

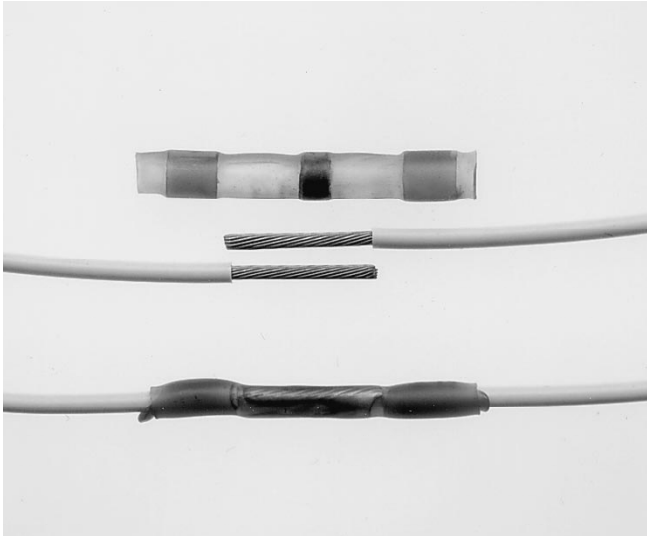
Wire-to-Wire Splicing

Solder Sleeve wire splices

Fax-on-Demand: (800) 260-9099
(650) 361-6523

| FAX ID | Description |
|--------|--------------------------------|
| 5600 | Data sheet (D-110 + D-1744) |
| 5000 | Data sheet (CWT) |

Before ordering check with factory for most current data.



Applications

In-line wire splices.

Features/Benefits

- Transparent Kynar or polyolefin sleeve provides encapsulation, inspectability, strain relief, and insulation.
- Prefluxed solder preform provides a controlled soldering process.
- One-piece design makes installation easy and lowers the installed cost.
- With one or two wires per end, the NAS 1744 splices meet 75,000-ft (22,000-m) altitude immersion requirement.
- Thermochromic temperature indicator in the NAS splices facilitates termination and inspection.
- UL and CUL recognized



Product Options

| Product series | Max. wire temperature rating range | Intended application environment |
|-------------------|------------------------------------|----------------------------------|
| CWT | 85°C to 125°C | Splashproof |
| D-110 | 125°C to 150°C | Splashproof |
| D-1744 (NAS 1744) | 125°C to 150°C | Immersion sealed |

Product Selection Process

From the Product Options table above, select the product series appropriate for your application based on the temperature rating and sealing performance required.

If the application has only one size of wire per side and no more than two wires on either side:

1. Determine wire gauge sizes for both sides of splice.
2. Determine number of wires (one or two wires) for each side of splice.
3. Select part numbers from the appropriate table:
 - For CWT series (low temperature): Use Table A on page 9-7.
 - For D-110 series (splashproof): Use Table B on page 9-8.
 - For D-1744 series (immersion sealed): Use Table C on page 9-9.

If the application has more than one size of wire per side or more than two wires on either side (or if you prefer to work with CMA or mm² sizes):

1. Turn to "CMA/mm² Calculation" on page 9-10 and use the workspace there to calculate the total cross section to be spliced.
2. Use Table E on page 9-10 to select the sleeve recommended for that cross section.

Notes

- While all combinations listed will provide satisfactory solder joints, the degree of strain relief obtained depends on the outer diameter of the wires being joined. Refer to Table E for the recommended size ranges for the sleeves.
- Wires 16 AWG (1.21 mm²) and larger, and wires having more than 19 strands, should be pretinned prior to splicing, to obtain the optimum solder joint quality.
- Part selection for wires 26 AWG (0.15 mm²) and smaller is covered at the end of Table B on page 9-8.

Table A. CWT Series Selection

| Side A: Size and number of conductors | Side B: Size and number of conductors | | | | | | | | | |
|--|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 26 AWG | | 24 AWG | | 22 AWG | | 20 AWG | | | |
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | | |
| 26 AWG | 1 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 |
| | 2 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9002 | CWT-9001 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 |
| 24 AWG | 1 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 |
| | 2 | CWT-9001 | CWT-9002 | CWT-9001 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 |
| 22 AWG | 1 | CWT-9001 | CWT-9001 | CWT-9001 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 |
| | 2 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9003 |
| 20 AWG | 1 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9003 |
| | 2 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 |
| 18 AWG | 1 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9003 |
| | 2 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 |
| 16 AWG | 1 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 |
| | 2 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 |
| 14 AWG | 1 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 |
| | 2 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 |
| 12 AWG | 1 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 |
| | 2 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 |
| 10 AWG | 1 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 |

