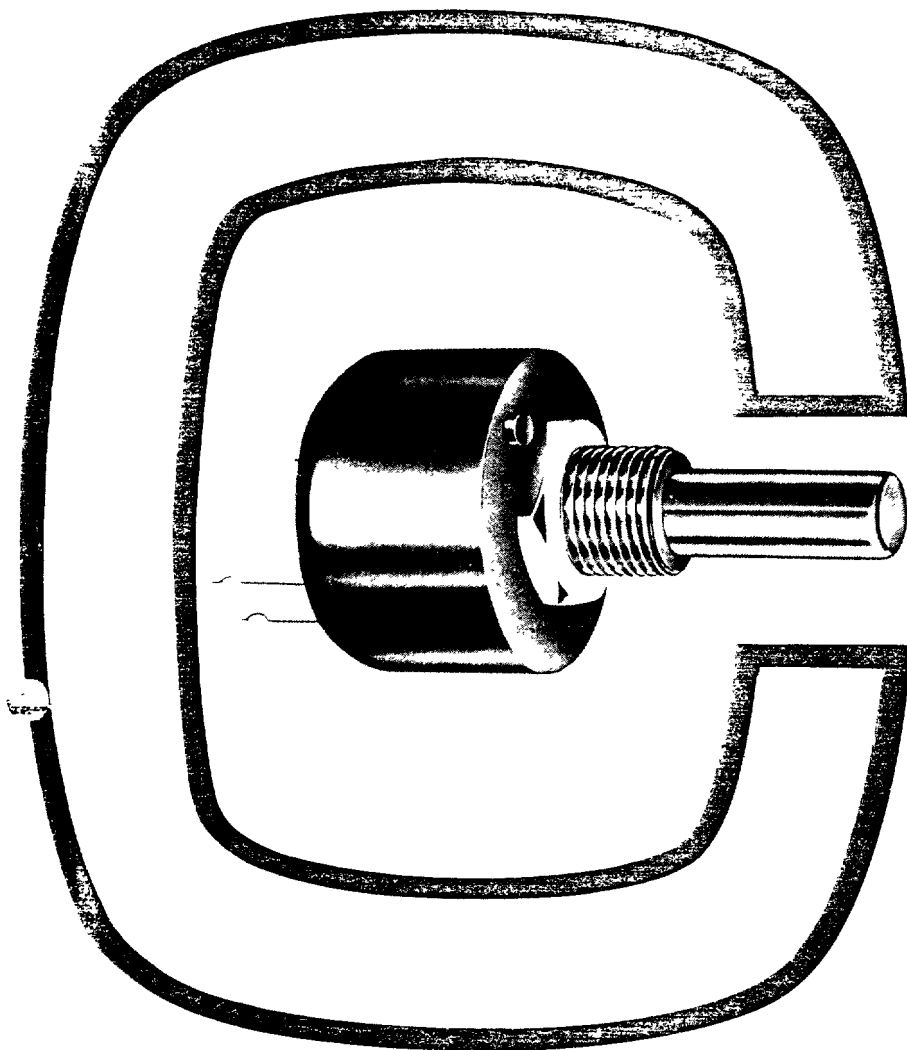


350-795
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837

OUR ORDER CODE
350-837

CP1601 + SPINDLE TYPE 9S + 1K, 5K, 10
OR 22 + 2K, 10K,



CONDUCTIVE POLYMER general purpose potentiometers

**Series CP 1600
& CP 1700**

Features

- CP1600 series — low cost bush mounting potentiometer — version available for motor driven applications.
- CP1700 series — bush mount with sintered bearings and precious metal wiper for longer life.
- Adaptor Plate available for servo mount applications.
- Conductive polymer track as used in CECC approved precision potentiometers.
- Available with either metric or imperial size bush.
- Full track current can be passed on through wiper continuously.
- Linearity to 0.25% available (restricted by angle of effective rotation).
- Linear and non-linear laws available.
- Centre tap available, either current or voltage.
- PC tag version available.
- Materials:

body	glass filled nylon
wiper	base or precious metal
bush	brass (nickel plating optional)
bearings	CP1700 sintered
spindle	stainless steel or brass (plating optional)

ELECTRICAL SPECIFICATION

Resistance Range

1K Ω to 500K Ω CP1600 series
1K Ω to 50K Ω CP1700 series
preferred values 1K Ω , 2K Ω , 5K Ω , 10K Ω .

Selection Tolerance

$\pm 20\%$, $\pm 10\%$ (closer tolerance available)

Angle of Effective Rotation

330° max. with stops
340° max. continuous rotation.
(Smaller angles supplied on request)
(Tolerance on standard angles $\pm 3^\circ$)

Power Rating

1 watt at 70°C (derate for restricted angle)

Wiper Current

30mA max. (limited by dissipation)

Output Smoothness

0.1% max. (for max. std. angles)

Linearity — Independent

$\pm 1\%$ Typical
0.5% or better, available,
dependent on other parameters

Temperature characteristic

-1% max. (+20°C to +70°C)
(0 to -200 ppm/°C max)

MECHANICAL SPECIFICATION

Mechanical Rotation

340° with stops or 360° continuous

End Stop Torque

800 mNm max.

Starting Torque

CP1600 20 mNm max.
CP1700 5 mNm max.

