

PERFORMANCE SPECIFICATION
RESISTORS, VARIABLE, WIRE-WOUND, PRECISION,
STYLE RR3100

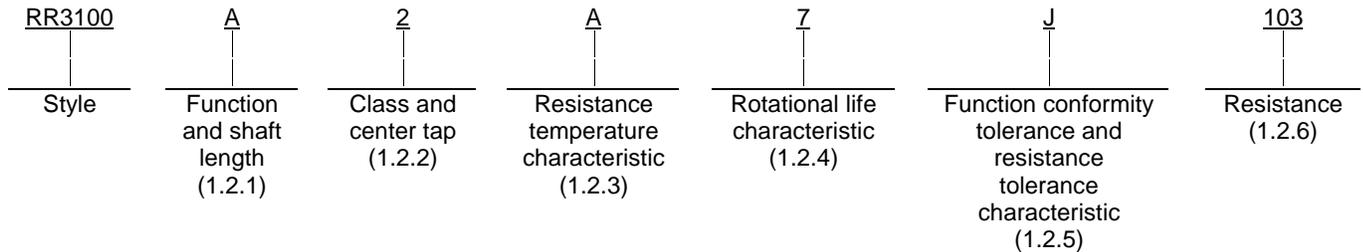
This specification is approved for use by all Departments
and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements for style RR3100, variable, wire-wound, precision resistors.

1.2 Part or Identifying Number (PIN). Variable resistors covered by this specification must be identified by a PIN which must be in the following form.

Single-section (cup) resistors



1.2.1 Function and shaft length. The function and shaft length applicable to this specification is identified by a single symbol in accordance with table I.

TABLE I. Function and shaft length.

Symbol	Shaft length tolerance ± 0.03125 (.79) ^{1/}	Function
A	0.750 (19.05)	Linear
B	0.875 (22.23)	Linear
C	1.000 (25.40)	Linear
D	1.125 (28.58)	Linear
E	1.250 (31.75)	Linear
F	1.375 (34.93)	Linear

^{1/} Metric equivalents are in parentheses.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center, Columbus, ATTN: DSCC/VAM, 3990 East Broad Street, Columbus, OH 43213-1193 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

1.2.2 Class and center tap. The class and center tap applicable to this specification are symbols 2, 3, 4, and 5.

1.2.3 Resistance temperature characteristic. The resistance temperature characteristic applicable to this specification are symbols A to H, inclusive.

1.2.4 Rotational life characteristic. The rotational life characteristics applicable to this specification are symbols 7, 8, and 9. This potentiometer is capable of operations up to 100 rpm.

1.2.5 Function-conformity tolerance and resistance tolerance characteristics. The function-conformity tolerance and resistance tolerance characteristic applicable to this specification are symbols A to X, Inclusive.

1.2.6 Resistance. The nominal total resistance values and nominal resolution applicable to this specification is in accordance with table II.

TABLE II. Nominal total resistance and nominal resolution characteristics.

Nominal total resistance value	Nominal resolution
<u>Ohms</u>	<u>Percent</u>
100	0.35
200	0.30
500	0.25
1,000	0.23
2,000	0.18
5,000	0.13
10,000	0.11

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-12934 - Resistors, Variable, Wire-wound, Precision, General Specification for.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Defense Automated Printing Service, Building 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-12934.

3.2 Interface and physical dimensions. The resistors shall meet the interface and physical dimensions specified in figure 1.

3.3 Minimum total resistance. The minimum total resistance value shall be 100 ohms.

3.4 Maximum total resistance. The maximum total resistance value shall be 10,000 ohms.

3.5 Mechanical travel. The mechanical travel shall be 360 degrees.

3.6 Actual electrical travel. The theoretical electrical travel shall be 350 degrees, ± 2 degrees.

3.7 Ganged cups. There shall be no more than 3 cups ganged.

3.8 Phasing. For independent linearity the phasing between the cups shall be within ± 1 degree. This shall be measured, with respect to the first cup, starting from the counterclockwise end point.

