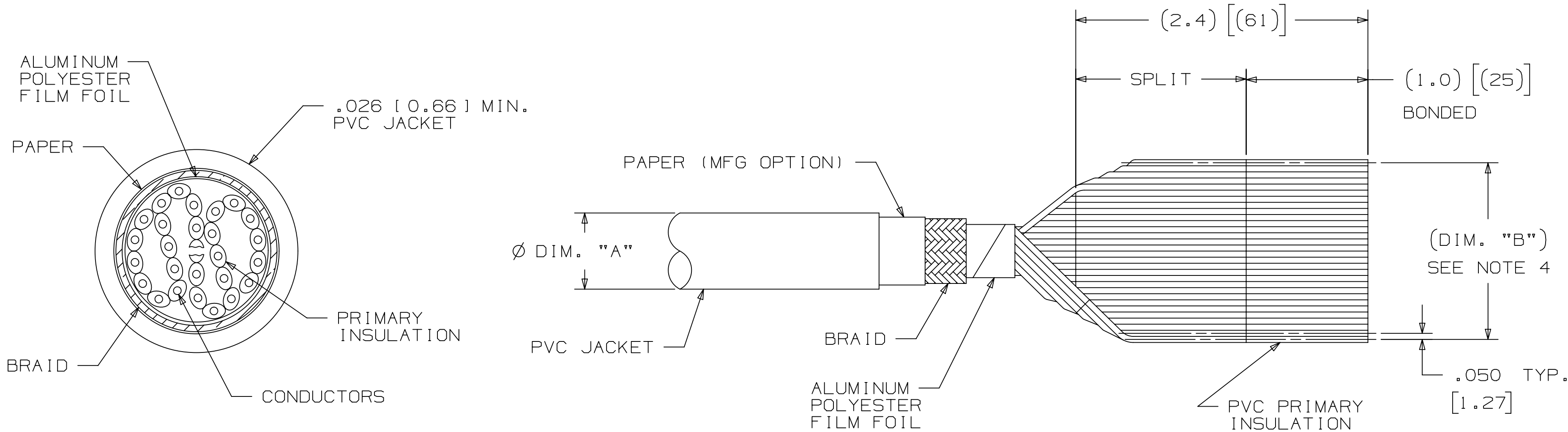


3M™ ROUND SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES
.050" 28 AWG STRANDED, MASS TERMINATABLE, PVC/PVC



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

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
<http://www.3m.com/interconnect>

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INFORMATION CALL 800-225-5373



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
ACROSS CODES	DIVISION CODE DEPP
DIVISION	DO NOT SCALE DRAWING
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018
MAX. SURFACE ROUGHNESS	ALL SURFACES
MARKED ONLY	ANGLES

D	122370	APR 16, 2025	JNC	FJR
C	64249	JUN 28, 2023	JNC	FJR
B	23307	APR 24, 2009	RED	ARM
A	23052	APR 07, 2009	RED	ARM
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	CATTIGLIONE	DATE JUN 28, 2023	DATE	DATE
CHKD		DATE	DATE	DATE
APPR	F. RODRIGUEZ	DATE JUN 28, 2023	DATE	DATE
3M Center St. Paul, MN 55144				
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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

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		D	122370	APR 16, 2025	JNC	FJR
		C	64249	REVISE DIM A	JNC	FJR
		B	23307	REVISE NOTES AND REDRAW	RED	ARM
		A	23052	APR 24, 2009 REVISE NOTES	RED	ARM
				APR 07, 2009 REVISE ORDERING INFO	RED	ARM
CAGE NUMBER		REV		ECO	ISSUE DATE AND DESCRIPTION	DRFT
122370		ECO		ISSUE DATE AND DESCRIPTION	DRFT	CHKD
CAGE NUMBER		DFT		CST	GLIGLIONE	
122370		DATE		JUN 28, 2023	MFG	DATE
122370		DATE			APPROV	DATE
122370					P. RODRIGUEZ	JUN 28, 2023
DIVISION		DIVISION CODE		© 3M COPYRIGHT 2025		
DEPP		DEPP		 3M Center St. Paul, MN 55144		
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TOLERANCES EXCEPT AS NOTED		INCHES		TITLE		
.00 ± .01		.00 ± .05		RD SHIELDED/JACKETED,		
.000 ± .010		.000 ± .010		FLAT CABLE, 3659		
.0000 ± .0005		.0000 ± .0005		SERIES		
THIRD ANGLE PROJECTION		MILLIMETERS		CAGE NUMBER		
INTERPRET PER ASME Y14.5 - 2018		0 ±		SIZE		
MAX SURFACE ROUGHNESS		0 ±		DRAWING NO.		
ALL SURFACES		0 ±		78-5100-0083-5		
MARKED ONLY		.000 ±		REV.		
MARKED ONLY		ANGLES ±		D		
MARKED ONLY		ANGLES ±		DET.		
MARKED ONLY		ANGLES ±		LISTS		
MARKED ONLY		ANGLES ±		YES		
MARKED ONLY		ANGLES ±		NO		
MARKED ONLY		ANGLES ±		SHT 2 OF 2		