

Sycamore Contacts

Ultra low-profile with three points of contact

Maximize the life of your PCB by making your sensors and modules replaceable items. Use the triple contact design of Harwin’s Sycamore Contact to provide robustness and signal continuity superior to two-point contact systems.

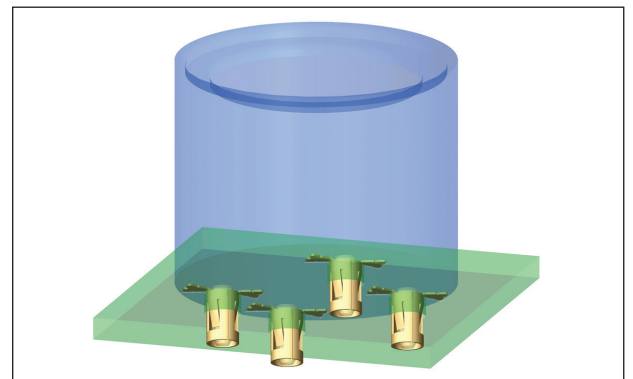
The socket is made from a single piece of gold-plated metal to reduce contact resistance and provide a secure surface mount connection. Contacts are supplied in tape and reel to ensure your operational costs are kept under control.

Choose from top or bottom entry and compatibility with mating pins of either Ø1mm or Ø1.5mm diameter, all with an ultra-low above-PCB height of 0.43mm maximum. These sockets are open-ended, so mating pins length is not limited. Ideal for your application in domestic or commercial gas detection systems, fire alarms or metering systems.

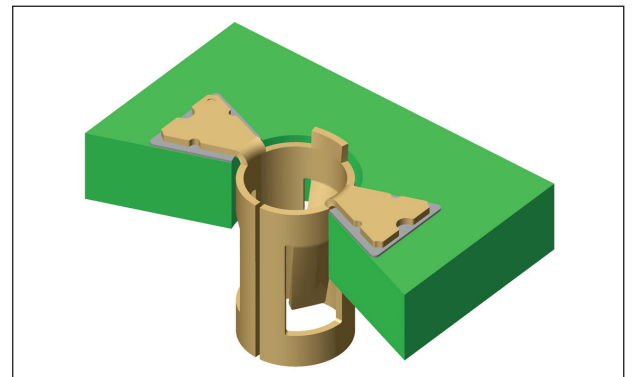


Bottom entry Ø1mm socket

Features and Benefits	
A socket to retain pins on a PCB	Great for use with external modules such as sensors
Surface mount socket	Ease of automation, no need for soldering on the underside of the board
Single piece, stamped	Easier to notice any damage, but still offers 500 mating cycles
Gold plated	Low contact resistance and High Conductivity improve the contact’s performance making it suitable for sensitive components
Packaged in Tape-and-Reel	Provided in standard reels for ease of automation, no pick-and-place cap or tape required
Both top and bottom entry models available	Design flexibility in its use
Compatible with Ø1.0mm and Ø1.5mm pins	Can be used for a variety of sensors and external modules
Protect sensitive components	Remove the risk of heating sensor pins to damage important expensive components
Low cost manufacturing	Remove a hand soldering process and keep all soldering to one side of the PCB
Patent published	Design created and engineered by Harwin



