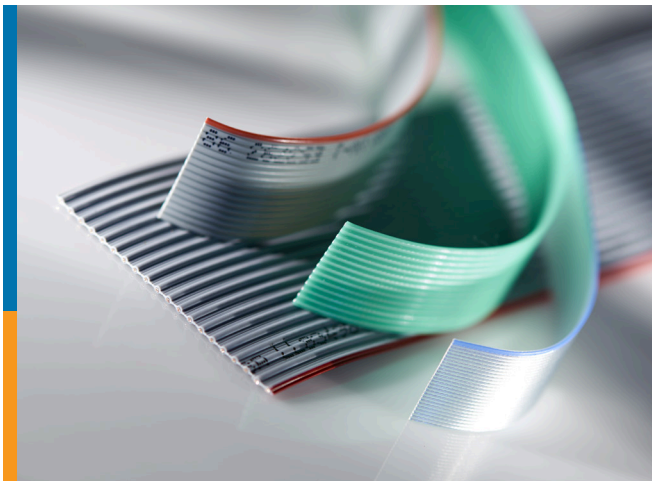
IDC RIBBON CABLE

With PVC/FEP Insulation



TE Connectivity (TE)'s Madison Cable family of PVC insulated cables utilize manufacturing processes that provide precise tolerances for mass termination. The same processes ensure consistent and reliable electrical performance while using low cost PVC insulating compounds. The PVC insulated family of cables is available in various center spacings (30, 28, 26, 24, 22 and 18 AWG conductor sizes for a wide range of applications). The .025" center spacing cable delivers a high signal density allowing the use of high performance cables that meet the specifications of miniaturization. The 1.0mm spacing cables are designed for the disk drive industry where the 2.0mm IDC connector is widely accepted, whereas the 0.050, 0.100, and the 0.156 spacing cables are used for general purpose electronic interconnected applications.

TE's Madison Cable family of FEP insulated cables can withstand high temperatures, survive exposure to chemicals, abrasion and be mass terminated. The FEP insulated family of cables is available in various center spacings of 32, 30, 28 and 26 AWG conductor sizes ideal for harsh industrial applications.

APPLICATIONS

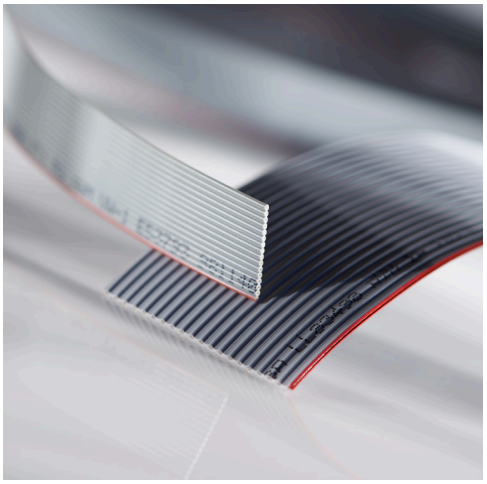
- Internal wiring of electrical appliances and devices
- Automation termination equipment
- General purpose electronic interconnects
- Applications with limited confined spaces
- Harsh industrial applications (FEP only)

BENEFITS

- Weight reduction for ease of handling and flexibility
- Available in sizes: 30, 28, 26, 24, 22 and 18 AWG
- Consistent electrical properties
- Easily routed in confined spaces
- High density interconnection application
- Flexible when bent in the plane of the cross section

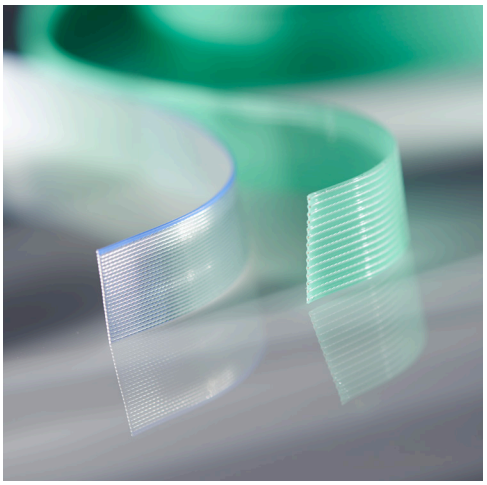
Insulation Type

PVC — FEATURES



- Available in .025", .050", .100", .156" and 1mm (.0394") center spacing
- Conductor sizes available: 30, 28, 26, 24, 22 and 18 AWG
- Conductor plating available: bare, tinned and overcoat
- Operating temperature of -20ºC to +105ºC
- UL and CSA Safety Certification
- Polarity edge marked for proper circuit alignment
- Available in a variety of conductor widths up to 60 positions, depending on the center spacing, allowing installation in a wide variety of applications
- Compatible with all mass termination equipment eliminating the need for cable specific tooling and machinery
- Internal wiring of electrical appliances/devices (printers, computers)
- Zippable for branching or discrete termination
- RoHS compliant (EU & China) and Reach compliant

