

- Mates Directly with Souriau MS-M RF Connectors
- Dense RF Connection to 1.3 GHz
- 50 Ω Impedance Connectors
- Open Terminations for User Termination



Simple Connection

Pickering connection solutions provide a simple way of connecting to a user's device under test or remote connection. The MS-M products include cable assemblies, connectors, pins and tools.

Cable Assemblies

Cable assemblies are offered in connector to SMB, and connector to unterminated versions.

Custom Design Needs




Pickering Interfaces can manufacture custom connector accessories to suit any application. If you do not see what you need in this data sheet contact your Pickering Interfaces sales office with information on your requirements or consider using our free online Cable Design Tool.

Using our Cable Design Tool, you can graphically design your own custom cable assembly. Once completed and submitted, our engineers will generate a quote for your cable requirements. See pickeringtest.com/cdt



Examples of Pickering PXI and LXI Products using MS-M RF Connectors


Cable Assemblies: RG178 or RG316 Wire

Cable Assembly Description		End 1	End 2		Cable Length	Product Order Code and Part Number	Page
		Gender & Cable Exit	Gender & Cable Exit	Options			
RG178	 3-Pin MS-M RF to SMB	Female, Rear	SMB Plug (Female), Rear	-	0.5 m	40-979-503-0.5m-SMB	4
1 m					40-979-503-1m-SMB		
2 m					40-979-503-2m-SMB		
 26-Pin MS-M RF to SMB		Female, Rear	SMB Plug (Female), Rear	-	0.5 m	40-979-526-0.5m-SMB	
					1 m	40-979-526-1m-SMB	
					2 m	40-979-526-2m-SMB	
RG316	 26-Pin MS-M RF to SMB	Female, Rear	SMB Plug (Female), Rear	-	0.5 m	40-979-526-3-0.5m-SMB	5
1 m					40-979-526-3-1m-SMB		
2 m					40-979-526-3-2m-SMB		
RG178	 3-Pin MS-M RF to Unterminated	Female, Rear	NA	Cut End	0.5 m	40-979A-503-0.5m-FU	6
1 m					40-979A-503-1m-FU		
2 m					40-979A-503-2m-FU		
 26-Pin MS-M RF to Unterminated		Female, Rear	NA	Cut End	0.5 m	40-979A-526-0.5m-FU	
					1 m	40-979A-526-1m-FU	
					2 m	40-979A-526-2m-FU	
RG316	 26-Pin MS-M RF to Unterminated	Female, Rear	NA	Cut End	0.5 m	40-979-526-3-0.5m-FU	7
1 m					40-979-526-3-1m-FU		
2 m					40-979-526-3-2m-FU		

Note: Custom lengths by quotation

Please click on the page number to navigate to the data sheet page required. Return to this page via the **C** button.

Connectors and Accessories

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	26-Pin MS-M RF Connector Housing	Female, Rear	As detailed	40-969-526-F	8
	MS-M RF 30 Piece Connector Contacts Kit, RG178 (Also Suitable for RG316 Wire)	Female	Souriau	40-969-501-FC	
	Crimp Tool RG178 (Also Suitable for RG178 Contacts with RG316 Wire)	N/A	-	40-969-501-CT	
	Extractor Tool	N/A	-	40-969-501-ET	

Appendix

Details of recent part number changes..... 9

Custom Termination

Customization Possibilities 11

- High Specification **RG178** Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

A range of cable assemblies suited to applications using the Souriau MS-M RF connector.

Selection Guidance

40-979-526: For use with any MS-M product, when used on some connectors there may be spare leads which do not connect to the RF product.

40-979-503: For use with the lower connector on the 40-754-009 PXI product. This connector supports a single SPDT switch. Contacts are fitted at positions A, E & K.

