

- Standard Voltage to 500 V AC, 16 A
- Cable Assemblies
- Cable Connectors
- PCB Connectors
- Guaranteed Compatibility

Simple Connection

Pickering connection solutions provide a simple way of connecting to a user's device under test or remote connection. The products include cable assemblies, cable connectors and panel 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 a Pickering PXI and LXI Product using 20-Pin GMCT Connectors

Cable Assemblies

Description		End 1	End 2		Cable Length	Product Order Code and Part Number	Data Sheet Page
		Gender & Cable Exit	Gender & Cable Exit	Options			
	Cable Assy, 20-Pin GMCT, 16 A	Male, Rear	Female, Rear	-	0.5 m 1 m 2 m	40-970B-020-0.5m-MF 40-970B-020-1m-MF 40-970B-020-2m-MF	5
	Cable Assy, 20-Pin GMCT, 10 A	Male, Rear	Female, Rear	-	0.5 m 1 m 2 m	A020GMR-020GFR-0B050 A020GMR-020GFR-0B100 A020GMR-020GFR-0B200	6
	Cable Assy, 20-Pin GMCT, 16 A	Female, Rear	Female, Rear	-	0.5 m 1 m 2 m	40-970B-020-0.5m-FF 40-970B-020-1m-FF 40-970B-020-2m-FF	7
	Cable Assy, 20-Pin GMCT, 10 A	Female, Rear	Female, Rear	-	0.5 m 1 m 2 m	A020GFR-020GFR-0B050 A020GFR-020GFR-0B100 A020GFR-020GFR-0B200	8
	Cable Assy, 20-Pin GMCT to Unterminated, 16 A	Female, Rear	NA	Ferrules	0.5 m 1 m 2 m	40-972C-020-0.5m-FU 40-972C-020-1m-FU 40-972C-020-2m-FU	9
				Tinned End	0.5 m 1 m 2 m	A020GFR-T-1B050 A020GFR-T-1B100 A020GFR-T-1B200	
				Cut End	0.5 m 1 m 2 m	A020GFR-C-1B050 A020GFR-C-1B100 A020GFR-C-1B200	
	Cable Assy, 20-Pin GMCT to Unterminated, 10 A	Female, Rear	NA	Ferrules	0.5 m 1 m 2 m	A020GFR-F-0C050 A020GFR-F-0C100 A020GFR-F-0C200	10
				Tinned End	0.5 m 1 m 2 m	A020GFR-T-0C050 A020GFR-T-0C100 A020GFR-T-0C200	
				Cut End	0.5 m 1 m 2 m	A020GFR-C-0C050 A020GFR-C-0C100 A020GFR-C-0C200	


Note: Custom lengths by quotation

Female Connectors


Description	Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Female, Rear	With Backshell	40-960-020-16A-F	11
		Without Backshell	92-960-020-16A-F	
	Female, Rear	With Backshell	40-960-020-10A-F	12
		Without Backshell	92-960-020-10A-F	

Please click on the page number to navigate to the data sheet page required. Return to this page via the [C](#) button.

Male Panel Mount Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Panel Connector, 20-Pin GMCT, 16 A, Solder Bucket	Male	Straight Panel Mount	40-963-020-16A-M	13
	Panel Connector, 20-Pin GMCT, 10 A, Solder Bucket	Male	Straight Panel Mount	40-963-020-10A-M	15





Tools

Description		Product Order Code and Part Number	Page
	GMCT Pin Extractor Tool	40-960-020-10A-E	11

Additional Accessories

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

Cable Assemblies



Description		End 1	End 2		Cable Length	Product Order Code and Part Number	Data Sheet Page	
		Gender & Cable Exit	Gender & Cable Exit	Options				
	Cable Assy, 20-Pin GMCT, 16 A	Male, Rear	Male, Rear	-	0.5 m	40-970B-020-0.5m-MM 40-970B-020-1m-MM 40-970B-020-2m-MM	17	
					1 m			
					2 m			
	Cable Assy, 20-Pin GMCT, 10 A	Male, Rear	Male, Rear	-	0.5 m	A020GMR-020GMR-0B050 A020GMR-020GMR-0B100 A020GMR-020GMR-0B200	18	
					1 m			
					2 m			
	Cable Assy, 20-Pin GMCT to Unterminated, 16 A	Male, Rear	NA	Ferrules	0.5 m	40-972C-020-0.5m-MU 40-972C-020-1m-MU 40-972C-020-2m-MU	19	
				Tinned End	1 m			
					2 m			
				Cut End	0.5 m			A020GMR-T-1B050 A020GMR-T-1B100 A020GMR-T-1B200
					1 m			
					2 m			
	Cable Assy, 20-Pin GMCT to Unterminated, 10 A	Male, Rear	NA	Ferrules	0.5 m	A020GMR-F-0C050 A020GMR-F-0C100 A020GMR-F-0C200	20	
				Tinned End	1 m			
					2 m			
				Cut End	0.5 m			A020GMR-T-0C050 A020GMR-T-0C100 A020GMR-T-0C200
					1 m			
					2 m			

Note: Custom lengths by quotation

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.

Male Connectors

Description		Gender & Cable Exit	Type	Product Order Code and Part Number	Page
	Cable Connector 20-Pin GMCT, 16 A, Solder Bucket	Male, Rear	With Backshell	40-960-020-16A-M	21
			Without Backshell	92-960-020-16A-M	
	Cable Connector 20-Pin GMCT, 10 A, Solder Bucket	Male, Rear	With Backshell	40-960-020-10A-M	22
			Without Backshell	92-960-020-10A-M	

Appendix

Details of recent part number changes..... 23

Custom Termination

Customization Possibilities 25

- High Specification 16 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

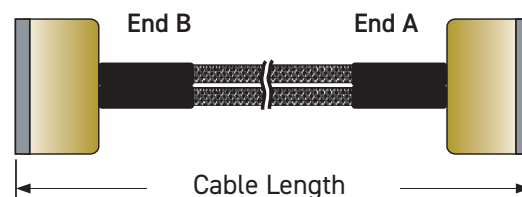
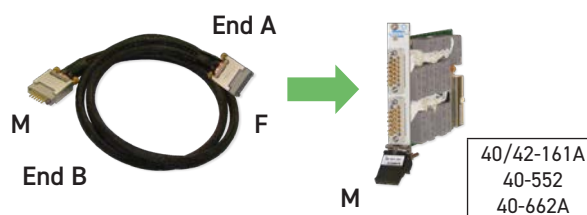
Technical Specification

Connector Type (End A):	20-Pin GMCT
Gender	Female
Securing Method	6-32 UNC screwlocks
Connector Type (End B):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Maximum Current	16 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Copper wire
Strands	19/0.41 (2.5 mm ² , 14AWG)
Resistance	0.013 Ω/m
Capacitance	120 pF/m typical
Insulation	PFA 500 V
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screens connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	10 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	130 mm (see diagram)

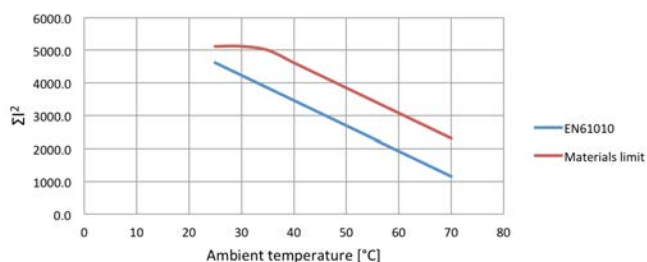


16 A 20-Pin GMCT Cable Assy

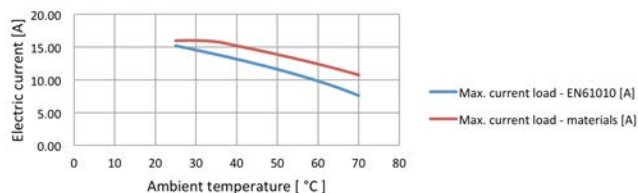
Product Compatibility



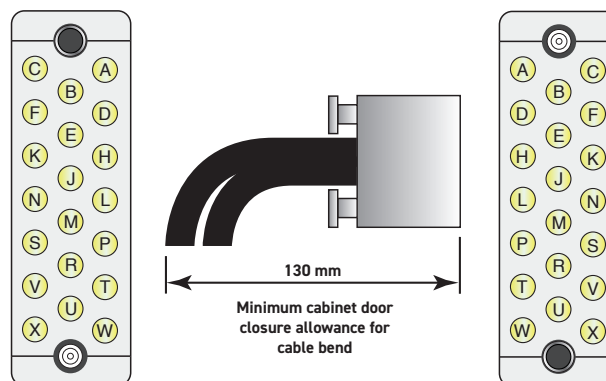
Characteristic Plots for 40-970B-020-1m



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



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



End B - Male Mating Face

End A - Female Mating Face

Product Order Codes

20-Pin GMCT Cable Assy, 16 A, Male to Female, Rear Cable Exit, 0.5 m Long	40-970B-020-0.5m-MF
1.0 m Long	40-970B-020-1m-MF
2.0 m Long	40-970B-020-2m-MF

Note: Other cable lengths can be supplied.

