

# Datamate

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# Datamate Connectors Introduction

Datamate is a 2mm pitch High-Reliability, high performance connector range from Harwin. The range has a proven track record for performance under extreme conditions, and complies with British Standard 9525-F0033.

Datamate provides a low-profile solution for all variations of cable-to-board, board-to-board and cable-to-cable interconnect requirements. The range has seen many developments to match customer and market demands, and now includes 1-, 2- and 3-row configurations, vertical and horizontal in both Throughboard and Surface Mount designs for PCB flexibility. To meet the demanding requirements of vibration, shock and acceleration, added security is available with the options of latches (for space-saving) or jackscrews (for maximum strain-relief).

With the addition of Datamate Mix-Tek, the 3A signal contacts can be supplied in the same connector as 20A power, 40A high power, or 6GHz coax connections, giving complete flexibility of design. Other range additions include the 101Lok fixing – designed for fast mating with a quarter-turn bayonet-style jackscrew.

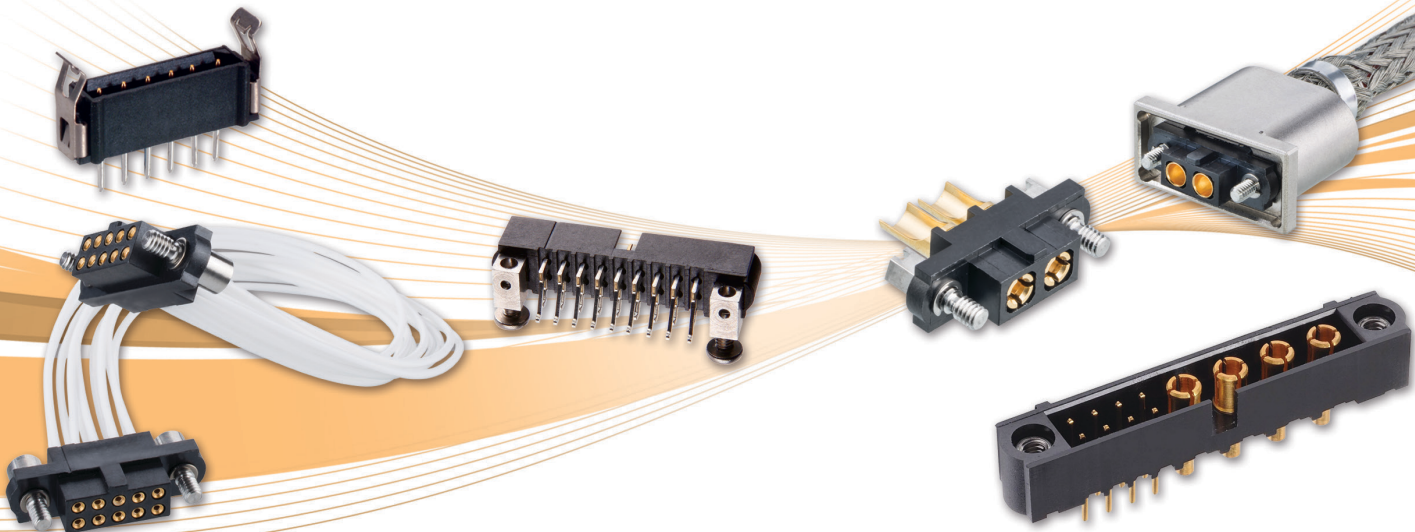
- ❖ 3A per contact (all electrically loaded; 3.3A per individual contact)
- ❖ 4-finger contact design to maintain electrical contact through high vibration and shock
- ❖ Beryllium Copper Contact for improved temperature range: -55°C to +125°C
- ❖ 500 Mating cycles durability
- ❖ Professional connector system at commercial prices
- ❖ Ongoing development program for High-Reliability connectors from Harwin
- ❖ Online videos and Cable assembly facility for assistance with cabling requirements

## Datamate Signal

- ❖ Strong stainless steel jackscrew fixings for maximum strain relief, or lightweight space-saving locking latches
- ❖ Lightweight metal and plastic hood options for shielding and additional cable protection
- ❖ Choices of pre-wired contacts or full cable assemblies from stock, for prototyping and full production

## Datamate Mix-Tek

- ❖ Multiple variations of power-only, power-and-signal, or coax only variations of connectors, available from stock
- ❖ Full cable assembly options for coax and power, in 2/4/6/8 contact connectors on 4mm pitch
- ❖ Compatible with lightweight metal hoods for shielding and cable protection

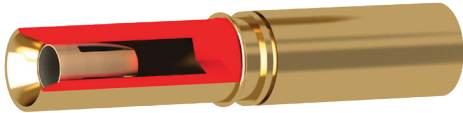




# Datamate Connectors Product Features

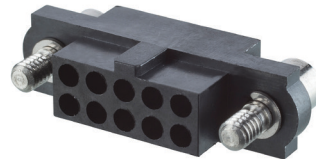
## Four Finger Beryllium Copper Contact

Proven high-reliability contact design ensures signal integrity under extremes of bump, vibration and shock. Durable to over 500 mating cycles.



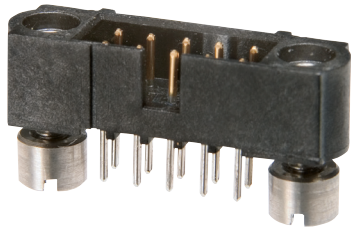
## Polarization

All Datamate designs feature polarization to prevent mis-mating in everyday use.



## Rugged construction

For use in harsh environments where high vibration, shock and temperature are a consideration.



## Innovative fast-acting bayonet fixing

101Lok utilises a 101-degree turn to quickly and simply lock mating connectors together.



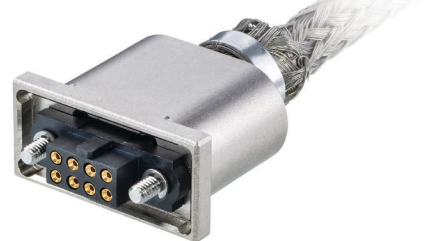
## Ready-made Cable Assemblies

Wide selection of stocked single and double-ended cable assemblies, with jackscrews or latching connectors, signal or power contacts.



## Single piece metal Backshells for EMC Shielding

Compatible with the J-Tek and Mix-Tek connector ranges, these robust hoods provide full 360° shielding, complete with retention feature on cable exit for fixing additional braiding.



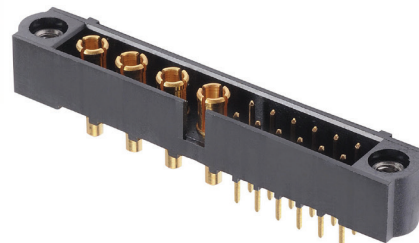
## Low outgassing emissions

Plastic housings with outgassing emissions within NASA & ESA recommendations, ready for space and low-pressure research.



## Comprehensive Operating Temperature

All connectors suitable for operational temperatures from -55°C to +125°C, due to high quality material choice.



All dimensions in mm.

# Datamate Mix-Tek Specification

## 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

<b>Current</b>	
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)
<b>Working voltage</b>	
At sea level 1013 mbar:	800V DC or AC <sub>rms</sub>
<b>Voltage proof</b>	
At sea level 1013 mbar:	1,200V DC or AC <sub>rms</sub>
<b>Contact resistance</b>	
Initial:	20mΩ max
After conditioning:	25mΩ max
<b>Insulation resistance</b>	
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 <sup>2</sup> (10G), duration 6h
*Bump severity:	390m/s <sup>2</sup> (40G), 4000 ±10 bumps
*Shock severity:	981m/s <sup>2</sup> (100G) for 6ms
*Acceleration severity:	490m/s <sup>2</sup> (50G)

\* Tested with connectors with Jackscrews.

## Power Contacts

### Materials

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

### Electrical

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

### Mechanical

<b>Insertion force (max)</b>	
32x, 33x:	8N
PFx, PMx:	15N
Withdrawal force (min):	0.5N
<b>Contact replacement in connector:</b>	
	5 times
<b>Power contact accommodation</b>	
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 <sub>rms</sub>
Contact resistance:	6mΩ max
Insulation resistance:	10 <sup>6</sup> MΩ at 250V AC <sub>rms</sub>

### 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		

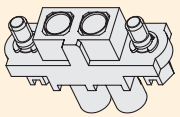
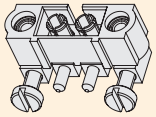
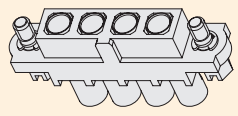
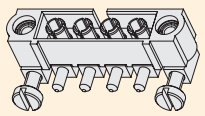
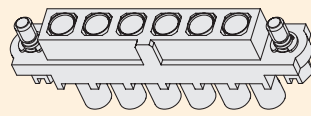
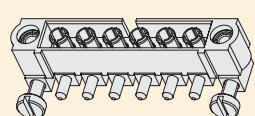
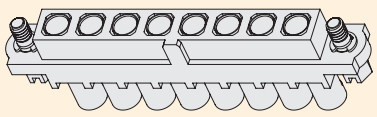
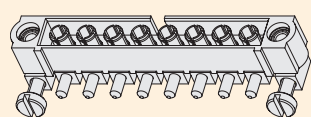
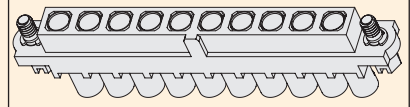
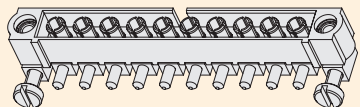
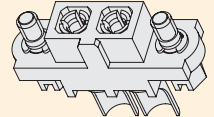
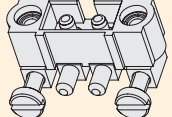
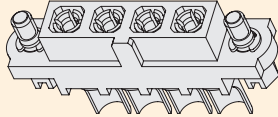
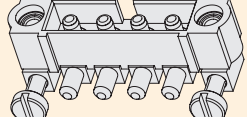
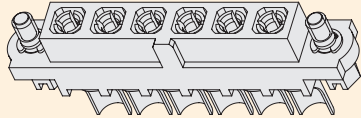
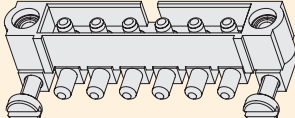
## Mating Profiles

		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.

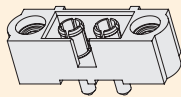
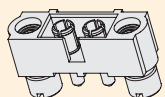
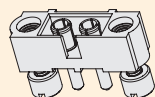
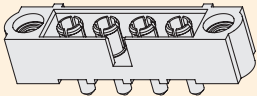
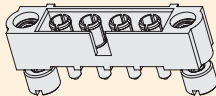
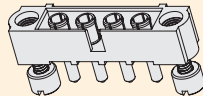
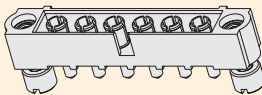
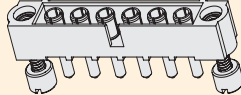
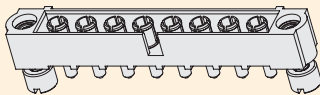
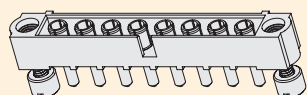
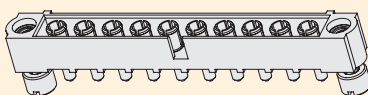
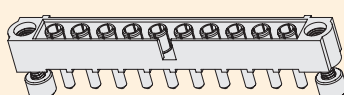
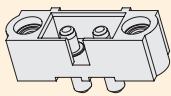
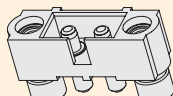
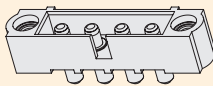
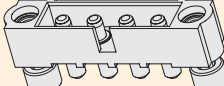
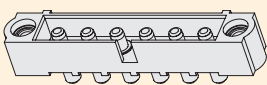
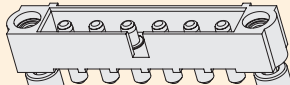
		TYPE		
		Cable Assemblies	Female Cable - Hex Slotted Jackscrews	Male Horizontal 3.5mm PC Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	Female Single Ended (Female to Cut End) Hex Socket Jackscrews M80-FC325F1-02-0150L Male Single Ended (Male to Cut End) Jackscrew Fixing M80-MC335M1-02-0150L	 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.

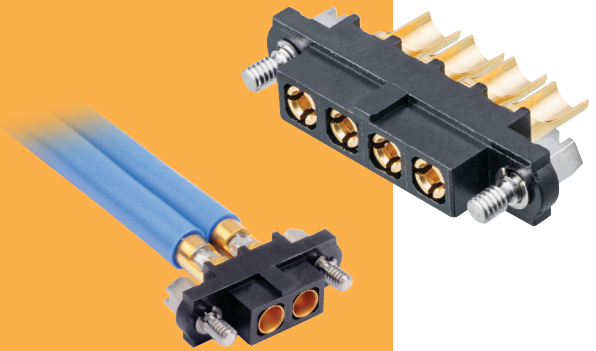
		TYPE		
		Male Vertical 3.5mm Tail - Jackscrew Fixing	Male Vertical 3.5mm Tail - 3.5mm Board Mount Jackcrew	Male Vertical 5mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	 M80-5000000M1-02-331-00-000	 M80-5000000M2-02-331-00-000	 M80-5000000M3-02-332-00-000
	4 Power	 M80-5000000M1-04-331-00-000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



DATAMATE POWER

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

All dimensions in mm.

# Datamate Power Connectors

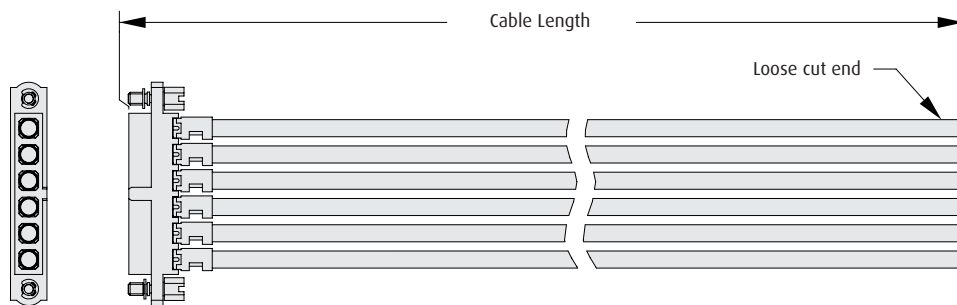
## Female Cable Assemblies

- 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.

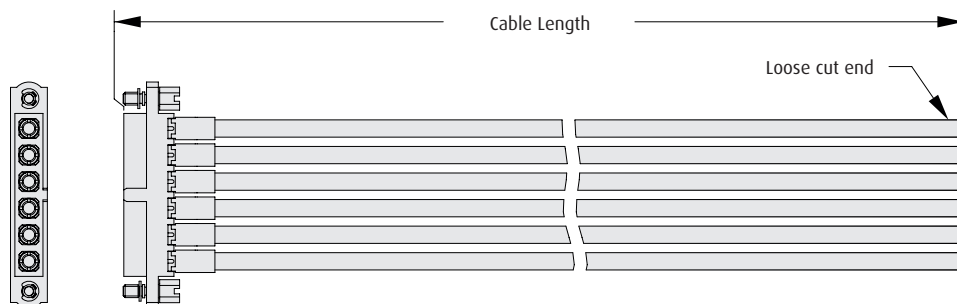


DATAMATE POWER

### STANDARD POWER



### HIGH POWER



### HOW TO ORDER

**M80 - FC XXX F1 - XX - 0150 L**

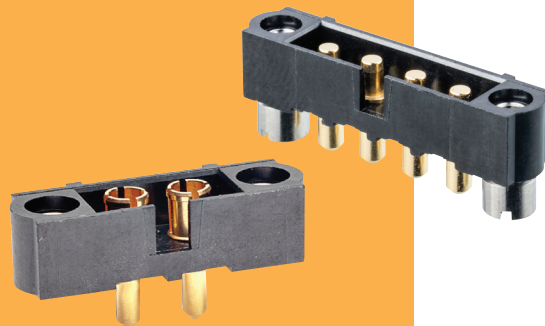
<b>SERIES CODE</b>	M80	<b>POWER CONTACTS PART NO.</b>	FC	<b>NO. OF POWER CONTACTS</b>	02, 04, 06, 08
		325 Standard Power	XXX		
		PF5 High Power	F1		
<b>JACKSCREW</b>	F1 Hex Slotted Jackscrews		XX	<b>TERMINATION - SECOND END</b>	L Loose cut end
			0150	<b>CABLE LENGTH</b>	0150 150mm

All dimensions in mm.

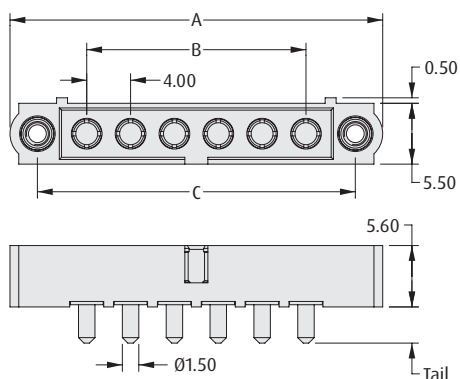
# Datamate Power Connectors

## Male Vertical Throughboard

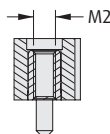
- ❖ A selection of stocked Datamate Mix-Tek solder tail standard layouts.
- ❖ Choice to suit two PCB thicknesses and two stud lengths.
- ❖ Standard Power contacts rated to 20A.
- ❖ High Power rated to 40A nominal, up to 80A max.



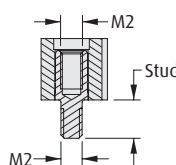
### STANDARD POWER



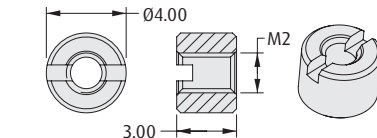
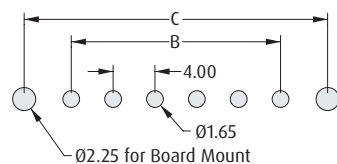
**Jackscrew fixing**



**Jackscrew with Board Mount**



**Recommended PC Board Pattern**

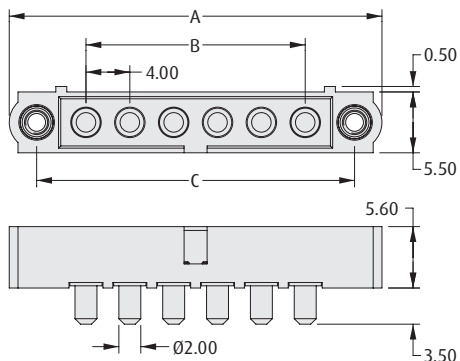


**Board Mount Nut, 2 per connector**

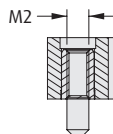
#### CALCULATION

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

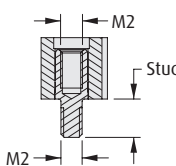
### HIGH POWER



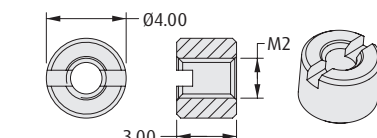
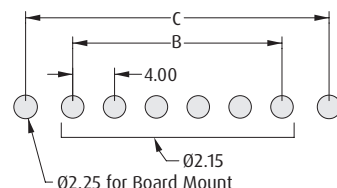
**Jackscrew fixing**



**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

<b>M1</b>	Jackscrew only
<b>M2</b>	With 3.5mm Board Mount stud
<b>M3</b>	With 5mm Board Mount stud

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

#### NO. OF POWER CONTACTS

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

#### POWER CONTACTS PART NO.

<b>331</b>	3.5mm Tail Standard Power
<b>332</b>	5mm Tail Standard Power
<b>PM1</b>	3.5mm Tail High Power

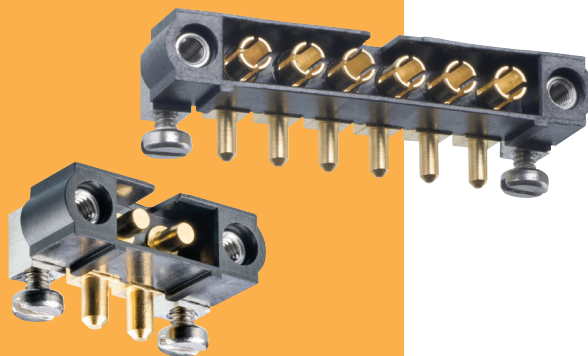
All dimensions in mm.



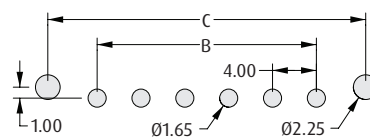
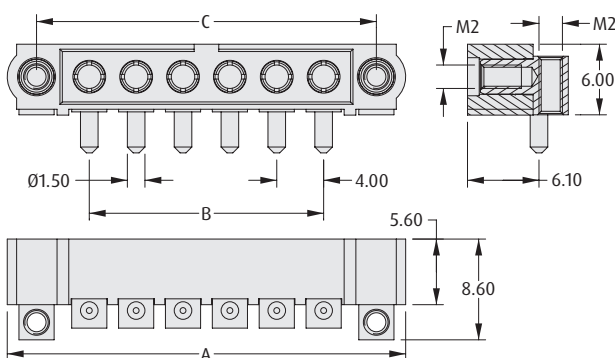
# Datamate Power Connectors

## 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.

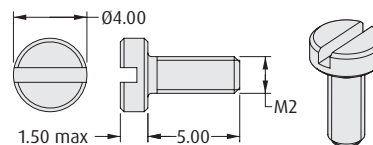


### STANDARD POWER



Recommended PC Board Pattern

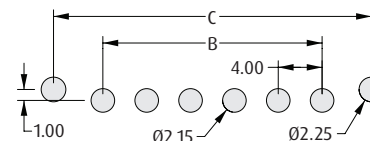
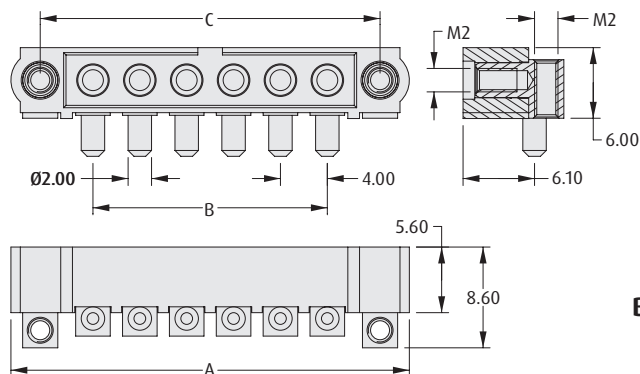
Board Mount Bolt,  
2 per connector



#### CALCULATION

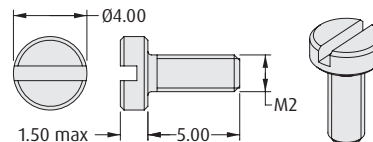
<b>A</b>	$B + 14$
<b>B</b>	$(\text{No. of Power contacts} - 1) \times 4$
<b>C</b>	$B + 9$

### HIGH POWER



Recommended PC Board Pattern

Board Mount Bolt,  
2 per connector



### HOW TO ORDER

**M80 - 500000 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.

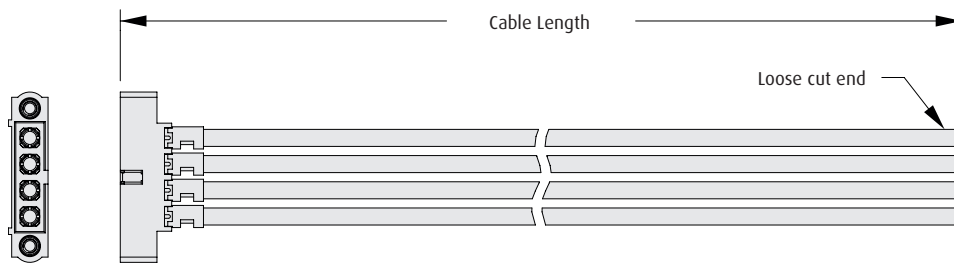
# Datamate Power Connectors

## Male Cable Assemblies

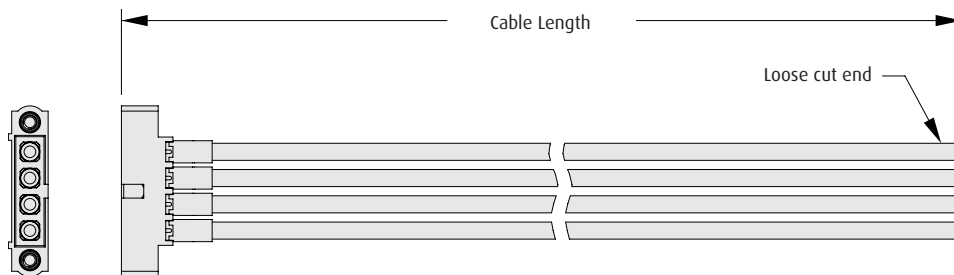
- ❖ Fully assembled connectors, fixings and cable in standard configurations.
- ❖ Standard Power contacts are rated to 20A, and are fitted with 12AWG, white PTFE-insulated cables.
- ❖ High Power are rated to 40A nominal, up to 80A max. Fitted with 10AWG, white PTFE-insulated cables.



### STANDARD POWER



### HIGH POWER



### HOW TO ORDER

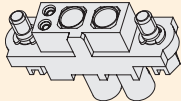
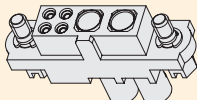
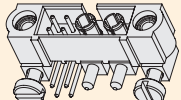
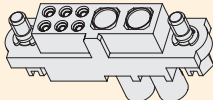
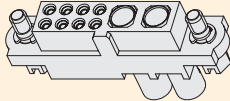
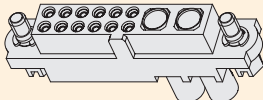
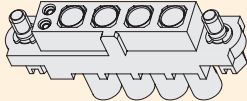
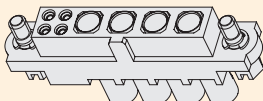
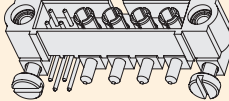
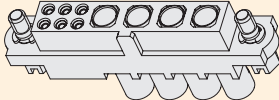
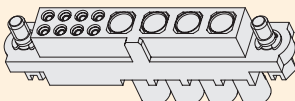
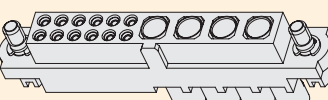
**M80 - MC XXX M1 - XX - 0150 L**

<b>SERIES CODE</b>	M80	<b>POWER CONTACTS PART NO.</b>	MC	<b>JACKSCREW</b>	M1	<b>NO. OF POWER CONTACTS</b>	XX	<b>TERMINATION - SECOND END</b>	L	<b>CABLE LENGTH</b>	0150
		335 Standard Power		Internal Jackscrews		02, 04, 06, 08		Loose cut end		150mm	
		PM5 High Power									

All dimensions in mm.

# Datamate Power/Signal Connectors

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

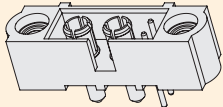
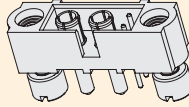
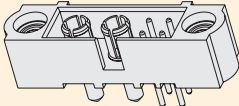
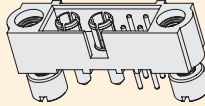
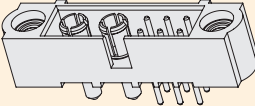
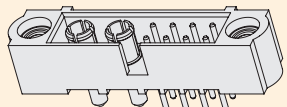
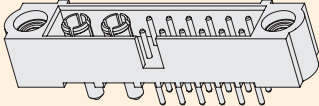
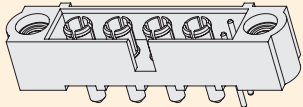
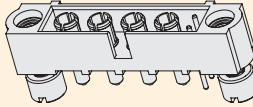
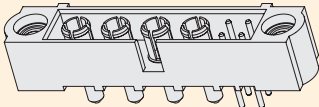
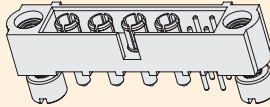
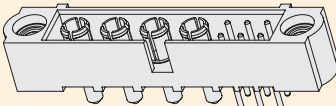
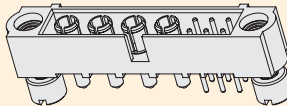
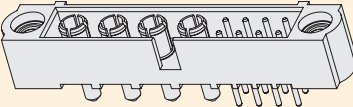
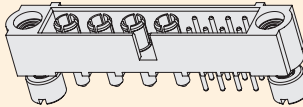
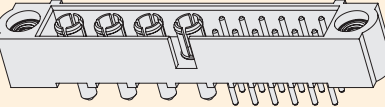
		TYPE	
		Female Cable - Hex Slotted Jackscrews	Male Horizontal 3mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Power	2 Signal  M80-4C10205F1-02-325-00-000	
	4 Signal  M80-4C10405F1-02-325-00-000	 M80-5L10405M5-02-333-00-000	
	6 Signal  M80-4C10605F1-02-325-00-000		
	8 Signal  M80-4C10805F1-02-325-00-000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

All dimensions in mm.

