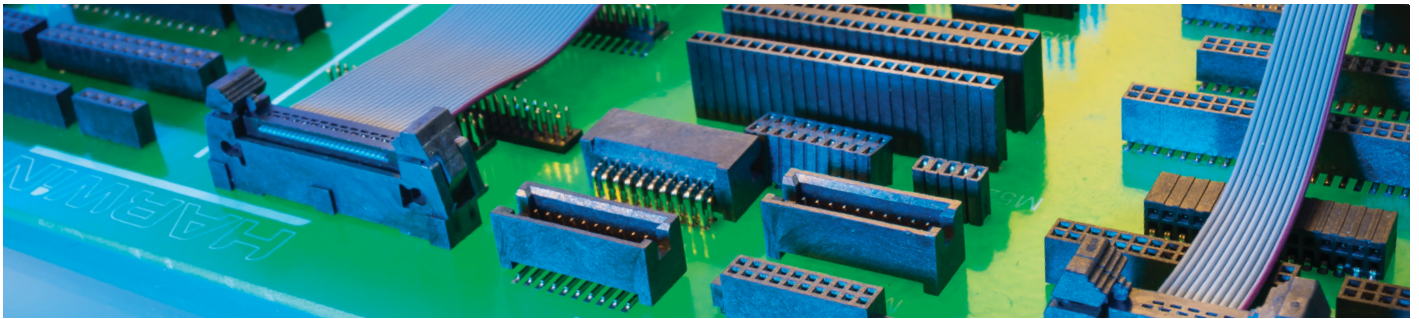


# Archer Connectors

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

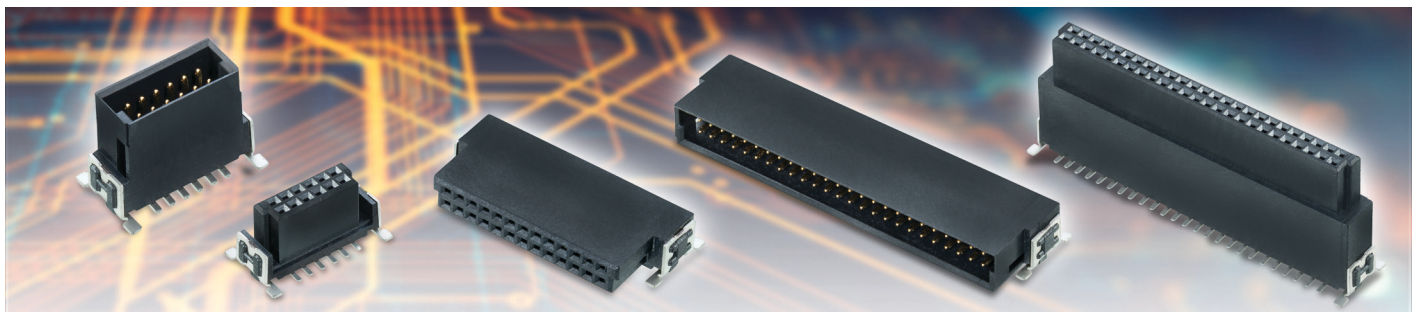
## ❖ Mechanical

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

## ❖ Environmental

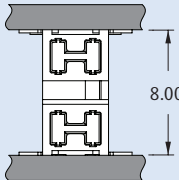
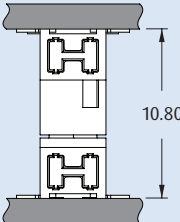
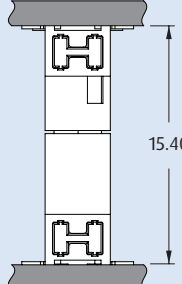
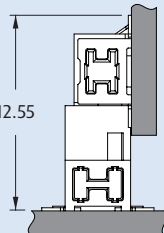
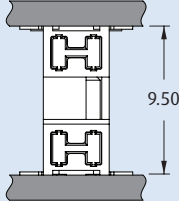
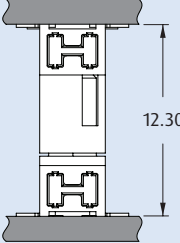
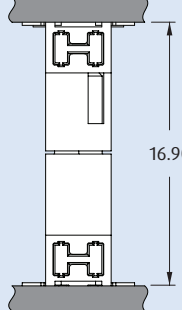
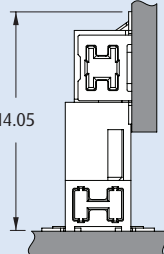
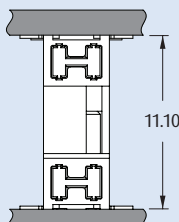
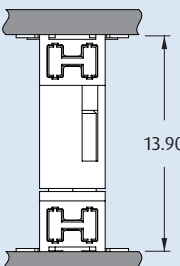
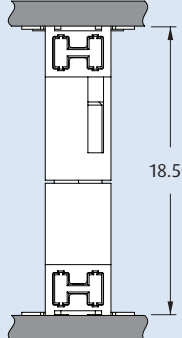
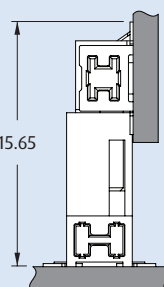
