

- 750 V Continuous Working Voltage, 5 A
1000 V Maximum
- Cable Assemblies
- Cable Connectors
- Guaranteed Compatibility
- 50-Pin Standard Voltage Solutions are also Available. See Data Sheet 90-005D



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 and cable 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



Examples of Pickering PXI and LXI Products using High Voltage 50-Pin D-type Connectors




High Voltage - 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, 50-Pin D-Type, 5 A, HV	Male, 45° Away from Pin 1	Female, 45° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-050-0.5m-MF-HV 40-970-050-1m-MF-HV 40-970-050-2m-MF-HV	4
		Male, 45° Towards Pin 1	Female, 45° Towards Pin 1	-	0.5 m 1 m 2 m	A050DM5-050DF5-HA050 A050DM5-050DF5-HA100 A050DM5-050DF5-HA200	
		Female, 45° Away from Pin 1	Female, 45° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-050-0.5m-FF-HV 40-970-050-1m-FF-HV 40-970-050-2m-FF-HV	5
		Female, 45° Towards Pin 1	Female, 45° Towards Pin 1	-	0.5 m 1 m 2 m	A050DF5-050DF5-HA050 A050DF5-050DF5-HA100 A050DF5-050DF5-HA200	
	Cable Assy, 50-Pin D-Type to Underterminated, 5 A, HV	Female, 45° Away from Pin 1	NA	Ferrules	0.5 m 1 m 2 m	40-972-050-0.5m-FU-HV 40-972-050-1m-FU-HV 40-972-050-2m-FU-HV	6
				Tinned End	0.5 m 1 m 2 m	A050DF4-T-HA050 A050DF4-T-HA100 A050DF4-T-HA200	
				Cut End	0.5 m 1 m 2 m	A050DF4-C-HA050 A050DF4-C-HA100 A050DF4-C-HA200	
		Female, 45° Towards Pin 1	NA	Ferrules	0.5 m 1 m 2 m	A050DF5-F-HA050 A050DF5-F-HA100 A050DF5-F-HA200	
				Tinned End	0.5 m 1 m 2 m	A050DF5-T-HA050 A050DF5-T-HA100 A050DF5-T-HA200	
				Cut End	0.5 m 1 m 2 m	A050DF5-C-HA050 A050DF5-C-HA100 A050DF5-C-HA200	

Note: Custom lengths by quotation

High Voltage - Connectors



Description	Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Female, 45° Options	With Backshell	40-960-050-F-HV	7
		Without Backshell	92-960-050-F-HV	

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 Voltage - 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, 50-Pin D-Type, 5 A, HV	Male, 45° Away from Pin 1	Male, 45° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-050-0.5m-MM-HV 40-970-050-1m-MM-HV 40-970-050-2m-MM-HV	9
		Male, 45° Towards Pin 1	Male, 45° Towards Pin 1	-	0.5 m 1 m 2 m	A050DM5-050DM5-HA050 A050DM5-050DM5-HA100 A050DM5-050DM5-HA200	
	Cable Assy, 50-Pin D-Type to Unterminated, 5 A, HV	Male, 45° Away from Pin 1	NA	Ferrules	0.5 m 1 m 2 m	40-972-050-0.5m-MU-HV 40-972-050-1m-MU-HV 40-972-050-2m-MU-HV	10
				Tinned End	0.5 m 1 m 2 m	A050DM4-T-HA050 A050DM4-T-HA100 A050DM4-T-HA200	
				Cut End	0.5 m 1 m 2 m	A050DM4-C-HA050 A050DM4-C-HA100 A050DM4-C-HA200	
		Male, 45° Towards Pin 1	NA	Ferrules	0.5 m 1 m 2 m	A050DM5-F-HA050 A050DM5-F-HA100 A050DM5-F-HA200	
				Tinned End	0.5 m 1 m 2 m	A050DM5-T-HA050 A050DM5-T-HA100 A050DM5-T-HA200	
				Cut End	0.5 m 1 m 2 m	A050DM5-C-HA050 A050DM5-C-HA100 A050DM5-C-HA200	

