



**DESIGN DATA:**

Design and construction: See figure 1.  
Number of conductors: Thirty-three.  
Conductor size and stranding: See table I.  
Wire: M16878/18BJE\* (see table I).  
Jacket undershield: Not applicable.  
Shielding: Not applicable.  
Sheath: Polyvinyl chloride.  
Temperature rating: 105°C.

**REQUIREMENTS:**

Visual and dimensional:

Components:

Basic wire: Tinned copper.

Dimensions: See table I.

Primary insulation:

Material: Polyvinyl chloride.

Wall thickness: .017 ±.003 inch.

Colors:

White with black tracer.  
White with brown tracer.  
White with red tracer.  
White with orange tracer.  
White with yellow tracer.  
White with green tracer.  
White with blue tracer.  
White with violet tracer.  
White with gray tracer.  
White with two black tracers.  
White with black and brown tracers.  
White with black and red tracers.  
White with black and orange tracers.  
White with black and yellow tracers.  
White with black and green tracers.  
White with black and blue tracers.

White with black and violet tracers.

White with black and gray tracers.

White with brown and black tracers.

White with two brown tracers.

White with brown and red tracers.

White with brown and orange tracers.

White with brown and yellow tracers.

White with brown and green tracers.

White with brown and blue tracers.

White with brown and violet tracers.

White with brown and gray tracers.

White with red and black tracers.

White with red and brown tracers.

White with two red tracers.

White with red and orange tracers.

White with red and yellow tracers.

White with red and green tracers.

Spark test voltage: 5,000 V rms.

Inspection test voltage: 3,000 V rms.

Impulse dielectric test: 10,000 V peak.

Jacket over insulation: Polyamide.

Color: Natural.

Filler:

Material: In accordance with MIL-C-27072.

Cabling:

Core: Fillers.

First layer:

Number of conductors: Five.

Maximum pitch or lay: 4.0 inches.

Second layer:

Number of conductors: Eleven.

Maximum pitch or lay: 7.0 inches.

**Third layer:**

Number of conductors: Seventeen.

Maximum pitch or lay: 10.0 inches.

Tape material: Polyethylene terephthalate.

Workmanship: In accordance with MIL-C-27072.

**Sheath:**

Material: Polyvinyl chloride.

Wall thickness: .065 inch nominal.

Tensile strength: In accordance with table V of MIL-C-27072.

Elongation: In accordance with table V of MIL-C-27072.

Tension set: Not applicable.

Tear strength: Not applicable.

Accelerated aging: In accordance with table V of MIL-C-27072.

Oil resistance: Not applicable.

Color: See table IV of MIL-C-27072.

**Finished cable:**

Weight: For future consideration.

Diameter: See table I.

Conductor resistance: In accordance with MIL-W-16878/18.

Dielectric strength: In accordance with MIL-W-16878/18.

Cold bend: Mandrel size in accordance with table XIII of MIL-C-27072.

Ozone: Mandrel size in accordance with table XIV of MIL-C-27072.

Marking durability: In accordance with MIL-C-27072.

Heat stability: Not applicable.

TABLE I. Construction data.

Part number	Conductor			Nominal diameter (in.)	Finished cable diameter (in.) ±10%	Basic wire M16878/18
	Wire size (AWG)	Number of strands	Strand size (AWG)			
M27072/32						
FBMA*	16	19	29	.103	.850	BJE***

Asterisks (\*) shall be replaced by the appropriate color designator.

Revision letters are not used to denote changes due to the extensiveness of the changes.

Custodians:  
Army - CR  
Navy - SH  
Air Force - 85

Review activities:  
Air Force - 99  
DLA - ES, IS

Preparing activity:  
Air Force - 85

Agent:  
DLA - ES

(Project 6145-0909-11)