

PROJECT NO 6130-0123

FED. SUP CLASS
6130USER SYMBOLS:
ARMY-ME-AVREVIEWER SYMBOLS:
USAF-82

*Action/rev information is current as of the date of this document.
For future coordination of changes to this document, draft limitations
should be based on the information in the current 60899.

This military standard is approved for use by all Departments
& Agencies of the Department of Defense. Selection for all new
engineering and design applications and for replacing use shall
be made from this document.

NOTES:

- THE CONVERTER IS HELD IN POSITION BY TWO RACK PINS INSERTED IN THE REAR OF THE UNIT AND TWO SCREWS IN THE FRONT OF THE UNIT.
- A HANDLE IS REQUIRED ON THE FRONT SURFACE FOR REMOVAL OF THE UNIT FROM THE MOUNTING RACK.
- MAXIMUM PIN INSERTION DEPTH OF 0.280 INCH.
- TERMINAL BOARD COVER SHALL BE REVERSIBLE, NON-METALLIC AND CONTAIN INSULATING BARRIERS.
- AIR EXHAUST, BOTH SIDES.

INPUT	
VOLTAGE (NOMINAL)	115/200 VOLTS
PHASE	3
OUTPUT	
VOLTAGE (NOMINAL) D.C.	28 VOLTS
CURRENT TO 65000 FT. ALT.	150 AMP
EFFICIENCY	
AT SEA LEVEL, -65° TO 120°F	
25% RATED LOAD TO RATED LOAD	85% (MIN)
WEIGHT (LBS)	15.0 MAX

MS PART NO.
MS18111-1

NO. 1 AND NO. 2 RECTIFIER CIRCUITS SHALL BE SEPARATE OUTPUTS.

FOR ANY COMBINATION OF CONDITIONS LISTED BELOW THE OUTPUT VOLTAGE SHALL REMAIN WITHIN THE INDICATED LIMITS	
INPUT VOLTAGE VARIED BETWEEN 112.5/195.5 AND 116.6/203 VOLTS AND INPUT FREQUENCY OF 380 TO 420 HZ	
LOAD CONDITIONS LOAD VARIED FROM ZERO TO 150 AMPS. LOAD VARIED FROM 5 AMPS. TO 150 AMPS. LOAD VARIED FROM 5 AMPS. TO 120 AMPS.	OUTPUT VOLTAGE LIMITS LOW 25.5 HIGH 31.0 LOW 25.5 HIGH 29.0 LOW 26.0 HIGH 29.0
a. AMBIENT TEMPERATURE RANGE OF -65°F TO 160°F FROM SEA LEVEL TO 65,000 FEET ALTITUDE. b. COOLING AIR TEMPERATURE OF 120°F AT SEA LEVEL TO 30°F AT 65,000 FEET WITH AIR FLOW AS DEFINED IN FIGURE 1, SHEET 2. c. WITH DC POSITIVES CONNECTED IN PARALLEL.	

(E) REVISED

P.A. NAVY - AS Other Code USAF-82 ARMY-ME	TITLE CONVERTER, 150 AMPERE, CLASS C AIRCRAFT BLAST COOLED	MILITARY STANDARD MS18111
PROCUREMENT SPECIFICATION MIL-C-7115	SUPERSEDES MS18111 (WP)	SHEET 1 OF 2

APPROVED 19 NOV 1963 REVISED (A) JULY 1964 (B) 9 JULY 1966 (C) 10 SEPTEMBER 1968 (D) 16 MAR 1972 (E) 9 JUN 72

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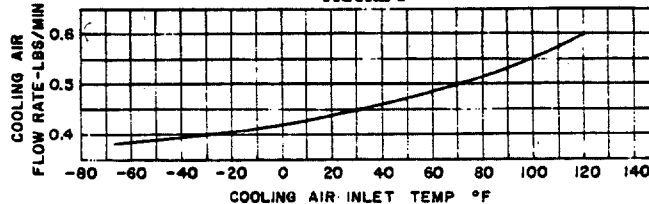
NOTES:

