104-Pin D-type Accessories

90-022D

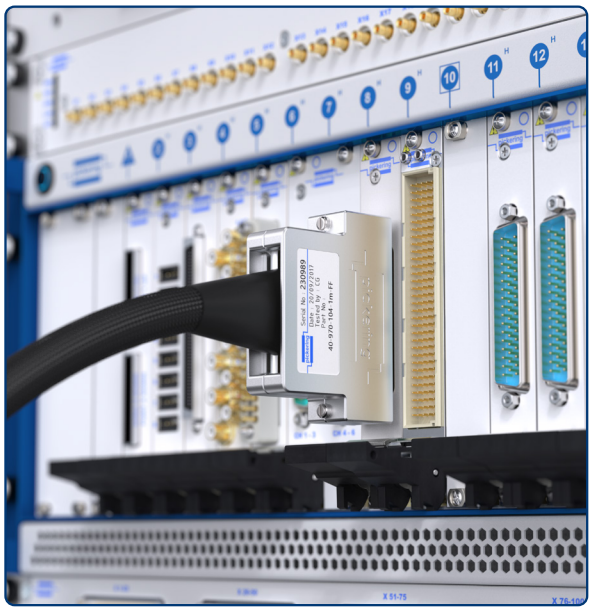
- Standard Voltage 300 VAC r.m.s, 2 A
- Cable Assemblies
- Cable Connectors
- PCB Connectors
- Guaranteed Compatibility

Simple Connection

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

Cable Assemblies

Cable assemblies are offered in connector to connector, and connector to unterminated versions. There are 3 termination options for the unterminated cables - ferrules, tinned copper or simple cut end.



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.

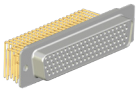
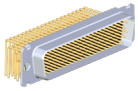
Using our Cable Design Tool, you can graphically design your own custom cable assembly. Once completed and submitted, our engineers will generate a quote for your cable requirements. See pickeringtest.com/cdt

Example of a Pickering PXI and BRIC Product using 104-Pin D-type Connectors

High Specification Cable Assemblies

Description		End 1 Gender & Cable Exit	End 2 Gender & Cable Exit	End 2 Options	Cable Length	Product Order Code and Part Number	Data Sheet Page
	Cable Assy, 104-Pin D-Type, 2 A	Male, Rear	Female, Rear	-	0.5 m 1 m 2 m	40-970-104-0.5m-MF 40-970-104-1m-MF 40-970-104-2m-MF	4
		Female, Rear	Female, Rear	-	0.5 m 1 m 2 m	40-970-104-0.5m-FF 40-970-104-1m-FF 40-970-104-2m-FF	5
	Cable Assy, 104-Pin D-Type to Unterminated, 2 A	Female, 45 ° Away from Pin 1	NA	Ferrules	0.5 m 1 m 2 m	40-972-104-0.5m-FU 40-972-104-1m-FU 40-972-104-2m-FU	6
				Tinned End	0.5 m 1 m 2 m	A104HFR-T-0A050 A104HFR-T-0A100 A104HFR-T-0A200	
				Cut End	0.5 m 1 m 2 m	A104HFR-C-0A050 A104HFR-C-0A100 A104HFR-C-0A200	
Note: Custom lengths by quotation. Max length 5 m.							

High Specification Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Cable Connector 104-Pin D-Type, 5 A, Solder Bucket	Female, Rear	With Backshell	C104DFR-2SB-1A	7
			Without Backshell	C104DFX-2SB-1A	
	PCB Connector 104-Pin D-Type, 5 A	Female	Right Angle PCB Mount	40-963-104-RF	8
	PCB Connector 104-Pin D-Type, 5 A	Male	Right Angle PCB Mount	40-963-104-RM	9

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

Additional Accessories

Although the items below do not directly mate with Pickering Interfaces products, customers may find them useful in the development of their own connection solutions.

