78-Pin D-type Accessories

90-006D

- Standard Voltage to 250 V AC/400 V DC, 3 A
- Cable Assemblies
- Cable Connectors & Connector Blocks
- Breakouts & 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, connector blocks, breakouts 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.

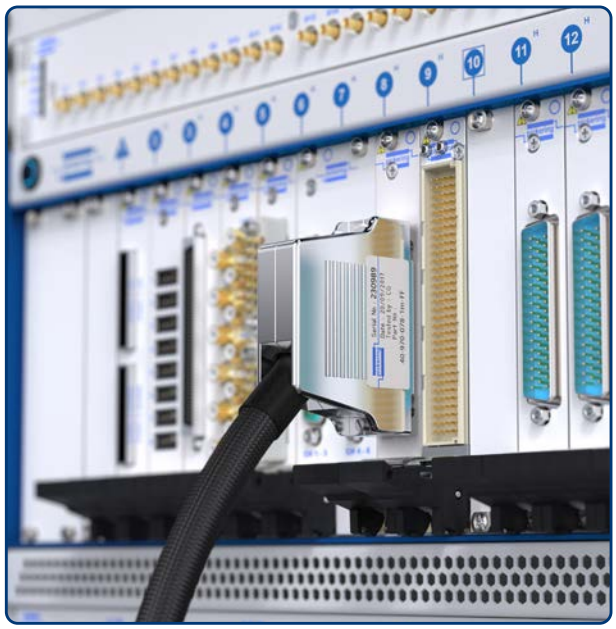
Connector Blocks and Breakouts

Connector Blocks convert the 78-pin D-type connections to an array of screw terminals. The customer can then interface to other devices using his own wiring. An alternative is a remote Breakout with screw terminals at the end of a cable assembly.

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 78-Pin D-type Connectors

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, 78-Pin D-Type, 3 A	Male, 45 ° Towards Pin 1	Female, 45 ° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-078-0.5m-MF 40-970-078-1m-MF 40-970-078-2m-MF	5
		Female, 45 ° Away from Pin 1	Female, 45 ° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-078-0.5m-FF 40-970-078-1m-FF 40-970-078-2m-FF	6
	Cable Assy, 78-Pin D-Type to Unterminated, 3 A	Female, 45 ° Away from Pin 1	NA	Ferrules	0.5 m 1 m 2 m	40-972-078-0.5m-FU 40-972-078-1m-FU 40-972-078-2m-FU	7
				Tinned End	0.5 m 1 m 2 m	A078HF4-T-0A050 A078HF4-T-0A100 A078HF4-T-0A200	
				Cut End	0.5 m 1 m 2 m	A078HF4-C-0A050 A078HF4-C-0A100 A078HF4-C-0A200	
		Female, 45 ° Towards Pin 1	NA	Ferrules	0.5 m 1 m 2 m	A078HF5-F-0A050 A078HF5-F-0A100 A078HF5-F-0A200	8
				Tinned End	0.5 m 1 m 2 m	A078HF5-T-0A050 A078HF5-T-0A100 A078HF5-T-0A200	
				Cut End	0.5 m 1 m 2 m	A078HF5-C-0A050 A078HF5-C-0A100 A078HF5-C-0A200	

Note: Custom lengths by quotation. Max length 5 m.

Specific Function 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, 78-Pin D-Type to Mini Thermocouple Plugs	Male, 45 ° Away from Pin 1	Male, Rear Cable Exit	32 Plugs 24 Plugs 16 Plugs 8 Plugs	1 m	A078DFR-32M002T5A100 A078DFR-24M002T5A100 A078DFR-16M002T5A100 A078DFR-08M002T5A100	9

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.

Female Connector Blocks/Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Shielded Connector Block, 78-Pin D-Type, 2 A, Screw Terminal	Female, Rear	With Backshell	40-965A-078-F	10
			Without Backshell	92-965-078-F	
	Breakout with DIN Rail Mount, 78-Pin D-Type, 2 A, Screw Terminal	Female	DIN Rail Mount	40-967-078-F	11
	Cable Connector 78-Pin D-Type, 3 A, Solder Bucket	Female, 45 ° Options	With Backshell	40-960-078-F	12
			Without Backshell	92-960-078-F	
	PCB Connector 78-Pin D-Type, 3 A	Female	Right Angle PCB Mount	40-963-078-RF	13
			Straight PCB Mount	40-963-078-SF	14

Male Breakouts/PCB Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Breakout with DIN Rail Mount, 78-Pin D-Type, 2 A, Screw Terminal	Male	DIN Rail Mount	40-967-078-M	15
	PCB Connector 78-Pin D-Type, 3 A	Male	Right Angle PCB Mount	40-963-078-RM	16
			Straight PCB Mount	40-963-078-SM	17

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.

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, 78-Pin D-Type, 3 A	Male, 45 ° Towards Pin 1	Male, 45 ° Towards Pin 1	-	0.5 m 1 m 2 m	40-970-078-0.5m-MM 40-970-078-1m-MM 40-970-078-2m-MM	19
	Cable Assy, 78-Pin D-Type to Unterminated, 3 A	Male, 45 ° Towards Pin 1	NA	Ferrules	0.5 m 1 m 2 m	40-972-078-0.5m-MU 40-972-078-1m-MU 40-972-078-2m-MU	20
				Tinned End	0.5 m 1 m 2 m	A078HM5-T-0A050 A078HM5-T-0A100 A078HM5-T-0A200	
				Cut End	0.5 m 1 m 2 m	A078HM5-C-0A050 A078HM5-C-0A100 A078HM5-C-0A200	
Note: Custom lengths by quotation. Max length 5 m.							

Male Connector Blocks/PCB Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Cable Connector 78-Pin D-Type, 3 A, Solder Bucket	Male, 45 ° Options	With Backshell	40-960-078-M	21
			Without Backshell	92-960-078-M	

Custom Termination

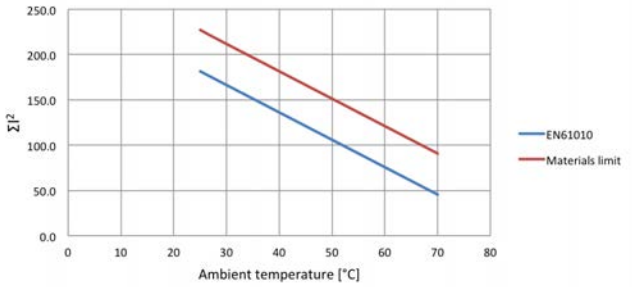
Customization Possibilities 22

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

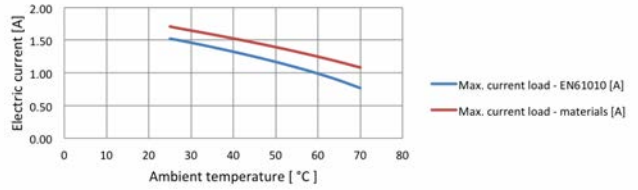
Technical Specification

Connector Type (End A):	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	3 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Cable Exit:	
Female Connectors	45 ° (Away from Pin 1)
Male Connectors	45 ° (Towards Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	7/0.15 (0.124 mm², 26AWG)
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	12 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)

