

MediSpec™ Hybrid Circular MT Connectors provide high-performance, mixed optical and electrical signaling to streamline the number of connectors required in medical systems

The Hybrid Circular MT Cable and Receptacle System combines optical and electrical solutions in one connector. This multifunctional connector provides options for three configurable ports by leveraging the existing circular MT optical connector and receptacle design.

For optical connections, any of the three connector ports can utilize the MT ferrule. For multimode versions, both 50/125 and 62.5/125µm fiber are available.

Mating electrical receptacles feature copper MT ferrules. The copper MT connector utilizes copper MT ferrules with the pins.

For additional information visit: www.molex.com/link/medispechybridcircular.html.

FEATURES AND BENEFITS

- Hybrid connector contains three configurable ports for combining optical and electrical interfaces enables a custom-configured connector for dual optical and electrical use with the proven optical MT ferrule and 2-to-8 copper electrical contacts
- Optical MT and LC cables plus electrical MicroFit 3.0™, MicroClasp™ and various RJ-45 jacks available for board-level connectivity provides a complete and reliable end-to-end solution
- Metal and medical-grade plastic connector housing options; metal housing provides a robust connector to withstand harsh environments and offers EMI shielding; plastic housing is light-weight and ideal for sensitive applications including MRI and PET scans
- Expanded beam MT ferrule option available reduces optical loss due to contamination, protects fibers from debris, scratching, pitting and makes the fiber easier to clean; long-term connection reliability; tested to over 5000 cycles
- Fiber counts range from 1 to 24 fibers per ferrule accommodates multimode expanded beam 12-fiber ferrules and/or traditional multimode and singlemode MT ferrules
- Copper MT ferrules with 24 and 30 AWG wire in a pin-and-socket format; 24 AWG contacts deliver up to 3.0A; 30 AWG contacts deliver up to 1.0A; 24 and 30 AWG assemblies will meet Insulation Resistance (IR) at 5000 Megohms; 24 and 30 AWG assemblies will meet Dielectric Withstanding Voltage (DWV) at 600V and 250V respectively
- Two through eight copper contacts available offering Ethernet transmissions up to 1 Gbps and additional power and ground options
- Copper contacts designed to meet MIL-DTL-83513/MIL-DTL-32129 standards offers proven robustness for over 500 insertions
- Custom configurable cable options and hardened tubings available meets optical and electrical cable requirements for medical applications and more

MediSpec™ Hybrid Circular MT Cable Assemblies and Receptacles For Integrated Optical and Electrical Solutions

CUSTOM MediSpec™ Hybrid Circular MT Cable Assemblies – Metal and Polymer Housings

CUSTOM MediSpec™ Receptacles



MediSpec™ Hybrid Circular MT Metal Cable Assemblies



MediSpec™ Hybrid Circular MT Polymer Cable Assembly

SPECIFICATIONS

Reference Information

Packaging: Bag
 UL File No.:
 Plastic Connector is rated UL-94V0
 Mates With:
 Circular Hybrid Receptacles – either plastic or metal
 Designed In: Millimeters
 RoHS: Yes
 Halogen Free: Yes

Mechanical

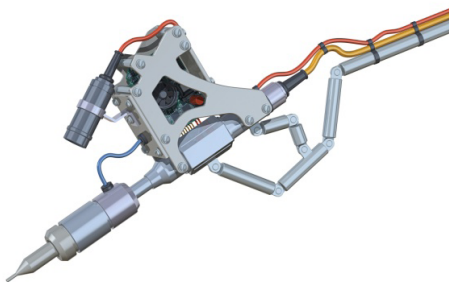
MT Ferrule Insertion Loss: 0.75 dB
 MT Ferrule Return Loss: -20 dB
 Copper Contacts:
 4 Contacts: 24 AWG, 600V, 3.0A
 8 Contacts: 30AWG, 600V, 1.0A
 Durability:
 Copper Connectors: 500 mate/demates
 Expanded Beam MT Connectors:
 up to 5000 mating cycles

Physical

Housing:
 Metal Circular – Nickel plated aluminum
 Plastic Circular –
 Engineering Grade Polymer
 Ferrule - optical:
 PPS plastic(optional lens)
 Ferrule - copper – PEI plastic
 Operating Temperature –
 connector (polymer or metal): -40 to +60 °C
 Operating Temperature – cable :
 will vary with application and cable type