# Datamate Power/Signal Connectors

DATAMATE POWER/SIGNAL

- 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	2 Signal  M80-5T10205M1-02-331-00-000	2 Signal  M80-5T10205M2-02-331-00-000
		4 Signal  M80-5T10405M1-02-331-00-000	4 Signal  M80-5T10405M2-02-331-00-000
		6 Signal  M80-5T10605M1-02-331-00-000	
		8 Signal  M80-5T10805M1-02-331-00-000	
		12 Signal  M80-5T11205M1-02-331-00-000	
TOTAL NO. OF CONTACTS	4 Power	2 Signal  M80-5T10205M1-04-331-00-000	2 Signal  M80-5T10205M2-04-331-00-000
		4 Signal  M80-5T10405M1-04-331-00-000	4 Signal  M80-5T10405M2-04-331-00-000
		6 Signal  M80-5T10605M1-04-331-00-000	6 Signal  M80-5T10605M2-04-331-00-000
		8 Signal  M80-5T10805M1-04-331-00-000	8 Signal  M80-5T10805M2-04-331-00-000
		12 Signal  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

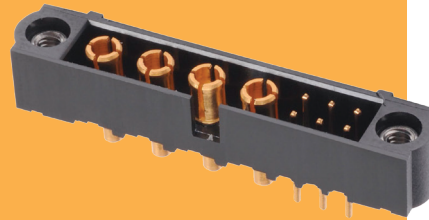
SIGNAL AND POWER	CALCULATION	SPARE CONTACTS						
	<table border="1"> <tr> <td><b>A</b></td> <td>B + 13</td> </tr> <tr> <td><b>B</b></td> <td>(No. of Power contacts - 1) x 4 + Total no. of Signal contacts + 1</td> </tr> <tr> <td><b>C</b></td> <td>B + 8</td> </tr> </table>	<b>A</b>	B + 13	<b>B</b>	(No. of Power contacts - 1) x 4 + Total no. of Signal contacts + 1	<b>C</b>	B + 8	<p><b>Signal (24 to 28 AWG)</b></p> <p>Indent Groove</p> <p><b>ORDER CODE</b> M80-0130005</p> <p><b>Standard Power (12 AWG)</b></p> <p><b>ORDER CODE</b> M80-325</p>
	<b>A</b>	B + 13						
	<b>B</b>	(No. of Power contacts - 1) x 4 + Total no. of Signal contacts + 1						
<b>C</b>	B + 8							
<p><b>TOOLS</b></p> <p><b>Recommended Crimp Tool (Signal)</b> - M22520/2-01  <b>Positioner (Signal)</b> - T5747  <b>Contact Insertion/Removal Tool (Signal)</b> - Z80-280  <b>Contact Removal Tool (Power)</b> - Z80-290</p> <ul style="list-style-type: none"> <li>❖ No special tooling required for connecting Power wire, other than standard soldering equipment.</li> <li>❖ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>	<p><b>WIRE STRIPPING DETAILS</b></p> <p>01.10 max for Signal 02.25 for Standard Power</p> <p>2.00 for Signal 5.00 for Standard Power</p>							
<p><b>HOW TO ORDER</b></p> <p><b>M80 - 4C1 XX 05F1 - XX - 325 - 00 - 000</b></p> <table border="1" style="width: 100%;"> <tr> <td style="width: 30%;"><b>NO. OF SIGNAL CONTACTS</b></td> <td style="width: 40%;"></td> <td style="width: 30%;"><b>NO. OF POWER CONTACTS</b></td> </tr> <tr> <td>02, 04, 06, 08, 12</td> <td></td> <td>02, 04</td> </tr> </table> <p>Check image chart to confirm Off-The-Shelf sizes available</p>			<b>NO. OF SIGNAL CONTACTS</b>		<b>NO. OF POWER CONTACTS</b>	02, 04, 06, 08, 12		02, 04
<b>NO. OF SIGNAL CONTACTS</b>		<b>NO. OF POWER CONTACTS</b>						
02, 04, 06, 08, 12		02, 04						

All dimensions in mm.

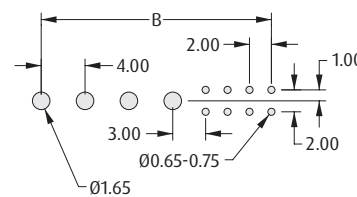
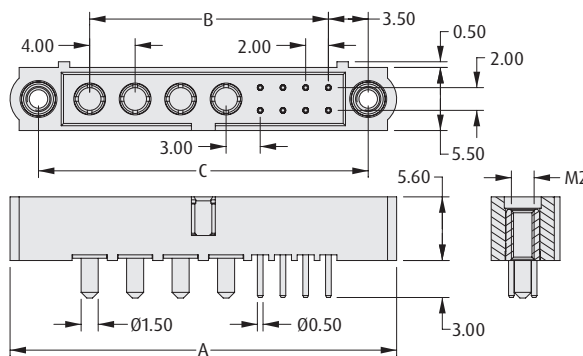
# Datamate Power/Signal Connectors

## 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

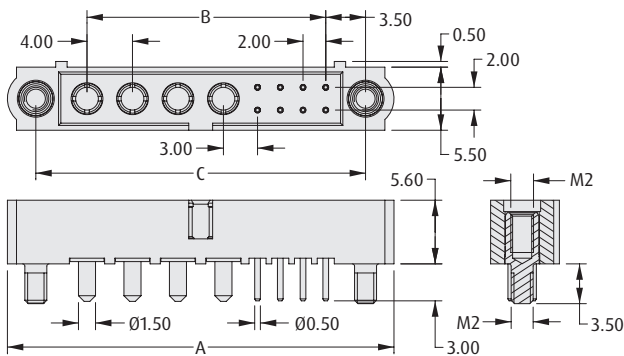


Recommended PC Board Pattern

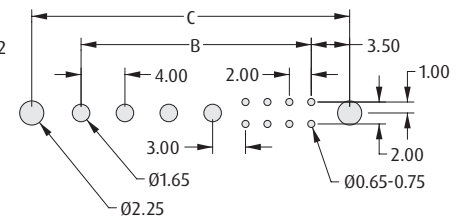
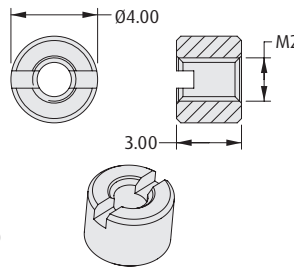
#### CALCULATION

<b>A</b>	B + 13
<b>B</b>	(No. of Power contacts - 1) x 4 + Total no. of Signal contacts + 1
<b>C</b>	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**

<b>M1</b>	Jackscrew only
<b>M2</b>	With 3.5mm Board Mount stud

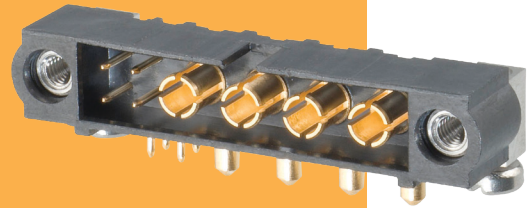
Check image chart to confirm Off-The-Shelf sizes available

All dimensions in mm.

# Datamate Power/Signal Connectors

## Male Power/Signal Horizontal Throughboard

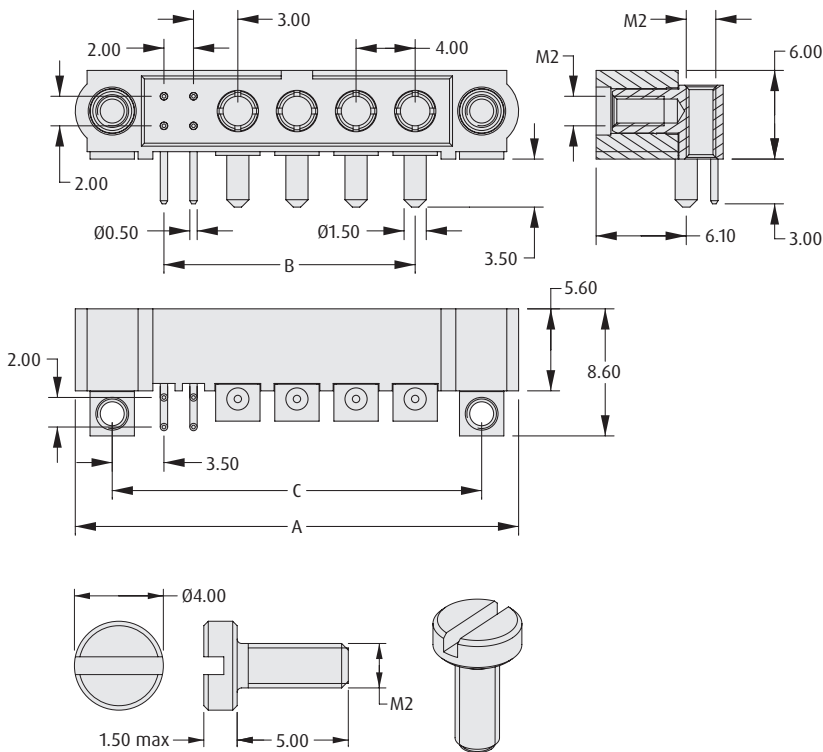
- ❖ A selection of stocked Datamate Mix-Tek solder tail standard layouts.
- ❖ Polarized housings.
- ❖ Standard Power contacts rated to 20A, signal to 3A.



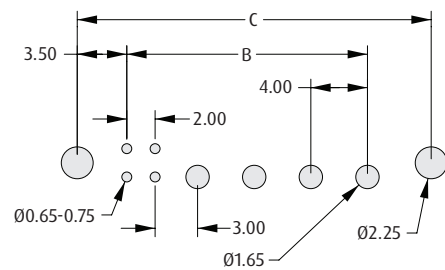
DATAMATE POWER/SIGNAL

### SIGNAL AND POWER

### CALCULATION



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



Recommended PC Board Pattern

**Board Mount Bolt, 2 per connector**

### HOW TO ORDER

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

NO. OF SIGNAL CONTACTS

04

NO. OF POWER CONTACTS

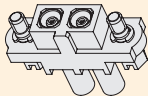
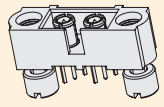
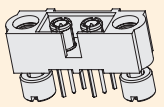
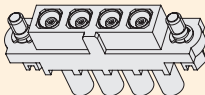
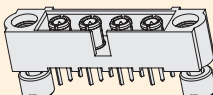
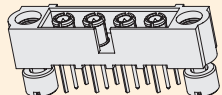
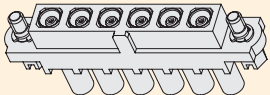
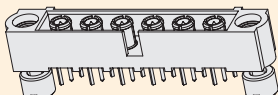
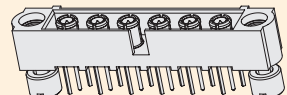
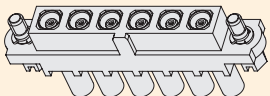
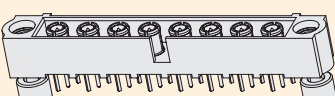
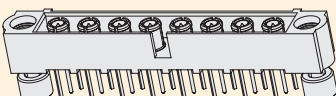
02, 04

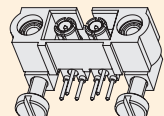
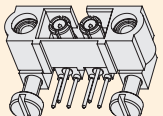
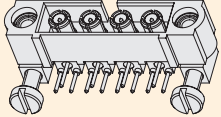
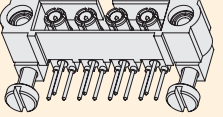
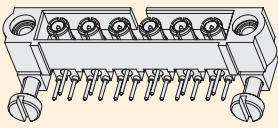
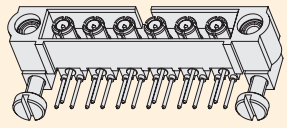
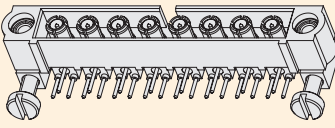
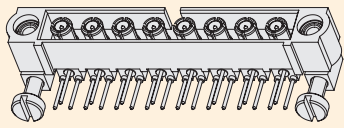
All dimensions in mm.

# Datamate Coax Connectors

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

DATAMATE COAX

		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

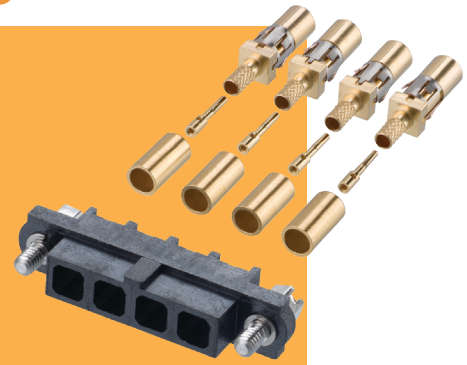
		TYPE		
		Female Cable Assemblies - Hex Slotted Jackscrews	Male Horizontal 3mm Tail - 5mm Board Mount Jackcrew	Male Horizontal 4.5mm Tail - 5mm Board Mount Jackcrew
TOTAL NO. OF CONTACTS	2 Coax	Single Ended (Female to Cut End) M80-FC305F1-02-0150L Double Ended (Female to Female) M80-FC305F1-02-0150F1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

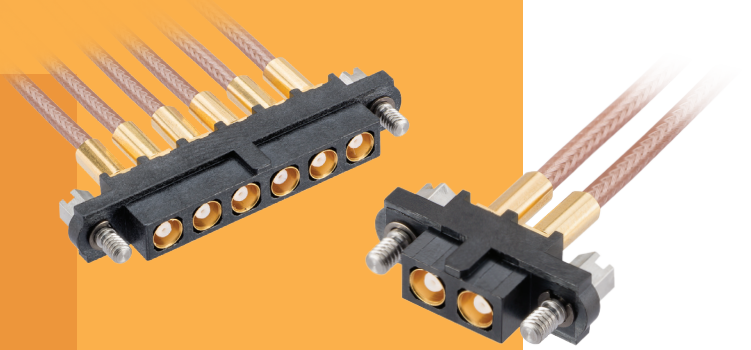
CABLE	CALCULATION	SPARE COAX CONTACTS						
	<table border="1"> <tr> <td><b>A</b></td> <td><math>B + 14</math></td> </tr> <tr> <td><b>B</b></td> <td><math>(\text{No. of Coax contacts} - 1) \times 4</math></td> </tr> <tr> <td><b>C</b></td> <td><math>B + 9</math></td> </tr> </table>	<b>A</b>	$B + 14$	<b>B</b>	$(\text{No. of Coax contacts} - 1) \times 4$	<b>C</b>	$B + 9$	<div style="border: 1px solid black; padding: 2px; margin-top: 10px; background-color: #f4a460; color: white;"> <b>ORDER CODE</b>  <b>M80-305</b> </div>
<b>A</b>	$B + 14$							
<b>B</b>	$(\text{No. of Coax contacts} - 1) \times 4$							
<b>C</b>	$B + 9$							
TOOLS	WIRE STRIPPING DETAILS							
<p><b>Recommended Inner Contact Crimp Tool</b> - Z80-292</p> <p><b>Positioner for Inner Contact</b> - Z80-291</p> <p><b>Recommended Outer Sleeve Crimp Tool</b> - Z80-293</p> <p><b>Contact Removal Tool</b> - Z80-290</p> <p>❖ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</p>								
HOW TO ORDER								
M80 - FC 305 F1 - XX								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="background-color: #f4a460; color: white;">COAX CONTACT TYPE</th> </tr> <tr> <td style="width: 30%; text-align: center;"><b>305</b></td> <td>Ø2.00mm cable</td> </tr> </table>	COAX CONTACT TYPE		<b>305</b>	Ø2.00mm cable	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="background-color: #f4a460; color: white;">NO. OF COAX CONTACTS</th> </tr> <tr> <td style="text-align: center;">02, 04, 06, 08</td> </tr> </table>	NO. OF COAX CONTACTS	02, 04, 06, 08	
COAX CONTACT TYPE								
<b>305</b>	Ø2.00mm cable							
NO. OF COAX CONTACTS								
02, 04, 06, 08								

All dimensions in mm.

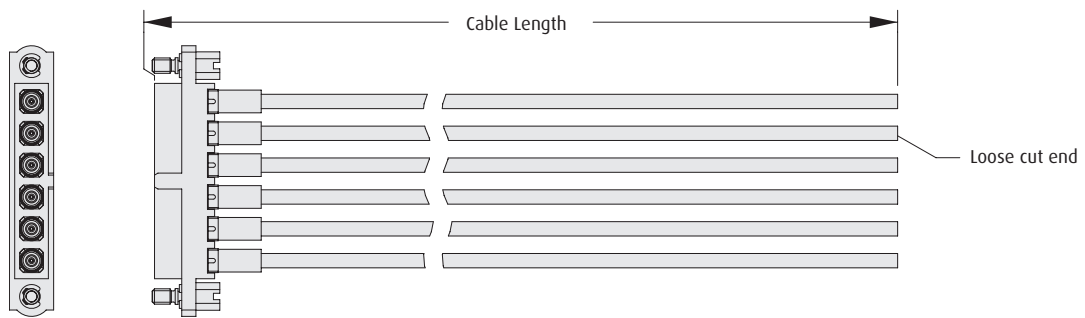
# Datamate Coax Connectors

## Jack (Female) Cable Assemblies

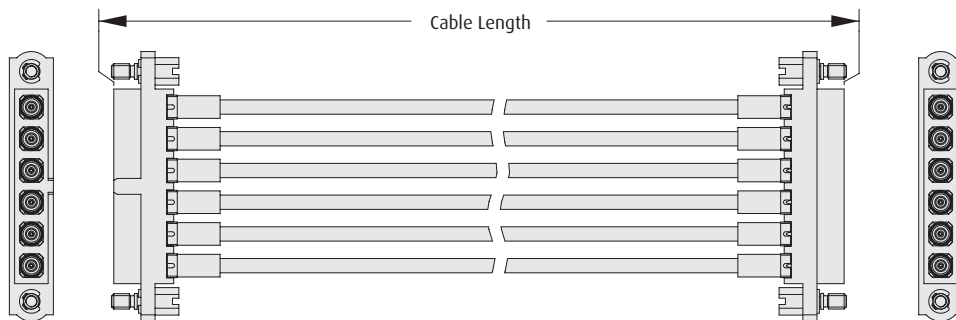
- A selection of stocked ganged multiport coax cable assemblies in standard layouts.
- 6GHz, 50Ω Coax contacts, assembled with RG178 cable.
- Hexagonal slotted jackscrew style.



### 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

<b>L</b>	Loose cut end
<b>F1</b>	Female connector

#### CABLE LENGTH

<b>0150</b>	150mm
<b>0300</b>	300mm
<b>0450</b>	450mm

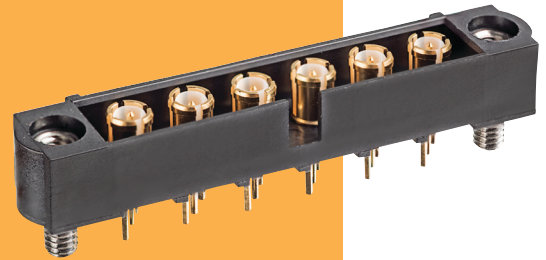
All dimensions in mm.

# Datamate Coax Connectors

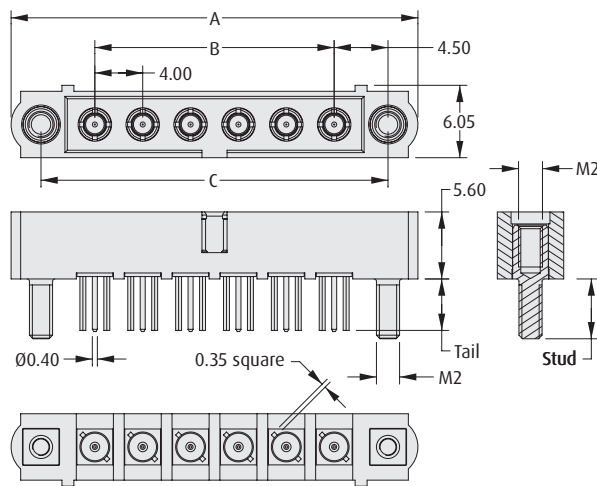
DATAMATE COAX

## 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.

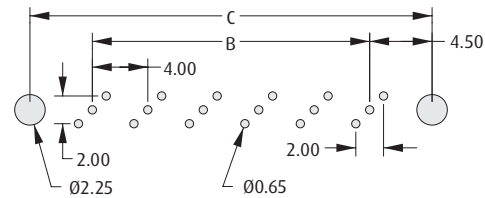


### VERTICAL



### CALCULATION

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



Recommended PCB Board Pattern

### HOW TO ORDER

**M80 - MV 3XX MX - XX**

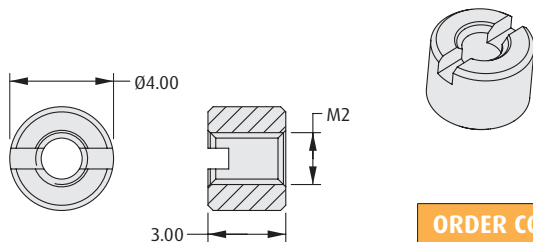
TYPE	
<b>311M2</b>	3mm Tail with 3.5mm Board Mount Stud
<b>312M3</b>	4.5mm Tail with 5mm Board Mount Stud

NO. OF COAX CONTACTS
<b>02, 04, 06, 08</b>

### REQUIRED HARDWARE

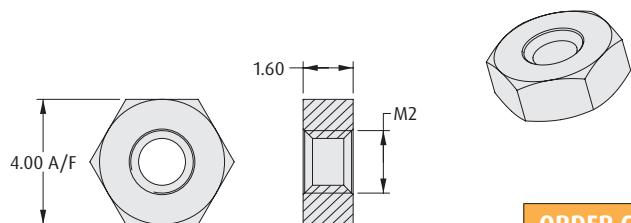
Order separately from connector

#### Slotted Board Mount Nut



**ORDER CODE**  
**M80-2130000B**

#### Hexagonal Board Mount Nut



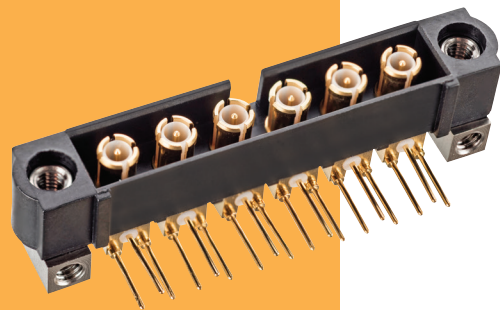
**ORDER CODE**  
**M80-2430000B**

All dimensions in mm.

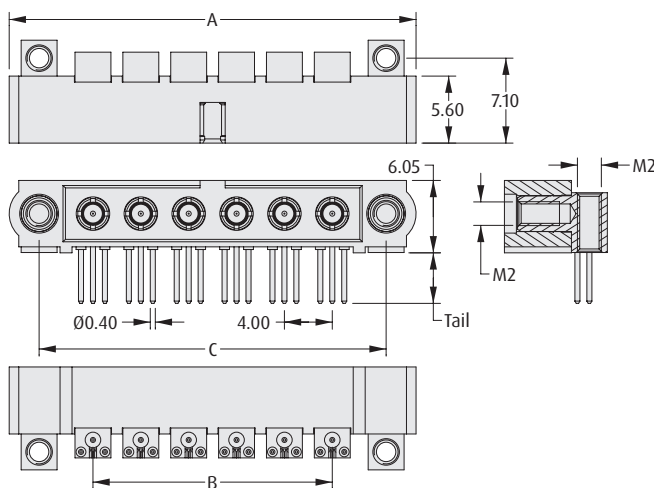
# Datamate Coax Connectors

## 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.

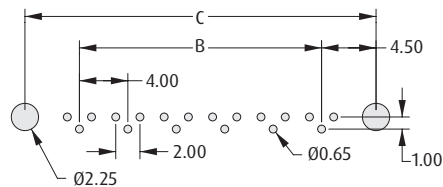


### HORIZONTAL



### CALCULATION

<b>A</b>	B + 14
<b>B</b>	(No. of Coax contacts - 1) x 4
<b>C</b>	B + 9



Recommended PCB Board Pattern

### HOW TO ORDER

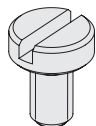
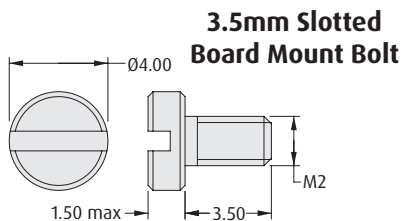
**M80 - MH 3XX M5 - XX**

TYPE	
313	3mm Tail
314	4.5mm Tail

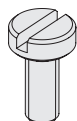
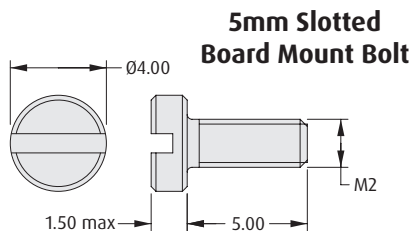
NO. OF COAX CONTACTS
02, 04, 06, 08

### REQUIRED HARDWARE

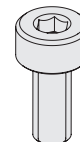
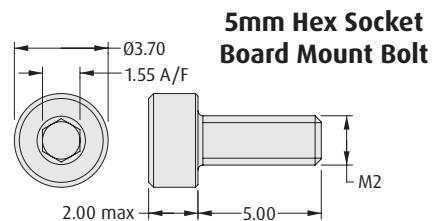
Order separately from connector



**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
<b>2 Signal</b>			M80-263F104-02-00	M80-263F106-02-00
<b>4 Signal</b>			M80-263F104-04-00	
<b>6 Signal</b>	M80-263F102-06-00			
<b>8 Signal</b>	M80-263F102-08-00	M80-263F103-08-00		
<b>12 Signal</b>			M80-263F104-12-00	

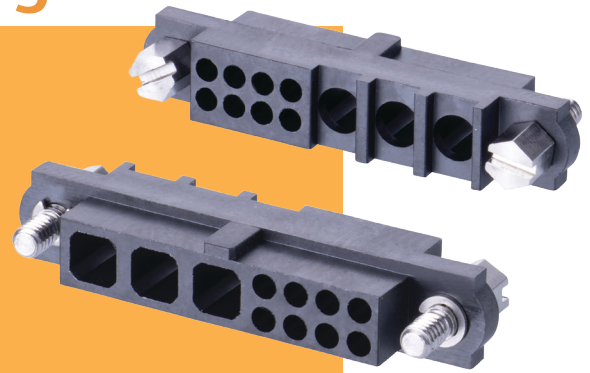
POWER/COAX ONLY HOUSINGS - STANDARD GENDER JACKSCREWS				
	Female Hex Slotted floating	Female Hex Socket floating	Female Guide Pin panel mount	Male Internal jackscrew
<b>2 Contact</b>	M80-263F102-00-00	M80-263F202-00-00	M80-263F302-00-00	M80-273M102-00-00
<b>3 Contact</b>	M80-263F103-00-00	M80-263F203-00-00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

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

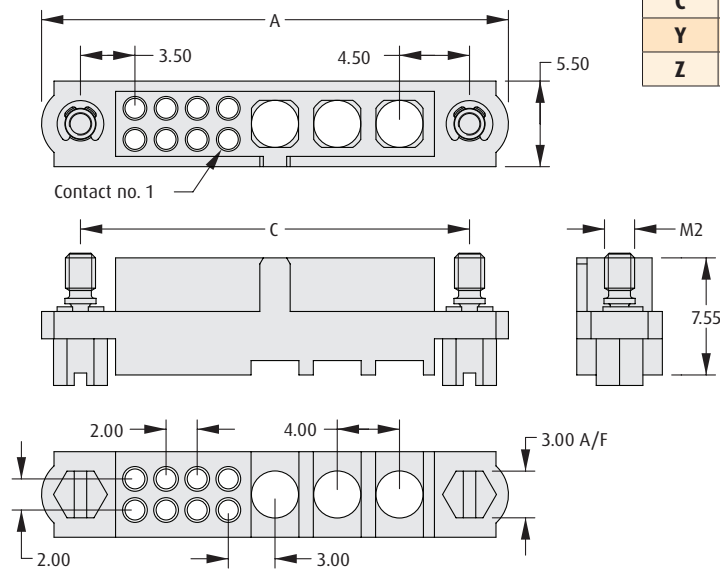
# Datamate Mix-Tek Housings

## 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](http://www.harwin.com/contact).



### SIGNAL + POWER/COAX



### CALCULATION

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

### HOW TO ORDER

**M80 - 263 F1 XX - XX - 00**

#### SERIES CODE

#### HOUSING

**263** Female

#### CONTACT POSITION COMBINATIONS

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

#### JACKSCREW

**F1** Floating Hex Slotted, Standard Gender

All dimensions in mm.

# Datamate Mix-Tek Housings

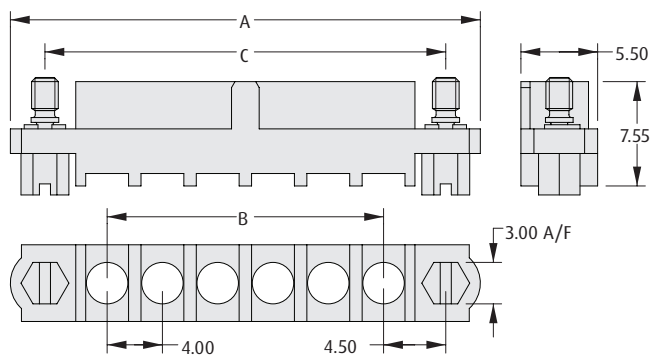
## Female Power/Coax Cable Housings

- 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](http://www.harwin.com/contact).



