Connectors

Contents

1.00mm Pitch Industry Standard Connectors

1.25mm Pitch Industry Standard Connectors

Archer - 1.27mm Pitch Industry Standard Connectors

- Archer Kontrol
  - Specifications, Mating Profiles
  - Female PCB Connectors
  - Male PCB Connectors
- Archer - M50
  - Specifications, Mating Profiles
  - Female PCB Connectors
  - Jumper Sockets
  - Male PCB Connectors
- Archer - M50 Polarised
  - Specifications, Mating Profiles
  - Polarised Female PCB Connectors
  - Polarised Male PCB Connectors
- Archer - M50 IDC
  - Specifications, Mating Profiles
  - IDC Female Cable Connectors
  - IDC Mating Male PCB Connectors
  - IDC Male Cable Connectors
  - IDC Cable Assemblies
- Archer - M52 (1.27 x 2.54mm pitch)
  - Specifications, Mating Profiles
  - Female PCB Connectors
  - Male PCB Connectors

2.00mm Pitch Industry Standard Connectors

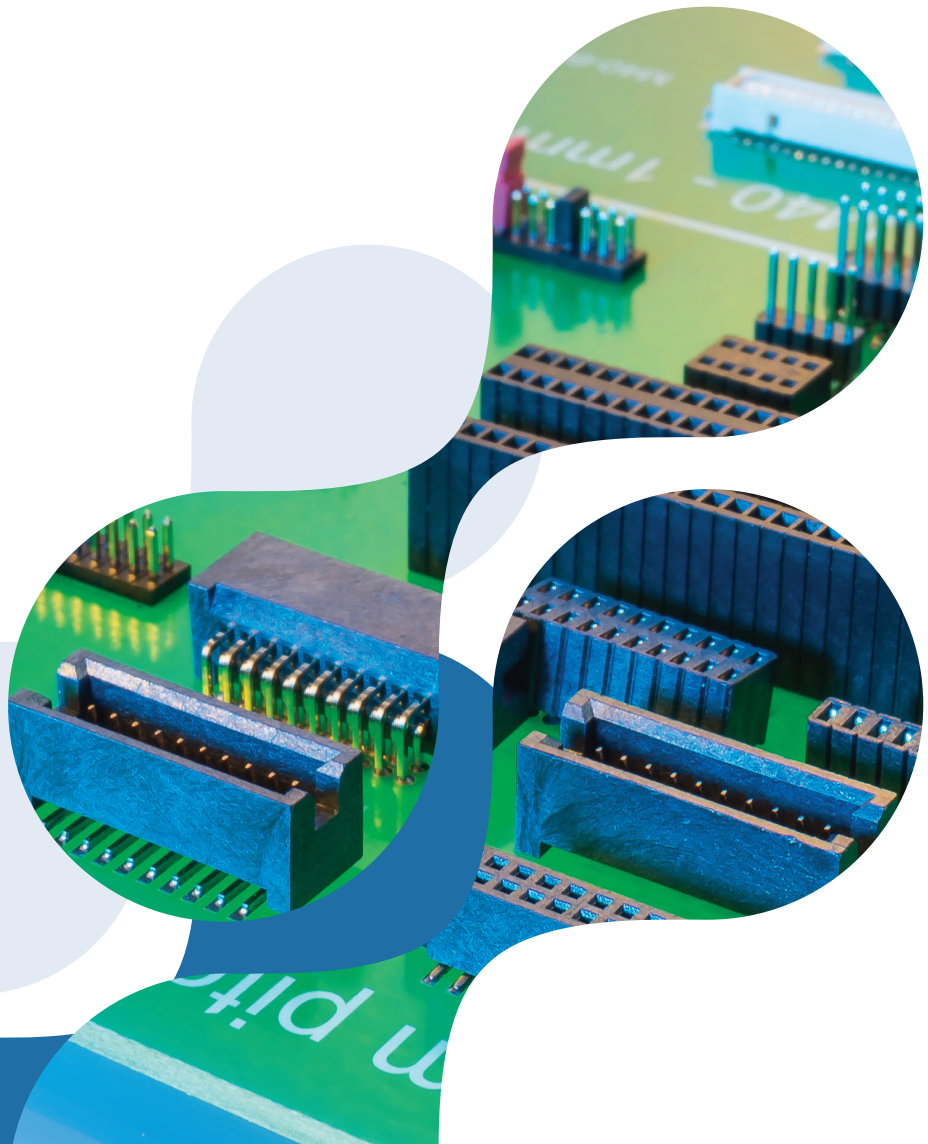
- M225 Series
  - Female Cable Connectors
  - Male PCB Connectors
- M22 Series
  - Female PCB Connectors
  - Female Cable Connectors
  - Jumper Sockets
  - Male PCB Connectors

M20 - 2.54mm Pitch Industry Standard Connectors

- Specifications, Mating Profiles
- Female PCB Connectors
- Female Cable Connectors
- Jumper Sockets
- Male PCB Connectors

PC/104 and PC/104-Plus Connectors

Clarke & Severn Electronics
Ph +612 9482 1944
Email sales@clarke.com.au
www.clarke.com.au



M40-600/620 Connectors Specification

- A range of double row 1.00mm pitch SMT male and female connectors for board-to-board stacking.

Materials

Mouldings:	High Temp Thermoplastic, UL94V-0
Contacts:	Phosphor Bronze
Finish:	Tin

Mechanical

Durability:	30 operations
Insertion force (max):	2.7N per contact
Withdrawal force (min):	0.4N per contact

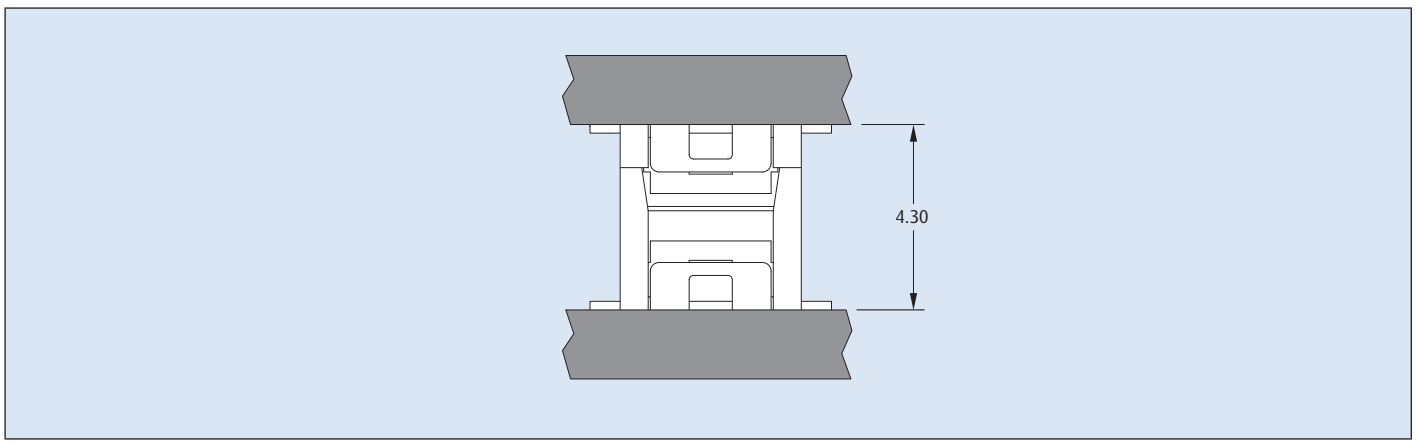
Electrical

Current:	0.5A per contact
Working voltage:	150V AC
Voltage proof:	250V AC
Contact resistance:	50mΩ max
Insulation resistance:	500MΩ min

Environmental

Operating temperature:	-20°C to +125°C
Solderability:	210°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

Mating Profile

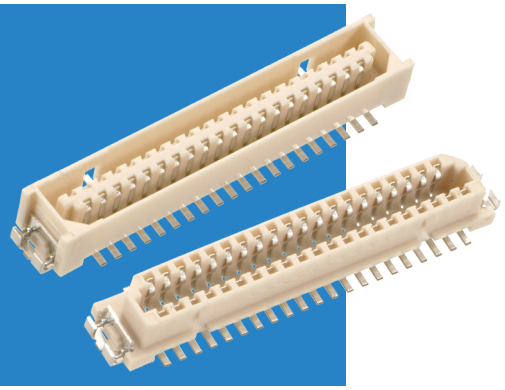


All dimensions in mm.

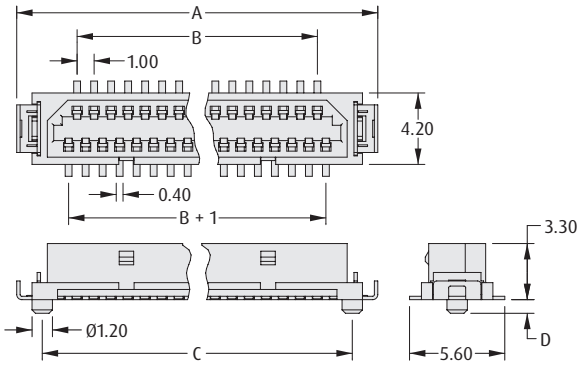
M40 Connectors

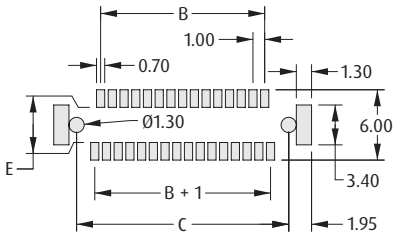
Vertical Surface Mount

- Locating pegs to ensure correct positioning onto the board.
- Polarised to prevent mis-mating.
- Staggered pin-out to help board layout.



FEMALE

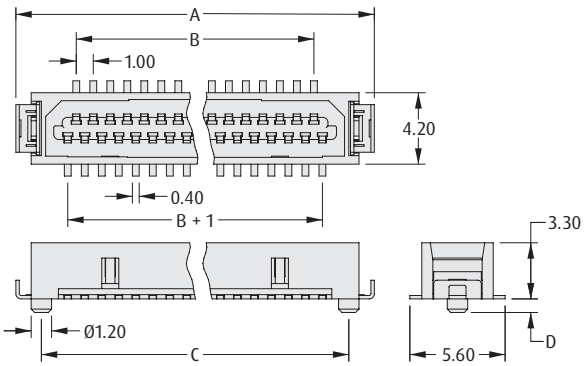


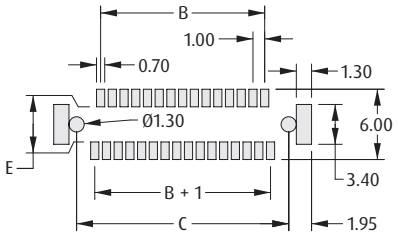


Recommended PC Board Pattern

CALCULATION	
A	B + 7.1
B	(Total No. Of Contacts – 3) / 2
C	B + 4.1
D	1.00mm for 9, 15, 21, 25 way; otherwise 0.80mm
E	1.84mm for 9, 15, 21, 25 way; otherwise 3.00mm

MALE





Recommended PC Board Pattern

HOW TO ORDER

M40 - 6 X 0 XX XX X

SERIES CODE

GENDER	
0	Male
2	Female

PACKAGING	
Blank	Loose
R	Tape & Reeled

FINISH	
46	Tin

TOTAL NO. OF CONTACTS
09, 15, 21, 25, 31, 41, 51

All dimensions in mm.

M40-310/320 Connectors Specification

- A range of double row 1.00mm pitch SMT pin header and socket connectors.

Materials

Mouldings:	High Temp Thermoplastic, UL94V-0
Contacts	
Male:	Brass
Female:	Phosphor Bronze
Finish:	Gold

Electrical

Current:	1.0A per contact
Voltage proof:	500V AC
Contact resistance:	30mΩ max
Insulation resistance:	1,000MΩ min

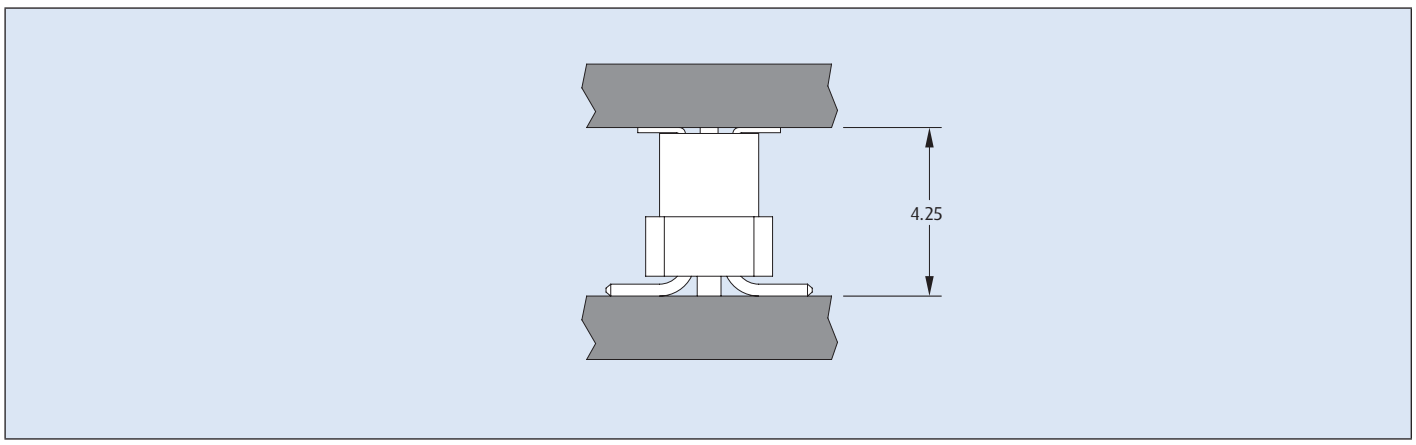
Mechanical

Durability:	300 operations
Insertion force (max):	1.5N per contact
Withdrawal force (min):	0.1N per contact
Vibration sensitivity:	50 – 2000Hz, 45 minutes duration
Shock severity:	294m/s^2 (30G) for 11ms

Environmental

Operating temperature:	-40°C to +105°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

Mating Profile

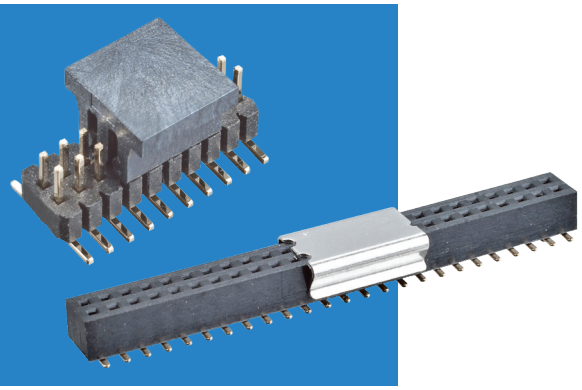


All dimensions in mm.

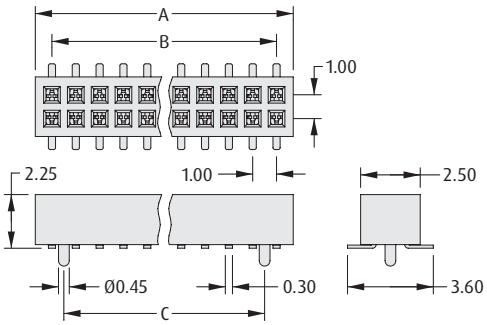
M40 Connectors

Vertical Surface Mount

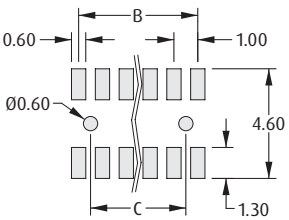
- Locating pegs to ensure correct positioning onto the board.
- Supplied in tape and reel packaging with pick and place caps as standard.
- Twin beam female connector for higher durability.



FEMALE

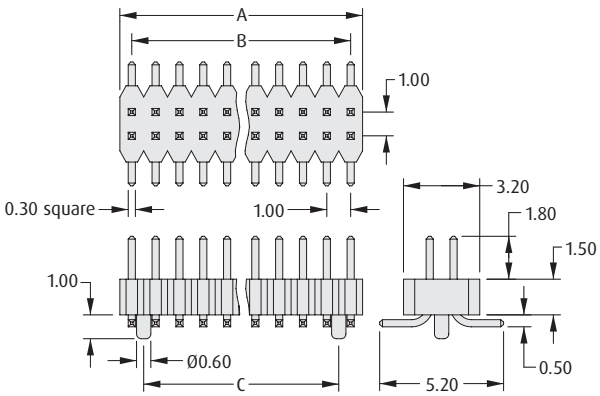


CALCULATION	
A	B + 1.4
B	No. of contacts per row - 1
C	No. of contacts per row - 2

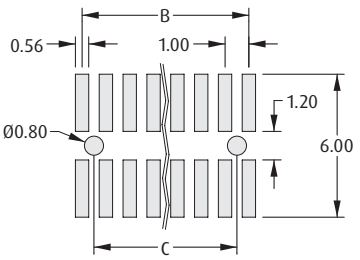


Recommended PC Board Pattern

MALE



CALCULATION	
A	No. of contacts per row
B	No. of contacts per row - 1
C	No. of contacts per row - 2



Recommended PC Board Pattern

HOW TO ORDER

M40 - 3 X 0 XX 45 R

SERIES CODE

GENDER

1	Female
2	Male

TAPE & REELED

FINISH

45	Gold

NO. OF CONTACTS PER ROW

03, 04, 05, 06, 08, 10, 20, 25

All dimensions in mm.

M40 Cable-to-Board Specification

- A range of cable-to-board connectors on 1.00mm pitch - SMT male connectors and cable female connectors in single and double row options.

Materials

Mouldings	
SMT Connectors:	High Temp Thermoplastic, UL94V-0
Cable Housings:	Thermoplastic, UL94V-0
Contacts:	Phosphor Bronze
Finish:	Tin

Electrical

Current:	1A per contact
Working voltage:	50V AC/DC
Voltage proof:	500V AC/DC
Contact resistance:	30mΩ max
Insulation resistance:	100MΩ min

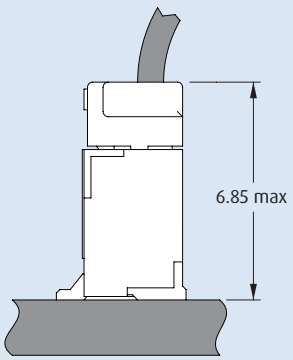
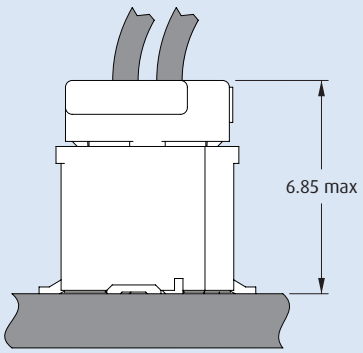
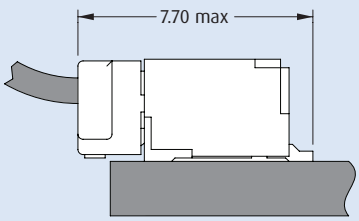
Mechanical

Durability:	50 operations
Insertion force (max):	2.0N per contact
Withdrawal force (min):	0.4N per contact
Crimped wire retention (min)	
28 AWG wire:	12.7N
30 AWG wire:	9.8N
32 AWG wire:	4.9N
Vibration sensitivity:	10 – 55Hz, 1.5mm, 6 hours duration
Shock severity:	490m/s^2 (50G) for 11ms

Environmental

Operating temperature:	-25°C to +85°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 5 seconds

Mating Profiles

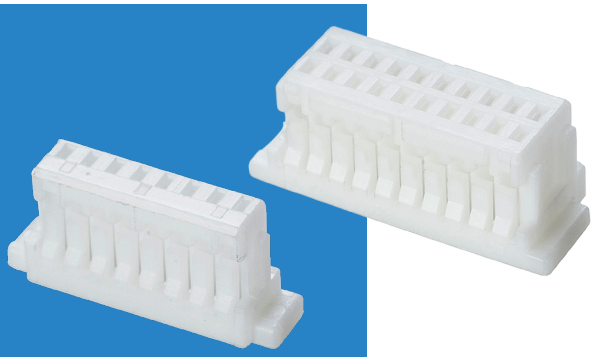
		FEMALE CRIMP	
		SINGLE ROW	DOUBLE ROW
MALE	VERTICAL SMT		
	HORIZONTAL SMT		

All dimensions in mm.

M40 Cable-to-Board Connectors

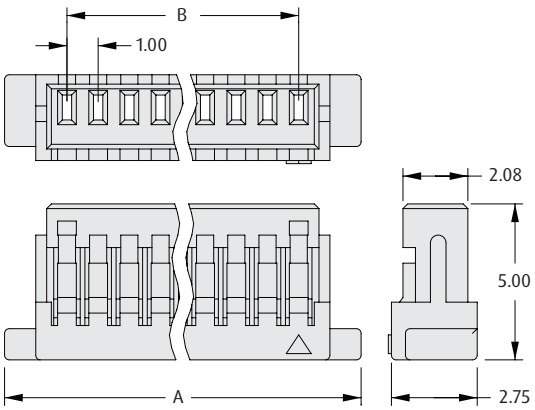
Female Crimp Housings

- Crimp contacts or pre-cabled contacts are orderd separately - see following pages.
- Crimped contacts on wires are inserted into rear of connector housing - no additional tooling required.



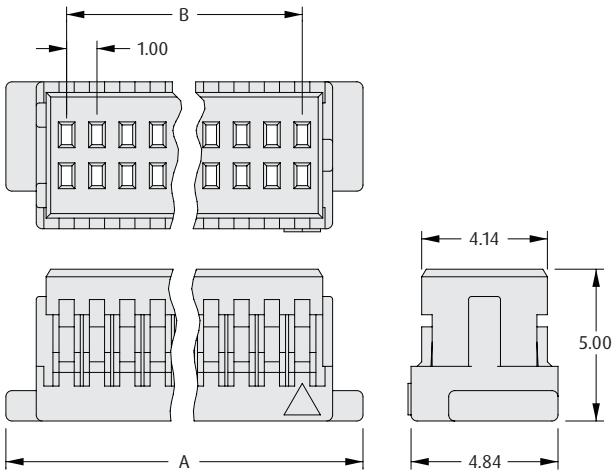
SINGLE ROW

CALCULATION	
A	B + 4
B	No. of contacts per row - 1



DOUBLE ROW

CALCULATION	
A	B + 4
B	No. of contacts per row - 1



HOW TO ORDER

M40 - 1X0 XX 00

SERIES CODE

TYPE	
110	Single Row
120	Double Row

NO. OF CONTACTS PER ROW	
02 to 20	Single Row
05 to 10, 12, 15, 20, 25	Double Row

All dimensions in mm.

M40 Cable-to-Board Connectors

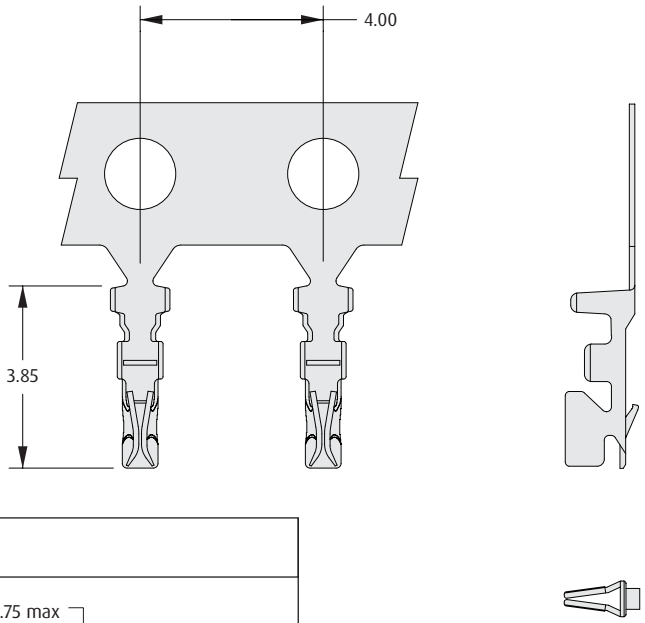
Female Crimp Contacts

- Open crimp design, ideal for automation.
- Use with female crimp housings shown on previous page.
- Pre-crimped contacts with wire attached shown on following page.
- Requires crimp machine with applicable tooling for crimping to wires.

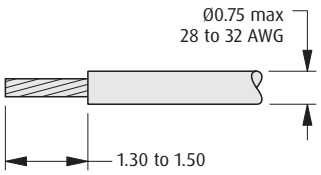


CONTACTS

- Order code is for one reel of 15,000 contacts.



WIRE STRIPPING DETAIL



HOW TO ORDER

M40 - 100 00 46

SERIES CODE

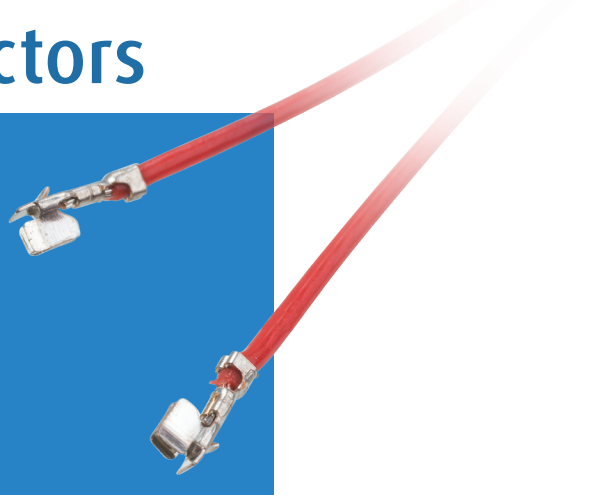
FINISH	
46	Tin

All dimensions in mm.

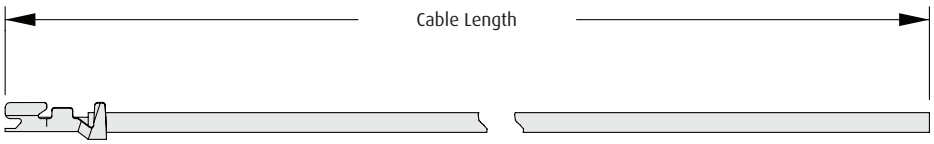
M40 Cable-to-Board Connectors

Female Crimp Contacts - Pre-Crimped Wires

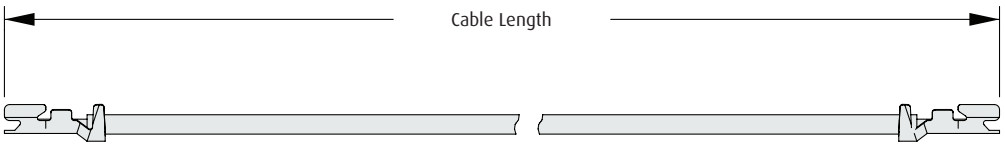
- Female crimp contacts pre-assembled with a choice of wire sizes and lengths.
- PVC insulated multi-strand tinned copper equipment wire to UL1571.
- Use with female crimp housings shown on previous page.
- Ideal for prototype and pre-production applications.
- Individual contacts without wire shown on previous page.



FEMALE SINGLE ENDED



FEMALE - FEMALE



HOW TO ORDER

M40 - 9XX 00 99

SERIES CODE

CABLE COLOUR	
99	Red

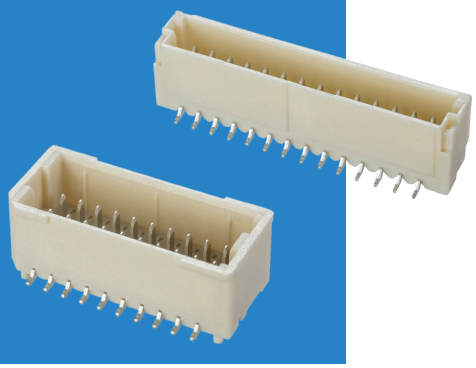
SINGLE ENDED	FEMALE - FEMALE	
900	904	28 AWG cable, 150mm length
901	905	32 AWG cable, 150mm length
902	906	28 AWG cable, 300mm length
903	907	32 AWG cable, 300mm length
910		30 AWG cable, 150mm length
911		30 AWG cable, 300mm length

All dimensions in mm.

M40 Cable-to-Board Connectors

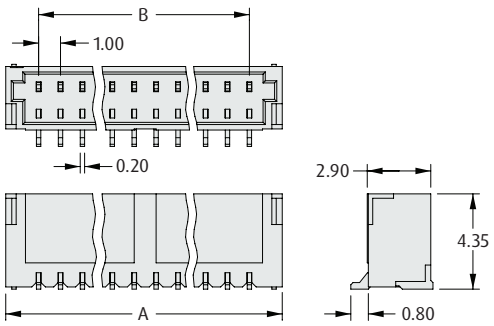
Male Vertical Surface Mount

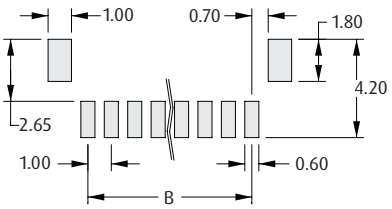
- Shrouded male connectors.
- Double row connector features locating pegs to ensure correct positioning onto the board.
- Tape and Reel option supplied fitted with pick and Place cap.



SINGLE ROW

CALCULATION	
A	B + 3
B	No. of contacts per row - 1

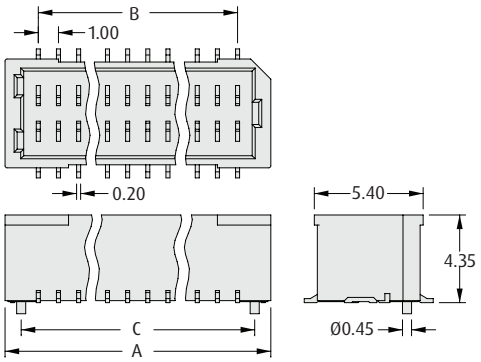


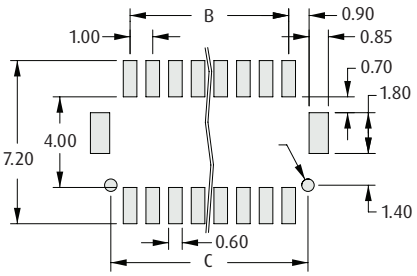


Recommended PC Board Pattern

DOUBLE ROW

CALCULATION	
A	B +3
B	No. of contacts per row - 1
C	B +1.7





Recommended PC Board Pattern

HOW TO ORDER

M40 - 30 X XX 46 X

SERIES CODE

TYPE

1	Single Row
2	Double Row

NO. OF CONTACTS PER ROW

02 to 20	Single Row
05 to 08, 10, 12, 15	Double Row

FINISH

46	Tin

PACKAGING

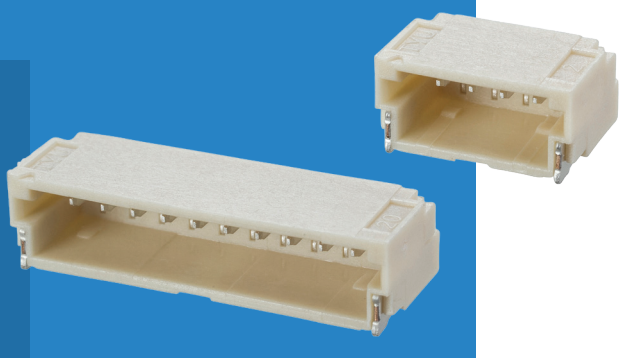
Blank	Loose
R	Tape & Reeled

All dimensions in mm.

M40 Cable-to-Board Connectors

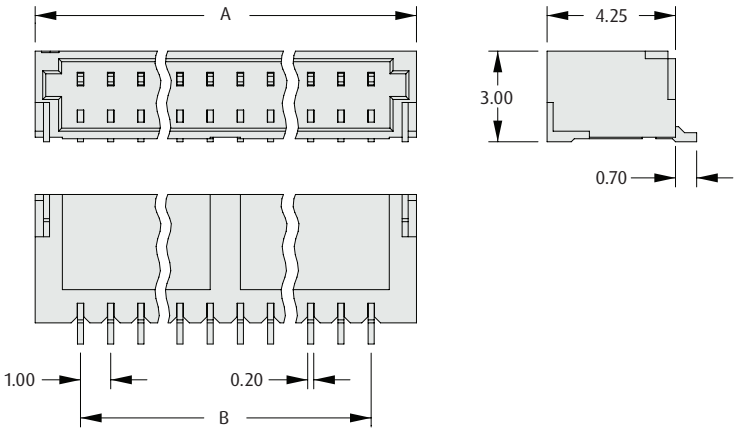
Male Horizontal Surface Mount

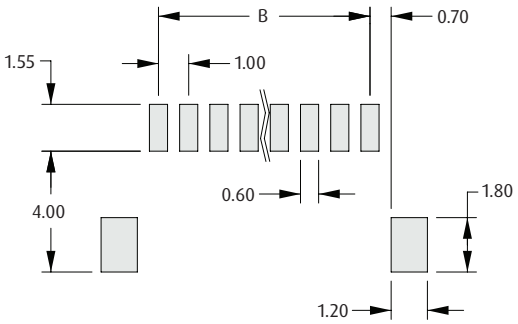
- Shrouded male connectors.
- Tape and Reel option does not require Pick and Place cap.



SINGLE ROW

CALCULATION	
A	B + 3
B	No. of contacts per row - 1





Recommended PC Board Pattern

HOW TO ORDER

M40 - 401 XX 46 X

SERIES CODE

NO. OF CONTACTS PER ROW
02 to 20

PACKAGING	
Blank	Loose
R	Tape & Reeled

FINISH	
46	Tin

All dimensions in mm.

M30 Connectors Specification

- A range of 1.25mm pitch male and female connectors, for cable-to-board applications.

Material

Mouldings	
SMT:	Nylon 6T, UL94V-0
Others:	Nylon 66, UL94V-0
Contacts	
Male:	Brass
Female:	Phosphor Bronze
Finish:	Tin

Electrical

Current:	1A per contact
Working voltage:	150V AC
Voltage proof:	500V AC/DC
Contact resistance:	30mΩ max
Insulation resistance:	500MΩ min

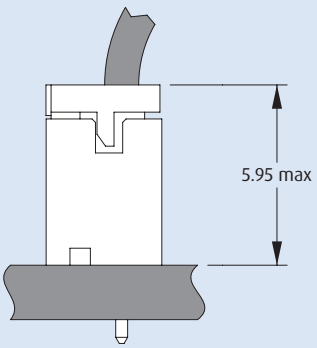
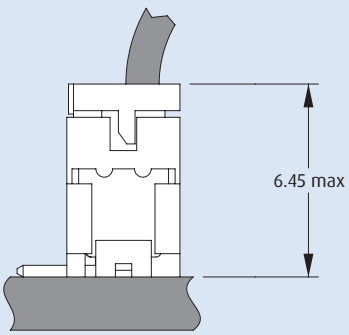
Mechanical

Durability:	50 operations
Insertion force (max):	4.9N per contact
Withdrawal force (min):	0.5N per contact
Crimp retention (min):	4.9N per contact
Crimped wire retention (min)	
26 AWG wire:	19.6N
28 AWG wire:	9.8N
30 AWG wire:	7.8N
Vibration sensitivity:	10 – 55Hz, 1.5mm, 6 hours duration
Shock severity:	490m/s2 (50G) for 11ms

Environmental

Operating temperature:	-25°C to +85°C
Solderability:	245°C for 5 seconds
Soldering heat resistance	
PC Tail:	250°C for 5 seconds
SMT:	260°C for 10 seconds

Mating Profiles

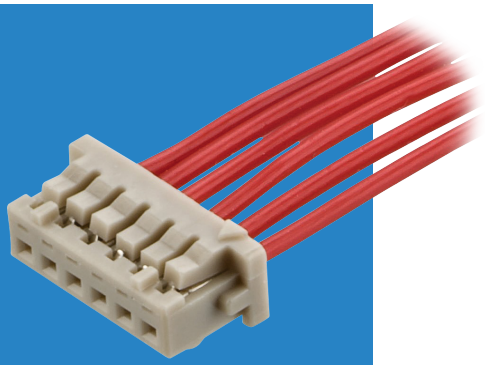
	MALE	
	PC TAIL	SMT
FEMALE CRIMP		

All dimensions in mm.