Mechanical Endurance

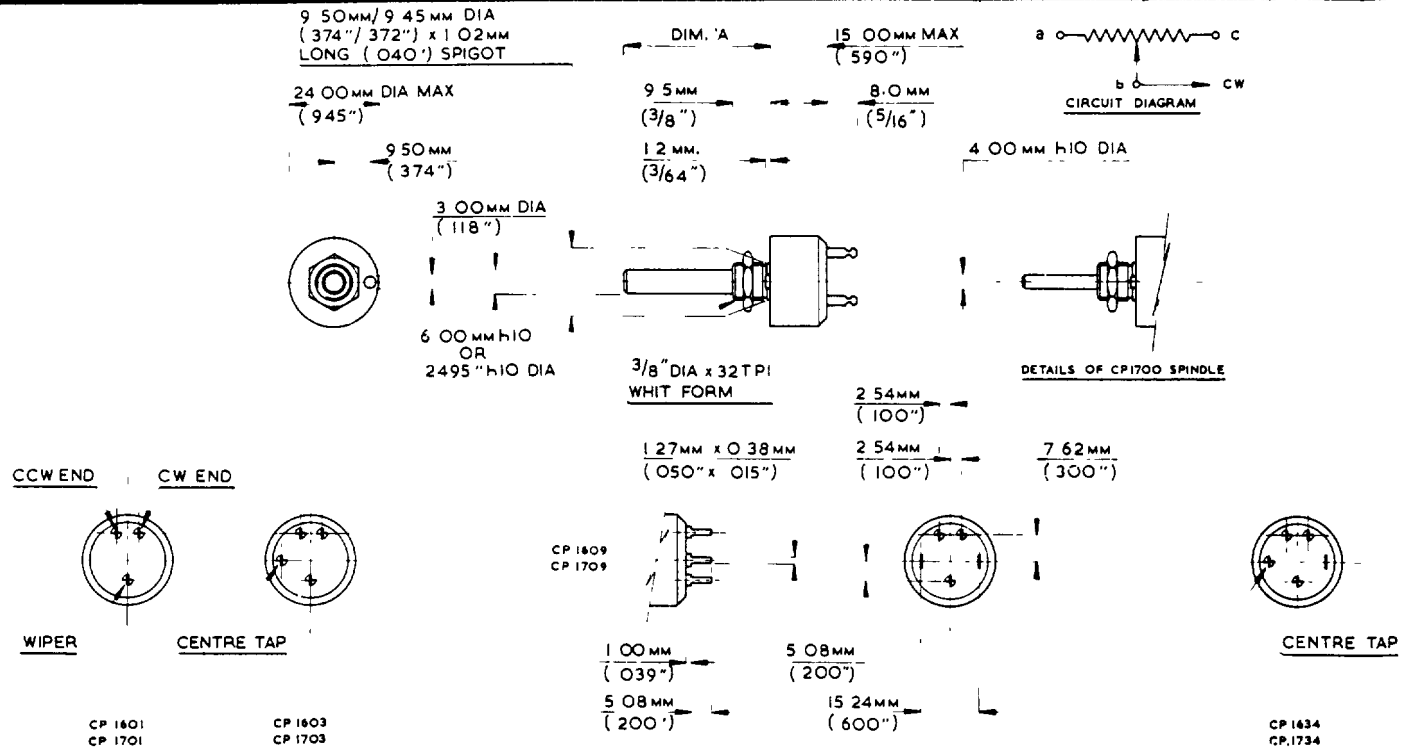
CP1600 3 x 10⁵ cycles — standard
2 x 10⁶ cycles — with
stainless steel shaft and
precious metal wiper
CP1700 5 x 10⁶ cycles

Applications notes:

- 1 Potentiometers having conductive polymer tracks are tested as potential dividers with a wiper load resistance of a minimum of 100 times track resistance. When used as variable resistors certain performance parameters may well differ from those quoted above.
2. Versions of the CP1600 with spindle damping lubricant are intended for hand operation only and must not be used below a temperature of 0°C.

Colvern

A Subsidiary of Welwyn Electronics Ltd LIMITED
A Royal Worcester Company
Spring Gardens, Romford, Essex RM7 9LP, England
Telephone Romford 62222/5



STANDARD SPINDLE LENGTHS

(Dimension "A")

CP1600

9S	5/8 in. long, 1/4 in. dia., slotted
11S	3/4 in. long, 1/4 in. dia., slotted
15S	1 in. long, 1/4 in. dia., slotted
22	1 1/2 in. long, 1/4 in. dia., plain
6M16S	16 mm long, 6 mm dia., slotted
6M25S	25 mm long, 6 mm dia., slotted

CP1700

4M16	16 mm long, 4 mm dia., plain
4M25	25 mm long, 4 mm dia., plain

STANDARD TYPES AVAILABLE

CP16001	Basic panel mount potentiometer with spindle damping lubricant
CP16003	As CP1601 plus centre tap
CP16005	As CP1603 but 360° mechanical angle
CP16009	Printed circuit tags plus mounting bracket
CP16018	Basic low torque panel mount potentiometer
CP16301	Basic servo potentiometer
CP16501	Sealed version of CP1601
CP16503	Sealed version of CP1603
CP16505	Sealed version of CP1605
CP17001	Basic panel mount potentiometer with sintered bearings
CP17003	As CP1702 plus centre tap
CP17005	As CP1701 but 360° mechanical angle

ENVIRONMENTAL SPECIFICATION

Climatic Category

40/125/04	standard version
55/125/21	sealed version

Extended temperature range and humidity characteristics available.

Vibration

10 to 500 Hz 10g Δ Rac < 1%

Bump

4000 bumps; 390 m/s², 40g: Δ Rac < 1%

Methods of test in accordance with BS CECC 41000

MARKING

The marking on the potentiometer of resistance value and tolerance in accordance with BS 1852, clauses 3 and 4

ORDERING INFORMATION

Specify type number, spindle code, ohmic value, tolerance and resistance law

Where additional variants, or extended ranges, are indicated as being also available, these statements are not intended to imply that types incorporating these particular variants, or range extensions, meet all the above specified parameters. The company reserves the right to alter the specification, design or conditions of supply of any product or service, without prior notice.

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