DATAMATE MIX-TEK

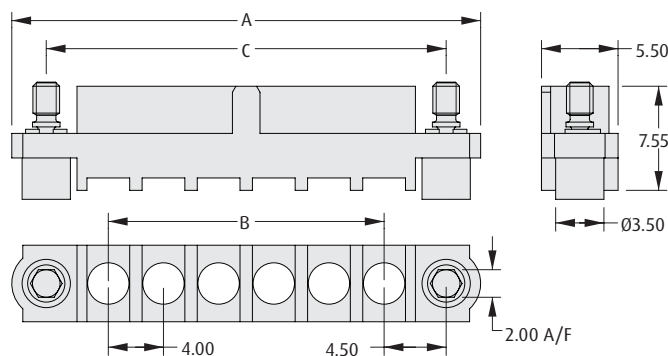
### HEX SLOTTED JACKSCREW



#### CALCULATION

<b>A</b>	B + 14
<b>B</b>	(No. of contact positions - 1) x 4
<b>C</b>	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.



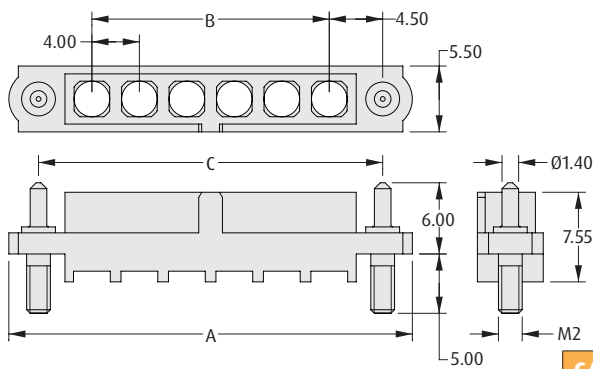
# Datamate Mix-Tek Housings

## 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](http://www.harwin.com/contact).



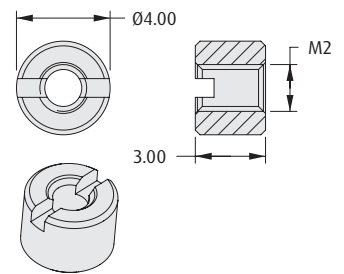
### GUIDE PIN WITH PANEL MOUNT



#### CALCULATION

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

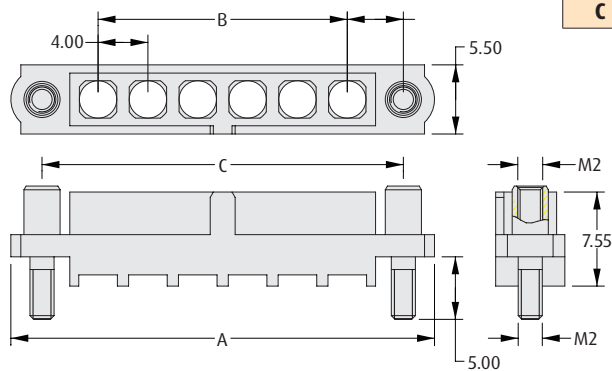
### SLOTTED NUT



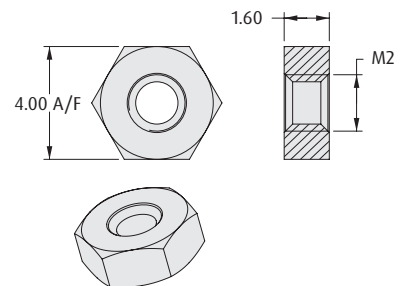
- Order separately from connector

**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

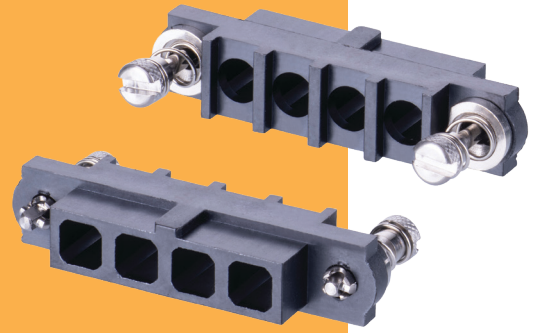
<b>F3</b>	Guide pin with 5mm panel mount stud
<b>F9</b>	Reverse fix with 5mm panel mount stud

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](http://www.harwin.com/contact).

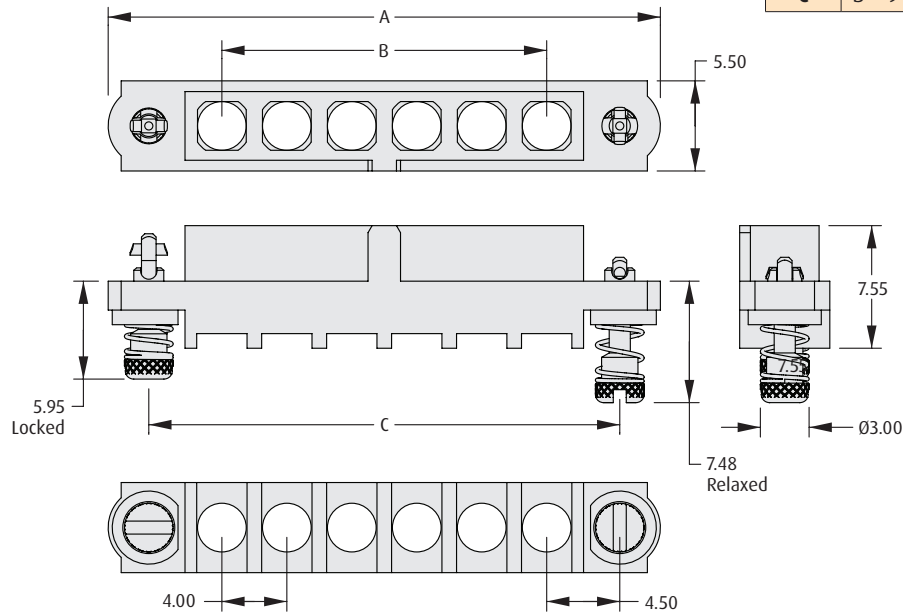


DATAMATE MIX-TEK

### 101LOK

### CALCULATION

<b>A</b>	B + 14
<b>B</b>	(No. of contact positions - 1) x 4
<b>C</b>	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.

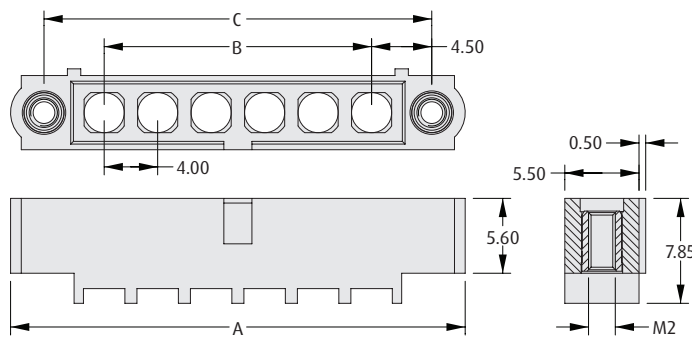
# Datamate Mix-Tek Housings

## 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](http://www.harwin.com/contact).



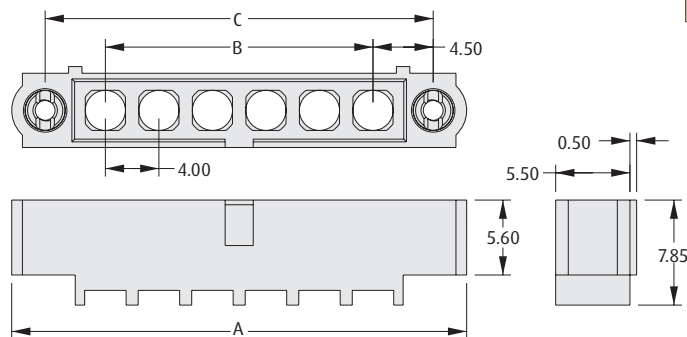
### INTERNAL THREADED JACKSCREW



#### CALCULATION

<b>A</b>	B + 14
<b>B</b>	(No. of contact positions - 1) x 4
<b>C</b>	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

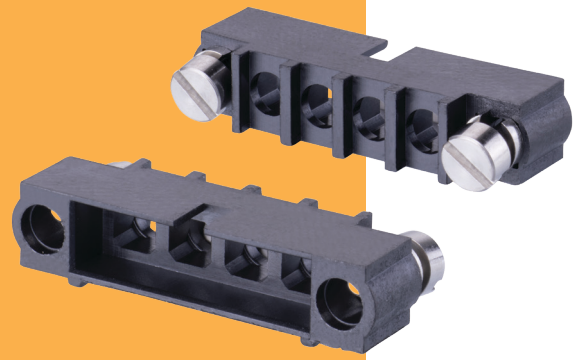
<b>M1</b>	Internally threaded jackscrew, standard gender
<b>MC</b>	101Lok receptacle fixing

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](http://www.harwin.com/contact).



DATAMATE MIX-TEK

REVERSE FIX		CALCULATION	
<b>A</b>	$B + 14$	<b>B</b>	$(\text{No. of contact positions} - 1) \times 4$
<b>C</b>	$B + 9$		

### HOW TO ORDER

**M80 - 273 MA XX - 00 - 00**

<b>SERIES CODE</b>	M80	<b>NO. OF POWER/COAX CONTACT POSITIONS</b>	02, 03, 04, 06, 08
<b>HOUSING</b>	273 Male	<b>JACKSCREW</b>	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.



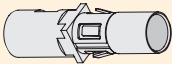

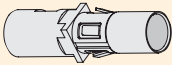
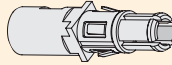
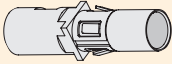
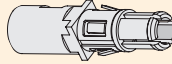
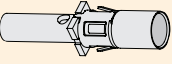
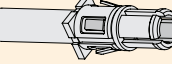

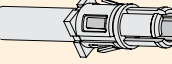
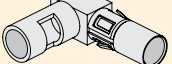
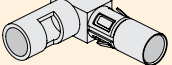
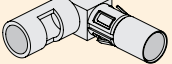


DATAMATE MIX-TEK

CRIMP CONTACTS	DUMMY CONTACT												
<p><b>Large Bore (22 AWG)</b></p> <p><b>Small Bore (24 to 28 AWG)</b></p> <p><b>Extra Small Bore (28 to 32 AWG)</b></p>	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin-top: 5px;"> <b>ORDER CODE</b>  <b>M80-023</b> </div>												
	WIRE STRIPPING DETAILS												
	TOOLS												
	<p><b>Recommended Crimp Tool</b> - M22520/2-01  <b>Positioner</b> - T5747  <b>Contact Insertion/Removal Tool</b> - Z80-280</p> <ul style="list-style-type: none"> <li>Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>												
HOW TO ORDER													
<p><b>M80 - OXX 00 XX</b></p>													
<div style="border: 1px solid black; padding: 2px; width: fit-content; margin-bottom: 10px;"> <b>SERIES CODE</b> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #f4a460;">TYPE</th> <th></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>011</b></td> <td>Large Bore (22 AWG)</td> </tr> <tr> <td style="text-align: center;"><b>013</b></td> <td>Small Bore (24-28 AWG)</td> </tr> <tr> <td style="text-align: center;"><b>019</b></td> <td>Extra Small Bore (28-32 AWG)</td> </tr> </tbody> </table>	TYPE		<b>011</b>	Large Bore (22 AWG)	<b>013</b>	Small Bore (24-28 AWG)	<b>019</b>	Extra Small Bore (28-32 AWG)	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin-top: 10px;"> <b>FINISH</b> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center;"><b>01</b></td> <td>Gold + Tin</td> </tr> <tr> <td style="text-align: center;"><b>05</b></td> <td>Gold</td> </tr> </tbody> </table>	<b>01</b>	Gold + Tin	<b>05</b>	Gold
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<b>01</b>	Gold + Tin												
<b>05</b>	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

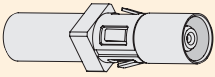
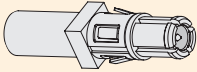
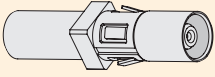
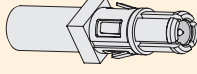
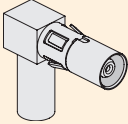
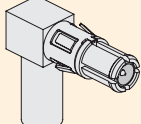
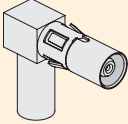
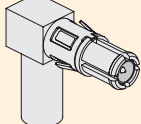
## TOOLS

**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](http://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](http://www.harwin.com/instructions).

## WIRE STRIPPING DETAILS

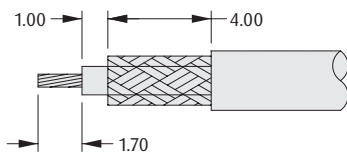


Figure 1

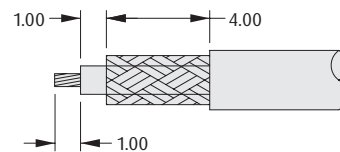


Figure 2

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**

<b>06</b>	Male
<b>45</b>	Female with Slotted Jackscrews
<b>46</b>	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
<b>08</b>	2 contacts	-
<b>10</b>	-	2 Power, 2 Signal
<b>12</b>	3 contacts	2 Power, 4 Signal
<b>14</b>	-	2 Power, 6 Signal
<b>16</b>	4 contacts	2 Power, 8 Signal
<b>18</b>	-	4 Power, 2 Signal
<b>20</b>	5 contacts	2 Power, 12 Signal or 4 Power, 4 Signal
<b>22</b>	-	4 Power, 6 Signal
<b>24</b>	6 contacts	4 Power, 8 Signal
<b>28</b>	7 contacts	4 Power, 12 Signal
<b>32</b>	8 contacts	-
<b>36</b>	9 contacts	-
<b>40</b>	10 contacts	-
<b>44</b>	11 contacts	-
<b>48</b>	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](http://www.harwin.com/instructions).



FEMALE		CALCULATION					
<p><b>1 x Metal Backshell</b></p>		<b>A</b>	$B + 16.2$				
		<b>B</b>	Equivalent no. of contacts - 2				
		<b>C</b>	$B + 7$				
		<b>D</b>	$B + 0.8$				
<p>4 x E-Clip (2 spare)</p> <p>2 x Slotted Jackscrew (M80-945 Kit)</p> <p>2 x Hex Socket Jackscrew (M80-946 Kit)</p>							
E-CLIP TOOL		BAND-IT TIE					
<p>❖ For assembling E-Clips supplied with kit.</p> <p><b>ORDER CODE</b> <b>Z80-300</b></p>		<p>❖ For fixing braid to rear collar (requires Tie Dex II A30199 Micro Band tool).</p> <p><b>ORDER CODE</b></p> <table border="1"> <tr> <td><b>M80-9470000</b></td> <td>Length = 206.8mm</td> </tr> <tr> <td><b>M80-9480000</b></td> <td>Length = 362.0mm</td> </tr> </table>		<b>M80-9470000</b>	Length = 206.8mm	<b>M80-9480000</b>	Length = 362.0mm
<b>M80-9470000</b>	Length = 206.8mm						
<b>M80-9480000</b>	Length = 362.0mm						
HOW TO ORDER							
<p><b>M80 - 94 X XX 02</b></p>							
<p><b>SERIES CODE</b></p>		<p><b>FINISH</b></p> <table border="1"> <tr> <td><b>02</b></td> <td>Nickel</td> </tr> </table>		<b>02</b>	Nickel		
<b>02</b>	Nickel						
<p><b>TYPE</b></p> <table border="1"> <tr> <td><b>5</b></td> <td>With Slotted Jackscrews</td> </tr> <tr> <td><b>6</b></td> <td>With Hex Socket Jackscrews</td> </tr> </table>		<b>5</b>	With Slotted Jackscrews	<b>6</b>	With Hex Socket Jackscrews	<p><b>EQUIVALENT NO. OF SIGNAL CONTACTS</b></p> <p>08, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48</p>	
<b>5</b>	With Slotted Jackscrews						
<b>6</b>	With Hex Socket Jackscrews						

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

### HOW TO ORDER

**M80 - 906 XX 02**

<b>SERIES CODE</b>	<b>FINISH</b>
M80 - 906	02 Nickel

<b>EQUIVALENT NO. OF SIGNAL CONTACTS</b>
08, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48

All dimensions in mm.

# Datamate J-Tek Specification

DATAMATE J-TEK

## Materials

<b>Housings:</b>	Glass-filled thermoplastic UL94V-0
<b>Female contacts</b>	
Standard J-Tek:	Brass shell, with Beryllium Copper inner contact
T-Contact:	Beryllium Copper
<b>Male contacts:</b>	Copper alloy
<b>Finish:</b>	See individual pages

## Electrical

### Current - Standard J-Tek

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)
Flex Circuit Assembly:	1.0A max per track (at 25°C)

### Current - T-Contact

Individual contacts in isolation:	8.5A max (at 25°C) 6.5A max (at 85°C)
All contacts simultaneously:	3.5A max (at 25°C) 2.6A max (at 85°C)

### Working voltage

At sea level 1013 mbar:	800V DC or AC peak
-------------------------	--------------------

### Voltage proof

At sea level 1013 mbar:	1,200V DC or AC peak
-------------------------	----------------------

### Contact resistance

Initial:	20mΩ max
After conditioning:	25mΩ max

### Insulation resistance

Initial:	1,000MΩ min
After conditioning:	100MΩ min

## Mechanical

### Durability

Standard J-Tek:	500 operations
T-Contact:	1,000 operations

### Insertion force (max)

Standard J-Tek:	2.8N
T-Contact:	4.0N

### Withdrawal force (min)

Standard J-Tek:	0.2N
T-Contact:	0.5N

### Signal crimp accommodation:

22 AWG to 32 AWG BS 3G 210 Type A, MIL-W-16878
---

## Environmental

**Environmental classification:** 55/125/56 days at 95% RH

**Operational temperature:** -55°C to +125°C

### \*Vibration sensitivity

Standard J-Tek:	10Hz to 2000Hz, 0.75mm, 98m/s <sup>2</sup> (10G), duration 6 hours
T-Contact:	10Hz to 2000Hz, 0.75mm, 390m/s <sup>2</sup> (40G), duration 6 hours

### \*Bump severity:

390m/s<sup>2</sup> (40G), 4000 ±10 bumps

### \*Shock severity:

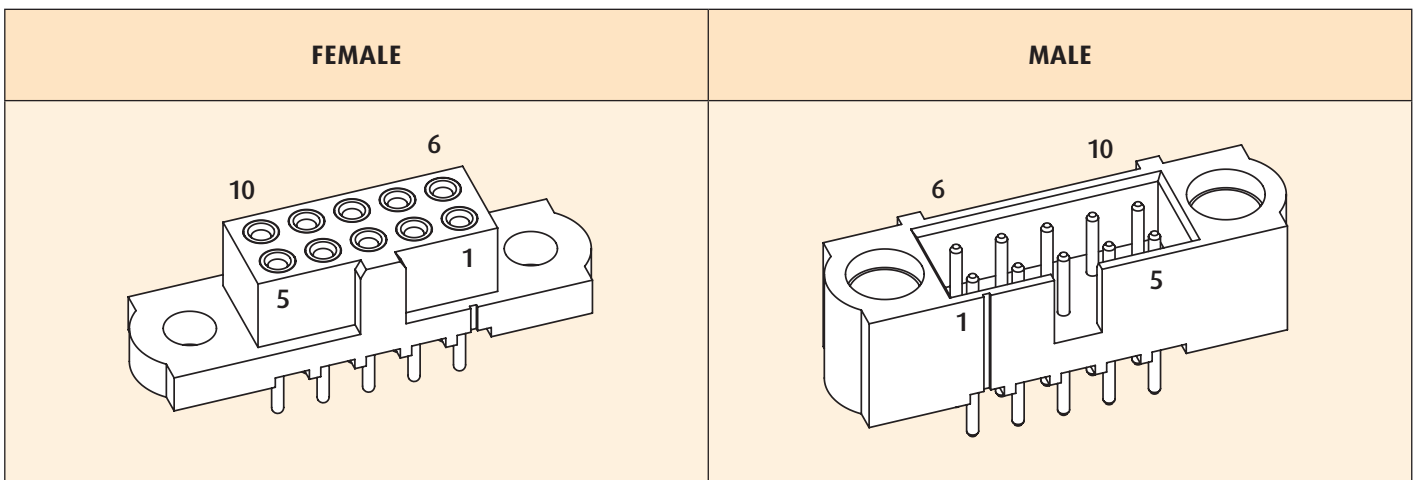
981m/s<sup>2</sup> (100G) for 6ms

### \*Acceleration severity:

490m/s<sup>2</sup> (50G)

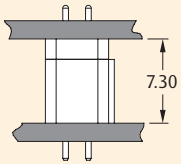
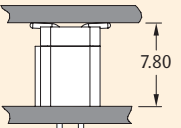
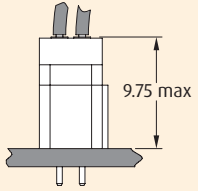
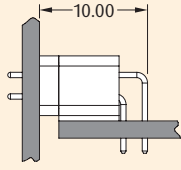
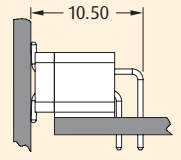
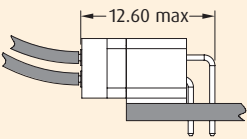
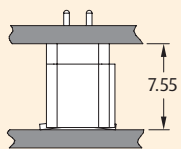
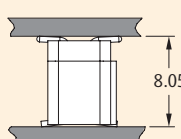
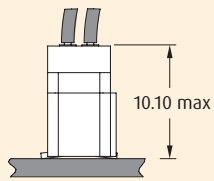
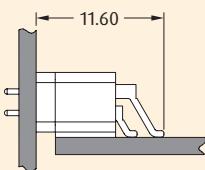
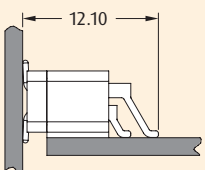
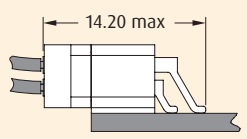
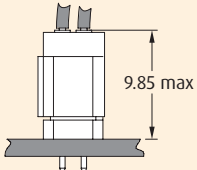
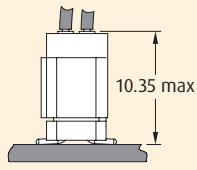
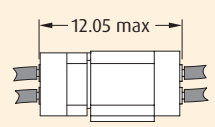
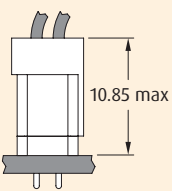
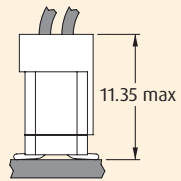
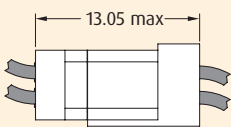
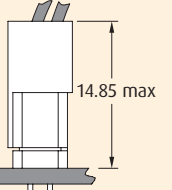
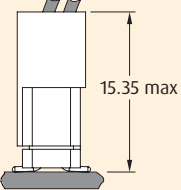
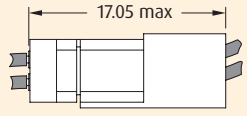
\* Tested with connectors with Jackscrews.

# Pin Numbering



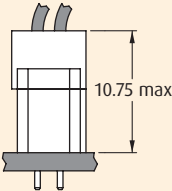
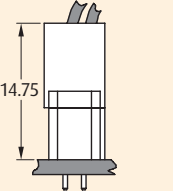
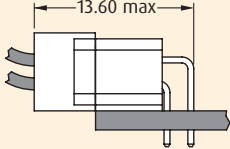
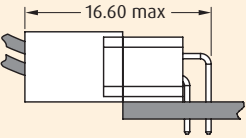
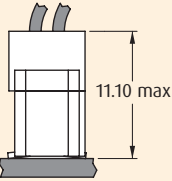
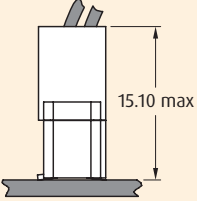
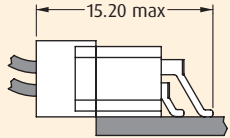
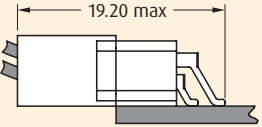
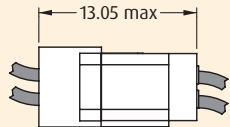
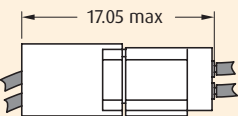
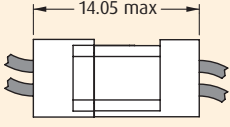
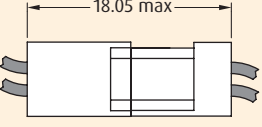
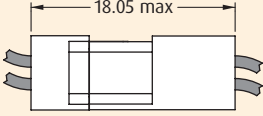
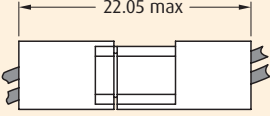
All dimensions in mm.

# Datamate J-Tek Mating Profiles

		FEMALE		
		VERTICAL THROUGHBOARD	VERTICAL SMT	CRIMP
MALE	VERTICAL THROUGHBOARD			
	HORIZONTAL THROUGHBOARD			
	VERTICAL SMT			
	HORIZONTAL SMT			
	CRIMP			
	CRIMP 1mm EXTENDED WALL			
	CRIMP 5mm EXTENDED WALL			

All dimensions in mm.

# Datamate J-Tek Mating Profiles

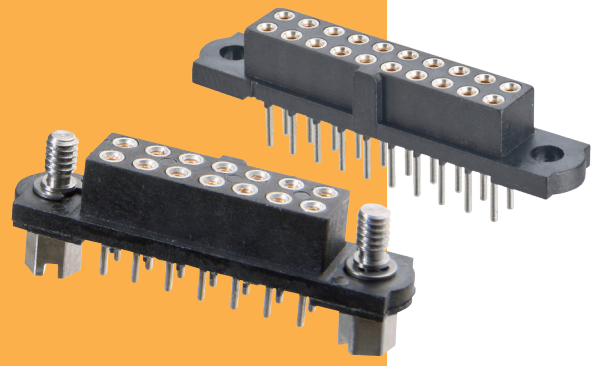
		FEMALE	
		CRIMP 1mm EXTENDED WALL	CRIMP 5mm EXTENDED WALL
<b>MALE</b>	<b>VERTICAL THROUGH-BOARD</b>		
	<b>HORIZONTAL THROUGH-BOARD</b>		
	<b>VERTICAL SMT</b>		
	<b>HORIZONTAL SMT</b>		
	<b>CRIMP</b>		
	<b>CRIMP 1mm EXTENDED WALL</b>		
	<b>CRIMP 5mm EXTENDED WALL</b>		

All dimensions in mm.

# Datamate J-Tek Connectors

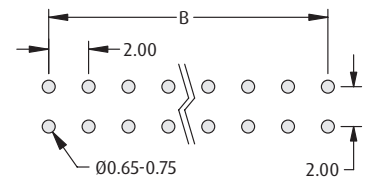
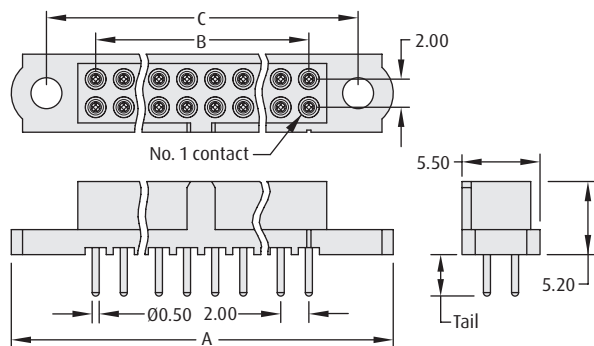
## Female Vertical Throughboard

- ❖ Fully shrouded contacts.
- ❖ Polarized housings.
- ❖ Mates with all Datamate J-Tek male connectors with compatible jackscrews.



DATAMATE J-TEK

### WITHOUT JACKSCREWS

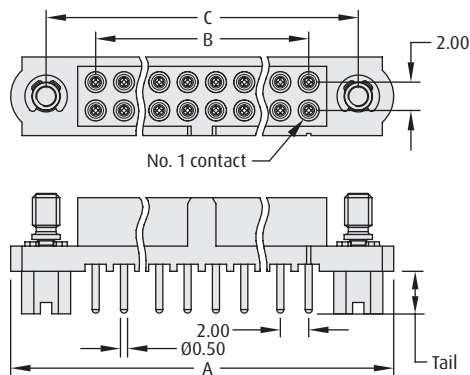


Recommended PC Board Pattern

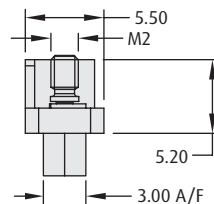
#### CALCULATION

<b>A</b>	B + 12
<b>B</b>	Total no. of contacts - 2
<b>C</b>	B + 7

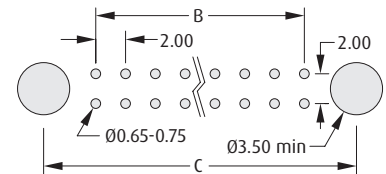
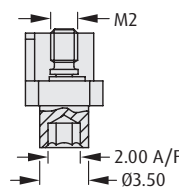
### WITH JACKSCREWS



#### Hex Slotted Jackscrew



#### Hex Socket Jackscrew



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 4 X X XX XX**

#### SERIES CODE

<b>0</b>	With Hex Slotted Jackscrews
<b>1</b>	Without Jackscrews
<b>2</b>	With Hex Socket Jackscrews

<b>0</b>	3mm Tails
<b>1</b>	4.5mm Tails

#### FINISH

<b>05</b>	Gold
<b>42</b>	Gold + Tin

#### TOTAL NO. OF CONTACTS

04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

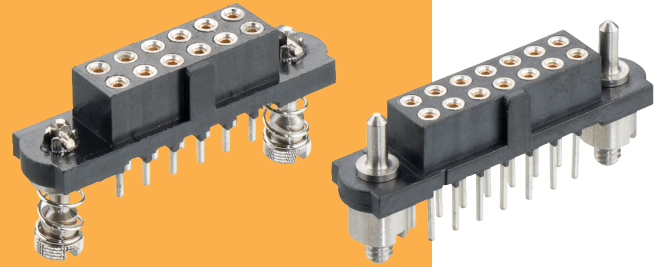
All dimensions in mm.