M30 Connectors

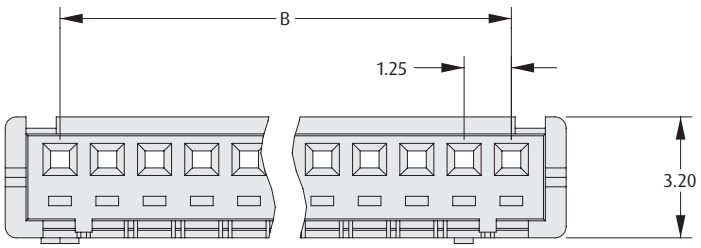
Female Crimp Housing

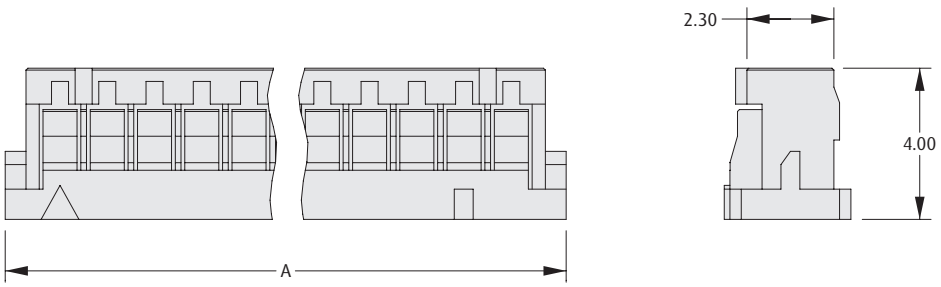
- Loose or reeled contacts.
- Crimp contacts or pre-cabled contacts are ordered separately - see the following pages.



HOUSING

CALCULATION	
A	B + 2.9
B	1.25 x (No. of contacts per row - 1)





HOW TO ORDER

M30 - 110 XX 00

SERIES CODE

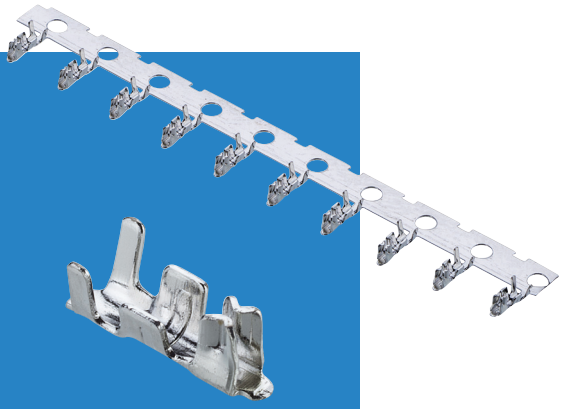
NO. OF CONTACTS PER ROW
02 to 15

All dimensions in mm.

M30 Connectors

Female Crimp Contacts

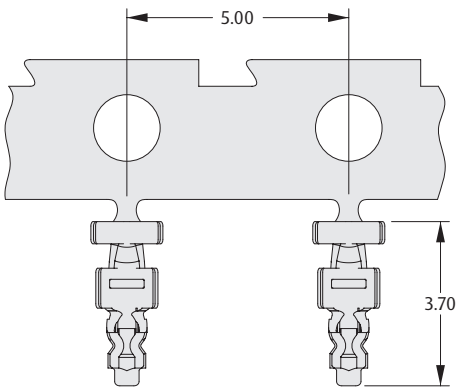
- Loose or reeled contacts.
- Open crimp design, ideal for automation.
- Use with female crimp housings shown on previous page.
- Pre-crimped contacts with wire attached shown on following page.



CONTACTS

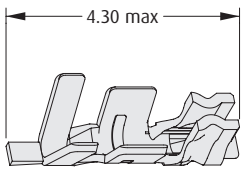
Reeled (continuous strip)

- Order code is for one reel of 10,000 contacts.



Loose (cropped)

- Order code is for one pack of 100 contacts.



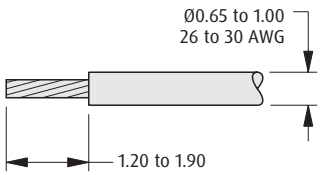
HAND CRIMP TOOL

- Instruction sheet is available at **www.harwin.com/instructions.**
- For use with loose contacts.



ORDER CODE
Z30-021

WIRE STRIPPING DETAILS



HOW TO ORDER

M30 - 10 X 00 46

SERIES CODE

TYPE	
5	Reeled contact
6	Loose contact

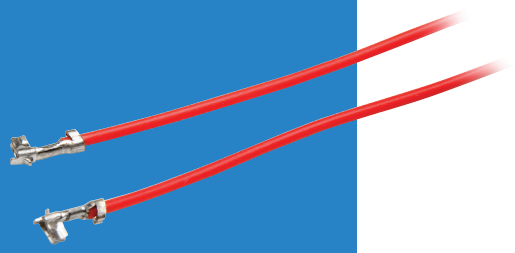
FINISH	
46	Tin

All dimensions in mm.

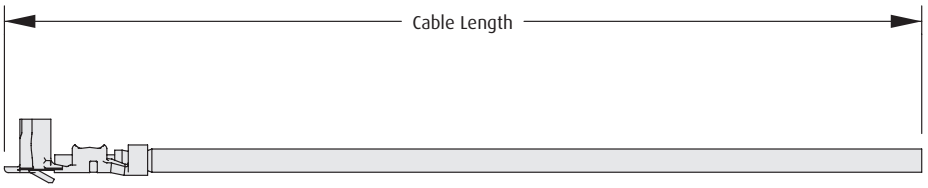
M30 Connectors

Female Crimp Contacts – Pre-Crimped Wires

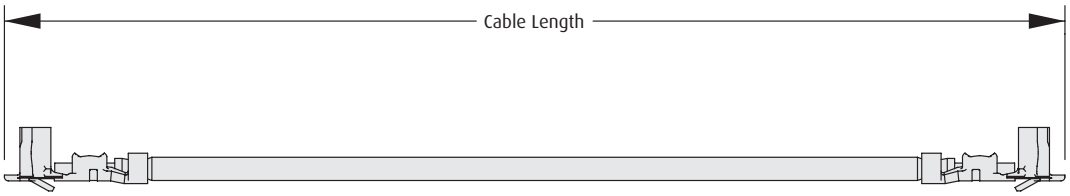
- Female crimp contacts pre-assembled with a choice of wire sizes and lengths.
- PTFE-insulated, multi-strand silver-plated copper conductor equipment wire.
- Use with female crimp housings shown on previous page.
- Ideal for prototype and pre-production applications.
- Individual contacts without wire shown on previous page.



FEMALE SINGLE ENDED



FEMALE - FEMALE



HOW TO ORDER

M30 - 9XX 00 99

SERIES CODE

CABLE COLOUR	
99	Red

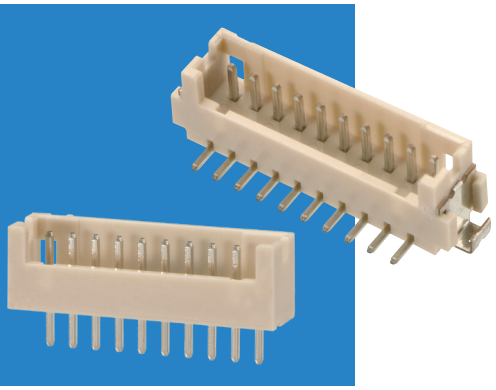
SINGLE ENDED	FEMALE - FEMALE	
900	904	26 AWG cable, 150mm length
901	905	30 AWG cable, 150mm length
902	906	26 AWG cable, 300mm length
903	907	30 AWG cable, 150mm length

All dimensions in mm.

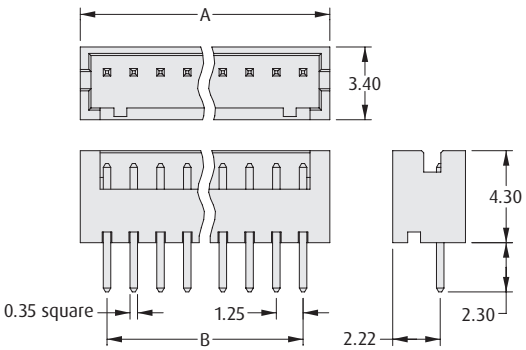
M30 Connectors

Male Vertical

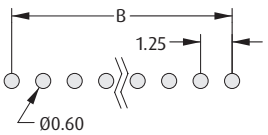
- Shrouded male connectors.
- SMT version features metal solder-down tabs and locating pegs to ensure correct positioning onto the board.
- Tape and Reel option supplied fitted with Pick and Place cap, contact **technical@harwin.com** for availability.



PC TAIL

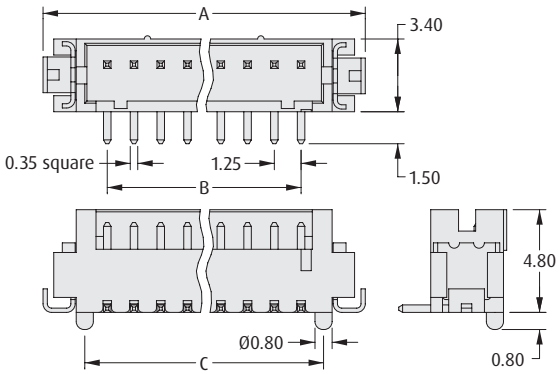


CALCULATION	
A	1.25 x (No. of contacts per row + 1)
B	1.25 x (No. of contacts per row - 1)

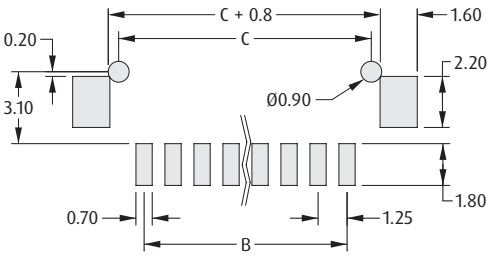


Recommended PC Board Pattern

SURFACE MOUNT



CALCULATION	
A	B + 6
B	1.25 x (No. of contacts per row - 1)
C	B + 2.1



Recommended PC Board Pattern

HOW TO ORDER

M30 - 6 X 0 XX XX X

SERIES CODE

TYPE	
0	Surface Mount
1	PC Tail

PACKAGING	
Blank	Loose
R	Tape & Reeled (M30-600)

FINISH	
46	Tin

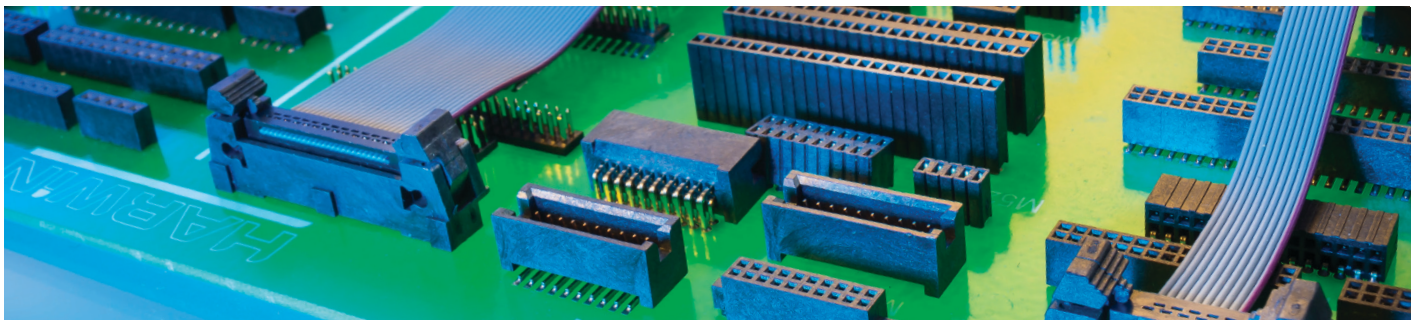
NO. OF CONTACTS PER ROW
02 to 15

All dimensions in mm.

Archer Connectors

The Archer range from Harwin is a series of 1.27mm (0.05") pitch connectors, offering single and double row options at half the PCB footprint of a 2.54mm (0.1") pitch connector. These Industry Standard connectors are backed by Harwin's outstanding service, quality and distribution network, and are an ideal choice for a miniature alternative to larger pin header and socket connections.

- M50 – Single and Double row pin headers and sockets, in vertical and horizontal orientations, for board-to-board connections. 1.27mm (0.05") pitch in both directions, with 0.4mm square male pins. Jumper Sockets and Pin Header Variants also available.
- M50 Polarised – Double row connectors for board-to-board, with added shrouding and a polarisation feature.
- M50 IDC – Cable connectors for 0.635mm pitch ribbon cable, and associated board connectors with securing latches and polarisation, for cable-to-board connection. Complete cable assemblies also supplied as standard.
- M52 – Single and Double row pin headers and sockets, in vertical and horizontal orientations, for board-to-board connections. 1.27mm (0.05") pitch along the connector, 2.54mm (0.1") between connector rows using 0.46mm square male pins. Pin Header Variants also available.



Archer Kontrol

1.27mm pitch durable, rugged board-to-board connectors. Available in a choice of orientations and mating heights, these connectors add a tougher option to the Archer family. Due to the fully shrouded design, these connectors are suited for blind-mating applications. They can withstand lateral and twisting forces, and tolerate a significant amount of mis-alignment.

- Current rating of 1.2A per contact.
- Vertical and Horizontal options in both male and female connectors – board-to-board connection for parallel/mezzanine, motherboard to daughterboard, or coplanar/edge-to-edge PCB layouts.
- Variable stacking height options with multiple connector sizes in both genders.
- Enhanced durability of 500 mating cycles minimum.
- Additional strain relief with retaining SMT tabs.
- Supplied in tape and reel, with pick-and-place caps where required, for automated assembly.
- Increased operating temperature range: -55°C to +125°C.

Archer Kontrol offers the ideal connection system for demanding industrial environments:

- Drives and controls
- Dataloggers
- IOT installations
- Vehicle control systems
- Trackside monitoring equipment
- Large scale factory installations

Archer Kontrol Specification

Materials

Mouldings:	High Temperature Plastic UL94V-0
Contacts:	Phosphor Bronze
Retaining strap:	Brass
Finish:	See individual pages
Contacts:	Gold on contact area, Tin on tails
Retaining strap:	Tin

Electrical

Current:	1.2A max per contact
Voltage proof:	500V AC for 1 minute
Contact resistance:	25mΩ max
Insulation resistance:	10GΩ min

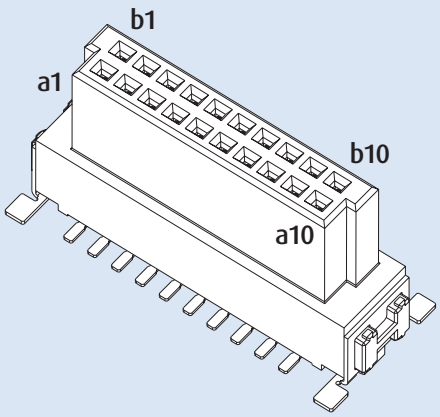
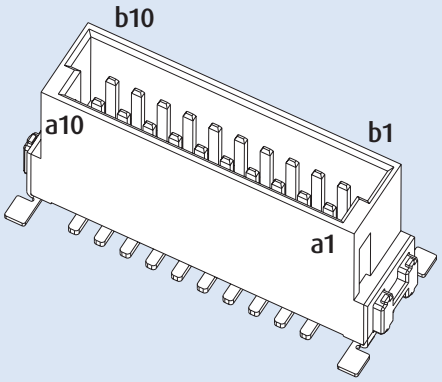
Mechanical

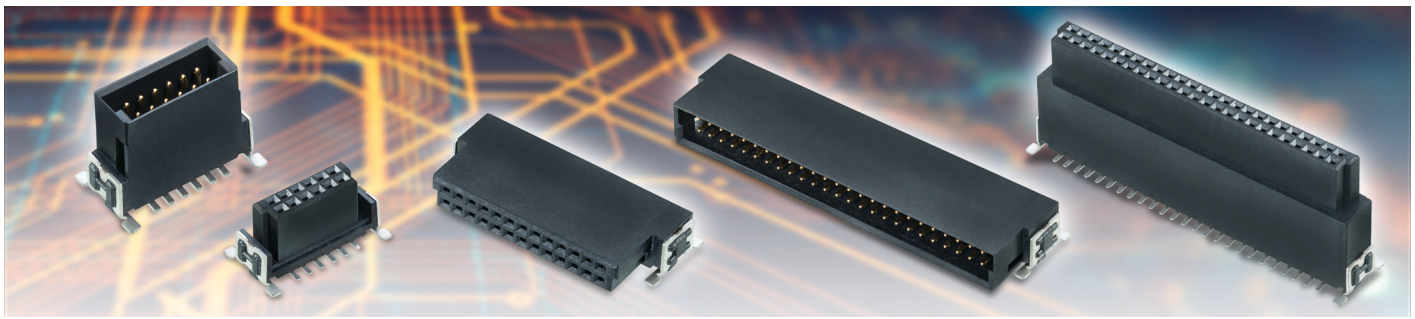
Durability:	500 operations
Insertion force (max):	0.8N per contact
Withdrawal force (min):	0.2N per contact

Environmental

Operating temperature:	-55°C to +125°C
Vibration sensitivity:	10Hz to 2000Hz, 1.52mm, 196m/s^2 (20G), duration 12h
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

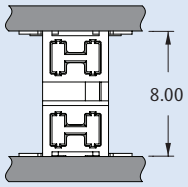
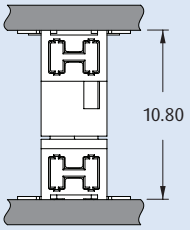
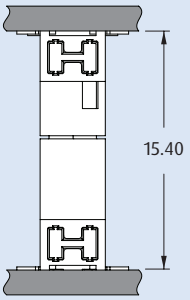
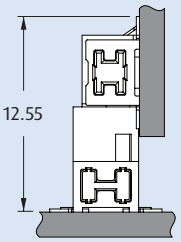
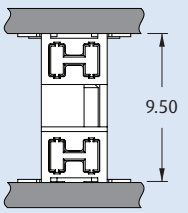
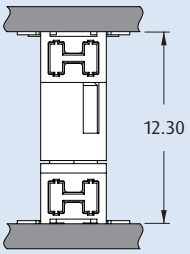
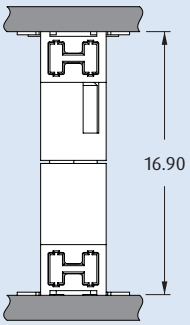
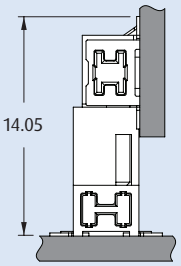
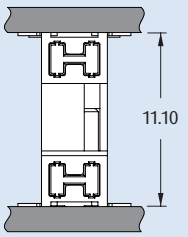
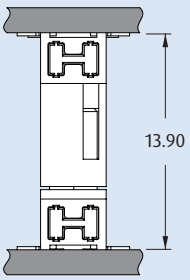
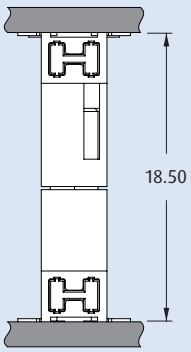
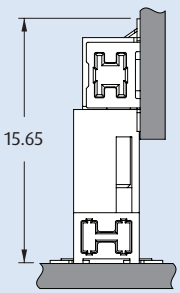
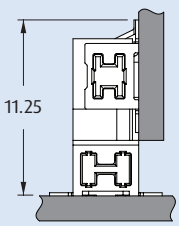
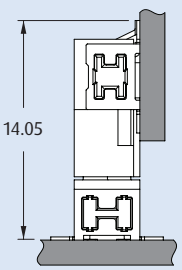
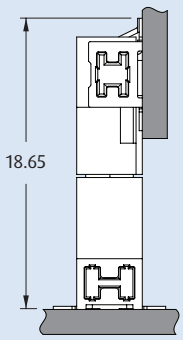
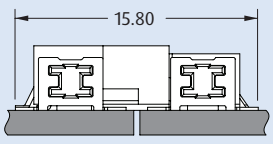
Pin Numbering

FEMALE	MALE
	



Archer Kontrol Mating Profiles

- Mating heights shown in fully mated condition. Product can be used up to 1.5mm separated and still perform to the same specifications.

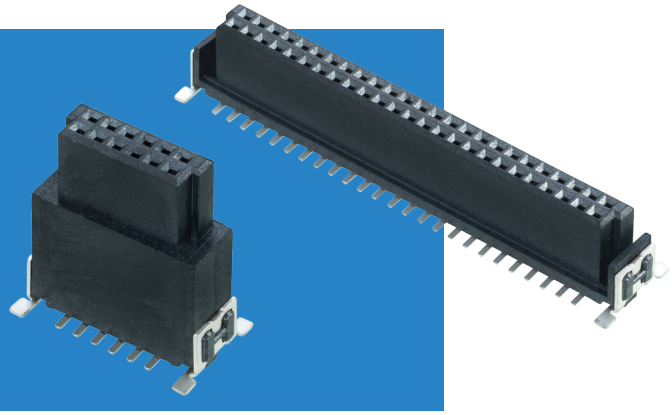
			FEMALE			
			VERTICAL SMT			HORIZONTAL SMT
			6.25mm HEIGHT	9.05mm HEIGHT	13.65mm HEIGHT	
MALE	VERTICAL SMT	6.75mm HEIGHT				
		8.25mm HEIGHT				
		9.85mm HEIGHT				
	HORIZONTAL SMT					

All dimensions in mm.

Archer Kontrol Connectors

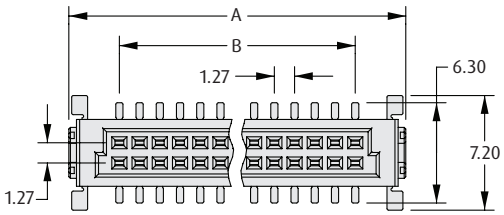
Female Vertical Surface Mount

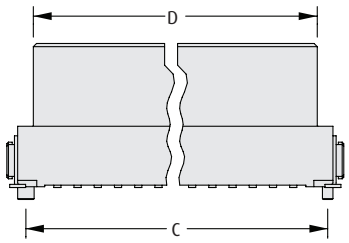
- Suitable for parallel board-to-board (mezzanine stacking) or motherboard-to-daughterboard configurations.
- Choice of three height options.
- Polarised and shrouded housing design.
- Location pegs and tape & reel packaging for automated assembly processes.

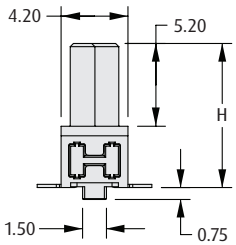


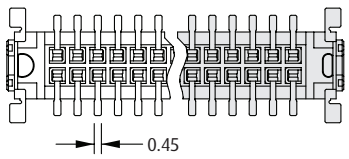
VERTICAL

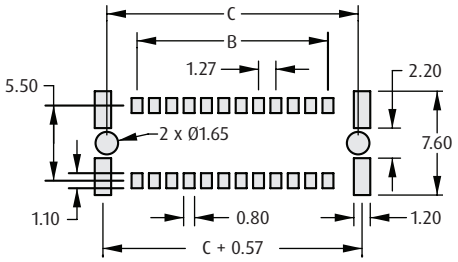
CALCULATION	
A	B + 6.35
B	0.635 x (Total No. of contacts - 2)
C	B + 4.42
D	B + 3.02











Recommended PC Board Pattern

HOW TO ORDER

M55 - 60 X XX 42 R

SERIES CODE

CONNECTOR HEIGHT

0	H = 6.25mm
1	H = 9.05mm
2	H = 13.65mm

PACKAGING

R	Tape & Reeled

FINISH

42	Gold + Tin

TOTAL NO. OF CONTACTS

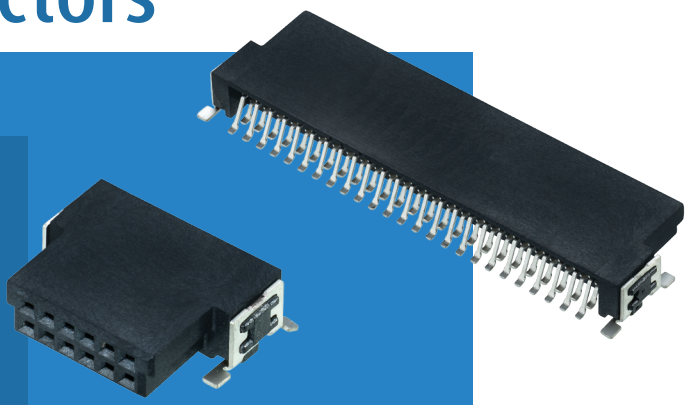
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

Archer Kontrol Connectors

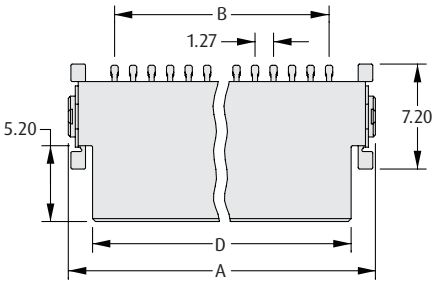
Female Horizontal Surface Mount

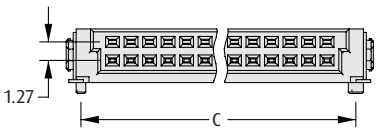
- Suitable for coplaner (edge-to-edge) or motherboard-to-daughterboard configurations.
- Hold-down SMT retaining straps for additional retention to the board.
- Polarised and shrouded housing design.
- Location pegs and tape & reel packaging for automated assembly processes.

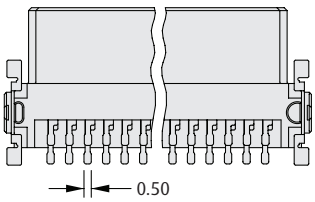


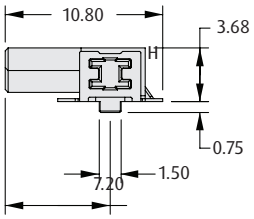
HORIZONTAL

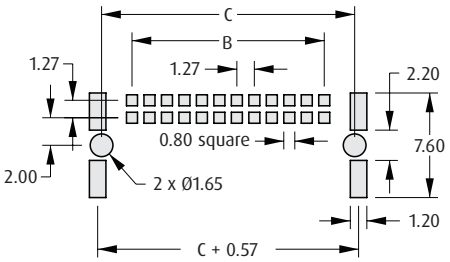
CALCULATION	
A	B + 6.35
B	0.635 x (Total No. of contacts - 2)
C	B + 4.42
D	B + 3.02











Recommended PC Board Pattern

HOW TO ORDER

M55 - 610 XX 42 R

SERIES CODE

PACKAGING	
R	Tape & Reeled

FINISH	
42	Gold + Tin

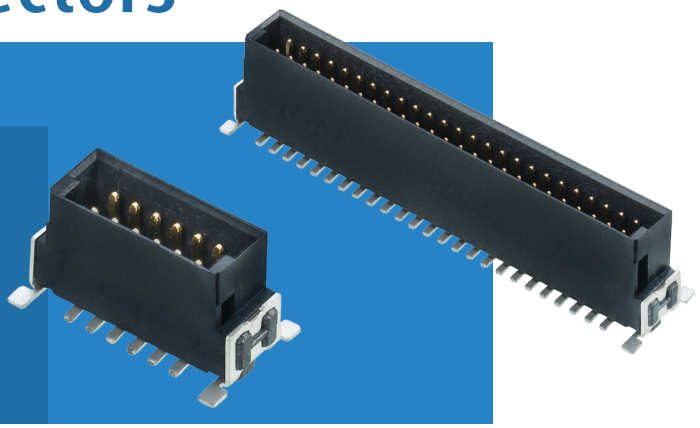
TOTAL NO. OF CONTACTS
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

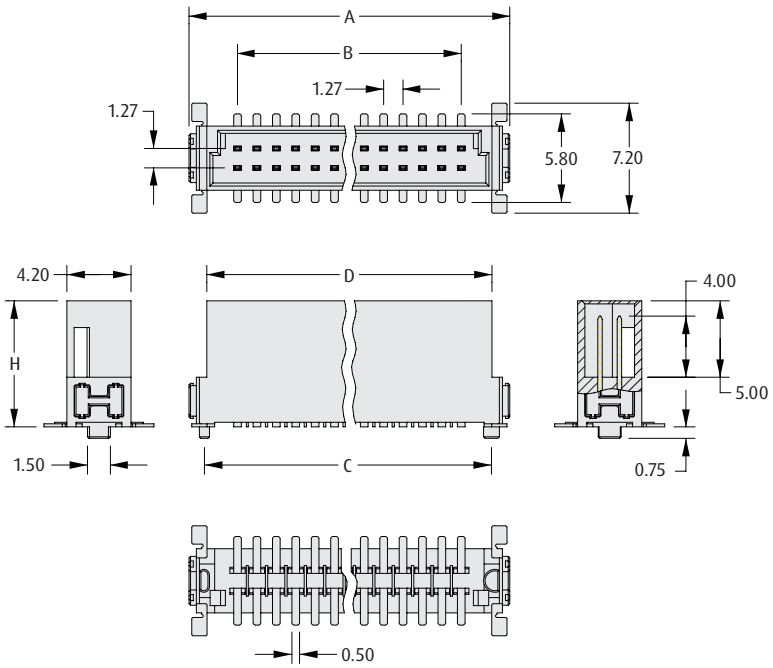
Archer Kontrol Connectors

Male Vertical Surface Mount

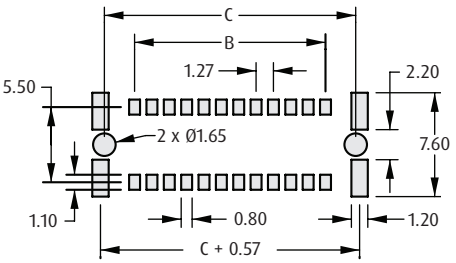
- Suitable for parallel board-to-board (mezzanine stacking) or motherboard-to-daughterboard configurations.
- Choice of three height options.
- Polarised and shrouded housing design.
- Location pegs and tape & reel packaging for automated assembly processes.



VERTICAL



CALCULATION	
A	B + 6.35
B	0.635 x (Total No. of contacts - 2)
C	B + 4.42
D	B + 4.02



Recommended PC Board Pattern

HOW TO ORDER

M55 - 70 X XX 42 R

SERIES CODE

CONNECTOR HEIGHT	
0	H = 6.75mm
1	H = 8.25mm
2	H = 9.85mm

PACKAGING	
R	Tape & Reeled

FINISH	
42	Gold + Tin

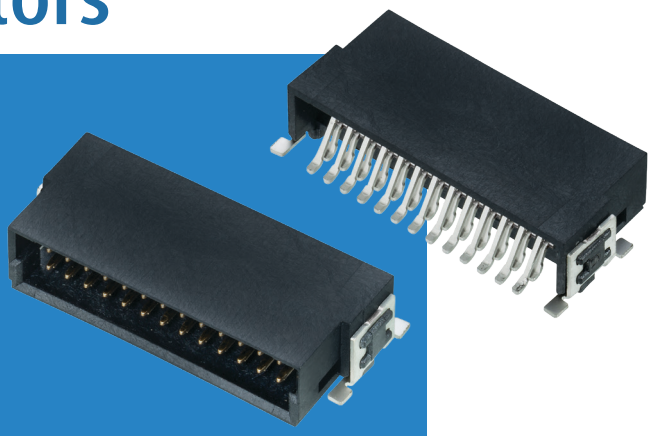
TOTAL NO. OF CONTACTS
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

Archer Kontrol Connectors

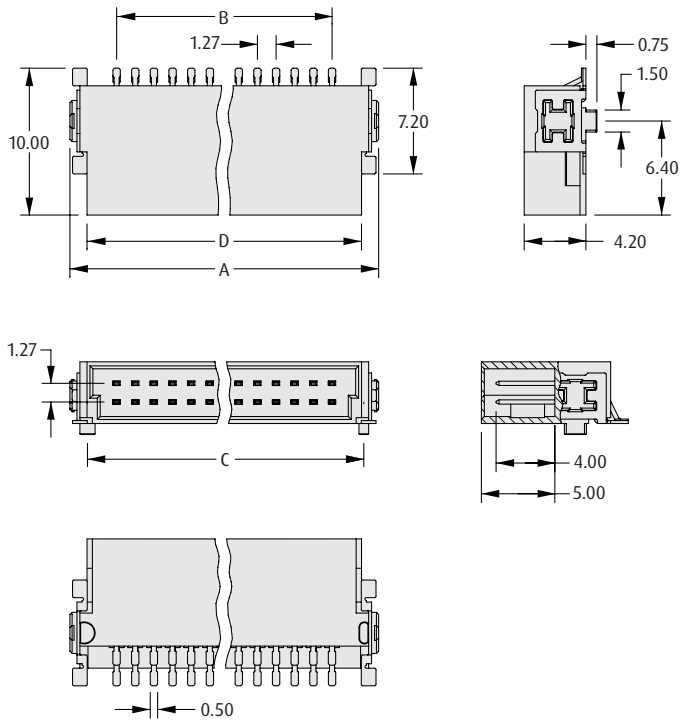
Male Horizontal Surface Mount

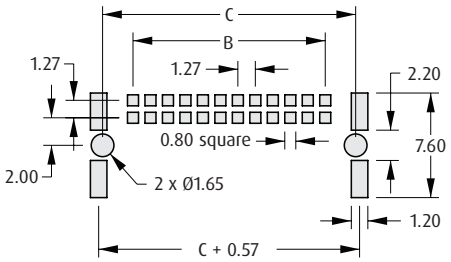
- Suitable for coplaner (edge-to-edge) or motherboard-to-daughterboard configurations.
- Hold-down SMT retaining straps for additional retention to the board.
- Polarised and shrouded housing design.
- Location pegs and tape & reel packaging for automated assembly processes.



HORIZONTAL

CALCULATION	
A	B + 6.35
B	0.635 x (Total No. of contacts - 2)
C	B + 4.42
D	B + 4.02





Recommended PC Board Pattern

HOW TO ORDER

M55 - 710 XX 42 R

SERIES CODE

PACKAGING	
R	Tape & Reeled

FINISH	
42	Gold + Tin

TOTAL NO. OF CONTACTS
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

Archer Connectors - M50 Specification

- 1.27mm pitch male pin headers (with 0.4mm square pins) and female sockets, for board-to-board connection.

