

Datamate Specification

Datamate **3-Row**

Materials

Mouldings:	Glass-filled thermoplastic UL94V-0
Female contacts:	Brass shell, with Beryllium Copper inner contact
Male contacts:	Phosphor bronze
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 ACrms
Proof Voltage (at sea level 1013 mbar):	1200V DC or ACrms
Contact resistance (initial):	20 mΩ max
Contact resistance (after conditioning):	25 mΩ max
Insulation resistance (initial):	1000 MΩ min
Insulation resistance (after conditioning):	100 MΩ min

Mechanical

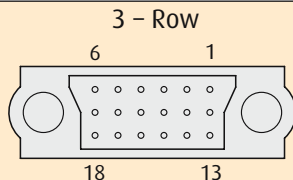
Durability:	500 operations
Insertion force (max):	1.0N
Withdrawal force (min):	0.2N
Signal crimp accommodation:	22 AWG to 28 AWG BS 3G 210 Type A or MIL-DTL-16878/6 Type ET

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

* Tested with connectors with Jackscrews.

Pin Numbering



Contact numbering is shown looking onto mating face of male connector.

Mating Profiles

FEMALE MALE	VERTICAL PC TAIL		CRIMP	
VERTICAL PC TAIL	M83-LFTXxxNXX	 10.65	M83-LFC1xxNXX	 12.85
	M83-LMTXxxNXX	 15.80	M83-LFD1xxNXX	 18.00
HORIZONTAL PC TAIL	M83-LFTXxxNXX	 15.80	M83-LFC1xxNXX	 18.00
	M83-LMLXxxNXX	 15.80	M83-LFD1xxNXX	 18.00

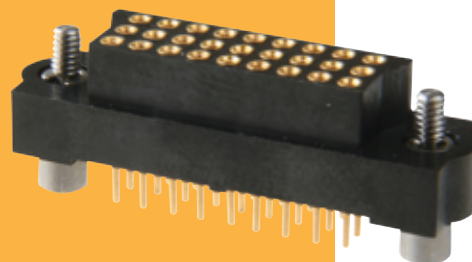
All dimensions in mm.

Datamate Connectors

Datamate **3-Row**

Female Vertical PC Tail

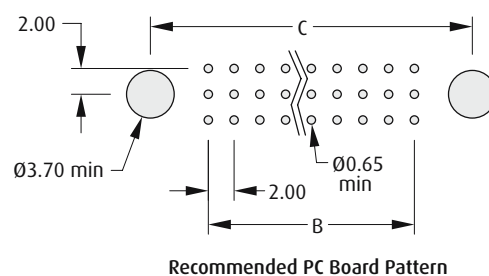
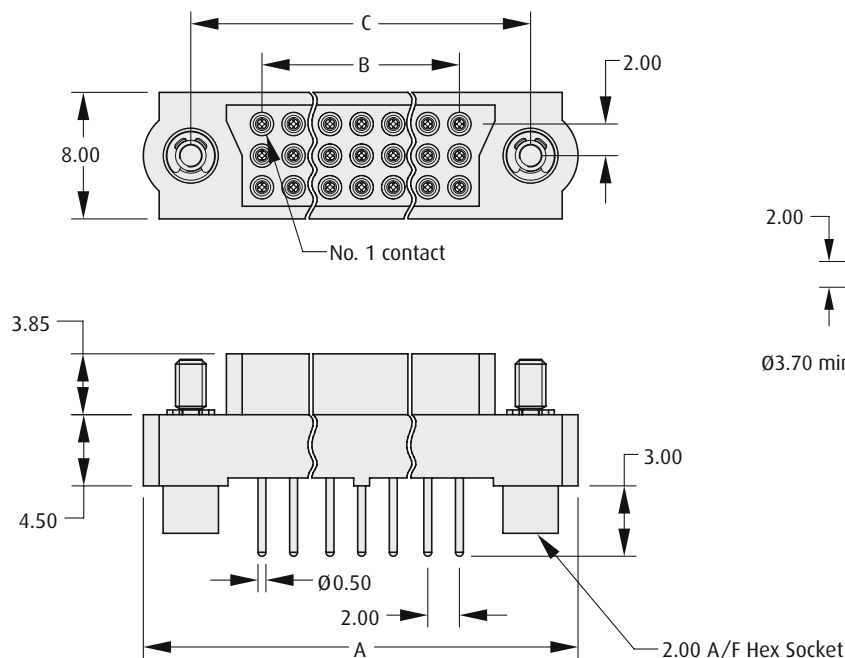
- ❖ Low-force 4-finger Beryllium Copper contact clip.
- ❖ Fully shrouded contacts.
- ❖ Polarised mouldings.
- ❖ All contacts are gold finish for full RoHS compliance.
- ❖ Mates with male connectors shown on pages 69 and 70.



