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SAE AS7974/4

FEDERAL SUPPLY CLASS
6150

RATIONALE

AS7974/4 HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

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THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8A

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

CABLE ASSEMBLY, EXTERNAL ELECTRIC POWER,
AIRCRAFT, SINGLE-JACKETED 115/200 VOLT,
400 HERTZ

SAE AS7974/4
SHEET 1 OF 8

ISSUED 1998-01 REAFFIRMED 2012-12

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION: MIL-C-7974.

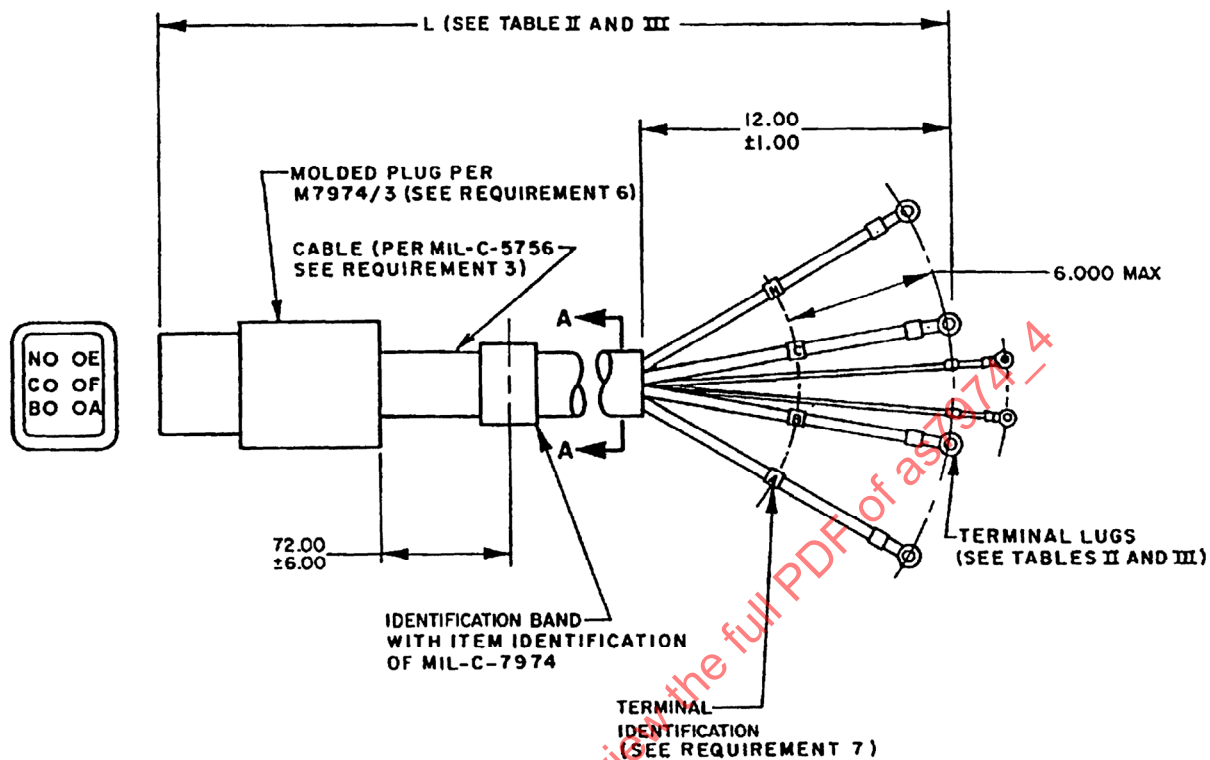
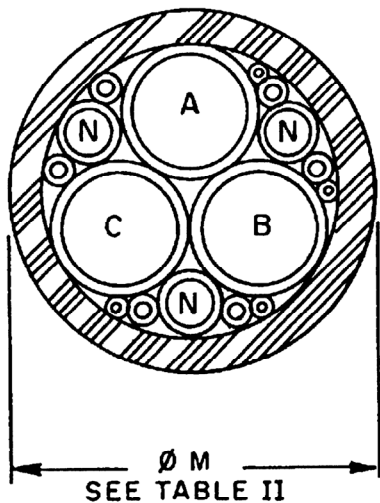
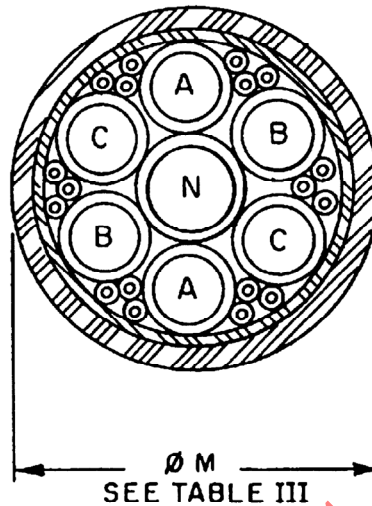


