

## Type 12P, 12C Series



These small versatile potentiometers meet a wide range of instrument applications. They are ideally suited to the need of professional broadcast and industrial control systems where a high performance specification, long operational life and low noise are of prime importance. They are offered with printed circuit and eyelet terminals as alternatives.

### Key Features

- Polymer Film or Cermet Element
- Low Noise
- Long Life
- High Performance
- 12.5mm Square
- Robust Construction
- Linear and Non Linear Laws
- Board Washable
- Eyelet PC Terminations

## Spindle Operated Potentiometers

### Type 12P, 12C Series

#### Characteristics - Electrical

	Conductive Plastic	Cermet 12P, 12C
<b>Resistance Laws &amp; Range:</b>	1K Ohm to 1M Ohm Linear (Non Linear Laws available to order)	150 Ohm to 100K Ohm (Linear)
<b>Standard Values:</b>	1K, 5K, 10K, 50K, 100K, 500K, 1M	150R, 200R, 250R, 500R, 750R, 1K, 5K, 10K, 50K, 100K
<b>Selection Tolerance:</b>	± 20% ( ± 10% by selection )	± 10% ( ± 5% by selection )
<b>Rated Dissipation:</b>	0.25W Lin, 0.125W Non Lin	1.0W
<b>Limiting Element Voltage:</b>	200V dc or ac RMS	350V dc or ac peak
<b>Isolation Voltage:</b>	500V dc or ac peak	500V dc or ac peak
<b>Electrical Rotation:</b>	270° ± 5°	270° ± 5°
<b>Terminal Resistance:</b>	2 Ohm max.	2 Ohm max.
<b>Noise:</b>	2 % max.	2 % max.
<b>Insulation Resistance:</b>	1000M Ohm min.	1000 M Ohm min.

#### Characteristics - Mechanical

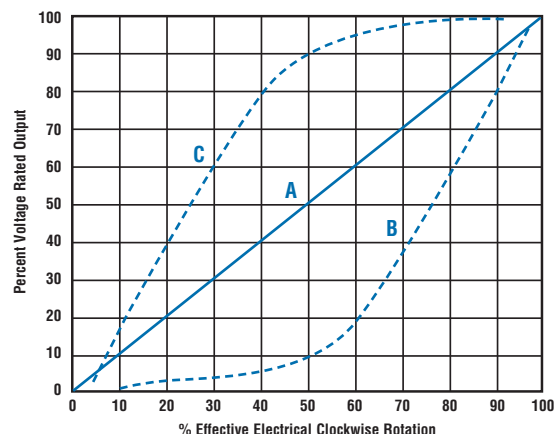
	Conductive Plastic	Cermet 12P, 12C
<b>Starting Torque:</b>	2 to 15 mNm	2 to 15 mNm
<b>Mechanical Torque:</b>	295° ± 5°	295° ± 5°
<b>End Stop Torque:</b>	560 mNm	560 mNm
<b>Spindles (standard)</b>	7/8" Long with slot x 1/8" diameter 1" Long with slot x 1/4" diameter	7/8" Long with slot x 1/8" diameter 1" Long with slot x 1/4" diameter
	Other spindle, bushing and Terminal styles are available on request	Other spindle, bushing and Terminal styles are available on request

#### Characteristics - Environmental

	Conductive Plastic	Cermet 12P, 12C
<b>Limits of Resistance Change:</b>	± 5% (after 1000 hrs endurance)	± 10% (after 1000 hrs endurance)
<b>Temperature characteristics of resistance (-55°C to 125°C):</b>	± 1000 ppm/°C	± 150 ppm/°C
<b>Bump Severity:</b>	15G ΔR<± 2%	15G ΔR<± 2%
<b>Mechanical Endurance:</b>	50,000 operations min.	25,000 operations min.

#### Resistance Laws

- A - Linear  
B - Log  
C - Inverse Log



### Cermet Elements

This series has been enhanced by the development of a Cermet version. Cermet elements are available in a wide range of resistive values. They offer essentially infinite resolution and

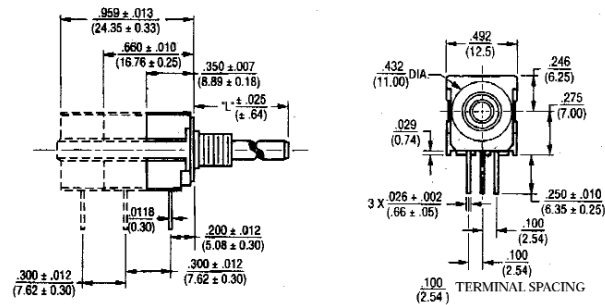
excellent stability in most severe environmental conditions. Static and Dynamic noise (CRV) performance is good but does not match that of conductive plastic.

The temperature coefficient of cermet elements, though not as low as for wirewound elements, is better than conductive plastic type elements. Frequency response of cermet

materials is very good and the practical application range extends well beyond 100MHZ.