- High Specification 10 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

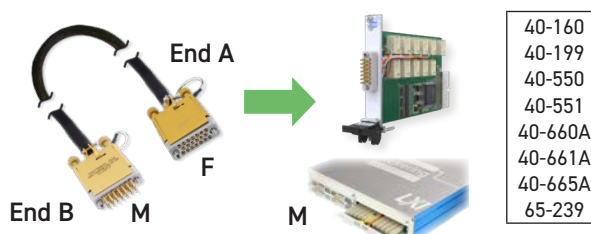
Technical Specification

Connector Type (End A):	20-Pin GMCT
Gender	Female
Securing Method	6-32 UNC screwlocks
Connector Type (End B):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Maximum Current	10 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.254 (1 mm ² , 18AWG)
Resistance	0.021Ω/m
Insulation	PFA, temp: -100 to +260 °C
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	12 mm nom
Minimum Bend Radius	25 mm
Door Closure Allowance	100 mm (see diagram)

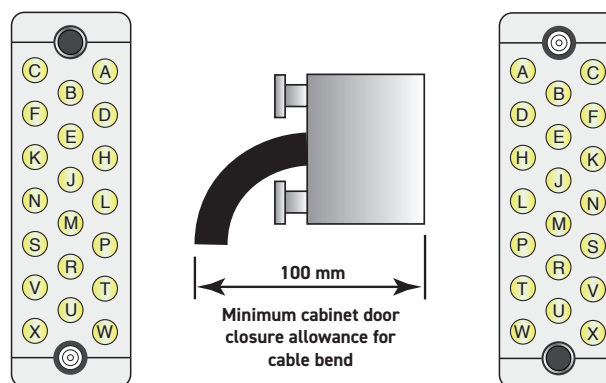
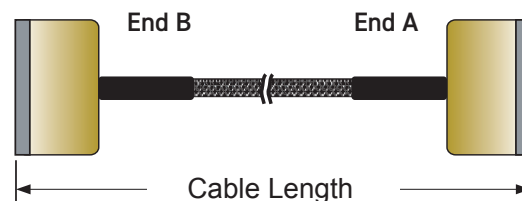


10 A 20-Pin GMCT Cable Assy

Product Compatibility



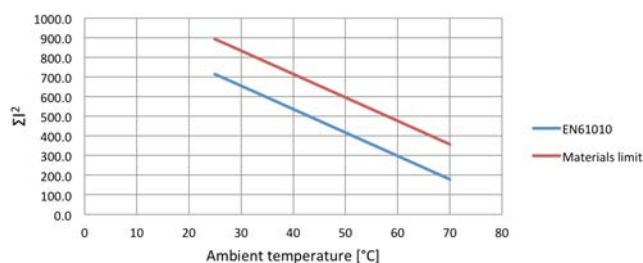
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- 65-239



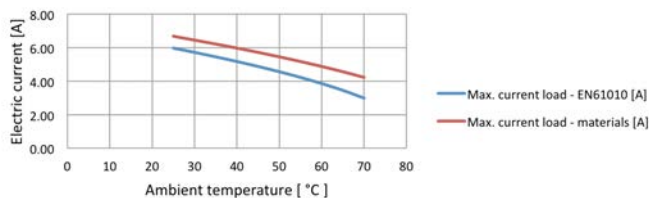
End B - Male Mating Face

End A - Female Mating Face

Characteristic Plots for A020GMR-020GFR-0B100



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

- 20-Pin GMCT Cable Assy, 10 A, Male to Female, Rear Cable Exit, 0.5 m Long [A020GMR-020GFR-0B050](#)
- 1.0 m Long [A020GMR-020GFR-0B100](#)
- 2.0 m Long [A020GMR-020GFR-0B200](#)

Note: Other cable lengths can be supplied.

- High Specification 16 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

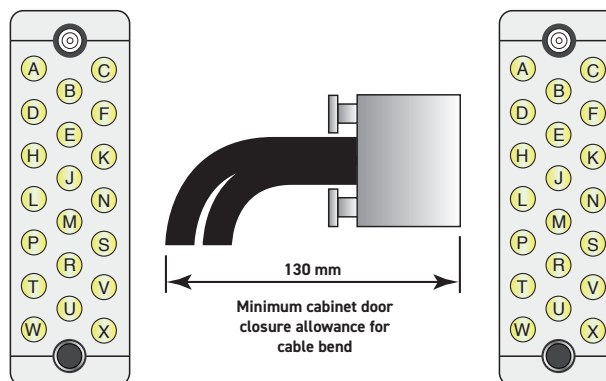
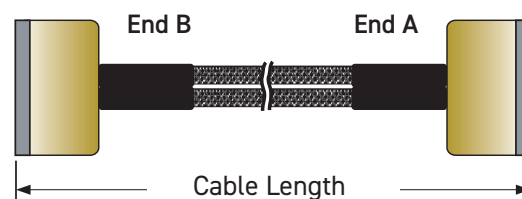
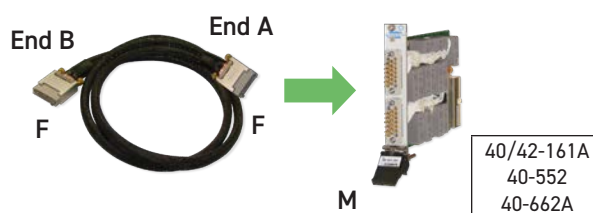
Technical Specification

Connector Type (End A):	20-Pin GMCT
Gender	Female
Securing Method	6-32 UNC screwlocks
Connector Type (End B):	20-Pin GMCT
Gender	Female
Securing Method	6-32 UNC screwlocks
Maximum Current	16 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Copper wire
Strands	19/0.41 (2.5 mm ² , 14AWG)
Resistance	0.013 Ω/m
Capacitance	120 pF/m typical
Insulation	PFA 500 V
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screens connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	10 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	130 mm (see diagram)



16 A 20-Pin GMCT Cable Assy

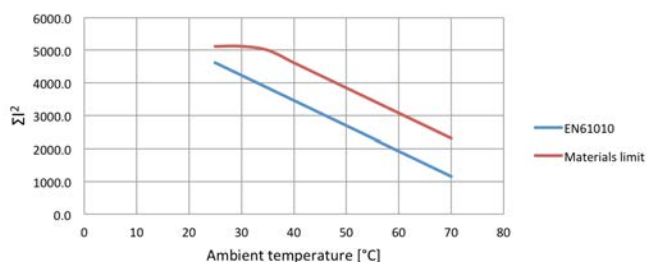
Product Compatibility



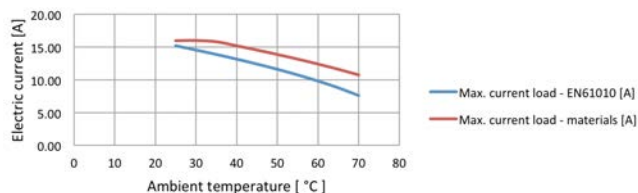
End B - Female Mating Face

End A - Female Mating Face

Characteristic Plots for 40-970B-020-1m



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



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

Product Order Codes

- 20-Pin GMCT Cable Assy, 16 A, Female to Female, Rear Cable Exit,
- 0.5 m Long [40-970B-020-0.5m-FF](#)
 - 1.0 m Long [40-970B-020-1m-FF](#)
 - 2.0 m Long [40-970B-020-2m-FF](#)

Note: Other cable lengths can be supplied.

