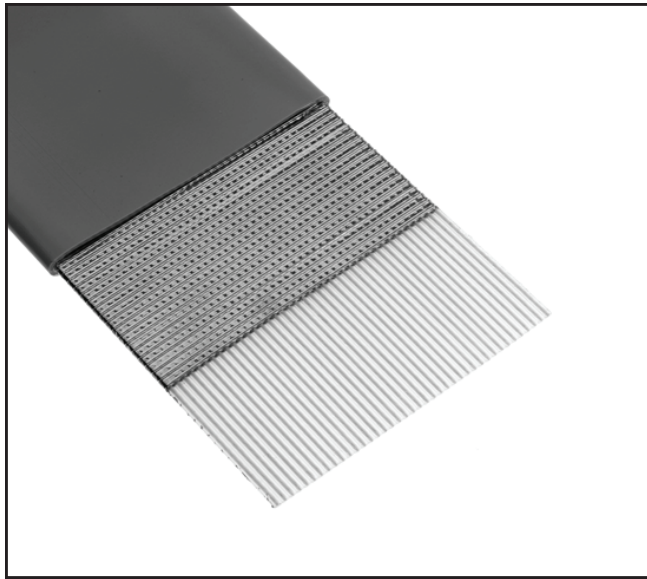


# 3M™ Pleated Foil Shielded Cable

.025" 30 AWG Solid, TPE Primary, PVC Jacket

90101 Series



- Compatible with IDC mass termination connectors
- Functions with applications requiring standard impedance of 100  $\Omega$  balanced (differential)
- Extremely low crosstalk, used in the all-signal mode to quadruple signal density as compared to standard .025 inch flat ribbon cable
- Solid pleated copper foil provides flexibility and 35 db average shielding effectiveness
- CL2 rated, rugged design and high reliability for peripheral applications
- See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of [www.3M.com/Interconnect](http://www.3M.com/Interconnect) for compliance information (RIA E1 & C1 apply)

Date Modified: July 16, 2009

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## Physical

### Jacket:

Material: Polyvinyl Chloride (PVC)

Color: Gray

Primary Material: Thermoplastic Elastomer (TPE)

### Marking:

Standard: (UL) CL2 75C 30 AWG 3M NU C  AWM IIA/B 80C 150V FT1 EU <50V

**Conductors:** 30 AWG [ 0.254 ] Tinned Solid 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 $\Omega$	104 $\Omega$

<b>Capacitance:</b>	28.4 pF/ft [ 93.2 pF/m ]	14.5 pF/ft [ 47.6 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>	1.52 ns/ft [ 4.99 ns/m ]	1.51 ns/ft [ 4.95 ns/m ]
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<b>Velocity of Propagation:</b>	67%	67%
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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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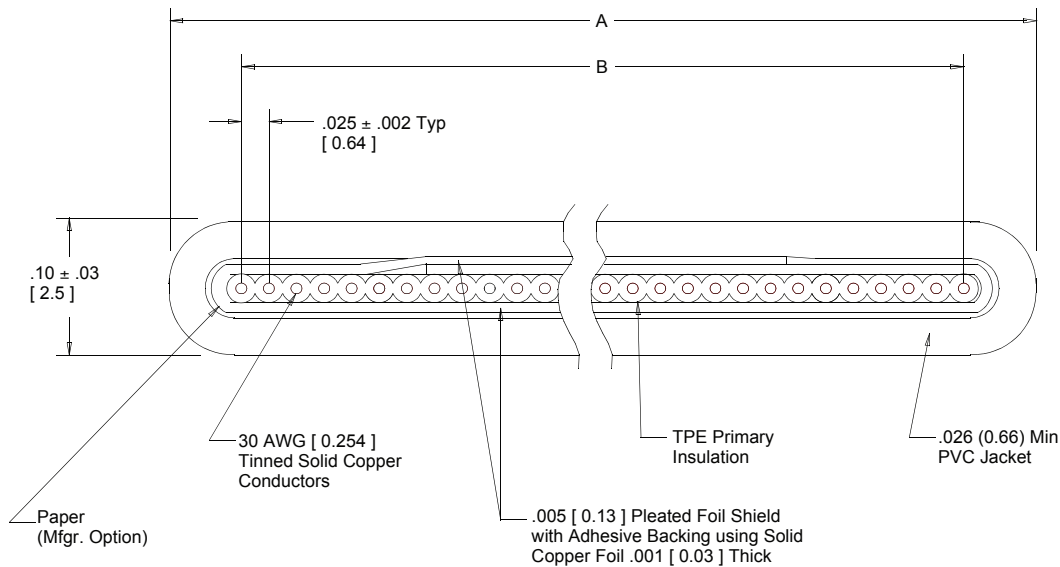
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Number of Conductors	3M Part Number	Dimension A	Dimension B
20	90101/20	0.60 [ 15.2 ]	0.475 ± .006 [ 12.07 ]
26	90101/26	0.75 [ 19.1 ]	0.625 ± .006 [ 15.88 ]
36	90101/36	1.00 [ 25.4 ]	0.875 ± .009 [ 22.23 ]
40	90101/40	1.10 [ 27.9 ]	0.975 ± .009 [ 24.77 ]
50	90101/50	1.35 [ 34.3 ]	1.225 ± .009 [ 31.12 ]
68	90101/68	1.80 [ 45.7 ]	1.675 ± .012 [ 42.55 ]
80	90101/80	2.10 [ 53.3 ]	1.975 ± .015 [ 50.17 ]
100	90101/100	2.60 [ 66.0 ]	2.475 ± .017 [ 62.87 ]



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

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

[ ] Dimensions for Reference Only

## Ordering Information

**90101/XX XX**

Number of Conductors  
(See Table)

Blank = Standard  
SF = Splice Free

Note: Standard lengths are 100 ft, 150 ft, and 300 ft rolls.  
Please specify when ordering.

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