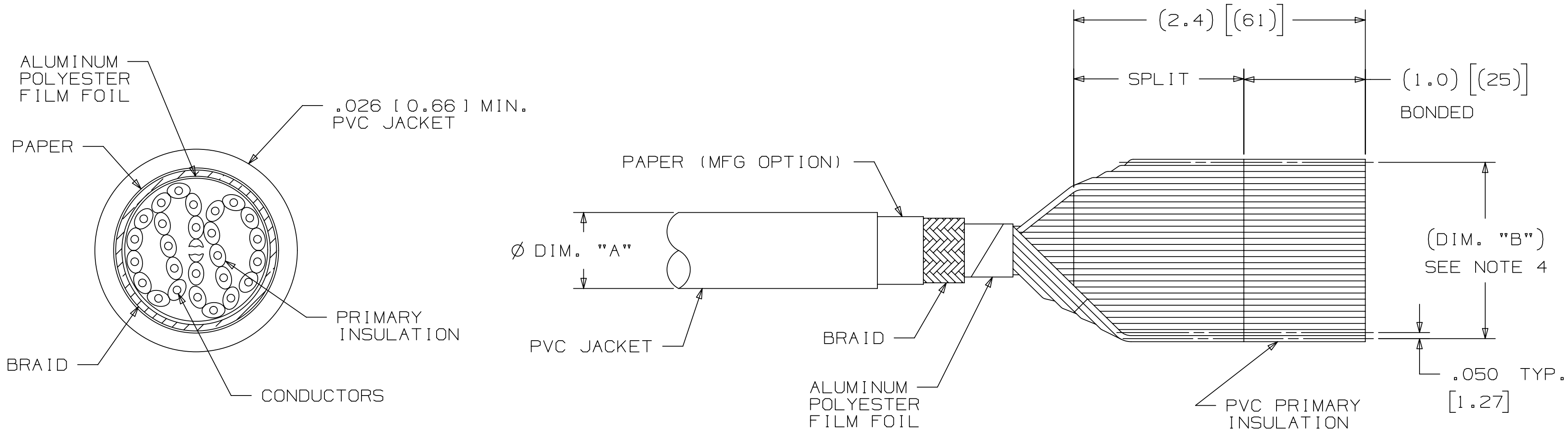


3M™ ROUND SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES
.050" 28 AWG STRANDED, MASS TERMINATABLE, PVC/PVC



ORDERING INFORMATION

3659/XX XX XX

NUMBER OF CONDUCTORS
(SEE TABLE 1)

BLANK = STANDARD
SF = SPLICE FREE

BLANK = STANDARD
SO = CONTINUOUSLY BONDED WIRE (NO SPLIT)

NOTE:
AVAILABLE IN STANDARD LENGTHS OF 100 FT OR 300 FT ROLLS,
PLEASE SPECIFY WHEN ORDERING.
CONTACT 3M FOR AVAILABILITY OF ADDITIONAL CONDUCTOR COUNTS
AND/OR CUSTOM ROLL LENGTHS.

2 PHYSICAL :

JACKET MATERIAL: POLYVINYL CHLORIDE (PVC)
COLOR: BLACK
PRIMARY MATERIAL: PVC
COLOR: GRAY

MARKING:
STANDARD: SEE "PRINTING ILLUSTRATION" BELOW
CONDUCTORS: 28 AWG, 7 X 36 AWG (7 X Ø .127) TINNED STRANDED COPPER
SHIELDING: .001 (.03) THICK ALUMINUM/POLYESTER FILM FOIL AND 90%
COVERAGE TINNED COPPER BRAID.

2 ELECTRICAL :

VOLTAGE RATING: USA: N.E.C. 725, CL2 OR AWM; 300V CANADIAN 300V, EU: <50V
INSULATION RESISTANCE: (PRIMARY CABLE) >1 X 10¹⁰Ω/10ft. (3m)

CHARACTERISTIC	UNBALANCED	BALANCED
IMPEDANCE:	62Ω	106Ω
CAPACITANCE:	27.7 pF/ft (90.88 pF/m)	15.2 pF/ft (49.9 pF/m)
INDUCTANCE:	0.11μH/ft (0.35μH/m)	0.17μH/ft (0.57μH/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 GROUNDING.
BALANCED IS MEASURED BETWEEN SIGNAL CONDUCTORS WITHIN A PAIR.
WITH THE SHIELD FLOATING.