High Specification Cable Assemblies

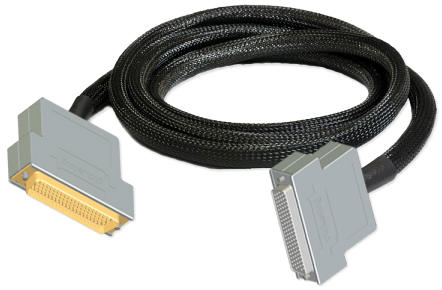
Description		End 1	End 2		Cable Length	Product Order Code and Part Number	Data Sheet Page
		Gender & Cable Exit	Gender & Cable Exit	Options			
	Cable Assy, 104-Pin D-Type, 2 A	Male, Rear	Male, Rear	-	0.5 m 1 m 2 m	40-970-104-0.5m-MM 40-970-104-1m-MM 40-970-104-2m-MM	11
	Cable Assy, 104-Pin D-Type to Unterminated, 2 A	Male, Rear	NA	Ferrules	0.5 m 1 m 2 m	40-972-104-0.5m-MU 40-972-104-1m-MU 40-972-104-2m-MU	12
				Tinned End	0.5 m 1 m 2 m	A104HMR-T-0A050 A104HMR-T-0A100 A104HMR-T-0A200	
				Cut End	0.5 m 1 m 2 m	A104HMR-C-0A050 A104HMR-C-0A100 A104HMR-C-0A200	
Note: Custom lengths by quotation							

High Specification Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Cable Connector 104-Pin D-Type, 5 A, Solder Bucket	Male, Rear	With Backshell	40-960-104-M	13
			Without Backshell	92-960-104-M	

Custom Termination

- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

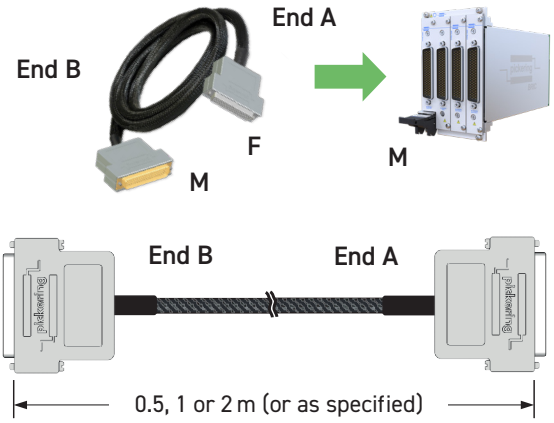


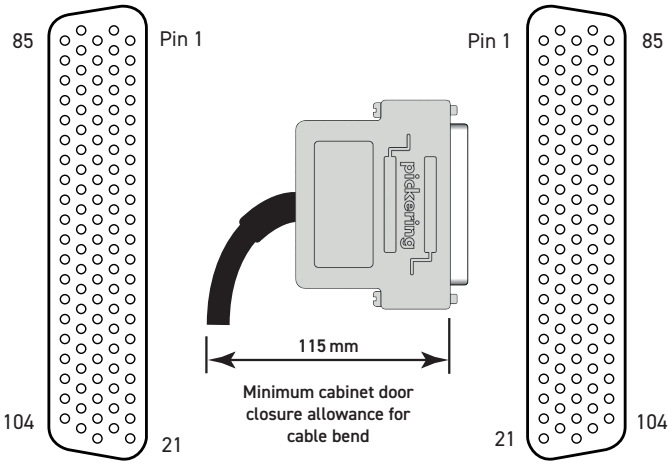
104-Pin D-Type Cable Assembly

Technical Specification

Connector Type (End A):	104-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	50-Pin D-Subminiature Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	2 A
Maximum Voltage	300 VAC r.m.s
Insulation Resistance	5000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Cable Exit	Rear
Overall Size (Approx)	H71 x W19 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	19/0.16 (0.38 mm^2, 22AWG)
Resistance	0.054 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	18 mm
Minimum Bend Radius	35 mm
Door Closure Allowance	115 mm (see diagram)

Product Compatibility





End B - Male Mating Face

End A - Female Mating Face

Product Order Codes

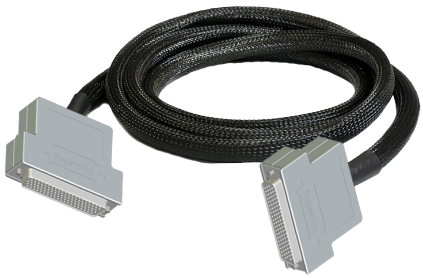
104-Pin D-Type Cable Assy, 2 A, Male to Female,	
0.5 m Long	40-970-104-0.5m-MF
1.0 m Long	40-970-104-1m-MF
2.0 m Long	40-970-104-2m-MF

Note: Other cable lengths can be supplied. Max length 5 m.