Characteristic Plots for 40-970-078-1m



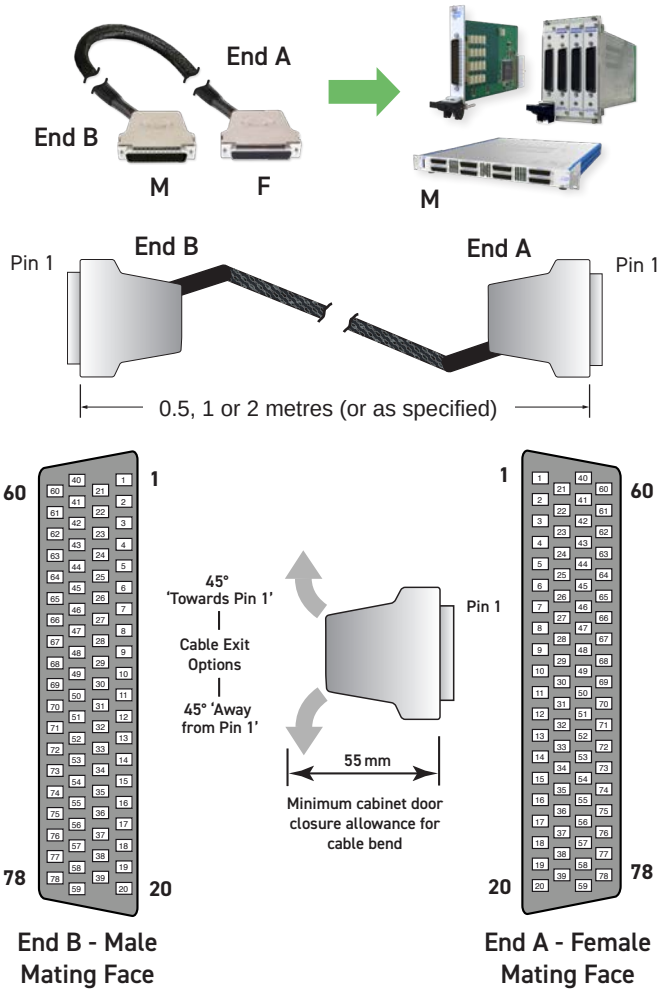
The graph shows the permitted ΣI² versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.



The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI² is complied with.

78-Pin D-Type Cable Assembly

Product Compatibility



End B - Male Mating Face

End A - Female Mating Face

Product Order Codes

78-Pin D-Type Cable Assy, 3 A, Male to Female,	
0.5 m Long	40-970-078-0.5m-MF
1.0 m Long	40-970-078-1m-MF
2.0 m Long	40-970-078-2m-MF

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

Cable Assy - Female to Female

90-006D

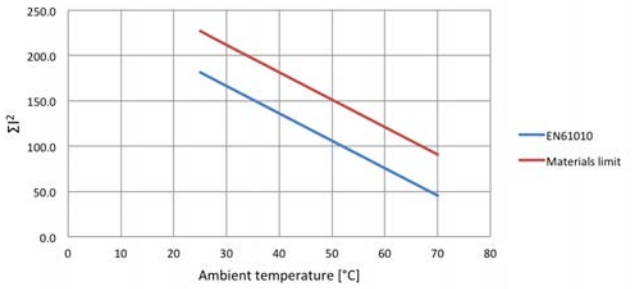
- High Specification Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- 45 ° Cable Exit

78-Pin D-Type Cable Assembly

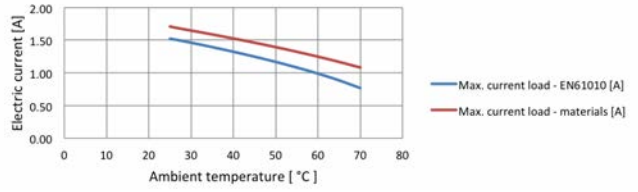
Technical Specification

Connector Type (End A):	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Maximum Current	3 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Cable Exit:	45 ° (Away from Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	7/0.15 (0.124 mm², 26AWG)
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	12 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)

Characteristic Plots for 40-970-078-1m

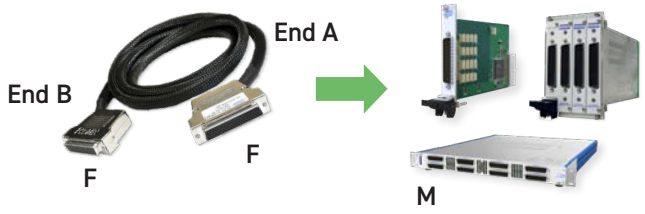


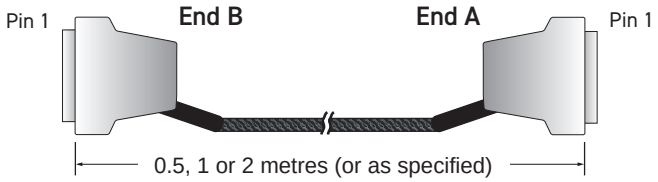
The graph shows the permitted ΣI² versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.

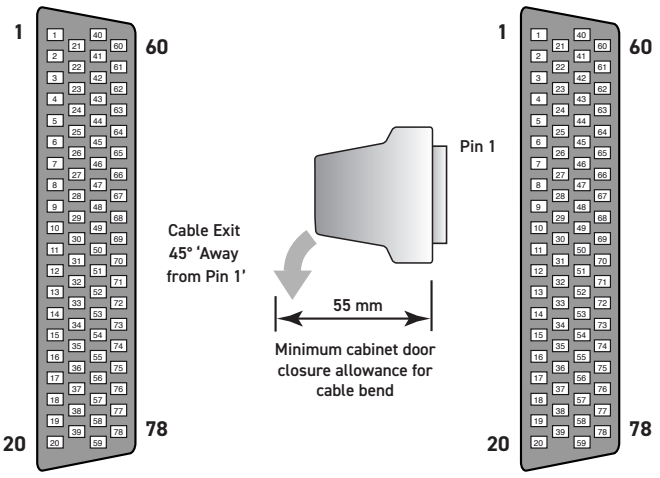


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI² is complied with.

Product Compatibility







End B - Female Mating Face

End A - Female Mating Face

Product Order Codes

78-Pin D-Type Cable Assy, 3 A, Female to Female,	
0.5 m Long	40-970-078-0.5m-FF
1.0 m Long	40-970-078-1m-FF
2.0 m Long	40-970-078-2m-FF

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

Cable Assy - Female to Unterminated

90-006D

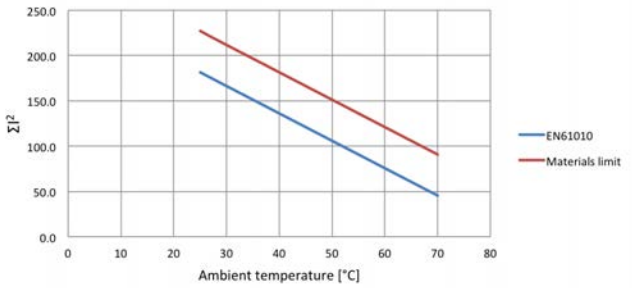
- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- 45 ° Cable Exit (Away from Pin 1)
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

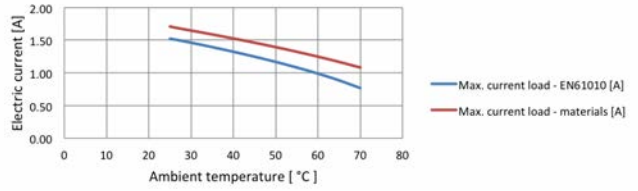
Connector Type (End A):	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins A white/black screen pigtail is also included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	3 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Cable Exit	45 ° (Away from Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	7/0.15 (0.124 mm², 26AWG)
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	12 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)

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

Characteristic Plots for 40-972-078-1m



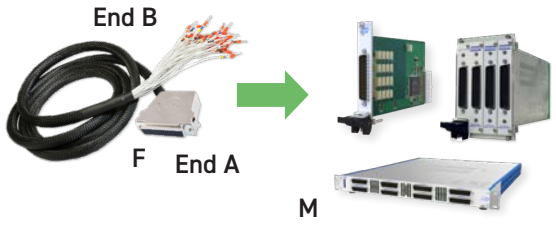
The graph shows the permitted ΣI² versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.

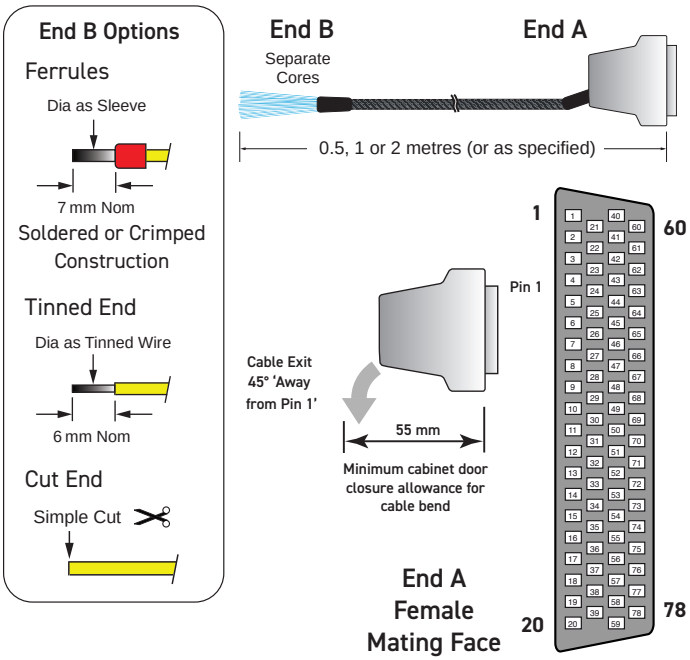


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI² is complied with.

