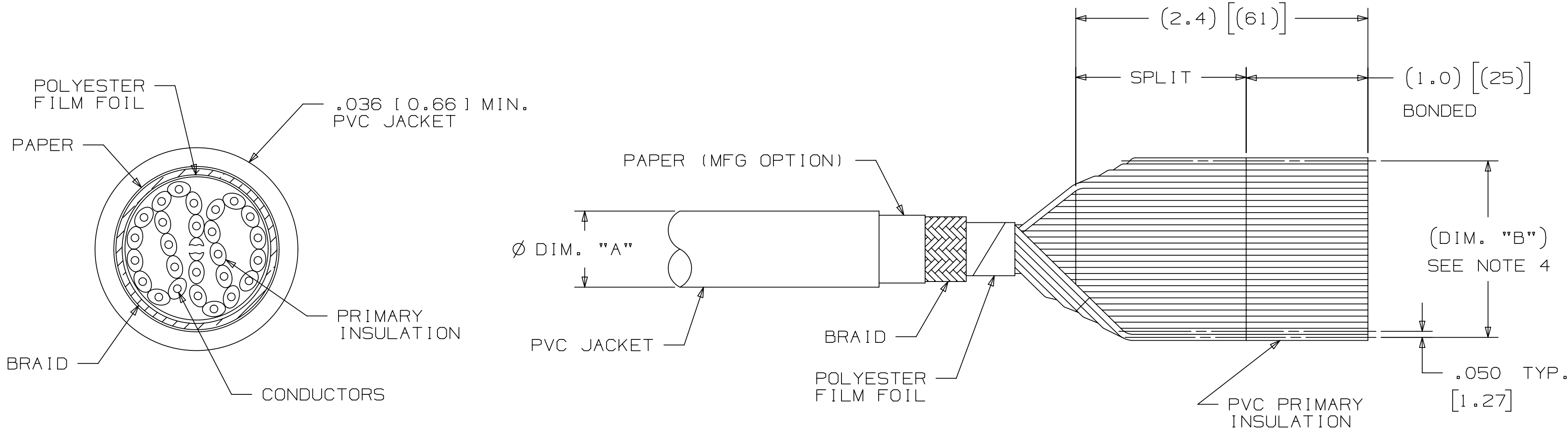


3M™ ROUND SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES
.050" 28 AWG STRANDED, MASS TERMINATABLE, PVC/PVC



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	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
ACROSS CODES		DRFT	C	64249	JUN 28, 2023	JNC
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED	DATE	DATE	DATE	DATE
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MILLIMETERS	DATE	DATE	DATE	DATE
MAX. SURFACE ROUGHNESS	ALL SURFACES	MARKED ONLY	DATE	DATE	DATE	DATE
3M	3M Center St. Paul, MN 55144	© 3M COPYRIGHT 2023	DATE	DATE	DATE	DATE
TITLE	RD SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES	CAGE NUMBER	SIZE	DRAWING NO.	REV.	
MODEL	3659	D	78-5100-0083-5	C		
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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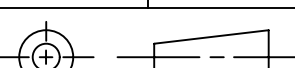
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C	64249	JUN 28, 2023		JNC	FJR
B	23307	REVISE NOTES AND REDRAW		RED	ARM
A	23052	APR 24, 2009 REVISE NOTES APR 07, 2009 REVISE ORDERING INFO		RED	ARM
REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
ACCESS CODES		DATE	JUN 28, 2023	MPG	DATE
DIVISION		CHKD	DATE	APPRV. F. RODRIGUEZ	DATE JUN 28, 2023
DO NOT SCALE DRAWING		TOLERANCES EXCEPT AS NOTED		<div>  <div> <p>3M Center St. Paul, MN 55144</p> <p>This document contains information that is confidential to 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.</p> </div> </div>	
 <p>THIRD ANGLE PROJECTION ASME Y14.5 - 2018</p>		<p>INCHES</p> <p>0.0 ± 1 0.00 ± .05 0.000 ± .010 0.0000 ± .0005</p> <p>MILLIMETERS</p> <p>0 ± 1 0.0 ± .05 0.00 ± .010 0.000 ± .0005</p>		<p>TITLE</p> <p>RD SHIELDED/JACKETED, FLAT CABLE, 3659 SERIES</p>	
<p>MAX. SURFACE ROUGHNESS</p> <p>✓ <input type="checkbox"/> ALL SURFACES</p> <p><input type="checkbox"/> MARKED ONLY</p>		<p>CAGE NUMBER</p> <p>D</p>		<p>SIZE DRAWING NO.</p> <p>78-5100-0083-5</p>	
<p>ANGLES</p> <p>✓ <input type="checkbox"/> MARKED ONLY</p>		<p>MODEL</p> <p>3659</p>		<p>REV.</p> <p>DET. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>SHT 2 OF 2</p>	