

INCH-POUND

MIL-DTL-49285/10A
w/AMENDMENT 2
18 November 2021
SUPERSEDING
MIL-DTL-49285/10A
w/AMENDMENT 1
27 March 2018

DETAIL SPECIFICATION SHEET

CABLE, SPECIAL PURPOSE, ELECTRICAL, ONE INDIVIDUALLY SHIELDED
PAIR OF 22 (7 X 30) AWG

Inactive for new design after 16 June 1997.

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 sheet and MIL-DTL-49285.

Engineering information: See table I.

Note: : Not recommended for shipboard or aerospace applications due to toxic smoke release in the event of a fire. PVC is not recommended in other applications (i.e. confined spaces, low ventilation) where there is the potential for human smoke exposure in a fire.

TABLE I. Description, electrical.

Electrical characteristics	Requirements
Nominal capacitance between conductors	34 pF/ft (picofarads/foot)
Nominal capacitance between the conductor and the shield with one conductor tied to the shield	67 pF/ft
Continuous working voltage	200 V _{rms} maximum between conductors
Shield dc resistance	14 ohms/1,000 feet maximum



MIL-DTL-49285/10A
w/AMENDMENT 2

TABLE II. Description, physical.

Components	Construction details
Number of pairs	One individually shielded
Conductor type and wire size	Stranded tinned copper 22 AWG
Conductor stranding	7 X 30 AWG
Conductor insulation	Polypropylene
Conductor insulation thickness	0.008 inch nominal thickness
Drain wire type and size	Stranded tinned copper 22 AWG
Drain wire stranding	7 X 30 AWG
Jacket material	Polyvinyl chloride
Jacket thickness	0.020 inch
Finished cable diameter	0.142 inch maximum outside diameter
Cable style (UL)	Not applicable
Tensile strength (jacket)	2,000 pounds per square inch minimum
Elongation (jacket)	150 percent minimum
Overall cabling lay length	6.8 twists per foot $\pm$ 10 percent

REQUIREMENTS:

Design and construction. See table II.

Shield color code. The shield color shall be blue.

Shield location and orientation. The polyester aluminum shield is to be located on the outer circumference of the pair, with the aluminum foil side outward. Insulation on the interior of the shield is to be complete with no aluminum available for contact.

Drain wire location. The drain wire is to be spirally located between the shield and jacket, and is to be in continuous contact with the aluminum surface of the foil shield throughout the cable.

Cable temperature rating. The cable temperature rating shall be -20 °C to +80 °C.

MIL-DTL-49285/10A
w/AMENDMENT 2

Shield integrity test.*

<u>Frequency</u>	<u>Response</u>
100 kHz	109 dB or more below reference
500 kHz	105 dB or more below reference
1 MHz	99 dB or more below reference
5 MHz	85 dB or more below reference
10 MHz	79 dB or more below reference
15 MHz	76 dB or more below reference
20 MHz	72 dB or more below reference
25 MHz	68 dB or more below reference
30 MHz	65 dB or more below reference

* Any two readings may deviate to a value of 0.9 times the stated limits.

Fixture resonance will occur between 40 and 70 MHz.

At 100 MHz: At least 51 dB below reference.

Flammability. Insulation flammability testing shall be performed in accordance with the VW-1 flame test method of UL 2556.

Crosstalk test limits. Crosstalk testing is not required for this configuration.

Durometer hardness. The cable jacket shall have a "Shore A" hardness of 90 ± 5 .

Part or Identifying Number (PIN): The PIN shall be M49285/10.

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 document. In addition to MIL-DTL-49285, this document references the following: UL 2556.

MIL-DTL-49285/10A
w/AMENDMENT 2

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – SH
Air Force – 85
DLA - CC

Preparing activity:

DLA - CC

Review activities:

Army – MI

(Project 6145-2021-043)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.