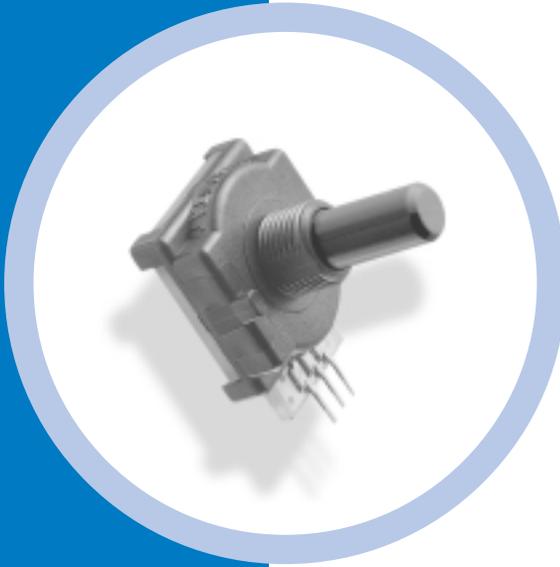


# Model 510

**NEW**



## FEATURES:

- Cost Effective*  
- Eliminates A/D converters
- High Resolution*  
- Up to 36 positions
- Stability*  
- Operating range of -40C to +105C
- Variability*  
- Horizontal and vertical mounting

## Electrical

**OUTPUT:**  
2-bit grey code, channel L leads channel R by 90 deg electrically in the CW direction. 4-bit grey code, absolute electrical position output.

**CLOSED CIRCUIT RESISTANCE:**  
5 ohms maximum

**OPEN CIRCUIT RESISTANCE:**  
100K ohm minimum

**CONTACT RATING:**  
Resistance load 250mA @ 28Vdc maximum

**SWITCHING LOADS:**  
1.5mA @ 115 Vac  
150mA @ 14Vdc

**BOUNCE (Jitter):**  
5 ms/cycle @ 15 RPM

**DIELECTRIC WITHSTANDING VOLTAGE:**  
1000 Vac @ sea level

**ELECTRICAL TRAVEL:**  
Continuous

**OPERATING SPEED:**  
50 RPM maximum

## Mechanical

**ROTATIONAL TORQUE:**  
3-5 oz. in. (2.16 - 3.60 Ncm)

**MECHANICAL TRAVEL:**  
Continuous

**PANEL MOUNTING TORQUE:**  
7 lbs. in. (1.13Nm) maximum

**SHAFT LOAD FORCE:**  
10 lbs. in. (1.13Nm) maximum

**SHAFT PULL FORCE:**  
10 lbs. maximum

**TERMINALS:**  
Standard PC style, 3 terminals on 0.100" (2.54mm) grid-in-line perpendicular or parallel to shaft. Solder hook available on 0.200" grid.

## MOLDED CONSTRUCTION:

Molding compound used for housing/bushing and shaft has a UL94V-2 rating

## ROTATIONAL LIFE:

100,000 detented cycles at rated load typical.  
(1 cycle = 720 degrees)

## Operational

### TEMPERATURE RANGE:

Operating temperature: -40 degrees C to +105 degrees C  
Storage temperature: -55 degrees C to +120 degrees C

### HUMIDITY:

Per MIL-STD. 202, Method 106C:  
Insulation resistance shall be 1 Megohm maximum of a relative humidity 90% @ 25 degrees C

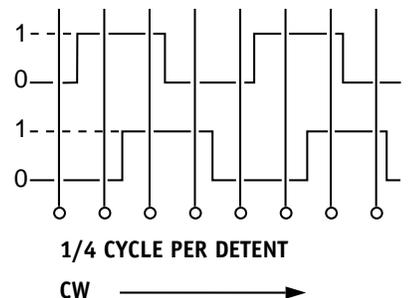
### SHOCK:

Per MIL-STD. 202, Method 213, Test Condition G, consisting of 18 impacts shock at 50 G's for duration of 11ms