Note: Custom lengths by quotation

High Voltage - Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Cable Connector 50-Pin D-Type, 5 A, HV, Solder Bucket	Male, 45° Options	With Backshell	40-960-050-M-HV	11
			Without Backshell	92-960-050-M-HV	

Custom Termination

Customization Possibilities 12

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

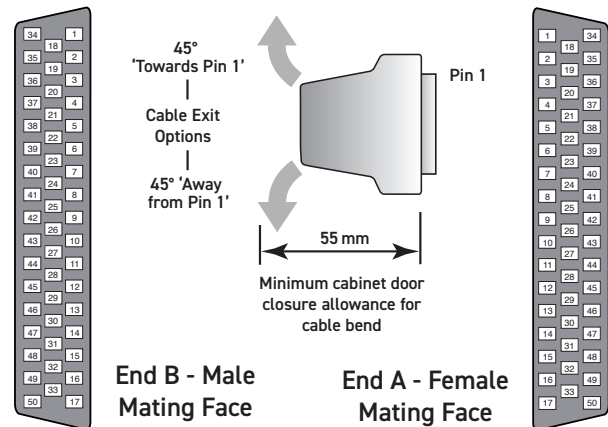
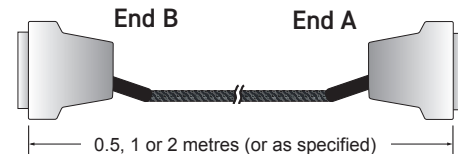
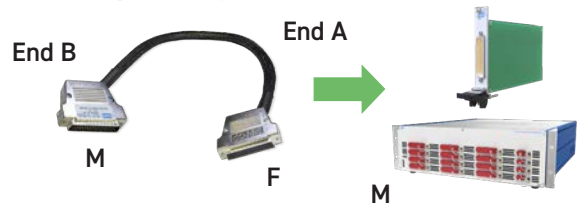
Technical Specification

Connector Type (End A):	50-Pin D-Subminiature, HV
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	50-Pin D-Subminiature, HV
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	5 A
Maximum Voltage	750 V working/1000 VDC AC peak typical
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Cable Exit	45° (See Order Codes)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	7/0.2 (0.2 mm ² , 24AWG) 1.62 mm O/D
Resistance	0.089 Ω/m (max) at 20 °C
Insulation	PTFE Type C (BS3G210)
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)

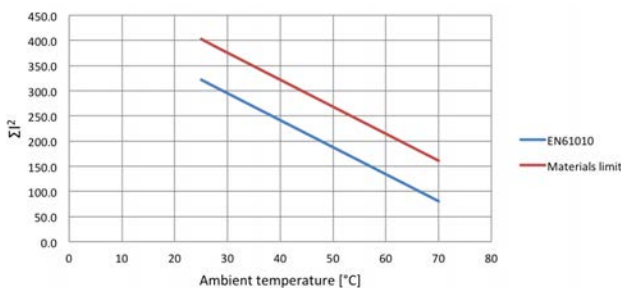


50-Pin D-Type HV Cable Assembly

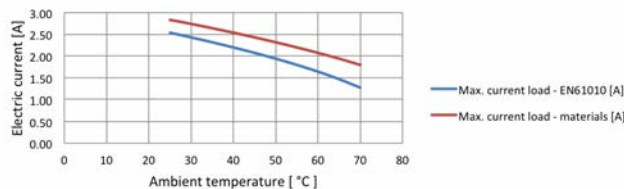
Product Compatibility



Characteristic Plots for 40-970-050-1m (HV)



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.

Product Order Codes

50-Pin D-Type Cable Assy, 5 A, Male to Female, HV,
Cable Exit 45° (Away from Pin 1),

0.5 m Long

[40-970-050-0.5m-MF-HV](#)

1.0 m Long

[40-970-050-1m-MF-HV](#)

2.0 m Long

[40-970-050-2m-MF-HV](#)

Cable Exit 45° (Towards Pin 1),

0.5 m Long

[A050DM5-050DF5-HA050](#)

1.0 m Long

[A050DM5-050DF5-HA100](#)

2.0 m Long

[A050DM5-050DF5-HA200](#)

Note: Other cable lengths can be supplied.

