

FED. SUP CLASS
6125

RECEPTACLE TO FIT PLUG MS1106-24-2P

DC TERMINAL BLOCKS MS25044-1

1.250 MIN RAD

COOLING AIR INTAKE SHALL BE AT EACH END OF UNIT AND EXHAUST THROUGH CENTER

1.250 MIN RAD

A-C OUTPUT

A-C INPUT

D-C INPUT

D-C OUTPUT

WYE

DELTA

DC TERMINAL BLOCK

CONNECTIONS EXTERNAL TO THE INVERTER NECESSARY FOR WYE (115/200 VOLT) AND DELTA (115 VOLT) CONNECTIONS. FOR 1 Ø CONNECTION, SEE NOTE 1.

MS PART NO.
MS25202-1

PARAMETERS AND CONDITIONS		3 Ø	1 Ø
INPUT:	VOLTS, DC	28	28
OUTPUT:	VOLTS, AC	115/200	115
	FREQUENCY, HZ	400	400
CLASS A OPERATION:			
VA TO 35,000 FEET ALTITUDE AND -10°C TEMPERATURE		5000	5000
CLASS B OPERATION:			
VA TO 50,000 FEET ALTITUDE AND 20°C TEMPERATURE		3500	3500
VA TO 65,000 FEET ALTITUDE AND 20°C TEMPERATURE		1750	1750
PF MINIMUM LAG, PERCENT		90	90
PF MINIMUM LEAD, PERCENT		95	95
MINIMUM OUTPUT VOLTAGE AT 200 PERCENT RATED CURRENT		50 H5	50
MINIMUM EFFICIENCY, PERCENT AT RATED LOAD, SEA LEVEL, AND 25° ± 15°C		60	55
WEIGHT: POUNDS, MAXIMUM		76	76

B ENTIRE STANDARD REVISED AND REDRAWN

P.A. NAVY - AS Other Cust	TITLE INVERTER: 5000VA, 3/1 PHASE, CLASS A 1500VA, 3/1 PHASE, CLASS B	MILITARY STANDARD MS25202 (AS)
PROCUREMENT SPECIFICATION MIL-I-7032	SUPERSEDES	SHEET 1 OF 1

This military standard is approved by NAVAL AIR SYSTEMS COMMAND. Description of the Navy and it will be used by that activity. All other military activities are required to employ this standard where suitable.

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FOR ANY COMBINATION OF CONDITIONS LISTED BELOW, THE OUTPUT VOLTAGE AND FREQUENCY SHALL REMAIN WITHIN THE INDICATED LIMITS.

OPERATING CONDITIONS	OUTPUT LIMITS	
	VOLTAGE	FREQUENCY HZ
INPUT VOLTAGE VARIED BETWEEN 26 AND 29 VOLTS LOAD VARIED FROM 0 TO FULL LOAD AMBIENT TEMPERATURE CLASS A OPERATION ALTITUDE VARIED WITHIN THE RANGE ESTABLISHED BY CURVE 11 OF MS33543. THE UNIT SHALL DELIVER RATED OUTPUT TO 35,000 FEET ALTITUDE AND -10°C TEMPERATURE. CLASS B OPERATION ALTITUDE VARIED WITHIN THE RANGE ESTABLISHED BY CURVE 1 OF MS33543, EXCEPT THAT THE AMBIENT TEMPERATURE FOR THIS UNIT SHALL NEVER EXCEED 85°C. THE UNIT SHALL DELIVER RATED OUTPUT TO 50,000 FEET ALTITUDE AND 50 PERCENT RATED OUTPUT TO 65,000 FEET ALTITUDE, BOTH AT 20°C TEMPERATURE. LOAD POWER FACTOR VARIED FROM .90 LAG TO .95 LEAD.	LOW 110/192 HIGH 120/204	LOW 390 HIGH 410

REQUIREMENTS:

- THIS INVERTER DESIGN SHALL BE SUCH THAT IT MAY BE LOADED EITHER 3 Ø OR 1 Ø BUT NOT SIMULTANEOUSLY. WHEN USED AS A SINGLE-PHASE INVERTER, THE UNIT SHALL BE CONNECTED IN DELTA AND THE LOAD CONNECTED TO THE TERMINALS A(T₁) AND B(T₂). FOR 3 Ø AIRCRAFT APPLICATIONS, THE LOADS PER PHASE SHALL NOT DIFFER BY MORE THAN 10 PERCENT OF THE INVERTER RATING.
- THE AIRCRAFT MANUFACTURER SHALL ALLOW AT LEAST ONE INCH CLEARANCE IN ADDITION TO THE MAXIMUM DIMENSIONS SHOWN ON THIS DRAWING FOR INSTALLATION AND VENTILATION.
- THE WEIGHT AND DIMENSIONS SHOWN ON THIS DRAWING SHALL INCLUDE THE WEIGHT AND DIMENSIONS OF ALL AUXILIARY APPARATUS NECESSARY TO MAKE THE UNIT CONFORM TO THE PROCUREMENT SPECIFICATION.
- A MEANS OF ADJUSTING THE VOLTAGE SHALL BE ON THE CONNECTOR END AND ABOVE THE HORIZONTAL CENTERLINE OF THE INVERTER.
- PERMISSION OF THE PROCURING ACTIVITY SHALL BE OBTAINED FOR APPLICATION OF THIS UNIT OUTSIDE OF THE SPECIFIED LIMITS.
- TWO PLACARDED PIN JACKS SHALL BE PROVIDED ON THE CONNECTOR END AND ABOVE THE HORIZONTAL CENTERLINE OF THE UNIT BETWEEN WHICH THE VOLTAGE BETWEEN A(T₁) AND C(T₄) CAN BE MEASURED. THESE PIN JACKS SHALL ACCEPT A PROD PIN .078 ±.002 INCHES IN DIAMETER.
- RADIO INTERFERENCE - THE INVERTER SHALL MEET THE REQUIREMENTS OF MIL-1-6181 WITH THE FOLLOWING RELAXATIONS:

