

PCB Hardware

Contents

SMT Test Points

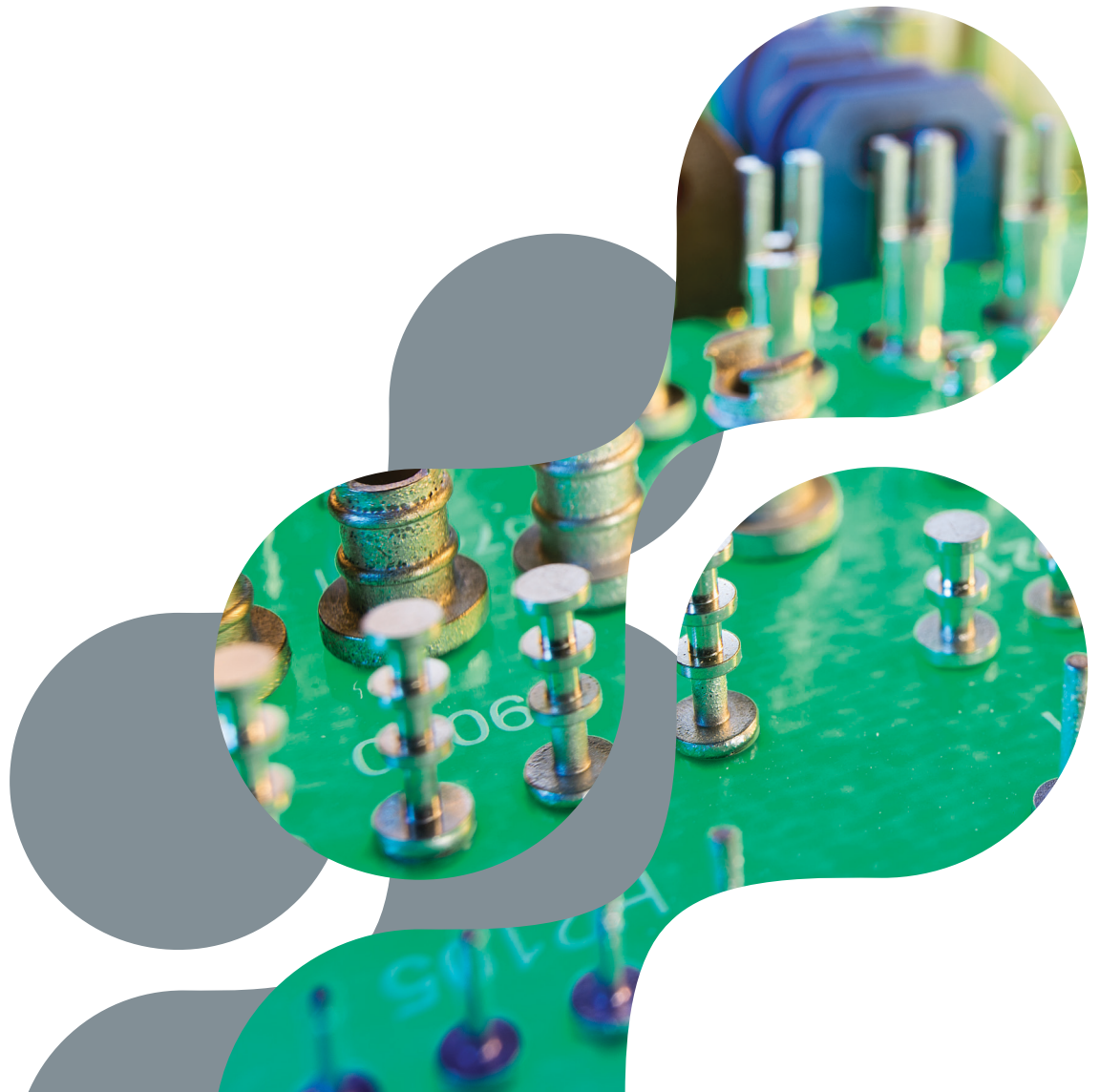
SMT Cable Clips

SMT Jumper Links

PCB Jumper Links

PCB Terminals, Turret Lugs

Spacers / Pillars / Standoffs



SMT Hardware

Test Points

- ❖ Ideal for use with standard probes, clips and hooks.
- ❖ Can be placed using industry standard equipment.
- ❖ Suitable for automatic or manual test.
- ❖ High speed placement.
- ❖ Industry standard tape and reel packaging.
- ❖ Strong and durable.



