

78-Way D-type Connector Accessories

- **Standard Voltage to 250V AC/400V, 3A**
- **Mating connectors**
- **Connector hoods**
- **Connector blocks**
- **Cable assemblies**
- **Guaranteed compatibility**



The Standard Voltage 78-Way D-Type connector is used on PXI and LXI switching products to provide a medium density user connector solution.

Pickering Interfaces has developed a full range of standard connection solutions to simplify the task of integrating products into a test system.

For users wishing to develop their own cabling solutions, we offer mating connectors and connector hoods which allow users to create either their own cable based solutions, or a PCB header solution. Connector Blocks directly terminate the module connector and convert the connection to arrays of screw terminal blocks, or users can select to use a remote DIN rail mounted breakout to terminate the cables at the end of a cable assembly.

Connector to Connector cable assemblies provide a simple way of connecting the product to the user's remote matching connection. Connectors to unterminated solutions allow the user to connect directly to the product connector and wire directly into a remote UUT. Cable assemblies are offered in various lengths to match most user requirements.

Pickering Interfaces can manufacture custom connector accessories to suit any application, if you do not see what you need then contact your Pickering Interfaces sales office with information on your requirements and let us solve your connection problems.



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CUSTOM TERMINATION

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PCB Interfacing - 78 Way D-Type Connector

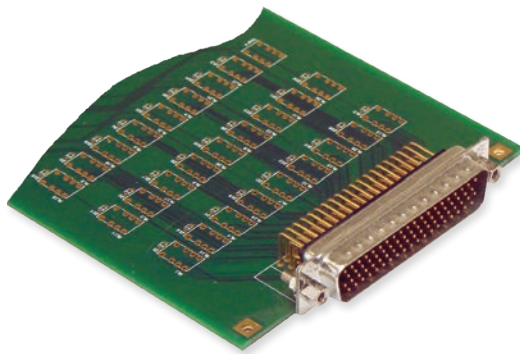
Standard Voltage

- Male and Female versions available
- PCB mounted
- Ideal for user created termination solutions

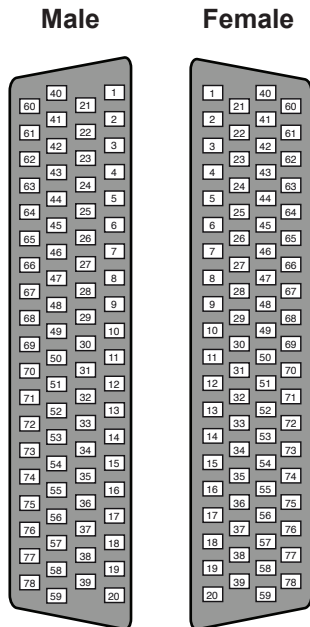


Female version depicted

Accessory allows a user to create their own PCB based termination solution mounted directly on the front of the product or on the end of a cable. Interfacing PCB's should be designed with suitable clearances for the voltage the application requires



Note: Picture depicts a male connector



Technical Specification

Connector Type:	78 Way D-Subminiature, Density and a Half
Gender	Male or Female
Mounting	Right Angle PCB Mount
Cable Securing method	4-40 UNC Screwlocks
Connector Type:	
Current Rating	3A each pin
Voltage Rating	250V AC
Contact Material	Gold Plated Copper Alloy
Contact Resistance	<20mOhm
Notes:	78 Way Female connectors can be directly mated to a corresponding Pickering Switching Module.

Product Order Codes

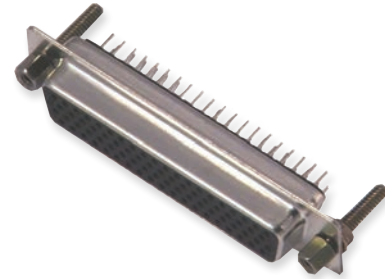
78 Way D-Type Connector, 3A, Right Angle PCB Mount
 Female 40-963-078-RF
 Male 40-963-078-RM