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

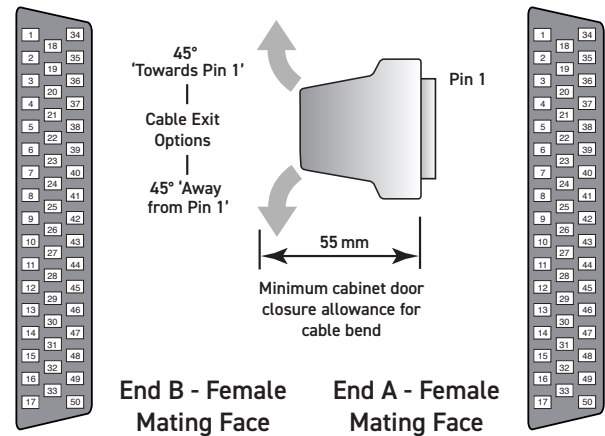
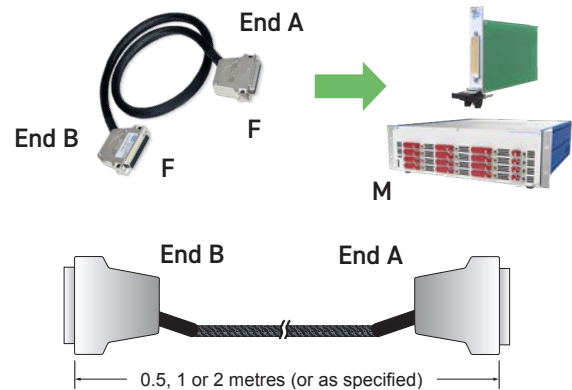
Technical Specification

Connector Type (End A):	50-Pin D-Subminiature, HV Female
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	50-Pin D-Subminiature, HV Female
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Maximum Current	5 A
Maximum Voltage	750 V working/1000 VDC AC peak typical
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Cable Exit	45° (See Order Codes)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	7/0.2 (0.2 mm ² , 24AWG) 1.62 mm O/D
Resistance	0.089 Ω/m (max) at 20 °C
Insulation	PTFE Type C (BS3G210)
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)

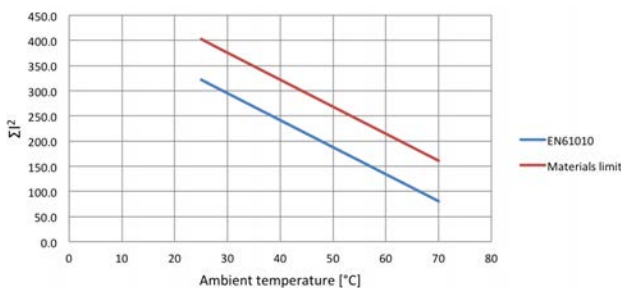


50-Pin D-Type HV Cable Assembly

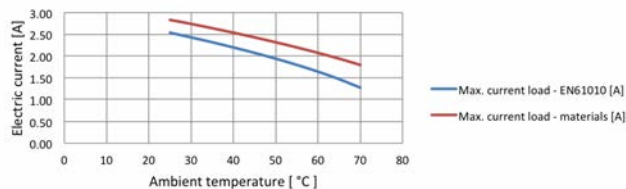
Product Compatibility



Characteristic Plots for 40-970-050-1m (HV)



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.

Product Order Codes

50-Pin D-Type Cable Assy, 5 A, Female to Female, HV,
Cable Exit 45° (Away from Pin 1),

0.5 m Long

[40-970-050-0.5m-FF-HV](#)

1.0 m Long

[40-970-050-1m-FF-HV](#)

2.0 m Long

[40-970-050-2m-FF-HV](#)

Cable Exit 45° (Towards Pin 1),

0.5 m Long

[A050DF5-050DF5-HA050](#)

1.0 m Long

[A050DF5-050DF5-HA100](#)

2.0 m Long

[A050DF5-050DF5-HA200](#)

Note: Other cable lengths can be supplied.