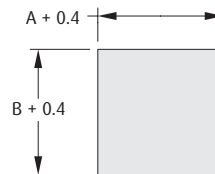
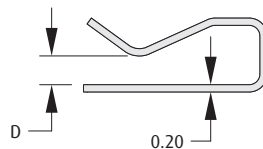
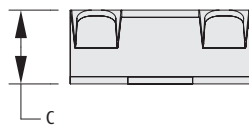
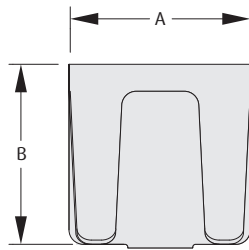
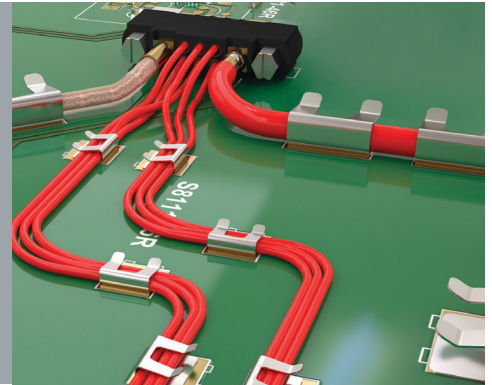
❖ Materials Material: Copper Alloy Finish: Tin ❖ Packaging Format: Tape & Reel Reel quantity S1751-46R: 2,500 on a Ø330mm reel S2751-46R: 2,500 on a Ø178mm reel S2761-46R: 3,000 on a Ø178mm reel	2.00mm HIGH Recommended PC Board Pattern ORDER CODE S1751-46R
1.40mm HIGH Recommended PC Board Pattern ORDER CODE S2751-46R	1.15mm HIGH Recommended PC Board Pattern ORDER CODE S2761-46R

All dimensions in mm.

SMT Hardware

Cable Management & Grounding Clips

- ❖ Suitable for use with insulated cables with outer diameters Ø0.9 to Ø3mm and grounding braided coax cables.
- ❖ Cable clip can be soldered at same time as rest of board, reducing additional operation time required for mounting plastic clip types.
- ❖ Low profile & small footprint saves PCB space.



Recommended PCB Board Pattern

Materials

Material: Copper Alloy
Finish: Tin

Packaging

Format: Tape & Reel
Reel quantity: Ø330mm reel, see table

HOW TO ORDER

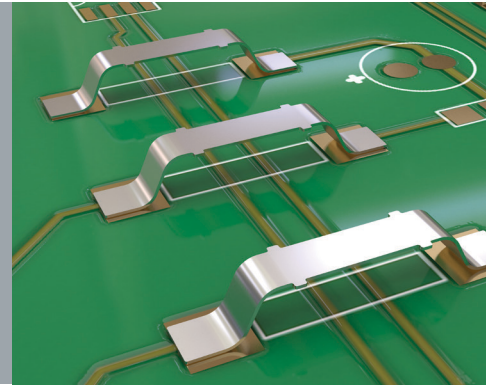
PART NO.	A	B	C	D	COAX GROUNDING	CABLE RETENTION	REEL QUANTITY
S8091-46R	5.00	4.00	1.35	0.70	Ø1.12mm	2 x Ø0.9mm	3,000
S8101-46R	5.00	4.00	1.50	0.80	RG178, RG179, RG316	2 x Ø1.0mm	3,000
S8111-46R	5.00	5.00	2.05	0.80	RG174, RG179, RG316	3 x Ø1.0mm, 2 x Ø1.5mm	1,500
S8121-46R	7.00	5.50	2.55	1.30	n/a	2 x Ø1.5mm, 1 x Ø2.0mm	1,300
S8131-46R	10.00	8.00	3.55	1.80	RG58	3 x Ø2.0mm, 1 x Ø3.0mm	800

All dimensions in mm.

SMT Hardware

SMT Fixed Jumper Link

- Designed to link PCB tracks where through hole links are not possible.
- Typical applications include use on aluminium backplanes in power applications.
- High current.
- Small footprint.
- Low profile options available for space saving design.