Technical Specification

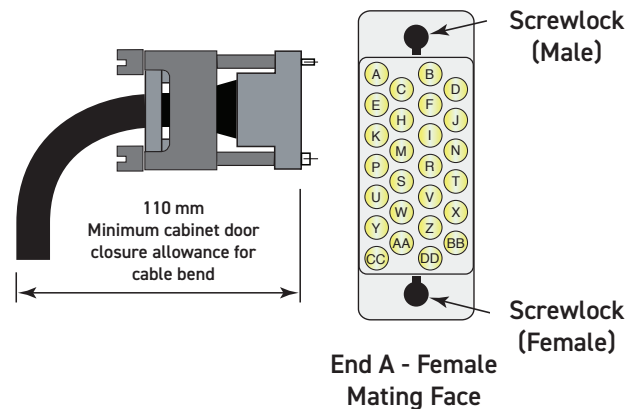
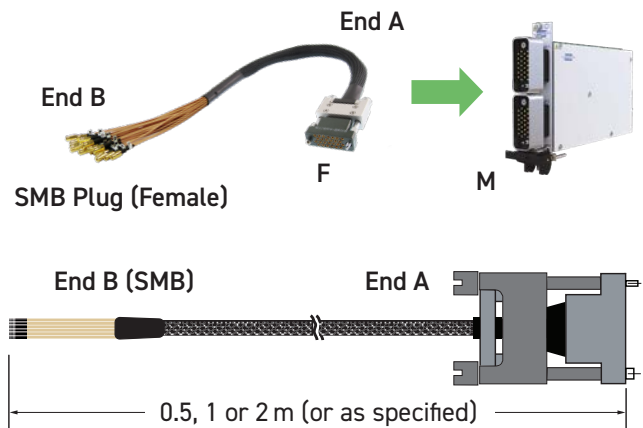
Connector Type (End A):	MS-M RF (3 or 26-Pin) with RG178 contacts
Gender	Female
Contact Material	Copper alloy
Impedance	50 Ohm
Securing Method	6-32 UNC screwlocks, male and female (see diagram)
Cable Exit	Rear
Overall Size (Approx)	H41 x W15 x D66 mm
Connector Type (End B):	SMB
Gender	Plug (female)
Contact Material	Gold plated brass
Impedance	50 Ohm
Securing Method	Push fit
Cable Exit	Rear
Overall Size (Approx)	6.5 mm dia x 200 mm long
Free Wire Length	130 mm (approx)
Cable Assembly Rating:	
Maximum Frequency	500 MHz with good VSWR
Cable Type:	RG178
Conductor: Material	Ag plated copper clad steel
Attenuation	1.08 dB/m at 400 MHz
Insulation	PVC
Outer Sleeve	Polyester
Screened Construction	Yes (Copper braid)
Additional Braided Sleeve	Yes
Cable O/D	13 mm
Minimum Bend Radius	50 mm
Door Closure Allowance	110 mm (see diagram)

Note: Cable assemblies can be ordered partially loaded instead of having the full number of connector pins and cables.



MS-M RG178 Cable Assy - Female to SMB

Product Compatibility



Product Order Codes

MS-M RF Cable Assemblies, RG178 Wire,

- 3-Pin Female to SMB, 0.5 m Long [40-979-503-0.5m-SMB](#)
- 3-Pin Female to SMB, 1 m Long [40-979-503-1m-SMB](#)
- 3-Pin Female to SMB, 2 m Long [40-979-503-2m-SMB](#)
- 26-Pin Female to SMB, 0.5 m Long [40-979-526-0.5m-SMB](#)
- 26-Pin Female to SMB, 1 m Long [40-979-526-1m-SMB](#)
- 26-Pin Female to SMB, 2 m Long [40-979-526-2m-SMB](#)

MS-M RF Connector Female Contacts

- RG178 (Souriau) 30 Piece Kit [40-969-501-FC](#)

Note: Other cable lengths can be supplied.

- High Specification **RG316** Cable
- Highly Flexible Cable with Braided Sleaving
- Fully Screened Cable Construction with Strain Relief

A range of cable assemblies using the Souriau MS-M RF connector.

Each cable assembly is based on the use of Pickering Interfaces integrated connector and strain relief system that minimizes the risk of cable damage caused by flexing during use.

