

Datamate Mix-Tek Specification

DATAMATE MIX-TEK

Materials

Housings:	Glass-filled thermoplastic UL94V-0
Female contacts:	Brass shell, with Beryllium Copper inner contact
Male contacts:	Copper alloy
Finish:	See individual pages

Electrical

Current	
Individual contacts in isolation:	3.3A max (at 25°C) 2.6A max (at 85°C)
All contacts simultaneously:	3.0A max (at 25°C) 2.2A max (at 85°C)
Working voltage	
At sea level 1013 mbar:	800V DC or AC _{rms}
Voltage proof	
At sea level 1013 mbar:	1,200V DC or AC _{rms}
Contact resistance	
Initial:	20mΩ max
After conditioning:	25mΩ max
Insulation resistance	
Initial:	1,000MΩ min
After conditioning:	100MΩ min

Mechanical

Durability:	500 operations
Insertion force (max):	2.8N
Withdrawal force (min):	0.2N
Signal crimp accommodation:	22 AWG to 28 AWG BS 3G 210 Type A

Environmental

Environmental classification:	55/125/56 days at 95% RH
Operational temperature:	-55°C to +125°C
*Vibration sensitivity:	10Hz to 2000Hz, 0.75mm, 98m/s ² (10G), duration 6h
*Bump severity:	390m/s ² (40G), 4000 ±10 bumps
*Shock severity:	981m/s ² (100G) for 6ms
*Acceleration severity:	490m/s ² (50G)

* Tested with connectors with Jackscrews.

Power Contacts

Materials

Latching collar:	Beryllium Copper, Nickel plated
Other metallic parts:	Copper alloy, Gold plated

Electrical

Current (in isolation)	
32x, 33x:	20A max
PFx, PMx:	40A nominal, up to 80A max
Contact resistance:	6mΩ max

Mechanical

Insertion force (max)	
32x, 33x:	8N
PFx, PMx:	15N
Withdrawal force (min):	0.5N
Contact replacement in connector:	
	5 times
Power contact accommodation	
32x, 33x:	12 to 20 AWG
PFx, PMx:	10 AWG

All dimensions in mm.

Coax Contacts

Materials

Latching collar:	Beryllium Copper, Nickel plated
Other metallic parts:	Copper alloy, Gold plated
Insulator:	PTFE

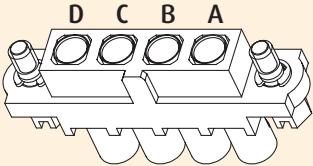
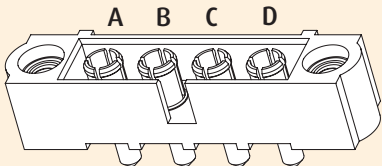
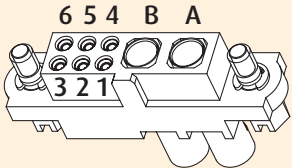
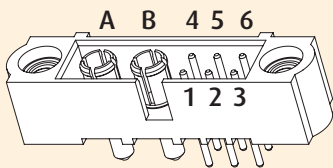
Electrical

Frequency range:	6GHz (depending on cable)
Impedance:	50Ω
VSWR:	1.05 + (0.04 x Frequency) GHz max
Operating voltage (sea level):	180V AC at 500mA
Maximum voltage (sea level):	1000V AC _{rms}
Contact resistance:	6mΩ max
Insulation resistance:	10 ⁶ MΩ at 250V AC _{rms}

Mechanical

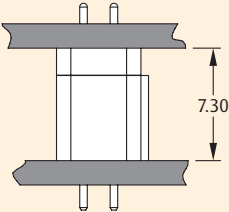
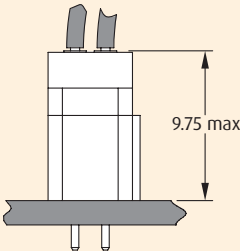
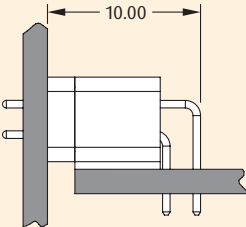
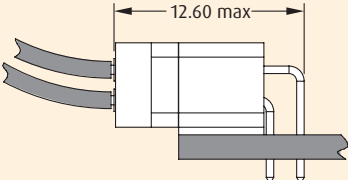
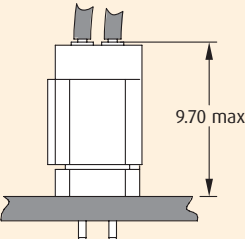
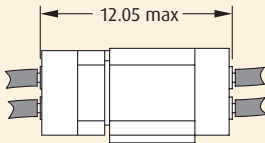
Insertion force (max):	8N
Withdrawal force (min):	0.5N
Contact replacement in connector:	5 times

Datamate Mix-Tek Pin Numbering

	FEMALE	MALE
POWER OR COAX ONLY		
SIGNAL AND POWER		

DATAMATE MIX-TEK

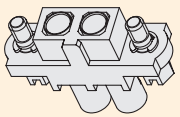
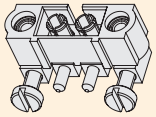
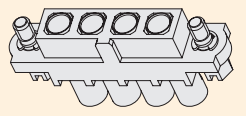
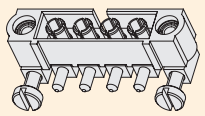
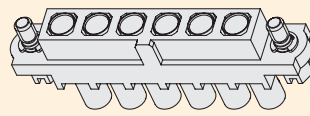
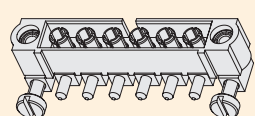
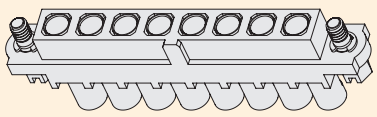
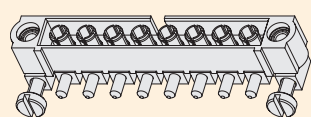
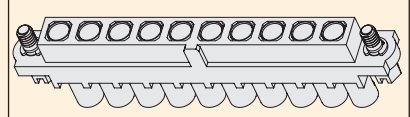
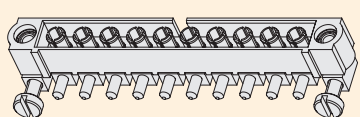
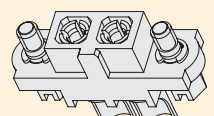
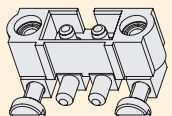
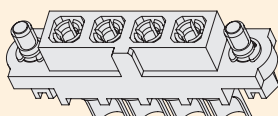
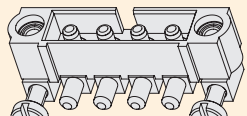
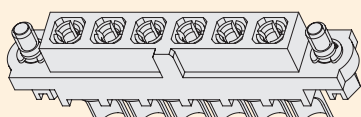
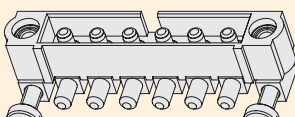
Mating Profiles

		FEMALE	
		VERTICAL THROUGHBOARD	CRIMP
MALE	VERTICAL THROUGHBOARD		
	HORIZONTAL THROUGHBOARD		
	CRIMP		

All dimensions in mm.

Datamate Power Connectors

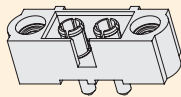
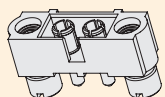
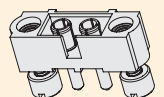
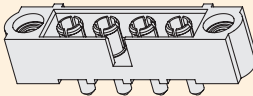
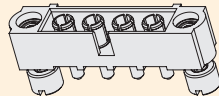
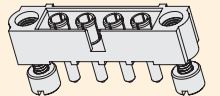
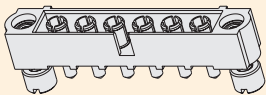
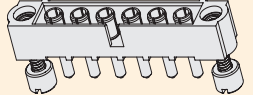
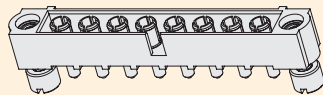
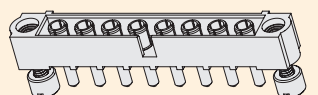
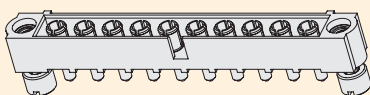
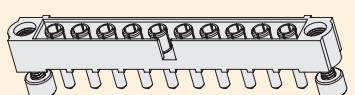
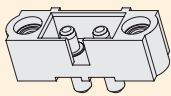
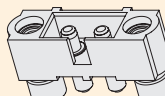
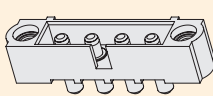
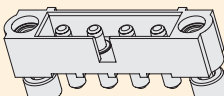
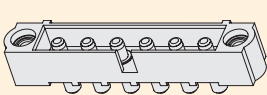
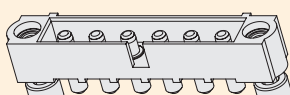
- Standard high-reliability connectors fitted with power contacts on 4mm pitch.

		TYPE		
		Cable Assemblies	Female Cable - Hex Slotted Jackscrews	Male Horizontal 3.5mm PC Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FC325F1-02-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MC335M1-02-0150L	 M80-4000000F1-02-325-00-000	 M80-5000000M5-02-333-00-000
	4 Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FC325F1-04-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MC335M1-04-0150L	 M80-4000000F1-04-325-00-000	 M80-5000000M5-04-333-00-000
	6 Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FC325F1-06-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MC335M1-06-0150L	 M80-4000000F1-06-325-00-000	 M80-5000000M5-06-333-00-000
	8 Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FC325F1-08-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MC335M1-08-0150L	 M80-4000000F1-08-325-00-000	 M80-5000000M5-08-333-00-000
	10 Power		 M80-4000000F1-10-325-00-000	 M80-5000000M5-10-333-00-000
	2 High Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FCPF5F1-02-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MCPM5M1-02-0150L	 M80-4000000F1-02-PF5-00-000	 M80-5000000M5-02-PM3-00-000
	4 High Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FCPF5F1-04-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MCPM5M1-04-0150L	 M80-4000000F1-04-PF5-00-000	 M80-5000000M5-04-PM3-00-000
	6 High Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FCPF5F1-06-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MCPM5M1-06-0150L	 M80-4000000F1-06-PF5-00-000	 M80-5000000M5-06-PM3-00-000
	8 High Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FCPF5F1-08-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MCPM5M1-08-0150L		

All dimensions in mm.

Datamate Power Connectors

- Standard high-reliability connectors fitted with power contacts on 4mm pitch.

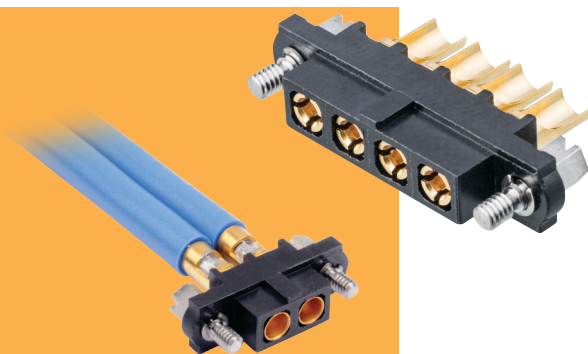
		TYPE		
		Male Vertical 3.5mm Tail - Jackscrew Fixing	Male Vertical 3.5mm Tail - 3.5mm Board Mount Jackcrew	Male Vertical 5mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	 M80-5000000M1-02-331-00-000	 M80-5000000M2-02-331-00-000	 M80-5000000M3-02-332-00-000
	4 Power	 M80-5000000M1-04-331-00-000	 M80-5000000M2-04-331-00-000	 M80-5000000M3-04-332-00-000
	6 Power		 M80-5000000M2-06-331-00-000	 M80-5000000M3-06-332-00-000
	8 Power		 M80-5000000M2-08-331-00-000	 M80-5000000M3-08-332-00-000
	10 Power		 M80-5000000M2-10-331-00-000	 M80-5000000M3-10-332-00-000
	2 High Power	 M80-5000000M1-02-PM1-00-000	 M80-5000000M2-02-PM1-00-000	
	4 High Power	 M80-5000000M1-04-PM1-00-000	 M80-5000000M2-04-PM1-00-000	
	6 High Power	 M80-5000000M1-06-PM1-00-000	 M80-5000000M2-06-PM1-00-000	

All dimensions in mm.