- High Specification 10 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

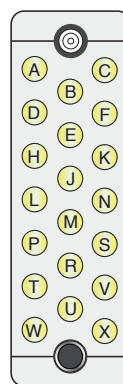
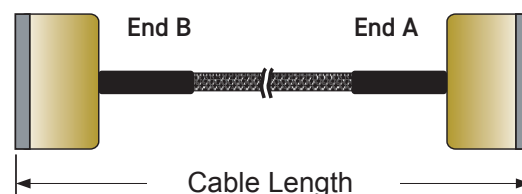
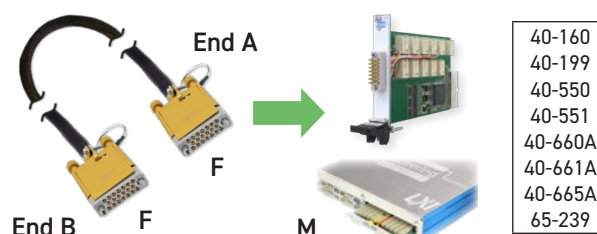
Technical Specification

Connector Type (End A):	20-Pin GMCT
Gender	Female
Securing Method	6-32 UNC screwlocks
Connector Type (End B):	20-Pin GMCT
Gender	Female
Securing Method	6-32 UNC screwlocks
Maximum Current	10 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.254 (1 mm ² , 18AWG)
Resistance	0.021Ω/m
Insulation	PFA, temp: -100 to +260 °C
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	12 mm nom
Minimum Bend Radius	25 mm
Door Closure Allowance	100 mm (see diagram)

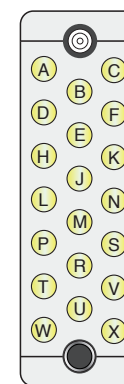
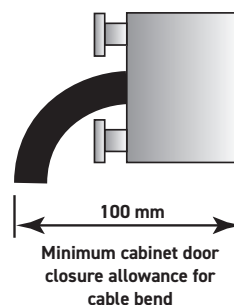


10 A 20-Pin GMCT Cable Assy

Product Compatibility

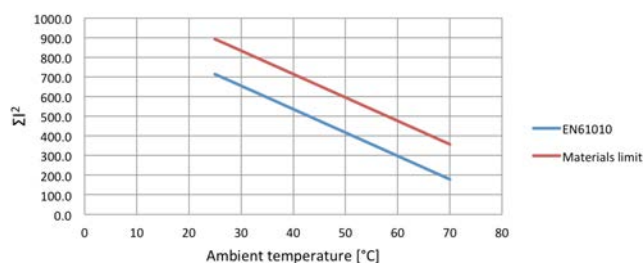


End B - Female Mating Face

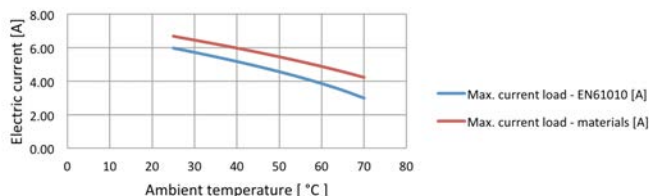


End A - Female Mating Face

Characteristic Plots for A020GFR-020GFR-0B100



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

- 20-Pin GMCT Cable Assy, 10 A, Female to Female, Rear Cable Exit,
- 0.5 m Long [A020GFR-020GFR-0B050](#)
 - 1.0 m Long [A020GFR-020GFR-0B100](#)
 - 2.0 m Long [A020GFR-020GFR-0B200](#)

Note: Other cable lengths can be supplied.

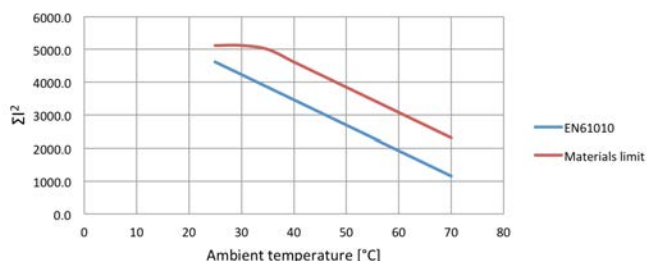
- High Specification 16 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

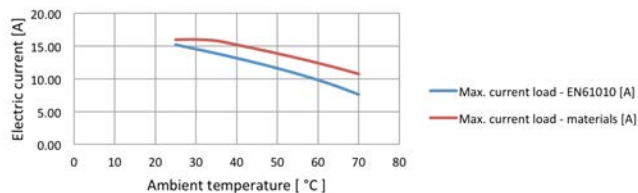
Connector Type (End A):	20-Pin GMCT
Gender:	Female
Securing Method:	6-32 UNC screwlocks
Unterminated End (End B):	
Wire End Options:	Ferrules, Tinned, Cut End
Free Wire Length:	130 mm nominal
Individual Wire Labelling:	To connector pins White/black screen pigtails are included
Maximum Current:	16 A
Maximum Voltage:	500 VAC/500 VDC
Insulation Resistance:	1000 MOhm
Connector:	
Contact Material:	Gold plated copper alloy
Contact Resistance:	3 mOhm
Cable Exit:	Rear
Overall Size (Approx):	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor:	
Material:	Copper wire
Strands:	19/0.41 (2.5 mm ² , 14AWG)
Resistance:	0.013 Ω/m
Capacitance:	120 pF/m typical
Insulation:	PFA 500 V
Outer Sleeve:	Polyester, Max temp 130 °C
Screened Construction:	Yes (Cable screens connected to backshell)
Additional Braided Sleeve:	Yes
Cable O/D:	10 mm
Minimum Bend Radius:	25 mm
Door Closure Allowance:	130 mm (see diagram)

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

Characteristic Plots for 40-972C-020-1m



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

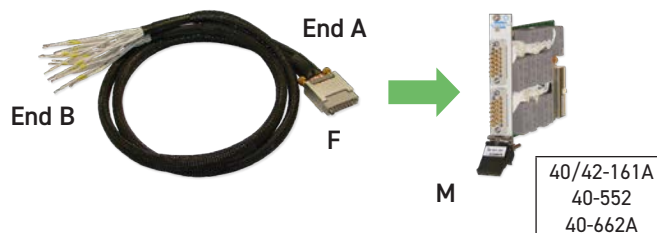


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.



16 A 20-Pin GMCT Unterminated Cable Assy

Product Compatibility



End B Options

Ferrules

Dia as Sleeve

7 mm Nom

Soldered or Crimped Construction

Tinned End

Dia as Tinned Wire

6 mm Nom

Cut End

Simple Cut

Separate Cores

End B **End A**

130 mm nominal

Cable Length

130 mm

Minimum cabinet door closure allowance for cable bend

End A Female Mating Face

Product Order Codes

20-Pin GMCT Cable Assy, 16 A, Female to Unterminated, Ferrules, 0.5 m Long	40-972C-020-0.5m-FU
Ferrules, 1.0 m Long	40-972C-020-1m-FU
Ferrules, 2.0 m Long	40-972C-020-2m-FU
Tinned End, 0.5 m Long	A020GFR-T-1B050
Tinned End, 1.0 m Long	A020GFR-T-1B100
Tinned End, 2.0 m Long	A020GFR-T-1B200
Cut End, 0.5 m Long	A020GFR-C-1B050
Cut End, 1.0 m Long	A020GFR-C-1B100
Cut End, 2.0 m Long	A020GFR-C-1B200

Note: Other cable lengths can be supplied.

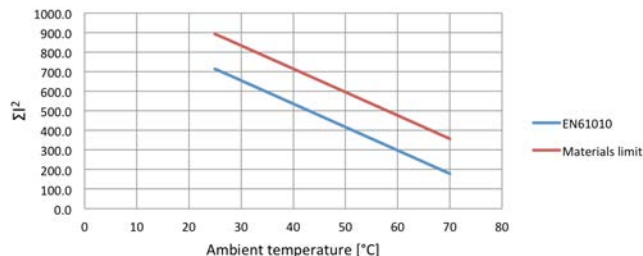
- High Specification 10 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

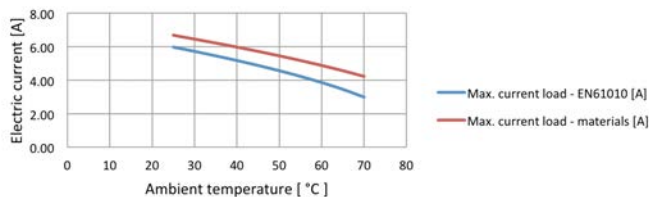
Connector Type (End A):	20-Pin GMCT
Gender:	Female
Securing Method:	6-32 UNC screwlocks
Unterminated End (End B):	
Wire End Options:	Ferrules, Tinned, Cut End
Free Wire Length:	130 mm nominal
Individual Wire Labelling:	To connector pins A white/black screen pigtail is included
Maximum Current:	10 A
Maximum Voltage:	500 VAC/500 VDC
Insulation Resistance:	1000 MOhm
Connector:	
Contact Material:	Gold plated copper alloy
Contact Resistance:	3 mOhm
Cable Exit:	Rear
Overall Size (Approx):	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material:	Tinned copper wire
Strands:	19/0.254 (1mm ² , 18AWG)
Resistance:	0.021Ω/m
Insulation:	PFA, temp: -100 to +260 °C
Outer Sleeve:	Polyester, Max temp 130 °C
Screened Construction:	Yes (Cable screen connected to backshell)
Additional Braided Sleeve:	Yes
Cable O/D:	12 mm nom
Minimum Bend Radius:	25 mm
Door Closure Allowance:	100 mm (see diagram)

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

Characteristic Plots for A020GFR-*-0C100



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.