Technical Specification

Connector Type (End A):	MS-M RF (26-Pin) with RG178 contacts
Gender	Female
Contact Material	Copper alloy
Impedance	50 Ohm
Securing Method	6-32 UNC screwlocks, male and female (see diagram)
Cable Exit	Rear
Overall Size (Approx)	H41 x W15 x D66 mm
Connector Type (End B):	SMB
Gender	Plug (female)
Contact Material	Gold plated brass
Impedance	50 Ohm
Securing Method	Push fit
Overall Size (Approx)	6.5 mm dia x 200 mm long
Free Wire Length	130 mm (approx)
Individual Wire Labelling	To connector pins
Cable Assembly Rating:	
Maximum Frequency	1.3 GHz with good VSWR
Cable Type:	RG316
Conductor: Material	Ag plated copper clad steel
Attenuation	68 dB/100 m at 500 MHz
Insulation	PTFE
Outer Sleeve	PTFE (alt. FEP)
Screened Construction	Yes (Silvered copper braid)
Additional Braided Sleeve	Yes
Cable O/D	13 mm
Minimum Bend Radius	50 mm
Door Closure Allowance	110 mm (see diagram)

Note: Cable assemblies can be ordered partially loaded instead of having the full number of connector pins and cables.

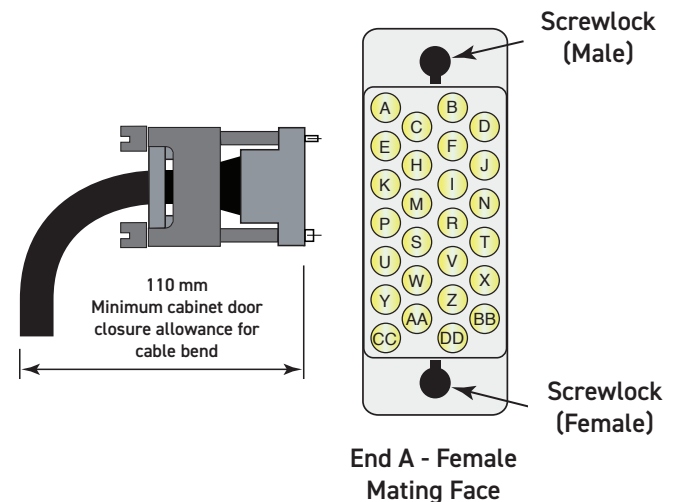
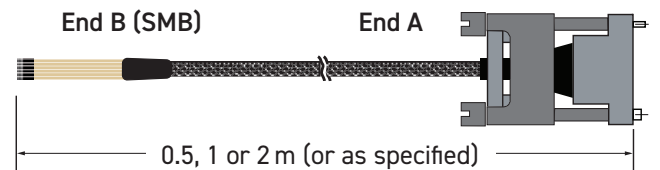
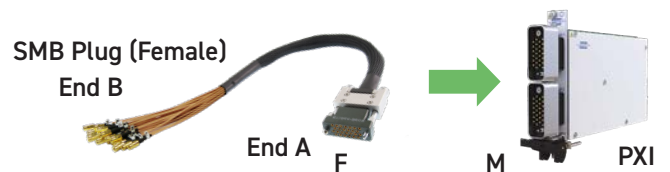


Engineering tests have proved that RG178 Contacts are suitable for use with RG316 Wire



MS-M RG316 Cable Assy - Female to SMB

Product Compatibility



Product Order Codes

- MS-M RF Cable Assemblies, RG316 Wire,
- 26-Pin Female to SMB, 0.5 m Lg [40-979-526-3-0.5m-SMB](#)
 - 26-Pin Female to SMB, 1 m Lg [40-979-526-3-1m-SMB](#)
 - 26-Pin Female to SMB, 2 m Lg [40-979-526-3-2m-SMB](#)

- MS-M RF Connector Female Contacts
RG178 (Souriau) 30 Piece Kit [40-969-501-FC](#)

Note: Other cable lengths can be supplied.