Cable Assy - Female to Female

90-022D

- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

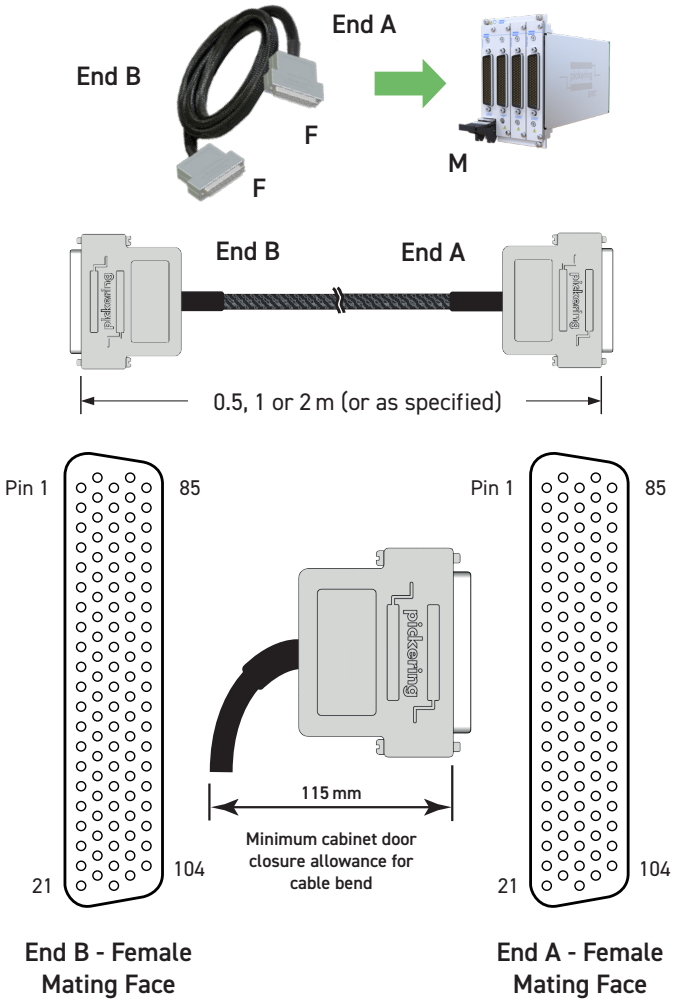


104-Pin D-Type Cable Assembly

Technical Specification

Connector Type (End A):	104-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	104-Pin D-Subminiature Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Maximum Current	2 A
Maximum Voltage	300 VAC r.m.s
Insulation Resistance	5000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Cable Exit	Rear
Overall Size (Approx)	H71 x W19 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	19/0.16 (0.38 mm², 22AWG)
Resistance	0.054 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	18 mm
Minimum Bend Radius	35 mm
Door Closure Allowance	115 mm (see diagram)

Product Compatibility



End B - Female Mating Face

End A - Female Mating Face

Product Order Codes

104-Pin D-Type Cable Assy, 2 A, Female to Female,	
0.5 m Long	40-970-104-0.5m-FF
1.0 m Long	40-970-104-1m-FF
2.0 m Long	40-970-104-2m-FF

Note: Other cable lengths can be supplied. Max length 5 m.

Cable Assy - Female to Unterminated

90-022D

- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit
- Fully Coded Markers to Ensure Easy Connection

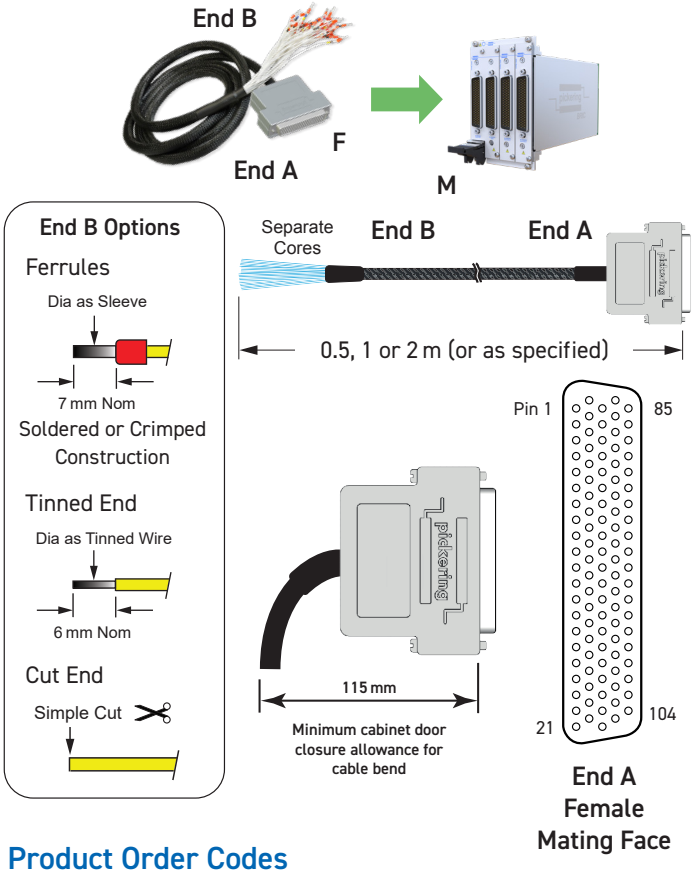
104-Pin D-Type Unterminated Cable Assembly