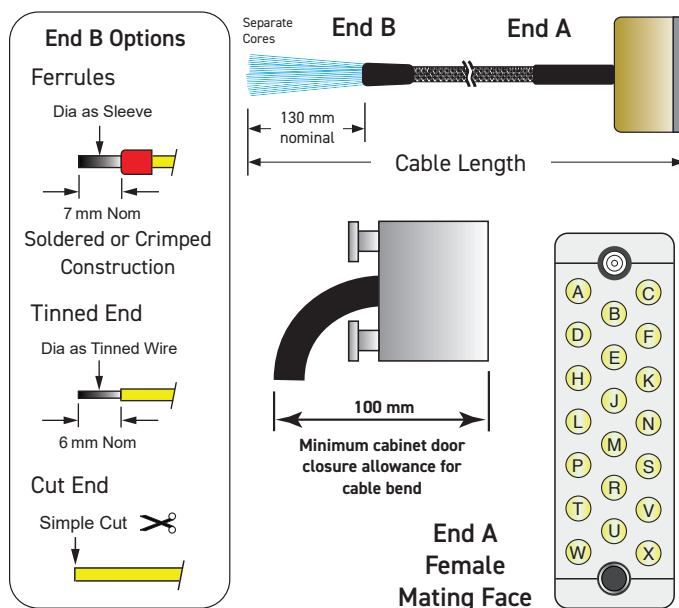
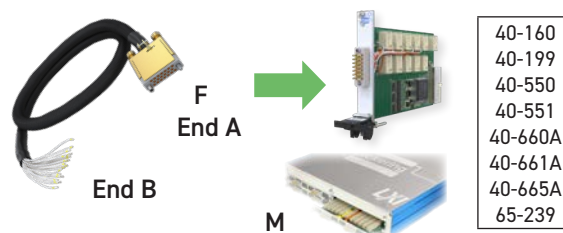


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.



10 A 20-Pin GMCT Unterminated Cable Assy

Product Compatibility



Product Order Codes

20-Pin GMCT Cable Assy, 10 A, Female to Unterminated, Ferrules, 0.5 m Long	A020GFR-F-0C050
Ferrules, 1.0 m Long	A020GFR-F-0C100
Ferrules, 2.0 m Long	A020GFR-F-0C200
Tinned End, 0.5 m Long	A020GFR-T-0C050
Tinned End, 1.0 m Long	A020GFR-T-0C100
Tinned End, 2.0 m Long	A020GFR-T-0C200
Cut End, 0.5 m Long	A020GFR-C-0C050
Cut End, 1.0 m Long	A020GFR-C-0C100
Cut End, 2.0 m Long	A020GFR-C-0C200

Note: Other cable lengths can be supplied.

- 16 A 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.

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.

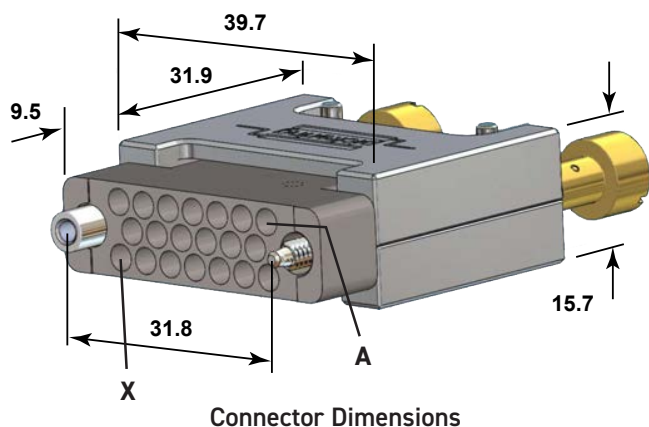
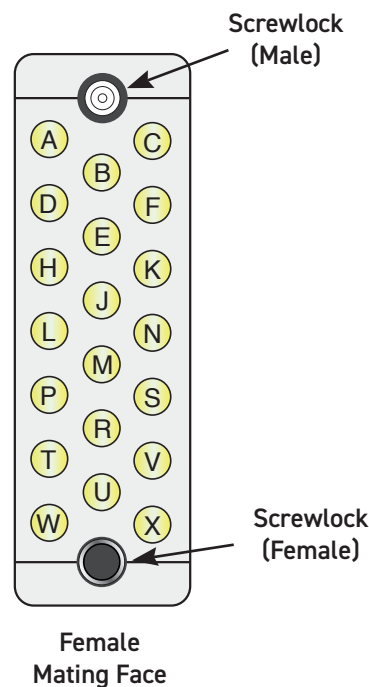
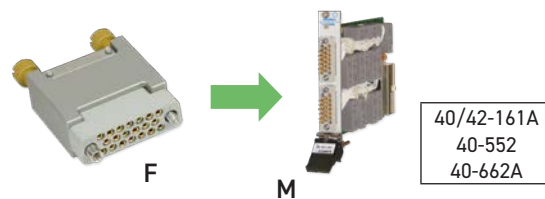
Technical Specification

Connector Type:	20-Pin GMCT
Gender	Female
Securing Method:	
Product with Backshell	6-32 UNC screwlocks
Product without Backshell	6-32 UNC screwlocks
Wire Connection	Solder bucket
Connector Ratings:	
Maximum Current	16 A
Maximum Voltage	500 V AC
Cable Exit:	Rear
Cable Exit Size	20.4 x 12 mm
Overall Size (Approx)	H40 x W16 x D56 mm
20-Pin GMCT:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Wire Connection:	
Maximum Wire Size	14AWG
Recommended Insulation	PTFE
Additional Cable Clamp	Yes (in backshell). This clamp can also be used as a connection for a cable screen



16 A 20-Pin GMCT Cable Connector with Backshell

Product Compatibility



Product Order Codes

20-Pin GMCT Connector, 16 A, Solder Bucket, With Backshell, Female	40-960-020-16A-F
Without Backshell, Female	92-960-020-16A-F
Pin Extractor Tool	40-960-020-10A-E

Note: The supplied connector includes 20 off 16 A contacts of the appropriate gender.

- 10 A 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.

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.

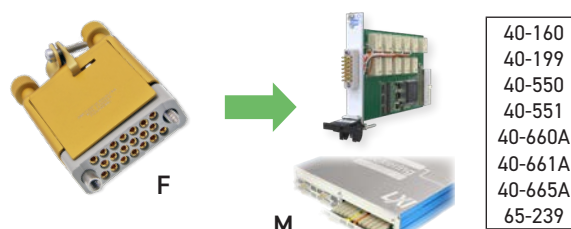
Technical Specification

Connector Type:	20-Pin GMCT
Gender	Female
Securing Method:	
Product with Backshell	6-32 UNC screwlocks
Product without Backshell	6-32 UNC screwlocks
Wire Connection	Solder bucket
Cable Screen Connection	Screwlock tag
Connector Ratings:	
Maximum Current	10 A
Maximum Voltage	500 V AC
Cable Exit:	Rear
Cable Exit Size	11 mm dia
Overall Size (Approx)	H40 x W20 x D62 mm
20-Pin GMCT:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Wire Connection:	
Maximum Wire Size	16AWG
Recommended Insulation	PTFE
Additional Cable Clamp	Yes (in backshell)

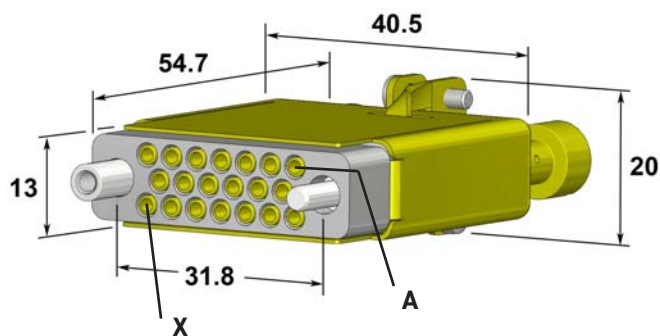
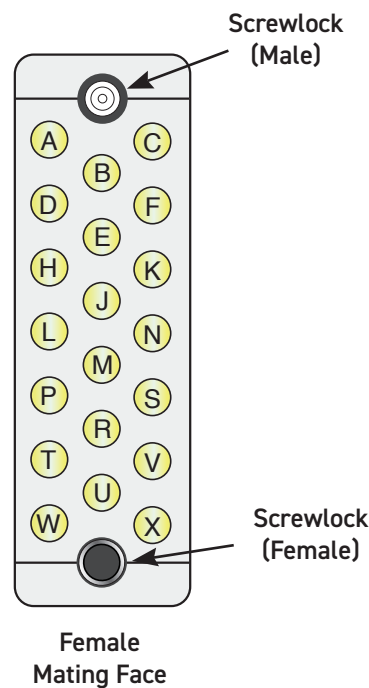


10 A 20-Pin GMCT Cable Connector with Backshell

Product Compatibility



- 40-160
- 40-199
- 40-550
- 40-551
- 40-660A
- 40-661A
- 40-665A
- 65-239



Connector Dimensions

Product Order Codes

20-Pin GMCT Connector, 10 A, Solder Bucket, With Backshell, Female	40-960-020-10A-F
Without Backshell, Female	92-960-020-10A-F
Pin Extractor Tool (See page 11)	40-960-020-10A-E

Note: The supplied connector includes 20 off 10 A contacts of the appropriate gender.

