

REV.
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SAE AS5756/3

FEDERAL SUPPLY CLASS
6145

RATIONALE

INCORPORATE AS5756/3-A1

NOTICE

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

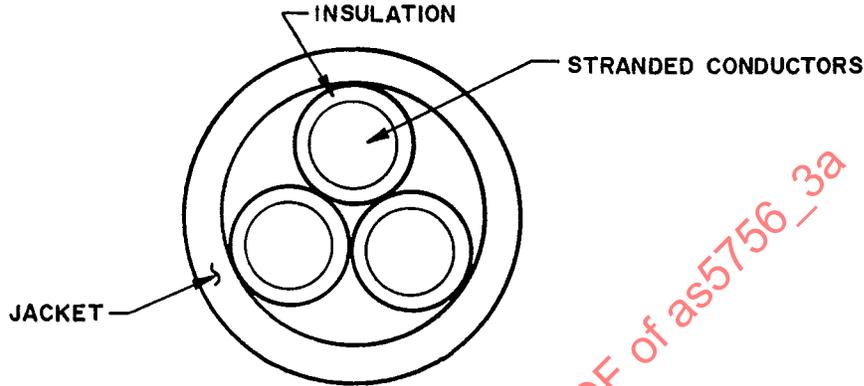


FIGURE 1 – EXAMPLE OF 3 CONDUCTOR CABLE

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.

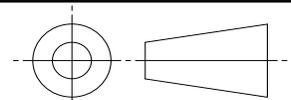
FIFTH - BINDER TAPE APPLIED HELICALLY WITH OVERLAP.

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

OZONE RESISTANCE - REQUIRED.

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS5756/3A>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8D

PROCUREMENT SPECIFICATION: AS5756

SAE Aerospace
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AEROSPACE STANDARD

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

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ISSUED 2004-06 REVISED 2010-10

TABLE 1 – DETAILS OF CONSTRUCTION

PART NO. M5756/3	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	NOMINAL INSULATION THICKNESS (INCH) 1/	NOMINAL JACKET THICKNESS (INCH) 2/	OVERALL DIAMETER OF JACKETED CABLE		CONDUCTOR RESISTANCE PER 1000 FEET (MAX) @ 20°C (OHMS)	NOMINAL WEIGHT PER 1000 FEET (POUNDS) 3/
					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.

 An SAE International Group	AEROSPACE STANDARD CABLE, POWER, ELECTRICAL, 600 VOLTS, PORTABLE, MULTICONDUCTOR	SAE AS5756/3 SHEET 2 OF 4	REV. A

TABLE 1 – DETAILS OF CONSTRUCTION (CONT'D)

PART NO. M5756/3	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	NOMINAL INSULATION THICKNESS (INCH) 1/	NOMINAL JACKET THICKNESS (INCH) 2/	OVERALL DIAMETER OF JACKETED CABLE		CONDUCTOR RESISTANCE PER 1000 FEET (MAX) @ 20°C (OHMS)	NOMINAL WEIGHT PER 1000 FEET (POUNDS) 3/
					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

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