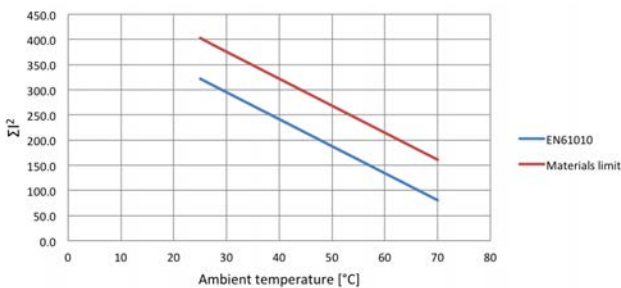
- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

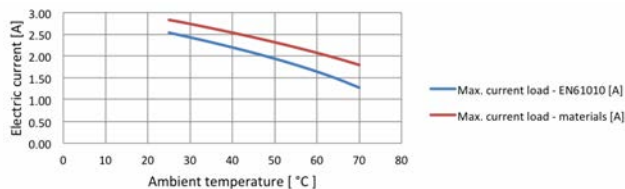
Connector Type (End A):	50-Pin D-Subminiature, HV
Gender	Female
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins A white/black screen pigtail is also included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	5 A
Maximum Voltage	750 V working/1000 VDC AC peak typical
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Cable Exit	45° (See Order Codes)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	7/0.2 (0.2 mm ² , 24AWG) 1.62 mm O/D
Resistance	0.089 Ω/m (max) at 20 °C
Insulation	PTFE Type C (BS3G210)
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 40-972-050-1m (HV)



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.

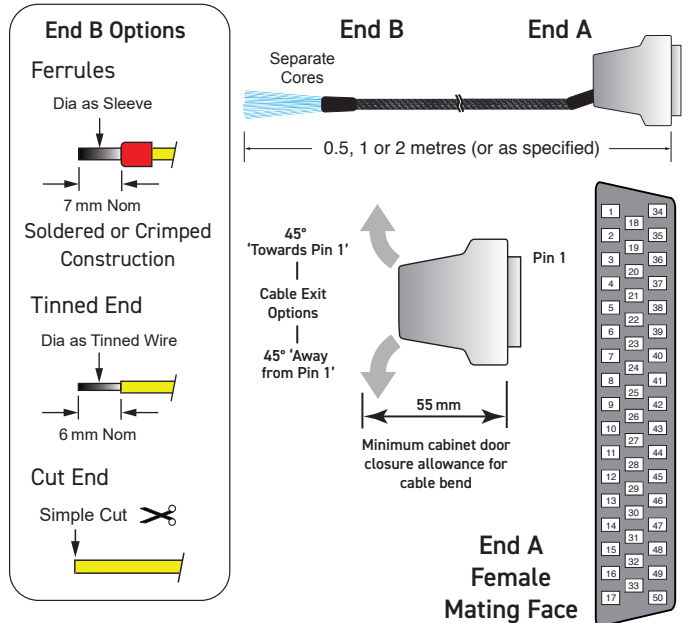
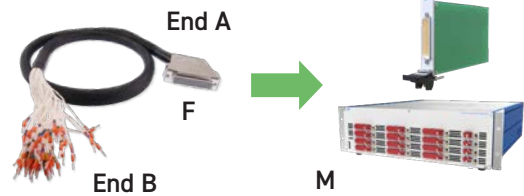


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.



50-Pin D-Type HV Unterminated Cable Assembly

Product Compatibility



Product Order Codes

- 50-Pin D-Type Cable Assy, 5 A, Cable Exit 45° Away from Pin 1, Ferrules, HV,
 Female to Unterminated, 0.5 m Lg [40-972-050-0.5m-FU-HV](#)
 Female to Unterminated, 1.0 m Lg [40-972-050-1m-FU-HV](#)
 Female to Unterminated, 2.0 m Lg [40-972-050-2m-FU-HV](#)

Part numbers for other versions:

A050DF*.-HA***

End A: 45° Cable Exit
 4 = (Away from Pin 1)
 5 = (Towards Pin 1)

End B:
 F = Ferrules
 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.