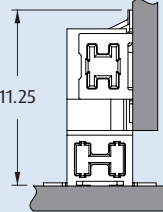
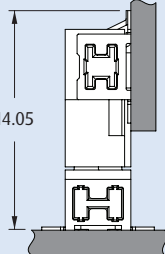
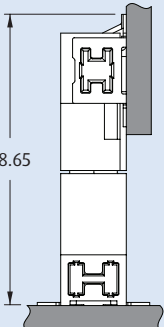
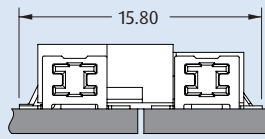
Operating temperature:	-55°C to +125°C
Vibration sensitivity:	10Hz to 2000Hz, 1.52mm, 196m/s <sup>2</sup> (20G), duration 12h
Solderability:	245°C for 5 seconds
Soldering heat resistance:	260°C for 10 seconds

1.27mm (.050") PITCH



# Archer Kontrol Mating Profiles

1.27mm (.050") PITCH

		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					

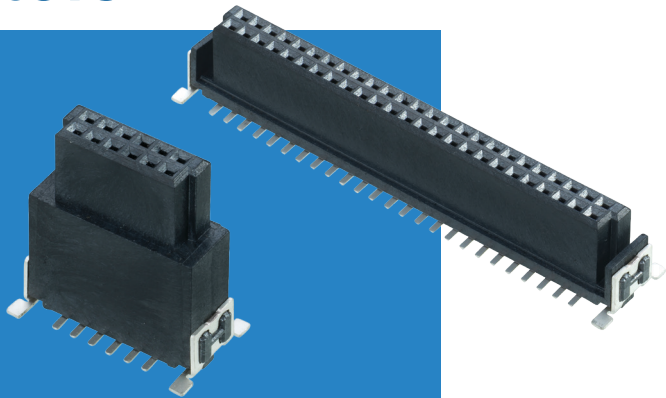
All dimensions in mm.

# Archer Kontrol Connectors

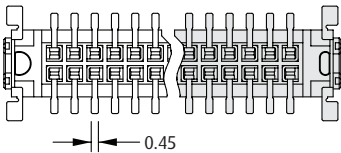
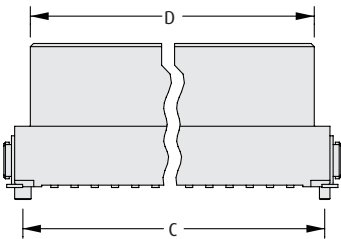
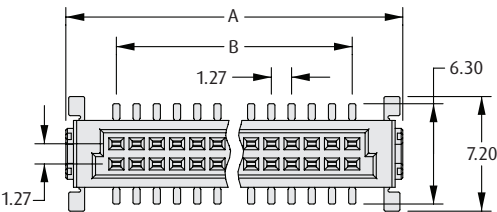
1.27mm (.050") PITCH

