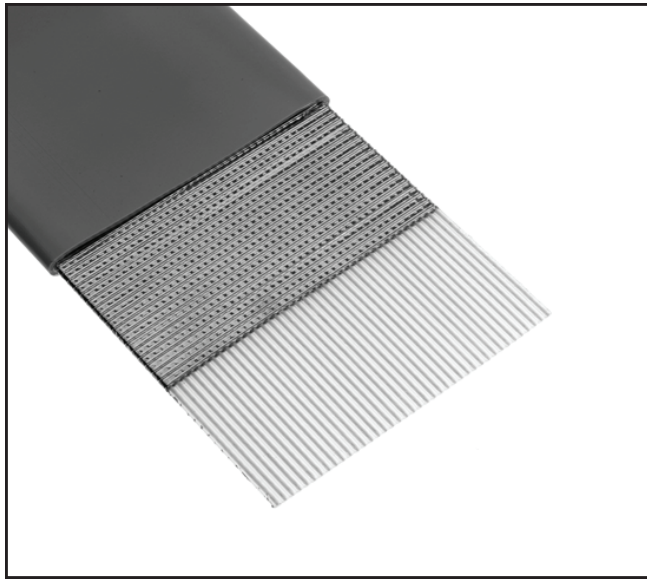


# 3M™ Pleated Foil Shielded Cable

.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)
- 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.3Mconnectors.com](http://www.3Mconnectors.com) for compliance information (RIA E1 & C1 apply)

Date Modified: September 3, 2013

TS-0285-D  
Sheet 1 of 2

## 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)  $> 1 \times 10^{10} \Omega/10 \text{ ft. [ 3 m ]}$

| Characteristic Impedance: | Unbalanced  | Balanced     |
|---------------------------|-------------|--------------|
|                           | 53 $\Omega$ | 104 $\Omega$ |

|                     |                          |                          |
|---------------------|--------------------------|--------------------------|
| <b>Capacitance:</b> | 28.4 pF/ft [ 93.2 pF/m ] | 14.5 pF/ft [ 47.6 pF/m ] |
|---------------------|--------------------------|--------------------------|

|                    |                                                |                                                |
|--------------------|------------------------------------------------|------------------------------------------------|
| <b>Inductance:</b> | 0.08 $\mu\text{H/ft}$ [ 0.26 $\mu\text{H/m}$ ] | 0.16 $\mu\text{H/ft}$ [ 0.52 $\mu\text{H/m}$ ] |
|--------------------|------------------------------------------------|------------------------------------------------|

|                           |                          |                          |
|---------------------------|--------------------------|--------------------------|
| <b>Propagation Delay:</b> | 1.52 ns/ft [ 4.99 ns/m ] | 1.51 ns/ft [ 4.95 ns/m ] |
|---------------------------|--------------------------|--------------------------|

|                                 |     |     |
|---------------------------------|-----|-----|
| <b>Velocity of Propagation:</b> | 67% | 67% |
|---------------------------------|-----|-----|

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

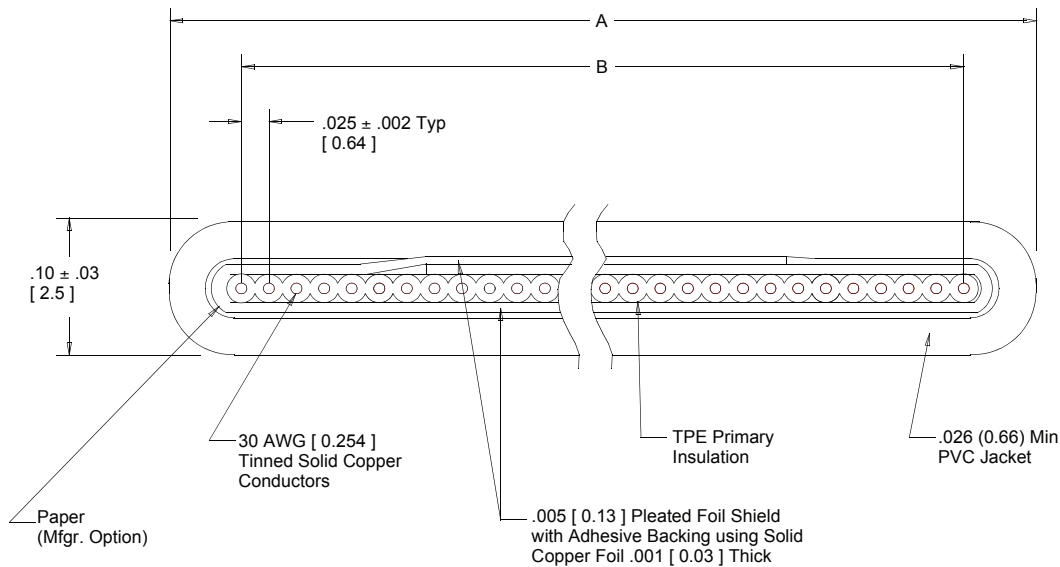
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| Number of Conductors | 3M Part Number | Dimension A   | Dimension B            |
|----------------------|----------------|---------------|------------------------|
| 20                   | 90101/20       | 0.60 [ 15.2 ] | 0.475 ± .006 [ 12.07 ] |
| 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 ] |



Inch  
[mm]

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

[ ] Dimensions for Reference Only

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

## 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.

TS-0285-D  
Sheet 2 of 2

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