- 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.

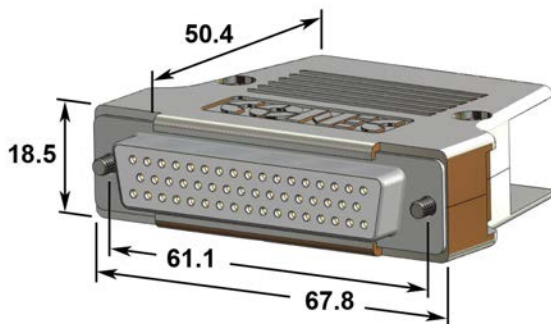
When the product is used without a backshell users should make their own cable strain relief arrangements and ensure appropriate electrical safety precautions are observed.



50-Pin D-Type HV Cable Connector

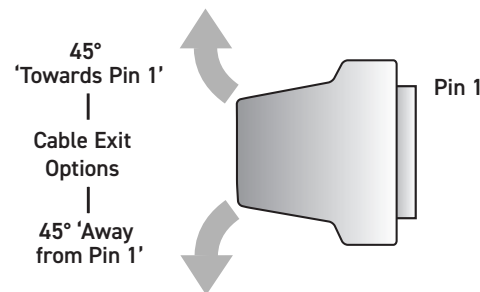
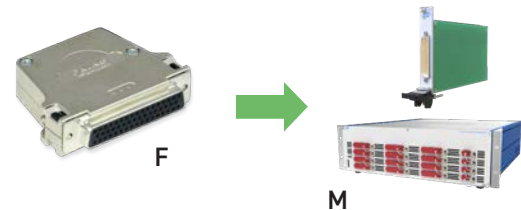
Technical Specification

Connector Type: Gender Securing Method: Product with Backshell Product without Backshell Wire Connection	50-Pin D-Subminiature, HV Female 4-40 UNC screwlocks, male 4-40 UNC screwlocks, male Solder bucket. A backshell fixing is also provided for a cable screen
Connector Ratings: Maximum Current Maximum Voltage Cable Exit: Cable Exit Size Overall Size (Approx) 50-Pin D-Sub: Contact Material Contact Resistance Wire Connection: Maximum Wire Size Recommended Insulation Additional Cable Clamp	5 A 1000 V DC or AC 45° 12 mm dia H68 x W18.5 x D55 mm Gold plated copper alloy 20 mOhm 20AWG PTFE Type C Yes (in backshell)

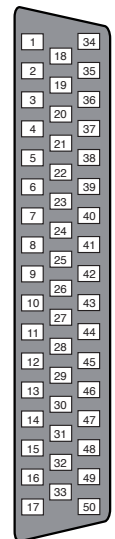


Connector Dimensions

Product Compatibility



Internal Solder Connection



Female Mating Face

Product Order Codes

50-Pin D-Type Connector, 5 A, Solder Bucket, HV, With Backshell, Female	40-960-050-F-HV
Without Backshell, Female	92-960-050-F-HV