3.9 Function. The type of function applicable to this specification shall be independent linearity.

3.10 Weight. The maximum weight shall be 0.06 pounds and each additional cup shall be 0.03 pounds.

3.11 Hardware. The mounting nut shall be 0.0625-inch thick and shall measure 0.3125-inch across the hexagonal flats. Thread size shall be 0.250-32NEF-2B. Internal-tooth lockwasher of suitable size shall be supplied.

4. VERIFICATIONS.

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-PRF-12934.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

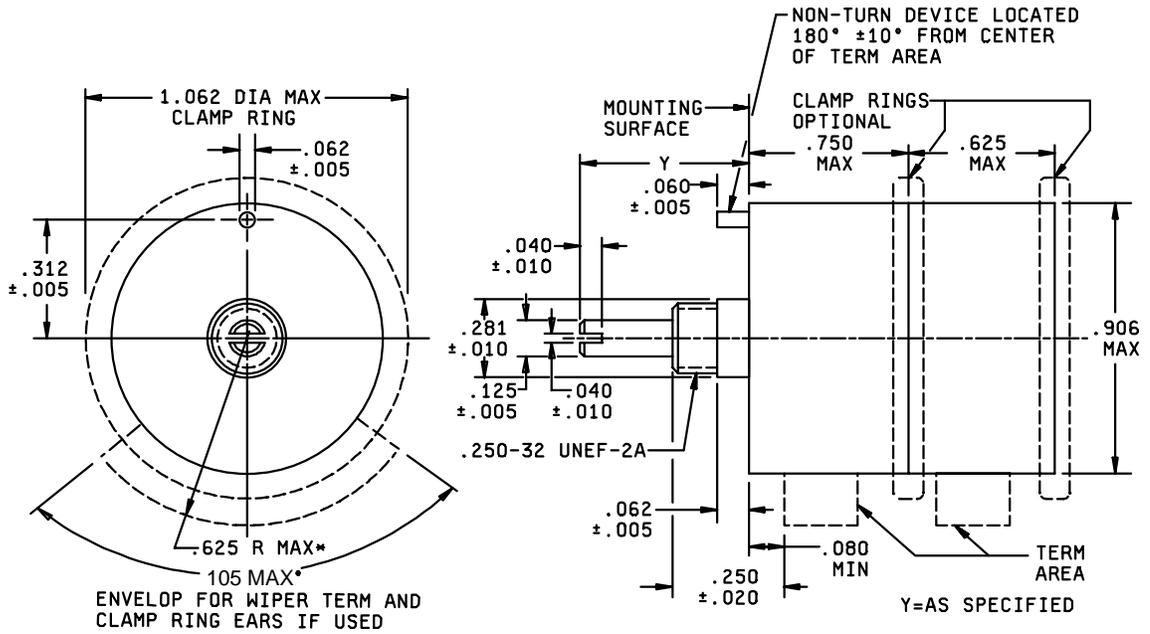
6. NOTES

(This section contains information of general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The intended use specified in MIL-PRF-12934 will be applicable to this specification.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification, and the complete PIN (see 1.2).
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of the individual documents referenced (see 2.1).
- c. Packaging instructions (see 5.1).



Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.005	0.13	.040	1.02	.080	2.03	.281	7.14	.750	19.05
.010	0.25	.060	1.52	.125	3.18	.312	7.92	.906	23.01
.020	0.51	.062	1.57	.250	6.35	.625	15.88	1.062	26.97

Style	Turns	Maximum continuous working voltage (volts)	Power rating (watts) ^{1/}	Maximum starting and running torque (ounce-inch)			
				Single-turn, single cup		Per additional single-turn cup	
				Starting	Running	Starting	Running
RR3100	Single	250	1.25	0.3	0.25	0.2	0.15

^{1/} When single turn units are ganged, the first cup will be full wattage rating, the remaining cups will be 75 percent of rated wattage.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information.

FIGURE 1. Style RR3100

6.3 PIN. This specification requires a PIN that describes technology and appropriate references to associated documents (see 1.2 and 3.1).

6.4 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the change.

Custodians:
Army - CR
Navy - EC
Air Force - 85

Preparing activity:
DLA - CC

Review activities
Army - AR, AT, AV, CR4, MI
Navy - AS, CG, MC, OS
Air Force - 17, 19, 99

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