Datamate Power Connectors

Female Power Cable Connector Kit

- ❖ Part numbers are for a complete kit of a housing and the applicable number of contacts.
- ❖ Hexagonal slotted jackscrews are assembled where specified.
- ❖ Polarized housings.
- ❖ Standard Power contacts rated to 20A, High Power to 40A.



POWER CONTACTS ONLY		CALCULATION		SPARE SOLDER CONTACTS	
Standard Power (12 AWG)		A	B + 14		Standard Power (12 AWG)
		B	(No. of Power contacts - 1) x 4		
		C	B + 9		
High Power (10 AWG)				High Power (10 AWG)	
TOOLS		WIRE STRIPPING DETAILS			
<p>Contact Removal Tool - Z80-290</p> <p>❖ No special tooling required for connecting wire, other than standard soldering equipment.</p>					
HOW TO ORDER					
M80 - 4000000F1 - XX - XXX - 00 - 000					
NO. OF POWER CONTACTS				POWER CONTACTS PART NO.	
02, 04, 06, 08, 10	Standard Power			325	Standard Power
02, 04, 06	High Power			PF5	High Power

All dimensions in mm.

Datamate Power Connectors

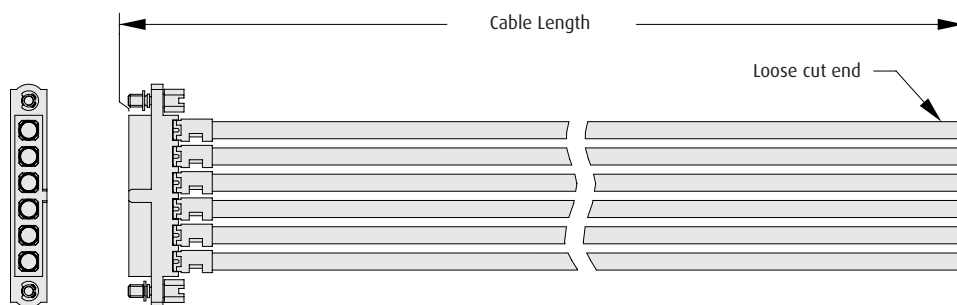
Female Cable Assemblies

- ❑ Fully assembled connectors, fixings and cable in standard configurations.
- ❑ Standard Power contacts are rated to 20A, and are fitted with 12AWG, white PTFE-insulated cables.
- ❑ High Power are rated to 40A nominal, up to 80A max. Fitted with 10AWG, white PTFE-insulated cables.

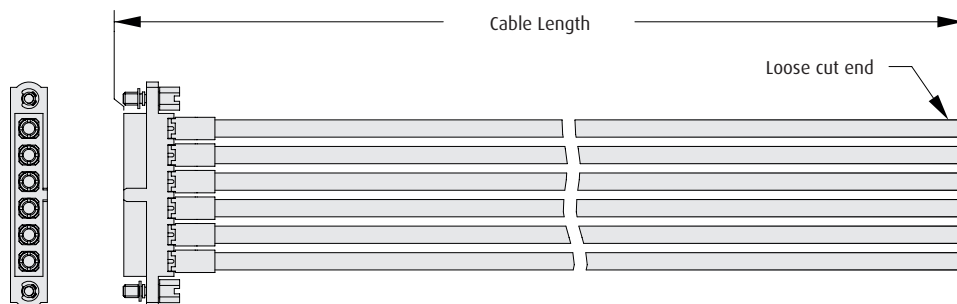


DATAMATE POWER

STANDARD POWER



HIGH POWER



HOW TO ORDER

M80 - FC XXX F1 - XX - 0150 L

SERIES CODE

POWER CONTACTS PART NO.

325	Standard Power
PF5	High Power

JACKSCREW

F1	Hex Slotted Jackscrews
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TERMINATION - SECOND END

L	Loose cut end
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CABLE LENGTH

0150	150mm
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NO. OF POWER CONTACTS

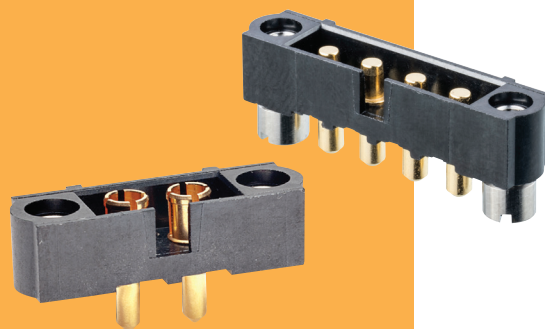
02, 04, 06, 08

All dimensions in mm.

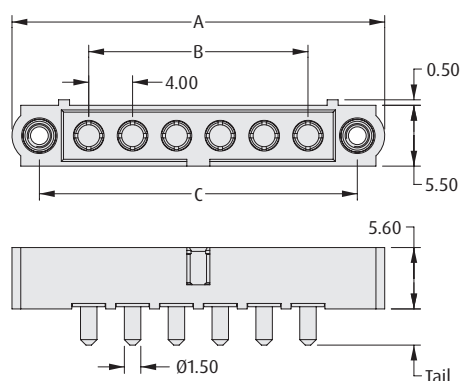
Datamate Power Connectors

Male Vertical Throughboard

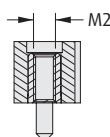
- ❖ A selection of stocked Datamate Mix-Tek solder tail standard layouts.
- ❖ Choice to suit two PCB thicknesses and two stud lengths.
- ❖ Standard Power contacts rated to 20A.
- ❖ High Power rated to 40A nominal, up to 80A max.



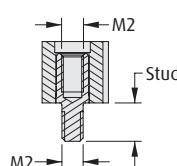
STANDARD POWER



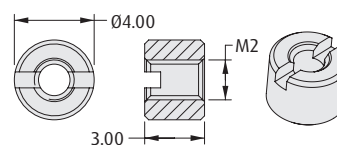
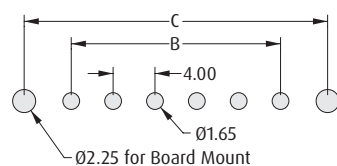
Jackscrew fixing



Jackscrew with Board Mount



Recommended PC Board Pattern

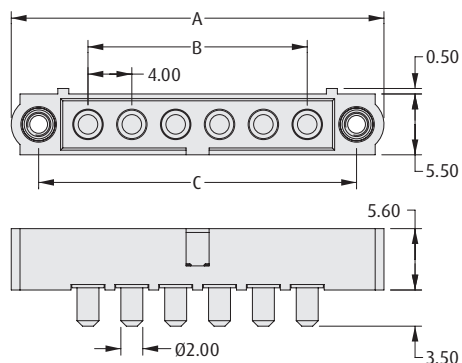


Board Mount Nut, 2 per connector

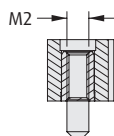
CALCULATION

A	$B + 14$
B	$(\text{No. of Power contacts} - 1) \times 4$
C	$B + 9$

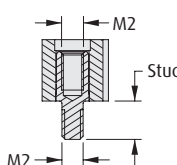
HIGH POWER



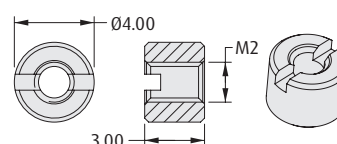
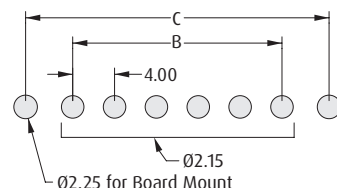
Jackscrew fixing



Jackscrew with Board Mount



Recommended PC Board Pattern



Board Mount Nut, 2 per connector

HOW TO ORDER

M80 - 5000000 XX - XX - XXX - 00 - 000

JACKSCREW

M1	Jackscrew only
M2	With 3.5mm Board Mount stud
M3	With 5mm Board Mount stud

Check image chart to confirm Off-The-Shelf sizes available

NO. OF POWER CONTACTS

02, 04	Standard Power (M1 Jackscrews)
02, 04, 06, 08, 10	Standard Power (M2/M3 Jackscrews)
02, 04, 06	High Power (M1/M2 Jackscrews)

POWER CONTACTS PART NO.

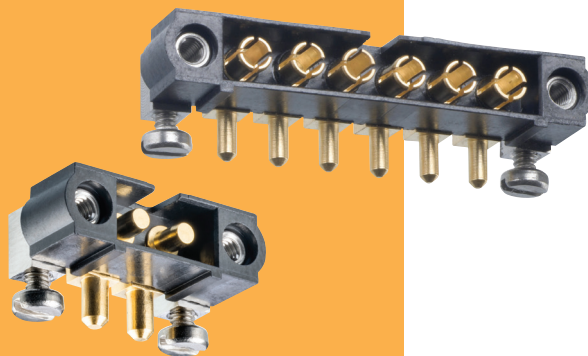
331	3.5mm Tail Standard Power
332	5mm Tail Standard Power
PM1	3.5mm Tail High Power

All dimensions in mm.

Datamate Power Connectors

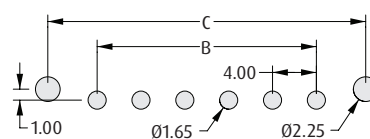
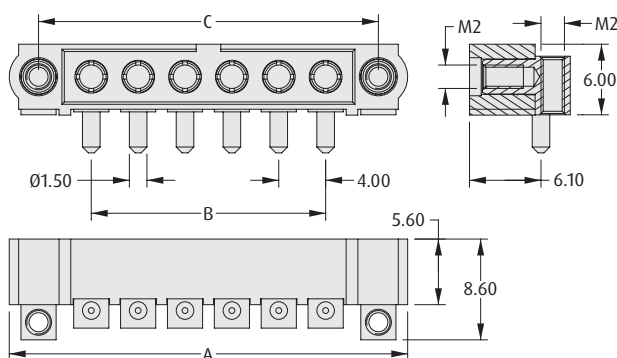
Male Horizontal Throughboard

- Choice to suit two PCB thicknesses and two stud lengths.
- Standard Power contacts rated to 20A.
- High Power rated to 40A nominal, up to 80A max.

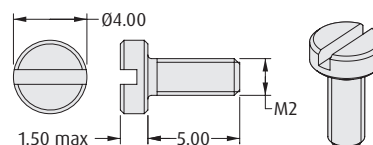


DATAMATE POWER

STANDARD POWER



Recommended PC Board Pattern

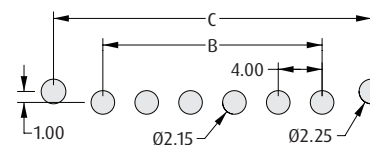
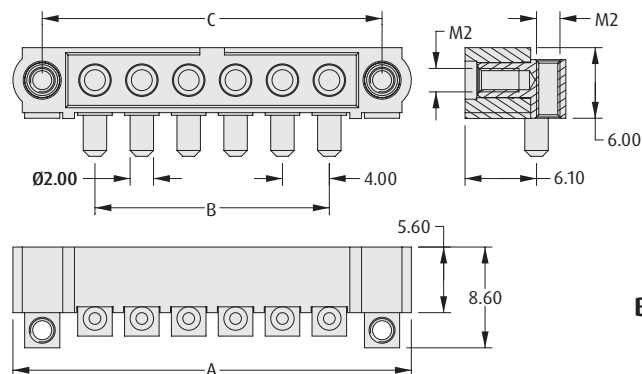


Board Mount Bolt,
2 per connector

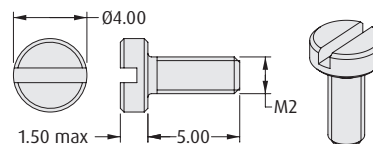
CALCULATION

A	$B + 14$
B	$(\text{No. of Power contacts} - 1) \times 4$
C	$B + 9$

HIGH POWER



Recommended PC Board Pattern



Board Mount Bolt,
2 per connector

HOW TO ORDER

M80 - 5000000 M5 - XX - XXX - 00 - 000

NO. OF POWER CONTACTS

02, 04, 06, 08, 10	Standard Power
02, 04, 06,	High Power

POWER CONTACTS PART NO.