| | 18 AWG | | 16 AWG | | 14 AWG | | 12 AWG | | 10 AWG | |
|--------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | |
| 26 AWG | 1 | CWT-9002 | CWT-9003 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9002 | CWT-9003 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| 24 AWG | 1 | CWT-9002 | CWT-9003 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9002 | CWT-9003 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| 22 AWG | 1 | CWT-9002 | CWT-9003 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| 20 AWG | 1 | CWT-9002 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9005 |
| 18 AWG | 1 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9005 |
| 16 AWG | 1 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9004 | CWT-9005 | CWT-9005 |
| 14 AWG | 1 | CWT-9003 | CWT-9003 | CWT-9003 | CWT-9004 | CWT-9003 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9004 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 |
| 12 AWG | 1 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9004 | CWT-9005 | CWT-9004 | CWT-9005 | CWT-9005 |
| | 2 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 |
| 10 AWG | 1 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 | CWT-9005 |

Table B. D-110 Series Selection

| Side A: Size and number of conductors | Side B: Size and number of conductors | | | | | | | | |
|--|---------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | 26 AWG | | 24 AWG | | 22 AWG | | 20 AWG | | |
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | |
| 26 AWG | 1 | D-110-35 | D-110-35 | D-110-35 | D-110-35 | D-110-35 | D-110-41 | D-110-41 | D-110-41 |
| | 2 | D-110-35 | D-110-35 | D-110-35 | D-110-41 | D-110-35 | D-110-41 | D-110-41 | D-110-41 |
| 24 AWG | 1 | D-110-35 | D-110-35 | D-110-35 | D-110-35 | D-110-35 | D-110-41 | D-110-41 | D-110-41 |
| | 2 | D-110-35 | D-110-41 | D-110-35 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 |
| 22 AWG | 1 | D-110-35 | D-110-35 | D-110-35 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 |
| | 2 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-0181 |
| 20 AWG | 1 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-0181 |
| | 2 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-0181 | D-110-0181 | D-110-0181 |
| 18 AWG | 1 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-0181 |
| | 2 | D-110-0181 | D-110-0181 | D-110-0181 | D-110-0181 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0101 |
| 16 AWG | 1 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-41 | D-110-0181 | D-110-0181 | D-110-0181 |
| | 2 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0101 |
| 14 AWG | 1 | D-110-0181 | D-110-0181 | D-110-0181 | D-110-0181 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0101 |
| | 2 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 |
| 12 AWG | 1 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 |
| | 2 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 |
| 10 AWG | 1 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0083 | D-110-0083 | D-110-0083 |

| | 18 AWG | | 16 AWG | | 14 AWG | | 12 AWG | | 10 AWG | |
|--------|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | |
| 26 AWG | 1 | D-110-41 | D-110-0181 | D-110-41 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 |
| | 2 | D-110-41 | D-110-0181 | D-110-41 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 |
| 24 AWG | 1 | D-110-41 | D-110-0181 | D-110-41 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 |
| | 2 | D-110-41 | D-110-0181 | D-110-41 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 |
| 22 AWG | 1 | D-110-41 | D-110-0181 | D-110-41 | D-110-0181 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 |
| | 2 | D-110-41 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 | D-110-0090 |
| 20 AWG | 1 | D-110-41 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 |
| | 2 | D-110-0181 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 | D-110-0090 |
| 18 AWG | 1 | D-110-0181 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 | D-110-0090 |
| | 2 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0083 |
| 16 AWG | 1 | D-110-0181 | D-110-0101 | D-110-0181 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 | D-110-0090 |
| | 2 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 | D-110-0090 | D-110-0083 | D-110-0083 |
| 14 AWG | 1 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0101 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0083 |
| | 2 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0083 | D-110-0083 |
| 12 AWG | 1 | D-110-0101 | D-110-0090 | D-110-0101 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0083 | D-110-0083 |
| | 2 | D-110-0090 | D-110-0090 | D-110-0090 | D-110-0083 | D-110-0090 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 |
| 10 AWG | 1 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 | D-110-0083 |

For Fine Wire Splices 26 AWG (0.15 mm²) and Smaller (mm/in)

| Part number | Inside diameter | | Length*** |
|-------------|-----------------|-------------------|-------------|
| | As supplied* | Fully recovered** | |
| D-110-0071 | 0.9 (0.035) | 0.6 (0.025) | 4.7 (0.185) |
| D-110-0213 | 0.9 (0.035) | 0.6 (0.025) | 4.2 (0.165) |
| D-110-0214 | 0.6 (0.025) | 0.3 (0.013) | 6.3 (0.250) |
| D-110-0217 | 1.0 (0.040) | 0.6 (0.025) | 9.1 (0.360) |
| D-110-40 | 0.6 (0.025) | 0.5 (0.021) | 5.1 (0.200) |

Note: Micro SolderSleeve terminations are used for splicing wires smaller than 26 AWG (0.15 mm²).

