

# Cables and Accessories Selection Guide

From data centers to robotics to patient monitoring equipment, we're committed to enabling the next generation of faster, smaller and smarter design. 3M offers an extensive portfolio of cables and accessories built for speed and reliability, so you get the performance you need with as little downtime possible. Visit 3Mconnectors.com for tech sheets and more information.

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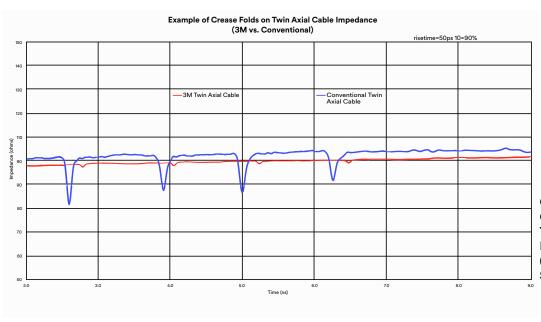
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## 3M<sup>™</sup> Twin Axial Cable, SL8800 Series

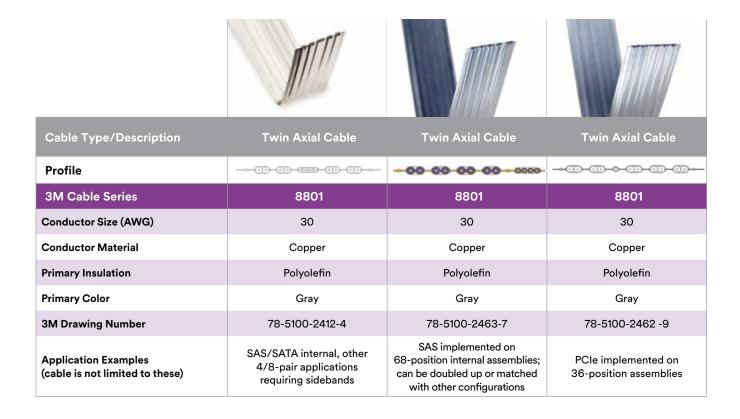
After designing cables for over 50 years, we understand what it takes to design, build, deliver and install high-performance devices on time and on budget.

The 3M Twin Axial Cable, SL8800 Series is designed to bring together high-speed performance and high signal density in an extremely thin and flexible package that can be folded with minimal loss or impact on performance. With its ultra-low, space-saving profile, the SL8800 Series helps allow for optimal cooling and airflow to maintain the high speeds and processing power your system demands.



Comparative Example of Crease Folds on 3M<sup>™</sup> Twin Axial Cable Differential Impedance (3M vs. Conventional Spiral Wrapped)

## 3M™ Twin Axial Cable, SL8800 Series (cont.)



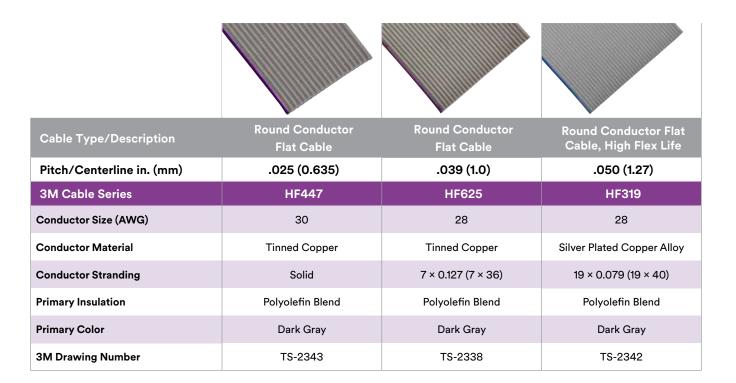


## 3M™ Low Smoke Zero Halogen (LSZH) Cables

You asked for them, and we delivered.

LSZH Cables help minimize the risks associated with smoke and corrosive gasses.

And since these cables come from 3M, the increase in safety comes
without a dip in performance. The HF Series meets established industry low smoke
(IEC 61034-2:2005) and low toxicity (NF X 70-100-2:2006) criteria with comparable
flexibility and durability to 3M's PVC Cables. 3M's LSZH Cables are halogen-free
as defined by IEC 61249-2-21. As you'd expect, this makes the HF Series ideal for
electronics, especially in data center, transportation and military
applications.