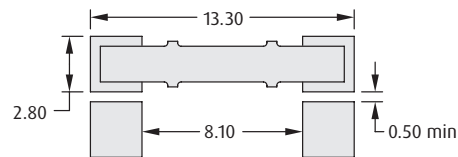
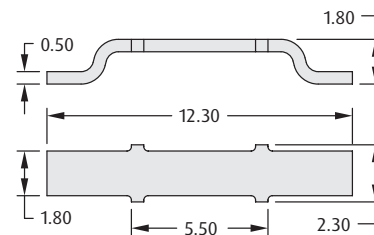
Materials

Material: Copper Alloy (S1621, S1911)
Copper (S1731)
Finish: Tin

Packaging

Format: Tape & Reel
Reel quantity
S1621-46R: 5,000 on a Ø330mm reel
S1731-46R: 2,500 on a Ø330mm reel
S1911-46R: 4,000 on a Ø330mm reel

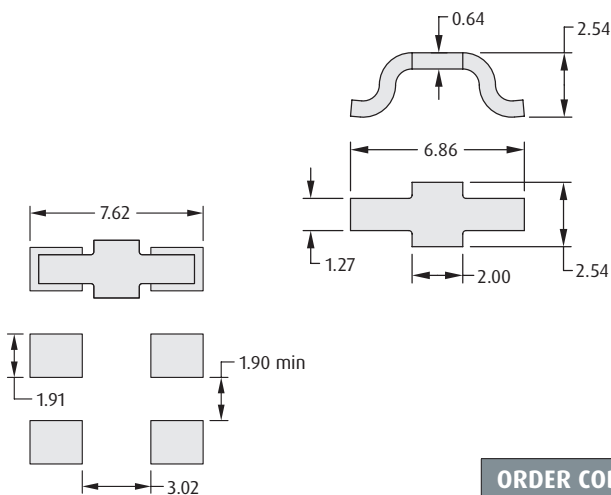
12.3mm LONG



Recommended PC Board Pattern

ORDER CODE
S1621-46R

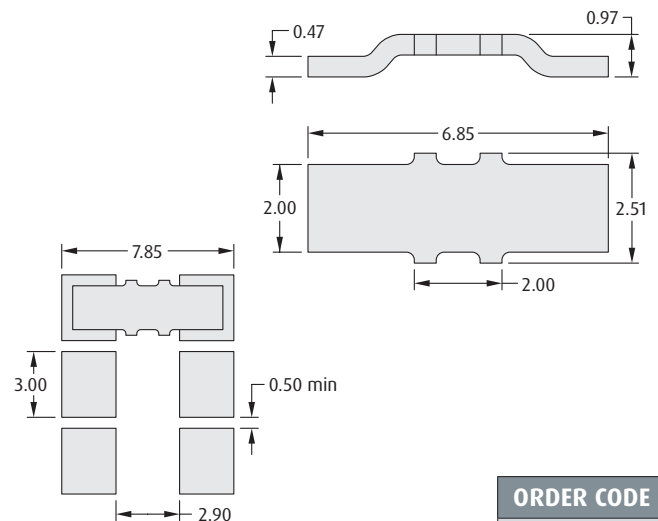
6.86mm LONG, 2.54mm HIGH



Recommended PC Board Pattern

ORDER CODE
S1731-46R

6.85mm LONG, 0.97mm HIGH



Recommended PC Board Pattern

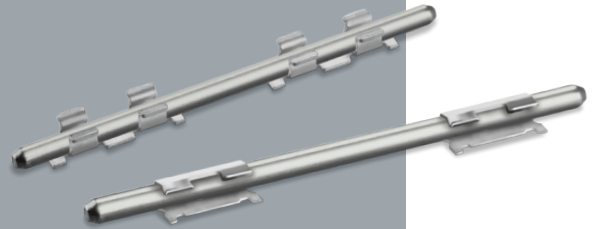
ORDER CODE
S1911-46R

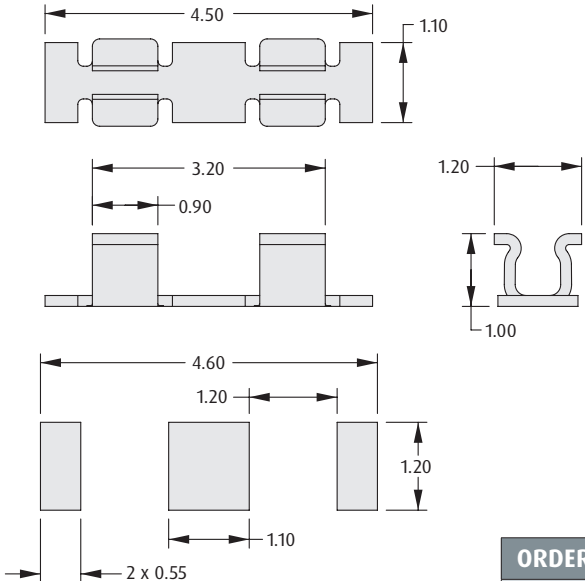
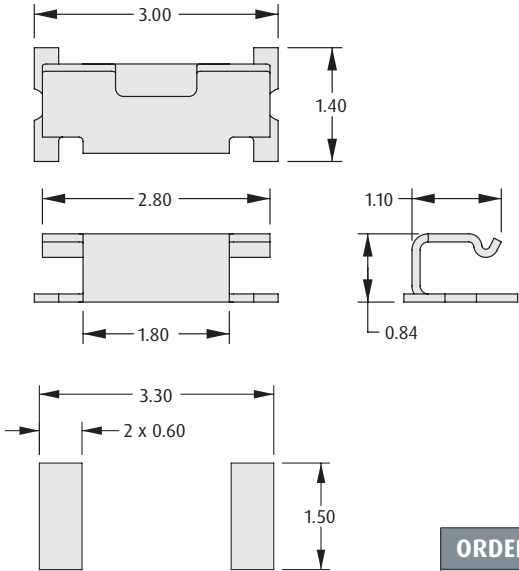
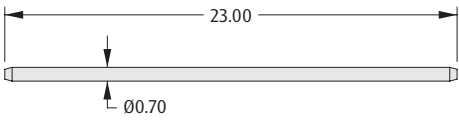
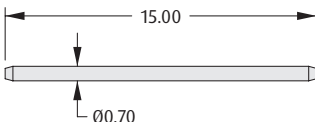
All dimensions in mm.

SMT Hardware

Removable Jumper Link - SMT Clip and Bar

- ❖ Simple & effective method for connecting across LED arrays and PCBs.
- ❖ Vertical and horizontal configurations available.
- ❖ Connecting bars available in two lengths.
- ❖ SMT clips packaged in tape and reel to suit automated placement.
