



3644 Series, Round, 100-Ohm, Discrete, Twisted Pair Cable

3M™ 3644 Series cable is an excellent choice for digital communications applications requiring 100-Ohm impedance. It combines all the features that make for superior performance and easier handling in applications.

The 3644 cable uses a dual shielding of aluminum/polyester film foil and tinned copper braid for excellent EMI/ESD protection. Its twisted pair configuration reduces crosstalk for balanced drive applications, resulting in higher quality communications. Its 28 AWG stranded, discrete color-coded wire is flexible and easy to use.

The 3644 cable is an optimal cost/performance solution for LVDS digital 100-Ohm transmission applications where the cable length is less than four meters and transmission speeds are under 700 Mbytes per second. Applications include:

- Routers
- Switches
- Device-to-device digital communications
- Desktop monitors
- Factory automation equipment
- Medical equipment
- Kiosk displays and flat panel displays

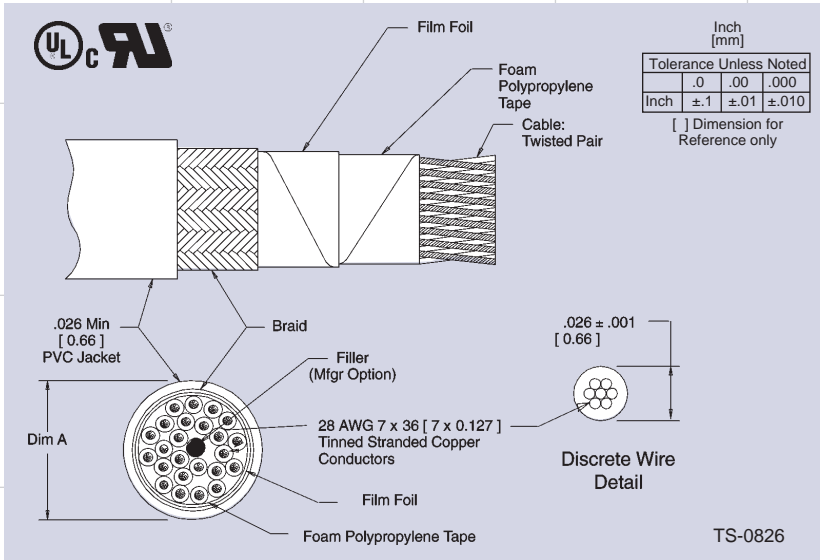
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3M promises innovative, quality products and service that make your life easier and better, from a company you can trust. 3M is a company of creative problem-solvers. Whether the challenge is precise signal transmission requirements, fast moving schedules on a production line or just-in-time delivery to manufacturing sites around the world, 3M's research, engineering, production and sales staff have the experience and tools to do the job. The 3644 Series Cable extends 3M's family of excellent cable and cable assemblies, offering you even more options in digital design.

Features

- Color-coded twisted pairs provide easy identification for connector termination
- Dual shielding of aluminum/polyester film foil and tinned copper braid
- UL Listed Power Limited Circuit Cable (CL2)
- Cable meets USA National Electrical Code requirements for external wiring





| Number of Conductors | 3M Part Number | Dimension A .02 |
|----------------------|----------------|-----------------|
| 14 (7 Pair) | 3644X/14 | .22 [5.6] |
| 16 (8 Pair) | 3644x/16 | .23 [5.8] |
| 20 (10 Pair) | 3644X/20 | .24 [6.1] |
| 26 (13 Pair) | 3644X/26 | .25 [6.4] |
| 36 (18 Pair) | 3644X/36 | .29 [7.4] |
| 40 (20 Pair) | 3644X/40 | .30 [7.6] |
| 50 (25 Pair) | 3644X/50 | .32 [8.1] |
| 68 (34 Pair) | 3644X/68 | .37 [9.4] |
| 80 (40 Pair) | 3600X/80 | .39 [9.9] |
| 100 (50 Pair) | 3600X/100 | .44 [11.2] |