PCB Interfacing - 78 Way D-Type Connector

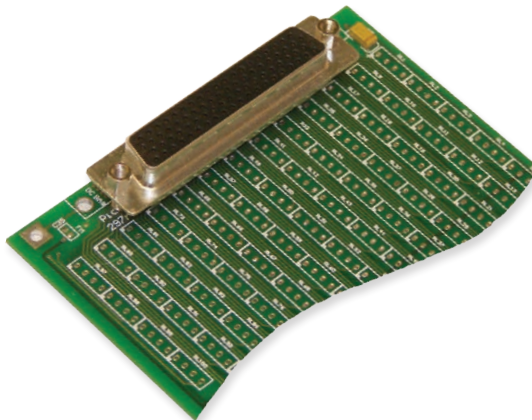
Standard Voltage

- Male and Female versions available
- PCB mounted
- Ideal for user created termination solutions

Ideal for user created termination schemes where the termination is to be on the front or remotely connected to the module by cable. Suitable cables for this product are contained elsewhere in this data sheet. Interfacing PCB's should be designed with suitable clearances for the voltage the application requires.

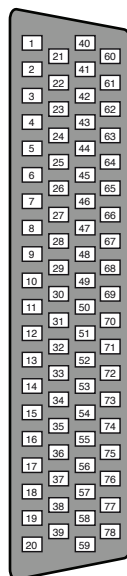
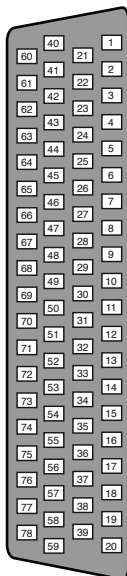


Female version depicted



Male

Female



Technical Specification

Connector Type:	78 Way D-Subminiature, Density and a Half
Gender	Male or Female
Mounting	Straight PCB Mount
Cable Securing Method	4-40 UNC Screwlocks
Connector Ratings:	
Current Rating	3A each pin
Voltage Rating	250V AC
Contact Material	Gold Plated Copper Alloy
Contact Resistance	<20mOhm
Notes:	78 Way Female connectors can be directly mated to a corresponding Pickering Switching Module.

Product Order Codes

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

Cable Connection - 78 Way D-Type Connector

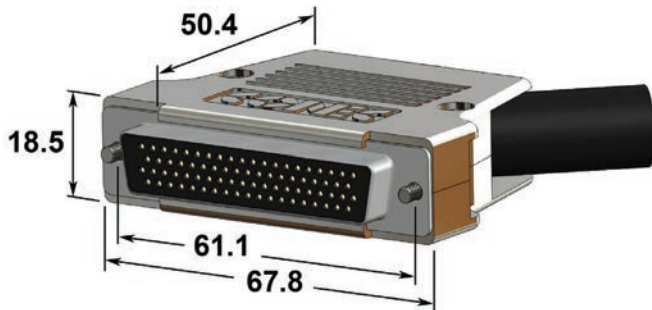
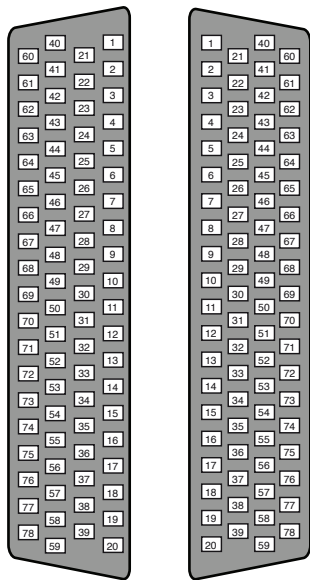
Standard Voltage

- Connector only or Connector and Backshell
- Solder bucket cable termination
- Cable clamp in backshell



Suitable for users to create their own cable assemblies, can be supplied with or without their backshell. Recommended for use with PFA coated 3 Amp cable.

Male Female



Technical Specification

Connector Type:	78 Way D-Subminiature, Density and a Half
Gender	Male or Female
Securing method	4-40 UNC Screwlocks
Cable entry	12mm Dia
Overall size (Approx)	H68 x W18.5 x D55mm
Connector Ratings:	
Current Rating	3A
Voltage Rating	250V AC
Contact Material	Gold Plated Copper Alloy
Contact Resistance	20mOhm
Insulation Resistance	1000MOhm
Cable Connection:	
Recommended Cable	PFA 7/0.15 26AWG
	0.9mm OD
Connection method	Soldering
Cable Clamp	Yes (In Backshell)
Notes:	78 Way Female cable connectors can be directly mated to a corresponding Pickering Switching Module.