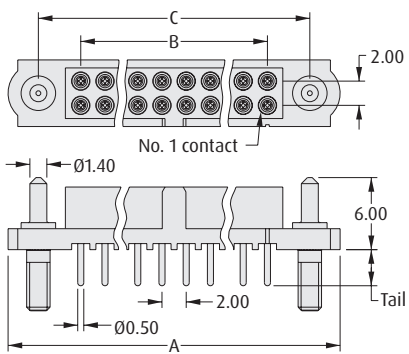
# Datamate J-Tek Connectors

## Female Vertical Throughboard, Guide Pin, 101Lok

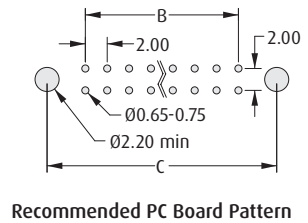
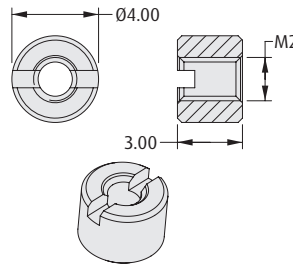
- Guide pin style includes board mount fixing, and mates with Datamate J-Tek male connectors with compatible jackscrews.
- 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- 101Lok style mates with Datamate J-Tek male connectors with compatible 101Lok fixings.



### GUIDE PIN JACKSCREWS



#### Board Mount Nut, 2 per connector

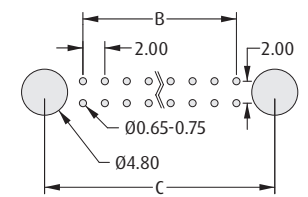
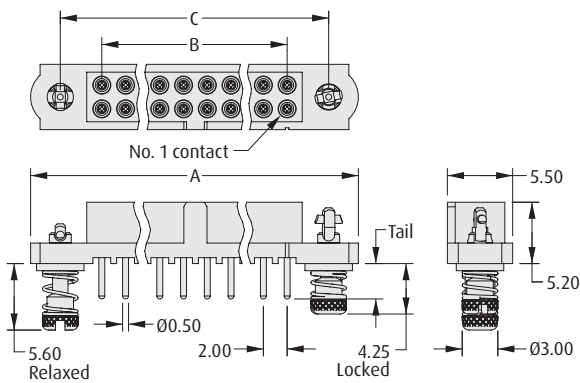


Recommended PC Board Pattern

#### CALCULATION

<b>A</b>	B + 12
<b>B</b>	Total no. of contacts - 2
<b>C</b>	B + 7

### 101LOK



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 4 TX XX XX FX**

#### SERIES CODE

#### TYPE

<b>T1</b>	3mm Tails
<b>T2</b>	4.5mm Tails

#### TOTAL NO. OF CONTACTS

**04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50**

#### JACKSCREW

<b>F3</b>	Guide Pin
<b>FD</b>	101Lok

#### FINISH

<b>05</b>	Gold
<b>42</b>	Gold + Tin

All dimensions in mm.

# Datamate J-Tek Connectors

## Female Vertical Throughboard Reverse Fix

- ❖ Fully shrouded contacts.
- ❖ Polarized housings.
- ❖ Includes board mount fixing.
- ❖ Mates with male Datamate J-Tek connectors with compatible Reverse Fix jackscrews.

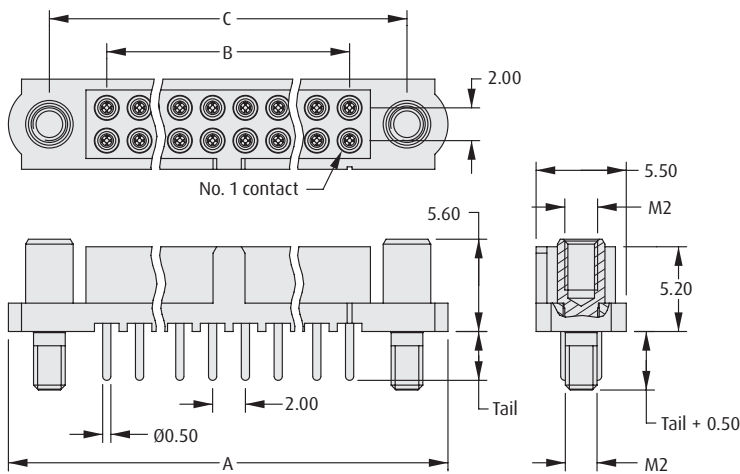


DATAMATE J-TEK

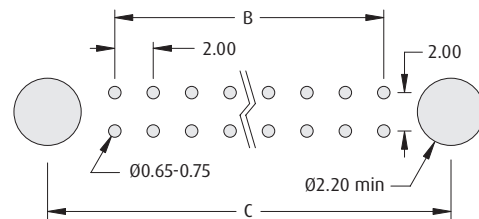
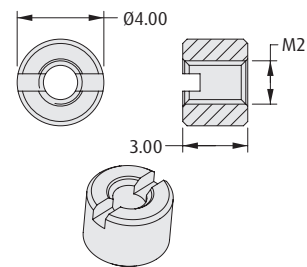
### REVERSE FIX

### CALCULATION

<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$



### Board Mount Nut, 2 per connector



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 40 X XX XX**

#### SERIES CODE

#### TYPE

<b>5</b>	3mm Tails
<b>6</b>	4.5mm Tails

#### FINISH

<b>05</b>	Gold
<b>42</b>	Gold + Tin

#### TOTAL NO. OF CONTACTS

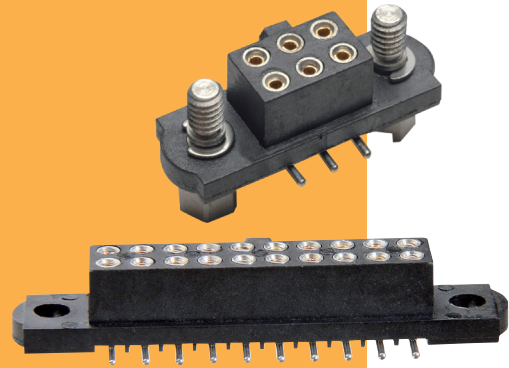
04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

All dimensions in mm.

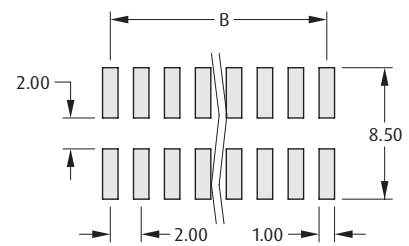
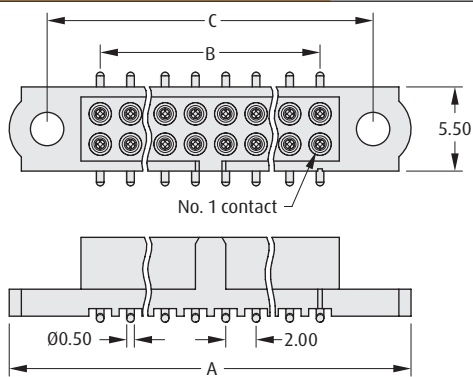
# Datamate J-Tek Connectors

## Female Vertical Surface Mount

- Mates with all Datamate J-Tek male connectors with compatible jackscrews.
- Gull wing SMT tails simplify inspection process.



### WITHOUT JACKSCREWS

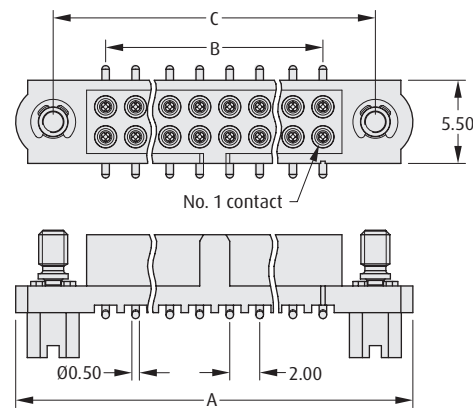


Recommended PC Board Pattern

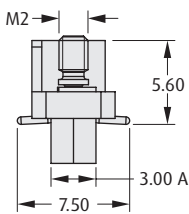
### CALCULATION

<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$

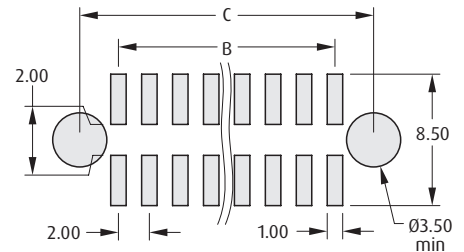
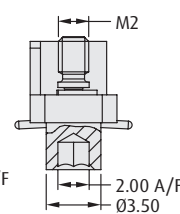
### WITH JACKSCREWS



#### Hex Slotted Jackscrew



#### Hex Socket Jackscrew



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 4 X 2 XX XX**

#### SERIES CODE

#### TYPE

<b>0</b>	With Hex Slotted Jackscrews
<b>1</b>	Without Jackscrews
<b>2</b>	With Hex Socket Jackscrews

#### FINISH

<b>05</b>	Gold
<b>42</b>	Gold + Tin

#### TOTAL NO. OF CONTACTS

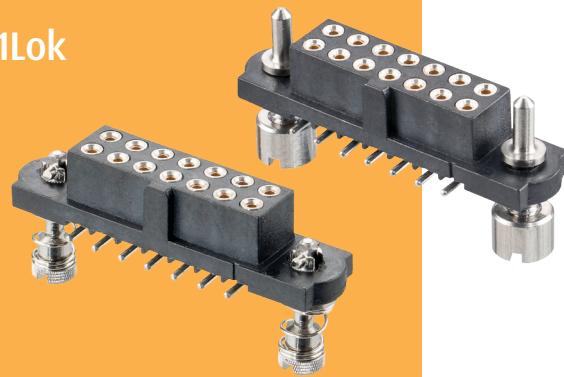
**04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50**

All dimensions in mm.

# Datamate J-Tek Connectors

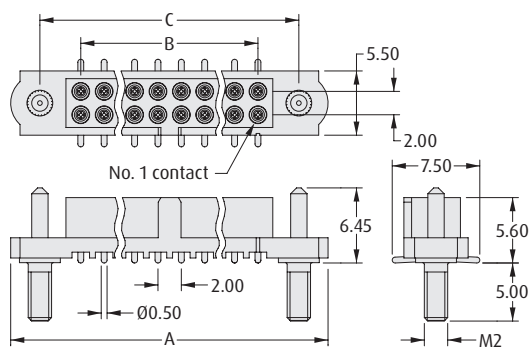
## Female Vertical Surface Mount Guide Pin, 101Lok

- Guide pin style includes board mount fixing, and mates with Datamate J-Tek male connectors with compatible jackscrews.
- 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- 101Lok style mates with Datamate J-Tek male connectors with compatible 101Lok fixings.

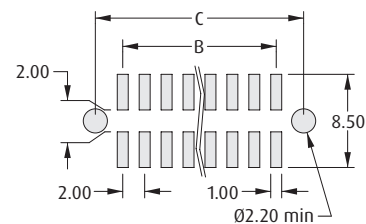
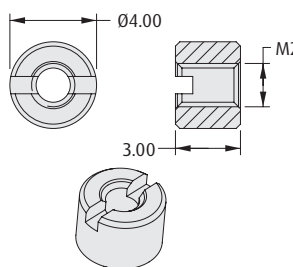


DATAMATE J-TEK

### GUIDE PIN JACKSCREWS



### Board Mount Nut, 2 per connector

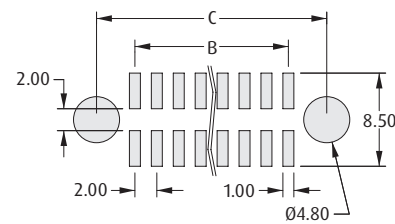
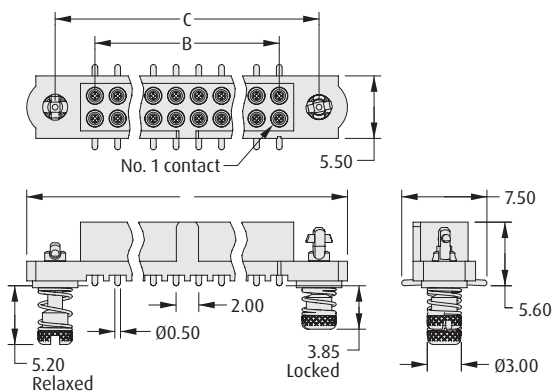


Recommended PC Board Pattern

### CALCULATION

<b>A</b>	B + 12
<b>B</b>	Total no. of contacts - 2
<b>C</b>	B + 7

### 101LOK



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 4S1 XX XX FX**

SERIES CODE

TOTAL NO. OF CONTACTS

04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

### JACKSCREW

<b>F3</b>	Guide Pin
<b>FD</b>	101Lok

### FINISH

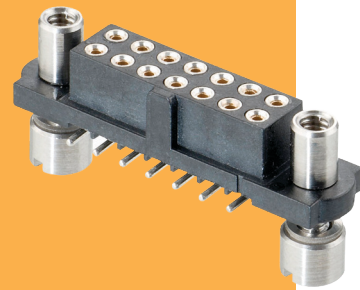
<b>05</b>	Gold
<b>42</b>	Gold + Tin

All dimensions in mm.

# Datamate J-Tek Connectors

## Female Vertical Surface Mount Reverse Fix

- Fully shrouded contacts.
- Polarized housings.
- Includes Board Mount fixing.
- Mates with male Datamate J-Tek connectors with compatible Reverse Fix jackscrews.

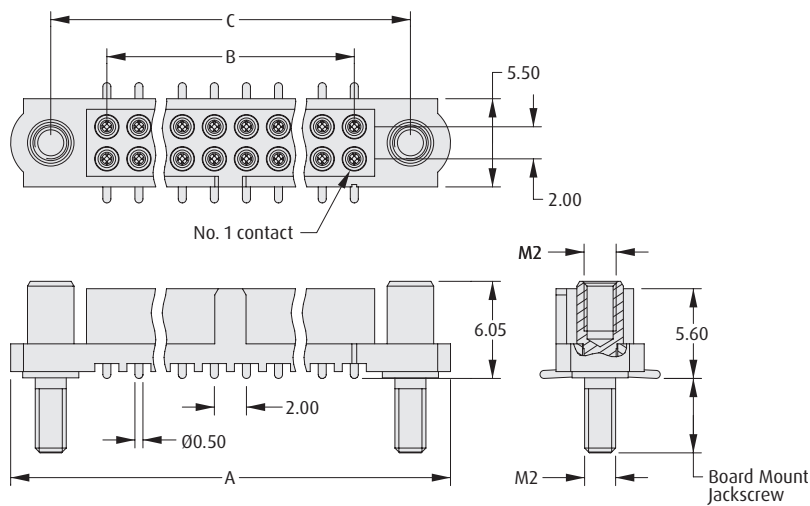


DATAMATE J-TEK

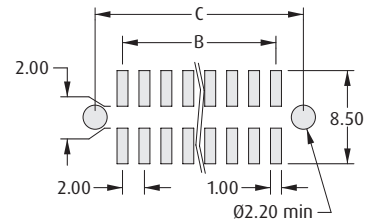
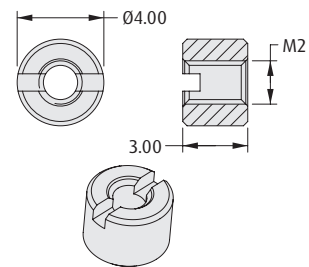
### REVERSE FIX

### CALCULATION

<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$



### Board Mount Nut, 2 per connector



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 4S1 XX XX FX**

**SERIES CODE**

**TOTAL NO. OF CONTACTS**

04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

### TYPE

<b>F8</b>	3.5mm Board Mount Jackscrew
<b>F9</b>	5mm Board Mount Jackscrew

### FINISH

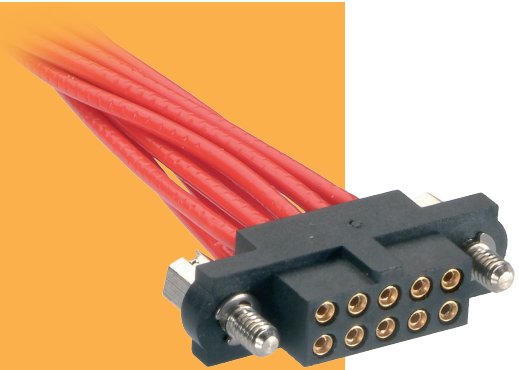
<b>05</b>	Gold
<b>42</b>	Gold + Tin

All dimensions in mm.

# Datamate J-Tek Connectors

## Female Crimp Kit

- ❖ Part numbers are for a complete kit of a housing and the applicable number of contacts.
- ❖ Jackscrews are assembled where specified.
- ❖ Crimp contacts are rear insertable.
- ❖ Version also available for 28 – 32 AWG cable – see the following page.
- ❖ Spare contacts are available.



DATAMATE J-TEK

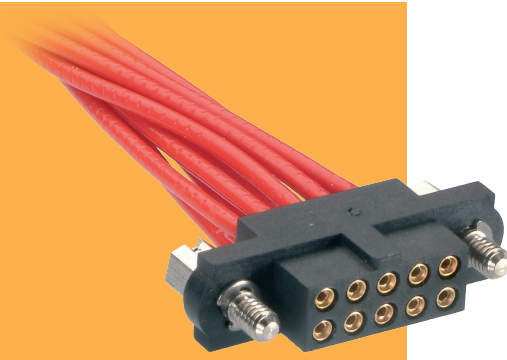
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All dimensions in mm.

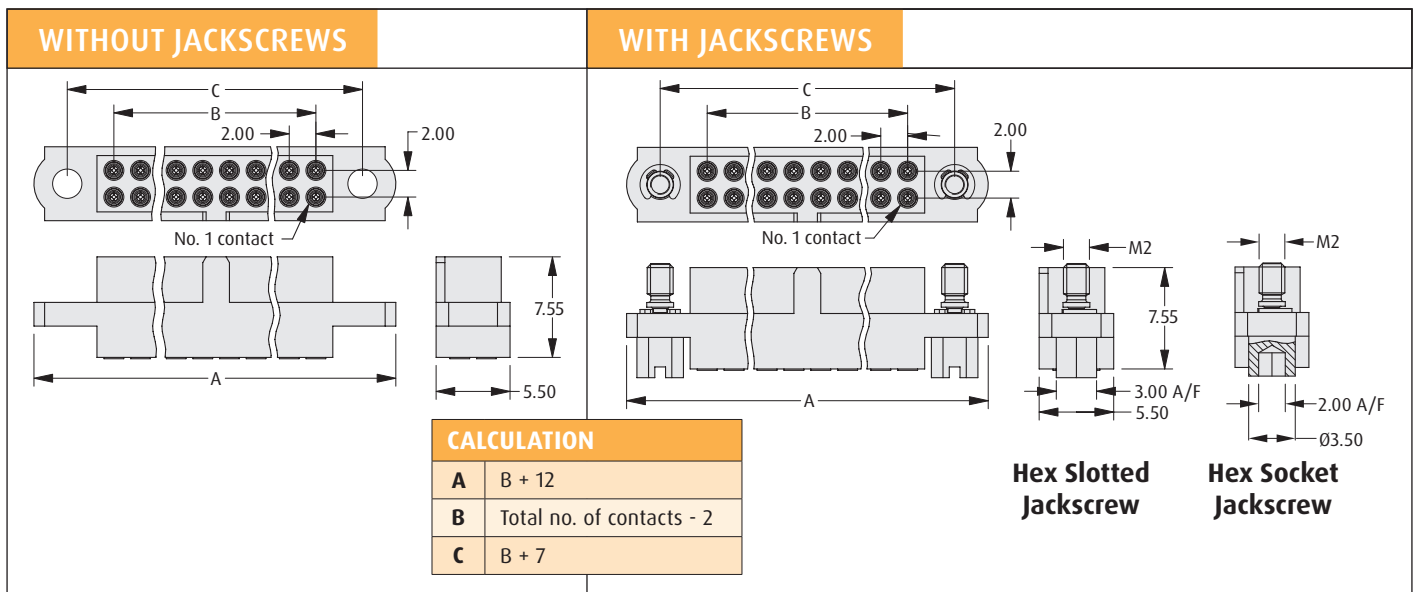
# Datamate J-Tek Connectors

## Female Crimp Kit - Extra Small Bore

- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Jackscrews are assembled where specified.
- Crimp contacts are rear insertable.
- Versions also available for 22 - 28 AWG cable - see the previous page.
- Spare contacts are available.



DATAMATE J-TEK



TOOLS	WIRE STRIPPING DETAILS
<p><b>Recommended Crimp Tool</b> - M22520/2-01</p> <p><b>Positioner</b> - T5747</p> <p><b>Contact Insertion/Removal Tool</b> - Z80-280</p> <ul style="list-style-type: none"> <li>Spare and pre-cabled contacts shown on following pages.</li> <li>Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>	

### HOW TO ORDER

M80 - 4 E1 XX XX FX

<b>SERIES CODE</b>		<b>JACKSCREW</b>	
<b>TYPE</b>		<b>00</b>	Without Jackscrews
<b>E1</b>	Extra Small Bore 28-32 AWG	<b>F1</b>	With Hex Slotted Jackscrews
<b>TOTAL NO. OF CONTACTS</b>		<b>F2</b>	With Hex Socket Jackscrews
<b>04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50</b>		<b>FINISH</b>	
		<b>05</b>	Gold
		<b>42</b>	Gold + Tin

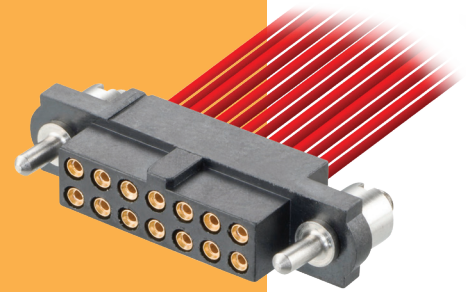
All dimensions in mm.



# Datamate J-Tek Connectors

## Female Crimp Kit - Guide Pin, 101Lok

- Guide pin style includes board mount fixing.
- 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- Connectors mate with Datamate J-Tek male connectors with applicable jackscrews or 101Lok fixings.
- Part numbers are for a complete kit of a housing and the applicable number of contacts.



DATAMATE J-TEK

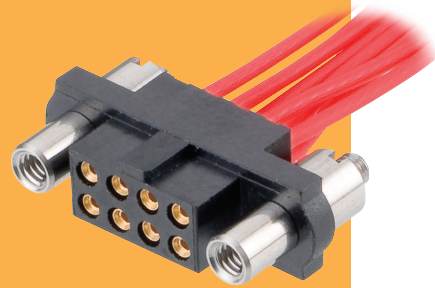
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All dimensions in mm.

# Datamate J-Tek Connectors

## Female Crimp Kit - Reverse Fix

- ❖ Allows for further flexibility in system design.
- ❖ Crimp contacts supplied loose and are inserted from rear.
- ❖ Part numbers are for a complete kit of a housing and the applicable number of contacts.
- ❖ Jackscrews are assembled.
- ❖ Mates with male Datamate J-Tek connectors with compatible Reverse Fix jackscrews.



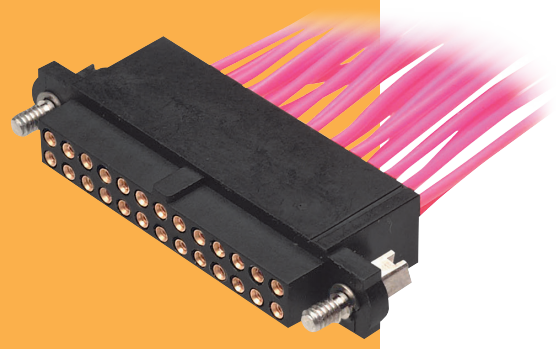
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All dimensions in mm.

# Datamate J-Tek Connectors

## Female Crimp Kit - Extended Wall

- ❖ Extended Wall Datamate allows back potting to be performed.
- ❖ Polarized housings.
- ❖ Crimp contacts are rear insertable.
- ❖ Large bore 22 AWG, small bore 24 - 28 AWG.
- ❖ Part numbers are for a housing and the equivalent number of contacts.



DATAMATE J-TEK

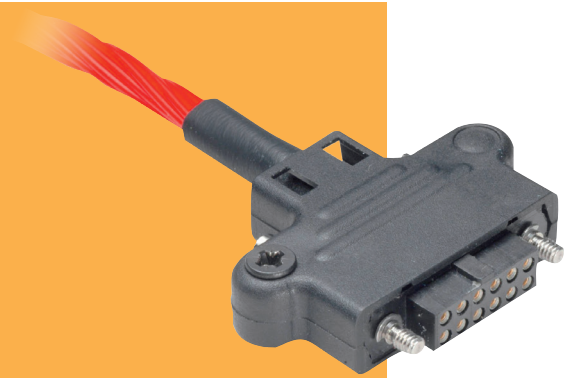
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All dimensions in mm.

# Datamate J-Tek Connectors

## Female Crimp Kit with Hood

- Supplied as a complete kit: jackscrews assembled to housing; hood, contacts and assembly screws supplied loose.
- Provides strain relief by preventing cable bending at the rear of the connector, and also has the option of inserting a cable tie to reduce pull strain.



DATAMATE J-TEK

FEMALE		CALCULATION									
		<b>A</b>	$B + 21.5$								
		<b>B</b>	Total no. of contacts - 2								
		<b>C</b>	$B + 7$								
TOOLS		WIRE STRIPPING DETAILS									
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All dimensions in mm.

# Datamate J-Tek Connectors

## Spare Female Crimp Contacts

- Barrel Crimp Contacts are supplied with the connectors - see previous page. Use the order code for extra spare crimps.



DATAMATE J-TEK

CRIMP CONTACTS	DUMMY CONTACT
<p><b>Large Bore (22 AWG)</b></p> <p><b>Small Bore (24 to 28 AWG)</b></p> <p><b>Extra Small Bore (28 to 32 AWG)</b></p>	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin-top: 5px;"> <b>ORDER CODE</b>  <b>M80-023</b> </div>
	WIRE STRIPPING DETAILS
	TOOLS
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### HOW TO ORDER

**M80 - 0XX 00 XX**

**SERIES CODE**

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

**FINISH**

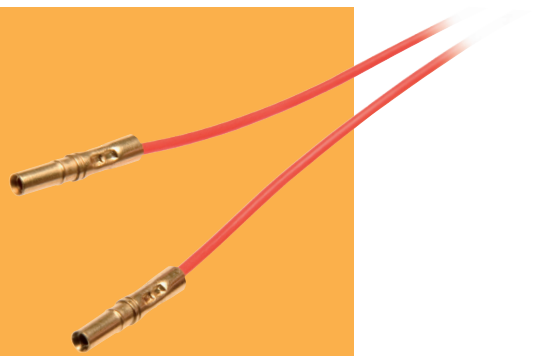
<b>01</b>	Gold + Tin
<b>05</b>	Gold

All dimensions in mm.

# Datamate J-Tek Connectors

## Female Crimp Contacts – Pre-Crimped Wires

- Female crimp contacts pre-assembled with a choice of BS 3G 210 Type A cable at selected lengths.
- PTFE-insulated, multi-strand silver-plated copper conductor equipment wire.
- Ideal for prototype and pre-production applications.



FEMALE SINGLE ENDED	FEMALE - FEMALE

### TOOLS

**Contact Insertion/Removal Tool** – Z80-280

- Full crimp connector kits and spare crimp contacts shown on previous pages.
- Instruction sheets available at [www.harwin.com/instructions](http://www.harwin.com/instructions).

### HOW TO ORDER

**M80 - 9XX 00 99**

SERIES CODE

CABLE COLOR	
<b>99</b>	Red

SINGLE ENDED	FEMALE-FEMALE	
<b>910</b>	<b>918</b>	22 AWG Cable, 150mm length
<b>911</b>	<b>919</b>	24 AWG Cable, 150mm length
<b>912</b>	<b>920</b>	26 AWG Cable, 150mm length
<b>913</b>	<b>921</b>	28 AWG Cable, 150mm length
<b>914</b>	<b>922</b>	22 AWG Cable, 300mm length
<b>915</b>	<b>923</b>	24 AWG Cable, 300mm length
<b>916</b>	<b>924</b>	26 AWG Cable, 300mm length
<b>917</b>	<b>925</b>	28 AWG Cable, 300mm length

All dimensions in mm.