| Pair Identification | | | | | | |
|---------------------|------|---------------|--------|------|---------------|--------|
| Pairs | Cond | 1st Conductor | | Cond | 2nd Conductor | |
| | | Solid | Band | | Solid | Band |
| 1 | 1 | White | Tan | 2 | Tan | White |
| 2 | 3 | White | Brown | 4 | Brown | White |
| 3 | 5 | White | Pink | 6 | Pink | White |
| 4 | 7 | White | Orange | 8 | Orange | White |
| 5 | 9 | White | Yellow | 10 | Yellow | White |
| 6 | 11 | White | Green | 12 | Green | White |
| 7 | 13 | White | Blue | 14 | Blue | White |
| 8 | 15 | White | Violet | 16 | Violet | White |
| 9 | 17 | White | Gray | 18 | Gray | White |
| 10 | 19 | Tan | Brown | 20 | Brown | Tan |
| 11 | 21 | Tan | Pink | 22 | Pink | Tan |
| 12 | 23 | Tan | Orange | 24 | Orange | Tan |
| 13 | 25 | Tan | Yellow | 26 | Yellow | Tan |
| 14 | 27 | Tan | Green | 28 | Green | Tan |
| 15 | 29 | Tan | Blue | 30 | Blue | Tan |
| 16 | 31 | Tan | Violet | 32 | Violet | Tan |
| 17 | 33 | Tan | Gray | 34 | Gray | Tan |
| 18 | 35 | Brown | Pink | 36 | Pink | Brown |
| 19 | 37 | Brown | Orange | 38 | Orange | Brown |
| 20 | 39 | Brown | Yellow | 40 | Yellow | Brown |
| 21 | 41 | Brown | Green | 42 | Green | Brown |
| 22 | 43 | Brown | Blue | 44 | Blue | Brown |
| 23 | 45 | Brown | Violet | 46 | Violet | Brown |
| 24 | 47 | Brown | Gray | 48 | Gray | Brown |
| 25 | 49 | Pink | Orange | 50 | Orange | Pink |
| 26 | 51 | Pink | Yellow | 52 | Yellow | Pink |
| 27 | 53 | Pink | Green | 54 | Green | Pink |
| 28 | 55 | Pink | Blue | 56 | Blue | Pink |
| 29 | 57 | Pink | Violet | 58 | Violet | Pink |
| 30 | 59 | Pink | Gray | 60 | Gray | Pink |
| 31 | 61 | Orange | Yellow | 62 | Yellow | Orange |
| 32 | 63 | Orange | Green | 64 | Green | Orange |
| 33 | 65 | Orange | Blue | 66 | Blue | Orange |
| 34 | 67 | Orange | Violet | 68 | Violet | Orange |
| 35 | 69 | Orange | Gray | 70 | Gray | Orange |
| 36 | 71 | Yellow | Green | 72 | Green | Yellow |
| 37 | 73 | Yellow | Blue | 74 | Blue | Yellow |
| 38 | 75 | Yellow | Violet | 76 | Violet | Yellow |
| 39 | 77 | Yellow | Gray | 78 | Gray | Yellow |
| 40 | 79 | Green | Blue | 80 | Blue | Green |
| 41 | 81 | Green | Violet | 82 | Violet | Green |
| 42 | 83 | Green | Gray | 84 | Gray | Green |
| 43 | 85 | Blue | Violet | 86 | Violet | Blue |
| 44 | 87 | Blue | Gray | 88 | Gray | Blue |
| 45 | 89 | Violet | Gray | 90 | Gray | Violet |
| 46 | 91 | White | - | 92 | Tan | - |
| 47 | 93 | Gray | - | 94 | Brown | - |
| 48 | 95 | Blue | - | 96 | Pink | - |
| 49 | 97 | Violet | - | 98 | Orange | - |
| 50 | 99 | Green | - | 100 | Yellow | - |

Electrical

Voltage Rating: USA: N.E.C. 725, CL2 Canada: 150V EU: <50V

Insulation Resistance: (Primary Cable) >1x10¹⁰ Ω/10 ft. [3m]

Unbalanced **Balanced**

Characteristic Impedance: 63 Ω 100 Ω

Capacitance: 24.2 pF/ft. [79.4 pF/m] 15.3 pF/ft. [50.2 pF/m]

Inductance: .10 μH/ft. [0.33 μH/m] .15 μH/ft. [0.49 μH/m]

Propagation Delay: 1.54 ns/ft. [5.05 ns/m] 1.54 ns/ft. [5.05 ns/m]

Velocity of Propagation: 66% 66%

Note: Unbalanced is measured between conductors within a pair with one conductor connected to the shield. Balanced is measured between conductors within a pair with the shield floating.

For ordering information, technical information, and product information, you can reach us at:

Phone: 1-800-225-5373 Fax: 1-800-325-5329

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