FED. SUP CLASS
6645

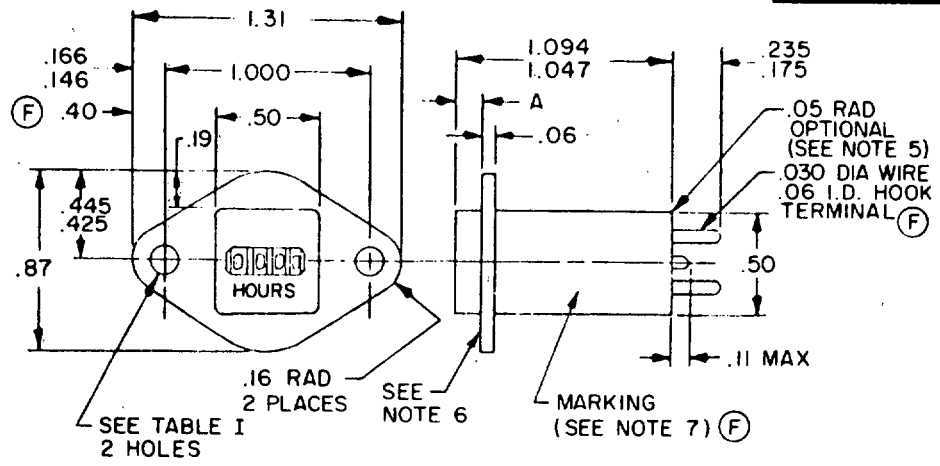

FIGURE 1

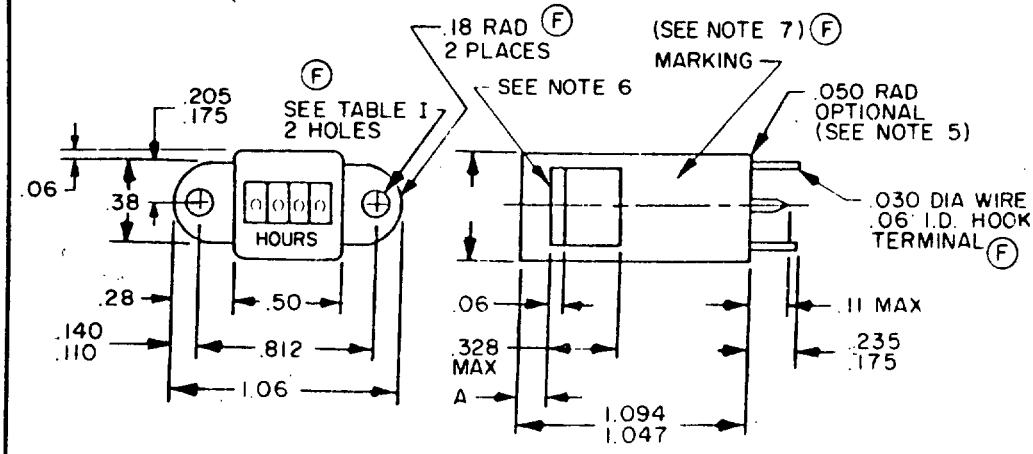

FIGURE 2

TABLE I. Mounting Hole Code Letter

CODE LETTER	MOUNTING HOLES	APPL. FIG
A B	NO. .112-40 UNC-2B TAPPED HOLES NO. .112-40 UNC-2B TAPPED HOLES	1 1 (with flange rotated 90°)
C D	.125 DIA CLEARANCE HOLES .125 DIA CLEARANCE HOLES	1 1 (with flange rotated 90°)
E F	NO. .112-40 UNC-2B TAPPED HOLES NO. .112-40 UNC-2B TAPPED HOLES	2 2 (with flange rotated 90°)
G H	.125 DIA CLEARANCE HOLES .125 DIA CLEARANCE HOLES	2 2 (with flange rotated 90°)

(F) DENOTES CHANGE

APPROVED 5-MARCH-1971 REVISED (E) 6-APRIL-1972 (F) 17 August 1973

This standard has been approved by Department of the AF and is mandatory for use by that activity. All other military activities are required to employ this standard where suitable.

P.A. AF-11 Other Cust	International interest	TITLE METER, TIME TOTALIZING HERMETICALLY SEALED 115 V 400 Hz	MILITARY STANDARD MS 27651 (USAF)
Procurement Specification MIL-M-7793		SUPERSEDES:	PAGE 1 OF 5

DD FORM 1 SEP 63 672 (LIMITED COORDINATION)

6645-F301

NOTES:
1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ± .02 for two place decimals and ± .005 for three place decimals.
3. For design feature purposes, this standard takes precedence over procurement documents referenced herein.
4. Referenced documents shall be of the issue in effect on date of invitation for bid.
5. Optional radius applies to all corners and edges.
6. Exposed tin plate on this surface of mounting flange only, per MIL-T-10727, to provide an electrical ground for the case.
7. Marking surface is optional; marking must not be obsured by mounting bracket.

Requirements: In accordance with MIL-M-7793, except lower voltage limit shall be 100 instead of 102.

Dimensions: See Figure.

Electrical: At 23° C.

Range: 0 to 10,000 hours, meter will read 9999 hours maximum.

Scale designator: Hours.

