MIL-C-46369(MU)
AMENDMENT 4
7 March 1968
SUPERSEDING
AMENDMENT 3
7 August 1967

MILITARY SPECIFICATION

CONVERTER-REGULATOR: 10516120

This amendment forms a part of Military Specification MIL-C-46369(MU) dated 29 April 1963.

Paragraph 2.1, under SPECIFICATIONS: Delete Federal Specification QQ-N-290 - Nickel Plating (Electrodeposited) and substitute Military Specification "MIL-T-10727 - Tin Plating: Electrodeposited or Hot-Dipped, for Ferrous and Nonferrous Metals"; add drawing "C10553449 - Converter-Regulator: 10553449."

Paragraph 3.2.3: Delete and substitute:

"3.2.3 Inclosure.- The Converter shall be inclosed in a metallic case which shall be insulated from one input terminal and one output terminal. The surface of the metallic case shall be tin plated in accordance with Type I of Specification MIL-T-10727, except that the plating shall have a minimum thickness of 0.0004 inch."

Paragraph 3.6.3: At the end of the paragraph add: "at one-half and full load."

Paragraph 3.7.2: Delete and substitute:

"3.7.2 Input voltage surge.- The converter shall show no evidence of physical or electrical damage and shall exhibit no increase in output voltage after being subjected to five 125 ± 25 millisecond dc voltage spikes of 80 volts each at the rate of five spikes per minute."

Paragraph 3.7.4: Delete and substitute:

"3.7.4 Regulation.

3.7.4.1 Line regulation.- The converter line regulation shall be 2% or less for an input voltage change from 18.0 to 30.0 volts dc under the two constant load conditions of one-half load and full load.

3.7.4.2 Load regulation.- The converter load regulation shall be 2% or less for a varying load from one-half load to full load at any constant input voltage within the range of 18.0 to 30.0 volts dc."

Paragraph 3.7.7: Add the following new paragraph in proper sequence:

"3.7.7 Reverse output voltage (Drawing No. C10553449).- The converter shall be capable of withstanding 30 volts positive and negative applied continuously across the output terminal and case."

Table I, under "Classification of Defects": Delete "Use Inspection Level II in Table IIIA, with Sampling Plan Table IVA of Standard MIL-STD-105: and substitute "Use Inspection Level II in Table I with Sampling Plan Table II-A of Standard MIL-STD-105".

Table I: Delete "Critical: None defined" and substitute:

		Requirement Paragraph	QA Paragraph	Test Method
	Critical: 100% Inspection			
*	1. Incorrect output voltage ($75^{o} \pm 15^{o}F$)	3.7.5	4.10.1.6.5	SME"

Table I, characteristic 110: Delete and substitute:

110.	"Regulation (line and load) not within tolerance	3.7.4.1 3.7.4.2	4.10.1.6.4.1 4.10.1.6.4.2	SME SME"

Table I: Delete characteristic 111.

Table I, in Note: Delete "(plus or minus $75^{o}F.$)" and substitute; "($75^{o} \pm 15^{o}F.$)"

Table II, under "Classification of Defects": Delete "Use Inspection Level L6 in Table IIIB, with Sampling Plan Table IV of Standard MIL-STD-105" and substitute "Use Inspection Level S3 in Table I with Sampling Plan Table II-A of Standard MIL-STD-105".

Table II, characteristic 108: Delete and substitute:

"Regulation (line and load) not within tolerance	3.7.4.1 3.7.4.2	4.10.1.6.4.1 4.10.1.6.4.2	SME SME"

Paragraph 4.10.1.5.2: Delete and substitute:

"4.10.1.5.2 Output circuit impedance.- This test shall be conducted by applying a frequency signal of 1000 cps to the output of the converter. The electrical output impedance shall be measured across the output at one-half (22.5 ma) and full load (45 ma) with standard measuring equipment to determine compliance with the requirements of 3.6.3."

Paragraph 4.10.1.6.2: Delete and substitute:

"4.10.1.6.2 Input voltage surge.- Apply the specified amount of voltage spikes at the rate specified in 3.7.2 to the input of the energized converter for the required time period. The converter shall be examined during this test to insure against increased output voltage. Subsequent to the application of the voltage spikes, the converter shall show no evidence of physical or electrical damage in compliance with 3.7.2. All measurements shall be made with standard measuring equipment."

Paragraph 4.10.1.6.4: Delete and substitute:

"4.10.1.6.4 Regulation.

4.10.1.6.4.1 Line regulation.- With the converter energized and subjected to a constant load of one-half load (22.5 ma), and a full load (45 ma), the output voltage shall be measured with standard measuring equipment while varying the input voltage in 3 volt increments from 18 to 30 volts dc. The measured line regulation shall not exceed the tolerance specified in 3.7.4.1.

4.10.1.6.4.2 Load regulation.- This test shall be conducted utilizing standard measuring equipment. The input voltages shall be established at the minimum voltage, the mean voltage, and the maximum voltage for the 18 to 30 Vdc operational range. The converter shall operate for a minimum of 15 minutes for each of the input voltages with one-half load (22.5 ma) to full load (45 ma) variation. The measured load regulation shall be examined during the operating periods to determine compliance with the tolerance specified in 3.7.4.2."

* Paragraph 4.10.1.6.5: Delete and substitute:

"4.10.1.6.5 Output voltage.- The output voltage shall be measured across the output terminals with standard measuring equipment while applying an input voltage of 18, 24, and 30 Vdc. The measured output voltage of the converter shall be within the tolerance specified in 3.7.5 at the temperature indicated.

Paragraph 4.10.1.6.7: Add the following new paragraph in proper sequence:

"4.10.1.6.7 Reverse output voltage (Drawing No. C10553449).- The converter shall meet all operational requirements after being subjected to reverse voltage as specified in 3.7.7 for a minimum of 5 minutes."

*The outside margins have been marked to indicate where additions to the previous amendment have been made. This has been done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in this notation. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content as written irrespective of the marginal notation and relationship to the last previous amendment.

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