

Commercial Mechanical Encoders

Model 110

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:
 15mA @ 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:

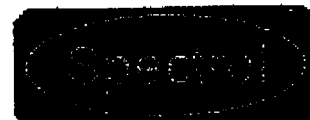
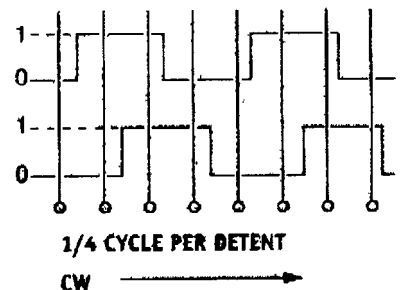
Per MIL-STD. 202, Method 106C:
 Insulation resistance shall be 1 Megohm maximum of a relative humidity 90% @ 25 degrees C

SHOCK:

Per MIL-STD 202, Method 213, Test Condition G, consisting of 1 MIL-STD.

Test Procedure A

Output Table



Spectrol Electronics Limited
 Garrard Way, Swindon SN3 3HY, UK
 Telephone: +44 (0)1793 521351 Fax: +44 (0)1793 525163
 E-mail: sales@spectrol.co.uk Web: www.spectrol.com

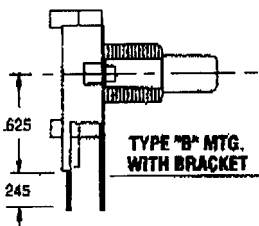
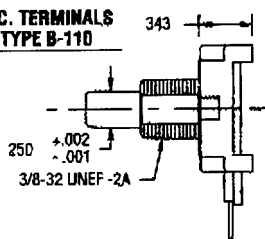
DIMENSIONS for Series 110

2-Bit, 36-Position Incremental Output

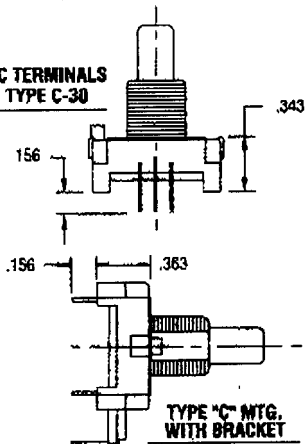
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2	█	□	□
3	█	□	□
4	█	□	□
5	█	□	□
6	█	□	□
7	█	□	□
8	█	□	□
9	█	□	□
10	█	□	□
11	█	□	□
12	█	□	□
13	█	□	□
14	█	□	□
15	█	□	□
16	█	□	□
17	█	□	□
18	█	□	□
19	█	□	□
20	█	□	□
21	█	□	□
22	█	□	□
23	█	□	□
24	█	□	□
25	█	□	□
26	█	□	□
27	█	□	□
28	█	□	□
29	█	□	□
30	█	□	□
31	█	□	□
32	█	□	□
33	█	□	□
34	█	□	□
35	█	□	□
36	█	□	□

2-bit, 16 pos.
2-bit, 24 pos.
2-bit, 36 pos.

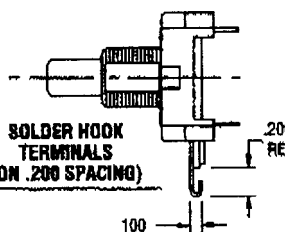
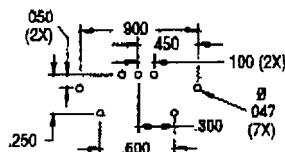
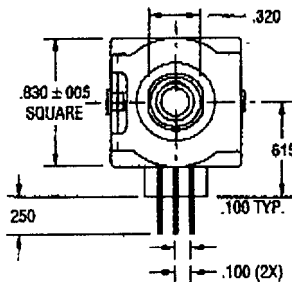
P.C. TERMINALS
TYPE B-110



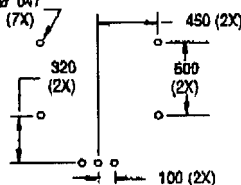
PC TERMINALS
TYPE C-30



TYPE 'C' MTG.
WITH BRACKET



SOLDER HOOK
TERMINALS
(ON .200 SPACING)

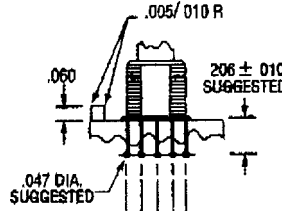
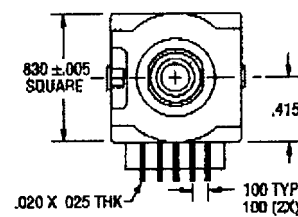


4-bit, 6-Position Incremental Output

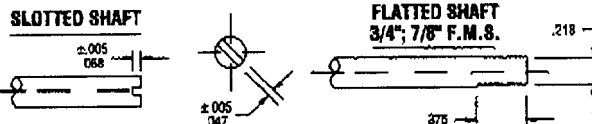
Step	1	4	2	G	8
1	█	█	█	█	█
2	█	█	█	█	█
3	█	█	█	█	█
4	█	█	█	█	█
5	█	█	█	█	█
6	█	█	█	█	█
7	█	█	█	█	█
8	█	█	█	█	█
9	█	█	█	█	█
10	█	█	█	█	█
11	█	█	█	█	█
12	█	█	█	█	█
13	█	█	█	█	█
14	█	█	█	█	█
15	█	█	█	█	█
16	█	█	█	█	█
17	█	█	█	█	█
18	█	█	█	█	█
19	█	█	█	█	█
20	█	█	█	█	█
21	█	█	█	█	█
22	█	█	█	█	█
23	█	█	█	█	█
24	█	█	█	█	█
25	█	█	█	█	█
26	█	█	█	█	█
27	█	█	█	█	█
28	█	█	█	█	█
29	█	█	█	█	█
30	█	█	█	█	█
31	█	█	█	█	█
32	█	█	█	█	█
33	█	█	█	█	█
34	█	█	█	█	█
35	█	█	█	█	█
36	█	█	█	█	█

4-bit, 16 pos.

█ Closed □ Open



SHAFT DIMENSIONS



ORDERING INFORMATION

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

