# Standard Voltage 9-Pin D-type Accessories

- Standard Voltage to 250 V AC/400 V, 5 A
- Cable Assemblies
- Calibration Port Solutions
- Cable Connectors & Connector Blocks
- PCB Connectors
- Guaranteed Compatibility
- 9-Pin High Voltage Solutions are also Available See Data Sheet 90-003HVD

## 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 and pcb connectors. The 9-Pin D-type connector is also used as the Calibration Port Connector for precision resistor modules.

#### 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

Connector Blocks convert the 9-pin D-type connections to an array of screw terminals. The customer can then interface to other devices using his own wiring.





## **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 <a href="mailto:pickeringtest.com/cdt">pickeringtest.com/cdt</a>



Examples of Pickering PXI Products using 9-Pin D-type Connectors

Issue 10.6 November 2023



## Standard Voltage - Cable Assemblies

Description		End 1	End 2		Cable	Product Order Code	Data
		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	40-970-009-0.5m-MF 40-970-009-1m-MF 40-970-009-2m-MF	5
P	9-Pin D-Type, 5 A	Female, 45° Away from Pin 1	Female, 45° Away from Pin 1	-	0.5 m 1 m 2 m	40-970-009-0.5m-FF 40-970-009-1m-FF 40-970-009-2m-FF	6
				Ferrules	0.5 m 1 m 2 m	40-972-009-0.5m-FU 40-972-009-1m-FU 40-972-009-2m-FU	
Cable Assy, 9-Pin D-Type to Unterminated, 5 A	Female, 45° Away from Pin 1	NA	Tinned End	0.5 m 1 m 2 m	A009DF4-T-0A050 A009DF4-T-0A100 A009DF4-T-0A200	7	
	54		Cut End	0.5 m 1 m 2 m	A009DF4-C-0A050 A009DF4-C-0A100 A009DF4-C-0A200	1	

# Standard Voltage - Female Connector Blocks/Connectors

	Description	Gender & Cable Exit	Туре	Product Order Code and Part Number	Page		
Connector Block,		Female,	With Backshell	40-965-009-F	- 8		
Ag.	9-Pin D-Type, 5 A, Screw Terminal	Rear	Without Backshell	92-965-009-F	8		
	Cable Connector 9-Pin D-Type,	Female,	With Backshell	40-960-009-F	9		
	5 A, Solder Bucket	45° Options	45° Options	45° Options	Without Backshell	92-960-009-F	7
5 1888°	PCB Connector	- Family	Right Angle PCB Mount	40-963-009-RF	10		
	9-Pin D-Type, 5 A	Female	Straight PCB Mount	40-963-009-SF	11		

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

C

## **Standard Voltage - Male PCB Connectors**

	Description	Gender & Cable Exit	Туре	Product Order Code and Part Number	Page
A Company of the Comp	PCB Connector	Male	Right Angle PCB Mount	40-963-009-RM	12
1	9-Pin D-Type, 5 A	Mate	Straight PCB Mount	40-963-009-SM	13

# **Standard Voltage - Calibration Cables**

	End 1		End 2	Cabla	Product Order Code	Data
Description	Number of Connectors	Gender & Cable Exit	Gender & Cable Exit	Cable Length	and Part Number	Sheet Page
	1			1m	40-975-009-SL1	
Cable Assy,	2	Female, 45° Away from Pin 1	4 x Male, Rear	1.3 m	40-975-009-SL2	14
9-Pin D-Type Connector(s), Female to 4 x 4 mm DMM Bayonet Plug	3			1.6 m	40-975-009-SL3	

## 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.

## Standard Voltage - Cable Assemblies

		End 1	End 1 End 2		Cabla Draduct Order Cada		Data
Desc	Description		Gender & Cable Exit	Options	Cable Length	Product Order Code and Part Number	Sheet Page
O	Cable Assy, 9-Pin D-Type, 5 A	Male, 45° Towards Pin 1	Male, 45° Towards Pin 1	-	0.5 m 1 m 2 m	40-970-009-0.5m-MM 40-970-009-1m-MM 40-970-009-2m-MM	16
				Ferrules	0.5 m 1 m 2 m	40-972-009-0.5m-MU 40-972-009-1m-MU 40-972-009-2m-MU	
0	9-Pin D-Type to Unterminated,	/,b° lowards	NA	Tinned End	0.5 m 1 m 2 m	A009DM5-T-0A050 A009DM5-T-0A100 A009DM5-T-0A200	17
3	JA			Cut End	0.5 m 1 m 2 m	A009DM5-C-0A050 A009DM5-C-0A100 A009DM5-C-0A200	