Product Order Codes

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

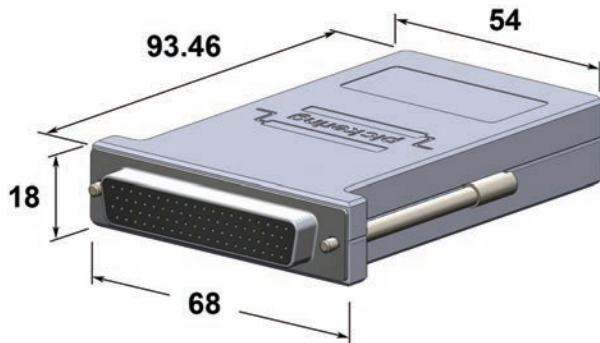
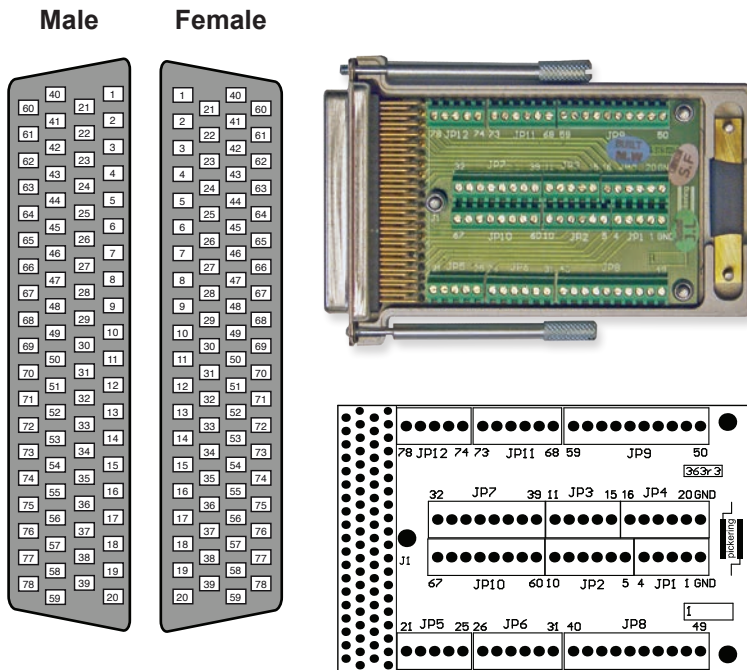
Direct Connection - 78 Way D-Type Connector Block

Standard Voltage

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.

- Connector and PCB only or Connector, PCB and Backshell
- Male and Female versions available
- Cable clamp in backshell
- Easy to use rising cage screw terminals

Suitable for use on the front of Pickering modules this connector block provides a simple method of connecting to high density 78 Way D-Type connectors. The screw terminals use a rising cage clamp mechanism to minimize risk of copper strand breakage. The metal shell includes an internal insulation barrier under the carrier board.



Technical Specification

Connector Block	
Current Rating	2A
Voltage Rating	200V DC
Securing method	4-40 UNC Screwlocks
Cable entry	10 x 20mm
Overall size (Approx)	H68 x W18 x D100mm
Main Connector:	
Type	78 Way D-Subminiature, Density and a Half
Gender	Male or Female
Current Rating	3A
Voltage Rating	250V AC
Contact Material	Gold Plated Copper Alloy
Contact Resistance	<20mOhm
Wire/Cable Connection:	
Connection method	Rising cage screw terminals
Recommended Wire/Cable	PTFE type
Recommended Wire Size	Up to 1.3mm ² csa
Torque Setting	0.12-0.15Nm
Cable Clamp	Yes (In Backshell)
Notes:	Female versions are suited to direct connection to a Pickering Switching Module while male versions can be used to interface to a female cable assembly termination.