Retain external modules without permanent fixing

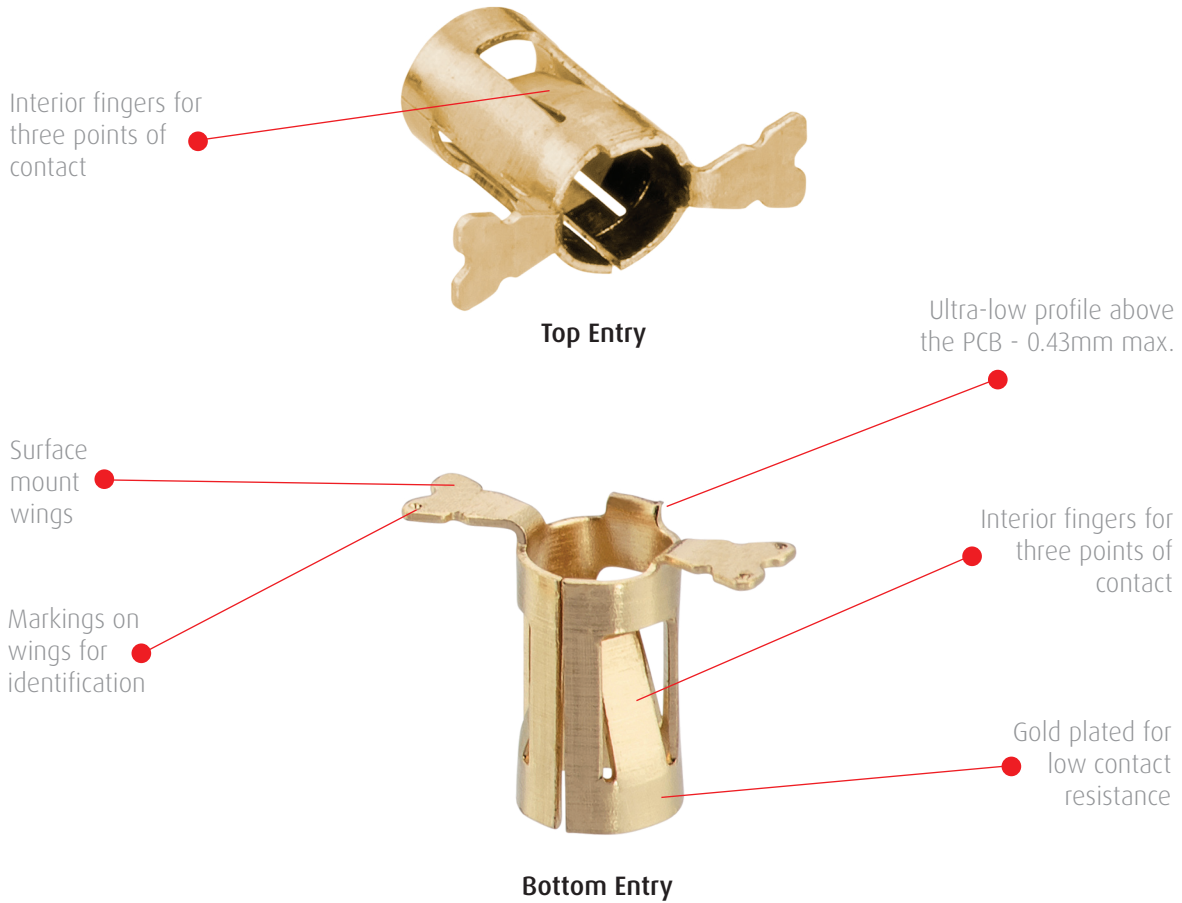


PCB mounted with SMT placement

Key Applications	
Industrial	Gas detection sensors, fire alarms and metering systems, replaceable modules
Electric Vehicles	Battery Management modules, LED lighting using IMS (Insulated Metal Substrate) PCBs
Commercial	Domestic gas sensors and fire alarms, LED lighting panels

Product Features

Harwin Sycamore Contacts



Specifications

Electrical		Mechanical		Physical	
Current Rating	6A (3.87mm length) 8A (5.87mm length)	No. of Operations	500	Packaging	Tape and Reel
		Insertion Force	3.5N max. (Ø1.5mm) 17.0N max. (Ø1.9mm) 3.0N max. (Ø0.8mm) 6.0N max. (Ø1.3mm)	Base Material	Beryllium Copper
Contact Resistance	15mΩ max.			Finish	Gold over nickel
		Withdrawal Force	0.5N min. (Ø1.5mm) 0.3N min. (Ø0.8mm)	Temperature Range	-50°C to +125°C

Why use a Sycamore Contact?

Advantages over soldering

- Easy to replace a damaged sensor
- Avoids heat travelling through the sensor in the soldering process: this can prevent damage happening to the sensitive sensor
- Compatible with surface mount processes
- Avoids the need to solder on the bottom of the board
- Easy to change sensor during design phase

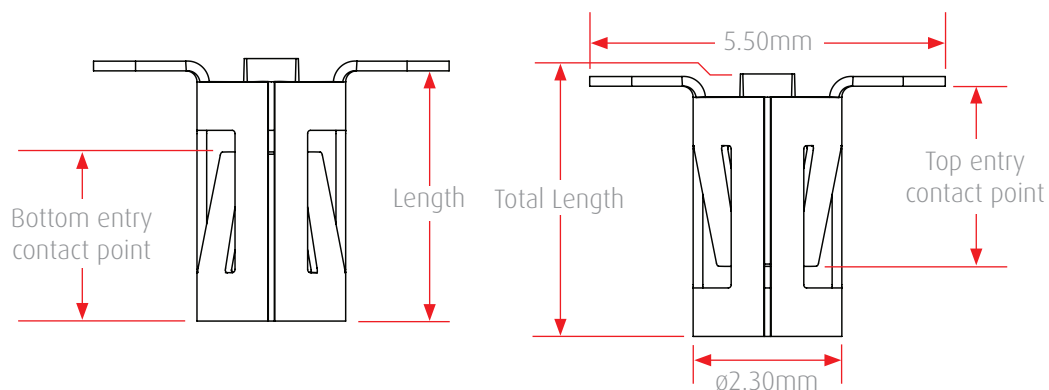
Advantages over other sockets

- Tape-and-Reel packaged for automated assembly, saving costs
- Easier to notice any damage compared to two piece sockets
- No fixed arrangement: PCB design can easily be altered without needing to source a new part
- Gold plated for high conductivity and low contact resistance

How to Order

Part No.	Compatible Mating Pin	Pin Entry Direction	Contact Point (see Dimensions)	Length (see Dimensions)	Total Length (see Dimensions)
S9111-45R	Ø1.5 - 1.9mm	Top	2.8mm	3.87mm	4.3mm max.
S9121-45R	Ø1.5 - 1.9mm	Bottom	2.6mm	3.87mm	4.3mm max.
S9131-45R	Ø0.8 - 1.3mm	Top	2.7mm	3.87mm	4.3mm max.
S9141-45R	Ø0.8 - 1.3mm	Bottom	2.6mm	3.87mm	4.3mm max.
S9321-45R	Ø1.5 - 1.9mm	Bottom	2.6mm	5.87mm	6.3mm max.
S9341-45R	Ø0.8 - 1.3mm	Bottom	2.6mm	5.87mm	6.3mm max.

Dimensions





Harwin Europe (Global Headquarters)

Portsmouth, Hampshire, UK

E: mis@harwin.co.uk

T: +44 (0)23 9231 4545

Harwin Inc (Americas)

New Albany, Indiana, USA

E: mis@harwin.com

T: +1 603 893 5376

Harwin Asia Pte Ltd (Asia, Australasia)

Singapore

E: mis@harwinasia.com

T: +65 6 779 4909