### VIBRATION:

Per MIL-STD. 202, Method 214, Test Procedure A

## Output Table



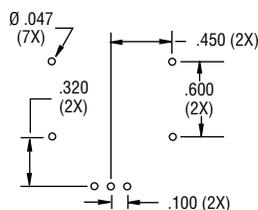
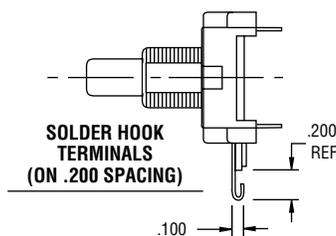
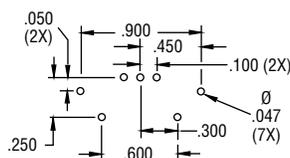
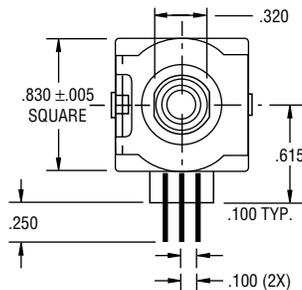
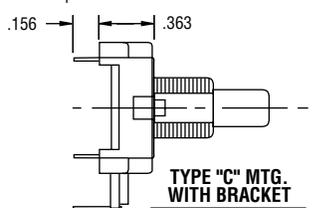
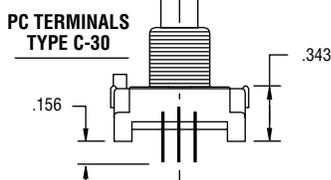
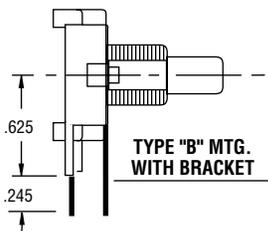
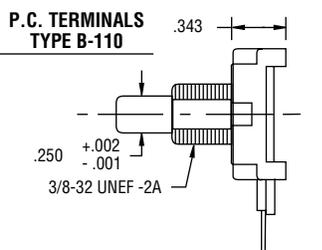
**ISO 9001  
CERTIFIED**

# DIMENSIONS for Series 510

## 2-Bit, 36-Position Incremental Output

Step	1	G	2
1			
2			
3			
4			
5			
5			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			

2-bit, 16 pos. (Steps 16-22)  
2-bit, 24 os. (Steps 23-30)  
2-bit, 36 pos. (Steps 31-36)

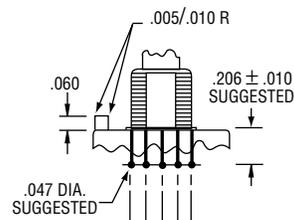
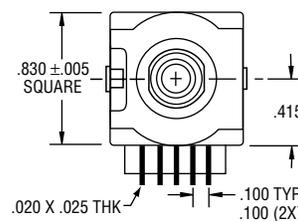


## 4-bit, 6-Position Incremental Output

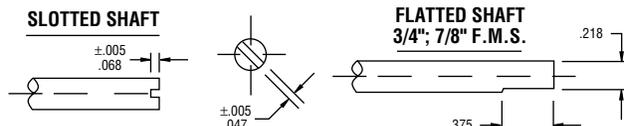
Step	1	4	2	G	8
1					
2					
3					
4					
5					
5					
7					
8					
9					
#					
#					
#					
#					
#					
#					
#					
#					

4-bit, 16 pos.

■ Closed □ Open

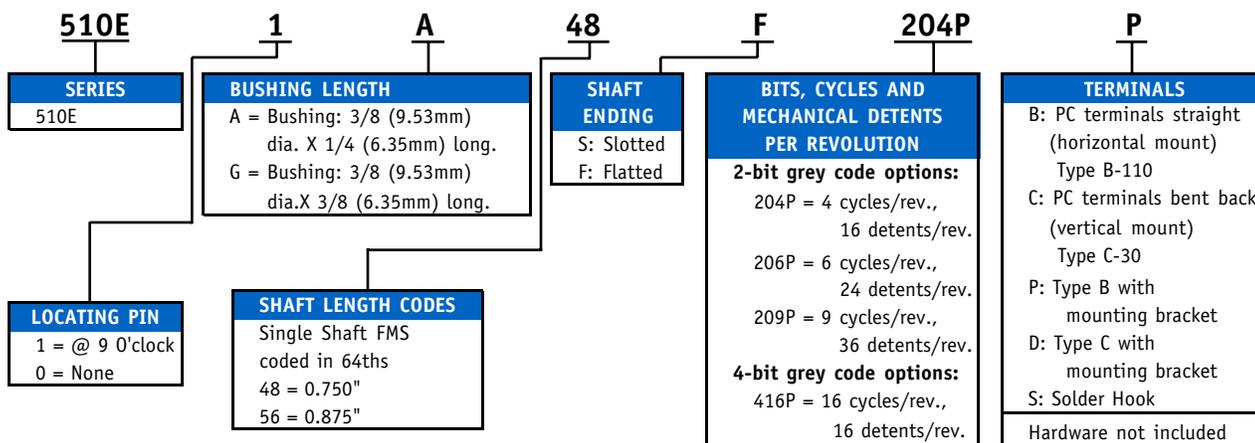


## SHAFT DIMENSIONS



## ORDERING INFORMATION

When ordering, indicate the desired options as shown in this example:



To order or for custom applications, call 800-874-1874

800 874 1874 · Clarostat, a division of Invensys Group Company · El Paso, Texas 79936

