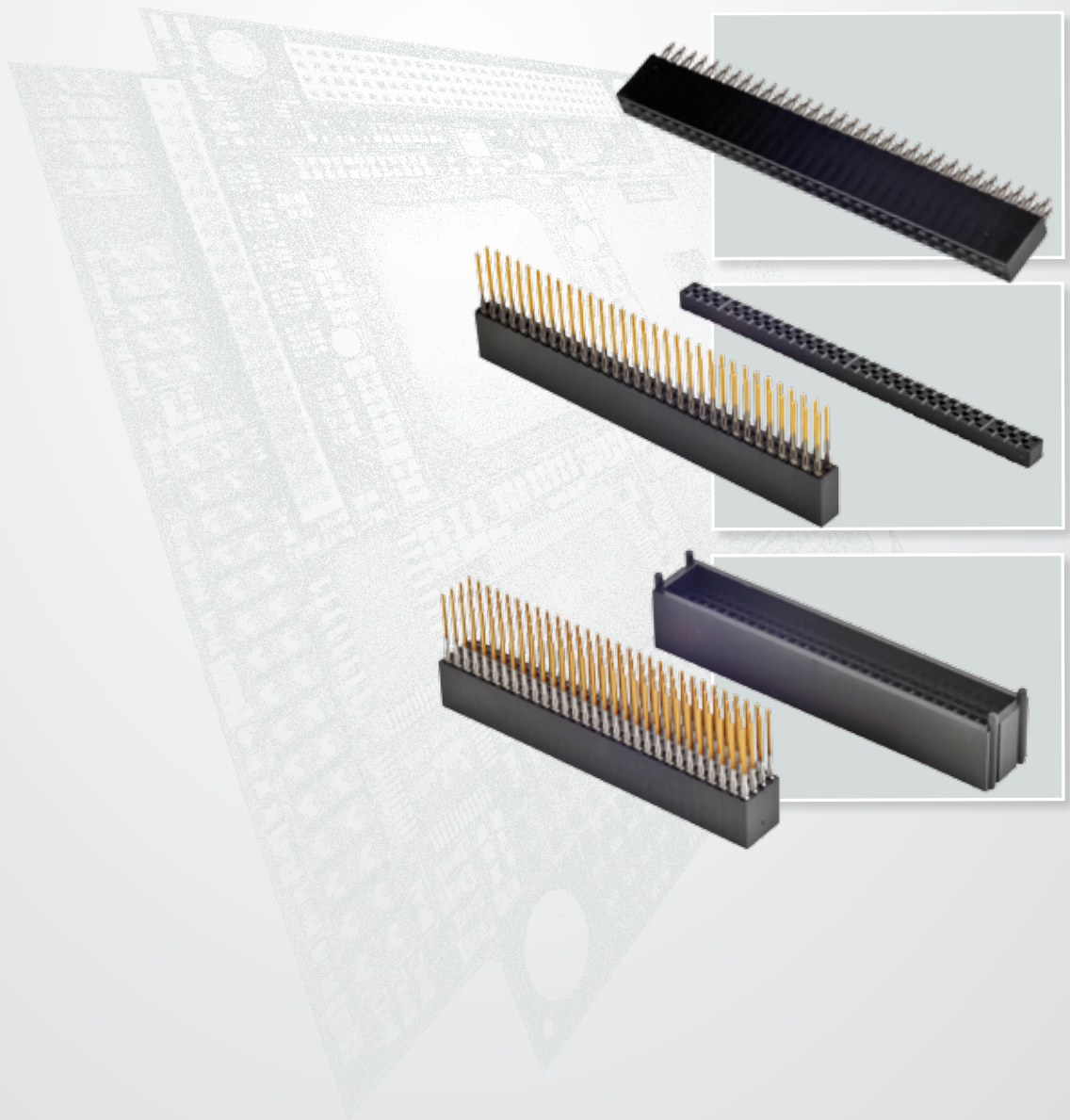




TECHNOLOGY IN CONNECTORS™

PC/104 AND PC/104 PLUS-CONNECTORS





Technical drawing of a PCB layout showing dimensions and clearances for I/O connectors. The drawing includes labels for various dimensions in inches and millimeters, such as .250 (6.35) for pin spacing, .075 (2.0) for hole diameters, and .345 (8.76) for the unshaded area. It also includes notes like "I/O Connectors may overhang in this area" and "Keep out region for the around." The CONEC logo is visible in the bottom left corner.

PC104 CONNECTOR SERIES

Aside from standard designs meeting the PC/104 specification, CONEC also offers different pole counts for special applications with up to max. 2x50 contacts. To achieve higher module stacks a stack-through connector with the modified contact length of 17,0 mm is also available.