333	3.5mm Tail Standard Power
PM3	3.5mm Tail High Power

All dimensions in mm.

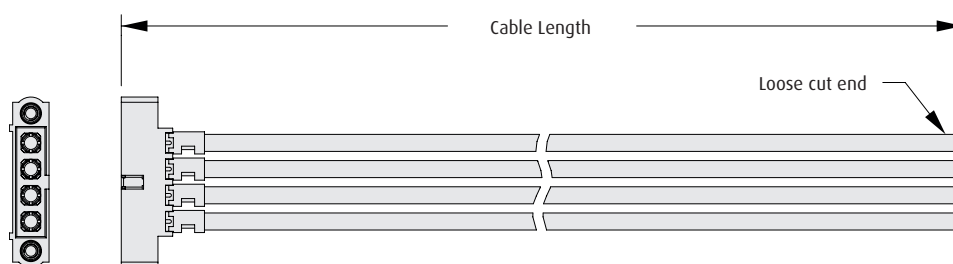
Datamate Power Connectors

Male Cable Assemblies

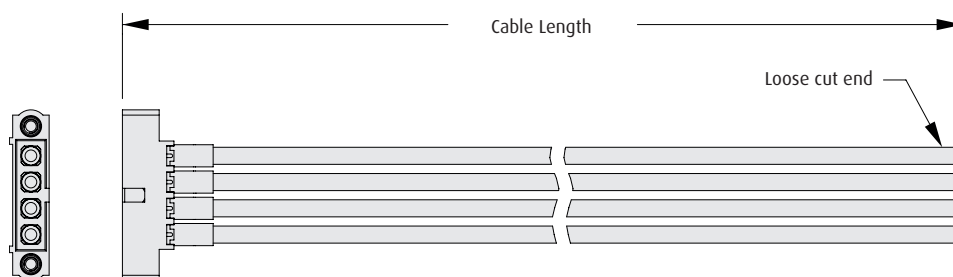
- ❖ Fully assembled connectors, fixings and cable in standard configurations.
- ❖ Standard Power contacts are rated to 20A, and are fitted with 12AWG, white PTFE-insulated cables.
- ❖ High Power are rated to 40A nominal, up to 80A max. Fitted with 10AWG, white PTFE-insulated cables.



STANDARD POWER



HIGH POWER



HOW TO ORDER

M80 - MC XXX M1 - XX - 0150 L

SERIES CODE

POWER CONTACTS PART NO.

335	Standard Power
PM5	High Power

JACKSCREW

M1	Internal Jackscrews
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TERMINATION - SECOND END

L	Loose cut end
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CABLE LENGTH

0150	150mm
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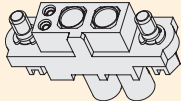
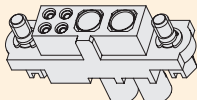
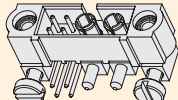
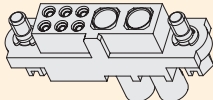
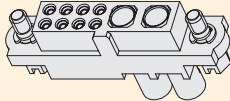
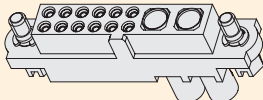
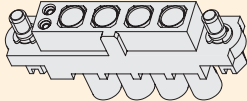
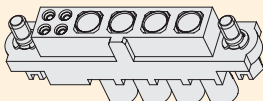
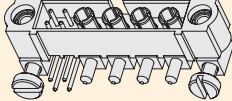
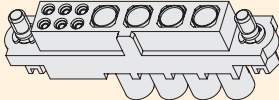
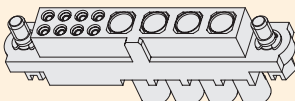
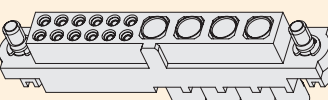
NO. OF POWER CONTACTS

02, 04, 06, 08

All dimensions in mm.

Datamate Power/Signal Connectors

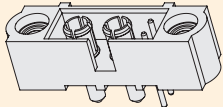
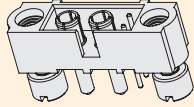
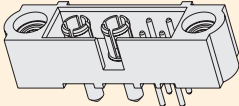
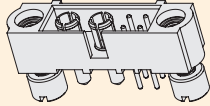
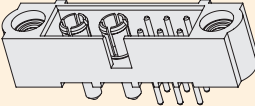
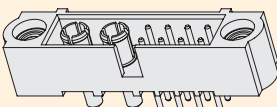
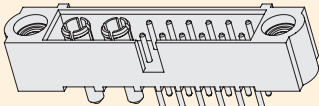
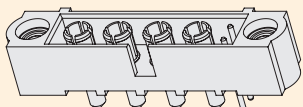
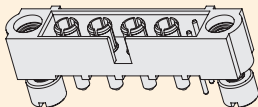
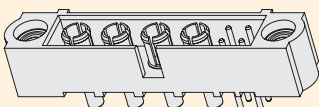
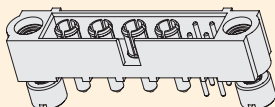
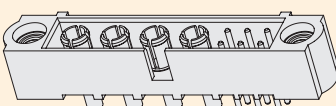
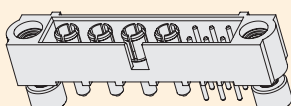
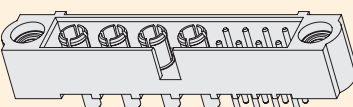
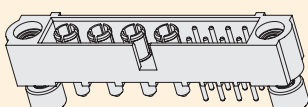
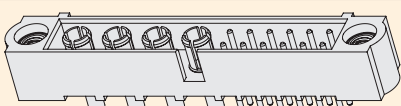
❖ Standard high-reliability connectors fitted with a combination of signal and 20A power contacts.

		TYPE	
		Female Cable - Hex Slotted Jackscrews	Male Horizontal 3mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	 <p>M80-4C10205F1-02-325-00-000</p>	
	4 Signal	 <p>M80-4C10405F1-02-325-00-000</p>	 <p>M80-5L10405M5-02-333-00-000</p>
	6 Signal	 <p>M80-4C10605F1-02-325-00-000</p>	
	8 Signal	 <p>M80-4C10805F1-02-325-00-000</p>	
	12 Signal	 <p>M80-4C11205F1-02-325-00-000</p>	
	4 Power	 <p>M80-4C10205F1-04-325-00-000</p>	
	4 Signal	 <p>M80-4C10405F1-04-325-00-000</p>	 <p>M80-5L10405M5-04-333-00-000</p>
	6 Signal	 <p>M80-4C10605F1-04-325-00-000</p>	
	8 Signal	 <p>M80-4C10805F1-04-325-00-000</p>	
	12 Signal	 <p>M80-4C11205F1-04-325-00-000</p>	

All dimensions in mm.

Datamate Power/Signal Connectors

- Standard high-reliability connectors fitted with a combination of signal and 20A power contacts.

		TYPE	
		Male Vertical 3mm Tail - Jackscrew fixing	Male Vertical 3mm Tail - 3.5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	 M80-5T10205M1-02-331-00-000	 M80-5T10205M2-02-331-00-000
		 M80-5T10405M1-02-331-00-000	 M80-5T10405M2-02-331-00-000
		 M80-5T10605M1-02-331-00-000	
		 M80-5T10805M1-02-331-00-000	
		 M80-5T11205M1-02-331-00-000	
	4 Power	 M80-5T10205M1-04-331-00-000	 M80-5T10205M2-04-331-00-000
		 M80-5T10405M1-04-331-00-000	 M80-5T10405M2-04-331-00-000
		 M80-5T10605M1-04-331-00-000	 M80-5T10605M2-04-331-00-000
		 M80-5T10805M1-04-331-00-000	 M80-5T10805M2-04-331-00-000
		 M80-5T11205M1-04-331-00-000	

All dimensions in mm.

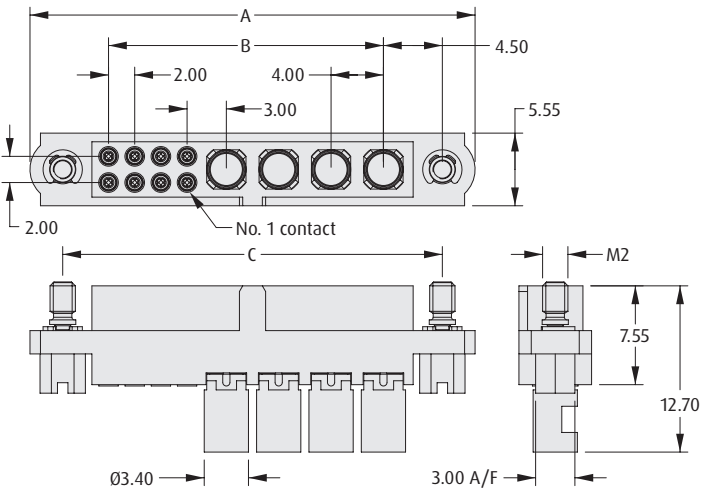
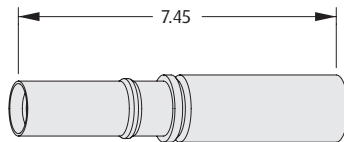
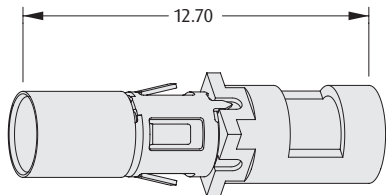
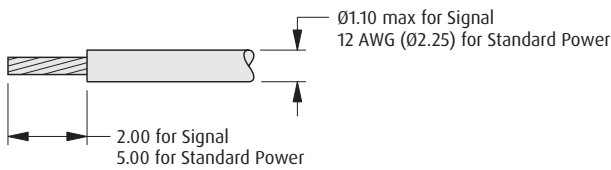
Datamate Power/Signal Connectors

Female Power/Signal Cable Connector Kit

- ❖ Part numbers are for a complete kit of a housing and the applicable number of contacts.
- ❖ Hexagonal slotted jackscrews are assembled.
- ❖ Polarized housings.
- ❖ Standard Power contacts rated to 20A, signal to 3A.



DATAMATE POWER/SIGNAL

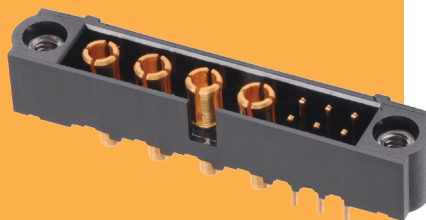
SIGNAL AND POWER		CALCULATION		SPARE CONTACTS	
		A	B + 13	Signal (24 to 28 AWG)  Indent Groove ORDER CODE M80-0130005	
		B	(No. of Power contacts - 1) x 4 + Total no. of Signal contacts +1		
		C	B + 8		
				Standard Power (12 AWG)  ORDER CODE M80-325	
TOOLS		WIRE STRIPPING DETAILS			
<p>Recommended Crimp Tool (Signal) - M22520/2-01</p> <p>Positioner (Signal) - T5747</p> <p>Contact Insertion/Removal Tool (Signal) - Z80-280</p> <p>Contact Removal Tool (Power) - Z80-290</p> <p>❖ No special tooling required for connecting Power wire, other than standard soldering equipment.</p> <p>❖ Instruction sheets available at www.harwin.com/instructions.</p>					
HOW TO ORDER					
M80 - 4C1 XX 05F1 - XX - 325 - 00 - 000					
NO. OF SIGNAL CONTACTS				NO. OF POWER CONTACTS	
02, 04, 06, 08, 12				02, 04	
Check image chart to confirm Off-The-Shelf sizes available					

All dimensions in mm.

