

SAE Executive Standards Committee Rules provide that: " This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

**REV.
B**

AS5756™/3

FEDERAL SUPPLY CLASS
6145

RATIONALE

AS5756/3 IS BEING STABILIZED BECAUSE THE COMMITTEE DOES NOT ANTICIPATE FUTURE TECHNICAL CHANGES. AS5756/3 CABLES ARE CONSIDERED WELL-ESTABLISHED PRODUCTS. QUALIFIED SUPPLIERS ARE STILL MAINTAINED. REFERENCE CHANGES NOTED BY THE SUPPLIERS WHICH RESULTS IN A PRODUCT CHANGE WILL BE ADDRESSED BY A NEW REVISION.

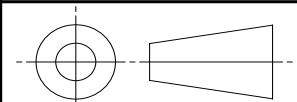
STABILIZED NOTICE

THIS DOCUMENT HAS BEEN DECLARED "STABILIZED" BY THE SAE AE-8D WIRE AND CABLE COMMITTEE AND WILL NO LONGER BE SUBJECTED TO PERIODIC REVIEWS FOR CURRENCY. USERS ARE RESPONSIBLE FOR VERIFYING REFERENCES AND CONTINUED SUITABILITY OF TECHNICAL REQUIREMENTS. NEWER TECHNOLOGY MAY EXIST.

SAENORM.COM : Click to view the full PDF of as5756_3b

For more information on this standard, visit
<https://www.sae.org/standards/content/AS5756/3B/>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8D

PROCUREMENT SPECIFICATION: AS5756



AEROSPACE STANDARD

CABLE, POWER, ELECTRICAL,
600 VOLTS,
PORTABLE, MULTICONDUCTOR

AS5756™/3

**REV.
B**

NOTICE

THE REQUIREMENTS FOR PROCURING THE CONTACTS DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF: SAE AS5756

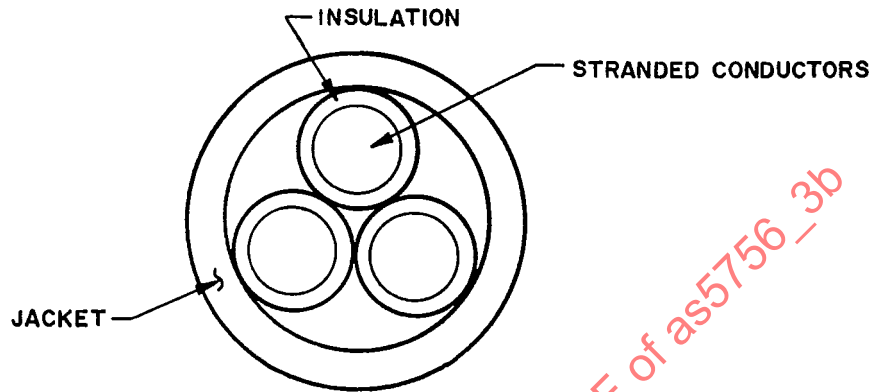


FIGURE 1 – EXAMPLE OF 3 CONDUCTOR CABLE

REQUIREMENTS:

QUALIFICATION REQUIRED.

CONSTRUCTION (SEE TABLE 1)

FIRST - COPPER CONDUCTOR, SEE TABLE I OF AS5756 FOR REQUIREMENTS, SIZES 10 AWG AND SMALLER SHALL BE TIN-COATED, SIZES 8 AWG AND LARGER SHALL BE UNCOATED.

SECOND - SEPARATOR, REQUIRED WHERE UNCOATED CONDUCTORS ARE USED, OPTIONAL WHERE TIN-COATED CONDUCTORS ARE USED.

THIRD - INSULATION OF SYNTHETIC OR NATURAL RUBBER (SEE TABLE I FOR THICKNESS), COLOR CODED PER PARAGRAPH 3.4.6 OF AS5756.