Technical Specification

Connector Type (End A):	104-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins. A white/black screen pigtail is also included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	2 A
Maximum Voltage	300 VAC r.m.s
Insulation Resistance	5000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Cable Exit	Rear
Overall Size (Approx)	H71 x W19 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	19/0.16 (0.38 mm^2, 22AWG)
Resistance	0.054 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	18 mm
Minimum Bend Radius	35 mm
Door Closure Allowance	115 mm (see diagram)

Note: When using this product please ensure appropriate electrical safety.

Product Compatibility



Product Order Codes

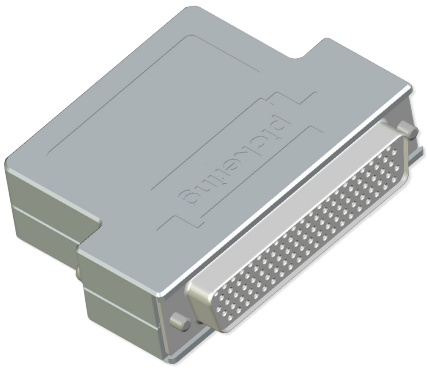
104-Pin D-Type Cable Assy, 2 A, Female to Unterminated,	
Ferrules, 0.5 m Long	40-972-104-0.5m-FU
Ferrules, 1.0 m Long	40-972-104-1m-FU
Ferrules, 2.0 m Long	40-972-104-2m-FU
Tinned End, 0.5 m Long	A104HFR-T-0A050
Tinned End, 1.0 m Long	A104HFR-T-0A100
Tinned End, 2.0 m Long	A104HFR-T-0A200
Cut End, 0.5 m Long	A104HFR-C-0A050
Cut End, 1.0 m Long	A104HFR-C-0A100
Cut End, 2.0 m Long	A104HFR-C-0A200

Note: Other cable lengths can be supplied. Max length 5 m.

- Connector only or Connector and Backshell
- Cable Clamp in Backshell
- Soldered Cable Termination

This accessory is designed to allow users to directly terminate with soldered connections to the connector.

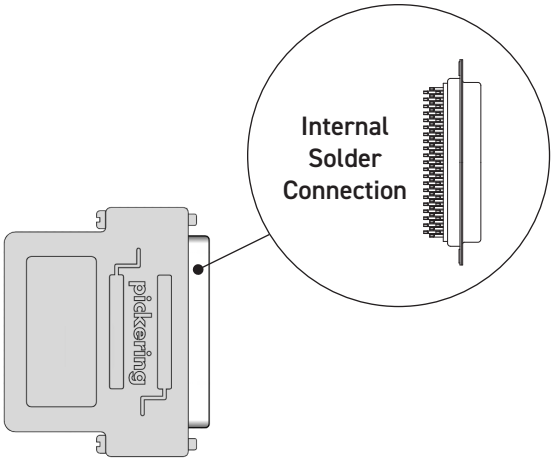
When the product is used without a backshell users should make their own cable strain relief arrangements and ensure appropriate electrical safety precautions are observed.



104-Pin D-Type Cable Connector with Backshell

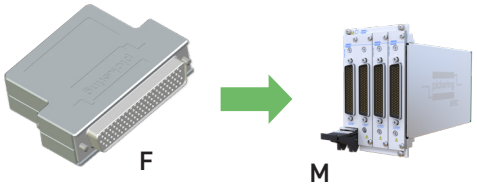
Technical Specification

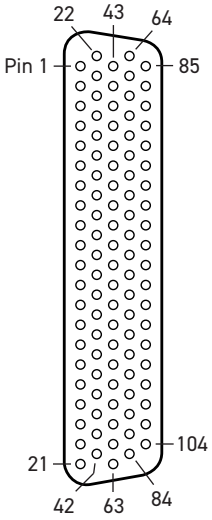
Connector Type:	104-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method:	
Product with Backshell	4-40 UNC screwlocks, male
Product without Backshell	4-40 UNC screwlocks, male
Wire Connection	Solder bucket. A backshell fixing is also provided for a cable screen
Connector Ratings:	
Maximum Current	5 A
Maximum Voltage	300 V r.m.s
Cable Exit:	Rear
Cable Exit Size	41 x 15.5 mm
Overall Size (Approx)	H71 x W19 x D 55 mm
104-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Wire Connection:	
Maximum Wire Size	22AWG
Recommended Insulation	PFA
Additional Cable Clamp	Yes (in backshell)



