

### Datamate J-Tek Specification

Ph +612 9482 1944 - Email sales@clarke.com.au - www.clarke.com.au - webshop www.cseonline.com.au

Housings: Glass-filled thermoplastic UL94V-0

Female contacts

Brass shell, with Beryllium Copper Standard J-Tek:

inner contact

T-Contact: Bervllium Copper Male contacts: Copper alloy

Finish: See individual pages

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

All contacts simultaneously:

Individual contacts in isolation: 8.5A max (at 25°C)

6.5A max (at 85°C) 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

1,000MΩ min Initial: After conditioning:  $100M\Omega$  min

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)

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

Signal crimp accommodation: 22 AWG to 32 AWG

BS 3G 210 Type A, MIL-W-16878

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,

 $98m/s^2$  (10G), duration 6 hours

10Hz to 2000Hz, 0.75mm, T-Contact:

390m/s<sup>2</sup> (40G), duration 6 hours

390m/s<sup>2</sup> (40G), 4000 ±10 bumps \*Bump severity:

\*Shock severity: 981m/s<sup>2</sup> (100G) for 6ms

\*Acceleration severity: 490m/s<sup>2</sup> (50G)

### Pin Numbering

FEMALE	MALE
	5



<sup>\*</sup> Tested with connectors with Jackscrews.

# **Datamate J-Tek Mating Profiles**

		FEMALE					
		VERTICAL THROUGHBOARD	VERTICAL SMT	CRIMP			
	VERTICAL THROUGH- BOARD	7.30	7.80	9.75 max			
	HORIZONTAL THROUGH- BOARD	10.00	10.50	12.60 max			
	VERTICAL SMT	7.55	8.05	10.10 max			
MALE	HORIZONTAL SMT	11.60	12.10	14.20 max			
	CRIMP	9.85 max	10.35 max	12.05 max			
	CRIMP 1mm EXTENDED WALL	10.85 max	11.35 max	13.05 max			
	CRIMP 5mm EXTENDED WALL	14.85 max	15.35 max	17.05 max			



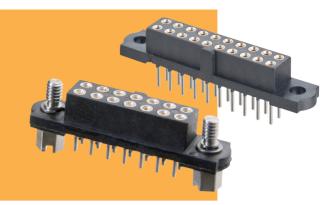
# **Datamate J-Tek Mating Profiles**

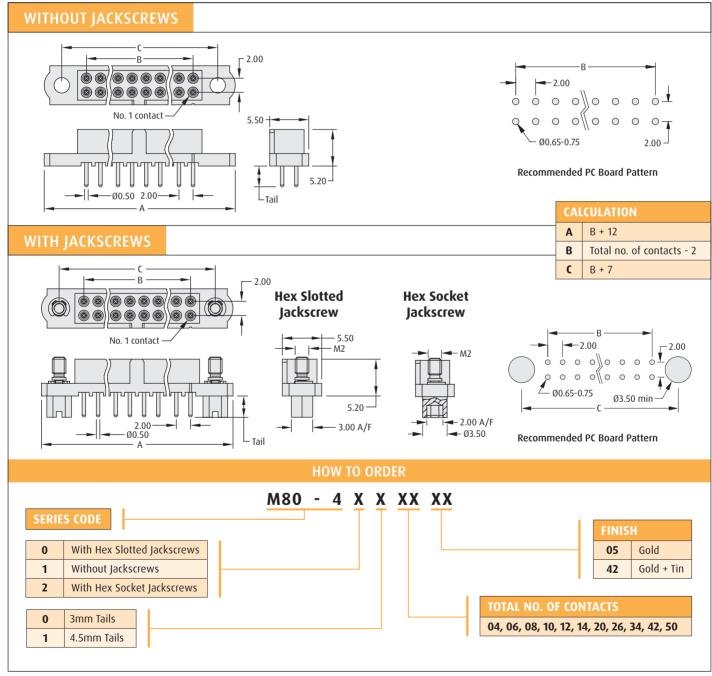
		FEM	ALE
		CRIMP 1mm EXTENDED WALL	<b>CRIMP</b> 5mm EXTENDED WALL
	VERTICAL THROUGH- BOARD	10.75 max	14.75
	HORIZONTAL THROUGH- BOARD	13.60 max	16.60 max
	VERTICAL SMT	11.10 max	15.10 max
MALE	HORIZONTAL SMT	15.20 max	19.20 max ———————————————————————————————————
	CRIMP	13.05 max —	17.05 max ——
	CRIMP 1mm EXTENDED WALL	14.05 max ———————————————————————————————————	18.05 max
	CRIMP 5mm EXTENDED WALL	18.05 max	22.05 max ———————————————————————————————————



### Female Vertical Throughboard

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



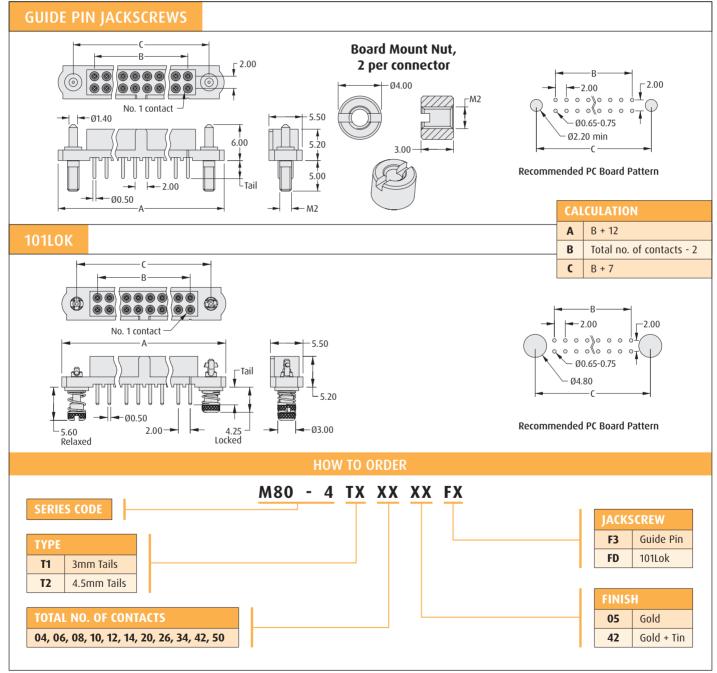




### Female Vertical Throughboard, Guide Pin, 101Lok

- ➤ 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.