## 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.

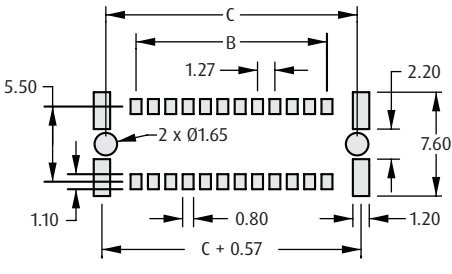


### VERTICAL



### CALCULATION

<b>A</b>	$B + 6.35$
<b>B</b>	$0.635 \times (\text{Total No. of contacts} - 2)$
<b>C</b>	$B + 4.42$
<b>D</b>	$B + 3.02$



Recommended PC Board Pattern

### HOW TO ORDER

M55 - 60 X XX 42 R

#### SERIES CODE

#### CONNECTOR HEIGHT

<b>0</b>	H = 6.25mm
<b>1</b>	H = 9.05mm
<b>2</b>	H = 13.65mm

#### PACKAGING

**R** Tape & Reeled

#### FINISH

**42** Gold + Tin

#### TOTAL NO. OF CONTACTS

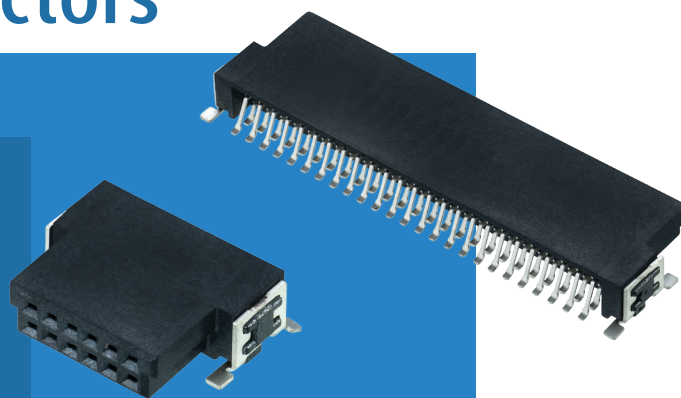
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

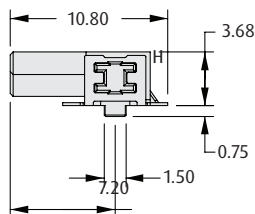
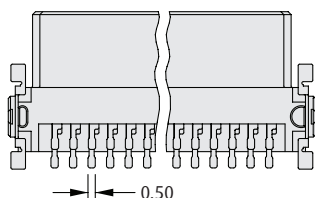
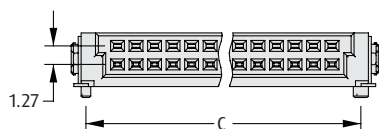
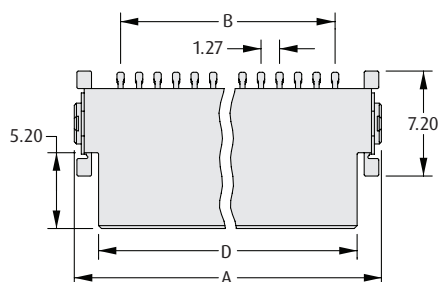
# Archer Kontrol Connectors

## Female Horizontal Surface Mount

- ❖ Suitable for coplanar (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.

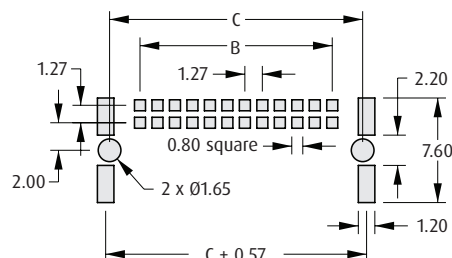


### HORIZONTAL



### CALCULATION

<b>A</b>	$B + 6.35$
<b>B</b>	$0.635 \times (\text{Total No. of contacts} - 2)$
<b>C</b>	$B + 4.42$
<b>D</b>	$B + 3.02$



