

# Linear Conductive-Plastic Potentiometer



# CLWG

3" to 30" [75 to 750 mm]

## Specification Summary

CE IP65

### 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  
 Max. Operating Speed ..... 200 inches per second

Developed specifically for a wide range of demanding applications, Celesco's CLWG 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.

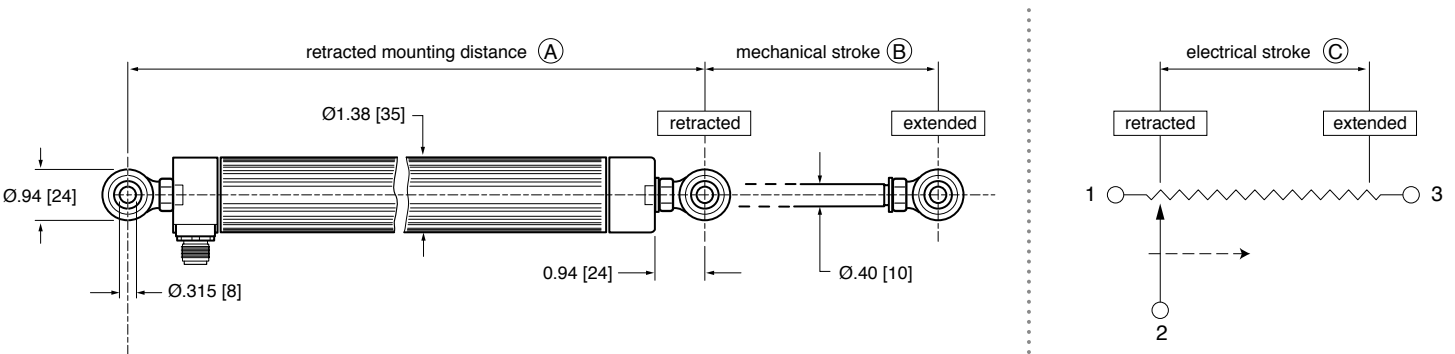
### ELECTRICAL

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

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

### ENVIRONMENTAL

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



Measurement Range	3	4	6	9	12	14	18	20	24	30
	75	100	150	225	300	360	450	500	600	750
	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
	247	273	323	400	476	551	665	730	856	1040
	in									
(B)	3.11	4.13	6.10	9.09	12.09	14.49	18.11	20.08	24.09	30.07 $\pm 0.02$
	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
	76	102	152	228	304	366	457	508	610	762
	mm									

All DIMENSIONS ARE IN INCHES [MM]

Celesco Transducer Products, Inc.

20630 Plummer Street • Chatsworth, CA • 91311 • tel: (800) 423-5483 • (818) 701-2750 • fax: (818) 701-2799 • www.celesco.com • info@celesco.com



**Ordering Information**

**Model Number:**

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

Sample Model Number:

**CLWG - 75 - NC4**

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

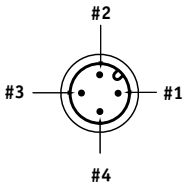
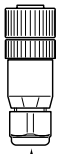

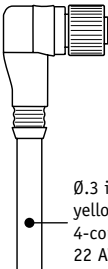
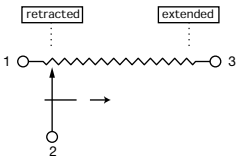
**A** electrical connection: 4-pin, 90° microconnector w/ cordset

**Full Stroke Range:**

<b>R</b> order code:	<b>75</b>	<b>100</b>	<b>150</b>	<b>225</b>	<b>300</b>	<b>360</b>	<b>450</b>	<b>500</b>	<b>600</b>	<b>750</b>
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, Ω (±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:

<b>blank</b>	<b>MC4</b>	<b>SC4</b>	<b>NC4</b>
4-pin micro-connector <i>(no mating plug supplied)</i>	4-pin micro-connector w/ mating plug	4-pin micro-connector and 4 meter length cordset w/straight mating plug	4-pin micro-connector and 4 meter length cordset w/90° mating plug
			
male receptacle (contact view)	0.16" - 0.32" OD Cable	Ø.3 in [8mm] yellow PVC jacket 4-conductor 22 AWG	Ø.3 in [8mm] yellow PVC jacket 4-conductor 22 AWG
			
		Pin#	Cordset Wire Color
		1	BROWN
		2	WHITE
		3	BLUE
		4	BLACK

version: 2.0 last updated: August 18, 2004