

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

Electrical

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

Mechanical

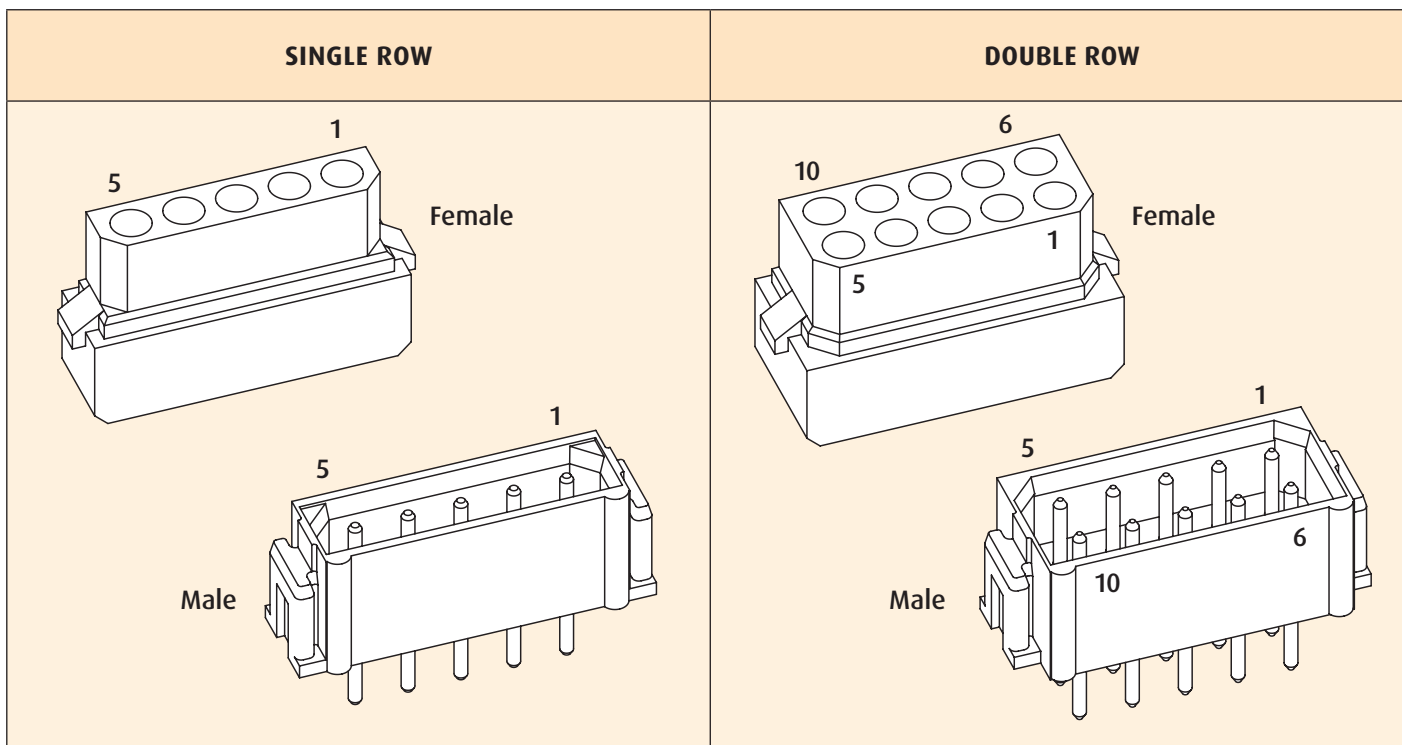
Durability:	500 operations
Insertion force (max):	2.8N
Withdrawal force (min):	0.2N
Signal crimp accommodation:	22 AWG to 32 AWG BS 3G 210 Type A, MIL-W-16878

Environmental

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

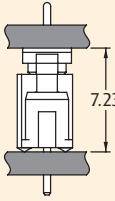
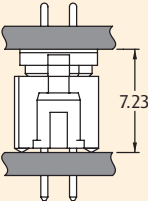
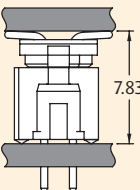
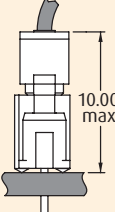
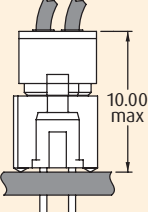
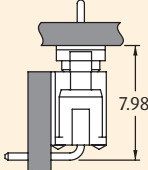
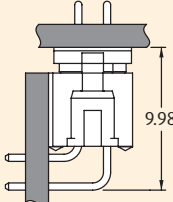
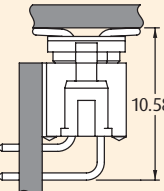
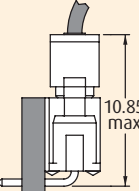
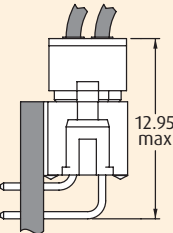
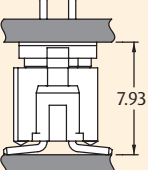
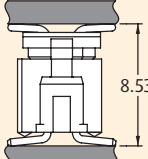
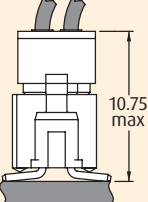
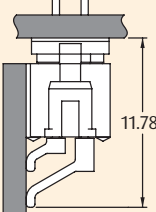
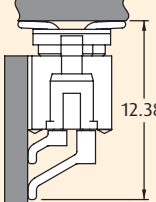
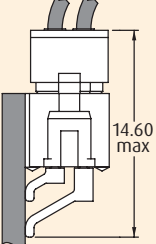
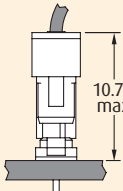
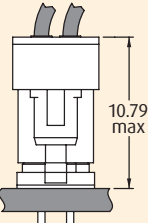
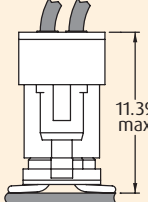
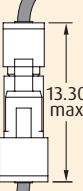
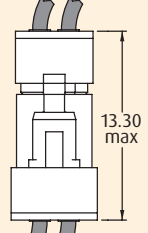
* Tested with latched connectors.