Materials

Mouldings:	High Temperature Plastic UL94V-0
Contacts:	Copper Alloy
Finish:	See individual pages

Electrical

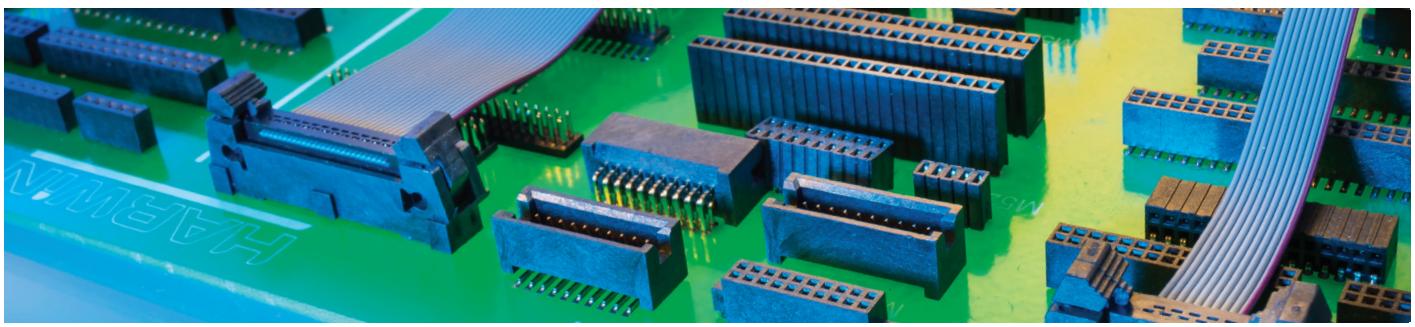
Current:	1A per contact
Voltage proof:	300V AC, 500V DC for 1 minute (see individual drawings)
Contact resistance:	30mΩ max
Insulation resistance:	500MΩ min

Mechanical

Durability	
M50-310, 312, 491:	100 operations
M50-311:	600 operations
M50-315:	25 operations
M50-353, 363, 393:	500 operations
Others:	300 operations
Insertion force (max)	
M50-303, 313, 314:	1.17N per contact
Jumper sockets:	10.0N
Others:	2.0N per contact
Withdrawal force (min)	
Jumper sockets:	1.3N
Others:	0.1N per contact
Vibration sensitivity:	10 - 55Hz, 1.5mm, 6 hours duration
Shock severity:	294m/s^2 (30G) for 11ms

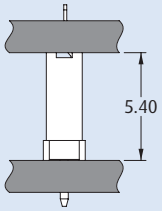
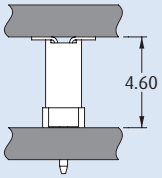
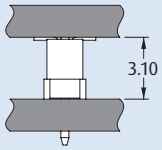
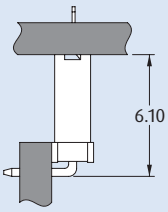
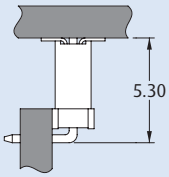
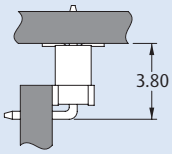
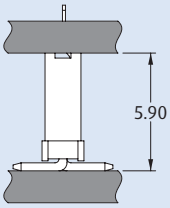
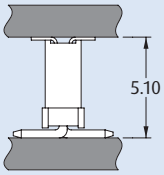
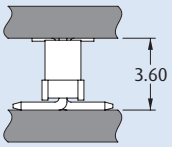
Environmental

Operating temperature:	-40°C to +105°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 5 seconds

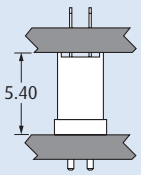
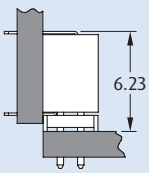
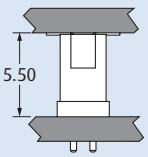
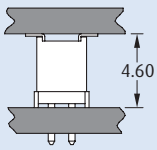
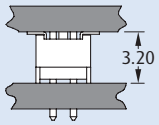
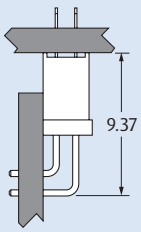
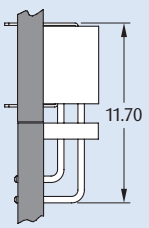
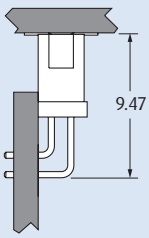
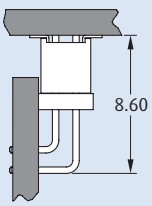
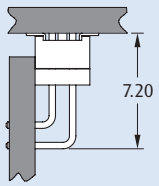
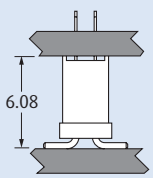
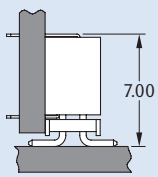
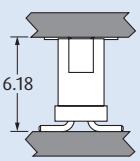
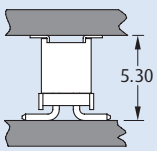
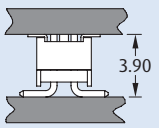


Archer Connectors - M50 Mating Profiles

SINGLE ROW

MALE \ FEMALE	VERTICAL PC TAIL	VERTICAL SMT	VERTICAL SMT Low Profile
VERTICAL PC TAIL			
HORIZONTAL PC TAIL			
VERTICAL SMT			

DOUBLE ROW

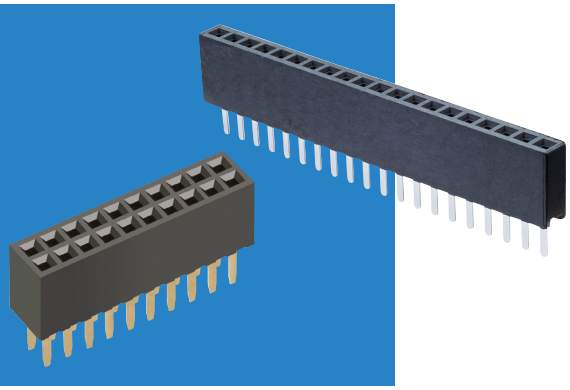
MALE \ FEMALE	VERTICAL PC TAIL	HORIZONTAL PC TAIL	VERTICAL SMT	VERTICAL SMT Low Profile	
VERTICAL PC TAIL					
HORIZONTAL PC TAIL					
VERTICAL SMT					

All dimensions in mm.

Archer Connectors – M50

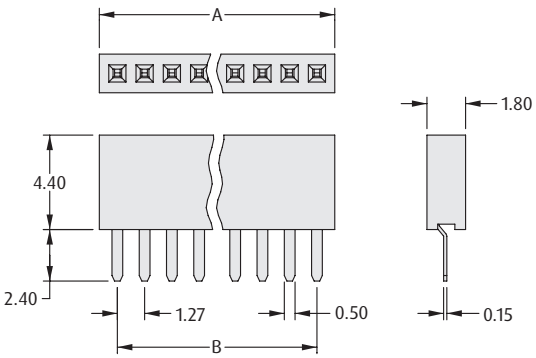
Female PC Tail Vertical

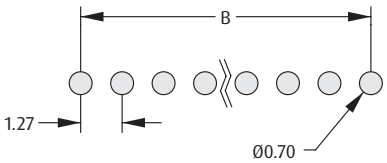
- Twin beam connector for higher durability.



SINGLE ROW

CALCULATION	
A	B + 1.67
B	1.27 x (No. of contacts per row - 1)

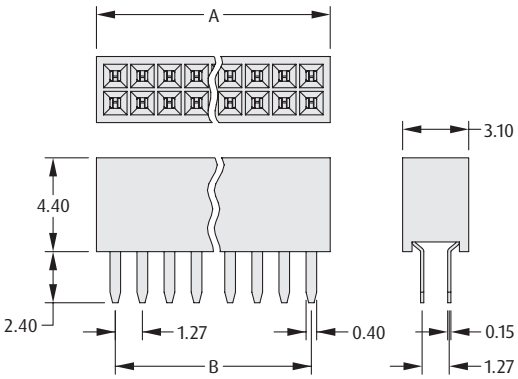


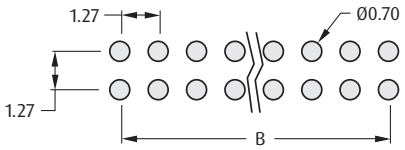


Recommended PC Board Pattern

DOUBLE ROW

CALCULATION	
A	B + 1.77
B	1.27 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M50 - 3 0 X XX XX

SERIES CODE

TYPE	
0	Double Row
3	Single Row

FINISH	
42	Gold + Tin (Single Row)
45	Gold (Double Row)

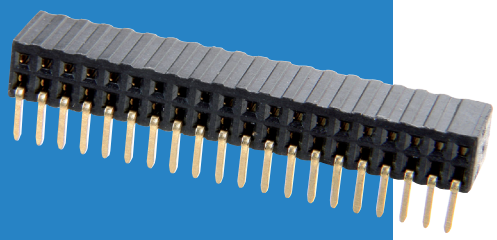
NO. OF CONTACTS PER ROW	
02 to 06, 08, 10, 20	Single Row
03 to 15, 20, 25, 50	Double Row

All dimensions in mm.

Archer Connectors – M50

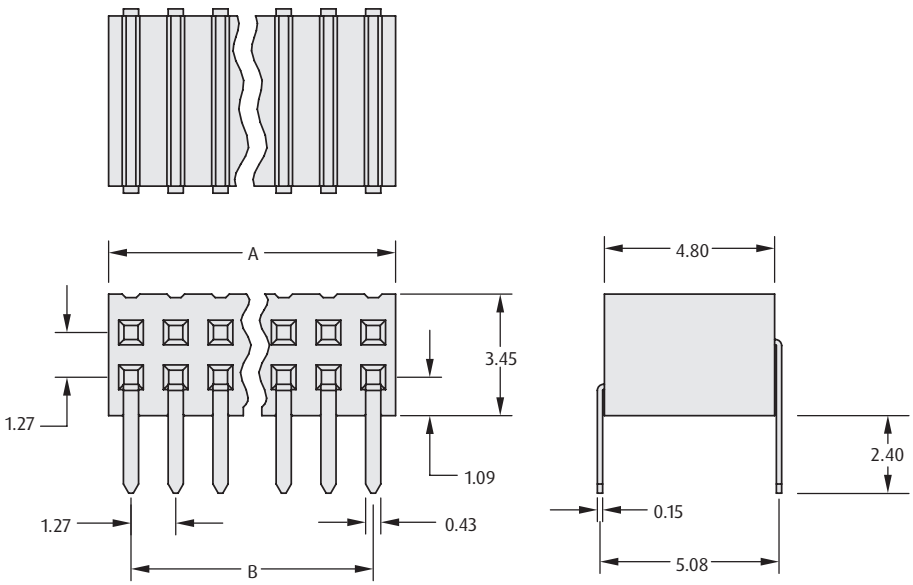
Female PC Tail Horizontal

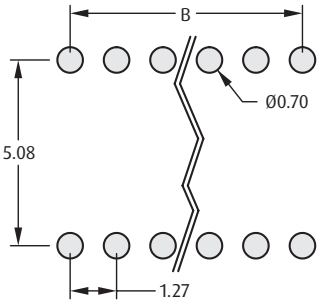
- Horizontal connector has two point solder fixing for connector rigidity.
- Twin beam connector for higher durability.



HORIZONTAL

CALCULATION	
A	B + 1.77
B	1.27 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M50 - 320 XX 45

SERIES CODE

FINISH	
45	Gold

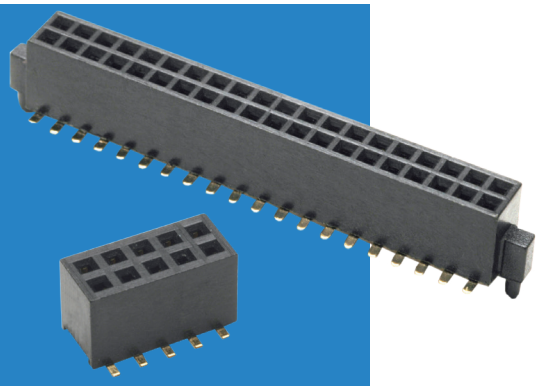
NO. OF CONTACTS PER ROW
03 to 15, 20, 25

All dimensions in mm.

Archer Connectors – M50

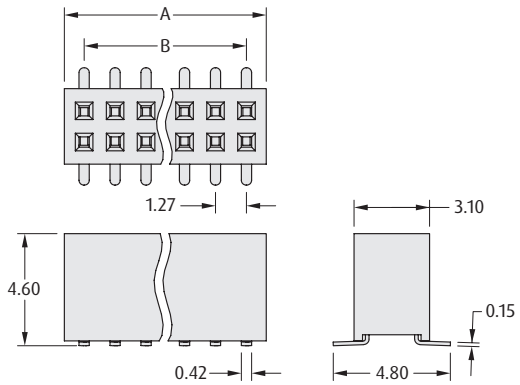
Female Vertical Surface Mount

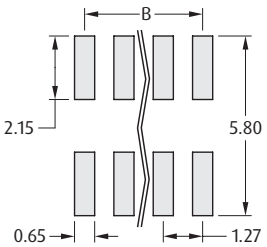
- Locating pegs (posts) available to ensure correct positioning on the board.
- Alternative height connectors available on the following page.
- Contact **technical@harwin.com** for Tape and Reel options.
- Dual entry connector can be used as either top or bottom entry.



WITHOUT POST

CALCULATION	
A	B + 1.62
B	1.27 x (No. of contacts per row - 1)

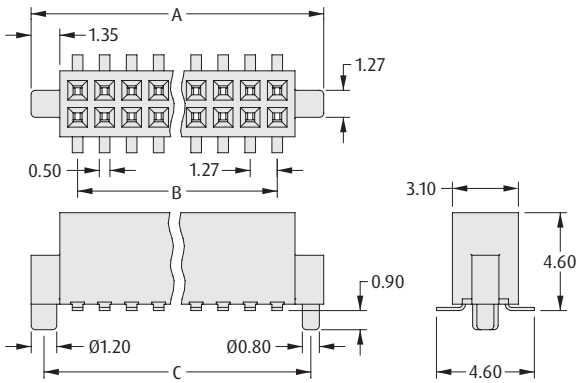


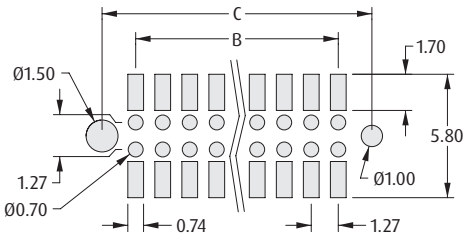


Recommended PC Board Pattern

WITH POST, DUAL ENTRY

CALCULATION	
A	B + 4.37
B	1.27 x (No. of contacts per row - 1)
C	B + 3.16





Recommended PC Board Pattern

HOW TO ORDER

M50 - 31 X XX XX

SERIES CODE

TYPE	
0	Without Posts
1	With Posts

FINISH	
42	Gold + Tin (With Posts)
45	Gold (Without Posts)

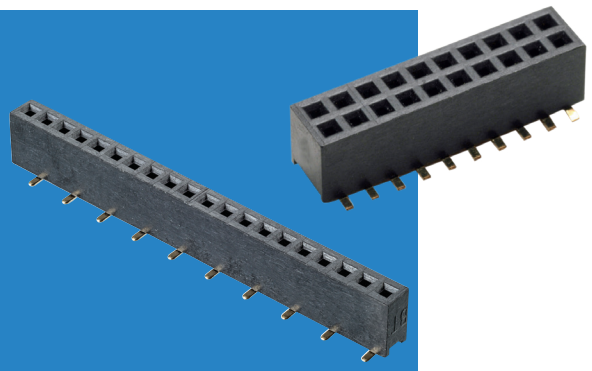
NO. OF CONTACTS PER ROW	
03 to 15, 20, 25, 50	Without Posts
03 to 15, 20, 25, 30	With Posts

All dimensions in mm.

Archer Connectors – M50

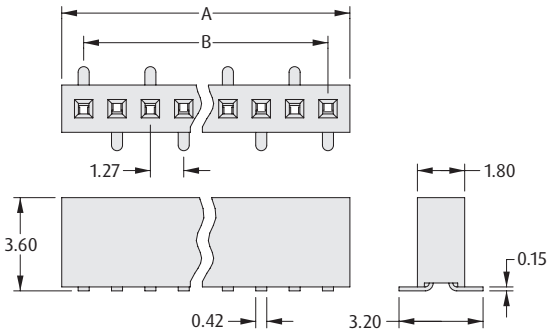
Female Vertical Surface Mount, Low Profile

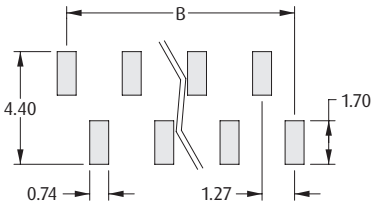
- Lower profile surface mount connector with twin beam contacts for additional board-to-board height options.
- Contact **technical@harwin.com** for Tape and Reel options.



SINGLE ROW

CALCULATION	
A	B + 1.67
B	1.27 x (No. of contacts per row - 1)

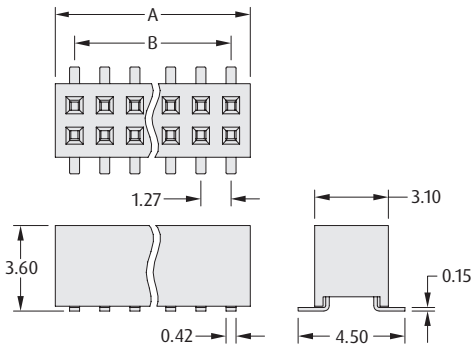


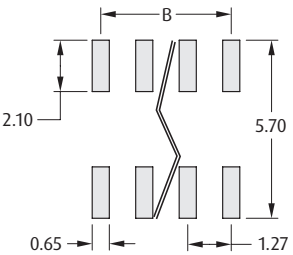


Recommended PC Board Pattern

DOUBLE ROW

CALCULATION	
A	B + 1.73
B	1.27 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M50 - 31 X XX XX X

SERIES CODE

TYPE	
2	Double Row
4	Single Row

PACKAGING	
R	Tape & Reeled (Single Row)
Blank	Loose

FINISH	
45	Gold

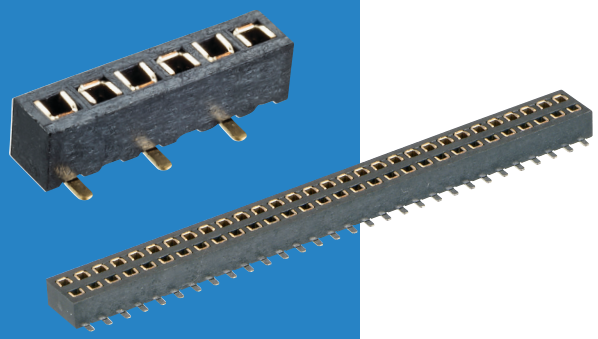
NO. OF CONTACTS PER ROW	
03 to 15, 20, 25, 30, 50	Double Row
02 to 06, 08, 10, 20	Single Row

All dimensions in mm.

Archer Connectors – M50

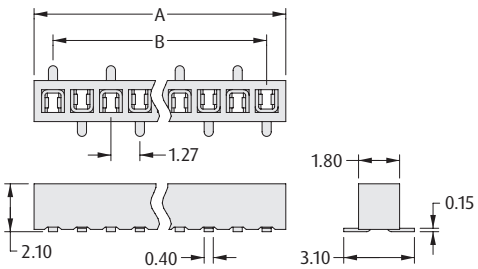
Female Vertical Surface Mount, Low Profile

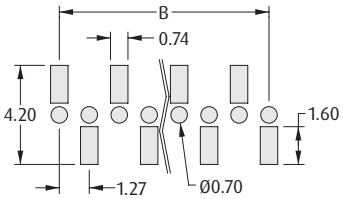
- Locating pegs (posts) available on double row to ensure correct positioning on the board.
- Dual entry connectors can be used as either top or bottom entry.
- Contact **technical@harwin.com** for Tape and Reel options on double row.



SINGLE ROW

CALCULATION	
A	B + 1.67
B	1.27 x (No. of contacts per row - 1)

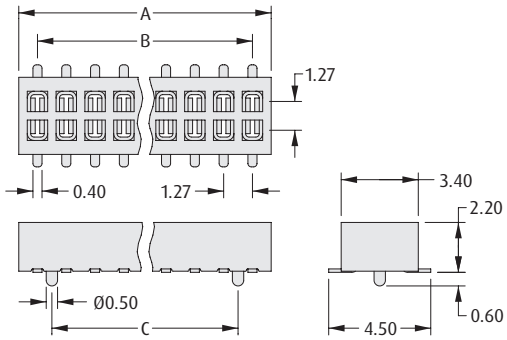


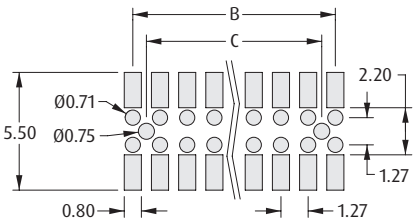


Recommended PC Board Pattern

DOUBLE ROW WITH POSTS

CALCULATION	
A	B + 1.67
B	1.27 x (No. of contacts per row - 1)
C	B + 1.27





Recommended PC Board Pattern

HOW TO ORDER

M50 - 31 X XX XX X

SERIES CODE

TYPE	
3	Single Row (without posts)
5	Double Row with posts

PACKAGING	
R	Tape & Reeled (Single Row)
Blank	Loose

FINISH	
42	Gold + Tin (Double Row)
45	Gold (Single Row)

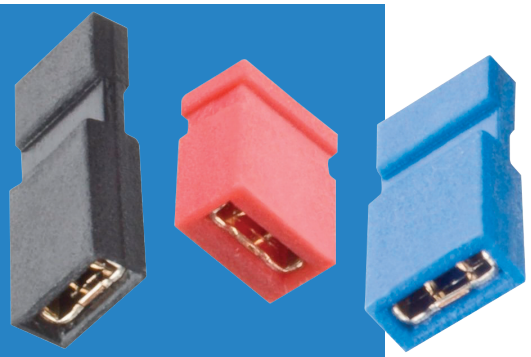
NO. OF CONTACTS PER ROW	
02 to 06, 08, 10, 20	Single Row
03 to 15, 20, 22, 25, 30	Double Row

All dimensions in mm.

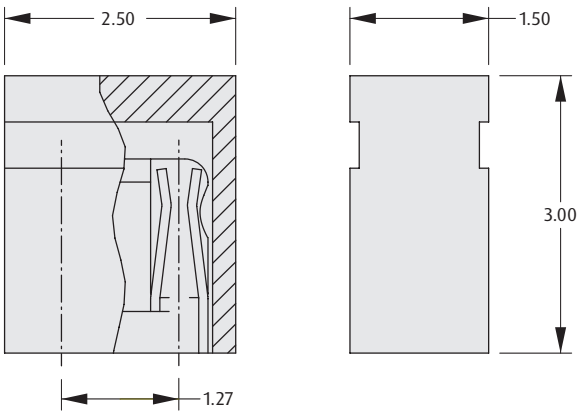
Archer Connectors – M50

Jumper Sockets

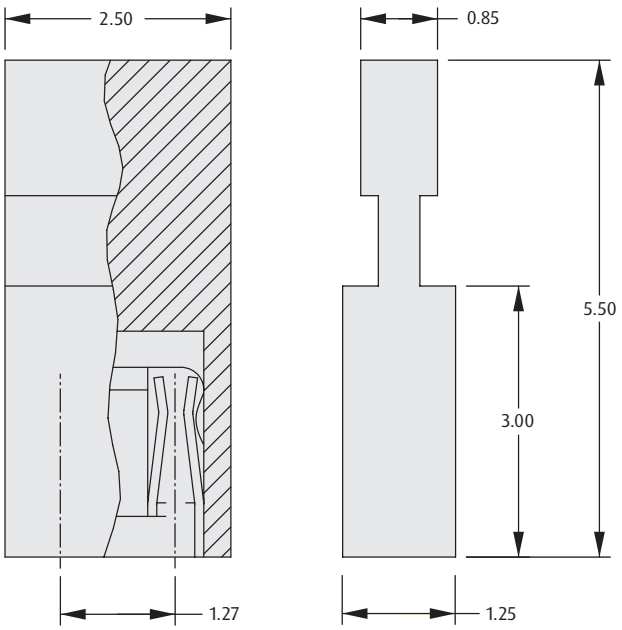
- Can be fitted and removed by hand, giving an alternative on-board programming method to DIP switches.
- Suitable for use with male M50 pin headers.
- Choice of colours available.
- Closed top with handle available for easier handling, placing and removing.



CLOSED TOP



CLOSED TOP WITH HANDLE



HOW TO ORDER

M50 XXX 00 05

SERIES CODE

TYPE			
Closed Top		Closed Top with Handle	
190	Black	**200**	Black
192	Red	**202**	Red
193	Blue	**203**	Blue

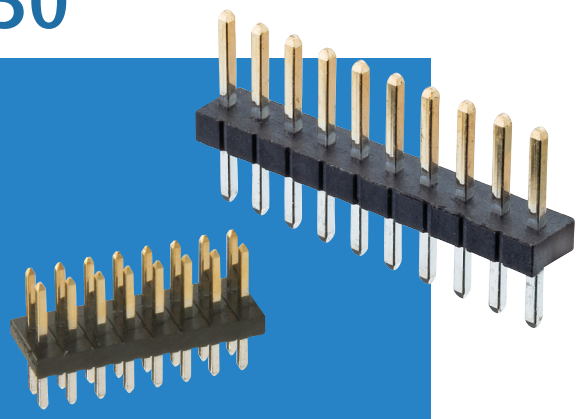
FINISH	
05	Gold

All dimensions in mm.

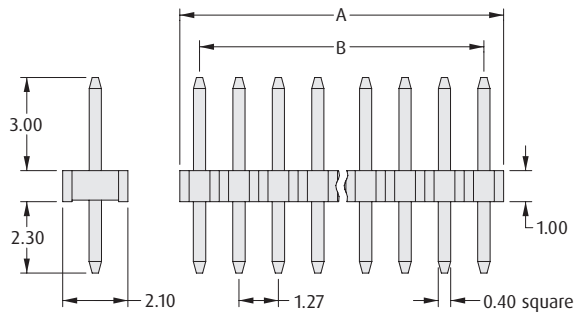
Archer Connectors – M50

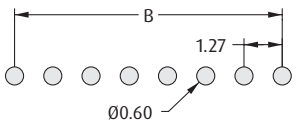
Male PC Tail Vertical

- Suitable for use with female connectors and jumper sockets.
- Also available with variable dimensions.



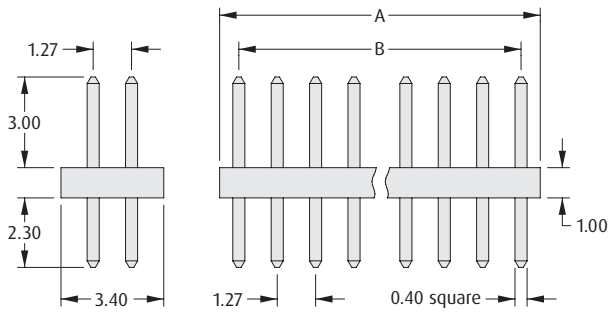
SINGLE ROW

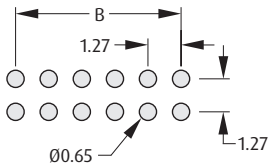




Recommended PC Board Pattern

DOUBLE ROW





Recommended PC Board Pattern

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M50 - 35 X XX 42

SERIES CODE

TYPE	
0	Double Row
3	Single Row

NO. OF CONTACTS PER ROW	
02 to 15, 20, 25, 50	Double Row
02 to 06, 08, 10, 20	Single Row

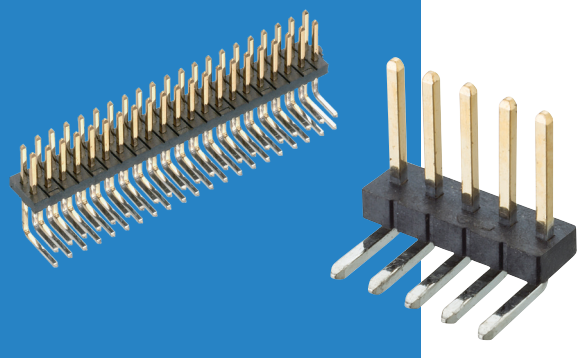
FINISH	
42	Gold + Tin

All dimensions in mm.

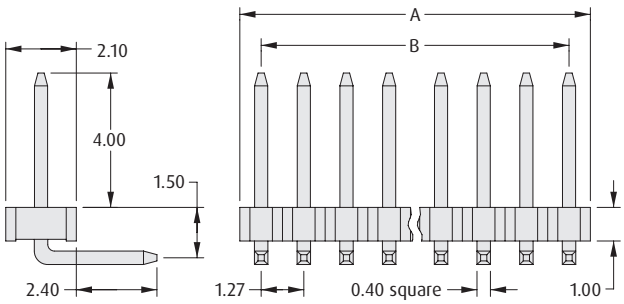
Archer Connectors – M50

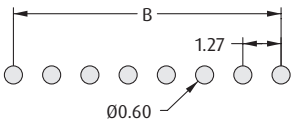
Male PC Tail Horizontal

- Suitable for use with female connectors and jumper sockets.
- Also available with variable dimensions.



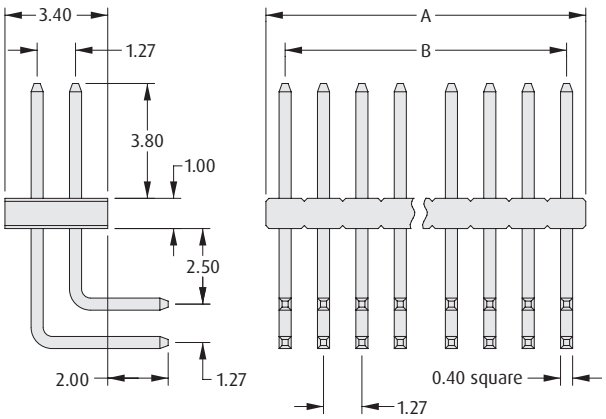
SINGLE ROW

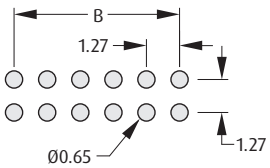




Recommended PC Board Pattern

DOUBLE ROW





Recommended PC Board Pattern

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M50 - 39 X XX 42

SERIES CODE

TYPE	
0	Double Row
3	Single Row

FINISH	
42	Gold + Tin

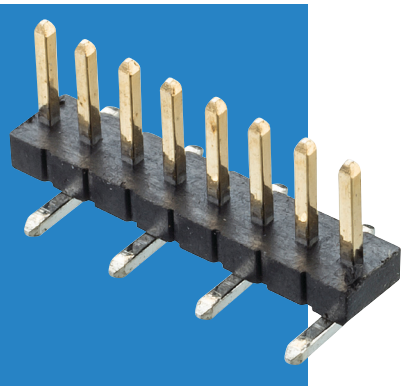
NO. OF CONTACTS PER ROW	
02 to 15, 20, 25	Double Row
02 to 06, 08, 10, 20	Single Row

All dimensions in mm.

Archer Connectors – M50

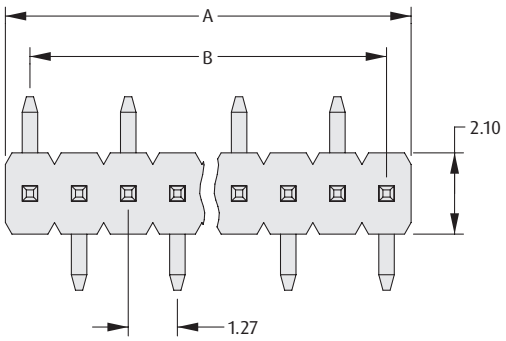
Male Vertical Surface Mount Single Row

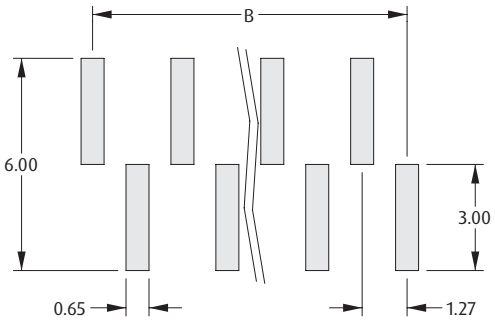
- Suitable for use with female connectors and jumper sockets.
- Tape and Reel packaging option includes Pick and Place cap for automated assembly.



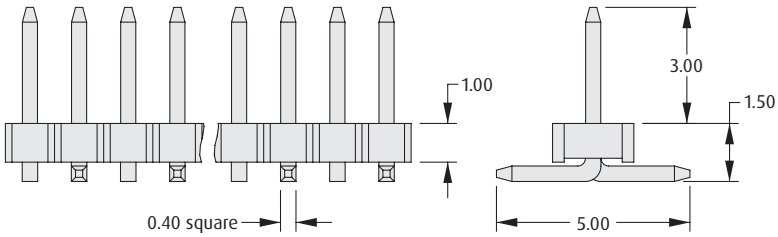
SINGLE ROW

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)





Recommended PC Board Pattern



HOW TO ORDER

M50 - 363 XX 42 X

SERIES CODE

NO. OF CONTACTS PER ROW
02 to 06, 08, 10, 20

PACKAGING

Blank	Loose
R	Tape & Reeled

FINISH

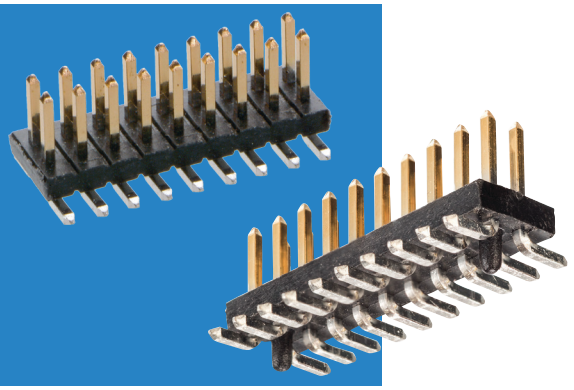
42	Gold + Tin

All dimensions in mm.

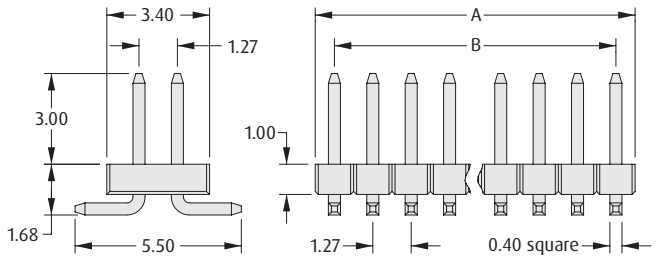
Archer Connectors – M50

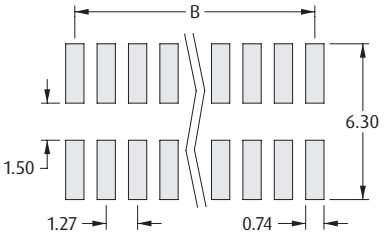
Male Vertical Surface Mount Double Row

- Suitable for use with female connectors and jumper sockets.
- Also available with variable dimensions.
- Available with or without location posts.
- Tape and Reel packaging option includes Pick and Place cap for automated assembly.



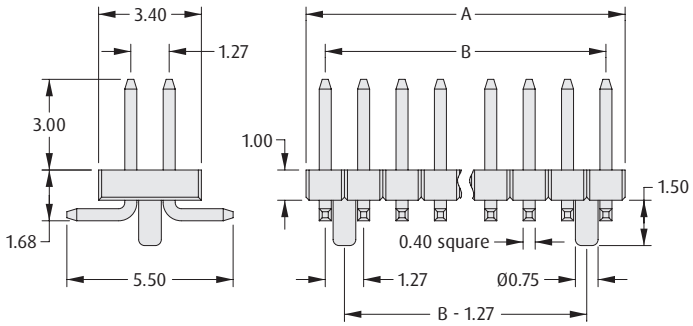
WITHOUT POSTS

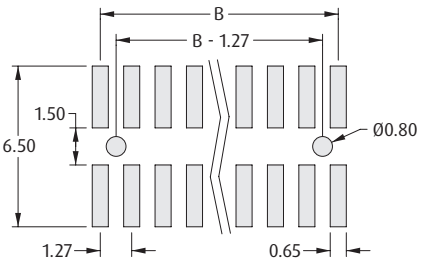




Recommended PC Board Pattern

WITH POSTS





Recommended PC Board Pattern

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M50 - 36 X XX 42 X

SERIES CODE

TYPE	
0	Without Posts
1	With Posts

NO. OF CONTACTS PER ROW	
02 to 15, 20, 25	Without Posts
05 to 08, 10, 12, 15, 20, 25	With Posts

PACKAGING	
Blank	Loose
R	Tape & Reeled (check website for available sizes)

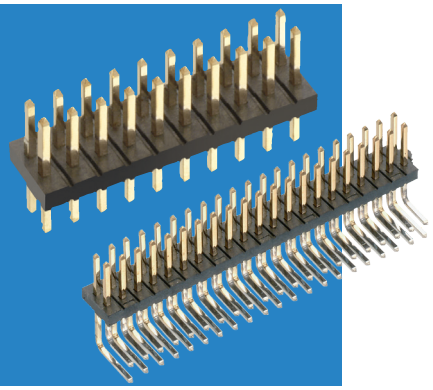
FINISH	
42	Gold + Tin

All dimensions in mm.

Archer Connectors – M50

Pin Header Variants

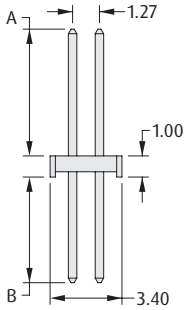
- If you are unable to specify the connector you require from our standard range of Archer M50 connectors, use the order code below to create an application-specific connector.
- Contact **technical@harwin.com** for further information, or search online for M50-XXX.
- Suitable for use with female connectors and jumper sockets.



TERMINATION STYLES

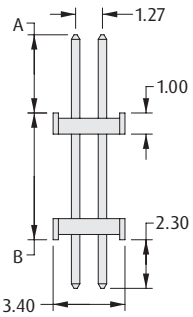
Vertical PC Tail
W Series

- Pin section is 0.40mm square.
- PCB mounting hole is Ø0.65mm.



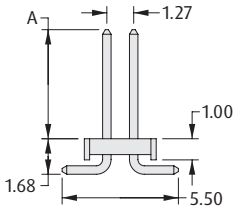
Extended PC Tail
F Series

- Pin section is 0.40mm square.
- PCB mounting hole is Ø0.65mm.



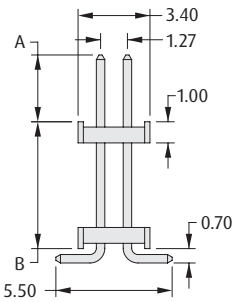
Vertical SMT
S Series

- Pin section is 0.40mm square.
- For PCB pad layout see standard Male SMT pin header.
- B dimension is 000.



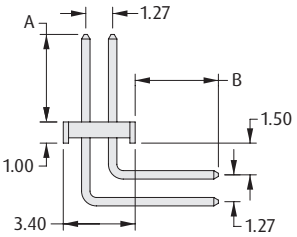
Extended SMT
T Series

- Pin section is 0.40mm square.
- For PCB pad layout see standard Male SMT pin header.
- A+B+0.68 not to exceed 24.3mm.



Horizontal PC Tail
J Series

- Pin section is 0.40mm square.
- PCB mounting hole is Ø0.65mm.



