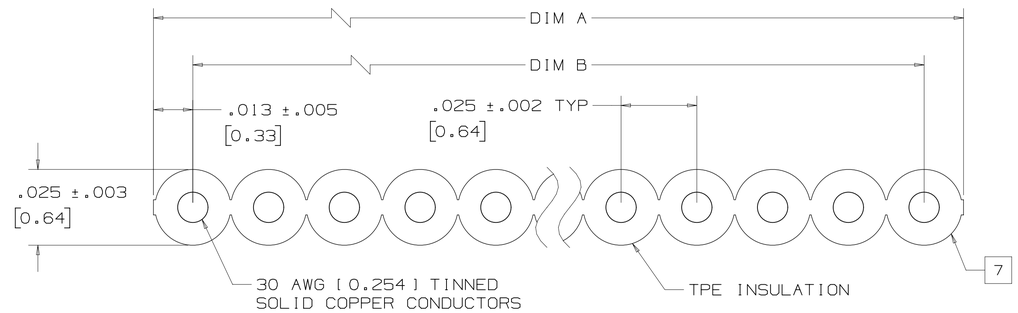
3M™ ROUND CONDUCTOR FLAT CABLE, 3749 SERIES

.025" 30 AWG SOLID, TPE



NOTES

1. REGULATORY INFORMATION:
   FOR REGULATORY INFORMATION ABOUT THIS PRODUCT, VISIT 3m.com/regs OR CONTACT YOUR 3M REPRESENTATIVE.

   UL FILE NO: E42769.
   STYLE NO: 20297
2. CLOSE SPACING PERMITS HIGHER SIGNAL DENSITY
3. TPE INSULATION PROVIDES EXCELLENT TRANSMISSION PROPERTIES.
4. 30 AWG SOLID CONDUCTORS ON .025 INCH SPACING ALLOWS FOR MASS TERMINATION.
5. ZIPPABLE FOR BRANCHING OR DISCRETE TERMINATION.
6. MEETS THE SCSI-3 FAST-20 CHARACTERISTIC IMPEDANCE REQUIREMENTS.

7 BLUE MARKING ON ONE EDGE OF CABLE DESIGNATES WIRE #1.

ORDERING INFORMATION

3749/XX XX

- BLANK = STANDARD
- C = CANADIAN CERTIFIED VERSION
- NUMBER OF CONDUCTORS (SEE TABLE)
- BLANK = STANDARD
- SF = SPLICE FREE

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

TABLE 1

NUMBER OF CONDUCTORS	3M PART NUMBER	DIMENSION A	DIMENSION B
10	3749/10	0.250±.006 [6.35]	0.225±.004 [5.72]
12	3749/12	0.300±.006 [7.62]	0.275±.004 [6.99]
14	3749/14	0.350±.006 [8.89]	0.325±.004 [8.26]
16	3749/16	0.400±.006 [10.16]	0.375±.004 [9.53]
20	3749/20	0.500±.006 [12.70]	0.475±.004 [12.07]
24	3749/24	0.600±.006 [15.24]	0.575±.004 [14.61]
26	3749/26	0.650±.006 [16.51]	0.625±.004 [15.88]
30	3749/30	0.750±.009 [19.05]	0.725±.006 [18.42]
34	3749/34	0.850±.009 [21.59]	0.825±.006 [20.96]
36	3749/36	0.900±.009 [22.86]	0.875±.006 [22.23]
40	3749/40	1.000±.009 [25.40]	0.975±.006 [24.77]
50	3749/50	1.250±.009 [31.75]	1.225±.006 [31.12]
60	3749/60	1.500±.012 [38.10]	1.475±.009 [37.47]
68	3749/68	1.700±.012 [43.18]	1.675±.009 [42.55]
80	3749/80	2.000±.015 [50.80]	1.975±.011 [50.17]
100	3749/100	2.500±.015 [63.50]	2.475±.012 [62.87]

PHYSICAL:

