

INCH - POUND

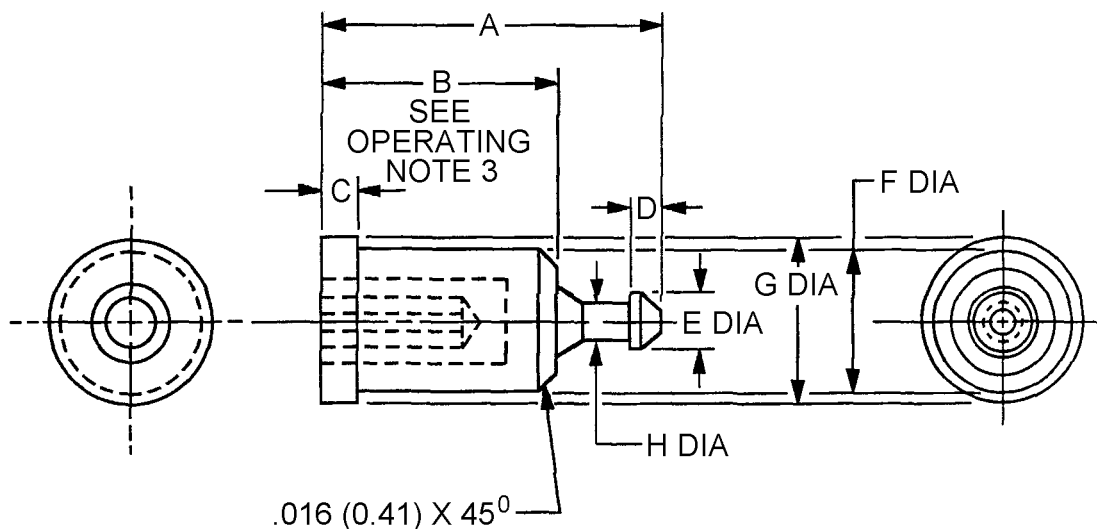
MIL-DTL-39024/12F
w/AMENDMENT 1
3 June 2020
SUPERSEDING
MIL-DTL-39024/12F
22 September 2018

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, TEST POINT TYPE, PANEL TYPE;
SINGLE TEST POINT (HOLE MOUNTING, PUSH-FIT), LOW VOLTAGE

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein
shall consist of this specification and MIL-DTL-39024.



NOTES:

1. Dimensions are in inches. Metric equivalents are given for general information only.
2. Unless otherwise specified, tolerances are $\pm .010$ (0.25 mm) for three place decimals and $\pm 3.0^\circ$ for angles.

FIGURE 1. Configuration and dimensions.



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TABLE I. Design and identification data.

Dash number	Dimensions <u>1/</u>								Insulation
	A $\pm .010$ (0.25)	B	C	D	E Dia	F Dia $\pm .002$ (0.05)	G Dia	H Dia	Color
-01	.453 (11.51)	.317 (8.05)	.047 (1.19)	.037 (0.94)	.074 (1.88)	.185 (4.70)	.219 (5.56)	.054 (1.37)	White
-02	"	"	"	"	"	"	"	"	Red
-03	"	"	"	"	"	"	"	"	Black
-04	"	"	"	"	"	"	"	"	Brown
-05	"	"	"	"	"	"	"	"	Green
-06	"	"	"	"	"	"	"	"	Orange
-07	"	"	"	"	"	"	"	"	Blue
-08	"	"	"	"	"	"	"	"	Yellow
-09	"	"	"	"	"	"	"	"	Gray
-10	"	"	"	"	"	"	"	"	Purple
-11	"	"	"	"	"	"	"	"	Natural
-12	.390 (9.91)	.265 (6.73)	.046 (1.17)	.023 (0.58)	.068 (1.73)	.149 (3.78)	.172 (4.37)	.040 (1.02)	White
-13	"	"	"	"	"	"	"	"	Red
-14	"	"	"	"	"	"	"	"	Black
-15	"	"	"	"	"	"	"	"	Brown
-16	"	"	"	"	"	"	"	"	Green
-17	"	"	"	"	"	"	"	"	Orange
-18	"	"	"	"	"	"	"	"	Blue
-19	"	"	"	"	"	"	"	"	Yellow
-20	"	"	"	"	"	"	"	"	Gray
-21	"	"	"	"	"	"	"	"	Purple
-22	"	"	"	"	"	"	"	"	Natural

1/ Metric equivalents are in parentheses.

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1 and table I.

Insulation: Material shall be polytetrafluoroethylene in accordance with ASTM D1710.

Operating temperature: -65°C to +200°C.

Test probe: Connectors shall be .500 inch (minimum) length and accept test probe tips as follows:

<u>Dash numbers</u>	<u>Probe dia. ($\pm .001$)</u>
-01 thru -11	.080 inch
-12 thru -22	.040 inch

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Contact current rating: 5.5 amperes (maximum).

Dielectric withstanding voltage (at sea level):

Test voltage shall be as follows:

<u>Dash numbers</u>	<u>Volts, rms (60 Hz)</u>
-01 thru -11	1,800
-12 thru -22	1,600

Insertion and withdrawal forces:

Insertion force: 5.0 pounds (max).

Withdrawal force: 0.4 pound (min).

Thermal shock: Shall be in accordance with MIL-STD-202-107, condition C.

Identification marking:

Part or Identifying Number (PIN): M39024/12-(dash number from table I).

Operating conditions:

Operating voltage is as follows:

<u>Dash numbers</u>	<u>At sea level</u>	<u>At 50,000 feet</u>
-01 thru -11	800 volts rms, 60 Hz	450 volts rms, 60 Hz
-12 thru -22	700 volts rms, 60 Hz	450 volts rms, 60 Hz

Maximum thickness of panel on which these connectors may be used is as follows:

<u>Dash numbers</u>	<u>Max panel thickness</u>
-01 thru -11	.230 inch
-12 thru -22	.139 inch

Application data:

Dash numbers -01 thru -11. Countersink installation side $.172 \pm .002$ inch mounting hole with a 60° countersink to $.195 + .005, -.000$ inch diameter when used with a .040 inch or thicker chassis.

Dash numbers -12 thru -22. Countersink installation side $.136 \pm .002$ inch mounting hole with a 60° countersink to $.160 + .005, -.000$ inch diameter when used with a .040 inch or thicker chassis.

An 82° countersink shall be used with a chassis under 0.040 inch thick.

Qualification: Not applicable.

First article inspection. First article inspection shall consist of Group A and B inspections. MIL-DTL-39024 paragraph 4.5 through 4.5.3.1.3 and Tables III through VII as applicable.

Conformance inspection. Inspection of successive lots for delivery shall consist of Group A inspections. MIL-DTL-39024 paragraph 4.5 through 4.5.3.1.3 and Tables III through VII as applicable.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-39024, this document references the following:

MIL-STD-202-107
ASTM-D1710

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2020-080)

Review activities:

Army - AR, AT, MI
Navy - AS, MC, OS, SH
Air Force - 19

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