## Standard Voltage - Male Breakouts/PCB Connectors

[	Description	Gender & Cable Exit	Туре	Product Order Code and Part Number	Page
	Cable Connector	Male,	With Backshell	40-960-009-M	10
C. CHE	9-Pin D-Type, 5 A, Solder Bucket	45° Options	Without Backshell	92-960-009-M	18

## **Custom Termination**

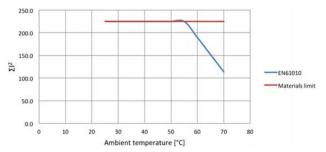
# Cable Assy - Male to Female

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

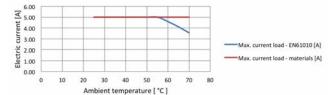
## **Technical Specification**

Connector Type (End A): Gender Securing Method	9-Pin D-Subminiature Female 4-40 UNC screwlocks, male
Connector Type (End B): Gender	9-Pin D-Subminiature Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current Maximum Voltage Insulation Resistance Connectors:	5 A 250 VAC/400 VDC 1000 MOhm
Contact Material Contact Resistance	Gold plated copper alloy
Cable Exit:	20111011111
Female Connectors	45° (Away from Pin 1)
Male Connectors Overall Size (Approx)	45° (Towards Pin 1) H32 x W15 x D46 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.18 (0.4 mm², 21AWG)
Resistance Insulation	0.041Ω/m PFΔ
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	8 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	50 mm (see diagram)

#### Characteristic Plots for 40-970-009-1m-MF



The graph shows the permitted  $\Sigma l^2$  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.



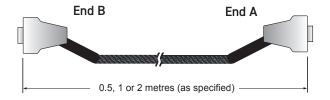
The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the  $\Sigma$ 1 $^2$  is complied with.

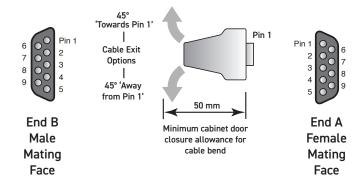


9-Pin D-Type Cable Assembly

## **Product Compatibility**







#### **Product Order Codes**

9-Pin D-Type Cable Assy, 5 A, Male to Female,

 0.5 m Long
 40-970-009-0.5m-MF

 1.0 m Long
 40-970-009-1m-MF

 2.0 m Long
 40-970-009-2m-MF

C

Note: Other cable lengths can be supplied.

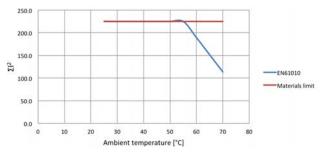
# Cable Assy - Female to Female

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

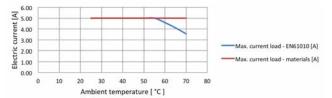
#### **Technical Specification**

Connector Type (End A): Gender Securing Method	9-Pin D-Subminiature Female 4-40 UNC screwlocks, male
Connector Type (End B): Gender Securing Method	9-Pin D-Subminiature Female 4-40 UNC screwlocks, male
Maximum Current Maximum Voltage Insulation Resistance Connectors:	5 A 250 VAC/400 VDC 1000 MOhm
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Cable Exit	45° (Away from Pin 1)
Overall Size (Approx)	H32 x W15 x D46 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.18 (0.4 mm², 21AWG)
Resistance	0.041Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to
	backshells)
Additional Braided Sleeve	Yes
Cable O/D	8 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	50 mm (see diagram)

#### Characteristic Plots for 40-970-009-1m-FF



The graph shows the permitted  $\Sigma l^2$  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.

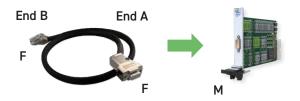


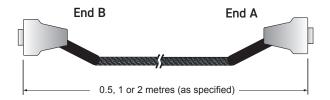
The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the  $\Sigma$ 1 $^2$  is complied with.

