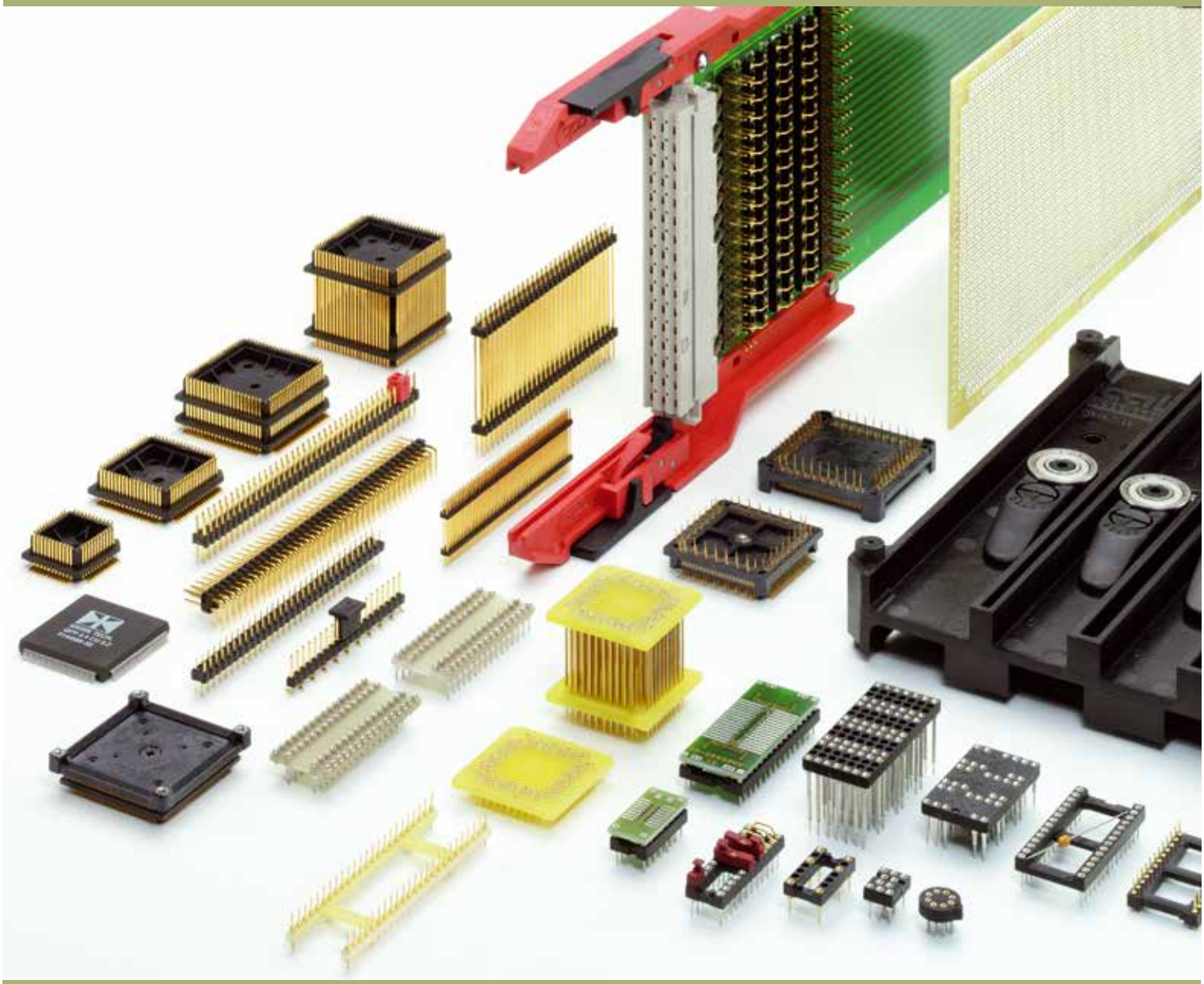
Products for the electronic industry

Supplementary catalogue of the Preci-Dip program



PCB Connectors
Special sockets
and accessories

Edition 5.2

cab - The safe contact
Supplementary catalogue of the Preci-Dip programm

For over 30 years now **cab** in Karlsruhe is your partner for IC-sockets and connectors with precision contacts. Thanks to the biggest store in Germany we can respond immediately to your requirements. We also manufacture in small quantities according to individual customers requirements.

Please find the latest news at **www.cab.de**

Preci-Dip in Delémont / Switzerland is the worlds leading producer of precision contacts for IC-sockets, pin strips and socket boards. With 250 employees Preci-Dip produces more than 150 million pieces per week. Within the broad range of precision contacts be sure to find the right solution for your requirements.

Please find further information at **www.precidip.com**

TET in Tokio / Japan develops and manufactures mainly QFP- and BGA-sockets and adapters for the laboratory and test range. We can help you fast and efficiently during your developmental period.

Please find further information at **www.tetc.co.jp**

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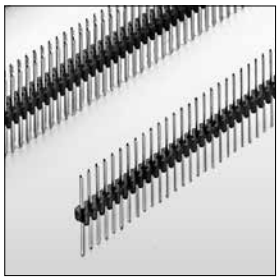
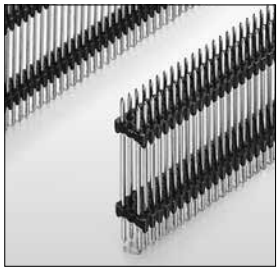


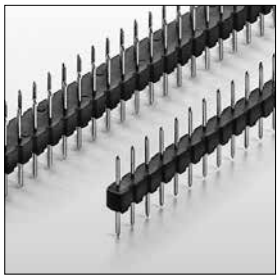
6

Pin Connectors Pitch 1.27 mm
Pin Ø 0.48 mm
single row / double row



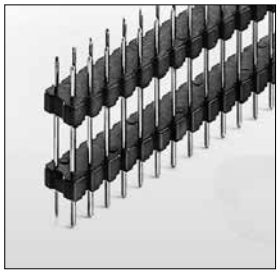
7

Pin Connectors Pitch 1.27 mm
Pin Ø 0.48 mm
single row / double row Sandwich



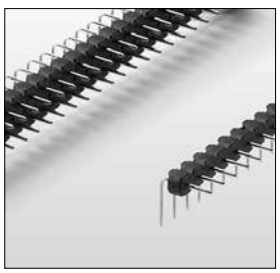
8

Pin Connectors Pitch 2.54 mm
Pin Ø 0.48 mm
single row / double row



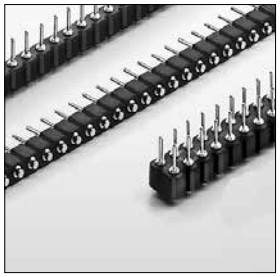
9

Pin Connectors Pitch 2.54 mm
Pin Ø 0.48 mm
single row / double row Sandwich



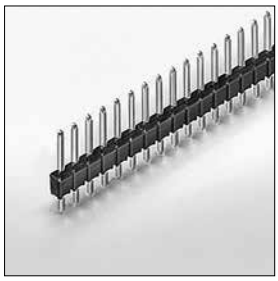
10

Pin Connectors Pitch 2.54 mm
Pin Ø 0.48 mm
single row / double row right angle



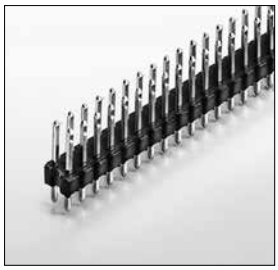
11

SMD Pin Connectors Pitch 2.54 mm
Pin Ø 0.48 mm
single row / double row



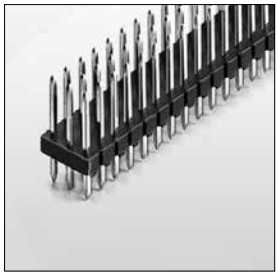
12

Pin Connectors Pitch 2.54 mm
Pin ⍁ 0.635 mm
single row



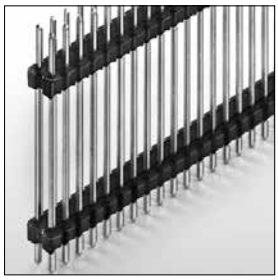
13

Pin Connectors Pitch 2.54 mm
Pin ⍁ 0.635 mm
double row



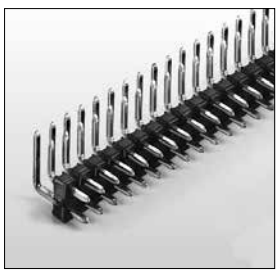
16

Pin Connectors Pitch 2.54 mm
Pin ⍁ 0.635 mm
triple row



14

Pin Connectors Pitch 2.54 mm
Pin ⍁ 0.635 mm
single row / double row Sandwich



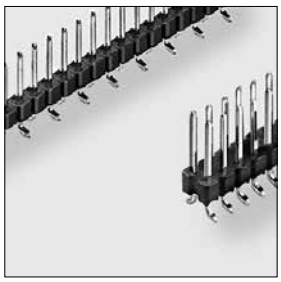
15

Pin Connectors Pitch 2.54 mm
Pin ⍁ 0.635 mm
single row / double row right angle

16

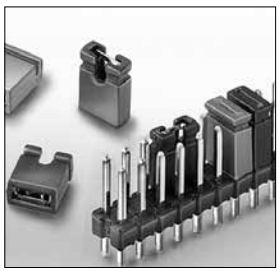
Pin Connectors Pitch 2.54 mm
Pin ⍁ 0.635 mm
triple row right angle

Contents



17

SMD Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm
single row / double row



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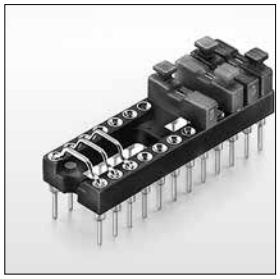
Female Jumpers
Pitch 2.54 mm
for square Pins



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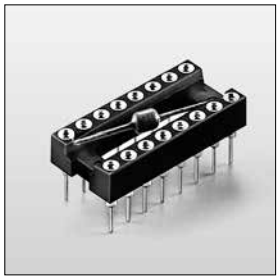
Male Jumpers
Pitch 2.54 / 5.08 / 7.62 mm



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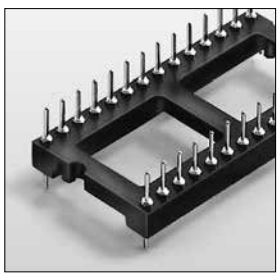
DIL Sockets with Capacitor



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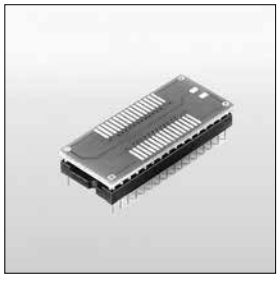
DIL Sockets with Pin Contacts SMD



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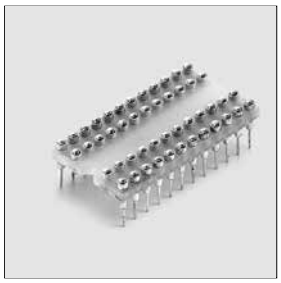
DIL -> SOP Converter Sockets



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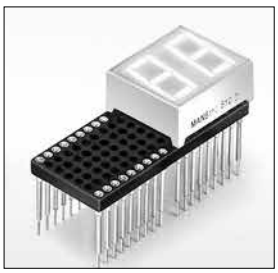
DIL -> DIL Reduction Sockets



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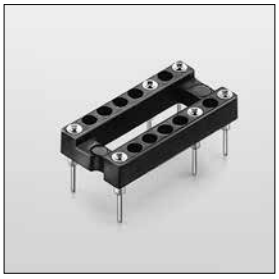
LED Sockets



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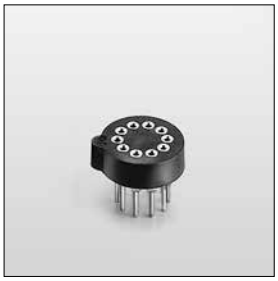
DIL Sockets partial assembled



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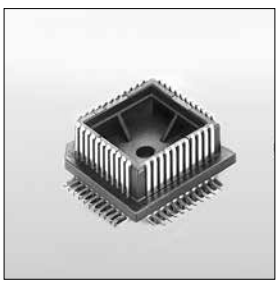
TO Sockets



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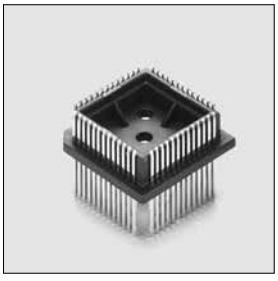
PLCC-Adapter Series 531



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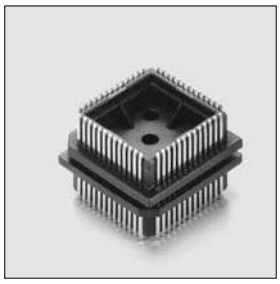
PLCC-Adapter Series 532

Contents



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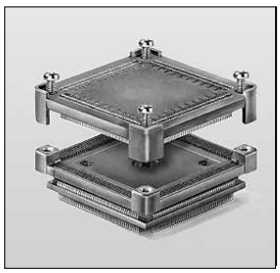
PLCC-Adapter Series 533



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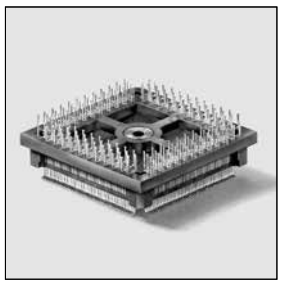
QFP Sockets



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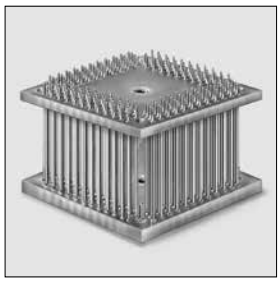
QFP Solder Base
Series Q1001



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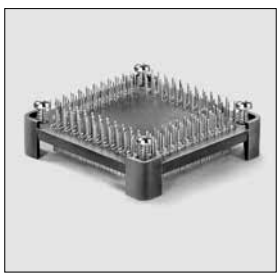
QFP Extender
Series Q1501/Q1502



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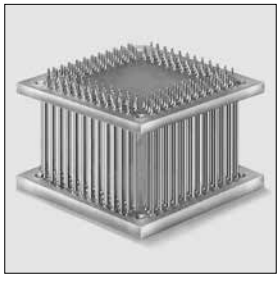
QFP-Adapter
Serie Q2201



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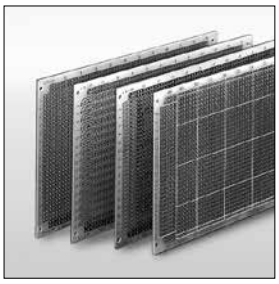
QFP-Extender
Serie Q2101/Q2102



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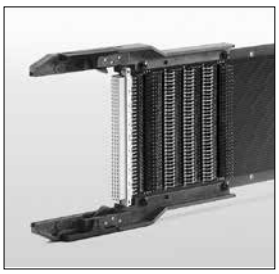
19“ Laboratory cards



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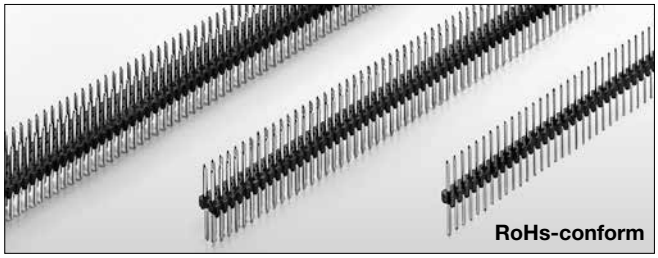
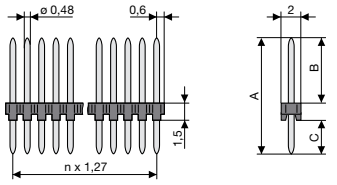
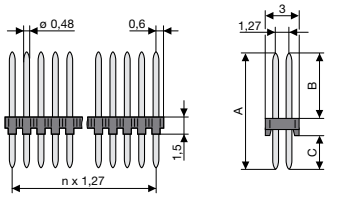
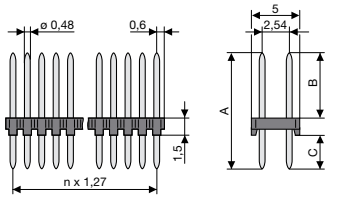
19“ Extender boards

Pin Connector Pitch 1.27 mm
Round Pin Ø 0.48 mm



Material typical CuZn alloy
Surface 2-3 µm nickel, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 5 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 0.7 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

	Pin No.	A	B	C	Pins	0.15 µm gold	
Series 2101 	**12**	9.2	4.7	3.0	**64**	2101-121-064 Pins	
Series 2102 	**12**	9.2	4.7	3.0	**128**	2102-121-128 Pins	
Series 6102 	**12**	9.2	4.7	3.0	**128**	6102-121-128 Pins	

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below with 0.15 µm gold plating are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Gold 0.15 µm		
9.2	x		
10.2	x		
11.4	x		
12.4	x		
13.5	x		
15.2	x		
16.5	x		
17.5	x		
18.6	x		
20.3	x		
23.5	x		

Checklist

Series ☐ 2101 ☐ 2102 ☐ 6102

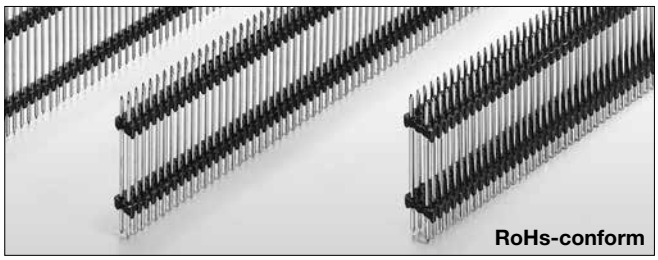
Pin length A _____ B + C + 1.5 mm
B _____
C _____