- 16 A Panel Mount Connector
- Soldered Cable Termination
- Ideal for User Created Termination Solutions

This accessory is designed to allow users to directly terminate with soldered connections to the connector. Interfacing products should have suitable clearances for the voltage the application requires.

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

Technical Specification

Connector Type:	20-Pin GMCT Panel Mount
Gender	Male
Cable Securing Method:	6-32 UNC screwlocks
Connector Panel Securing Method	4-40 UNC threads, washers & nuts
Wire Connection	Solder bucket
Connector Ratings:	
Maximum Current	16 A
Maximum Voltage	500 V AC
20-Pin GMCT:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Wire Connection:	
Maximum Wire Size	14AWG
Recommended Insulation	PTFE
Recommended Wire Strip Length for Soldering	5 mm

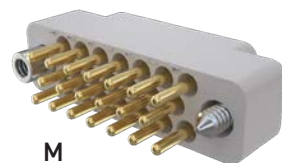
Note: A dimensioned drawing of the connector and a recommended panel cut-out can be found on the following page.



A 16 A Male Contact - Solder Bucket

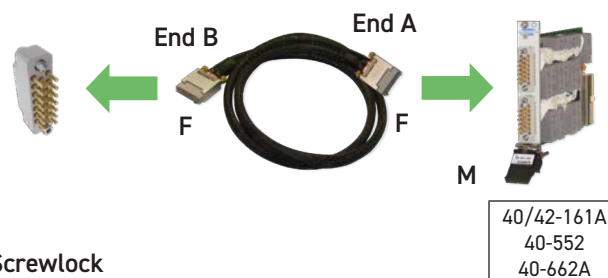


Pin Extractor Tool (40-960-020-10A-E)

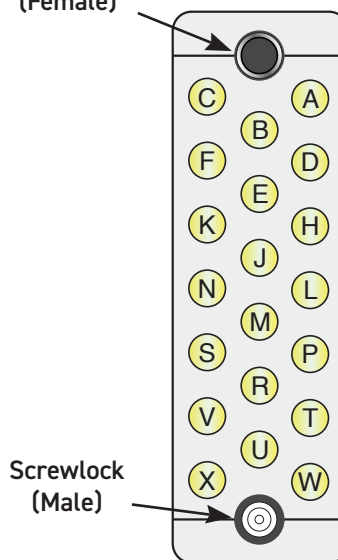


16 A 20-Pin GMCT Panel Mount Connector

Product Compatibility



Screwlock (Female)



Rear View of Connector (Without Pins Fitted)

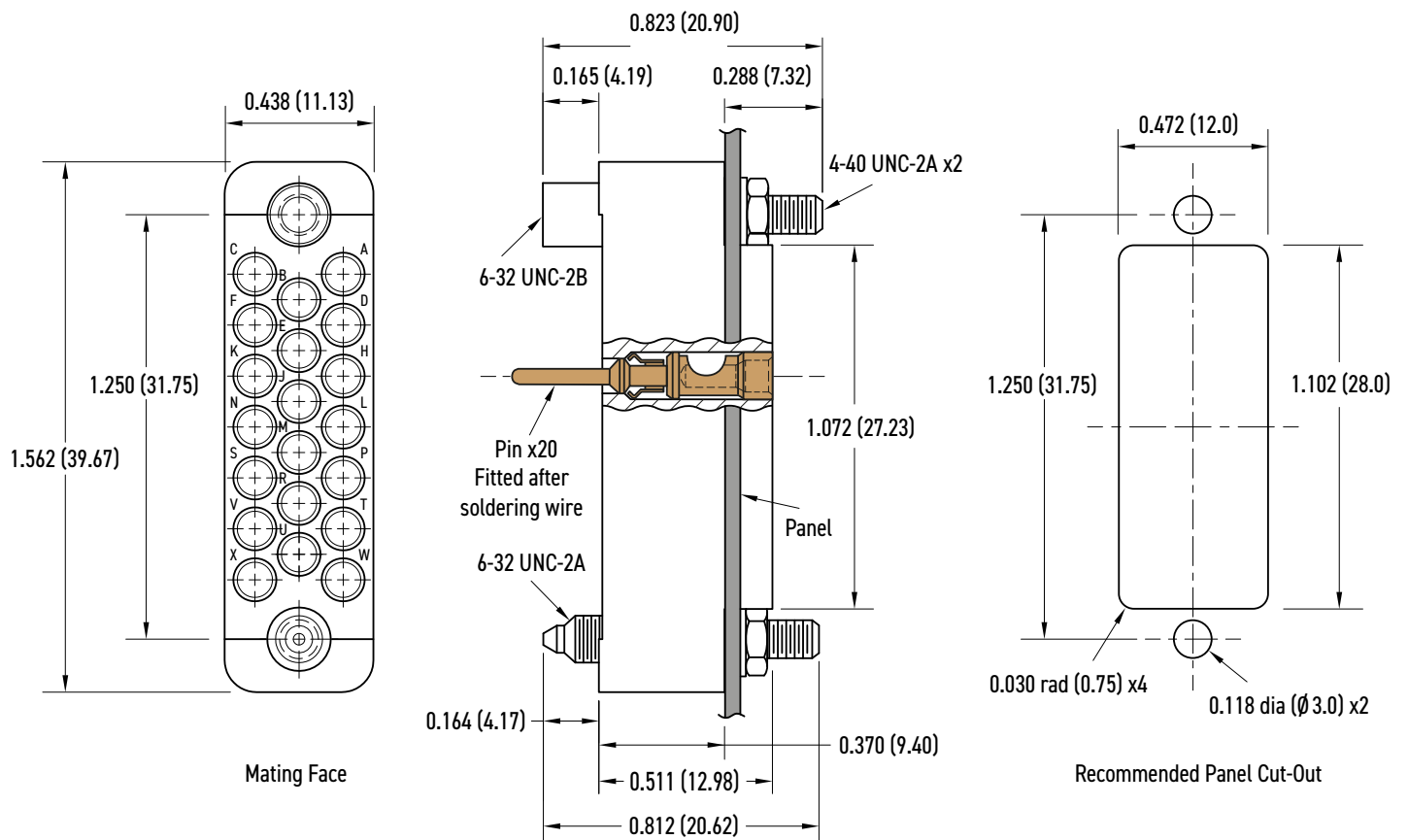
Product Order Codes

20-Pin GMCT Panel Mount Connector, 16 A, Solder Bucket, Male [40-963-020-16A-M](#)

Pin Extractor Tool [40-960-020-10A-E](#)

Note: The supplied connector includes the fixings and 20 off 16 A contacts of the appropriate gender.

Dimensioned Drawing and Recommended Panel Cut-Out for the Panel Mount Connector



Note: Connectors 40-963-020-16A-M and 40-963-020-10A-M utilise the same shell and panel cut-out, yet have different pins.

- 10 A Panel Mount Connector
- Soldered Cable Termination
- Ideal for User Created Termination Solutions

This accessory is designed to allow users to directly terminate with soldered connections to the connector. Interfacing products should have suitable clearances for the voltage the application requires.

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

Technical Specification

Connector Type:	20-Pin GMCT Panel Mount
Gender	Male
Cable Securing Method:	6-32 UNC screwlocks
Connector Panel Securing Method	4-40 UNC threads, washers & nuts
Wire Connection	Solder bucket
Connector Ratings:	
Maximum Current	10 A
Maximum Voltage	500 V AC
20-Pin GMCT:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Wire Connection:	
Maximum Wire Size	16AWG
Recommended Insulation	PTFE
Recommended Wire Strip Length for Soldering	5 mm

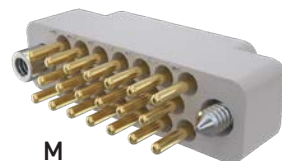
Note: A dimensioned drawing of the connector and a recommended panel cut-out can be found on the previous page.



