

# 3M™ Pleated Foil Shielded Cable

.025" 30 AWG Solid, TPE Primary, Thin TPE Cover

90201 Series



- Can be used with IDC mass termination connectors
- Can be used in applications requiring standard impedance of 100  $\Omega$  balanced (differential)
- Perfect for board-to-board applications within electronic equipment, TPE covering prevents pleated copper foil from accidental shorting
- 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

**Cover Material:** Thermoplastic Elastomer (TPE)

**Cover Color:** Gray

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

**Marking:**

Standard: None

**Canadian Option:**  AWM 20674 105C 150V VW1 3M NU  
 AWM IA 105C 150V FT1 EU <50V

**Conductors:** 30 AWG [ 0.254 ] Tinned Solid Copper

**Shielding:** Solid, Pleated, Copper Foil

## Electrical

**Voltage Rating:** USA: 150V      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 ] |
|---------------------|--------------------------|--------------------------|

|                    |  |  |
|--------------------|--|--|
| <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 $\mu\text{H}/\text{m}$ ] |
|--------------------|--|--|

|                           |                          |                          |
|---------------------------|--------------------------|--------------------------|
| <b>Propagation Delay:</b> | 1.52 ns/ft [ 4.99 ns/m ] | 1.50 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:** -20°C to +105°C

**Flammability Rating:** USA: VW-1      Canada: FT1

UL File No.: E42769, Style No.: 20674

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| Number of Conductors | 3M Part Number | Dimension A   | Dimension B            |
|----------------------|----------------|---------------|------------------------|
| 20                   | 90201/20       | 0.54 [ 13.7 ] | 0.475 ± .006 [ 12.06 ] |
| 26                   | 90201/26       | 0.69 [ 17.5 ] | 0.625 ± .006 [ 15.88 ] |
| 36                   | 90201/36       | 0.94 [ 23.9 ] | 0.875 ± .009 [ 22.23 ] |
| 40                   | 90201/40       | 1.04 [ 26.4 ] | 0.975 ± .009 [ 24.77 ] |
| 50                   | 90201/50       | 1.29 [ 32.8 ] | 1.225 ± .009 [ 31.11 ] |
| 60                   | 90201/60       | 1.54 [ 39.1 ] | 1.475 ± .012 [ 37.47 ] |
| 68                   | 90201/68       | 1.74 [ 44.2 ] | 1.675 ± .012 [ 42.55 ] |
| 80                   | 90201/80       | 2.04 [ 51.8 ] | 1.975 ± .015 [ 50.17 ] |
| 100                  | 90201/100      | 2.54 [ 64.5 ] | 2.475 ± .017 [ 62.87 ] |



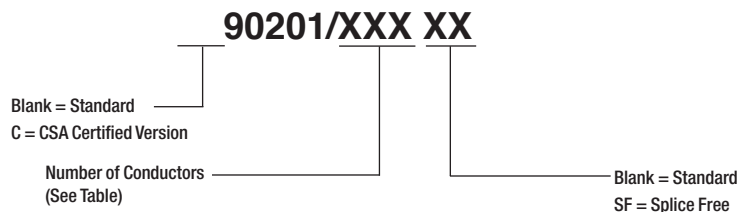
Inch  
[mm]

| 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



Note: Available in standard 100 ft or 300 ft rolls, please specify when ordering. Contact 3M for availability of additional conductor counts and/or custom roll lengths.

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