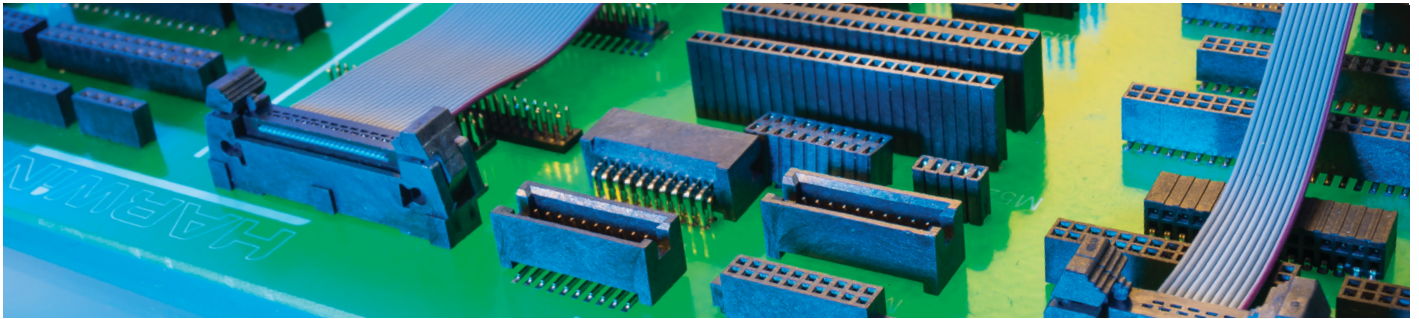


Archer Connectors

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 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

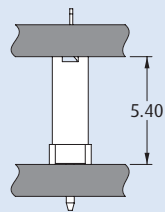
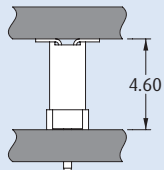
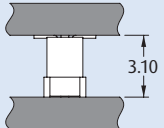
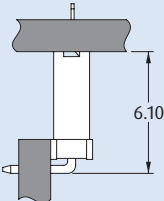
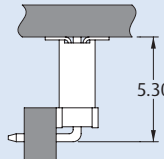
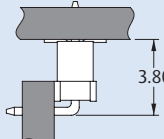
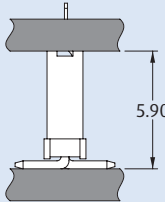
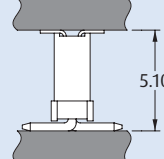
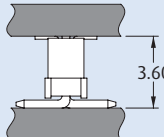
Durability	
M50-310, 312, 491:	100 operations
M50-311:	600 operations
M50-315:	25 operations
M50-353, 363, 393:	500 operations
Others:	300 operations
Insertion force (max)	
M50-303, 313, 314:	1.17N per contact
Jumper sockets:	10.0N
Others:	2.0N per contact
Withdrawal force (min)	
Jumper sockets:	1.3N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

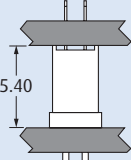
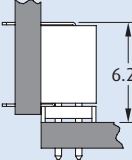
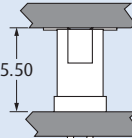
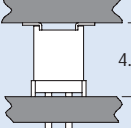
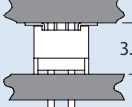
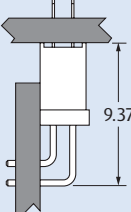
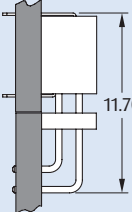
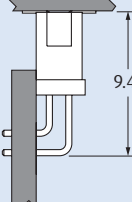
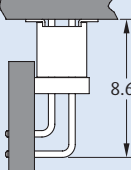
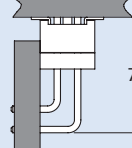
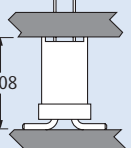
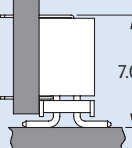
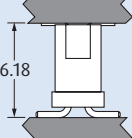
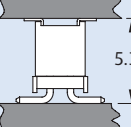
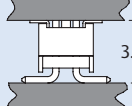
❖ Environmental

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

Mating Profiles

1.27mm (.050") PITCH

SINGLE ROW		FEMALE		
		VERTICAL PC TAIL	VERTICAL SMT	VERTICAL SMT Low Profile
MALE	VERTICAL PC TAIL	 5.40	 4.60	 3.10
	HORIZONTAL PC TAIL	 6.10	 5.30	 3.80
	VERTICAL SMT	 5.90	 5.10	 3.60

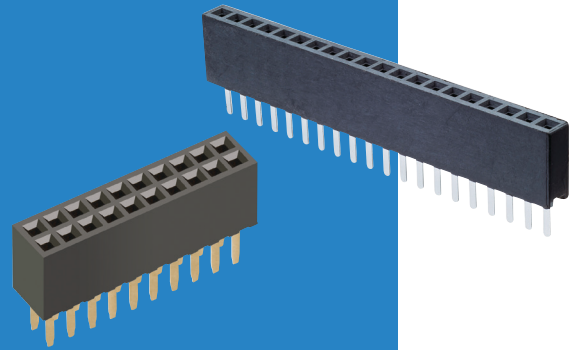
DOUBLE ROW		FEMALE				
		VERTICAL PC TAIL	HORIZONTAL PC TAIL	VERTICAL SMT	VERTICAL SMT Low Profile	
MALE	VERTICAL PC TAIL	 5.40	 6.23	 5.50	 4.60	 3.20
	HORIZONTAL PC TAIL	 9.37	 11.70	 9.47	 8.60	 7.20
	VERTICAL SMT	 6.08	 7.00	 6.18	 5.30	 3.90

All dimensions in mm.

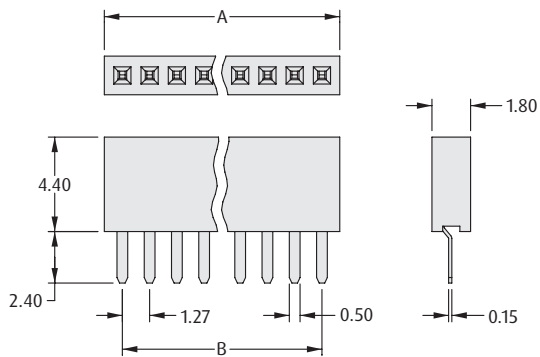
Archer Connectors – M50

Female PC Tail Vertical

- ▣ Twin beam connector for higher durability.

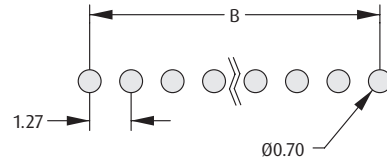


SINGLE ROW



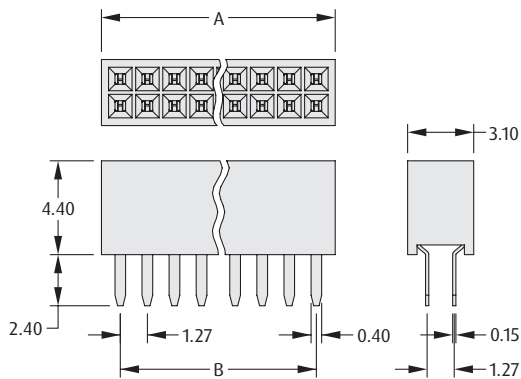
CALCULATION

A	$B + 1.67$
B	$1.27 \times (\text{No. of contacts per row} - 1)$



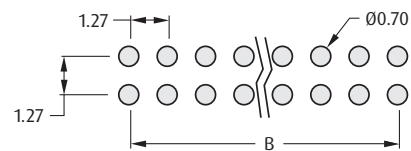
Recommended PC Board Pattern

DOUBLE ROW



CALCULATION

A	$B + 1.77$
B	$1.27 \times (\text{No. of contacts per row} - 1)$



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

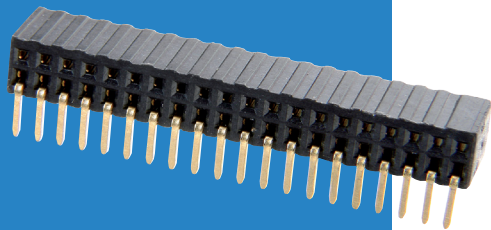
02 to 06, 08, 10, 20	Single Row
03 to 50	Double Row

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.