Pin Numbering



All dimensions in mm.

Datamate L-Tek Mating Profiles

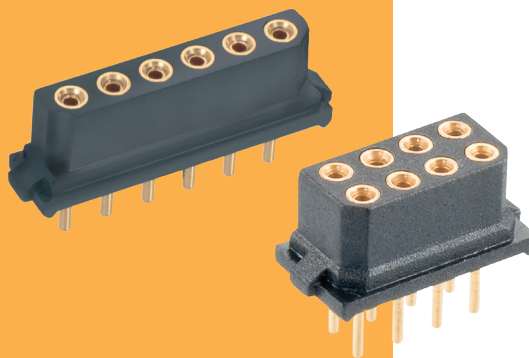
		FEMALE				
		VERTICAL THROUGHBOARD		VERTICAL SMT	CRIMP	
		SIL	DIL	DIL	SIL	DIL
MALE	VERTICAL THROUGHBOARD	 7.23	 7.23	 7.83	 10.00 max	 10.00 max
	HORIZONTAL THROUGHBOARD	 7.98	 9.98	 10.58	 10.85 max	 12.95 max
	VERTICAL SMT		 7.93	 8.53		 10.75 max
	HORIZONTAL SMT		 11.78	 12.38		 14.60 max
	CRIMP	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

All dimensions in mm.

Datamate L-Tek Connectors

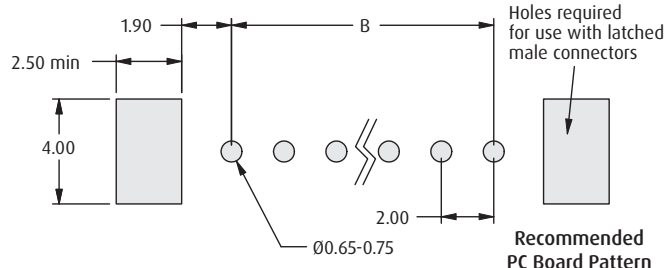
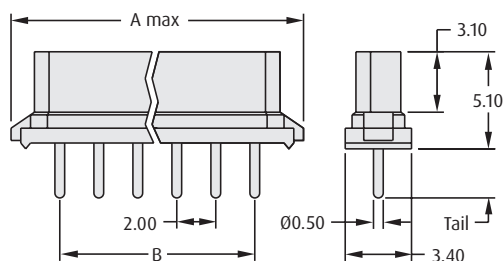
Female Vertical Throughboard

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



DATAMATE L-TEK

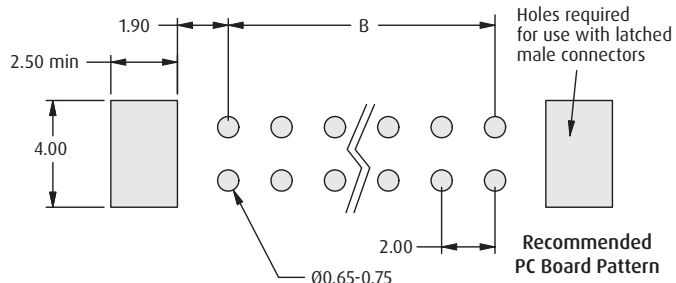
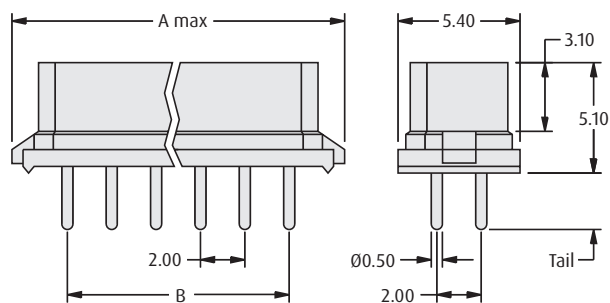
SINGLE ROW



CALCULATION

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

DOUBLE ROW



CALCULATION

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

HOW TO ORDER

M80 - XXX XX XX

SERIES CODE

TYPE

840	Single Row (3mm tail)
850	Double Row (3mm tail)
790	Single Row (4.5mm tail)
770	Double Row (4.5mm tail)

FINISH

42	Gold + Tin
45	Gold

TOTAL NO. OF CONTACTS

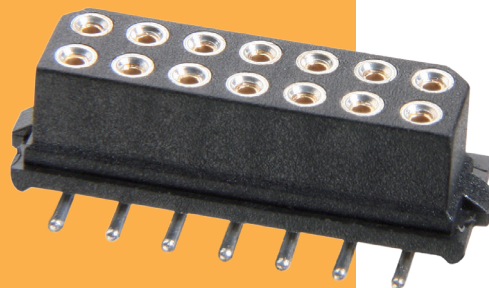
02 to 07, 17, 22	Single Row
04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44	Double Row

All dimensions in mm.