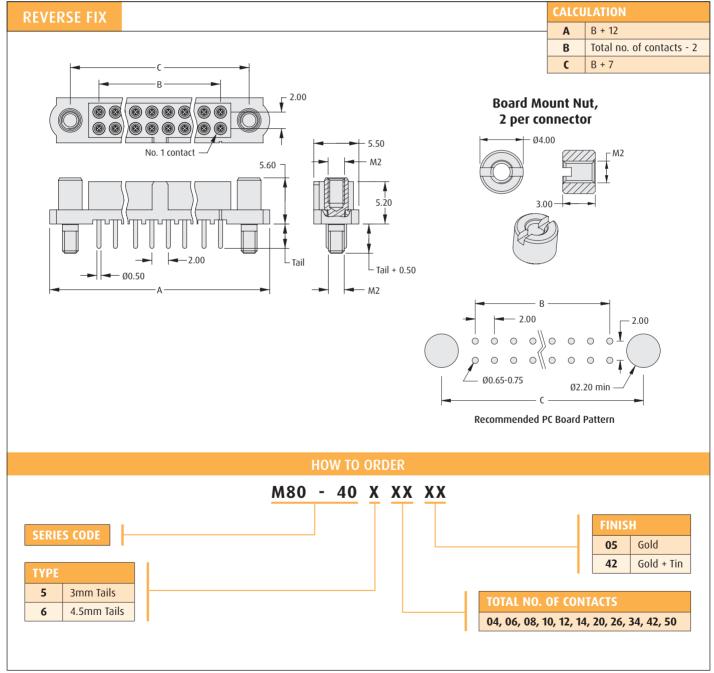




### Female Vertical Throughboard Reverse Fix

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

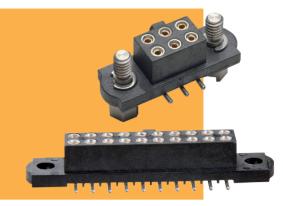


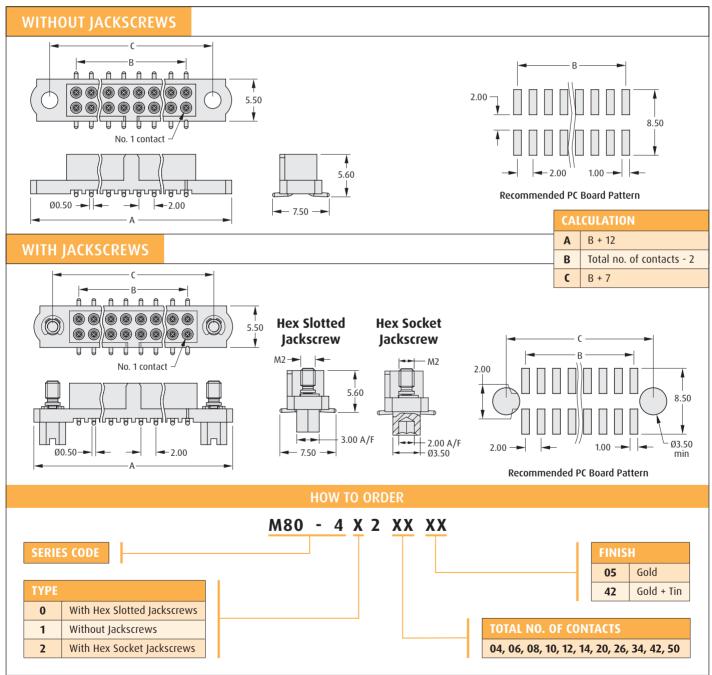




#### **Female Vertical Surface Mount**

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



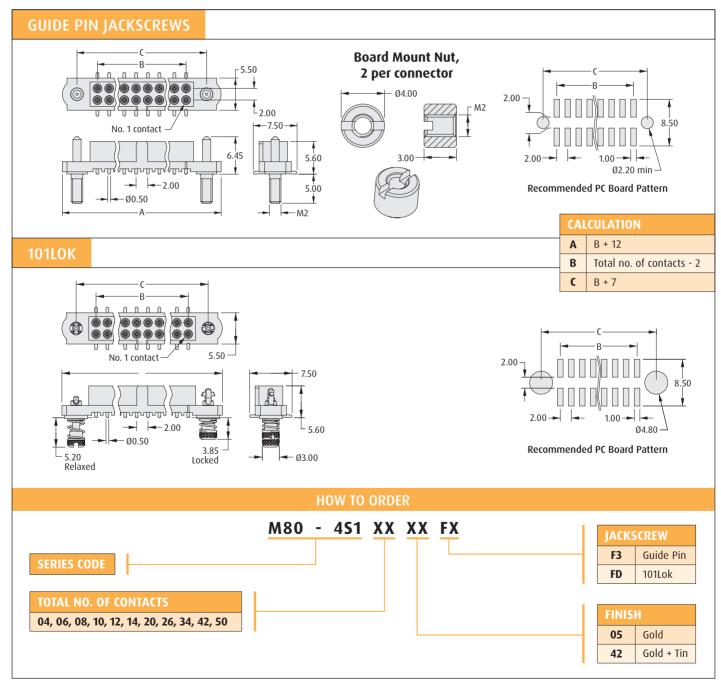




### Female Vertical Surface Mount Guide Pin, 101Lok

- 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.



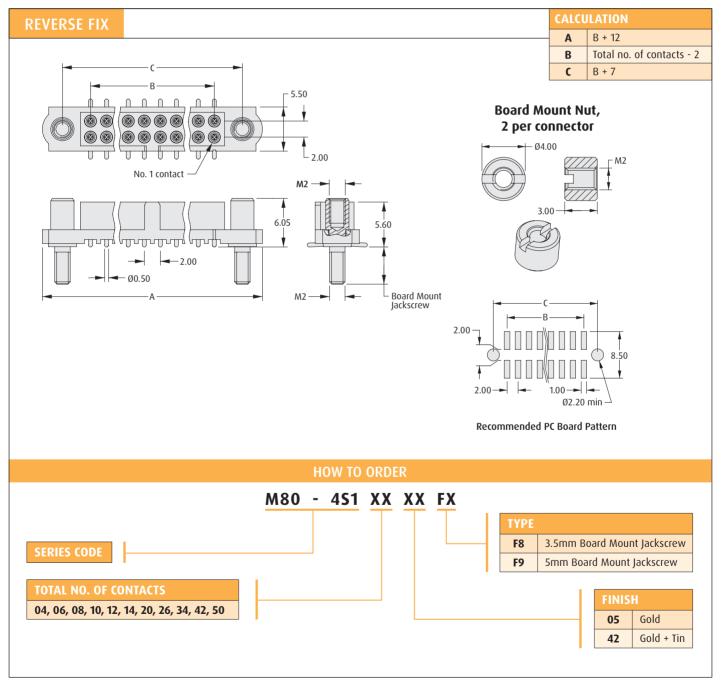




#### Female Vertical Surface Mount Reverse Fix

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



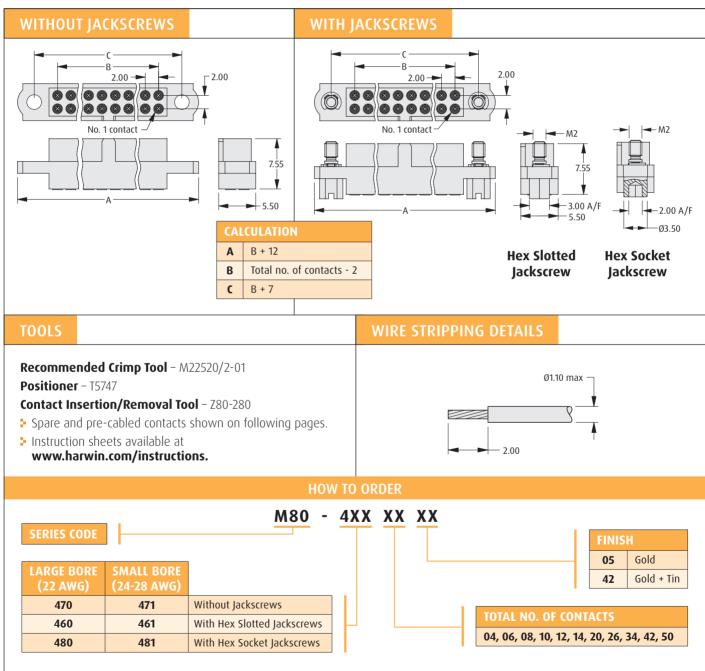




### Female Crimp Kit

- 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.



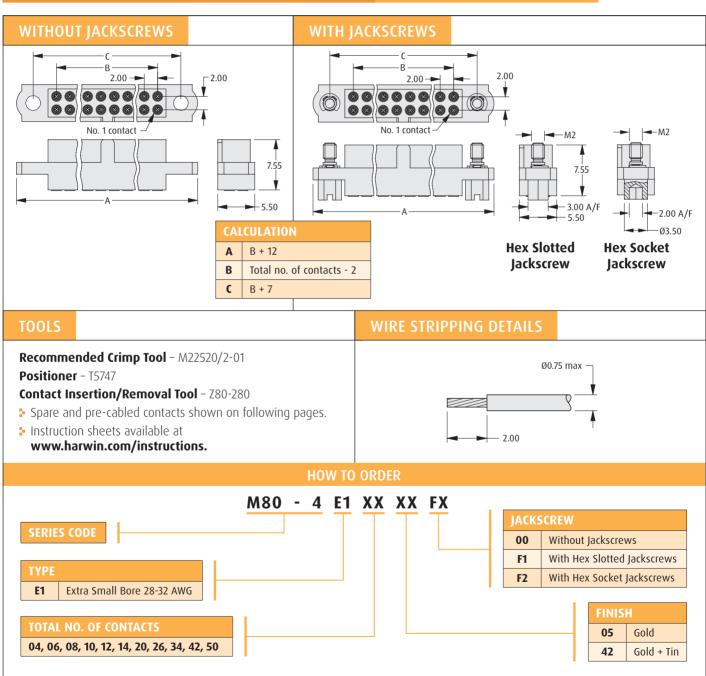




#### Female Crimp Kit - Extra Small Bore

- ➤ 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.