*Minimum. Wire insulation must be smaller than this.

**Maximum. Wire insulation and combined conductor diameters must be greater than this.

***Nominal. Wire strip length must be approximately one-half of this.

Table C. D-1744 Series Selection

| Side A: Size and number of conductors | Side B: Size and number of conductors | | | | | | | | |
|---------------------------------------|---------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 26 AWG | | 24 AWG | | 22 AWG | | 20 AWG | | |
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | |
| 26 AWG | 1 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-02 |
| | 2 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-02 | D-1744-01 | D-1744-02 |
| 24 AWG | 1 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-02 |
| | 2 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-02 | D-1744-02 | D-1744-02 |
| 22 AWG | 1 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-02 | D-1744-01 | D-1744-02 |
| | 2 | D-1744-01 | D-1744-02 | D-1744-01 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 |
| 20 AWG | 1 | D-1744-01 | D-1744-01 | D-1744-01 | D-1744-02 | D-1744-01 | D-1744-02 | D-1744-02 | D-1744-02 |
| | 2 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-03 |
| 18 AWG | 1 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-03 |
| | 2 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 |
| 16 AWG | 1 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-02 | D-1744-03 |
| | 2 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 |
| 14 AWG | 1 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 |
| | 2 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| 12 AWG | 1 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 |
| | 2 | D-1744-04 | D-1744-04 | D-1744-04 | | D-1744-04 | | | |
| | | 18 AWG | | 16 AWG | | 14 AWG | | 12 AWG | |
| | | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| 26 AWG | 1 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| | 2 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| 24 AWG | 1 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| | 2 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| 22 AWG | 1 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| | 2 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 |
| 20 AWG | 1 | D-1744-02 | D-1744-03 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | |
| | 2 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 | D-1744-03 | |
| 18 AWG | 1 | D-1744-02 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | |
| | 2 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 | D-1744-03 | |
| 16 AWG | 1 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 | D-1744-03 | |
| | 2 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 | D-1744-04 | |
| 14 AWG | 1 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 | D-1744-03 | |
| | 2 | D-1744-03 | D-1744-04 | D-1744-04 | D-1744-04 | D-1744-04 | | | |
| 12 AWG | 1 | D-1744-03 | D-1744-03 | D-1744-03 | D-1744-04 | D-1744-03 | | D-1744-04 | |
| | 2 | | | | | | | | |

CMA/mm² Calculation

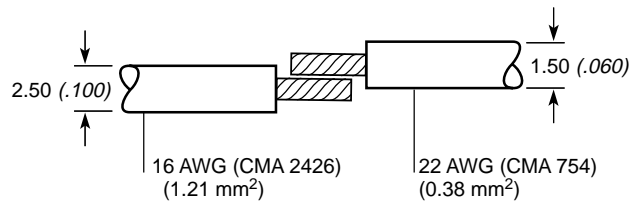
To calculate the total circular mil or mm² area of the conductors to be terminated in a single splice, follow these steps:

1. Choose either CMA or mm² as your unit of measure for selection purposes and continue to use it for all your selection criteria.
2. In the workspace below, list the CMA or mm² for each conductor that will go into the same splice. (To assist you, Table D on this page provides the CMA of typical conductors.)
3. Add together the values listed in the workspace below to obtain the total area.
4. From Table E on this page, select the part number recommended for the total CMA or mm² you have calculated.
5. Refer to the examples on this page for further clarification.

| Wire number | CMA | mm ² | |
|--------------|-------|-----------------|--------------------|
| 1 | _____ | _____ | |
| 2 | _____ | _____ | |
| 3 | _____ | _____ | |
| 4 | _____ | _____ | |
| 5 | _____ | _____ | Part number: _____ |
| Total | _____ | _____ | _____ |

CMA/mm² Examples (mm/in)

