

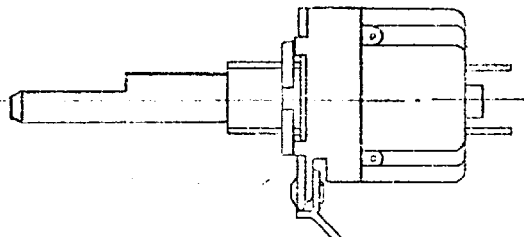
BRITISH STANDARDS INSTITUTION 2, PARK STREET, LONDON, W1A 2BS	BS.CECC 41302 002 ISSUE B. MARCH 1980. ISSUE C. NOVEMBER, 1980.
Specification available from:— EGEN ELECTRIC LIMITED, CHARFLEETS INDUSTRIAL ESTATE, CANVEY ISLAND, ESSEX.	ISSUE 1. MARCH, 1981. 
ELECTRONIC COMPONENTS OF ASSESSED QUALITY DETAIL SPECIFICATION IN ACCORDANCE WITH BS CECC 41000 1977 BS CECC 41300 1979. BS CECC 41302 1979.	MANUFACTURER'S TYPE NUMBER See TABLE 1 AND PD9002 CECC 00200
	FOR PATTERNS AVAILABLE IN THIS STYLE SEE TABLE IV. For ordering information see CLAUSE 4. SINGLE GANG, SINGLE TURN LOW POWER ROTARY POTENTIOMETER WITH SWITCH. NON-WIREWOUND. SPINDLE INSULATED FROM RESISTANCE ELEMENT.
MOUNTING VARIANTS :- SEE APPENDIX A. OUTLINE DIMENSIONS :- SEE APPENDIX A. SPINDLE & BUSH DIM. :- SEE TABLE IV & APPENDIX B & C. SWITCH DIMENSIONS :- SEE APPENDIX D. MARKING INFORMATION :- SEE CLAUSE 2.	NON SEALED. ASSESSMENT LEVEL M.

TABLE 1.

STYLE	RATED DISSIPATION. (W AT 70°C)		LIMITING ELEMENT VOLTAGE. (V.D.C. or A.C. M.S.)	ISOLATION VOLTAGE (V.D.C. OR AC PEAK)	
	RESISTANCE LAW A	RESISTANCE /LAWS B & C		NORMAL AIR PRESSURE.	LOW AIR PRESEURE.
EB	0.125	0.0625	500	1000	N/A

1. RATINGS & CHARACTERISTICS.

- RESISTANCE LAWS)
 " RANGE) SEE TABLE A.B.C.
) III The range of values available in each
) law is given in the qualified products list.

STANDARD SELECTION TOLERANCE :- $\pm 20\%$
 TEMPERATURE CHARACTERISTIC :- $\Delta R/R : \leq \pm 0.1\%$
 of RESISTANCE (20° to 70°C) :- $\Delta R/R/\Delta T : \leq \pm 1000 \text{ ppm./}^\circ\text{C.}$
 CLIMATIC CATEGORY 10/070/21

- * The preferred values are those of E3 series of IEC 63. Where the use of intermediate values is essential, they should, wherever possible, be chosen from a series in that document.

Refer to Qualified Products List PD 9002 and/or CECC 00200 for details of manufacturers approved to this specification.