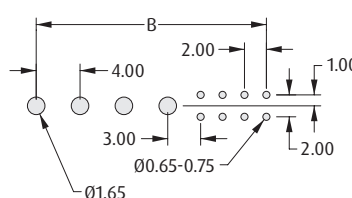
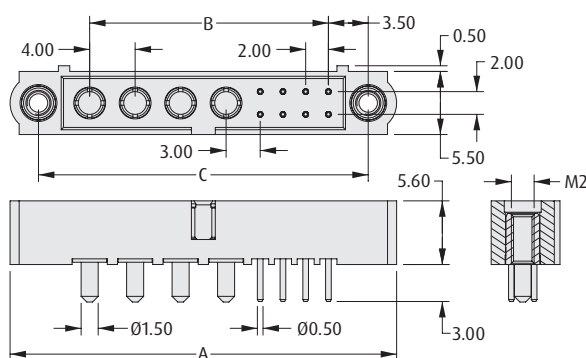
Datamate Power/Signal Connectors

Male Power/Signal Vertical Throughboard

- ❑ A selection of stocked Datamate Mix-Tek solder tail standard layouts.
- ❑ Choice to suit two PCB thicknesses and two stud lengths.
- ❑ Polarized housings.
- ❑ Standard Power contacts rated to 20A, signal to 3A.



JACKSCREW ONLY

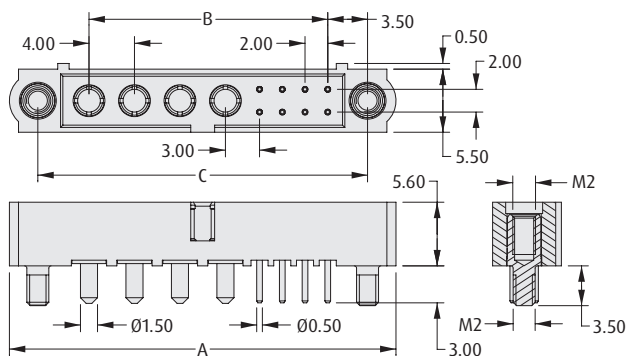


Recommended PC Board Pattern

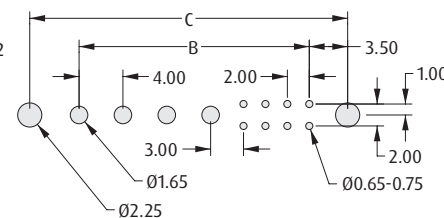
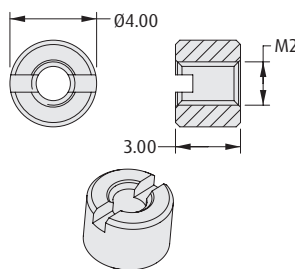
CALCULATION

A	$B + 13$
B	(No. of Power contacts - 1) x 4 + Total no. of Signal contacts + 1
C	$B + 8$

WITH BOARD MOUNT



**Board Mount Nut,
2 per connector**



Recommended PC Board Pattern

HOW TO ORDER

M80 - 5T1 XX 05 XX - XX - 331 - 00 - 000

NO. OF SIGNAL CONTACTS

02, 04, 06, 08, 12

NO. OF POWER CONTACTS

02, 04

JACKSCREW

M1	Jackscrew only
M2	With 3.5mm Board Mount stud

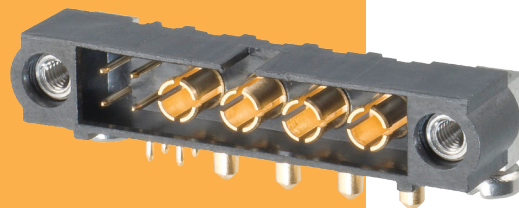
Check image chart to confirm Off-The-Shelf sizes available

All dimensions in mm.

Datamate Power/Signal Connectors

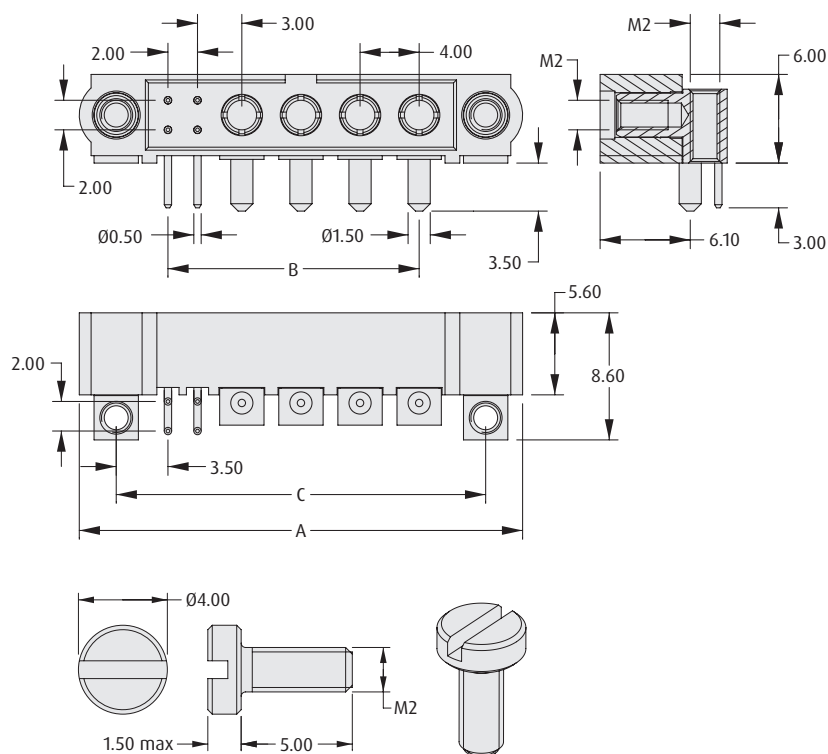
Male Power/Signal Horizontal Throughboard

- ❖ A selection of stocked Datamate Mix-Tek solder tail standard layouts.
- ❖ Polarized housings.
- ❖ Standard Power contacts rated to 20A, signal to 3A.



DATAMATE POWER/SIGNAL

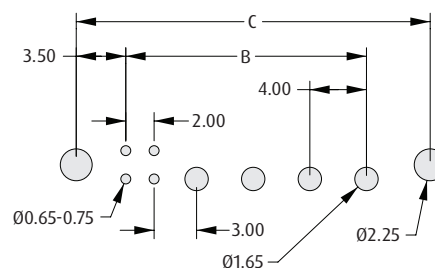
SIGNAL AND POWER



Board Mount Bolt, 2 per connector

CALCULATION

A	$B + 13$
B	$(\text{No. of Power contacts} - 1) \times 4$ $+ \text{Total no. of Signal contacts} + 1$
C	$B + 8$



Recommended PC Board Pattern

HOW TO ORDER

M80 - 5L1 04 05 M5 - XX - 333 - 00 - 000

NO. OF SIGNAL CONTACTS

04

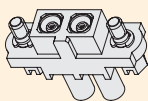
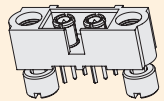
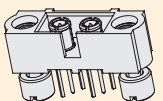
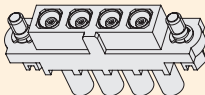
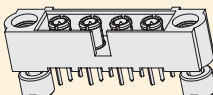
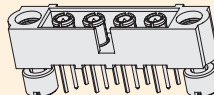
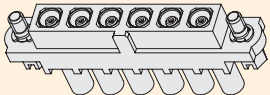
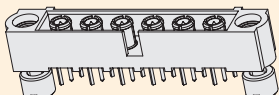
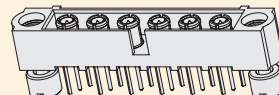
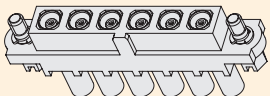
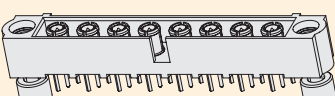
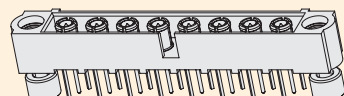
NO. OF POWER CONTACTS

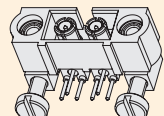
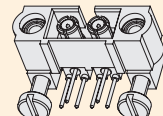
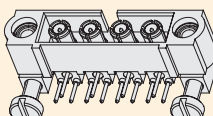
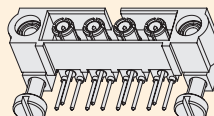
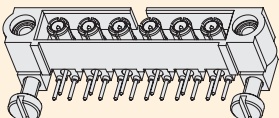
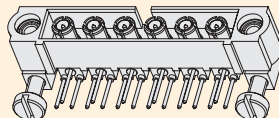
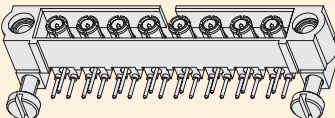
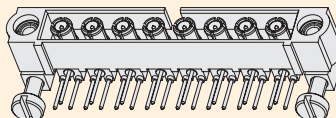
02, 04

All dimensions in mm.

Datamate Coax Connectors

- Standard high-reliability connectors fitted with coax contacts on 4mm pitch.

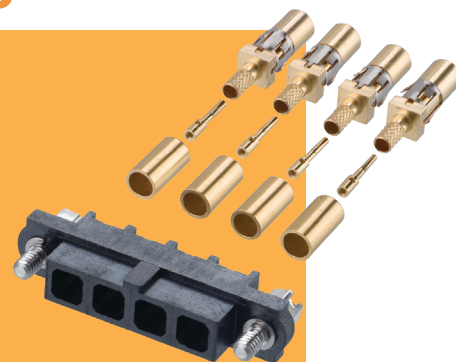
		TYPE		
		Female Cable Connectors - Hex Slotted Jackscrews	Male Vertical 3mm Tail - 3.5mm Board Mount Jackcrew	Male Vertical 4.5mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Coax	 M80-FC305F1-02	 M80-MV311M2-02	 M80-MV312M3-02
	4 Coax	 M80-FC305F1-04	 M80-MV311M2-04	 M80-MV312M3-04
	6 Coax	 M80-FC305F1-06	 M80-MV311M2-06	 M80-MV312M3-06
	8 Coax	 M80-FC305F1-08	 M80-MV311M2-08	 M80-MV312M3-08

		TYPE		
		Female Cable Assemblies - Hex Slotted Jackscrews	Male Horizontal 3mm Tail - 5mm Board Mount Jackcrew	Male Horizontal 4.5mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Coax	Single Ended (Female to Cut End) M80-FC305F1-02-0150L Double Ended (Female to Female) M80-FC305F1-02-0150F1	 M80-MH313M5-02	 M80-MH314M5-02
	4 Coax	Single Ended (Female to Cut End) M80-FC305F1-04-0150L Double Ended (Female to Female) M80-FC305F1-04-0150F1	 M80-MH313M5-04	 M80-MH314M5-04
	6 Coax	Single Ended (Female to Cut End) M80-FC305F1-06-1050L Double Ended (Female to Female) M80-FC305F1-06-0150F1	 M80-MH313M5-06	 M80-MH314M5-06
	8 Coax	Single Ended (Female to Cut End) M80-FC305F1-08-0150L Double Ended (Female to Female) M80-FC305F1-08-0150F1	 M80-MH313M5-08	 M80-MH314M5-08

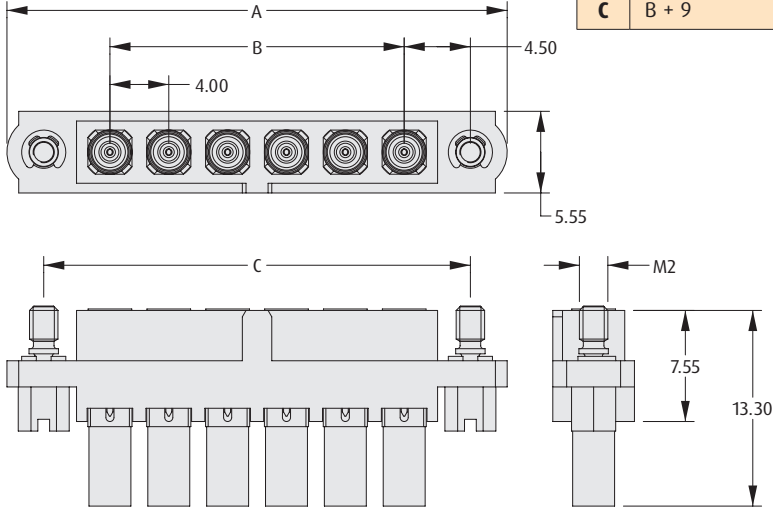
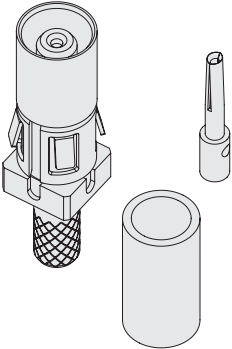
Datamate Coax Connectors

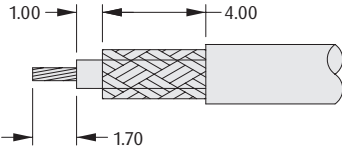
Jack (Female) Crimp Kit

- ❖ A selection of stocked jack cable connectors in standard layouts.
- ❖ 6GHz, 50Ω Coax contacts, suitable for RG178 cable.
- ❖ Product supplied as a complete kit; housing with jackscrews assembled, and the applicable number of coax contacts supplied loose, not assembled.
- ❖ Polarized housings.
- ❖ Hexagonal slotted jackscrew style.



