

# Linear Potentiometer

## Precision Potentiometric Output

Ranges: 0-3 to 0-30 inches [0-75 to 0-750 mm]

5K – 10K ohms • IP65



# CLWG

### Specification Summary:

#### GENERAL

Full Stroke Ranges ..... 0-3 to 0-30 in. (0-75 to 0-750 mm)  
 Output Signal ..... voltage divider (potentiometer)  
 Linearity .....  $\pm 0.04$  to 0.1% full stroke, see ordercode  
 Repeatability .....  $< 0.01$  mm  
 Resolution ..... essentially infinite  
 Life Expectancy ..... 50 million cycles  
 Enclosure Material ..... aluminum  
 Sensor ..... conductive plastic linear potentiometer  
 Operating Speed ..... 200 inches (5 M) per second, max.

#### ELECTRICAL

Input Resistance ..... .5K to 10K ohms ( $\pm 20\%$ ), see ordercode  
 Recommended Maximum Input Voltage ..... 25-30 V(AC or DC)  
 Recommended Operating Wiper Current .....  $\leq 1 \mu A$

#### ENVIRONMENTAL

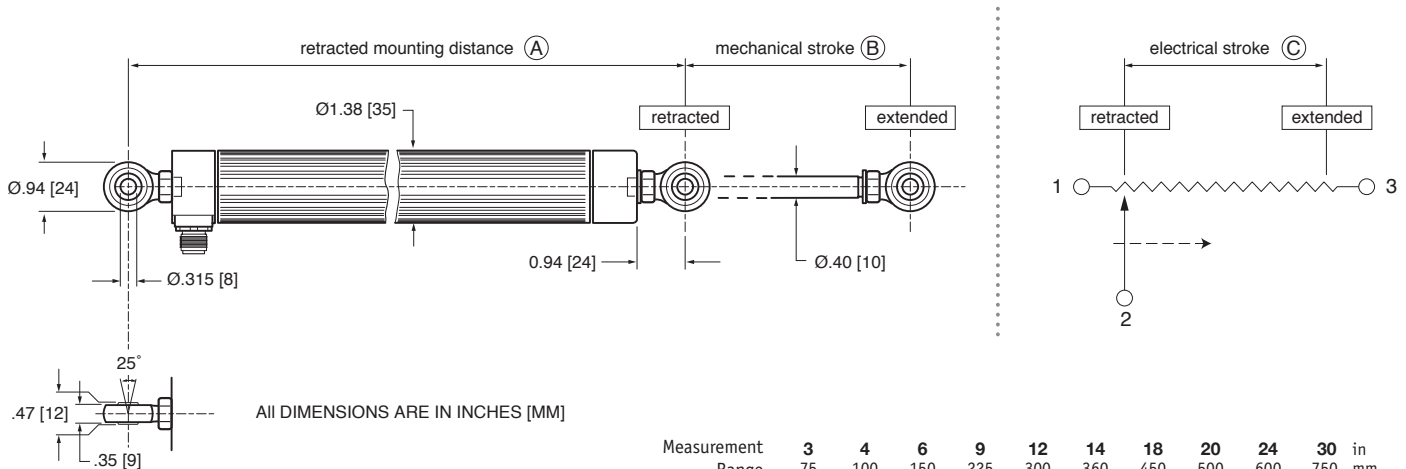
Enclosure Design ..... IP65  
 Operating Temperature .....  $-22^\circ$  to  $212^\circ F$   
 Vibration ..... up to 10 G's to 2000 Hz maximum



Developed specifically for a wide range of demanding applications, Celesco's CL series position transducers offer unrivalled performance in terms of accuracy, repeatability, life expectancy and ease of mounting. Such applications include industrial automation, automotive and robotics.

The CLWG uses a twin-bearing actuating rod, backlash-free pivot heads and a superior wiper system to provide outstanding linearity and performance.

### Outline Drawing



Measurement Range	3	4	6	9	12	14	18	20	24	30	in
	75	100	150	225	300	360	450	500	600	750	mm
(A)	9.72	10.75	12.72	15.75	18.74	21.69	26.18	28.74	33.70	40.94	in
	247	273	323	400	476	551	665	730	856	1040	mm
(B)	3.11	4.13	6.10	9.09	12.09	14.49	18.11	20.08	24.09	30.07 $\pm 0.02$	in
	79	105	155	231	307	368	460	510	612	764 $\pm 2$	mm
(C)	2.99	4.01	5.98	8.98	11.97	14.41	17.99	20.00	24.02	30.00	in
	76	102	152	228	304	366	457	508	610	762	mm



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**Ordering Information:**

**Model Number:**

**CLWG** - \_\_\_\_\_ - \_\_\_\_\_  
*order code:*                      **R**                      **A**

Sample Model Number:

**CLWG - 75 - NC4**

**R** range:                      3 inches [75 mm]

**A** electrical connection: 4-pin, 90° M12 cordset

**Full Stroke Range:**

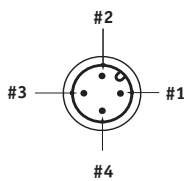
<b>R</b> <i>order code:</i>	75	100	150	225	300	360	450	500	600	750
measurement range, in. [mm]:	3[75]	4[100]	6[150]	9[225]	12[300]	14[360]	18[450]	20[500]	24[600]	30[750]
resistance, (±20%):	3K	3K	5K	5K	5K	5K	5K	5K	5K	10K
linearity, %:	0.1%	0.1%	0.08%	0.07%	0.06%	0.05%	0.05%	0.05%	0.05%	0.04%

**Electrical Connection:**

**A** *order code:*

**blank**

4-pin M12 connector  
*(no mating plug supplied)*



male receptacle  
 (contact view)

**MC4**

4-pin M12 connector  
 w/ mating plug



0.13" - 0.20" OD Cable  
 (4mm - 6mm)

**SC4**

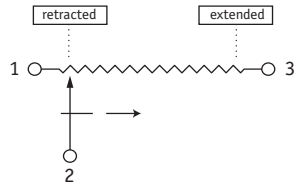
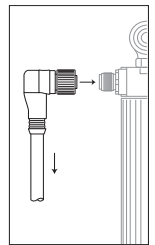
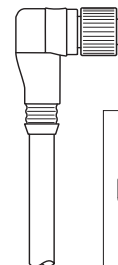
4-pin M12 connector  
 and 4 meter length cordset  
 w/straight mating plug



4-conductor  
 22 AWG

**NC4**

4-pin M12 connector  
 and 4 meter length cordset  
 w/90° mating plug



Pin#	Cordset Wire Color
1	BROWN
2	WHITE
3	BLUE
4	BLACK