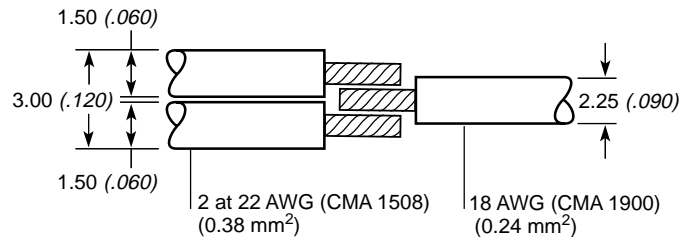
One-to-One Wire Splice



Total CMA = 3180
Total mm² = 1.59

Correct part number selection from Table E
(based on CMA/mm² and wire OD) = CWT-9002 or D-110-41 or D-1744-02.

Multiwire Splice



Total CMA = 3408
Total mm² = 1.71

Correct part number selection from Table E
(based on CMA/mm² and wire OD) = CWT-9003 or D-110-0181 or D-1744-03.

Table D. CMA of Typical AWG Conductors

| AWG | 28 | 26 | 24 | 22 | 20 | 18 | 16 | 14 | 12 |
|-----------------------|------|------|------|------|------|------|------|------|------|
| CMA | 177 | 304 | 475 | 754 | 1216 | 1900 | 2426 | 3831 | 5874 |
| mm² | 0.09 | 0.15 | 0.24 | 0.38 | 0.61 | 0.95 | 1.21 | 1.92 | 2.94 |

Table E. Multiwire Splice Selection (mm/in)

| Product series | Wire OD | | | | CMA | | mm ² | |
|-------------------------------|---------|-------|------|-------|----------------|-------|-----------------|------|
| | min. | | max. | | Combined total | | Combined total | |
| | min. | max. | min. | max. | min. | max. | min. | max. |
| CWT-9001/D-110-35/D-1744-01 | .76 | (.03) | 1.5 | (.06) | 450 | 1500 | 0.2 | .75 |
| CWT-9002/D-110-41/D-1744-02 | 1.0 | (.04) | 2.8 | (.11) | 1250 | 4000 | 0.6 | 2.0 |
| CWT-9003/D-110-0181/D-1744-03 | 2.0 | (.08) | 4.4 | (.17) | 3600 | 5000 | 1.8 | 2.5 |
| CWT-9004/D-110-0101/D-1744-04 | 3.0 | (.12) | 5.8 | (.22) | 4800 | 9000 | 2.4 | 4.5 |
| CWT-9005/D-110-0090/D-1744-04 | 4.0 | (.16) | 7.0 | (.27) | 8500 | 16200 | 4.2 | 8.1 |
| CWT-9005/D-110-0083 | 4.0 | (.16) | 8.6 | (.34) | 16200 | 25000 | 8.1 | 12.5 |

Product Characteristics

Material

| | |
|---------------------------------|--|
| Insulation (D-110, D-1744) | Radiation-crosslinked, heat-shrinkable polyvinylidene fluoride (Kynar) |
| Insulation (CWT) | Radiation-crosslinked, heat-shrinkable polyolefin |
| Solder and flux (D-110, D-1744) | Sn63 Pb37, RMA flux |
| Solder and flux (CWT) | Sn50 Pb32 Cd18, RA flux |
| Melttable inserts (CWT, D-1744) | Melttable thermoplastic |

Typical performance

| | |
|------------------------------------|-------------------------------|
| Voltage drop | 2.0 mV |
| Tensile strength | Exceeds strength of conductor |
| Dielectric strength | 2.0 kV |
| Temperature rating (CWT) | -55°C to +125°C |
| Temperature rating (D-110, D-1744) | -55°C to +150°C |
| Insulation resistance | 1000 megohms |

Specifications/Approvals

| Series | Agency | Raychem |
|--------|-----------|---------|
| CWT | UL E87681 | D-5023 |
| D-110 | UL E87681 | RT-1404 |
| D-1744 | NAS-1744 | RT-1404 |

Installation Requirements

For proper installation of these devices the correct heating tool and reflector attachment must be used.

Any one of the following Raychem heating tools is recommended:

- HL1802E
- AA-400 Super Heater
- IR-1759 MiniRay
- CV-1981

Refer to Raychem installation procedure RCPS 100-70 (D-1744/D-110) or RPIP 850-00 (CWT) for detailed instructions and recommended reflector attachments.

You will find ordering information for these tools in the Application Equipment section of this catalog.

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