Recommended PC Board Pattern

### HOW TO ORDER

#### SERIES CODE

**M55 - 610 XX 42 R**

#### PACKAGING

**R** Tape & Reeled

#### FINISH

**42** Gold + Tin

#### TOTAL NO. OF CONTACTS

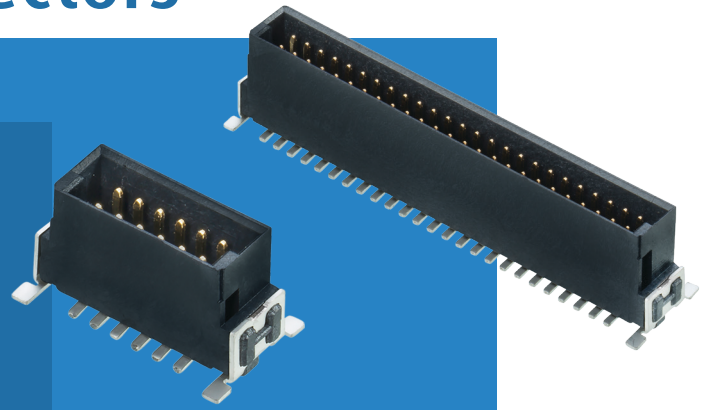
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

# Archer Kontrol Connectors

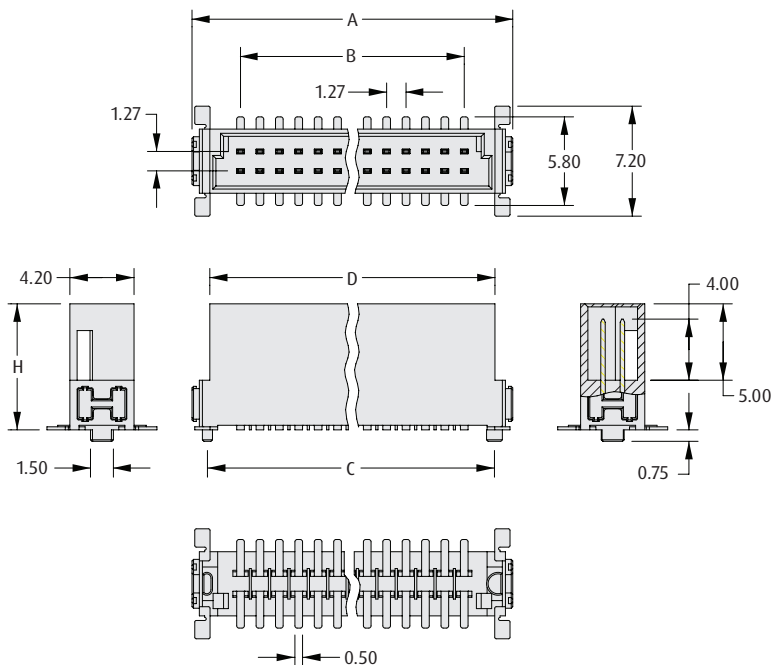
## Male Vertical Surface Mount

- ❖ 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.



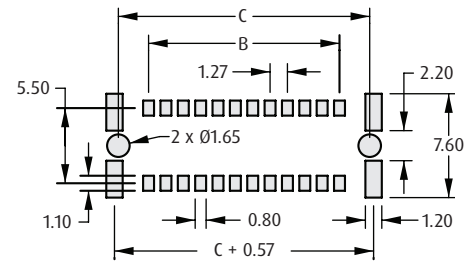
1.27mm (.050") PITCH

### VERTICAL



### CALCULATION

<b>A</b>	$B + 6.35$
<b>B</b>	$0.635 \times (\text{Total No. of contacts} - 2)$
<b>C</b>	$B + 4.42$
<b>D</b>	$B + 4.02$