- High Specification & Highly Flexible **RG178** Cable
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Range of cable assemblies suited to applications using the Souriau MS-M RF connector. Supported products include 40-754 and 40-755.

Each cable assembly is based on the use of Pickering Interfaces integrated connector and strain relief system that minimizes the risk of cable damage caused by flexing during use.

Selection Guidance

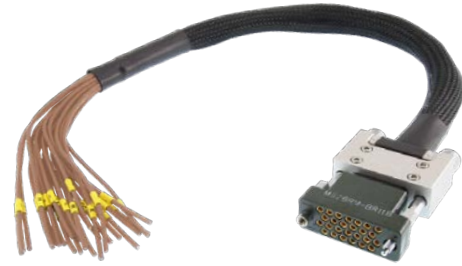
40-979A-526: For use with any MS-M product, when used on some connectors there may be spare leads which do not connect to the RF product.

40-979A-503: For use with the lower connector on the 40-754-009 PXI product. This connector supports a single SPDT switch. Contacts are fitted at positions A, E & K.

Technical Specification

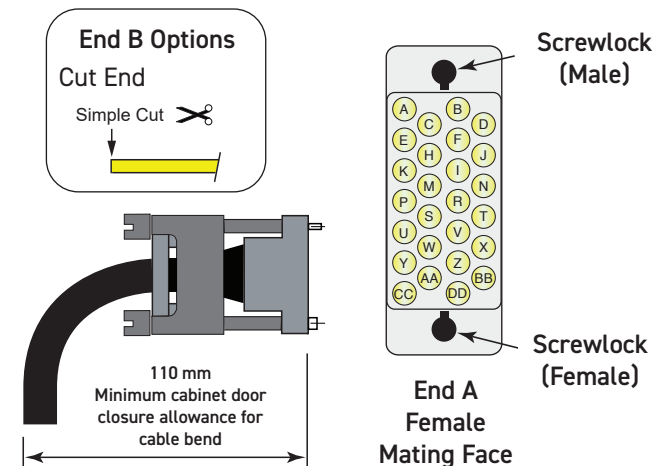
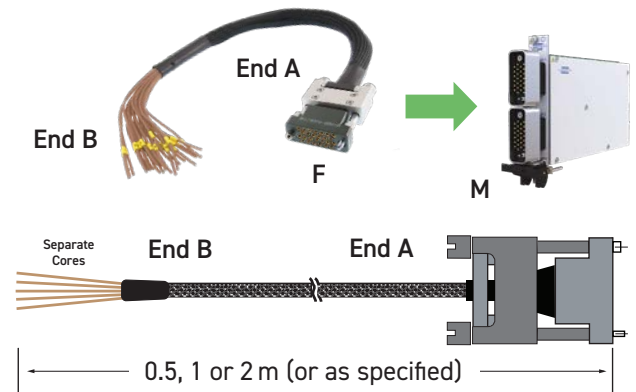
Connector Type (End A):	MS-M RF (3 or 26-Pin) with RG178 contacts
Gender	Female
Contact Material	Copper alloy
Impedance	50 Ohm
Securing Method	6-32 UNC screwlocks, male and female (see diagram)
Cable Exit	Rear
Overall Size (Approx)	H41 x W15 x D66 mm
Unterminated End (End B):	Separate cores
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins
Wire End Options	Cut end
Cable Assembly Rating:	
Maximum Frequency	1.3 GHz with good VSWR
Cable Type:	RG178BU
Conductor: Material	Ag plated copper clad steel
Attenuation	102 dB/100 m at 500 MHz
Insulation	PTFE
Outer Sleeve	FEP
Screened Construction	Yes (Silvered copper braid)
Additional Braided Sleeve	Yes
Cable O/D	13 mm
Minimum Bend Radius	50 mm
Door Closure Allowance	110 mm (see diagram)

Note: Cable assemblies can be ordered partially loaded instead of having the full number of connector pins and cables.