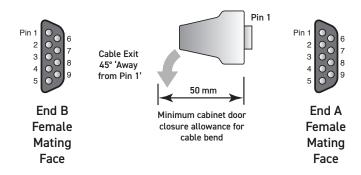


9-Pin D-Type Cable Assembly

#### **Product Compatibility**







#### **Product Order Codes**

9-Pin D-Type Cable Assy, 5 A, Female to Female,
0.5 m Long 40-970-009-0.5m-FF
1.0 m Long 40-970-009-1m-FF
2.0 m Long 40-970-009-2m-FF

C

Note: Other cable lengths can be supplied.

# Cable Assy - Female to Unterminated

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

#### **Technical Specification**

Door Closure Allowance

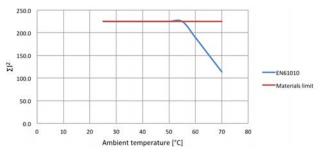
Connector Type (End A): 9-Pin D-Subminiature Gender Female Securing Method 4-40 UNC screwlocks, male Unterminated End (End B): Free Wire Length 130 mm nominal Individual Wire Labelling To connector pins A white/black screen pigtail is also included Wire End Options Ferrules, Tinned, Cut End Maximum Current Maximum Voltage 250 VAC/400 VDC 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) H32 x W15 x D46 mm Cable Type: Individual wires, screened & sleeved Conductor: Material Tinned copper wire Strands 19/0.18 (0.4 mm<sup>2</sup>, 21AWG) Resistance  $0.041\Omega/m$ PFA Insulation Outer Sleeve Polyester Screened Construction Yes (Cable screen connected to backshell) Additional Braided Sleeve Yes Cable O/D 8 mm Minimum Bend Radius

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

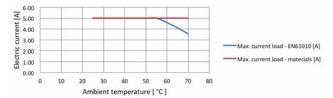
50 mm (see diagram)

#### Characteristic Plots for 40-972-009-1m-FU

25 mm



The graph shows the permitted  $\Sigma I^2$  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.

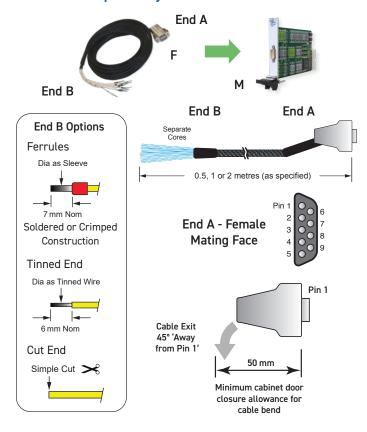


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the  $\Sigma I^2$  is complied with.



9-Pin D-Type Unterminated Cable Assembly

#### **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Cable Assy, 5 A, Cable Exit Away from Pln 1,

Female to Unterminated, 0.5 m Long 40-972-009-0.5m-FU Female to Unterminated, 1.0 m Long 40-972-009-1m-FU Female to Unterminated, 2.0 m Long 40-972-009-2m-FU

Part numbers for other versions:



Note: Other cable lengths can be supplied.

# Connector Block - Female

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

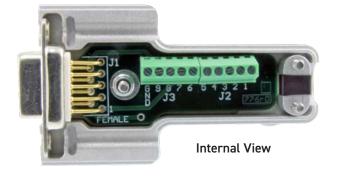
Connector blocks provide a convenient method of termination without the use of custom cabling. However, a higher resistance path, lower capacity ratings and lower voltage ratings are typical.

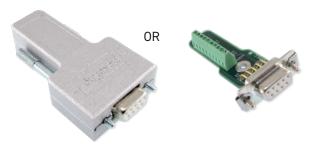
Suitable for use on the front of modules this connector block provides a simple method of connecting to 9-Pin D-Type connectors. The screw terminals use a rising cage clamp mechanism to minimize risk of copper strand breakage. PTFE cables are recommended for use with this connector block to maximise copper cross-sectional area and insulation properties. Connector blocks have higher losses than a cable connection and the breakdown voltage is controlled by clearances to the metal shell. The metal shell includes an internal insulation barrier under the carrier board.