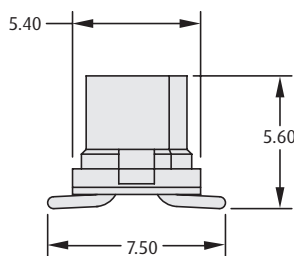
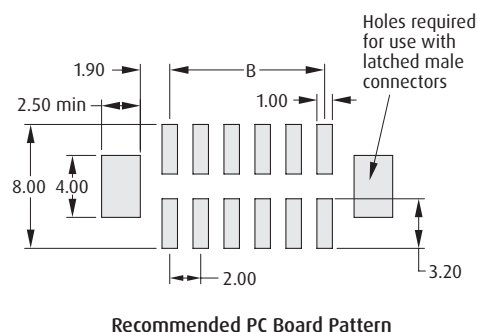
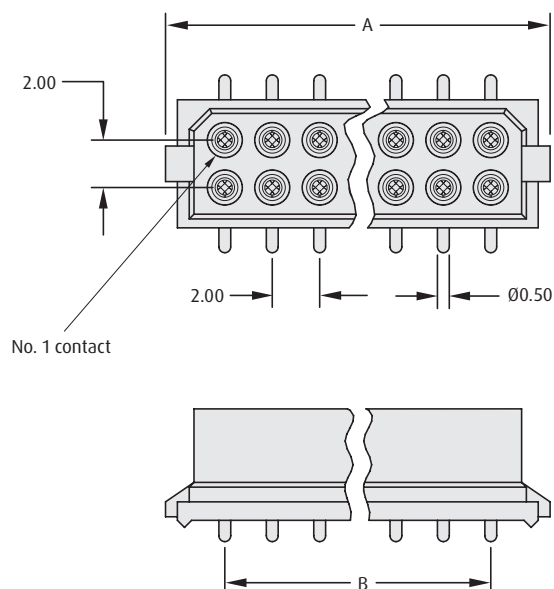
Datamate L-Tek Connectors

Female Vertical Surface Mount

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



DOUBLE ROW



CALCULATION

A	$B + 5.15$
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

BLANK	No cap
P	Pick and place cap

FINISH

42	Gold + Tin
45	Gold

All dimensions in mm.

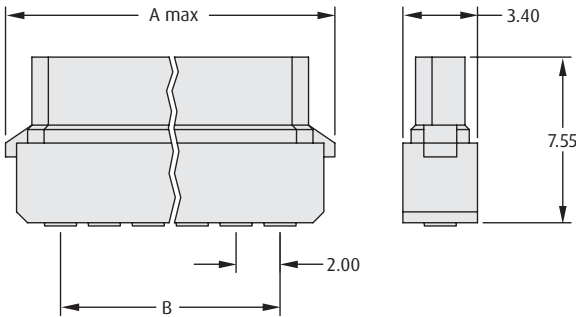
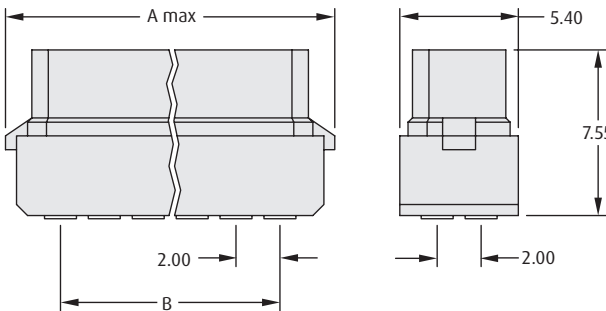
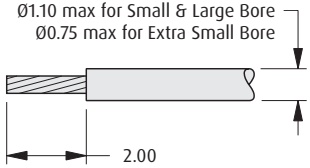
Datamate L-Tek Connectors

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.