DATAMATE COAX

CABLE		CALCULATION		SPARE COAX CONTACTS	
		A	B + 14		
		B	(No. of Coax contacts - 1) x 4		
		C	B + 9		
				<div>ORDER CODE</div> <div>M80-305</div>	

TOOLS		WIRE STRIPPING DETAILS	
<div>Recommended Inner Contact Crimp Tool – Z80-292</div> <div>Positioner for Inner Contact – Z80-291</div> <div>Recommended Outer Sleeve Crimp Tool – Z80-293</div> <div>Contact Removal Tool – Z80-290</div> <div>❖ Instruction sheets available at www.harwin.com/instructions.</div>			

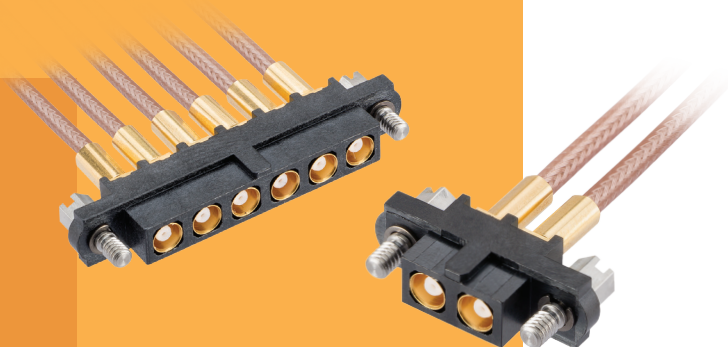
HOW TO ORDER			
M80 - FC 305 F1 - XX			
<div>COAX CONTACT TYPE</div> <div>305Ø2.00mm cable</div>		<div>NO. OF COAX CONTACTS</div> <div>02, 04, 06, 08</div>	

All dimensions in mm.

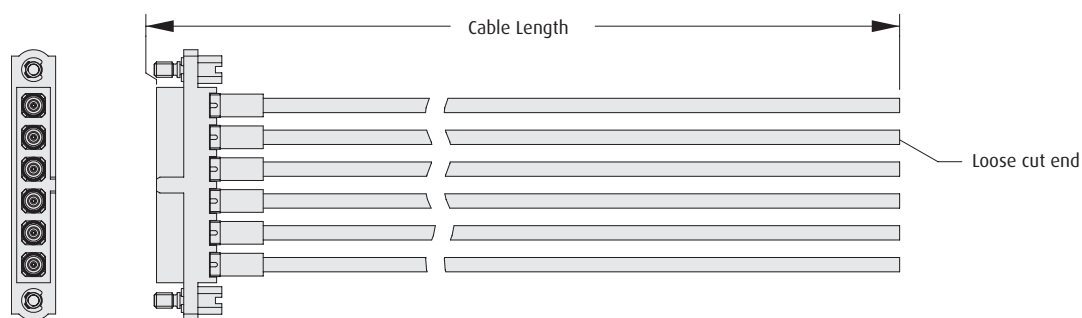
Datamate Coax Connectors

Jack (Female) Cable Assemblies

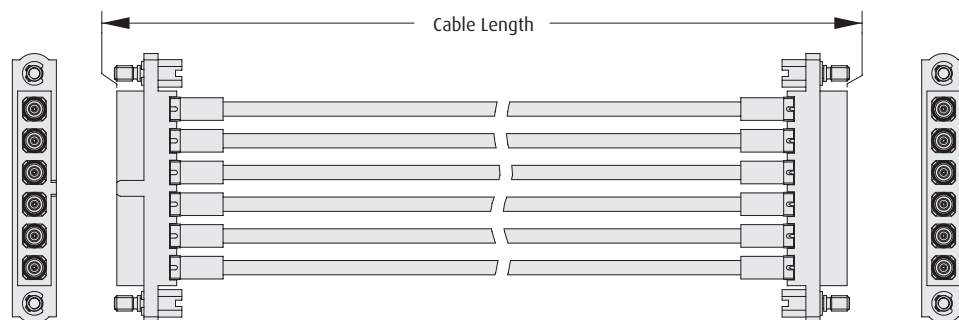
- ❑ A selection of stocked ganged multiport coax cable assemblies in standard layouts.
- ❑ 6GHz, 50Ω Coax contacts, assembled with RG178 cable.
- ❑ Hexagonal slotted jackscrew style.



FEMALE SINGLE ENDED



FEMALE - FEMALE



HOW TO ORDER

M80 - FC305F1 - XX - 0150 X

SERIES CODE

NO. OF POWER CONTACTS

02, 04, 06, 08

TERMINATION - SECOND END

L	Loose cut end
F1	Female connector

CABLE LENGTH

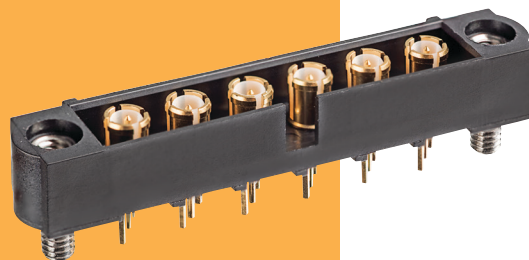
0150	150mm
0300	300mm
0450	450mm

All dimensions in mm.

Datamate Coax Connectors

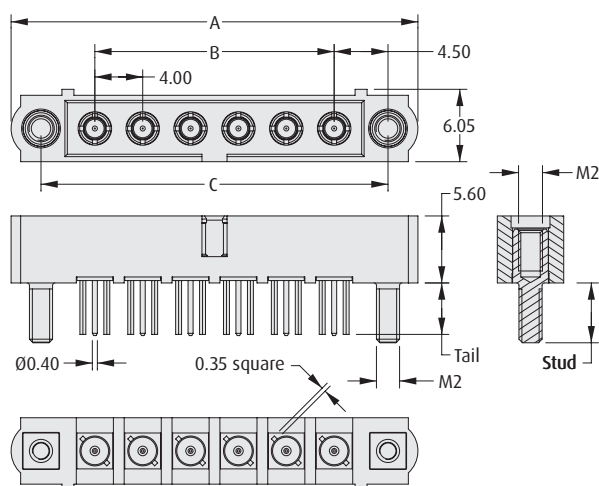
Plug (Male) Vertical Throughboard

- ❑ Stocked coax connectors in vertical orientation, with board-mount jackscrews for added security.
- ❑ 6GHz, 50Ω Coax contacts.
- ❑ Choice to suit two PCB thicknesses.
- ❑ Order board mount nuts separately.
- ❑ Screwdriver **Z80-298** available for assembling slotted jackscrew nuts.



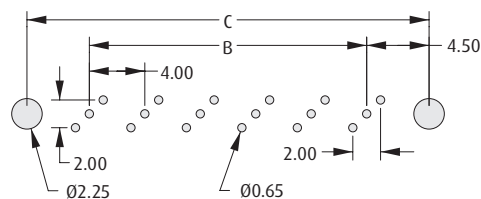
DATAMATE COAX

VERTICAL



CALCULATION

A	$B + 14$
B	$(\text{No. of Coax contacts} - 1) \times 4$
C	$B + 9$



Recommended PCB Board Pattern

HOW TO ORDER

M80 - MV 3XX MX - XX

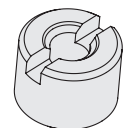
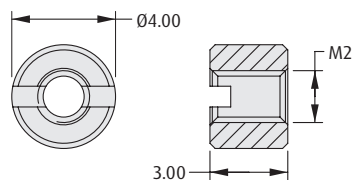
TYPE	
311M2	3mm Tail with 3.5mm Board Mount Stud
312M3	4.5mm Tail with 5mm Board Mount Stud

NO. OF COAX CONTACTS
02, 04, 06, 08

REQUIRED HARDWARE

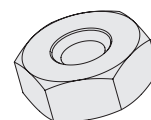
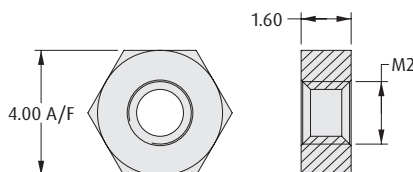
Order separately from connector

Slotted Board Mount Nut



ORDER CODE
M80-2130000B

Hexagonal Board Mount Nut



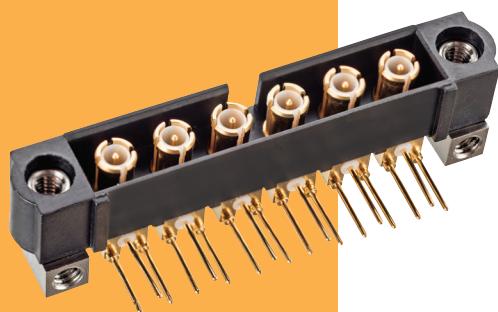
ORDER CODE
M80-2430000B

All dimensions in mm.

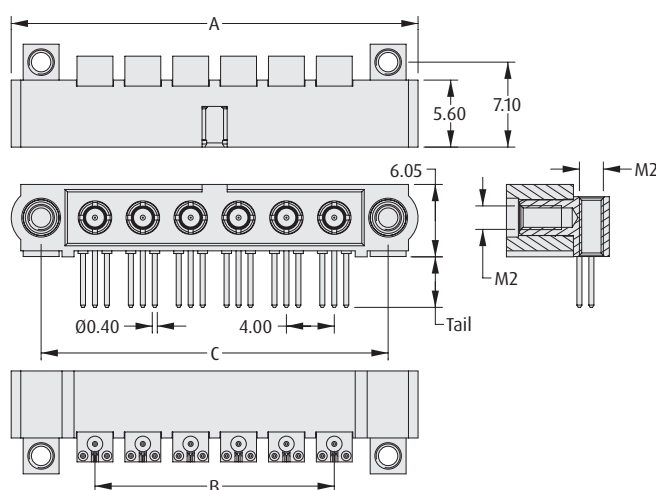
Datamate Coax Connectors

Plug (Male) Horizontal Throughboard

- ❖ Stocked coax connectors in horizontal orientation, with board-mount jackscrews for added security.
- ❖ 6GHz, 50Ω Coax contacts.
- ❖ Choice to suit two PCB thicknesses.
- ❖ Order board mount bolts separately.