Halogen Free

# 3M™ Low Smoke Zero Halogen (LSZH) Cable (cont.)

Cable Type/Description	Round Conductor Flat Cable	Twisted Pair Flat Cable
Pitch/Centerline in. (mm)	.050 (1.27)	.050 (1.27)
3M Cable Series	HF365	HF100
Conductor Size (AWG)	28	28
Conductor Material	Tinned Copper	Tinned Copper
Conductor Stranding	7 × 0.127 (7 × 36)	7 × 0.127 (7 × 36)
Primary Insulation	Polyolefin Blend	Polyolefin Blend
Primary Color	Dark Gray	Blue/Off-White Pairs
3M Drawing Number	TS-2334	TS-2344



# 3M<sup>™</sup> Flat Ribbon Cable .025" - .033" Pitch

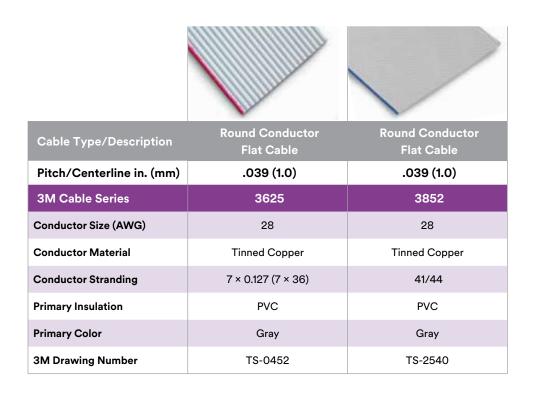
Cable Type/Description	Round Conductor Flat Cable	Round Conductor Flat Cable	Round Conductor Flat Cable
Pitch/Centerline in. (mm)	.025 (0.635)	.025 (0.635)	.025 (0.635)
3M Cable Series	3754	3447	3756
Conductor Size (AWG)	30	30	30
Conductor Material	Tinned Copper	Tinned Copper	Tinned Copper
Conductor Stranding	7 × 0.102 (7 × 38)	Solid	7 × 0.102 (7 × 38)
Primary Insulation	PVC	PVC	TPE
Primary Color	Gray	Gray	Gray
3M Drawing Number	TS-0875	TS-0830	TS-0508

Cable Type/Description	Round Conductor Flat Cable	Round Conductor Flat Cable
Pitch/Centerline in. (mm)	.025 (0.635)	.025 (0.635)
3M Cable Series	3749	3609
Conductor Size (AWG)	30	30
Conductor Material	Tinned Copper	Silver Plated Copper
Conductor Stranding	Solid	7 × 0.102 (7 × 38)
Primary Insulation	TPE	FEP
Primary Color	Gray	Opaque White
3M Drawing Number	TS-0068	TS-0654

# 3M<sup>™</sup> Flat Ribbon Cable .025" - .033" Pitch (cont.)

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Cable Type/Description	Round Conductor Flat Cable	Round Conductor Flat Cable
Pitch/Centerline in. (mm)	.025 (0.635)	.033 (0.838)
3M Cable Series	3604	3849
Conductor Size (AWG)	30	30
Conductor Material	Silver Plated Copper	Tinned Copper
Conductor Stranding	Solid	7 × 0.102 (7 × 38)
Primary Insulation	FEP	PVC
Primary Color	Opaque White	Gray
3M Drawing Number	TS-0653	TS-0573