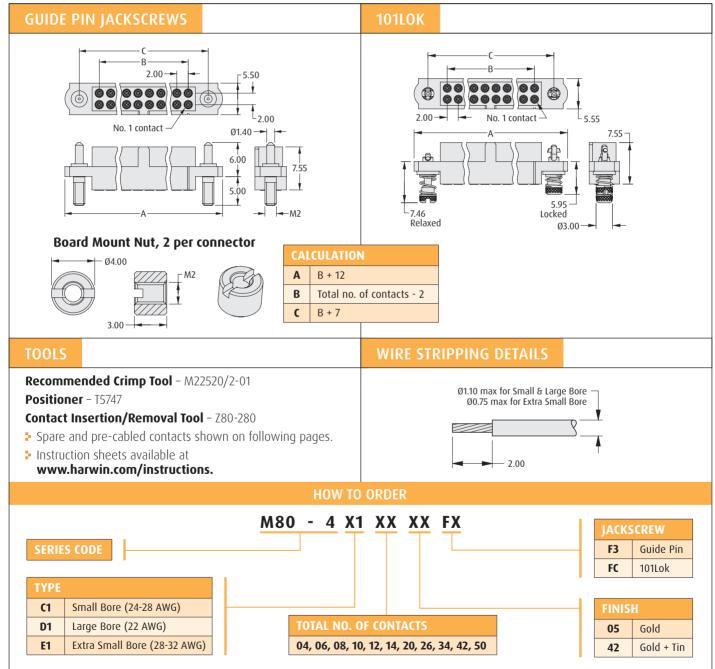




#### Female Crimp Kit - Guide Pin, 101Lok

- 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.

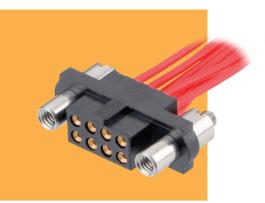


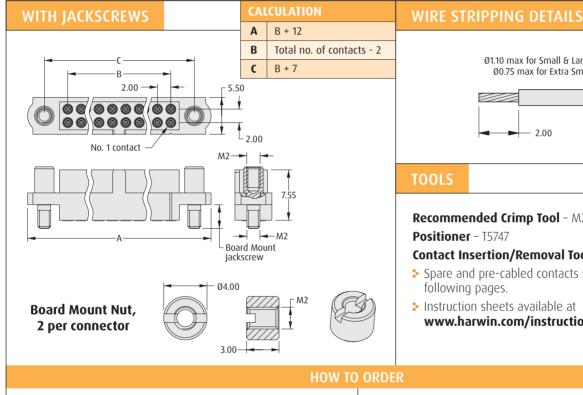


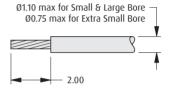


#### Female Crimp Kit - Reverse Fix

- **Crimp** contacts supplied loose and are inserted from rear.
- ▶ Jackscrews are assembled.



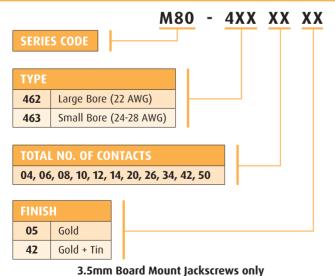




**Recommended Crimp Tool** - M22520/2-01

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

- Spare and pre-cabled contacts shown on
- Instruction sheets available at www.harwin.com/instructions.

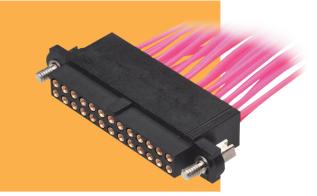


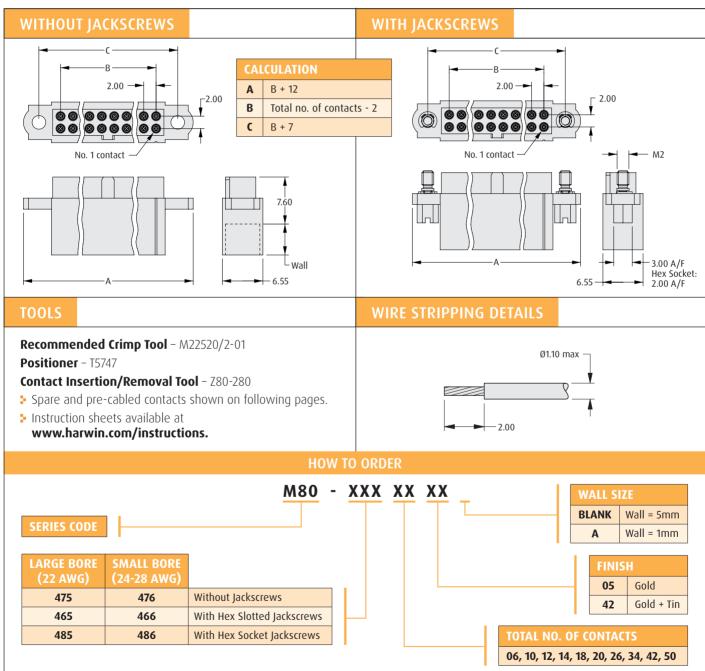
		M8	0 -	4	<b>X1</b>	XX	ХX	FΧ
SERIE	S CODE					T		
TYPE					Ш			
<b>C1</b>	Small Bore (	24-28 A'	WG)		Ш			
D1	Large Bore (22 AWG)							
E1	E1 Extra Small Bore (28-32 AWG)							
TOTAL NO. OF CONTACTS 04, 06, 08, 10, 12, 14, 20, 26, 34, 42, 50								
FINIS	Н	$\vdash$						
05	Gold		JACKS	CRE	N			
42	Gold + Tin		F8	3.5n	nm Bo	ard Mo	unt	μ
			F9	5mr	n Boai	rd Moun	nt	



### 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



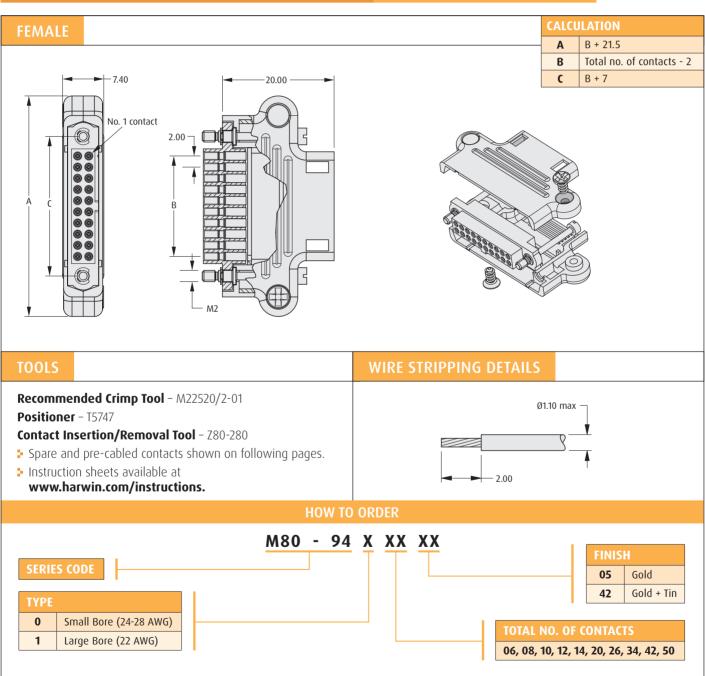




### Female Crimp Kit with Hood

- 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.