Product Order Codes

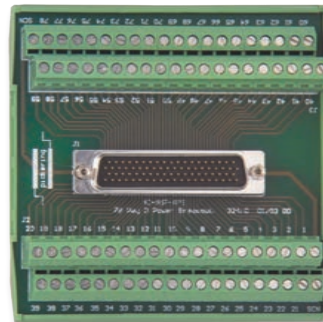
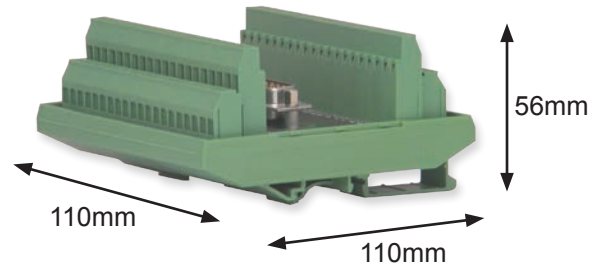
78 Way D-Type Connector Block, 2A, Screw Terminal	
With Backshell, Female	40-965-078-F
With Backshell, Male	40-965-078-M
Without Backshell, Female	92-965-078-F
Without Backshell, Male	92-965-078-M

Cable Connection - 78 Way D-Type Breakout

Standard Voltage

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.

- For connection at cable end
- Simple to use rising cage screw clamp termination
- DIN Rail Mounted

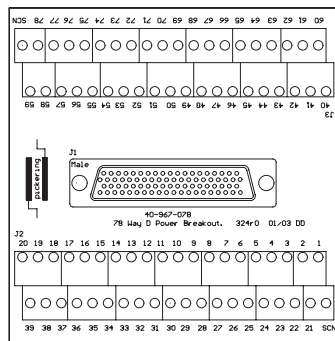
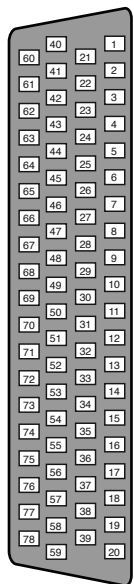


Suitable for use at the end of a mating cable remote from the product and on DIN rails this termination option is capable of accepting heavy duty connection wires and uses rising clamp screw terminals to minimize the danger of copper strand damage.

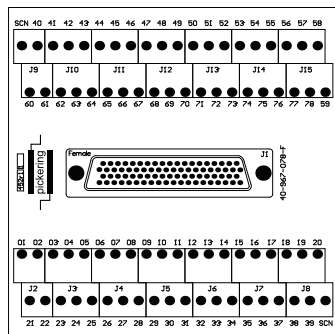
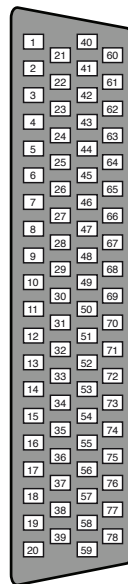


40-967-078-M

Male



Female



40-967-078-F

Technical Specification

Connector Block	
Current Rating	2A
Voltage Rating	200V DC
Securing method	Suitable for securing to DIN rails.
Overall size (Approx)	H110 x W110 x D56mm
Main Connector:	
Type	78 Way D-Subminiature, Density and a Half.
Gender	Male or Female
Current Rating	3A
Voltage Rating	250V AC
Contact Material	Gold Plated Copper Alloy
Contact Resistance	<20mOhm
Cable Securing Method	4-40 UNC Screwlocks
Wire/Cable Connection:	
Connection method	Rising cage screw terminals
Recommended Wire/Cable	Any (User Defined)
Recommended Wire Size	Solid wire up to 4mm ² csa
Torque Setting	0.5-0.6Nm
Cable Clamp	No

Product Order Codes

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

78 Way D-Type Connector to Connector Assembly

Standard Voltage

- High Specification Cable
- Highly Flexible Cable
- Strain Relief
- Braided sleeving
- Fully screened cable construction