78-Pin D-Type Unterminated Cable Assembly

Product Compatibility





Product Order Codes

78-Pin D-Type Cable Assy, 3 A, Female to Unterminated, Ferrules,

Cable Exit Away from Pin 1, 0.5 m Lg	40-972-078-0.5m-FU
Cable Exit Away from Pin 1, 1.0 m Lg	40-972-078-1m-FU
Cable Exit Away from Pin 1, 2.0 m Lg	40-972-078-2m-FU

Part numbers for other versions:

A078HF4-*-0A***

- End B: T = Tinned End, C = Cut End
- Cable Length: 050 = 0.5 m, 100 = 1.0 m, 200 = 2.0 m

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

- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- 45 ° Cable Exit (Towards Pin 1)
- Fully Coded Markers to Ensure Easy Connection

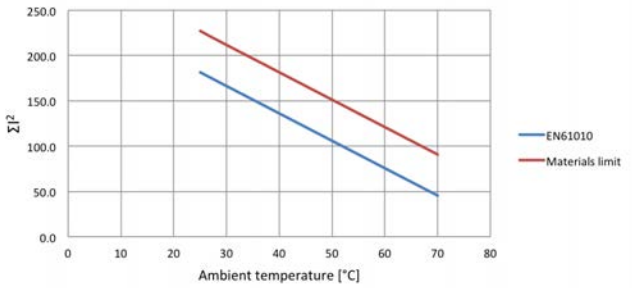
78-Pin D-Type Unterminated Cable Assembly

Technical Specification

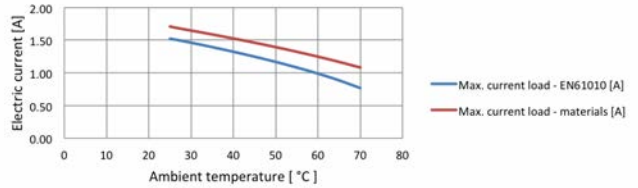
Connector Type (End A):	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins A white/black screen pigtail is also included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	3 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Cable Exit	45 ° (Towards Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	7/0.15 (0.124 mm², 26AWG)
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	12 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)

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

Characteristic Plots for A078HF5-*-0A100

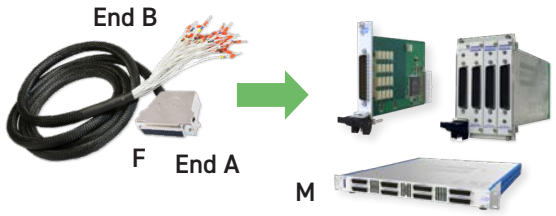


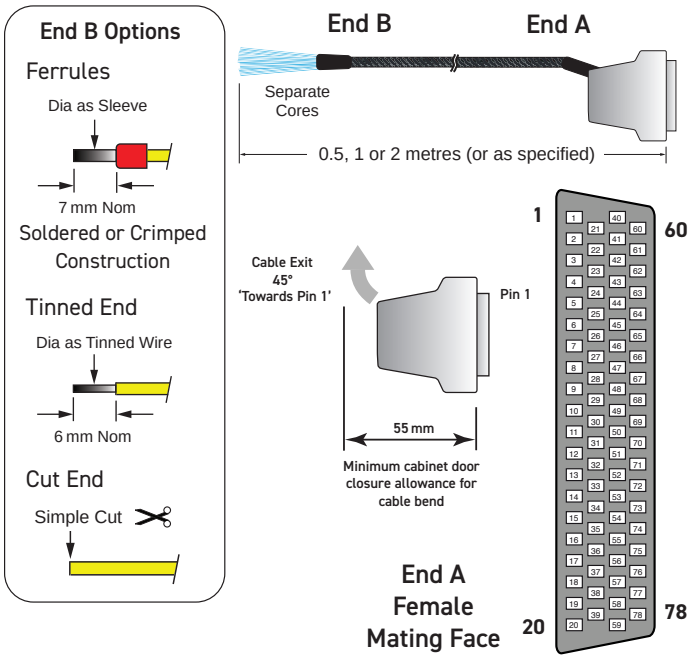
The graph shows the permitted ΣI² versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.



The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI² is complied with.

Product Compatibility





Product Order Codes

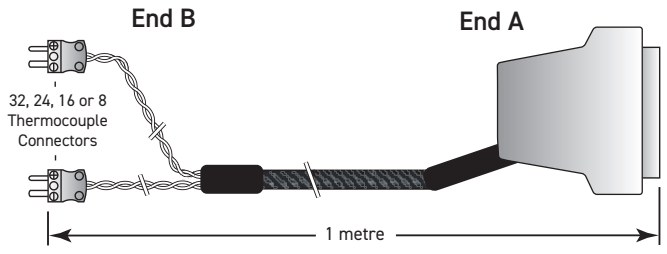
78-Pin D-Type Cable Assy, 3 A, Female to Unterminated,	
Exit Towards Pin 1, Ferrules, 0.5 m Lg	A078HF5-F-0A050
Exit Towards Pin 1, Ferrules, 1.0 m Lg	A078HF5-F-0A100
Exit Towards Pin 1, Ferrules, 2.0 m Lg	A078HF5-F-0A200
Exit Towards Pin 1, Tinned End, 0.5 m Lg	A078HF5-T-0A050
Exit Towards Pin 1, Tinned End, 1.0 m Lg	A078HF5-T-0A100
Exit Towards Pin 1, Tinned End, 2.0 m Lg	A078HF5-T-0A200
Exit Towards Pin 1, Cut End, 0.5 m Lg	A078HF5-C-0A050
Exit Towards Pin 1, Cut End, 1.0 m Lg	A078HF5-C-0A100
Exit Towards Pin 1, Cut End, 2.0 m Lg	A078HF5-C-0A200

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

- Compatible with the Millivolt Thermocouple Simulator Modules, 41-760, 41-761 & 41-761A
- High Specification and Highly Flexible Cable
- Braided Sleeve
- Fully Coded Markers to Ensure Easy Connection

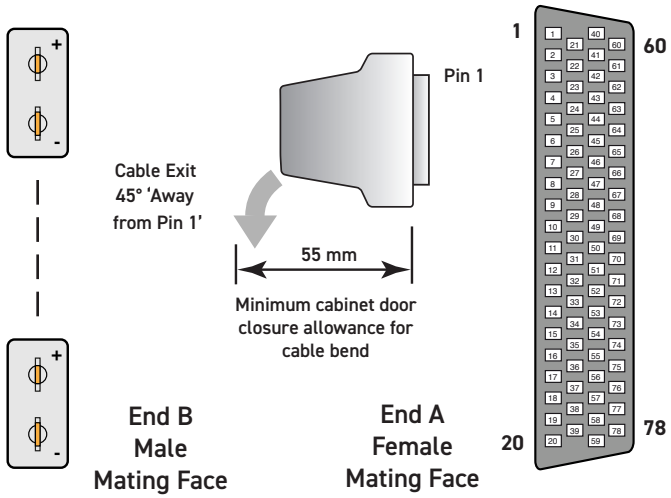
Technical Specification

Connector Type (End A):	78-Pin D-Subminiature, density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	Mini copper thermocouple plugs
Gender	Male
Securing Method	Push Fit
Free Wire Length	100 mm nominal
Individual Wire Labelling	As thermocouple channel
Maximum Current	3 A
Maximum Voltage	125 VAC
Insulation Resistance	3000 MOhm/m
Connector (End A):	
Contact Material	Brass
Contact Resistance	20 mOhm
Cable Exit	45 ° (Away from Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Connector (End B):	
Contact Material	Brass
Max Continuous Temperature	150 °C
Cable Exit:	Rear with cable clamp
Overall Size (Excluding Pins)	H16 x W8 x D20.2 mm
Cable Type:	26 AWG PFA twisted pair
Conductor: Material	Silver plated copper
Strands	7/0.15 mm
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	-
Screened Construction	No
Additional Braided Sleeve	Yes
Cable O/D	12 mm max
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)



78-Pin D-Type Unterminated Cable Assembly

Product Compatibility



Product Order Codes

78-Pin D-Type Cable Assy, 3 A,
Female to 32 x Mini Thermocouple plugs, 1 m long
A078DFR-32M002T5A100
Female to 24 x Mini Thermocouple plugs, 1 m long
A078DFR-24M002T5A100
Female to 16 x Mini Thermocouple plugs, 1 m long
A078DFR-16M002T5A100
Female to 8 x Mini Thermocouple plugs, 1 m long
A078DFR-08M002T5A100

Note: Other cable lengths can be supplied.

