



The Electroswitch 700 Series is the economical solution to virtually any digital encoder or potentiometer requirement. As the latest version in our new generation of rotary encoder products, the 700 Series has been freshly tooled to include resistive analog output for potentiometer applications, as well as the standard digital code for direct interface with a microprocessor. The .890" package enhances the original design concept, delivering high performance and quality levels in triple digit PPRs.

FEATURES

- **Digital Codes Available: Incremental Quadrature, Absolute, Gray**
- **Analog Resistive Output For Use As A Potentiometer**
- **5K And 10K Resistive Element Standard**
- **High Temperature Materials Meet 85°C Requirements**
- **Push button Feature**
- **Push to Turn Feature**
- **RoHs Compliant**

BENEFITS

- **Multiple Output Codes Allow Simpler Integration with a Wider Variety of Receiving Devices**
- **Encoder or Potentiometer function in same package**
- **Excellent Performance in Harsh Environments**
- **Push button Allows Dual Function with Single Shaft Input**
- **Low Profile Package**

APPLICATIONS

Medical

- Rehab Treadmills
- X-Ray Equipment
- Cold Therapy/Compression Equipment

Audio/Music

- Volume Control
- Automotive
- Home
- Professional
- Electric Guitars

HVAC

- Temperature Control
- Fan Control

Appliance

- Electronic Range Control of Bake time
- Electronic Range Control of Temperature and Duration
- Dishwasher Control

Agriculture/Construction

- Bailer control for height and speed
- Electronic control interface

Test and Measurement

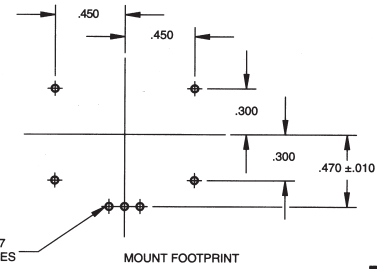
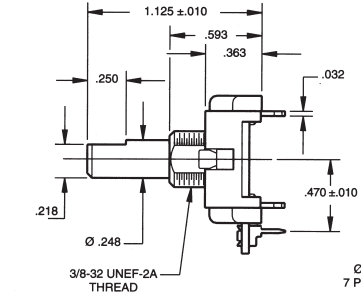
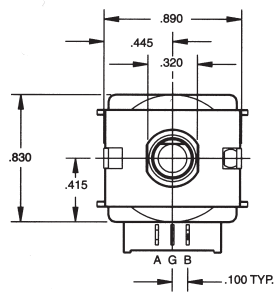
- Automotive Test Equipment

Panel Input Device

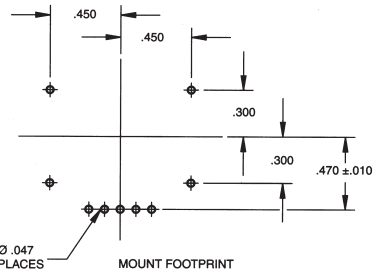
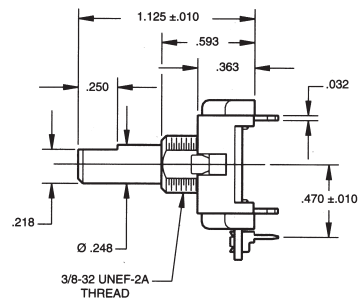
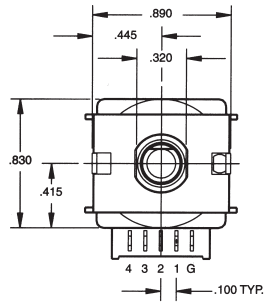
- Menu scroll and select via pushbutton

Timer Setting

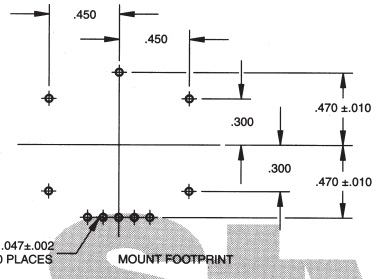
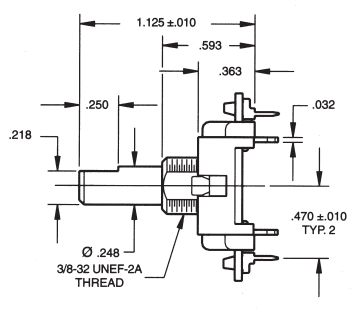
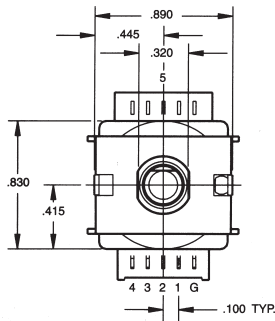
- Irrigation controls



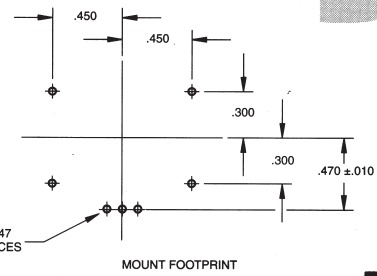
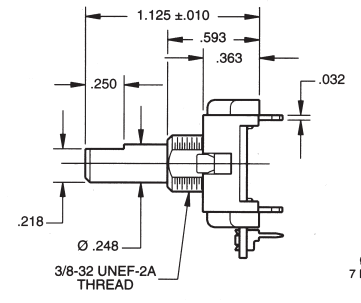
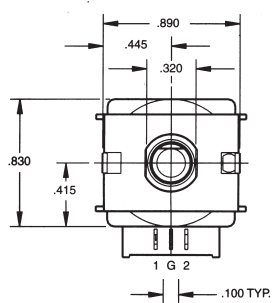
700 Series