DATAMATE L-TEK

SINGLE ROW		CALCULATION		DOUBLE ROW		CALCULATION																					
		A	$B + 5.15$			A	$B + 5.15$																				
		B	$(\text{Total no. of contacts} - 1) \times 2$			B	$\text{Total no. of contacts} - 2$																				
TOOLS		WIRE STRIPPING DETAILS																									
<p>Recommended Crimp Tool – M22520/2-01</p> <p>Positioner – T5747</p> <p>Contact Insertion/Removal Tool – Z80-280</p> <p>❖ Spare and pre-cabled contacts shown on following pages.</p> <p>❖ Instruction sheets available at www.harwin.com/instructions.</p>																											
HOW TO ORDER																											
SERIES CODE		M80		- XXX		XX XX																					
<table><tr><th colspan="2">TYPE</th></tr><tr><td>798</td><td>Single Row, Extra Small Bore (28-32 AWG)</td></tr><tr><td>898</td><td>Single Row, Small Bore (24-28 AWG)</td></tr><tr><td>899</td><td>Single Row, Large Bore (22 AWG)</td></tr><tr><td>788</td><td>Double Row, Extra Small Bore (28-32 AWG)</td></tr><tr><td>888</td><td>Double Row, Small Bore (24-28 AWG)</td></tr><tr><td>889</td><td>Double Row, Large Bore (22 AWG)</td></tr></table>		TYPE		798	Single Row, Extra Small Bore (28-32 AWG)	898	Single Row, Small Bore (24-28 AWG)	899	Single Row, Large Bore (22 AWG)	788	Double Row, Extra Small Bore (28-32 AWG)	888	Double Row, Small Bore (24-28 AWG)	889	Double Row, Large Bore (22 AWG)					<table><tr><th colspan="2">FINISH</th></tr><tr><td>01</td><td>Gold + Tin</td></tr><tr><td>05</td><td>Gold</td></tr></table>		FINISH		01	Gold + Tin	05	Gold
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All dimensions in mm.

Datamate L-Tek Connectors

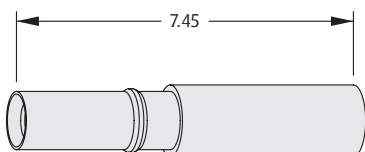
Spare Female Crimp Contacts

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

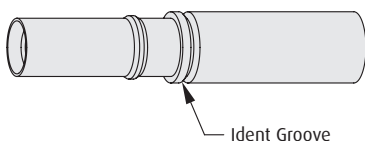


CRIMP CONTACTS

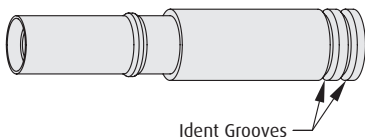
Large Bore (22 AWG)



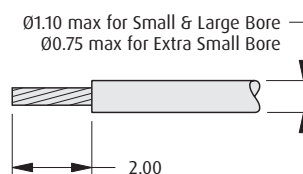
Small Bore (24 to 28 AWG)



Extra Small Bore (28 to 32 AWG)



WIRE STRIPPING DETAILS



TOOLS

- Recommended Crimp Tool** - M22520/2-01
Positioner - T5747
Contact Insertion/Removal Tool - Z80-280
- ❖ Pre-cabled contacts shown on following page.
 - ❖ Instruction sheets available at www.harwin.com/instructions.

HOW TO ORDER

M80 - 0XX 00 XX

SERIES CODE

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

FINISH

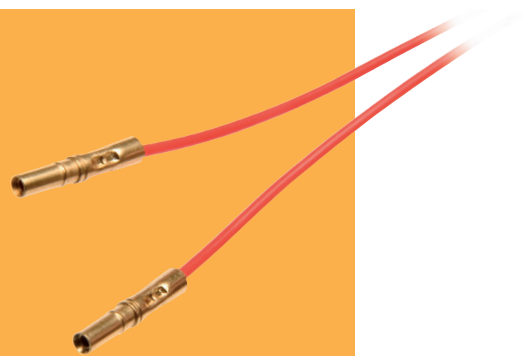
01	Gold + Tin
05	Gold

All dimensions in mm.

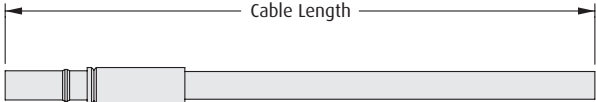
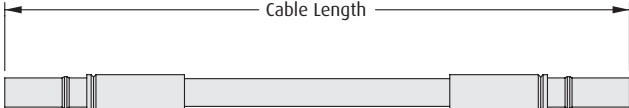
Datamate L-Tek Connectors

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.