Connector Block - Female

90-006D

- Connector & PCB Only or Connector, PCB & Backshell
- Male Screwlocks
- Cable Clamp in Backshell
- Easy to Use Rising Cage Screw Terminals

Connector blocks provide a convenient method of termination without the use of custom cabling. However, a higher resistance path, lower capacity ratings and lower voltage ratings are typical.

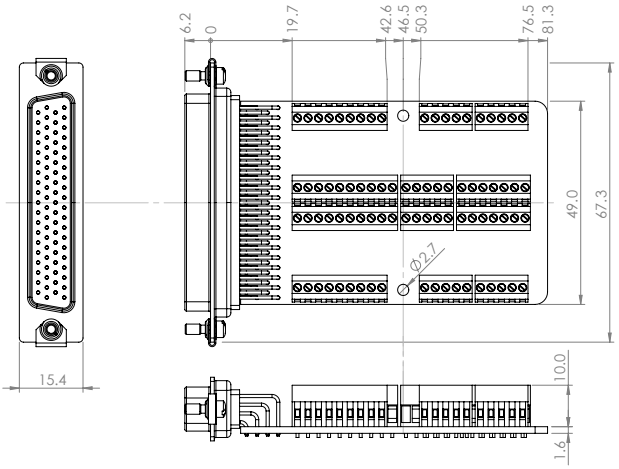
The screw terminals use a rising cage clamp mechanism to minimize risk of copper strand breakage. PTFE cables are recommended for use with this connector block to maximise copper cross-sectional area and insulation properties. The breakdown voltage of the connector block is controlled by clearances to the metal shell. The metal shell includes an internal insulation barrier under the carrier board.

This connector block uses male screwlocks and will not mate to Pickering cables. Connector blocks supplied without a backshell do not include cable strain relief.

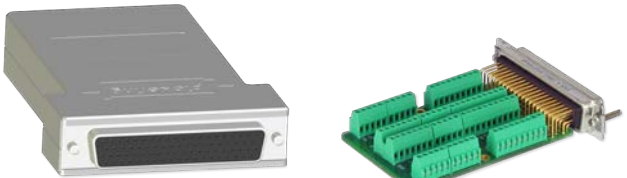
Technical Specification

Connector Type:	78-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 or female
Wire Connection	Rising cage screw terminals A screen (GND) connection is provided
Connector Block Ratings:	
Maximum Current	2 A
Maximum Voltage	200 V DC
Cable Exit	Rear - 15.3 x 30 mm
Overall Size (Approx)	H68 x W18.3 x D102 mm
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Screw Terminals:	
Maximum Wire Size	20AWG
Recommended Insulation	PTFE type
Additional Cable Clamp	Yes (in backshell)

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

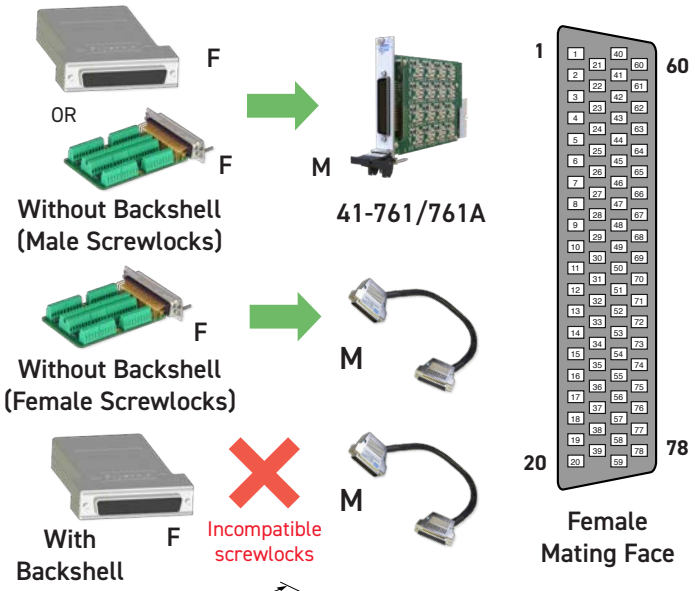


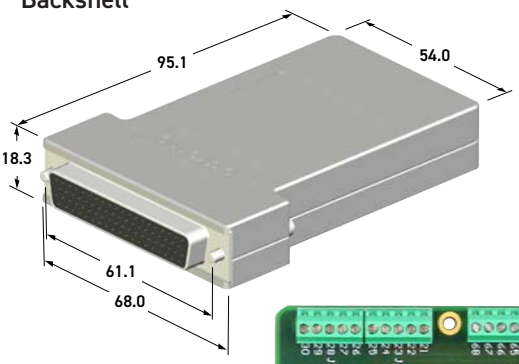
Product Dimensions (92-965-078-F)



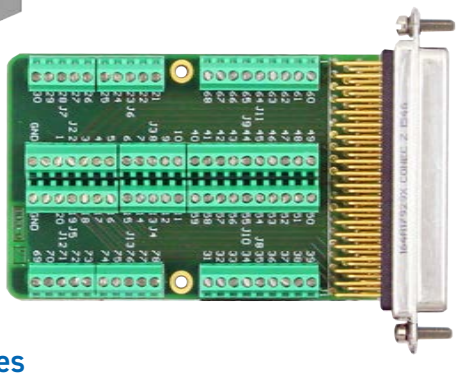
78-Pin D-Type Connector Block

Product Compatibility





Connector Block Dimensions



Connector Block PCB Legend

Product Order Codes

78-Pin D-Type Shielded Connector Block, 2 A, Screw Terminal,	
With Backshell, Female	40-965A-078-F
Without Backshell, Female	92-965-078-F

Note: Male and female screwlocks are provided for connector blocks without a backshell.

- For Connection at Cable End
- Simple to Use Rising Cage Screw Clamp Termination
- DIN Rail Mounted

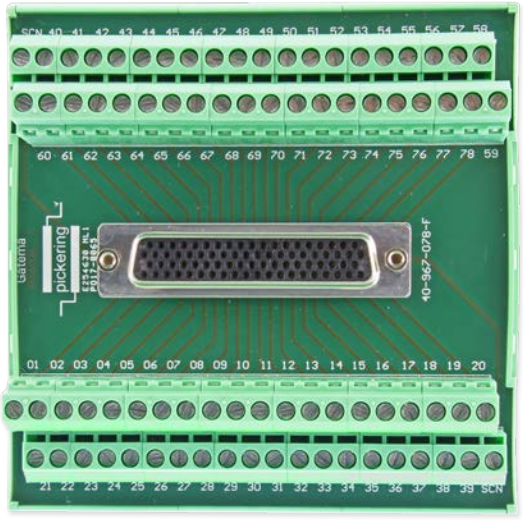
Connector blocks provide a convenient method of termination without the use of custom cabling. However, a higher resistance path, lower capacity ratings and lower voltage ratings are typical.

This termination option is capable of accepting heavy duty connection wires and uses rising clamp screw terminals to minimize the danger of copper strand damage. Users should care take to protect the termination and provide a suitable method of restraining the cables.

