

SPECIFICATION CONTROL DRAWING

CXA-0078

TITLE

MULTIPLE COMPONENT CABLES,
SHIELDED, JACKETED, 600 VOLT

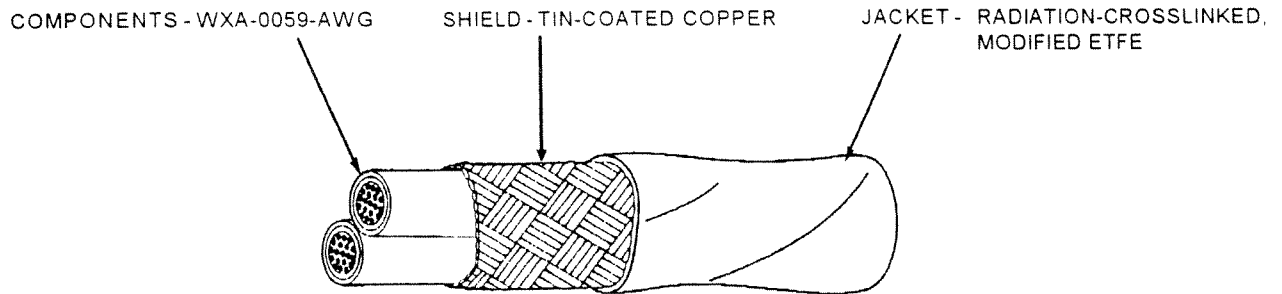
Date

10-31-96

Revision

B

This specification sheet forms a part of the latest of Raychem Specification 55A and MIL-C-27500 as applicable.



EXAMPLE: CXA-0078-24-2 (TWO CONDUCTOR CABLE)

ONE CONDUCTOR CABLE CONSTRUCTION DETAILS							
PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lb/1000 ft)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-1-*	24	38	.006	.008	.078	.083	6.6
CXA-0078-22-1-*	22	38	.006	.008	.085	.090	8.1
CXA-0078-20-1-*	20	38	.006	.008	.093	.098	10.3
CXA-0078-18-1-*	18	38	.006	.008	.104	.109	13.5
CXA-0078-16-1-*	16	38	.006	.008	.112	.118	16.0
CXA-0078-14-1-*	14	38	.006	.008	.126	.132	21.4
CXA-0078-12-1-*	12	38	.006	.008	.147	.154	30.0
CXA-0078-10-1-*	10	38	.006	.008	.172	.181	43.7

TWO CONDUCTOR CABLE CONSTRUCTION DETAILS							
PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-2-*	24	38	.006	.008	.123	.129	11.4
CXA-0078-22-2-*	22	38	.006	.008	.137	.144	14.4
CXA-0078-20-2-*	20	38	.006	.008	.153	.161	18.7
CXA-0078-18-2-*	18	38	.006	.008	.175	.184	25.0
CXA-0078-16-2-*	16	38	.006	.008	.191	.201	29.9
CXA-0078-14-2-*	14	38	.007	.009	.221	.232	41.3
CXA-0078-12-2-*	12	38	.007	.009	.263	.276	58.6
CXA-0078-10-2-*	10	38	.007	.009	.313	.329	86.0

NOTE: Nominal values are for information only.
Nominal values are not requirements.

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681

DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL

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THREE CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-3-*	24	38	.006	.008	.130	.137	14.7
CXA-0078-22-3-*	22	38	.006	.008	.145	.153	18.7
CXA-0078-20-3-*	20	38	.006	.008	.163	.171	24.8
CXA-0078-18-3-*	18	38	.006	.008	.186	.196	33.8
CXA-0078-16-3-*	16	38	.006	.008	.204	.214	40.8
CXA-0078-14-3-*	14	38	.007	.009	.236	.248	57.0
CXA-0078-12-3-*	12	38	.007	.009	.281	.295	81.9
CXA-0078-10-3-*	10	36	.008	.010	.341	.358	127.

FOUR CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-4-*	24	38	.006	.008	.142	.165	18.0
CXA-0078-22-4-*	22	38	.006	.008	.159	.185	23.3
CXA-0078-20-4-*	20	38	.006	.008	.178	.208	31.2
CXA-0078-18-4-*	18	38	.006	.008	.205	.240	42.8
CXA-0078-16-4-*	16	38	.007	.009	.226	.265	52.6
CXA-0078-14-4-*	14	38	.007	.009	.260	.305	73.0
CXA-0078-12-4-*	12	36	.007	.009	.315	.370	109.
CXA-0078-10-4-*	10	36	.008	.010	.377	.444	164.