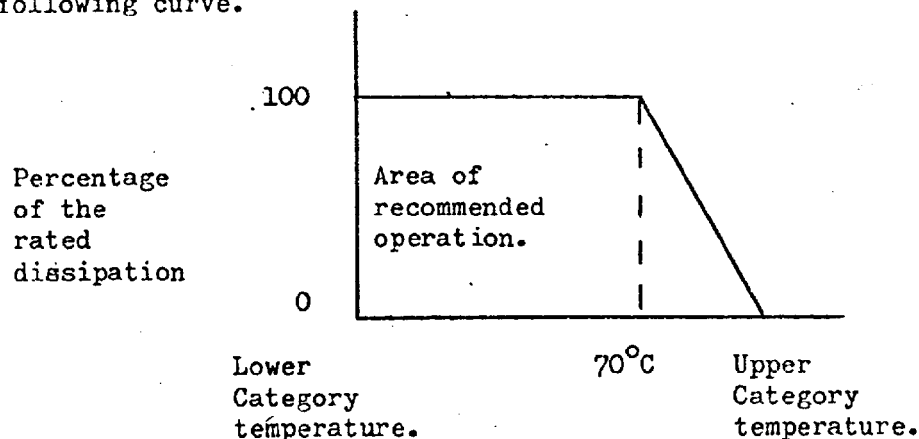

Documents

Document Sharing Hub

Vibration Severity.	10 Hz to 15 Hz; 0.75 m.m. or 98 m/s ² (whichever is the less).
Limits of resistance change (a to c) (after 1000 h) electrical endurance test)	± (15% R + 0 ohms).
Starting Torque.	3 mNm to 20 mNm.
Switch Torque.	40 mNm to 80 mNm.
Switch Rating.	1.5A: 250V 327
Limiting slider current.	) SEE TABLE III.
Terminal Resistance	)

1.1 Derating.

Potentiometers covered by this specification are derated according to the following curve.



2. Marking.

2.1 The following marking information, in the order of importance given below, is required:-

- (1) Rated Resistance.
- (2) Tolerance on rated resistance.
- (3) Resistance law (if other than linear).
- (4) Detail specification and style.
- (5) Date of acceptance. A nationally approved code may be used.
- (6) Details of spindle and bush (if not implicit in (4) above).
- (7) Manufacturer's name and trade-mark.
- (8) Switch rated voltage (a.c. and d.c. ratings when appropriate).
- (9) Switch rated current (a.c. and d.c. ratings when appropriate).
- (10) Corresponding terminals (in case of double pole switches), and terminals to be connected to mains supply.

Additional Marking

- (11) Pattern.

2.2 The potentiometer will be marked with 1,2,3,5,7, and 11 above, using, where applicable, one of the coding methods specified in IEC62. The switch will be clearly marked with (8), (9) and (10) above.

2.3 The package containing the potentiometer will be marked with 1 to 9 and 11 above, as clause 2.3 of BS CECC 41302.

2.4 Any additional marking shall be so applied that no confusion can arise.

3. Related Documents.

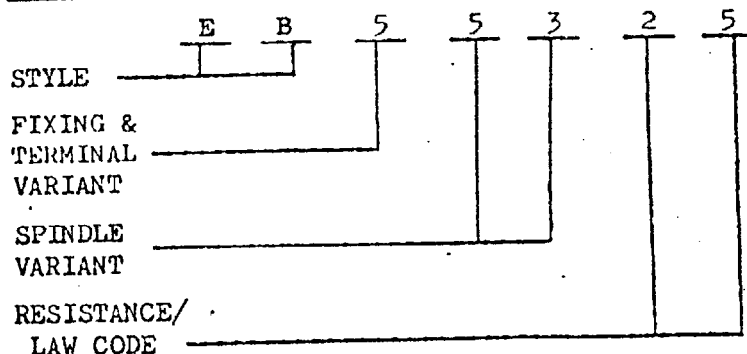
National Authorised Institution will complete this section, making reference to any documents, recommendations or specifications directly referred to in their national equivalent of this document.

4. Ordering Information.

Orders for potentiometers covered by this specification shall contain the following information :-

- Quantity.
- Resistance value and tolerance.
- Resistance Law. (If other than Linear).
- BS CECC Specification Number, Issue Number, Date & Assessment Level.
- Style and Pattern reference. (See Table IV).

Example Ordering Code.



The example code describes a SINGLE GANG SINGLE TURN ROTARY POTENTIOMETER, WITH SWITC
TWIST TAB BEARING, DIP SOLDERING TERMINALS, LONG PRINTED WIRING PINS,
PLAIN 6 mm SPINDLE 30 mm LONG, LOG LAW 2.2 K ohms.

5. Certified Test Records.

National Authorised Institutions shall indicate in this paragraph whether Certified Test Records shall be prepared in accordance with 3.5 of CECC 41 000.

6. Delayed Delivery.

The provisions of 3.6 of CECC 41 000 shall apply except that the Inspection Level shall be reduced to S-2 and (except for carbon composition types) the period shall be extended to two years. The period for carbon composition types shall remain at one year.