Solder Buckets

Product Compatibility





Female
Mating Face

Product Order Codes

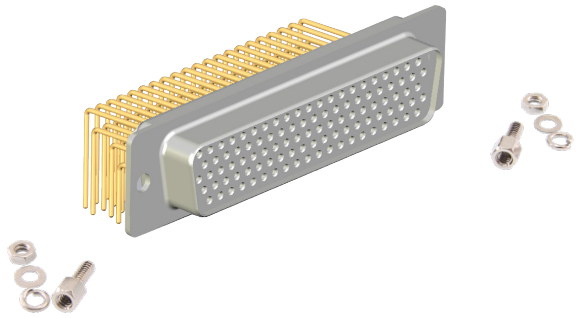
104-Pin D-Type Connector, 5 A, Solder Bucket,	
With Backshell, Female	C104DFR-2SB-1A
Without Backshell, Female	C104DFX-2SB-1A

PCB Connector, Right Angle - Female

- Right Angle PCB Mount
- Ideal for User Created Termination Solutions

This accessory allows a user to create their own PCB based termination solution mounted on the end of a cable. Suitable cables for this product are contained elsewhere in this data sheet. Interfacing PCBs should be designed with suitable clearances for the voltage the application requires.

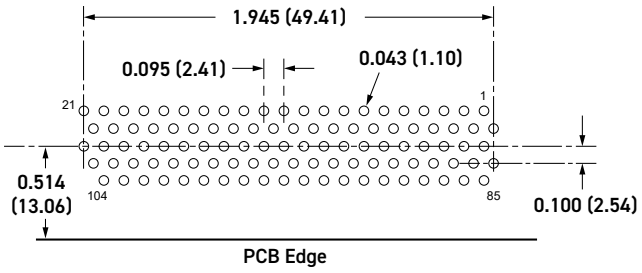
Note: This product is not suitable for directly mounting onto the front panel of a Pickering switching product.



104-Pin D-Type PCB Connector

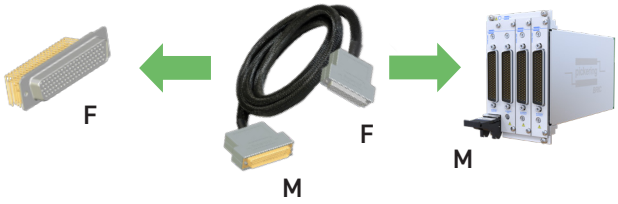
Technical Specification

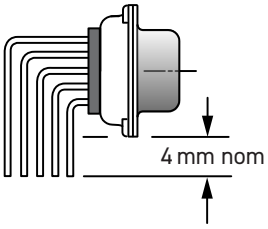
Connector Type:	104-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Right angle PCB mount, solder
Connector Ratings:	
Maximum Current	5 A
Maximum Voltage	300 VAC
50-Pin D-Sub:	
Contact Material	Gold flash on brass
Contact Resistance	30 mOhm max
PCB Legs:	
Effective Leg Length	4 mm nom (See diagram)



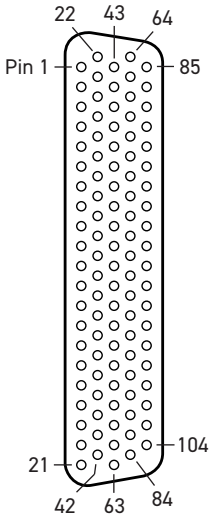
PCB Footprint of 104-Pin Right Angle Female Connector
(Connector Side - Not to Scale)

Product Compatibility





Effective Leg Length



Female
Mating Face

Product Order Codes

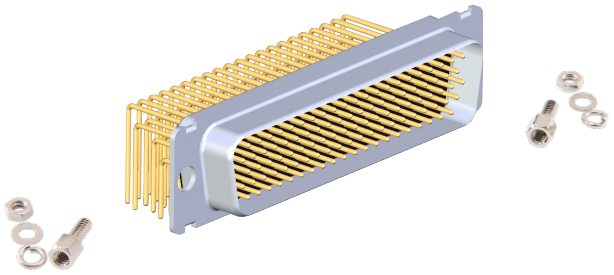
104-Pin D-Type Connector, 5 A, Right Angle PCB Mount, Female	40-963-104-RF

PCB Connector, Right Angle - Male

- Right Angle PCB Mount
- Ideal for User Created Termination Solutions

This accessory allows a user to create their own PCB based termination solution mounted on the end of a cable. Suitable cables for this product are contained elsewhere in this data sheet. Interfacing PCBs should be designed with suitable clearances for the voltage the application requires.