INSULATION
- MATERIAL: THERMOPLASTIC ELASTOMER, TPE (TPO TYPE)
- COLOR: GRAY
- MARKING
  - STANDARD: NONE
  - CANADIAN: SEE "PRINTING ILLUSTRATION" VIEW

CONDUCTORS
- MATERIAL: 30 AWG [Ø0.254] TINNED SOLID COPPER

ELECTRICAL:

VOLTAGE RATING: USA 150V CANADIAN 150V
INSULATION RESISTANCE: >1 X $10^{10}\Omega$/10ft. [3m]

	UNBALANCED
CHARACTERISTIC IMPEDANCE:	90Ω
CAPACITANCE:	16.5 pF/ft [54.1 pF/m]
INDUCTANCE:	0.13 μH/ft [0.43 μH/m]
PROPAGATION DELAY:	1.48 ns/ft [4.86 ns/m]
VELOCITY OF PROPAGATION:	69%

NOTE: UNBALANCED IS MEASURED BETWEEN GROUND-SIGNAL-GROUND CONDUCTORS.

ENVIRONMENTAL:

TEMPERATURE RATING: -40°C TO +105°C
FLAMMABILITY RATING: USA: UL HORIZONTAL CANADA: FT2

CANADIAN OPTION
"PRINTING ILLUSTRATION"

AWM 20297 105C 150V HB 3M NU

AWM IA 105C 150V FT2 EU <50V

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

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INCH [MM]			
TOLERANCE - UNLESS NOTED			
	.X	.XX	.XXX
INCH	±.1	±.05	±.010
[ ] = DIM. FOR REFERENCE ONLY			

DIMENSIONS: INCH [MM]

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
G	0101481	JAN 04,2022 REDRAWN WORK REQUEST 13221	LDS	TRP

DESIGN REFERENCE | NEXT ASSEMBLY | ACTION CODES | DIVISION | DIVISION CODE

DRFT L SCHMIDT DATE DEC 14,2021 MFG DATE
CHKD T PLEPYS DATE JAN 04,2022 APPVL DATE

DO NOT SCALE DRAWING | SCALE 4 1 | THIRD ANGLE PROJECTION | INTERPRET PER ASME Y14.5 - 2018 | MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED
INCHES: .0 ±.1; .00 ±.02; .000 ±.005; .0000 ±.0002
MILLIMETERS: 0 ±; .0 ±; .00 ±; .000 ±
ANGLES ±1°

3M Center St. Paul, MN 55144

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TITLE: ROUND CONDUCTOR FLAT CABLE SERIES 3749 .025" 30AWG SOLID

CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-0068-6 | REV. G
MODEL | DET LISTS ☐ YES ☒ NO | SHT 1 OF 2

Imaged: Central Standard Time 1/20/2022 -- UTC Offset (hrs) 6

3M™ ROUND CONDUCTOR FLAT CABLE, 3749 SERIES

.025" 30 AWG SOLID, TPE

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REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
G	0101481	JAN 04,2022 REDRAWN WORK REQUEST 13221	LDS	TRP

DESIGN REFERENCE | NEXT ASSEMBLY | ACCESS CODES | DIVISION | DIVISION CODE

DRFT: L SCHMIDT — DATE: DEC 14,2021 | MFG | DATE
CHKD: T PLEPYS — DATE: JAN 04,2022 | APPVL | DATE

DO NOT SCALE DRAWING — SCALE 4/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED
INCHES: .0 ±.1; .00 ±.02; .000 ±.005; .0000 ±.0002
MILLIMETERS: 0 ±; .0 ±; .00 ±; .000 ±
ANGLES ±1°

3M Center, St. Paul, MN 55144

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CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-0068-6 | REV. G
MODEL | DET. LISTS ☐ YES ☒ NO | SHT 2 OF 2

78-5100-0068-6 (DRAWING NUMBER) G (REVISION)

Imaged: Central Standard Time 1/20/2022 -- UTC Offset (hrs) 6