## 3M™ Flat Ribbon Cable 1 mm Pitch

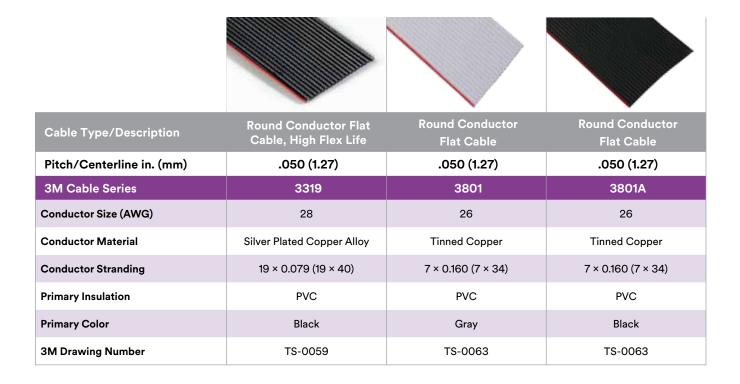


## 3M™ Flat Ribbon Cable .050" Pitch



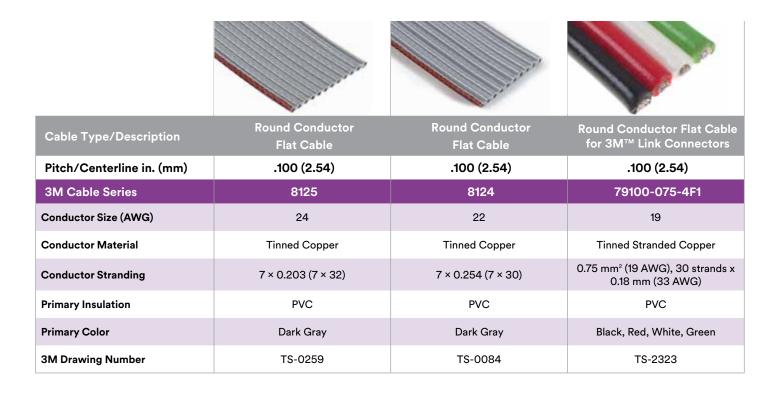
Cable Type/Description	Round Conductor Flat Cable	Round Conductor Flat Cable, Medium Flex Life	Round Conductor Flat Cable, Medium Flex Life
Pitch/Centerline in. (mm)	.050 (1.27)	.050 (1.27)	.050 (1.27)
3M Cable Series	3667	3539	3539A
Conductor Size (AWG)	28	28	28
Conductor Material	Tinned Copper	Tinned Copper	Tinned Copper
Conductor Stranding	7 × 0.127 (7 × 36)	19 × 0.079 (19 × 40)	19 × 0.079 (19 × 40)
Primary Insulation	PVC	PVC	PVC
Primary Color	Gray	Gray	Black
3M Drawing Number	TS-0247	TS-0058	TS-0058

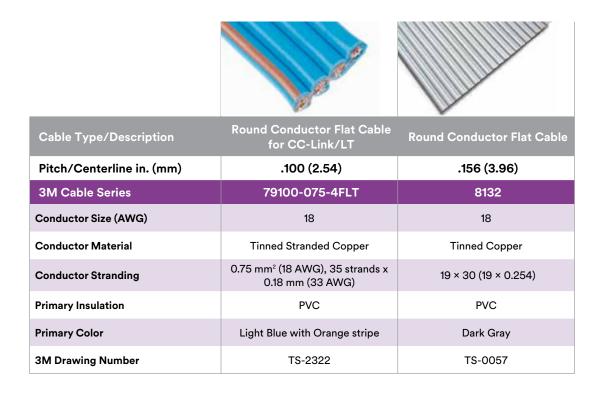
# 3M™ Flat Ribbon Cable .050" Pitch (cont.)



Cable Type/Description	Round Conductor Flat Cable	Round Conductor Flat Cable	Round Conductor Flat Cable
Pitch/Centerline in. (mm)	.050 (1.27)	.050 (1.27)	.050 (1.27)
3M Cable Series	3355	3770	3601
Conductor Size (AWG)	28	26	28
Conductor Material	Tinned Copper	Tinned Copper	Silver Plated Copper
Conductor Stranding	7 × 0.127 (7 × 36)	7 × 0.160 (7 × 34)	7 × 0.127 (7 × 36)
Primary Insulation	TPE	TPE	FEP
Primary Color	Gray	Gray	Blue
3M Drawing Number	TS-0317	TS-0342	TS-0553