# Datamate J-Tek Connectors

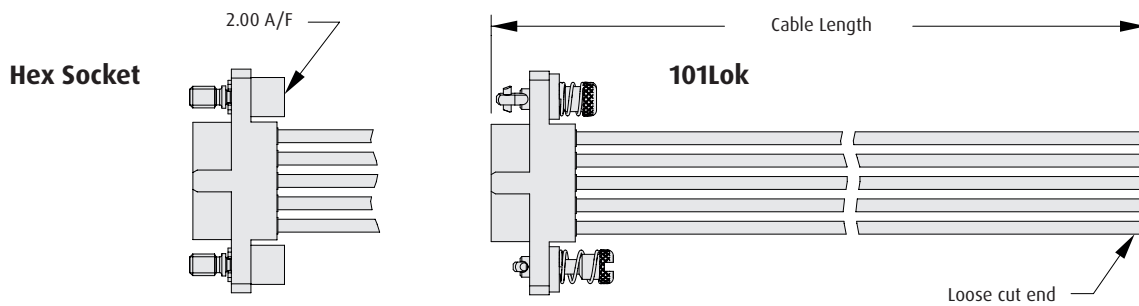
## Female Cable Assemblies

- Fully assembled connectors, fixings and cable in standard configurations.
- Fitted with 24AWG wire, PTFE insulation.
- Connectors mate with Datamate J-Tek male connectors with applicable threaded jackscrews or 101Lok fixings.



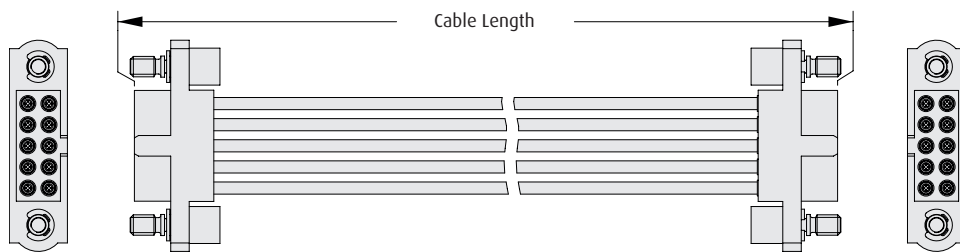
DATAMATE J-TEK

### FEMALE SINGLE ENDED



- Cable insulation is multicolored - check applicable Technical Drawing for color sequence.

### FEMALE - FEMALE DOUBLE ENDED



- Cable insulation is white.
- Contact 1 is attached to Contact 1, Contact 2 to Contact 2, etc.

### HOW TO ORDER

**M80 - FC2 XX XX XX - 0150 XX**

**SERIES CODE**

**TOTAL NO. OF CONTACTS**

<b>06, 10, 20, 26</b>	Double Ended, Hex Socket
<b>06, 10, 20, 26, 50</b>	Single Ended, Hex Socket
<b>04, 08, 12, 20</b>	Single Ended, 101Lok

**FIXING, LENGTH, TERMINATION - SECOND END**

<b>F2-0150F2</b>	150mm, Double Ended, Hex Socket Jackscrews
<b>F2-0150L</b>	150mm, Single Ended, Hex Socket Jackscrews
<b>FC-0150L</b>	150mm, Single Ended, 101Lok

**WIRE COLOR**

<b>05</b>	White (Double Ended only)
<b>68</b>	Multicolor (Single Ended only)

All dimensions in mm.



# Datamate J-Tek Connectors

## Female Crimp T-Contact

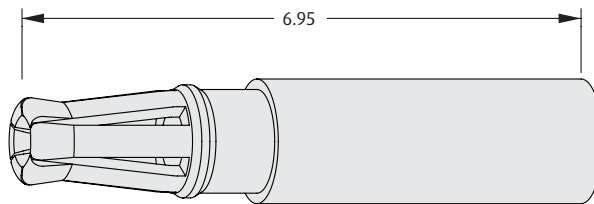
- ❖ Advanced single-piece contact design using Beryllium Copper for a 6-finger contact with improved capabilities.
- ❖ Current carrying capacity up to 8.5 Amps per contact.
- ❖ Improved mating durability to 1,000 operations.
- ❖ Suitable for use with 22AWG cable, Ø1.1mm maximum insulation diameter.
- ❖ Compatible cable housings showing on the following pages - order contact and housings separately.



DATAMATE J-TEK

### CRIMP CONTACTS

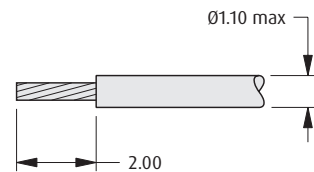
#### Large Bore (22 AWG)



### TOOLS

**Recommended Crimp Tool** - M22520/2-01  
**Positioner** - Z80-444  
**Contact insertion/Removal Tool** - Z80-280  
 ❖ Instruction sheets available at [www.harwin.com/instructions](http://www.harwin.com/instructions).

### WIRE STRIPPING DETAILS



### HOW TO ORDER

**M80 - 206 00 05**

**SERIES CODE**

**FINISH**

**05** | Gold

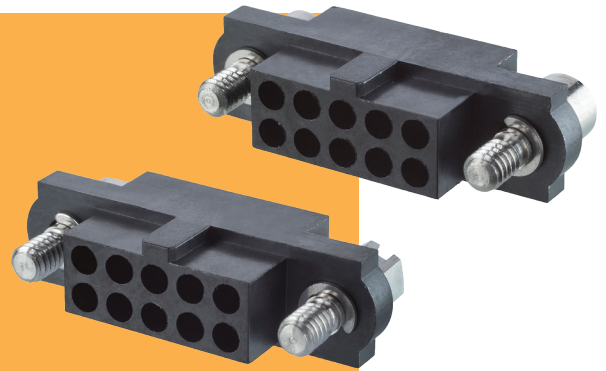
All dimensions in mm.

Patent Pending

# Datamate J-Tek Connectors

## Female Crimp Housing

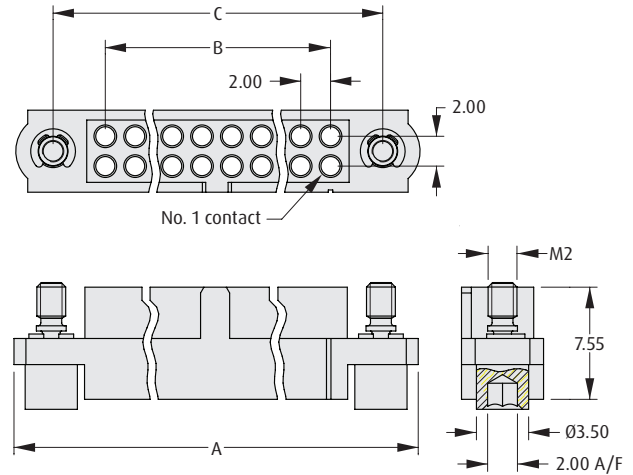
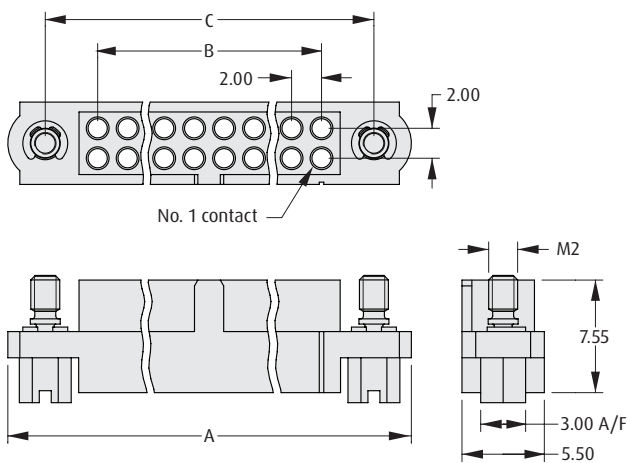
- ❖ Compatible with all female signal barrel crimp contacts, including T-Contact shown on previous page.
- ❖ Use insertion tool to insert crimped contacts into rear of connector housing: **order code Z80-Z80**.
- ❖ Connectors mate with Datamate J-Tek male connectors with applicable jackscrews.
- ❖ Jackscrews are supplied already assembled to housing.



DATAMATE J-TEK

### HEX SLOTTED JACKSCREWS

### HEX SOCKET JACKSCREWS



#### CALCULATION

<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$

### HOW TO ORDER

**M80 - 41 X XX 98**

**SERIES CODE**

**JACKSCREW TYPE**

<b>3</b>	Hex Slotted Jackscrews
<b>4</b>	Hex Socket Jackscrews

**TOTAL NO. OF CONTACTS**

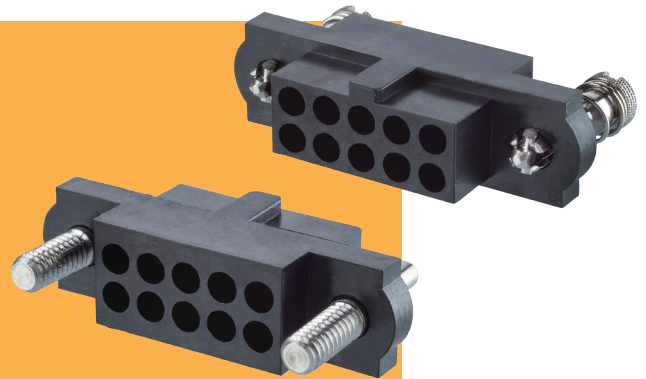
**04 to 50 (Even numbers only)**

All dimensions in mm.

# Datamate J-Tek Connectors

## Female Crimp Housing - Guide Pin, 101Lok

- Compatible with all female signal barrel crimp contacts, including T-Contact shown on previous page.
- Guide pin style includes board mount fixing.
- 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- Connectors mate with Datamate J-Tek male connectors with applicable jackscrews or 101Lok fixings.



GUIDE PIN JACKSCREWS	101LOK								
<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">CALCULATION</th> </tr> </thead> <tbody> <tr> <td style="background-color: #f4a460;">A</td> <td>B + 12</td> </tr> <tr> <td style="background-color: #f4a460;">B</td> <td>Total no. of contacts - 2</td> </tr> <tr> <td style="background-color: #f4a460;">C</td> <td>B + 7</td> </tr> </tbody> </table>		CALCULATION		A	B + 12	B	Total no. of contacts - 2	C	B + 7
CALCULATION									
A	B + 12								
B	Total no. of contacts - 2								
C	B + 7								
<h3>HOW TO ORDER</h3>									
<p><b>M80 - 41 X XX 98</b></p>									
<p><b>SERIES CODE</b></p>	<p><b>TOTAL NO. OF CONTACTS</b></p> <p>04 to 50 (Even numbers only)</p>								
<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">JACKSCREW TYPE</th> </tr> </thead> <tbody> <tr> <td style="background-color: #f4a460;">7</td> <td>Guide Pin Jackscrews</td> </tr> <tr> <td style="background-color: #f4a460;">8</td> <td>101Lok</td> </tr> </tbody> </table>	JACKSCREW TYPE		7	Guide Pin Jackscrews	8	101Lok			
JACKSCREW TYPE									
7	Guide Pin Jackscrews								
8	101Lok								
<h3>HARDWARE FOR GUIDE PIN STUD</h3>									
<p><b>Slotted Board Mount Nut</b></p>	<p><b>Hexagonal Board Mount Nut</b></p>								
<p><b>ORDER CODE</b></p> <p><b>M80-2130000B</b></p>	<p><b>ORDER CODE</b></p> <p><b>M80-2430000B</b></p>								

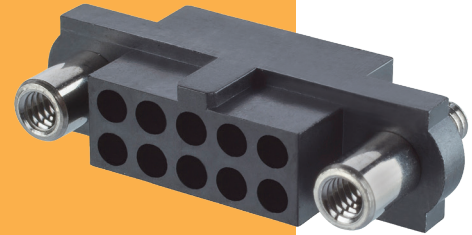
All dimensions in mm.

# Datamate J-Tek Connectors

DATAMATE J-TEK

## Female Crimp Housing - Reverse Fix

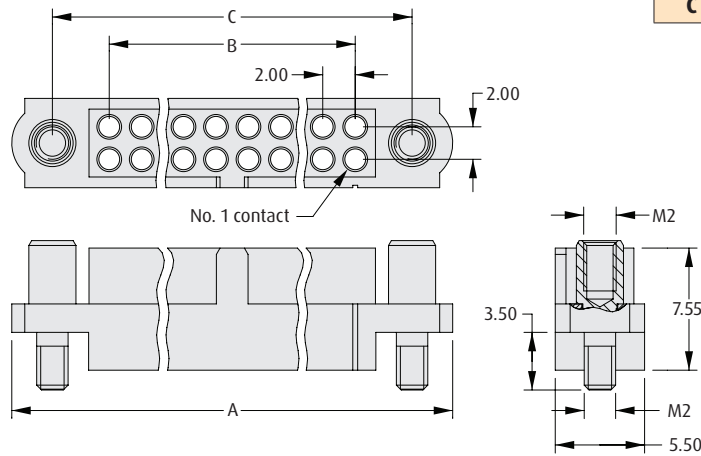
- Compatible with all female signal barrel crimp contacts, including T-Contact shown on previous page.
- Use insertion tool to insert crimped contacts into rear of connector housing: **order code Z80-280**.
- Jackscrows are supplied already assembled to housing.
- Connectors mate with Datamate J-Tek male connectors with compatible Reverse Fix jackscrows.



### REVERSE FIX JACKSCREWS

### CALCULATION

<b>A</b>	B + 12
<b>B</b>	Total no. of contacts - 2
<b>C</b>	B + 7



### HOW TO ORDER

**M80 - 41 5 XX 98**

SERIES CODE

JACKSCREW TYPE

5 Reverse Fix Jackscrew

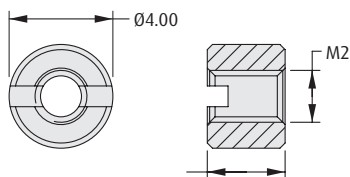
TOTAL NO. OF CONTACTS

04 to 50 (Even numbers only)

### HARDWARE FOR PANEL MOUNT STUD

Order separately from connector

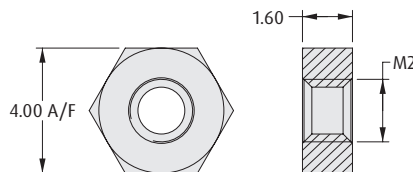
#### Slotted Board Mount Nut



ORDER CODE

M80-2130000B

#### Hexagonal Board Mount Nut



ORDER CODE

M80-2430000B

All dimensions in mm.

# Datamate J-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 Crimp Kit without jackscrews.
- ❖ 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](http://www.harwin.com/instructions).



DATAMATE J-TEK

FEMALE		CALCULATION									
<p><b>1 x Metal Backshell</b></p>	<table border="1"> <tr> <td><b>A</b></td> <td><math>B + 16.2</math></td> </tr> <tr> <td><b>B</b></td> <td>Equivalent no. of contacts - 2</td> </tr> <tr> <td><b>C</b></td> <td><math>B + 7</math></td> </tr> <tr> <td><b>D</b></td> <td><math>B + 0.8</math></td> </tr> </table>		<b>A</b>	$B + 16.2$	<b>B</b>	Equivalent no. of contacts - 2	<b>C</b>	$B + 7$	<b>D</b>	$B + 0.8$	
	<b>A</b>	$B + 16.2$									
	<b>B</b>	Equivalent no. of contacts - 2									
	<b>C</b>	$B + 7$									
<b>D</b>	$B + 0.8$										
<p><b>4 x E-Clip (2 spare)</b></p> <p><b>2 x Slotted Jackscrew (M80-945 Kit)</b></p> <p><b>2 x Hex Socket Jackscrew (M80-946 Kit)</b></p>											
<p><b>E-CLIP TOOL</b></p> <p>❖ For assembling E-Clips supplied with kit.</p> <table border="1"> <tr> <th>ORDER CODE</th> </tr> <tr> <td><b>Z80-300</b></td> </tr> </table>		ORDER CODE	<b>Z80-300</b>	<p><b>BAND-IT TIE</b></p> <p>❖ For fixing braid to rear collar (requires Tie Dex II A30199 Micro Band tool).</p> <table border="1"> <tr> <th>ORDER CODE</th> <th>Length</th> </tr> <tr> <td><b>M80-9470000</b></td> <td>Length = 206.8mm</td> </tr> <tr> <td><b>M80-9480000</b></td> <td>Length = 362.0mm</td> </tr> </table>		ORDER CODE	Length	<b>M80-9470000</b>	Length = 206.8mm	<b>M80-9480000</b>	Length = 362.0mm
ORDER CODE											
<b>Z80-300</b>											
ORDER CODE	Length										
<b>M80-9470000</b>	Length = 206.8mm										
<b>M80-9480000</b>	Length = 362.0mm										
<b>HOW TO ORDER</b>											
<b>M80 - 94 X XX 02</b>											
<p><b>SERIES CODE</b></p>		<p><b>FINISH</b></p> <table border="1"> <tr> <td><b>02</b></td> <td>Nickel</td> </tr> </table>		<b>02</b>	Nickel						
<b>02</b>	Nickel										
<p><b>TYPE</b></p> <table border="1"> <tr> <td><b>5</b></td> <td>With Slotted Jackscrews</td> </tr> <tr> <td><b>6</b></td> <td>With Hex Socket Jackscrews</td> </tr> </table>		<b>5</b>	With Slotted Jackscrews	<b>6</b>	With Hex Socket Jackscrews	<p><b>EQUIVALENT NO. OF SIGNAL CONTACTS</b></p> <p><b>08 to 28, 32 to 50 (Even numbers only)</b></p>					
<b>5</b>	With Slotted Jackscrews										
<b>6</b>	With Hex Socket Jackscrews										

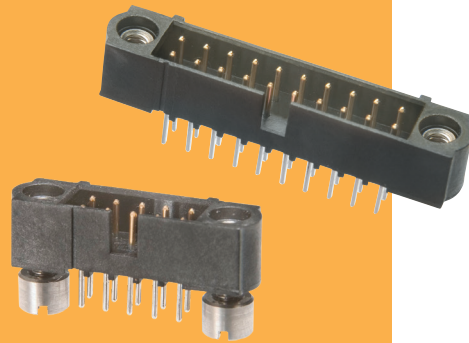
All dimensions in mm.

# Datamate J-Tek Connectors

DATAMATE J-TEK

## Male Vertical Throughboard

- Polarized housings.
- Fully shrouded contacts.
- Jackscrews are assembled where specified.
- Choice of throughboard termination length.
- Board Mount provides PCB strain relief.
- Mates with female Datamate J-Tek connectors with compatible jackscrews.



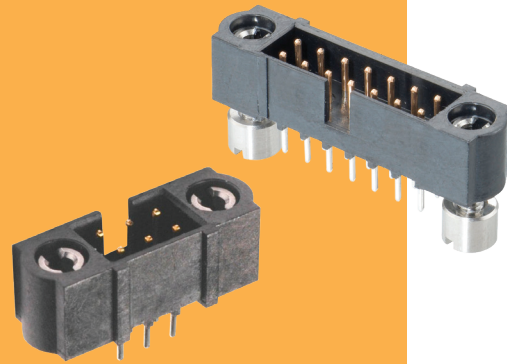
WITHOUT JACKSCREWS		CALCULATION	
	<p>Recommended PC Board Pattern</p>	<b>A</b>	$B + 12$
		<b>B</b>	Total no. of contacts - 2
		<b>C</b>	$B + 7$
WITH JACKSCREWS		WITH BOARD MOUNT	
		<b>Board Mount Nut, 2 per connector</b> 	
HOW TO ORDER			
<b>M80 - 5 X X XX XX</b>			
<b>SERIES CODE</b>		<b>FINISH</b>	
0	With Jackscrews	05	Gold
1	With Board Mount	42	Gold + Tin
2	Without Jackscrews		
<b>TAIL LENGTH</b>		<b>TOTAL NO. OF CONTACTS</b>	
0	3mm Tails	04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50	
1	4.5mm Tails		

All dimensions in mm.

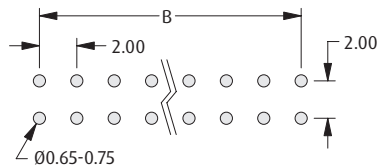
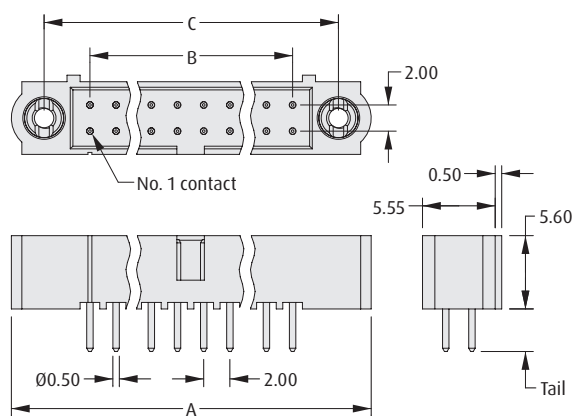
# Datamate J-Tek Connectors

## Male Vertical Throughboard 101Lok

- ❖ 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- ❖ Connectors mate with Datamate J-Tek female connectors with applicable 101Lok fixings.
- ❖ Board Mount provides PCB strain relief.
- ❖ Choice of throughboard termination length.



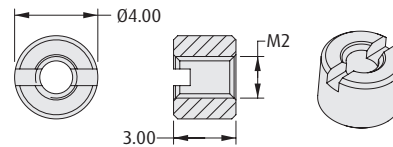
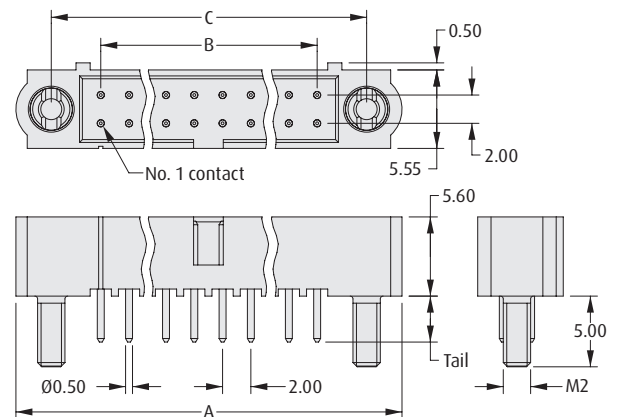
### 101LOK



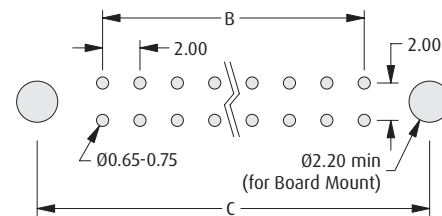
Recommended PC Board Pattern

CALCULATION	
<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$

### 101LOK WITH BOARD MOUNT



Board Mount Nut, 2 per connector



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 5 TX XX XX MX**

**SERIES CODE**

**TYPE**

<b>T1</b>	3mm Tails
<b>T2</b>	4.5mm Tails

**TOTAL NO. OF CONTACTS**

**04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50**

**JACKSCREW**

<b>MC</b>	101Lok
<b>ME</b>	101Lok with Board Mount

**FINISH**

<b>05</b>	Gold
<b>42</b>	Gold + Tin

All dimensions in mm.

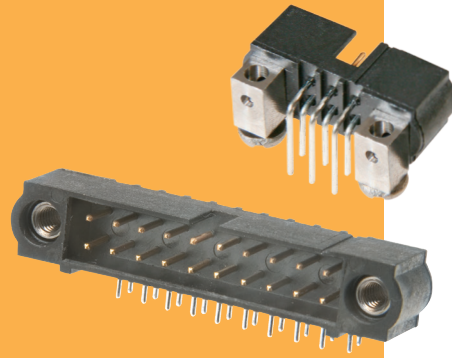


# Datamate J-Tek Connectors

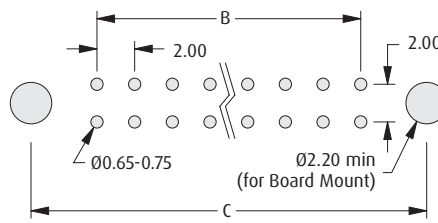
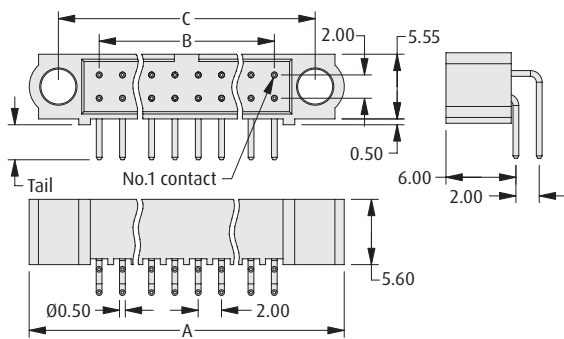
DATAMATE J-TEK

## Male Horizontal Throughboard

- Polarized housings.
- Fully shrouded contacts.
- Jackscrews are assembled where specified.
- Choice of throughboard termination length.
- Board Mount provides PCB strain relief.
- Mates with female Datamate J-Tek connectors with compatible jackscrews.



### WITHOUT JACKSCREWS

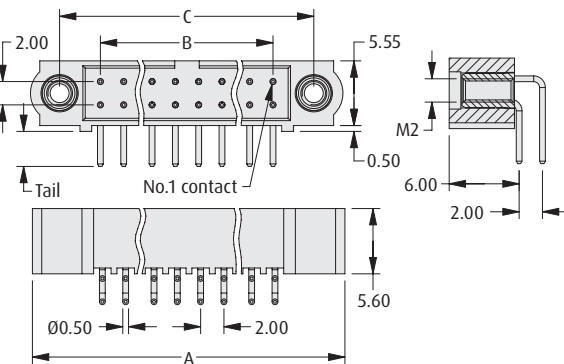


Recommended PC Board Pattern

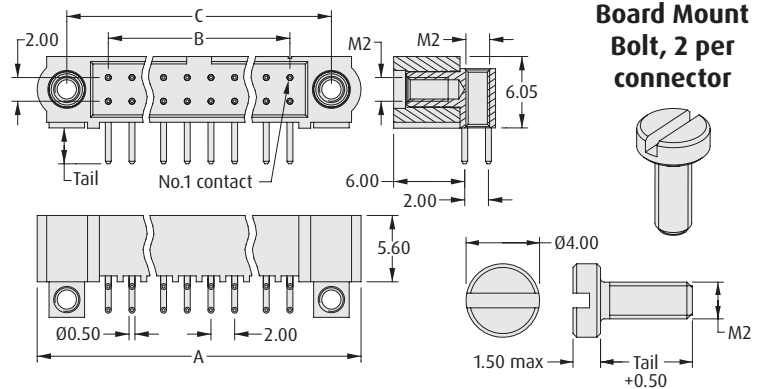
### CALCULATION

<b>A</b>	B + 12
<b>B</b>	Total no. of contacts - 2
<b>C</b>	B + 7

### WITH JACKSCREWS



### WITH BOARD MOUNT



### HOW TO ORDER

**M80 - 5 X X XX XX**

#### SERIES CODE

<b>3</b>	With Jackscrews
<b>4</b>	With Board Mount
<b>5</b>	Without Jackscrews

<b>0</b>	3mm Tails
<b>1</b>	4.5mm Tails

#### FINISH

<b>05</b>	Gold
<b>42</b>	Gold + Tin

#### TOTAL NO. OF CONTACTS

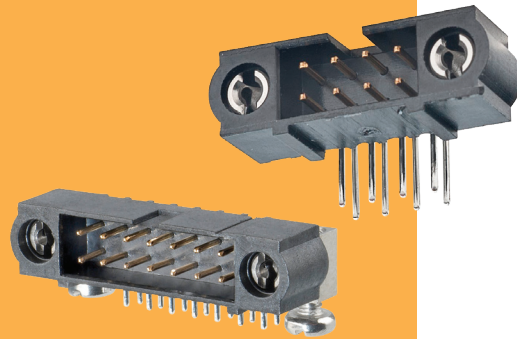
04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

All dimensions in mm.

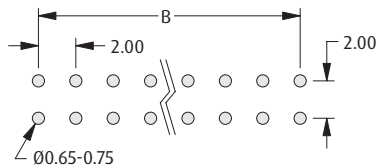
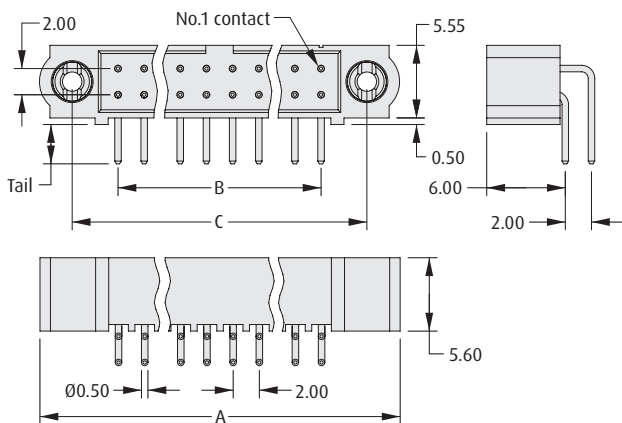
# Datamate J-Tek Connectors

## Male Horizontal Throughboard 101Lok

- ❖ 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- ❖ Connectors mate with Datamate J-Tek female connectors with applicable 101Lok fixings.
- ❖ Board Mount provides PCB strain relief.
- ❖ Choice of throughboard termination length.



