

# 3M™ Shielded/Jacketed, Flat Cable

.050" 28 AWG Stranded, PVC/PVC

3517 Series



- Meets external wiring requirements of National Electrical Code, Article 725 (CL2)
- UL listed for USA and Canadian markets
- 28 AWG stranded wire on .050 inch centers permits mass termination to broad line of IDC connectors
- 360 degree expanded copper shielding provides 20 db average shielding effectiveness
- Primary cable is zippable for branching or discrete terminations
- See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of [www.3M.com/Interconnects](http://www.3M.com/Interconnects) for compliance information (RIA E1 & C1 apply)

Date Modified: December 8, 2009

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## Physical

**Jacket Material:** Polyvinyl Chloride (PVC)

Color: Black

Primary Material: PVC

Color: Gray

**Marking:**

Standard: (UL) CL2 75C 28 AWG or AWM 20879 3M NU C  AWM IIA/B 80C 300V FT1 EU <50V

**Conductors:** 28 AWG, 7 × 36 AWG [ 7 × Ø 0.127 ] Tinned Stranded Copper

Shielding Material: Expanded Copper

## Electrical

**Voltage Rating:** USA: N.E.C. 725, CL2 or AWM 300V    Canada: <50V    EU: <50V

**Insulation Resistance:** (Primary Cable) > 1 × 10<sup>10</sup> Ω/10 ft. [ 3 m ]

| <b>Characteristic Impedance:</b> | <b>Unbalanced</b> | <b>Balanced</b> |
|----------------------------------|-------------------|-----------------|
|                                  | 70 Ω              | 119 Ω           |

|                     |                          |                          |
|---------------------|--------------------------|--------------------------|
| <b>Capacitance:</b> | 21.5 pF/ft [ 70.5 pF/m ] | 12.7 pF/ft [ 41.7 pF/m ] |
|---------------------|--------------------------|--------------------------|

|                    |                          |                          |
|--------------------|--------------------------|--------------------------|
| <b>Inductance:</b> | 0.11 μH/ft [ 0.35 μH/m ] | 0.18 μH/ft [ 0.59 μH/m ] |
|--------------------|--------------------------|--------------------------|

|                           |                          |                          |
|---------------------------|--------------------------|--------------------------|
| <b>Propagation Delay:</b> | 1.51 ns/ft [ 4.95 ns/m ] | 1.51 ns/ft [ 4.95 ns/m ] |
|---------------------------|--------------------------|--------------------------|

|                                 |     |     |
|---------------------------------|-----|-----|
| <b>Velocity of Propagation:</b> | 67% | 67% |
|---------------------------------|-----|-----|

Note: Unbalanced is measured between ground-signal-ground conductors, with shield grounded. Balanced is measured between signal conductors within a pair, with the shield floating.

## Environmental

**Temperature Rating:** USA: CL2; 75°C or AWM: -20°C to +80°C    Canada: 80°C

**Flammability Rating:** USA: N.E.C. 725, CL2    Canada: FT1

UL File No.: E118773, Power Limited Circuit Cable: CL2 (or AWM Style 20879)

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Inch  
[mm]

| Tolerance Unless Noted |     |      |       |
|------------------------|-----|------|-------|
|                        | .0  | .00  | .000  |
| Inch                   | ±.1 | ±.01 | ±.005 |

[ ] Dimensions for Reference Only

| Number of Conductors | 3M Part Number | Dimension A<br>± .040" | Dimension B            |
|----------------------|----------------|------------------------|------------------------|
| 09                   | 3517/09        | .58 [ 14.7 ]           | 0.400 ± .007 [ 10.16 ] |
| 10                   | 3517/10        | .63 [ 16.0 ]           | 0.450 ± .007 [ 11.43 ] |
| 14                   | 3517/14        | .83 [ 21.1 ]           | 0.650 ± .007 [ 16.51 ] |
| 15                   | 3517/15        | .88 [ 22.4 ]           | 0.700 ± .007 [ 17.78 ] |
| 16                   | 3517/16        | .93 [ 23.6 ]           | 0.750 ± .011 [ 19.05 ] |
| 20                   | 3517/20        | 1.13 [ 28.7 ]          | 0.950 ± .011 [ 24.13 ] |
| 24                   | 3517/24        | 1.33 [ 33.8 ]          | 1.150 ± .011 [ 29.21 ] |
| 25                   | 3517/25        | 1.38 [ 35.0 ]          | 1.200 ± .011 [ 30.48 ] |
| 26                   | 3517/26        | 1.43 [ 36.3 ]          | 1.250 ± .011 [ 31.75 ] |
| 30                   | 3517/30        | 1.63 [ 41.4 ]          | 1.450 ± .015 [ 36.83 ] |
| 34                   | 3517/34        | 1.83 [ 46.5 ]          | 1.650 ± .015 [ 41.91 ] |
| 36                   | 3517/36        | 1.93 [ 49.0 ]          | 1.750 ± .015 [ 44.45 ] |
| 37                   | 3517/37        | 1.98 [ 50.3 ]          | 1.800 ± .015 [ 45.72 ] |
| 40                   | 3517/40        | 2.13 [ 54.1 ]          | 1.950 ± .015 [ 49.53 ] |
| 50                   | 3517/50        | 2.63 [ 66.8 ]          | 2.450 ± .015 [ 62.23 ] |
| 60                   | 3517/60        | 3.13 [ 79.5 ]          | 2.950 ± .015 [ 74.93 ] |
| 64                   | 3517/64        | 3.38 [ 85.9 ]          | 3.150 ± .015 [ 80.01 ] |



Note: Red marking on edge of primary cable designates wire #1.

## Ordering Information

**3517/XX XX**

Blank = Standard  
C = Canadian Certified Version

Number of Conductors  
(See Table)

Blank = Standard  
SF = Splice Free

Note: Available in standard 100 ft or 300 ft rolls, please specify when ordering. Contact 3M for availability of additional conductor counts and/or custom roll lengths.

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