- ❖ Allows easy replacement of defective arrays and PCBs without the need to de-solder.
- ❖ SMT clips and bars ordered separately.



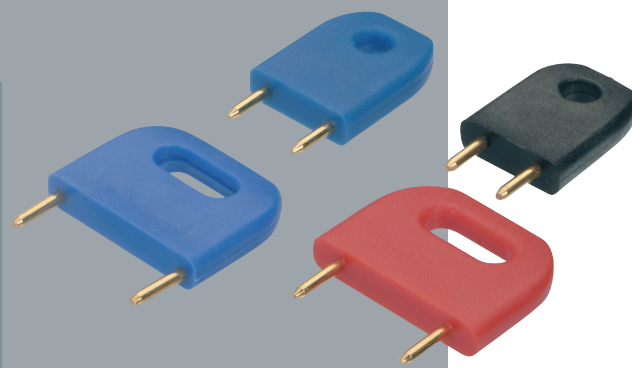
VERTICAL CLIP	HORIZONTAL CLIP
❖ Specification Material: Stainless Steel Finish: Tin Packaging format: Tape & Reel (10,000 on a Ø330mm reel)  Recommended PC Board Pattern ORDER CODE S8071-46R	❖ Specification Material: Stainless Steel Finish: Tin Packaging format: Tape & Reel (10,000 on a Ø330mm reel)  Recommended PC Board Pattern ORDER CODE S8081-46R
23mm LONG REMOVABLE BAR	15mm LONG REMOVABLE BAR
❖ Specification Material: Phosphor Bronze Finish: Tin Packaging format: Loose  ORDER CODE S07-46	❖ Specification Material: Phosphor Bronze Finish: Tin Packaging format: Loose  ORDER CODE S08-46

All dimensions in mm.

PCB Hardware

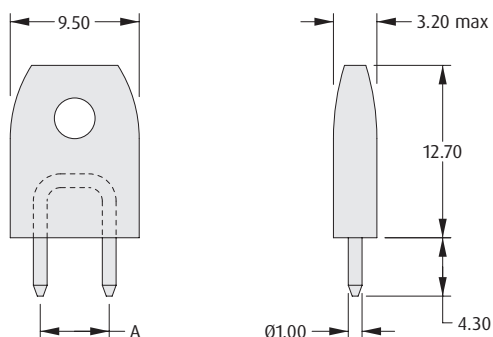
Ø1mm Shorting Link Plugs

- Choice of insulated or un-insulated links.
- Insulated links supplied in a variety of colours, with a high-performance gold finish.
- Un-insulated links can be soldered directly into the PCB for permanent linking.
- Can be used with individual PCB sockets for hardware programming applications.