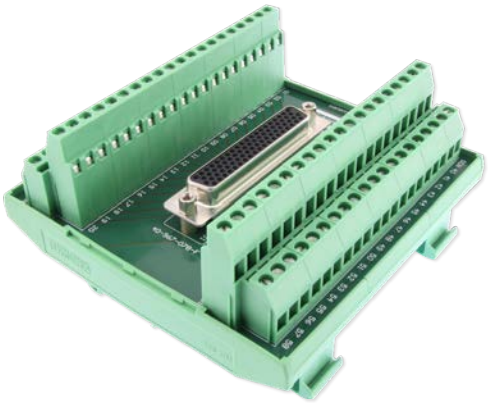
When using this product please ensure appropriate electrical safety precautions are observed.

Technical Specification

Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method:	4-40 UNC screwlocks, female
Wire Connection	Rising cage screw terminals A screen connection is provided
Breakout Ratings:	
Maximum Current	2 A
Maximum Voltage	200 V DC
Securing Method	Suitable for securing to DIN rails
Overall Size (Approx)	H110 x W110 x D56 mm
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Screw Terminals:	
Maximum Wire Size	12AWG
Additional Cable Clamp	No

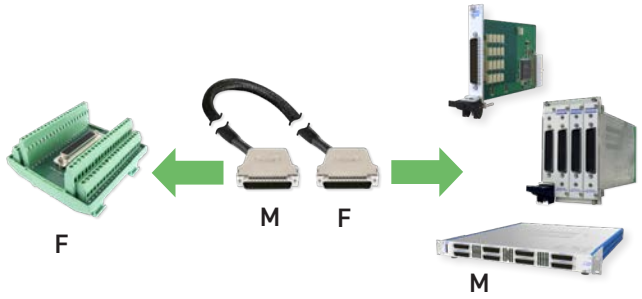


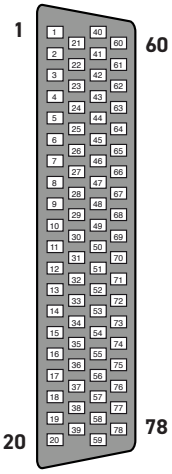
PCB Layout



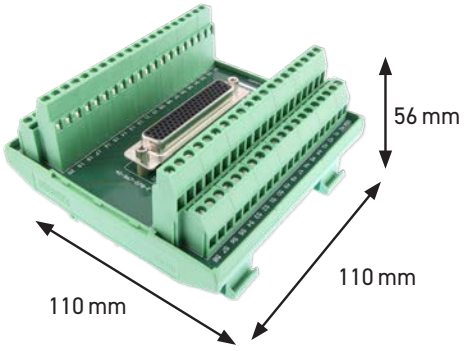
78-Pin D-Type Breakout

Product Compatibility





Female Mating Face



Product Order Codes

78-Pin D-Type Breakout with DIN Rail Mount, 2 A, Screw Terminal, Female	40-967-078-F

Cable Connector - Female

90-006D

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

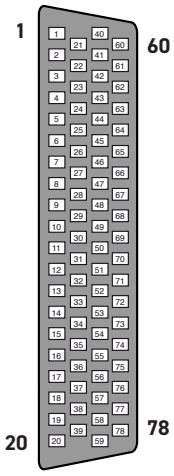
This accessory is designed to allow users to directly terminate with soldered connections to the connector.

Connector and shell are supplied separately to allow the user to determine the direction of the cable exit.

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

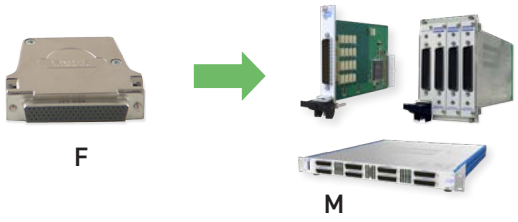
Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method:	
Product with Backshell	4-40 UNC screwlocks, male
Product without Backshell	4-40 UNC screwlocks, male
Wire Connection	Solder bucket. A backshell fixing is also provided for a cable screen
Connector Ratings:	
Maximum Current	3 A
Maximum Voltage	250 V AC
Cable Exit:	45 °
Cable Exit Size	12 mm dia
Overall Size (Approx)	H68 x W18.5 x D55 mm
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Wire Connection:	
Maximum Wire Size	22AWG
Recommended Insulation	PFA
Additional Cable Clamp	Yes (in backshell)

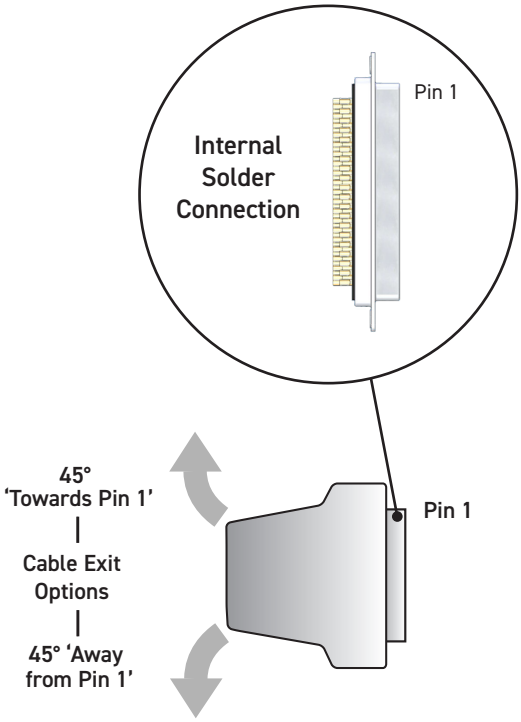


Female
Mating Face

78-Pin D-Type Cable Connector with Backshell

Product Compatibility





Product Order Codes

78-Pin D-Type Connector, 3 A, Solder Bucket,	
With Backshell, Female	40-960-078-F
Without Backshell, Female	92-960-078-F

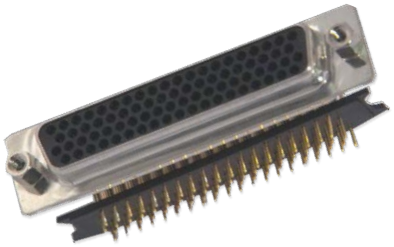
PCB Connector, Right Angle - Female

90-006D

- 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.

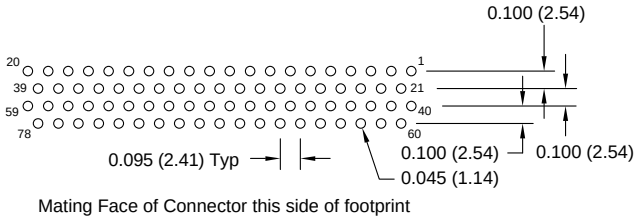
Note: This product is not suitable for directly mounting onto the front panel of a Pickering switching product.



78-Pin D-Type PCB Connector

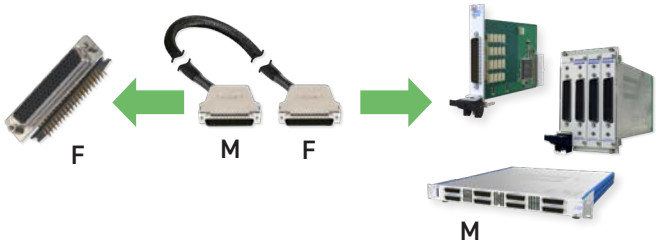
Technical Specification

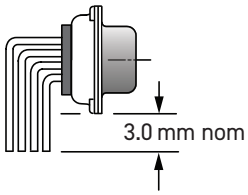
Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Right angle PCB mount, solder
Connector Ratings:	
Maximum Current	3 A each pin
Maximum Voltage	250 V AC
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
PCB Legs:	
Effective Leg Length	3.0 mm nom (See diagram)



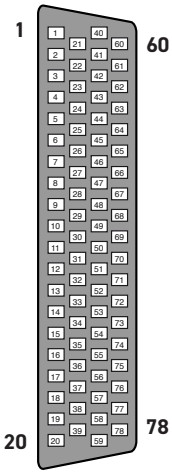
PCB Footprint of 78-Pin Right Angle Female Connector (Connector Side - Not to Scale)

Product Compatibility





Effective Leg Length



Female Mating Face

Product Order Codes

78-Pin D-Type Connector, 3 A, Right Angle PCB Mount, Female	40-963-078-RF

- Straight PCB Mount
- Ideal for User Created Termination Solutions

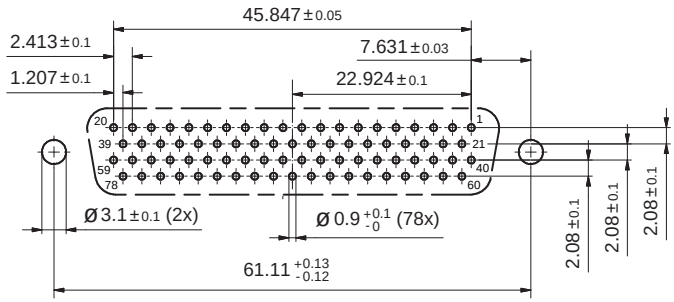
This accessory allows a user to create their own PCB based termination solution mounted on the end of a cable. Suitable cables for this product are contained elsewhere in this data sheet. Interfacing PCBs should be designed with suitable clearances for the voltage the application requires.