MS-M RG178 Cable Assy - Female to Unterminated

Product Compatibility



Product Order Codes

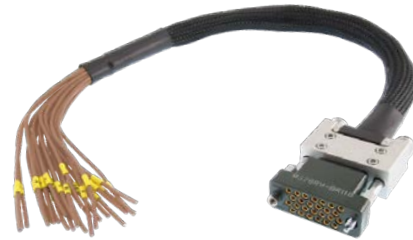
MS-M RF Cable Assemblies, RG178 Wire, Cut End,	
3-Pin Fem to Unterterm, 0.5 m Long	40-979A-503-0.5m-FU
3-Pin Fem to Unterterm, 1 m Long	40-979A-503-1m-FU
3-Pin Fem to Unterterm, 2 m Long	40-979A-503-2m-FU
26-Pin Fem to Unterterm, 0.5 m Long	40-979A-526-0.5m-FU
26-Pin Fem to Unterterm, 1 m Long	40-979A-526-1m-FU
26-Pin Fem to Unterterm, 2 m Long	40-979A-526-2m-FU

MS-M RF Connector Female Contacts	
RG178 (Souriau) 30 Piece Kit	40-969-501-FC

Note: Other cable lengths can be supplied.

- High Specification & Highly Flexible **RG316** Cable
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

A range of cable assemblies using the Souriau MS-M RF connector. Each cable assembly is based on the use of Pickering Interfaces integrated connector and strain relief system that minimizes the risk of cable damage caused by flexing during use.



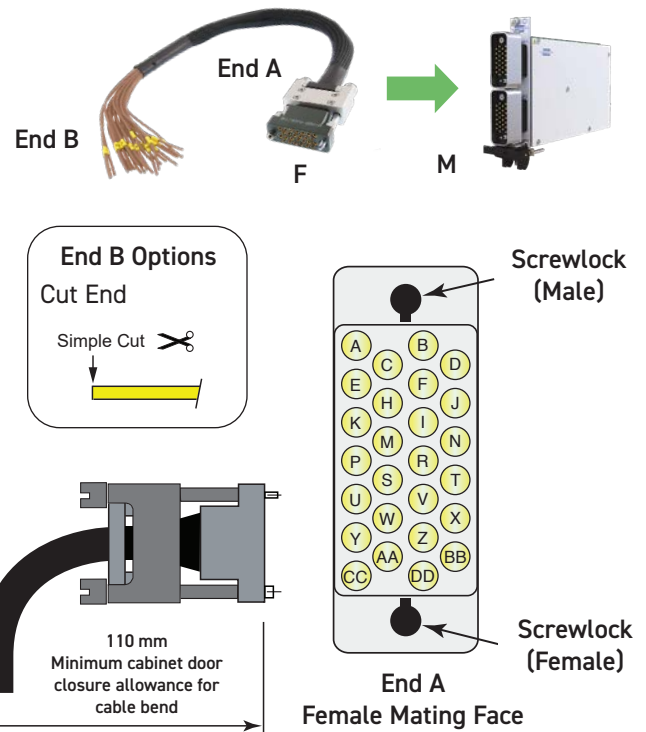
MS-M RG316 Cable Assy - Female to Unterminated

Technical Specification

Connector Type (End A):	MS-M RF (26-Pin) with RG178 contacts
Gender	Female
Contact Material	Copper alloy
Impedance	50 Ohm
Securing Method	6-32 UNC screwlocks, male and female (see diagram)
Cable Exit	Rear
Overall Size (Approx)	H41 x W15 x D66 mm
Unterminated End (End B):	Separate cores
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins
Wire End Options	Cut end
Cable Assembly Rating:	
Maximum Frequency	1.3 GHz with good VSWR
Cable Type:	RG316
Conductor: Material	Ag plated copper clad steel
Attenuation	68 dB/100 m at 500 MHz
Insulation	PTFE
Outer Sleeve	PTFE (alt. FEP)
Screened Construction	Yes (Silvered copper braid)
Additional Braided Sleeve	Yes
Cable O/D	13 mm
Minimum Bend Radius	50 mm
Door Closure Allowance	110 mm (see diagram)

Note: Cable assemblies can be ordered partially loaded instead of having the full number of connector pins and cables.