Surface ☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

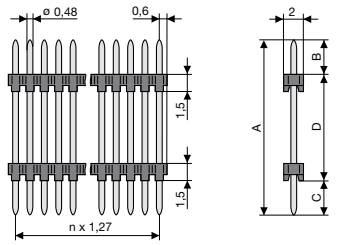
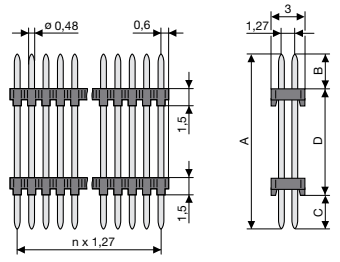
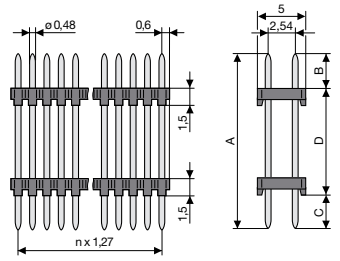
Amount of Pins _____

Demand _____ pieces

Pin Connector Pitch 1.27 mm
Round Pin Ø 0.48 mm



Material typical CuZn alloy
Surface 2-3 µm nickel, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 5 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 0.7 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

	Pin No.	A	B	C	D	Pins	0.15 µm gold	
Series 2104 	**19**	17.5	3.0	3.0	11.5	**64**	2104-191-064 Pins	
Series 2105 	**19**	17.5	3.0	3.0	11.5	**128**	2105-191-128 Pins	
Series 6105 	**19**	17.5	3.0	3.0	11.5	**128**	6105-191-128 Pins	

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below with 0.15 µm gold plating are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Gold 0.15 µm		
9.2	x		
10.2	x		
11.4	x		
12.4	x		
13.5	x		
15.2	x		
16.5	x		
17.5	x		
18.6	x		
20.3	x		
23.5	x		

Checklist

Series ☐ 2104 ☐ 2105 ☐ 6105

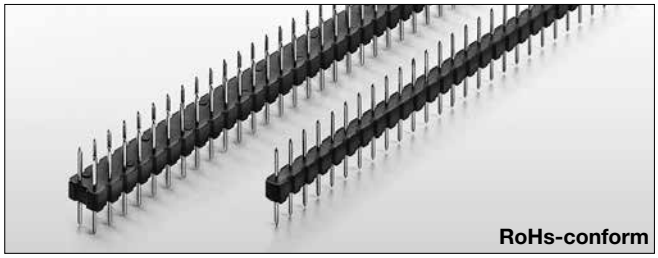
Pin length A _____ B + C + D mm
B _____
C _____

Surface ☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

Amount of pins _____

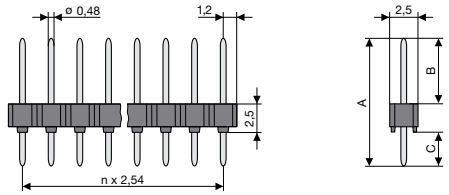
Demand _____ pieces

Pin Connector Pitch 2.54 mm
Round Pin Ø 0.48 mm



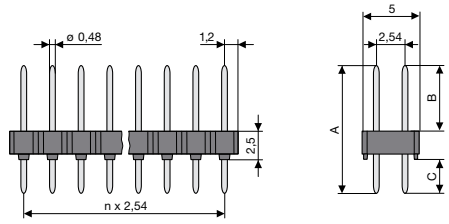
Material typical CuZn alloy
Surface 2-3 µm nickel, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 2.0 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

Series 1101



Pin No.	A	B	C	Pins	0.15 µm gold
12	9.2	3.7	3.0	**32**	1101-121-032
13	10.2	4.7	3.0	**32**	1101-131-032
14	11.4	5.7	3.2	**32**	1101-141-032
15	12.4	6.7	3.2	**32**	1101-151-032
16	13.5	7.7	3.3	**32**	1101-161-032
17	15.2	9.7	3.0	**32**	1101-171-032
18	16.5	10.7	3.3	**32**	1101-181-032
19	17.5	11.7	3.3	**32**	1101-191-032
20	18.6	12.7	3.4	**32**	1101-201-032
21	20.3	14.7	3.1	**32**	1101-211-032
22	23.5	17.7	3.3	**32**	1101-221-032 (Pins)

Series 1102



Pin No.	A	B	C	Pins	0.15 µm gold
12	9.2	3.7	3.0	**64**	1102-121-064
13	10.2	4.7	3.0	**64**	1102-131-064
14	11.4	5.7	3.2	**64**	1102-141-064
15	12.4	6.7	3.2	**64**	1102-151-064
16	13.5	7.7	3.3	**64**	1102-161-064
17	15.2	9.7	3.0	**64**	1102-171-064
18	16.5	10.7	3.3	**64**	1102-181-064
19	17.5	11.7	3.3	**64**	1102-191-064
20	18.6	12.7	3.4	**64**	1102-201-064
21	20.3	14.7	3.1	**64**	1102-211-064
22	23.5	17.7	3.3	**64**	1102-221-064 (Pins)

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below with 0.15 µm gold plating are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Gold 0.15 µm		
9.2	x		
10.2	x		
11.4	x		
12.4	x		
13.5	x		
15.2	x		
16.5	x		
17.5	x		
18.6	x		
20.3	x		
23.5	x		

Checklist

Series ☐ 1101 ☐ 1102

Pin length A _____B + C + 2.5 mm
_____B
C _____

Surface ☐ Tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

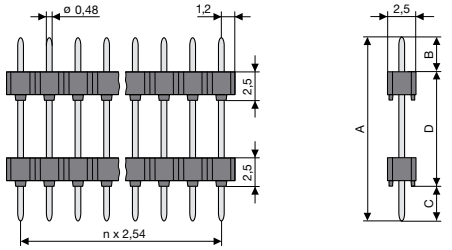
Amount of pins _____

Demand _____ pieces

Pin Connector Pitch 2.54 mm
Round Pin Ø 0.48 mm

Material typical CuZn alloy
Surface 2-3 µm nickel, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 2.0 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

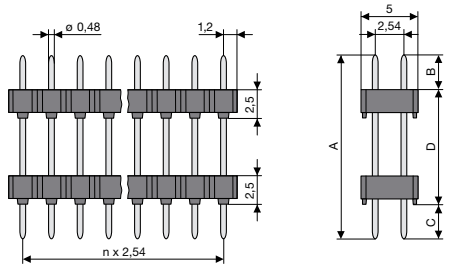
Series 1104



Pin No.	A	B	C	D	Pins	0.15 µm gold
15	12.4	3.7	3.2	5.5	**32**	1104-151-032
16	13.5	3.7	3.2	6.5	**32**	1104-161-032
17	15.2	3.7	3.0	8.5	**32**	1104-171-032
18	16.5	3.7	3.3	9.5	**32**	1104-181-032
19	17.5	3.7	3.3	10.5	**32**	1104-191-032
20	18.6	3.7	3.4	11.5	**32**	1104-201-032
21	20.3	3.7	3.1	13.5	**32**	1104-211-032

Pins

Series 1105



Pin No.	A	B	C	D	Pins	0.15 µm gold
15	12.4	3.7	3.2	5.5	**64**	1105-151-064
16	13.5	3.7	3.2	6.5	**64**	1105-161-064
17	15.2	3.7	3.0	8.5	**64**	1105-171-064
18	16.5	3.7	3.3	9.5	**64**	1105-181-064
19	17.5	3.7	3.3	10.5	**64**	1105-191-064
20	18.6	3.7	3.4	11.5	**64**	1105-201-064
21	20.3	3.7	3.1	13.5	**64**	1105-211-064

Pins

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below with 0.15 µm gold plating are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Gold 0.15 µm		
9.2	x		
10.2	x		
11.4	x		
12.4	x		
13.5	x		
15.2	x		
16.5	x		
17.5	x		
18.6	x		
20.3	x		
23.5	x		

Checklist

Series ☐ 1104 ☐ 1105

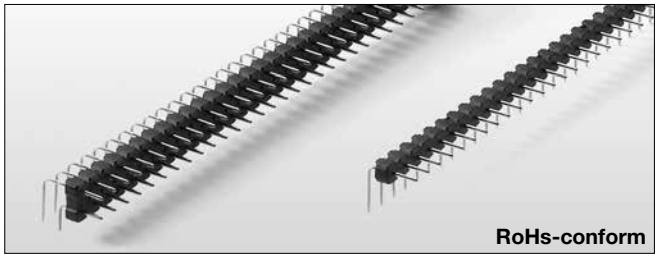
Pin length A _____ B + C + D mm
B _____
C _____
D _____

Surface ☐ tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

Amount of pins _____

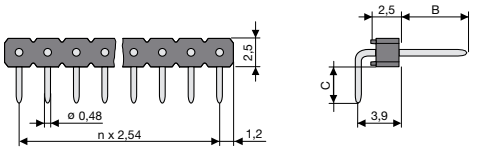
Demand _____ pieces

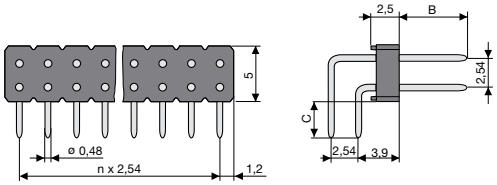
Pin Connector Pitch 2.54 mm
Round Pin Ø 0.48 mm



Material typical CuZn alloy
Surface 2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 2.0 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

	Pin No.	B	C	Pins	5 µm tin Sn100	0.15 µm gold
Series 1106	**12**	3.3	1.2	**32**		1106-121-032
	14	3.7	3.0	**32**	1106-149-032	1106-141-032
	18	3.7	8.1	**32**		1106-181-032 (Pins)
Series 1107	**14**	3.7	3.0	**64**		1107-141-064 (Pins)





We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Tin 5 µm	Gold 0.15 µm	
9.2		x	
10.2			
11.4	x	x	
12.4			
13.5			
15.2			
16.5		x	
17.5			
18.6			

Checklist

Series ☐ 1106

Pin length A1 _____ B + C + 4.7 mm
B _____
C _____

Series ☐ 1107

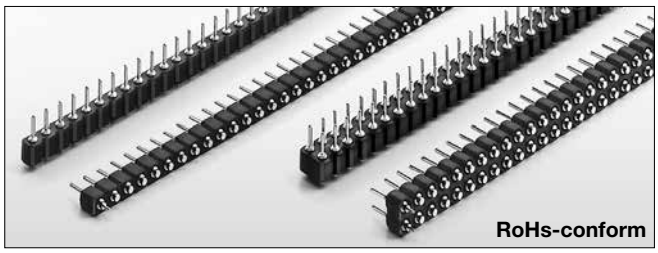
Pin length A1 _____ B + C + 4.7 mm
A2 _____ B + C + 9.8 mm
B _____
C _____

Surface ☐ tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

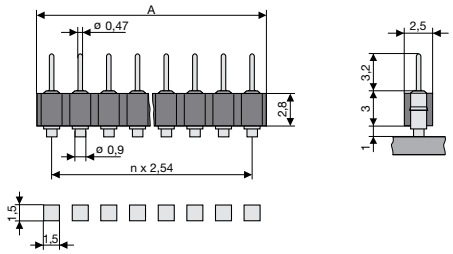
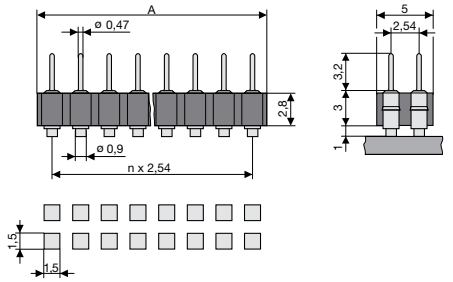
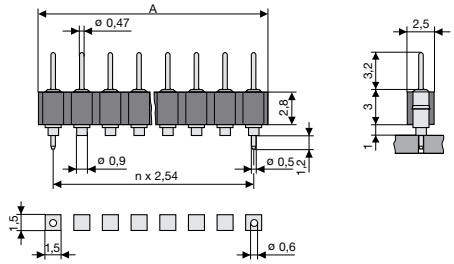
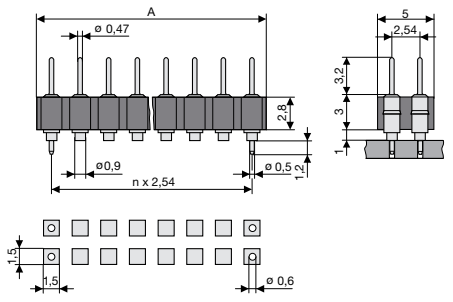
Amount of pins _____

Demand _____ pieces

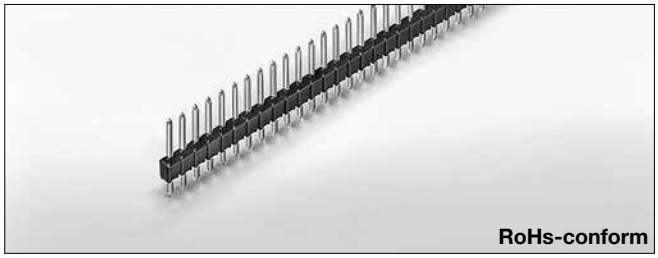
SMD Pin Connector Pitch 2.54 mm
Round contact plug Ø 0.47 mm



Material typical CuZn alloy
Surface 2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1.0 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

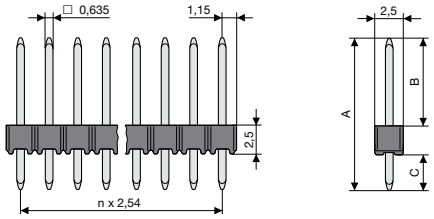
		A	Pins		5 µm tin Sn100	0.15 µm gold
Type 1		81.1	**32**		1313437	1312476
		We deliver the pin connectors in every required number of poles.				
Type 1		81.1	**64**		1313232	1312477
		We deliver the pin connectors in every required number of poles.				
Type 2		81.1	**32**		1313862	1312478
		We deliver the pin connectors in every required number of poles.				
Type 2		40.5 81.1	**32** **64**		1313321 1313864	1313027 1312479
		We deliver the pin connectors in every required number of poles.				

Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm



Material typical CuZn alloy
Surface 2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1.9 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

Series 1001



Pin No.	A	B	C	Pins	5 µm tin Sn100	0.15 µm gold
11	10.2	5.2	2.5	**40**	1001-119-040	1001-111-040
12	10.8	5.8	2.5	**40**	1001-129-040	1001-121-040
13	11.4	6.4	2.5	**40**	1001-139-040	1001-131-040
14	12.4	7.4	2.5	**40**	1001-149-040	1001-141-040
15	10.8	5.1	3.2	**40**	1001-159-040	1001-151-040
16	11.4	5.8	3.1	**40**	1001-169-040	1001-161-040
17	12.4	6.9	3.0	**40**	1001-179-040	1001-171-040
18	13.5	8.0	3.0	**40**	1001-189-040	1001-181-040
38	14.7	9.0	3.2	**40**		1001-381-040
19	15.2	9.5	3.2	**40**		1001-191-040
39	15.9	10.2	3.2	**40**	1001-399-040	
20	16.5	10.8	3.2	**40**	1001-209-040	1001-201-040
21	17.8	12.1	3.2	**40**	1001-219-040	1001-211-040
22	18.6	12.9	3.2	**40**	1001-229-040	1001-221-040
40	19.1	13.4	3.2	**40**	1001-409-040	
41	19.8	14.1	3.2	**40**	1001-419-040	1001-411-040
23	21.6	15.9	3.2	**40**	1001-239-040	1001-231-040
24	24.1	18.4	3.2	**40**	1001-249-040	1001-241-040
25	13.5	5.7	5.3	**40**	1001-259-040	1001-251-040
26	15.2	5.7	7.0	**40**		1001-261-040
27	16.5	5.7	8.3	**40**	1001-279-040	1001-271-040
28	17.8	5.7	9.6	**40**	1001-289-040	1001-281-040
29	18.6	5.7	10.4	**40**	1001-299-040	1001-291-040
30	21.6	5.7	13.4	**40**	1001-309-040	1001-301-040
31	24.1	5.7	15.9	**40**	1001-319-040	1001-311-040
32	26.7	5.7	18.5	**40**	1001-329-040	1001-321-040
33	29.2	5.7	21.0	**40**	1001-339-040	1001-331-040
34	34.3	5.7	26.0	**40**	1001-349-040	1001-341-040
42	31.7	5.7	23.5	**40**	1001-429-040	1001-421-040
43	39.4	5.7	31.2	**40**	1001-439-040	

Pins

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Tin	Gold	
	5 µm	0.15 µm	0.75 µm
10.2	x	x	
10.8	x	x	
11.4	x	x	x
12.4	x	x	
13.5	x	x	
14.7		x	
15.2			
15.9	x		
16.5	x	x	
17.8	x	x	
18.6	x	x	
19.1	x		
19.8	x	x	
21.6	x	x	
24.1	x	x	
26.7	x	x	
29.2	x	x	
31.7	x	x	
34.3	x	x	
39.4	x		