FEP — FEATURES



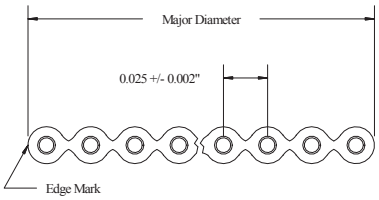
- Available in .025", .050", and 1mm (.0394") center spacing
- Conductor sizes available: 32, 30, 28 and 26 AWG
- Conductor plating available: silver plated copper high-strength alloy
- Operating temperature of -65ºC to +200ºC
- UL and CSA Safety Certification
- Polarity edge marked for proper circuit alignment
- Available in a variety of conductor widths up to 100 positions, depending on the center spacing, allowing installation in a wide variety of applications
- Compatible with all mass termination equipment eliminating the need for cable specific tooling and machinery
- Chemically resistant (acids, alcohols, esters, hydrocarbons, keytones, etc.)
- Designed for harsh environments
- Ensures optimum signal transmission with minimum loss
- Abrasion resistant
- Withstands soldering termination
- RoHS compliant (EU & China) and Reach compliant

IDC RIBBON CABLE WITH PVC/FEP INSULATION

PVC Insulation

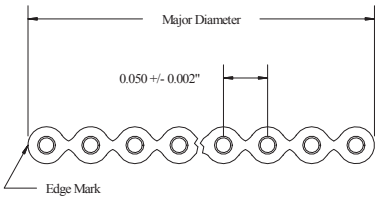
.025” (0.63 mm) Center PVC Insulation
- 30 AWG Solid Bare Copper
- Insulation: OD 0.025”
- Working Voltage: 150 Volts
- Impedance (GSG): 80 Ohms Nominal
- Capacitance(GSG): 23.0 pf/ft. @ 1 MHz Nominal
- Time delay: 1.55 ns/ft. Nominal

.025” (0.63 mm) Center PVC Insulation
- 30 AWG 7/38 Stranded Tin Plated Copper
- Insulation: OD 0.027”
- Working Voltage: 150 Volts
- Impedance(GSG): 70 Ohms Nominal
- Capacitance(GSG): 22.0 pf/ft. @ 1 MHz Nominal
- Time delay: 1.55 ns/ft. Nominal



.050 (1.27) Center PVC Insulation
- 28 AWG 7/36 Stranded Tin Plated Copper
- Insulation: OD 0.035”
- Working Voltage: 300 Volts
- Impedance(GSG): 105 Ohms Nominal
- Capacitance(GSG): 13.5 pf/ft. @ 1 MHz Nominal
- Time delay: 1.45 ns/ft. Nominal

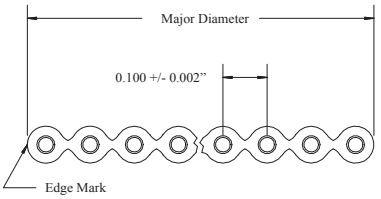
.050 (1.27) Center PVC Insulation
- 26 AWG 7/34 Stranded Tin Plated Copper
- Insulation: OD 0.039”
- Working Voltage: 300 Volts
- Impedance(GSG): 90 Ohms Nominal
- Capacitance(GSG): 18.0 pf/ft. @ 1 MHz Nominal
- Time delay: 1.44 ns/ft. Nominal



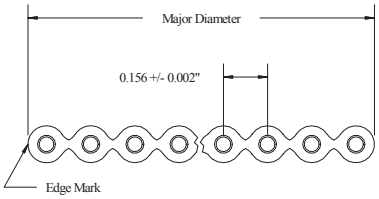
.100 (2.54) Center PVC Insulation
- 26 AWG 7/34 Stranded Tin Plated Copper
- Insulation: OD 0.039”
- Working Voltage: 300 Volts
- Impedance(GSG): 90 Ohms Nominal
- Capacitance(GSG): 18.0 pf/ft. @ 1 MHz Nominal
- Time delay: 1.44 ns/ft. Nominal

.100 (2.54) Center PVC Insulation
- 22 AWG 7/30 Stranded Tin Plated Copper
- Insulation: OD 0.051”
- Working Voltage: 300 Volts
- Conductor DC resistance: (Tin) 0.015 Ohms/ft. Nominal @20°C

