Plastic or Metal shaft styles
- Switch Types Available
- Multiple Sections Available
- Flatted, Serrated Shaft Available

#### Characteristics - Electrical

<b>Resistance Range:</b>	100R to 4M7 Linear, 2K2 to 2M2 Non-Linear
<b>Resistance Values:</b>	1, 2.2 & 4.7 in each decade
<b>Resistance Tolerance:</b>	$\pm 20\% (>1M \pm 30\%) - \pm 10\%$ by selection
<b>Power Rating @ 40°C:</b>	0.2 Watts Linear - 0.1 Watts Non-Linear
<b>Limiting Element Voltage:</b>	250 Volts dc (Linear), 125 Volts dc (Non Linear)
<b>Electrical Rotation:</b>	$260^\circ \pm 20^\circ$
<b>Terminal Resistance:</b>	5 ohms, maximum $\leq 0.1\%$ (2 ohms, minimum)
<b>Noise (ENR):</b>	$\leq 3\%$ (3 ohms minimum)
<b>Insulation Resistance:</b>	4G ohms, minimum
<b>Resolution:</b>	Essentially Infinite
<b>Voltage Proof:</b>	1KV ac peak

#### Characteristics - Mechanical

<b>End Torque:</b>	400 mNm maximum
<b>Operating Torque:</b>	5 to 25 mNm maximum
<b>Mechanical Adjustment:</b>	$300^\circ \pm 5^\circ$
<b>Maximum Torque to Nut:</b>	800 mNm

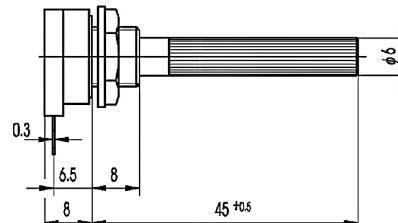
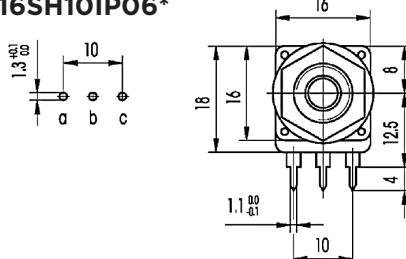
#### Characteristics - Environmental

<b>Electrical Life:</b>	$\Delta R \pm 5\%$ (1000 hours 0.2 Watts @ 40°C)
<b>Mechanical Life:</b>	25,000 operations
<b>Operating Temperature:</b>	-25°C to +70°C
<b>Temperature Coefficient:</b>	$\pm 300\text{ppm}/^\circ\text{C}$ ( $R_n < 100\text{K}$ ohms)
<b>Thermal Cycling:</b>	$\Delta R \pm 2.5\%$ (16 hours 85°C, 2 hours @ -25°C)
<b>Damp Heat:</b>	$\Delta R \pm 5\%$ (500 hours @ 40°C +95% RH)
<b>Vibration:</b>	$\Delta R \pm 2\%$ (2 hours @ 20g - 10Hz ~50 Hz)

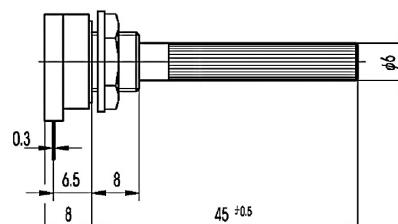
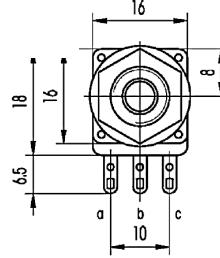
#### Switch Specifications

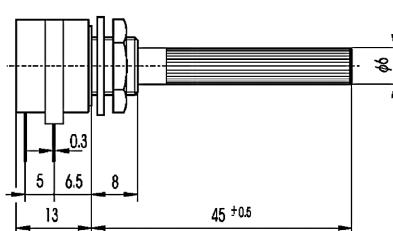
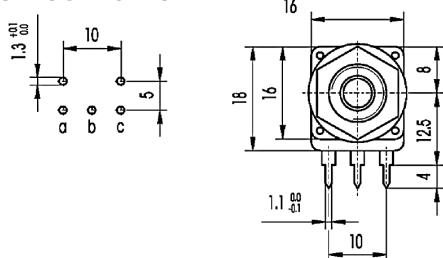
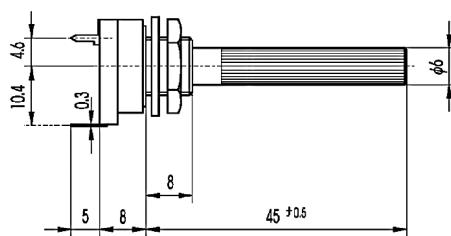
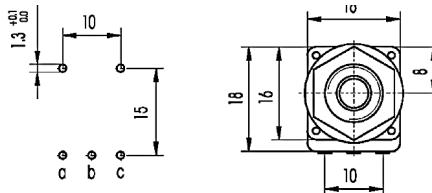
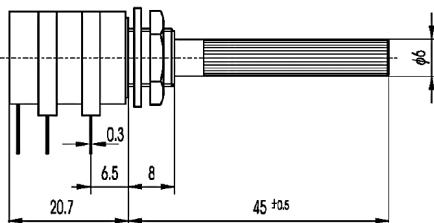
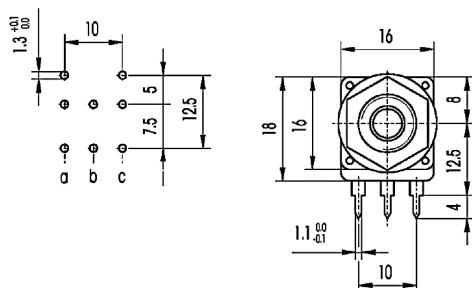
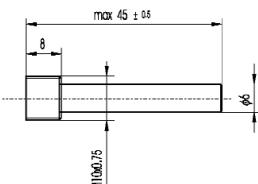
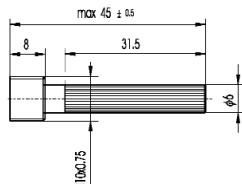
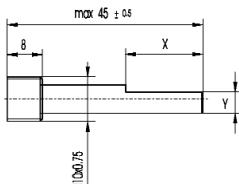
<b>Nominal Current:</b>	1A, 250 VAC
<b>Contact Resistance:</b>	10 milli ohms
<b>Operating Torque:</b>	10 to 30mNm
<b>Operating Angle:</b>	$30^\circ \pm 5^\circ$
<b>Test Voltage:</b>	500 V

#### Dimensions CP16SH10IP06\*



#### CP16SH10CP06\*



**Type CP16 Series**
**Dimensions  
CP16SH10IP6\*...I**

**CP16SV10IP6\*...**

**CP16DH10IP6\*...I**

**Shaft Styles (Plastic)  
R06/R6**

**P06/P6**

**F06/F6**

**How to Order**

CP16S	H10	I	PO6	102	Resistance Value	Law	Tolerance	Switch
Common Part CP16S – Single CP16D - Dual	Style / Bush H10 – Horz. M10 Bush V10 - Vert. M10 Bush	Terminals I – PCB C – Eyelet	Shaft Type P06/P6 Standard F06/F6 Flatted 6mm R06/R6 Round 6mm		The first two digits are significant figures of resistance value. The third denotes the number of zeros following. e.g. 100R: 101 1K: 102 10K: 103 100K: 104	-- Linear B – Log C – Inverse Log	-- Standard K - 10%	-- No Switch I – Switched