Mounting flange: Surface shall be tin plated per MIL-T-10727, 0.0002 to 0.0004 inch thick to provide an electrical ground for the case. (see figure)

Input power: 1.0 watt nominal, 1.5 watts maximum.

Input voltage: 115 volts $\pm \begin{matrix} 13V \\ 15V \end{matrix}$

Frequency: 400 ± 20 Hz.
Current: 15 milliamperes maximum.

Accuracy: 0.1 percent or 1 hour, whichever is greater. Note: accuracy is degraded at the same percent as the percentage change in input frequency plus the specified accuracy tolerance.

Weight: 0.7 oz. maximum. (F)

Transient protection: No temporary or permanent degradation or other malfunction shall be produced in the time totalizing meter if the input voltage should increase to +180 Vrms at 320 to 480 Hz for a period of 150 milliseconds maximum.

Case finish: Lusterless black no. 37038 per FED-STD-595.

Marking: Unit shall remain clearly and legibly marked with the following information after subjection to the environmental requirements.

(A) Part number, MS27651 (and dash number from table II and mounting hole code letter from table I). Example: MS 27651-01
(B) Source and date code per MIL-STD-1285.
(C) Nominal voltage and frequency.

APPROVED REVISED FOR CHANGES SEE PAGES 1, 2, 3, 4 AND 5

P.A. AF-11 Other Cust	International interest	TITLE METER, TIME TOTALIZING HERMETICALLY SEALED 115 V 400 Hz	MILITARY STANDARD MS 27651 (USAF)
Procurement Specification MIL-M-7793		SUPERSEDES:	PAGE 2 OF 5

Table II. Dash numbers and dimensions

Dash number	DIM. A ± .015	Dash number	DIM. A ± .015
-01	.0	-14	.406
-02	.031	-15	.438
-03	.062	-16	.469
-04	.094	-17	.500
-05	.125	-18	.531
-06	.156	-19	.562
-07	.188	-20	.594
-08	.218	-21	.625
-09	.250	-22	.656
-10	.281	-23	.688
-11	.312	-24	.719
-12	.344	-25	.750* Ⓕ
-13	.375	-26	.781*

Ⓕ * Does not apply to figure 2.

Ⓕ

Quality conformance inspection: The following tests, run in the order shown on all meters, supersede the individual tests and sampling Plan A and B specified in MIL-M-7793. The maximum meter reading at the time of delivery shall be 0001.

(A) Examination of product.

(B) Operational check. Ten operations for instant starting at 23° C. Five of these ten operations at 128 V, 380 Hz and the other five operations at 100 V, 420 Hz.

(C) Thermal shock per MIL-STD-202, method 107, test condition B is modified as follows:

Test conditions

1. The meter shall be operated at 128 V, 380 Hz during Step 1.
2. The meter shall be operated at 100 V, 420 Hz during Step 3.

Measurements during cycling

The meter shall show no evidence of damage and shall not malfunction.

(F)

(D) Operation at 23° C and 115 V, 400 Hz for 20 hours.

(E) Hermetic seal.

(F) Insulation resistance.

(G) Sea level dielectric stress (600 Vrms). (2 to 5 seconds).

(H) All meters failing one or more of these quality conformance inspection tests shall be rejected.

In addition to the above tests, three sample meters total (any part number) shall be subject to the following tests every twelve months. These tests shall be conducted at a government approved laboratory.

Salt Spray
Vibration
Shock
Life:

High voltage at high temperature	(100 hours)
Low voltage at high temperature	(100 hours)
High voltage at low temperature	(100 hours)
Low voltage at low temperature	(100 hours)
115 volts at room ambient	(100 hours)
	500 hours

Meter reading at the conclusion of these tests must be within specified accuracy. The test report and test samples shall be forwarded to the qualifying activity.

Qualification Test

Qualification tests are to be conducted in accordance with MIL-M-7793 except that four sample meters (designated 1, 2, 3 and 4) shall be submitted to Group 1 test (see Table III). Samples designated 1 and 2 shall be submitted to Group 2 tests and samples designated 3 and 4 shall be submitted to Group 3 tests.

APPROVED REVISED For changes see pages 1, 2, 3, 4, and 5.

Ⓕ TABLE III. Qualification Tests.

Test	Requirement paragraph	Test Paragraph
Group 1		
Examination of product	3.3.2 3.3.3 3.3.4 3.3.11 3.5 3.9 3.10	Visual examination (4.6.1)
Operational check	3.7.12	4.6.2
Group 2		
Power supply tolerance	3.7.12.1	4.6.3
Insulation resistance	3.3.9	4.6.4
Dielectric stress	3.3.8	4.6.5
Altitude	3.7.7	4.6.6
Temperature cycling	3.7.6	4.6.7
Time to come to synchronism	3.7.5	4.6.8
Moisture resistance	3.7.8	4.6.9
Salt spray	3.7.9	4.6.10
Vibration	3.7.10	4.6.11
Shock	3.7.11	4.6.12
Hermetic seal	3.7.13	4.6.13
Group 3		
Life	3.7.1	4.6.14
Electromagnetic compatibility	3.6	4.6.15

APPROVED REVISED For changes see pages 1, 2, 3, 4, and 5.