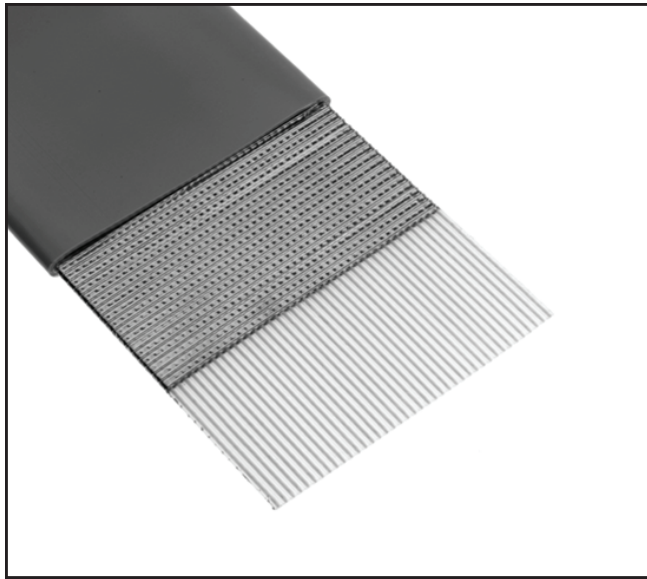


3M™ Pleated Foil Shielded Cable

.050" 28 AWG Stranded, TPE Primary, PVC Jacket

90104 Series



- Can be used with IDC mass termination connectors
- Can be used in applications requiring standard impedance of 100 Ω balanced (differential)
- CL2 rated, rugged design and high reliability for peripheral applications
- Solid pleated copper foil provides flexibility and 35 db average shielding effectiveness
- See Regulatory Information Appendix (RIA) for chemical compliance information (RIA E1 & C1 apply)

Date Modified: September 3, 2013

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Physical

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

Primary Material: Thermoplastic Elastomer (TPE) **Color:** Natural

Marking:

Standard: (UL) CL2 75C 28 AWG 3M NU C  AWM IIA/B 80C 150V FT1 EU <50V

Conductors: 28 AWG, 7 \times 36 AWG [7 \times \varnothing 0.127] Tinned Stranded Copper

Shielding: Solid, Pleated, Copper Foil

Electrical

Voltage Rating: USA: N.E.C. 725, CL2 Canada: 150V EU: <50V

Insulation Resistance: (Primary Cable) $> 1 \times 10^{10} \Omega/10 \text{ ft.}$ [3 m]

Characteristic Impedance: **Unbalanced** **Balanced**
53 Ω 110 Ω

Capacitance: 28.1 pF/ft [92.2 pF/m] 13.4 pF/ft [44.0 pF/m]

Inductance: 0.08 $\mu\text{H}/\text{ft}$ [0.26 $\mu\text{H}/\text{m}$] 0.16 $\mu\text{H}/\text{ft}$ [0.52 $\mu\text{H}/\text{m}$]

Propagation Delay: 1.49 ns/ft [4.89 ns/m] 1.48 ns/ft [4.86 ns/m]

Velocity of Propagation: 68% 69%

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 Canada: 80°C

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

UL File No.: E118773, Power Limited Circuit Cable: CL2

3M
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<http://www.3Mconnectors.com>

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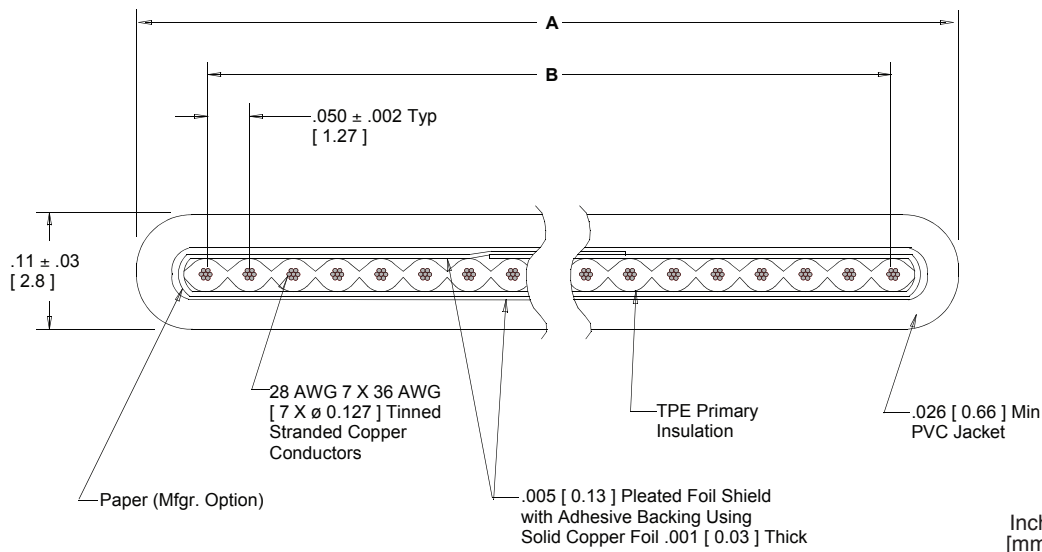
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| Number of Conductors | 3M Part Number | Dimension A | Dimension B |
|----------------------|----------------|---------------|------------------------|
| 15 | 90104/15 | 86 [21.8] | 0.700 ± .007 [17.78] |
| 20 | 90104/20 | 1.11 [28.2] | 0.950 ± .011 [24.13] |
| 25 | 90104/25 | 1.34 [34.0] | 1.200 ± .011 [30.48] |
| 26 | 90104/26 | 1.40 [35.6] | 1.250 ± .011 [31.75] |
| 30 | 90104/30 | 1.60 [40.6] | 1.450 ± .011 [36.83] |
| 34 | 90104/34 | 1.80 [45.7] | 1.650 ± .015 [41.91] |
| 36 | 90104/36 | 1.90 [48.3] | 1.750 ± .015 [44.45] |
| 37 | 90104/37 | 1.95 [49.5] | 1.800 ± .015 [45.72] |
| 40 | 90104/40 | 2.10 [53.4] | 1.950 ± .015 [49.53] |
| 50 | 90104/50 | 2.60 [66.0] | 2.450 ± .015 [62.23] |
| 60 | 90104/60 | 3.10 [78.7] | 2.950 ± .015 [74.93] |
| 64 | 90104/64 | 3.32 [84.3] | 3.150 ± .015 [80.01] |

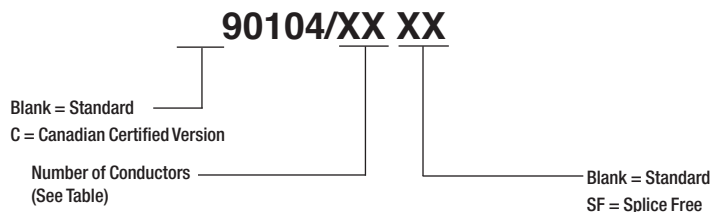


| Tolerance Unless Noted | | | |
|------------------------|-----|------|-------|
| | .0 | .00 | .000 |
| Inch | ±.1 | ±.05 | ±.010 |

[] Dimensions for Reference Only

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

Ordering Information



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

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Sheet 2 of 2

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