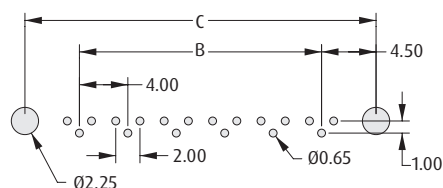


HORIZONTAL



CALCULATION

A	$B + 14$
B	$(\text{No. of Coax contacts} - 1) \times 4$
C	$B + 9$



Recommended PCB Board Pattern

HOW TO ORDER

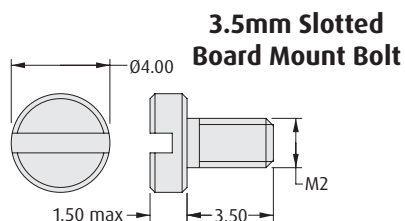
M80 - MH 3XX M5 - XX

TYPE	
313	3mm Tail
314	4.5mm Tail

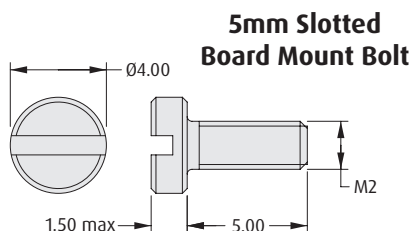
NO. OF COAX CONTACTS
02, 04, 06, 08

REQUIRED HARDWARE

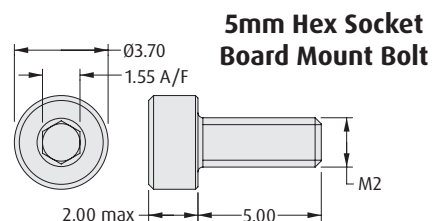
Order separately from connector



ORDER CODE
M80-2260000B



ORDER CODE
M80-2270000B



ORDER CODE
M80-2320000B

All dimensions in mm.

Datamate Mix-Tek Housings

- Housings only for cable connections, suitable for use with all power, high power and coax contacts. Contacts to be ordered separately.

MIXED TECHNOLOGY HOUSINGS - FEMALE, HEX SLOTTED JACKSCREWS				
	2 Power/Coax	3 Power/Coax	4 Power/Coax	6 Power/Coax
2 Signal			M80-263F104-02-00	M80-263F106-02-00
4 Signal			M80-263F104-04-00	
6 Signal	M80-263F102-06-00			
8 Signal	M80-263F102-08-00	M80-263F103-08-00		
12 Signal			M80-263F104-12-00	

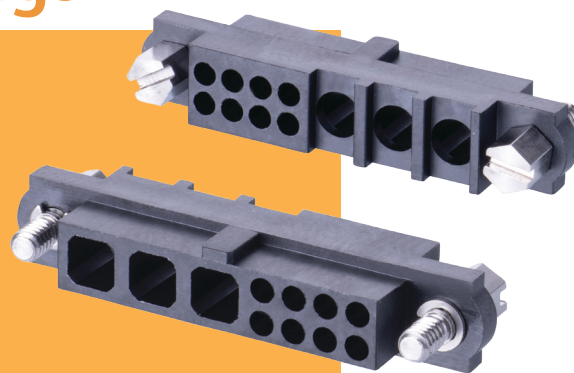
POWER/COAX ONLY HOUSINGS - STANDARD GENDER JACKSCREWS				
	Female Hex Slotted floating	Female Hex Socket floating	Female Guide Pin panel mount	Male Internal jackscrew
2 Contact	M80-263F102-00-00	M80-263F202-00-00	M80-263F302-00-00	M80-273M102-00-00
3 Contact	M80-263F103-00-00	M80-263F203-00-00	M80-263F303-00-00	M80-273M103-00-00
4 Contact	M80-263F104-00-00	M80-263F204-00-00	M80-263F304-00-00	M80-273M104-00-00
6 Contact	M80-263F106-00-00	M80-263F206-00-00	M80-263F306-00-00	M80-273M106-00-00
8 Contact	M80-263F108-00-00	M80-263F208-00-00	M80-263F308-00-00	M80-273M108-00-00
10 Contact	M80-263F110-00-00			

POWER/COAX ONLY HOUSINGS				
REVERSE FIX JACKSCREWS		101LOK		
	Female 5mm panel mount	Male Slotted floating	Female	Male
2 Contact	M80-263F902-00-00	M80-273MA02-00-00	M80-263FC02-00-00	M80-273MC02-00-00
3 Contact	M80-263F903-00-00	M80-273MA03-00-00	M80-263FC03-00-00	M80-273MC03-00-00
4 Contact	M80-263F904-00-00	M80-273MA04-00-00	M80-263FC04-00-00	M80-273MC04-00-00
6 Contact	M80-263F906-00-00	M80-273MA06-00-00	M80-263FC06-00-00	M80-273MC06-00-00
8 Contact	M80-263F908-00-00	M80-273MA08-00-00	M80-263FC08-00-00	M80-273MC08-00-00

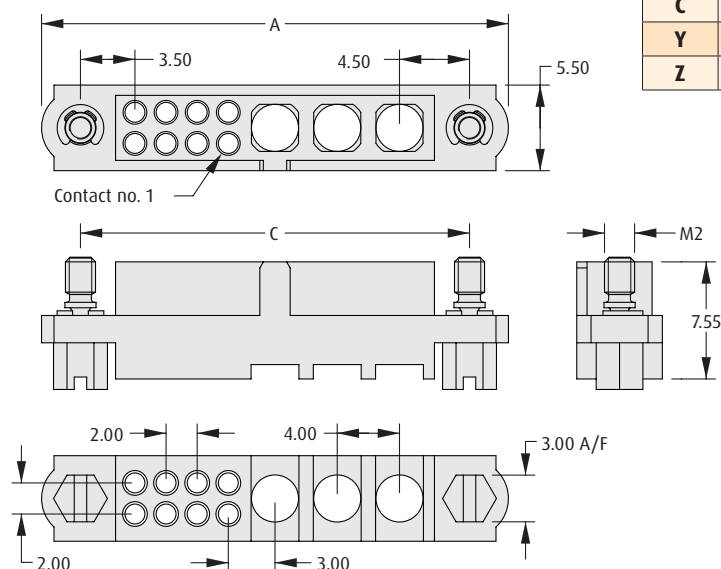
Datamate Mix-Tek Housings

Female Mixed Technology Cable Housings

- ❖ Female cable housings fitted with floating jackscrews (standard gender), hexagonal slotted heads.
- ❖ Compatible with all signal, power and coax female cable contacts.
- ❖ Housings only - compatible contacts must be purchased separately.
- ❖ Mates with any male mixed-technology connectors with the same signal + power/coax layout.
- ❖ For other combinations shown on the Technical Drawing, please consult our Experts at www.harwin.com/contact.



SIGNAL + POWER/COAX



CALCULATION

A	$(4 \times Y) + Z + 10$
C	$(4 \times Y) + Z + 5$
Y	No. of Power/Coax Contact positions
Z	No. of Signal Contact positions

HOW TO ORDER

M80 - 263 F1 XX - XX - 00

SERIES CODE

HOUSING

263

Female

CONTACT POSITION COMBINATIONS

02-06	2 power/coax positions, 6 signal positions
02-08	2 power/coax positions, 8 signal positions
03-08	3 power/coax positions, 8 signal positions
04-02	4 power/coax positions, 2 signal positions
04-04	4 power/coax positions, 4 signal positions
04-12	4 power/coax positions, 12 signal positions
06-02	6 power/coax positions, 2 signal positions

JACKSCREW

F1

Floating Hex Slotted, Standard Gender

All dimensions in mm.

Datamate Mix-Tek Housings

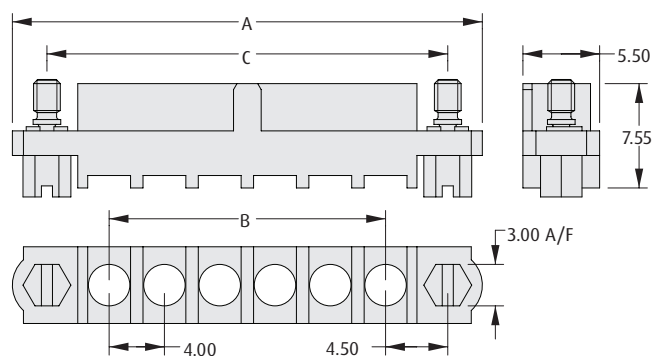
Female Power/Coax Cable Housings

- ❖ Female cable housings fitted with floating jackscrews (standard gender).
- ❖ Choice of hexagonal slotted or hex socket for the jackscrew head.
- ❖ Compatible with all power and coax female cable contacts.
- ❖ Housings only - compatible contacts must be purchased separately.
- ❖ Mates with any male connectors with the same power/coax layout.
- ❖ For other combinations shown on the Technical Drawing, please consult our Experts at www.harwin.com/contact.



DATAMATE MIX-TEK

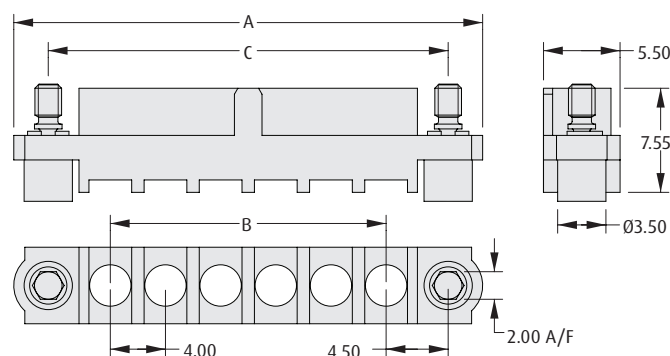
HEX SLOTTED JACKSCREW



CALCULATION

A	B + 14
B	(No. of contact positions - 1) x 4
C	B + 9

HEX SOCKET JACKSCREW



HOW TO ORDER

M80 - 263 XX XX - 00 - 00

SERIES CODE

HOUSING

263 Female

NO. OF POWER/COAX CONTACT POSITIONS

02, 03, 04, 06, 08	All variations
10	F1 jackscrew only

JACKSCREW

F1	Floating Hex Slotted
F2	Floating Hex Socket

All dimensions in mm.

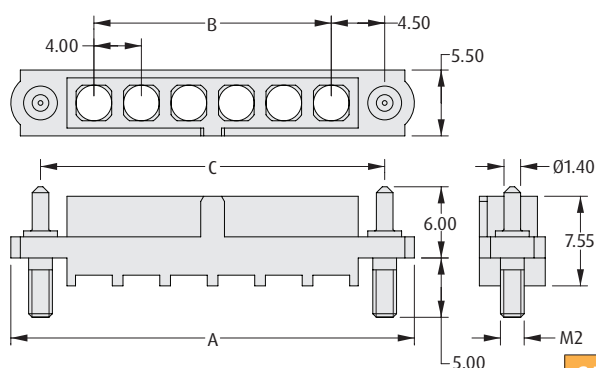
Datamate Mix-Tek Housings

Female Power/Coax Cable Housings - Guide Pin, Reverse Fix

- ❖ Female cable housings fitted with panel mount jackscrews.
- ❖ Guide Pins are compatible with male standard gender jackscrews.
- ❖ Reverse fix panel mount is only compatible with male connectors fitted with reverse fix.
- ❖ Compatible with all power and coax female cable contacts.
- ❖ Housings only - compatible contacts must be purchased separately.
- ❖ For other combinations shown on the Technical Drawing, please consult our Experts at www.harwin.com/contact.