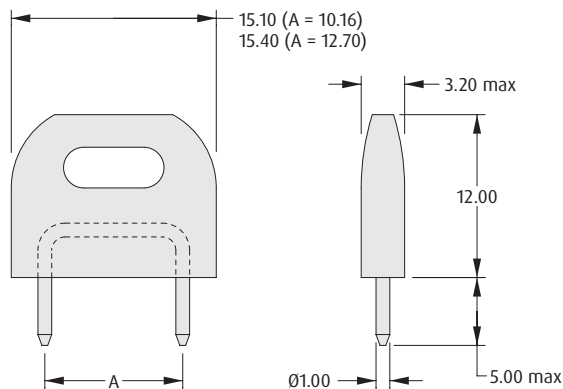


INSULATED

Style 1



Style 2



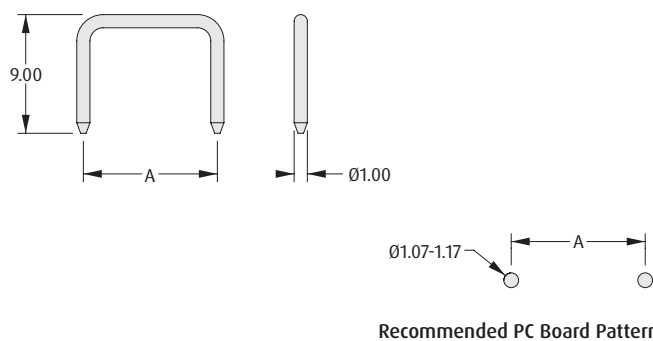
Materials

Moulding: PBT UL94V-0
Contact: Brass
Finish
Insulated: Gold
Un-insulated: See order code

Electrical

Current rating: 10A at 20°C

UN-INSULATED



HOW TO ORDER

D308 X - XX

SERIES CODE

PITCH (A)	STYLE
6	5.08mm
7	6.35mm
8	10.16mm
9	12.70mm

COLOUR

97	Blue
98	Black
99	Red

HOW TO ORDER

D308 X - XX

SERIES CODE

PITCH (A)	
0	5.08mm
1	6.35mm
2	10.16mm

FINISH

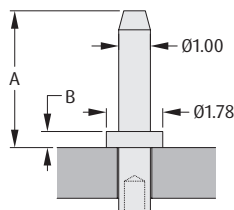
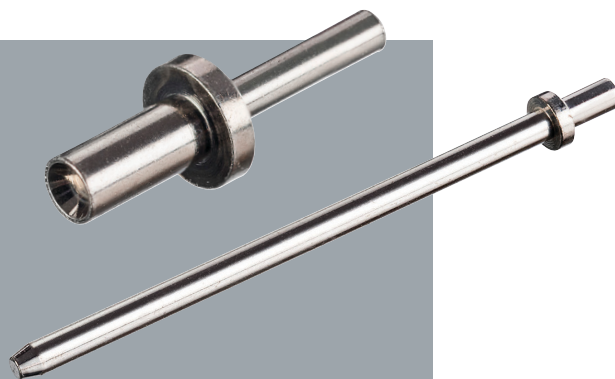
05	Gold
46	Tin

All dimensions in mm.

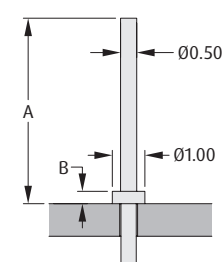
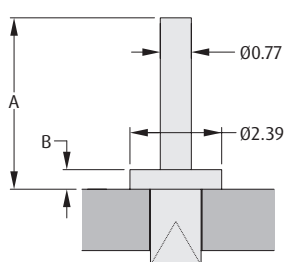
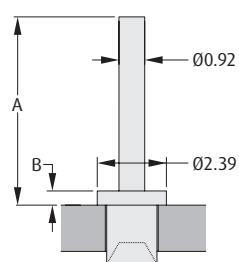
PCB Hardware

Turned Terminals

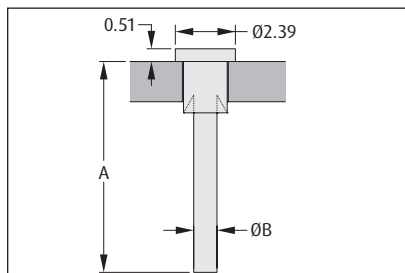
- Material: Brass with tin plating.
- Retention by swaging feature available.
- For swaging tool, change order code prefix to Z, and suffix to 00 (example Z2174-00).
- Suitable for a variety of PCB thicknesses from 1mm to 2.4mm.