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

78-Pin D-Type PCB Connector

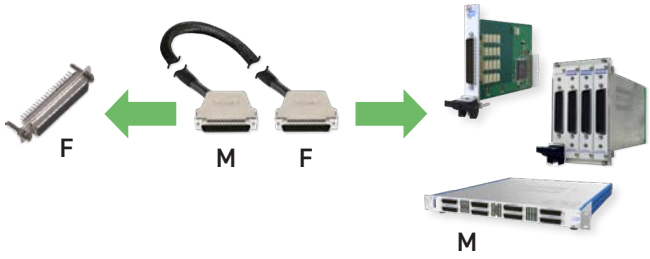
Technical Specification

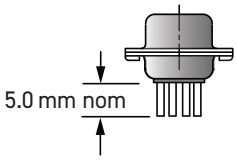
Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Female
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Straight PCB mount, solder
Connector Ratings:	
Maximum Current	3 A each pin
Maximum Voltage	250 V AC
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
PCB Legs:	
Leg Length	5.0 mm nom (See diagram)



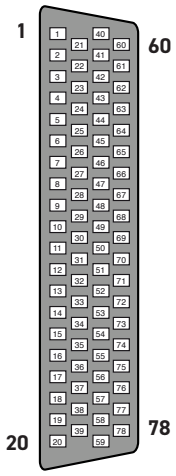
PCB Footprint of 78-Pin Straight Female Connector
(Connector Side - Not to Scale)

Product Compatibility





Leg Length



Female
Mating Face

Product Order Codes

78-Pin D-Type Connector, 3 A, Straight PCB Mount, Female	40-963-078-SF

Breakout - Male

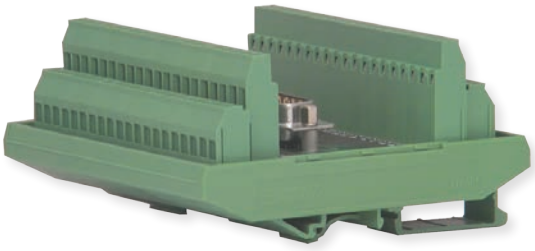
90-006D

- For Connection at Cable End
- Simple to Use Rising Cage Screw Clamp Termination
- DIN Rail Mounted

Connector blocks provide a convenient method of termination without the use of custom cabling. However, a higher resistance path, lower capacity ratings and lower voltage ratings are typical.

This termination option is capable of accepting heavy duty connection wires and uses rising clamp screw terminals to minimize the danger of copper strand damage. Users should care take to protect the termination and provide a suitable method of restraining the cables.

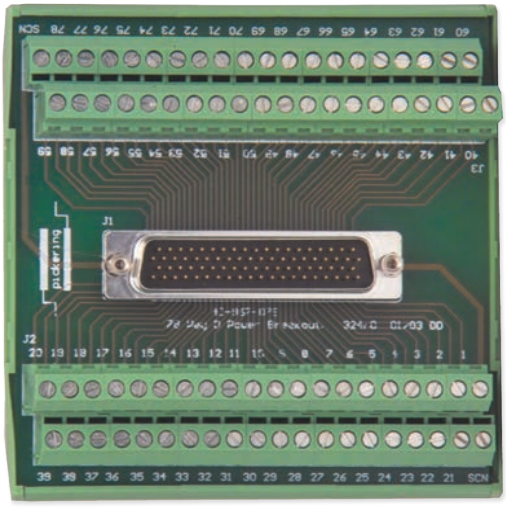
When using this product please ensure appropriate electrical safety precautions are observed.



78-Pin D-Type Breakout

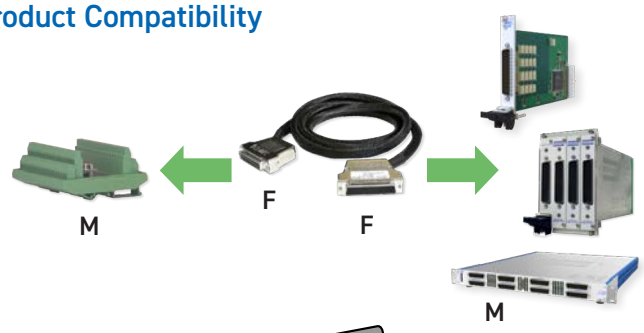
Technical Specification

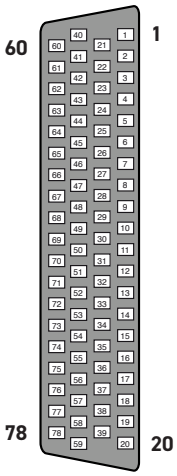
Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method:	4-40 UNC screwlocks, female
Wire Connection	Rising cage screw terminals A screen connection is provided
Breakout Ratings:	
Maximum Current	2 A
Maximum Voltage	200 V DC
Securing Method	Suitable for securing to DIN rails
Overall Size (Approx)	H110 x W110 x D56 mm
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Screw Terminals:	
Maximum Wire Size	12AWG
Additional Cable Clamp	No



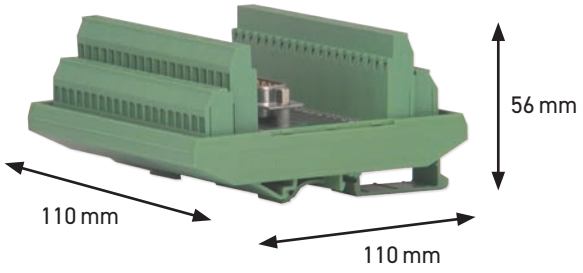
PCB Legend

Product Compatibility





Male Mating Face



Breakout Dimensions

Product Order Codes

78-Pin D-Type Breakout with DIN Rail Mount, 2 A, Screw Terminal, Male	40-967-078-M

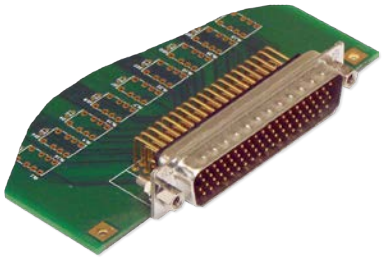
PCB Connector, Right Angle - Male

90-006D

- 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.

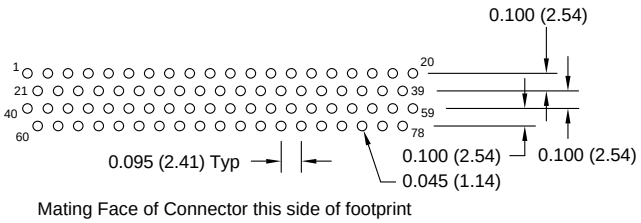
Note: This product is not suitable for directly mounting onto the front panel of a Pickering switching product.