FOURTH - THE REQUIRED NUMBER OF CONDUCTORS CABLED TOGETHER WITH A LEFT-HAND LAY NOT GREATER THAN 16 TIMES THE DIAMETER UNDER THE JACKET. WHEN NEEDED, FILLERS SHALL BE EMPLOYED TO OBTAIN A FIRM, WELL-ROUNDED ASSEMBLY.

FIFTH - BINDER TAPE APPLIED HELICALLY WITH OVERLAP.

SIXTH - NATURAL OR SYNTHETIC RUBBER JACKET (SEE TABLE I FOR THICKNESS). CABLE SURFACE MARKING REQUIRED.

OZONE RESISTANCE - REQUIRED.

	AEROSPACE STANDARD	AS5756™/3 SHEET 1 OF 4	REV. B
	CABLE, POWER, ELECTRICAL, 600 VOLTS, PORTABLE, MULTICONDUCTOR		

TABLE 1 – DETAILS OF CONSTRUCTION

PART NO. M5756/3	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	NOMINAL INSULATION THICKNESS (INCH) <u>1/</u>	NOMINAL JACKET THICKNESS (INCH) <u>2/</u>	OVERALL DIAMETER OF JACKETED CABLE		CONDUCTOR RESISTANCE PER 1000 FEET (MAX) @ 20°C (OHMS)	NOMINAL WEIGHT PER 1000 FEET (POUNDS) <u>3/</u>
					MIN (INCHES)	MAX (INCHES)		
-001	18	2	.031	.0625	.316	.375	7.49	60.9
-002	16	2	.031	.0625	.338	.399	4.70	72.5
-003	14	2	.047	.078	.429	.530	2.96	127.9
-004	12	2	.047	.078	.499	.576	1.86	159.3
-005	10	2	.047	.094	.549	.648	1.20	217.7
-006	8	2	.063	.109	.705	.824	.699	335.0
-007	6	2	.063	.125	.831	.962	.444	487.2
-008	4	2	.063	.141	.965	1.100	.279	676.9
-009	2	2	.063	.156	1.150	1.270	.177	945.1
-010	1	2	.078	.156	1.270	1.410	.141	1173.1
-011	1/0	2	.078	.172	1.360	1.540	.111	1422.5
-012	2/0	2	.078	.187	1.560	1.740	.0893	1780.0
-013	3/0	2	.078	.187	1.710	1.890	.0708	2131.3
-014	4/0	2	.078	.203	1.840	2.050	.0562	2586.6
-015	250	2	.094	.203	2.010	2.220	.0476	3045.2
-016	18	3	.031	.0625	.331	.392	7.49	71.9
-017	16	3	.031	.0625	.356	.418	4.70	87.2
-018	14	3	.047	.078	.482	.557	2.96	154.0
-019	12	3	.047	.094	.527	.606	1.86	213.9
-020	10	3	.047	.094	.611	.692	1.20	268.9
-021	8	3	.063	.109	.772	.869	.699	429.9
-022	6	3	.063	.141	.910	1.100	.444	639.5
-023	4	3	.063	.156	1.050	1.190	.279	888.4
-024	2	3	.063	.172	1.210	1.310	.177	1252.9
-025	1	3	.078	.172	1.350	1.520	.141	1556.6
-026	1/0	3	.078	.172	1.480	1.630	.111	1837.1
-027	2/0	3	.078	.187	1.680	1.840	.0893	2295.1
-028	3/0	3	.078	.203	1.820	2.030	.0708	2832.2
-029	4/0	3	.078	.203	1.990	2.180	.0562	3369.2
-030	250	3	.094	.203	2.140	2.360	.0476	3995.8
-031	18	4	.031	.0625	.358	.421	7.49	85.2
-032	16	4	.031	.0625	.385	.450	4.70	104.8
-033	14	4	.047	.078	.523	.601	2.96	185.6
-034	12	4	.047	.094	.603	.689	1.86	258.4
-035	10	4	.047	.109	.664	.749	1.20	349.2

1/ THE MINIMUM INSULATION THICKNESS SHALL BE AT LEAST 90% OF THE NOMINAL.

2/ THE MINIMUM JACKET THICKNESS SHALL BE AT LEAST 90% OF THE NOMINAL.