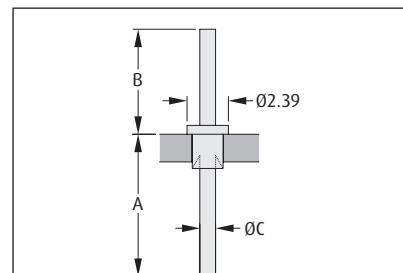
ORDER CODE	H2174-01	H2175-01	H2173-01	H2176-01	H2170-01
A	4.32mm	4.90mm	8.13mm	9.53mm	13.21mm
B	0.51mm	0.35mm	0.51mm	0.51mm	0.51mm
PANEL THICKNESS	1.60mm	1.60mm	1.60mm	1.60mm	1.60mm
MOUNTING HOLE	Ø1.04 - 1.14mm	Ø1.04 - 1.14mm	Ø1.04 - 1.14mm	Ø1.04 - 1.14mm	Ø1.04 - 1.14mm



ORDER CODE	H2101A01	H2105A01	H2106A01	H3108-01
A	6.47mm	4.47mm	4.47mm	5.70mm
B	0.51mm	0.51mm	0.51mm	0.38mm
PANEL THICKNESS	1.60mm	1.60mm	2.40mm	1.00mm
MOUNTING HOLE	Ø1.79 - 1.87mm	Ø1.33 - 1.41mm	Ø1.33 - 1.41mm	Ø0.50 - 0.55mm



ORDER CODE	H2101B01	H2105B01
A	8.39mm	6.37mm
B	Ø0.93mm	Ø0.77mm
PANEL THICKNESS	1.60mm	1.60mm
MOUNTING HOLE	Ø1.79 - 1.87mm	Ø1.33 - 1.41mm



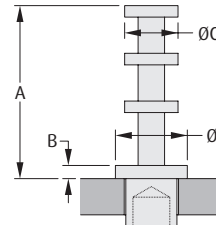
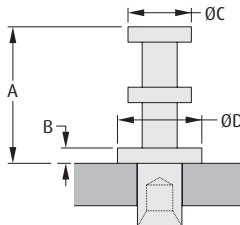
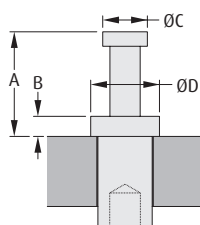
ORDER CODE	H2101-01	H2105-01
A	8.23mm	5.05mm
B	6.07mm	4.48mm
C	Ø0.87mm	Ø0.77mm
PANEL THICKNESS	1.60mm	1.60mm
MOUNTING HOLE	Ø1.79 - 1.87mm	Ø1.33 - 1.41mm

All dimensions in mm.

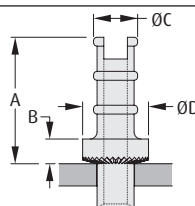
PCB Hardware

Turned Terminals

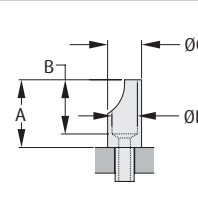
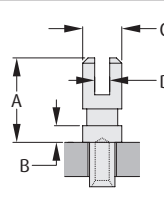
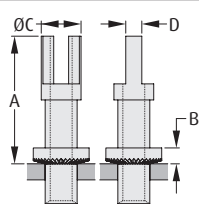
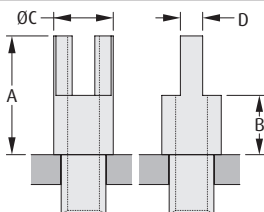
- Material: Brass with tin plating.
- Retention by swaging feature available.
- For swaging tool, change order code prefix to Z, and suffix to 00 (example Z9001-00).
- Suitable for a variety of PCB thicknesses from 1.6mm to 3.2mm.



ORDER CODE	H9001-01	H9004-01	H2121-01	H9020-01	H9021-01
A	2.39mm	4.74mm	5.15mm	7.65mm	7.65mm
B	0.46mm	1.19mm	0.58mm	0.58mm	0.58mm
C	Ø1.02mm	Ø1.91mm	Ø2.39mm	Ø2.36mm	Ø2.36mm
D	Ø1.57mm	Ø3.18mm	Ø3.18mm	Ø3.18mm	Ø3.18mm
PANEL THICKNESS	1.60mm	1.60mm	1.60mm	1.60mm	2.40mm
MOUNTING HOLE	Ø1.25 - 1.33mm	Ø2.01 - 2.09mm	Ø1.69 - 1.74mm	Ø2.35 - 2.45mm	Ø2.35 - 2.45mm