DATAMATE L-TEK

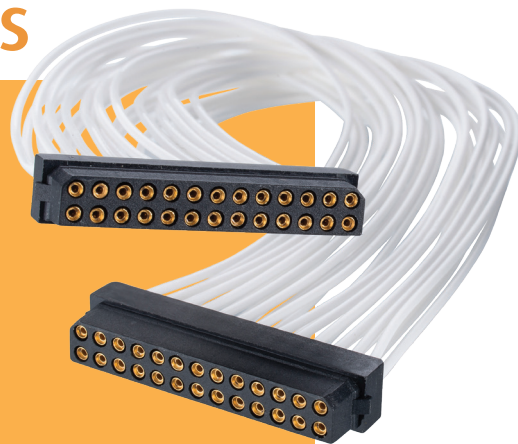
FEMALE SINGLE ENDED		FEMALE - FEMALE																											
																													
TOOLS																													
Contact Insertion/Removal Tool – Z80-Z80		<ul style="list-style-type: none">❖ Full crimp connector kits and spare crimp contacts shown on previous pages.❖ Instruction sheets available at www.harwin.com/instructions.																											
HOW TO ORDER																													
M80 - 9XX 00 99		<table><tr><th colspan="2">CABLE COLOR</th></tr><tr><td>99</td><td>Red</td></tr></table>		CABLE COLOR		99	Red																						
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SERIES CODE	<table><tr><th>SINGLE ENDED</th><th>FEMALE-FEMALE</th></tr><tr><td>910</td><td>918</td></tr><tr><td>911</td><td>919</td></tr><tr><td>912</td><td>920</td></tr><tr><td>913</td><td>921</td></tr><tr><td>914</td><td>922</td></tr><tr><td>915</td><td>923</td></tr><tr><td>916</td><td>924</td></tr><tr><td>917</td><td>925</td></tr></table>	SINGLE ENDED	FEMALE-FEMALE	910	918	911	919	912	920	913	921	914	922	915	923	916	924	917	925	<table><tr><td>22 AWG Cable, 150mm length</td></tr><tr><td>24 AWG Cable, 150mm length</td></tr><tr><td>26 AWG Cable, 150mm length</td></tr><tr><td>28 AWG Cable, 150mm length</td></tr><tr><td>22 AWG Cable, 300mm length</td></tr><tr><td>24 AWG Cable, 300mm length</td></tr><tr><td>26 AWG Cable, 300mm length</td></tr><tr><td>28 AWG Cable, 300mm length</td></tr></table>		22 AWG Cable, 150mm length	24 AWG Cable, 150mm length	26 AWG Cable, 150mm length	28 AWG Cable, 150mm length	22 AWG Cable, 300mm length	24 AWG Cable, 300mm length	26 AWG Cable, 300mm length	28 AWG Cable, 300mm length
SINGLE ENDED	FEMALE-FEMALE																												
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All dimensions in mm.

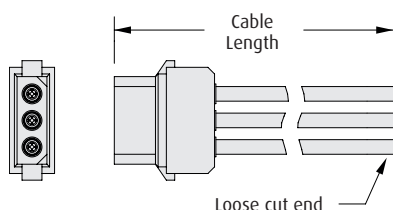
Datamate L-Tek Connectors

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.

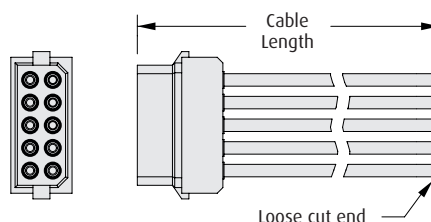


SINGLE ROW, SINGLE ENDED



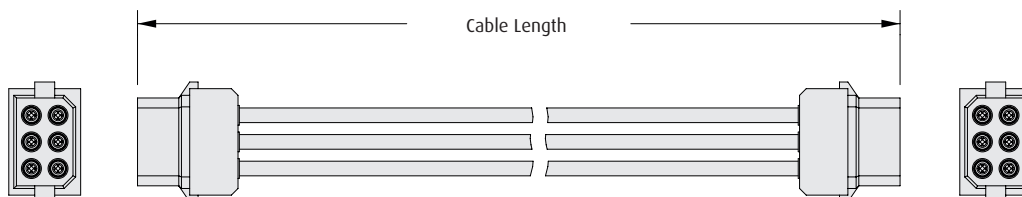
- ❖ Cable insulation is multicolored - check applicable Technical Drawing for color sequence.

DOUBLE ROW, 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 - FX2 XX XX L0 - 0150 XX

SERIES CODE	
M80-FD2	Single Row
M80-FC2	Double Row

TOTAL NO. OF CONTACTS	
02, 03, 04, 17	Single Row
06, 10, 26, 34	Double Row

TERMINATION - SECOND END	
L	Loose cut end
F	Female connector (Double row only)

CABLE LENGTH	
0150	150mm

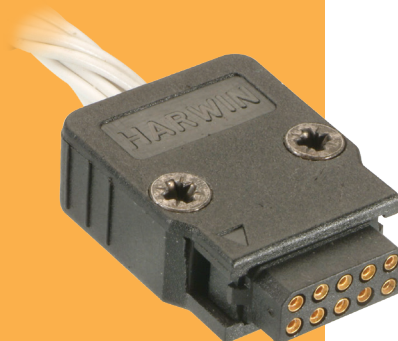
WIRE COLOR	
05	White (Double Ended only)
68	Multicolor (Single Ended only)

All dimensions in mm.