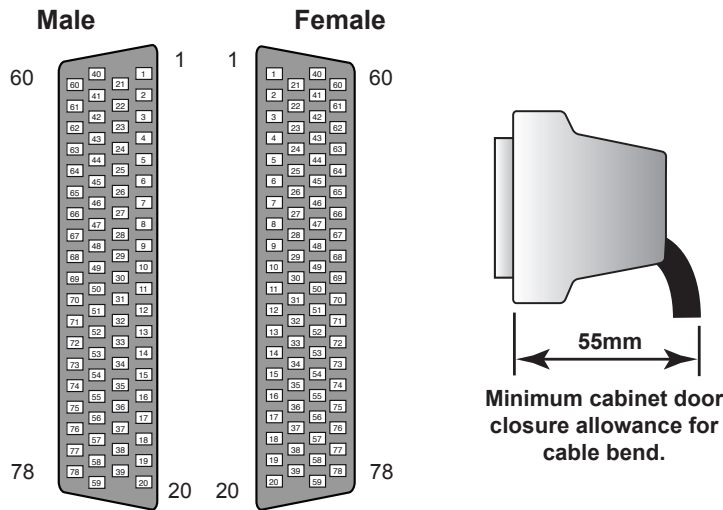
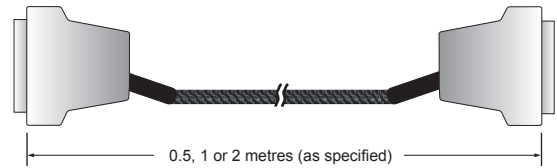


A 78 Way Female connector option of this cable assembly is suited for direct connection to Pickering Interfaces products.

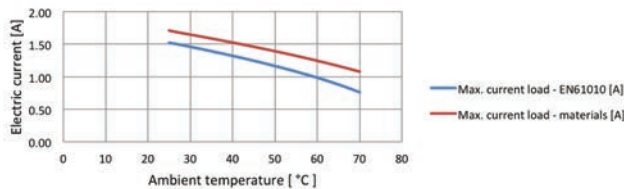
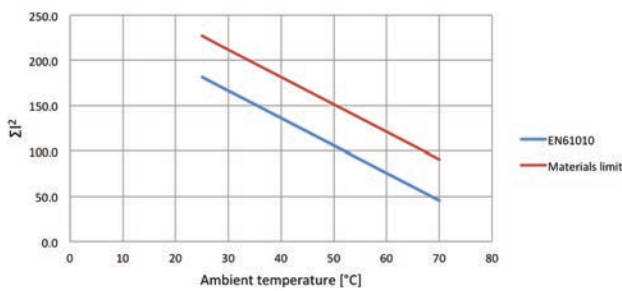
Technical Specification

Cable Assembly Rating: Maximum Current Maximum Voltage Standard Lengths Door Closure Allowance	3A 250V AC / 400V DC Multiples of 0.5m 55mm (See diagram)
Connector Type (End A): Gender Current Rating Voltage Rating Contact Material Contact Resistance Product Securing method Overall size (Approx)	78 Way D-Subminiature, Density and a Half Male or Female 3A 250V AC / 400V DC Gold Plated Copper Alloy 20mOhm 4-40 UNC Screwlocks H68 x W18.5 x D55mm
Connector Type (End B): Gender	As End A Male or Female
Cable Type: Conductors: Material Strands Resistance Screened Construction Insulation Outer Sleeve Additional Braided Sleeve Cable O/D Minimum Bend Radius	Silver Plated Copper Wire 7/0.15 (0.124mm ² 26AWG) 0.137Ω/m Yes PFA Polyester Yes 12mm 25mm

Notes:
Other cable lengths can be supplied.



Characteristic Plots for 40-970-078-1m



Top 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.

Bottom graph shows 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.

Product Order Codes

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

78 Way D-Type Connector to Unterminated

Standard Voltage

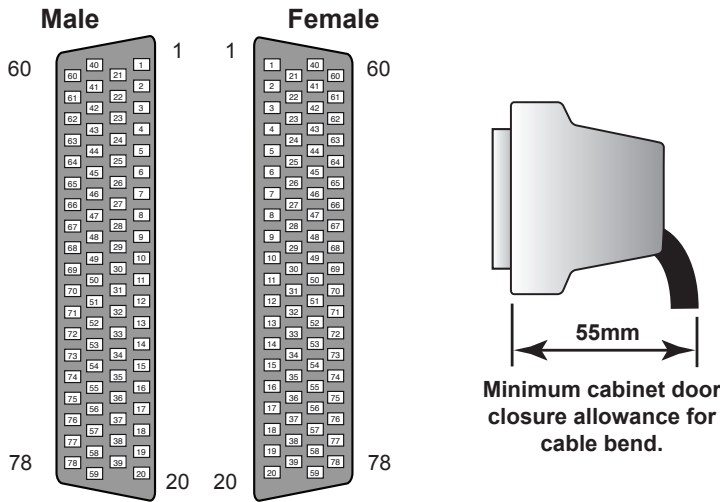
- High Specification Cable
- Highly Flexible Cable
- Fully screened cable construction with Braided Sleeve and Strain Relief
- Fully coded markers to ensure easy connection
- Boot lace ferrules to prevent wire strand breakage