Product Compatibility

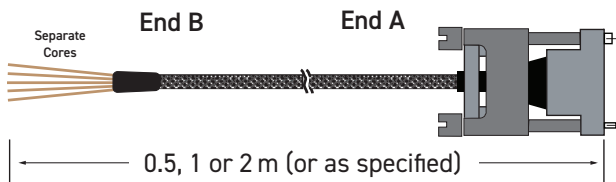


Product Order Codes

- MS-M RF Cable Assemblies, RG316 Wire, Cut End,
 26-Pin Female to Unterterm, 0.5 m Lg [40-979-526-3-0.5m-FU](#)
 26-Pin Female to Unterterm, 1 m Lg [40-979-526-3-1m-FU](#)
 26-Pin Female to Unterterm, 2 m Lg [40-979-526-3-2m-FU](#)

- MS-M RF Connector Female Contacts
 RG178 (Souriau) 30 Piece Kit [40-969-501-FC](#)

Note: Other cable lengths can be supplied.



Engineering tests have proved that RG178 Contacts are suitable for use with RG316 Wire

- Connector Housing with Strain Relief
- RF Connector Pins for use with RG178 & RG316 Cables
- Crimp and Extractor Tools

These components allow users or their designated cable assembly suppliers to create their own cabling solutions for use with the Souriau MS-M RF connection solution.

RF connections should be made using the recommended crimp tool for the contacts used.

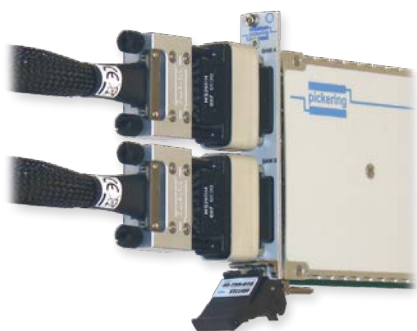
This connector can be partially loaded with contacts. For applications requiring a low number of RF connections packing may be required to allow the clamp mechanism to operate correctly.

Technical Specification

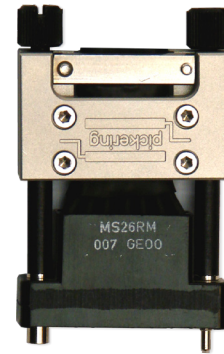
Connector Type:	26-Pin MS-M RF Connector housing
Gender	Female
Securing Method:	6-32 UNC screwlocks, male and female (see diagram)
Pins	Female contacts supplied separately
Cable Exit:	Rear
Cable Exit Size	18 x 8.5 mm
Overall Size (Approx)	H41 x W15 x D66 mm
Wire Connection:	
Recommended Wire	RG178 or RG316
Connection Method	Crimp
Additional Cable Clamp	Yes



Engineering tests have proved that RG178 Contacts are suitable for use with RG178 & RG316 Wire

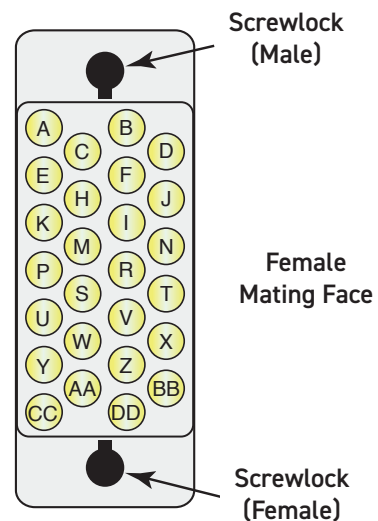
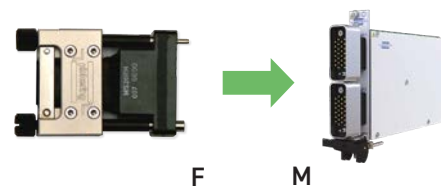