HOW TO ORDER

M50 - XXX XXX X XX 45

SERIES CODE

DIMENSION A
Example: 7.8mm = 078

DIMENSION B
Example: 5.0mm = 050

NO. OF CONTACTS PER ROW
01 to 50

TYPE

W	Vertical PC Tail
F	Extended PC Tail
S	Vertical SMT
T	Extended SMT
J	Horizontal PC Tail

FINISH

45	Gold

All dimensions in mm.

Archer Connectors – Polarised Specification

- 1.27mm pitch male and female connectors, for board-to-board connection with polarisation.

Materials

Mouldings:	High Temperature Plastic UL94V-0
Contacts:	Copper Alloy
Finish:	Gold

Mechanical

Durability:	100 operations
Insertion force (max):	2.0N per contact
Withdrawal force (min):	0.15N per contact

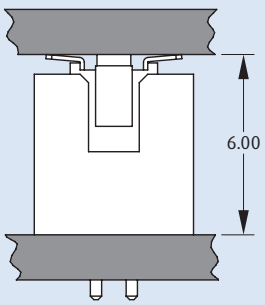
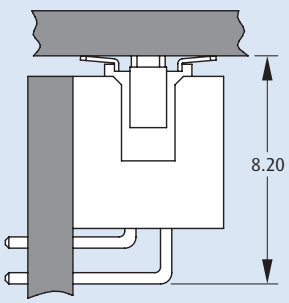
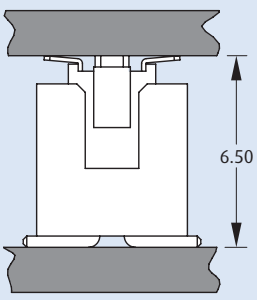
Electrical

Current:	1A per contact
Voltage proof:	300V AC, 500V DC for 1 minute
Contact resistance:	30mΩ max
Insulation resistance:	500MΩ min

Environmental

Operating temperature:	-40°C to +105°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

Mating Profiles

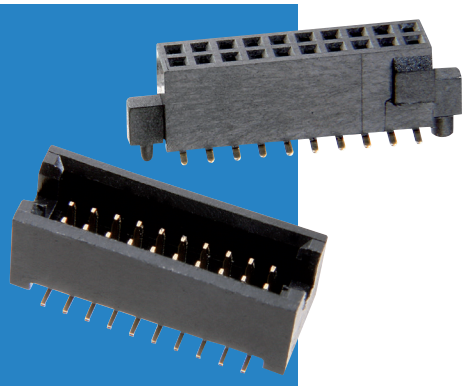
	MALE		
	VERTICAL PC TAIL	HORIZONTAL PC TAIL	VERTICAL SMT
FEMALE VERTICAL SMT			

All dimensions in mm.

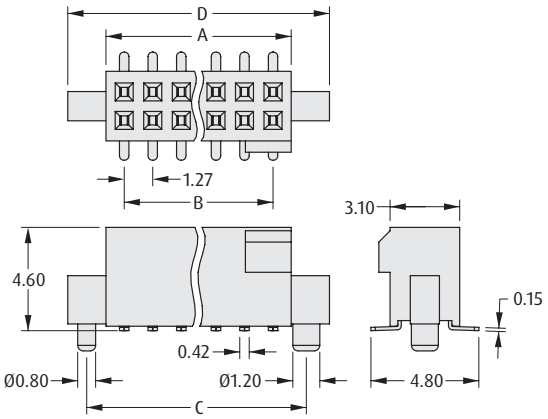
Archer Connectors – Polarised

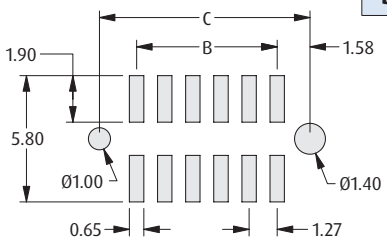
Vertical Surface Mount

- Mating connectors in Surface Mount format.
- Female connector is also suitable for use with male PC Tail connectors on the following page.
- Polarisation to prevent mis-mating.
- Locating pegs of different sizes ensure correct orientation and positioning on the board.
- Shrouded for additional pin protection.



FEMALE

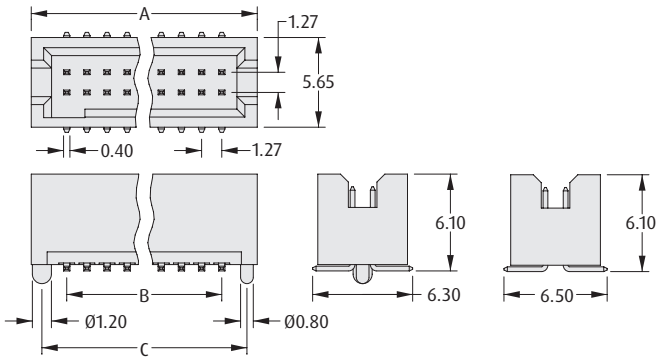


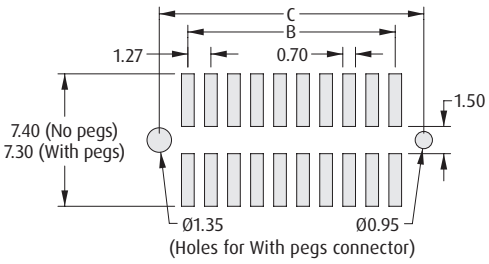


Recommended PC Board Pattern

CALCULATION	
A	B + 1.62
B	1.27 x (No. of contacts per row - 1)
C	B + 3.15
D	B + 5.02

MALE





Recommended PC Board Pattern

CALCULATION	
A	B + 4.47
B	1.27 x (No. of contacts per row - 1)
C	B + 3.15

HOW TO ORDER

M50 - 4XX XX 45 X

SERIES CODE

TYPE	
430	Female
490	Male without pegs
491	Male with pegs

NO. OF CONTACTS PER ROW	
03 to 15, 19, 20, 25, 50	Female
05 to 15, 20, 25, 50	Male without pegs
05 to 08, 10, 12, 15, 20, 25	Male with pegs

PACKAGING	
Blank	Loose
R	Tape & Reeled (check website for available sizes)

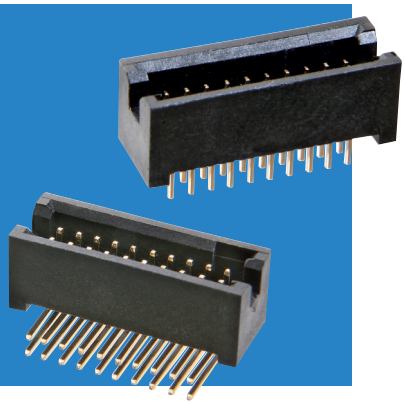
FINISH	
45	Gold

All dimensions in mm.

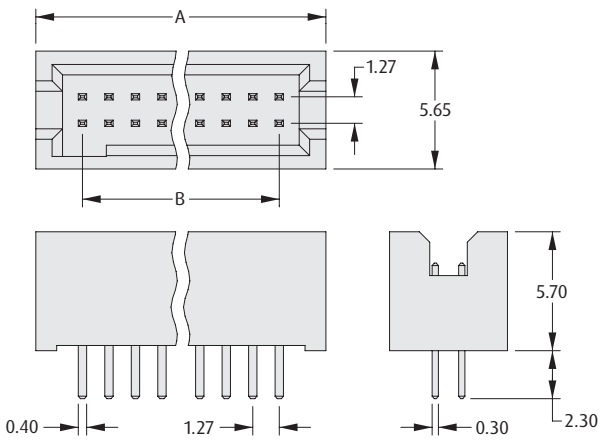
Archer Connectors – Polarised

Male PC Tail

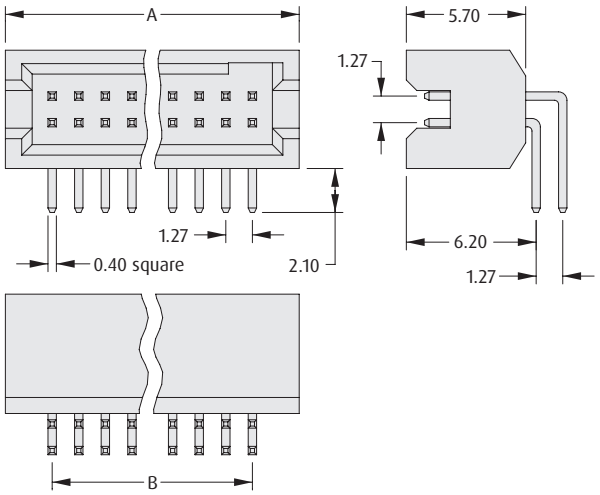
- PC Tail male connectors suitable for use with female connector M50-430 Series, shown on previous page.
- Polarisation to prevent mis-mating.
- Shrouded for additional pin protection.

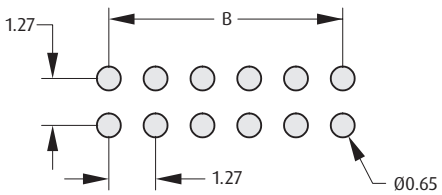


VERTICAL



HORIZONTAL





Recommended PC Board Pattern

CALCULATION	
A	B + 4.47
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M50 - 4 X 0 XX 45

SERIES CODE

TYPE	
7	Vertical
8	Horizontal

FINISH	
45	Gold

NO. OF CONTACTS PER ROW
03 to 15, 20, 25

All dimensions in mm.

Archer Connectors – M50 IDC Specification

- 1.27mm pitch cable-to-board connectors, with latching and polarisation.

Materials

Mouldings	
PC Tail, SMT:	LCP, UL94V-0
IDC Cable Connectors:	PBT, UL94V-0
Contacts:	Copper Alloy
Finish	
M50-380:	Gold on contact area
Others:	Gold on contact area, Tin on tails

Electrical

Current	
M50-330, 91X:	1A per contact
M50-355, 365:	1.75A per contact
M50-380, 90X:	0.5A per contact
Voltage proof	
M50-90X/91X:	300V DC for 1 minute
Others:	1,000V AC for 1 minute
Contact resistance:	30mΩ max
Insulation resistance	
M50-90X, 91X:	5MΩ min
Others:	1,000MΩ min

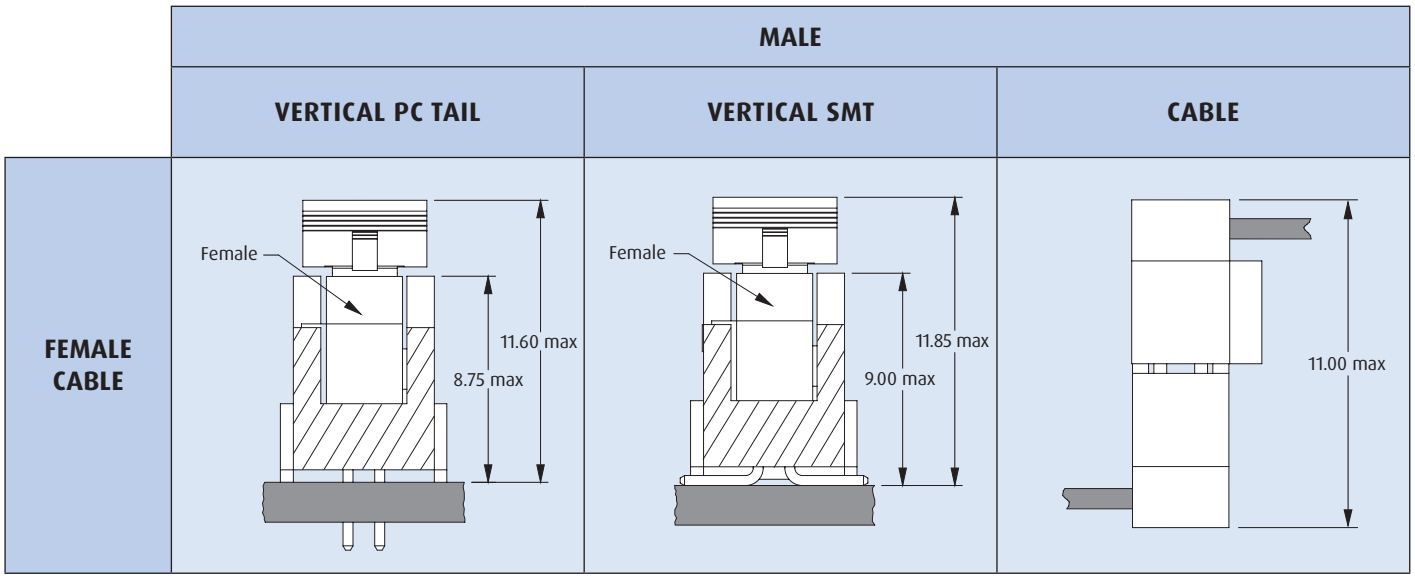
Mechanical

Durability:	100 operations
Insertion force (max):	1.0N per contact
Withdrawal force (min):	0.15N per contact

Environmental

Operating temperature	
PC Tail, SMT:	-55°C to +125°C
IDC Cable Connectors:	-40°C to +105°C
Cable Assembly:	-20°C to +105°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

Mating Profiles

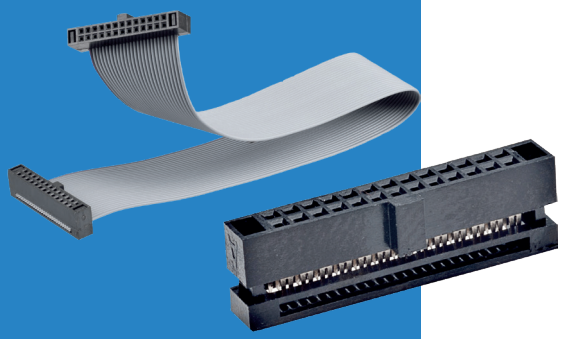


All dimensions in mm.

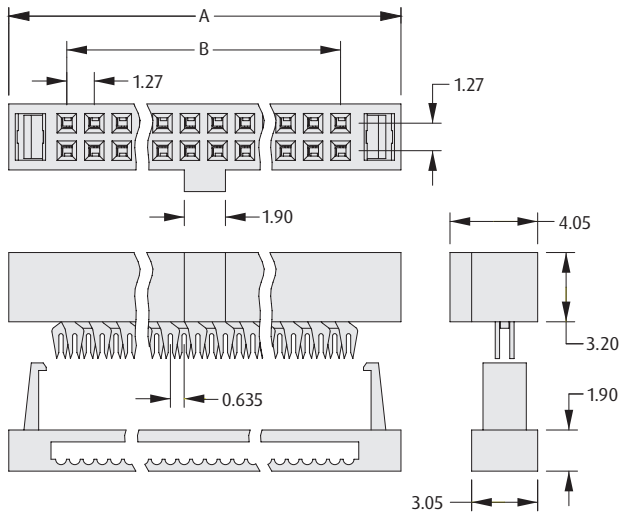
Archer Connectors – M50 IDC

Female Cable Connector & Cable Assembly

- Suitable for use with male vertical latching connectors shown on the following page.
- IDC connection for fast termination of multiple contacts.
- Polarised to prevent mis-mating.
- Secure cable retention with positive latching to header.
- Standard cable assembly lengths from stock.
- Instruction sheet for Hand Tool is available at **www.harwin.com/instructions.**

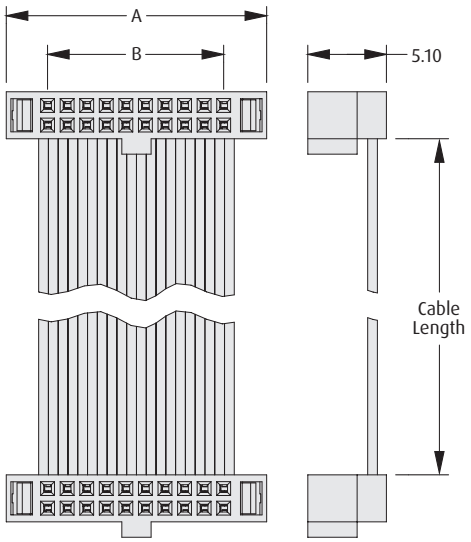


FEMALE IDC



FEMALE-TO-FEMALE CABLE

- Uses 0.635mm pitch 30 AWG Ribbon cable to UL2678.
- Constructed with Contact 1 attached to Contact 1, Contact 2 to Contact 2, etc.



HAND TOOL



ORDER CODE
Z50-020

CALCULATION	
A	B + 5.47
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M50 - XXX XX 42

SERIES CODE

TYPE	
330	Female IDC Connector
910	150mm Cable Assembly
911	300mm Cable Assembly

NO. OF CONTACTS PER ROW	
05, 10, 13, 17, 20, 25	All
06, 07, 08	M50-330 only

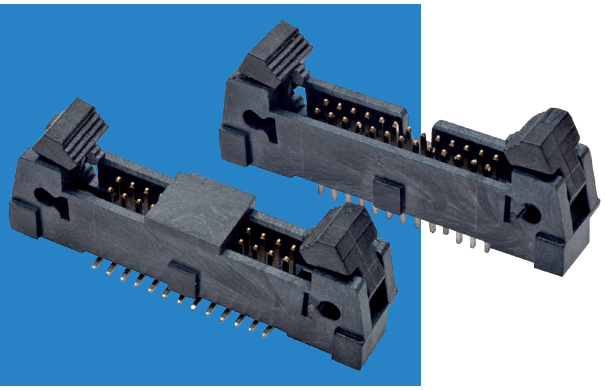
FINISH	
42	Gold + Tin

All dimensions in mm.

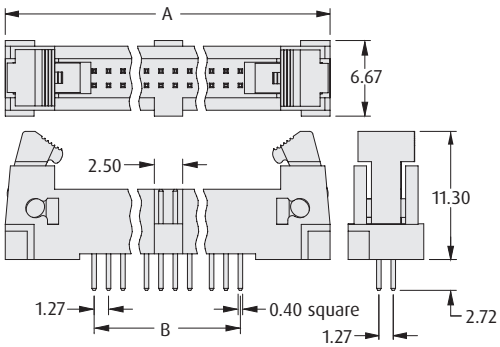
Archer Connectors – M50 IDC

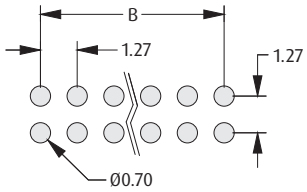
Male Vertical Latching Connectors

- Suitable for use with female cable connectors shown on previous page.
- Surface mount option has locking pegs for location and retention.
- Shrouded for robust pin protection.
- Polarised to prevent mis-mating.
- Secure, positive latch & ejection system.
- Tape and Reel packaging option includes Pick and Place cap for automated assembly.



PC TAIL

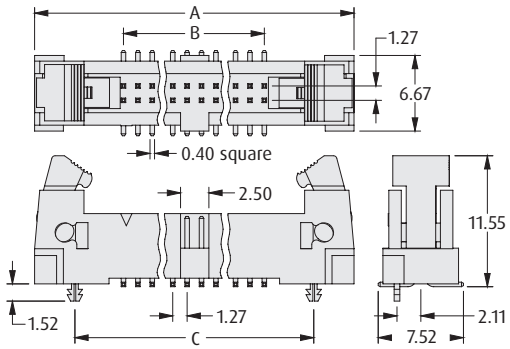


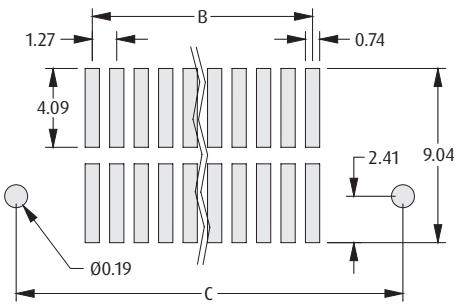


Recommended PC Board Pattern

CALCULATION	
A	B + 15.75
B	1.27 x (No. of contacts per row - 1)
C	B + 8.64

SURFACE MOUNT





Recommended PC Board Pattern

HOW TO ORDER

M50 - 3 X 5 XX 42 X

SERIES CODE

TYPE	
5	PC Tail
6	Surface Mount

NO. OF CONTACTS PER ROW

05, 06, 07, 08, 10, 13, 17, 20, 25

PACKAGING	
R	Tape & Reeled (M50-365)
Blank	Loose (M50-355)

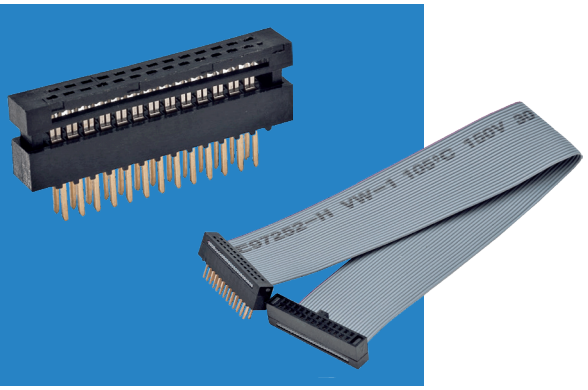
FINISH	
42	Gold + Tin

All dimensions in mm.

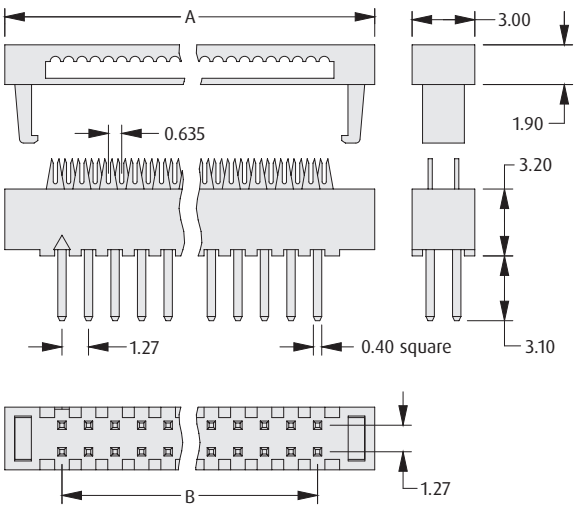
Archer Connectors – M50 IDC

Male Cable Connectors & Cable Assembly

- Male transitional cable connector suitable for soldering directly to PCB, permits cost effective cable to PCB attachment.
- IDC connection for fast termination of multiple contacts.
- Suitable for mating with other sockets from the Archer range.
- Low profile, small footprint.
- Instruction sheet for Hand Tool is available at **www.harwin.com/instructions.**

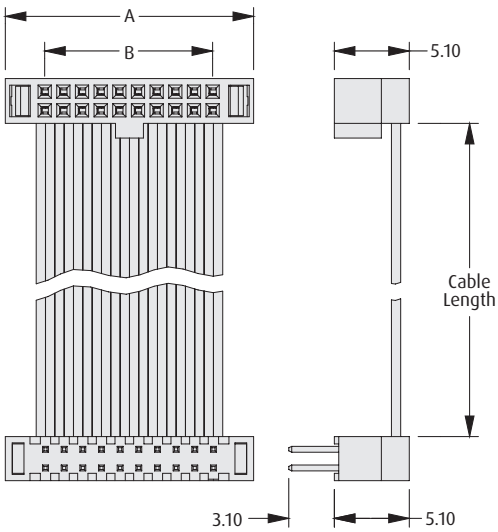


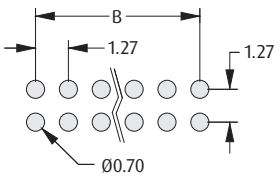
MALE IDC



MALE-TO-FEMALE CABLE

- Uses 0.635mm pitch 30 AWG Ribbon cable to UL2678.
- Constructed with Contact 1 attached to Contact 1, Contact 2 to Contact 2, etc.





Recommended PC Board Pattern

HAND TOOL



ORDER CODE
Z50-030

CALCULATION	
A	B + 5.47
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M50 - XXX XX 42

SERIES CODE

TYPE	
380	Male IDC Connector
901	150mm Cable Assembly
902	300mm Cable Assembly

NO. OF CONTACTS PER ROW	
05, 10, 13, 17, 20, 25	All
06, 07, 08	M50-380 only

FINISH	
42	Gold + Tin

All dimensions in mm.

Archer Connectors – M52 Specification

- 1.27mm x 2.54mm pitch male pin headers (with 0.46mm square pins) and female sockets, for vertical board-to-board connection.

Materials

Mouldings:	High Temperature Plastic UL94V-0
Contacts:	Copper Alloy
Finish:	Gold

Electrical

Current:	1A per contact
Voltage proof:	500V AC, 1,000V DC for 1 minute
Contact resistance:	30mΩ max
Insulation resistance	1,000MΩ min

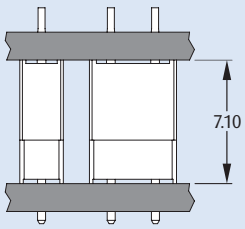
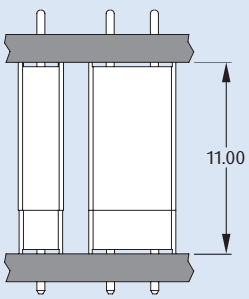
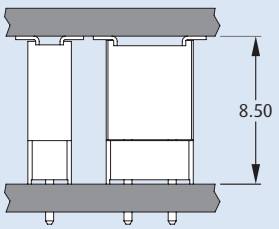
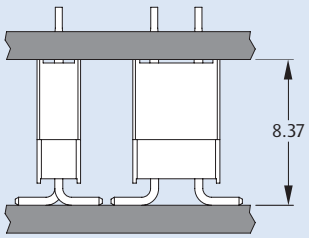
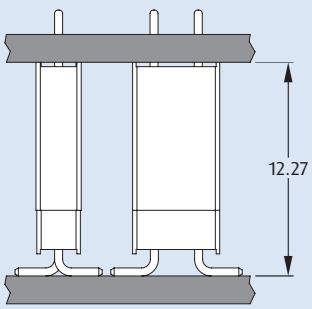
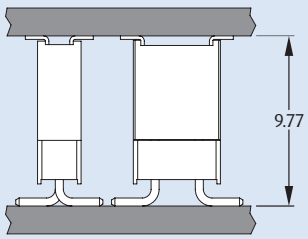
Mechanical

Durability:	300 operations
Insertion force (max)	
M52-500, 510:	1.0N per contact
Others:	1.5N per contact
Withdrawal force (min)	
M52-500, 510:	0.12N per contact
Others:	0.1N per contact
Vibration sensitivity:	50-2,000Hz, 3.13G, 45 minutes duration
Shock severity:	294m/s² (30G) for 11ms

Environmental

Operating temperature:	-40°C to +105°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 5 seconds

Mating Profiles

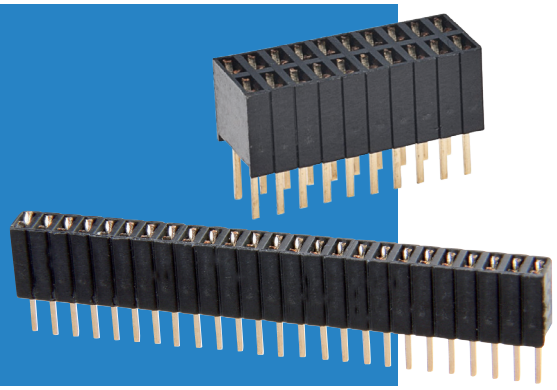
		FEMALE		
		VERTICAL PC TAIL (4.6mm Height)	**VERTICAL PC TAIL** (8.5mm Height)	**VERTICAL SMT**
MALE	**VERTICAL PC TAIL**			
	VERTICAL SMT			

All dimensions in mm.

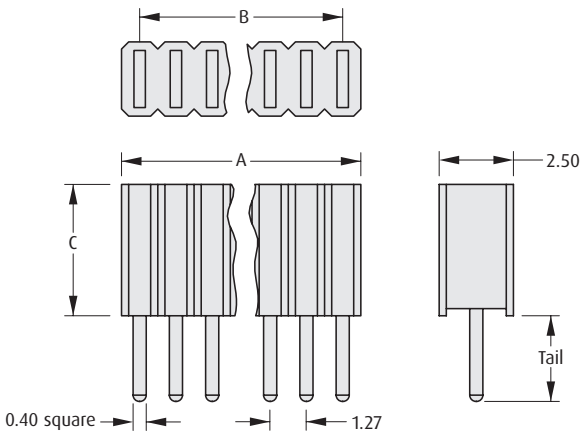
Archer Connectors – M52

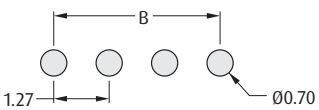
Female Vertical PC Tail

- Choice of connector height.
- Suitable for use with male connectors with 0.46mm square pins.



SINGLE ROW

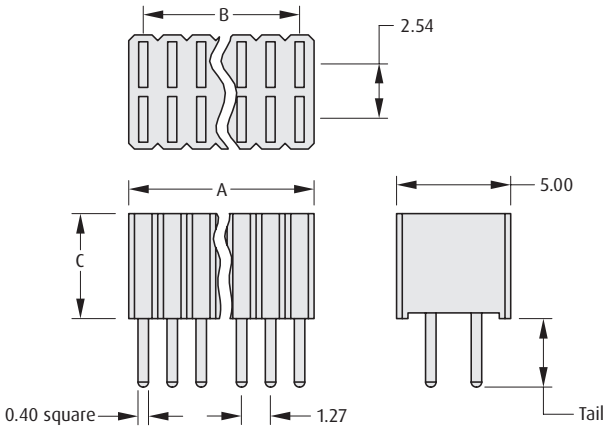


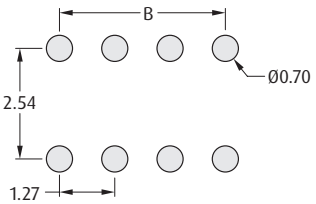


Recommended PC Board Pattern

CALCULATION	
A	B + 1.67 (when C = 4.6mm) B + 1.27 (when C = 8.5mm)
B	1.27 x (No. of contacts per row - 1)

DOUBLE ROW





Recommended PC Board Pattern

HOW TO ORDER

M52 - 5 X X XX 45

SERIES CODE

NO. OF ROWS	
0	Single Row
1	Double Row

HEIGHT	
0	C = 4.6mm, Tail = 3.00mm
1	C = 8.5mm, Tail = 2.80mm

NO. OF CONTACTS PER ROW	
03 to 10, 12, 14 to 16, 20, 25, 40	Single, 4.6mm
03 to 10, 12, 15, 20, 23, 25	Single, 8.5mm
03 to 10, 12, 15, 20, 25, 30, 40	Double 4.6mm
03 to 10, 12, 15, 20, 23, 25	Double, 8.5mm

FINISH	
45	Gold

All dimensions in mm.

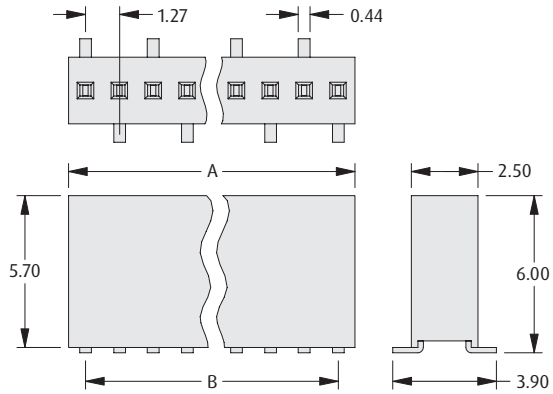
Archer Connectors – M52

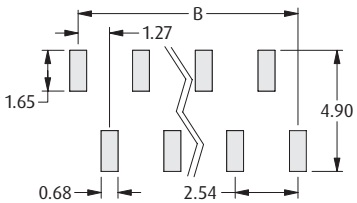
Female Vertical Surface Mount

- Suitable for use with male pin headers with 0.46mm square pins.
- Twin beam contact for cost-effective reliability.
- Contact **technical@harwin.com** for Tape and Reel options.



SINGLE ROW

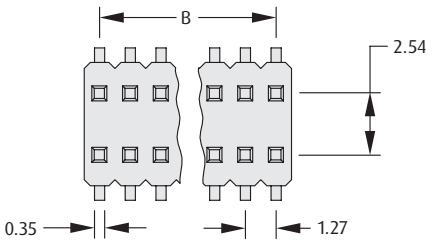


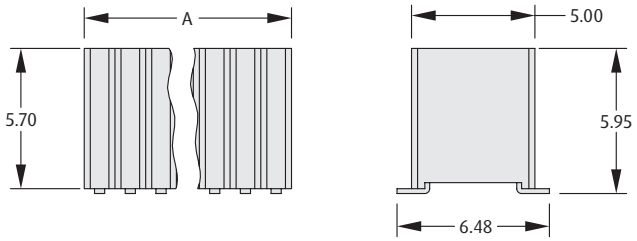


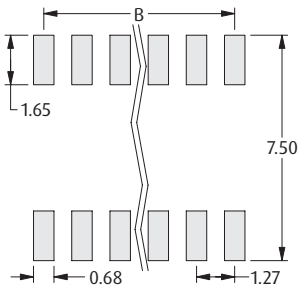
Recommended PC Board Pattern

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)

DOUBLE ROW







Recommended PC Board Pattern

HOW TO ORDER

M52 - 5 X 5 XX 45

SERIES CODE

TYPE	
0	Single Row
1	Double Row

FINISH	
45	Gold

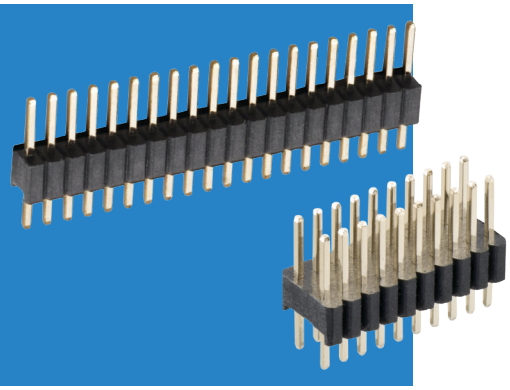
NO. OF CONTACTS PER ROW
03 to 10, 12, 15, 20, 25

All dimensions in mm.

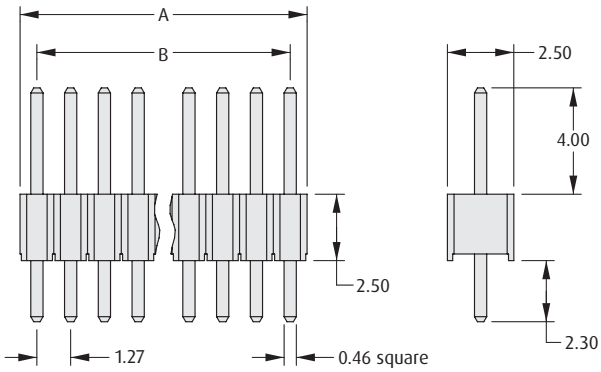
Archer Connectors – M52

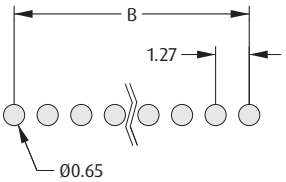
Male Vertical PC Tail

- Suitable for use with female connectors shown on previous page.
- For alternative pin lengths, see pin header variants on following pages.



SINGLE ROW

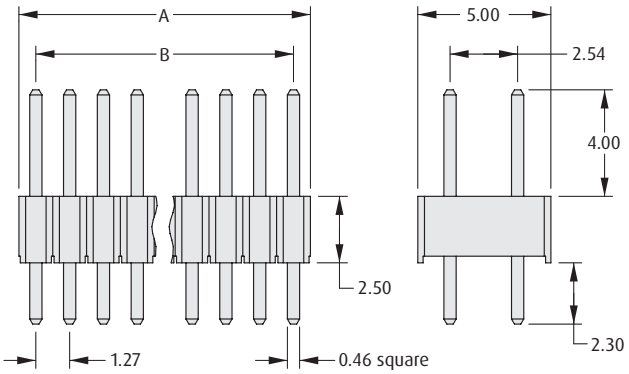


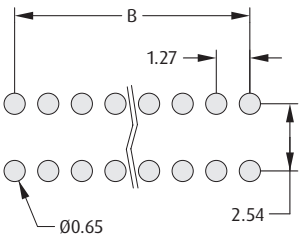


Recommended PC Board Pattern

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)

DOUBLE ROW





Recommended PC Board Pattern

HOW TO ORDER

M52 - 040023 X XX 45

SERIES CODE

TYPE	
V	Single Row
W	Double Row

FINISH	
45	Gold

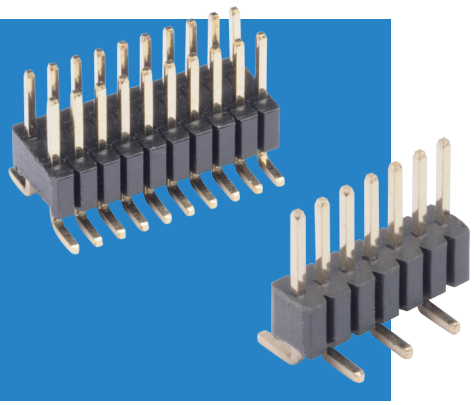
NO. OF CONTACTS PER ROW
05, 10, 20, 25

All dimensions in mm.