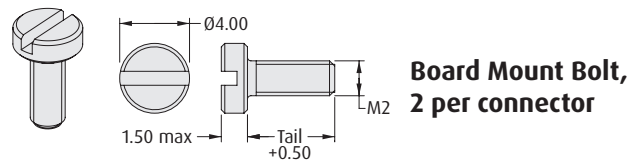
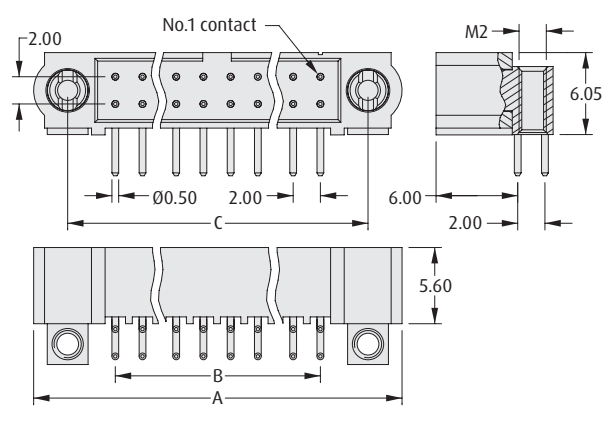
### 101LOK



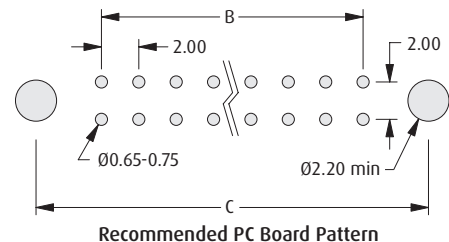
Recommended PC Board Pattern

CALCULATION	
<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$

### 101LOK WITH BOARD MOUNT



Board Mount Bolt, 2 per connector



Recommended PC Board Pattern

## HOW TO ORDER

**M80 - 5 LX XX XX MX**

**SERIES CODE**

TYPE	
<b>L1</b>	3mm Tails
<b>L2</b>	4.5mm Tails

TOTAL NO. OF CONTACTS	
<b>04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50</b>	

JACKSCREW	
<b>MC</b>	101Lok
<b>MD</b>	101Lok with Board Mount

FINISH	
<b>05</b>	Gold
<b>42</b>	Gold + Tin

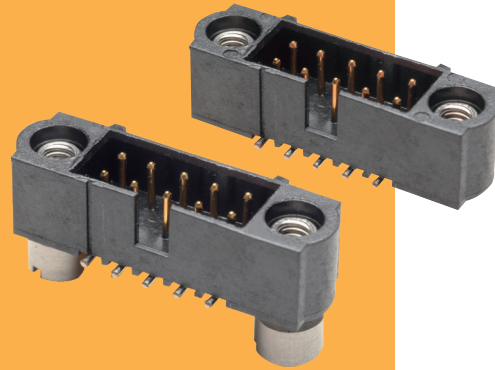
All dimensions in mm.

# Datamate J-Tek Connectors

DATAMATE J-TEK

## Male Vertical Surface Mount

- Gull wing SMT tails simplify inspection process.
- Board Mount provides PCB strain relief.
- Optional pick and place cap.
- Mates with female Datamate J-Tek connectors with compatible jackscrews.



WITHOUT JACKSCREWS		WITH JACKSCREWS		WITH BOARD MOUNT																													
<p>Recommended PC Board Pattern</p>		<table border="1"> <thead> <tr> <th colspan="2">CALCULATION</th> </tr> </thead> <tbody> <tr> <td><b>A</b></td> <td>B + 12</td> </tr> <tr> <td><b>B</b></td> <td>Total no. of contacts - 2</td> </tr> <tr> <td><b>C</b></td> <td>B + 7</td> </tr> </tbody> </table>		CALCULATION		<b>A</b>	B + 12	<b>B</b>	Total no. of contacts - 2	<b>C</b>	B + 7																						
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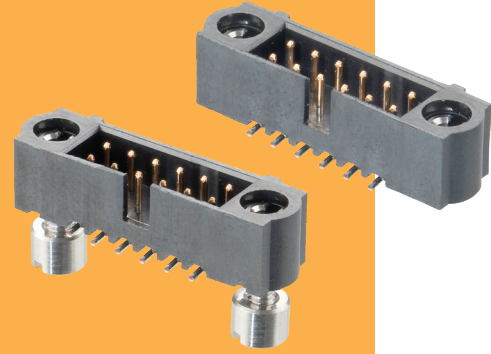
All dimensions in mm.

# Datamate J-Tek Connectors

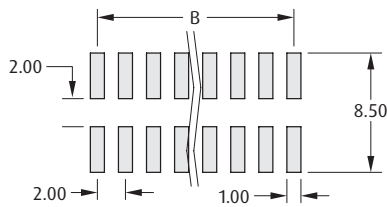
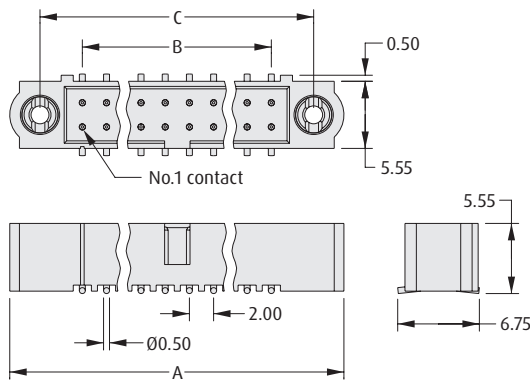
DATAMATE J-TEK

## Male Vertical Surface Mount 101Lok

- ❖ 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- ❖ Connectors mate with Datamate J-Tek female connectors with applicable 101Lok fixings.
- ❖ Board Mount provides PCB strain relief.
- ❖ Gull wing SMT tails simplify inspection process.



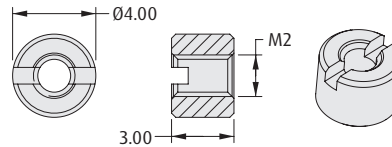
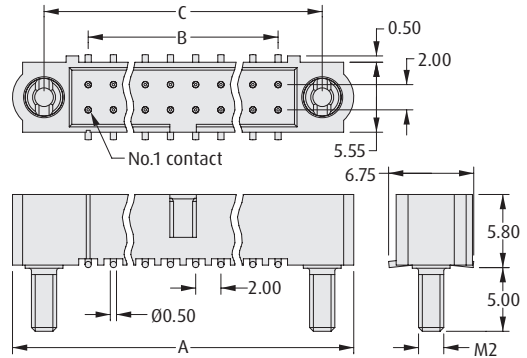
### 101LOK



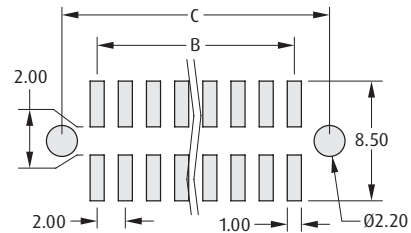
Recommended PC Board Pattern

CALCULATION	
<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$

### 101LOK WITH BOARD MOUNT



Board Mount Nut,  
2 per connector



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 5S1 XX XX MX**

SERIES CODE

TOTAL NO. OF CONTACTS

04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

JACKSCREW

<b>MC</b>	101Lok
<b>ME</b>	101Lok with 5mm Board Mount

FINISH

<b>05</b>	Gold
<b>42</b>	Gold + Tin

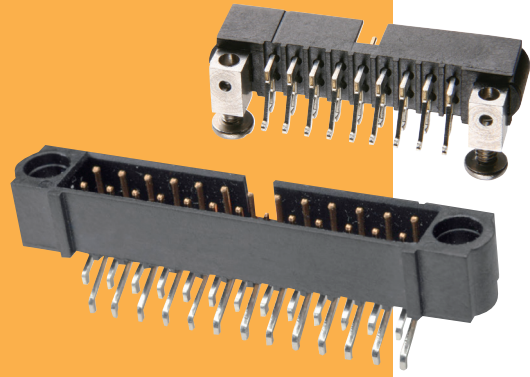
All dimensions in mm.

# Datamate J-Tek Connectors

DATAMATE J-TEK

## Male Horizontal Surface Mount

- Stamped contact ensures co-planarity.
- Board Mount provides PCB strain relief.
- Mates with female Datamate J-Tek connectors with compatible jackscrews.



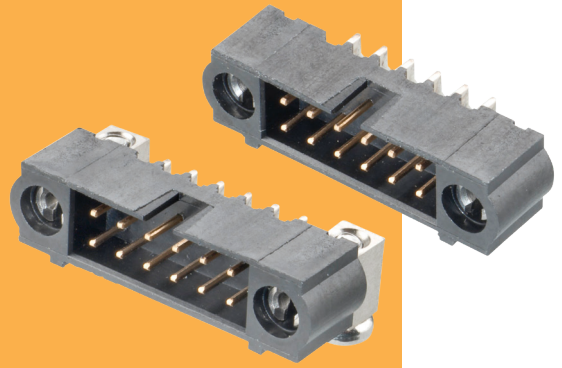
WITHOUT JACKSCREWS		WITH JACKSCREWS		WITH BOARD MOUNT																	
				<p><b>Board Mount Bolt, 2 per connector</b></p>																	
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All dimensions in mm.

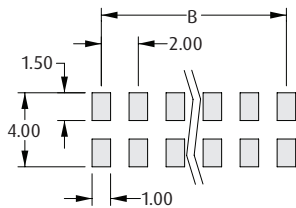
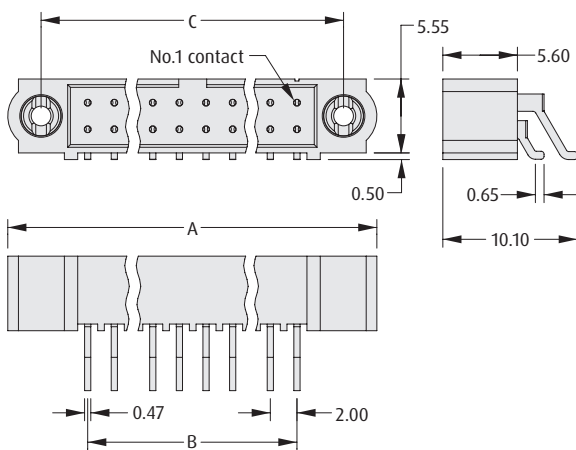
# Datamate J-Tek Connectors

## Male Horizontal Surface Mount 101Lok

- ❖ 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- ❖ Connectors mate with Datamate J-Tek female connectors with applicable 101Lok fixings.
- ❖ Board Mount provides PCB strain relief.
- ❖ Stamped contact ensures co-planarity.



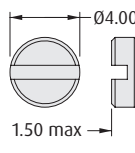
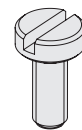
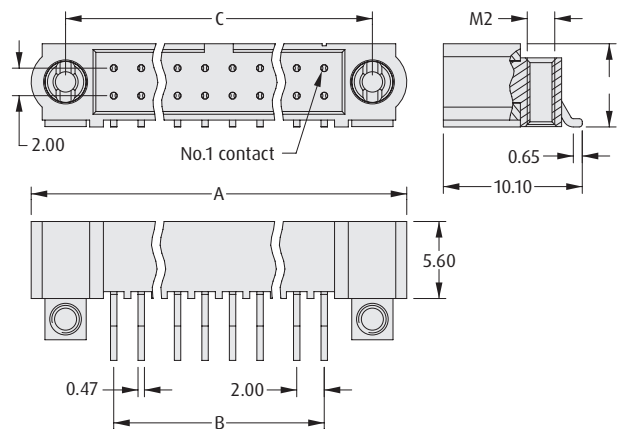
### 101LOK



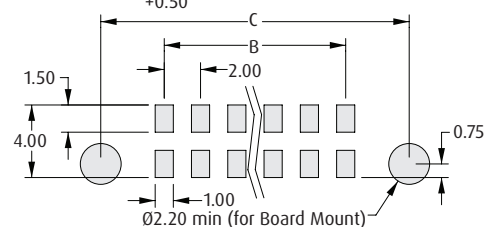
Recommended PC Board Pattern

CALCULATION	
<b>A</b>	$B + 12$
<b>B</b>	Total no. of contacts - 2
<b>C</b>	$B + 7$

### 101LOK WITH BOARD MOUNT



**Board Mount Bolt, 2 per connector**



Recommended PC Board Pattern

### HOW TO ORDER

**M80 - 5S2 XX XX MX**

**SERIES CODE**

**TOTAL NO. OF CONTACTS**

04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50

**JACKSCREW**

<b>MC</b>	101Lok
<b>MD</b>	101Lok with Board Mount

**FINISH**

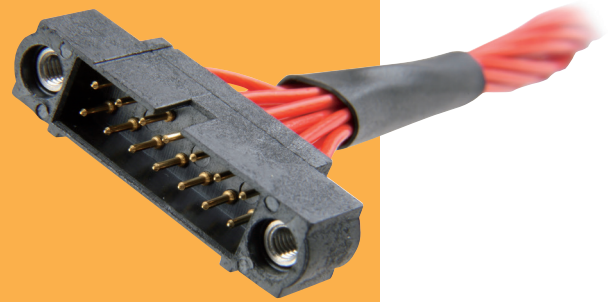
<b>05</b>	Gold
<b>42</b>	Gold + Tin

All dimensions in mm.

# Datamate J-Tek Connectors

## Male Crimp Kit

- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Jackscrews are assembled where specified.
- Crimp contacts supplied loose.
- Crimp contacts are rear insertable and replaceable.
- Spare contacts are available.



DATAMATE J-TEK

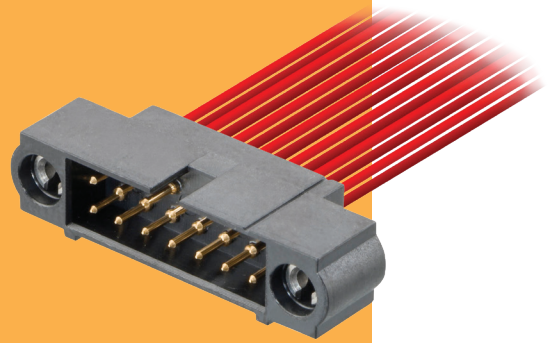
WITHOUT JACKSCREWS	WITH JACKSCREWS																
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All dimensions in mm.

# Datamate J-Tek Connectors

## Male Crimp Kit 101Lok

- ❖ Part numbers are for a complete kit of a housing and the applicable number of contacts.
- ❖ 101Lok fixing gives secure, fast and simple mating; no special tooling required. Just a simple 101-degree turn is required to fix the connectors together.
- ❖ Connectors mate with Datamate J-Tek female connectors with applicable 101Lok fixings.
- ❖ Crimp contacts supplied loose.



DATAMATE J-TEK

101LOK		CALCULATION	
		<b>A</b>	$B + 12$
		<b>B</b>	Total no. of contacts - 2
		<b>C</b>	$B + 7$
TOOLS		WIRE STRIPPING DETAILS	
<p><b>Recommended Crimp Tool</b> - M22520/2-01  <b>Positioner</b> - Z80-193  <b>Contact Insertion/Removal Tool</b> - Z80-280</p> <ul style="list-style-type: none"> <li>❖ Spare contacts shown on following pages.</li> <li>❖ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>			
HOW TO ORDER			
<b>M80 - 5 X1 XX 05 MC</b>			
<b>SERIES CODE</b>			<b>JACKSCREW</b>
<b>TYPE</b>			<b>MC</b> 101Lok
<b>C1</b> Small Bore (24-28 AWG)			
<b>D1</b> Large Bore (22 AWG)			
<b>TOTAL NO. OF CONTACTS</b>			<b>FINISH</b>
<b>04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50</b>			<b>05</b> Gold

All dimensions in mm.

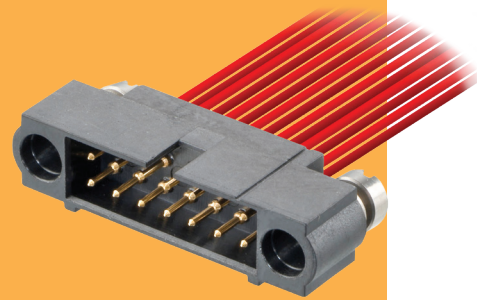


# Datamate J-Tek Connectors

DATAMATE J-TEK

## Male Crimp Kit Reverse Fix

- Allows for further flexibility in system design.
- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Crimp contacts are rear insertable and replaceable.
- Mates with female Datamate J-Tek connectors with compatible Reverse Fix jackscrews.



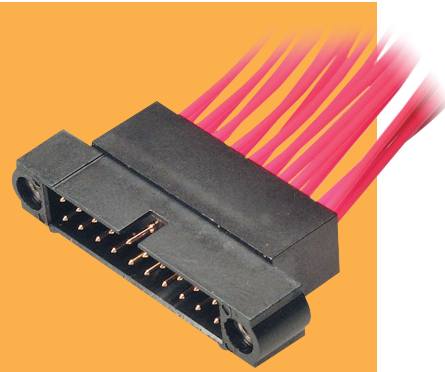
REVERSE FIX		CALCULATION													
		<b>A</b>	$B + 12$												
		<b>B</b>	Total no. of contacts - 2												
		<b>C</b>	$B + 7$												
TOOLS		WIRE STRIPPING DETAILS													
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All dimensions in mm.

# Datamate J-Tek Connectors

## Male Crimp Kit Extended Wall

- Extended Wall Datamate allows back potting to be performed.
- Fully shrouded contacts.
- Large Bore 22 AWG, Small Bore 24 – 28 AWG.
- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Crimp contacts are rear insertable and replaceable.
- Crimp contacts supplied loose.



DATAMATE J-TEK

WITHOUT JACKSCREWS	WITH JACKSCREWS														
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>CALCULATION</b></p> <table border="1"> <tr> <td><b>A</b></td> <td><math>B + 12</math></td> </tr> <tr> <td><b>B</b></td> <td>Total no. of contacts - 2</td> </tr> <tr> <td><b>C</b></td> <td><math>B + 7</math></td> </tr> </table> </div>	<b>A</b>	$B + 12$	<b>B</b>	Total no. of contacts - 2	<b>C</b>	$B + 7$									
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TOTAL NO. OF CONTACTS															
<b>06, 10, 14, 20, 26, 34</b>															

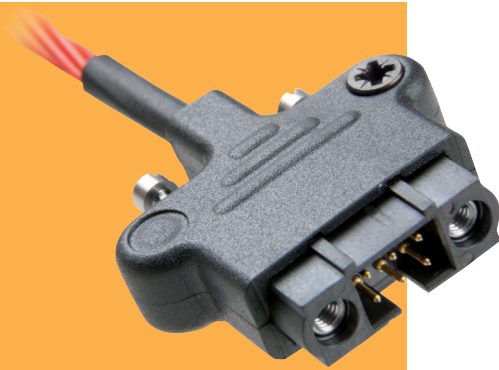
All dimensions in mm.

# Datamate J-Tek Connectors

DATAMATE J-TEK

## Male Crimp with Hood

- Supplied as a complete kit: jackscrews assembled to housing; hood, contacts and assembly screws supplied loose.
- Provides strain relief by preventing cable bending at the rear of the connector, and also the option of inserting a cable tie to reduce pull strain.



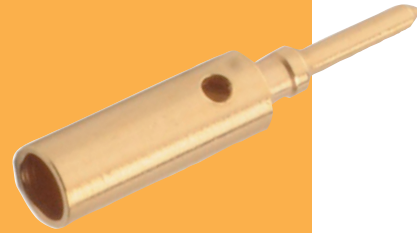
MALE		CALCULATION					
		<b>A</b>	$B + 21.5$				
		<b>B</b>	Total no. of contacts - 2				
		<b>C</b>	$B + 7$				
TOOLS		WIRE STRIPPING DETAILS					
<p><b>Recommended Crimp Tool</b> - M22520/2-01</p> <p><b>Positioner</b> - Z80-193</p> <p><b>Contact Insertion/Removal Tool</b> - Z80-280</p> <ul style="list-style-type: none"> <li>➤ Spare contacts shown on following pages.</li> <li>➤ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>							
HOW TO ORDER							
<p><b>SERIES CODE</b></p> <p><b>M80 - 94 X XX 05</b></p>		<p><b>FINISH</b></p> <p><b>05</b> Gold</p>					
<p><b>TYPE</b></p> <table border="1"> <tr> <td><b>2</b></td> <td>Small Bore (24-28 AWG)</td> </tr> <tr> <td><b>3</b></td> <td>Large Bore (22 AWG)</td> </tr> </table>		<b>2</b>	Small Bore (24-28 AWG)	<b>3</b>	Large Bore (22 AWG)	<p><b>TOTAL NO. OF CONTACTS</b></p> <p>06, 08, 10, 12, 14, 20, 26, 34, 42, 50</p>	
<b>2</b>	Small Bore (24-28 AWG)						
<b>3</b>	Large Bore (22 AWG)						

All dimensions in mm.

# Datamate J-Tek Connectors

## Spare Male Crimp Contacts

- Barrel Crimp Contacts are supplied with the connectors - see previous page. Use the order code for extra spare crimps.



DATAMATE J-TEK

CRIMP CONTACTS	WIRE STRIPPING DETAILS						
<p><b>Large Bore (22 AWG)</b></p>							
<p><b>Small Bore (24 to 28 AWG)</b></p>							
<b>TOOLS</b>							
<p><b>Recommended Crimp Tool</b> - M22520/2-01  <b>Positioner</b> - Z80-193  <b>Contact Insertion/Removal Tool</b> - Z80-280</p> <p>❖ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</p>							
<b>HOW TO ORDER</b>							
<p><b>M80 - 19 X 00 05</b></p>							
<p><b>SERIES CODE</b></p>	<p><b>FINISH</b></p> <table border="1"> <tr> <td><b>05</b></td> <td>Gold</td> </tr> </table>	<b>05</b>	Gold				
<b>05</b>	Gold						
<table border="1"> <thead> <tr> <th colspan="2">TYPE</th> </tr> </thead> <tbody> <tr> <td><b>4</b></td> <td>Large Bore (22 AWG)</td> </tr> <tr> <td><b>5</b></td> <td>Small Bore (24-28 AWG)</td> </tr> </tbody> </table>	TYPE		<b>4</b>	Large Bore (22 AWG)	<b>5</b>	Small Bore (24-28 AWG)	
TYPE							
<b>4</b>	Large Bore (22 AWG)						
<b>5</b>	Small Bore (24-28 AWG)						

All dimensions in mm.

# Datamate J-Tek Connectors

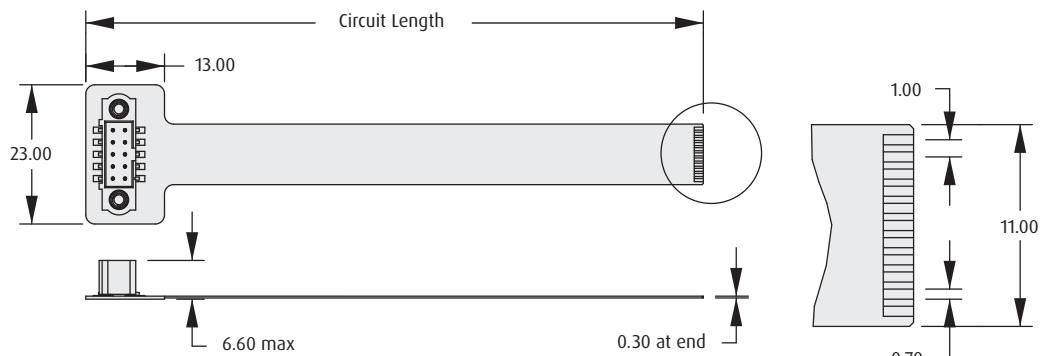
## Flexible Circuit Assemblies

- ❖ Surface mount connectors with jackscrews assembled to flexible printed circuit for an alternative to cable connection.
- ❖ Improved bend radius and lower mated height than equivalent cable assemblies.
- ❖ The free end is compatible with 1mm pitch FPC connectors.
- ❖ Contact Harwin for alternative connector sizes and cable lengths.



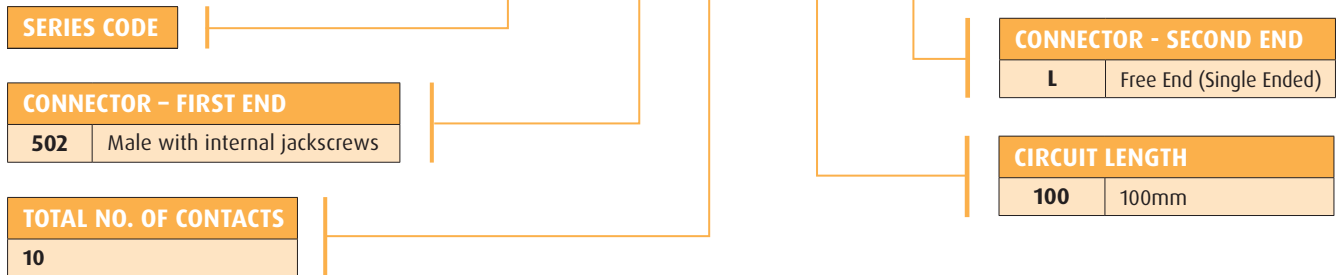
DATAMATE J-TEK

### MALE SINGLE ENDED



### HOW TO ORDER

**M80 - F1 502 10 - 100 - L**

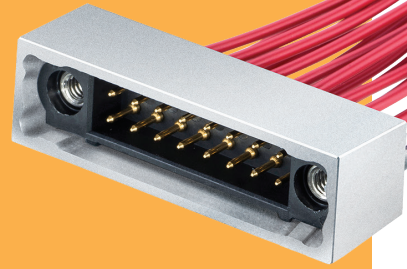


All dimensions in mm.

# Datamate J-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 J-TEK

MALE		CALCULATION	
<b>A</b>	$B + 13.7$	<b>B</b>	Equivalent no. of contacts - 2
<b>C</b>	$B + 7$	<b>D</b>	$B + 2.8$

### HOW TO ORDER

**M80 - 906 XX 02**

<b>SERIES CODE</b>	<b>FINISH</b>
M80 - 906	02 Nickel

<b>EQUIVALENT NO. OF SIGNAL CONTACTS</b>
08 to 28, 32 to 50 (Even numbers only)

All dimensions in mm.

# Datamate J-Tek 3-Row Specification

## Materials

Housings:	Glass-filled thermoplastic UL94V-0
Female contacts:	Brass shell, with Beryllium Copper inner contact
Male contacts:	Phosphor bronze
Finish:	Gold

## Electrical

<b>Current</b>	
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)
<b>Working voltage</b>	
At sea level 1013 mbar:	800V DC or AC <sub>rms</sub>
<b>Voltage proof</b>	
At sea level 1013 mbar:	1200V DC or AC <sub>rms</sub>
<b>Contact resistance</b>	
Initial:	20mΩ max
After conditioning:	25mΩ max
<b>Insulation resistance</b>	
Initial:	1000MΩ min
After conditioning:	100MΩ min

## Mechanical

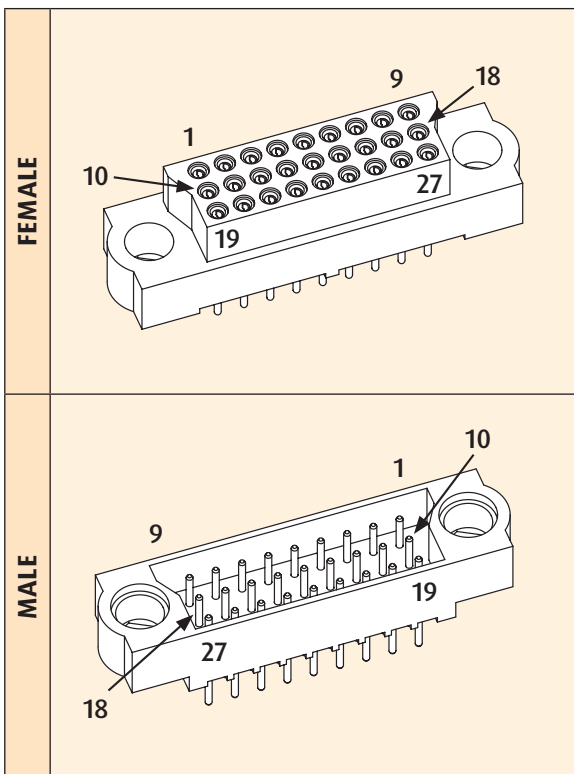
Durability:	500 operations
Insertion force (max):	1.0N
Withdrawal force (min):	0.2N
Signal crimp accommodation:	22 AWG to 28 AWG BS 3G 210 Type A or MIL-DTL-16878/6 Type ET

## 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 <sup>2</sup> (10G), duration 6h
*Bump severity:	390m/s <sup>2</sup> (40G), 4000 ±10 bumps
*Shock severity:	981m/s <sup>2</sup> (100G) for 6ms
*Acceleration severity:	490m/s <sup>2</sup> (50G)

\* Tested with connectors with Jackscrews.

