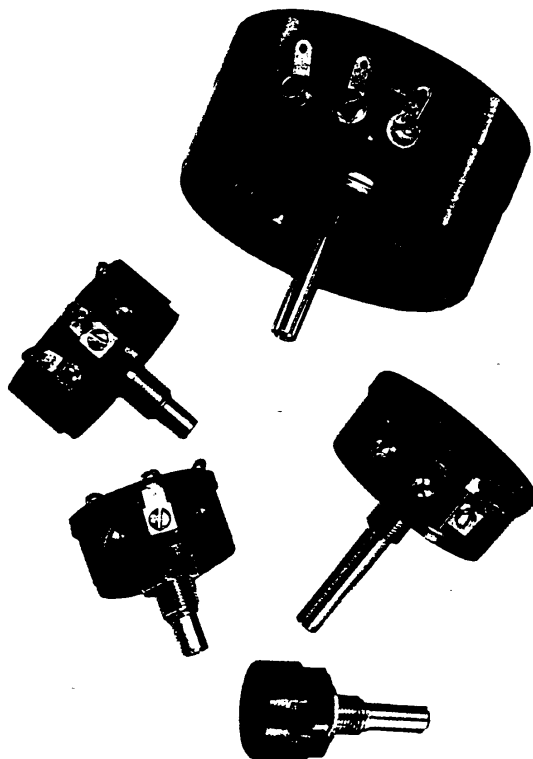


351-313 to 490

# Colvern



## Wirewound

CLR Series, 1100; 3000; 4000; 5000; 7000

### Features

- General purpose, high quality, high dissipation, robustly constructed styles included in the range.

- Linear or non-linear laws available.

### CLR 1100

- Two gang unit available with a common spindle.

- Terminations are cemented to body for greater reliability.

- Phenolic body moulding; beryllium copper contact; nickel plated, brass spindle and bush.

### CLR 3000/4000/5000/7000

- Up to four sections can be ganged together on a common spindle.

- Phenolic body moulding; nickel silver contact; nickel plated brass spindle and bush; hot tin dipped brass tags.

## Electrical Characteristics

### Standard Resistance Range

CLR	1100	3000	4000	5000	7000
5R0	LL	LL	LL	LL	
10R					LL
25R		★			
50R	★		★	★	★
100R	★	★	★	★	
200R	★	★	★	★	
250R	★	★	★	★	★
500R	★	★	★	★	★
1K0	★	★	★	★	★
2K0	★	★	★	★	
2K5	★				★
5K0	★	★	★	★	★
10K	★	★	★	★	★
20K	★	★	★	★	
25K	★	★	★	★	★
50K	UL	★	★	★	
75K		UL			
100K			UL	UL	
150K					UL

★ = Preferred value

LL = Lowest value

UL = Highest value

Non-Preferred values are charged at a premium, please consult factory for details

	CLR1100	CLR3000	CLR4000	CLR5000	CLR7000
*Power rating @ 20°C Linear law (Non-linear law)	1W ( $\frac{1}{2}$ W)	2W (1W)	3W ( $1\frac{1}{2}$ W)	5W ( $2\frac{1}{2}$ W)	12W (6W)
Angle of effective rotation	265°±15°	260°±5°	275°±5°	275°±5° (non-linear 270°±5°)	300°±5°
Total mechanical rotation	290°±10°	285°±5°	290°±10°	295°±5°	320°±5°
Limiting element voltage d.c. or a.c. r.m.s.	250V	400V	500V	500V	630V

\*For ganged units the front section must be derated to 75%, the rear section to 50% and the middle section(s) to 40% of the above ratings. Derate all ratings by 50% for operation at 70°C.

### Selection Tolerance

±10% (±5%, CLR 5000 only ±2%, also available)

### Terminal Resistance

Maximum of 0.2Ω or 0.01% (1Ω or 0.1%:CLR7000) of nominal resistance whichever is the greater

### Rotational Noise

100Ω E.N.R. maximum

### Temperature Characteristic of Resistance

±0.75% (+20°C to +70°C)

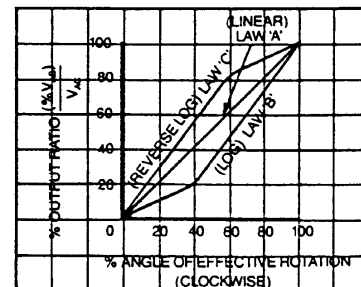
### Insulation Resistance

1000MΩ minimum at 500V d.c.

