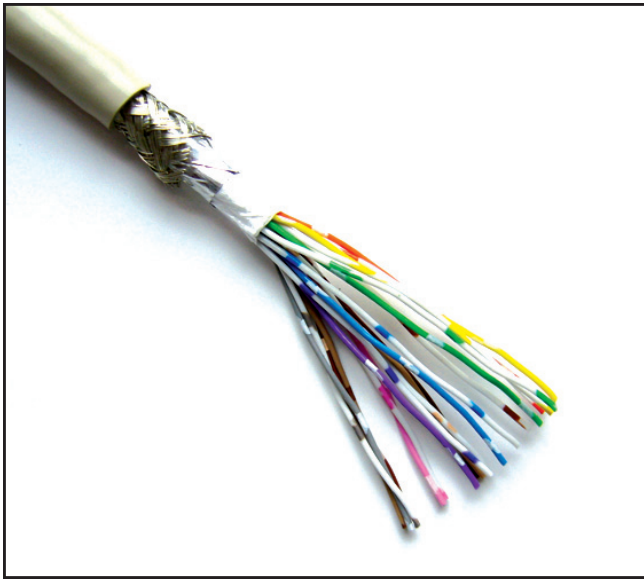


3M™ Round, Shielded/Jacketed, Disc. Wire Cable

28 AWG Stranded, Twisted Pair, PO/PVC

3644X Series



- Dual shielding provides 35 db average shielding effectiveness
- Wires are color coded for easy identification
- Meets external wiring requirements of National Electrical Code, Article 725 (CL2)
- UL listed for US and Canadian markets
- Please contact your 3M sales representative for variations not described in this specification.
- RoHS Compliant. See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of www.3Mconnectors.com for compliance information (RIA E1 & C1 apply)

Date Modified: April 24, 2012

TS-0826-C
Sheet 1 of 3

Physical

Jacket Material: Polyvinyl Chloride (PVC)

Color: Beige

Primary Material: Polyolefin (PO)

Marking:

Standard: (UL) CL2 75C 28 AWG 3M XX

C  AWM IIA/B 80C 150V FT1 EU <50V

(where XX may be NU or NW)

Conductors: 28 AWG 7 × 36 [7 × 0.127] Tinned Stranded Copper

Shielding: 0.001 [0.03] Thick Aluminum/Polyester Film Foil and 90% Coverage Tinned Copper Braid

Electrical

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

Insulation Resistance: (Primary Cable) > 1 × 10¹⁰ Ω/10 ft. [3 m]

| | | |
|----------------------------------|-------------------|-----------------|
| Characteristic Impedance: | Unbalanced | Balanced |
| | 63 Ω | 100 Ω |

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

| | | |
|--------------------|--------------------------|--------------------------|
| Inductance: | 0.10 μH/ft [0.33 μH/m] | 0.15 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 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 Max | Canada: 80°C |
|----------------------------|--------------------|--------------|

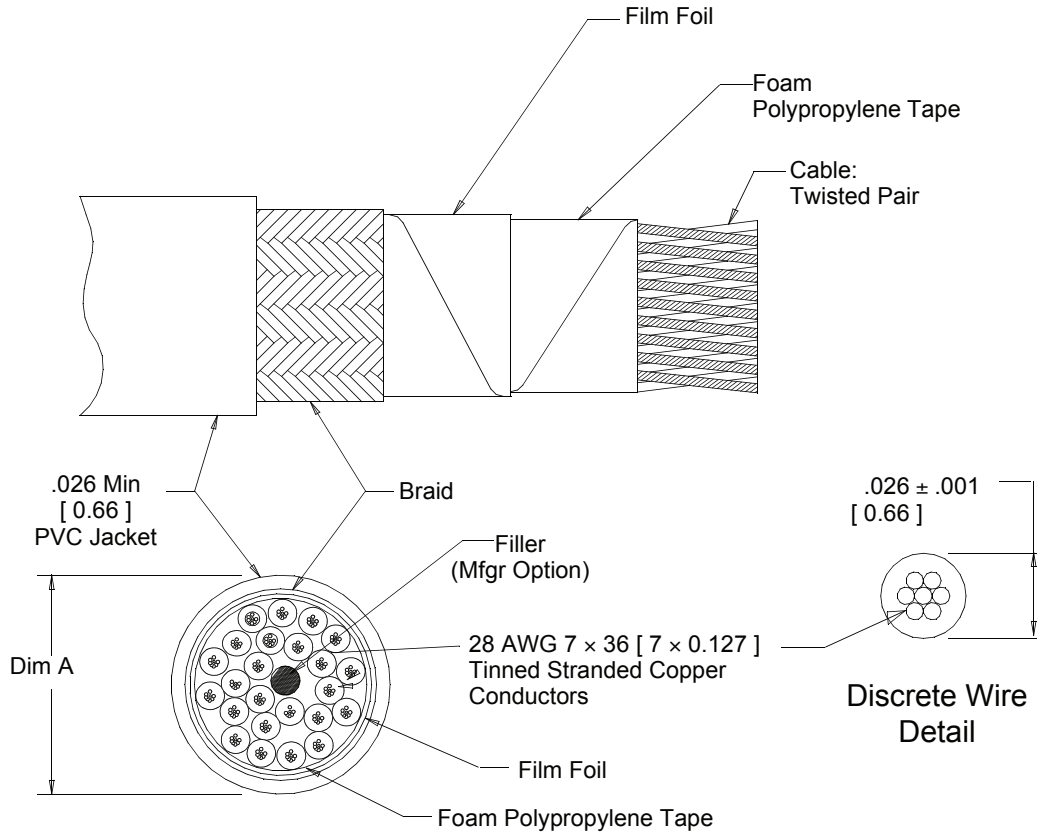
| | | |
|-----------------------------|----------------------|-------------|
| Flammability Rating: | USA: N.E.C. 725, CL2 | Canada: FT1 |
|-----------------------------|----------------------|-------------|

UL File No.: E118773, Power Limited Circuit Cable; CL2

3M™ Round, Shielded/Jacketed, Disc. Wire Cable

28 AWG Stranded, Twisted Pair, PO/PVC

3644X Series



| 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] |
| 24 (12 pair) | 3644X/24 | .25 [6.4] |
| 26 (13 Pair) | 3644X/26 | .25 [6.4] |
| 30 (15 Pair) | 3644X/30 | .27 [6.9] |
| 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) | 3644X/80 | .39 [9.9] |
| 100 (50 Pair) | 3644X/100 | .44 [11.2] |

Inch
[mm]

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

[] Dimensions for Reference Only

TS-0826-C
Sheet 2 of 3

3M™ Round, Shielded/Jacketed, Disc. Wire Cable

28 AWG Stranded, Twisted Pair, PO/PVC

3644X Series

| Pair Identification | | | | | | |
|---------------------|------|---------------|--------|------|---------------|--------|
| Pair | 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 | - |

Ordering Information

3644X / XX XX

Jacket Color Options: _____
 A = "Special" Black Jacket
 B = "Standard" Beige Jacket

Blank = Standard
 SF = Splice Free

Number of Conductors
 (See Table)

Note: Standard length 20 through 68 conductors is 300 feet per roll. Standard length of 80 and 100 conductor cables is 200 feet per roll.

TS-0826-C
 Sheet 3 of 3

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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