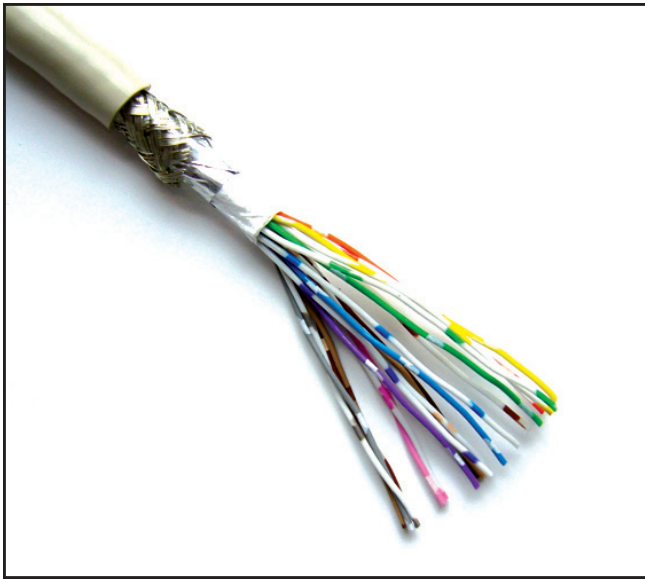


# 3M™ Round, Shielded/Jacketed, Disc. Wire Cable

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

Date Modified: April 24, 2012

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## 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 × 10<sup>10</sup> Ω/10 ft. [ 3 m ]

<b>Characteristic Impedance:</b>	<b>Unbalanced</b>	<b>Balanced</b>
	63 Ω	100 Ω

<b>Capacitance:</b>	24.2 pF/ft [ 79.4 pF/m ]	15.3 pF/ft [ 50.2 pF/m ]

<b>Inductance:</b>	0.10 μH/ft [ 0.33 μH/m ]	0.15 μH/ft [ 0.49 μH/m ]

<b>Propagation Delay:</b>	1.54 ns/ft [ 5.05 ns/m ]	1.54 ns/ft [ 5.05 ns/m ]

<b>Velocity of Propagation:</b>	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

<b>Temperature Rating:</b>	USA: CL2: 75°C Max	Canada: 80°C
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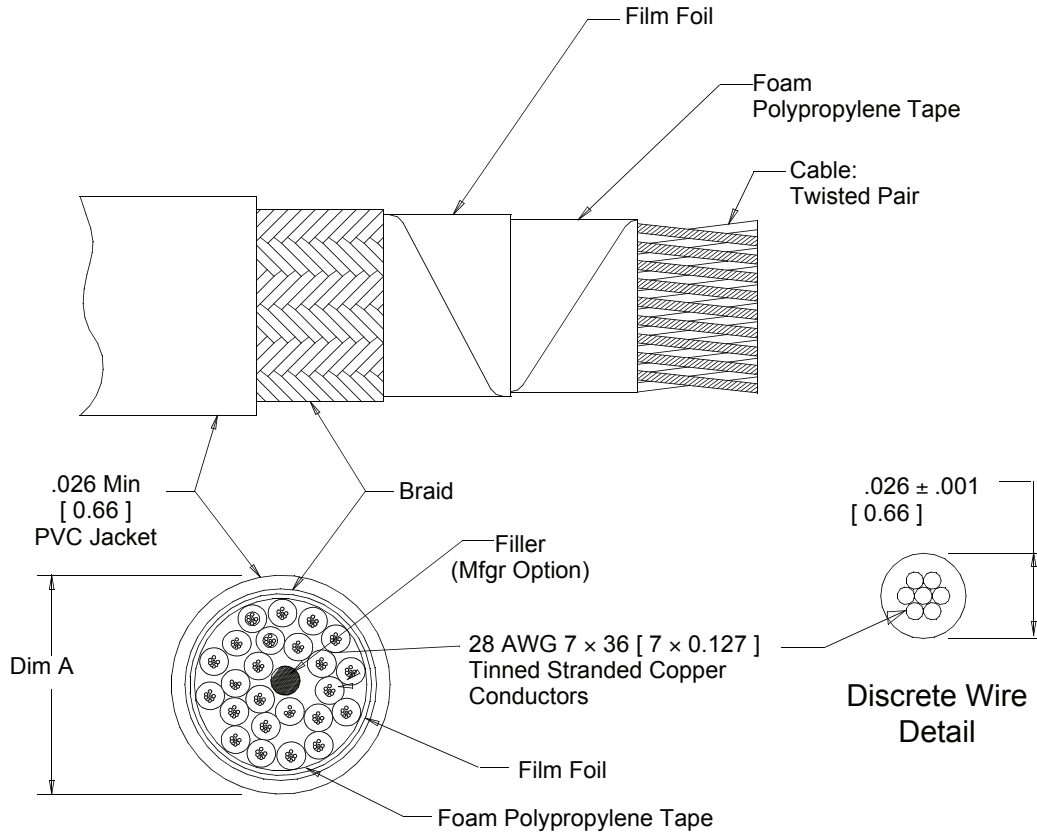
<b>Flammability Rating:</b>	USA: N.E.C. 725, CL2	Canada: FT1
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UL File No.: E118773, Power Limited Circuit Cable; CL2

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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

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# 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.

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