High Voltage 37-Pin D-type Accessories

- High Voltage to 750 V Working/1000 VDC AC Peak Typical, 5 A
- Cable Assemblies
- Cable Connectors
- PCB Connectors
- Guaranteed Compatibility
- Standard Voltage Solutions are also Available See Data Sheet 90-007D



Simple Connection

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

Cable Assemblies

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



Custom Design Needs

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

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



Examples of Pickering PXI Products using High Voltage 37-Pin D-type Connectors





High Voltage - Cable Assemblies

		End 1	End 2		Cable Product Order Code		Data
Desc	ription	Gender & Cable Exit	Gender & Cable Exit	Options	Length	and Part Number	Sheet Page
	Cable Assy,	Male, 45° Towards Pin 1	Female, 45° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-037-0.5m-MF-HV 40-970-037-1m-MF-HV 40-970-037-2m-MF-HV	4
	37-Pin D-Type, 5 A, HV	Female, 45° Away from Pin 1	Female, 45° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-037-0.5m-FF-HV 40-970-037-1m-FF-HV 40-970-037-2m-FF-HV	5
			Ferrules	0.5 m 1 m 2 m	40-972-037-0.5m-FU-HV 40-972-037-1m-FU-HV 40-972-037-2m-FU-HV		
O	37-Pin D-Type to Unterminated 45° Aw	Female, 45° Away from NA Pin 1	NA	Tinned End	0.5 m 1 m 2 m	A037DF4-T-HA050 A037DF4-T-HA100 A037DF4-T-HA200	6
			Cut End	0.5 m 1 m 2 m	A037DF4-C-HA050 A037DF4-C-HA100 A037DF4-C-HA200		

High Voltage - Female Connectors

	Description	Gender & Cable Exit	Туре	Product Order Code and Part Number	Page
Constituting the second			With Backshell	40-960-037-F-HV	7
ō <u> </u>	37-Pin D-Type, 5 A, HV, Solder Bucket	45° Options	Without Backshell	92-960-037-F-HV	,
annunum s	PCB Connector	Famala	Right Angle PCB Mount	40-963-037-RF-HV	8
· Tamanana	37-Pin D-Type, 5 A, HV	Female -	Straight PCB Mount	40-963-037-SF-HV	9

High Voltage - Male Connectors

С	escription	Gender & Cable Exit	Туре	Product Order Code and Part Number	Page
	PCB Connector	Male	Right Angle PCB Mount	40-963-037-RM-HV	10
	37-Pin D-Type, 5 A, HV	Масе	Straight PCB Mount	40-963-037-SM-HV	11

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

90-007HVD

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 Gender & Cable Exit	End 2 Gender & Cable Exit	Options	Cable Length	Product Order Code and Part Number	Data Sheet Page
	Cable Assy, 37-Pin D-Type,	Male, 45° Towards	Male, 45° Towards	_	0.5 m	40-970-037-0.5m-MM-HV 40-970-037-1m-MM-HV	13
	5 A, HV	Pin 1	Pin 1		2 m	40-970-037-2m-MM-HV	
				Ferrules	0.5 m 1 m 2 m	40-972-037-0.5m-MU-HV 40-972-037-1m-MU-HV 40-972-037-2m-MU-HV	
O	Cable Assy, 37-Pin D-Type to Unterminated, 5 A, HV Male, 45° Towards Pin 1	NA E	Tinned End	0.5 m 1 m 2 m	A037DM5-T-HA050 A037DM5-T-HA100 A037DM5-T-HA200	14	
			Cut End	0.5 m 1 m 2 m	A037DM5-C-HA050 A037DM5-C-HA100 A037DM5-C-HA200		
Note: Custom le	ngths by quotation						

High Voltage - Male Connectors

	Description	Gender & Cable Exit	Туре	Product Order Code and Part Number	Page
	Cable Connector	Male,	With Backshell	40-960-037-M-HV	15
2	37-Pin D-Type, 5 A, HV, Solder Bucket	45° Options	Without Backshell	92-960-037-M-HV	1 15