A 10 A Male Contact - Solder Bucket



Pin Extractor Tool (40-960-020-10A-E)

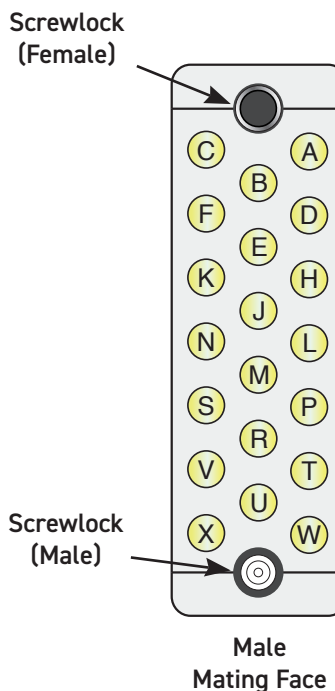


10 A 20-Pin GMCT Panel Mount Connector

Product Compatibility



- 40-160
- 40-199
- 40-550
- 40-551
- 40-660A
- 40-661A
- 40-665A
- 65-239



Rear View of Connector (Without Pins Fitted)

Product Order Codes

20-Pin GMCT Panel Mount Connector, 16 A, Solder Bucket, Male [40-963-020-10A-M](#)

Pin Extractor Tool [40-960-020-10A-E](#)

Note: The supplied connector includes the fixings and 20 off 10 A contacts of the appropriate gender.

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 16 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

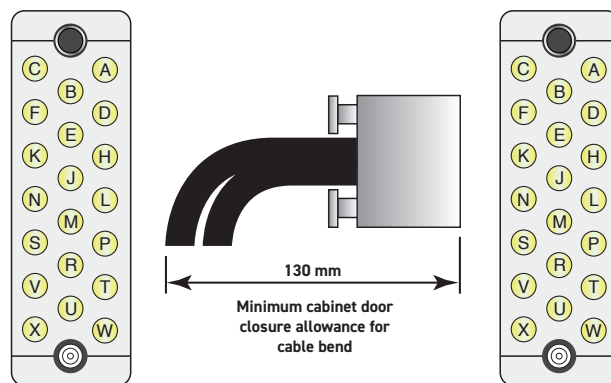
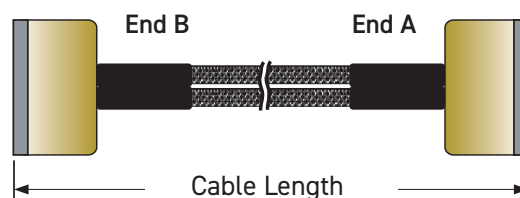
This Cable Assembly is Not Suitable for Connection to a Pickering Switching Product

Technical Specification

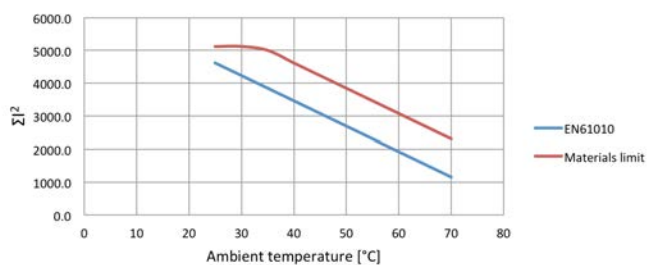
Connector Type (End A):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Connector Type (End B):	20-Pin Scorpion
Gender	Male
Securing Method	6-32 UNC screwlocks
Maximum Current	16 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Copper wire
Strands	19/0.41 (2.5 mm ² , 14AWG)
Resistance	0.013 Ω/m
Capacitance	120 pF/m typical
Insulation	PFA 500 V
Outer Sleeve	Polyester, Max temp 130°C
Screened Construction	Yes (Cable screens connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	10 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	130 mm (see diagram)



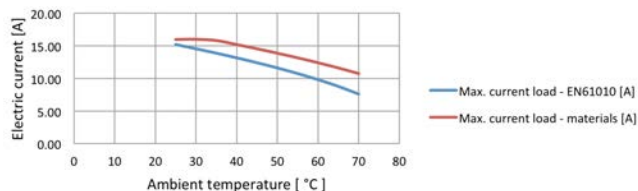
16 A 20-Pin GMCT Cable Assy



Characteristic Plots for 40-972B-020-1m



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



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

Product Order Codes

- 20-Pin GMCT Cable Assy, 16 A, Male to Male, Rear Cable Exit, 0.5 m Long [40-970B-020-0.5m-MM](#)
- 1.0 m Long [40-970B-020-1m-MM](#)
- 2.0 m Long [40-970B-020-2m-MM](#)

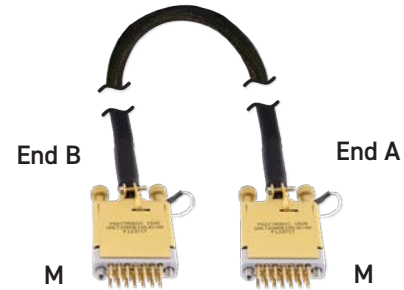
Note: Other cable lengths can be supplied.

- High Specification 10 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Rear Cable Exit

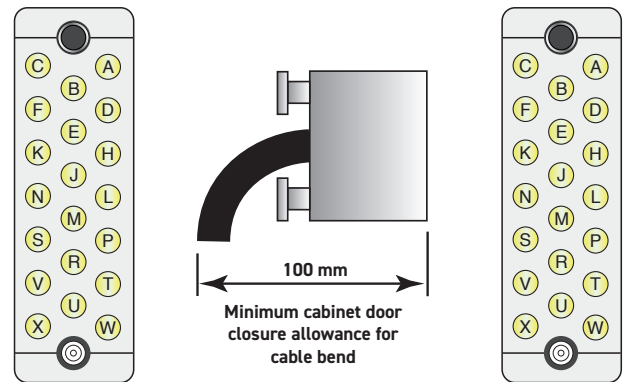
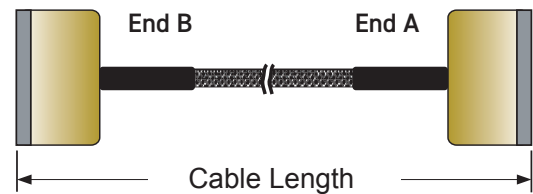
Technical Specification

Connector Type (End A):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Connector Type (End B):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Maximum Current	10 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connectors:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.254 (1mm ² , 18AWG)
Resistance	0.021Ω/m
Insulation	PFA, temp: -100 to +260 °C
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screen connected to backshells)
Additional Braided Sleeve	Yes
Cable O/D	12 mm nom
Minimum Bend Radius	25 mm
Door Closure Allowance	100 mm (see diagram)

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



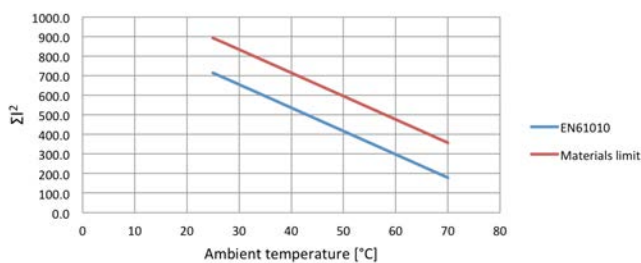
10 A 20-Pin GMCT Cable Assy



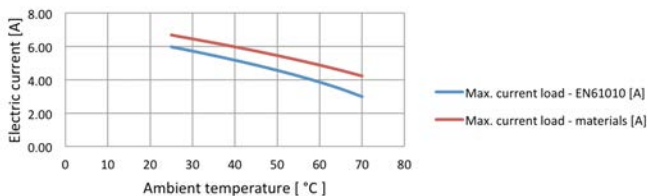
End B - Male Mating Face

End A - Male Mating Face

Characteristic Plots for A020GMR-A020GMR-0B100



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

- 20-Pin GMCT Cable Assy, 10 A, Male to Male, Rear Cable Exit,
- 0.5 m Long [A020GMR-020GMR-0B050](#)
 - 1.0 m Long [A020GMR-020GMR-0B100](#)
 - 2.0 m Long [A020GMR-020GMR-0B200](#)

Note: Other cable lengths can be supplied.