Datamate L-Tek Connectors

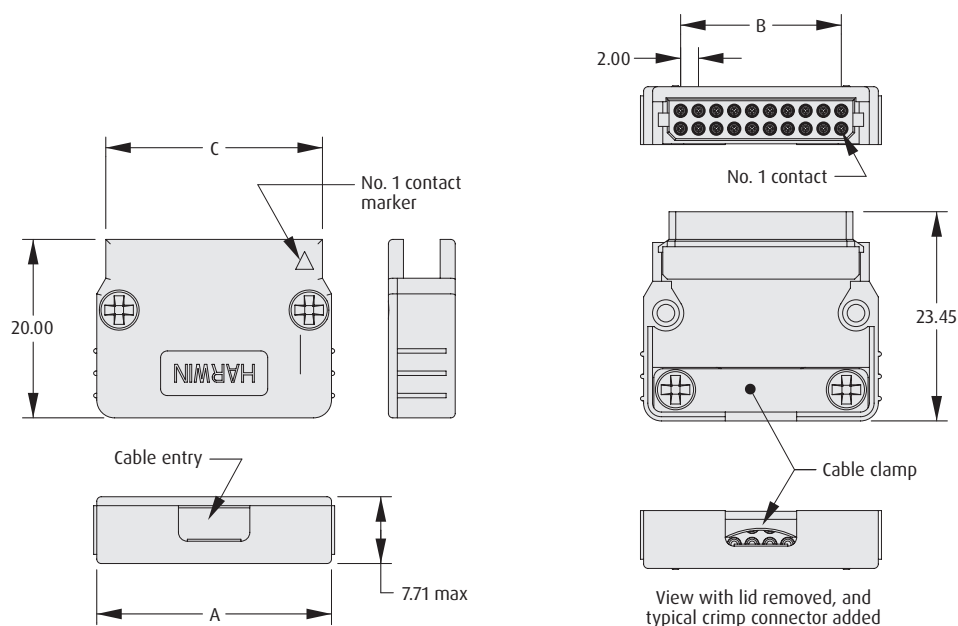
Female Accessories

- ❖ 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

A	$B + 8.3$
B	Total no. of contacts - 2
C	$B + 6.3$

HOW TO ORDER

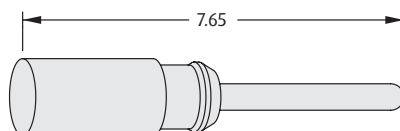
M80 - 880 XX 98

SERIES CODE

TOTAL NO. OF CONTACTS

10, 12, 14, 16, 18, 20, 26, 34

DUMMY CONTACT



ORDER CODE

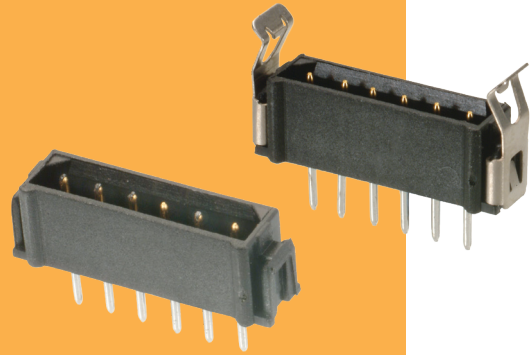
M80-023

All dimensions in mm.

Datamate L-Tek Connectors

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**.



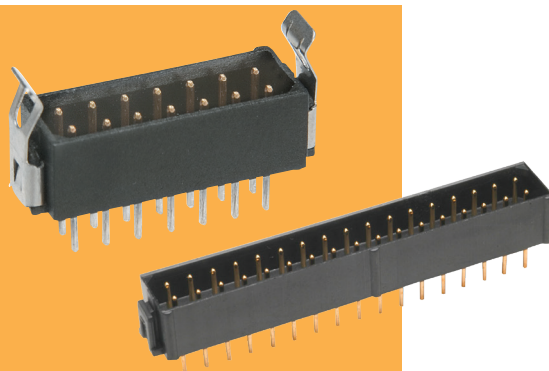
NO LATCHES		CALCULATION		LOCKING LATCH		CALCULATION	
		A	B + 5.6			A	B + 6.1
		B	(Total no. of contacts - 1) x 2			B	(Total no. of contacts - 1) x 2
STRAIN RELIEF STRAP		Order separately from connector				Recommended PC Board Pattern	
		View of Strain Relief strap in place				ORDER CODE M80-0030006	
HOW TO ORDER							
SERIES CODE		M80 - XXX		XX		XX	
TYPE		852		882		782	
		No Latches, 3mm Tail		Locking Latch, 3mm Tail		Locking Latch, 4.5mm Tail	
						TOTAL NO. OF CONTACTS	
						02 to 07	
						FINISH	
						42	
						Gold + Tin	
						45	
						Gold	

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

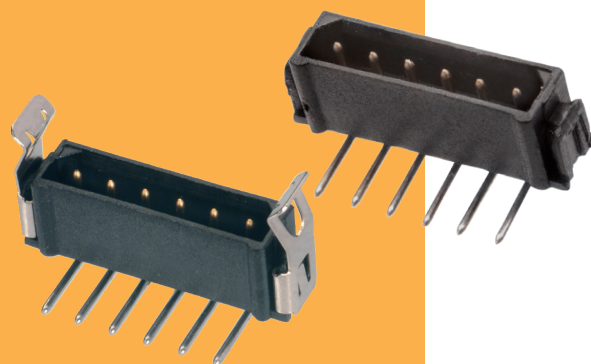
NO LATCHES		CALCULATION		LOCKING LATCH		CALCULATION	
		A	B + 5.6			A	B + 6.1
		B	Total no. of contacts - 2			B	Total no. of contacts - 2
STRAIN RELIEF STRAP		Order separately from connector				Recommended PC Board Pattern	
		View of Strain Relief strap in place				ORDER CODE M80-0030006	
HOW TO ORDER							
SERIES CODE		M80		- XXX		XX XX	
3mm TAIL		4.5mm TAIL		No Latches		FINISH	
854		754		Locking Latch		42 Gold + Tin	
853		753				45 Gold	
				TOTAL NO. OF CONTACTS		04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44	