Custom Termination

Cable Assy - Male to Female

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

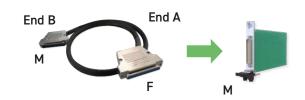


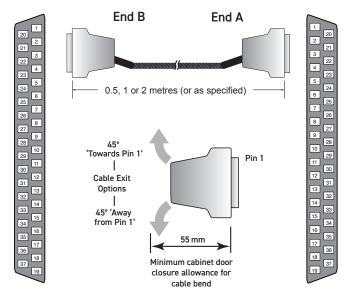
Connector Type (End A): Gender Securing Method	37-Pin D-Subminiature, HV Female 4-40 UNC screwlocks, male
Connector Type (End B):	37-Pin D-Subminiature, HV
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	5 A
Maximum Voltage	750 V working/1000 V DC AC peak
	typical
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Cable Exit:	
Female Connectors	45° (Away from Pin 1)
Male Connectors	45° (Towards Pin 1)
Overall Size (Approx)	H70 x W18.5 x D55 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	7/0.2 (0.22 mm², 24AWG) 1.62 mm 0/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)



37-Pin HV D-Type Cable Assembly

Product Compatibility





End B - Male Mating Face

End A - Female Mating Face

Product Order Codes

37-Pin D-Type Cable Assy, 5 A, HV, Male to Female,			
0.5 m Long	40-970-037-0.5m-MF-HV		
1.0 m Long	40-970-037-1m-MF-HV		
2.0 m Long	40-970-037-2m-MF-HV		

Note: Other cable lengths can be supplied.

Cable Assy - Female to Female

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

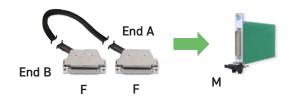
Technical Specification

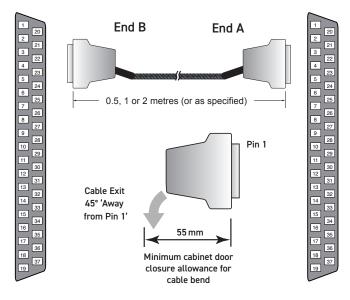
Connector Type (End A): Gender Securing Method	37-Pin D-Subminiature, HV Female 4-40 UNC screwlocks, male
Connector Type (End B): Gender Securing Method	37-Pin D-Subminiature, HV Female 4-40 UNC screwlocks, male
Maximum Current Maximum Voltage Insulation Resistance Connectors:	5 A 750 V working/1000 V DC AC peak typical 1000 M0hm
Contact Material Contact Resistance Cable Exit: Overall Size (Approx) Cable Type: Conductor: Material Strands Resistance Insulation Outer Sleeve Screened Construction	Gold plated copper alloy <20 mOhm 45° (Away from Pin 1) H70 x W18.5 x D55 mm Individual wires, screened & sleeved Tinned copper wire 7/0.2 (0.22 mm², 24AWG) 1.62 mm O/D 0.089 Ω/m (max) at 20 °C PTFE Type C (BS3G210) Polyester Yes (Cable screen connected to back-
Additional Braided Sleeve Cable O/D Minimum Bend Radius Door Closure Allowance	shells) Yes 12 mm 25 mm 55 mm (see diagram)



37-Pin HV D-Type Cable Assembly

Product Compatibility





End B - Female Mating Face

End A - Female Mating Face

Product Order Codes

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

 0.5 m Long
 40-970-037-0.5m-FF-HV

 1.0 m Long
 40-970-037-1m-FF-HV

 2.0 m Long
 40-970-037-2m-FF-HV

Note: Other cable lengths can be supplied.