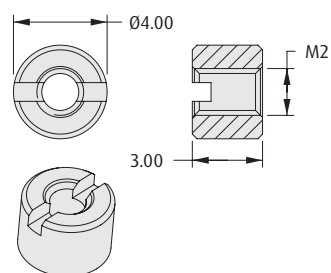
GUIDE PIN WITH PANEL MOUNT



CALCULATION

A	$B + 14$
B	$(\text{No. of contact positions} - 1) \times 4$
C	$B + 9$

SLOTTED NUT

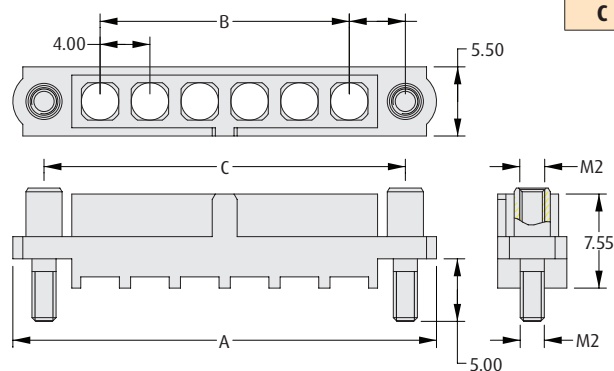


- ❖ Order separately from connector

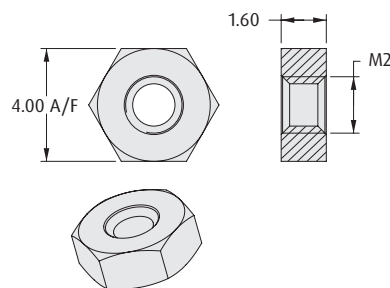
ORDER CODE

M80-2130000B

REVERSE FIX WITH PANEL MOUNT



HEXAGONAL NUT



- ❖ Order separately from connector

ORDER CODE

M80-2430000B

HOW TO ORDER

M80 - 263 XX XX - 00 - 00

SERIES CODE

HOUSING

263

Female

NO. OF POWER/COAX CONTACT POSITIONS

02, 03, 04, 06, 08

JACKSCREW

F3

Guide pin with 5mm panel mount stud

F9

Reverse fix with 5mm panel mount stud

All dimensions in mm.

Datamate Mix-Tek Housings

Female Power/Coax Cable Housings - 101Lok

- ❖ Female cable housings fitted with secure, fast and simple bayonet fixings, no special tooling required.
- ❖ Mates with male connectors fitted with 101Lok receptacles.
- ❖ Housings only - compatible contacts must be purchased separately.
- ❖ Compatible with all power and coax female cable contacts.
- ❖ For other combinations shown on the Technical Drawing, please consult our Experts at www.harwin.com/contact.

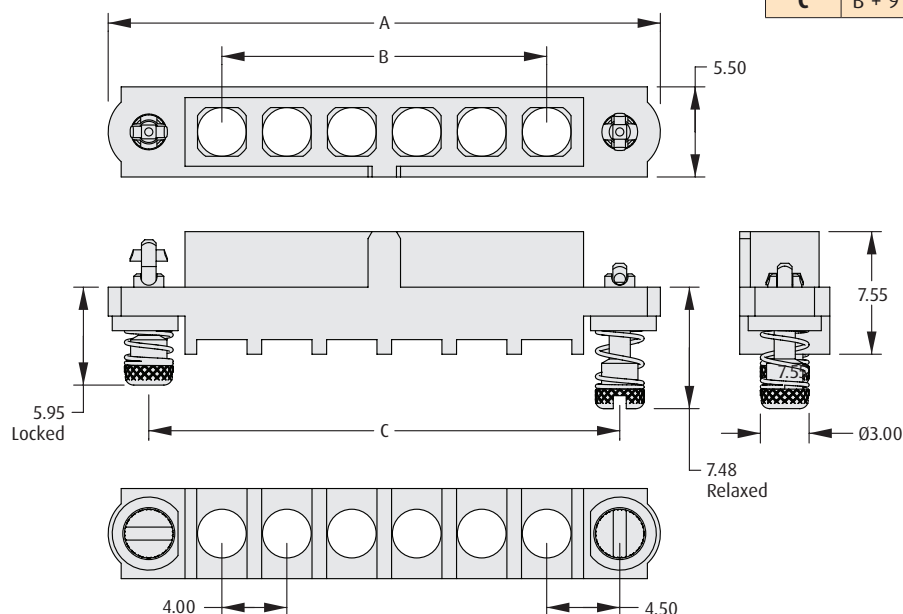


DATAMATE MIX-TEK

101LOK

CALCULATION

A	$B + 14$
B	$(\text{No. of contact positions} - 1) \times 4$
C	$B + 9$



HOW TO ORDER

M80 - 263 FC XX - 00 - 00

SERIES CODE

HOUSING

263

Female

NO. OF POWER/COAX CONTACT POSITIONS

02, 03, 04, 06, 08

JACKSCREW

FC

101Lok fixing

All dimensions in mm.

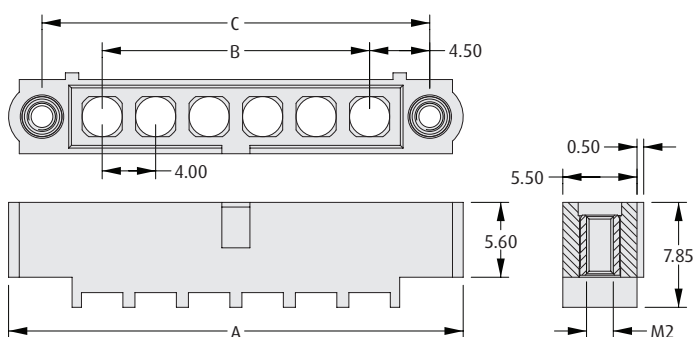
Datamate Mix-Tek Housings

Male Power/Coax Cable Housings

- ❖ Male cable housings fitted with either internally threaded jackscrews (standard gender) or 101Lok receptacles.
- ❖ Internal threaded jackscrews compatible with standard gender floating jackscrews or guide pins.
- ❖ 101Lok receptacle fixings compatible with 101Lok bayonet female fixings.
- ❖ Housings only - compatible power and coax male contacts must be purchased separately.
- ❖ For other combinations shown on the Technical Drawing, please consult our Experts at www.harwin.com/contact.



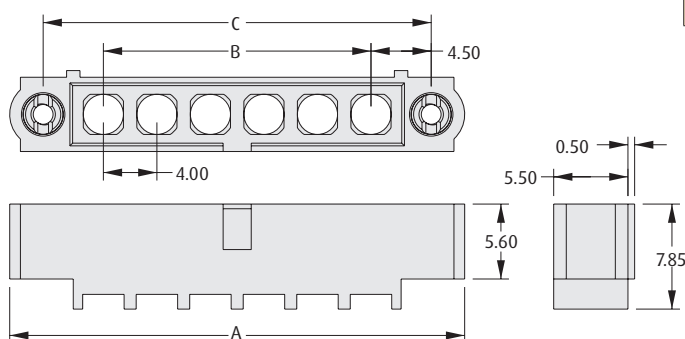
INTERNAL THREADED JACKSCREW



CALCULATION

A	B + 14
B	(No. of contact positions - 1) x 4
C	B + 9

101LOK RECEPTACLE



HOW TO ORDER

M80 - 273 XX XX - 00 - 00

SERIES CODE

HOUSING

273 Male

NO. OF POWER/COAX CONTACT POSITIONS

02, 03, 04, 06, 08

JACKSCREW

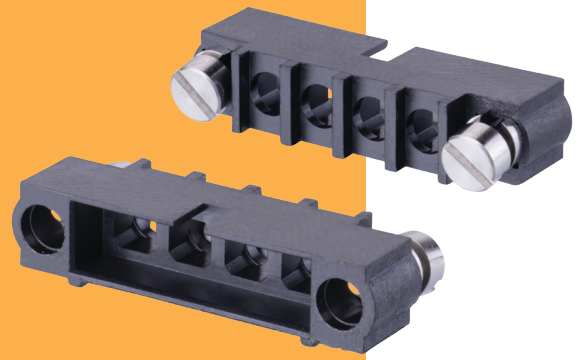
M1	Internally threaded jack screw, standard gender
MC	101Lok receptacle fixing

All dimensions in mm.

Datamate Mix-Tek Housings

Male Power/Coax Cable Housings - Reverse Fix

- ❖ Male cable housings fitted with floating slotted jackscrews, reverse fix style.
- ❖ Mates with equivalent layout female connectors fitted with reverse fix jackscrews.
- ❖ Housings only - compatible power and coax male contacts must be purchased separately.
- ❖ For other combinations shown on the Technical Drawing, please consult our Experts at www.harwin.com/contact.

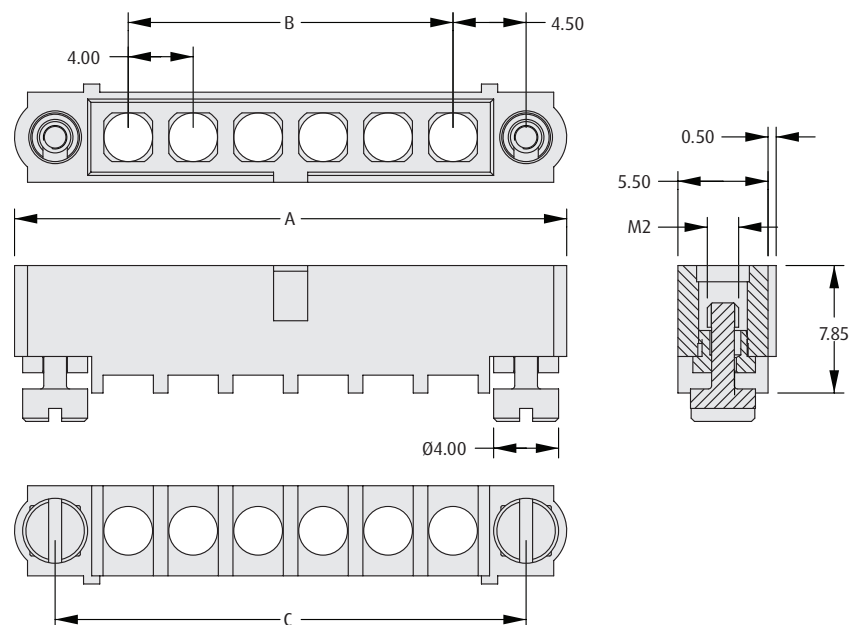


DATAMATE MIX-TEK

REVERSE FIX

CALCULATION

A	B + 14
B	(No. of contact positions - 1) x 4
C	B + 9



HOW TO ORDER

M80 - 273 MA XX - 00 - 00

SERIES CODE

HOUSING

273 Male

NO. OF POWER/COAX CONTACT POSITIONS

02, 03, 04, 06, 08

JACKSCREW

MA Floating slotted, reverse fix

All dimensions in mm.

Datamate Mix-Tek Cable Contacts

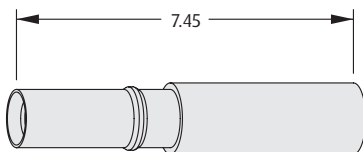
Female Signal Contacts

- Compatible with the signal + power/coax housings. See following pages for power and coax contacts.

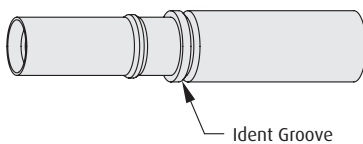


CRIMP CONTACTS

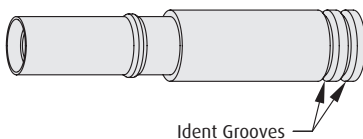
Large Bore (22 AWG)



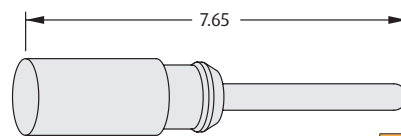
Small Bore (24 to 28 AWG)



Extra Small Bore (28 to 32 AWG)



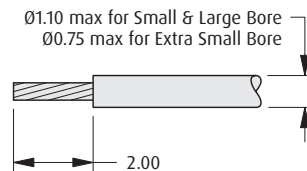
DUMMY CONTACT



ORDER CODE

M80-023

WIRE STRIPPING DETAILS



TOOLS

Recommended Crimp Tool - M22520/2-01
Positioner - T5747
Contact Insertion/Removal Tool - Z80-280
 Instruction sheets available at www.harwin.com/instructions.