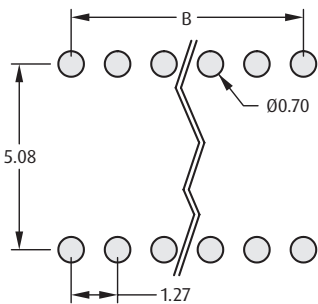
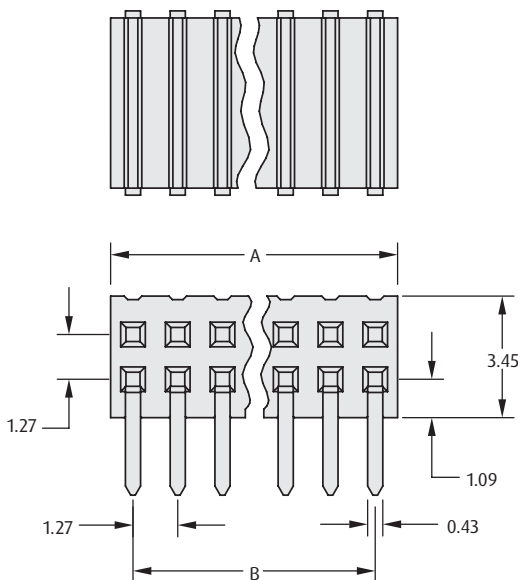


1.27mm (.050") PITCH

HORIZONTAL

CALCULATION

A	$B + 1.77$
B	$1.27 \times (\text{No. of contacts per row} - 1)$



Recommended PC Board Pattern

HOW TO ORDER

M50 - 320 XX 45

SERIES CODE

FINISH

45 Gold

NO. OF CONTACTS PER ROW

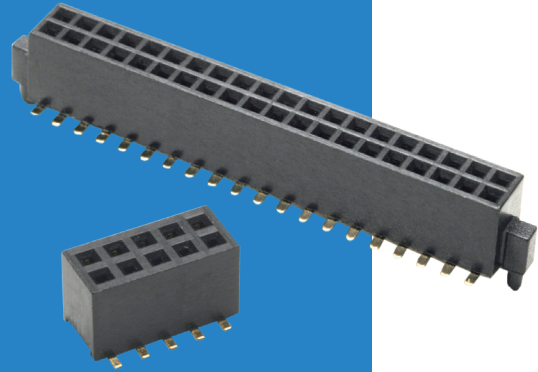
02 to 50

All dimensions in mm.

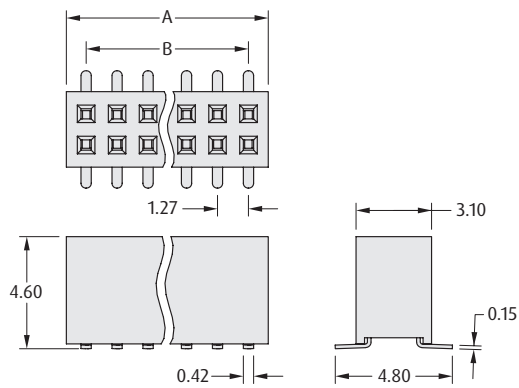
Archer Connectors – M50

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.

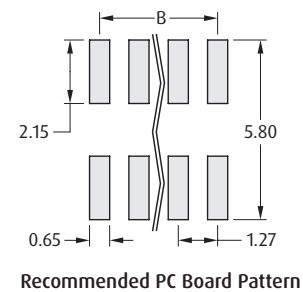


WITHOUT POST

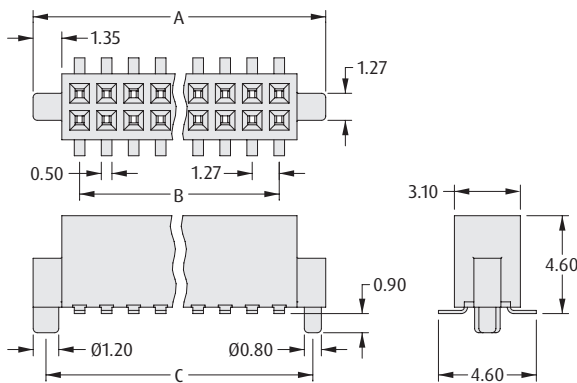


CALCULATION

A	$B + 1.62$
B	$1.27 \times (\text{No. of contacts per row} - 1)$

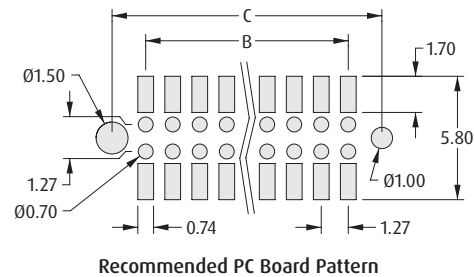


WITH POST, DUAL ENTRY



CALCULATION

A	$B + 4.37$
B	$1.27 \times (\text{No. of contacts per row} - 1)$
C	$B + 3.16$



HOW TO ORDER

SERIES CODE

M50 - 31 X XX XX

TYPE

0	Without Posts
1	With Posts

FINISH

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

NO. OF CONTACTS PER ROW

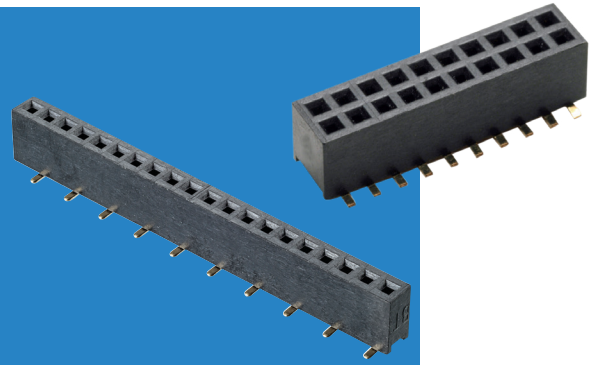
03 to 50	Without Posts
05 to 12, 15, 20, 25, 30, 35, 40, 45, 50	With Posts

All dimensions in mm.

Archer Connectors – M50

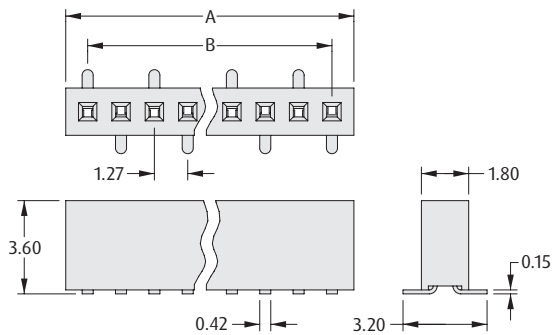
Female Vertical Surface Mount, Low Profile

- ❖ 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.



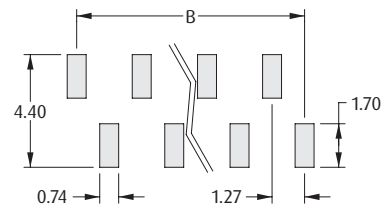
1.27mm (.050") PITCH

SINGLE ROW



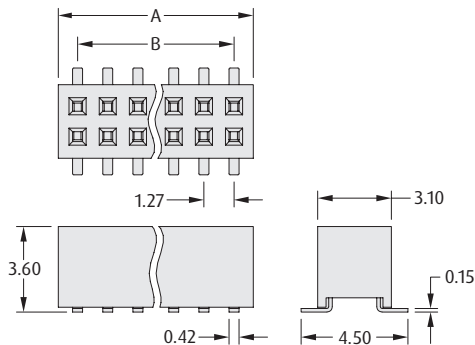
CALCULATION

A	$B + 1.67$
B	$1.27 \times (\text{No. of contacts per row} - 1)$



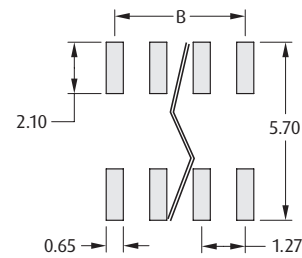
Recommended PC Board Pattern

DOUBLE ROW



CALCULATION

A	$B + 1.73$
B	$1.27 \times (\text{No. of contacts per row} - 1)$



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

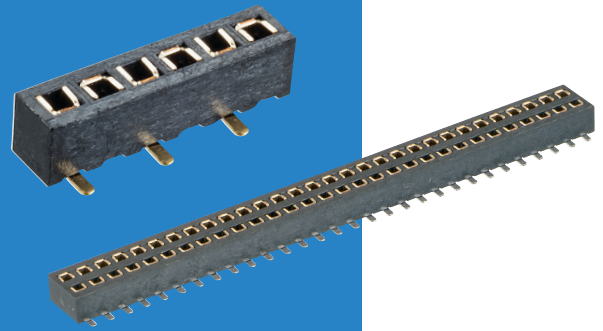
03 to 50	Double Row
02 to 06, 08, 10, 20	Single Row

All dimensions in mm.