ORDER CODE	H2071Z01	H2072-01	H2072Z01	H2072ZL1	H2073Z01	H2074Z01
A	9.12mm	6.29mm	6.52mm	6.52mm	9.12mm	8.74mm
B	1.78mm	1.01mm	1.24mm	1.24mm	1.78mm	1.60mm
C	Ø3.18mm	Ø3.25mm	Ø2.54mm	Ø2.54mm	Ø3.18mm	Ø4.57mm
D	Ø4.75mm	Ø3.96mm	Ø3.96mm	Ø3.96mm	Ø4.75mm	Ø6.35mm
PANEL THICKNESS	2.40mm	1.60mm	1.60mm	2.40mm	3.20mm	3.20mm
MOUNTING HOLE	Ø2.68 - 2.78mm	Ø2.17 - 2.27mm	Ø2.01 - 2.11mm	Ø2.01 - 2.11mm	Ø2.68 - 2.78mm	Ø3.93 - 4.03mm



ORDER CODE	H2051-01	H2055-01	H2039-01	H9023-01	H9026-01
A	4.78mm	6.35mm	12.65mm	3.96mm	6.35mm
B	2.39mm	3.17mm	1.52mm	0.78mm	5.08mm
C	Ø3.18mm	Ø3.18mm	Ø3.90mm	Ø1.83mm	Ø3.18mm
D	0.73mm	1.13mm	1.54mm	0.71mm	Ø2.39mm
THROUGH HOLE	Ø1.06mm	Ø1.74mm	Ø2.22mm	n/a	Ø1.13mm
PANEL THICKNESS	1.60mm	2.40mm	3.20mm	1.60mm	2.40mm
MOUNTING HOLE	Ø1.60 - 1.68mm	Ø2.40 - 2.48mm	Ø3.19 - 3.27mm	Ø1.28 - 1.38mm	Ø1.84 - 1.92mm

All dimensions in mm.

Metric Spacers

Clearance Spacers

- Standard lengths available from 3 to 30mm.
- Brass spacers: base material is free-machining brass, with nickel plating.
- Aluminium spacers: supplied with a clear passivation finish to prevent oxidation.
- Plastic material: Nylon 66 UL94V-2.



CLEARANCE FOR M3 THREAD

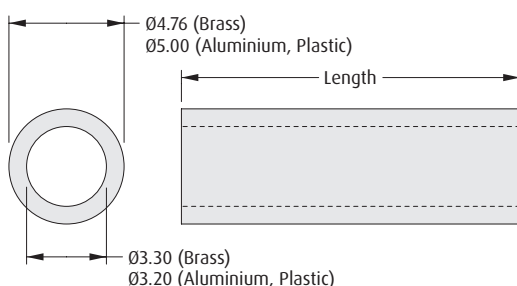
Materials

Base material: Brass, Aluminium or Plastic

Finish

Brass: Nickel

Aluminium: Clear Passivate



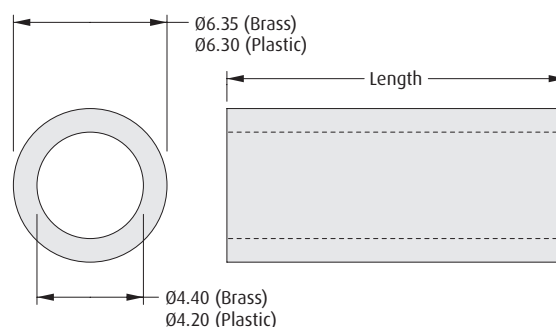
CLEARANCE FOR M4 THREAD

Materials

Base material: Brass or Plastic

Finish

Brass: Nickel



HOW TO ORDER

R30 - 6 XX XX XX

SERIES CODE

MATERIAL

01	Brass
20	Aluminium
70	Plastic

LENGTH (mm)

03 to 16, 18, 20, 25, 30	Brass, Aluminium
03 to 16, 18, 20, 25	Plastic

FINISH

02	Nickel (Brass only)
14	Passivation (Aluminium only)
94	White (Plastic only)

HOW TO ORDER

R40 - 6 XX XX XX

SERIES CODE

MATERIAL

00	Brass
71	Plastic

LENGTH (mm)

03 to 16, 18, 20, 25, 30	Brass
03, 05 to 08, 10 to 12, 15, 18	Plastic

FINISH

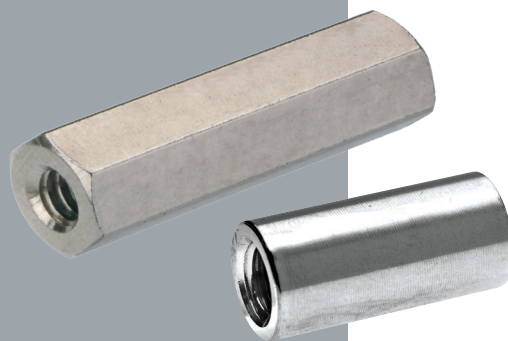
02	Nickel (Brass only)
94	White (Plastic only)

All dimensions in mm.