## Pin Numbering



## Mating Profiles

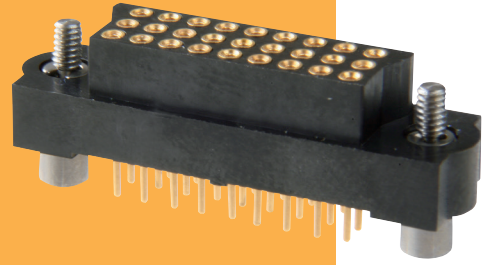
		FEMALE	
		VERTICAL THROUGHBOARD	CRIMP
MALE	VERTICAL THROUGHBOARD		
	HORIZONTAL THROUGHBOARD		

All dimensions in mm.

# Datamate J-Tek 3-Row Connectors

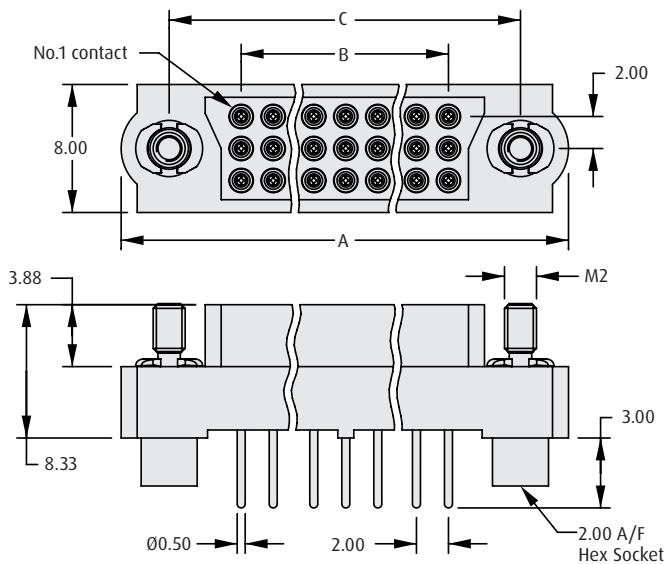
## Female Vertical Throughboard

- ❖ Low-force 4-finger Beryllium Copper contact clip.
- ❖ Fully shrouded contacts.
- ❖ Polarized housings.
- ❖ All contacts are gold finish for full RoHS compliance.
- ❖ Mates with all Datamate 3-Row male connectors with compatible jackscrews.



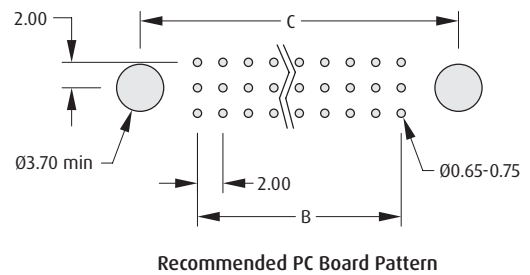
DATAMATE J-TEK 3-ROW

### THROUGHBOARD



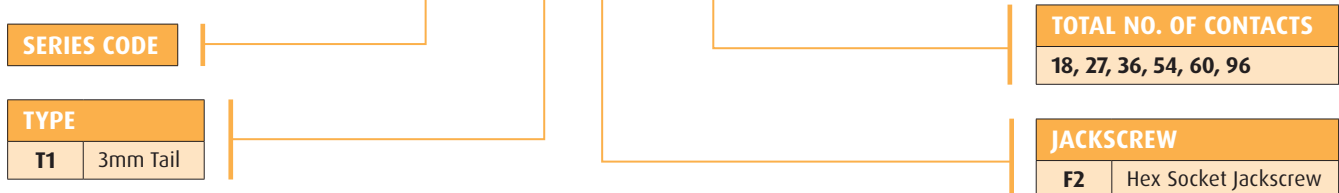
### CALCULATION

<b>A</b>	B + 15
<b>B</b>	(Total no. of contacts - 3) x 2/3
<b>C</b>	B + 9



### HOW TO ORDER

**M83 - LF T1 F2 N XX - 0000 - 000**



All dimensions in mm.

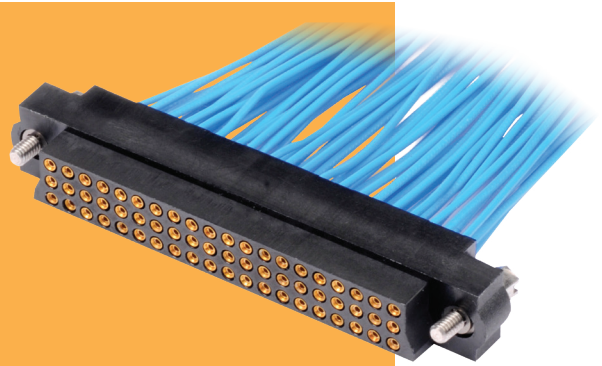


# Datamate J-Tek 3-Row Connectors

DATAMATE J-TEK 3-ROW

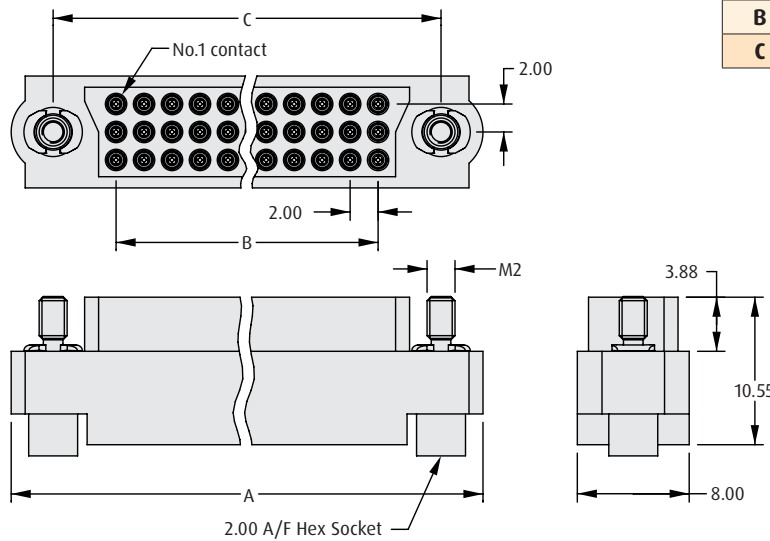
## Female Crimp Kit

- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Jackscrews are assembled where specified.
- Crimp contacts are rear insertable.
- Low-force 4-finger Beryllium Copper contact clip.
- Spare contacts are available.



### FEMALE CRIMP

### CALCULATION



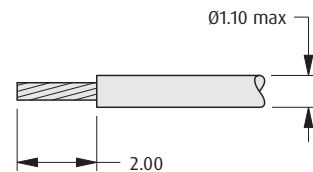
<b>A</b>	B + 15
<b>B</b>	(Total no. of contacts - 3) x 2/3
<b>C</b>	B + 9

### TOOLS

**Recommended Crimp Tool** - M22520/2-01  
**Positioner** - T5747  
**Contact Insertion/Removal Tool** - Z80-280

- Spare contacts shown on following pages.
- Instruction sheets available at [www.harwin.com/instructions](http://www.harwin.com/instructions).

### WIRE STRIPPING DETAILS



### HOW TO ORDER

**M83 - LF X1 F2 N XX - 0000 - 000**

**SERIES CODE**

**TYPE**

<b>C1</b>	Small Bore (24-28 AWG)
<b>D1</b>	Large Bore (22 AWG)

**TOTAL NO. OF CONTACTS**

18, 27, 36, 54, 60, 96

**JACKSCREW**

**F2** Hex Socket Jackscrew

All dimensions in mm.

# Datamate J-Tek 3-Row Connectors

## Spare Female Crimp Contacts

- Barrel Crimp Contacts are supplied with the connectors - see previous page. Use the order code for extra spare crimps.



DATAMATE J-TEK 3-ROW

CRIMP CONTACTS	WIRE STRIPPING DETAILS								
<p><b>Large Bore (22 AWG)</b></p> <p>7.45</p> <p>2 x Ident Grooves</p> <p><b>Small Bore (24 to 28 AWG)</b></p> <p>3 x Ident Grooves</p>	<p>Ø1.10 max</p> <p>2.00</p>								
	TOOLS								
	<p><b>Recommended Crimp Tool</b> - M22520/2-01  <b>Positioner</b> - T5747  <b>Contact Insertion/Removal Tool</b> - Z80-280</p> <p>❖ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</p>								
HOW TO ORDER									
<p><b>M83 - 01X 00 05</b></p>									
<p><b>SERIES CODE</b></p> <table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">TYPE</th> </tr> </thead> <tbody> <tr> <td style="background-color: #f4a460;">011</td> <td>Large Bore (22 AWG)</td> </tr> <tr> <td style="background-color: #f4a460;">013</td> <td>Small Bore (24-28 AWG)</td> </tr> </tbody> </table>	TYPE		011	Large Bore (22 AWG)	013	Small Bore (24-28 AWG)	<p><b>FINISH</b></p> <table border="1" style="width: 100%;"> <tbody> <tr> <td style="background-color: #f4a460;">05</td> <td>Gold</td> </tr> </tbody> </table>	05	Gold
TYPE									
011	Large Bore (22 AWG)								
013	Small Bore (24-28 AWG)								
05	Gold								

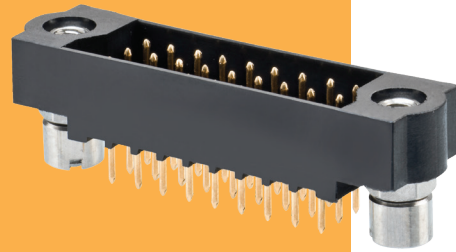
All dimensions in mm.

# Datamate J-Tek 3-Row Connectors

DATAMATE J-TEK 3-RW

## Male Vertical Throughboard

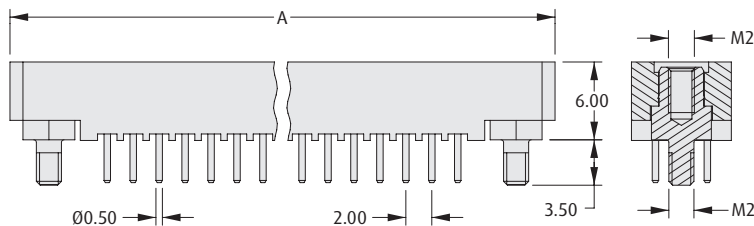
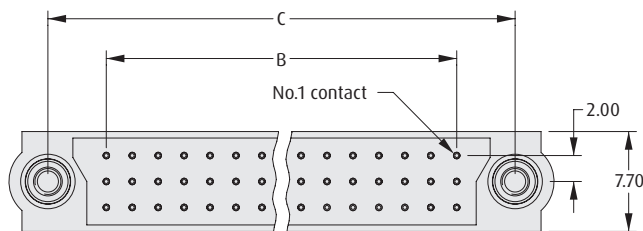
- Board Mount nuts to be tightened to a maximum torque of 23cmN.
- Fully shrouded contacts.
- Polarized housings.
- All contacts are gold finish for full RoHS compliance.
- Mates with all Datamate 3-Row female connectors with compatible jackscrews.



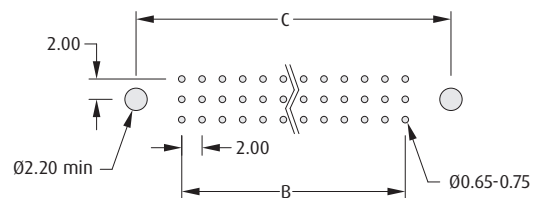
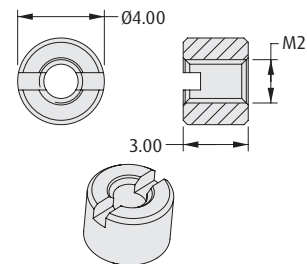
### MALE VERTICAL

### CALCULATION

<b>A</b>	B + 15
<b>B</b>	(Total no. of contacts - 3) x 2/3
<b>C</b>	B + 9



### Board Mount Nut, 2 per connector



Recommended PC Board Pattern

### HOW TO ORDER

**M83 - LM T1 M2 N XX - 0000 - 000**

**SERIES CODE**

**TYPE**

**T1** 3mm Tail

**TOTAL NO. OF CONTACTS**

18, 27, 36, 54, 60, 96

**JACKSCREW**

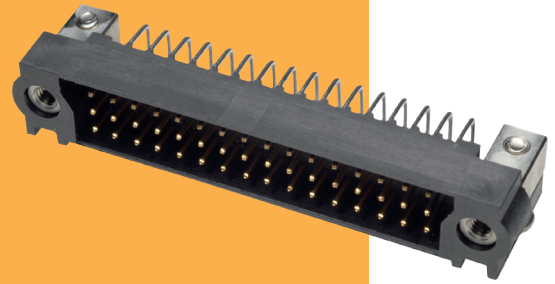
**M2** Board Mount Jackscrew

All dimensions in mm.

# Datamate J-Tek 3-Row Connectors

## Male Horizontal Throughboard

- ❖ Board Mount screws to be tightened to a maximum torque of 23cmN.
- ❖ Suitable for motherboard/daughterboard configurations.
- ❖ Fully shrouded contacts, polarized housings.
- ❖ All contacts are gold finish for full RoHS compliance.
- ❖ Mates with all Datamate 3-Row female connectors with compatible jackscrews.

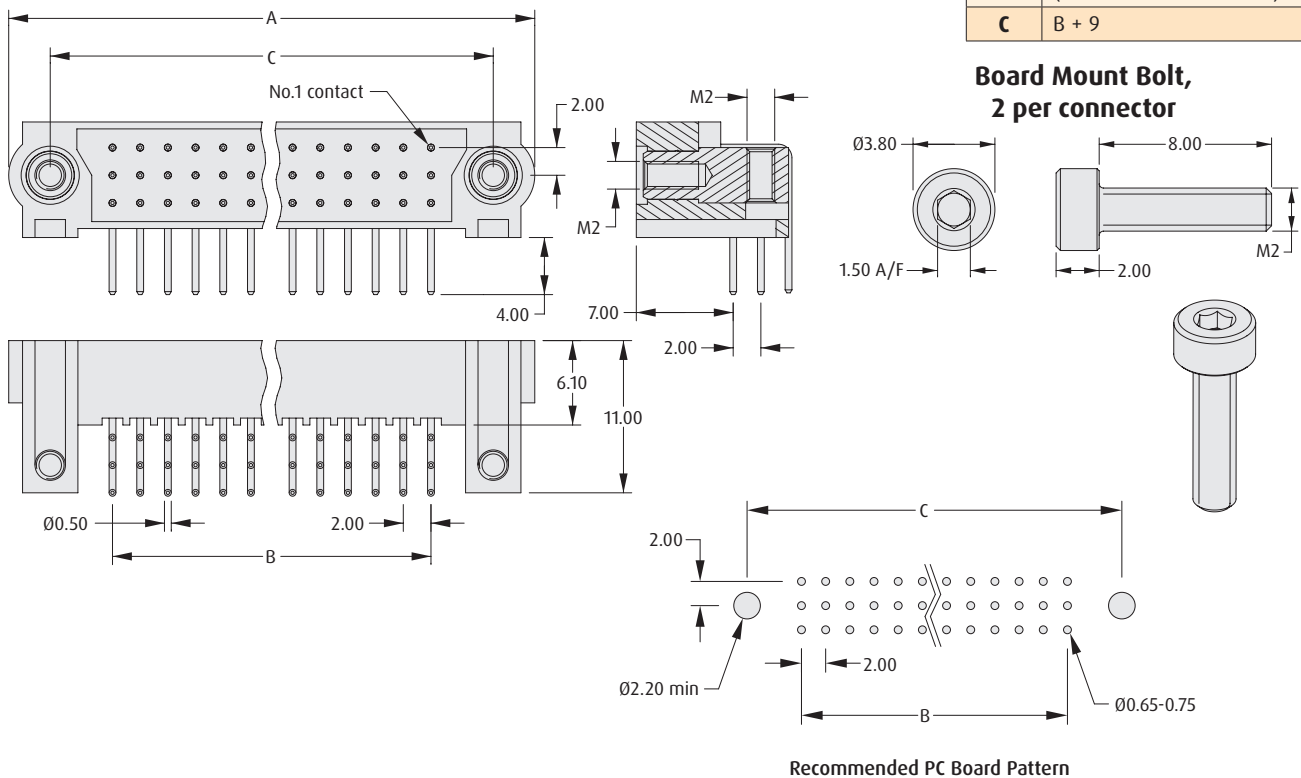


DATAMATE J-TEK 3-ROW

### MALE HORIZONTAL

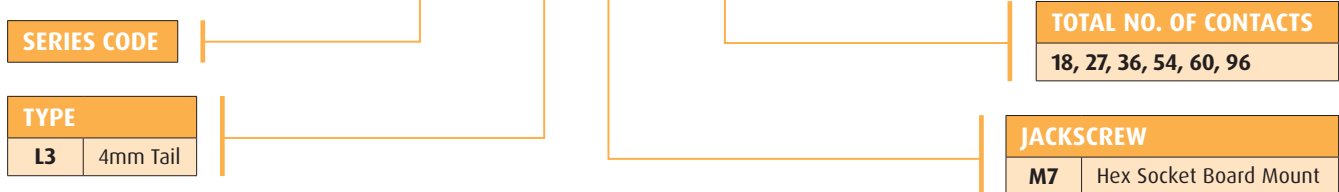
### CALCULATION

<b>A</b>	B + 15
<b>B</b>	(Total no. of contacts - 3) x 2/3
<b>C</b>	B + 9



### HOW TO ORDER

**M83 - LM L3 M7 N XX - 0000 - 000**



All dimensions in mm.

# Datamate L-Tek Specification

## Materials

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

## Mechanical

Durability:	500 operations
Insertion force (max):	2.8N
Withdrawal force (min):	0.2N
Signal crimp accommodation:	22 AWG to 32 AWG BS 3G 210 Type A, MIL-W-16878

## Electrical

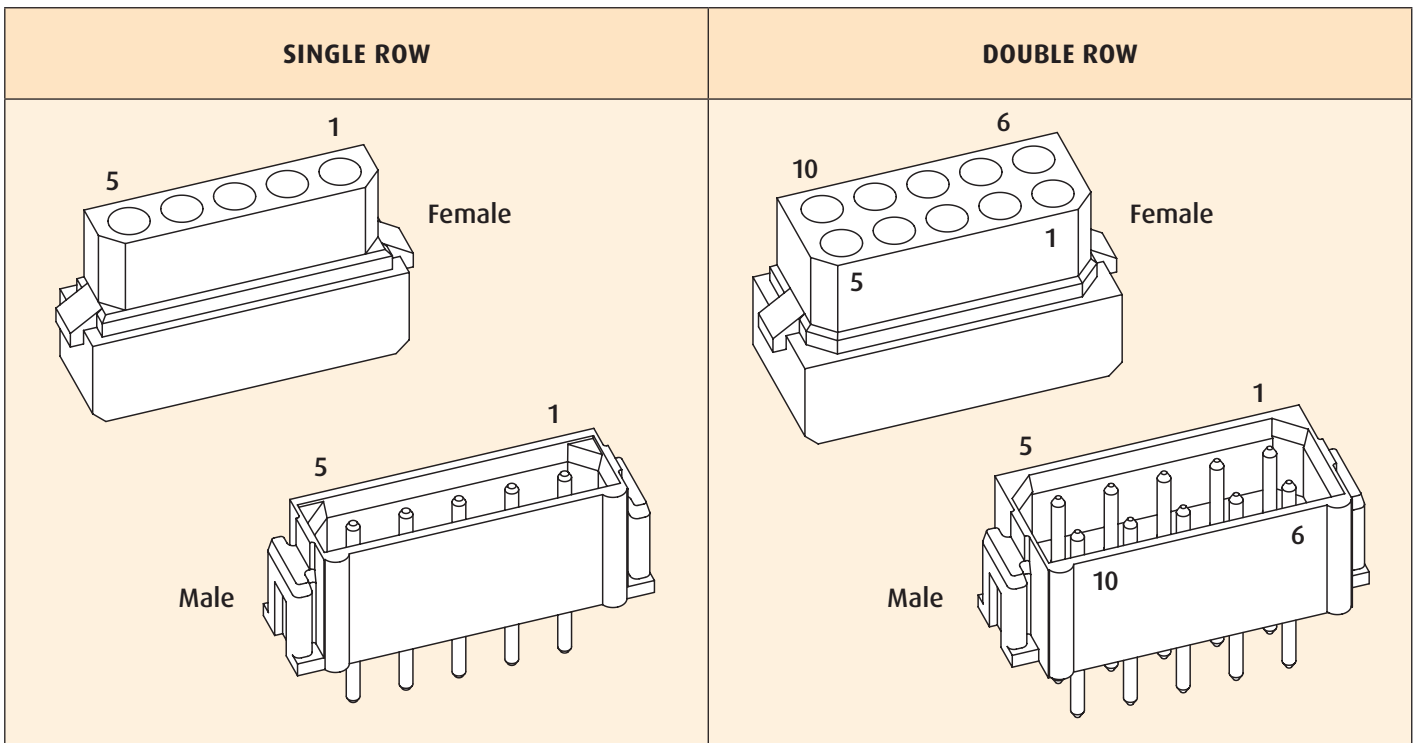
<b>Current</b>	
Individual contacts in isolation:	3.3A max (at 25°C) 2.6A max (at 85°C)
All contacts simultaneously:	3.0A max (at 25°C) 2.2A max (at 85°C)
<b>Working voltage</b>	
At sea level 1013 mbar:	800V DC or AC <sub>rms</sub>
<b>Voltage proof</b>	
At sea level 1013 mbar:	1,200V DC or AC <sub>rms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

## 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 <sup>2</sup> (10G), duration 6h
*Bump severity:	390m/s <sup>2</sup> (40G), 4000 ±10 bumps
*Shock severity:	981m/s <sup>2</sup> (100G) for 6ms
*Acceleration severity:	490m/s <sup>2</sup> (50G)

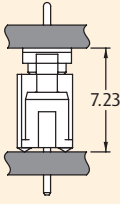
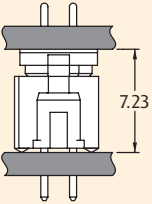
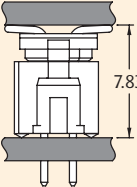
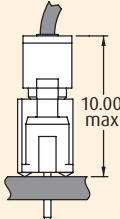
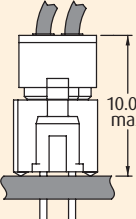
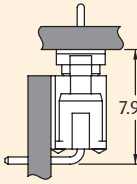
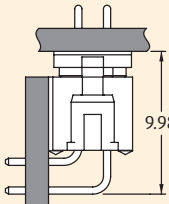
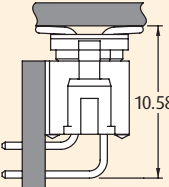
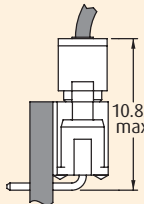
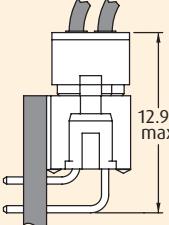
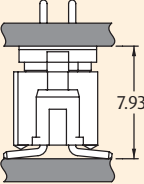
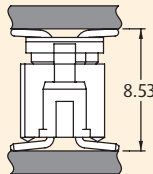
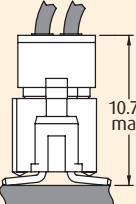
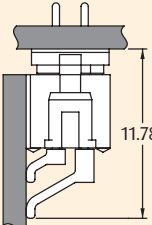
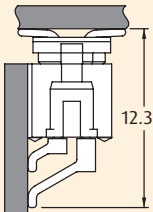
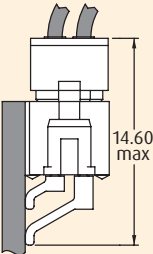
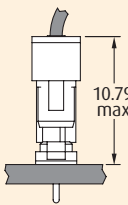
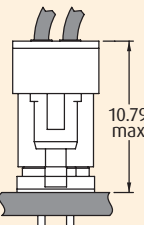
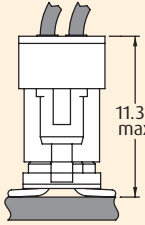
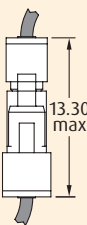
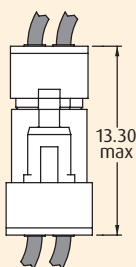
\* Tested with latched connectors.

# Pin Numbering



All dimensions in mm.

# Datamate L-Tek Mating Profiles

		FEMALE				
		VERTICAL THROUGHBOARD		VERTICAL SMT	CRIMP	
		SIL	DIL	DIL	SIL	DIL
MALE	VERTICAL THROUGHBOARD	 7.23	 7.23	 7.83	 10.00 max	 10.00 max
	HORIZONTAL THROUGHBOARD	 7.98	 9.98	 10.58	 10.85 max	 12.95 max
	VERTICAL SMT		 7.93	 8.53		 10.75 max
	HORIZONTAL SMT		 11.78	 12.38		 14.60 max
	CRIMP	 10.79 max	 10.79 max	 11.39 max	 13.30 max	 13.30 max

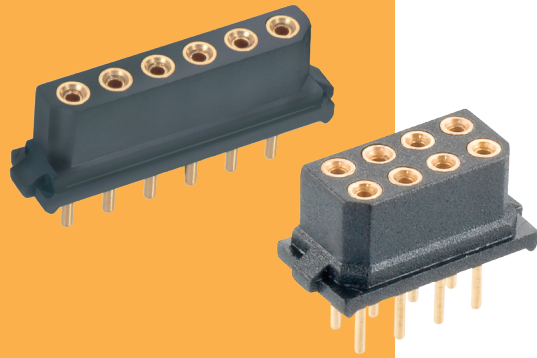
All dimensions in mm.

# Datamate L-Tek Connectors

DATAMATE L-TEK

## Female Vertical Throughboard

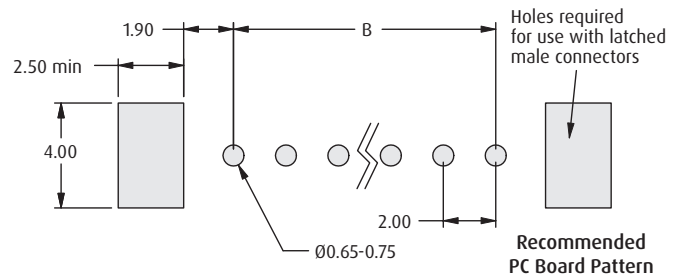
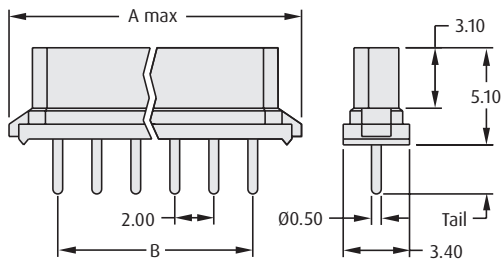
- Polarized housings.
- Dummy contacts are available for additional polarization, use order code **M80-023**.



### SINGLE ROW

### CALCULATION

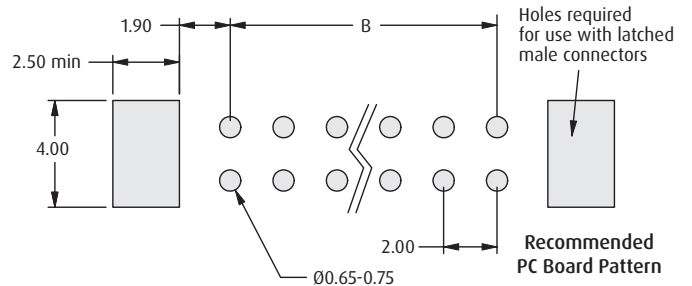
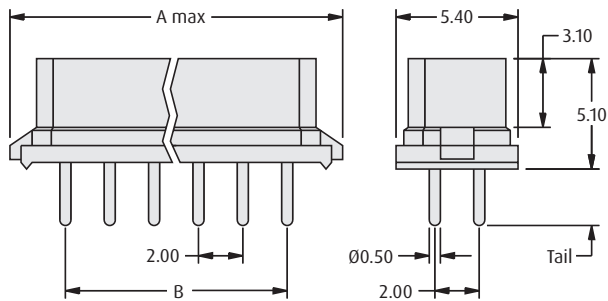
<b>A</b>	$B + 5.15$
<b>B</b>	$(\text{Total no. of contacts} - 1) \times 2$



### DOUBLE ROW

### CALCULATION

<b>A</b>	$B + 5.15$
<b>B</b>	$\text{Total no. of contacts} - 2$



## HOW TO ORDER

**M80 - XXX XX XX**

### SERIES CODE

### TYPE

<b>840</b>	Single Row (3mm tail)
<b>850</b>	Double Row (3mm tail)
<b>790</b>	Single Row (4.5mm tail)
<b>770</b>	Double Row (4.5mm tail)

### FINISH

<b>42</b>	Gold + Tin
<b>45</b>	Gold

### TOTAL NO. OF CONTACTS

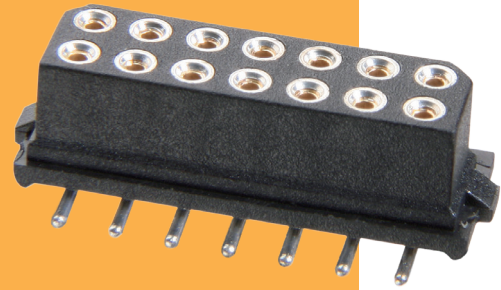
<b>02 to 07, 17, 22</b>	Single Row
<b>04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44</b>	Double Row

All dimensions in mm.