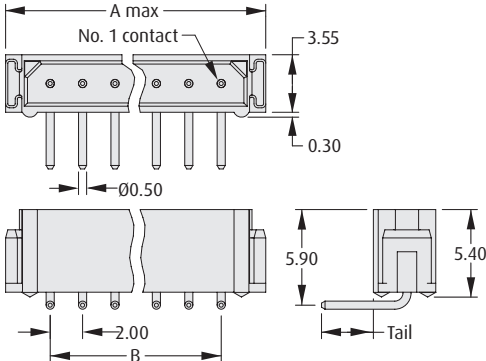
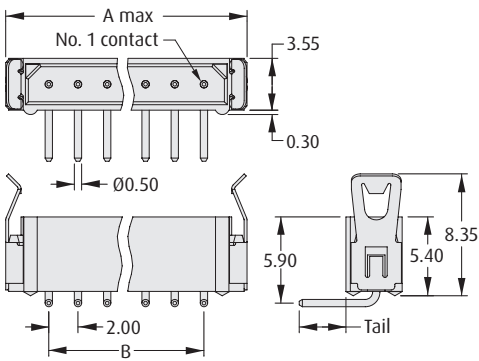
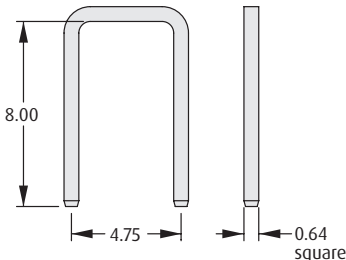
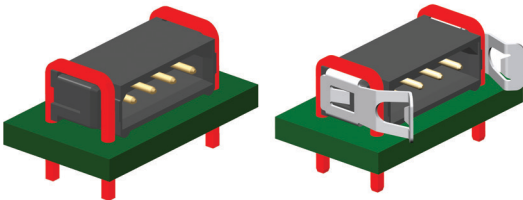
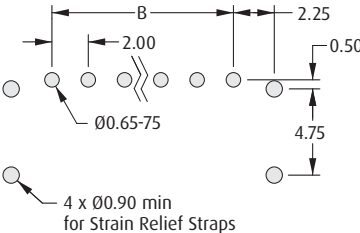
All dimensions in mm.

Datamate L-Tek Connectors

Male 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**.



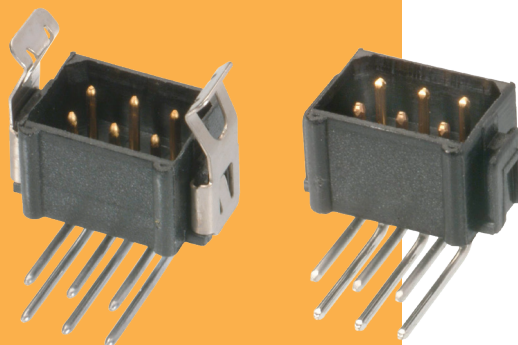
NO LATCHES		CALCULATION		LOCKING LATCH		CALCULATION	
		A	B + 5.6			A	B + 6.1
		B	(Total no. of contacts - 1) x 2			B	(Total no. of contacts - 1) x 2
							
STRAIN RELIEF STRAP				Supplied with connector		Recommended PC Board Pattern	
							
HOW TO ORDER							
M80 - XXX XX XX							
SERIES CODE				FINISH			
TYPE				42 Gold + Tin			
843 No Latches, 3mm Tail				45 Gold			
842 Locking Latch, 3mm Tail				TOTAL NO. OF CONTACTS			
792 Locking Latch, 4.5mm Tail				02 to 07			

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

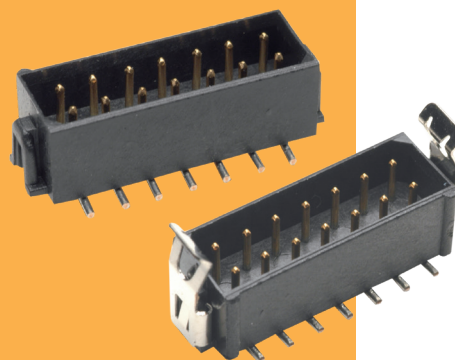
NO LATCHES		CALCULATION		LOCKING LATCH		CALCULATION	
		A	B + 5.6			A	B + 6.1
		B	Total no. of contacts - 2			B	Total no. of contacts - 2
STRAIN RELIEF STRAP		Supplied with connector				Recommended PC Board Pattern	
HOW TO ORDER							
SERIES CODE		M80		XXX		XX XX	
TYPE		841		851		771	
		No Latches, 3mm Tail		Locking Latch, 3mm Tail		Locking Latch, 4.5mm Tail	
						TOTAL NO. OF CONTACTS	
						04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34, 44	
						FINISH	
						42 Gold + Tin	
						45 Gold	

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.



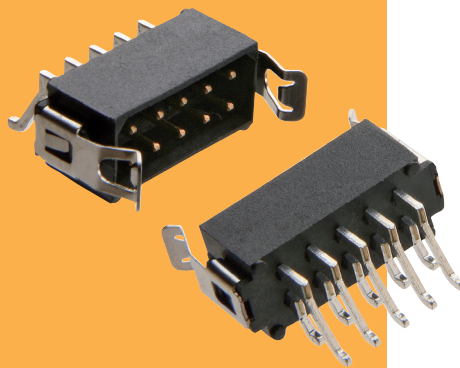
NO LATCHES		CALCULATION		LOCKING LATCH		CALCULATION	
		A	B + 5.6			A	B + 6.1
		B	Total no. of contacts - 2			B	Total no. of contacts - 2
STRAIN RELIEF STRAP		Order separately from connector				Recommended PC Board Pattern	
		ORDER CODE M80-0030006					
HOW TO ORDER							
M80 - 82X XX XX P							
SERIES CODE						PICK AND PLACE CAP	
TYPE						BLANK No cap P Pick and place cap	
826 No Latches 828 Locking Latch		TOTAL NO. OF CONTACTS 04, 06, 08, 10, 12, 14, 16, 18, 20, 26, 34				FINISH 42 Gold + Tin 45 Gold	