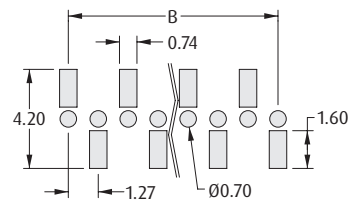
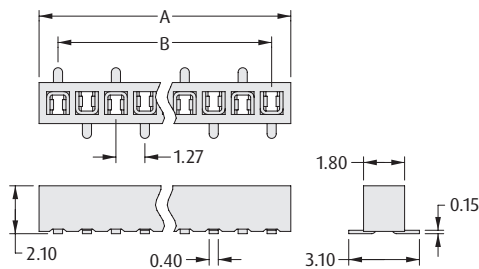
Archer Connectors – M50

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

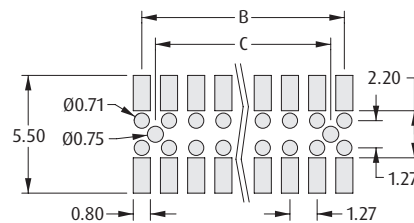
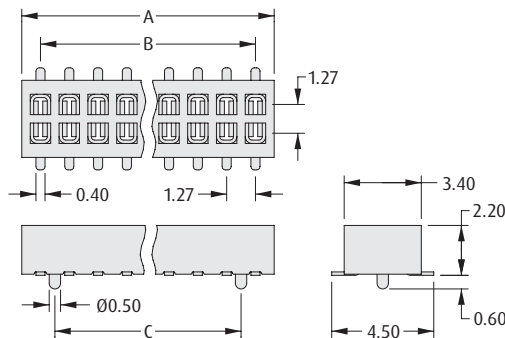


Recommended PC Board Pattern

CALCULATION

A	$B + 1.67$
B	$1.27 \times (\text{No. of contacts per row} - 1)$

DOUBLE ROW WITH POSTS



Recommended PC Board Pattern

CALCULATION

A	$B + 1.67$
B	$1.27 \times (\text{No. of contacts per row} - 1)$
C	$B + 1.27$

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 40	Double Row

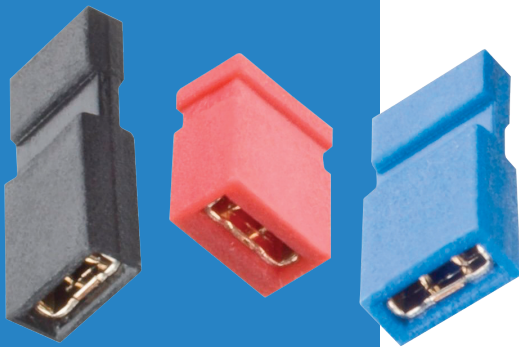
All dimensions in mm.

Archer Connectors – M50

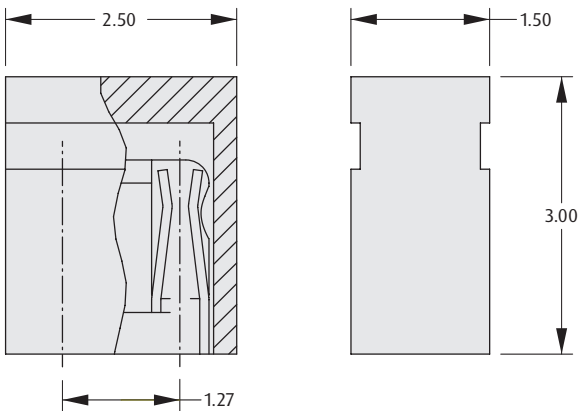
1.27mm (.050") PITCH

Jumper Sockets

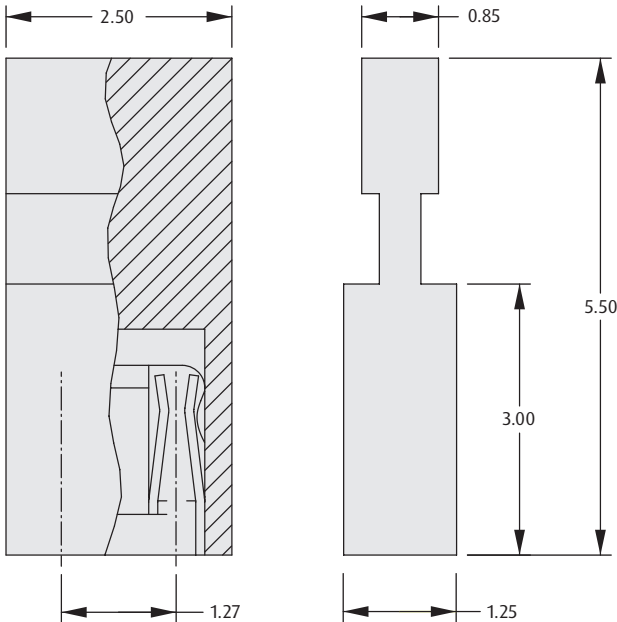
- ❖ Can be fitted and removed by hand, giving an alternative on-board programming method to DIP switches.
- ❖ Suitable for use with male M50 pin headers.
- ❖ Choice of colours available.
- ❖ Closed top with handle available for easier handling, placing and removing.



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

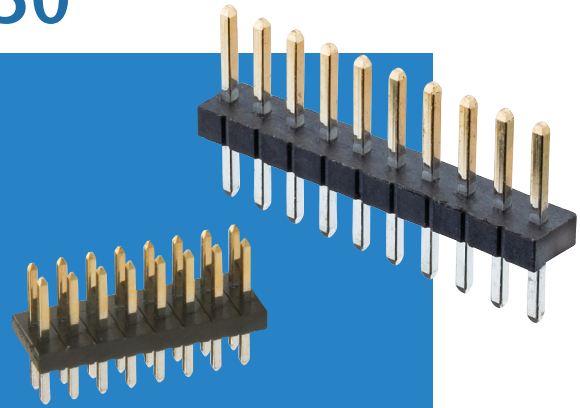
05 Gold

All dimensions in mm.

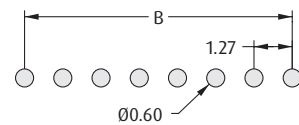
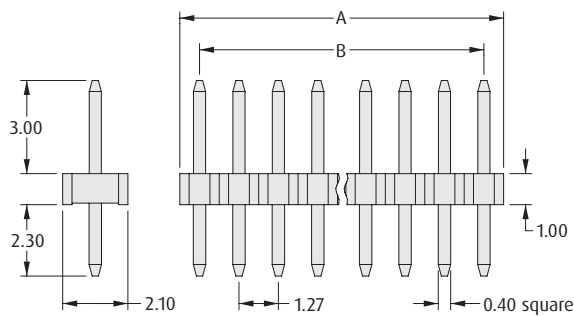
Archer Connectors – M50

Male PC Tail Vertical

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



SINGLE ROW

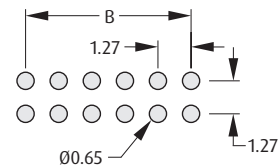
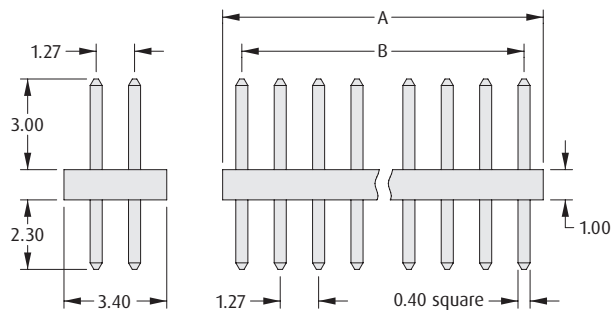


Recommended PC Board Pattern

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

SERIES CODE

M50 - 35 X XX 42

TYPE

0	Double Row
3	Single Row

FINISH

42	Gold + Tin
-----------	------------

NO. OF CONTACTS PER ROW

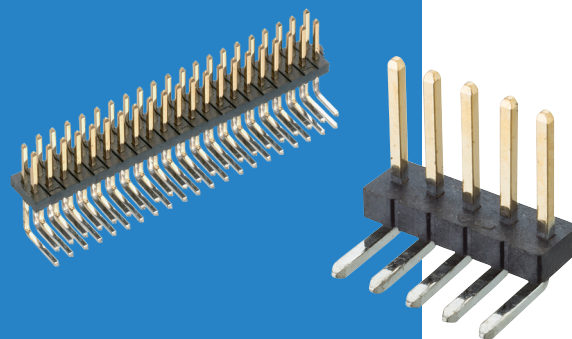
02 to 50	Double Row
02 to 06, 08, 10, 20	Single Row

All dimensions in mm.