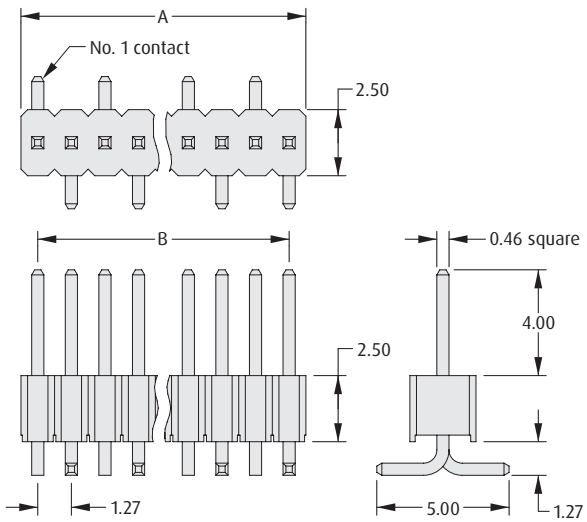
Archer Connectors – M52

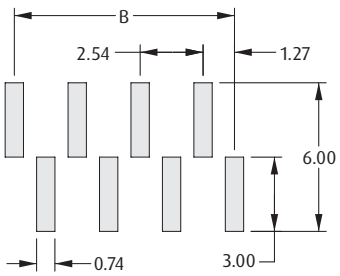
Male Vertical Surface Mount

- Suitable for use with female connectors shown on previous page.
- For alternative pin lengths, see pin header variants on following pages.
- Contact **technical@harwin.com** for Tape and Reel options.



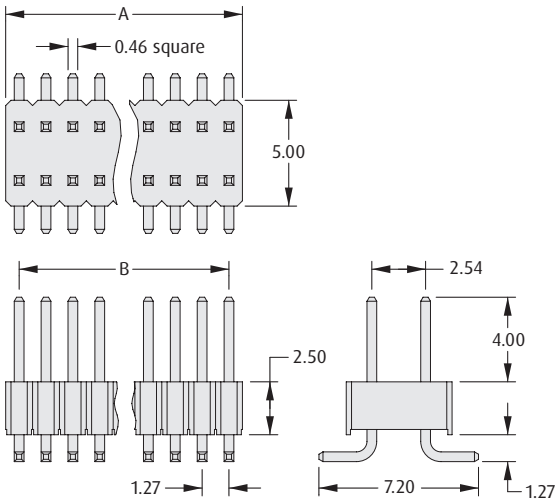
SINGLE ROW

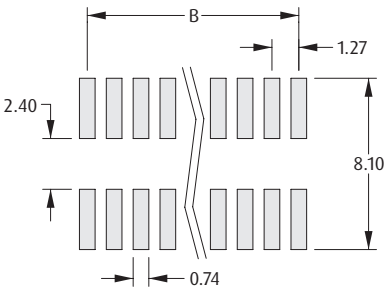




Recommended PC Board Pattern

DOUBLE ROW





Recommended PC Board Pattern

CALCULATION	
A	1.27 x No. of contacts per row
B	1.27 x (No. of contacts per row - 1)

HOW TO ORDER

M52 - 040000 X XX 45

SERIES CODE

TYPE	
P	Single Row
S	Double Row

FINISH	
45	Gold

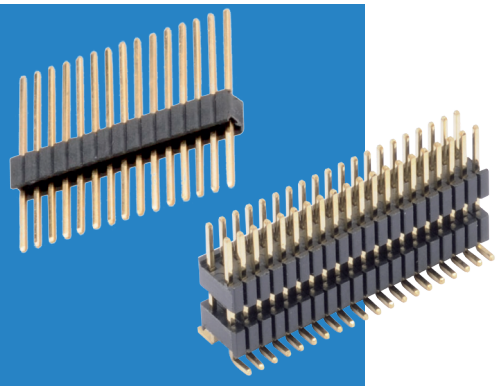
NO. OF CONTACTS PER ROW
05, 10, 20, 25

All dimensions in mm.

Archer Connectors – M52

Pin Header Variants

- If you are unable to specify the connector you require from our standard range of Archer M52 connectors, use the order code below to create an application-specific connector.
- Contact **technical@harwin.com** for further information, or search online for M52-XXX.
- Suitable for use with female connectors shown on previous pages.

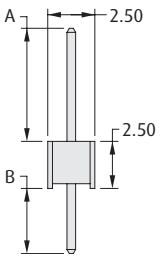


TERMINATION STYLES

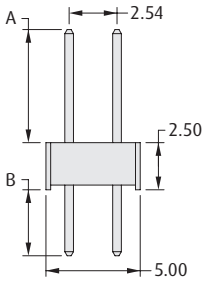
Vertical PC Tail

- Pin section is 0.46mm square.
- PCB mounting hole is Ø0.65mm.

V Series



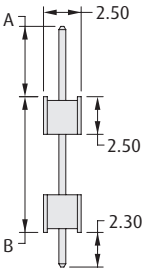
W Series



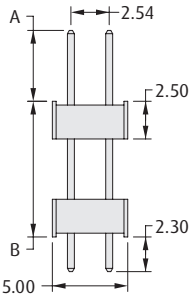
Extended PC Tail

- Pin section is 0.46mm square.
- PCB mounting hole is Ø0.65mm.

E Series



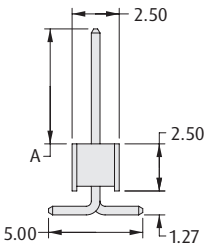
F Series



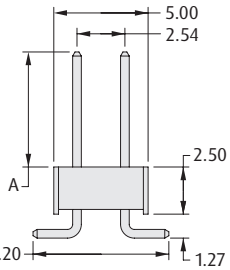
Vertical SMT

- Pin section is 0.46mm square.
- For PCB pad layout see standard Male SMT pin header.
- B dimension is 000.

P Series



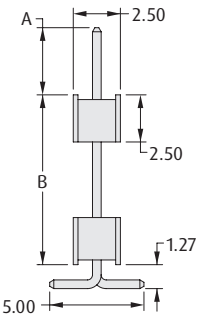
S Series



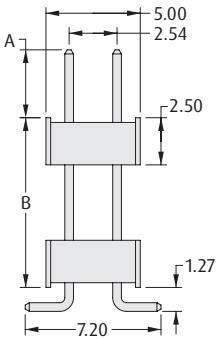
Extended SMT

- Pin section is 0.46mm square.
- For PCB pad layout see standard Male SMT pin header.

R Series



T Series



HOW TO ORDER

M52 - XXX XXX X XX 45

SERIES CODE

DIMENSION A
Example: 7.8mm = 078

DIMENSION B
Example: 5.0mm = 050

SINGLE ROW	DOUBLE ROW	
V	W	Vertical
E	F	Extended
P	S	SMT
R	T	Extended SMT

NO. OF CONTACTS PER ROW
02 to 50

FINISH	
45	Gold

All dimensions in mm.

M225 Connectors

2.00mm pitch high performance industrial connector range. Available in a selection of crimp sizes and pin counts, this cable-to-board system gives a more robust connection than the M22 series. The three points of contact on the female crimp contact enable resistance against industrial levels of vibration and shock. Added strain relief and vibration resistance is obtained with the use of the rubber locking collars and fixing pin system.

- Current rating of 3A per signal contact (all electrically loaded; 3.3A per individual contact)
- Female crimp contacts on continuous strip for automated crimping
- Polarized and fully shrouded housings to prevent accidental damage
- Increased operating temperature range: -55°C to +125°C
- Simple locking mechanism – push fixing pin fully home to expand and lock the rubber collar into the male connector
- Suitable for 22 to 28AWG PTFE equipment cables

M225 Series Connectors provide an excellent connection system for demanding industrial environments:

- Industrial: factory and mobile machinery, control panels and sus-systems, drives, robotics and other automation
- Instrumentation: test equipment and portable hand-held devices
- Site Control: remote control devices, ground and machinery monitoring

Specifications

Materials

Mouldings, Pins:	High Temperature Plastic, UL94V-0
Contacts	
Female:	Beryllium Copper, Tin finish
Male:	Phosphor Bronze, Tin finish
Rubber Locking Collar:	Fluoroelastic Polymer

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:	800V DC or AC peak
Voltage proof:	1,200V DC or AC peak
Contact resistance:	25mΩ max
Insulation resistance:	100MΩ min

Mechanical

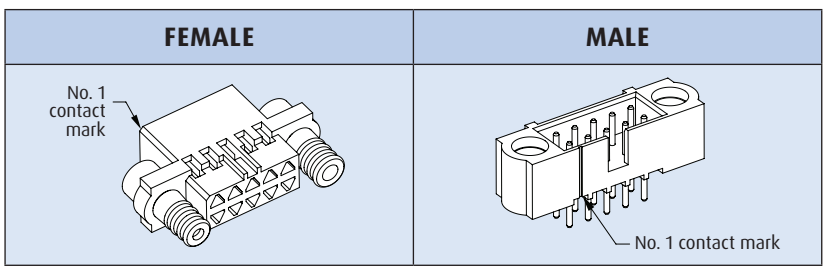
Durability:	50 operations
Insertion force (max):	2.8N per contact
Withdrawal force (min):	0.2N per contact

Environmental

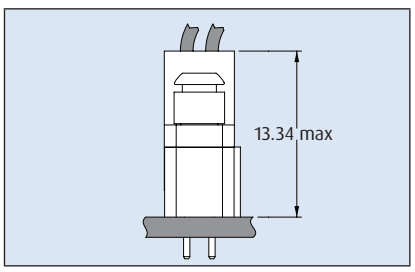
Environmental classification:	55/125/56 days at 95% RH
Operational temperature:	-55°C to +125°C
*Vibration sensitivity:	10Hz to 20000Hz, 0.75mm, 98m/s² (10G), duration 6 hours
*Bump severity:	390m/s² (40G), 4000 ±10 bumps
*Shock severity:	981m/s² (100G), for 6ms
*Acceleration severity:	490m/s² (50G)

* Tested with fixing pins fully engaged

Pin Numbering



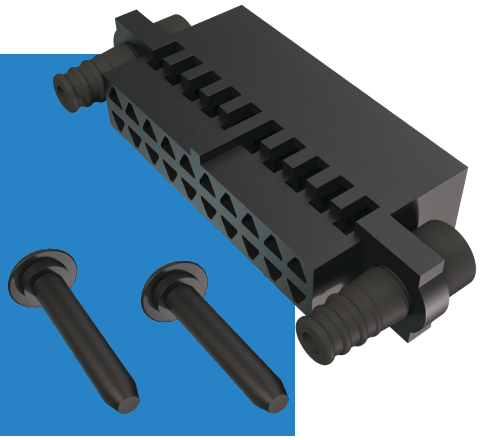
Mating Profile



M225 Connectors

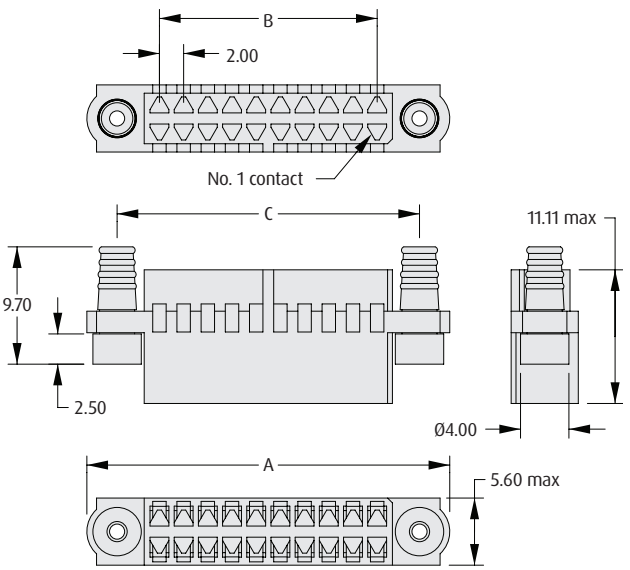
Female Crimp Housings

- Female crimp housing kits - contacts are ordered separately (shown on following page).
- Housings are supplied fitted with the rubber locking collars, and supplied with loose fixing pins. Collars and pins only needed to be ordered separately if spares are required.



HOUSING

CALCULATION	
A	B + 12
B	Total no. of contacts - 2
C	B + 7



- Housing Kit includes 2 x Rubber Locking Collars (fitted) and 2 x Fixing Pins (loose).

SPARE RUBBER LOCKING COLLAR



ORDER CODE
M225-0500098

SPARE FIXING PIN



ORDER CODE
M225-0600098

HOW TO ORDER

M225 - 455 XX 98

SERIES CODE

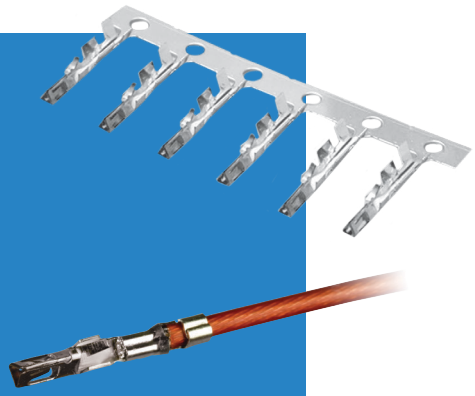
NO. OF CONTACTS
10, 20, 26, 34, 50

All dimensions in mm.

M225 Connectors

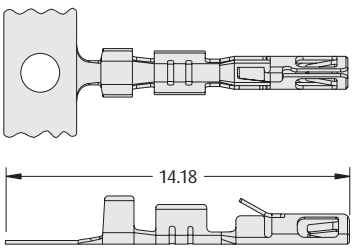
Female Crimp Contacts

- Crimp contacts must be ordered separately, see previous pages for applicable housings.
- Crimp contacts are available loose, or in continuous reeled format for automated crimping.

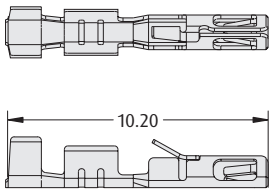


CRIMP CONTACTS

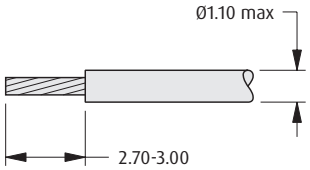
Reeled



Loose



WIRE STRIPPING DETAIL



HAND CRIMP TOOL



- Instruction sheet available at **www.harwin.com/instructions.**

ORDER CODE
Z80-255

REMOVAL TOOL

- For removal of crimped contacts from mouldings.
- Instruction sheet available at **www.harwin.com/instructions.**



ORDER CODE
Z80-258

HOW TO ORDER

M225 - XXX 00 46

SERIES CODE

TYPE	
253	Female Crimp 22-24 AWG, Reeled
254	Female Crimp 26-28 AWG, Reeled
283	Female Crimp 22-24 AWG, Loose
284	Female Crimp 26-28 AWG, Loose

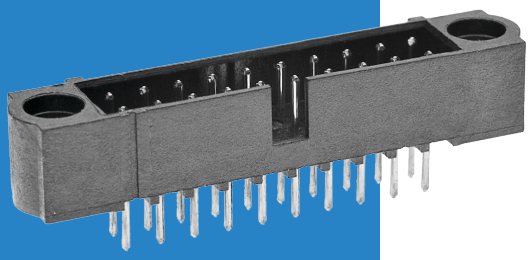
FINISH	
46	Tin

All dimensions in mm.

M225 Connectors

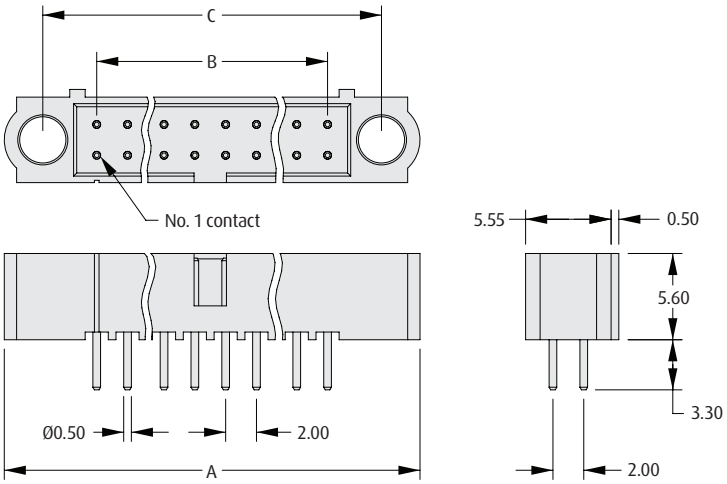
Male Vertical PC Tail

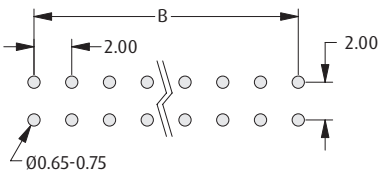
- Polarised mouldings.
- Fully shrouded contacts.



MALE

CALCULATION	
A	B + 12
B	Total no. of contacts - 2
C	B + 7





Recommended PC Board Pattern

HOW TO ORDER

M225 - 520 XX 46

SERIES CODE

FINISH	
46	Tin

TOTAL NO. OF CONTACTS
10, 20, 26, 34, 50

All dimensions in mm.

M22 Connectors Specification

- 2mm pitch, with 0.5mm square male pin connection system.
- Board-to-Board and Cable-to-Board application options.

Materials

Mouldings:	Standard or High Temperature Plastic, UL94V-0
Contacts	
Female:	Phosphor Bronze
Jumper socket:	Beryllium Copper
Male:	Copper Alloy
Finish:	See individual pages

Electrical

Current:	Up to 2A per contact (see individual drawings)
Voltage proof:	500V AC for 1 minute
Contact resistance:	30mΩ max
Insulation resistance:	500MΩ min

Mechanical

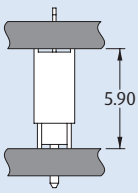
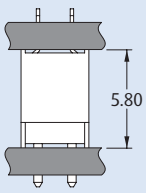
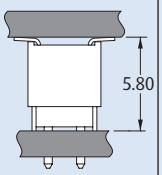
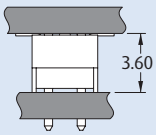
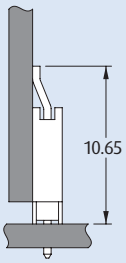
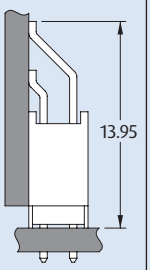
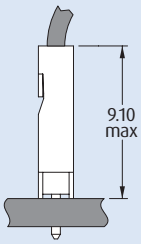
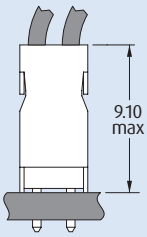
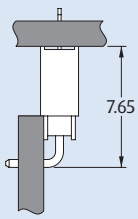
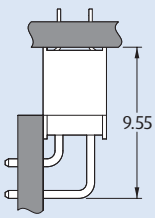
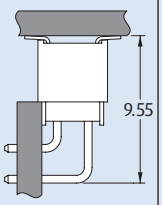
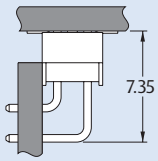
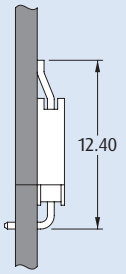
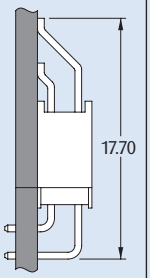
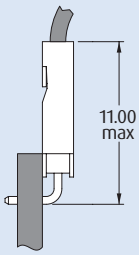
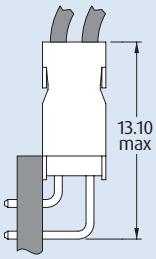
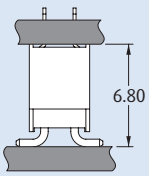
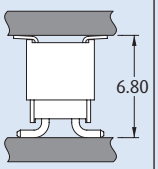
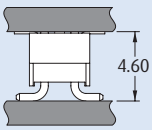
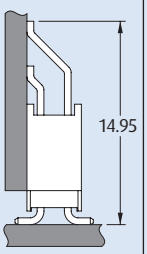
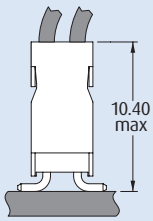
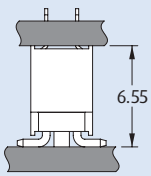
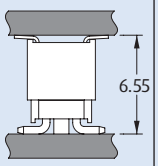
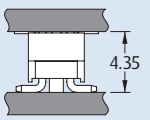
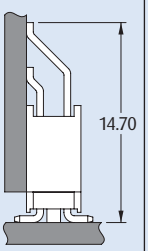
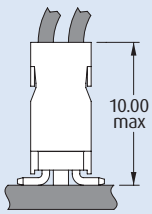
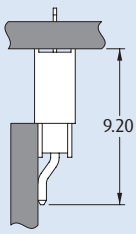
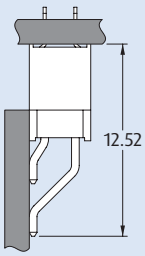
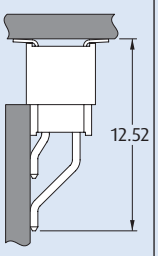
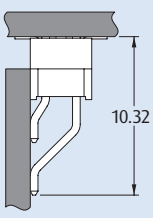
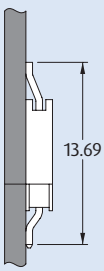
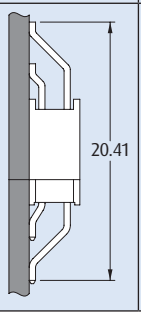
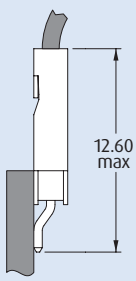
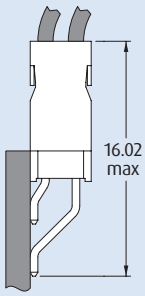
Durability	
M22-30X:	25 operations
Others:	300 operations
Insertion force (max)	
Jumper sockets:	10N total
M22-30X:	2.9N per contact
Others:	2.0N per contact
Withdrawal force (min)	
Jumper sockets:	1N total
M22-30X:	1.0N per contact
Others:	0.2N per contact
Vibration sensitivity	
M22-654, 655:	50 – 2,000Hz, 3.13G, 45 minutes duration
Others:	10 – 55Hz, 1.5mm, 6 hours duration
Shock severity:	294m/s^2 (30G) for 11ms

Environmental

Operating temperature	
M22-30X:	-25°C to +85°C
Others:	-40°C to +105°C
Solderability	
M22-636, 713, 714:	250°C for 3 seconds
Others:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

All dimensions in mm.

M22 Connectors Mating Profiles

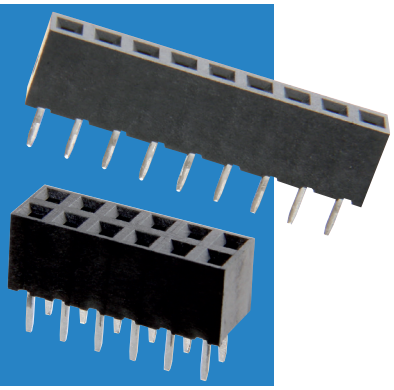
		FEMALE							
		VERTICAL PC TAIL		VERTICAL SMT	VERTICAL SMT Low Profile	HORIZONTAL SMT		CRIMP	
		SIL	DIL	DIL	DIL	SIL	DIL	SIL	DIL
MALE	VERTICAL PC TAIL								
	HORIZONTAL PC TAIL								
	VERTICAL SMT								
	VERTICAL SMT With Pegs								
	HORIZONTAL SMT								

All dimensions in mm.

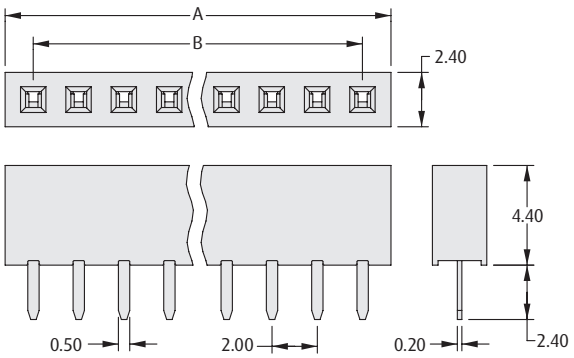
M22 Connectors

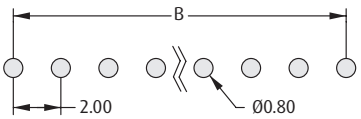
Female Vertical PC Tail

- Twin beam phosphor bronze contacts.
- Suitable for use with mating M22 male pin headers, with 0.5mm square pins.
- For polarising key use **order code M22-0340000.**



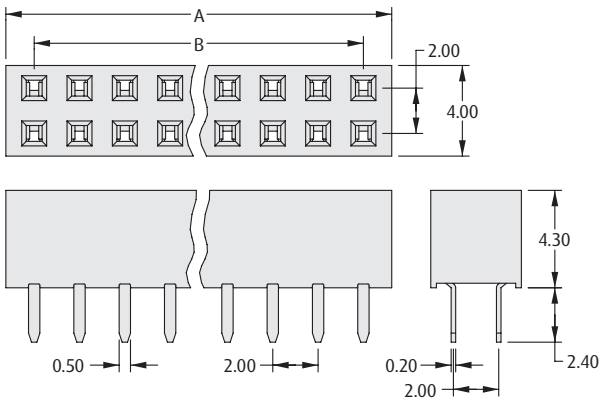
SINGLE ROW

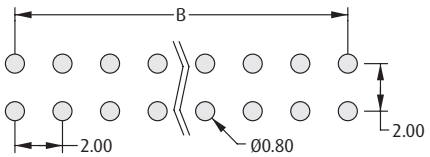




Recommended PC Board Pattern

DOUBLE ROW





Recommended PC Board Pattern

CALCULATION	
A	B + 2.5
B	2 x (No. of contacts per row - 1)

HOW TO ORDER

M22 - 71 X XX XX

SERIES CODE

NO. OF ROWS	
3	Single Row
4	Double Row

NO. OF CONTACTS PER ROW	
03 to 20, 25	Single Row
03 to 25	Double Row

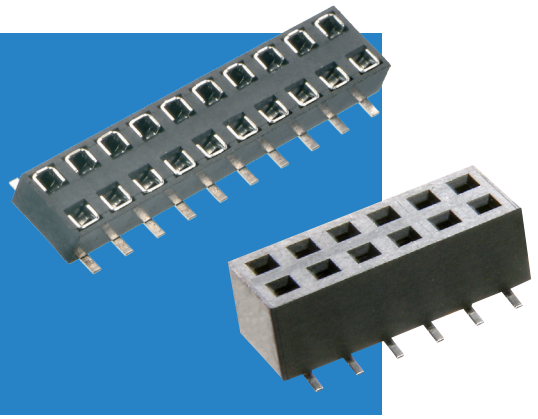
FINISH	
42	Gold + Tin

All dimensions in mm.

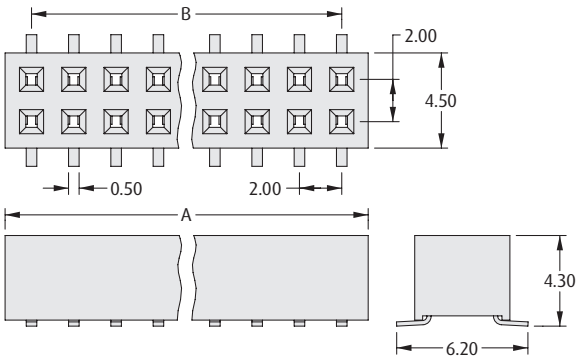
M22 Connectors

Female Vertical Surface Mount, Dual Entry

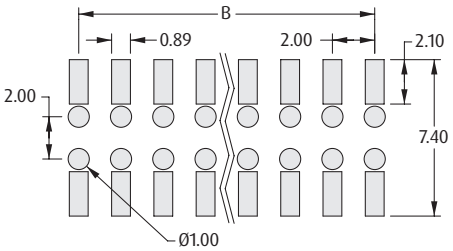
- Dual entry sockets - can be used as either a top entry or bottom entry configuration.
- The low profile socket has locating pegs, to assist with correct positioning and minimised movement during soldering.
- Twin beam contact for cost-effective reliability.
- Contact **technical@harwin.com** for Tape and Reel options.



4.30mm HIGH

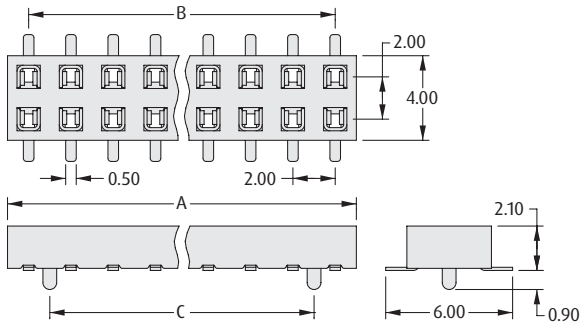


CALCULATION	
A	B + 2.5
B	2 x (No. of contacts per row - 1)

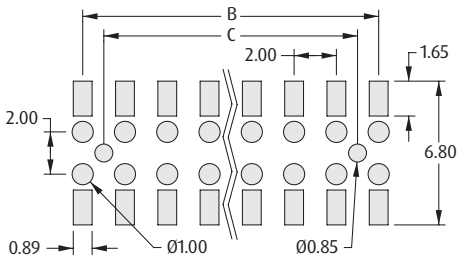


Recommended PC Board Pattern

2.10mm HIGH



CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)
C	B – 2



Recommended PC Board Pattern

HOW TO ORDER

M22 - 63 X XX XX

SERIES CODE

TYPE	
4	4.30mm high
6	2.10mm high

FINISH	
42	Gold + Tin
46	Tin (2.10mm high only)

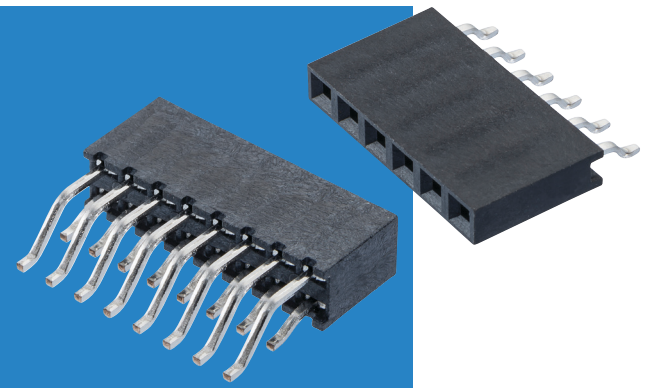
NO. OF CONTACTS PER ROW	
03 to 20	4.30mm high
02 to 20	2.10mm high

All dimensions in mm.

M22 Connectors

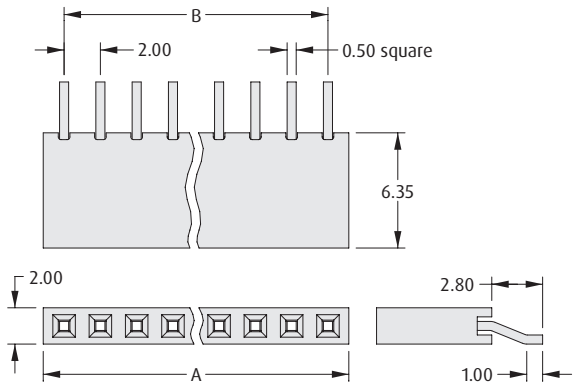
Female Horizontal Surface Mount

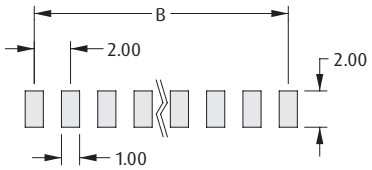
- Rear tail configuration, to allow mounting right up to the edge of the PCB.
- Supplied in Tape and Reel packaging as standard for use in automated assembly systems.



SINGLE ROW

CALCULATION	
A	B + 2.3
B	2 x (No. of contacts per row - 1)

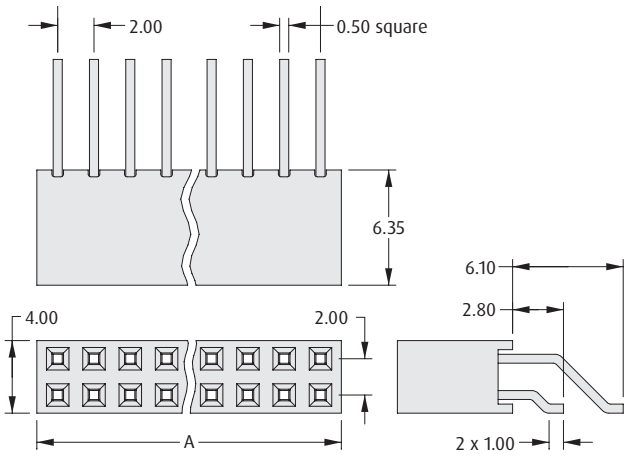


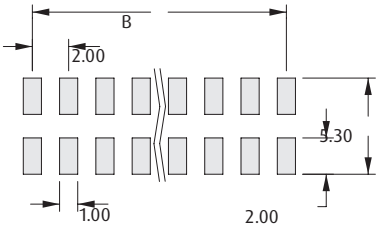


Recommended PC Board Pattern

DOUBLE ROW

CALCULATION	
A	B + 2.3
B	2 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M22 - 65 X XX XX R

SERIES CODE

TYPE

4	Single Row
5	Double Row

NO. OF CONTACTS PER ROW

02 to 06, 08, 10

FINISH

42	Gold + Tin

PACKAGING

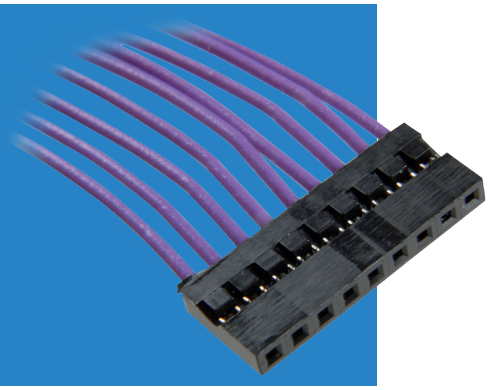
R	Tape & Reeled

All dimensions in mm.

M22 Connectors

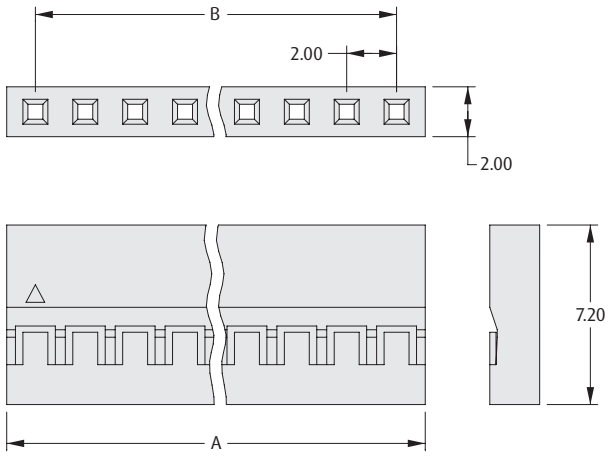
Female Crimp Housings

- Female crimp housing - contacts are ordered separately (shown on following page).
- For polarising key use **order code M22-0340000.**



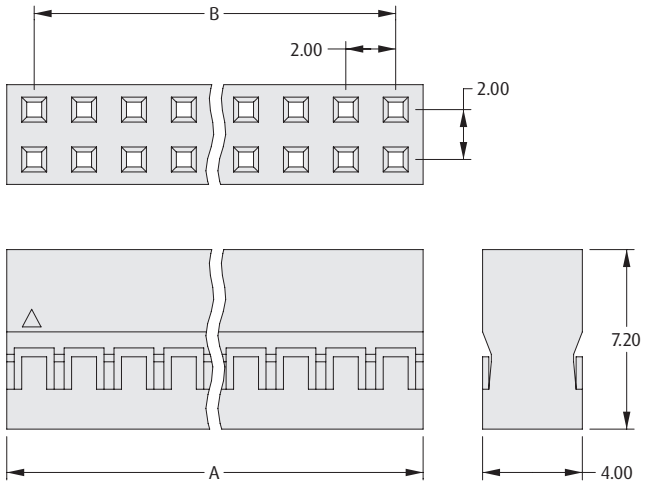
SINGLE ROW

CALCULATION	
A	B + 2.3
B	2 x (No. of contacts per row - 1)



DOUBLE ROW

CALCULATION	
A	B + 2.2
B	2 x (No. of contacts per row - 1)



HOW TO ORDER

M22 - 30 X XX 00

SERIES CODE

TYPE	
1	Single Row
2	Double Row

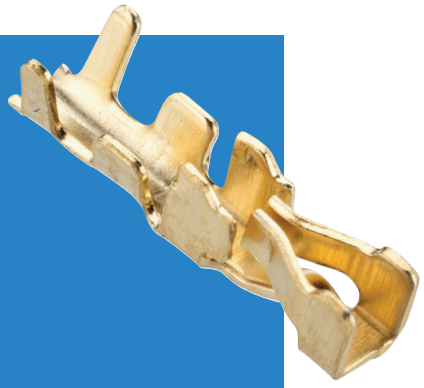
NO. OF CONTACTS PER ROW
02 to 20

All dimensions in mm.