Cable Assy - Female to Unterminated

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

Technical Specification

Connector Type (End A): 37-Pin D-Subminiature, HV Gender Female 4-40 UNC screwlocks, male Securing Method 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 750 V working/1000 V DC AC peak Maximum Voltage typical Insulation Resistance 1000 M0hm Connector: Contact Material Gold plated copper alloy Contact Resistance <20 m0hm 45° (Away from Pin 1) Cable Exit Overall Size (Approx) H70 x W18.5 x D55 mm Cable Type: Individual wires, screened & sleeved Conductor: Material Tinned copper wire Strands 7/0.2 (0.22 mm², 24AWG) 1.62 mm Resistance O/D Insulation 0.089 Ω/m (max) at 20 °C 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)

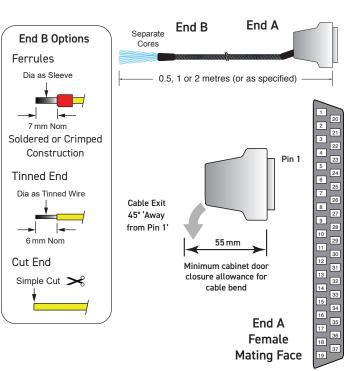
Note: When using this product please ensure appropriate electrical safety.



37-Pin HV D-Type Unterminated Cable Assembly

Product Compatibility





Product Order Codes

37-Pin D-Type Cable Assy, 5 A, HV, Boot Lace Ferrules, Female to Unterminated, 0.5 m Lg \$40-972-037-0.5m-FU-HV\$ Female to Unterminated, 1.0 m Lg \$40-972-037-1m-FU-HV\$ Female to Unterminated, 2.0 m Lg \$40-972-037-2m-FU-HV\$

Part numbers for other versions:



Note: Other cable lengths can be supplied.

Cable Connector - Female

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

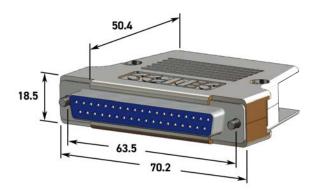
This accessory is designed to allow users to directly terminate with soldered connections to the connector.

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:	37-Pin D-Subminiature, HV
Gender	Female
Securing Method:	
Product with Backshell	4-40 UNC screwlocks, male
Product without Backshell	4-40 UNC screwlocks, male
Wire Connection	Solder bucket. A backshell fixing is
	also provided for a cable screen
Connector Ratings:	
Maximum Current	5 A
Maximum Voltage	1000 V DC or AC
Cable Exit:	45°
Cable Exit Size	12 mm dia
Overall Size (Approx)	H70 x W18.5 x D55 mm
37-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Wire Connection:	
Maximum Wire Size	20AWG
Recommended Insulation	PTFE Type C
Additional Cable Clamp	Yes (in backshell)

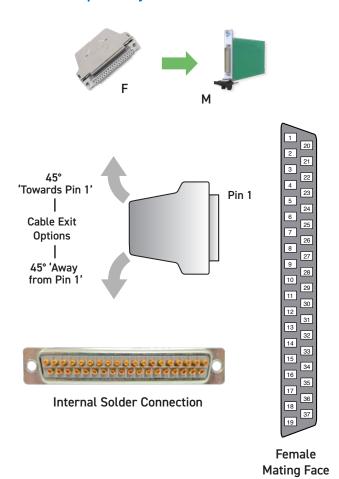


Backshell Dimensions



37-Pin HV D-Type Cable Connector with Backshell

Product Compatibility



Product Order Codes

37-Pin D-Type Connector, 5 A, HV, Solder Bucket,
With Backshell, Female
40-960-037-F-HV
Without Backshell, Female
92-960-037-F-HV

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Page 7

PCB Connector, Right Angle - Female

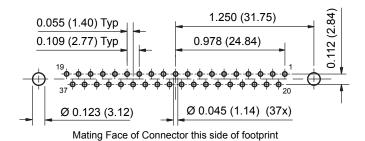
- Right Angle PCB Mount
- Ideal for User Created Termination Solutions