FEMALE VERTICAL

CALCULATION

A	$B + 15$
B	$(\text{Total no. of contacts} - 3) \times 2/3$
C	$B + 9$



HOW TO ORDER

M83 - LF T1 F2 N XX - 0000 - 000

SERIES CODE

TAIL

T1 3mm Tail

TOTAL NO. OF CONTACTS

18, 27, 36, 54, 60, 96

JACKSCREW

F2 Hex Socket Jackscrew

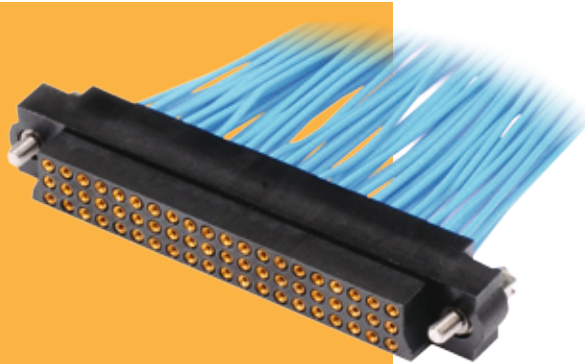
All dimensions in mm.

M83 Datamate Connectors

Datamate **3-Row**

Female Crimp

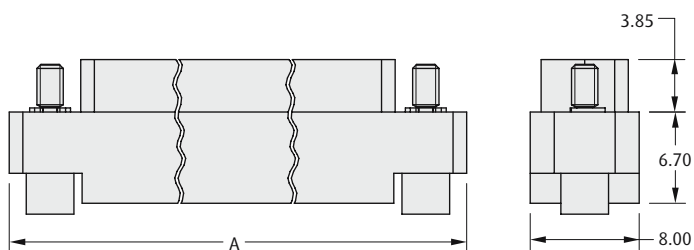
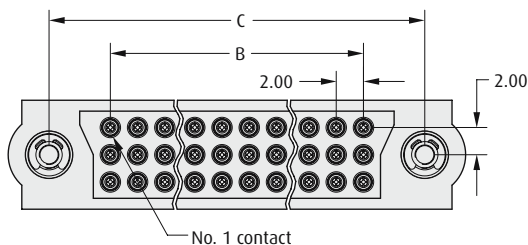
- Part numbers are for a kit of housing and contacts.
- Spare contacts are available.
- Low-force 4-finger Beryllium Copper contact clip.
- Fully shrouded contacts, rear-insertable.
- Crimp instruction sheets & video available online at www.harwin.com.
- Mates with male connectors shown on pages 69 and 70.



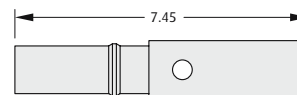
FEMALE CRIMP

CALCULATION

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



SPARE CONTACTS



WIRE SIZE	PART NUMBER
22 AWG	M83-0110005
24-28 AWG	M83-0130005

TOOLS

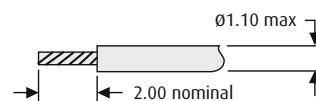
Recommended Crimp Tool – M22520/2-01
Positioner – T5747

Contact Insertion/Removal Tool – Z80-280

See pages 87 to 89

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

WIRE STRIPPING DETAILS



HOW TO ORDER

M83 - LF X1 F2 N XX - 0000 - 000

SERIES CODE

CRIMPS

C1	Small Bore (24-28 AWG)
D1	Large Bore (22 AWG)

TOTAL NO. OF CONTACTS

18, 27, 36, 54, 60, 96

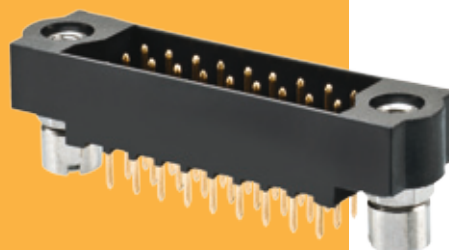
JACKSCREW

F2 Hex Socket Jackscrew

All dimensions in mm.

Male Vertical PC Tail

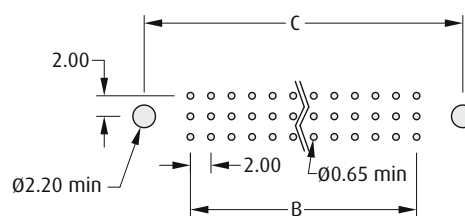
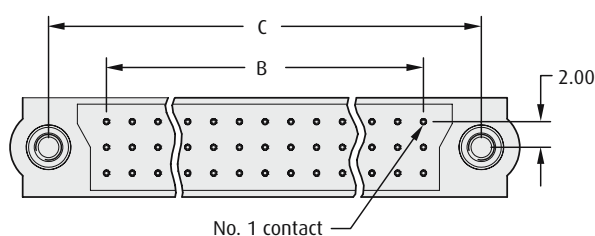
- ❖ Board Mount nuts to be tightened to a maximum torque of 23cmN.
- ❖ Fully shrouded contacts.
- ❖ Polarised mouldings.
- ❖ All contacts are gold finish for full RoHS compliance.
- ❖ Mates with female connectors shown on pages 67 and 68.