FIGURE 1. CABLE ASSEMBLY.



TYPE I, STYLE A AND B
CONSTRUCTION MIL-C-5756/5
CABLE (SEE REQUIREMENT 3)



TYPE II, STYLE C
CONSTRUCTION MIL-C-5756/5
CABLE (SEE REQUIREMENT 3)

SECTION A-A

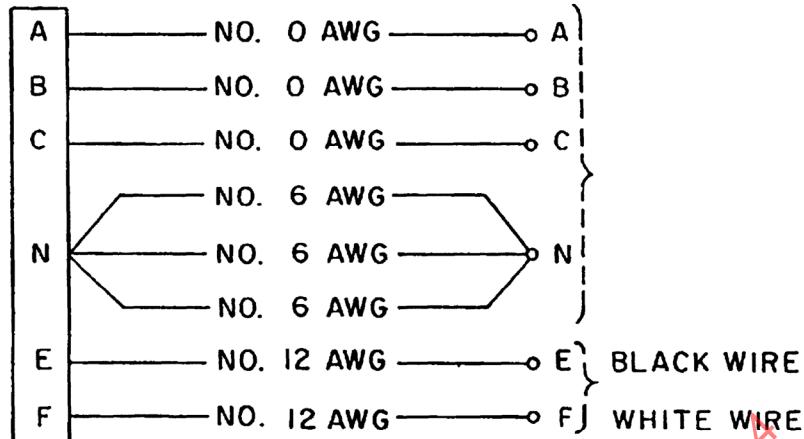
FIGURE 2. CROSS-SECTION OF CABLE.

TABLE I. METRIC CONVERSION.

INCH	MM	INCH	MM	FEET	CM	FEET	CM
1.000	25.40	1.980	50.29	0.50	15.2	60.0	1829
1.555	39.50	6.000	152.4	20.0	610	72.0	2195
1.660	42.16	12.00	304.8	30.0	914	80.0	2438
				40.0	1219	100.0	3048

PLUG END

LUG END

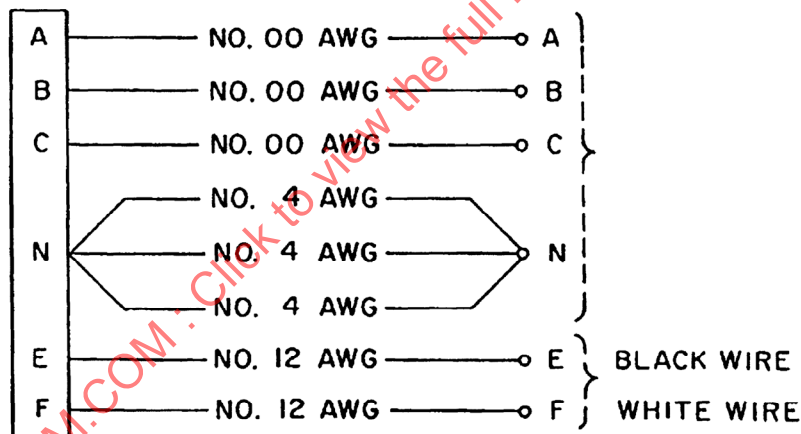


For assemblies without control leads, contacts E and F are electrically connected in the connector head using an AWG 12 (minimum) conductor.