MS-M RF Product Connection



MS-M Connector Housing

Product Compatibility



Product Order Codes

26-Pin MS-M RF Connector housing with Strain Relief, Female	40-969-526-F
MS-M RF Connector Female Contacts RG178 (Souriau) - 30 Piece Kit	40-969-501-FC
Crimp Tool for MS-M RF RG178 Contacts (Including RG178 Contacts with RG316 Wire)	40-969-501-CT
Extractor Tool for MS-M RF Connector Pins	40-969-501-ET

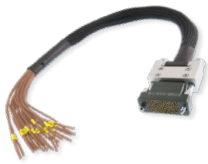
Appendix

This appendix gives details of recent part number changes.

ECN1738 Dated 28th June 2022

This Change Note covered changes to the RF wire type used within the RG178 unterminated cable assemblies, as the existing black PVC coated wire had proved difficult to terminate. The new wire uses an FEP outer sleeve. Additionally, the RG316 unterminated cables (40-979-526-3-*m-FU) and RG316 contacts kit were added to the data sheet.

Items that changed and the corresponding updated part numbers are detailed below:

Product changes in data sheet order		Data Sheet 90-017D Issue 9.3 Feb 2022	Data Sheet 90-017D Issue 9.4 Jun 2022
		Product Part Numbers	Product Part Numbers
	Cable Assy, 3-Pin MS-M to Unterminated	40-979-503-0.5m-FU	40-979A-503-0.5m-FU
	Cable Assy, 26-Pin MS-M to Unterminated	40-979-526-0.5m-FU	40-979A-526-0.5m-FU

Custom Termination

Pickering Interfaces are able to manufacture custom built cable assemblies and backshells that mate with all the connectors we use in our extensive product range and to provide connection solutions for third party products.

We are able to model and manufacture cable assemblies and other termination arrangements to user notes and drawings, and to deal with simple and complex assemblies, and both small and high volume orders.

All products are designed to ensure easy and problem free connection.

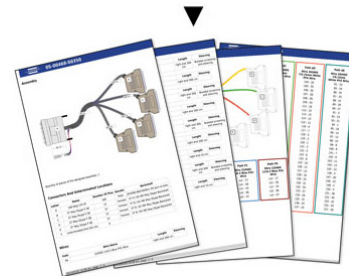
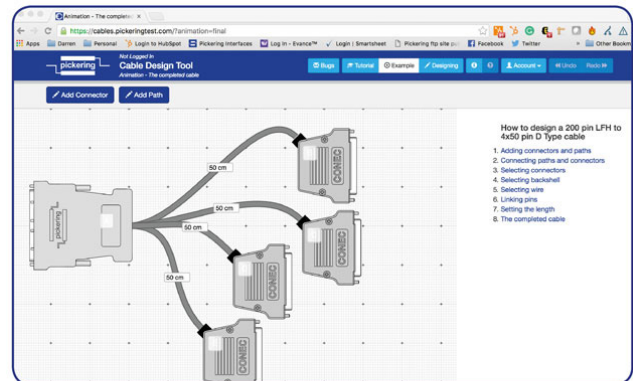
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.



Pickering's Cable Design Tool

Our Cable Design Tool is an online tool that allows you to define a cable assembly to exactly meet your requirements.

- Graphical design of customized cable assemblies
- Built-in library of standard cable sets can be used as the basis for customization, or cables can be defined from scratch
- The ability to store cable assemblies in the Cloud and develop them over time
- Each cable design has a PDF documentation file detailing all the specifications
- Allows detailed design including; connector types, wire type, pin definitions, pin & cable labelling, cable bundling, length selection, sleeving, comments, etc.
- Add your own connectors and wires
- Fully supported on major tablet operating systems



Because the Cable Design Tool is a web-based tool, we will continually update it to better accommodate your requirements and features. Your data is not trapped; complete details of the design are always available to the user at any time via the documentation or spreadsheet file. Once a cable is designed, you can submit it to us for quotation.

For more information visit: pickeringtest.com/cdt