2 ENVIRONMENTAL :

TEMPERATURE RATING: USA; CL2; 75°C OR AWM; -20°C TO +80°C
CANADA; -20°C TO +80°C

FLAMMABILITY RATING: USA; N.E.C. 725, CL2
CANADA; FT1

"PRINTING ILLUSTRATION"

UL® CL2 75°C 28 AWG OR AWM 20267 3M NU UL® AWM II A/B 80°C 300V FT1 EU <50V

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INTERCONNECT SOLUTIONS
<http://www.3m.com/interconnect>

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UL FILE NUMBER:
E118773, CL2 (VOLUME 1, SECTION 1)
E42769, STYLE 20267

- * ROUND CONSTRUCTION PERMITS MORE EASY ROUTING.
- * 28 AWG WIRE ON .050 INCH CENTERS 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 TERMINATION.
- * MEETS EXTERNAL WIRING REQUIREMENTS OF NATIONAL ELECTRICAL CODE: ARTICAL 725 (CL2).
- * DUAL SHIELDING PROVIDES 35 db AVERAGE SHIELDING EFFECTIVENESS.

- NOTES
1. REGULATORY INFORMATION:
VISIT 3M.com/regs
 2. IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
 3. RED MARKING ON ONE EDGE OF PRIMARY CABLE DESIGNATES WIRE #1.
 4. DIMENSION "B" PERTAINS TO BONDED AREA ONLY.

TABLE 1			
NO. OF CONDUCTORS	3M PART NUMBER	DIM. "A"	DIM. "B" REFERENCE
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]

CONTACT 3M FOR AVAILABLE OF ADDITIONAL
CONDUCTOR COUNTS.

DIMENSIONS: INCHES (MM)
(MM) IS FOR REF. ONLY

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
XXXXX		DRFT	CASTIGLIONE	DATE JUN 28, 2023	DATE	DATE
DIVISION	DIVISION CODE DEPP	CHKD		DATE	DATE	DATE
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MILLIMETERS				
MAX. SURFACE ROUGHNESS	ALL SURFACES	ANGLES				
MARKED ONLY						
3M Center St. Paul, MN 55144		© 3M COPYRIGHT 2025 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.				
TITLE		RD SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES				
CAGE NUMBER	SIZE	DRAWING NO.	REV.			
D	78-5100-0083-5	D				
MODEL	3659	LISTS	YES	NO	SHT 1 OF 2	

3M™ ROUND SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES
.050" 28 AWG STRANDED, MASS TERMINATABLE, PVC/PVC

Regulatory: For regulatory information about this product, visit 3M.com/regs or contact your 3M representative.

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3M Company
Electronics Materials Solutions Division
13011 McCallen Pass, Bldg. C
Austin, TX 78753-5380
1-800-225-5373
www.3M.com/interconnect

D	122370	APR 16, 2025 REVISE DIM A	JNC	FJR
C	64249	JUN 28, 2023 REVISE NOTES AND REDRAW	JNC	FJR
B	23307	APR 24, 2009 REVISE NOTES	RED	ARM
A	23052	APR 07, 2009 REVISE ORDERING INFO	RED	ARM

DESIGN REFERENCE		NEXT ASSEMBLY		REV		ECO		ISSUE DATE AND DESCRIPTION				DRFT		CHKD	
ACCESS CODES				DRFT CASTIGLIONE		DATE JUN 28, 2023		INFO				DATE			
				CHKD		DATE		APPROV. RODRIGUEZ				DATE JUN 28, 2023			
DIVISION				DIVISION CODE DEPP				 3M Center St. Paul, MN 55144 © 3M COPYRIGHT 2025 This document and the information it contains are 3M property and may not be reproduced on further distribution without the prior permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.							
DO NOT SCALE DRAWING		SCALE		TOLERANCES EXCEPT AS NOTED											
				INCHES				TITLE							
THIRD ANGLE PROJECTION				.0 ± .01 .00 ± .005 .0000 ± .0005				RD SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES							
INTERPRET PER ASME Y14.5 - 2018				MILLIMETERS				CAGE NUMBER SIZE DRAWING NO. REV.							
MAX SURFACE ROUGHNESS				.00 ± .000 ± .000 ±				D 78-5100-0083-5							
☒ ALL SURFACES ☐ MARKED ONLY				ANGLES ±				MODEL 3659 DET. LISTS ☒ YES ☒ NO SHT 2 OF 2							

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