.050” Round, Shielded/Jacketed, Flat Cable
28 AWG Stranded, Mass-Term, PVC/PVC

- Round construction permits easier routing
- 28 AWG wire on .050 inch pitch permits mass termination to broad line of IDC connectors
- Continuous split/bond repeat allows for mass termination on 2.4 inch centers (approximate)
- Primary cable is zippable for branching or discrete terminations
- Meets external wiring requirements of National Electrical Code, Article 725 (CL2)
- UL listed for USA and Canadian markets
- Dual shielding provides 35 db average shielding effectiveness

Date Modified: July 29, 1999

Physical

Jacket
- Material: Polyvinyl Chloride (PVC)
- Color: Black

Primary Material:
- PVC
- Color: Gray

Marking
- Standard: (UL) CL2 75C 28 AWG or AWM 20267 3M NU AWM IIA/B 80C 300V FT1 EU <50V
- Conductors: 28 AWG 7 × 36 [ 7 × 0.127 ] Tinned Stranded Copper
- Shielding: .001 [ 0.03 ] Thick Aluminum/Polyester Film Foil and 90% Coverage Tinned Copper Braid

Electrical

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

Insulation Resistance:
- > 1 × 10¹⁰ Ω/10 ft. [ 3m ]

Unbalanced Balanced
- Characteristic Impedance 62Ω 106 Ω
- Capacitance 27.7 pF/ft. [ 90.88 pF/m ] 15.2 pF/ft. [ 49.9 pF/m ]
- Inductance .13 µH/ft. [ 0.43 µH/m ] .20 µH/ft. [ 0.66 µH/m ]
- Propagation Delay 1.72 ns/ft. [ 5.64 ns/m ] 1.62 ns/ft. [ 5.32 ns/m ]
- Velocity of Propagation 59% 62%

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 Max or AWM; −20°C to +80°C
- Canada: 80°C

Flammability Rating:
- USA: N.E.C. 725, CL2
- Canada: FTI

UL File No.: E118773, Power Limited Circuit Cable: CL2 (or AWM Style 20267)
### .050" Round, Shielded/Jacket, Flat Cable
#### 28 AWG Stranded, Mass-Term, PVC/PVC

#### 3659 Series

<table>
<thead>
<tr>
<th>Number of Conductors</th>
<th>3M Part Number</th>
<th>Dimension A ± .03</th>
<th>Dimension B Ref (See Note 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09</td>
<td>3659/09</td>
<td>0.27 [ 6.9 ]</td>
<td>0.40 [ 10.2 ]</td>
</tr>
<tr>
<td>10</td>
<td>3659/10</td>
<td>0.27 [ 6.9 ]</td>
<td>0.45 [ 11.4 ]</td>
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<tr>
<td>14</td>
<td>3659/14</td>
<td>0.31 [ 7.9 ]</td>
<td>0.65 [ 16.5 ]</td>
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<tr>
<td>15</td>
<td>3659/15</td>
<td>0.31 [ 7.9 ]</td>
<td>0.70 [ 17.8 ]</td>
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<tr>
<td>16</td>
<td>3659/16</td>
<td>0.31 [ 7.9 ]</td>
<td>0.75 [ 19.1 ]</td>
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<tr>
<td>20</td>
<td>3659/20</td>
<td>0.34 [ 8.6 ]</td>
<td>0.95 [ 24.1 ]</td>
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<tr>
<td>24</td>
<td>3659/24</td>
<td>0.37 [ 9.4 ]</td>
<td>1.15 [ 29.2 ]</td>
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<tr>
<td>25</td>
<td>3659/25</td>
<td>0.37 [ 9.4 ]</td>
<td>1.20 [ 30.5 ]</td>
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<tr>
<td>26</td>
<td>3659/26</td>
<td>0.37 [ 9.4 ]</td>
<td>1.25 [ 31.8 ]</td>
</tr>
<tr>
<td>34</td>
<td>3659/34</td>
<td>0.41 [ 10.4 ]</td>
<td>1.65 [ 41.9 ]</td>
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<tr>
<td>36</td>
<td>3659/36</td>
<td>0.43 [ 10.9 ]</td>
<td>1.75 [ 44.5 ]</td>
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<tr>
<td>37</td>
<td>3659/37</td>
<td>0.43 [ 10.9 ]</td>
<td>1.80 [ 45.7 ]</td>
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<tr>
<td>40</td>
<td>3659/40</td>
<td>0.43 [ 10.9 ]</td>
<td>1.95 [ 49.5 ]</td>
</tr>
<tr>
<td>50</td>
<td>3659/50</td>
<td>0.48 [ 12.2 ]</td>
<td>2.45 [ 62.2 ]</td>
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<tr>
<td>60</td>
<td>3659/60</td>
<td>0.51 [ 13.0 ]</td>
<td>2.95 [ 74.9 ]</td>
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<tr>
<td>64</td>
<td>3659/64</td>
<td>0.54 [ 13.7 ]</td>
<td>3.15 [ 80.0 ]</td>
</tr>
</tbody>
</table>

#### Notes:
1. Red marking on one edge of primary cable designates wire #1.
2. Dimension B pertains to bonded area only.

#### Ordering Information

**3659X/XX**

<table>
<thead>
<tr>
<th>Number of Conductors (See Table)</th>
</tr>
</thead>
</table>

**Jacket Color Options**
- Blank = "Standard" Black Jacket
- C = "Special" Cream Jacket
- G = "Special" Gray Jacket
- L = "Special" Light Olive Jacket

**Dimensions for Reference only**

Inch [mm]

<table>
<thead>
<tr>
<th>Tolerance Unless Noted</th>
<th>Inch</th>
<th>±.1</th>
<th>±.05</th>
<th>±.01</th>
</tr>
</thead>
</table>

Note: Available in standard length of 100 or 300 ft/roll, please specify when ordering.