

INCH-POUND

MIL-PRF-10304/12F
w/AMENDMENT 3
18 March 2020
SUPERSEDING
MIL-PRF-10304/12F
w/AMENDMENT 2
28 August 2013

PERFORMANCE SPECIFICATION SHEET

METERS, ELECTRICAL INDICATING, PANEL TYPE, RUGGEDIZED:
AMMETER, DC (FLUSH MOUNTING, ROUND FLANGE, 3.5 INCH), STYLE 36

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

The requirements for acquiring the products described herein shall consist of this specification sheet and
MIL-PRF-10304.

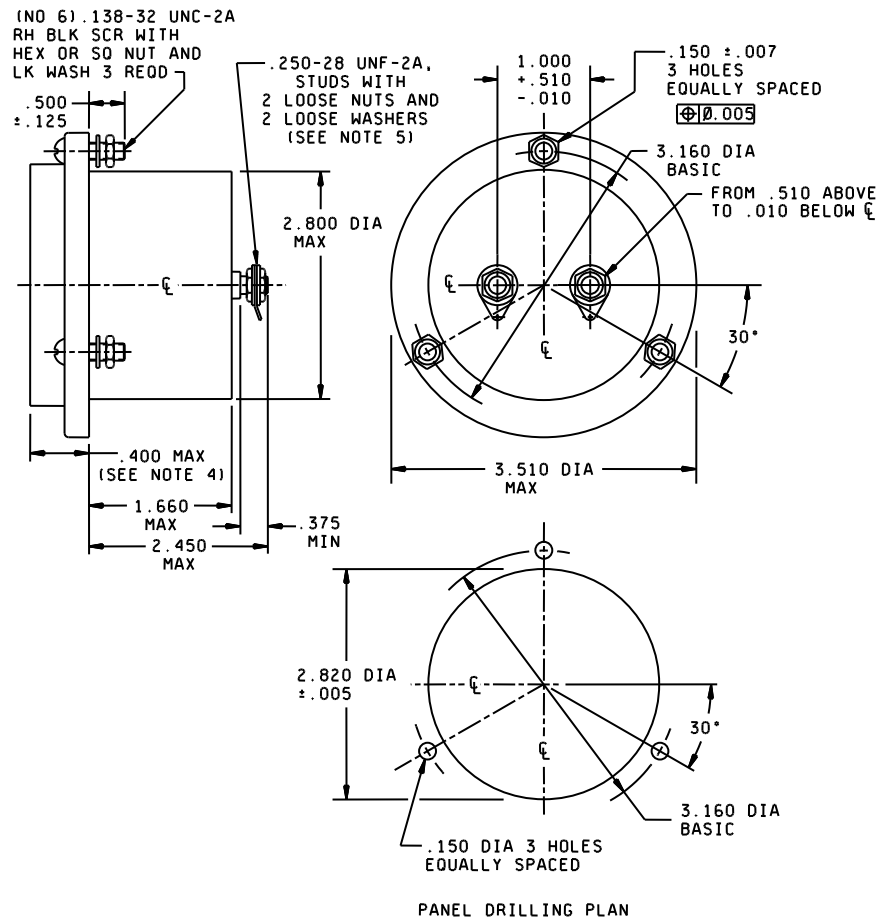


FIGURE 1. Meter, panel type.

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Inches	mm	Inches	mm	Inches	mm
.005	.13	.250	6.35	1.660	42.16
.007	.18	.375	9.53	2.450	62.23
.010	.25	.400	10.16	2.800	71.12
.125	3.18	.500	12.70	2.820	71.63
.138	3.51	.510	12.95	3.160	80.26
.150	3.81	1.000	25.40	3.510	89.15

NOTES:

1. Dimensions are in inches. Unless otherwise specified, tolerances are $\pm .015$ inch for two place (.XX), and $\pm .005$ inch for three place (.XXX) dimensions.
2. Tolerance is ± 0.5 ($\frac{1}{2}$) degree on angles.
3. Metric equivalents are given for general information only.
4. Maximum projection from front panel including mounting gaskets (if used).
5. Other forms of terminals, as specified in MIL-PRF-10304, are permitted. The specified minimum length applies to stud-type terminals only. Terminals shall be equally spaced, from each side of vertical centerline.

FIGURE 1. Meter, panel type - Continued.

REQUIREMENTS:

(Readings expressed as a percent of full-scale value.)

Dimensions and configuration: See figure 1.

Full-scale ranges: See table I.

Scale:

Length: 2 inches minimum.

Pointer deflection: 90 degrees minimum.

Position influence: ± 2 percent change of 60 degrees rotation from normal operating position.

Accuracy: ± 2 percent.

Overshoot: 50 percent maximum.

Response time: 2 seconds maximum.

Power consumption (loss) (at end scale deflection): 1 mA ± 5 percent.

Microammeters and milliammeters: 150 mV maximum.

Ammeters (self-contained): 75 mV maximum.

Ammeters (external shunt): 50 mV ± 2 percent with leads of 0.065 ± 0.010 ohms resistance.

High temperature cycling:

± 3 percent.

± 2 percent permanent change.

Temperature influence: ± 1 percent change.

Exposure to extreme temperatures: ± 3 percent permanent change.

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Overload capacity:

Momentary overload: ± 2 percent permanent change.

Sustained overload:

- ± 1 percent temporary zero shift.
- ± 1 percent permanent zero shift.
- ± 2 percent permanent change.

Dielectric withstanding voltage: 3,000 volts rms.

Vibration, random drop and shock: Repeatability is not applicable for those microammeters below 100 μ A ranges.

TABLE I. Full-scale ranges.

Microamperes		Milliamperes		Amperes		^{1/} Kiloamperes
Zero left	Zero center	Zero left	Zero center	Zero left	Zero center	
20	30-0-30	1	1-0-1	1	5-0-5	1.0
50	50-0-50	5	5-0-5	2	10-0-10	1.2
100	100-0-100	10	10-0-10	5	^{1/} 10-0-30	
200	200-0-200	30	30-0-30	10	^{1/} 20-0-20	
500	300-0-300	50	50-0-50	20	^{1/} 30-0-30	
	500-0-500	100	100-0-100	30	^{1/} 50-0-50	
		200	200-0-200	^{1/} 50		
		300	300-0-300	^{1/} 100		
		500	500-0-500	^{1/} 200		
				^{1/} 300		
				^{1/} 500		

^{1/} Used with external shunt.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. This document references MIL-PRF-10304.

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – SH
DLA – CC

Preparing activity:

DLA – CC

(Project 6625-2020-006)

Review activities:

Army –AT, AV, CR4, EA, MI
Navy – MC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.