Checklist

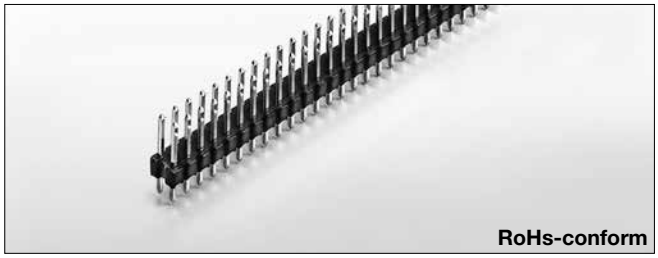
Pin length A _____ B + C + 2.5 mm
B _____
C _____

Surface ☐ tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

Amount of Pins _____

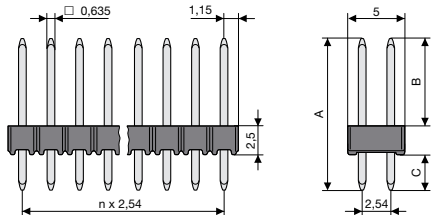
Demand _____ pieces

Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm



Material typical CuZn alloy
Surface 2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1.9 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

Series 1002



Pin No.	A	B	C	Pins	5 µm tin Sn100	0.15 µm gold
11	102	5.2	2.5	**80**	1002-119-080	1002-111-080
12	10.8	5.8	2.5	**80**	1002-129-080	1002-121-080
13	11.4	6.4	2.5	**80**	1002-139-080	1002-131-080
14	12.4	7.4	2.5	**80**	1002-149-080	1002-141-080
15	10.8	5.1	3.2	**80**	1002-159-080	1002-151-080
16	11.4	5.8	3.1	**80**	1002-169-080	1002-161-080
17	12.4	6.9	3.0	**80**	1002-179-080	1002-171-080
18	13.5	8.0	3.0	**80**	1002-189-080	1002-181-080
38	14.7	9.0	3.2	**80**		1002-381-080
19	15.2	9.5	3.2	**80**		1002-191-080
39	15.9	10.2	3.2	**80**	1002-399-080	
20	16.5	10.8	3.2	**80**	1002-209-080	1002-201-080
21	17.8	12.1	3.2	**80**	1002-219-080	1002-211-080
22	18.6	12.9	3.2	**80**	1002-229-080	1002-221-080
40	19.1	13.4	3.2	**80**	1002-409-080	
41	19.8	14.1	3.2	**80**	1002-419-080	1002-411-080
23	21.6	15.9	3.2	**80**	1002-239-080	1002-231-080
24	24.1	18.4	3.2	**80**	1002-249-080	1002-241-080
25	13.5	5.7	5.3	**80**	1002-259-080	1002-251-080
26	15.2	5.7	7.0	**80**		1002-261-080
27	16.5	5.7	8.3	**80**	1002-279-080	1002-271-080
28	17.8	5.7	9.6	**80**	1002-289-080	1002-281-080
29	18.6	5.7	10.4	**80**	1002-299-080	1002-291-080
30	21.6	5.7	13.4	**80**	1002-309-080	1002-301-080
31	24.1	5.7	15.9	**80**	1002-319-080	1002-311-080
32	26.7	5.7	18.5	**80**	1002-329-080	1002-321-080
33	29.2	5.7	21.0	**80**	1002-339-080	1002-331-080
34	34.3	5.7	26.0	**80**	1002-349-080	1002-341-080
42	31.7	5.7	23.5	**80**	1002-429-080	1002-421-080
43	39.4	5.7	31.2	**80**	1002-439-080	Pins

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Tin	Gold	
	5 µm	0.15 µm	0.75 µm
10.2	x	x	
10.8	x	x	
11.4	x	x	x
12.4	x	x	
13.5	x	x	
14.7		x	
15.2			
15.9	x		
16.5	x	x	
17.8	x	x	
18.6	x	x	
19.1	x		
19.8	x	x	
21.6	x	x	
24.1	x	x	
26.7	x	x	
29.2	x	x	
31.7	x	x	
34.3	x	x	
39.4	x		

Checklist

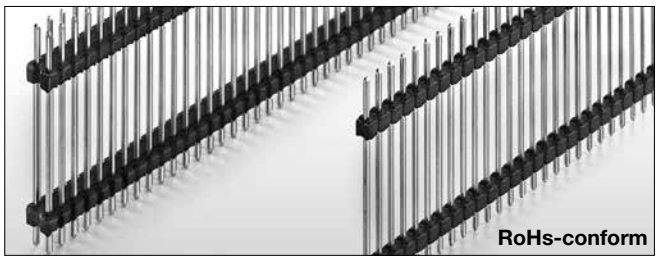
Pin length A _____ B + C + 2.5 mm
B _____
C _____

Surface ☐ tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

Amount of pins _____

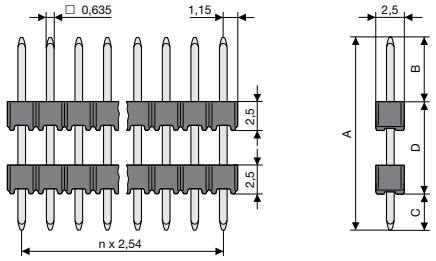
Demand _____ pieces

Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm

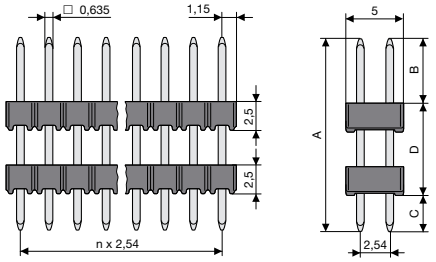


Material	typical CuZn alloy
Surface	2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body	Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper.	-55 up to 125 °C
Solder temperature	from 235°C acc. IEC 68-2-54 Ta
Solder heat resist.	up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage	100 V_{RMS} / 150 VDC
Insulation resistance	> 10^{10} Ω
Air and creepage distance	> 1.9 mm
Moisture sensibility level (MSL)	J-STD-020C Level 1

Series 1004



Series 1005



Pin No.	A	B	C	D	Pins	5 µm tin Sn100	0.15 µm gold
13	17.8	5.7	3.2	8.9	**40**	1004-139-040	1004-131-040
14	18.6	5.7	3.2	9.7	**40**	1004-149-040	1004-141-040
15	21.6	5.7	3.2	12.7	**40**	1004-159-040	1004-151-040
16	24.1	5.7	3.2	15.2	**40**	1004-169-040	1004-161-040
17	26.7	5.7	3.2	17.8	**40**	1004-179-040	1004-171-040
18	29.2	5.7	3.2	20.3	**40**	1004-189-040	1004-181-040
36	31.7	5.7	3.2	22.8	**40**	1004-369-040	1004-361-040
19	34.3	5.7	3.2	25.4	**40**	1004-199-040	1004-191-040
20	39.4	5.7	3.2	30.5	**40**	1004-209-040	
22	16.5	3.2	3.2	10.1	**40**	1004-229-040	1004-221-040
23	17.8	3.2	3.2	11.4	**40**	1004-239-040	1004-231-040
24	18.6	3.2	3.2	12.1	**40**	1004-249-040	1004-241-040
25	21.6	3.2	3.2	15.2	**40**	1004-259-040	1004-251-040
26	24.1	3.2	3.2	17.7	**40**	1004-269-040	1004-261-040
27	26.7	3.2	3.2	20.3	**40**	1004-279-040	1004-271-040
28	29.2	3.2	3.2	22.8	**40**	1004-289-040	1004-281-040
37	31.7	3.2	3.2	25.3	**40**	1004-379-040	1004-371-040
29	34.3	3.2	3.2	27.9	**40**	1004-299-040	1004-291-040
30	39.4	3.2	3.2	33.0	**40**	1004-309-040	Pins
13	178	5.7	3.2	8.9	**80**	1005-139-080	1005-131-080
14	18.6	5.7	3.2	9.7	**80**	1005-149-080	1005-141-080
15	216	5.7	3.2	12.7	**80**	1005-159-080	1005-151-080
16	24.1	5.7	3.2	15.2	**80**	1005-169-080	1005-161-080
17	26.7	5.7	3.2	17.8	**80**	1005-179-080	1005-171-080
18	29.2	5.7	3.2	20.3	**80**	1005-189-080	1005-181-080
36	31.7	5.7	3.2	22.8	**80**	1005-369-080	1005-361-080
19	34.3	5.7	3.2	25.4	**80**	1005-199-080	1005-191-080
20	39.4	5.7	3.2	30.5	**80**	1005-209-080	
22	16.5	3.2	3.2	10.1	**80**	1005-229-080	1005-221-080
23	17.8	3.2	3.2	11.4	**80**	1005-239-080	1005-231-080
24	18.6	3.2	3.2	12.1	**80**	1005-249-080	1005-241-080
25	21.6	3.2	3.2	15.2	**80**	1005-259-080	1005-251-080
26	24.1	3.2	3.2	17.7	**80**	1005-269-080	1005-261-080
27	26.7	3.2	3.2	20.3	**80**	1005-279-080	1005-271-080
28	29.2	3.2	3.2	22.8	**80**	1005-289-080	1005-281-080
37	31.7	3.2	3.2	25.3	**80**	1005-379-080	1005-371-080
29	34.3	3.2	3.2	27.9	**80**	1005-299-080	1005-291-080
30	39.4	3.2	3.2	33.0	**80**	1005-309-080	Pins

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Sn/µm 5	Au/µm 0.15	Au/µm 0.75
10.2	x	x	
10.8	x	x	
11.4	x	x	x
12.4	x	x	
13.5	x	x	
14.7		x	
15.2	x	x	
15.9	x		
16.5	x	x	
17.8	x	x	
18.6	x	x	
19.1	x	x	

A	Sn/µm 5	Au/µm 0.15	Au/µm 0.75
19.8	x	x	
21.6	x	x	
24.1	x	x	
26.7	x	x	
29.2	x	x	
31.7	x	x	
34.3	x	x	
39.4	x		

Checklist

Series ☐ 1004 ☐ 1005

Pin length A _____ B + C + D mm
B _____
C _____

Surface ☐ tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

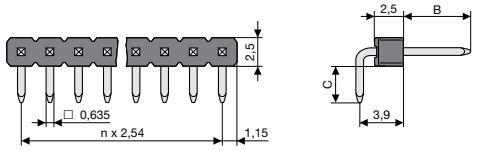
Amount of pins _____

Demand _____ pieces

Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm

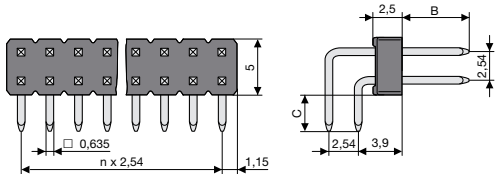
Material typical CuZn alloy
Surface 2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1.9 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

Series 1006



Pin No.	B	C	Pins	5 µm tin Sn100	0.15 µm gold
21	3.1	3.1	**40**	1006-219-040	1006-211-040
12	6.4	2.5	**40**	1006-129-040	1006-121-040
14	5.8	3.1	**40**	1006-149-040	1006-141-040
15	6.9	3.2	**40**		1006-151-040
16	5.7	6.2	**40**	1006-169-040	1006-161-040
17	5.7	8.8	**40**	1006-179-040	
18	5.7	11.3	**40**	1006-189-040	1006-181-040
19	5.7	13.8	**40**	1006-199-040	1006-191-040 Pins

Series 1007



Pin No.	B	C	Pins	5 µm tin Sn100	0.15 µm gold
21	3.1	3.1	**80**	1007-219-080	
12	6.4	2.5	**80**	1007-129-080	1007-121-080
14	5.8	3.1	**80**	1007-149-080	1007-141-080
15	6.9	3.2	**80**		1007-151-080
16	5.7	6.2	**80**	1007-169-080	1007-161-080
17	5.7	8.8	**80**	1007-179-080	
18	5.7	11.3	**80**	1007-189-080	1007-181-080
19	5.7	13.8	**80**	1007-199-080	1007-191-080 Pins

We deliver the pins in every required number of poles. The insulator can be positioned in every place.

The pin lengths stated in the chart below are stock articles.

We manufacture more pin lengths order related from 60,000 pins.

Single contact pin stock items

A	Tin 5 µm	Gold 0.15 µm	Gold 0.75 µm
10.2	x	x	
10.8	x	x	
11.4	x	x	x
12.4	x	x	
13.5	x	x	
14.7		x	
15.2	x	x	
15.9	x		
16.5	x	x	
17.8	x	x	
18.6	x	x	
19.1	x		
19.8	x	x	
21.6	x	x	
24.1	x	x	

Checklist

Series ☐ 1006

Pin length A1_____ B + C + 4.6 mm
B _____
C _____

Series ☐ 1007

Pin length A1_____ B + C + 4.6 mm
A2 _____ B + C + 9.7 mm
B _____
C _____

Surface ☐ tin plated
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

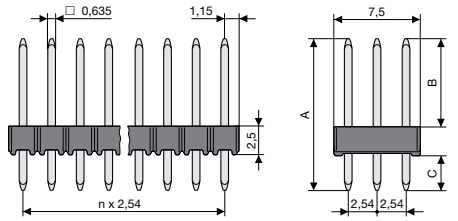
Amount of pins _____

Demand _____ pieces

Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm

Material typical CuZn alloy
Surface 2-3 µm nickel, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1.9 mm
Moisture sensibility level (MSL) J-STD-020C Level 1

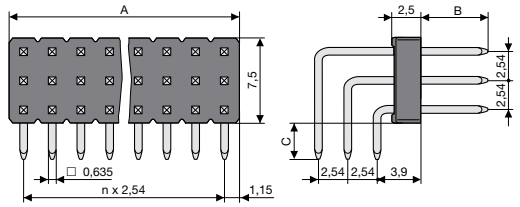
Series 1003



Pin No.	A	B	C	Pins	0.15 µm gold
16	11.4	5.8	3.1	**150**	1003-161-150
17	12.4	6.9	3.0	**150**	1003-171-150

Pins

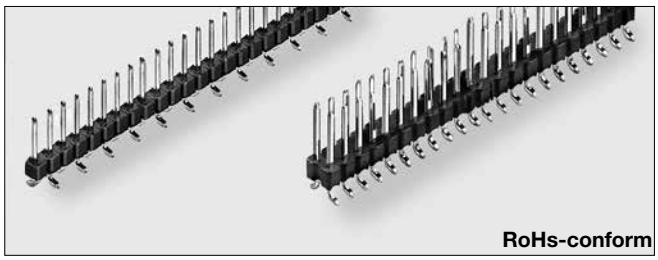
Series 1008



Pin No.	A	B	C	Pins	0.15 µm gold
15	–	6.9	3.3	**150**	1008-151-150

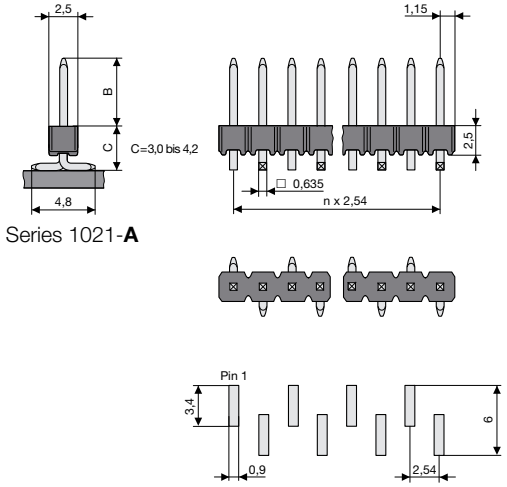
Pins

Pin Connector Pitch 2.54 mm
Pin ⍁ 0.635 mm



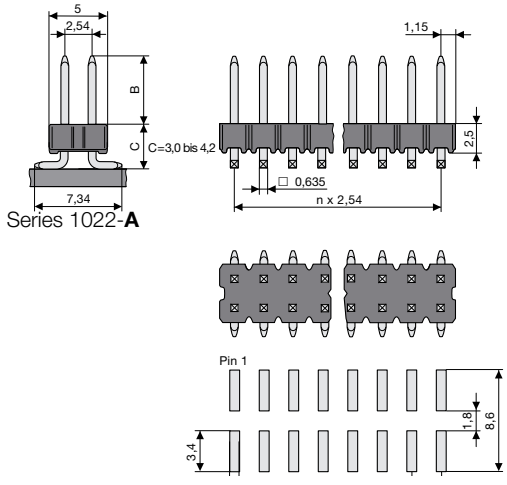
RoHs-conform

Material typical CuZn alloy
Surface 2-3 µm nickel, 5 µm tin, 0,15 µm gold
Insulator body Thermopl. polyester glass-fibre reinforced, UL 94V0
Operation temper. -55 up to 125 °C
Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder heat resist. up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Rated voltage 100 V_{RMS} / 150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1.9 mm
Moisture sensibility level (MSL) J-STD-020C Level 1



Series 1021-**A**

A	B	C	Pins	5 µm tin Sn100	0.15 µm gold
11.4	5.8	3.8	**40**	1021-A-169-040	1021-A-161-040
12.4	6.9	3.7	**40**	1021-A-179-040	1021-A-171-040 Pins

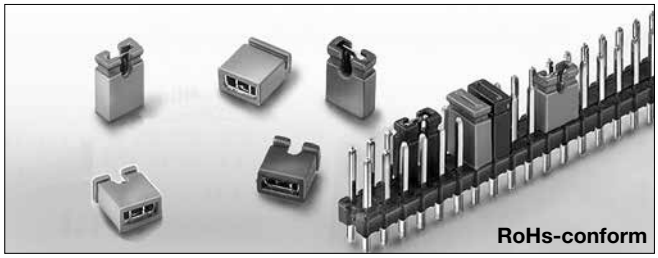


Series 1022-**A**

A	B	C	Pins	5 µm tin Sn100	0.15 µm gold
11.4	5.8	3.8	**80**	1022-A-169-080	1022-A-161-080
12.4	6.9	3.7	**80**	1022-A-179-080	1022-A-171-080 Pins

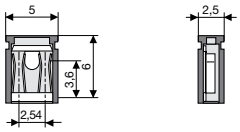
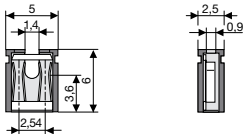
More pin lengths on request

Female Jumpers Pitch 2.54 mm for square Pins ⍁0.635 mm



Insulated female jumpers for square pins, connectable in series.