M22 Connectors

Female Crimp Contacts

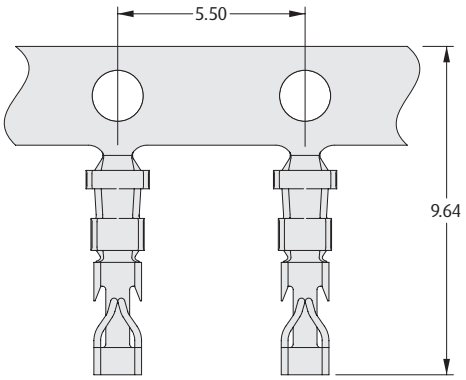
- Loose or reeled contacts.
- Open crimp design, ideal for automation.
- Use with female crimp housings shown on previous page.
- Suitable for connection with male pin headers with a mating length of 4.00mm or longer.



CONTACTS

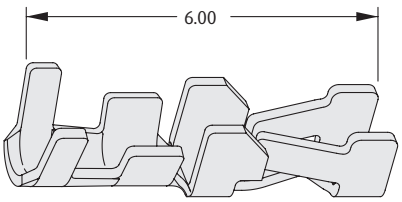
Reeled (continuous strip)

- Order code is for one reel of 10,000 contacts.



Loose (cropped)

- Order code is for one pack of 100 contacts.



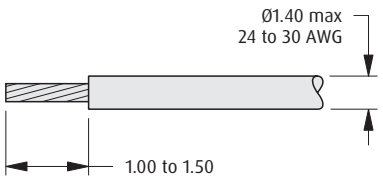
HAND CRIMP TOOL

- Instruction sheet is available at **www.harwin.com/instructions.**
- For use with loose contacts.



ORDER CODE
Z22-020

WIRE STRIPPING DETAILS



HOW TO ORDER

M22 - 30 X 00 XX

SERIES CODE

TYPE	
4	Reeled Contacts
5	Loose Contacts

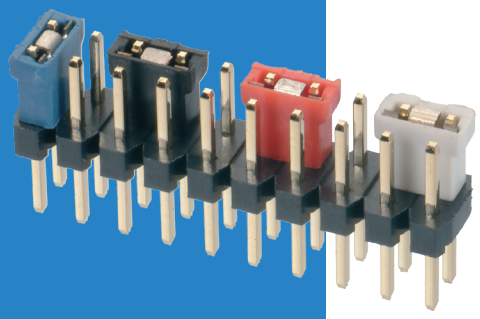
FINISH	
42	Gold
46	Tin

All dimensions in mm.

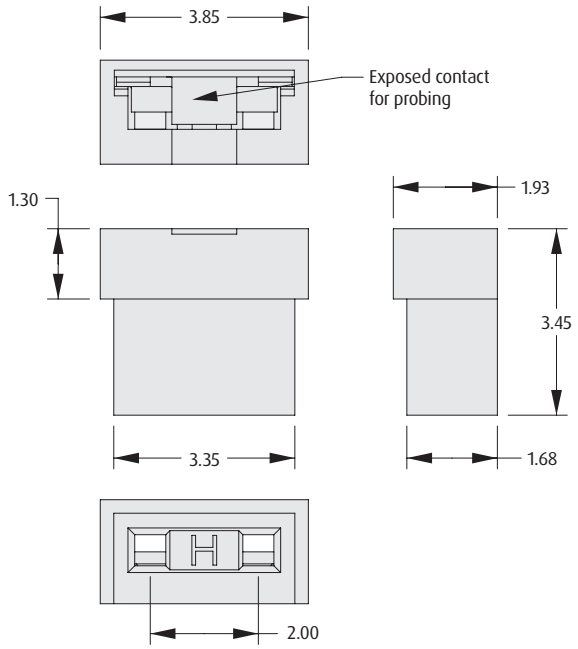
M22 Connectors

Jumper Sockets, Polarising Key

- Can be fitted and removed by hand.
- Used with male pin headers, Jumper Sockets give an alternative on-board programming method to DIP switches.
- Jumper Sockets have an open top for use with test probes.

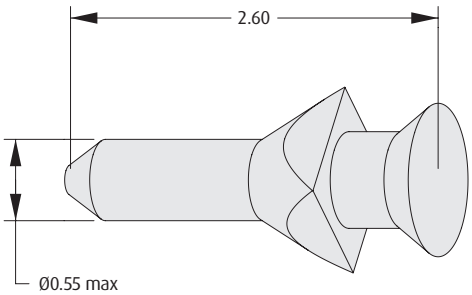


JUMPER SOCKET



POLARISING KEY

- For use with Female Vertical PC Tail connectors, M22-713 and M22-714 series.
- For use with Female Cable Housings, M22-301 and M22-302 series.





ORDER CODE
M22-0340000

HOW TO ORDER

M22 - 19 X 00 XX

SERIES CODE

COLOUR	
0	Black
1	Blue
2	Red
3	Grey

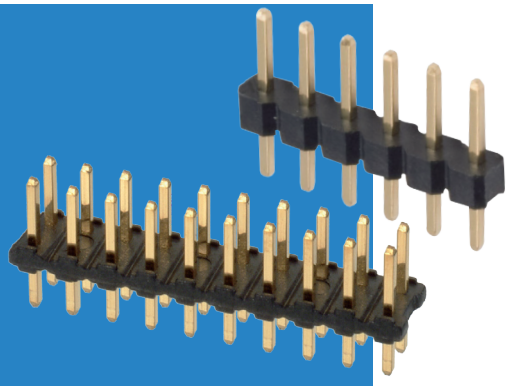
FINISH	
05	Gold
46	Tin

All dimensions in mm.

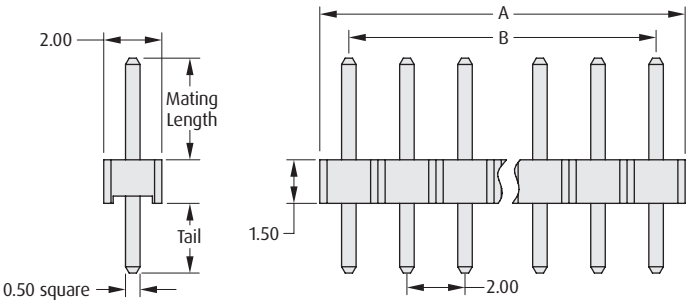
M22 Connectors

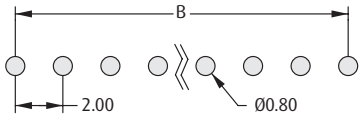
Male Vertical PC Tail

- Suitable for use with female PCB connectors and jumper sockets.
- 4.2mm mating pin length recommended for use with female cable connections.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.



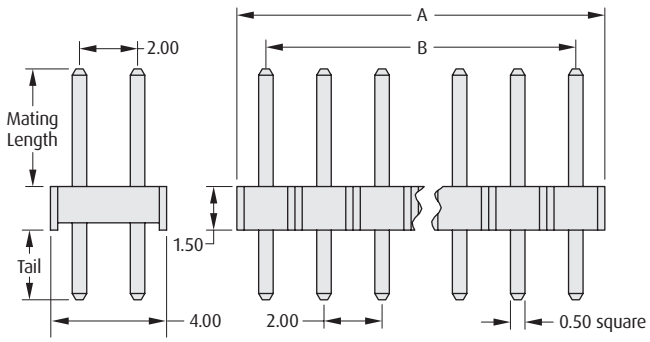
SINGLE ROW

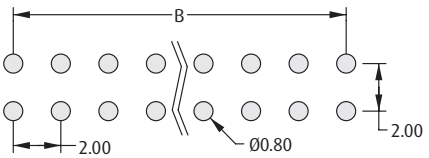




Recommended PC Board Pattern

DOUBLE ROW





Recommended PC Board Pattern

CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)

HOW TO ORDER

M22 - 2XX XX XX

SERIES CODE

TYPE			
SINGLE ROW	DOUBLE ROW	MATING LENGTH	TAIL
201	202	3.50mm	3.40mm
251	252	3.50mm	2.30mm
271	272	4.20mm	2.30mm

FINISH	
05	Gold
46	Tin

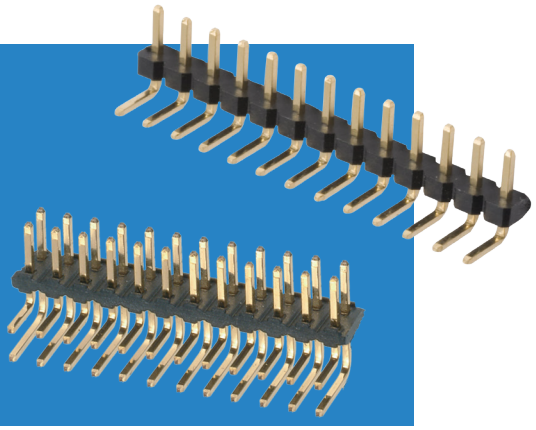
NO. OF CONTACTS PER ROW	
02 to 25, 50	M22-201, M22-202
02 to 20, 25, 40, 50	M22-251
02 to 20, 25, 40	M22-252
02 to 20	M22-271, M22-272

All dimensions in mm.

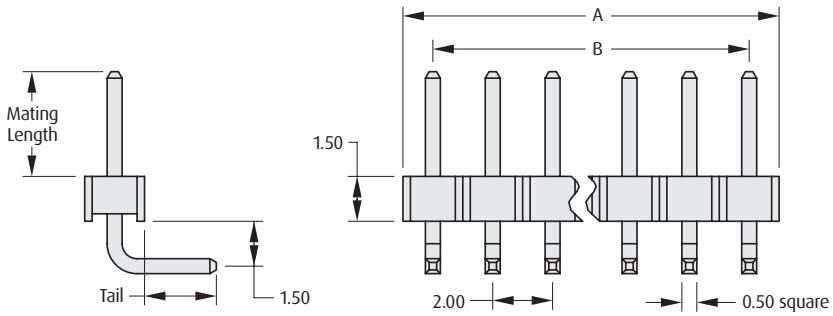
M22 Connectors

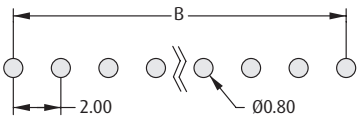
Male Horizontal PC Tail

- Suitable for use with female PCB connectors and jumper sockets.
- 4.2mm mating pin length recommended for use with female cable connectors.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.



SINGLE ROW

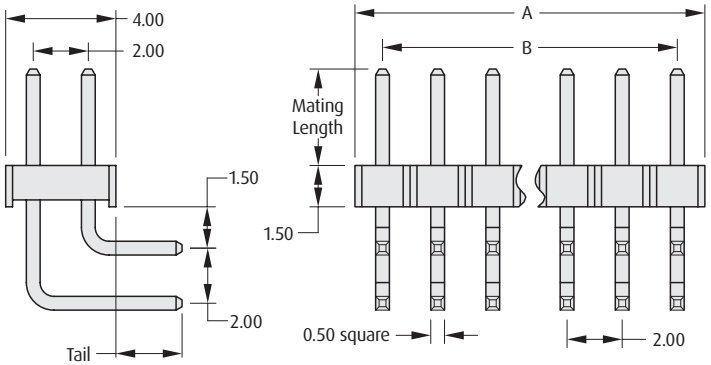


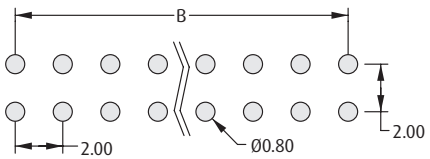


Recommended PC Board Pattern

CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)

DOUBLE ROW





Recommended PC Board Pattern

HOW TO ORDER

M22 - 2XX XX XX

SERIES CODE

TYPE			
SINGLE ROW	DOUBLE ROW	MATING LENGTH	TAIL
203	204	3.50mm	3.00mm
253	254	3.50mm	2.40mm
273	274	4.20mm	2.40mm

FINISH	
05	Gold
46	Tin

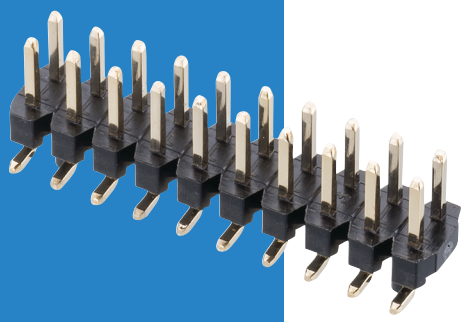
NO. OF CONTACTS PER ROW	
02 to 25, 50	M22-203, M22-204
02 to 20	Others

All dimensions in mm.

M22 Connectors

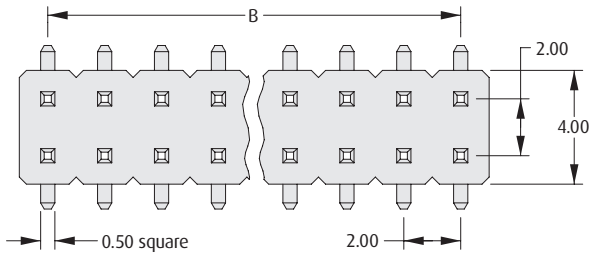
Male Vertical Surface Mount

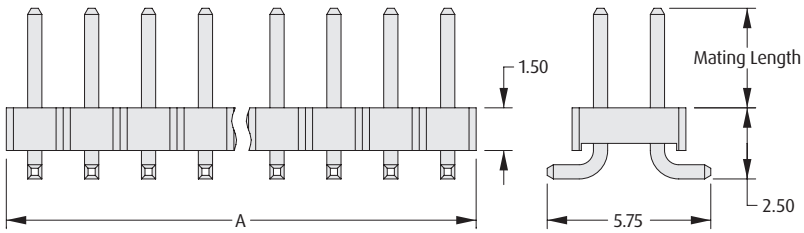
- Suitable for use with female PCB connectors and jumper sockets.
- 4.2mm mating pin length recommended for use with female cable connectors.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.
- Tape and Reel option supplied fitted with Pick and Place cap, contact **technical@harwin.com** for availability.

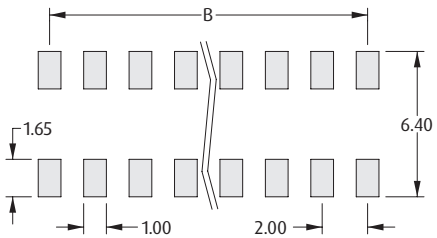


DOUBLE ROW

CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)







Recommended PC Board Pattern

HOW TO ORDER

M22 - 5 X 2 XX XX X

SERIES CODE

TYPE	
3	3.50mm Mating Length
5	4.20mm Mating Length

NO. OF CONTACTS PER ROW	
02 to 25	3.50mm Mating Length
02 to 20	4.20mm Mating Length

PACKAGING	
Blank	Loose
P	Pick and Place cap, tube
R	Tape & Reeled

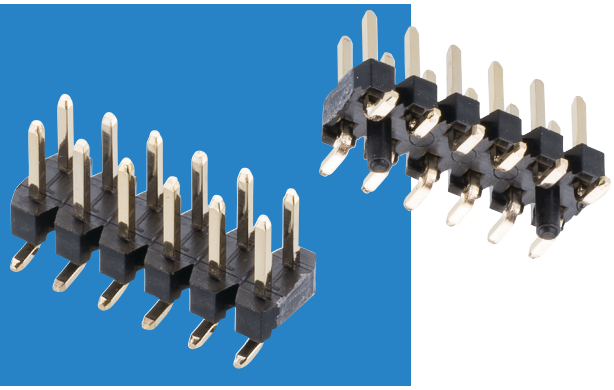
FINISH	
05	Gold
46	Tin

All dimensions in mm.

M22 Connectors

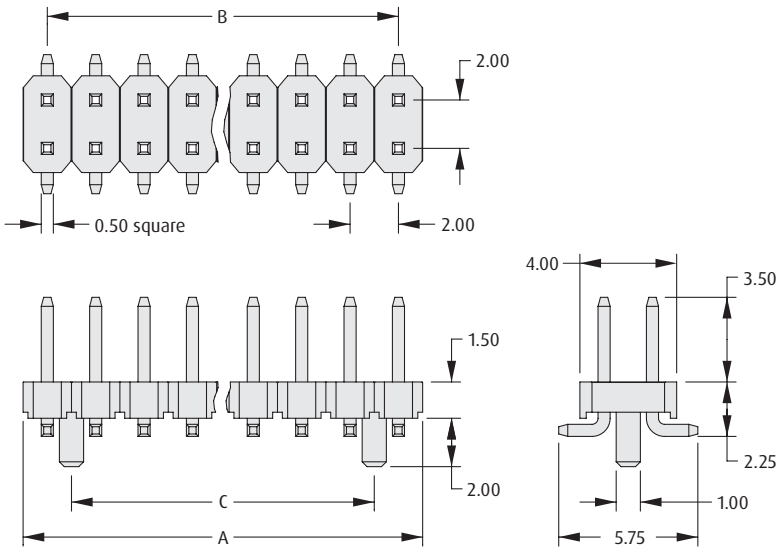
Male Vertical Surface Mount

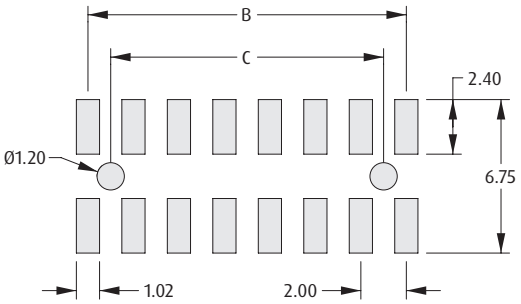
- Suitable for use with female PCB connectors and jumper sockets.
- Supplied with location pegs for additional placement accuracy.
- Tape and Reel option supplied fitted with Pick and Place cap.



DOUBLE ROW

CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)
C	B – 2





Recommended PC Board Pattern

HOW TO ORDER

M22 - 530 XX 05 X

SERIES CODE

NO. OF CONTACTS PER ROW	
02 to 06, 10	Loose
02, 03, 05	Tape & Reeled

PACKAGING	
Blank	Loose
R	Tape & Reeled

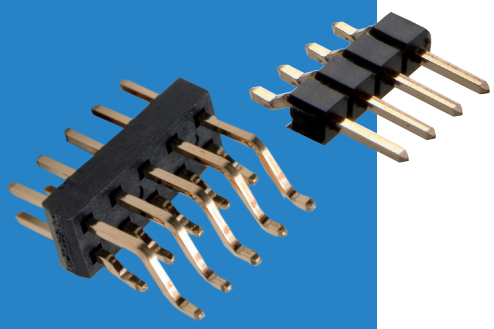
FINISH	
05	Gold

All dimensions in mm.

M22 Connectors

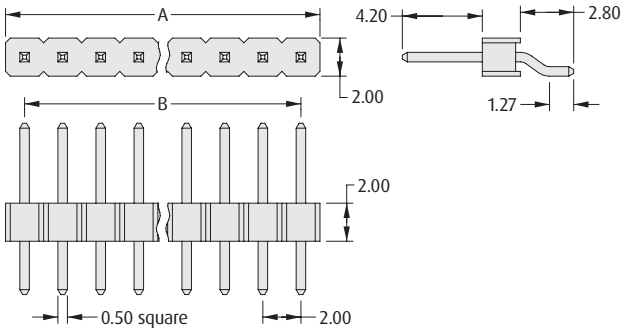
Male Horizontal Surface Mount

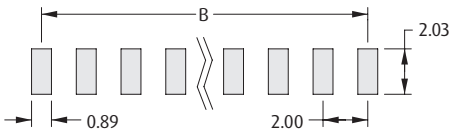
- Suitable for use with female PCB connectors and jumper sockets.
- 4.2mm mating pin length recommended for use with female cable connectors.
- Single row pin headers can be cut into smaller sizes.
- Locating pegs on double row, to assist with correct positioning and minimised movement during soldering.
- Contact **technical@harwin.com** for Tape and Reel options.



SINGLE ROW

CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)

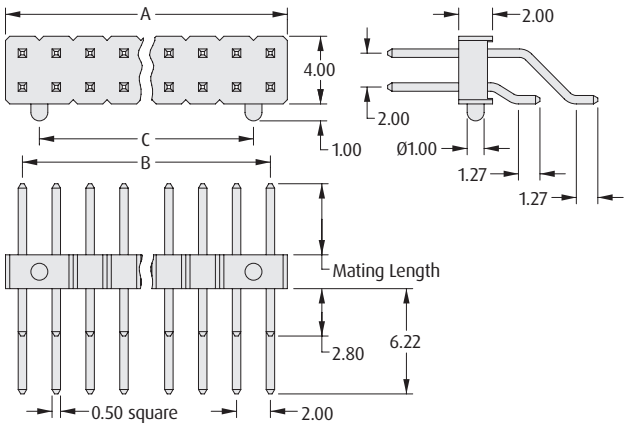


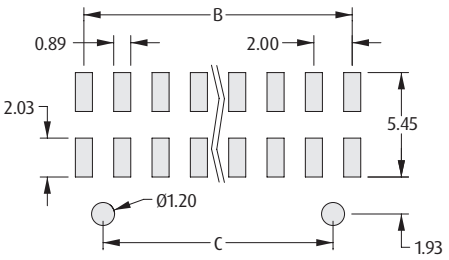


Recommended PC Board Pattern

DOUBLE ROW

CALCULATION	
A	2 x No. of contacts per row
B	2 x (No. of contacts per row - 1)
C	B – 2





Recommended PC Board Pattern

HOW TO ORDER

M22 - 5 X 3 XX 05

SERIES CODE

TYPE	
3	Single Row
4	Double Row, 3.2mm Mating Length
6	Double Row, 4.2mm Mating Length

NO. OF CONTACTS PER ROW	
02 to 15	M22-533
03 to 15, 20	M22-543
03 to 20	M22-563

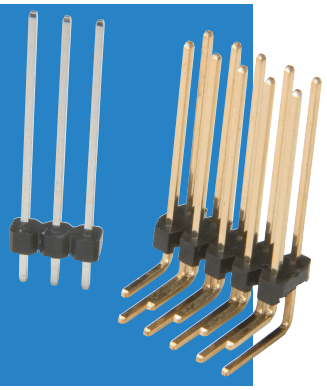
FINISH	
05	Gold

All dimensions in mm.

M22 Connectors

Pin Header Variants

- If you are unable to specify the connector you require from our standard range of M22 connectors, use the order code below to create an application-specific connector.
- Contact **technical@harwin.com** for further information, or search online for M22-XXX.
- Suitable for use with female connectors shown on previous pages.

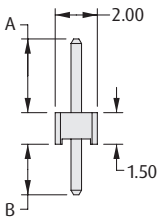


TERMINATION STYLES

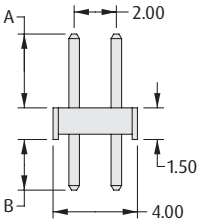
Vertical PC Tail

- Pin section is 0.50mm square.
- PCB mounting hole is Ø0.80mm.

V Series



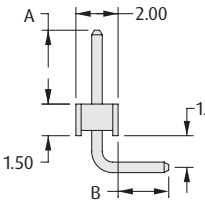
W Series



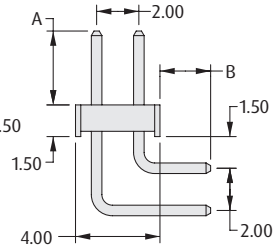
Horizontal PC Tail

- Pin section is 0.50mm square.
- PCB mounting hole is Ø0.80mm.
- Maximum B dimension is 6.00mm.

H Series



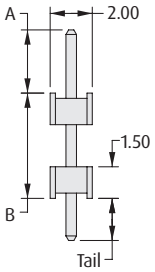
J Series



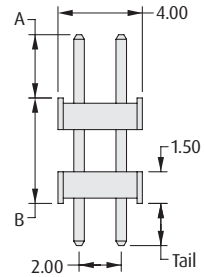
Extended PC Tail

- Pin section is 0.50mm square.
- PCB mounting hole is Ø0.80mm.

E Series (3mm Tail)
K Series (2.4mm Tail)



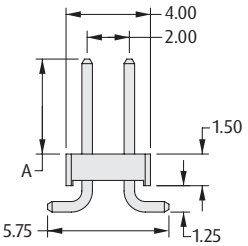
F Series (3mm Tail)
L Series (2.4mm Tail)



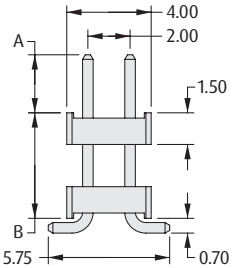
Vertical SMT
Extended SMT

- Pin section is 0.50mm square.
- For PCB pad layout see standard Male SMT pin header.
- B dimension is 000 on S series.

S Series



T Series



HOW TO ORDER

M22 - XXX XXX X XX XX

SERIES CODE

DIMENSION A
Example: 7.8mm = 078

DIMENSION B
Example: 5.0mm = 050

FINISH	
05	Gold
46	Tin

NO. OF CONTACTS PER ROW
02 to 50

SINGLE ROW	DOUBLE ROW	
V	W	Vertical
H	J	Horizontal
E	F	Extended
K	L	Extended (2.4mm Tail)
–	S	Surface Mount
–	T	Extended Surface Mount

All dimensions in mm.

M20 Connectors Specification

- 2.54mm pitch, with 0.64mm square male pin connection system.
- Board-to-Board and Cable-to-Board application options.

Materials

Mouldings:	Standard or High Temperature Plastic, UL94V-0
Contacts	
Female:	Phosphor Bronze
Male:	Copper Alloy
Finish:	See individual pages

Electrical

Current:	3A per contact
Voltage proof:	800V AC, 500V DC for 1 minute
Contact resistance:	30mΩ max
Insulation resistance:	1,000MΩ min

Mechanical

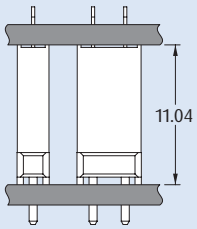
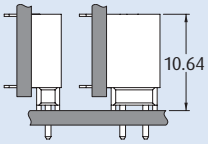
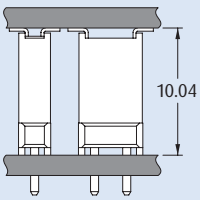
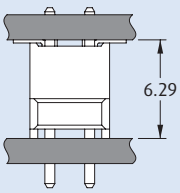
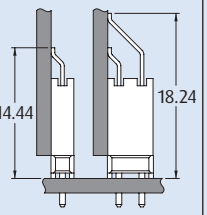
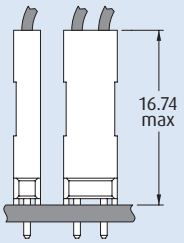
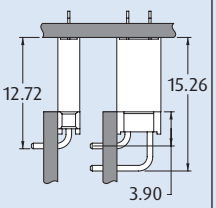
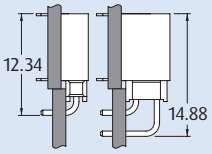
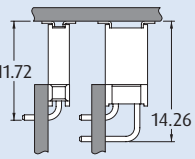
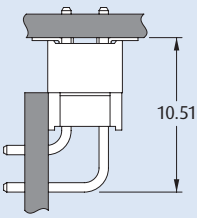
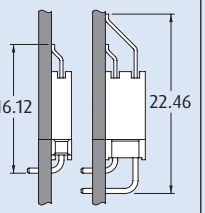
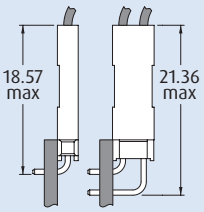
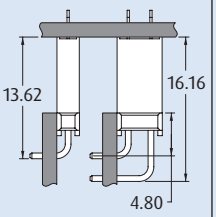
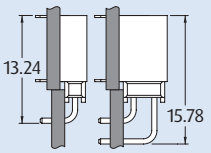
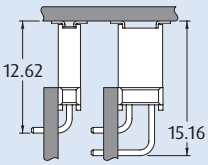
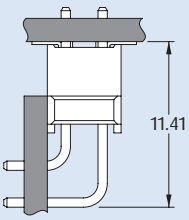
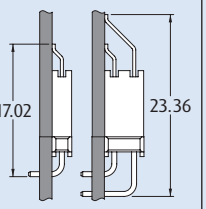
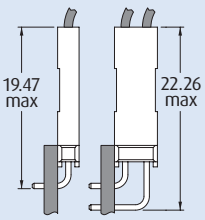
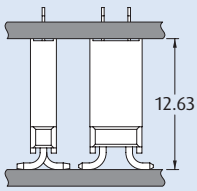
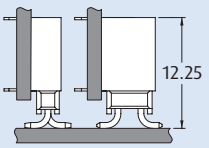
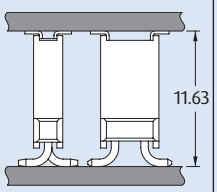
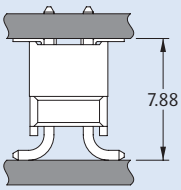
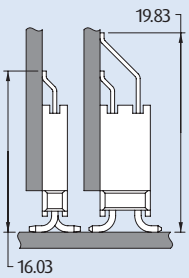
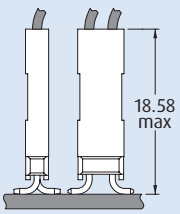
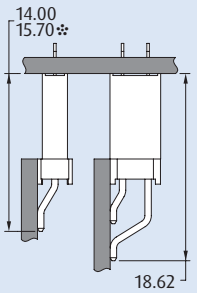
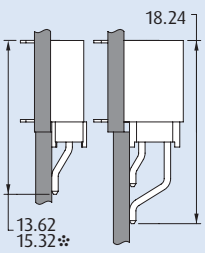
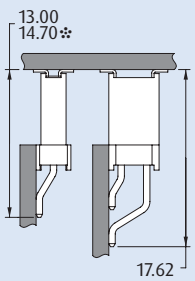
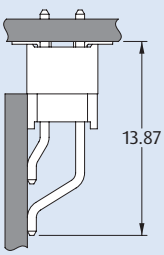
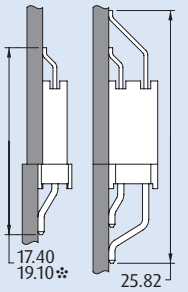
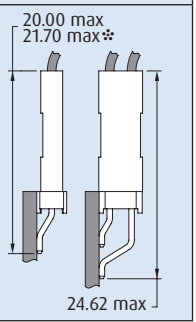
Durability	
Gold finish:	300 operations
Tin finish:	50 operations
Insertion force (max)	
Female:	2.0N per contact
Jumper sockets:	12.5N total
Withdrawal force (min)	
Female:	0.3N per contact
Jumper sockets:	1.0N total
Vibration sensitivity:	50 – 2,000Hz, 3.13G, 45 minutes duration
Shock severity:	294m/s^2 (30G) for 11ms

Environmental

Operating temperature:	-40°C to +105°C
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

2.54mm (.100") PITCH

M20 Connectors Mating Profiles

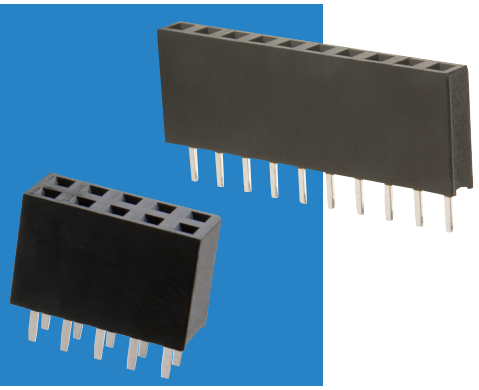
MALE \ FEMALE	VERTICAL PC TAIL	HORIZONTAL PC TAIL	VERTICAL SMT	VERTICAL SMT Low Profile	HORIZONTAL SMT	CRIMP
VERTICAL PC TAIL						
HORIZONTAL PC TAIL 3.9mm Tail						
HORIZONTAL PC TAIL 4.8mm Tail						
VERTICAL SMT						
HORIZONTAL SMT ❊High Profile Single Row						

All dimensions in mm.

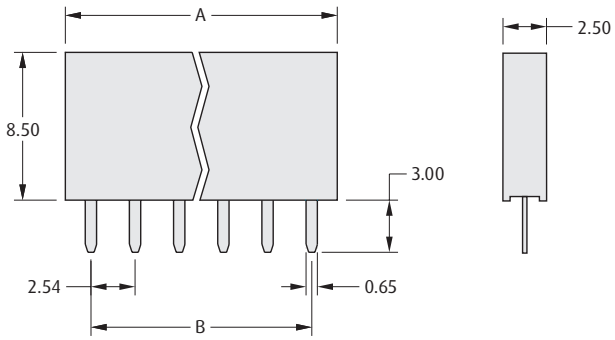
M20 Connectors

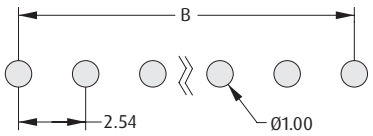
Female Vertical PC Tail

- Twin beam phosphor bronze contacts.
- Suitable for use with mating M20 male pin headers, with 0.64mm square pins.



SINGLE ROW

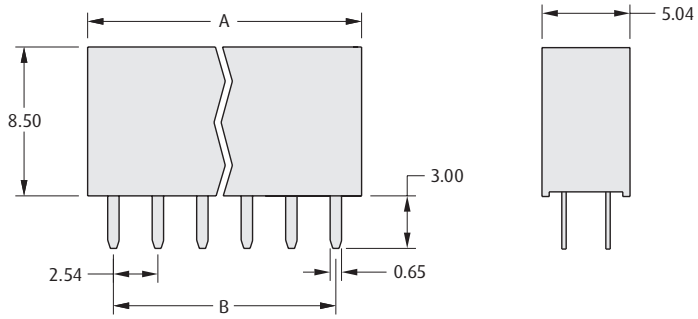


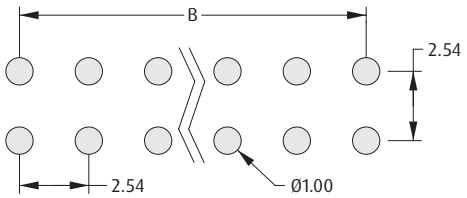


Recommended PC Board Pattern

DOUBLE ROW

CALCULATION	
A	B + 2.94
B	2.54 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M20 - 78 X XX XX

SERIES CODE

TYPE	
2	Single Row
3	Double Row

FINISH	
42	Gold + Tin
46	Tin

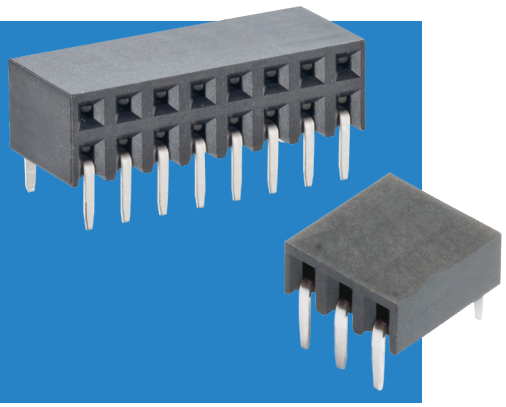
NO. OF CONTACTS PER ROW
02 to 20, 25, 32, 36

All dimensions in mm.

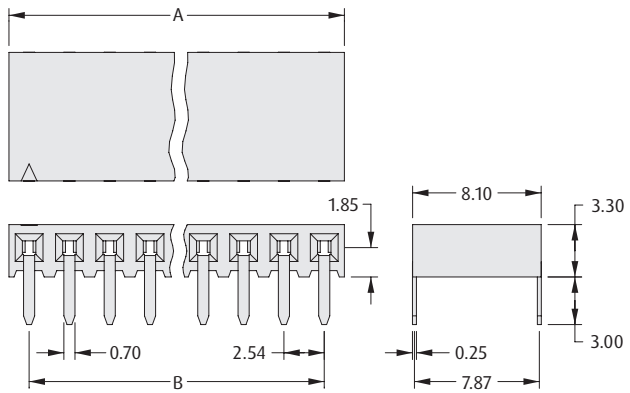
M20 Connectors

Female Horizontal PC Tail

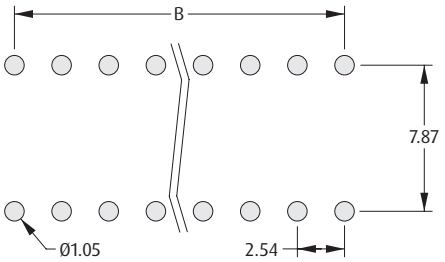
- Two point solder fixing for connector rigidity.
- Twin beam contact for cost-effective reliability.
- Suitable for use with mating M20 male pin headers, with 0.64mm square pins.



