

3M™ Round, Shielded/Jacketed, Flat Cable

.050" 28 AWG Stranded, Mass Terminatable, PVC/PVC

3659 Series




- Round construction permits easier routing
- 28 AWG wire on .050 inch pitch permits mass termination to broad line of IDC connectors
- Continuous split/bond repeat allows for mass termination on 2.4 inch centers (approximate)
- Primary cable is zippable for branching or discrete terminations
- Meets external wiring requirements of National Electrical Code, Article 725 (CL2)
- UL listed for USA and Canadian markets
- Dual shielding provides 35 db average shielding effectiveness
- RoHS* Compliant

Date Modified: April 13, 2007

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Physical

Jaket Material: Polyvinyl Chloride (PVC)
Color: Black
Primary Material: PVC
Color: Gray
Marking Standard: (UL) CL2 75C 28 AWG or AWM 20267 3M NU  AWM IIA/B 80C 300V FT1 EU <50V
Conductors: 28 AWG, 7 x 36 AWG [7 x Ø 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 or AWM; 300V	Canada: 300V	EU: <50V
Insulation Resistance:	> 1×10^{10} Ω /10 ft. [3m]		
	Unbalanced	Balanced	
Characteristic Impedance:	62 Ω	106 Ω	
Capacitance:	27.7 pF/ft [90.88 pF/m]	15.2 pF/ft [49.9 pF/m]	
Inductance:	0.11 μ H/ft [0.35 μ H/m]	0.17 μ H/ft [0.57 μ H/m]	
Propagation Delay:	1.72 ns/ft [5.64 ns/m]	1.62 ns/ft [5.31 ns/m]	
Velocity of Propagation:	59%	62%	

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: -20° C to +105° C Canada: -20° C to +80° C
Flammability Rating: USA: VW-1 Canada: FT1

**RoHS Compliant 2005/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M's Regulatory Information Appendix, then 3M's entire liability and Buyer's exclusive will be in accordance with the Warranty stated below.

UL File No.: E118773, Power Limited Circuit Cable: CL2 (or AWM Style 20267)

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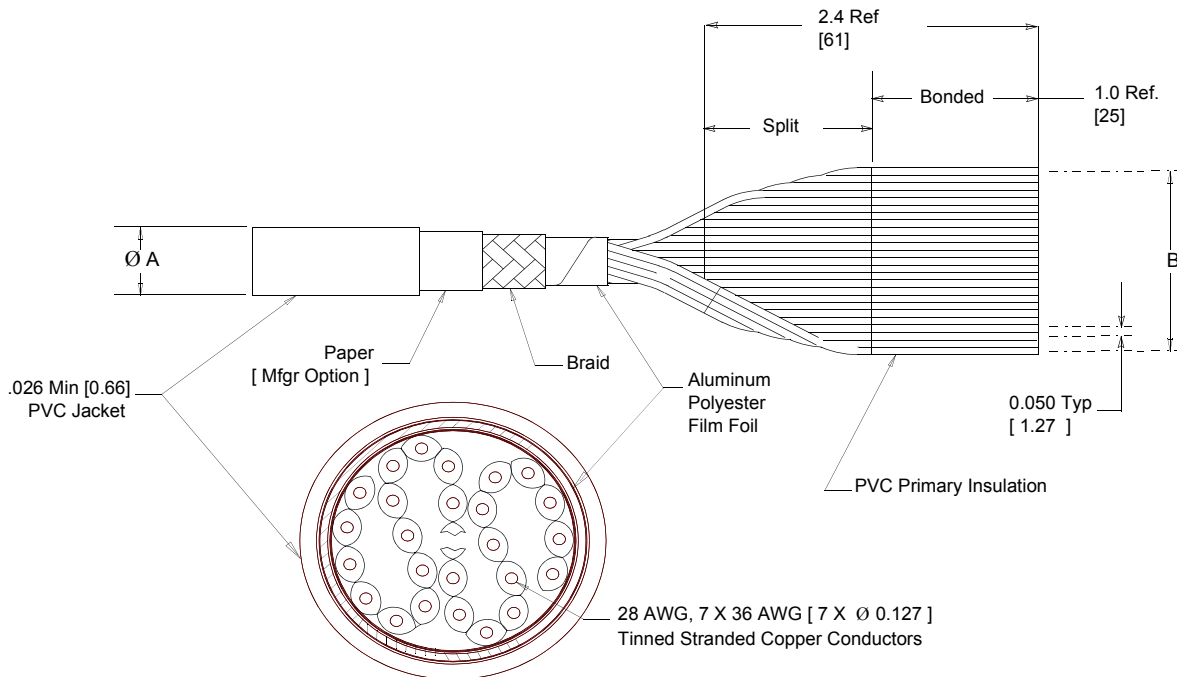
Inch
[mm]

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

[] Dimensions for Reference only

Number of Conductors	3M Part Number	Diameter A	Dimension B Ref (See Note 2)
09	3659/09	0.27 [6.9]	0.40 [10.2]
10	3659/10	0.27 [6.9]	0.45 [11.4]
14	3659/14	0.31 [7.9]	0.65 [16.5]
15	3659/15	0.31 [7.9]	0.70 [17.8]
16	3659/16	0.31 [7.9]	0.75 [19.1]
20	3659/20	0.34 [8.6]	0.95 [24.1]
24	3659/24	0.37 [9.4]	1.15 [29.2]
25	3659/25	0.37 [9.4]	1.20 [30.5]
26	3659/26	0.37 [9.4]	1.25 [31.8]
34	3659/34	0.41 [10.4]	1.65 [41.9]
36	3659/36	0.43 [10.9]	1.75 [44.5]
37	3659/37	0.43 [10.9]	1.80 [45.7]
40	3659/40	0.43 [10.9]	1.95 [49.5]
50	3659/50	0.48 [12.2]	2.45 [62.2]
60	3659/60	0.51 [13.0]	2.95 [74.9]
64	3659/64	0.54 [13.7]	3.15 [80.0]

Note: Contact 3M for availability of additional conductor counts.



Notes:

1. Red marking on one edge of primary cable designates wire #1.
2. Dimension B pertains to bonded area only.

Ordering Information

3659 / XX XX X00 XX

Number of Conductors
(See Table)

Blank = Standard
SF = Splice Free
Length of Roll in Feet
100 = 100 ft Standard
300 = 300 ft Standard

Blank = Standard
SO = Continuously Bonded Wire
(No Split)

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Note: Contact 3M for availability of custom roll lengths.

Important Notice

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3M Electronics

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Minimum 10%
Post-Consumer Fiber

Printed in USA.

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