Material	Phosphor bronze
Operation temperature	-40 up to 105°C
Rated voltage	250V AC, DC
Contact restistance	< 20 m Ω
Insulation resistance	>1000 M Ω

	Colour plastic	Pins	Gold flash Packaging unit 1000	Gold flash Packaging unit 100
Closed design 	**black**	**1**	3300101	3300113
Open design 	**black** **red**	**1** **1**	3300096 3300097	3300111 3300559

Male Jumpers for IC Sockets and Socket Connectors

Male jumpers with pitch 2.54/5.08/7.62 mm, optional with or without insulator body.

With the sidewise displaced nipple the jumper can be easily plugged in and drawn off.

For measures in plugged-in position a drill-hole is positioned in the middle of the insulator body.

Material typical CuZn alloy

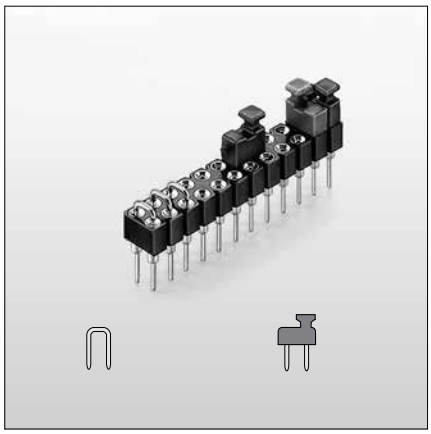
Surface nickel 2 - 3 µm, gold 0.15 µm or tin 5 µm (Sn100)

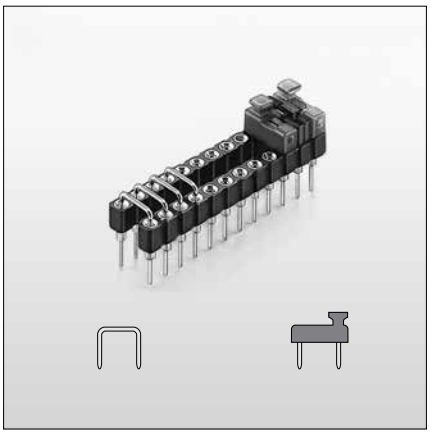
Insulator body Thermoplastic Polyester self-extinguishing rated UL94V0

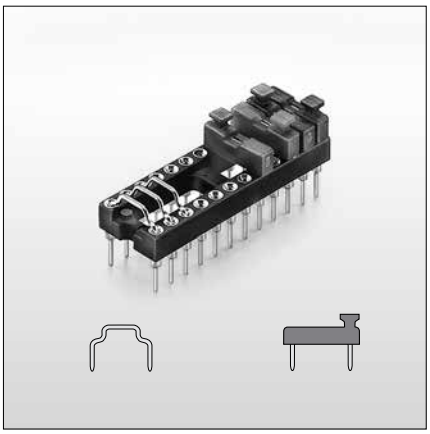
Operation temperature -55 up to +125°C.

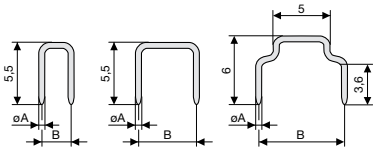
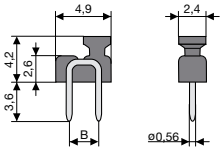
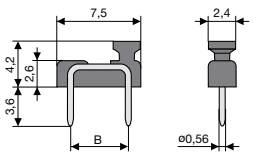
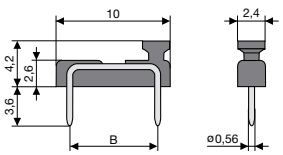
Rated voltage 100 V_{RMS}/150 VDC
Breakdown voltage 1000 V_{RMS}
Insulation resistance >10^{10} Ω
Contact resistance ≤ 10 mΩ
Air and creepage distance > 0,7 mm
Current carrying capacity 3 A
Moisture sensibility level (MSL) J-STD-020C Level 1
RoHS-conform

The technical data refer to IC Sockets and Socket Connectors with pitch 2.54 mm.







	Surface →			0.15 µm Gold	5 µm Tin
	A	**B**	**Plastic colour**	**PU**	**Bestell-Nr.**
	0.56 0.56 0.56	2.54 5.08 7.62		1000 1000 1000	11.1110 11.1210 11.1310	11.1190 11.1290 11.1390
	0.5 0.5 0.5	2.54 5.08 7.62		1000 1000 1000	41.1110 41.1210 41.1310	41.1190 41.1290 41.1390
	0.56 0.56	2.54 2.54	**black** **red**	100 100	11.2110 11.2111	11.2190 11.2191
	0.56 0.56	5.08 5.08	**black** **red**	100 100	11.2210 11.2211	11.2290 11.2291
	0.56 0.56	7.62 7.62	**black** **red**	100 100	11.2310 11.2311	11.2390 11.2391

PU = Packaging Unit

DIL-Capacitor Sockets Series K1-110

The capacitor socket is used in bus drivers or storages to avoid voltage dips during switching.

The connecting cable of the capacitor is injected with the socket contact.

Highest contact safety due to 4 multi-disc contact spring made of Beryllium copper with homogeneous gilding.

8- to 40-pin, all side arrangable. For PCB´s up to 2.0 mm thickness.

No capillary action during soldering due to screened inner contact (no fluxing medium or tin in the contact area).

Contact clip Beryllium copper
Surface nickel 2 - 3 µm, gold flash

Sleeve typical CuZn alloy turned
Surface tin (Sn100)

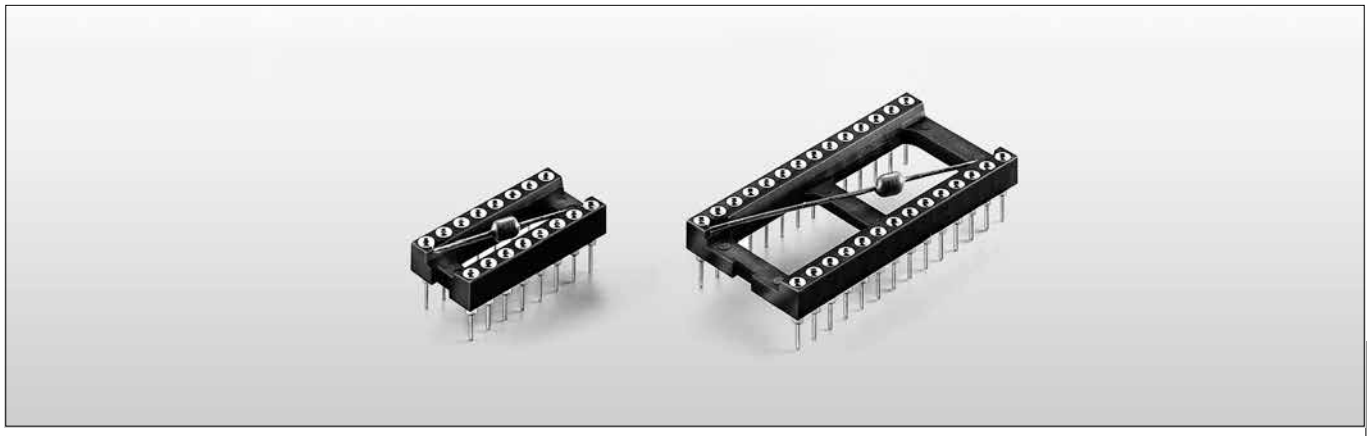
Insulator body Thermoplastic polyester glass-fibre reinforced,self-extinguishing rated UL94V0.

Operation temperature -55 up to +125°C

Solder temperature
from 235°C acc. IEC 68-2-54 Ta
Solder head resistance
up to 260°C 10 sec. acc. IEC 68-2-20 Tb

Contact depth 2.4 mm by safe contact making
Accepted diameter 0.4 - 0,56 mm
Rated voltage max. 50 VDC
Insulation resistance $>10^{10}$ Ω
Contact resistance ≤ 10 mΩ
Air and creepage distance > 0.7 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL)
J-STD-020C Level 1
RoHS-conform

Ceramic multi level capacitor Z5U
Capacity 0,1 µF ± 20%
Rated voltage max. 50 VDC
Operating temperature -25 up to +125°C



	Sleeve		5 µm tin		
	Clip		Gold flash		
A	**B**	**Pins**	**PU**	**Order No.**	**Min. order amount**
10.1	7.62	**8**	52	K1 110-87-308	11,370
17.7	7.62	**14**	29	K1 110-87-314	
20.3	7.62	**16**	25	K1 110-87-316	
22.8	7.62	**18**	22	K1 110-87-318	5,060
25.3	7.62	**20**	20	K1 110-87-320	
30.4	7.62	**24**	17	K1 110-87-324	3,910
30.4	15.24	**24**	17	K1 110-87-624	2,550
35.4	15.24	**28**	14	K1 110-87-628	
40.6	15.24	**32**	12	K1 110-87-632	1,800
50.6	15.24	**40**	10	K1 110-87-640	1,500

More sizes on request

For pins
Ø 0,4 up to 0,56 mm
▱ 0,25 x 0,45 mm

PU = Packaging Unit

DIL-Sockets with pin contacts SMD

The SMD Sockets are delivered in three versions:

Type 1 All pins with SMD connection

Type 2 The connection on the four corners have additional fixing knobs. The print of the soldering paste can be carried out like type 1.

Type 3 All pins are fitted with additional fixing knobs (on request).

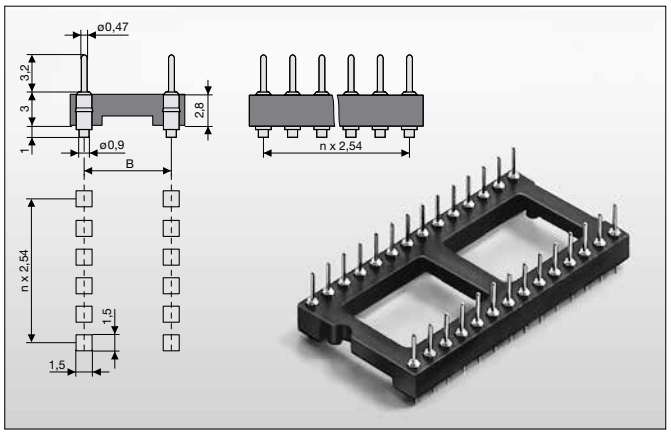
Material typical CuZn alloy turned
Surface nickel 2 - 3 µm, tin 5 µm (Sn100) or gold 0.15 µm

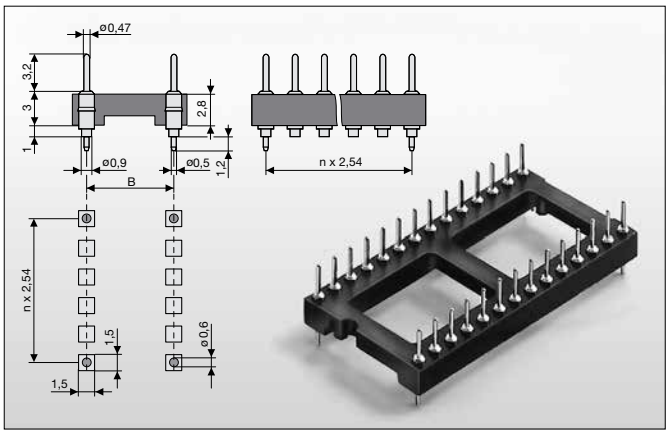
Insulator body Thermoplastic polyester glass-fibre reinforced, self-extinguishing rated UL94V0.

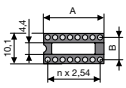
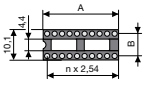
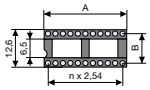
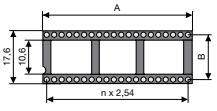
Operation temperature -55 up to +125°C

Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder head resistance up to 260°C 10 sec. acc. IEC 68-2-20 Tb

Rated voltage 100 V_{RMS}/150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance > 1,0 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL) J-STD-020C Level 1
RoHS-conform





				Surface		0.15 µm gold		5 µm tin	
						Part No.			
	A	B	Pins	PU	Type 1	Type 2	Type 1	Type 2
	7.6	7.62	**6**	69				1008279
	10.1	7.62	**8**	52			1008130	1008131
	17.7	7.62	**14**	29	1008465		1009121	1008280
	20.3	7.62	**16**	25	1008297	1009469	1009037	1008281
	22.8	7.62	**18**	22	1008403		1008505	1008282
	25.3	7.62	**20**	20	1008298	1008296		1008283
	30.4	7.62	**24**	17		1008708		1008284
	35.5	7.62	**28**	14				1008265
	30.4	10.16	**24**	17				1008285
	35.5	10.16	**28**	14				1008286
	40.6	10.16	**32**	12				1008287
	30.4	15.24	**24**	17				1008288
	35.5	15.24	**28**	14			1009282	1008289
	40.6	15.24	**32**	12	1008670	1008669		1008290
	50.6	15.24	**40**	10	1009153		1009328	1008291
	60.9	15.24	**48**	8				1008168
	65.9	15.24	**52**	7				1008294

More sizes on request

PU = Packaging Unit

Converter Sockets DIL → SOP
Reduction Sockets DIL → DIL Series 599

① Converter socket DIL→SOP solder on the PCB.

② Converter socket Skinny DIL→DIL
No capillary action during soldering due to screened inner contact. No fluxing medium or tin in the contact area.

Contact clip Beryllium copper
Surface Nickel 2 - 3 µm, gold flash

Contact pin typical CuZn alloy turned
Surface nickel 2 - 3 µm,
tin 5 µm (Sn100)
or gold 0,15 µm

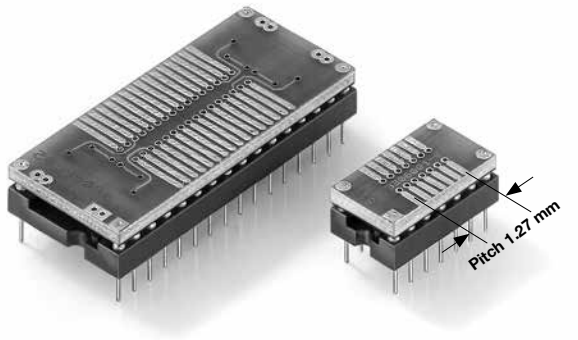
Insulator body Thermoplastic polyester glass-fibre reinforced, self-extinguishing rated UL94V0.

PCB Glas-fibre Epoxyd EP-GC 02, self-extinguishing rated UL94V0, (35 µm copper tin-plated Sn100 or chemical Ni/Au)

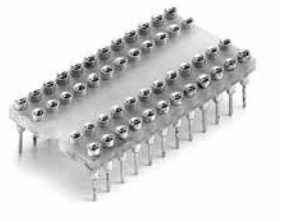
Operation temperature -55 up to +125 °C

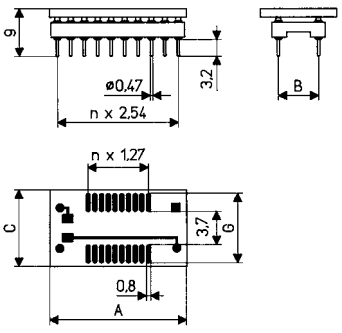
Solder temperature
from 235°C acc. IEC 68-2-54 Ta
Solder head resistance
up to 260°C 10 sec. acc. IEC 68-2-20 Tb
Contact depth 2.4 mm by safe contact making
Accepted diameter 0.4 - 0.56 mm
Mechanical life > 50
Rated voltage 100 V_{RMS}/150 VDC
Contact resistance < 30 mΩ
Insulation resistance > 5 x 10^9 Ω
Air and creepage distance PCB > 0.3 mm
Insulator body > 0.7 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL)
J-STD-020C Level 1
RoHS-conform

① The DIL → SOP Converter socket can be inserted or soldered as required.

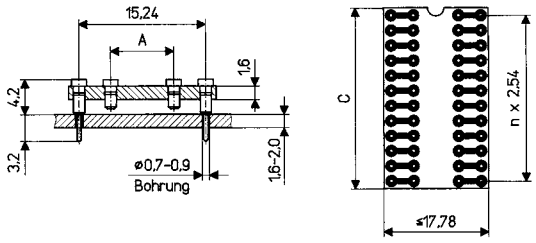


② Skinny DIL → DIL Converter sockets for electrically similar components with different widths and pitches.