1. ALL DIMENSIONS ARE SHOWN IN INCHES. TOLERANCES ARE ± 0.015 UNLESS OTHERWISE SHOWN.
2. THE WEIGHT AND VOLUME LIMITATIONS SHOWN ON THIS DRAWING SHALL INCLUDE THE WEIGHT AND VOLUME OF ALL AUXILIARY APPARATUS NECESSARY TO MAKE THIS UNIT CONFORM TO THE PROCUREMENT SPECIFICATION.
3. THIS DRAWING AND THE PROCUREMENT SPECIFICATION COMPLEMENT ONE ANOTHER AND TOGETHER COMPLETELY DEFINE THE PRODUCT.
4. COOLING. THE UNIT SHALL BE COOLED BY BLAST AIR ENTERING THE UNIT THROUGH THE BOTTOM AND HAVING THE FOLLOWING CHARACTERISTICS:
 - (a) RELATIVE HUMIDITY OF THE COOLING AIR MAY VARY BETWEEN 0 AND 100 PER CENT AND EACH POUND OF AIR MAY CONTAIN UP TO 38 GRAINS OF WATER REGARDLESS OF VAPOR CONTENT.
 - (b) COOLING AIR TEMPERATURE MAY VARY BETWEEN -65°F TO 120°F DURING GROUND OPERATION AND THEN VARY LINEARLY FROM 80°F AT SEA LEVEL TO 30°F AT 65,000 FEET DURING FLIGHT OPERATION.
 - (c) AMOUNT OF COOLING AIR SHALL NOT EXCEED THAT SHOWN IN FIGURE 1.
 - (d) PRESSURE DROP IN THE UNIT SHALL NOT EXCEED 2.0 INCH H_2O AT A FLOW RATE OF 1.1 POUNDS PER MINUTE UNDER NORMAL SEA LEVEL CONDITIONS.
5. PARAGRAPHS 3.4.2 (g) and 3.4.2 (h) ARE NOT APPLICABLE.
6. INPUT FREQUENCY. THE UNIT SHALL BE CAPABLE OF CONTINUOUS OPERATION AT INPUT FREQUENCIES FROM 380 TO 420 HZ.
7. PARALLEL OPERATION. IN ADDITION TO THE NORMAL PARALLEL OPERATION WITH IDENTICAL UNITS, EACH PLUS OUTPUT CIRCUIT SHALL SHARE THE LOAD WITHIN 5% OF THE TOTAL UNIT LOAD FROM 50% TO 100% RATED UNIT LOAD.
8. OVERLOAD. THE UNIT SHALL BE CAPABLE OF DELIVERING OVERLOAD CURRENTS IN ACCORDANCE WITH FIGURE 1 OF MIL-C-7115D FOR TIME PERIODS GREATER THAN 10 SECONDS.
9. SHORT CIRCUIT CAPACITY. THE UNIT SHALL NOT BE DAMAGED BY FAULT CURRENTS DEFINED BY A STRAIGHT LINE ON LOG-LOG SCALE OF CURRENT VERSUS TIME, CONNECTING A POINT OF 10 SECONDS AT 600 AMPERES WITH A POINT OF 0.03 SECOND AT 2200 AMPERES. THESE LOADS REPRESENT TOTAL OUTPUT TO A COMMON LOAD AND WITH THE UNIT STABILIZED AT RATED LOAD PRIOR TO THE FAULT APPLICATION. FAULTS IN EXCESS OF 1000 AMPERES ARE TO BE SHARED BY IDENTICAL FEEDER IMPEDANCES WITHIN THE LIMITS OF $Y=16X-30$, WHERE Y=CURRENT DIFFERENCE, AND X-TOTAL LOAD.
10. VIBRATION. THE UNIT SHALL MEET THE VIBRATION REQUIREMENTS OF VIBRATION TEST OF MIL-C-7115D AS MODIFIED BY THE FOLLOWING SCHEDULE:

5 TO 10 CPS TOTAL EXCURSION 0.080 IN.
10 TO 28 CPS ACCELERATION 0.41g
28 TO 88.5 CPS TOTAL EXCURSION 0.010 IN.
88.5 TO 500 CPS ACCELERATION 0.05g
11. SALT SPRAY TEST SHALL BE IN ACCORDANCE WITH PROCEDURE 1 OF MIL-E-5272 FOR A TOTAL OF 50 HOURS.
12. LIFE. NO MAINTENANCE SHALL BE REQUIRED FOR A PERIOD OF 5,000 HOURS OF AIRCRAFT SERVICE, EXCEPT WHERE NOTED. THE LIFE TEST SHALL BE CONDUCTED AT FULL LOAD AND WITH NOMINAL INPUT POWER UNDER THE FOLLOWING SCHEDULES:

(a)	CONT. HOURS	DC AMP*	AMBIENT TEMP. $\pm 3^{\circ}\text{F}$	AMBIENT PRESS. PSI \pm	AIR FLOW LB/MIN ± 0.01	COOLING AIR TEMP. $\pm 3^{\circ}\text{F}$
	40	150	70	14.7 .5	.50	70
	20	150	160	14.7 .5	.60	120
	20	150	160	1.69 .1	.48	40
	20	150	160	.825 .05	.45	30
	20	150	160	.825 .05	.40	-20
	200	150	160	14.7 .5	.60	120
	150	30	160	14.7 .5	NONE	-
	50	30	160	11.8 .2	NONE	-
(b)	500 HOURS IN ACCORDANCE WITH PARAGRAPH 4.6.25 (b) OF MIL-E-7115D.					

FIGURE 1



P.A. NAVY-AS	TITLE	MILITARY STANDARD
Other Cust USAF-82 ARMY-ME	CONVERTER, 150 AMPERE, CLASS C AIRCRAFT, BLAST COOLED	MS18111
PROCUREMENT SPECIFICATION MIL-C-7115	SUPERSEDES: MS18111 (WP)	SHEET 2 OF 2

DD FORM 1 MAR 71 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 15320

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APPROVED 19 NOV 1963 REVISED E FOR CHANGES SEE SHEET 1