78-Pin D-Type PCB Connector
(PCB not supplied)

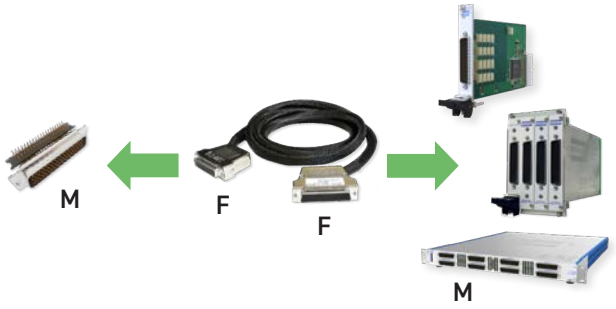
Technical Specification

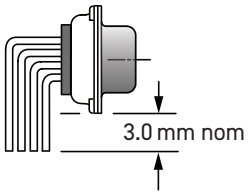
Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Right angle PCB mount, solder
Connector Ratings:	
Maximum Current	3 A each pin
Maximum Voltage	250 V AC
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
PCB Legs:	
Effective Leg Length	3.0 mm nom (See diagram)



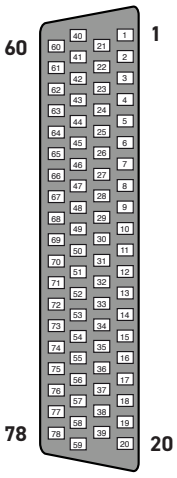
PCB Footprint of 78-Pin Right Angle Male Connector
(Connector Side - Not to Scale)

Product Compatibility





Effective Leg Length



Male
Mating Face

Product Order Codes

78-Pin D-Type Connector, 3 A, Right Angle PCB Mount, Male	40-963-078-RM

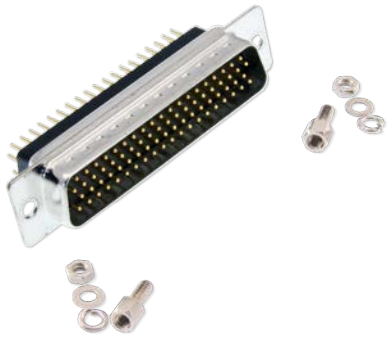
PCB Connector, Straight - Male

90-006D

- Straight 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.

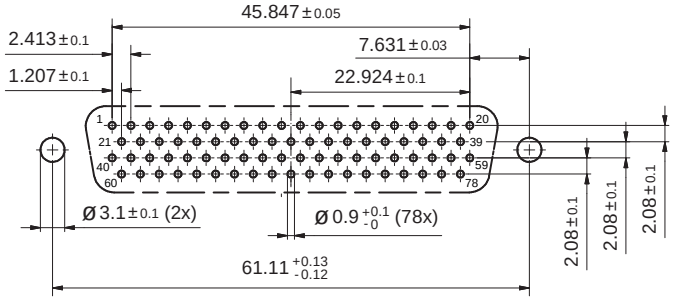
Note: This product is not suitable for directly mounting onto the front panel of a Pickering switching product.



78-Pin D-Type PCB Connector

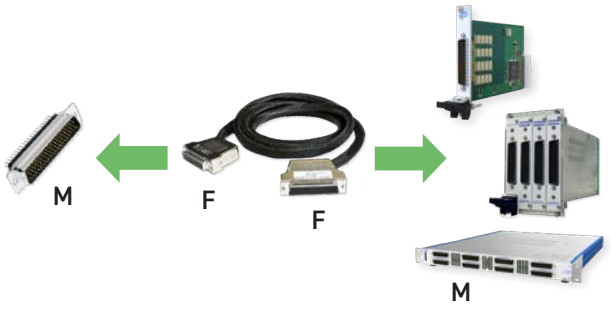
Technical Specification

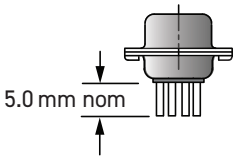
Connector Type:	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Straight PCB mount, solder
Connector Ratings:	
Maximum Current	3 A each pin
Maximum Voltage	250 V AC
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
PCB Legs:	
Leg Length	5.0 mm nom (See diagram)



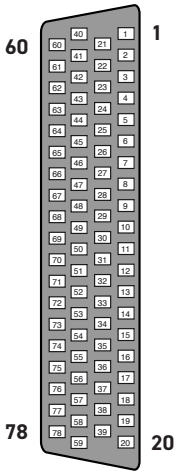
PCB Footprint of 78-Pin Straight Male Connector
(Connector Side - Not to Scale)

Product Compatibility





Leg Length



Male
Mating Face

Product Order Codes

78-Pin D-Type Connector, 3 A, Straight PCB Mount, Male	40-963-078-SM

Additional Connection Accessories

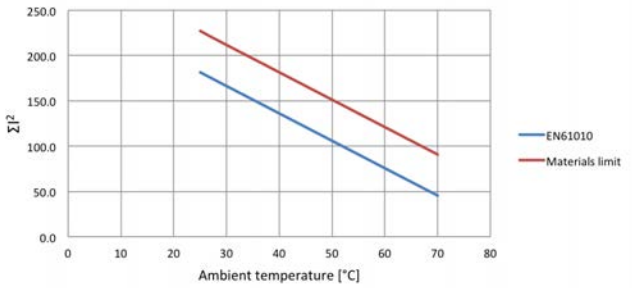
Although these items do not directly mate with Pickering Interfaces products customers may find them useful in the development of their own connection solutions.

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

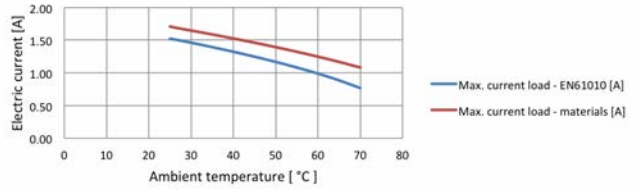
Technical Specification

Connector Type (End A):	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	3 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Cable Exit:	45 ° (Towards Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	7/0.15 (0.124 mm², 26AWG)
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	12 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)

Characteristic Plots for 40-970-078-1m

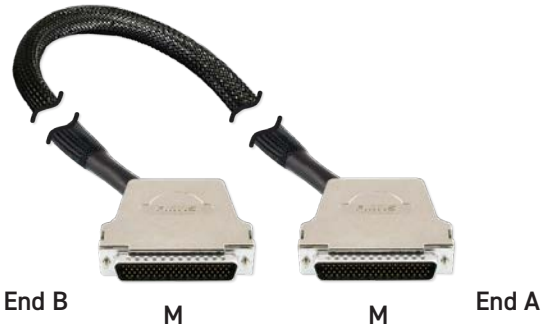


The graph shows the permitted ΣI^2 versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.

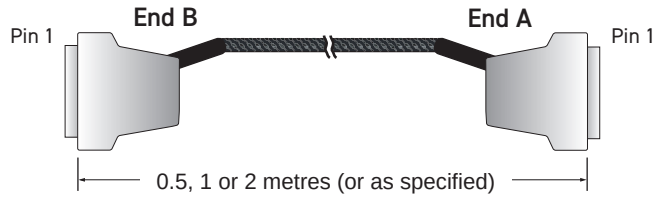


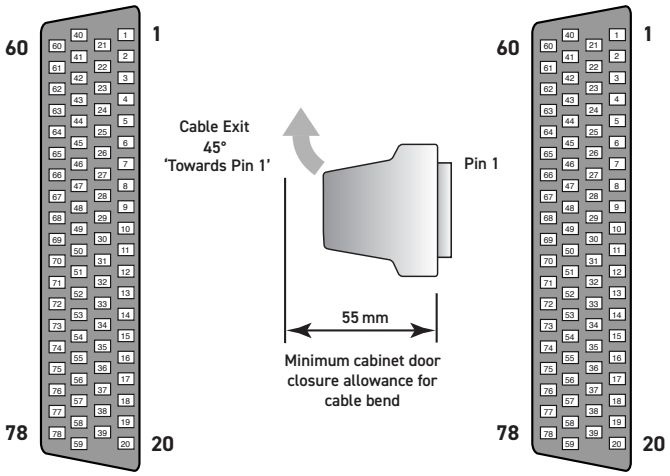
The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.