Wiring Diagram for Type I, Style A (Split Neutral) Cable Assembly

PLUG END

LUG END



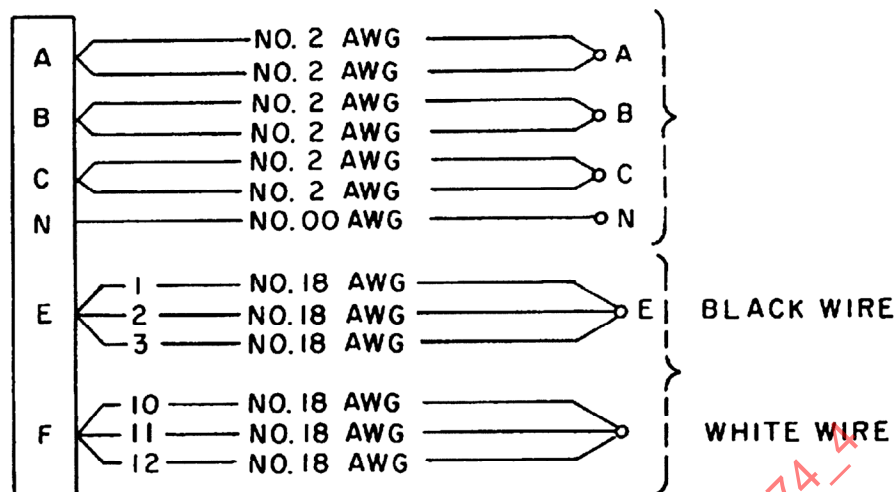
For assemblies without control leads, contacts E and F are electrically connected in the connector head using an AWG 12 (minimum) conductor.

Wiring Diagram for Type I, Style B (Split Neutral) Cable Assembly.

FIGURE 3. WIRING DIAGRAM TYPE I CABLE ASSEMBLY.

PLUG END

LUG END



For assemblies without control leads, contacts E and F are electrically connected in the connector head using an AWG 12 (minimum) conductor.

Wiring Diagram for Type II, Style C (Split Phase) Cable Assembly

FIGURE 4. WIRING DIAGRAM TYPE II CABLE ASSEMBLY.

TABLE II. TYPE I CABLE ASSEMBLY DETAILS.
ASSEMBLIES WITH CONTROL LEADS

PART NUMBER	WIRE SIZE			LUG TERMINALS		L FEET ±0.5	M DIA INCH (NOM)
	A, B, C	N	E AND F CONTROL	A, B, C, N	E & F CONTROL		
M7974/4A-1-20	0 AWG	3 X 6 AWG	12 AWG	MS20659-118	MS20659-106	20	1.595
M7974/4A-1-30	0 AWG	3 X 6 AWG	12 AWG	MS20659-118	MS20659-106	30	1.595
M7974-4A-1-40	0 AWG	3 X 6 AWG	12 AWG	MS20659-118	MS20659-106	40	1.595
M7974/4A-1-60	0 AWG	3 X 6 AWG	12 AWG	MS20659-118	MS20659-106	60	1.595
M7974/4A-1-80	0 AWG	3 X 6 AWG	12 AWG	MS20659-118	MS20659-106	80	1.595
M7974/4A-1-100	0 AWG	3 X 6 AWG	12 AWG	MS20659-118	MS20659-106	100	1.595
M7974/4B-1-20	00 AWG	3 X 4 AWG	12 AWG	MS20659-120	MS20659-106	20	1.865
M7974/4B-1-30	00 AWG	3 X 4 AWG	12 AWG	MS20659-120	MS20659-106	30	1.865
M7974/4B-1-40	00 AWG	3 X 4 AWG	12 AWG	MS20659-120	MS20659-106	40	1.865
M7974/4B-1-60	00 AWG	3 X 4 AWG	12 AWG	MS20659-120	MS20659-106	60	1.865
M7974/4B-1-80	00 AWG	3 X 4 AWG	12 AWG	MS20659-120	MS20659-106	80	1.865
M7974/4B-1-100	00 AWG	3 X 4 AWG	12 AWG	MS20659-120	MS20659-106	100	1.865