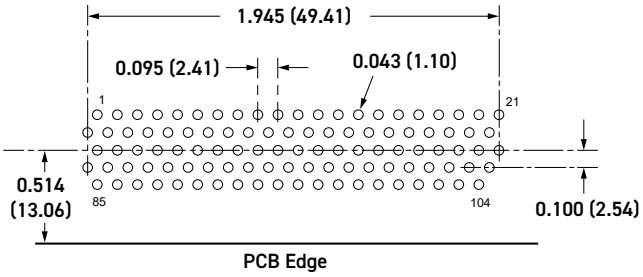
Note: This product is not suitable for directly mounting onto the front panel of a Pickering switching product.



104-Pin D-Type PCB Connector

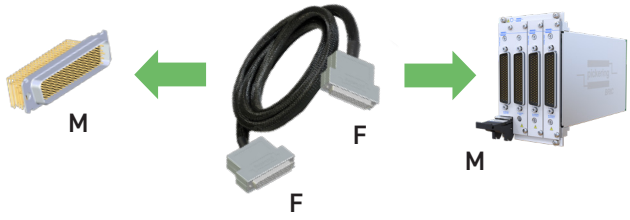
Technical Specification

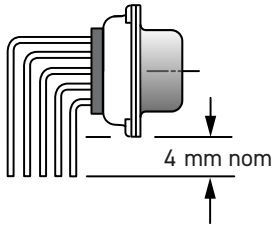
Connector Type:	104-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Right angle PCB mount, solder
Connector Ratings:	
Maximum Current	5 A
Maximum Voltage	300 VAC
104-Pin D-Sub:	
Contact Material	Gold flash on brass
Contact Resistance	30 mOhm max
PCB Legs:	
Effective Leg Length	4 mm nom (See diagram)



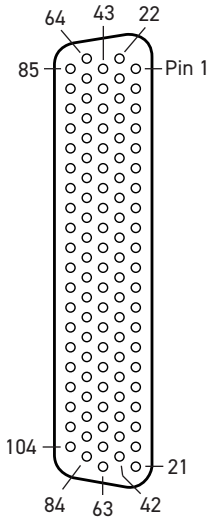
PCB Footprint of 104-Pin Right Angle Male Connector
(Connector Side - Not to Scale)

Product Compatibility





Effective Leg Length



Male
Mating Face

Product Order Codes

104-Pin D-Type Connector, 5 A, Right Angle PCB Mount, Male	40-963-104-RM

Additional Connection Accessories

Although these items do not directly mate with Pickering Interfaces products customers may find them useful in the development of their own connection solutions.

- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- 45 ° Cable Exit

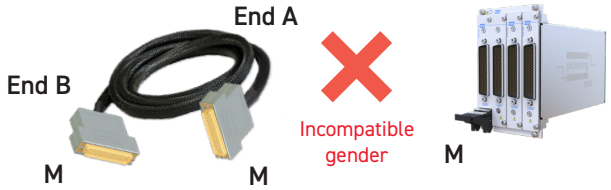
Technical Specification

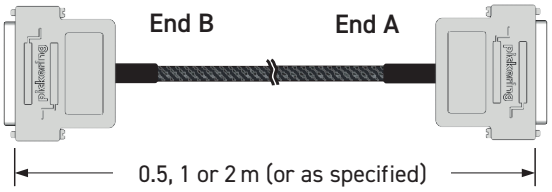
Connector Type (End A):	104-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	104-Pin D-Subminiature Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	2 A
Maximum Voltage	300 VAC r.m.s
Insulation Resistance	5000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Cable Exit	Rear
Overall Size (Approx)	H71 x W19 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	19/0.16 (0.38 mm², 22AWG)
Resistance	0.054 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	18 mm
Minimum Bend Radius	35 mm
Door Closure Allowance	115 mm (see diagram)