HOW TO ORDER

M80 - 0XX 00 XX

SERIES CODE

TYPE	
011	Large Bore (22 AWG)
013	Small Bore (24-28 AWG)
019	Extra Small Bore (28-32 AWG)

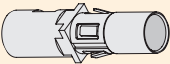
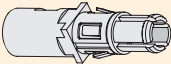
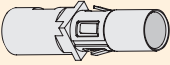
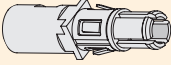

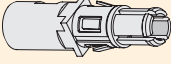
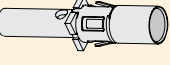
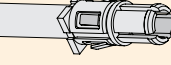







FINISH

01	Gold + Tin
05	Gold

All dimensions in mm.

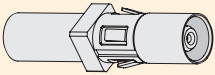
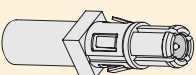
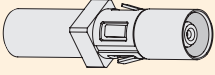
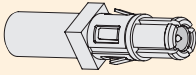
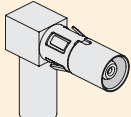
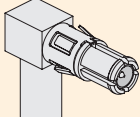
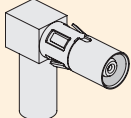
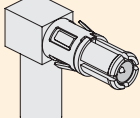
Datamate Mix-Tek Cable Contacts

- ❖ Compatible contacts for use with all Mix-Tek cable housings.
- ❖ Female standard power contacts mate with male standard power, female high power with male high power. Standard power contacts do not mate with high power.

STANDARD POWER					
Female	Male	Wire Size	Current Rating	Connection	Wire Strip Length
 M80-325	 M80-335	12 AWG	Up to 20A	Solder	5.00mm min
 M80-326	 M80-336	14 AWG	Up to 15A	Solder	5.00mm min
 M80-327	 M80-337	16 AWG	Up to 10A	Solder	5.00mm min
 M80-328	 M80-338	18 AWG	Up to 8A	Crimp	4.75-5.25mm
 M80-329	 M80-339	20 AWG	Up to 5A	Crimp	4.75-5.25mm
 M80-32A		12 AWG	Up to 20A	Solder	5.00mm min
 M80-32B		14 AWG	Up to 15A	Solder	5.00mm min
 M80-32C		16 AWG	Up to 10A	Solder	5.00mm min
HIGH POWER					
 M80-PF5	 M80-PM5	10 AWG	Up to 40A	Solder	5.00mm min
TOOLS					
Recommended Crimp Tool - Z80-294 Positioner - Z80-295 Contact Removal Tool - Z80-290			❖ Crimp Tool and Positioner required only for the Crimp contacts. No special tool is required for connecting wire to the solder contacts, other than standard soldering equipment. ❖ Instruction sheets available at www.harwin.com/instructions .		

Datamate Mix-Tek Cable Contacts

- Compatible contacts for use with all Mix-Tek cable housings.
- Straight coax contacts can mate with right-angle coax contacts.

COAX					
Female	Male	Coax Size	Coax Type	Connection	Wire Strip Length
 M80-305	 M80-315	Ø2.00mm	RG178	Crimp	See Figure 1
 M80-307	 M80-317	Ø2.70mm	RG174 RG179 RG316	Crimp	See Figure 1
 M80-308	 M80-318	Ø2.00mm	RG178	Crimp	See Figure 2
 M80-309	 M80-319	Ø2.70mm	RG174 RG179 RG316	Crimp	See Figure 2

TOOLS

Recommended Inner Contact Crimp Tool - Z80-292
Positioner for Inner Contact - Z80-291
Recommended Outer Sleeve Crimp Tool - Z80-293
Contact Removal Tool - Z80-290

Instruction sheets available at
www.harwin.com/instructions.

WIRE STRIPPING DETAILS

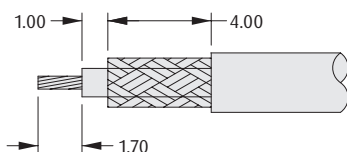


Figure 1

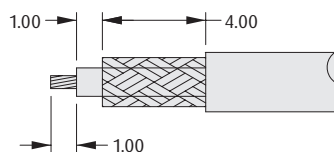


Figure 2

All dimensions in mm.

Datamate Mix-Tek Connectors

Metal Backshell Accessories

- ❖ Metal Backshells that can be used with any female cable connector (up to 12AWG), or male connectors with board mount jackscrews.
- ❖ Female backshells come with jackscrews - any existing jackscrews can be removed by removing the e-clip.
- ❖ Suitable for new designs, or in-production addition to enhance existing designs.



DATAMATE MIX-TEK

PART NUMBERING SYSTEM

M80 - 9 XX XX 02

SERIES CODE

FINISH

02 Nickel

TYPE

06 Male

45 Female with Slotted Jackscrews

46 Female with Hex Socket Jackscrews

EQUIVALENT NO. OF SIGNAL CONTACTS	NO. OF POWER ONLY OR COAX ONLY CONTACTS	NO. OF CONTACTS IN POWER/SIGNAL COMBINATION
08	2 contacts	-
10	-	2 Power, 2 Signal
12	3 contacts	2 Power, 4 Signal
14	-	2 Power, 6 Signal
16	4 contacts	2 Power, 8 Signal
18	-	4 Power, 2 Signal
20	5 contacts	2 Power, 12 Signal or 4 Power, 4 Signal
22	-	4 Power, 6 Signal
24	6 contacts	4 Power, 8 Signal
28	7 contacts	4 Power, 12 Signal
32	8 contacts	-
36	9 contacts	-
40	10 contacts	-
44	11 contacts	-
48	12 contacts	-

All dimensions in mm.

Datamate Mix-Tek Connectors

Female Metal Backshell

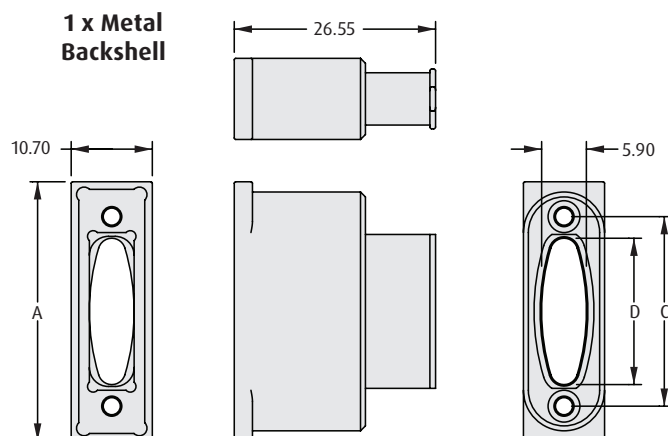
- ❖ Supplied as an accessory kit, including metal backshell, e-clips and the applicable jackscrews.
- ❖ To be used with the appropriate size of Female Cable connector kit without jackscrews (existing jackscrews can be removed).
- ❖ Gives 360 degree shielding when used with conductive braid and mated to a compatible male connector with metal backshell.
- ❖ Instruction sheets available at www.harwin.com/instructions.



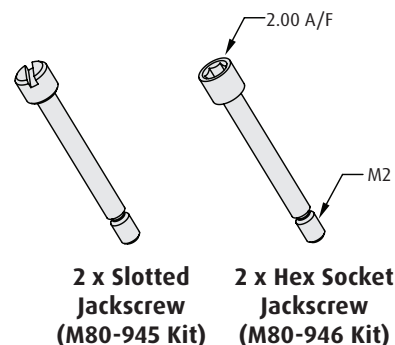
FEMALE

CALCULATION

A	$B + 16.2$
B	Equivalent no. of contacts - 2
C	$B + 7$
D	$B + 0.8$



4 x E-Clip
(2 spare)



2 x Slotted
Jackscrew
(M80-945 Kit)

2 x Hex Socket
Jackscrew
(M80-946 Kit)

E-CLIP TOOL



- ❖ For assembling E-Clips supplied with kit.

ORDER CODE

Z80-300

BAND-IT TIE



- ❖ For fixing braid to rear collar (requires Tie Dex II A30199 Micro Band tool).

ORDER CODE

M80-9470000	Length = 206.8mm
M80-9480000	Length = 362.0mm

HOW TO ORDER

M80 - 94 X XX 02

SERIES CODE

TYPE

5	With Slotted Jackscrews
6	With Hex Socket Jackscrews

FINISH

02 Nickel

EQUIVALENT NO. OF SIGNAL CONTACTS

08, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48

All dimensions in mm.

Datamate Mix-Tek Connectors

Male Metal Backshell

- ❖ Supplied as an accessory, to be used with existing male connectors.
- ❖ Can be fitted to either male vertical PCB connectors with board mount, or male cable connectors with panel mount jackscrews.
- ❖ Gives 360 degree shielding when mounted to a conductive panel and mated to a compatible female connector with metal backshell.

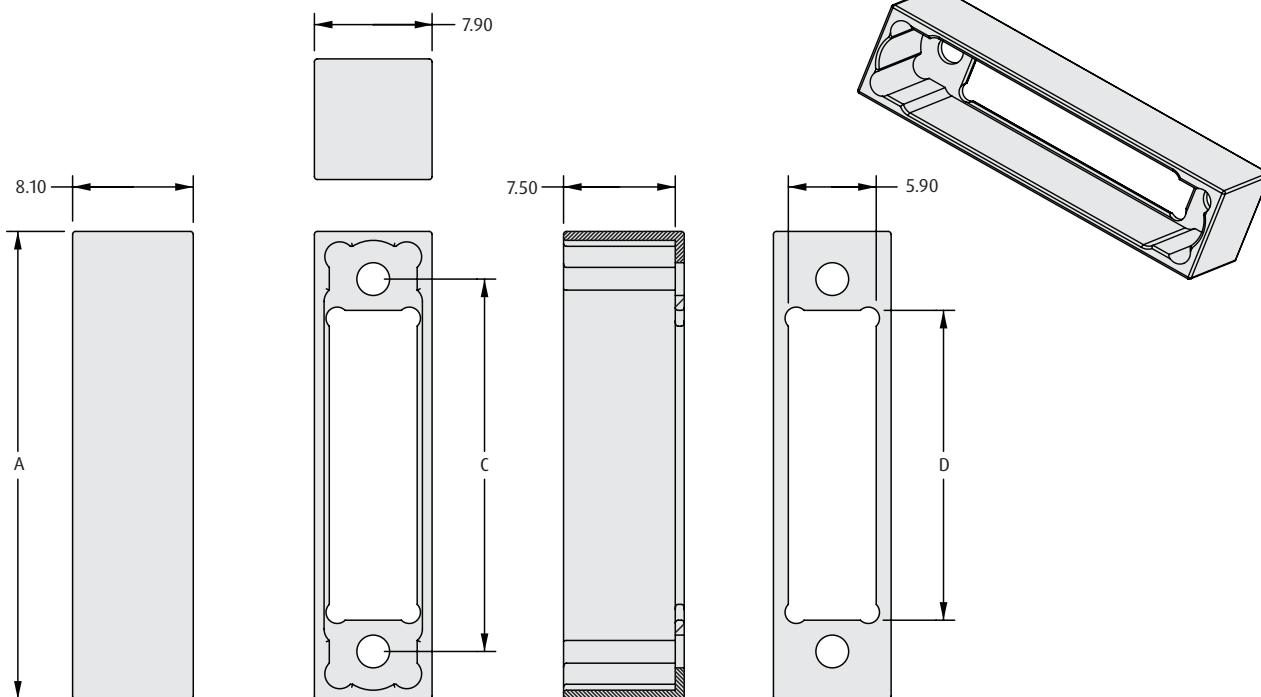


DATAMATE MIX-TEK

MALE

CALCULATION

A	$B + 13.7$
B	Equivalent no. of contacts - 2
C	$B + 7$
D	$B + 2.8$



HOW TO ORDER

M80 - 906 XX 02

SERIES CODE

FINISH

02 Nickel

EQUIVALENT NO. OF SIGNAL CONTACTS

08, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48

All dimensions in mm.