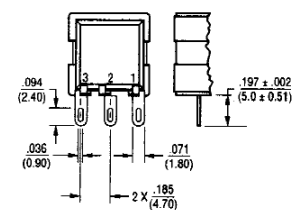
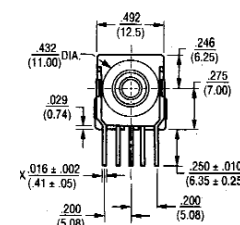
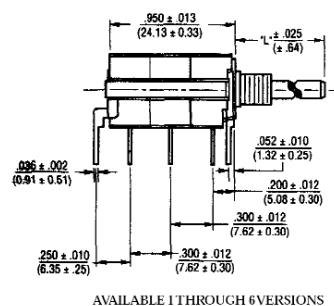
**Type 12P, 12C Series**

**Dimensions**

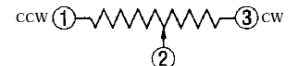


**PCB Mounting Bracket**

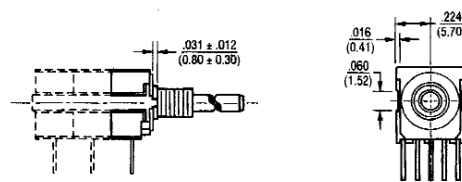
**Solder Lug Terminals**



**Electrical Schematic**

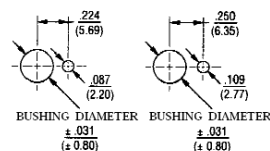


**Anti-Rotation Lug**



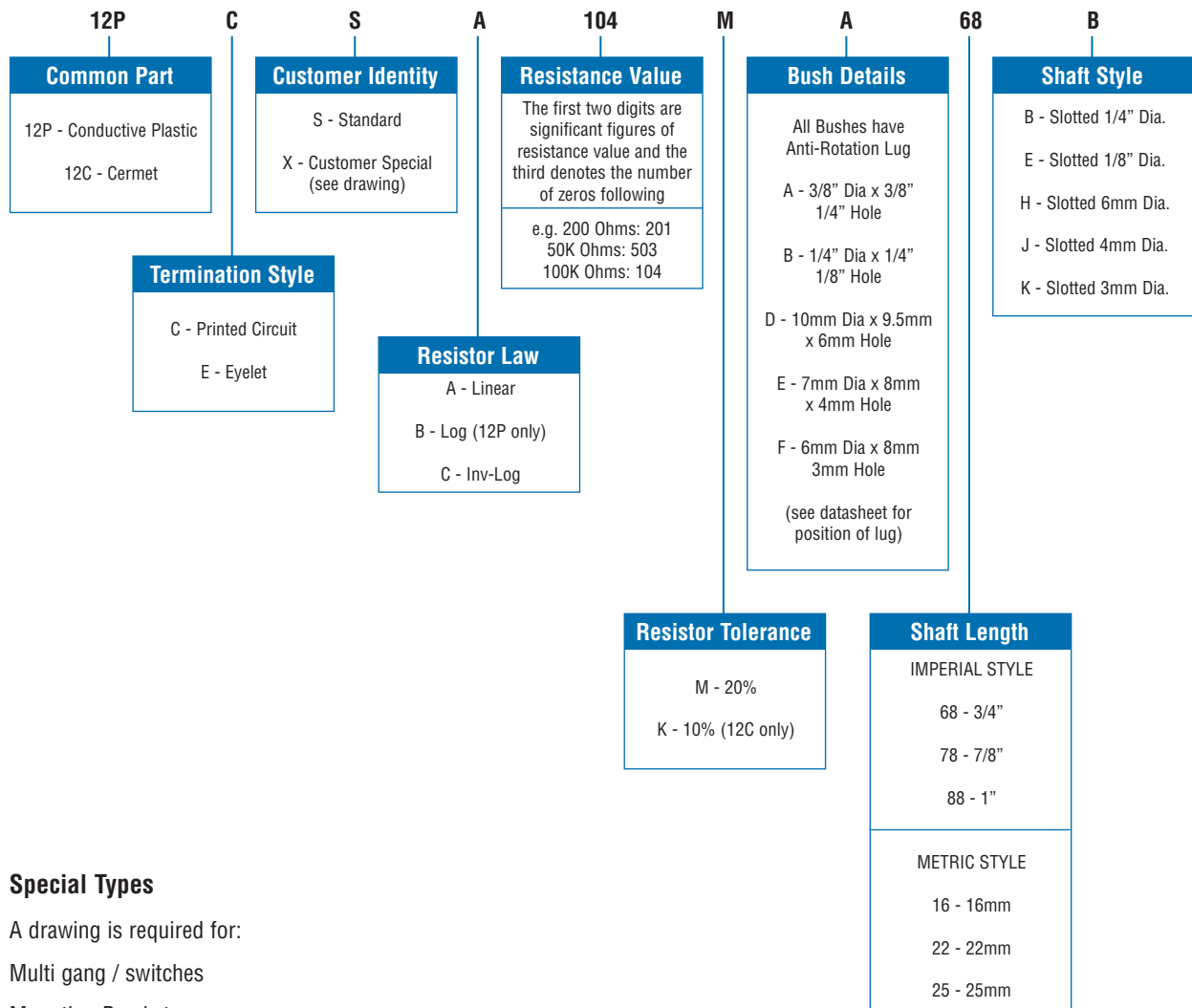
**Suggested Panel Layouts**

The 12P can be used with either of the two Panel Layouts shown below



FOR TOLERANCES SHOWN: .XX = ± .010 (0.25)  
.XXX = ± .005 (0.13)  
SHAFT DIMENSIONS ± 1/32 (0.80)

## How to Order



### \* Special Types

A drawing is required for:

Multi gang / switches

Mounting Bracket