Archer Connectors – M50

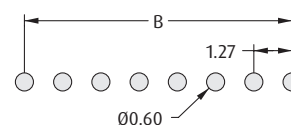
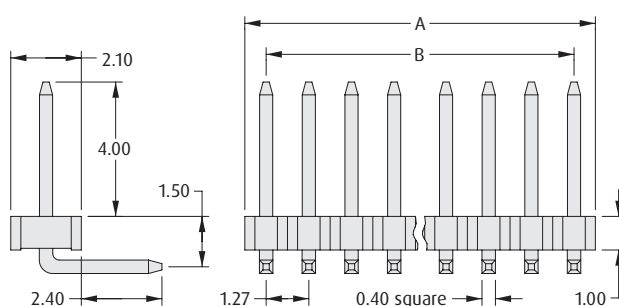
Male PC Tail Horizontal

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



1.27mm (.050") PITCH

SINGLE ROW

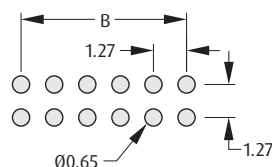
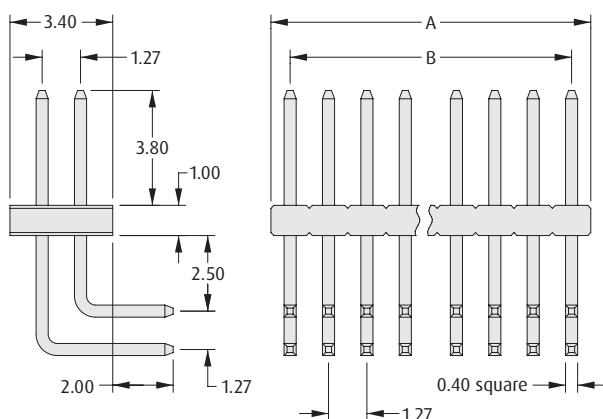


Recommended PC Board Pattern

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

M50 - 39 X XX 42

SERIES CODE

TYPE

0	Double Row
3	Single Row

FINISH

42 Gold + Tin

NO. OF CONTACTS PER ROW

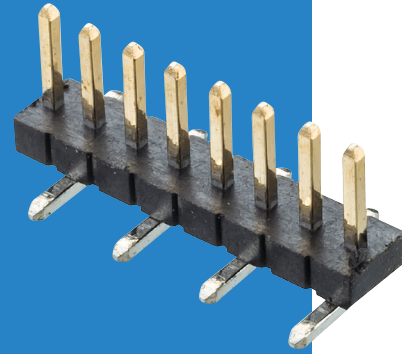
02 to 50	Double Row
02 to 06, 08, 10, 20	Single Row

All dimensions in mm.

Archer Connectors – M50

Male Vertical Surface Mount Single Row

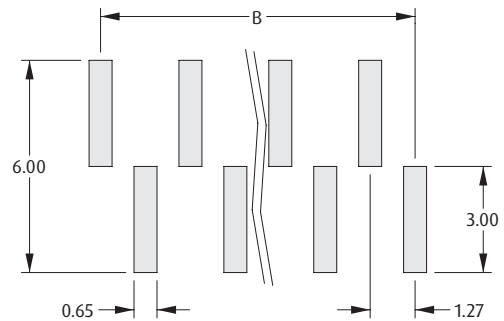
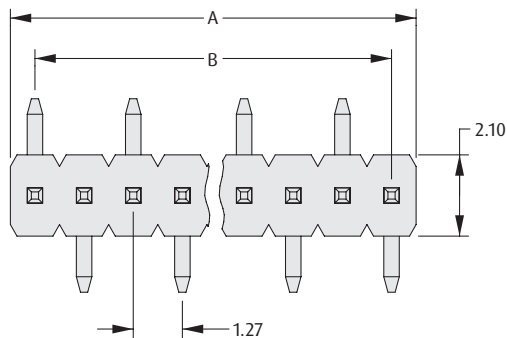
- Suitable for use with female connectors and jumper sockets.
- Tape and Reel packaging option includes Pick and Place cap for automated assembly.



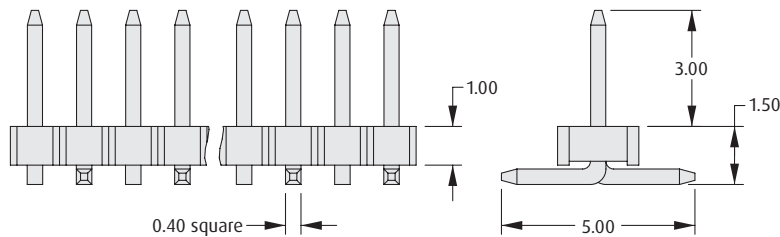
SINGLE ROW

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

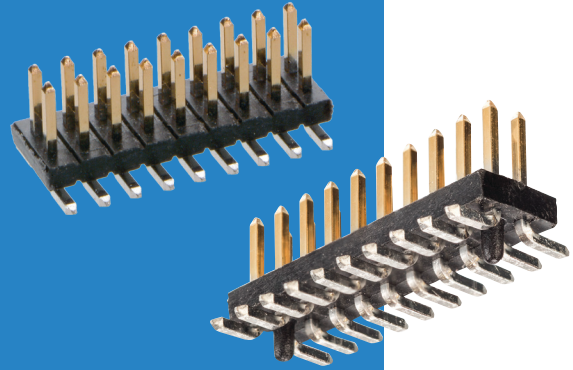
42	Gold + Tin
-----------	------------

All dimensions in mm.

Archer Connectors – M50

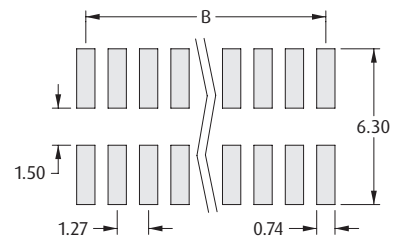
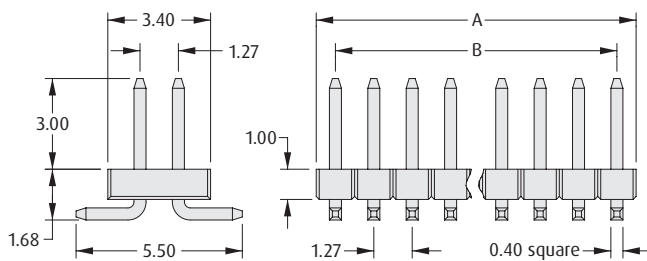
Male Vertical Surface Mount Double Row

- ❖ 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.



1.27mm (.050") PITCH

WITHOUT POSTS

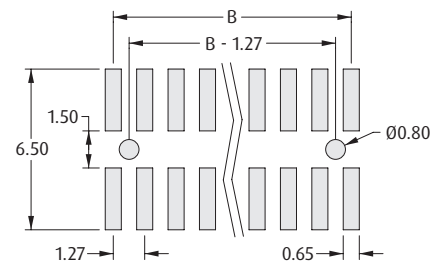
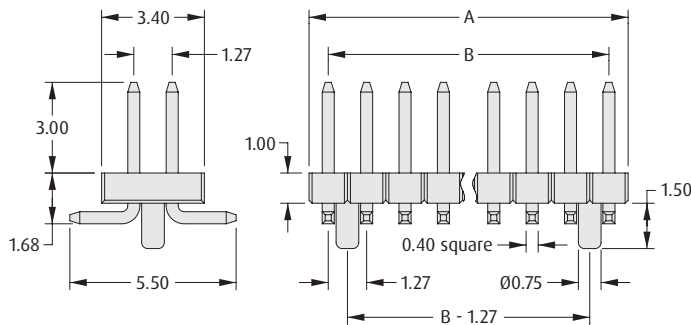


Recommended PC Board Pattern

CALCULATION

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

WITH POSTS



Recommended PC Board Pattern

HOW TO ORDER

SERIES CODE

M50 - 36 X XX 42 X

TYPE

0	Without Posts
1	With Posts

NO. OF CONTACTS PER ROW

02 to 50	Without Posts
05 to 08, 10, 12, 15, 20, 25	With Posts

PACKAGING

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

FINISH

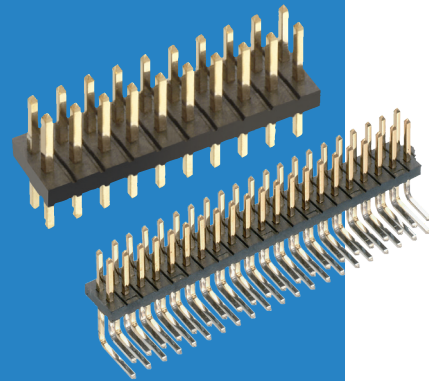
42	Gold + Tin
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All dimensions in mm.