Metric Spacers

Threaded Female Spacers

- ❖ Available in a variety of standard body lengths.
- ❖ Brass spacers: base material is free-machining brass, with nickel plating.
- ❖ Plastic material: Nylon 66 UL94V-2.
- ❖ Longer thread lengths may not be threaded through the complete length, but have female threads at both ends.



SPACERS

HEXAGONAL	CIRCULAR
❖ Materials Base material: Brass or Plastic Finish: Nickel	❖ Materials Base material: Brass Finish: Nickel

HOW TO ORDER

RXX - XXX XX XX

SERIES CODE	
R25-100	Hexagonal, Brass, M2.5 Thread
R30-100	Hexagonal, Brass, M3 Thread
R30-101	Hexagonal, Brass, M3 Thread
R30-161	Hexagonal, Plastic, M3 Thread
R30-500	Circular, Brass, M3 Thread
R40-100	Hexagonal, Brass, M4 Thread

FINISH	
00	White (Plastic only)
02	Nickel (Brass only)

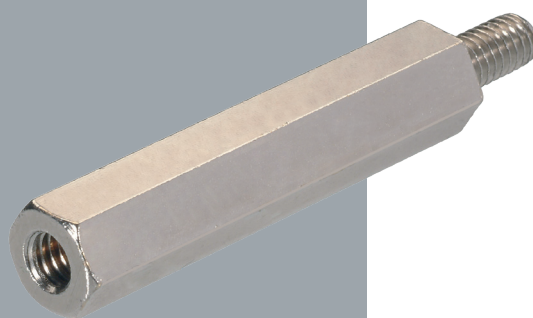
LENGTH (mm)	
06 to 16, 18, 20, 25	R30-161, R40-100
04 to 16, 18, 20, 25	Other

All dimensions in mm.

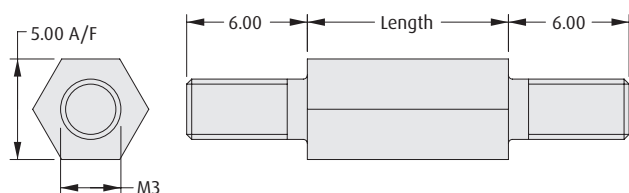
Metric Spacers

Threaded Male Pillars

- Available in a choice of thread sizes, with a variety of standard body lengths.
- Base material is free-machining Brass, with nickel plating.



MALE/MALE



HOW TO ORDER

R30 - 400 XX 02

SERIES CODE

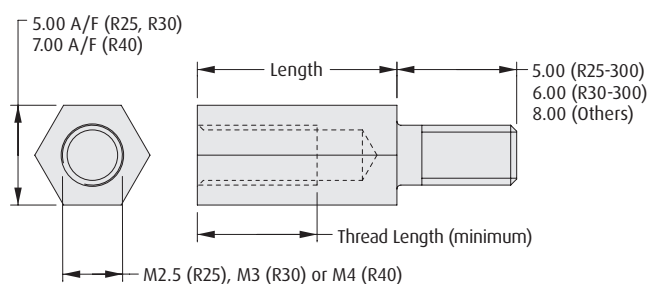
LENGTH (mm)

04 to 16, 18, 20, 25, 30, 35, 40

FINISH

02 Nickel

MALE/FEMALE



- Thread sizes are the same both ends for all standard spacers.

HOW TO ORDER

RXX - 30X XX 02

SERIES CODE

R25-300	M2.5 Thread
R30-300	M3 Thread, 6mm Stud
R30-301	M3 Thread, 8mm Stud
R40-300	M4 Thread

FINISH

02 Nickel

LENGTH (mm)

	03	04	05	06	07	08	09	10	11	12	13	14	15	16	18	20	25	30	35	40	
THREAD LENGTH	1.9	2.5	2.5	3.5	4.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	X	X	X	X	R25-300
	X	2.0	2.5	3.0	4.5	5.5	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	R30-300
	X	2.5	3.0	4.0	5.0	5.0	5.0	5.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	R30-301
	X	X	X	2.5	3.5	4.5	5.5	6.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	X	R40-300

All dimensions in mm.