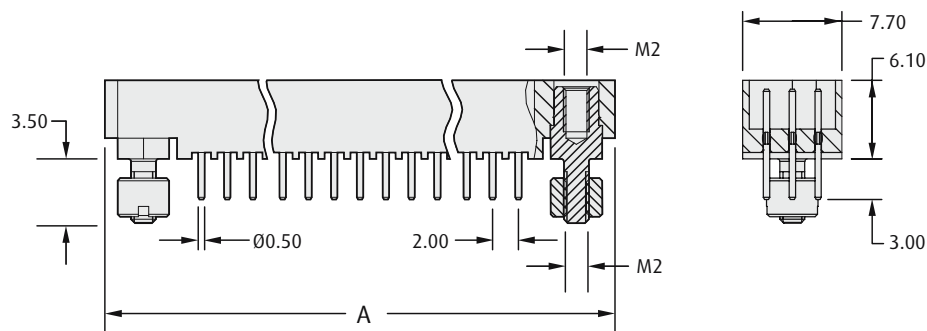
MALE VERTICAL

CALCULATION

A	$B + 15$
B	$(\text{Total no. of contacts} - 3) \times 2/3$
C	$B + 9$



Recommended PC Board Pattern



HOW TO ORDER

M83 - LM T1 M2 N XX - 0000 - 000

SERIES CODE

TAIL

T1 3mm Tail

TOTAL NO. OF CONTACTS

18, 27, 36, 54, 60, 96

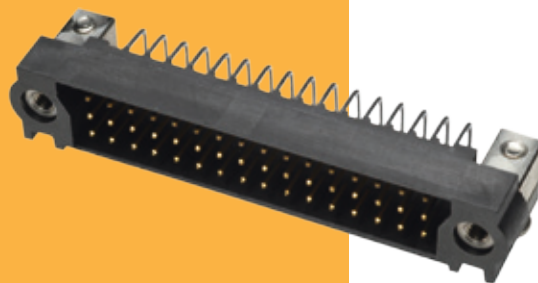
JACKSCREW

M2 Board Mount Jackscrew

All dimensions in mm.

Male Horizontal PC Tail

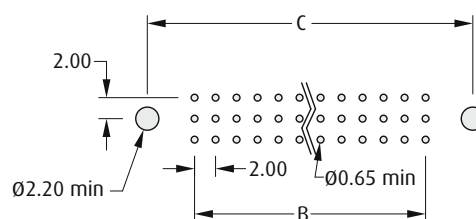
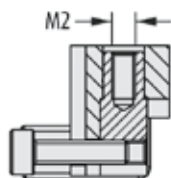
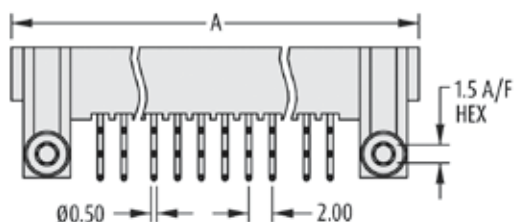
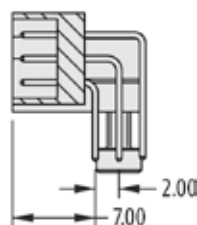
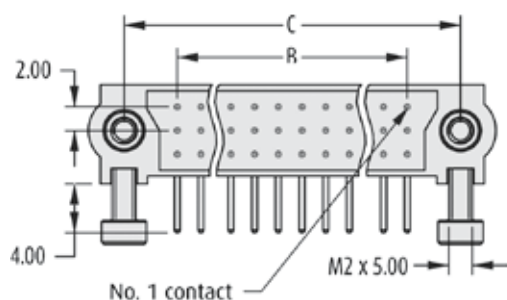
- Board Mount screws to be tightened to a maximum torque of 23cmN.
- Suitable for motherboard/daughterboard configurations.
- Fully shrouded contacts, polarised mouldings.
- All contacts are gold finish for full RoHS compliance.
- Mates with female connectors shown on pages 67 and 68.



MALE HORIZONTAL

CALCULATION

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



Recommended PC Board Pattern

HOW TO ORDER

M83 - LM L3 M7 N XX - 0000 - 000

SERIES CODE

TAIL

L3 4mm Tail

TOTAL NO. OF CONTACTS

18, 27, 36, 54, 60, 96

JACKSCREW

M7 Hex Socket Board Mount

All dimensions in mm.