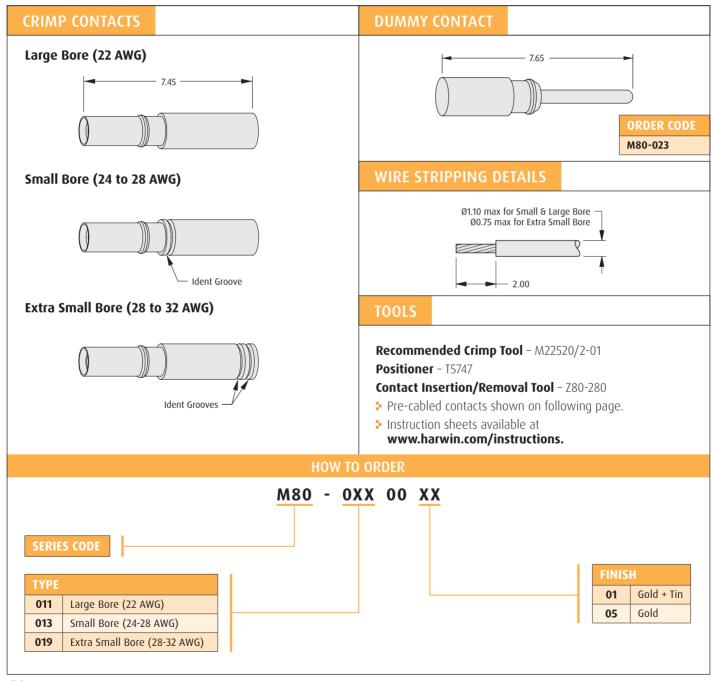




### **Spare Female Crimp Contacts**

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

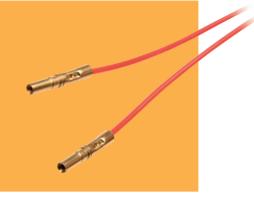


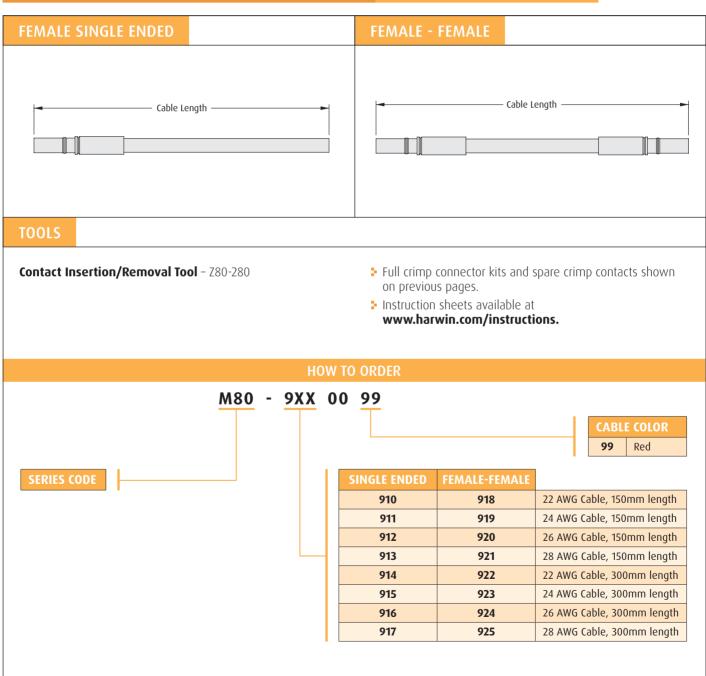




### Female Crimp Contacts - Pre-Crimped Wires

- ► 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.





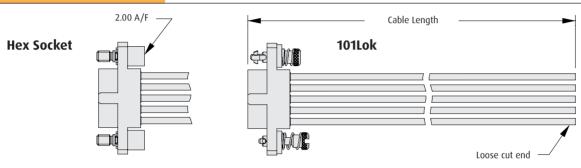


#### Female Cable Assemblies

- ➤ 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.

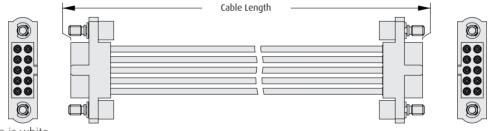






**Cable insulation is multicolored - check applicable Technical Drawing for color sequence.** 

#### FEMALE - FEMALE DOUBLE ENDED



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

#### **HOW TO ORDER**



#### **SERIES CODE**

TOTAL NO. OF CONTACTS		
06, 10, 20, 26	Double Ended, Hex Socket	
06, 10, 20, 26, 50	Single Ended, Hex Socket	
04, 08, 12, 20	Single Ended, 101Lok	

F1XING, LENGTH, TERMINATION - SECOND END

F2-0150F2 | 150mm, Double Ended, Hex Socket Jackscrews

F2-0150L 150mm, Single Ended, Hex Socket Jackscrews
FC-0150L 150mm, Single Ended, 101Lok

WIRE COLOR				
05	White (Double Ended only)			
68	Multicolor (Single Ended only)			



### Female Crimp T-Contact

- ♣ Advanced single-piece contact design using Beryllium Copper
- ▶ 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 -

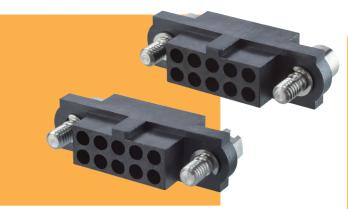


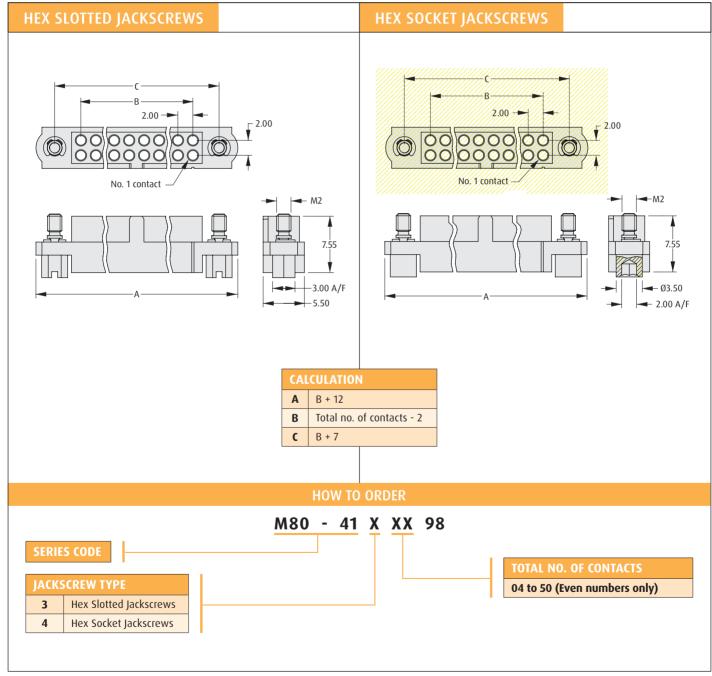
# **CRIMP CONTACTS** Large Bore (22 AWG) **WIRE STRIPPING DETAILS TOOLS Recommended Crimp Tool** – M22520/2-01 Ø1.10 max Positioner - Z80-444 Contact insertion/Removal Tool - Z80-280 > Instruction sheets available at www.harwin.com/instructions. M80 206 05 Gold Patent Pending



### 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 Z80-280.
- Connectors mate with Datamate J-Tek male connectors with applicable jackscrews.
- Jackscrews are supplied already assembled to housing.