Recommended PC Board Pattern

### HOW TO ORDER

**M55 - 70 X XX 42 R**

#### SERIES CODE

#### CONNECTOR HEIGHT

<b>0</b>	H = 6.75mm
<b>1</b>	H = 8.25mm
<b>2</b>	H = 9.85mm

#### PACKAGING

<b>R</b>	Tape & Reeled
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#### FINISH

<b>42</b>	Gold + Tin
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#### TOTAL NO. OF CONTACTS

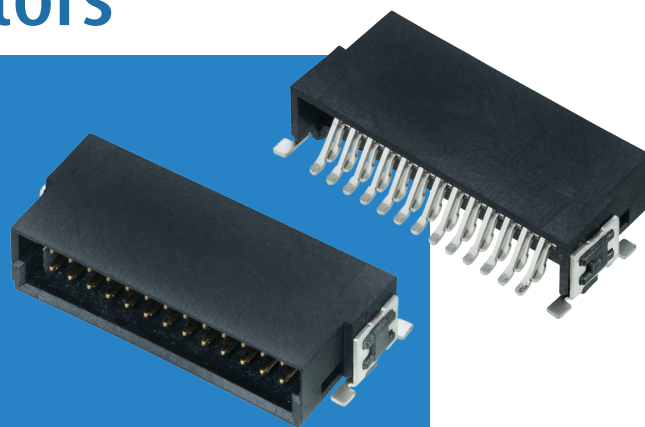
12, 16, 20, 26, 32, 40, 50, 68, 80

All dimensions in mm.

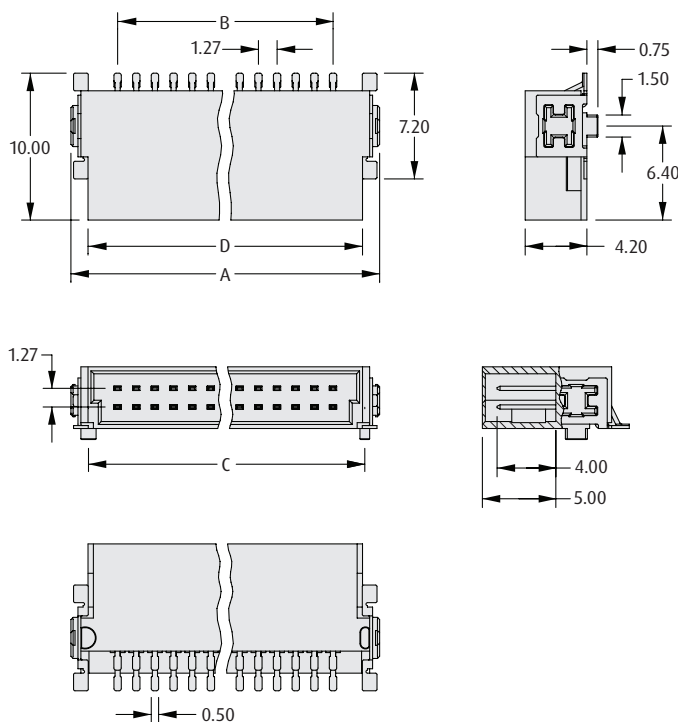
# Archer Kontrol Connectors

## Male Horizontal Surface Mount

- ❖ Suitable for coplanar (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.

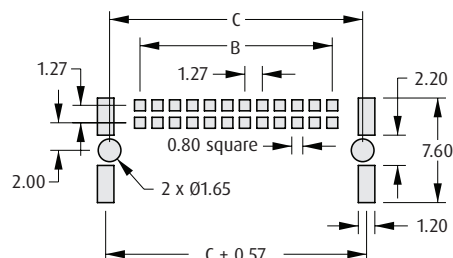


### HORIZONTAL



### CALCULATION

<b>A</b>	$B + 6.35$
<b>B</b>	$0.635 \times (\text{Total No. of contacts} - 2)$
<b>C</b>	$B + 4.42$
<b>D</b>	$B + 4.02$



Recommended PC Board Pattern

### HOW TO ORDER

#### SERIES CODE

**M55 - 710 XX 42 R**

#### 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.