SINGLE ROW

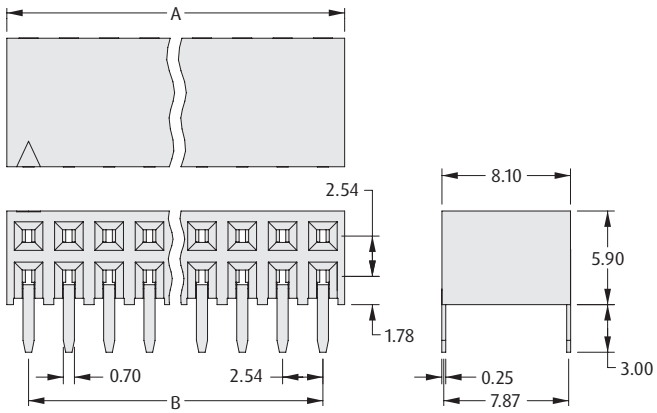


CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

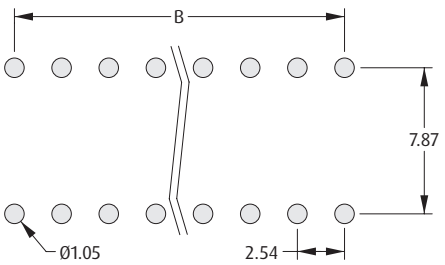


Recommended PC Board Pattern

DOUBLE ROW



CALCULATION	
A	B + 2.74
B	2.54 x (No. of contacts per row - 1)



Recommended PC Board Pattern

HOW TO ORDER

M20 - 78 X XX XX

SERIES CODE

TYPE	
8	Double Row
9	Single Row

FINISH	
42	Gold + Tin
46	Tin

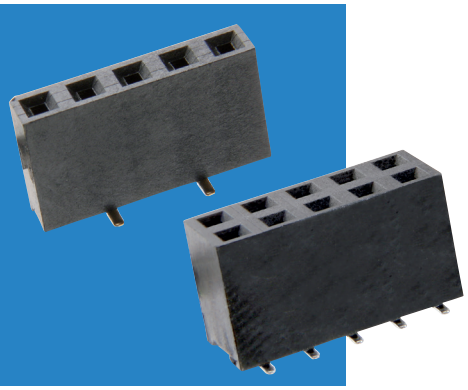
NO. OF CONTACTS PER ROW	
02 to 20, 25, 35, 36	Double Row
02 to 20, 25, 36, 40	Single Row

All dimensions in mm.

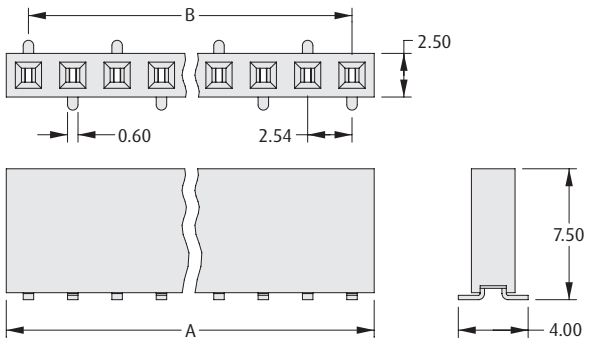
M20 Connectors

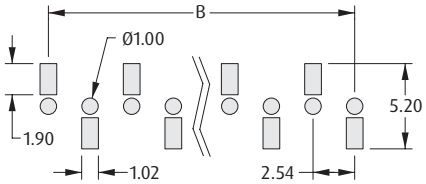
Female Vertical Surface Mount, Dual Entry

- Dual Entry sockets - can be used as either a top entry or bottom entry configuration.
- Twin beam contact for cost-effective reliability.
- Contact **technical@harwin.com** for Tape and Reel options.
- Suitable for use with mating M20 male pin headers, with 0.64mm square pins.



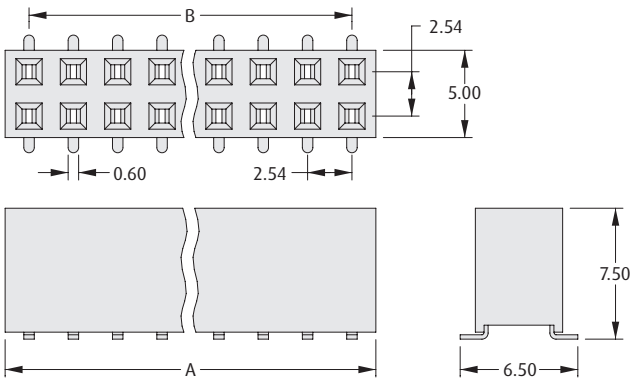
SINGLE ROW

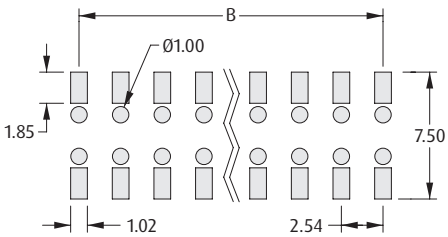




Recommended PC Board Pattern

DOUBLE ROW





Recommended PC Board Pattern

CALCULATION	
A	B + 2.74
B	2.54 x (No. of contacts per row - 1)

HOW TO ORDER

M20 - 78 X XX XX

SERIES CODE

TYPE	
6	Single Row
7	Double Row

FINISH	
42	Gold + Tin
46	Tin

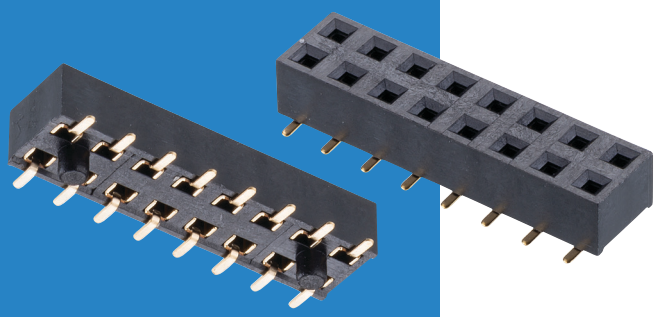
NO. OF CONTACTS PER ROW
02 to 20

All dimensions in mm.

M20 Connectors

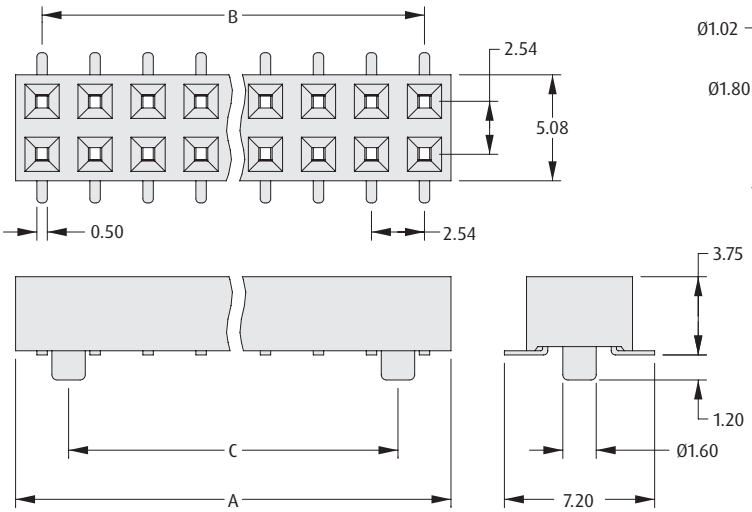
Female Vertical Surface Mount, Dual Entry

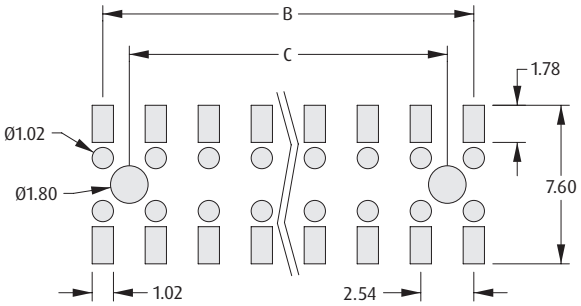
- Dual Entry socket - can be used as either a top entry or bottom entry configuration.
- Twin beam contact for cost-effective reliability.
- Tape and Reel option supplied fitted with Pick and Place cap.
- Suitable for use with mating M20 male pin headers, with 0.64mm square pins.



DOUBLE ROW

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)
C	B – 2.54





Recommended PC Board Pattern

HOW TO ORDER

M20 - 781 XX 45 X

SERIES CODE

NO. OF CONTACTS PER ROW
02 to 10, 12, 15, 20

PACKAGING	
Blank	Loose
R	Tape & Reeled

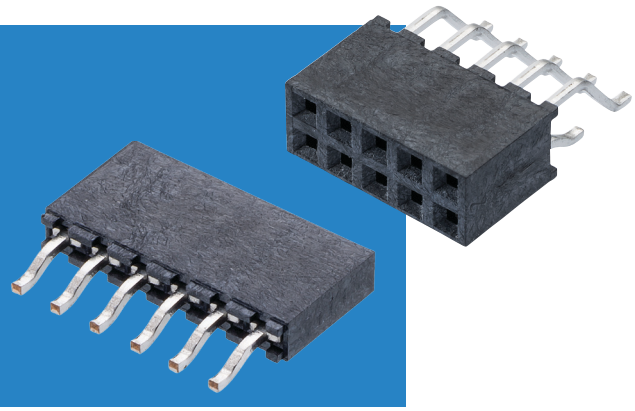
FINISH	
45	Gold

All dimensions in mm.

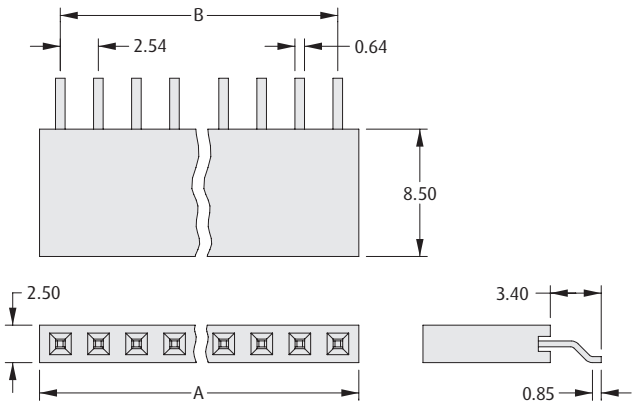
M20 Connectors

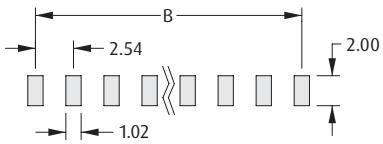
Female Horizontal Surface Mount

- Rear tail configuration, to allow mounting right up to the edge of the PCB.
- Supplied in Tape and Reel packaging as standard for use in automated assembly systems.



SINGLE ROW

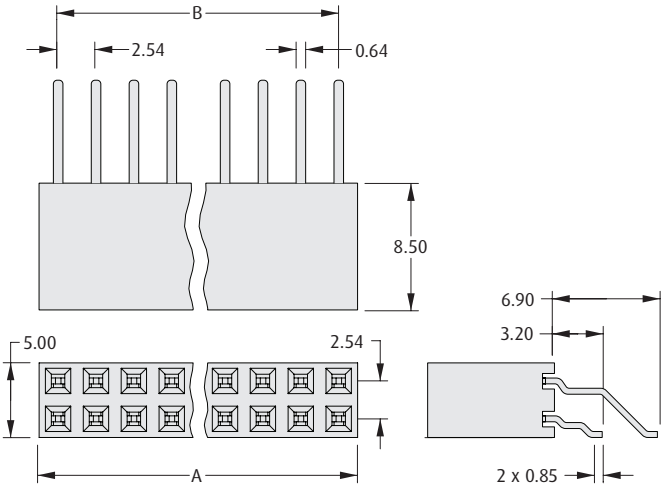


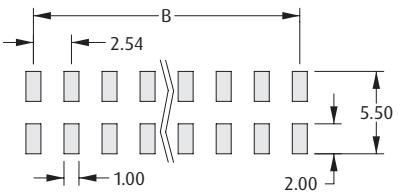


Recommended PC Board Pattern

CALCULATION	
A	B + 2.79
B	2.54 x (No. of contacts per row - 1)

DOUBLE ROW





Recommended PC Board Pattern

HOW TO ORDER

M20 - 79 X XX 42 R

SERIES CODE

NO. OF ROWS	
1	Single Row
2	Double Row

PACKAGING	
R	Tape & Reeled

FINISH	
42	Gold + Tin

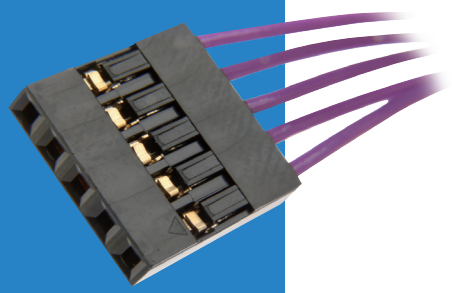
NO. OF CONTACTS PER ROW
02 to 06, 08, 10

All dimensions in mm.

M20 Connectors

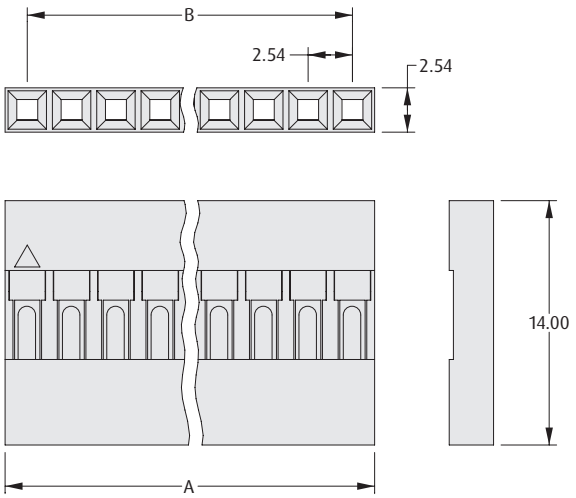
Female Crimp Housings

- Female crimp housing - contacts are ordered separately (shown on following page).
- For polarising key use **order code M20-003**



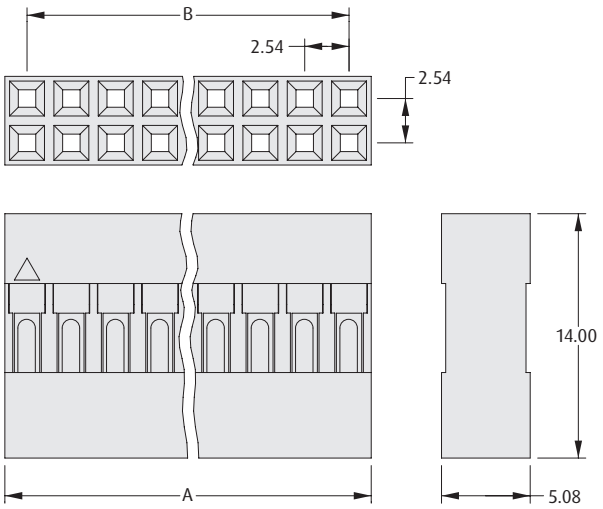
SINGLE ROW

CALCULATION	
A	B + 2.74
B	2.54 x (No. of contacts per row - 1)



DOUBLE ROW

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)



HOW TO ORDER

M20 - 10 X XX 00

SERIES CODE

TYPE	
6	Single Row
7	Double Row

NO. OF CONTACTS PER ROW
02 to 12

All dimensions in mm.

M20 Connectors

Female Crimp Contacts, Polarising Key

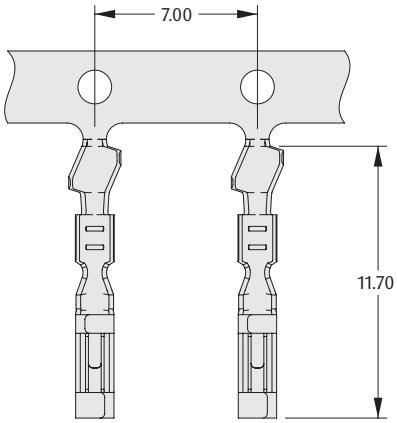
- Loose or reeled contacts.
- Open crimp design, ideal for automation.
- Use with female crimp housings shown on previous page.



CONTACTS

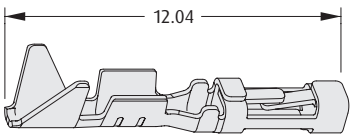
Reeled (continuous strip)

- Order code is for one reel of 10,000 contacts.



Loose (cropped)

- Order code is for one pack of 100 contacts.



HOW TO ORDER

M20 - 11 X 00 XX

SERIES CODE

TYPE	
6	Reeled Contacts
8	Loose Contacts

FINISH	
42	Gold + Tin
46	Tin

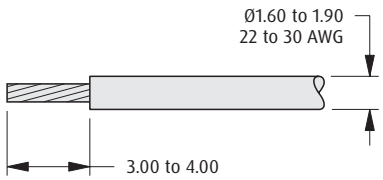
HAND CRIMP TOOL

- Instruction sheet is available at **www.harwin.com/instructions.**
- For use with loose contacts.



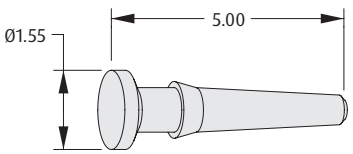
ORDER CODE
Z20-320

WIRE STRIPPING DETAILS



POLARISING KEY





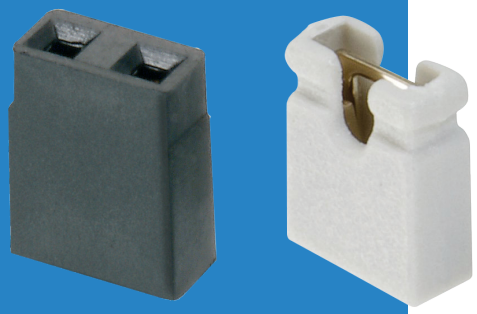
ORDER CODE
M20-003

All dimensions in mm.

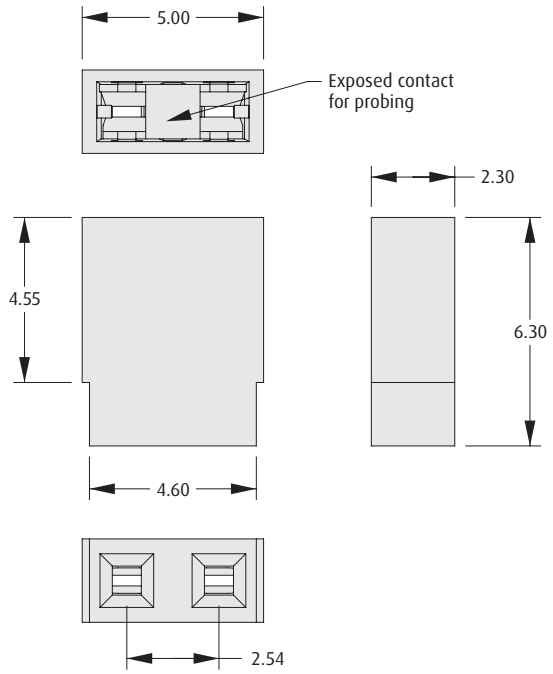
M20 Connectors

Jumper Sockets - Open Top

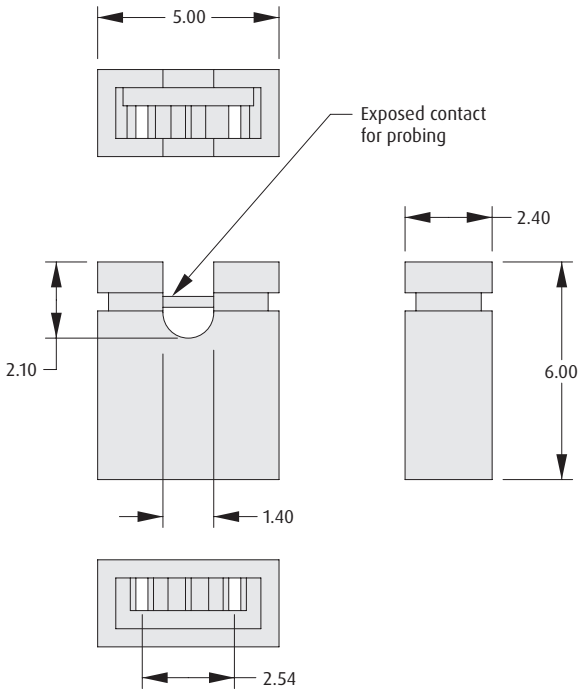
- Can be fitted by hand, giving an alternative on-board programming method to DIP switches.
- Open top for use with test probes.
- Choice of colours available.
- Multi-use socket provides up to 300 operations (Gold).
- Twin beam contact for cost-effective reliability.
- Suitable for use with mating M20 male pin headers, with 0.64mm square pins.



MULTI-USE



HIGH FORCE, SINGLE OPERATION



HOW TO ORDER

M75 XX - XX

SERIES CODE

MULTI-USE	SINGLE OPERATION	
65		Grey
66	81	Red
67	82	Black
71	83	Blue

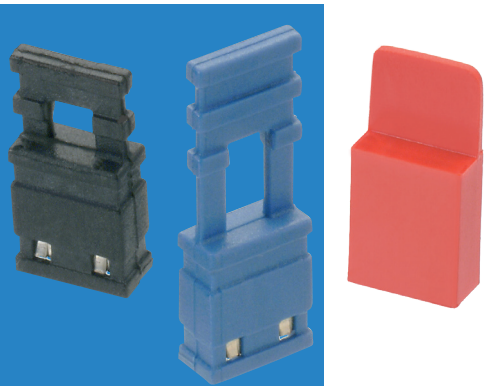
FINISH	
05	Gold
46	Tin

All dimensions in mm.

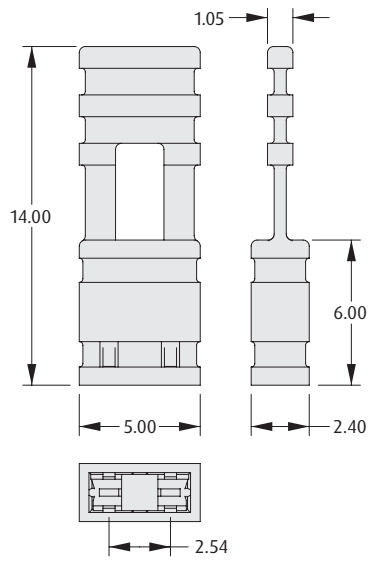
M20 Connectors

Jumper Sockets - Closed Top

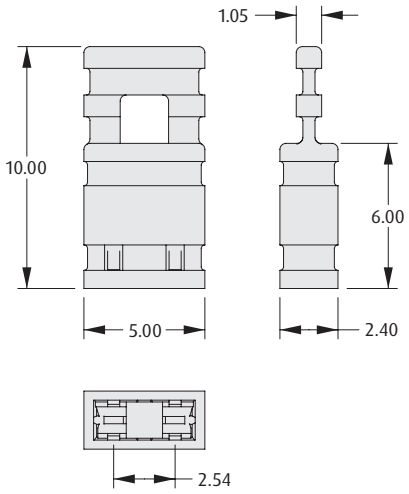
- Can be fitted by hand, giving an alternative on-board programming method to DIP switches.
- Twin beam contact for cost-effective reliability.
- Suitable for use with mating M20 male pin headers, with 0.64mm square pins.
- Choice of colours available.
- Flexible handle for ease of location and withdrawal.



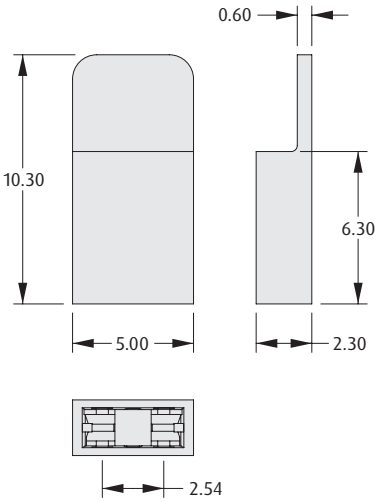
14mm FLEXIBLE HANDLE



10mm FLEXIBLE HANDLE



SOLID HANDLE



HOW TO ORDER

M7 XXX - XX

SERIES CODE

14mm HANDLE	10mm HANDLE	SOLID HANDLE	
680	684	965	Grey
681	685	966	Red
682	686	967	Black
683	687		Blue

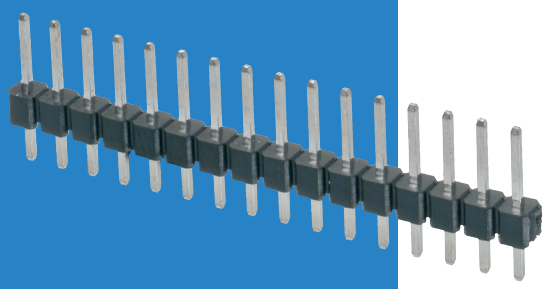
FINISH	
05	Gold
46	Tin

All dimensions in mm.

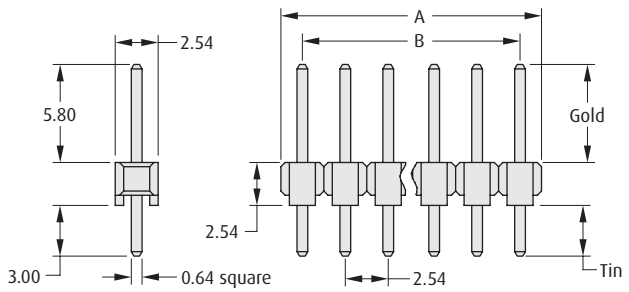
M20 Connectors

Male Vertical Single Row PC Tail

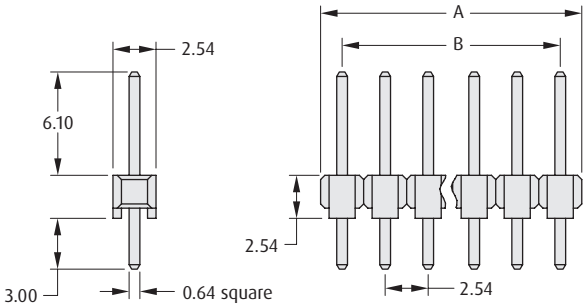
- Suitable for use with female connectors and jumper sockets shown on previous pages.
- Choice of mating pin lengths.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.



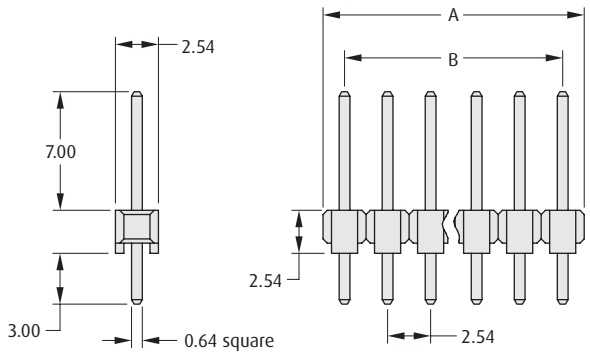
5.8mm

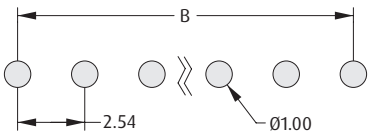


6.1mm



7.0mm





Recommended PC Board Pattern

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

HOW TO ORDER

M20 - 9 XX XX XX

SERIES CODE

TYPE	
73	7.0mm Mating Height
77	5.8mm Mating Height
99	6.1mm Mating Height

FINISH	
42	Gold + Tin (M20-977)
45	Gold (M20-973, 999)
46	Tin

NO. OF CONTACTS PER ROW	
02 to 20, 25 to 28, 36, 40	7.0mm Mating Height
02 to 20, 25, 26, 32, 36, 40	5.8mm Mating Height
02 to 20, 23, 25, 30 to 33, 36, 40	6.1mm Mating Height

All dimensions in mm.

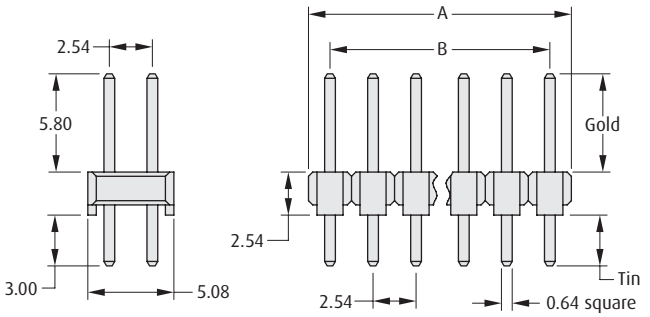
M20 Connectors

Male Vertical Double Row PC Tail

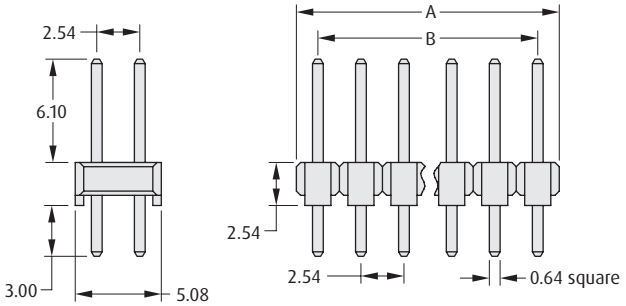
- Suitable for use with female connectors and jumper sockets shown on previous pages.
- Choice of mating pin lengths.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.



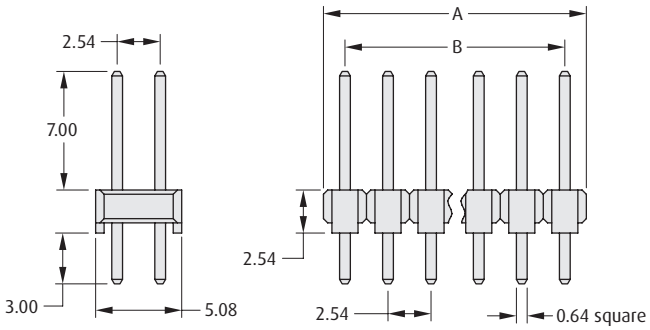
5.8mm

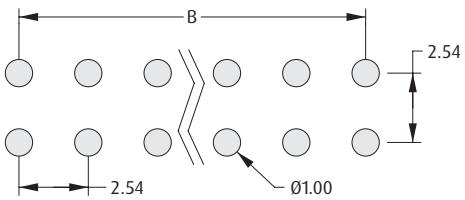


6.1mm



7.0mm





Recommended PC Board Pattern

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

HOW TO ORDER

M20 - 9 XX XX XX

SERIES CODE

TYPE	
72	7.0mm Mating Height
76	5.8mm Mating Height
98	6.1mm Mating Height

FINISH	
42	Gold + Tin (M20-976)
45	Gold (M20-972, 998)
46	Tin

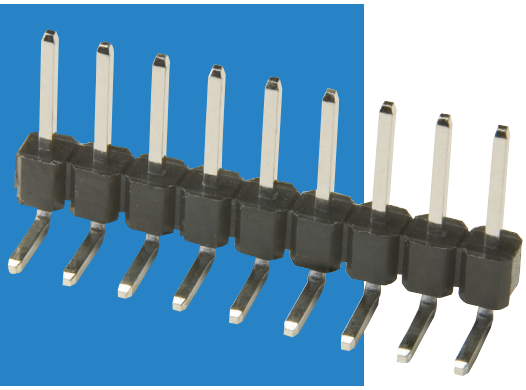
NO. OF CONTACTS PER ROW	
02 to 20, 24, 25, 36, 40	7.0mm Mating Height
02 to 20, 25, 36, 40	5.8mm Mating Height
02 to 20, 23 to 25, 32, 36, 40	6.1mm Mating Height

All dimensions in mm.

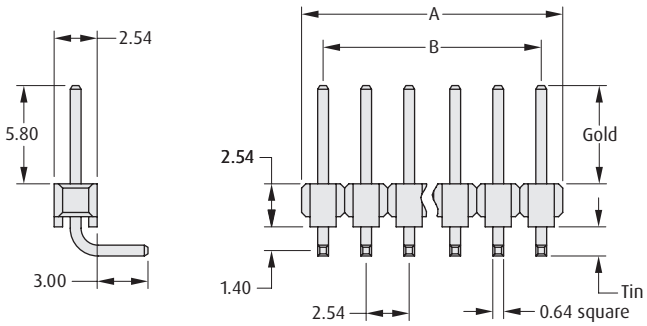
M20 Connectors

Male Horizontal Single Row PC Tail

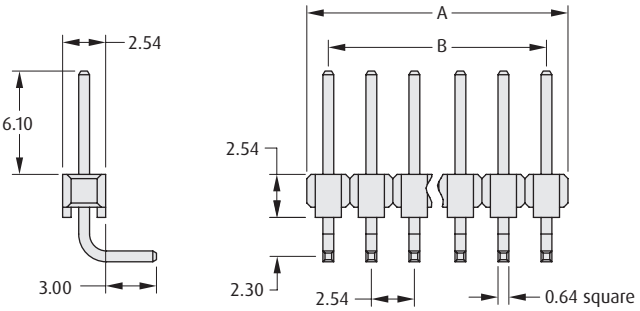
- Horizontal orientation for 90° board-to-board applications.
- Suitable for use with female connectors and jumper sockets shown on previous pages.
- Choice of mating pin lengths.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.



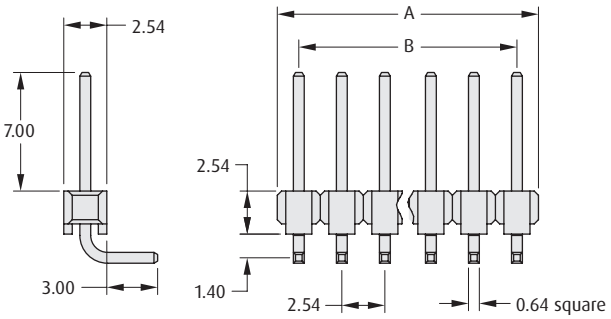
5.8mm

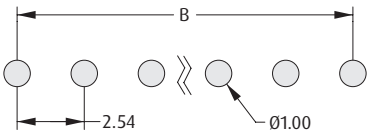


6.1mm



7.0mm





Recommended PC Board Pattern

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

HOW TO ORDER

M20 - 9 XX XX XX

SERIES CODE

TYPE	
71	7.0mm Mating Height
75	5.8mm Mating Height
96	6.1mm Mating Height

FINISH	
42	Gold + Tin (M20-975)
45	Gold (M20-971, 996)
46	Tin

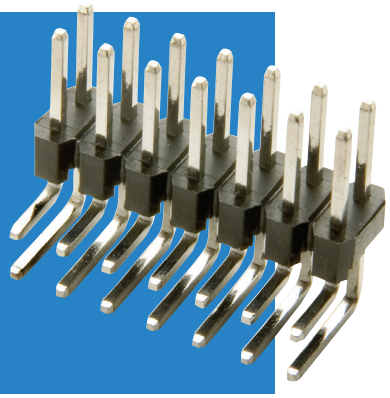
NO. OF CONTACTS PER ROW	
02 to 20, 22, 23, 26, 36, 40	7.0mm Mating Height
02 to 20, 25, 36, 40	5.8mm Mating Height
02 to 20, 24, 25, 36, 40	6.1mm Mating Height

All dimensions in mm.

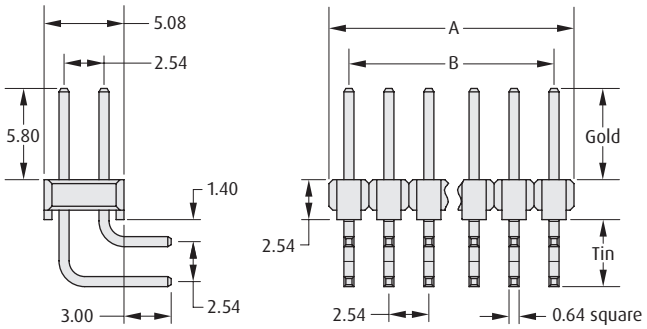
M20 Connectors

Male Horizontal Double Row PC Tail

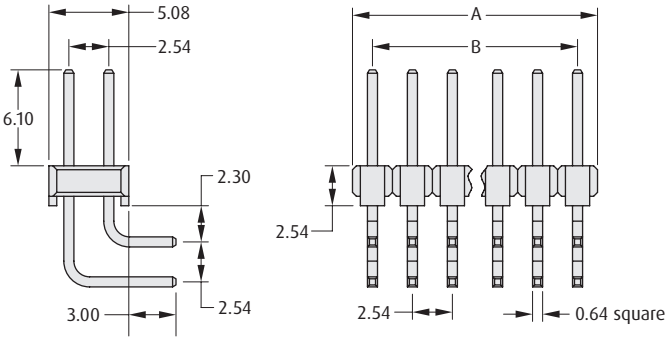
- Horizontal orientation for 90° board-to-board applications.
- Suitable for use with female connectors and jumper sockets shown on previous pages.
- Choice of mating pin lengths.
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.