Series 599



A	B	C	G	Pins	PU	Converter Socket	Part No.
10.2	7.62	10.2	9.8	**8**	52	SOP8-DIP308	3305702
17.8	7.62	10.2	9.8	**14**	29	SOP14-DIP314	3305704
20.4	7.62	10.2	9.8	**16**	25	SOP16-DIP316	3305706
20.4	7.62	14.0	13.2	**16**	25	SOP16W-DIP316	3305708
22.9	7.62	14.0	13.2	**18**	22	SOP18-DIP318	3305749
25.5	7.62	10.2	9.8	**20**	20	SOP20-DIP320	3305710
25.5	7.62	14.7	13.9	**20**	20	SOP20W-DIP320	3305712
30.5	7.62	17.8	16.8	**24**	17	SOP24-DIP324	3305750
30.5	15.24	17.8	16.8	**24**	17	SOP24-DIP624	3305714
35.6	7.62	17.8	16.8	**28**	14	SOP28-DIP328	3305752
35.6	15.24	17.8	16.8	**28**	14	SOP28-DIP628	3305716
40.7	15.24	17.8	16.8	**32**	12	SOP32-DIP632	3305718

W = Design „Wide“

Surface	Sleeve →	5 µm tin			
	Clip →	Gold flash			
A	**C**	**Pins**	**PU**	**Part No. New**	**Part No. Old**
7.62	31.0	**24**	17	1005221	599-87-048-1501
7.62	36.2	**28**	14	1005860	599-87-056-1503
7.62	41.2	**32**	12	1004108	599-87-064-1505

PU = Packaging Unit

LED-Sockets

The constructional depth of the LED-displays have to be aligned precisely to the mechanical conditions.

If there are several displays mounted side by side, a joint insulator is appropriate. Due to the insulator all displays are mounted on the same height. The socket connectors given below can be mounted. More construction depths on request.

The LED-Sockets are manufactured on customer order. Please use the design specification given below for your request.

Contact clip Beryllium copper
Surface nickel 2 - 3 µm, gold 0.75 µm (-83-) or gold flash (-87-)

Sleeve typical CuZn alloy turned
Surface Nickel 2 - 3 µm, tin 5 µm (Sn100)

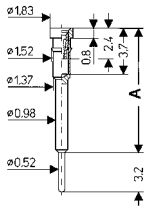
Insulator body Thermoplastic polyester glass-fibre reinforced,self-extinguishing rated UL94V0.

Operation temperature -55 up to +125 °C

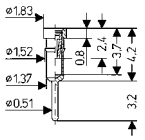
Solder temperature
from 235°C acc. IEC 68-2-54 Ta
Solder head resistance
up to 260°C 10 sec. acc. IEC 68-2-20 Tb

Contact depth 2.4 mm by safe contact makin
Accepted diameter 0.4 mm - 0.56 mm
Rated voltage 100 V_{RMS}/150 VDC
Insulation resistance $>10^{10}$ Ω
Contact resistance ≤ 10 mΩ
Air and creepage distance > 0.7 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL)
J-STD-020C Level 1

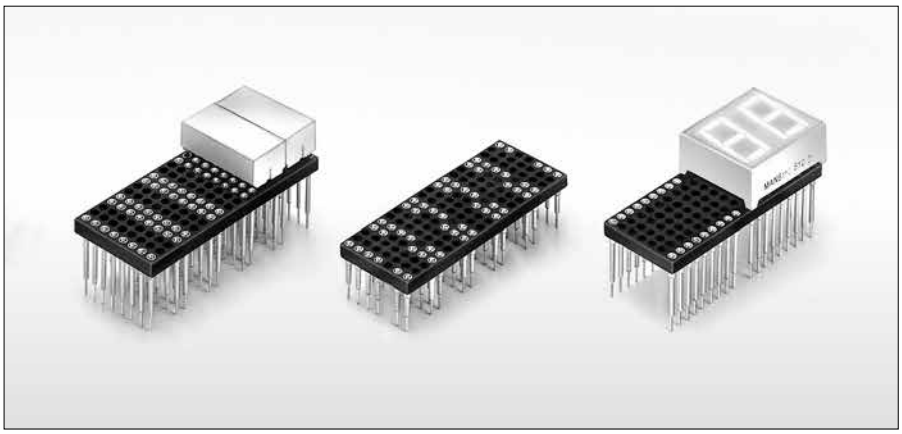
RoHS-conform



Dim A mm	Contact No.
6.0	01606-87-3010
8.0	01603-87-3010
10.1	01607-87-3010
13.0	01609-83-3010
15.0	01601-87-3010



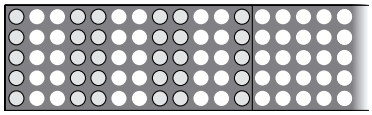
01001-83-3010
01001-87-3010



1. Footprints

Distance of drillings 2.54 mm

Example



2. Order No. single contacts

_____

3. Amount of single contacts

_____ pieces

4. Demand

_____ pieces sample

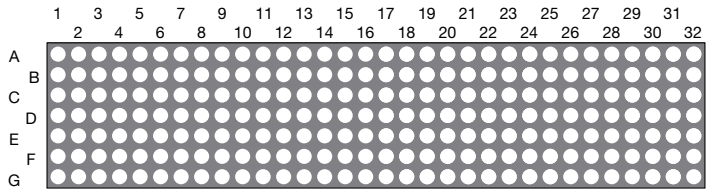
_____ pieces mass produce

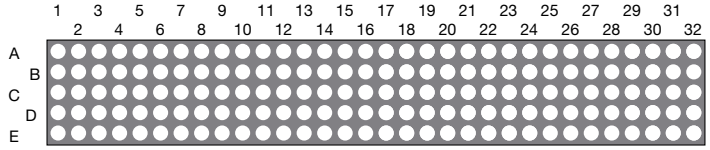
5. Address

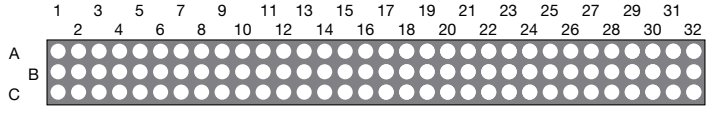
The LED-socket can be manufactured with different socket connectors.
Due to your footprint and the definition of the single contact the LED-socket will be produced.

Thickness of insulator body 2.8 mm

Insulator body 1100368







Bauteileseite

DIL-Sockets partial assembled Series 110
TO-Sockets

1. DIL-Sockets partial assembled, f.e. for Oscillators and relays.
2. TO-Socket with precision round contacts

Highest contact safety due to 4 multi-finger contact made of Beryllium copper with homogeneous gold plating.

For PCB's up to 2.0 mm thickness.

No capillary action during soldering due to screened inner contact. No fluxing medium or tin in the contact area.

Contact clip Beryllium copper
Surface Nickel 2 - 3 µm, gold 0.75 µm

Sleeve typical CuZn alloy turned
Surface Nickel 2 - 3 µm, tin 5 µm (Sn100)

Insulator body Thermoplastic polyester glass-fibre reinforced,self-extinguishing rated UL94V0

Operation temperature -55 up to +125 °C

Solder temperature
from 235°C acc. IEC 68-2-54 Ta

Solder head resistance
up to 260°C 10 sec. Series 110,
5 sec. TO-Socket acc. IEC 68-2-20 Tb

Contact depth 1.9 respectively 2.4 mm by safe contact making

Accepted diameter 0.4 - 0.56 mm

Rated voltage 100 V_{RMS}/150 VDC

Insulation resistance $>10^{10}\ \Omega$

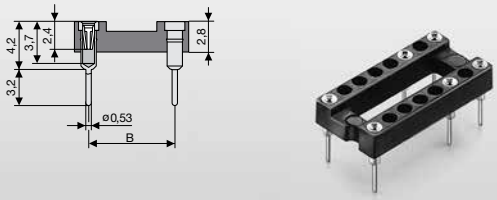
Contact resistance $\leq 10\ m\Omega$

Current carrying capacity per contact 1 A

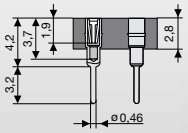
Moisture sensibility level (MSL)
J-STD-020C Level 1

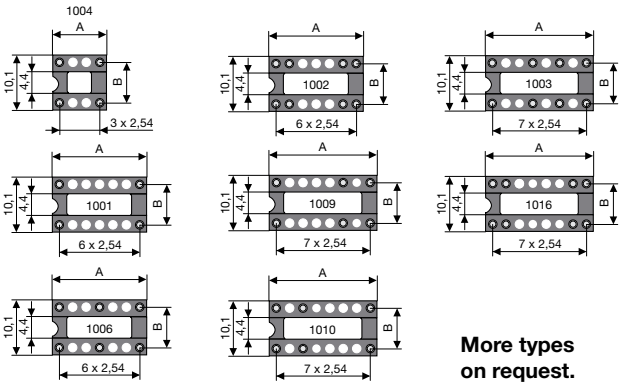
RoHS-conform

Series 110 partial assembled
For pin
Ø 0,4 bis 0,56 mm
▱ 0,25 x 0,45 mm

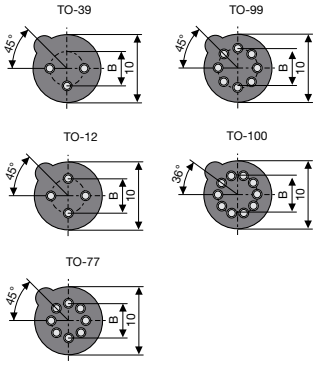


TO-Socket
For pin
Ø 0,4 bis 0,56 mm
▱ 0,25 x 0,45 mm





More types on request.



		Sleeve		5 µm tin
		Clip		0.75 µm gold
A	**B**	**Pins X**	**Y**	**PU**	**Order No.**
10.1	7.62	**8**	**4**	52	110-83-300-1004
17.7	7.62	**14**	**4**	29	110-83-300-1001
17.7	7.62	**14**	**6**	29	110-83-300-1006
17.7	7.62	**14**	**8**	29	110-83-300-1002
20.3	7.62	**16**	**6**	25	110-83-300-1009
20.3	7.62	**16**	**6**	25	110-83-300-1010
20.3	7.62	**16**	**8**	25	110-83-300-1003
20.3	7.62	**16**	**8**	25	110-83-300-1016

X = Insulator body/Y = Pins

		Sleeve	5 µm tin
		Clip	0.75 µm gold
Type	**B**	**Pins**	**PU**	**Order No.**
TO-39	5.08	**3**	50	917-83-103-41-005
TO-12	5.08	**4**	50	917-83-104-41-005
TO-77	5.08	**8**	50	917-83-108-41-005
TO-99	5.84	**8**	50	917-83-208-41-005
TO-100	5.84	**10**	50	917-83-210-41-005

PU = Packaging Unit

PLCC-Adapter Series 531

The angled SMD connections with a large soldering area ensure a high draw-off strength.

Suitable for all PLCC sockets in JEDEC Type A design.

The massive square pins guarantee a safe connection. The pin length of 5.5 mm in the insertion area ensure a safe contact. For particularly low component height, the insertion depth can be reduced to 4.6 mm.

The drill-holes in the in insulated body enable the socket to be fixed onto the PCB.

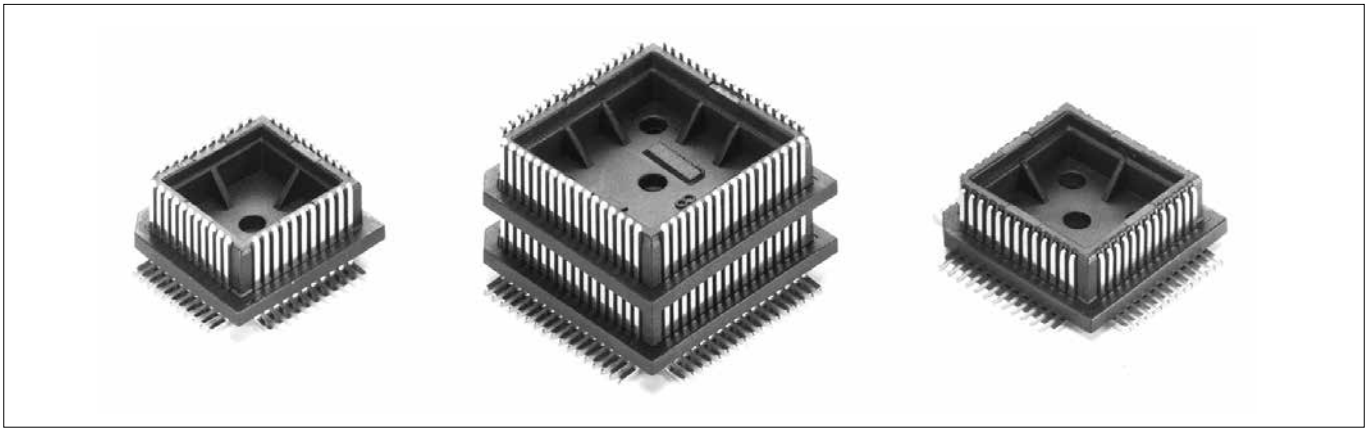
Contact pin typicaly CuZn alloy
Surface 2-3 µm nickel, 0.15 µm gold

Insulator body Thermoplastic polyester glass-fibre reinforced, self-extinguishing rated UL94V0.

Operation temperature -55 up to +125 °C

Solder temperature from 235°C acc. IEC 68-2-54 Ta
Solder head resistance up to 260°C 10 sec. acc. IEC 68-2-20 Tb

Mechanical life > 500 cycles
Rated voltage 100 V_{RMS}/150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance >0.6 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL) J-STD-020C Level 1
RoHS-conform



Customer Specific Design

Type: ☐ 1 ☐ 2 ☐ 3

Length: A = _____
M = A - 2.1 mm
K = ☐ 5.5 mm

A = _____
M = A - 3.1 mm
K = ☐ 4.6 mm

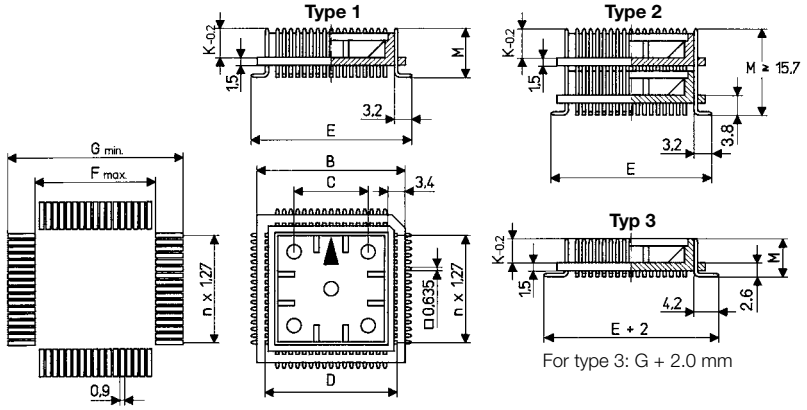
Surface: ☐ tinned
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

Pin count: _____

Single contact pin stock items

A	Gold 0.15 µm	
10.2	x	
10.8	x	
11.4	x	
12.4	x	
13.5	x	
14.7	x	
15.2	x	
16.5	x	
17.8	x	
19.1	x	
19.8	x	
21.6	x	
24.1	x	
26.7	x	
29.2	x	

Custom length and surface finishes for 60,000 pins or more.



	Type	1	2	3		
	M	9.3	15.7	7.1		
	K	5.5	5.5	4.6		

B	C	D	E	F	G	Pins	Part No. Contact pin 0.15 µm gold plated				
12.8		9.8	15.0	6.7	15.9	**20**					
15.3		12.3	17.4	9.2	18.4	**28**	3306811	3306911	3307311		
15.3 18.0		12.3 14.9	17.4 20.0	9.2 11.8	19.4 22.0	**32**	3306821	3306921	3307321		
20.3		17.4	22.5	14.3	24.5	**44**	3306831	3306931	3307331		
23.0	9.5	19.9	25.1	16.8	27.1	**52**	3306841	3306941	3307341		
28.0	14.0	25.0	30.1	21.9	32.1	**68**	3306851	3306951	3307351		
33.0	17.8	30.1	35.2	26.8	37.2	**84**	3306861	3306961	3307062		

PLCC-Adapter Series 532

For insertion into PCB's or to be soldered in SMD.

Suitable for all PLCC sockets in JEDEC Type A design.

The massive square pins guarantee a safe connection. The pin length of 5.5 mm in the insertion area ensure a safe contact. For particularly low component height, the insertion depth can be reduced to 4.6 mm.

The drill-holes in the in insulated body enable the socket to be fixed onto the PCB.

Contact pin typicaly CuZn alloy
Surface 2-3 µm nickel, 0.15 µm gold

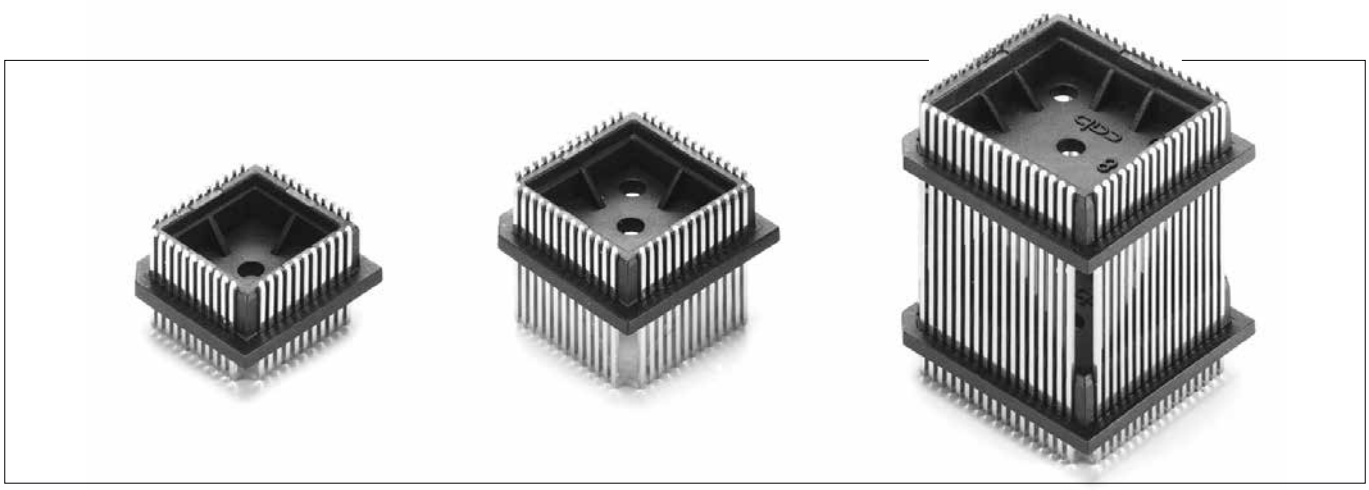
Insulator body Thermoplastic polyester glass-fibre reinforced, self-extinguishing rated UL94V0.