#### 3M™ Flat Ribbon Cable .100" - .156" Pitch

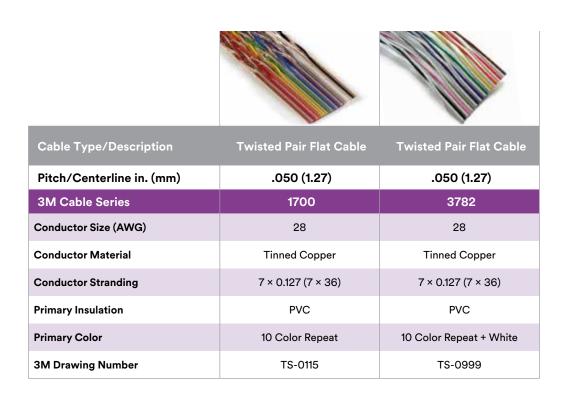




#### 3M™ Color Coded Flat Cable



#### 3M™ Twisted Pair Flat Cable



#### 3M™ Ground Plane Cable



## 3M™ Jacketed Flat Ribbon Cable



## 3M™ Jacketed Flat Ribbon Cable (cont.)



#### 3M™ Pleated Foil Flat Cable



## 3M<sup>™</sup> Pleated Foil Flat Cable (cont.)





# 3M™ Round Jacketed Flat Cable









Cable Type/Description	Round Jacketed Flat Cable	Round Jacketed Flat Cable	Round Jacketed Flat Cable, High Flex Life	Round Jacketed Flat Cable
Pitch/Centerline in. (mm)	.025 (0.635)	.050 (1.27)	.050 (1.27)	.050 (1.27)
3M Cable Series	3896	3759	3834	3758
Conductor Size (AWG)	30	28	28	26
Conductor Material	Tinned Copper	Tinned Copper	Silver Plated Stranded Copper	Tinned Copper
Conductor Stranding	7 × 0.102 (7 × 38)	7 × 0.127 (7 × 36)	19 × 0.079 (19 × 40)	7 × 0.160 (7 × 34)
Primary Insulation	PVC	PVC	PVC	PVC
Primary Color	Gray	Gray	Black	Gray
Jacket Insulation	PVC	PVC	PVC	PVC
Jacket Color	Black	Black	Black	Black
3M Drawing Number	TS-2173	TS-0070	TS-1006	TS-2200

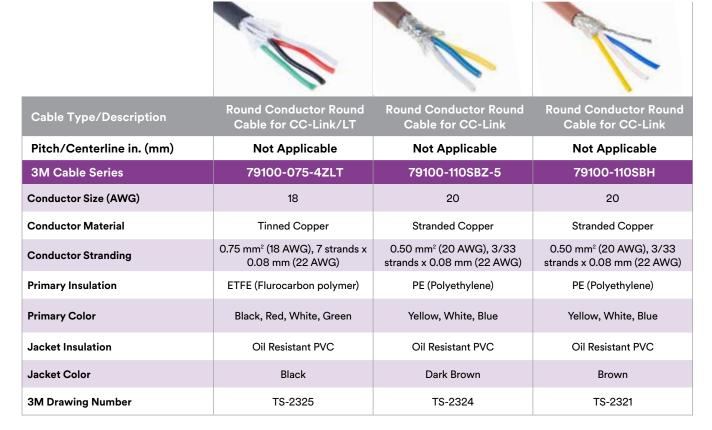






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Cable Type/Description	Round Jacketed Twisted Pair Flat Cable	Round, Shielded, Jacketed, Flat Cable	Round, Jacketed, Shielded Twisted Pair Flat Cable
Pitch/Centerline in. (mm)	.050 (1.27)	.050 (1.27)	.050 (1.27)
3M Cable Series	3783	3659	3784
Conductor Size (AWG)	28	28	28
Conductor Material	Tinned Copper	Tinned Copper	Tinned Copper
Conductor Stranding	7 × 0.127 (7 × 36)	7 × 0.102 (7 × 38)	7 × 0.127 (7 × 36)
Primary Insulation	PVC	PVC	PVC
Primary Color	10 Color Repeat + White	Gray	10 Color Repeat + White
Jacket Insulation	PVC	PVC	PVC
Jacket Color	Gray	Black	Gray
3M Drawing Number	TS-2249	TS-0083	TS-2250

## 3M™ Round Jacketed Discrete Cable for Factory Automation



#### 3M™ Twisted Pair Round Jacketed Cable



# 3M™ Twisted Pair Round Jacketed Cable (Cont.)







Cable Type/Description	Round, Shielded, Jacketed, Discrete Flat Cable	Round, Shielded, Jacketed, Discrete Flat Cable	Round, Shielded, Jacketed, Discrete Flat Cable
Pitch/Centerline in. (mm)	Not Applicable	Not Applicable	Not Applicable
3M Cable Series	KU-C-KMPVV	3600A	3600B
Conductor Size (AWG)	28	28	28
Conductor Material	Tinned Copper	Tinned Copper	Tinned Copper
Conductor Stranding	7 × 0.127 (7 × 36)	7 × 0.127 (7 × 36)	7 × 0.127 (7 × 36)
Primary Insulation	PVC	PVC	PVC
Primary Color	Color Coded	Color Coded	Color Coded
Jacket Insulation	PVC	PVC	PVC
Jacket Color	Cream	Black	Beige
3M Drawing Number	TS-2173	TS-0388	TS-0388