ASSEMBLIES WITHOUT CONTROL LEADS

PART NUMBER	WIRE SIZE		LUG TERMINALS		L FEET ±0.5	M DIA INCH (NOM)
	A, B, C	N	A, B, C, N	E & F CONTROL		
M7974/4A-2-20	0 AWG	3 X 6 AWG	MS20659-118	NO CONTROL LEADS USED	20	1.595
M7974/4A-2-30	0 AWG	3 X 6 AWG	MS20659-118		30	1.595
M7974/4A-2-40	0 AWG	3 X 6 AWG	MS20659-118		40	1.595
M7974/4A-2-60	0 AWG	3 X 6 AWG	MS20659-118		60	1.595
M7974/4A-2-80	0 AWG	3 X 6 AWG	MS20659-118		80	1.595
M7974/4A-2-100	0 AWG	3 X 6 AWG	MS20659-118		100	1.595
M7974/4B-2-20	00 AWG	3 X 4 AWG	MS20659-120	CONTACTS E AND F SHALL BE ELECTRICALLY CONNECTED WITHIN THE HEAD USING AN AWG 12 (MINIMUM) CONDUCTOR.	20	1.865
M7974/4B-2-30	00 AWG	3 X 4 AWG	MS20659-120		30	1.865
M7974/4B-2-40	00 AWG	3 X 4 AWG	MS20659-120		40	1.865
M7974/4B-2-60	00 AWG	3 X 4 AWG	MS20659-120		60	1.865
M7974/4B-2-80	00 AWG	3 X 4 AWG	MS20659-120		80	1.865
M7974/4B-2-100	00 AWG	3 X 4 AWG	MS20659-120		100	1.865

**TABLE III. TYPE II CABLE ASSEMBLY DETAILS.
ASSEMBLIES WITH CONTROL LEADS**

PART NUMBER	WIRE SIZE			LUG TERMINALS		L FEET ±0.5	M DIA INCH (NOM)
	A, B, C	N	E AND F CONTROL	A, B, C, N	E & F CONTROL		
M7974/4C-1-20	2 X 2 AWG	00 AWG	3 X 18 AWG	MS20659-120	MS20659-109	20	1.980
M7974/4C-1-30	2 X 2 AWG	00 AWG	3 X 18 AWG	MS20659-120	MS20659-109	30	1.980
M7974/4C-1-40	2 X 2 AWG	00 AWG	3 X 18 AWG	MS20659-120	MS20659-109	40	1.980
M7974/4C-1-60	2 X 2 AWG	00 AWG	3 X 18 AWG	MS20659-120	MS20659-109	60	1.980
M7974/4C-1-80	2 X 2 AWG	00 AWG	3 X 18 AWG	MS20659-120	MS20659-109	80	1.980
M7974/4C-1-100	2 X 2 AWG	00 AWG	3 X 18 AWG	MS20659-120	MS20659-109	100	1.980

ASSEMBLIES WITHOUT CONTROL LEADS

PART NUMBER	WIRE SIZE		LUG TERMINALS		L FEET ±0.5	M DIA INCH (NOM)
	A, B, C	N	A, B, C, N	E & F CONTROL		
M7974/4C-2-20	2 X 2 AWG	00 AWG	MS20659-120	NO CONTROL LEADS USED	20	1.980
M7974/4C-2-30	2 X 2 AWG	00 AWG	MS20659-120		30	1.980
M7974/4C-2-40	2 X 2 AWG	00 AWG	MS20659-120		40	1.980
M7974/4C-2-60	2 X 2 AWG	00 AWG	MS20659-120		60	1.980
M7974/4C-2-80	2 X 2 AWG	00 AWG	MS20659-120		80	1.980
M7974/4C-2-100	2 X 2 AWG	00 AWG	MS20659-120		100	1.980