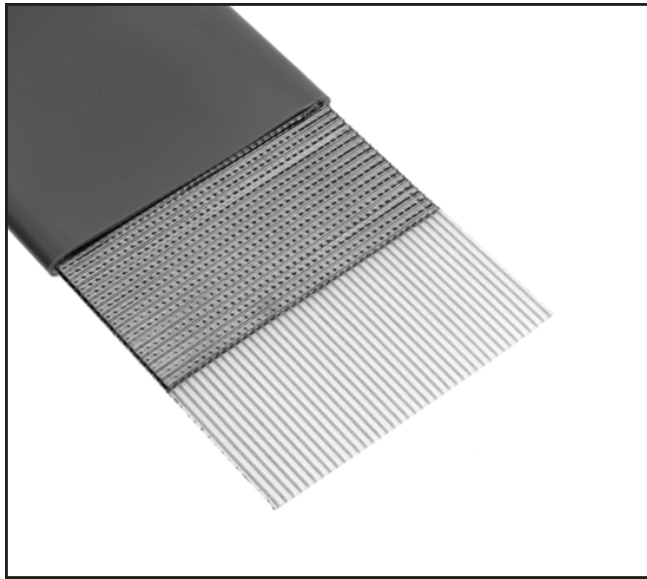


# 3M™ Pleated Foil Shielded Cable

.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  $\Omega$  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 x 36 AWG [ 7 x  $\varnothing$  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 ]

<b>Characteristic Impedance:</b>	<b>Unbalanced</b>	<b>Balanced</b>
	53 $\Omega$	110 $\Omega$

<b>Capacitance:</b>	28.1 pF/ft [ 92.2 pF/m ]	13.4 pF/ft [ 44.0 pF/m ]
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<b>Inductance:</b>	0.08 $\mu\text{H}/\text{ft}$ [ 0.26 $\mu\text{H}/\text{m}$ ]	0.16 $\mu\text{H}/\text{ft}$ [ 0.52 $\mu\text{H}/\text{m}$ ]
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<b>Propagation Delay:</b>	1.49 ns/ft [ 4.89 ns/m ]	1.48 ns/ft [ 4.86 ns/m ]
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<b>Velocity of Propagation:</b>	68%	69%
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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

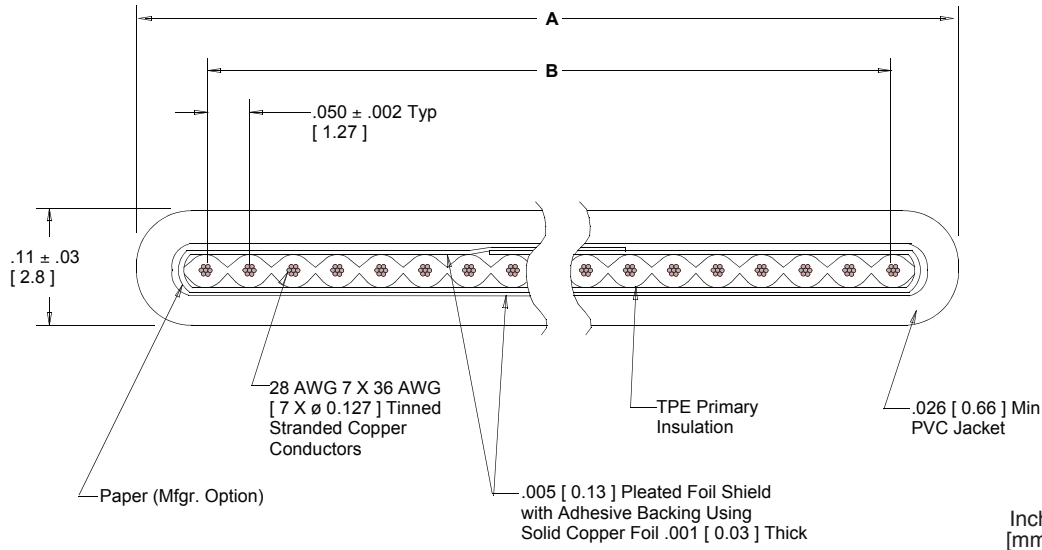
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Number of Conductors	3M Part Number	Dimension A	Dimension B
15	90104/15	86 [ 21.8 ]	0.700 ± .007 [ 17.78 ]
20	90104/20	1.11 [ 28.2 ]	0.950 ± .011 [ 24.13 ]
25	90104/25	1.34 [ 34.0 ]	1.200 ± .011 [ 30.48 ]
26	90104/26	1.40 [ 35.6 ]	1.250 ± .011 [ 31.75 ]
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 ]

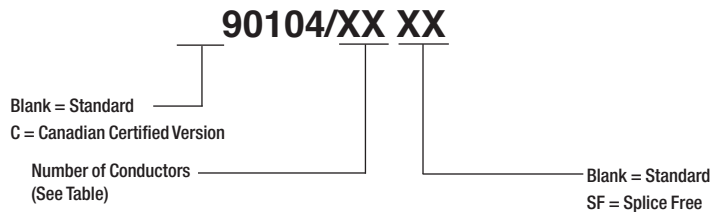


Tolerance Unless Noted			
	.0	.00	.000
Inch	±.1	±.05	±.010

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

[ ] Dimensions for Reference Only

## 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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**3M Electronics Solutions Division**

6801 River Place Blvd.  
Austin, TX 78726-9000  
U.S.A.  
1-800-225-5373  
[www.3Mconnectors.com](http://www.3Mconnectors.com)

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