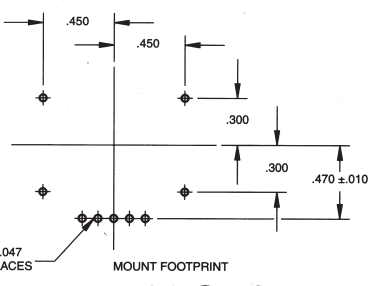
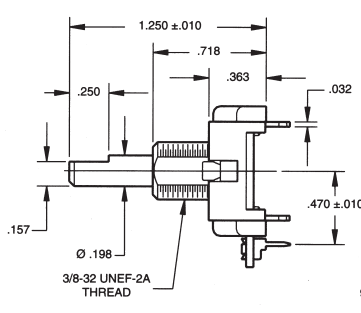
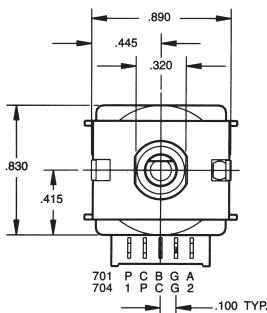
12 or 16 position 702 Series



24 or 32 position 702 Series

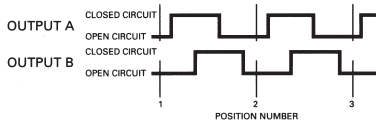


703 Series

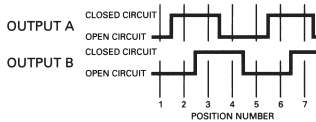


701 Series or 704 Series

QUADRATURE CODE FULL CYCLE PER DETENT (12, 16, 24 POSITION)



QUADRATURE CODE 1/4 CYCLE PER DETENT (12, 16, 24, 32, OR 36 POSITION)



QUADRATURE CODE FULL CYCLE 12, 16, 24 POSITION

SWITCH POSITIONS	OUTPUT	
	A	B
1		
2	•	
3	•	•
4	•	•
5		•
6		
7	•	
8	•	
9		•
10		•
11	•	•
12	•	•
13		•
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

QUADRATURE CODE 1/4 CYCLE ALL POSITION

SWITCH POSITIONS	OUTPUT	
	A	B
1		
2		
3	•	
4	•	
5		•
6		•
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		

GRAY CODE 16 POSITION (*)

SWITCH POSITIONS	OUTPUT			
	1	2	4	8
1				
2	•			
3	•	•		
4	•	•	•	
5	•	•	•	•
6	•	•	•	•
7	•	•	•	•
8	•	•	•	•
9				
10	•	•	•	•
11	•	•	•	•
12	•	•	•	•
13	•	•	•	•
14	•	•	•	•
15	•	•	•	•
16				

GRAY CODE 32 POSITION (**)

SWITCH POSITIONS	OUTPUT			
	1	2	4	8
17				
18				
19	•	•	•	•
20	•	•	•	•
21	•	•	•	•
22	•	•	•	•
23	•	•	•	•
24	•	•	•	•
25				
26				
27	•	•	•	•
28	•	•	•	•
29	•	•	•	•
30	•	•	•	•
31	•	•	•	•
32				

• INDICATES LOGIC HIGH

* - 12 position gray code is the same as a 16 position without positions 11 through 14.

** - 24 position gray code is the same as a 32 position without positions 21 through 28.

Specifications

Current Carrying Capacity	Resistive 0.5 watt	Detent Angles	36°, 30°, 22.5°, 15°, 11.25°, 10°; others upon request
Switching Load	1mA at 115 VAC, 15mA at 14 VDC	Molded Construction	Valox plastic rated 94 V-0 or better
Shock Humidity	MIL-STD 202E	Board Material	FR-4 with 1 oz. copper clad, plated
Dielectric Strength	750 volts	Push-Button Characteristics	Stroke: .065 ±.015
Contact Resistance	1 ohm typical		Push-Button Force: 15 oz. max.
Contact Bounce	5 ms @ 15 RPM		Push-Button Resistance: 80 ohms max.
Contacts	Phosphor-bronze gold interface with program board		Torque: 12, 24 position = 1.6 ±.3 in.-oz.
Codes	Resistive, Quadrature, A/B, Binary, Gray		Torque: 16 position = 2 ±.3 in.-oz.
Code Program	Non-shorting typical		Torque: 32, 36 position = 1.2 ±.3 in.-oz.
Operating Forces	16 position = 7.5 in.-oz. ±20%, 36 position = 4.5 in.-oz. ±20%		Contact Resistance: 5 ohms max.
Life	50,000 cycles (50% loss in torque over life. High temperature operation will reduce detent life.)		Contact Bounces: 5 ms max. @ 15 RPM
Operating Temperature	-40°C to +85°C		Push-Button Life: minimum 250,000 operations
Shaft Material	Molded plastic		
Anti-Rotation Device	Flatted mounting bushing .375" dia. x .320", double "D"		

Ordering Information

Code

700: Quadrature
701: Quadrature with Push-button
702: Absolute
703: Resistive
704: Resistive with Push-button

Electrical Cycles or Resistive Value

700: 06, 08, 09, 12, 16, 24, 32 or 36
701: 06, 08, 09, 12, 16, 24, 32 or 36
702: 01
703: 05K or 10K
704: 05K or 10K

Number of Detent Positions

700: 12, 16, 24, 32, 36 or 00: No Detents
701: 12, 16, 24, 32, 36 or 00: No Detents
702: 12, 16, 24, or 32
703: 00: No Detents
704: 00: No Detents

701

08

32

700 Series Standard Offerings

700-09-36	701-08-32	702-01-12	703-05-00	704-05-00
700-16-16	701-04-16	702-01-16	703-10-00	704-10-00
700-24-24	701-06-24	702-01-24		