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

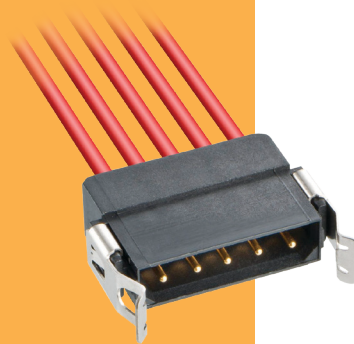
NO LATCHES		CALCULATION		LOCKING LATCH		CALCULATION	
		A	$B + 5.6$			A	$B + 6.1$
		B	Total no. of contacts - 2			B	Total no. of contacts - 2
STRAIN RELIEF STRAP		Supplied with connector				Recommended PC Board Pattern	

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.

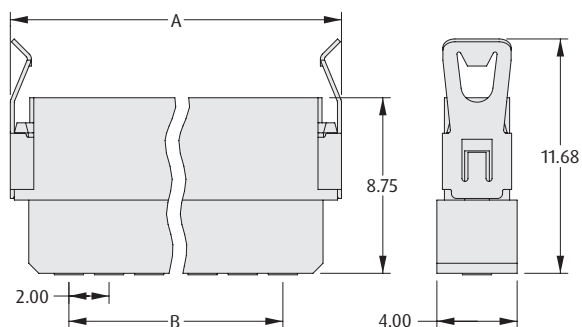


SINGLE ROW

CALCULATION

A	$B + 5.6$
B	$(\text{Total no. of contacts} - 1) \times 2$

Latches (when fitted) add 0.5mm to overall length 'A'

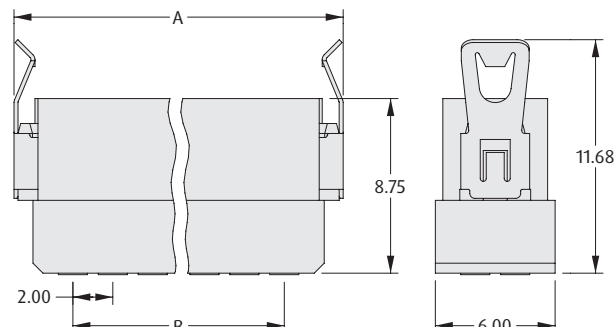


DOUBLE ROW

CALCULATION

A	$B + 5.6$
B	$\text{Total no. of contacts} - 2$

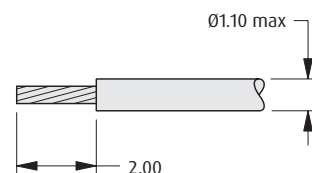
Latches (when fitted) add 0.5mm to overall length 'A'



TOOLS

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

WIRE STRIPPING DETAILS



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.

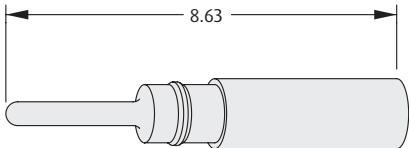
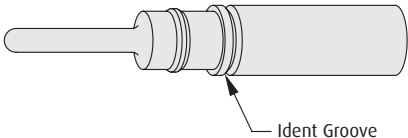
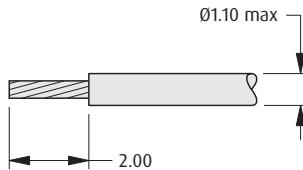
Datamate L-Tek Connectors

Spare Male Crimp Contacts

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



DATAMATE L-TEK

CRIMP CONTACTS	WIRE STRIPPING DETAILS								
<p>Large Bore (22 AWG)</p>  <p>Small Bore (24 to 28 AWG)</p> 	 <p>TOOLS</p> <p>Recommended Crimp Tool - M22520/2-01 Positioner - T5747 Contact Insertion/Removal Tool - Z80-280</p> <p>❖ Instruction sheets available at www.harwin.com/instructions.</p>								
HOW TO ORDER									
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>SERIES CODE</p> <table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">TYPE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">040</td> <td>Large Bore (22 AWG)</td> </tr> <tr> <td style="text-align: center;">041</td> <td>Small Bore (24-28 AWG)</td> </tr> </tbody> </table> </div> <div style="width: 40%; text-align: center;"> <p>M80 - 04X 00 05</p> </div> <div style="width: 25%;"> <p>FINISH</p> <table border="1" style="width: 100%;"> <tbody> <tr> <td style="text-align: center;">05</td> <td>Gold</td> </tr> </tbody> </table> </div> </div>		TYPE		040	Large Bore (22 AWG)	041	Small Bore (24-28 AWG)	05	Gold
TYPE									
040	Large Bore (22 AWG)								
041	Small Bore (24-28 AWG)								
05	Gold								

All dimensions in mm.