Archer Connectors – M50

Pin Header Variants

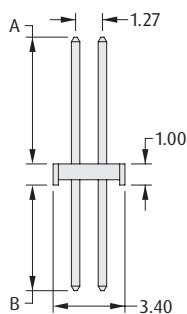
- ❖ If you are unable to specify the connector you require from our standard range of Archer M50 connectors, use the order code below to create an application-specific connector.
- ❖ Contact technical@harwin.com for further information, or search online for M50-XXX.
- ❖ Suitable for use with female connectors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



TERMINATION STYLES

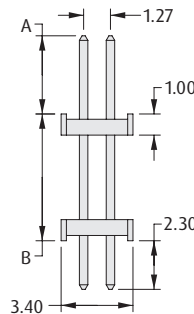
Vertical PC Tail W Series

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



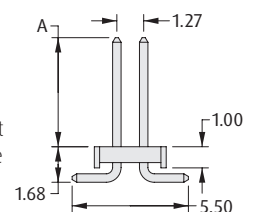
Extended PC Tail F Series

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



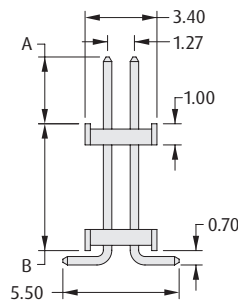
Vertical SMT S Series

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



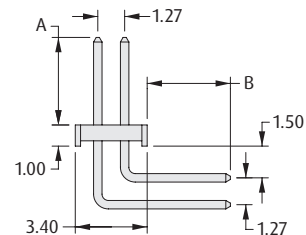
Extended SMT T Series

- ❖ 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

FINISH

45

Gold

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

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

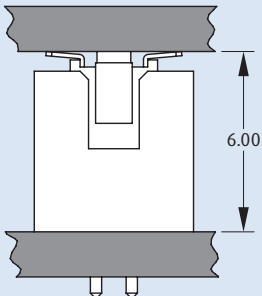
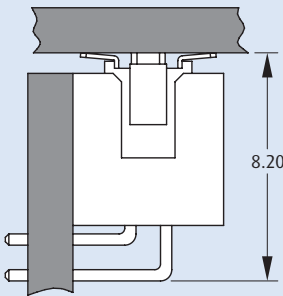
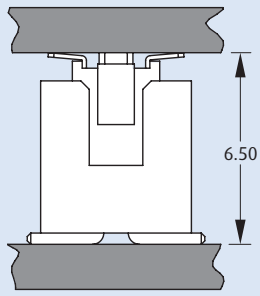
Current:	1A per contact
Voltage proof:	300V AC, 500V DC for 1 minute
Contact resistance:	30mΩ max
Insulation resistance:	500MΩ min

❖ Environmental

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

1.27mm (.050") PITCH

Mating Profiles

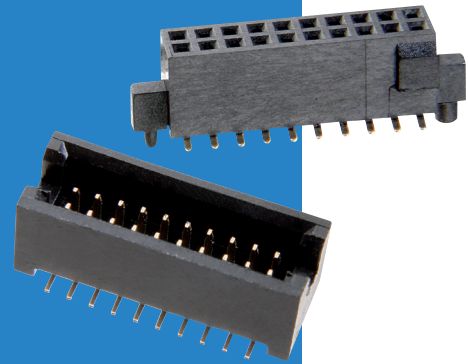
	MALE		
	VERTICAL PC TAIL	HORIZONTAL PC TAIL	VERTICAL SMT
FEMALE VERTICAL SMT			

All dimensions in mm.

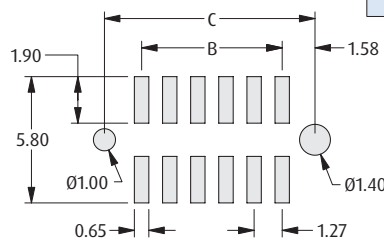
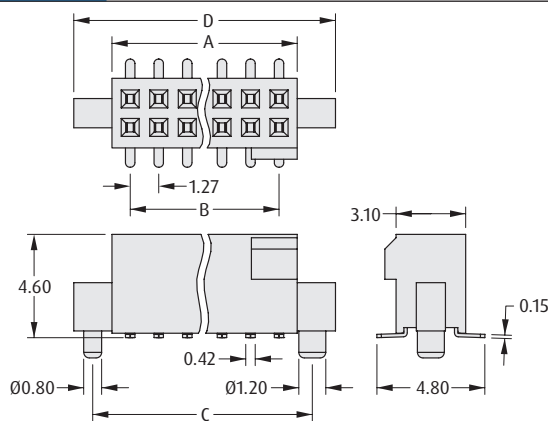
Archer Connectors – Polarised

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

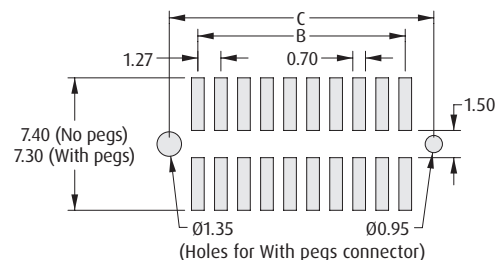
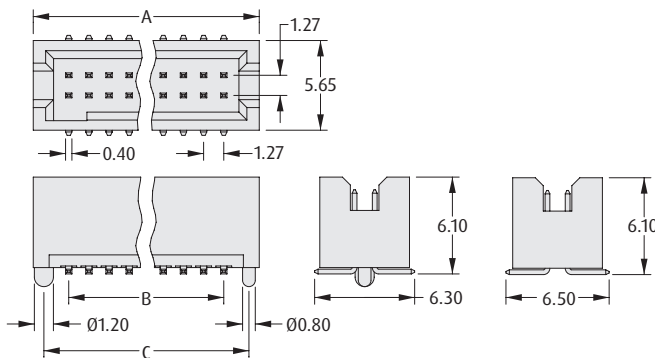


Recommended PC Board Pattern

CALCULATION

A	$B + 1.62$
B	$1.27 \times (\text{No. of contacts per row} - 1)$
C	$B + 3.15$
D	$B + 5.02$

MALE



Recommended PC Board Pattern

CALCULATION

A	$B + 4.47$
B	$1.27 \times (\text{No. of contacts per row} - 1)$
C	$B + 3.15$

HOW TO ORDER

SERIES CODE

M50 - 4XX XX 45 X

TYPE

430	Female
490	Male without pegs
491	Male with pegs

NO. OF CONTACTS PER ROW

03 to 50	Female
05 to 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
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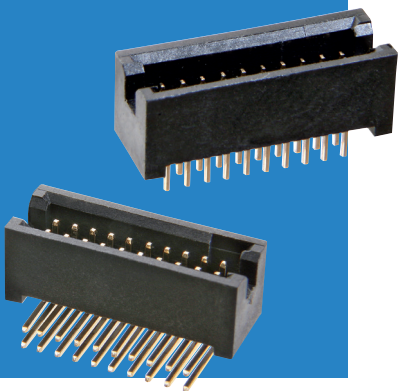
All dimensions in mm.

Archer Connectors – Polarised

1.27mm (.050") PITCH

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	$1.27 \times (\text{No. of contacts per row} - 1)$

HOW TO ORDER

SERIES CODE

TYPE

M50

- 4

X 0

XX

45

FINISH

45 Gold

NO. OF CONTACTS PER ROW

05 to 40

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

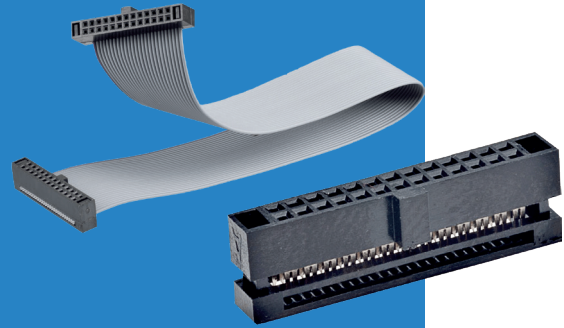
MALE			
	VERTICAL PC TAIL	VERTICAL SMT	CABLE
FEMALE CABLE			

All dimensions in mm.

Archer Connectors – M50 IDC

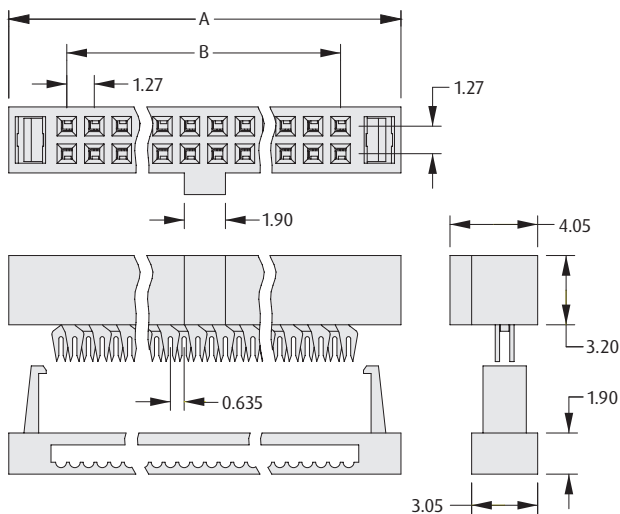
Female Cable Connector & Cable Assembly

- ❖ 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.