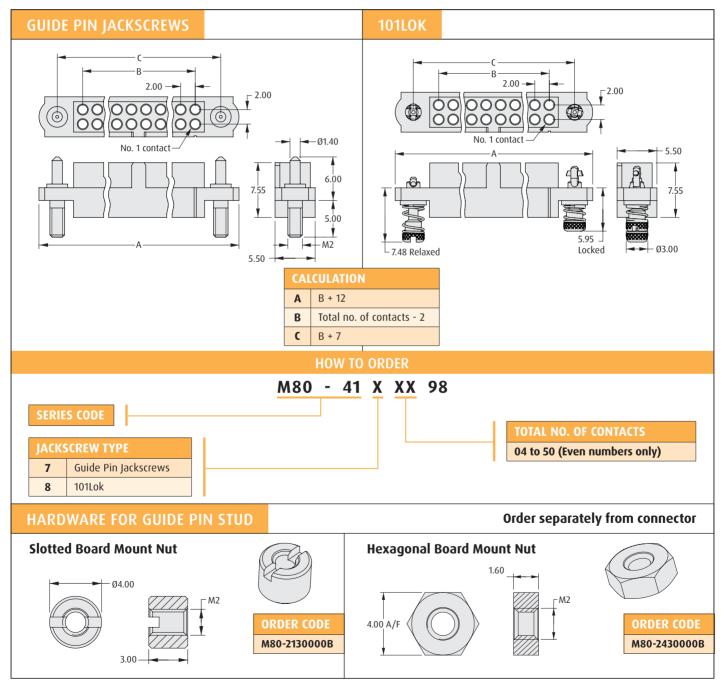




### Female Crimp Housing - Guide Pin, 101Lok

- ➤ 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 fxings.



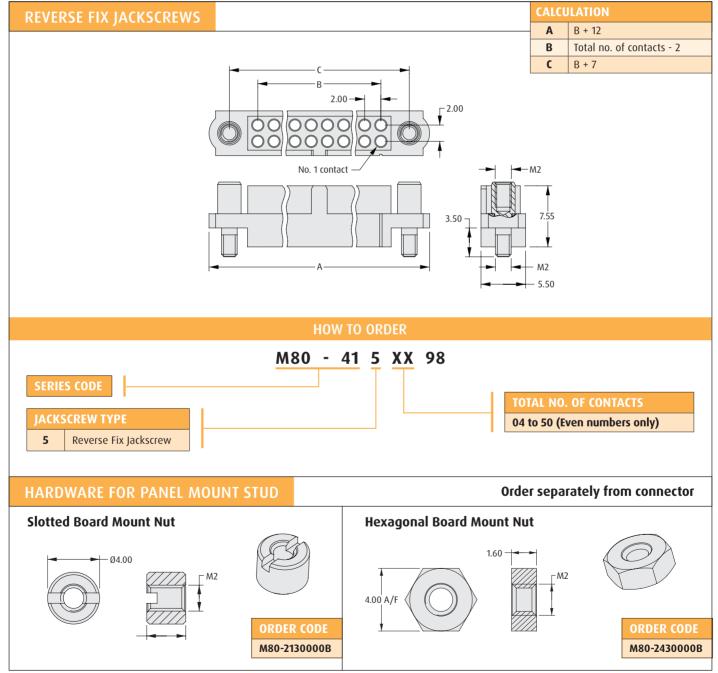




### Female Crimp Housing - Reverse Fix

- ➤ 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.
- Tackscrews are supplied already assembled to housing.
- **▶** Connectors mate with Datamate J-Tek male connectors with compatible Reverse Fix jackscrews.



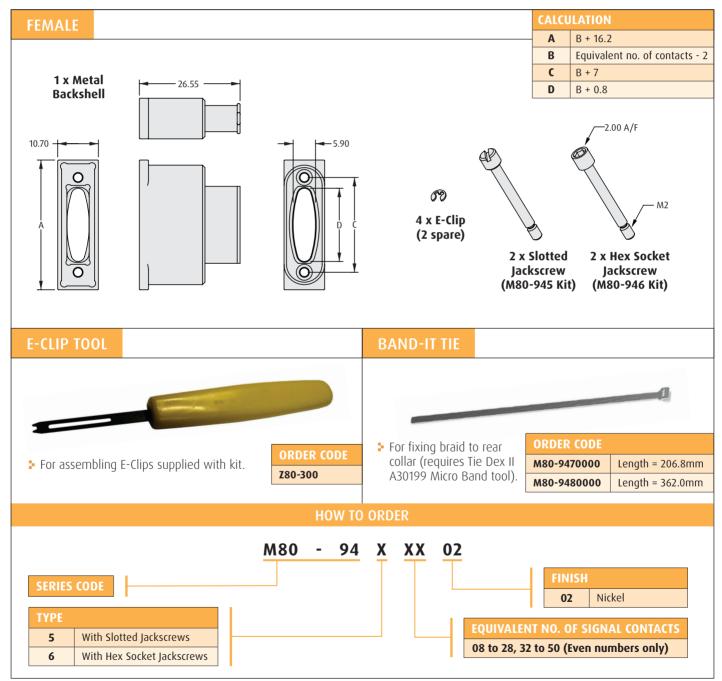




#### Female Metal Backshell

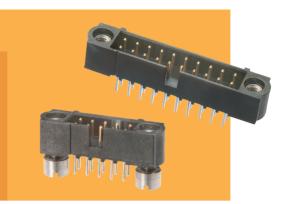
- Supplied as an accessory kit, including metal backshell, e-clips and the applicable jackscrews.
- ➤ To be used with the appropriate size of Female Crimp Kit without jackscrews.
- Gives 360 degree shielding when used with conductive braid and mated to a compatible male connector with metal backshell.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

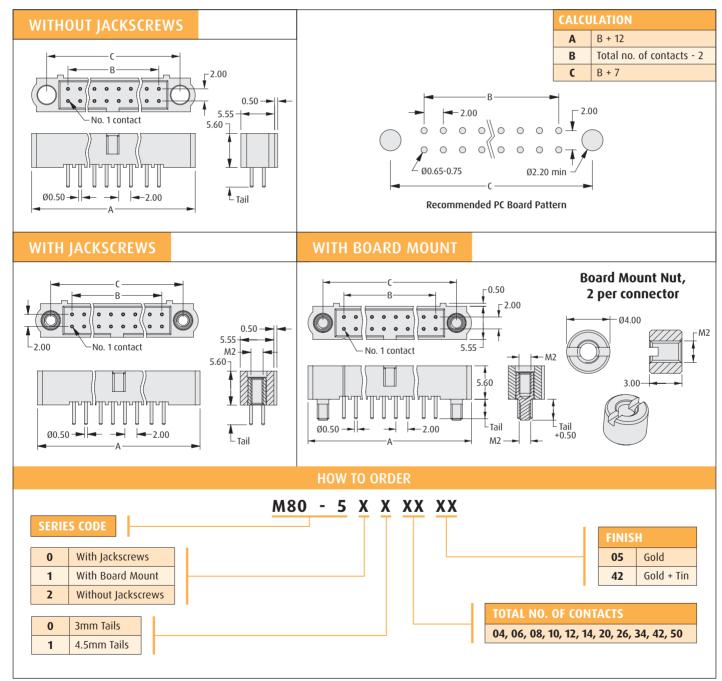




### Male Vertical Throughboard

- 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.

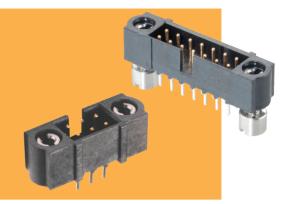


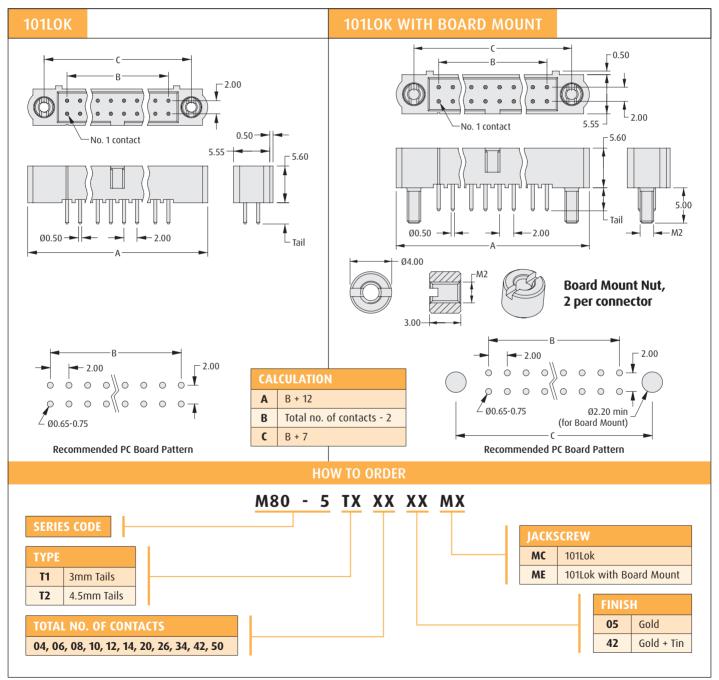




### Male Vertical Throughboard 101Lok

- ▶ 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.