Operation temperature -55 up to +125 °C

Solder temperature
from 235°C acc. IEC 68-2-54 Ta
Solder head resistance
up to 260°C 10 sec. acc. IEC 68-2-20 Tb

Mechanical life > 500 cycles
Rated voltage 100 V_{RMS}/150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance >0.6 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL)
J-STD-020C Level 1

RoHS-conform



Customer specific design

Type: ☐ 1 ☐ 2

Length: A = _____

L = _____

K = ☐ 4,6 mm ☐ 5,5 mm

Surface: ☐ tinned

☐ gold plated 0.15 µm

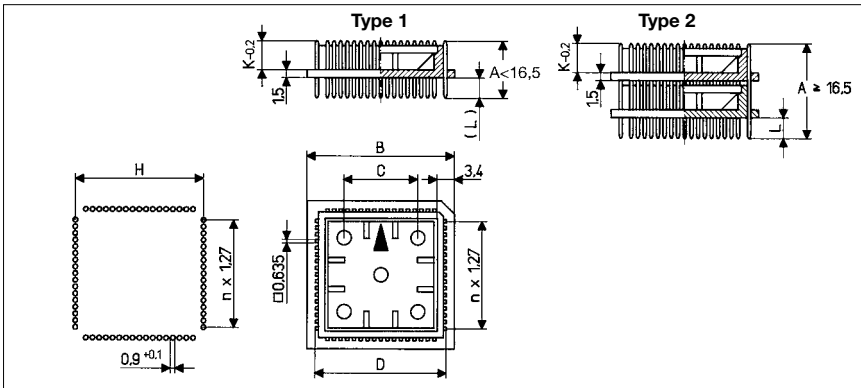
☐ gold plated 0.75 µm

Pin count: _____

Single contact pin stock items

A	Gold 0.15 µm	
10.2	x	
10.8	x	
11.4	x	
12.4	x	
13.5	x	
14.7	x	
15.2	x	
16.5	x	
17.8	x	
19.1	x	
19.8	x	
21.6	x	
24.1	x	
26.7	x	
29.2	x	

Custom lengths and surface finishes for 60,000 pins or more



	Type	1	1	2	2	
	A	10.8	15.2	16.5	29.2	
	K	5.5	5.5	5.5	5.5	
	L	3.8	8.2	3.5	3.5	

B	C	D	H	Pins	Part No. Contact pin 0.15 µm gold plated				
12.8		9.8	9.2	**20**					
15.3		12.3	11.7	**28**	3306812	3306912	3307812	3307512	
15.3 18.0		12.3 14.9	11.7 14.2	**32**	3306822	3306922	3307822	3307522	
20.3		17.4	16.8	**44**	3306832	3306932	3307832	3307532	
23.0	9.5	19.9	19.3	**52**	3306842	3306942	3307842	3307542	
28.0	14.0	25.0	24.4	**68**	3306852	3306952	3307852	3307552	
33.0	17.8	30.1	29.5	**84**	3306862	3306962	3307862	3307562	

PLCC-Adapter Series 533

Suitable for all PLCC sockets in JEDEC Type A design.

The massive square pins guarantee a safe connection. The pin length of 5.5 mm in the insertion area ensures a safe contact. For particularly low component height, the insertion depth can be reduced to 4.6 mm.

The drill-holes in the in insulated body enable the socket to be fixed onto the PCB.

Contact pin typicaly CuZn alloy
Surface 2-3 µm nickel, 0.15 µm gold

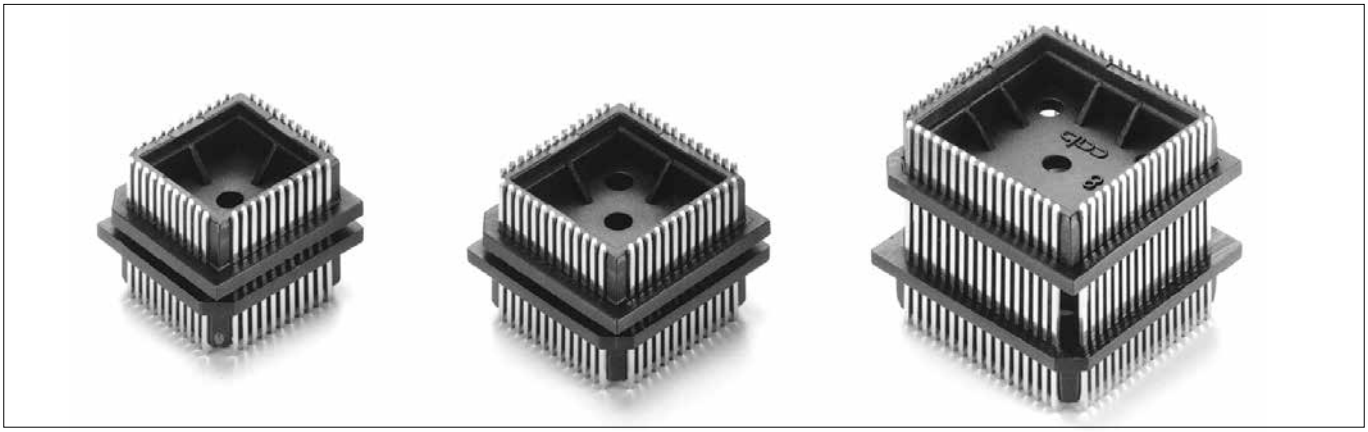
Insulator body Thermoplastic polyester glass-fibre reinforced, self-extinguishing rated UL94V0.

Operation temperature -55 up to +125 °C

Solder temperature
from 235°C acc. IEC 68-2-54 Ta
Solder head resistance
up to 260°C 10 sec. acc. IEC 68-2-20 Tb

Mechanical life > 500 cycles
Rated voltage 100 V_{RMS}/150 VDC
Insulation resistance > 10^{10} Ω
Air and creepage distance >0.6 mm
Current carrying capacity per contact 1 A
Moisture sensibility level (MSL)
J-STD-020C Level 1

RoHS-conform



Customer specific design

Length: A = _____
K = ☐ 4.6 mm ☐ 5.5 mm

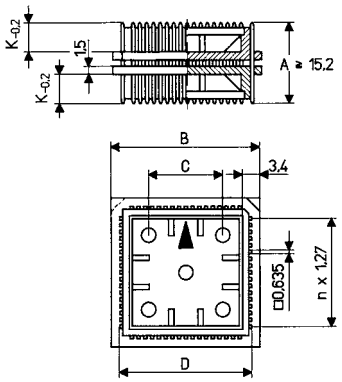
Surface: ☐ tinned
☐ gold plated 0.15 µm
☐ gold plated 0.75 µm

_____

Pin count: _____

Single contact pins stock items

A	Gold 0.15 µm		
15.2	x		
16.5	x		
17.8	x		
19.1	x		
19.8	x		
21.6	x		
24.1	x		
26.7	x		
29.2	x		
Custom lengths and surface finishes for 60,000 pins or more			

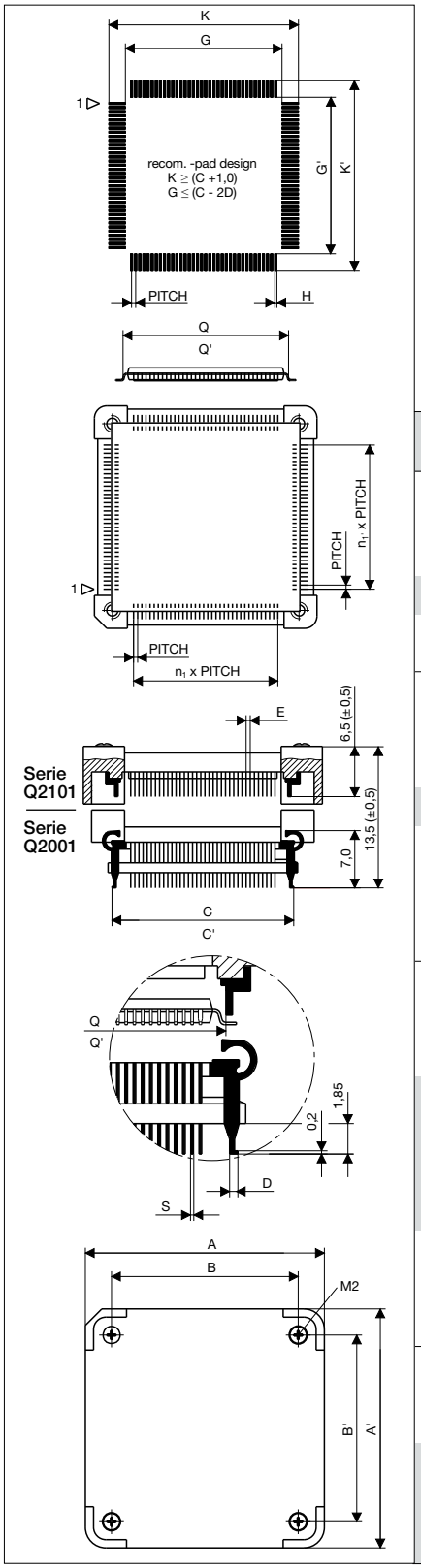


		A	15.2	21.6			
		K	5.5	5.5			
B	C	D	Pins	Part No. Contact pin 0.15 µm gold plated			
12.8		9.8	20				
15.3		12.3	28	3306813	3306913		
15.3		12.3	32	3306823	3306923		
18.0		14.9					
20.3		17.4	44	3306833	3306933		
23.0	9.5	19.9	52	3306843	3306943		
28.0	14.0	25.0	68	3306853	3306953		
33.0	17.8	30.1	84	3306863	3306963		

QFP-Socket Cover Series Q2101
QFP-Base Socket Series Q2001

Content of delivery Series Q2101
QFP-Socket cover and 4 screws M2x6

Content of delivery Series Q2001
QFP-Base socket and a cross slot screwdriver for M2



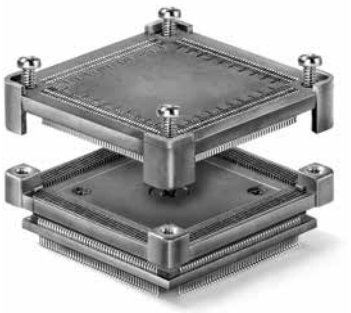
Contact
Beryllium copper, nickel 1-3 µm,
Q2101 = gold 0.5 µm, Q2001 = gold 0.25 µm

Insulator body
Liquid cristall polymer (LCP) self-extinguishing rated UL94V0

Operation temperature -25 up to +85°C
Resistance to solder heat
Reflow 260°C, 10 sec.
Manual 350°C, 5 sec./ per contact

Mechanical life >100 cycles
Rated voltage 100 V_{RMS}/150 VDC
Contact resistance < 70 mΩ
Insulation resistance > 5 x 10^8 Ω
Current carrying capacity per contact 0,5 A
Moisture sensibility level (MSL) J-STD-020C Level 2
RoHS-conform

Series Q2101



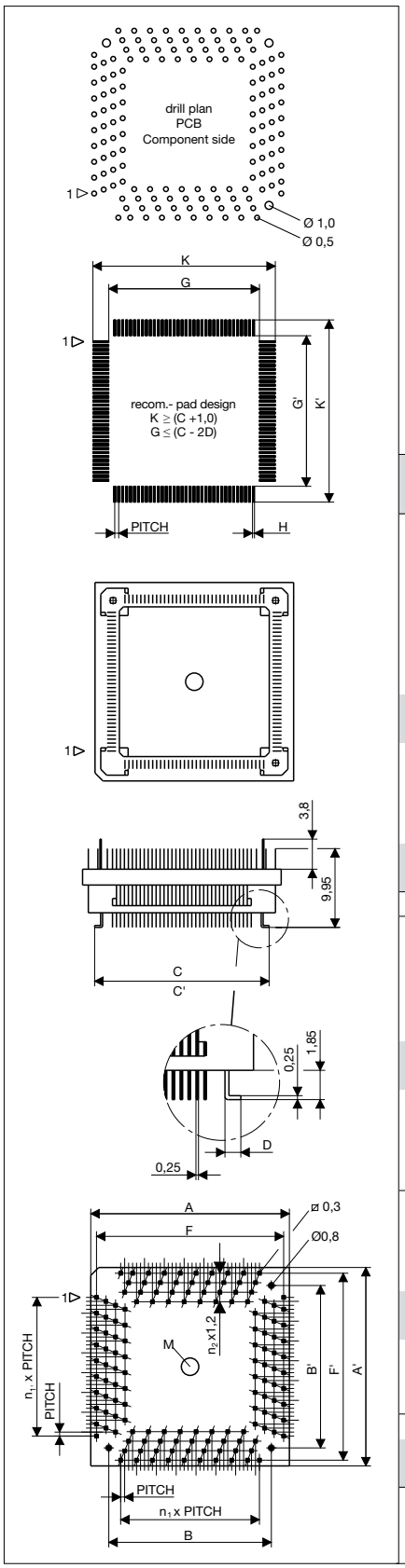
Series Q2001

A A'	B B'	C C'	D	E	H	Q Q'	S	n_1 $n_{1'}$	Pitch	Pins	S=Square R=Rectangular	Q2001 Part No.	Q2101 Part No.
19.00	12.65	12.1	0.5	0.18	0.2	11.22	0.18	19	**0.4**	**80**	**S**	3303231	3303275
21.00	14.65	14.1	0.5	0.18	0.2	13.20	0.18	24	**0.4**	**100**	**S**	3303232	3303276
23.00	16.60	16.0	0.5	0.18	0.2	15.42	0.18	29	**0.4**	**120**	**S**	3303233	3303277
21.00	16.95	16.1	0.5	0.20	0.25	15.22	0.18	31	**0.4**	**128**	**S**	3303264	3303314
25.00	18.65	18.1	0.5	0.20	0.2	17.22	0.18	35	**0.4**	**144**	**S**	3303234	3303278
23.55 29.55	17.20 23.20	16.1 22.1	0.5	0.18	0.2	15.40 21.40	0.18	31 45	**0.4**	**156**	**R**	3303235	3303279
29.00	22.65	22.1	0.5	0.20	0.2	21.20	0.18	43	**0.4**	**176**	**S**	3303236	3303280
33.00	26.65	26.1	0.5	0.20	0.2	25.22	0.18	53	**0.4**	**216**	**S**	3303324	3303321
37.50	31.15	30.6	0.5	0.18	0.2	30.00	0.18	63	**0.4**	**256**	**S**	3303237	3303281
17.00	10.65	9.1	0.5	0.23	0.25	8.40	0.18	11	**0.5**	**48**	**S**	3303238	3303282
19.00	12.65	12.1	0.5	0.25	0.25	11.20	0.18	15	**0.5**	**64**	**S**	3303267	3303318
21.00	14.65	14.1	0.5	0.25	0.25	13.40	0.18	19	**0.5**	**80**	**S**	3303239	3303283
23.00	16.60	16.0	0.5	0.23	0.25	15.12	0.18	24	**0.5**	**100**	**S**	3303240	3303284
29.00	22.65	22.05	0.5	0.25	0.25	21.20	0.18	29	**0.5**	**120**	**S**	3303241	3303285
29.00	22.65	22.05	0.5	0.25	0.25	21.80	0.18	29	**0.5**	**120**	**S**	3303241	3303286
24.00 30.00	17.65 23.65	16.1 21.1	0.5	0.25	0.25	15.40 21.40	0.18	25 37	**0.5**	**128**	**R**	3303243	3303287
27.00	20.65	20.1	0.5	0.25	0.25	19.40	0.18	31	**0.5**	**128**	**S**	3303242	3303288
29.00	22.65	22.05	0.5	0.25	0.25	21.20	0.18	35	**0.5**	**144**	**S**	3303244	3303289
33.00	26.65	26.1	0.5	0.23	0.25	25.24	0.18	39	**0.5**	**160**	**S**	3303245	3303290
23.00	26.65	26.1	0.5	0.23	0.25	25.24	0.18	43	**0.5**	**176**	**S**	3303246	3303291
37.00	30.65	30.1	0.5	0.23	0.25	29.40	0.18	51	**0.5**	**208**	**S**	3303247	3303292
37.00	30.65	30.1	0.5	0.23	0.25	30.00	0.18	51	**0.5**	**208**	**S**	3303247	3303293
41.00	34.65	34.1	0.5	0.25	0.25	33.90	0.18	59	**0.5**	**240**	**S**	3303248	3303294
19.70	13.35	12.2	0.5	0.25	0.35	11.2	0.23	11	**0.65**	**48**	**S**	3303325	3303322
19.70	13.35	12.2	0.5	0.25	0.35	11.2	0.23	12	**0.65**	**52**	**S**	3303268	3303319
19.70	13.35	12.2	0.5	0.25	0.35	11.2	0.23	13	**0.65**	**56**	**S**	3303359	3303323
22.10	15.75	14.6	0.8	0.25	0.35	13.95	0.23	15	**0.65**	**64**	**S**	3303249	3303295
24.10	17.75	16.6	0.8	0.25	0.35	15.80	0.23	19	**0.65**	**80**	**S**	3303250	3303296
24.10	17.75	16.6	0.8	0.25	0.35	15.35	0.23	19	**0.65**	**80**	**S**	3303250	3303297
23.75 30.25	17,40 23.90	16.25 22.75	0.5	0.25	0.35	16.57 23.07	0.25	19 29	**0.65**	**100**	**R**	3303251	3303298
23.75 30.25	17.40 23.90	16.25 22.75	0.5	0.25	0.35	15.35 21.25	0.25	19 29	**0.65**	**100**	**R**	3303251	3303299
23.75 30.25	17.40 23.90	16.25 22.75	0.5	0.25	0.35	15.91 21.85	0.25	19 29	**0.65**	**100**	**R**	3303251	3303300
23.75 30.25	17.40 23.90	16.25 22.75	0.5	0.25	0.35	16.77 23.07	0.25	19 29	**0.65**	**100**	**R**	3303251	3303301
28.10	21.75	20.6	0.8	0.25	0.35	21.00	0.23	24	**0.65**	**100**	**S**	3303252	3303302
29.60	23.25	22.1	0.5	0.25	0.35	21.40	0.23	27	**0.65**	**112**	**S**	3303263	3303313
29.60	23.25	22.1	0.5	0.25	0.35	21.1	0.23	28	**0.65**	**116**	**S**	3303269	3303320
38.70	31.70	30.6	0.8	0.23	0.35	30.30	0.23	35	**0.65**	**144**	**S**	3303253	3303303
38.70	31.70	30.6	0.8	0.23	0.35	30.30	0.23	39	**0.65**	**160**	**S**	3303254	3303304
38.70	31.70	30.6	0.8	0.23	0.35	30.30	0.23	41	**0.65**	**168**	**S**	3303255	3303305
16.70	10.35	9.20	0.5	0.25	0.5	8.40	0.25	7	**0.8**	**32**	**S**	3303265	3303316
19.70	13.35	12.2	0.5	0.5	0.5	11.20	0.25	10	**0.8**	**44**	**S**	3303260	3303311
19.70	13.35	13.3	0.75	0.25	0.5	12.22	0.23	10	**0.8**	**44**	**S**	3303261	3303312
23.70	17.35	17.3	0.75	0.25	0.5	16.20	0.30	15	**0.8**	**64**	**S**	3303256	3303306
23.70	17.35	16.2	0.5	0.25	0.5	15.20	0.25	15	**0.8**	**64**	**S**	3303262	3303307
23.70 30.10	17.35 23.75	17.3 23.3	0.75	0.25	0.5	16.20 22.40	0.30	15 23	**0.8**	**80**	**R**	3303257	3303308
23.70 30.10	17.35 23.75	17.3 23.3	0.75	0.25	0.5	15.96 22.00	0.30	15 23	**0.8**	**80**	**R**	3303257	3303309
23.80 29.80	17.45 23.45	17.2 23.2	0.75	0.25	0.6	16.60 22.60	0.30	12 18	**1.0**	**64**	**R**	3303259	3303310