3/ THE NOMINAL WEIGHT IS FOR INFORMATION ONLY.



AEROSPACE STANDARD

CABLE, POWER, ELECTRICAL,
600 VOLTS,
PORTABLE, MULTICONDUCTOR

AS5756™/3
SHEET 2 OF 4

**REV.
B**

TABLE 1 – DETAILS OF CONSTRUCTION (CONT'D)

PART NO. M5756/3	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	NOMINAL INSULATION THICKNESS (INCH) <u>1/</u>	NOMINAL JACKET THICKNESS (INCH) <u>2/</u>	OVERALL DIAMETER OF JACKETED CABLE		CONDUCTOR RESISTANCE PER 1000 FEET (MAX) @ 20°C (OHMS) <u>3/</u>	NOMINAL WEIGHT PER 1000 FEET (POUNDS) <u>3/</u>
					MIN (INCHES)	MAX (INCHES)		
-036	8	4	.063	.109	.872	.975	.699	511.3
-037	6	4	.063	.125	1.020	1.140	.444	749.6
-038	4	4	.063	.156	1.170	1.300	.279	1095.5
-039	2	4	.063	.172	1.330	1.490	.177	1555.4
-040	1	4	.078	.172	1.510	1.660	.141	1941.6
-041	1/0	4	.078	.187	1.620	1.810	.111	2352.8
-042	2/0	4	.078	.203	1.840	2.050	.0893	2936.5
-043	3/0	4	.078	.203	2.020	2.220	.0708	3554.9
-044	4/0	4	.078	.203	2.180	2.390	.0562	4246.3
-045	250	4	.094	.203	2.350	2.590	.0476	5052.8
-046	18	5	.031	.0625	.387	.452	7.49	99.5
-047	16	5	.031	.078	.417	.515	4.70	137.5
-048	14	5	.047	.094	.568	.682	2.96	238.5
-049	12	5	.047	.109	.655	.744	1.86	326.3
-050	10	5	.047	.109	.748	.842	1.20	413.6
-051	8	5	.063	.141	.948	1.090	.699	693.4
-052	6	5	.063	.156	1.140	1.260	.444	968.6
-053	4	5	.063	.156	1.280	1.410	.279	1311.4
-054	2	5	.063	.172	1.480	1.620	.177	1869.4
-055	1	5	.078	.187	1.680	1.840	.141	2392.9
-056	1/0	5	.078	.203	1.800	2.010	.111	2899.6
-057	2/0	5	.078	.203	2.050	2.240	.0893	3544.5
-058	3/0	5	.078	.203	2.220	2.430	.0708	4303.7
-059	4/0	5	.078	.203	2.400	2.620	.0562	5153.9
-060	250	5	.094	.203	2.590	2.840	.0476	6122.6
-061	18	6	.031	.078	.417	.516	7.49	128.0
-062	16	6	.031	.078	.479	.556	4.70	157.0
-063	14	6	.047	.094	.646	.734	2.96	273.2
-064	12	6	.047	.109	.709	.833	1.86	374.3
-065	10	6	.047	.125	.810	.940	1.20	505.0
-066	8	6	.063	.156	1.060	1.210	.699	833.2
-067	6	6	.063	.156	1.230	1.370	.444	1120.4
-068	4	6	.063	.172	1.420	1.560	.279	1571.8
-069	2	6	.063	.187	1.610	1.790	.177	2231.6
-070	1	6	.078	.203	1.830	2.030	.141	2855.0

1/ THE MINIMUM INSULATION THICKNESS SHALL BE AT LEAST 90% OF THE NOMINAL.

2/ THE MINIMUM JACKET THICKNESS SHALL BE AT LEAST 90% OF THE NOMINAL.

3/ THE NOMINAL WEIGHT IS FOR INFORMATION ONLY.



AEROSPACE STANDARD

CABLE, POWER, ELECTRICAL,
600 VOLTS,
PORTABLE, MULTICONDUCTOR

AS5756™/3
SHEET 3 OF 4

REV.
B