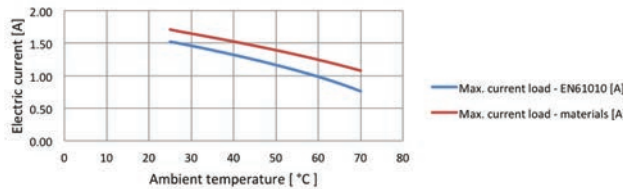
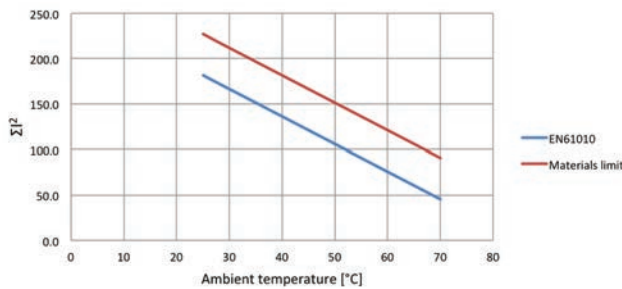
The Female cable assembly is suited for direct connection to Pickering Interfaces products using the 78 pin D-Type connector with unterminated connections at the other end. The unterminated connections are coded to match the connector pin designation and include crimped on ferrules to ensure the wire strands cannot break when they are terminated.

Technical Specification

Cable Assembly Rating:	
Maximum Current	3A
Maximum Voltage	250V AC / 400V DC
Standard Lengths	Multiples of 0.5m
Door Closure Allowance	55mm (See diagram)
Connector Type (End A):	
78 Way D-Subminiature, Density and a Half	
Gender	Male or Female
Current Rating	3A
Voltage Rating	250V AC / 400V DC
Contact Material	Gold Plated Copper Alloy
Contact Resistance	20mOhm
Product Securing method	4-40 UNC Screwlocks
Overall size (Approx)	H68 x W18.5 x D55mm
Unterminated End (End B)	
Wire coding	Yes - To Connector pins
Boot Lace Ferrules	Yes
Contact Material/Fixing	Tinned Copper/Crimped
Free wire length	130mm nominal
Cable Type:	
Conductors:	
Material	Silver Plated Copper Wire
Strands	7/0.15 (0.124mm ² 26AWG)
Resistance	0.137Ω/m
Screened Construction	Yes
Insulation	PFA
Outer Sleeve	Polyester
Additional Braided Sleeve	Yes
Cable O/D	12mm
Minimum Bend Radius	25mm
Notes:	Other cable lengths can be supplied.

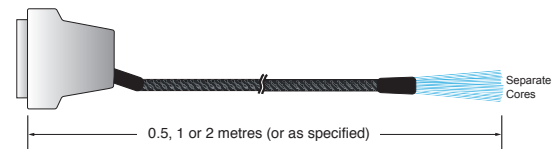


Characteristic Plots for 40-972-078-1m



Top 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.

Bottom graph shows 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.



Product Order Codes

78 Way D-Type Cable Assy, 3A, Female to Unterminated	
0.5m Long	40-972-078-0.5m-FU
1.0m Long	40-972-078-1m-FU
2.0m Long	40-972-078-2m-FU
78 Way D-Type Cable Assy, 3A, Male to Unterminated	
0.5m Long	40-972-078-0.5m-MU
1.0m Long	40-972-078-1m-MU
2.0m Long	40-972-078-2m-MU

Custom Termination

Pickering Interfaces is able to manufacture custom built cable assemblies and backshells that mate with all the connectors we use in our extensive product range.

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

All products are designed to ensure easy and problem free connection to our products and we can provide solutions to connect to third party products.

We offer a fast turn round of custom parts to keep your product ordering and integration timescales to a minimum.