Additional Connection Accessories

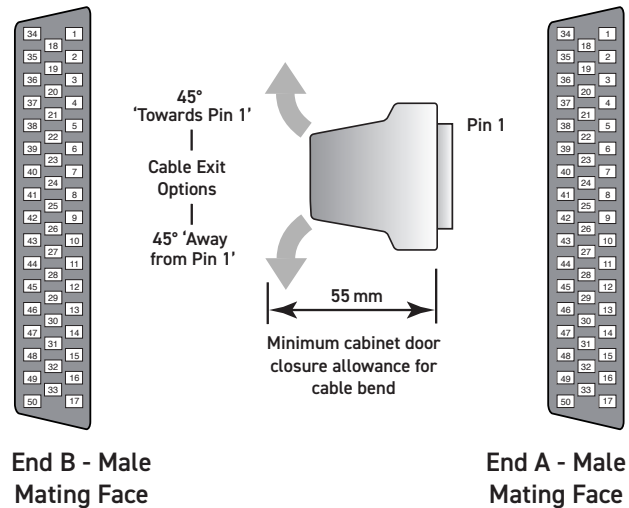
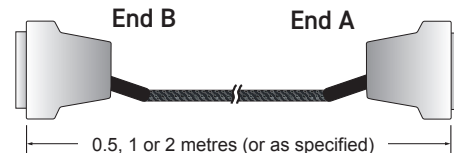
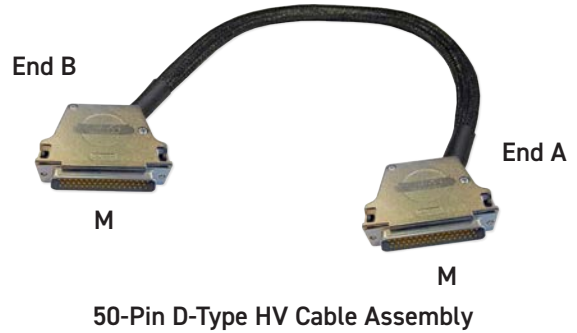
Although these items do not directly mate with Pickering Interfaces products customers may find them useful in the development of their own connection solutions.

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

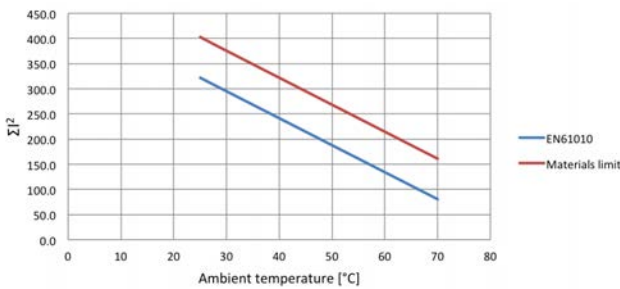
Technical Specification

Connector Type (End A):	50-Pin D-Subminiature, HV
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	50-Pin D-Subminiature, HV
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	5 A
Maximum Voltage	750 V working/1000 V DC AC peak typical
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Cable Exit	45° (See Order Codes)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	7/0.2 (0.2 mm ² , 24AWG) 1.62 mm O/D
Resistance	0.089 Ω/m (max) at 20 °C
Insulation	PTFE Type C (BS3G210)
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)

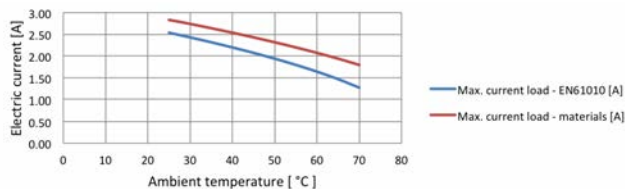
This Cable Assembly is Not Suitable for Connection to a Pickering Switching Product



Characteristic Plots for 40-970-050-1m (HV)



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.

Product Order Codes

50-Pin D-Type Cable Assy, 5 A, Male to Male, HV,
Cable Exit 45° (Away from Pin 1),

- 0.5 m Long [40-970-050-0.5m-MM-HV](#)
- 1.0 m Long [40-970-050-1m-MM-HV](#)
- 2.0 m Long [40-970-050-2m-MM-HV](#)

Cable Exit 45° (Towards Pin 1),

- 0.5 m Long [A050DM5-050DM5-HA050](#)
- 1.0 m Long [A050DM5-050DM5-HA100](#)
- 2.0 m Long [A050DM5-050DM5-HA200](#)

Note: Other cable lengths can be supplied.