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



78-Pin D-Type Cable Assembly





End B - Male Mating Face

End A - Male Mating Face

Product Order Codes

78-Pin D-Type Cable Assy, 3 A, Male to Male,	
0.5 m Long	40-970-078-0.5m-MM
1.0 m Long	40-970-078-1m-MM
2.0 m Long	40-970-078-2m-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

90-006D

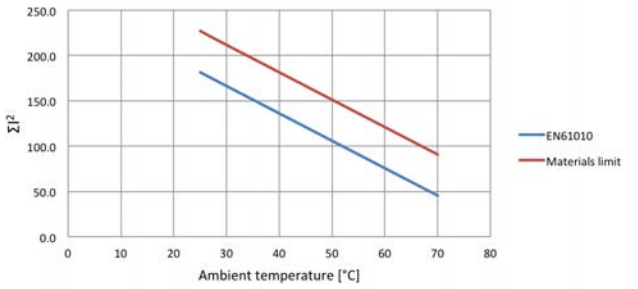
- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- 45 ° Cable Exit
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

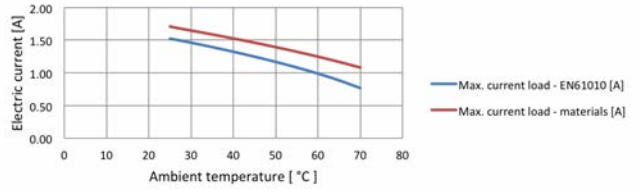
Connector Type (End A):	78-Pin D-Subminiature, Density and a half
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins A white/black screen pigtail is included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	3 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Cable Exit	45 ° (Towards Pin 1)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Silver plated copper wire
Strands	7/0.15 (0.124 mm², 26AWG)
Resistance	0.137 Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	12 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	55 mm (see diagram)

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

Characteristic Plots for 40-972-078-1m

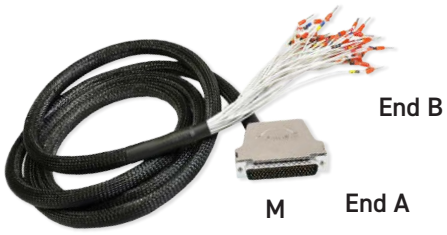


The graph shows the permitted ΣI^2 versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.

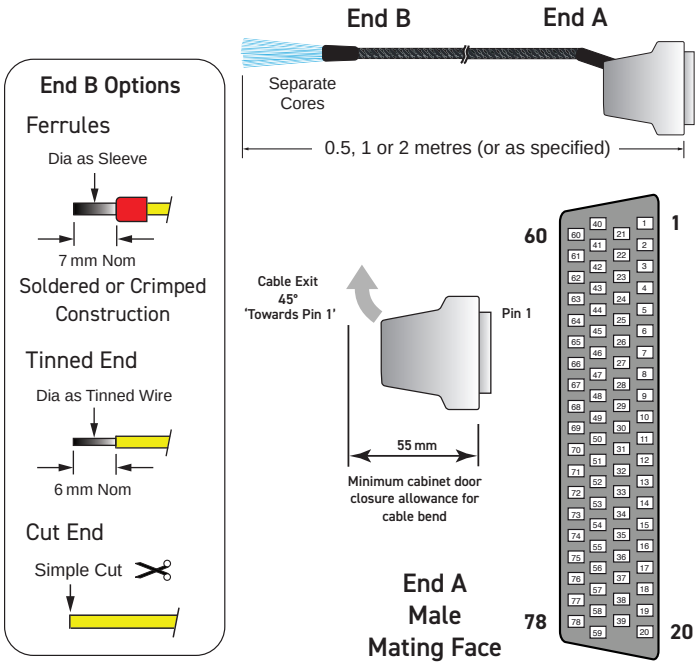


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.

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



78-Pin D-Type Unterminated Cable Assembly



Product Order Codes

78-Pin D-Type Cable Assy, 3 A, Male to Unterminated, Ferrules,	
Cable Exit Towards Pin 1, 0.5 m Long	40-972-078-0.5m-MU
Cable Exit Towards Pin 1, 1.0 m Long	40-972-078-1m-MU
Cable Exit Towards Pin 1, 2.0 m Long	40-972-078-2m-MU

Part numbers for other versions:

A078HM5-*-0A***

- End B: T = Tinned End, C = Cut End
- Cable Length: 050 = 0.5 m, 100 = 1.0 m, 200 = 2.0 m

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

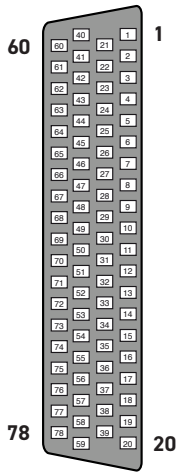
This accessory is designed to allow users to directly terminate with soldered connections to the connector.

Connector and shell are supplied separately to allow the user to determine the direction of the cable exit.

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.

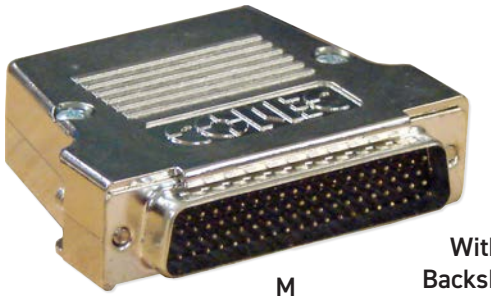
Technical Specification

Connector Type:	78-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	3 A
Maximum Voltage	250 V AC
Cable Exit:	45 °
Cable Exit Size	12 mm dia
Overall Size (Approx)	H68 x W18.5 x D55 mm
78-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	20 mOhm
Wire Connection:	
Maximum Wire Size	22AWG
Recommended Insulation	PFA
Additional Cable Clamp	Yes (in backshell)



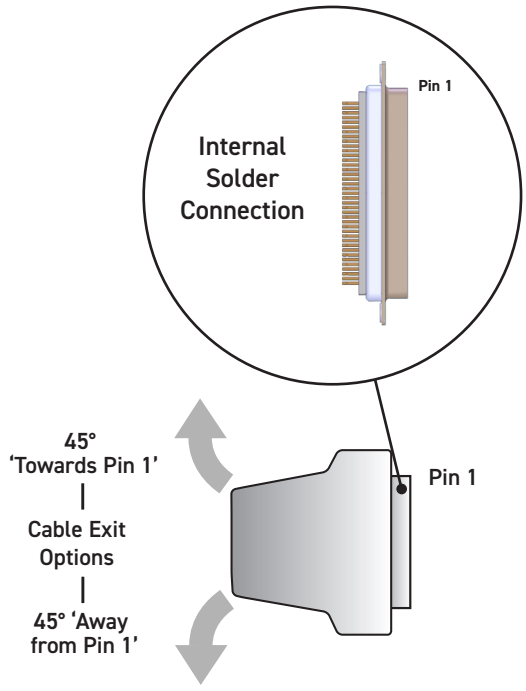
Male
Mating Face

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



78-Pin D-Type Cable Connector with Backshell

Product Compatibility



Product Order Codes

78-Pin D-Type Connector, 3 A, Solder Bucket,	
With Backshell, Male	40-960-078-M
Without Backshell, Male	92-960-078-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.

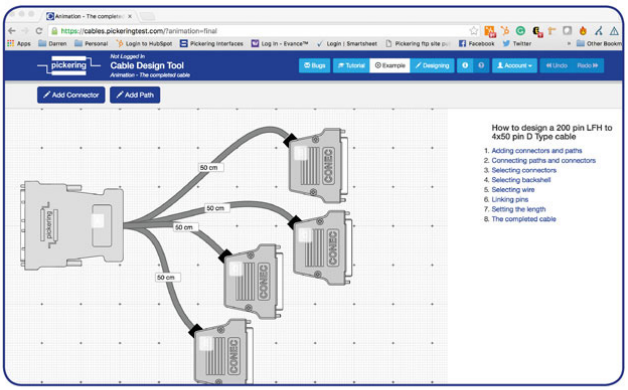
All products are designed to ensure easy and problem free connection.

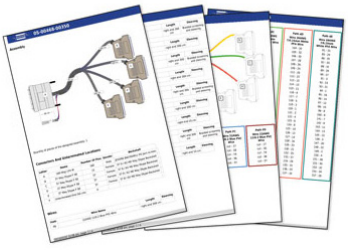
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.

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