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**

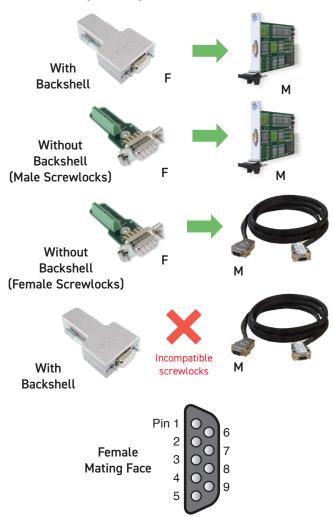
Connector Type:	9-Pin D-Subminiature
Gender	Female
Securing Method:	
Product with Backshell	4-40 UNC screwlocks, male
Product without Backshell	4-40 UNC screwlocks, male or female
Wire Connection	Rising cage screw terminals
	A screen (GND) connection is provided
Connector Block Ratings:	
Maximum Current	5 A
Maximum Voltage	200 VDC
Cable Exit	Rear - 10 x 8.8 mm
Overall Size (Approx)	H37.5 x W16.5 x D71mm
9-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Screw Terminals:	
Maximum Wire Size	20AWG
Recommended Insulation	PTFE
Additional Cable Clamp	Yes (in backshell)





9-Pin D-Type Connector Block

#### **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Shielded Connector Block, 5 A, Screw Terminal, With Backshell, Female 40-965-009-F

With backshelt, Female 40-763-007-F
Without Backshelt, Female 92-965-009-F

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

# Cable Connector - Female

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

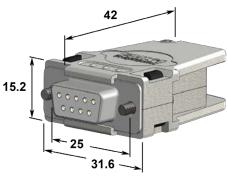
This accessory is designed to allow users to directly terminate with soldered connections to the connector.

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:	9-Pin D-Subminiature
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	250 VAC
Cable Exit:	45°
Cable Exit Size	15 mm dia
Overall Size (Approx)	H32 x W15 x D46 mm
9-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Wire Connection:	
Maximum Wire Size	20AWG
Recommended Insulation	PFA
Additional Cable Clamp	Yes (in backshell)

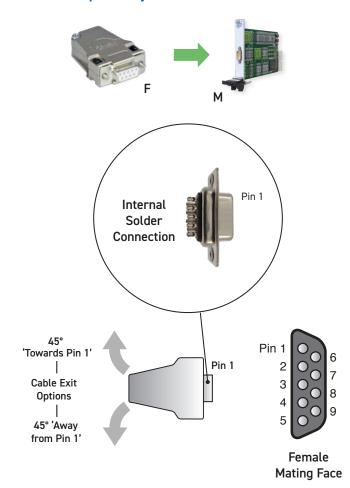


**Connector Dimensions** 



9-Pin D-Type Cable Connector with Backshell

### **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Connector, 5 A, Solder Bucket,
With Backshell, Female
40-960-009-F
Without Backshell, Female
92-960-009-F

# PCB Connector, Right Angle - Female

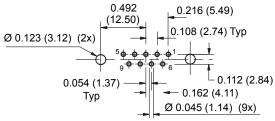
- Right Angle PCB Mount
- Ideal for User Created Termination Solutions

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	9-Pin D-Subminiature Female
Securing Method PCB Mounting	4-40 UNC screwlocks, female Right angle PCB mount, solder
Connector Ratings:	
Maximum Current	5 A each pin
Maximum Voltage	250 VAC
9-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
PCB Legs:	
Effective Leg Length	3.1mm nom (See diagram)



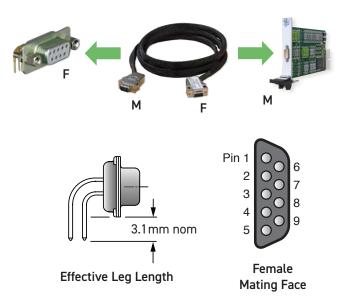
Mating Face of Connector this side of footprint

PCB Footprint of 9-Pin Right Angle Female Connector (Connector Side - Not to Scale)



9-Pin D-Type PCB Connector

## **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Connector, 5 A, Right Angle PCB Mount, Female 40-963-009-RF

# PCB Connector, Straight - Female

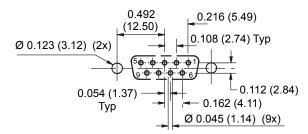
- Straight PCB Mount
- Ideal for User Created Termination Solutions

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: Gender	9-Pin D-Subminiature Female
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Straight PCB mount, solder
Connector Ratings:	
Maximum Current	5 A each pin
Maximum Voltage	250 VAC
9-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
PCB Legs:	
Leg Length	6.0 mm nom (See diagram)