Please check **Dimension Q** because several versions are available.

QFP-Solder Base Series Q1001

Content of delivery
QFP-Solder base adapter, core pin



Contact
NiFe (42 alloy) nickel 1-3 µm, gold 0.25 µm

Insulator body
Liquid Cristall Polymer (LCP) self-extinguishing rated UL94V0

Operation temperature -25 up to +85°C

Resitance to solder heat
Reflow 260°C, 10 sec.
Manual 350°C, 5 sec./per contact

Rated voltage 100 V_{RMS}/150 VDC

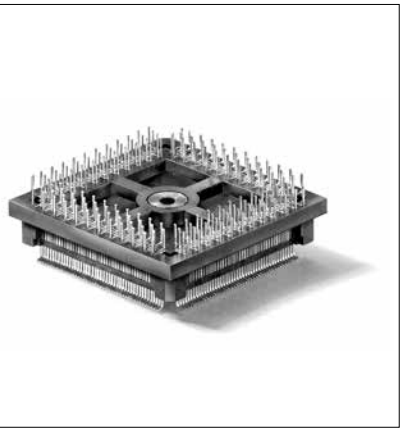
Contact resistance < 70 mΩ

Insulation resistance > 5 x 10^8 Ω

Current carrying capacity per contact 0,5 A

Moisture sensibility level (MSL)
J-STD-020C Level 2

RoHS-conform



A A'	B B'	C C'	D	F F'	H	M	n_1 $n_{1'}$	n_2	Pitch	Pins	S=Square R=Rectangular	Variant	Part No.
12.00	7.77	9.0	1.005	10.84	0.25	ø 2,2	11	2	**0.5**	**48**	**S**	01	3303001
14.00	9.77	12.0	1.505	12.84	0.25	M2	15	3	**0.5**	**64**	**S**	01	3303002
15.00	10.77	12.0	1.005	13.84	0.25	M2	17	3	**0.5**	**72**	**S**	01	3303003
16.00	11.77	14.0	1.505	14.84	0.25	M2	19	3	**0.5**	**80**	**S**	01	3303004
19.55	15.00	16.5	1.125	18.10	0.25	M2	24	3	**0.5**	**100**	**S**	01	3303005
21.00	16.77	18.0	1.005	19.84	0.25	M2	29	3	**0.5**	**120**	**S**	01	3303006
25.05	20.50	22.0	1.125	23.60	0.25	M2	29	3	**0.5**	**120**	**S**	02	3303007
19.00 25.00	14.77 20.77	16.0 22.0	1.005	17.84 23.84	0.25	M2	25 37	3	**0.5**	**128**	**R**	01	3303008
25.05	20.50	22.0	1.125	23.60	0.25	M2	35	3	**0.5**	**144**	**S**	01	3303009
29.05	24.50	26.0	1.125	27.60	0.25	M2	39	3	**0.5**	**160**	**S**	01	3303010
29.05	24.50	26.0	1.125	27.60	0.25	M2	43	3	**0.5**	**176**	**S**	01	3303011
33.05	28.50	30.0	1.125	31.60	0.25	M3	51	3	**0.5**	**208**	**S**	01	3303012
32.00 44.00	27.77 39.77	29.2 41.2	1.105	30.84 42.84	0.25	M3	51 75	3	**0.5**	**256**	**R**	01	3303013
30.55	26.02	27.5	1.125	29.10	0.35	M3	32	3	**0.635**	**132**	**S**	01	3303014
12.5	8.10	9.0	0.9	11.05	0.35	ø 2,2	9	2	**0.65**	**40**	**S**	01	3303365
14.45	9.92	12.0	1.425	13.00	0.35	M2	12	2	**0.65**	**52**	**S**	01	3303015
15.10	10.57	12.5	1.350	13.65	0.35	M2	13	2	**0.65**	**56**	**S**	01	3303016
16.40	11.85	14.0	1.450	14.95	0.35	M2	15	3	**0.65**	**64**	**S**	01	3303017
19.00	14.47	16.0	1.150	17.55	0.35	M2	19	3	**0.65**	**80**	**S**	01	3303018
19.00 25.50	14.47 20.97	15.96 22.45	1.125	17.55 24.05	0.35	M2	19 29	3	**0.65**	**100**	**R**	01	3303019
25.30	21.40	22.0	1.000	23.85	0.35	M2	27	3	**0.65**	**112**	**S**	01	3303020
32.00	27.47	30.0	1.650	30.55	0.35	M3	35	3	**0.65**	**144**	**S**	02	3303034
32.00	27.47	30.0	1.650	30.55	0.35	M3	39	3	**0.65**	**160**	**S**	02	3303021
35.90	31.37	34.0	1.700	34.45	0.35	M3	45	3	**0.65**	**184**	**S**	01	3303022
12.25	7.72	9.2	1.125	10.80	0.5	ø 2,3	7	2	**0.8**	**32**	**S**	01	3303023
14.65	10.12	12.0	1.325	13.20	0.5	M2	10	2	**0.8**	**44**	**S**	01	3303024
15.45	10.92	12.0	0.925	14.00	0.5	M2	11	3	**0.8**	**48**	**S**	01	3303026
18.65	14.12	16.0	1.325	17.20	0.5	M2	15	3	**0.8**	**64**	**S**	01	3303027
18.65 25.05	14.10 20.50	16.0 22.0	1.125	17.20 23.60	0.5	M2	15 23	3	**0.8**	**80**	**R**	01	3303028
25.85	21.32	24.0	1.725	24.40	0.5	M2	24	3	**0.8**	**100**	**S**	01	3303029
31.45	26.92	31.4	2.625	30.00	0.5	M2	29	3	**0,8**	**120**	**S**	01	3303030
31.45	26.92	31.4	2.625	30.00	0.5	M2	31	3	**0.8**	**128**	**S**	01	3303031
17.05	12.12	16.4	2.325	15.60	0.6	M2	10	2	**1.0**	**44**	**S**	01	3303032
19.05 25.05	14.12 20.12	16.0 22.0	1.125	17.60 23.60	0.6	M2	12 18	3	**1.0**	**64**	**R**	01	3303033

QFP-Extender Series Q1501 Q1502

By using the QFP-Extender the user can build up his individual height.

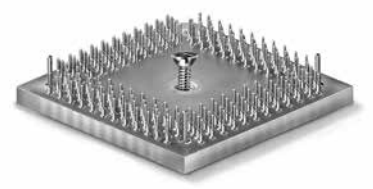
Contact clip
Beryllium copper, nickel 2.5 µm, gold flash

Sleeve
Screw machin. brass, nickel 2.5 µm, gold flash

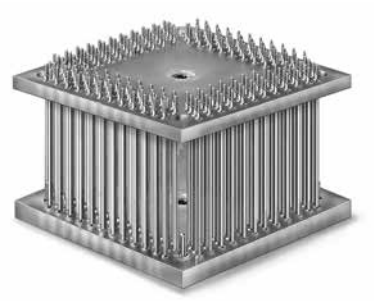
PCB
Glas-fibre Epoxyd EP-GC 02, self-extinguishing rated UL94V0

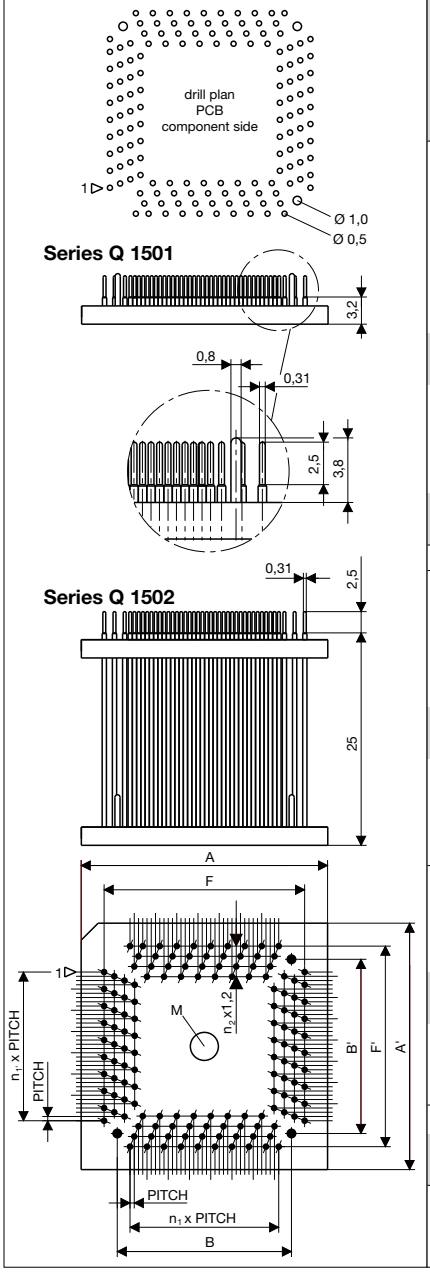
Operation temperature -55 up to +125°C
Resit. to wave solder heat 260°C, 5 sec.
Mechanical lifte > 500 cycles
Rated voltage 100 V_{RMS}/150 VDC
Contact resistance < 20 mΩ
Insulation resistance > 5 x 10^9 Ω
Current carrying capacity per contact 0,4 A
RoHS-conform

Series Q 1501



Series Q 1502





A A'	B B'	F F'	M	n_1 $n_{1'}$	n_2	Pitch	Pins	S=Square R=Rectangular	Variant	Q 1501	Q 1502
										Part No.	
19.0	7.77	10.84	ø 2,2	11	2	**0.5**	**48**	**S**	01	3303043	3303090
16.0	9.77	12.84	M2	15	3	**0.5**	**64**	**S**	01	3303044	3303091
17.0	10.77	13.84	M2	17	3	**0.5**	**72**	**S**	01	3303045	3303092
18.0	11.77	14.84	M2	19	3	**0.5**	**80**	**S**	01	3303046	3303093
21.5	15.00	18.10	M2	24	3	**0.5**	**100**	**S**	01	3303047	3303094
23.0	16.77	19.84	M2	29	3	**0.5**	**120**	**S**	01	3303048	3303095
29.0	20.50	23.60	M2	29	3	**0.5**	**120**	**S**	02	3303049	3303096
24.0 30.0	14.77 20.77	17.84 23.84	M2	25 37	3	**0.5**	**128**	**R**	01	3303050	3303097
27.0	20.50	23.60	M2	35	3	**0.5**	**144**	**S**	01	3303051	3303098
33.0	24.50	27.60	M2	39	3	**0.5**	**160**	**S**	01	3303052	3303099
33.0	24.50	27.60	M2	43	3	**0.5**	**176**	**S**	01	3303053	3303100
37.0	28.50	31.60	M3	51	3	**0.5**	**208**	**S**	01	3303054	3303101
34.0 46.0	27.77 39.77	30.84 42.84	M3	51 75	3	**0.5**	**256**	**R**	01	3303055	3303102
32.5	26.02	29.10	M3	32	3	**0.635**	**132**	**S**	01	3303056	3303103
12.5	–	–	–	–	–	**0.65**	**40**	**S**	01	3303473	3303474
16.5	9.92	13.00	M2	12	2	**0.65**	**52**	**S**	01	3303057	3303104
17.0	10.57	13.65	M2	13	2	**0.65**	**56**	**S**	01	3303058	3303105
22.0	11.85	14.95	M2	15	3	**0.65**	**64**	**S**	01	3303059	3303106
24.0	14.47	17.55	M2	19	3	**0.65**	**80**	**S**	01	3303060	3303107
23.0 29.5	14.47 20.97	17.55 24.05	M2	19 29	3	**0.65**	**100**	**R**	01	3303061	3303108
25.3	21.40	23.85	M2	27	3	**0.65**	**112**	**S**	01	3303062	3303109
34.0	27.47	30.55	M3	35	3	**0.65**	**144**	**S**	02	3303075	3303122
34.0	27.47	30.55	M3	39	3	**0.65**	**160**	**S**	02	3303063	3303110
38.0	31.37	34.45	M3	45	3	**0.65**	**184**	**S**	01	3303064	3303111
16.5	7.72	10.80	ø 2,3	7	2	**0.8**	**32**	**S**	01	3303065	3303112
19.7	10.12	13.20	M2	10	2	**0.8**	**44**	**S**	01	3303066	3303113
17.5	10.92	14.00	M2	11	3	**0.8**	**48**	**S**	01	3303067	3303114
23.7	14.12	17.20	M2	15	3	**0.8**	**64**	**S**	01	3303068	3303115
23.7 30.0	14.10 20.50	17.20 23.60	M2	15 23	3	**0.8**	**80**	**R**	01	3303069	3303116
27.8	21.32	24.40	M2	24	3	**0.8**	**100**	**S**	01	3303070	3303117
33.5	26.92	30.00	M2	29	3	**0.8**	**120**	**S**	01	3303071	3303118
33.5	26.92	30.00	M2	31	3	**0.8**	**128**	**S**	01	3303072	3303119
19.0	12.12	15.60	M2	10	2	**1.0**	**44**	**S**	01	3303073	3303120
23.8 29.8	14.12 20.12	17.60 23.60	M2	12 18	3	**1.0**	**64**	**R**	01	3303074	3303121