1.27mm (.050") PITCH

FEMALE IDC



HAND TOOL



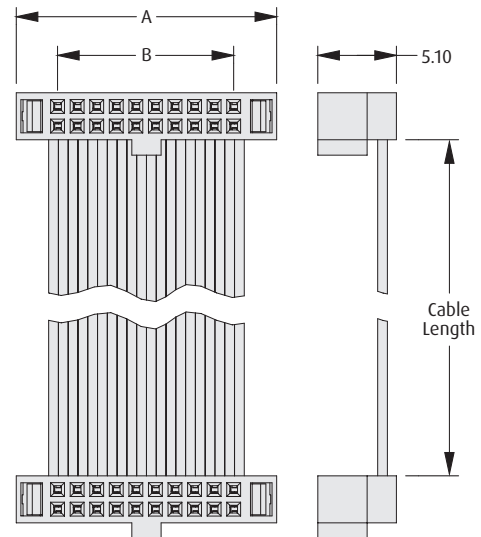
ORDER CODE
Z50-020

CALCULATION

A	$B + 5.47$
B	$1.27 \times (\text{No. of contacts per row} - 1)$

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.



HOW TO ORDER

M50 - XXX XX 42

SERIES CODE

TYPE

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

FINISH

42	Gold + Tin
-----------	------------

NO. OF CONTACTS PER ROW

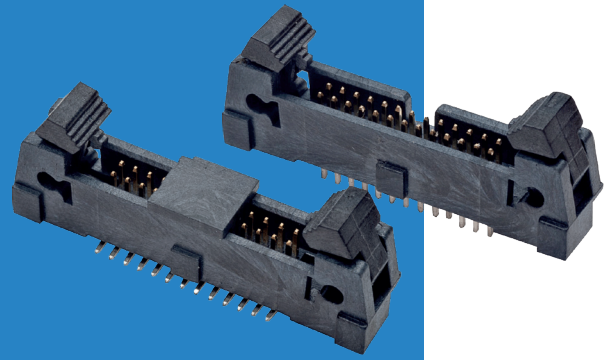
05, 10, 13, 17, 20, 25	All
06, 07, 08	M50-330 only

All dimensions in mm.

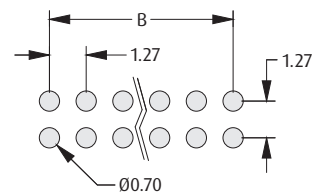
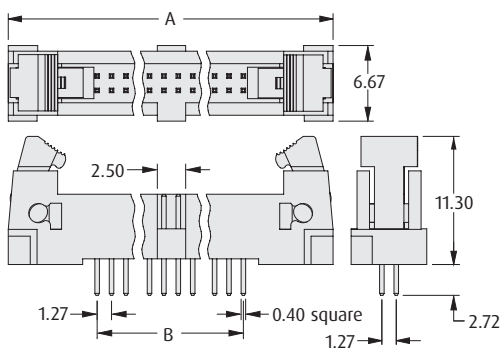
Archer Connectors – M50 IDC

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

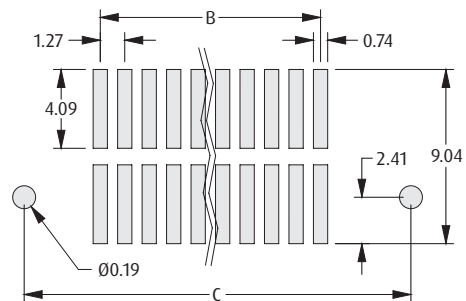
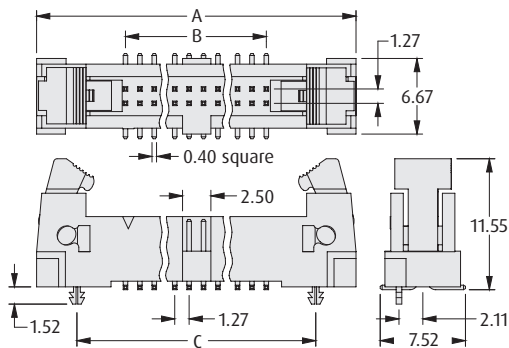


Recommended PC Board Pattern

CALCULATION

A	$B + 15.75$
B	$1.27 \times (\text{No. of contacts per row} - 1)$
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

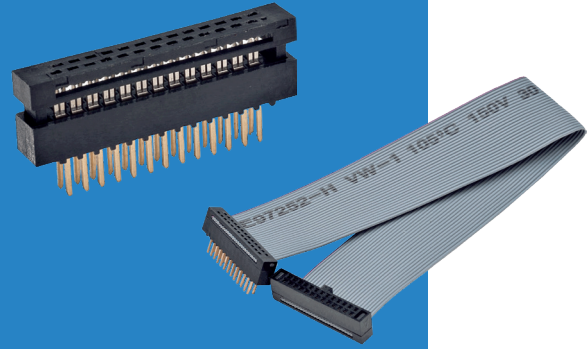
42	Gold + Tin
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All dimensions in mm.

Archer Connectors – M50 IDC

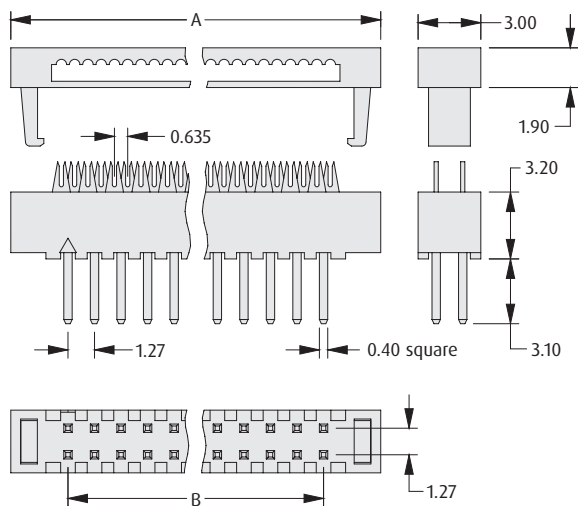
Male Cable Connectors & Cable Assembly

- 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.



1.27mm (.050") PITCH

MALE IDC



HAND TOOL



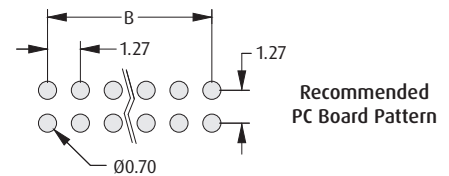
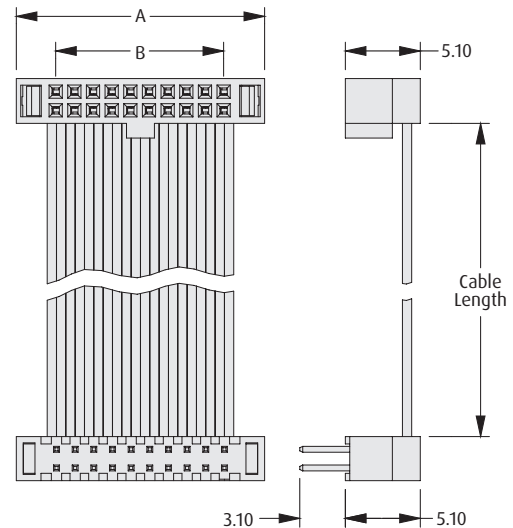
ORDER CODE
Z50-020

CALCULATION

A	$B + 5.47$
B	$1.27 \times (\text{No. of contacts per row} - 1)$

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

HOW TO ORDER

SERIES CODE

TYPE

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

M50 - XXX XX 42

FINISH

42	Gold + Tin
-----------	------------

NO. OF CONTACTS PER ROW

05, 10, 13, 17, 20, 25	All
06, 07, 08	M50-380 only

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

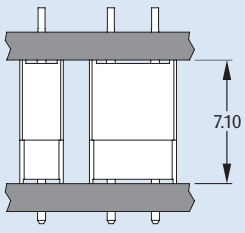
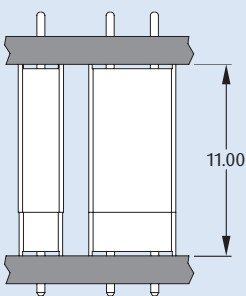
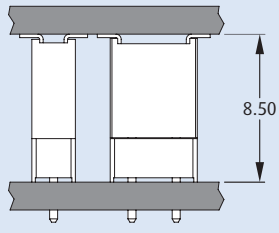
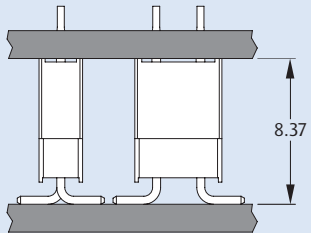
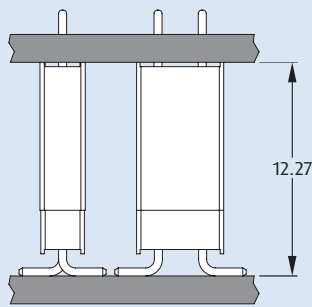
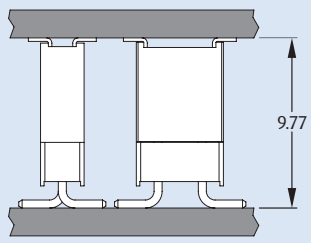
Mechanical