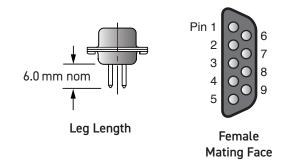
PCB Footprint of 9-Pin Straight Female Connector (Connector Side - Not to Scale)



9-Pin D-Type PCB Connector

## **Product Compatibility**





#### **Product Order Codes**

9-Pin D-Type Connector, 5 A, Straight PCB Mount, Female 40-963-009-SF

# PCB Connector, Right Angle - Male

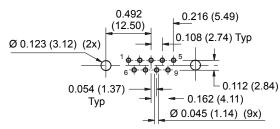
- Right Angle PCB Mount
- Ideal for User Created Termination Solutions

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**

Connector Type: Gender Securing Method PCB Mounting	9-Pin D-Subminiature Male 4-40 UNC screwlocks, female Right angle PCB mount, solder
Connector Ratings: Maximum Current Maximum Voltage 9-Pin D-Sub:	5 A each pin 250 VAC
Contact Material Contact Resistance PCB Legs:	Gold plated copper alloy
Effective Leg Length	3.1mm nom (See diagram)



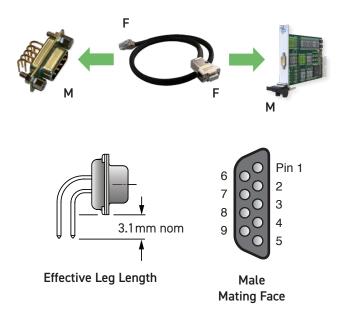
Mating Face of Connector this side of footprint

PCB Footprint of 9-Pin Right Angle Male Connector (Connector Side - Not to Scale)



9-Pin D-Type PCB Connector

## **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Connector, 5 A, Right Angle PCB Mount, Male 40-963-009-RM

# PCB Connector, Straight - Male

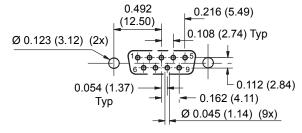
- Straight PCB Mount
- Ideal for User Created Termination Solutions

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: Gender	9-Pin D-Subminiature Male
Securing Method	4-40 UNC screwlocks, female
PCB Mounting	Straight PCB mount, solder
Connector Ratings:	
Maximum Current	5 A each pin
Maximum Voltage	250 VAC
9-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
PCB Legs:	
Leg Length	6.0 mm nom (See diagram)

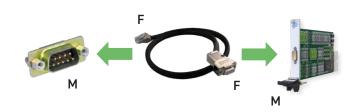


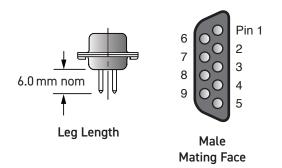
PCB Footprint of 9-Pin Straight Male Connector (Connector Side - Not to Scale)



9-Pin D-Type PCB Connector

#### **Product Compatibility**





#### **Product Order Codes**

9-Pin D-Type Connector, 5 A, Straight PCB Mount,
Male
40-963-009-SM

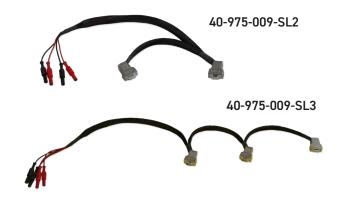
# Module Specific Calibration Port Cable

- High Specification Cable
- Stranded Hi-Flex PVC Cable with Braided Sleeving
- Fully Screened Cable Construction
- Strain Relief

The cable assembly is specifically designed to connect to the 9-Pin D-Type calibration port located on the front panel of Pickering Interfaces Module Part Numbers 40-260, 40-261, 40-262, 40-263 and 40-265. Three product types are available.