Contents of delivery:
QFP-Extender, Counter-sunk screw

QFP-Adapter Series Q2201

Contact
Beryllium copper, nickel 1-3 µm, gold 0.5 µm

Insulator body
Liquid Cristall Polymer (LCP) self-extinguishing rated UL94V0

Operation temperature -25 up to +85°C

Resitance to solder heat
Reflow 260°C, 10 sec.
Manual 350°C, 5 sec./per contact

Rated voltage 100 V_{RMS}/150 VDC

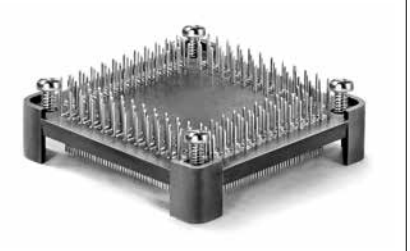
Contact resistance < 70 mΩ

Insulation resistance > 5 x 10^8Ω

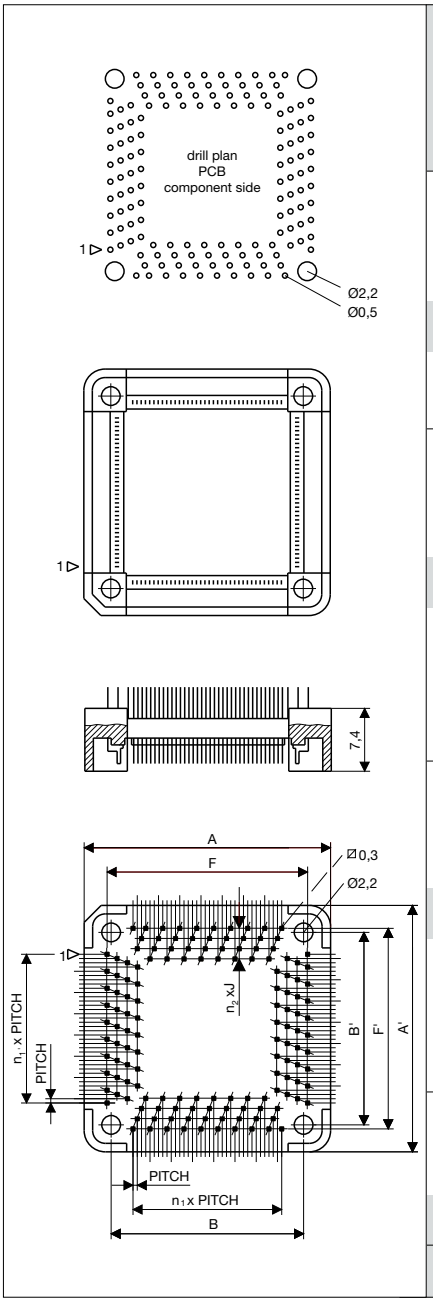
Current carrying capacity per contact 0,5 A

Moisture sensibility level (MSL)
J-STD-020C Level 2

RoHS-conform



Contents of delivery
QFP-Adapter, 4 cross slot screws M2x10



A A'	B B'	F F'	J	$n_{2'}$	n_1 $n_{1'}$	Pitch	Pins	S=Square R=Rectangular	Variant	Part No.
19.00	12.65	12.65	1.3	3	19	**0.4**	**80**	**S**	01	3303326
21.00	14.65	14.65	1.3	3	24	**0.4**	**100**	**S**	01	3303327
23.00	16.60	16.60	1.3	3	29	**0.4**	**120**	**S**	01	3303328
23.00	16.95	19.70	1.3	3	31	**0.4**	**128**	**S**	01	3303035
25.00	18.65	21.70	1.3	3	35	**0.4**	**144**	**S**	01	3303329
23.55 29.55	17.20 23.20	18.65 17.20	1.3	3	31 45	**0.4**	**156**	**R**	01	3303330
29.00	22.65	23.30	1.3	3	43	**0.4**	**176**	**S**	01	3303331
33.00	26.65	29.70	1.3	3	53	**0.4**	**216**	**S**	01	3303360
37.50	31.15	31.15	1.3	3	63	**0.4**	**256**	**S**	01	3303332
17.00	10.65	10.84	1.2	2	11	**0.5**	**48**	**S**	01	3303333
19.00	12.65	12.84	1.2	3	15	**0.5**	**64**	**S**	01	3303358
21.00	14.65	15.84	1.2	3	19	**0.5**	**80**	**S**	02	3303334
23.00	16.60	18.10	1.2	3	24	**0.5**	**100**	**S**	01	3303335
29.00	22.65	23.60	1.2	3	29	**0.5**	**120**	**S**	02	3303336
24.00 30.00	17.65 23.65	17.84 23.84	1.2	3	25 37	**0.5**	**128**	**R**	01	3303337
27.00	20.65	22.60	1.2	3	31	**0.5**	**128**	**S**	01	3303338
29.00	22.65	23.60	1.2	3	35	**0.5**	**144**	**S**	01	3303339
33.00	26.65	27.60	1.2	3	39	**0.5**	**160**	**S**	01	3303340
33.00	26.65	27.60	1.2	3	43	**0.5**	**176**	**S**	01	3303341
37.00	30.65	31.60	1.2	3	51	**0.5**	**208**	**S**	01	3303342
41.00	34.65	36.20	1.2	3	59	**0.5**	**240**	**S**	01	3303343
19.70	13.35	13.00	1.2	2	11	**0.65**	**48**	**S**	01	3303361
19.70	13.35	13.00	1.2	2	12	**0.65**	**52**	**S**	01	3303363
19.70	13.35	13.65	1.2	2	13	**0.65**	**56**	**S**	01	3303362
22.10	15.75	14.95	1.2	3	15	**0.65**	**64**	**S**	01	3303344
24.10	17.75	17.55	1.2	3	19	**0.65**	**80**	**S**	01	3303345
23.75 30.25	17.40 23.90	17.55 24.05	1.2	3	19 29	**0.65**	**100**	**R**	01	3303346
28.10	21.75	22.60	1.2	3	24	**0.65**	**100**	**S**	01	3303347
29.60	23.25	23.85	1.2	3	27	**0.65**	**112**	**S**	01	3303356
29.60	23.25	24.00	1.2	3	28	**0.65**	**116**	**S**	01	3303364
38.70	31.70	33.30	1.2	3	35	**0.65**	**144**	**S**	01	3303348
38.70	31.70	33.30	1.2	3	39	**0.65**	**160**	**S**	01	3303349
38.70	31.70	33.30	1.2	3	41	**0.65**	**168**	**S**	01	3303350
16.70	10.35	10.80	1.2	2	7	**0.8**	**32**	**S**	01	3303357
19.70	13.35	13.20	1.2	3	10	**0.8**	**44**	**S**	01	3303354
19.70	13.35	13.20	1.2	3	10	**0.8**	**44**	**S**	01	3303355*
23.70	17.35	17.20	1.2	3	15	**0.8**	**64**	**S**	01	3303351
23.70 30.10	17.35 23.75	17.20 23.60	1.2	3	15 23	**0.8**	**80**	**R**	01	3303352
23.80 29.80	17.45 23.45	17.60 23.60	1.2	3	12 18	**1.0**	**64**	**R**	01	3303353

*for Base socket 3303261

QFP-Extender Series Q2501
Series Q2502

By using the QFP-Extender the user can build up his individual height.

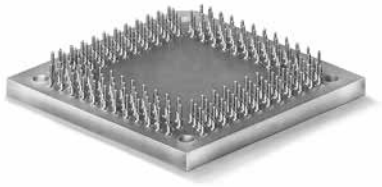
Contact clip
Beryllium copper, nickel 2.5 µm, gold flash

Sleeve
Screw machin. brass, nickel 2.5 µm, gold flash

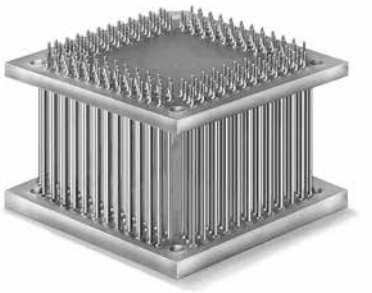
PCB
Glas-fibre Epoxyd EP-GC 02, self-extinguishing rated UL94V0

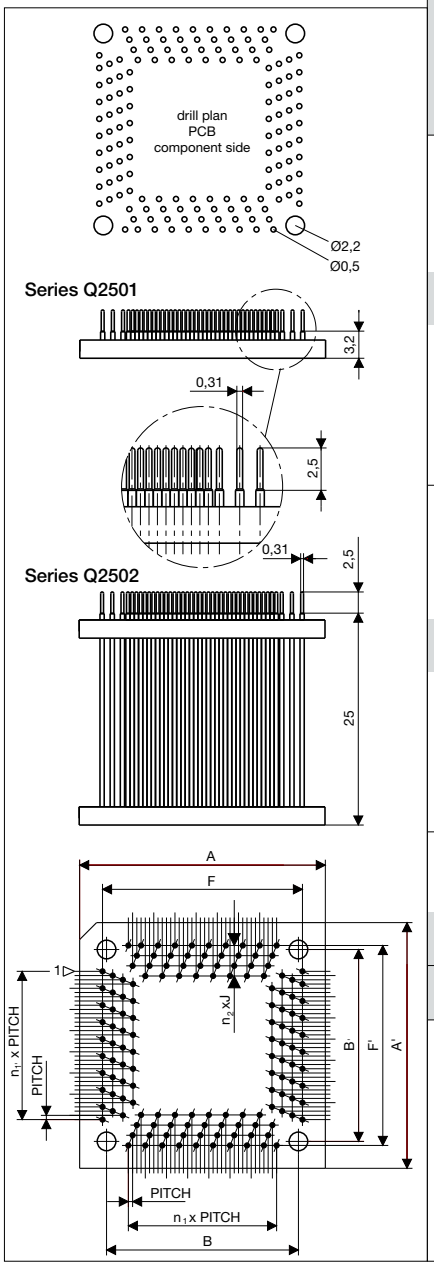
Operation temperature -55 up to +125°C
Resit. to wave solder heat 260°C, 5 sec
Mechanical lifte > 500 cycles
Rated voltage 100 V_{RMS}/150 VDC
Contact resistance < 20 mΩ
Insulation resistance > 5 x 10^9 Ω
Current carrying capacity per contact 0,4 A
RoHS-conform

Series Q2501



Series Q2502

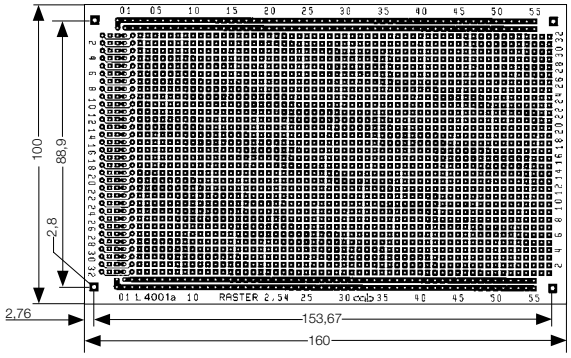




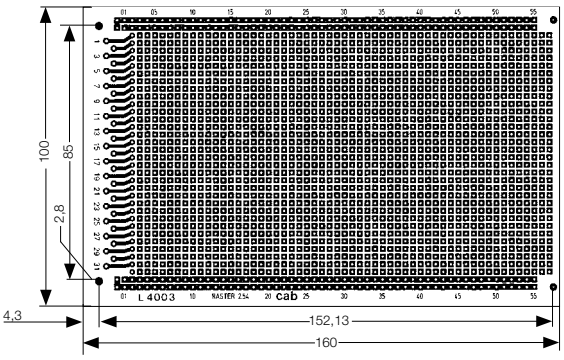
A A'	B B'	F	J	$n_{2'}$	n_1 $n_{1'}$	Pitch	Pins	S=Square R=Rectangular	Variant	Q2501 Part No.	Q2502 Part No.
17.00	10.65	10.84	1.2	2	11	**0.5**	**48**	**S**	01	3303376	3303418
19.00	12.65.	12.84	1.2	3	15	**0.5**	**64**	**S**	01	3303468	3303469
21.00	14.65	15,84	1.2	3	19	**0,5**	**80**	**S**	02	3303377	3303419
23.00	16.60	18.10	1.2	3	24	**0,5**	**100**	**S**	01	3303378	3303420
29.00	22.65	23.60	1.2	3	29	**0.5**	**120**	**S**	02	3303379	3303421
24.00 30.00	17.65 23.65	17.84 23.84	1.2	3	25 37	**0.5**	**128**	**R**	01	3303380	3303422
27.00	20.65	22.60	1.2	3	31	**0.5**	**128**	**S**	01	3303381	3303423
29.00	22.65	23.60	1.2	3	35	**0.5**	**144**	**S**	01	3303382	3303424
33.00	26.65	27.60	1.2	3	39	**0.5**	**160**	**S**	01	3303383	3303425
33.00	26.65	27.60	1.2	3	43	**0.5**	**176**	**S**	01	3303384	3303426
37.00	30.65	31.60	1.2	3	51	**0.5**	**208**	**S**	01	3303385	3303427
41.00	34.65	36.20	1.2	3	59	**0.5**	**240**	**S**	01	3303386	3303428
19.70	13.35	13.00	1.2	2	11	**0.65**	**48**	**S**	01	3303452	3303457
19.70	13.35	13.00	1.2	2	12	**0.65**	**52**	**S**	01	3303453	3303458
19.70	13.35	13.65	1.2	2	13	**0.65**	**56**	**S**	01	3303454	3303459
22.10	15.75	14.95	1.2	3	15	**0.65**	**64**	**S**	01	3303387	3303429
24.10	17.75	17.55	1.2	3	19	**0.65**	**80**	**S**	01	3303388	3303430
23.75 30.25	17.40 23.90	17.55 24.05	1.2	3	19 29	**0.65**	**100**	**R**	01	3303389	3303431
28.10	21.75	22.60	1.2	3	24	**0.65**	**100**	**S**	01	3303390	3303432
29.60	23.25	23.85	1.2	3	27	**0.65**	**112**	**S**	01	3303078	3303123
29.60	23.25	24.00	1.2	3	28	**0.65**	**116**	**S**	01	3303455	3303470
38.70	31.70	33.30	1.2	3	35	**0.65**	**144**	**S**	01	3303391	3303433
38.70	31.70	33.30	1.2	3	39	**0.65**	**160**	**S**	01	3303392	3303434
38.70	31.70	33.30	1.2	3	41	**0.65**	**168**	**S**	01	3303393	3303435
16.70	10.35	10.80	1.2	2	7	**0.8**	**32**	**S**	01	3303456	3303472
19.70	13.35	13.20	1.2	3	10	**0.8**	**44**	**S**	01	3303397	3303439
23.70	17.35	17.20	1.2	3	15	**0.8**	**64**	**S**	01	3303394	3303436
23.70 30.10	17.35 23.75	17.20 23.60	1.2	3	15 23	**0.8**	**80**	**R**	01	3303395	3303437
23.80 29.80	17.45 23.45	17.60 23.60	1.2	3	12 18	**1.0**	**64**	**R**	01	3303396	3303438

19“ Laboratory cards FR4

L 4001 a



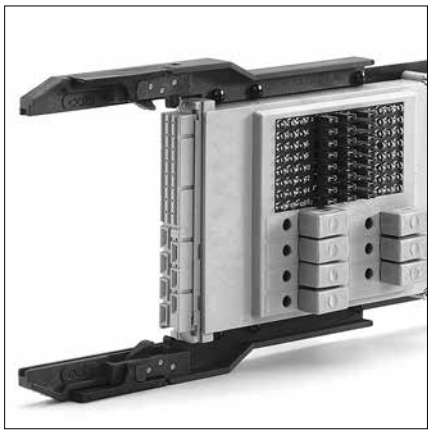
L 4003



Type	Size mm	Plug type	Part No.
L 4001 a	100 x 160	B/C 64, C96	3250083
L 4003		31, DIN 41617	3250100

Base material: Glas fibre Epoxyd EP-GC 02, self-extinguishing rated UL94V0, (35 µm copper tinned Sn100 HAL)
Thickness: 1.6 ± 0,19 mm
Pitch: 2.54 x 2.54 mm
Drilled: 1.0 mm Ø
Operation temperature: -55 up to +125°C
RoHS-conform
Mounting print on the reverse side

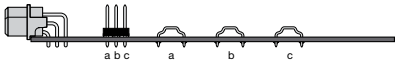
19“ Extender boards



The Extender boards are RoHs-conform.

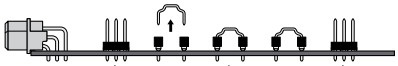
Signal measurement range

J



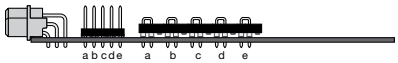
Test jumper is solded

K



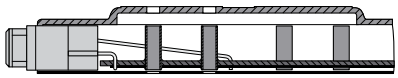
Test jumper is pluggable

P



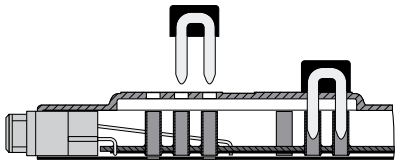
Test jumper is pluggable with parking option

G



Two measurement sockets ø 4 mm per through-contact. The test cable can be inserted from either side.

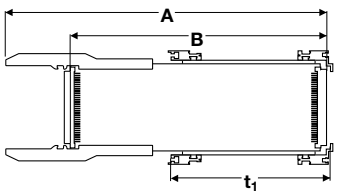
H



Measurement sockets ø 4 mm with additi-onal plug to separate teh circuits

Extender board	Height	PCB	t_1 mm	A mm	B mm	Signal measurement range J	K/P*	G	H
C 64	**3 HE**	2	235	423	350		3370074		
C 96	**3 HE**	2	235	423	350	3370169	3370170		
E 160	**3 HE**	9	235	423	350		3371036*		
H7/F24	**3 HE**	2 2	175 235	367 423	290 350			3370532	

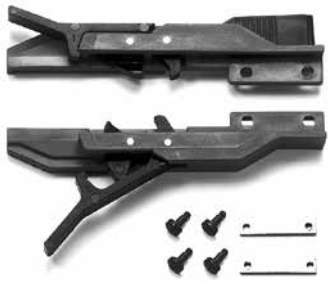
Joining adapter	Height	Plug connector	B mm	Part No.
	6 HE	C	290 350	3300095 3300004



PCB

2 Double sided through- contacts

9 Multilayer 9-layer for fast signals



Guide rail

of short and compact construction

Material:	Thermoplastic polyester glas-fibre reinforced, self-extin-guishing rated UL94V0
Color:	red
Contents of delivery:	Guide rail (upper) Guide rail (lower) Mounting hardware

Pull-in and disconnect level	PU	Part No.
with	1 Set	3300734
without	1 Set	3300735

Headquarters and fabrication in Germany

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Status: 01/2018