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

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

Technical Specification

Connector Type: Gender Securing Method PCB Mounting	37-Pin D-Subminiature, HV Female 4-40 UNC screwlocks, female Right angle PCB mount, solder
Connector Ratings: Maximum Current Maximum Voltage 37-Pin D-Sub:	5 A each pin 1000 V DC or AC
Contact Material Contact Resistance PCB Legs: Effective Leg Length	Gold plated copper alloy<20 mOhm5.0 mm nom (See diagram)

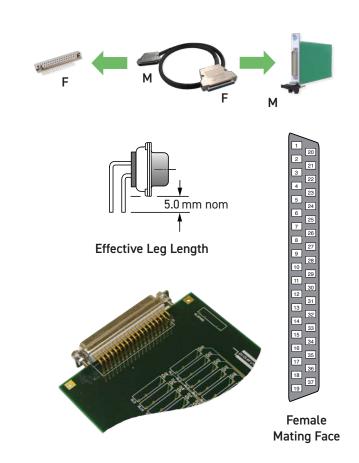


PCB Footprint of 37-Pin Right Angle Female HV Connector (Connector Side - Not to Scale)



37-Pin HV D-Type PCB Connector

Product Compatibility



Product Order Codes

37-Pin D-Type Connector, 5 A, HV, Right Angle PCB Mount, Female 40-963-037-RF-HV

PCB Connector, Straight - Female

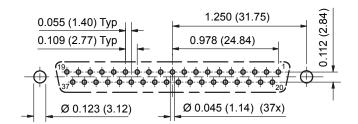
- Straight PCB Mount
- Ideal for User Created Termination Solutions

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.

Technical Specification

Connector Type:	37-Pin D-Subminiature, HV
Gender	Female
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Straight PCB mount, solder
Connector Ratings:	
Maximum Current	5 A each pin
Maximum Voltage	1000 V DC or AC
37-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Fixing Plate: Overall Size	69.32 x 12.55 mm (See diagram)
PCB Legs: Leg Length	4.6 mm nom (See diagram)



PCB Footprint of 37-Pin Straight Female HV Connector (Connector Side - Not to Scale)

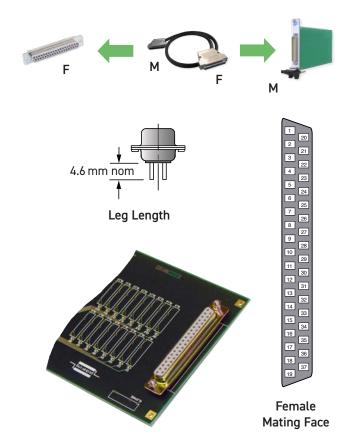


PCB Connector - Fixing Plate Dimensions



37-Pin HV D-Type PCB Connector

Product Compatibility



Product Order Codes

37-Pin D-Type Connector, 5 A, HV, Straight PCB Mount, Female 40-963-037-SF-HV

PCB Connector, Right Angle - Male

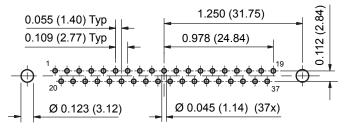
- Right Angle PCB Mount
- Ideal for User Created Termination Solutions

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

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

Technical Specification

37-Pin D-Subminiature, HV
Male
4-40 UNC screwlocks, female
Right angle PCB mount, solder
5 A each pin
1000 V DC or AC
Gold plated copper alloy
<20 m0hm
3.2 mm nom (See diagram)



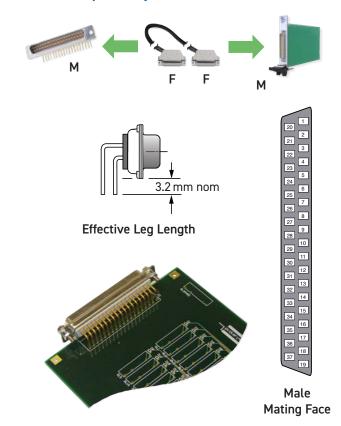
Mating Face of Connector this side of footprint