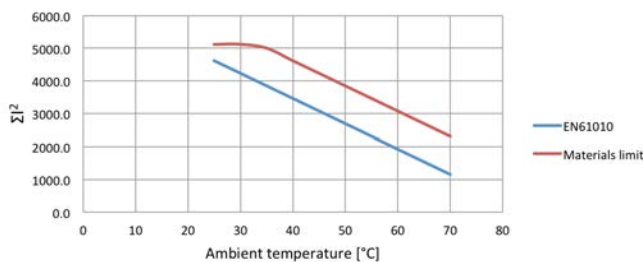
- High Specification 16 A Cable
- Highly Flexible Cable with Braided Sleaving
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

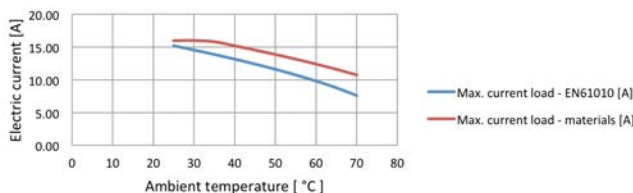
Connector Type (End A):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Unterminated End (End B):	
Wire End Options	Ferrules, Tinned, Cut End
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins. White/black screen pigtailed are included
Maximum Current	16 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Copper wire
Strands	19/0.41 (2.5 mm ² , 14AWG)
Resistance	0.013 Ω/m
Capacitance	120 pF/m typical
Insulation	PFA 500 V
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screens connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	10 mm
Minimum Bend Radius	25 mm
Door Closure Allowance	130 mm (see diagram)

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

Characteristic Plots for 40-972C-020-1m



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

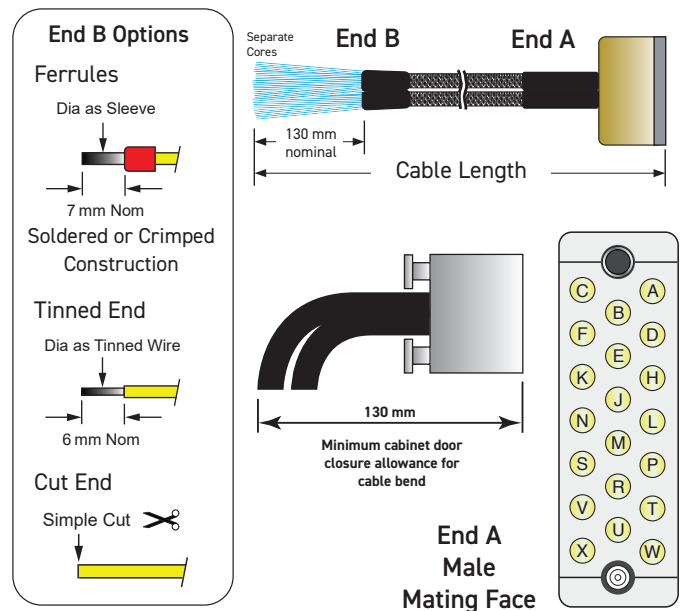


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.

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



16 A 20-Pin GMCT Unterminated Cable Assy



Product Order Codes

20-Pin GMCT Cable Assy, 16 A, Male to Unterminated, Ferrules, 0.5 m Long	40-972C-020-0.5m-MU
Ferrules, 1.0 m Long	40-972C-020-1m-MU
Ferrules, 2.0 m Long	40-972C-020-2m-MU
Tinned End, 0.5 m Long	A020GMR-T-1B050
Tinned End, 1.0 m Long	A020GMR-T-1B100
Tinned End, 2.0 m Long	A020GMR-T-1B200
Cut End, 0.5 m Long	A020GMR-C-1B050
Cut End, 1.0 m Long	A020GMR-C-1B100
Cut End, 2.0 m Long	A020GMR-C-1B200

Note: Other cable lengths can be supplied.

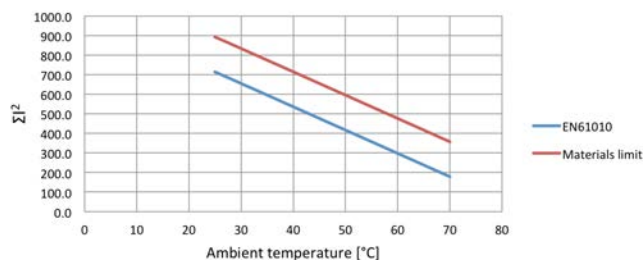
- High Specification 10 A Cable
- Highly Flexible Cable with Braided Sleeving
- Fully Screened Cable Construction with Strain Relief
- Fully Coded Markers to Ensure Easy Connection

Technical Specification

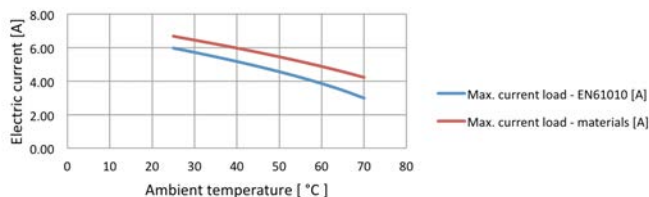
Connector Type (End A):	20-Pin GMCT
Gender	Male
Securing Method	6-32 UNC screwlocks
Unterminated End (End B):	
Wire End Options	Ferrules, Tinned, Cut End
Free Wire Length	130 mm nominal
Individual Wire Labelling	To connector pins. A white/black screen pigtail is included
Maximum Current	10 A
Maximum Voltage	500 VAC/500 VDC
Insulation Resistance	1000 MOhm
Connector:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Cable Exit	Rear
Overall Size (Approx)	H40 x W20 x D62 mm
Cable Type:	Individual wires, screened & sleeved
Conductor: Material	Tinned copper wire
Strands	19/0.254 (1mm ² , 18AWG)
Resistance	0.021Ω/m
Insulation	PFA, temp: -100 to +260 °C
Outer Sleeve	Polyester, Max temp 130 °C
Screened Construction	Yes (Cable screen connected to backshell)
Additional Braided Sleeve	Yes
Cable O/D	12 mm nom
Minimum Bend Radius	25 mm
Door Closure Allowance	100 mm (see diagram)

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

Characteristic Plots for A020GMR-*-0C100



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.

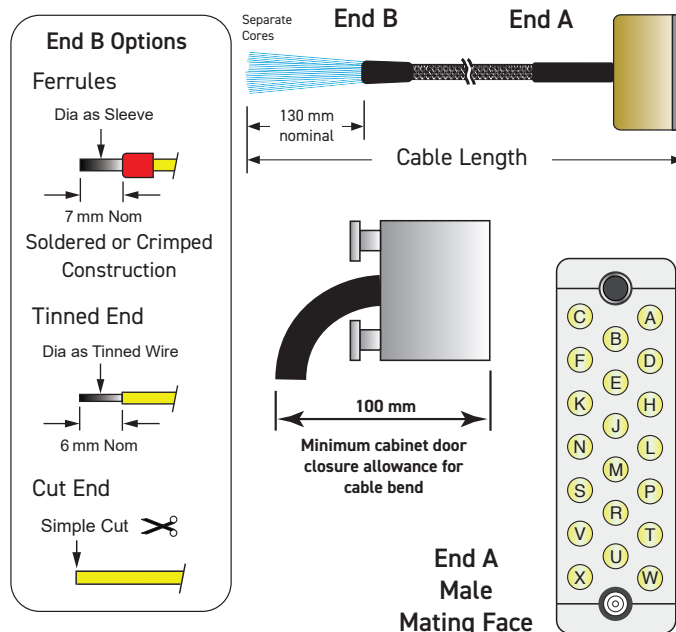


The graph shows the allowed current versus temperature assuming ALL wires carry the same current. Higher currents to the cable rating are permitted on individual wires provided the ΣI^2 is complied with.

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



10 A 20-Pin GMCT Unterminated Cable Assy



Product Order Codes

20-Pin GMCT Cable Assy, 10 A, Male to Unterminated, Ferrules, 0.5 m Long	A020GMR-F-0C050
Ferrules, 1.0 m Long	A020GMR-F-0C100
Ferrules, 2.0 m Long	A020GMR-F-0C200
Tinned End, 0.5 m Long	A020GMR-T-0C050
Tinned End, 1.0 m Long	A020GMR-T-0C100
Tinned End, 2.0 m Long	A020GMR-T-0C200
Cut End, 0.5 m Long	A020GMR-C-0C050
Cut End, 1.0 m Long	A020GMR-C-0C100
Cut End, 2.0 m Long	A020GMR-C-0C200

Note: Other cable lengths can be supplied.