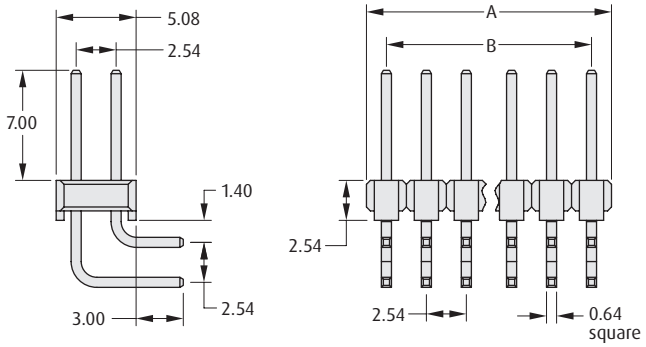
5.8mm

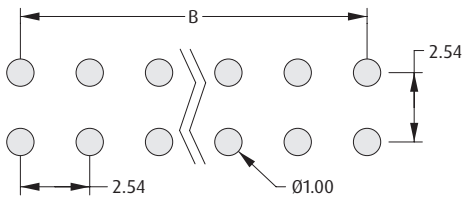


6.1mm



7.0mm





Recommended PC Board Pattern

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

HOW TO ORDER

M20 - 9 XX XX XX

SERIES CODE

TYPE	
70	7.0mm Mating Height
74	5.8mm Mating Height
95	6.1mm Mating Height

FINISH	
42	Gold + Tin (M20-974)
45	Gold (M20-970, 995)
46	Tin

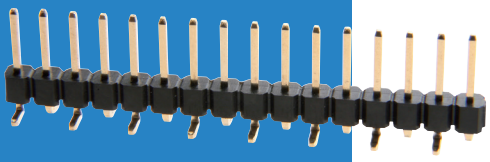
NO. OF CONTACTS PER ROW	
02 to 20, 22, 25, 27, 36, 40	7.0mm Mating Height
02 to 20, 25, 36, 40	5.8mm Mating Height
02 to 20, 24, 25, 32, 36, 40	6.1mm Mating Height

All dimensions in mm.

M20 Connectors

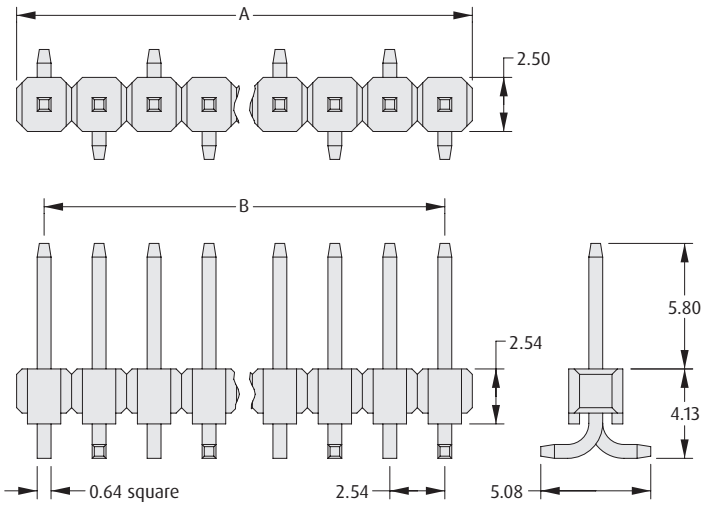
Male Vertical Surface Mount Single Row

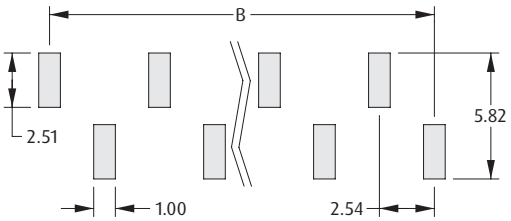
- Pin headers can be cut into smaller sizes.
- Also available with variable dimensions.
- Tape and Reel option supplied fitted with Pick and Place cap, contact **technical@harwin.com** for availability.
- Suitable for use with female connectors and jumper sockets shown on previous pages.



SINGLE ROW

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M20 - 877 XX XX X

SERIES CODE

NO. OF CONTACTS PER ROW	
02 to 20, 25, 36	Loose
02 to 20	Pick and Place cap, tube
02, 03, 04, 06, 08, 10, 15, 19	Tape & Reeled

PACKAGING	
Blank	Loose
P	Pick and Place cap, tube
R	Tape & Reeled

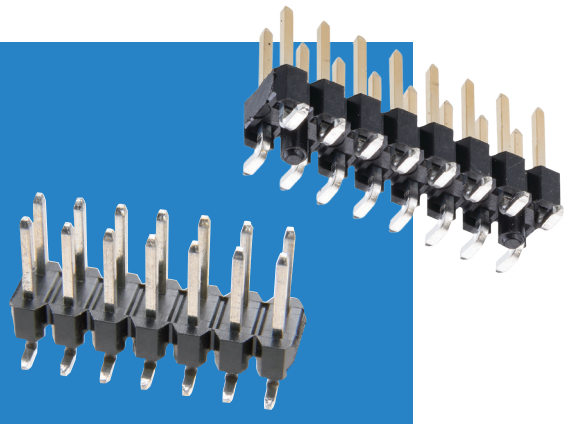
FINISH	
42	Gold + Tin
46	Tin

All dimensions in mm.

M20 Connectors

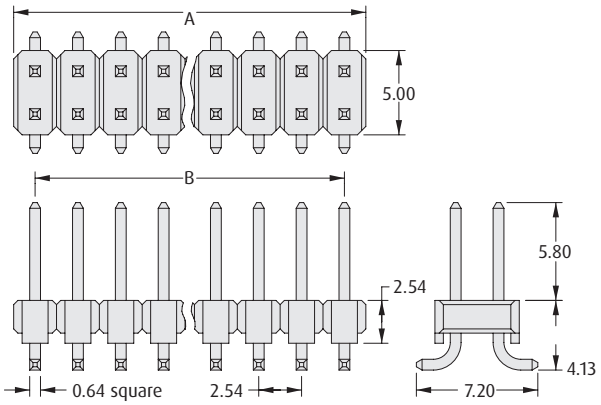
Male Vertical Surface Mount Double Row

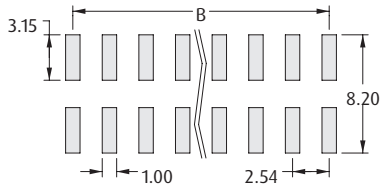
- Pin headers without pegs can be cut into smaller sizes.
- Peg option to assist with location during surface mount process.
- Also available with variable dimensions.
- Tape and Reel option supplied fitted with Pick and Place cap, contact **technical@harwin.com** for availability.
- Suitable for use with female connectors and jumper sockets shown on previous pages.



WITHOUT PEGS

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

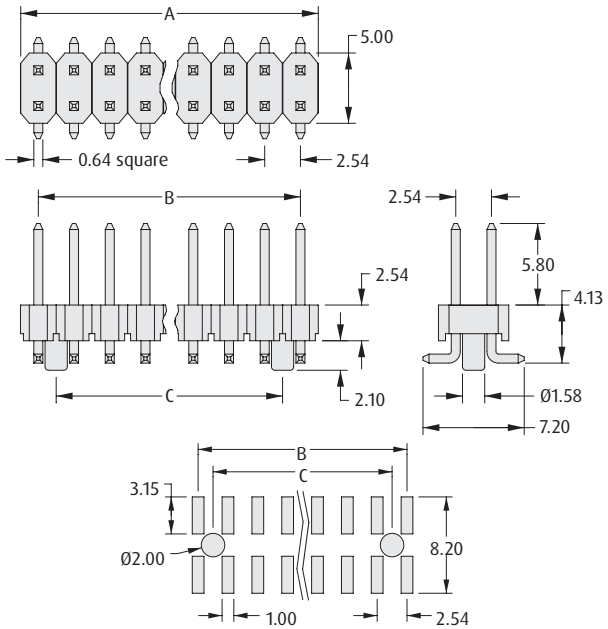




Recommended PC Board Pattern

WITH PEGS

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)
C	B – 2.54



Recommended PC Board Pattern

HOW TO ORDER

M20 - 87 X XX XX X

SERIES CODE

TYPE	
6	Without Pegs
5	With Pegs

NO. OF CONTACTS PER ROW	
02 to 20, 25, 36	Without Pegs (Loose)
02 to 20, 23	Without Pegs (Tube)
02 to 08, 10	With Pegs (Loose)
02, 03, 05, 07, 08, 10	With Pegs (Reeled)

PACKAGING	
Blank	Loose
P	Pick and Place cap, tube (Without Pegs)
R	Tape & Reeled

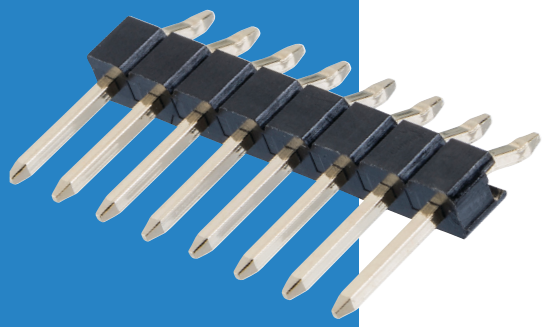
FINISH	
42	Gold + Tin
46	Tin (Without Pegs)

All dimensions in mm.

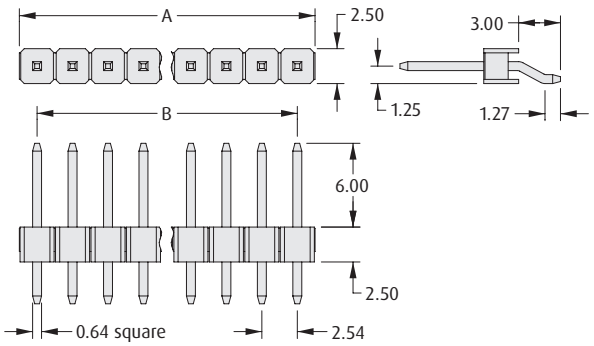
M20 Connectors

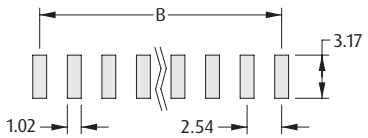
Male Horizontal Surface Mount Single Row

- Pin headers can be cut into smaller sizes.
- Contact **technical@harwin.com** for Tape and Reel options.
- Suitable for use with female connectors and jumper sockets shown on previous pages.
- Horizontal orientation for 90°C board-to-board applications.



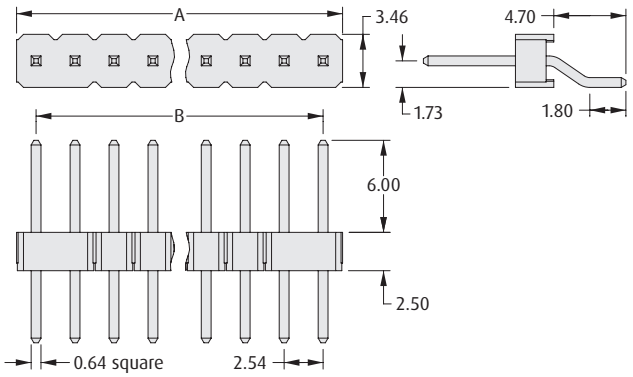
STANDARD PROFILE

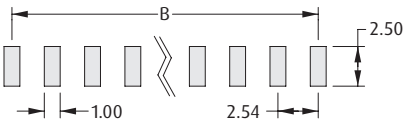




Recommended PC Board Pattern

HIGH PROFILE





Recommended PC Board Pattern

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)

HOW TO ORDER

M20 - 8XX XX 05 X

SERIES CODE

TYPE	
889	Standard Profile
890	High Profile

NO. OF CONTACTS PER ROW	
02 to 06, 08, 10	Standard Profile
03 to 20	High Profile

PACKAGING	
Blank	Loose
R	Tape & Reeled (Standard Profile)

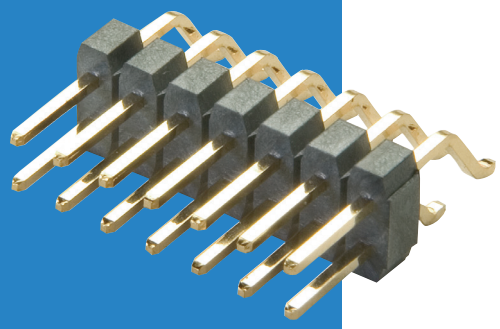
FINISH	
05	Gold (High Profile)
45	Gold (Standard Profile)

All dimensions in mm.

M20 Connectors

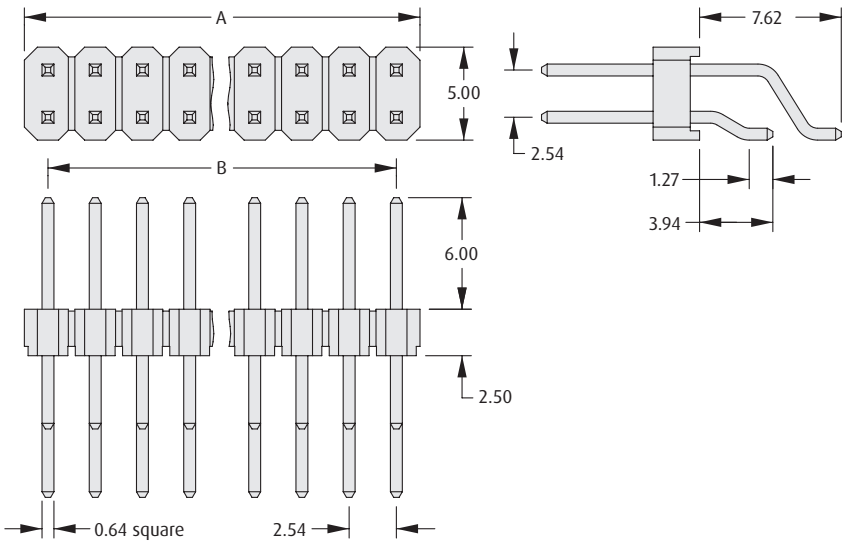
Male Horizontal Surface Mount Double Row

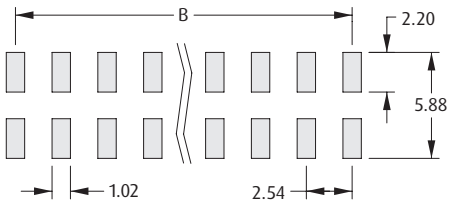
- Pin headers can be cut into smaller sizes.
- Contact **technical@harwin.com** for Tape and Reel options.
- Suitable for use with female connectors and jumper sockets shown on previous pages.
- Horizontal orientation for 90° board-to-board applications.



DOUBLE ROW

CALCULATION	
A	2.54 x No. of contacts per row
B	2.54 x (No. of contacts per row - 1)





Recommended PC Board Pattern

HOW TO ORDER

M20 - 891 XX 05

SERIES CODE

NO. OF CONTACTS PER ROW
02 to 20

FINISH

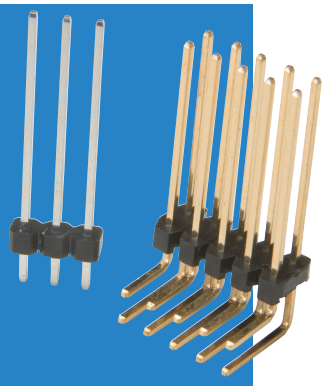
05	Gold

All dimensions in mm.

M20 Connectors

Pin Header Variants

- If you are unable to specify the connector you require from our standard range of M20 connectors, use the order code below to create an application-specific connector.
- Contact **technical@harwin.com** for further information, or search online for M20-XXX.
- Suitable for use with female connectors shown on previous pages.

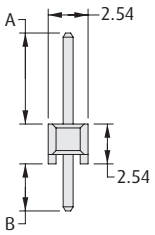


TERMINATION STYLES

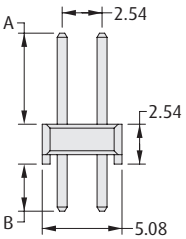
Vertical PC Tail

- Pin section is 0.64mm square.
- PCB mounting hole is Ø1.00mm.

V Series



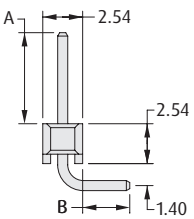
W Series



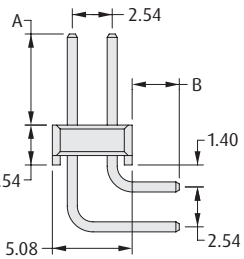
Horizontal PC Tail

- Pin section is 0.64mm square.
- PCB mounting hole is Ø1.00mm.
- Maximum B dimension is 6.00mm.

H Series



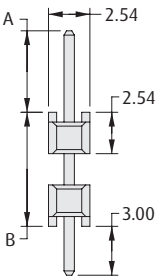
J Series



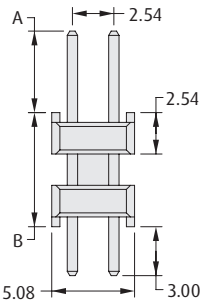
Extended PC Tail

- Pin section is 0.64mm square.
- PCB mounting hole is Ø1.00mm.

E Series



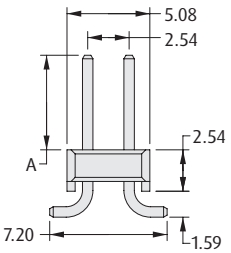
F Series



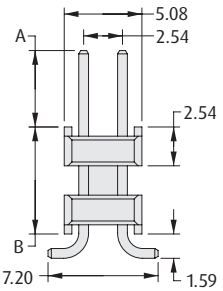
Vertical SMT Extended SMT

- Pin section is 0.64mm square.
- For PCB pad layout see standard Male SMT pin header.
- B dimension is 000 on S series.

S Series



T Series



HOW TO ORDER

M20 - XXX XXX X XX XX

SERIES CODE

DIMENSION A
Example: 7.8mm = 078

DIMENSION B
Example: 5.0mm = 050

FINISH	
45	Gold
46	Tin

NO. OF CONTACTS PER ROW
02 to 40

SINGLE ROW	DOUBLE ROW	
V	W	Vertical
H	J	Horizontal
E	F	Extended
–	S	Surface Mount
–	T	Extended Surface Mount

All dimensions in mm.

PC/104, PC/104 Plus Specification

- Industry Standard bus connection systems, typically used on embedded PC applications.
- Designed for Board-To-Board stacking with a common bus.

PC/104 Connectors – 2.54mm pitch (M20)

Materials

Mouldings:	High Temperature Plastic, UL94V-0
Contacts:	Phosphor Bronze
Finish:	Gold

Electrical

Current	
Solder Tail:	3A max
Press-Fit Tail:	1A max
Working voltage:	12V DC
Voltage proof:	1,000V AC
Contact resistance:	30mΩ max
Insulation resistance:	5,000MΩ min

Mechanical

Durability	
Mating:	10 operations
Press-fit:	3 operations
Insertion force (max):	2.0N per contact
Withdrawal force (min):	0.25N per contact
Insertion force to board (max)	
Press-Fit:	80N per contact

Environmental

Temperature range:	-55°C to +105°C

PC/104 Plus – 2.00mm pitch (M22)

Materials

Mouldings:	High Temperature Plastic, UL94V-0
Contacts	
M22-602:	Brass
Others:	Phosphor Bronze
Finish:	See order code

Electrical

Current:	1A max
Working voltage:	12V DC
Voltage proof:	800V AC
Contact resistance:	30mΩ max
Insulation resistance:	5,000MΩ min

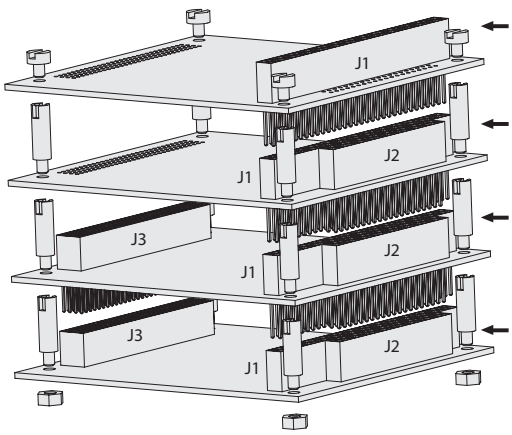
Mechanical

Durability:	10 operations
Insertion force (max):	2.0N per contact
Withdrawal force (min):	0.3N per contact

Environmental

Temperature range:	-55°C to +105°C

Typical PC/104 & PC/104-Plus Module Stack



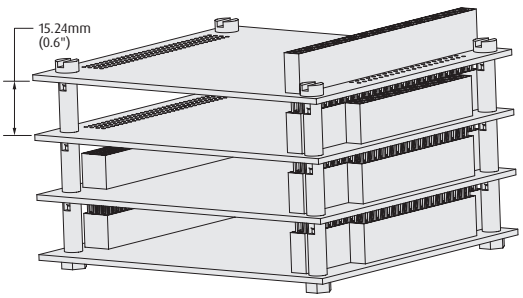
8-bit Module – comprising:
J1 = 32+32-contacts Stackthrough: M20-6103245
or M20-6153205

16-bit Module – comprising:
J1 = 32+32-contacts Stackthrough: M20-6103245
or M20-6153205
J2 = 20+20-contacts Stackthrough: M20-6102045
or M20-6152005

PCI Bus Module – comprising:
J1 = 32+32-contacts Stackthrough: M20-6103245
or M20-6153205
J2 = 20+20-contacts Stackthrough: M20-6102045
or M20-6152005
J3 = 120-contacts Stackthrough: M22-6003005

PCI Bus Module – comprising:
J1 = 32+32-contacts Non-stackthrough: M20-6113245
or M20-6163205
J2 = 20+20-contacts Non-stackthrough: M20-6112045
or M20-6162005
J3 = 120-contacts Non-stackthrough: M22-6013005

Assembled PC/104 stack (4 Modules)

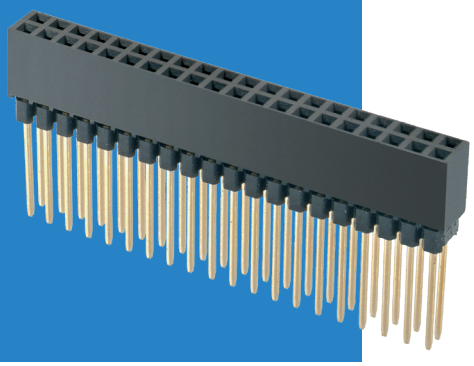


All dimensions in mm.

PC/104 Connectors

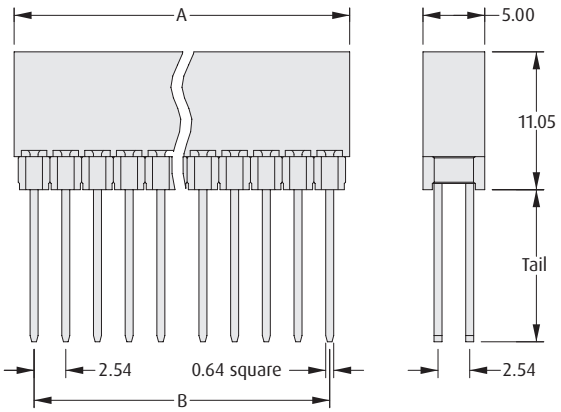
2.54mm Pitch Vertical Bus Connectors

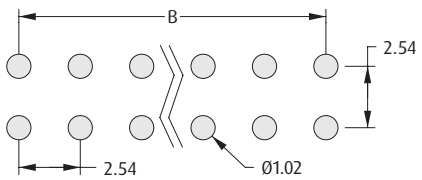
- 32+32 contacts supports an 8-bit system.
- 20+20 contacts combined with 32+32 contacts supports a 16-bit system.
- Press-fit connectors can be assembled direct to the PCB without soldering, using plated-through holes.
- Stackthrough connectors act as both male and female connectors.



SOLDER TAIL

CALCULATION	
A	B + 3.2
B	2.54 x (No. of contacts per row - 1)

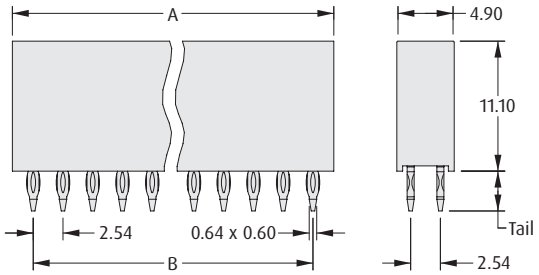




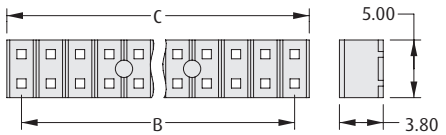
Recommended PC Board Pattern

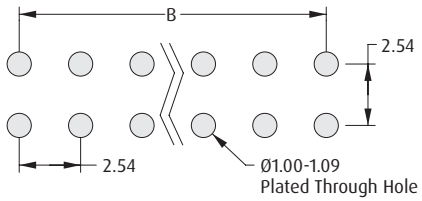
PRESS-FIT TAIL

CALCULATION	
A	B + 3.56
B	2.54 x (No. of contacts per row - 1)
C	2.54 x No. of contacts per row



Press-Fit connector M20-615 supplied with spacer moulding





Recommended PC Board Pattern

HOW TO ORDER

M20 - 61 X XX XX

SERIES CODE

TYPE	
0	Stackthrough, 12.20mm Solder Tail
1	Non-Stackthrough, 2.30mm Solder Tail
5	Stackthrough, 12.10mm Press-Fit Tail
6	Non-Stackthrough, 3.40mm Press-Fit Tail

FINISH	
05	Gold (M20-615, 616)
45	Gold (M20-610, 611)

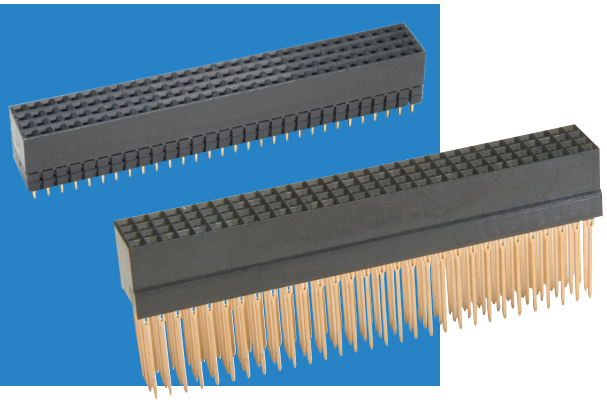
NO. OF CONTACTS PER ROW
20, 32

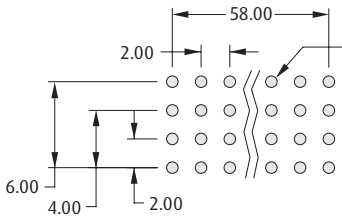
All dimensions in mm.

PC/104 Plus Connectors

2mm Pitch Vertical Bus Connectors

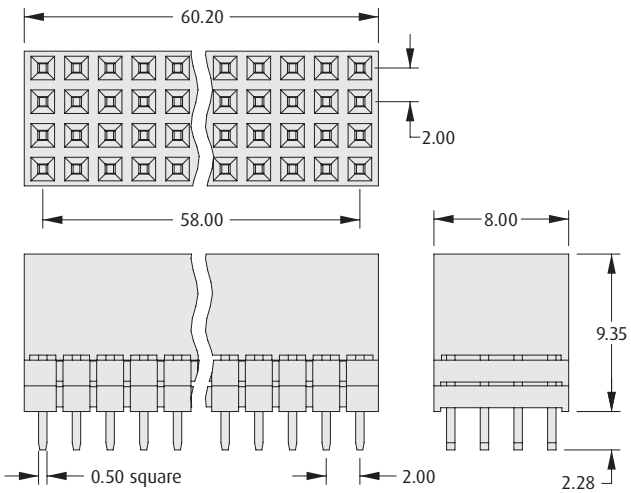
- Supports PCI bus.
- Stackthrough connectors act as both male and female connectors.
- Available in Solder tail configuration.



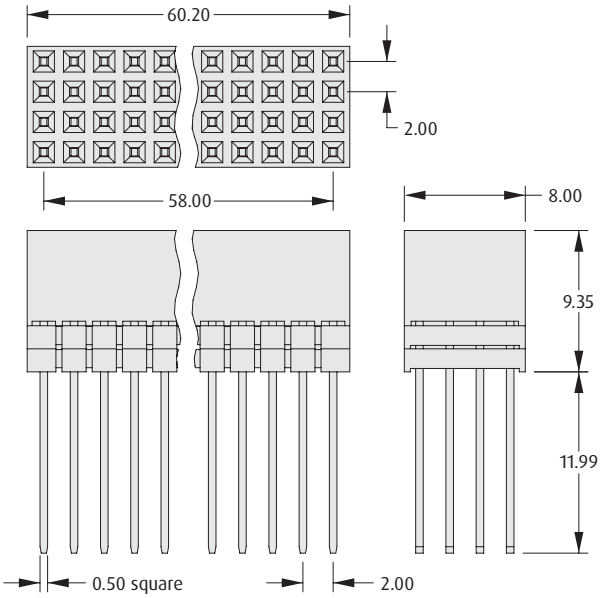


Recommended PC Board Pattern

NON-STACKTHROUGH



STACKTHROUGH



HOW TO ORDER

M22 - 60 X 30 05

SERIES CODE

TYPE	
0	Stackthrough
1	Non-Stackthrough

FINISH	
05	Gold

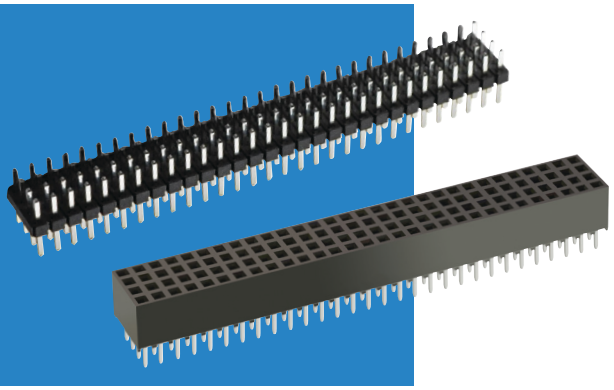
NO. OF CONTACTS PER ROW
30

All dimensions in mm.

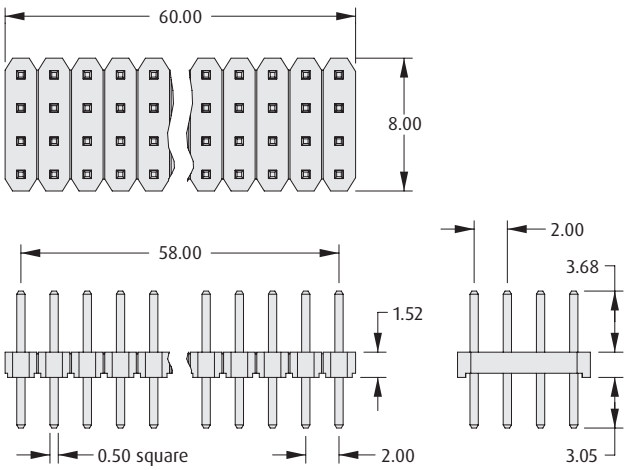
PC/104 Plus Connectors

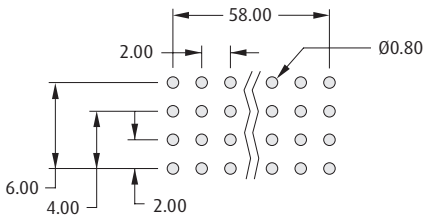
2mm Pitch Accessory Connectors

- Accessory connectors for use with the PC/104 Plus range.



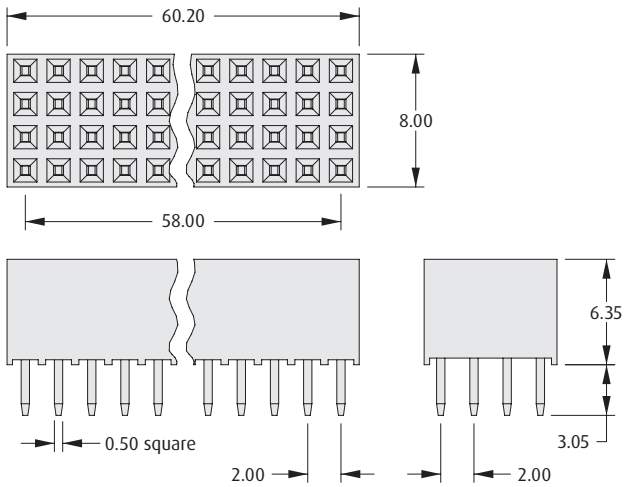
PC/104 PLUS POST HEADER

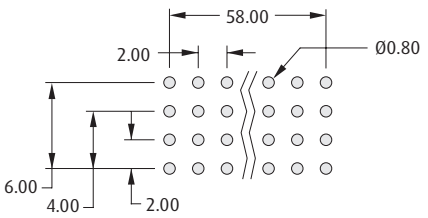




Recommended PC Board Pattern

PC/104 PLUS POST HEADER RECEPTACLE





Recommended PC Board Pattern

HOW TO ORDER

M22 - 60 X 30 42

SERIES CODE

TYPE	
2	Post Header
3	Post Receptacle

FINISH	
42	Gold + Tin

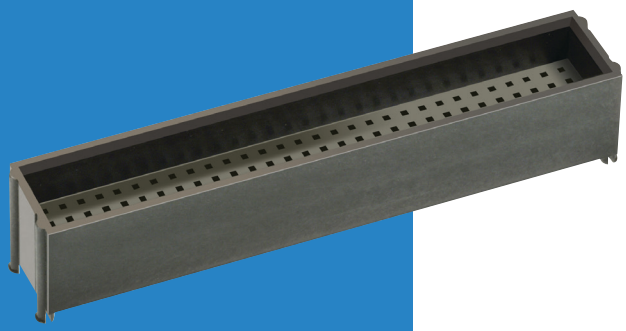
NO. OF CONTACTS PER ROW
30

All dimensions in mm.

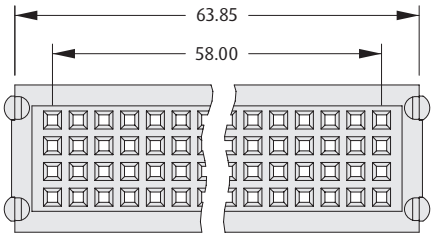
PC/104 Plus Connectors

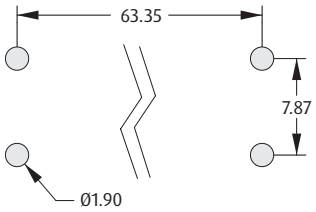
Accessories

- Accessory components for use with the PC/104 Plus range.
- The shroud is used to protect the long tails of the Stackthrough connector from the previous page, and ensures alignment with a mating connector. It self retains on the underside of the PCB after the Stackthrough connector has been soldered to the PCB, by latching into the four mounting holes.

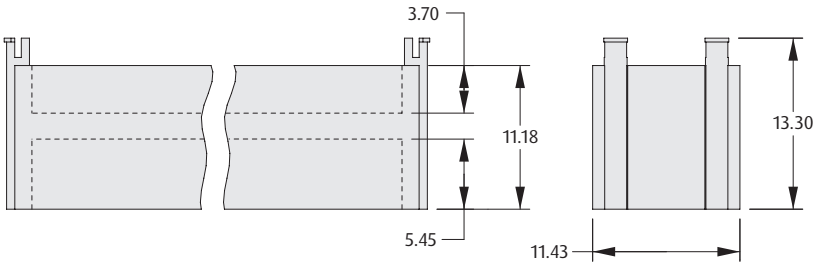


PC/104 PLUS SHROUD



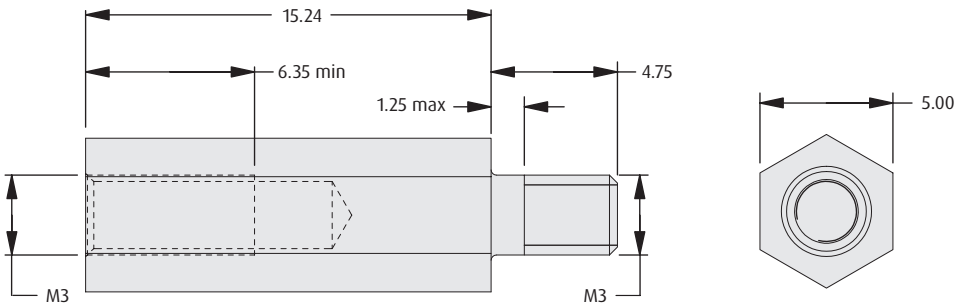


Recommended PC Board Pattern



ORDER CODE
M22-6043098

PC/104 SPACER



ORDER CODE
R6104-02

All dimensions in mm.