# Datamate L-Tek Connectors

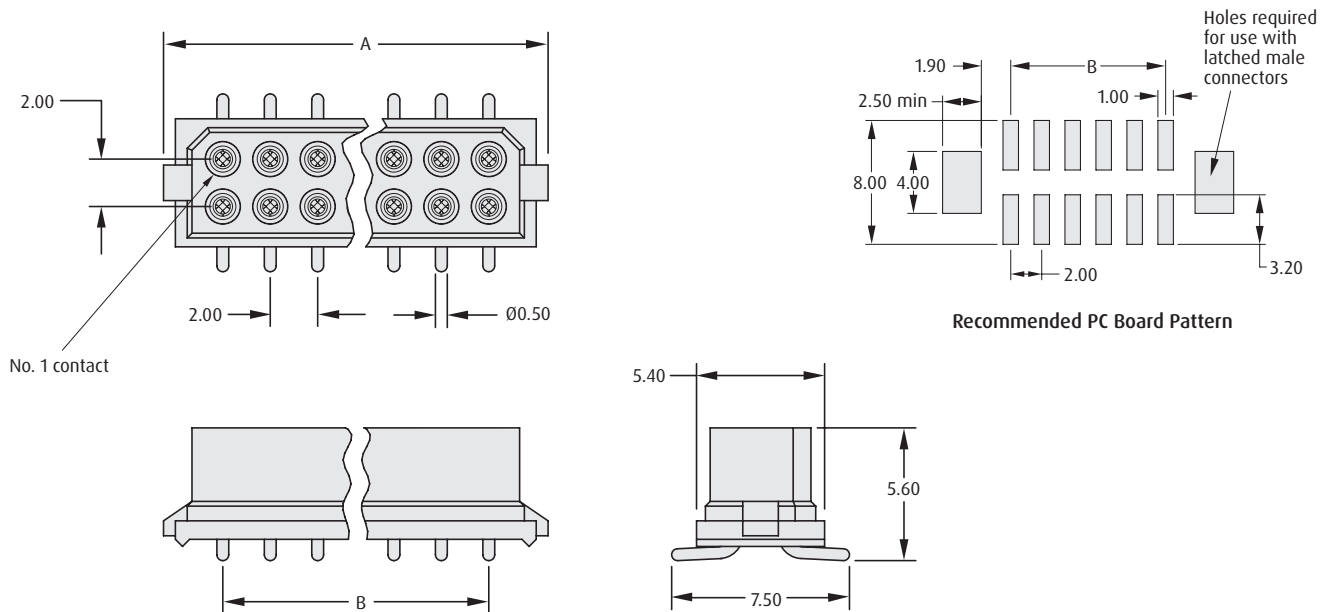
## Female Vertical Surface Mount

- ❖ Optional pick and place cap.
- ❖ Gull wing SMT tails simplify inspection process.



DATAMATE L-TEK

### DOUBLE ROW



CALCULATION	
<b>A</b>	$B + 5.15$
<b>B</b>	Total no. of contacts - 2

### HOW TO ORDER

**M80 - 681 XX XX P**

**SERIES CODE**

**TOTAL NO. OF CONTACTS**  
04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44

PICK AND PLACE CAP	
<b>BLANK</b>	No cap
<b>P</b>	Pick and place cap

FINISH	
<b>42</b>	Gold + Tin
<b>45</b>	Gold

All dimensions in mm.



# Datamate L-Tek Connectors

DATAMATE L-TEK

## Female Crimp Kit

- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Contacts are rear insertable.
- Spare contacts are available – see the following page.



SINGLE ROW	CALCULATION	DOUBLE ROW	CALCULATION
	<b>A</b> B + 5.15		<b>A</b> B + 5.15
	<b>B</b> (Total no. of contacts - 1) x 2		<b>B</b> Total no. of contacts - 2

TOOLS	WIRE STRIPPING DETAILS
<p><b>Recommended Crimp Tool</b> - M22520/2-01</p> <p><b>Positioner</b> - T5747</p> <p><b>Contact Insertion/Removal Tool</b> - Z80-280</p> <ul style="list-style-type: none"> <li>Spare and pre-cabled contacts shown on following pages.</li> <li>Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>	

HOW TO ORDER																			
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All dimensions in mm.

# Datamate L-Tek Connectors

## Spare Female Crimp Contacts

- ❖ Barrel Crimp Contacts are supplied with the connectors - see previous page. Use the order code for extra spare crimps.



DATAMATE L-TEK

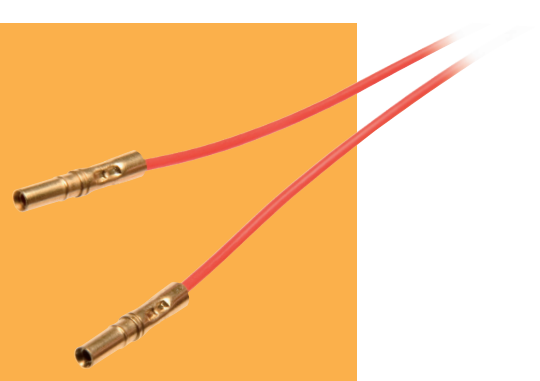
CRIMP CONTACTS	WIRE STRIPPING DETAILS												
<p><b>Large Bore (22 AWG)</b></p> <p><b>Small Bore (24 to 28 AWG)</b></p> <p><b>Extra Small Bore (28 to 32 AWG)</b></p>													
	TOOLS												
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01	Gold + Tin												
05	Gold												

All dimensions in mm.

# Datamate L-Tek Connectors

## Female Crimp Contacts – Pre-Crimped Wires

- Female crimp contacts pre-assembled with a choice of BS 3G 210 Type A cable at selected lengths.
- PTFE-insulated, multi-strand silver-plated copper conductor equipment wire.
- Ideal for prototype and pre-production applications.



FEMALE SINGLE ENDED	FEMALE - FEMALE

### TOOLS

**Contact Insertion/Removal Tool** – Z80-280

- Full crimp connector kits and spare crimp contacts shown on previous pages.
- Instruction sheets available at [www.harwin.com/instructions](http://www.harwin.com/instructions).

### HOW TO ORDER

**M80 - 9XX 00 99**

SERIES CODE

CABLE COLOR	
99	Red

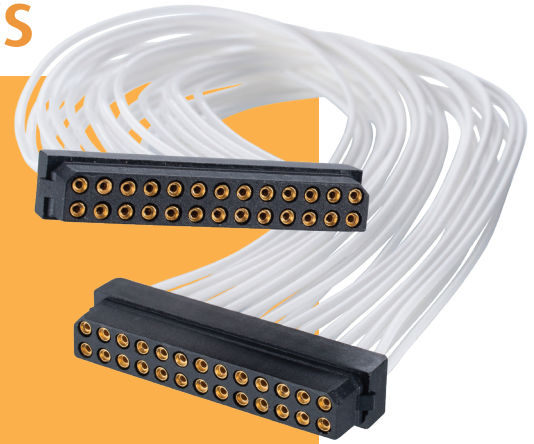
SINGLE ENDED	FEMALE-FEMALE	
910	918	22 AWG Cable, 150mm length
911	919	24 AWG Cable, 150mm length
912	920	26 AWG Cable, 150mm length
913	921	28 AWG Cable, 150mm length
914	922	22 AWG Cable, 300mm length
915	923	24 AWG Cable, 300mm length
916	924	26 AWG Cable, 300mm length
917	925	28 AWG Cable, 300mm length

All dimensions in mm.

# Datamate L-Tek Connectors

## Female Cable Assemblies

- Fully assembled connectors and cable in standard configurations.
- Fitted with 24AWG wire, PTFE insulation.
- Double Row connectors (10 contacts and larger) compatible with plastic Hood shown on following page.



DATAMATE L-TEK

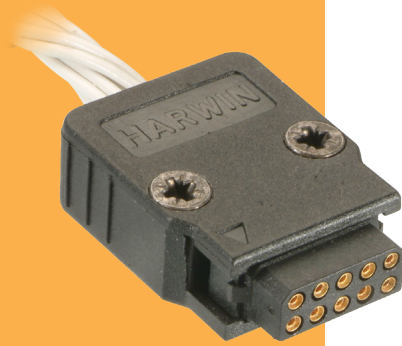
SINGLE ROW, SINGLE ENDED	DOUBLE ROW, SINGLE ENDED																												
<ul style="list-style-type: none"> <li>➤ Cable insulation is multicolored - check applicable Technical Drawing for color sequence.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Cable insulation is multicolored - check applicable Technical Drawing for color sequence.</li> </ul>																												
FEMALE - FEMALE DOUBLE ENDED																													
<ul style="list-style-type: none"> <li>➤ Cable insulation is white.</li> <li>➤ Contact 1 is attached to Contact 1, Contact 2 to Contact 2, etc.</li> </ul>																													
HOW TO ORDER																													
M80 - FX2 XX XX L0 - 0150 XX																													
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All dimensions in mm.

# Datamate L-Tek Connectors

## Female Accessories

- ❖ Crimp Hood is supplied as a kit of parts, including body, lid, cable clamp and 4 screws.
- ❖ For use with double row female crimp connectors.
- ❖ Mates with unlatched male connectors.
- ❖ Dummy contact can be used for additional polarization or keying of multiple connectors.
- ❖ Fits both female Throughboard and Crimp housings.



DATAMATE L-TEK

CRIMP HOOD		CALCULATION	
	<b>A</b>	$B + 8.3$	
	<b>B</b>	Total no. of contacts - 2	
	<b>C</b>	$B + 6.3$	
HOW TO ORDER			
<b>M80 - 880 XX 98</b>			
<b>SERIES CODE</b>	<b>TOTAL NO. OF CONTACTS</b>		10, 12, 14, 16, 18, 20, 26, 34
DUMMY CONTACT			
		<b>ORDER CODE</b> <b>M80-023</b>	

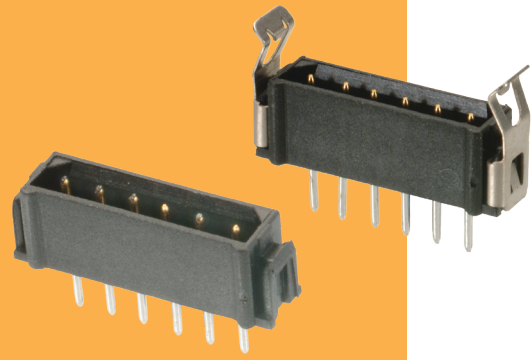
All dimensions in mm.

# Datamate L-Tek Connectors

DATAMATE L-TEK

## Male Single Row Vertical Throughboard

- Polarized housings.
- Fully shrouded contacts.
- Mates with standard Datamate L-Tek female connectors.
- Can be used with optional Strain Relief straps, available to order separately: **order code M80-0030006**.



NO LATCHES	CALCULATION	LOCKING LATCH	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 6.1
	<b>B</b> (Total no. of contacts - 1) x 2		<b>B</b> (Total no. of contacts - 1) x 2

### STRAIN RELIEF STRAP

Order separately from connector

View of Strain Relief strap in place

**ORDER CODE**  
**M80-0030006**

### Recommended PC Board Pattern

### HOW TO ORDER

M80 - XXX XX XX

**SERIES CODE**

TYPE	
852	No Latches, 3mm Tail
882	Locking Latch, 3mm Tail
782	Locking Latch, 4.5mm Tail

**FINISH**

42	Gold + Tin
45	Gold

**TOTAL NO. OF CONTACTS**

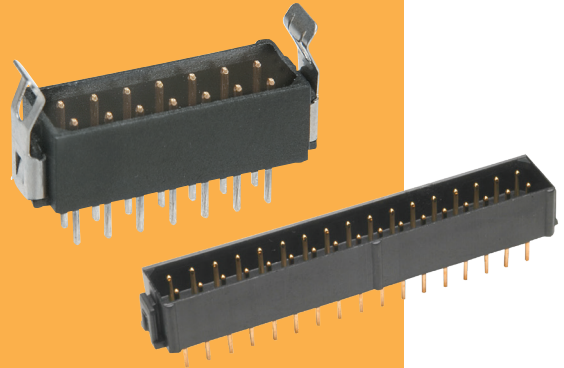
**02 to 07**

All dimensions in mm.

# Datamate L-Tek Connectors

## Male Double Row Vertical Throughboard

- ❖ Polarized housings.
- ❖ Fully shrouded contacts.
- ❖ Mates with standard Datamate L-Tek female connectors.
- ❖ Can be used with optional Strain Relief straps, available to order separately: **order code M80-0030006**.



DATAMATE L-TEK

NO LATCHES	CALCULATION	LOCKING LATCH	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 6.1
	<b>B</b> Total no. of contacts - 2		<b>B</b> Total no. of contacts - 2

### STRAIN RELIEF STRAP

Order separately from connector

View of Strain Relief strap in place

**ORDER CODE**

**M80-0030006**

### Recommended PC Board Pattern

### HOW TO ORDER

**M80 - XXX XX XX**

SERIES CODE			FINISH	
3mm TAIL	4.5mm TAIL			42
854	754	No Latches	45	Gold
853	753	Locking Latch		

**TOTAL NO. OF CONTACTS**

**04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44**

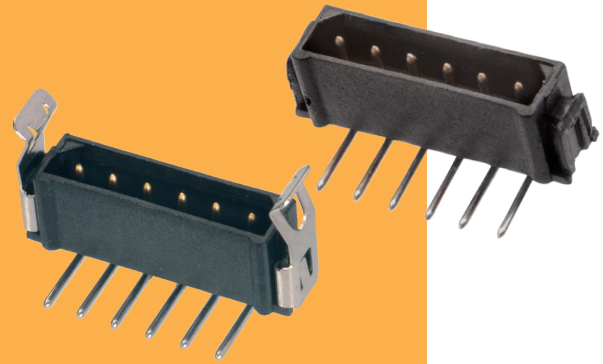
All dimensions in mm.

# Datamate L-Tek Connectors

DATAMATE L-TEK

## Male Single Row Horizontal Throughboard

- Polarized housings.
- Fully shrouded contacts.
- Mates with standard Datamate L-Tek female connectors.
- Supplied with two Strain Relief straps per connector; spares available under **order code M80-0030006**.



NO LATCHES	CALCULATION	LOCKING LATCH	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 6.1
	<b>B</b> (Total no. of contacts - 1) x 2		<b>B</b> (Total no. of contacts - 1) x 2

STRAIN RELIEF STRAP	Supplied with connector	Recommended PC Board Pattern
	<p>View of Strain Relief strap in place</p>	

### HOW TO ORDER

**M80 - XXX XX XX**

SERIES CODE	
TYPE	
<b>843</b>	No Latches, 3mm Tail
<b>842</b>	Locking Latch, 3mm Tail
<b>792</b>	Locking Latch, 4.5mm Tail

FINISH	
<b>42</b>	Gold + Tin
<b>45</b>	Gold

TOTAL NO. OF CONTACTS
<b>02 to 07</b>

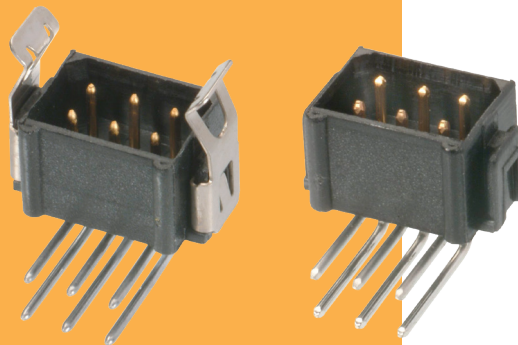
All dimensions in mm.



# Datamate L-Tek Connectors

## Male Double Row Horizontal Throughboard

- ❖ Polarized housings.
- ❖ Fully shrouded contacts.
- ❖ Mates with standard Datamate L-Tek female connectors.
- ❖ Supplied with two Strain Relief straps per connector; spares available under **order code M80-0030006**.



DATAMATE L-TEK

NO LATCHES	CALCULATION	LOCKING LATCH	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 6.1
	<b>B</b> Total no. of contacts - 2		<b>B</b> Total no. of contacts - 2

STRAIN RELIEF STRAP	Supplied with connector	Recommended PC Board Pattern
	<p>View of Strain Relief strap in place</p>	

### HOW TO ORDER

**M80 - XXX XX XX**

**SERIES CODE**

TYPE	
<b>841</b>	No Latches, 3mm Tail
<b>851</b>	Locking Latch, 3mm Tail
<b>771</b>	Locking Latch, 4.5mm Tail

**FINISH**

<b>42</b>	Gold + Tin
<b>45</b>	Gold

**TOTAL NO. OF CONTACTS**

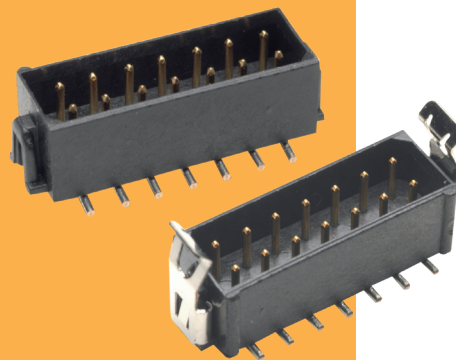
04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44

All dimensions in mm.

# Datamate L-Tek Connectors

## Male Vertical Surface Mount

- Mates with standard Datamate L-Tek female connectors.
- Can be used with optional Strain Relief straps, available to order separately: **order code M80-0030006**.
- Optional pick and place cap.
- Gull wing SMT tails simplify inspection process.



DATAMATE L-TEK

NO LATCHES	CALCULATION	LOCKING LATCH	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 6.1
	<b>B</b> Total no. of contacts - 2		<b>B</b> Total no. of contacts - 2

STRAIN RELIEF STRAP	Order separately from connector
	<p>View of Strain Relief strap in place</p> <p><b>ORDER CODE</b> <b>M80-0030006</b></p>

Recommended PC Board Pattern

4 x Ø0.90 min (optional) for Strain Relief Straps

### HOW TO ORDER

**M80 - 82X XX XX P**

<b>SERIES CODE</b>	M80	82X	XX	XX	P
--------------------	-----	-----	----	----	---

<b>TYPE</b>	826	No Latches
	828	Locking Latch

<b>PICK AND PLACE CAP</b>	BLANK	No cap
	P	Pick and place cap

<b>FINISH</b>	42	Gold + Tin
	45	Gold

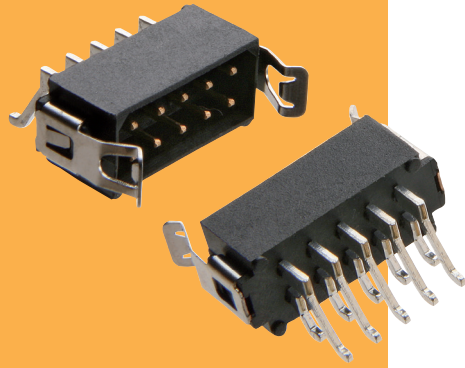
<b>TOTAL NO. OF CONTACTS</b>	04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34
------------------------------	--

All dimensions in mm.

# Datamate L-Tek Connectors

## Male Horizontal Surface Mount

- ❖ Mates with standard Datamate L-Tek female connectors.
- ❖ Supplied with two Strain Relief straps per connector; spares available under **order code M80-0030006**.
- ❖ Stamped contact ensures co-planarity.



DATAMATE L-TEK

NO LATCHES	CALCULATION	LOCKING LATCH	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 6.1
	<b>B</b> Total no. of contacts - 2		<b>B</b> Total no. of contacts - 2

STRAIN RELIEF STRAP	Supplied with connector	Recommended PC Board Pattern
	<p style="text-align: center;">View of Strain Relief strap in place</p>	

### HOW TO ORDER

M80 - 66X XX 42

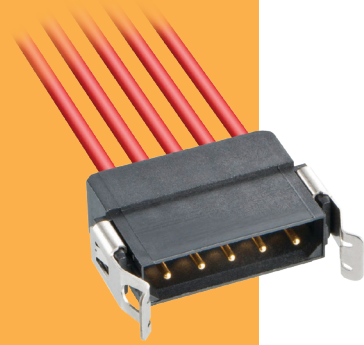
<b>SERIES CODE</b>		<b>FINISH</b>
<b>665</b> No Latches		<b>42</b> Gold + Tin
<b>666</b> Locking Latch		
	<b>TOTAL NO. OF CONTACTS</b>	
	04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34	

All dimensions in mm.

# Datamate L-Tek Connectors

## Male Crimp Kit

- Part numbers are for a complete kit of a housing and the applicable number of contacts.
- Contacts are rear insertable.
- Spare contacts are available - see the following page.



DATAMATE L-TEK

SINGLE ROW	CALCULATION	DOUBLE ROW	CALCULATION
	<b>A</b> B + 5.6		<b>A</b> B + 5.6
Latches (when fitted) add 0.5mm to overall length 'A'	<b>B</b> (Total no. of contacts - 1) x 2	Latches (when fitted) add 0.5mm to overall length 'A'	<b>B</b> Total no. of contacts - 2

TOOLS	WIRE STRIPPING DETAILS
<p><b>Recommended Crimp Tool</b> - M22520/2-01</p> <p><b>Positioner</b> - T5747</p> <p><b>Contact Insertion/Removal Tool</b> - Z80-280</p> <ul style="list-style-type: none"> <li>Spare contacts shown on following page.</li> <li>Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</li> </ul>	

### HOW TO ORDER

**M80 - 8XX XX 05**

SERIES CODE

SINGLE ROW	DOUBLE ROW	
806	810	Small Bore (24-28 AWG), No Latches
807	811	Large Bore (22 AWG), No Latches
808	812	Small Bore (24-28 AWG), Locking Latch
809	813	Large Bore (22 AWG), Locking Latch

FINISH

05 Gold

TOTAL NO. OF CONTACTS

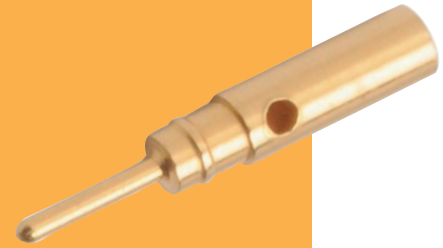
02, 03, 04, 05, 06, 07	Single Row
04, 06, 08, 10, 12	Double Row

All dimensions in mm.

# Datamate L-Tek Connectors

## Spare Male Crimp Contacts

- Barrel Crimp Contacts are supplied with the connectors - see previous page. Use the order code for extra Spare crimps.



CRIMP CONTACTS	WIRE STRIPPING DETAILS								
<p><b>Large Bore (22 AWG)</b></p>	<p><b>TOOLS</b></p> <p><b>Recommended Crimp Tool</b> - M22520/2-01  <b>Positioner</b> - T5747  <b>Contact Insertion/Removal Tool</b> - Z80-280</p> <p>❖ Instruction sheets available at <a href="http://www.harwin.com/instructions">www.harwin.com/instructions</a>.</p>								
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<b>05</b>	Gold								

All dimensions in mm.

# Datamate Tooling


- ❖ Instruction sheets can be accessed at [www.harwin.com/instructions](http://www.harwin.com/instructions).
- ❖ A Datamate Crimping Instruction video is available at [www.harwin.com/harwintv](http://www.harwin.com/harwintv).

HAND CRIMP TOOL	HAND CRIMP TOOL																
<ul style="list-style-type: none"> <li>❖ Standard circular crimp tool BS5210-3A-300 and MIL specification M22520/2-01.</li> <li>❖ Precision tool with ratchet mechanism and 8-indent form.</li> <li>❖ Must be used with applicable positioner shown below.</li> <li>❖ Instruction sheet available.</li> </ul>  <table border="1" data-bbox="430 1003 808 1108"> <thead> <tr> <th colspan="2">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Signal contacts, L-Tek, J-Tek &amp; Mix-Tek</td> <td><b>M22520/2-01</b></td> </tr> </tbody> </table>	ORDER CODE		Signal contacts, L-Tek, J-Tek & Mix-Tek	<b>M22520/2-01</b>	<ul style="list-style-type: none"> <li>❖ Standard circular crimp tools.</li> <li>❖ Precision tool with ratchet mechanism and 8-indent form.</li> <li>❖ Must be used with applicable positioner shown below.</li> <li>❖ Instruction sheets available.</li> </ul>  <table border="1" data-bbox="1161 966 1511 1108"> <thead> <tr> <th colspan="2">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Inner contact of Mix-Tek coax contacts</td> <td><b>Z80-292</b></td> </tr> <tr> <td>Power crimp contacts</td> <td><b>Z80-294</b></td> </tr> </tbody> </table>	ORDER CODE		Inner contact of Mix-Tek coax contacts	<b>Z80-292</b>	Power crimp contacts	<b>Z80-294</b>						
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<ul style="list-style-type: none"> <li>❖ Standard coax crimp tool for crimping the outer sleeve of Mix-Tek coax contacts.</li> <li>❖ Instruction sheet available.</li> </ul>  <table border="1" data-bbox="462 1795 808 1900"> <thead> <tr> <th colspan="2">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Outer sleeve of Mix-Tek coax contacts</td> <td><b>Z80-293</b></td> </tr> </tbody> </table>	ORDER CODE		Outer sleeve of Mix-Tek coax contacts	<b>Z80-293</b>	<ul style="list-style-type: none"> <li>❖ Used with applicable hand crimp tool.</li> </ul>  <table border="1" data-bbox="1071 1617 1511 1900"> <thead> <tr> <th colspan="2">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Female Signal Barrel Crimp, Male L-Tek Crimp</td> <td><b>T5747</b></td> </tr> <tr> <td>Male J-Tek, Mix-Tek Signal Crimp</td> <td><b>Z80-193</b></td> </tr> <tr> <td>Inner contact of Mix-Tek coax contacts</td> <td><b>Z80-291</b></td> </tr> <tr> <td>Female T-Contact</td> <td><b>Z80-444</b></td> </tr> <tr> <td>Power crimp contacts</td> <td><b>Z80-295</b></td> </tr> </tbody> </table>	ORDER CODE		Female Signal Barrel Crimp, Male L-Tek Crimp	<b>T5747</b>	Male J-Tek, Mix-Tek Signal Crimp	<b>Z80-193</b>	Inner contact of Mix-Tek coax contacts	<b>Z80-291</b>	Female T-Contact	<b>Z80-444</b>	Power crimp contacts	<b>Z80-295</b>
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All dimensions in mm.

# Datamate Tooling

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INSERTION/REMOVAL TOOL	REMOVAL TOOL																
<ul style="list-style-type: none"> <li>❖ For inserting crimped contacts into the rear of housings.</li> <li>❖ Suitable for all Datamate signal Barrel crimp contacts.</li> </ul>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Barrel Signal crimps for L-Tek, J-Tek &amp; Mix-Tek</td> <td style="text-align: center;"><b>Z80-280</b></td> </tr> </tbody> </table>	ORDER CODE		Barrel Signal crimps for L-Tek, J-Tek & Mix-Tek	<b>Z80-280</b>	<ul style="list-style-type: none"> <li>❖ To aid removal of special cable contacts from Mix-Tek connectors.</li> </ul>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Mix-Tek special cable connectors</td> <td style="text-align: center;"><b>Z80-290</b></td> </tr> </tbody> </table>	ORDER CODE		Mix-Tek special cable connectors	<b>Z80-290</b>								
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<ul style="list-style-type: none"> <li>❖ Recommended for unplugging L-Tek latched connectors (tool releases the latches prior to disengagement).</li> <li>❖ Can also be used with unlatched connectors.</li> <li>❖ Suitable for all sizes.</li> </ul>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>L-Tek</td> <td style="text-align: center;"><b>Z80-299</b></td> </tr> </tbody> </table>	ORDER CODE		L-Tek	<b>Z80-299</b>	<ul style="list-style-type: none"> <li>❖ Mating jackscrews to be tightened to a torque of 23cmN max.</li> <li>❖ Board mount nuts and bolts to be tightened to a torque of 21 ±2cmN.</li> </ul>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="background-color: #f4a460;">ORDER CODE</th> </tr> </thead> <tbody> <tr> <td>Slotted Nut Screwdriver (board mount nuts)</td> <td style="text-align: center;"><b>Z80-298</b></td> </tr> <tr> <td>1.5mm A/F Hex Drive Bit (board mount bolts)</td> <td style="text-align: center;"><b>Z9950-00</b></td> </tr> <tr> <td>2mm A/F Hex Drive Bit (floating jackscrews)</td> <td style="text-align: center;"><b>Z9951-00</b></td> </tr> <tr> <td>1.5mm A/F Ball Hex Driver (board mount bolts)</td> <td style="text-align: center;"><b>Z9952-00</b></td> </tr> <tr> <td>2mm A/F Ball Hex Driver (floating jackscrews)</td> <td style="text-align: center;"><b>Z9953-00</b></td> </tr> </tbody> </table>	ORDER CODE		Slotted Nut Screwdriver (board mount nuts)	<b>Z80-298</b>	1.5mm A/F Hex Drive Bit (board mount bolts)	<b>Z9950-00</b>	2mm A/F Hex Drive Bit (floating jackscrews)	<b>Z9951-00</b>	1.5mm A/F Ball Hex Driver (board mount bolts)	<b>Z9952-00</b>	2mm A/F Ball Hex Driver (floating jackscrews)	<b>Z9953-00</b>
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