7. Additional Information (Not for inspection purposes).

The detail specification may include information (which is not required to be verified by the inspection procedure) such as circuit diagrams, etc., needed for the clarification of the detail specification.

8. Inspection Requirements (See table 2).

8.1 When drying is called for, Procedure 1 of 4.2 of CECC 41 000 shall be used.

8.2 When it is desired to obtain qualification approval by adopting the fixed sample size procedure, use shall be made of the test schedule given for that purpose in CECC 41 300.

The conditions of test and the performance requirements shall be identical to those prescribed for quality conformance inspection in the detail specification.

8.3 In the quality conformance inspection the values representative of the whole approved range shall be tested within one year. (Groups A, B, and C only).

Test (See Note 1)	D or ND	Conditions of Test	IL (See Note 2)	AQL	Performance Requirements (See Note 1)
GROUP A INSPECTION					
To be conducted on a sampling basis, lot by lot					
<u>Sub-Group A1</u>	ND		S-3	4.0%	
4.3.1 Visual inspection					As in 4.3.1
<u>Sub-Group A2</u>	ND		S-3	1.5%	
4.3.2. Marking					As in 4.3.2
4.5 Element Resistance					As in 4.5.1
<u>Sub-Group A3</u>	ND		S-3	2.5%	
4.1.5 Rotational Noise.		Method A (non-wirewound types)			≤ 47 mV
Group B Inspection					
To be conducted on a sampling basis, lot by lot.					
<u>Sub-Group B1</u>	ND		S-2	2.5%	
4.12 Voltage proof					As in 4.12.5
4.23.1 Soldering - Solderability		Soldering iron method : Soldering iron : Size B Duration : 2 ± 0.5 s			The termination shall be examined for good tinning as evidence by free flowing of the solder with wetting of the terminations
<u>Sub-Group B2</u>	ND		S-2	2.5%	
4.6 Terminal resistance		Resistance <u>a</u> to <u>b</u> Resistance <u>b</u> to <u>c</u>			SEE TABLE III
4.9 Resistance law		The preferred measuring points & associated values of the output ratios for resistance laws are :			
		Resistance Law		% of effective electrical travel	Output ratio. $\frac{V_{ab}}{V_{ac}}$ %
		A (linear)		47 - 53	$R > 0.22$ mW 40- $R < 0.22$ mW 35-
		B (logarithmic)		30 - 36 64 - 70	1.5 - 8 10 - 40
		C (reverse logarithmic)		30 - 36 64 - 70	60 - 90 92 - 98.5

TEST (See Note 1)	D or ND	Conditions of Test.	Sample size & criteria of acceptability (See Note 3)			Performance Requirements (See Note 1)
<u>GROUP C INSPECTION.</u> To be conducted on a sampling basis, at the periodicity given in column "P"			P	n	c	As in Appendix "A"
<u>Sub-Group C1.</u>	D		3	5	1	
4.3.3 Dimensions Detail.						20N
4.21 Robustness of terminations						As in 4.21.8 (1)
4.21.2		Test Ua				R: $\leq + (1\%R +$
4.21.4		Test Ub Tag Ter.				0 ohms).
4.21.5		Test Ub P.W.Tag.				
		Visual examination				
		Element resistance				
<u>Sub-Group C2.</u>	ND		3	5	1	
4.16 Starting torque.		Room temperature				3 mNm to 20 mNm
4.17 Switch Torque						40 mNm to 80 mNm
<u>Sub-Group C3.</u>	D		6	8	1	
4.30 Mechanical endurance (Potentiometers)		(See Note 4) Number of cycles : 10,000 Rate : 10 to 17 cycles per min. Visual examination Element resistance Rotational Noise. Method A (non-wirewound types)				As in 4.30.6 R: $\leq + (15\%R +$ 0 ohms) ≤ 47 mV.
4.31 Mechanical endurance (Switches)		(See Note 4) Visual examination Switch contact resistance Switch torque Insulation resistance				As in 4.31.2.1 200 m ohms. Greater than twice the value of starting torque measured in sub-group C2 and less than 200 mNm. ≥ 1.6 ohm.

Notes on page 11