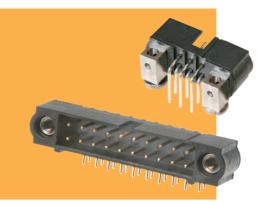


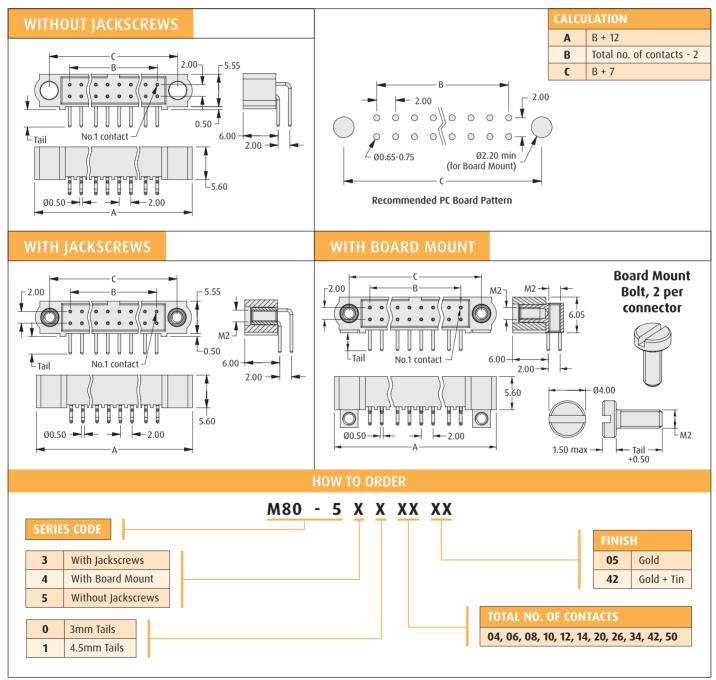




### Male Horizontal Throughboard

- 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.



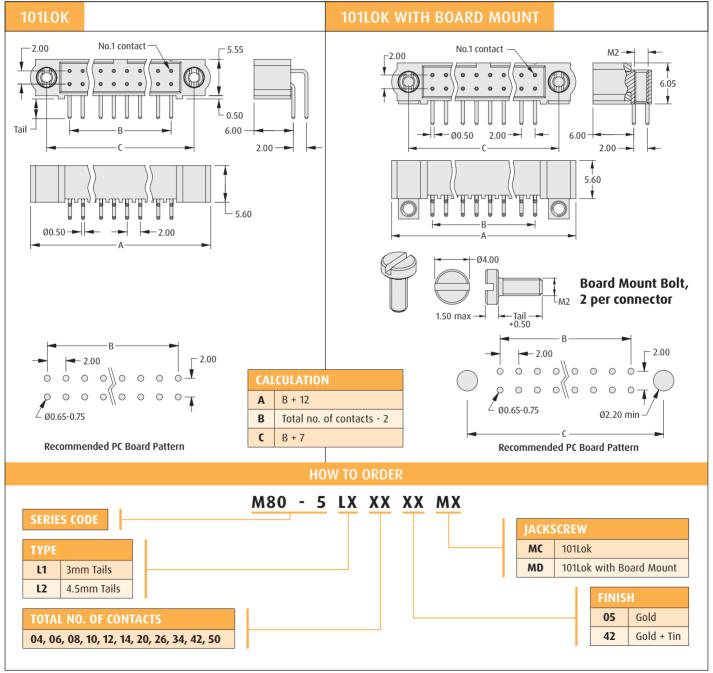




### Male Horizontal Throughboard 101Lok

- ♣ 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.



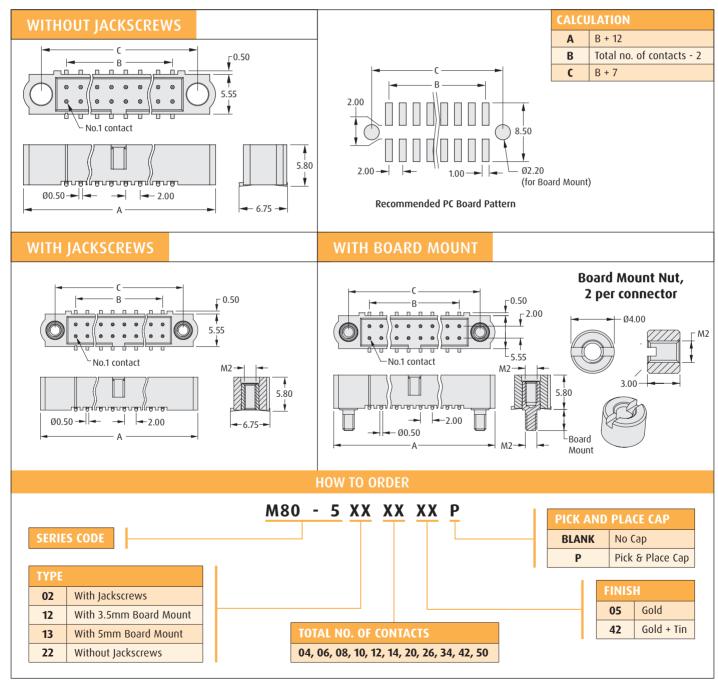




#### Male Vertical Surface Mount

- 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.



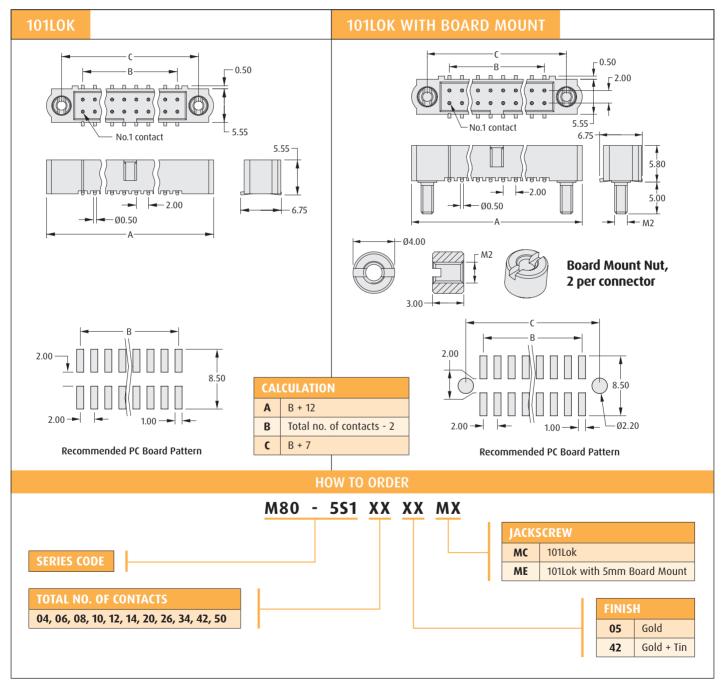




#### Male Vertical Surface Mount 101Lok

- 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.