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/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

Mating Profiles

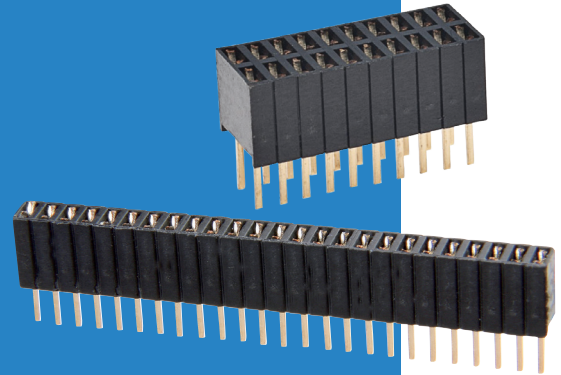
		FEMALE		
		VERTICAL PC TAIL (4.6mm Height)	VERTICAL PC TAIL (8.5mm Height)	VERTICAL SMT
MALE	VERTICAL PC TAIL			
	VERTICAL SMT			

All dimensions in mm.

Archer Connectors – M52

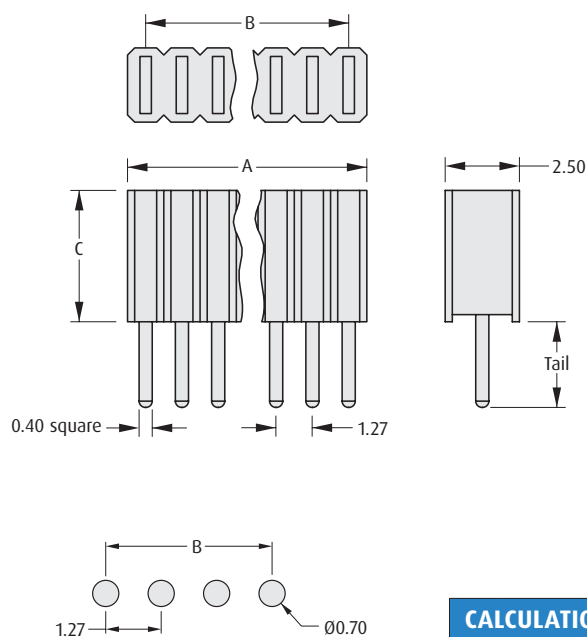
Female Vertical PC Tail

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



1.27mm (.050") PITCH

SINGLE ROW

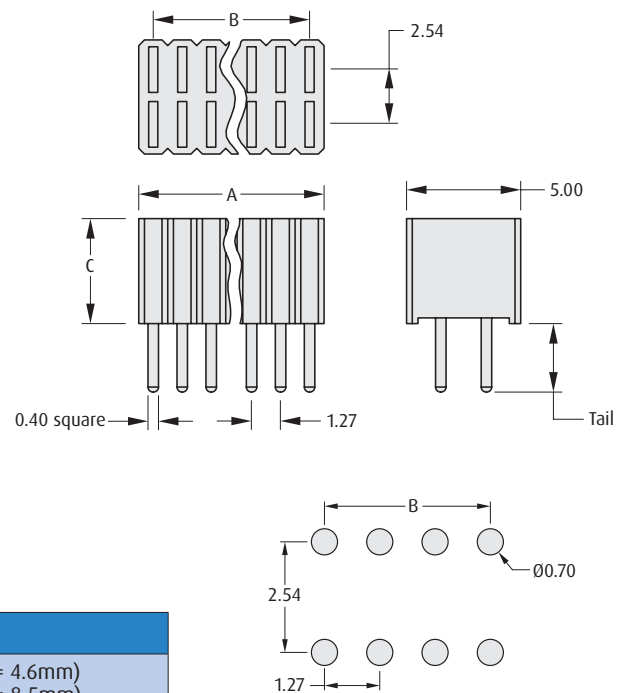


Recommended PC Board Pattern

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

FINISH

45 Gold

NO. OF CONTACTS PER ROW

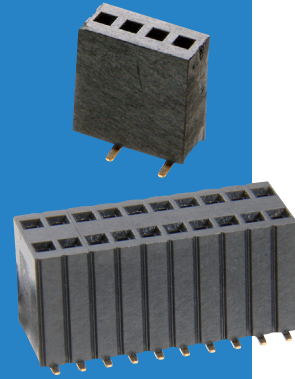
02 to 40

All dimensions in mm.

Archer Connectors – M52

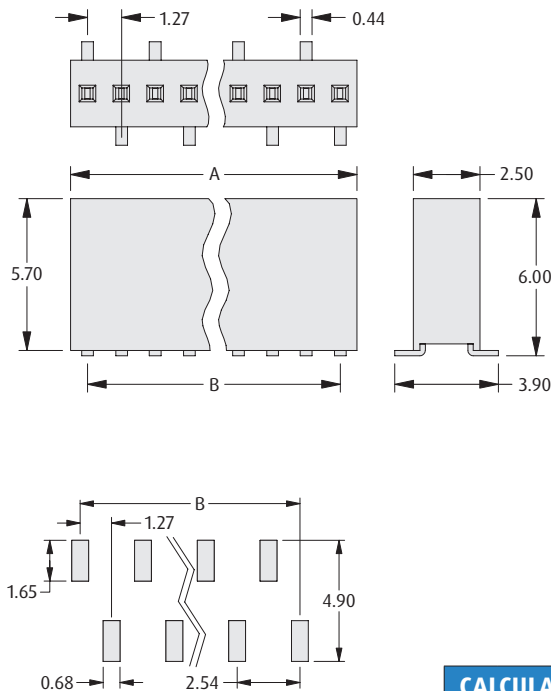
Female Vertical Surface Mount

- 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.



1.27mm (.050") PITCH

SINGLE ROW

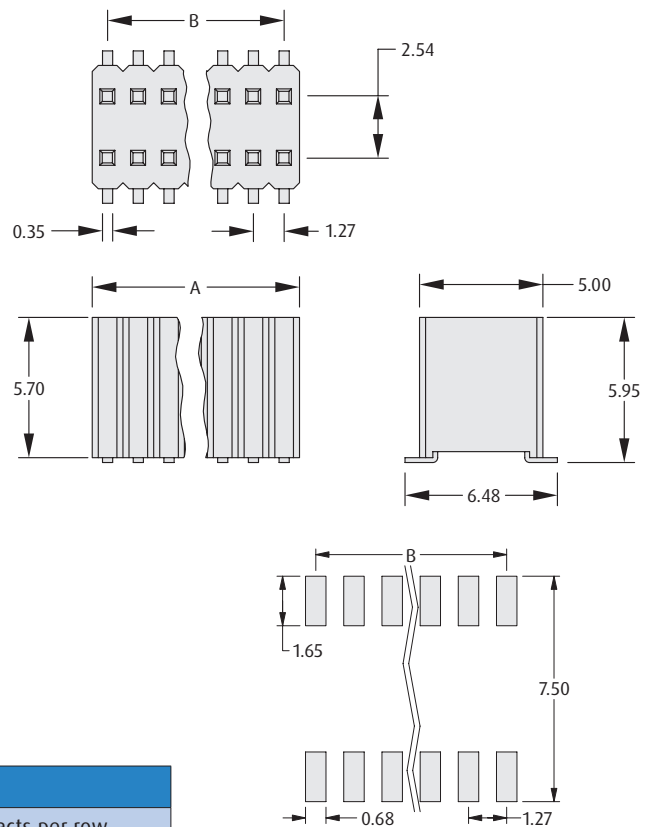


Recommended PC Board Pattern

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

SERIES CODE

M52 - 5 X 5 XX 45

FINISH

45 Gold

TYPE

0	Single Row
1	Double Row

NO. OF CONTACTS PER ROW

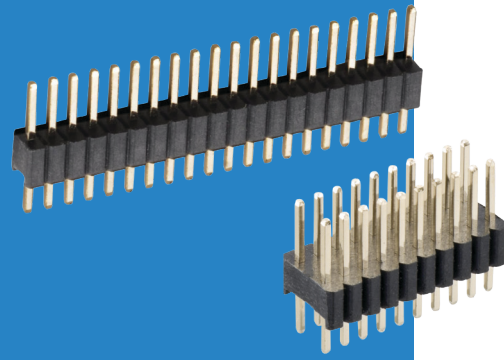
03 to 50

All dimensions in mm.

