

This copy is a reprint which includes current pages from Change 1 and Change 2.

*TM 11-6625-475-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

Operator's Manual

MULTIMETERS AN/PSM4, AN/PSM-6A, AND AN/PSM-6B

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SECTION I

GENERAL DESCRIPTION

1. General

This manual comprises the operating instructions for Multimeter AN/PSM-6, part number 56-5002A, FSN 6625+43-1686; Multimeter AN/PSM-6, part number 56-5002B, FSN 6625-643-1686; Multimeter AN/PSM-6A, part number 165-5002, FSN 6625-656-5871; and Multimeter AN/PSM-6B, part number 199-5002, FSN 6625-957--4374. Figure 1 shows Multimeter AN/PSM-6, using Multimeter ME-70A/PSM-6 as its major component. Serial numbers 25298 and above are assigned to these units. The Multimeter AN/PSM-6, illustrated in figure 2, uses Multimeter ME-70/PSM-6, to which serial numbers below 25298 are assigned, Multimeter AN/PSM-6A, illustrated in figure 3, uses Multimeter ME-70B/PSM-6A as its major component.

2. Purpose

A. Multimeter AN/PSM-6, AN/PSM-6A, and AN/PSM-6B, are items of general purpose test equipment designed to measure dc and ac voltage, dc current and resistance in the ranges most commonly encountered in electrical equipment. The maximum values which can be measured are as follows :

- (1) dc voltage-5,000 volts.
- (2) ac voltage-1,000 volts.
- (3) dc current-10 amperes.
- (4) resistance-10 megohms.

b. Multimeter AN/PSM-6A differs from Multimeter AN/PSM-6 in the following two respects:

- (1) The output function in the AN/PSM-6 has been replaced in the AN/PSM-6A by the more useful pulsed dc current function which is employed in the maintenance of

certain Fire Control apparatus. This makes it possible to measure pulsating dc currents having high peak values 1 and average values up to 1 ampere. Such currents cannot be measured accurately with the AN/PSM-6 incorporating Multimeter MF-70A/PSM-6.

- (2) To minimize down-time of the Multimeter in the field, a protective system has been incorporated in the AN/PSM-6A to protect the instrument against damage due to incorrect setting of the RANGE or FUNCTION Switch or wrong polarity of test lead connection. This system is capable of protecting every RANGE-FUNCTION combination under the following maximum conditions:

From a power source having 2000 volts open circuit capable of delivering 1 maximum short-circuit current of 375 ma and a maximum surge current of 30 amperes which decays to 400 ma within 2 milliseconds:

- 2000 volts dc applied in the forward direction,
- 2000 volts dc applied in the reverse direction,
- 2000 volts ac at 60 cps.

From a power source such that the multimeter is not required to dissipate more than 750 watts of power in any current range:

- 10 amperes dc applied in the forward direction,
- 10 amperes dc applied in the reverse direction,
- 10 amperes ac at 60 cps.

Note. Because of the variability among identical components with respect to their ability to withstand peak overload voltages and currents the number of overloads for which any individual multimeter is protected will vary from unit to unit.