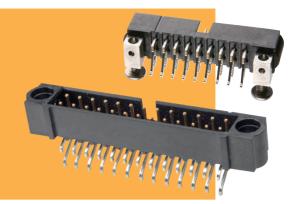


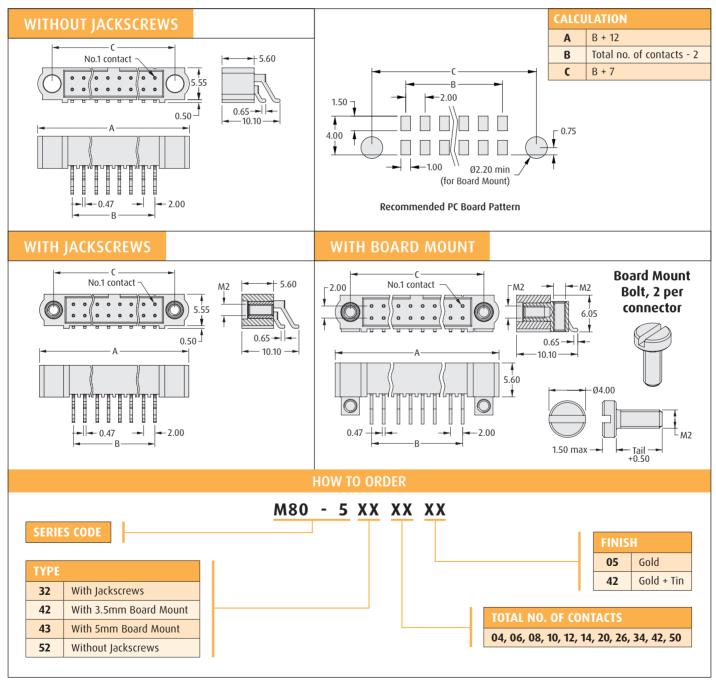




#### Male Horizontal Surface Mount

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

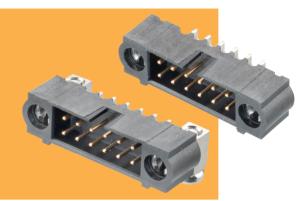


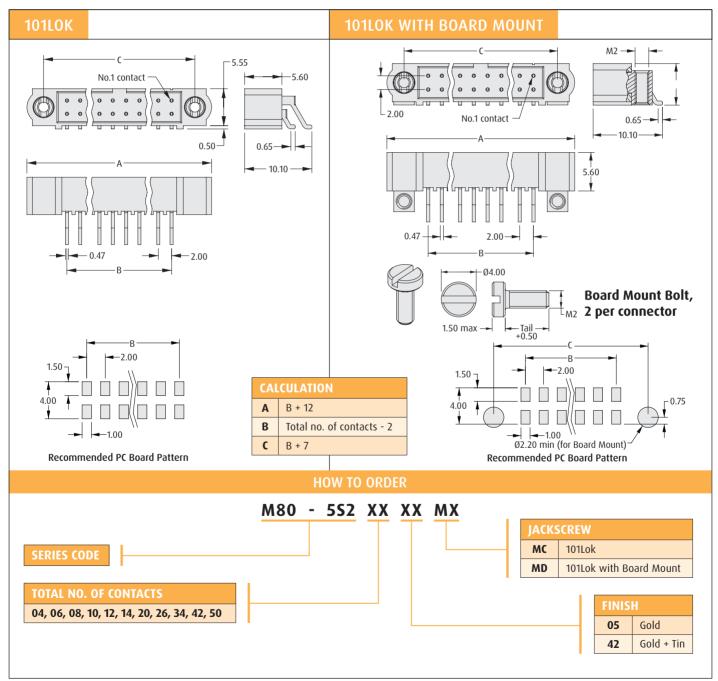




#### Male Horizontal Surface Mount 101Lok

- ♣ 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.



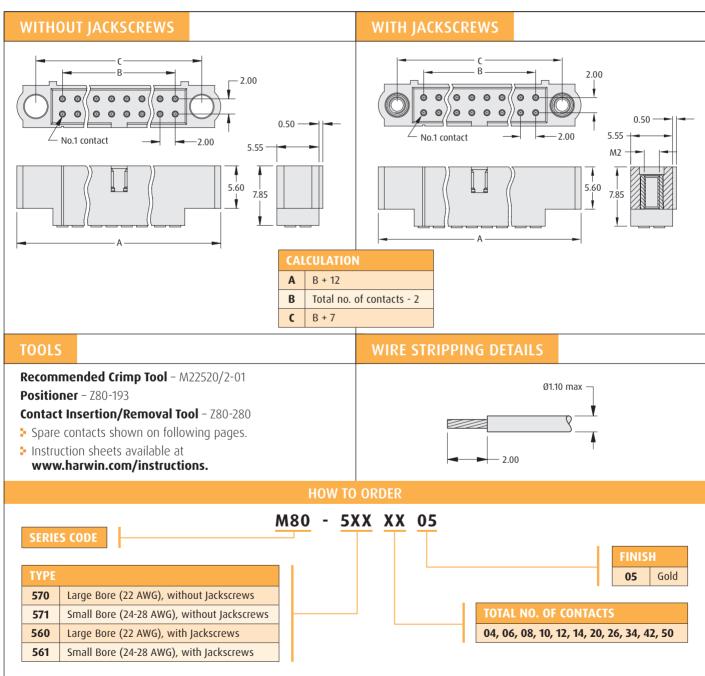




### Male Crimp Kit

- ▶ 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.

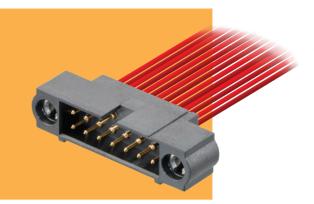


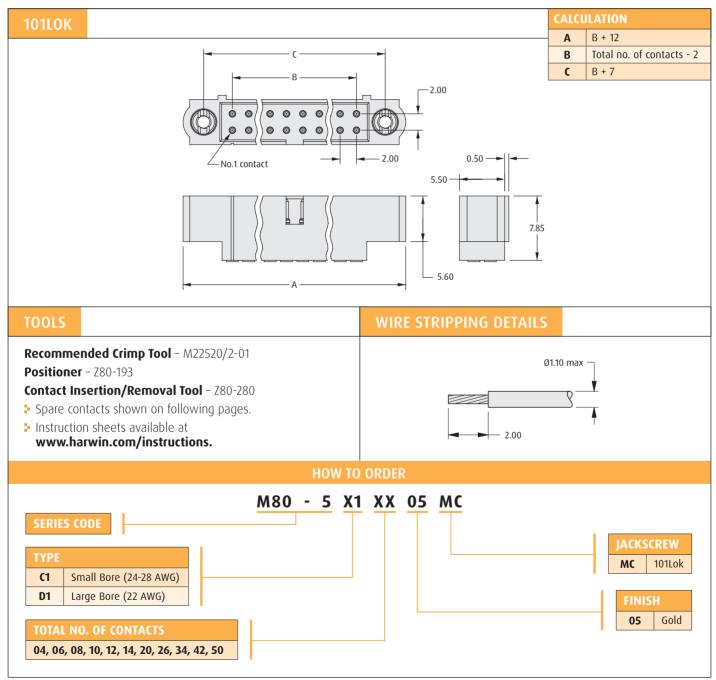




### Male Crimp Kit 101Lok

- 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.