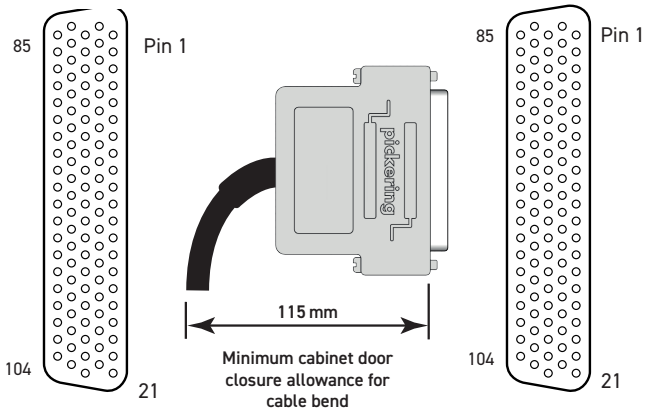
This Cable Assembly is Not Suitable for Connection to a Pickering Switching Product

104-Pin D-Type Cable Assembly

Product Compatibility







End B - Male Mating Face

End A - Male Mating Face

Product Order Codes

104-Pin D-Type Cable Assy, 2 A, Male to Female,	
0.5 m Long	40-970-104-0.5m-MM
1.0 m Long	40-970-104-1m-MM
2.0 m Long	40-970-104-2m-MM

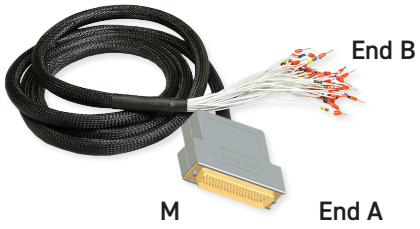
Note: 1. The Male gender **Will Not Mate** with a Pickering Module.
2. Other cable lengths can be supplied. Max length 5 m.

Cable Assy - Male to Unterminated

90-022D

- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit
- Fully Coded Markers to Ensure Easy Connection

This Cable Assembly is Not Suitable for Connection to a Pickering Switching Product



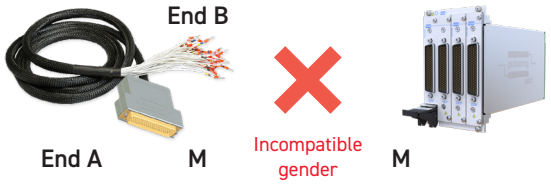
104-Pin D-Type Unterminated Cable Assembly

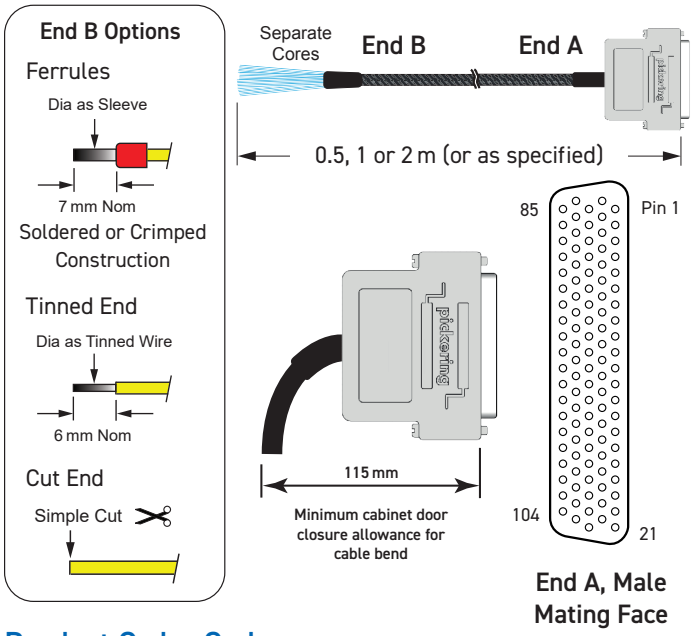
Technical Specification

Connector Type (End A):	104-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins. A white/black screen pigtail is included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	2 A
Maximum Voltage	300 VAC r.m.s
Insulation Resistance	5000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Cable Exit	Rear
Overall Size (Approx)	H71 x W19 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	19/0.16 (0.38 mm^2, 22AWG)
Resistance	0.054 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	18 mm
Minimum Bend Radius	35 mm
Door Closure Allowance	115 mm (see diagram)

Note: When using this product please ensure appropriate electrical safety.

Product Compatibility





Product Order Codes

104-Pin D-Type Cable Assy, 2 A, Male to Unterminated,	
Ferrules, 0.5 m Long	40-972-104-0.5m-MU
Ferrules, 1.0 m Long	40-972-104-1m-MU
Ferrules, 2.0 m Long	40-972-104-2m-MU
Tinned End, 0.5 m Long	A104HMR-T-0A050
Tinned End, 1.0 m Long	A104HMR-T-0A100
Tinned End, 2.0 m Long	A104HMR-T-0A200
Cut End, 0.5 m Long	A104HMR-C-0A050
Cut End, 1.0 m Long	A104HMR-C-0A100
Cut End, 2.0 m Long	A104HMR-C-0A200

Note: 1. The Male gender **Will Not Mate** with a Pickering Module.
2. Other cable lengths can be supplied. Max length 5 m.