### Isolation Voltage

1000V a.c. peak

## Standard Resistance Laws



### Linearity

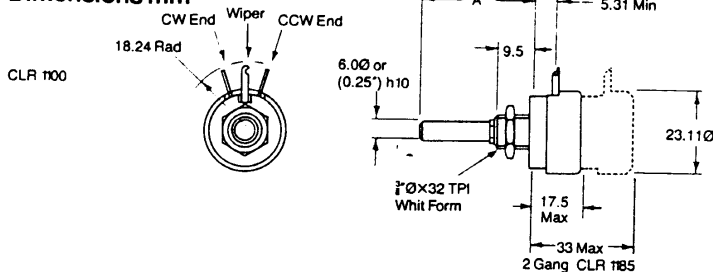
1% typical, 2% maximum

### Alignment (Ganged Units)

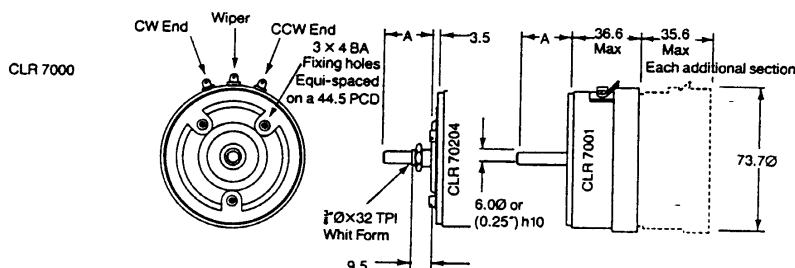
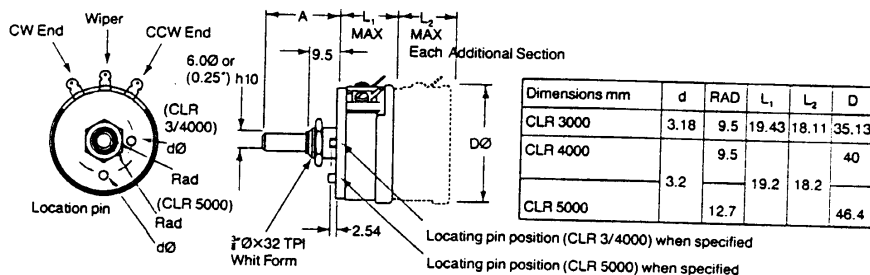
Sections are aligned to within ±1% at reference point of zero effective rotation (50% effective rotation:CLR1000)

ALL POTS WE STOCK FROM COLVERN ARE CIVILIAN

## Dimensions mm



CLR 3000/4000/5000



## Mechanical Characteristics

### Total Mechanical Rotation

See table overleaf.

Versions with 360° mechanical rotation also available; wiper goes o.c. for approximately 45° of rotation between end terminations (40°: CLR 4000, 25°: CLR 7000)

### Starting Torque

7 to 35mNm (7 to 70mNm: CLR 7000)

### End Stop Torque

800mNm: CLR 1100

1100mNm: CLR 3000/4000

1500mNm: CLR 5000/7000

### Rotational Life

20,000 cycles;  $\Delta R\% \leq 2\%$  (25,000: CLR 5000)

### No. of Gangs (max.)

4 (2: CLR 1100)

## Environmental Characteristics

### Environmental Category

25/070/04 (25/070/—: CLR 1100)

### Vibration (Not CLR 7000)

10 to 500Hz; 10g;  $\Delta R_{ac} \leq 1\%$

### Bump (Not CLR 7000)

4000 bumps; 390m/s<sup>2</sup>; 40g;  $\Delta R_{ac} \leq 1\%$

### Load Life

1000h at rated dissipation;  $\Delta R_{ac} \leq 2\%$

## Marking

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

## Standard Spindle Lengths (Dimension 'A')

For single section units. Multi-section units available with style 22 as standard

9S	1/8 in. long, 1/8 in. dia., slotted
11S*	1/4 in. long, 1/8 in. dia., slotted
15S	1 in. long, 1/8 in. dia., slotted
22	1 1/2 in. long, 1/8 in. dia., plain
M16S*	16mm long, 6mm dia., slotted
M25S*	25mm long, 6mm dia., slotted
M50	50mm long, 6mm dia., plain

\* Not CLR 7000

(All lengths are from fixing face)

## Standard Types Available

CLR 1106	Basic panel mount
CLR 1185	Two gang, panel mount
CLR 3001	Basic panel mount
CLR 3023	CLR 3001 plus centre tap
CLR 3033	Two gang, panel mount
CLR 3038	Three gang, panel mount
CLR 3060	Four gang, panel mount
CLR 4001	Basic panel mount
CLR 4049	Two gang panel mount
CLR 40106	Three gang panel mount
CLR 40118	Four gang panel mount
CLR 5001	Basic panel mount
CLR 5018	Two gang panel mount
CLR 5022	Three gang panel mount
CLR 5044	Four gang panel mount
CLR 7001	Basic, three-hole fixing
CLR 7010	CLR 7001, with 360° mechanical rotation
CLR 70204	Basic bush mounting
CLR 7004	Two gang, three hole fixing, panel mount
CLR 7029	Three gang, three hole fixing, panel mount
CLR 7036	Four gang, three hole fixing, panel mount

Note: Each section of a ganged unit is allocated a letter in sequence, i.e., A, B, C, D, etc., the section nearest the panel is defined as Section A. A different part number to that indicated above will be allocated when a standard locating pin (see drawing) is specified. Locating pins in other positions are also available.

Obtainable from

## Ordering Information

Specify type number, spindle code, ohmic value, tolerance and resistance law (for each section in the case of ganged units)

**colvern**



A Division of Crystalate Electronics Ltd.,  
Spring Gardens, Romford, Essex RM9 9LP, England.  
Telephone: Romford (0708) 762222  
Telex: 23984 FAX: (0708) 762981

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.