FIVE CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-5-*	24	38	.006	.008	.155	.176	21.4
CXA-0078-22-5-*	22	38	.006	.008	.173	.198	27.8
CXA-0078-20-5-*	20	38	.006	.008	.195	.224	37.5
CXA-0078-18-5-*	18	38	.007	.009	.227	.260	52.5
CXA-0078-16-5-*	16	38	.007	.009	.248	.286	63.8
CXA-0078-14-5-*	14	38	.007	.009	.286	.330	89.0
CXA-0078-12-5-*	12	36	.008	.010	.349	.402	135.
CXA-0078-10-5-*	10	36	.008	.010	.416	.481	201.

SIX CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-6-*	24	38	.006	.008	.168	.176	24.7
CXA-0078-22-6-*	22	38	.006	.008	.189	.198	32.4
CXA-0078-20-6-*	20	38	.006	.008	.213	.224	43.9
CXA-0078-18-6-*	18	38	.007	.009	.248	.260	61.6
CXA-0078-16-6-*	16	38	.007	.009	.272	.286	75.1
CXA-0078-14-6-*	14	36	.007	.009	.318	.334	109.
CXA-0078-12-6-*	12	36	.008	.010	.383	.402	159.
CXA-0078-10-6-*	10	34	.009	.011	.465	.488	247.

SEVEN CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-7-*	24	38	.006	.008	.168	.176	27.3
CXA-0078-22-7-*	22	38	.006	.008	.189	.198	36.0
CXA-0078-20-7-*	20	38	.006	.008	.213	.224	49.2
CXA-0078-18-7-*	18	38	.007	.009	.248	.260	69.4
CXA-0078-16-7-*	16	38	.007	.009	.272	.286	84.8
CXA-0078-14-7-*	14	36	.007	.009	.318	.334	123.
CXA-0078-12-7-*	12	36	.008	.010	.383	.402	181.
CXA-0078-10-7-*	10	34	.009	.011	.465	.488	281.

EIGHT CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-8-*	24	38	.006	.008	.179	.205	30.4
CXA-0078-22-8-*	22	38	.006	.008	.202	.231	40.2
CXA-0078-20-8-*	20	38	.007	.009	.230	.264	55.8
CXA-0078-18-8-*	18	38	.007	.009	.266	.305	78.1
CXA-0078-16-8-*	16	36	.007	.009	.296	.340	99.3
CXA-0078-14-8-*	14	36	.008	.010	.343	.395	140.
CXA-0078-12-8-*	12	36	.008	.010	.412	.474	204.
CXA-0078-10-8-*	10	34	.009	.011	.500	.576	318.

NINE CONDUCTOR CABLE CONSTRUCTION DETAILS

PART NUMBER	CONDUCTOR SIZE (AWG)	SHIELD SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lbs/1000ft.)
			MINIMUM	NOMINAL	NOMINAL	MAXIMUM	
CXA-0078-24-9-*	24	38	.006	.008	.193	.224	33.8
CXA-0078-22-9-*	22	38	.007	.009	.220	.255	45.4
CXA-0078-20-9-*	20	38	.007	.009	.248	.289	62.2
CXA-0078-18-9-*	18	36	.007	.009	.291	.339	90.9
CXA-0078-16-9-*	16	36	.008	.010	.321	.375	112.
CXA-0078-14-9-*	14	36	.008	.010	.371	.434	157.
CXA-0078-12-9-*	12	34	.009	.011	.453	.529	237.
CXA-0078-10-9-*	10	34	.010	.012	.543	.636	357.

CABLE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms)

BLOCKING: 150 ± 3°C for 6 hours

CONCENTRICITY: 70% (minimum)

CROSSLINKED VERIFICATION: 300 ± 3°C for 6 hours

DIELECTRIC WITHSTAND: 1500 volts, 60 Hz (rms), conductor to shield

FLAMMABILITY: Procedure 1, 30 seconds (maximum);

3 in. (maximum); no flaming of facial tissue

JACKET ELONGATION AND TENSILE STRENGTH:

Elongation, 50% (minimum)

Tensile Strength, 5000 lbf/in² (minimum)

JACKET FLAWS:

Spark Test, 1500 volts, 60 Hz (rms), 100% test

Impulse Dielectric Test, 6.0 kV (peak), 100% test

LIFE CYCLE: 200 ± 5°C for 168 hours

LOW TEMPERATURE-COLD BEND: -65 ± 5°C for 4 hours

SHIELD COVERAGE: 85% (minimum)

VOLTAGE WITHSTAND (POST ENVIRONMENTAL):

1000 volts, 60 Hz, 1 minute

COMPONENT COLORS:

Component colors shall be based on the number of conductors per the following color sequence:

9/6/3/5/2/0/4/7/8

The "*" in the part numbers shall be replaced by a jacket color code designator.

Example: AWG 20, 3 conductor cable (component wire colors = 9/6/3), white jacket:

CXA-0078-20-3-9

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