## **Technical Specification**

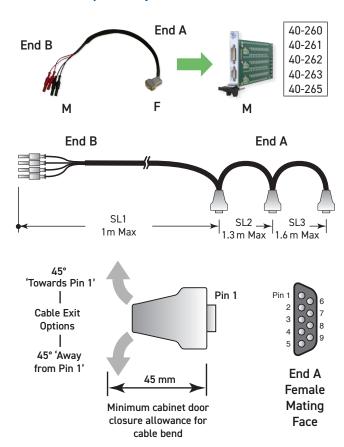
Connector Type (End A): Gender Securing Method Contact Material Contact Resistance Cable Exit Overall Size (Approx)	9-Pin D-Subminiature Female 4-40 UNC screwlocks, male Gold plated copper alloy <20 mOhm 45° (Away from Pin 1) H36 x W15 x D46 mm
Connector Type (End B): Gender Securing Method Contact Material Contact Resistance Cable Exit Overall Size (Approx)	4 x 4 mm DMM Bayonet Plug Male Push fit Gold plated copper alloy <20 mOhm Rear 50 x 8.5 mm dia
Maximum Current Maximum Voltage Insulation Resistance Cable Type: Conductor: Material Strands Resistance Insulation Outer Sleeve Screened Construction Additional Braided Sleeve Cable O/D Minimum Bend Radius Door Closure Allowance	5 A 750 V 1000 MOhm Stranded Hi-Flex PVC Tinned copper wire 259/0.07 (1.0 mm², 17AWG) - PVC Polyester No Yes 8 mm 10 mm 45 mm (see diagram)





9-Pin D-Type Calibration Port Cable (40-975-009-SL1)
Other versions are detailed below

#### **Product Compatibility**



#### **Product Order Codes**

1 $\times$ 9-Pin D-Type Connector, Female, to 4 $\times$ 4 mm DMM Bayonet Plug	40-975-009-SL1
$2 \times 9$ -Pin D-Type Connector, Female, to $4 \times 4$ mm DMM Bayonet Plug	40-975-009-SL2
$3 \times 9$ -Pin D-Type Connector, Female, to $4 \times 4 \text{ mm}$ DMM Bayonet Plug	40-975-009-SL3
Note: Other cable lengths can be supplied.	

C

# **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.

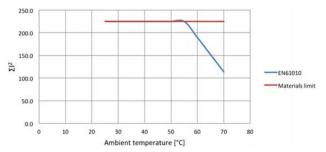
# Cable Assy - Male to Male

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

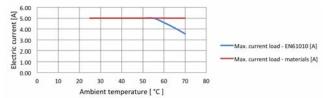
#### **Technical Specification**

Connector Type (End A): Gender	9-Pin D-Subminiature Male
Securing Method	4-40 UNC screwlocks, male
Connector Type (End B):	9-Pin D-Subminiature
Gender	Male
Securing Method	4-40 UNC screwlocks, male
Maximum Current	5 A
Maximum Voltage	250 VAC/400 VDC
Insulation Resistance	1000 M0hm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Cable Exit	45° (Towards Pin 1)
Overall Size (Approx)	H32 x W15 x D46 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.18 (0.4 mm², 21AWG)
Resistance	0.041Ω/m
Insulation	PFA
Outer Sleeve	Polyester
Screened Construction	Yes (Cable screen connected to
	backshells)
Additional Braided Sleeve	Yes
Cable O/D	8 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	50 mm (see diagram)

#### Characteristic Plots for 40-970-009-1m-MM



The graph shows the permitted  $\Sigma l^2$  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.



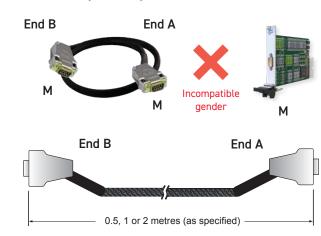
The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the  $\Sigma$ 1 $^2$  is complied with.

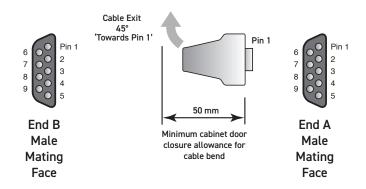
# This Cable Assembly is Not Suitable for Connection to a Pickering Switching Product



9-Pin D-Type Cable Assembly

#### **Product Compatibility**





#### **Product Order Codes**

9-Pin D-Type Cable Assy, 5 A, Male to Male,		
0.5 m Long	40-970-009-0.5m-MM	
1.0 m Long	40-970-009-1m-MM	
2.0 m Long	40-970-009-2m-MM	

Note: Other cable lengths can be supplied.