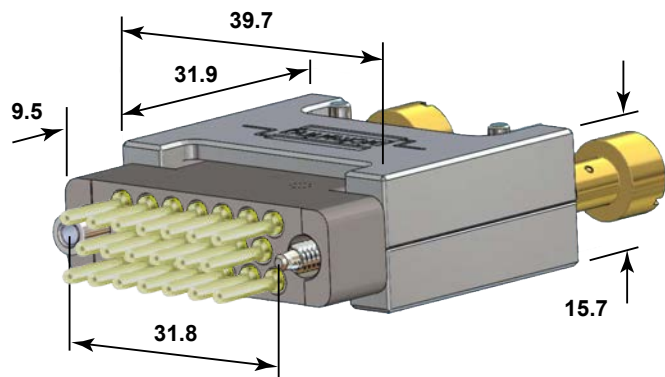
- 16 A Connector only or Connector and Backshell
- Cable Clamp in Backshell
- Soldered Cable Termination

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

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:	20-Pin GMCT
Gender	Male
Securing Method:	
Product with Backshell	6-32 UNC screwlocks
Product without Backshell	6-32 UNC screwlocks
Wire Connection	Solder bucket
Connector Ratings:	
Maximum Current	16 A
Maximum Voltage	500 V AC
Cable Exit:	Rear
Cable Exit Size	20.4 x 12 mm
Overall Size (Approx)	H40 x W16 x D56 mm
20-Pin GMCT:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Wire Connection:	
Maximum Wire Size	14AWG
Recommended Insulation	PTFE
Additional Cable Clamp	Yes (in backshell). This clamp can also be used as a connection for a cable screen



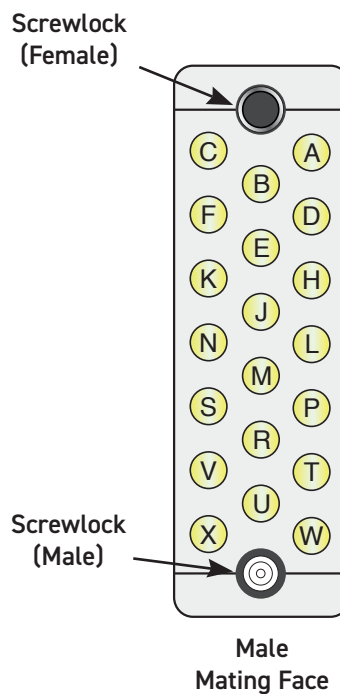
Connector Dimensions

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



M

16 A 20-Pin GMCT Cable Connector with Backshell



Product Order Codes

20-Pin GMCT Connector, 16 A, Solder Bucket, With Backshell, Male	40-960-020-16A-M
Without Backshell, Male	92-960-020-16A-M
Pin Extractor Tool (See page 11)	40-960-020-10A-E

Note: The supplied connector includes 20 off 16 A contacts of the appropriate gender.

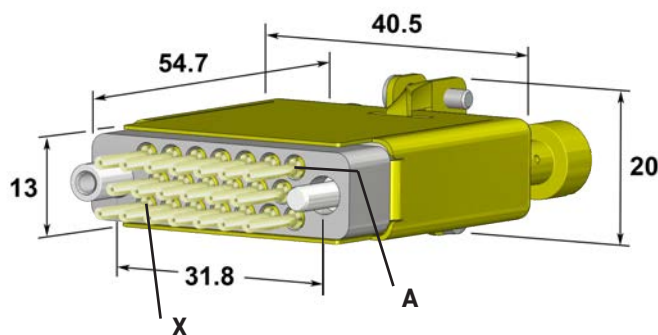
- 10 A Connector only or Connector and Backshell
- Cable Clamp in Backshell
- Soldered Cable Termination

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

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:	20-Pin GMCT
Gender	Male
Securing Method:	
Product with Backshell	6-32 UNC screwlocks
Product without Backshell	6-32 UNC screwlocks
Wire Connection	Solder bucket
Cable Screen Connection	Screwlock tag
Connector Ratings:	
Maximum Current	10 A
Maximum Voltage	500 V AC
Cable Exit:	Rear
Cable Exit Size	11 mm dia
Overall Size (Approx)	H40 x W20 x D62 mm
20-Pin GMCT:	
Contact Material	Gold plated copper alloy
Contact Resistance	3 mOhm
Wire Connection:	
Maximum Wire Size	16AWG
Recommended Insulation	PTFE
Additional Cable Clamp	Yes (in backshell)



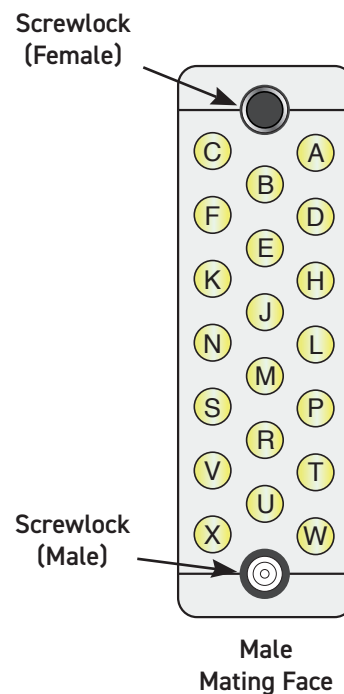
Connector Dimensions

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



M

10 A 20-Pin GMCT Cable Connector with Backshell



Product Order Codes

20-Pin GMCT Connector, 10 A, Solder Bucket, With Backshell, Male	40-960-020-10A-M
Without Backshell, Male	92-960-020-10A-M
Pin Extractor Tool (See page 11)	40-960-020-10A-E

Note: The supplied connector includes 20 off 10 A contacts of the appropriate gender.





Appendix

This appendix gives details of recent part number changes.

ECN1357 (20th August 2019)

This Change Note covered a change to the unterminated cable wire marking from numbers to letters, directly imaging the connector pin designations. The letters are now printed on yellow heatshrink.



Items that changed and the corresponding updated part numbers are detailed below:

Product changes in data sheet order			Data Sheet 90-014D Issue 10.2 Jul 2018	Data Sheet 90-014D Issue 10.3 Aug 2019
			Product Part Numbers	Product Part Numbers
	Cable Assy, 20-Pin GMCT, Female to Unterminated, 16 A	Ferrules	40-972B-020-*m-FU	40-972C-020-*m-FU
		Tinned	A020GFR-T-1A***	A020GFR-T-1B***
		Cut End	A020GFR-C-1A***	A020GFR-C-1B***
	Cable Assy, 20-Pin GMCT, Female to Unterminated, 10 A	Ferrules	A020GFR-F-0B***	A020GFR-F-0C***
		Tinned	A020GFR-T-0B***	A020GFR-T-0C***
		Cut End	A020GFR-C-0B***	A020GFR-C-0C***
	Cable Assy, 20-Pin GMCT, Male to Unterminated, 16 A	Ferrules	40-972B-020-*m-MU	40-972C-020-*m-MU
		Tinned	A020GMR-T-1A***	A020GMR-T-1B***
		Cut End	A020GMR-C-1A***	A020GMR-C-1B***
	Cable Assy, 20-Pin GMCT, Male to Unterminated, 10 A	Ferrules	A020GMR-F-0B***	A020GMR-F-0C***
		Tinned	A020GMR-T-0B***	A020GMR-T-0C***
		Cut End	A020GMR-C-0B***	A020GMR-C-0C***

ECN808 (August 2017)

This Change Note covered a change to the wire type used within the 10 A unterminated cables. 20AWG Silver plated copper wire to 18AWG Tinned copper wire.

Items that changed and the corresponding updated part numbers are detailed below:

Product changes in data sheet order			Data Sheet 90-014D Issue 9.1 Jun 2017	Data Sheet 90-014D Issue 9.2 Aug 2017
			Product Part Numbers	Product Part Numbers
	Cable Assy, 20-Pin GMCT, Female to Unterminated, 10 A	Ferrules	40-972A-020-*m-FU	A020GFR-F-0B***
		Tinned	A020GFR-T-0A***	A020GFR-T-0B***
		Cut End	A020GFR-C-0A***	A020GFR-C-0B***
	Cable Assy, 20-Pin GMCT, Male to Unterminated, 10 A	Ferrules	40-972A-020-*m-MU	A020GMR-F-0B***
		Tinned	A020GMR-T-0A***	A020GMR-T-0B***
		Cut End	A020GMR-C-0A***	A020GMR-C-0B***

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.

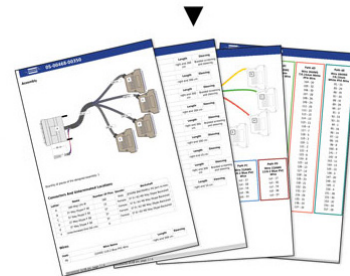
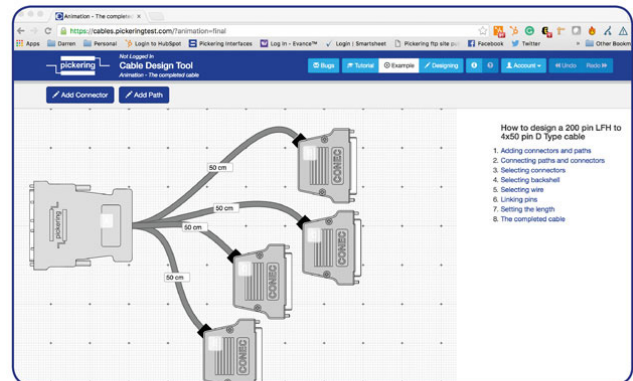
We offer a fast turn round of custom items to keep your ordering and integration time scales to a minimum.



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