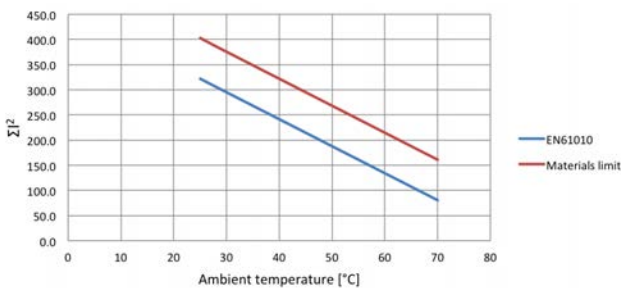
- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

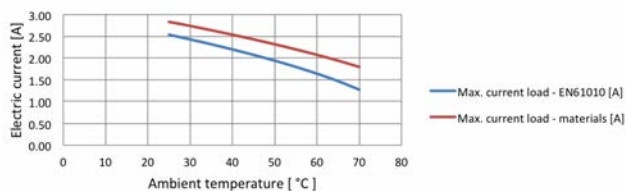
Connector Type (End A):	50-Pin D-Subminiature, HV
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Unterminated End (End B):	
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins A white/black screen pigtail is included
Wire End Options	Ferrules, Tinned, Cut End
Maximum Current	5 A
Maximum Voltage	750 V working/1000 V DC AC peak typical
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Cable Exit	45° (See Order Codes)
Overall Size (Approx)	H68 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	7/0.2 (0.2 mm ² , 24AWG) 1.62 mm O/D
Resistance	0.089 Ω/m (max) at 20 °C
Insulation	PTFE Type C (BS3G210)
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 40-972-050-1m (HV)

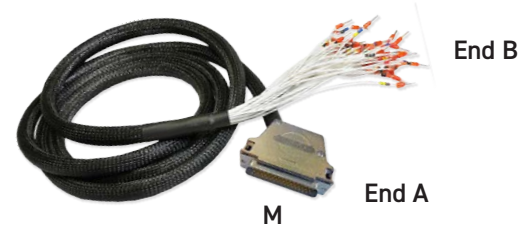


The graph shows the permitted ΣI^2 versus ambient temperature in accordance with EN61010 for user exposure to surface temperature and a higher limit imposed by the materials used where the cable is not directly user accessible.

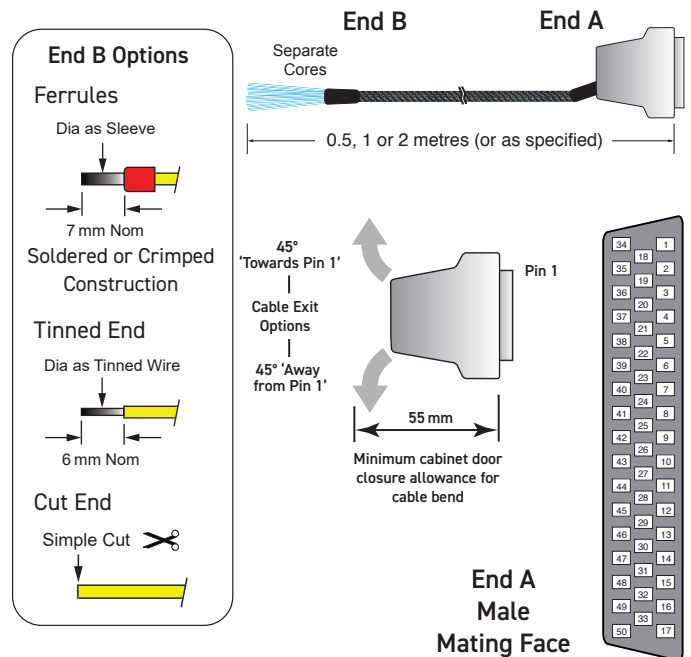


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.

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



50-Pin D-Type HV Unterminated Cable Assembly



Product Order Codes

- 50-Pin D-Type Cable Assy, 5 A, Cable Exit 45° Away from Pin 1, Ferrules, HV,
- Male to Unterminated, 0.5 m Lg [40-972-050-0.5m-MU-HV](#)
 - Male to Unterminated, 1.0 m Lg [40-972-050-1m-MU-HV](#)
 - Male to Unterminated, 2.0 m Lg [40-972-050-2m-MU-HV](#)

Part numbers for other versions:

A050DM*.-HA***

End A: 45° Cable Exit 4 = (Away from Pin 1) 5 = (Towards Pin 1)	End B: F = Ferrules T = Tinned End C = Cut End	Cable Length: 050 = 0.5 m 100 = 1.0 m 200 = 2.0 m
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Note: Other cable lengths can be supplied.