APPLICATIONS

- Medical Applications
 - Robotic Surgery
 - Minimally Invasive Surgery
 - Diagnostic Imaging
 - Neurosurgical
 - Cardio Thoracic Surgery
 - Electro-Surgical equipment
 - Orthopedic Surgery
 - Picture Archival Communications (PACS)
 - Hospital Surgical Suites
- Telecommunication Applications for Medical or Other Markets



Robotic Surgery

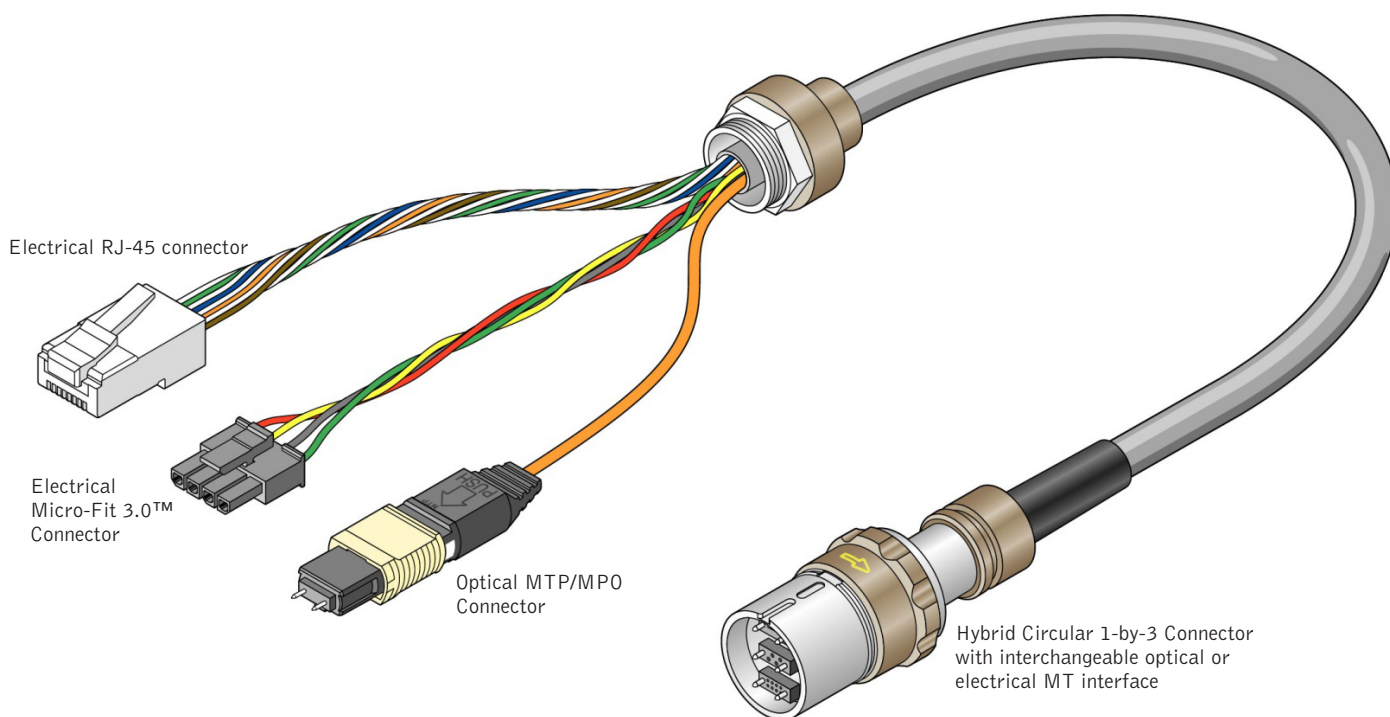


Diagnostic - IVUS Ultrasound

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CUSTOM MediSpec™ Hybrid Circular MT Cable Assemblies – Metal and Polymer Housings

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*Concept drawing of a Hybrid Cable Solution incorporating the following connectors:
MTP*, Micro-Fit 3.0™ and RJ-45 Plug for board-level connectivity*

*MTP is a registered trademark of US Conec Ltd.

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