# Cable Assy - Male to Unterminated

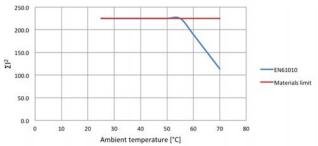
- High Specification, Highly Flexible Cable
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

## **Technical Specification**

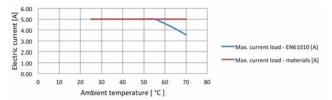
Connector Type (End A): 9-Pin D-Subminiature Gender Securing Method 4-40 UNC screwlocks, male Unterminated End (End B): Free Wire Length 130 mm nominal Individual Wire Labelling To connector pins A white/black screen pigtail is included Wire End Options Ferrules, Tinned, Cut End Maximum Current 250 VAC/400 VDC Maximum Voltage Insulation Resistance 1000 MOhm Connector: Contact Material Gold plated copper alloy Contact Resistance <20 m0hm Cable Exit 45° (Towards Pin 1) H32 x W15 x D46 mm Overall Size (Approx) Cable Type: Individual wires, screened & sleeved Conductor: Material Tinned copper wire Strands 19/0.18 (0.4 mm<sup>2</sup>, 21AWG) Resistance  $0.041\Omega/m$ Insulation **PFA** Outer Sleeve **Screened Construction** Yes (Cable screen connected to backshell) Additional Braided Sleeve Yes 8 mm Cable O/D Minimum Bend Radius 25 mm Door Closure Allowance 50 mm (see diagram)

 $\textbf{Note:} \ \textbf{When using this product please ensure appropriate electrical safety.}$ 

# Characteristic Plots for 40-972-009-1m-MU



The graph shows the permitted  $\Sigma l^2$  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.



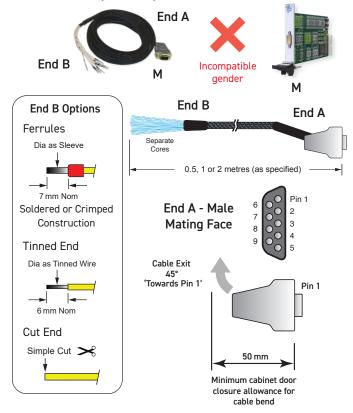
The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the  $\Sigma I^2$  is complied with.

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



9-Pin D-Type Unterminated Cable Assembly

## **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Cable Assy, 5 A, Cable Exit Towards Pln 1, Ferrules,

Male to Unterminated, 0.5 m Long
Male to Unterminated, 1.0 m Long
Male to Unterminated, 2.0 m Long
40-972-009-0.5m-MU
40-972-009-1m-MU
40-972-009-2m-MU

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

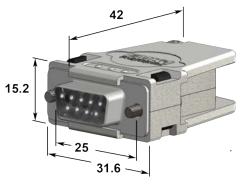
This accessory is designed to allow users to directly terminate with soldered connections to the connector.

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	9-Pin D-Subminiature 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
VVII e Goriniection	also provided for a cable screen
0	
Connector Ratings:	
Maximum Current	5 A
Maximum Voltage	250 VAC
Cable Exit:	45°
Cable Exit Size	15 mm dia
Overall Size (Approx)	H32 x W15 x D46 mm
9-Pin D-Sub:	
Contact Material	Gold plated copper alloy
Contact Resistance	<20 m0hm
Wire Connection:	
Maximum Wire Size	20AWG
Recommended Insulation	PFA
Additional Cable Clamp	Yes (in backshell)



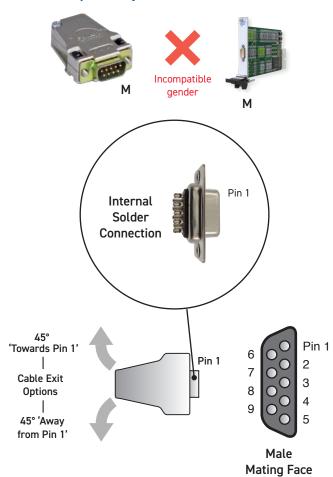
**Connector Dimensions** 

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



9-Pin D-Type Connector with Backshell

#### **Product Compatibility**



#### **Product Order Codes**

9-Pin D-Type Connector, 5 A, Solder Bucket,

With Backshell, Male 40-960-009-M Without Backshell, Male 92-960-009-M

## **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.

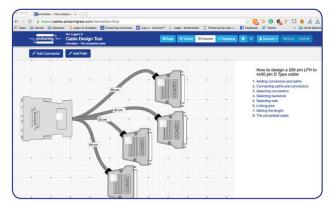
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.



# 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