PCB Footprint of 37-Pin Right Angle Male HV Connector (Connector Side - Not to Scale)



37-Pin HV D-Type PCB Connector

Product Compatibility



Product Order Codes

37-Pin D-Type Connector, 5 A, HV, Right Angle PCB Mount, Male 40-963-037-RM-HV

PCB Connector, Straight - Male

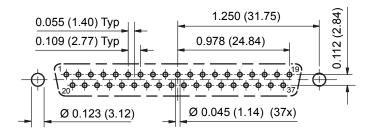
- Straight PCB Mount
- Ideal for User Created Termination Solutions

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.

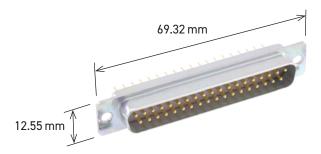
Note: This product is not suitable for directly mounting onto the front panel of a Pickering switching product.

Technical Specification

Connector Type:	37-Pin D-Subminiature, HV
Gender	Male
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Straight PCB mount, solder
Connector Ratings:	
Maximum Current	5 A each pin
Maximum Voltage	1000 V DC or AC
37-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Fixing Plate: Overall Size	69.32 x 12.55 mm (See diagram)
PCB Legs: Leg Length	4.6 mm nom (See diagram)



PCB Footprint of 37-Pin Straight Male HV Connector (Connector Side - Not to Scale)



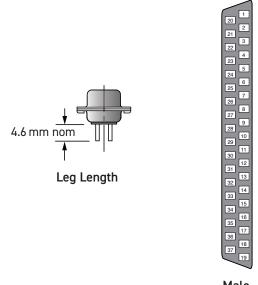
PCB Connector - Fixing Plate Dimensions



37-Pin HV D-Type PCB Connector

Product Compatibility





Male Mating Face

Product Order Codes

37-Pin D-Type Connector, 5 A, HV, Straight PCB Mount, Male 40-963-037-SM-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.

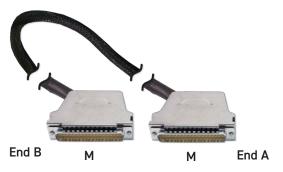
Cable Assy - Male to Male

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

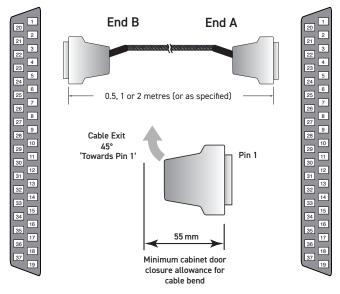
Technical Specification

Connector Type (End A): Gender Securing Method	37-Pin D-Subminiature, HV Male 4-40 UNC screwlocks, male
Connector Type (End B): Gender Securing Method	37-Pin D-Subminiature, HV Male 4-40 UNC screwlocks, male
Maximum Current Maximum Voltage Insulation Resistance Connectors:	5 A 750 V working/1000 V DC AC peak typical 1000 MOhm
Contact Material Contact Resistance Cable Exit: Overall Size (Approx) Cable Type: Conductor: Material Strands Resistance Insulation	Gold plated copper alloy <20 mOhm 45° (Towards Pin 1) H70 x W18.5 x D55 mm Individual wires, screened & sleeved Tinned copper wire 7/0.2 (0.22 mm², 24AWG) 1.62 mm 0/D 0.089 Ω/m (max) at 20°C PTFE Type C (BS3G210)
Outer Sleeve Screened Construction Additional Braided Sleeve Cable O/D	Polyester Yes (Cable screen connected to backshells) Yes 12 mm
Minimum Bend Radius Door Closure Allowance	25 mm 55 mm (see diagram)

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



37-Pin HV D-Type Cable Assembly



End B - Male Mating Face

End A - Male Mating Face

Product Order Codes

37-Pin D-Type Cable Assy, 5 A, HV, Male to Male, Cable Exit 45° (Towards Pin 1),

 0.5 m Long
 40-970-037-0.5m-MM-HV

 1.0 m Long
 40-970-037-1m-MM-HV

 2.0 m Long
 40-970-037-2m-MM-HV

Note: Other cable lengths can be supplied.