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

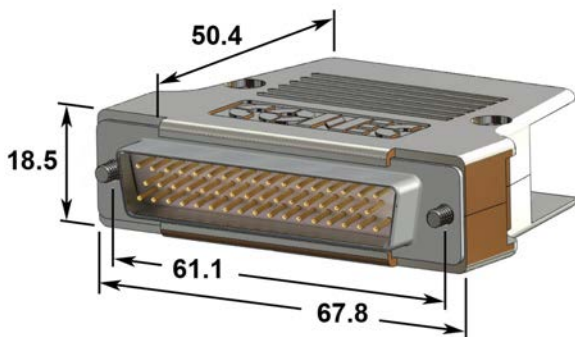
This accessory is designed to allow users to directly terminate with soldered connections to the connector.

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:	50-Pin D-Subminiature, HV
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	1000 V DC or AC
Cable Exit:	45°
Cable Exit Size	12 mm dia
Overall Size (Approx)	H68 x W18.5 x D55 mm
50-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 mOhm
Wire Connection:	
Maximum Wire Size	20AWG
Recommended Insulation	PTFE Type C
Additional Cable Clamp	Yes (in backshell)



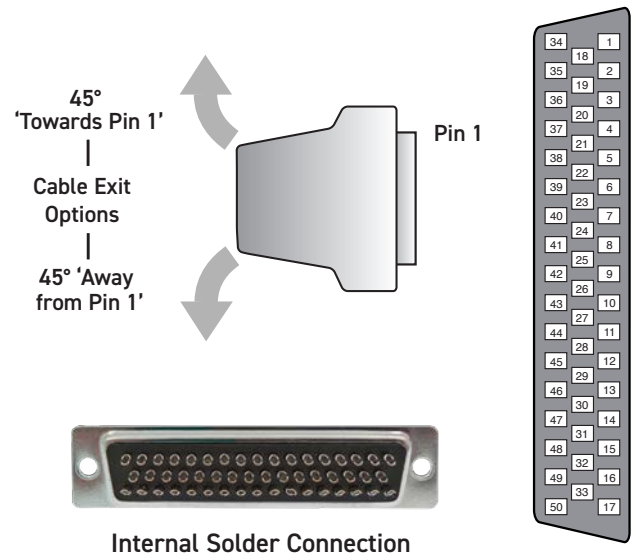
Connector Dimensions

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



M

50-Pin D-Type HV Connector with Backshell



Internal Solder Connection

Male Mating Face

Product Order Codes

50-Pin D-Type Connector, 5 A, Solder Bucket, HV, With Backshell, Male	40-960-050-M-HV
50-Pin D-Type Connector, 5 A, Solder Bucket, HV, Without Backshell, Male	92-960-050-M-HV

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.

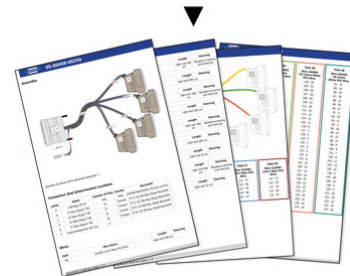
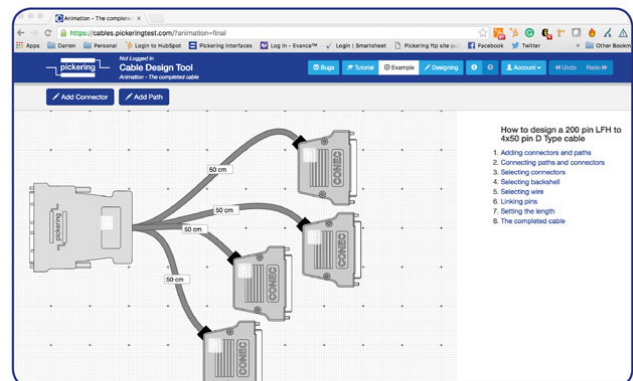
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.



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