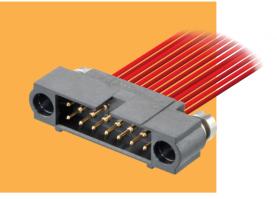


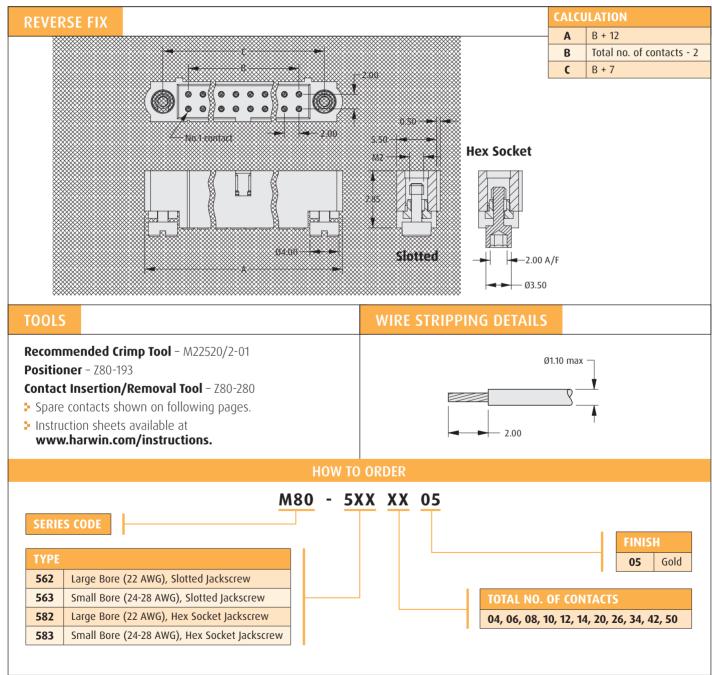




### Male Crimp Kit Reverse Fix

- **►** 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.



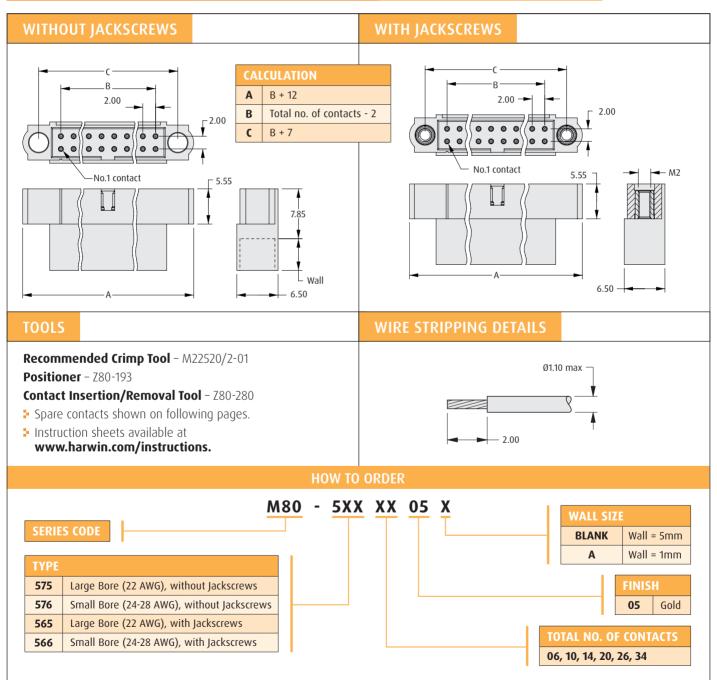




### Male Crimp Kit Extended Wall

- 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.



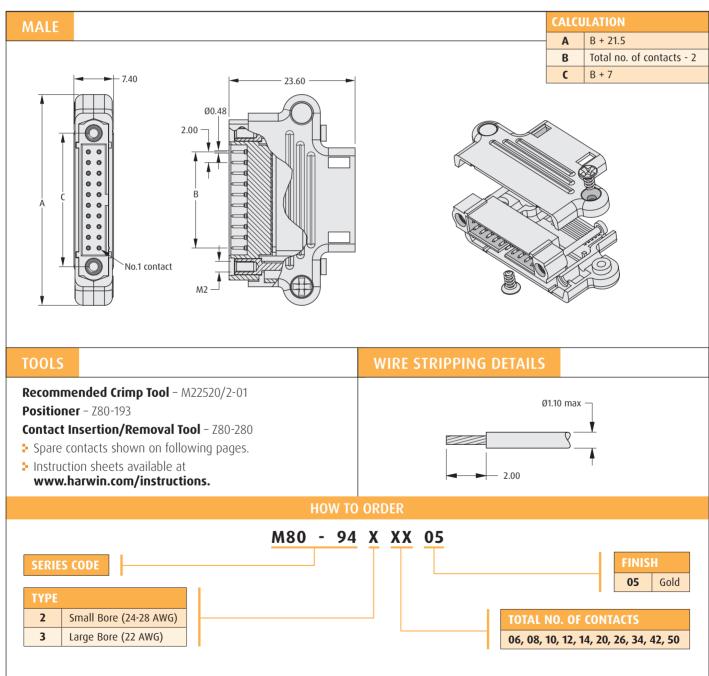




### Male Crimp with Hood

- 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



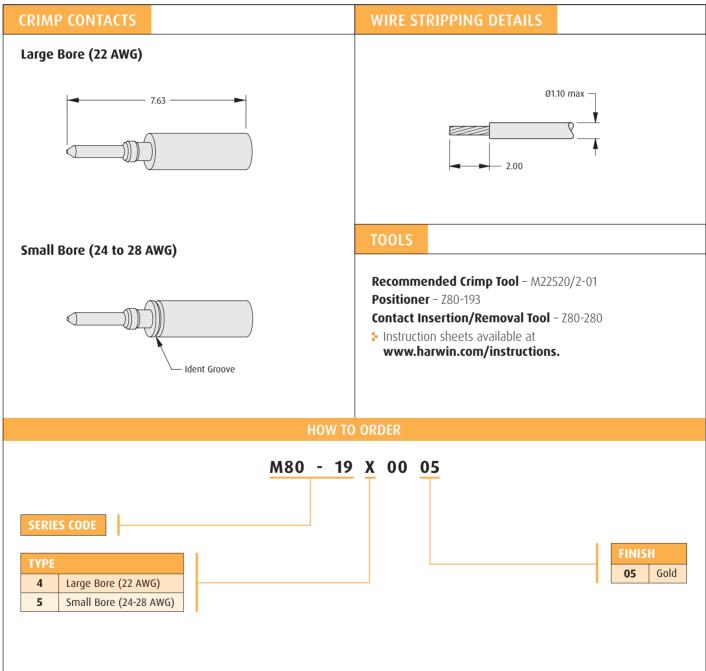




### **Spare Male Crimp Contacts**

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



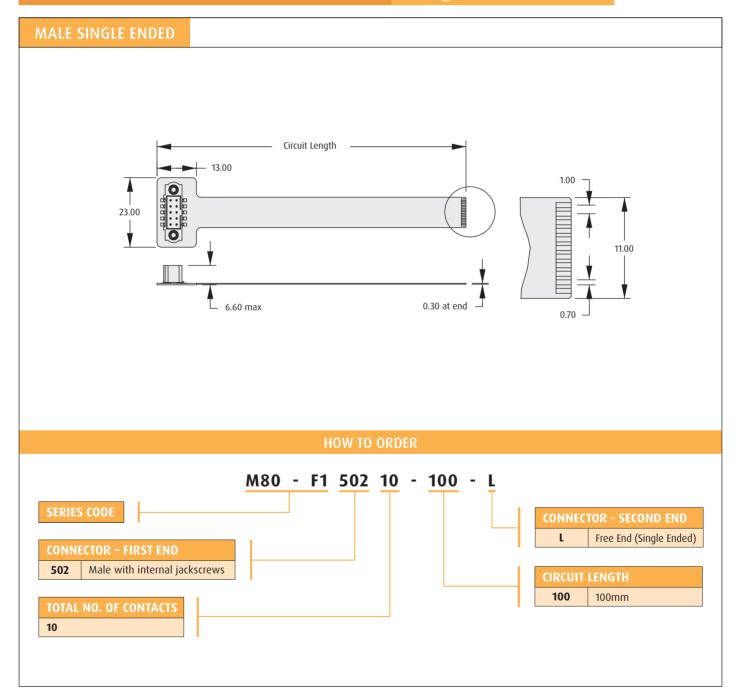




#### Flexible Circuit Assemblies

- 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.







#### 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 iackscrews.
- Gives 360 degree shielding when mounted to a conductive panel and mated to a compatible female connector with metal backshell.



