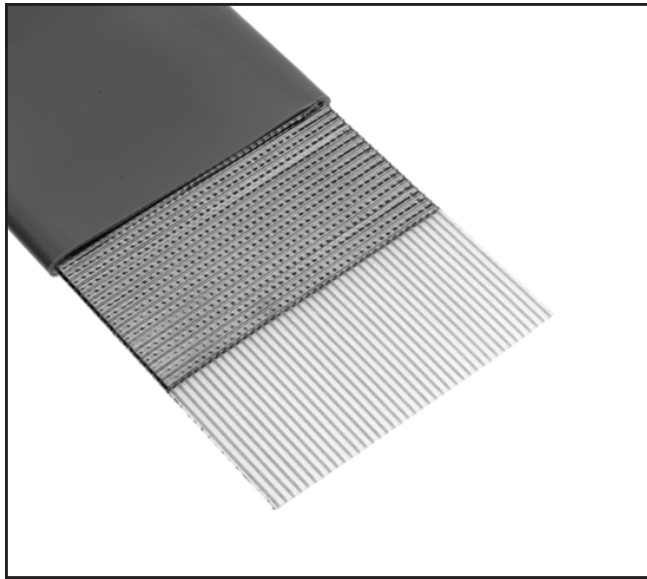


3M™ Pleated Foil Shielded Cable

.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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Sheet 1 of 2

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]
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Inductance:	0.08 $\mu\text{H/ft}$ [0.26 $\mu\text{H/m}$]	0.16 $\mu\text{H/ft}$ [0.52 $\mu\text{H/m}$]
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Propagation Delay:	1.49 ns/ft [4.89 ns/m]	1.48 ns/ft [4.86 ns/m]
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Velocity of Propagation:	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

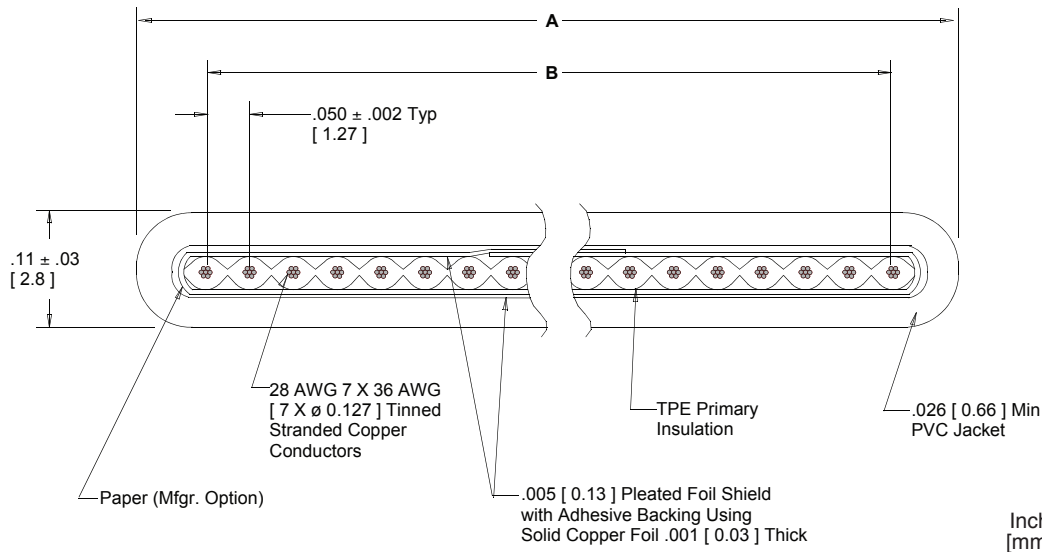
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Number of Conductors	3M Part Number	Dimension A	Dimension B
15	90104/15	86 [21.8]	0.700 ± .007 [17.78]
20	90104/20	1.11 [28.2]	0.950 ± .011 [24.13]
25	90104/25	1.34 [34.0]	1.200 ± .011 [30.48]
26	90104/26	1.40 [35.6]	1.250 ± .011 [31.75]
30	90104/30	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]

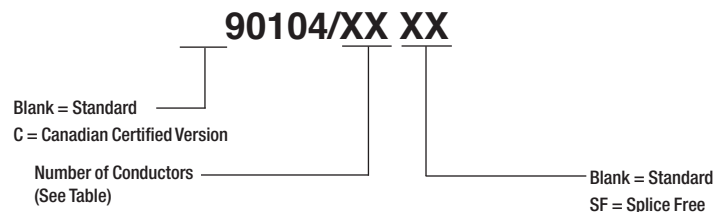


Tolerance Unless Noted			
	.0	.00	.000
Inch	±.1	±.05	±.010

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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Sheet 2 of 2

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