A. BROADBAND RADIATED INTERFERENCE LIMITS

15 DB BETWEEN 0.15 MHZ AND 0.5 MHZ
3 DB BETWEEN 0.5 MHZ AND 1.5 MHZ
2 DB BETWEEN 35 MHZ AND 90 MHZ

B. BROADBAND CONDUCTED INTERFERENCE LIMITS

10 DB BETWEEN 0.2 MHZ AND 0.9 MHZ

8. VIBRATION - THE INVERTER SHALL BE SUBJECTED TO DURABILITY AND PERFORMANCE TESTS AS FOLLOWS:

- DURABILITY - THE INVERTER SHALL BE OPERATED AT FULL LOAD DURING THIS TEST. THE INVERTER SHALL BE SUBJECTED TO HARMONIC OR CIRCULAR MOTION APPLIED TO THE MOUNTING BASE. THE AMPLITUDE SHALL BE 0.015 INCH (MAXIMUM TOTAL EXCURSION OF 0.03 INCH). THE FREQUENCY OF THE VIBRATION SHALL BE ESTABLISHED BY CYCLIC OPERATION FROM APPROXIMATELY 10 CPS TO 55 CPS AND BACK TO 10 CPS. THE DURATION OF ONE SUCH CYCLIC OPERATION SHALL BE BETWEEN 1 TO 5 MINUTES. THE INVERTER SHALL BE VIBRATED CONTINUOUSLY FOR 2 HOURS IN THE DIRECTION OF EACH OF THE 3 MAJOR AXES. AT THE END OF THE TEST PERIOD, THE INVERTER SHALL BE THOROUGHLY INSPECTED FOR DAMAGE OR OTHER DEFECTS RESULTING FROM THE VIBRATION TEST.
- PERFORMANCE - THE INVERTER SHALL BE SUBJECTED TO SIMPLE HARMONIC OR CIRCULAR MOTION APPLIED TO THE MOUNTING BASE. THE AMPLITUDE SHALL BE 0.015 INCH (MAXIMUM TOTAL EXCURSION OF 0.03 INCH) UP TO 60 CPS, THE ACCELERATION SHALL BE (ABOVE 60 CPS) LIMITED TO 1G. THE INVERTER SHALL BE VIBRATED OVER THE FREQUENCY RANGE OF 20 TO 500 CYCLES IN 15 MINUTES ALONG EACH OF ITS THREE MAJOR AXES. THE UNIT SHALL SHOW NO SIGNS OF INSTABILITY OR HARMFUL ARCING AND THE OUTPUT VOLTAGE MODULATION SHALL NOT EXCEED 2.0 PERCENT. FOLLOWING THIS TEST, THE INVERTER SHALL PASS THE TEST SPECIFIED IN PARA. 4.6.4(a) OF MIL-1-7032F.

This military standard is approved by Navy and Aeronautics. It is the property of the Navy and shall be used by other military departments as required. It is hereby made available to the public.

P.A. NAVY - AS Other Civil	TITLE INVERTER; 5000VA, 3/1 PHASE, CLASS A 3500VA, 3/1 PHASE, CLASS B	MILITARY STANDARD
		MS25202(AS)
PROCUREMENT SPECIFICATION MIL-1-7032	SUPERSEDES	SHEET 2 OF 3

DD FORM 672-1 (Limited coordination)

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9. THE INVERTER SHALL MEET ALL REQUIREMENTS WITHOUT ANY WARMUP.
10. THE INVERTER SHALL BE PROVIDED WITH A METER, TIME TOTALIZER CONFORMING TO MS17322-10. THE METER SHALL BE LOCATED ON THE CONNECTOR END AND ABOVE THE CENTERLINE OF THE INVERTER.
11. THE INVERTER SHALL BE CAPABLE OF SPECIFIED PERFORMANCE WHEN OPERATED FROM A DC POWER SOURCE CAPABLE OF MAINTAINING A DC VOLTAGE TO THE INVERTER WHICH WILL BE AT ITS MINIMUM STEADY-STATE VALUE WITHIN 200 MILLISECONDS FROM APPLICATION.
12. THE INVERTER SHALL BE PROVIDED WITH A STATIC SEMI-CONDUCTOR VOLTAGE AND FREQUENCY REGULATOR.

NOTES:

1. DIMENSIONS IN INCHES.
2. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
3. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by the activity. All other military activities are required to employ the standard where suitable.

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P.A. NAVY - AS Other Cust	TITLE	MILITARY STANDARD
	INVERTER; 5000VA, 3/1 PHASE, CLASS A 3500VA, 3/1 PHASE, CLASS B	MS25202(AS)
PROCUREMENT SPECIFICATION HTL-1-7032	SUPERSEDES	SHEET 1 OF 1

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