Archer Connectors – M52

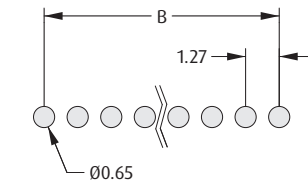
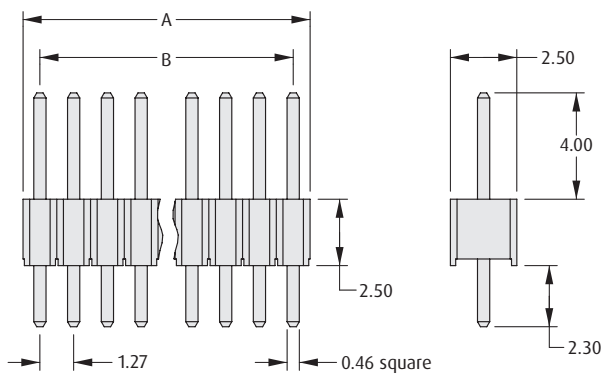
Male Vertical PC Tail

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



1.27mm (.050") PITCH

SINGLE ROW

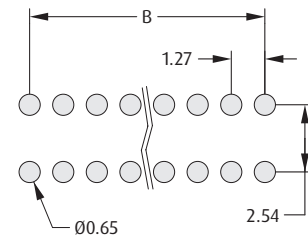
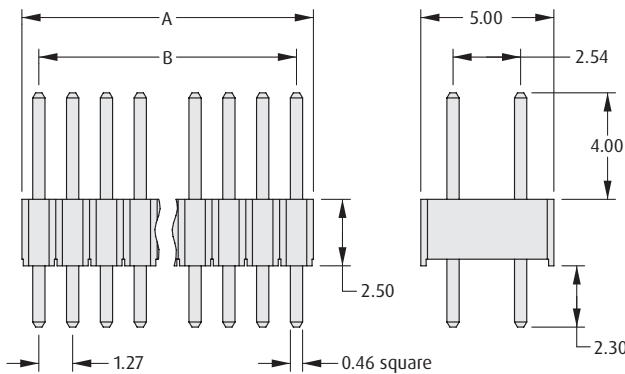


Recommended PC Board Pattern

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

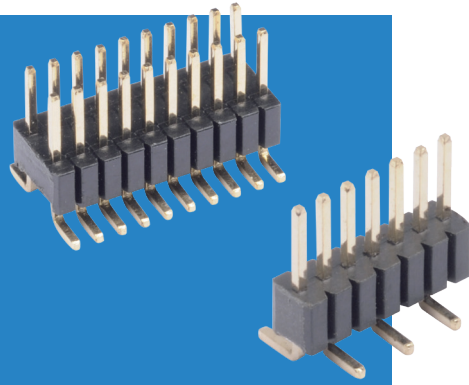
05, 10, 20, 25

All dimensions in mm.

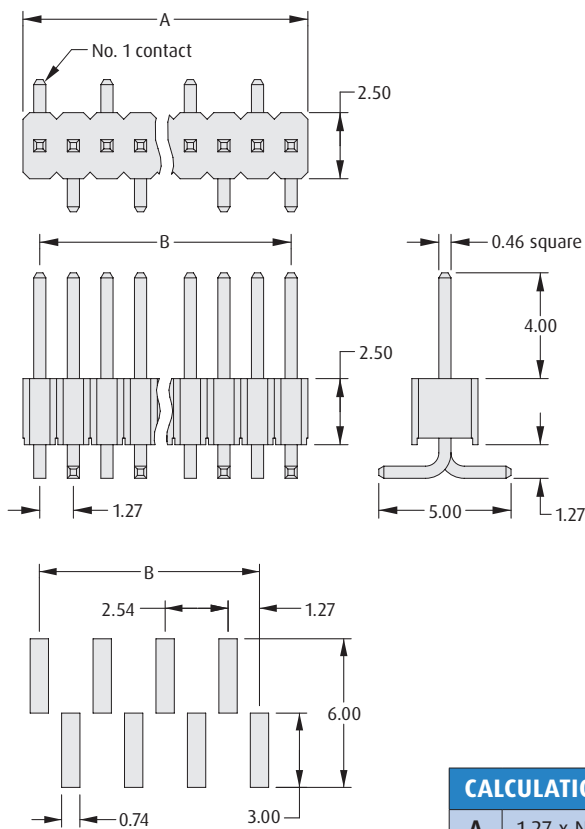
Archer Connectors – M52

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

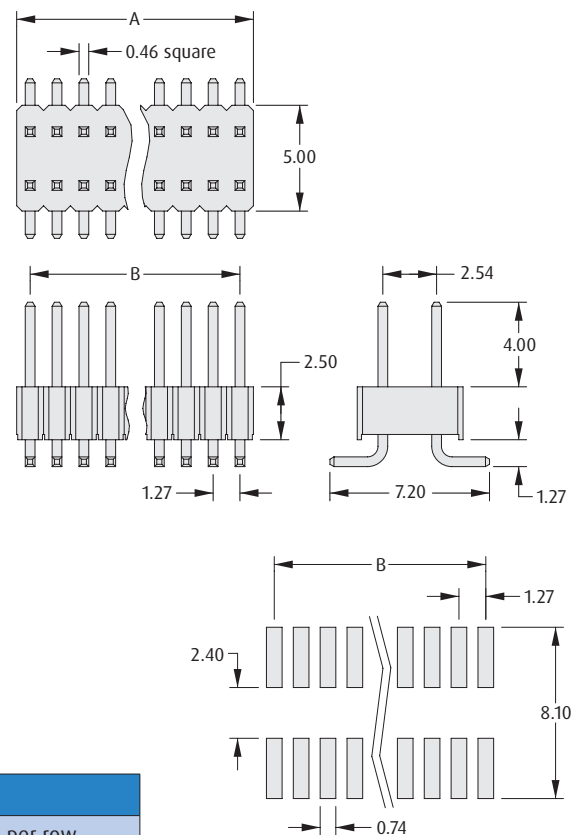


Recommended PC Board Pattern

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 - 040000 X XX 45

SERIES CODE

TYPE

P	Single Row
S	Double Row

FINISH

45	Gold
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NO. OF CONTACTS PER ROW

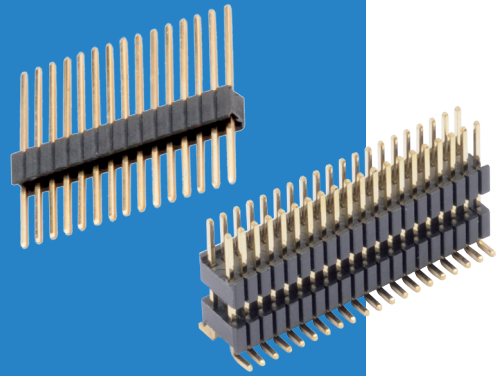
05, 10, 20, 25

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.



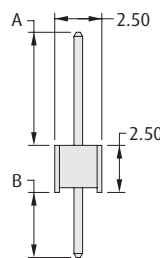
1.27mm (.050") PITCH

TERMINATION STYLES

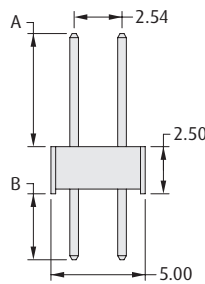
Vertical PC Tail

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

V Series



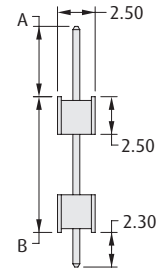
W Series



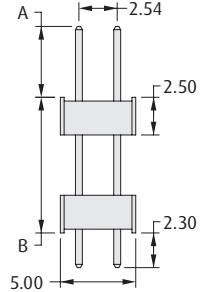
Extended PC Tail

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

E Series



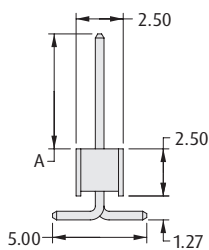
F Series



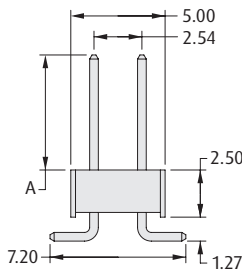
Vertical SMT

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

P Series



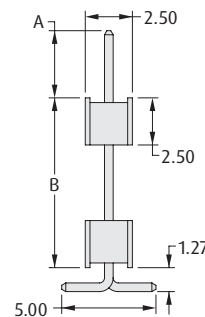
S Series



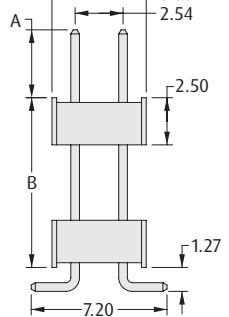
Extended SMT

- ❖ 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

FINISH

45

Gold

NO. OF CONTACTS PER ROW

02 to 50

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

All dimensions in mm.