Cable Assy - Male to Unterminated

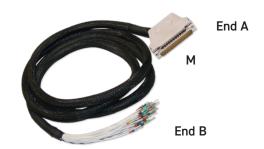
- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

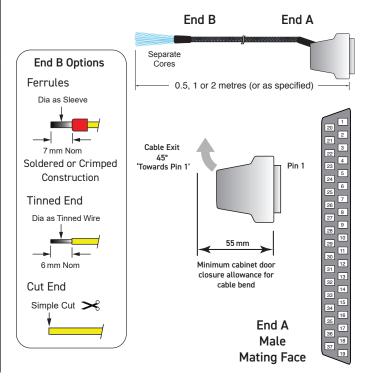
Connector Type (End A): Gender Securing Method	37-Pin D-Subminiature, HV Male 4-40 UNC screwlocks, male
Unterminated End (End B): Free Wire Length Individual Wire Labelling Wire End Options	130 mm nominal To connector pins. A white/black screen pigtail is included Ferrules, Tinned, Cut End
Maximum Current Maximum Voltage Insulation Resistance Connector:	5 A 750 V working/1000 V DC AC peak typical 1000 MOhm
Contact Material Contact Resistance Cable Exit Overall Size (Approx) Cable Type: Conductor: Material Strands Resistance Insulation Outer Sleeve Screened Construction	Gold plated copper alloy <20 mOhm 45° (Towards Pin 1) H70 x W18.5 x D55 mm Individual wires, screened & sleeved Tinned copper wire 7/0.2 (0.22 mm², 24AWG) 1.62 mm O/D 0.089 Ω/m (max) at 20 °C PTFE Type C (BS3G210) Polyester Yes (Cable screen connected to backshell)
Additional Braided Sleeve Cable O/D Minimum Bend Radius Door Closure Allowance	Yes 12 mm 25 mm 55 mm (see diagram)

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

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



37-Pin HV D-Type Unterminated Cable Assembly



Product Order Codes

37-Pin D-Type Cable Assy, 5 A, HV, Boot Lace Ferrules,
Male to Unterminated, 0.5 m Lg
40-972-037-0.5m-MU-HV
Male to Unterminated, 1.0 m Lg
40-972-037-1m-MU-HV
Male to Unterminated, 2.0 m Lg
40-972-037-2m-MU-HV

Part numbers for other versions:



Note: Other cable lengths can be supplied.

Cable Connector - Male

- 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: Gender	37-Pin D-Subminiature, HV 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)	H70 x W18.5 x D55 mm
37-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Wire Connection:	
Maximum Wire Size	20AWG
Recommended Insulation	PTFE Type C
Additional Cable Clamp	Yes (in backshell)

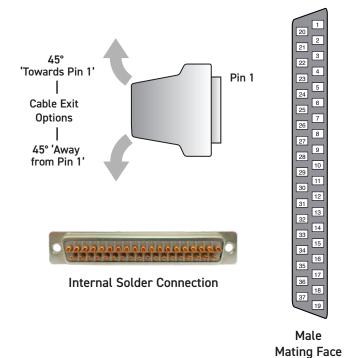


Backshell Dimensions

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



37-Pin HV D-Type Connector with Backshell



Product Order Codes

37-Pin D-Type Connector, 5 A, HV, Solder Bucket,
With Backshell, Male
40-960-037-M-HV
Without Backshell, Male
92-960-037-M-HV

C

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.

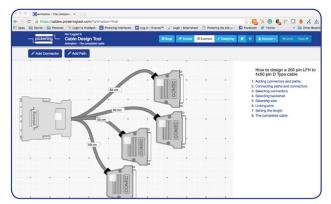
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.



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