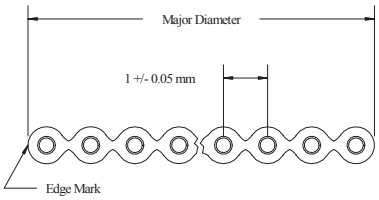
.100 (2.54) Center PVC Insulation
- 24 AWG 7/32 Stranded Tin Plated Copper or Tin Overcoat
- Insulation: OD 0.044”
- Working Voltage: 300 Volts
- Conductor DC resistance: (Tin) 0.024 Ohms/ft. Nominal @20°C
- Conductor DC resistance: (Overcoat) 0.025 Ohms/ft. Nominal @20°C



0.156” (3.96 mm) Center PVC Insulation
- 18 AWG 7/26 Stranded Tin Plated Copper
- Insulation: OD 0.068”
- Working Voltage: 300 Volts
- Conductor DC resistance: (Tin) 0.059 Ohms/ft. Nominal @20°C



1 mm (0.0394”) Center PVC Insulation
- 28 AWG 7/36 Stranded Tin Plated Copper
- Insulation: OD 0.031”
- Working Voltage: 150 Volts
- Impedance(GSG): 90 Ohms Nominal
- Capacitance(GSG): 16.5 pf/ft. @ 1 MHz Nominal
- Time delay: 1.47 ns/ft. Nominal

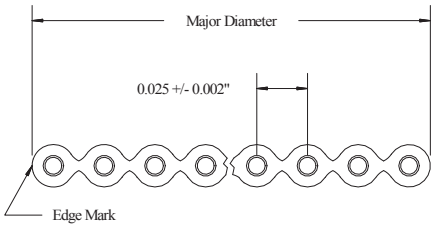


FEP Insulation

.025” (0.63 mm) Center FEP Insulation
- 32 AWG 7/40 Stranded Silver Plated Copper
- Insulation: OD 0.024”
- Working Voltage: 150 Volts
- Impedance (GSG): 95 Ohms Nominal
- Capacitance(GSG): 13.5 pf/ft. @ 1 MHz Nominal
- Time delay: 1.30 ns/ft. Nominal

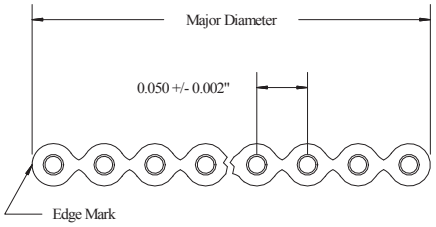
.025” (0.63 mm) Center FEP Insulation
- 30 AWG Solid Silver Plated Copper
- Insulation: OD 0.024”
- Working Voltage: 150 Volts
- Impedance (GSG): 90 Ohms Nominal
- Capacitance(GSG): 14.7 pf/ft. @ 1 MHz Nominal
- Time delay: 1.31 ns/ft. Nominal

.025” (0.63 mm) Center FEP Insulation
- 30 AWG 7/38 Stranded Silver Plated Copper
- Insulation: OD 0.024”
- Working Voltage: 150 Volts
- Impedance (GSG): 85 Ohms Nominal
- Capacitance(GSG): 15.5 pf/ft. @ 1 MHz Nominal
- Time delay: 1.30 ns/ft. Nominal

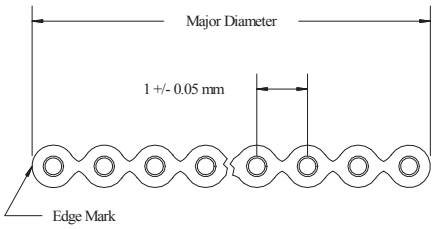


.050” (0.1.27 mm) Center FEP Insulation
- 28 AWG 7/36 Stranded Silver Plated Copper
- Insulation: OD 0.029”
- Working Voltage: 300 Volts
- Impedance (GSG): 115 Ohms Nominal
- Capacitance(GSG): 10 pf/ft. @ 1 MHz Nominal
- Time delay: 1.21 ns/ft. Nominal

.050” (0.1.27 mm) Center FEP Insulation
- 26 AWG 7/37 Stranded Silver Plated Copper
- Insulation: OD 0.032”
- Working Voltage: 300 Volts
- Impedance (GSG): 100 Ohms Nominal
- Capacitance(GSG): 11.5 pf/ft. @ 1 MHz Nominal
- Time delay: 1.22 ns/ft. Nominal



1 mm (0.0394”) Center FEP Insulation
- 28 AWG 7/36 Stranded Silver Plated Copper
- Insulation: OD 0.029”
- Working Voltage: 300 Volts
- Impedance(GSG): 100 Ohms Nominal
- Capacitance(GSG): 12 pf/ft. @ 1 MHz Nominal
- Time delay: 1.21 ns/ft. Nominal



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