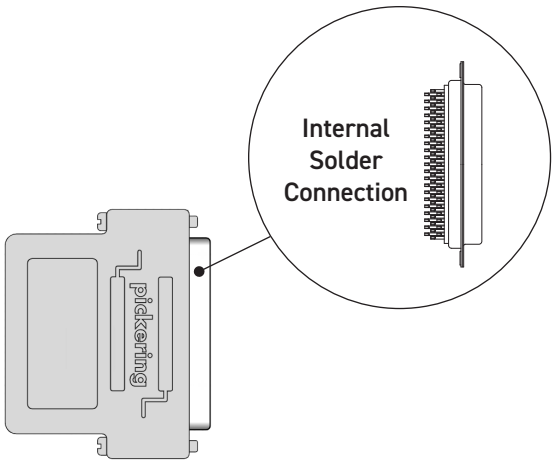
- Connector only or Connector and Backshell
- Cable Clamp in Backshell
- Soldered Cable Termination

This accessory is designed to allow users to directly terminate with soldered connections to the connector.

When the product is used without a backshell users should make their own cable strain relief arrangements and ensure appropriate electrical safety precautions are observed.

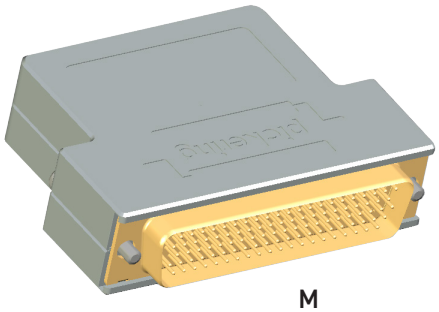
Technical Specification

Connector Type:	104-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method:	
Product with Backshell	4-40 UNC screwlocks, male
Product without Backshell	4-40 UNC screwlocks, male
Wire Connection	Solder bucket. A backshell fixing is also provided for a cable screen
Connector Ratings:	
Maximum Current	5 A
Maximum Voltage	300 V r.m.s
Cable Exit:	Rear
Cable Exit Size	41 x 15.5 mm
Overall Size (Approx)	H71 x W19 x D55 mm
104-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	30 mOhm
Wire Connection:	
Maximum Wire Size	22 AWG
Recommended Insulation	PFA
Additional Cable Clamp	Yes (in backshell)



Solder Buckets

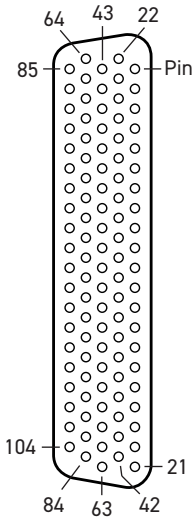
This Connector is Not Suitable for Connection to a Pickering Switching Product



M

104-Pin D-Type Cable Connector with Backshell

Product Compatibility



Male Mating Face

Product Order Codes

104-Pin D-Type Connector, 5 A, Solder Bucket,	
With Backshell, Male	40-960-104-M
Without Backshell, Male	92-960-104-M

Note: The Male gender **Will Not Mate** with a Pickering Module.

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.

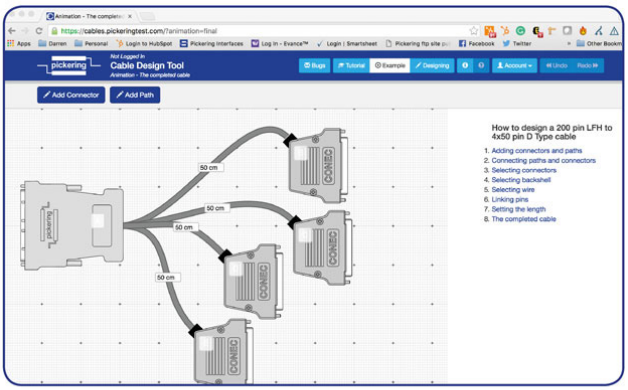
All products are designed to ensure easy and problem free connection.

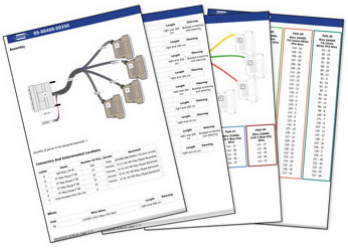
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.

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