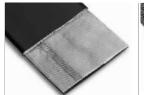






Cable Type/Description	Round, Shielded, Jacketed, Discrete Flat Cable	Round, Shielded, Jacketed, Discrete Wire Cable	Round, Shielded, Jacketed, Discrete Wire Cable
Pitch/Centerline in. (mm)	Not Applicable	Not Applicable	Not Applicable
3M Cable Series	3600G	3560	3750
Conductor Size (AWG)	28	26	26
Conductor Material	Tinned Copper	Tinned Copper	Tinned Copper
Conductor Stranding	7 × 0.127 (7 × 36)	Solid	7 × 0.160 (7 × 34)
Primary Insulation	PVC	PVC	PVC
Primary Color	Color Coded	Color Coded	Color Coded
Jacket Insulation	PVC	PVC	PVC
Jacket Color	Gray	Gray	Gray
3M Drawing Number	TS-0388	TS-0672	TS-0072

# 3M<sup>™</sup> Cable Accessories





Accessory Type	PVC Shielded Jacket	High Flex Life Braided Shield
3M Cable Accessory Series	3617	DS/FS
Description	Fits cable width sizes 1.5, 2.4 and 3.5 inch; .035 thick PVC jacket with expanded copper shield	0.2 - 0 .6 inch diameter, 1.2 and 1.5 inch widths; conductive high flex cable shielding sleeve
Conductor Material	Not Applicable	Tinned copper foil wound spirally over glass fibers
Primary Insulation	PVC	Not Applicable
Primary Color	Black	Bright Tin
3M Drawing Number	TS-0308	TS-0713







Accessory Type	Drain Wire Spring Clip	Cable Clamp	Strain Relief Grounding Clamp
3M Cable Accessory Series	3535	3484	3504
Description	One size fits 9-64 conductor round cable; used to attach a ground wire to the shield of a round cable	Organizes cable by clamping and retaining; used to organize up to six layers of flat cable	Jacketed cable strain relief/ grounding clamp; mount- ing brackets used to transfer stresses and strains to the cabinet and provide grounding
Material	Stainless Steel	PVC	Aluminum
Primary Color	Silver	Gray	Aluminum
3M Drawing Number	TS-0269	TS-0260	TS-0268

# **Notes**

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## AWG Conversion Table

	Individual Strands		Overall Conductor Construction	
AWG	Number	Outside Diameter	Outside Diameter	Cross Section
		mm / inch	mm / inch	mm <sup>2</sup> / Circ. Mils
22	1	0.643 / 0.0253	0.64 / 0.0253	0.326 / 640
22	7	0.254 / 0.0100	0.78 / 0.0300	0.355 / 700
22	19	0.160 / 0.0063	0.81 / 0.0320	0.382 / 750
24	1	0.510 / 0.0201	0.51 / 0.0201	0.205 / 404
24	7	0.203 / 0.0080	0.61 / 0.0240	0.227 / 448
24	19	0.127 / 0.0050	0.64 / 0.0250	0.241 / 475
26	1	0.404 / 0.0159	0.40 / 0.0159	0.128 / 253
26	7	0.160 / 0.0063	0.48 / 0.0190	0.141 / 275
26	19	0.102 / 0.0040	0.51 / 0.0200	0.149 / 304
28	1	0.320 / 0.0126	0.32 / 0.0126	0.080 / 124
28	7	0.127 / 0.0050	0.38 / 0.0150	0.089 / 175
28	19	0.080 / 0.0031	0.40 / 0.0160	0.092 / 201
30	1	0.250 / 0.0100	0.25 / 0.0100	0.050 / 100
30	7	0.102 / 0.0040	0.30 / 0.0120	0.057 / 112

#### Visit 3Mconnectors.com for more information.

\*Advantages of LSZH insulation are the low smoke (IEC 61034-2:2005), low toxicity of combustion gases (NF X 70-100-2:2006), reducing the risk to firefighters and reducing the soot and corrosion damage to nearby equipment. "RoHS Compliant 2002/95/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 remedy will be in accordance with the Warranty statement below.

3M is a trademark of 3M Company.

#### **Important Notice**

All statement, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

#### Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 1 year from the time of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.



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