

# SPECIFICATION CONTROL DRAWING

44AM183X

TITLE THREE CONDUCTOR CABLE, RADIATION-CROSSLINKED, POLYALKENE-INSULATED, SHIELDED, JACKETED, MEDIUM WEIGHT, AIRFRAME

Date 05-24-01

Revision

B

This specification sheet forms a part of the latest issue of Raychem Specification 44 and MIL-W-81044 as applicable

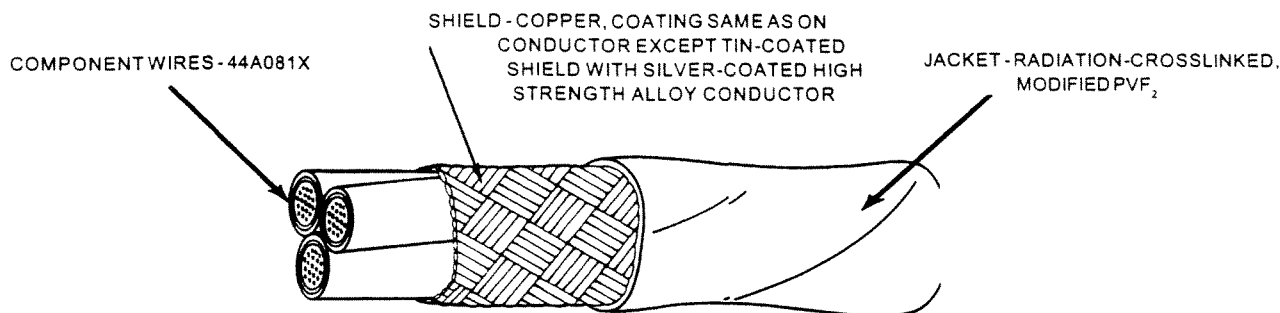


TABLE I. CABLE CONSTRUCTION DETAILS

| PARTNUMBER    | CONDUCTOR SIZE (AWG) | SHIELD SIZE (AWG) | JACKET THICKNESS (in.) |         | OUTSIDE DIAMETER (in.) |         | MAXIMUM WEIGHT (lb/1000 ft) |
|---------------|----------------------|-------------------|------------------------|---------|------------------------|---------|-----------------------------|
|               |                      |                   | MINIMUM                | MAXIMUM | NOMINAL                | MAXIMUM |                             |
| 44AM183X-24-* | 24                   | 38                | .005                   | .010    | .150                   | .157    | 17.3                        |
| 44AM183X-22-* | 22                   | 38                | .006                   | .012    | .169                   | .177    | 22.7                        |
| 44AM183X-20-* | 20                   | 38                | .006                   | .012    | .186                   | .194    | 28.7                        |
| 44AM183X-18-* | 18                   | 38                | .006                   | .012    | .208                   | .217    | 37.8                        |
| 44AM183X-16-* | 16                   | 38                | .007                   | .014    | .227                   | .236    | 45.6                        |
| 44AM183X-14-* | 14                   | 38                | .007                   | .014    | .268                   | .279    | 64.8                        |
| 44AM183X-12-* | 12                   | 36                | .007                   | .014    | .313                   | .329    | 94.4                        |
| 44AM183X-10-* | 10                   | 36                | .007                   | .014    | .376                   | .395    | 138.                        |

TABLE II. CABLE PERFORMANCE DETAILS

| PARTNUMBER    | BEND TESTING                               |           |                                            |           |
|---------------|--------------------------------------------|-----------|--------------------------------------------|-----------|
|               | MANDREL DIAMETER (inch) (± 3%)             |           | WEIGHT (lb) (± 3%)                         |           |
|               | ACCELERATED AGING IMMERSION AND LIFE CYCLE | COLD BEND | ACCELERATED AGING IMMERSION AND LIFE CYCLE | COLD BEND |
|               |                                            |           |                                            |           |
| 44AM183X-24-* | 6.00                                       | 6.00      | .750                                       | 13.5      |
| 44AM183X-22-* | 6.00                                       | 6.00      | 2.25                                       | 13.5      |
| 44AM183X-20-* | 6.00                                       | 6.00      | 3.00                                       | 18.0      |
| 44AM183X-18-* | 6.00                                       | 6.00      | 3.00                                       | 18.0      |
| 44AM183X-16-* | 6.00                                       | 6.00      | 3.00                                       | 22.5      |
| 44AM183X-14-* | 10.0                                       | 10.0      | 3.00                                       | 22.5      |
| 44AM183X-12-* | 10.0                                       | 10.0      | 3.00                                       | 22.5      |
| 44AM183X-10-* | 18.0                                       | 18.0      | 3.00                                       | 22.5      |

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

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-881

DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL

**Raychem**

**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****CROSSLINK VERIFICATION: 200 ± 5°C for 6 hours****DIELECTRIC WITHSTAND: 1500 volts (rms), 60 Hz, 15 sec. (min), 30 sec. (max)****FLAMMABILITY: 30 seconds (maximum); 3 in. (maximum);**

no flaming of facial tissue

**JACKET COLOR: White preferred****JACKET CONCENTRICITY: 70% (minimum)****JACKET ELONGATION AND TENSILE STRENGTH:**

Elongation, 200% (minimum)

Tensile Strength, 4000 lbf/in<sup>2</sup> (minimum)

**JACKET FLAWS:**

Spark Test, 1.5 kV (rms), 60 Hz, 100% test

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

**LOW TEMPERATURE-COLD BEND: -55 ± 5°C for 4 hours****SHIELD COVERAGE: 85% (minimum)****VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 1000 volts (rms), 60 Hz, 1 minute****PART NUMBER:**

The "X" in the part numbers on page 1 shall be replaced by the applicable conductor material designator as follows:

- 1 tin-coated copper
- 2 silver-coated copper
- 3 nickel-coated copper
- 4 silver-coated high strength copper alloy
- 6 nickel-coated high strength copper alloy

The "\*\*\*" in the part numbers on page 1 shall be replaced by color code designators with a slash separating the component wire colors and a dash separating the component wire colors from the jacket color.

Example: AWG 20, tin-coated copper wire; white, brown and red component wires;  
white jacket; 44AM1831-20-9/1/2-9