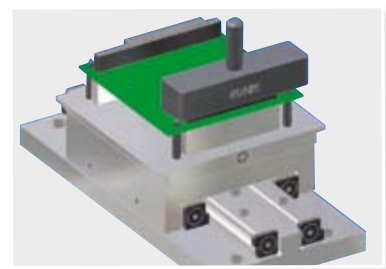
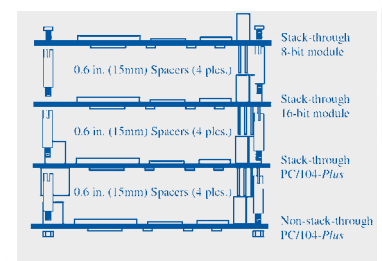
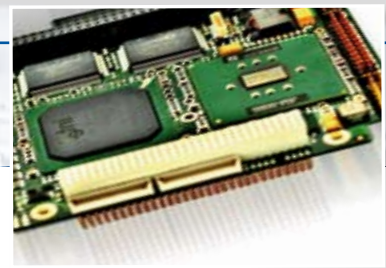
The PC104/plus specification defines a connector for implementing a PCI bus. It is a 4 x 30-pole connector with a 2.00 mm contact grid pattern. Here too there are connectors defined for stack-through and non-stack-through (terminating) purposes.

Because of the smaller grid spacing and increased contact density exhibited by these connectors, the specification describes an additional shroud that is to be plugged onto the circuit board's underside. This shroud stabilizes the stack-through contacts and ensures they are properly guided when modules are stacked.

PC/104 and PC/104plus connectors are specified to be compatible so that a mix of modules, compliant with either specification, can be used together in a single system configuration – which is often the case.

CONEC has applied its Θ Theta pin technology to the design of its PC/104 and PC/104plus press-fit connectors. This technology affords a flexible press-fit zone that preserves the circuit board during the press-fit process and it ensures good retention force for the mounted component.

CONEC PC/104 and PC/104plus connectors are exemplary of a modern, reliable contact design combined with just the right choice of materials to provide great performance reserves – even for future applications.



If you don't find your connector in this overview: Just inquire!
www.conec.com

PC/104 CONNECTORS

Technical Data

MATERIAL

Insulator	PBT, glass filled; UL94 V-0
Contact material	Copper alloy

ELEKTRICAL DATA

Current rating	2,2 A in acc. to IEC 60512-5-2
Contact resistance	< 20 mOhm
Temperature range	-55°C to +95°C

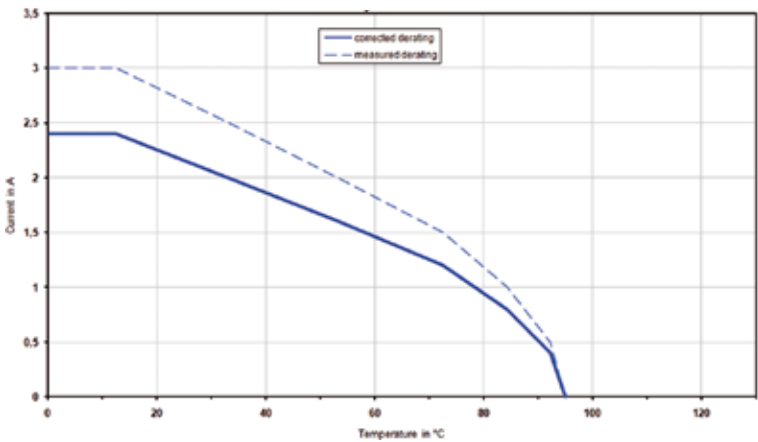
MECHANICAL DATA

Mating force	max. 0,9 N/pin with test pin Ø 0,6 mm
Withdrawal force	min. 0,3 N/pin with test pin Ø 0,6 mm
Press-In force	max. 80 N/pin
PCB thickness	1,6 mm
Creepage distance	min. 1,2 mm

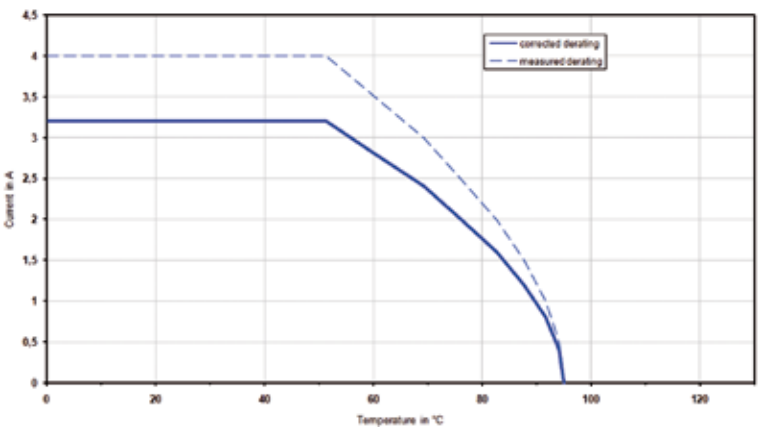
Directive 2002 95 EC
„RoHS“
Compliant

Technical alterations are subject to change without notice.

Derating-diagram 100-pol. connector – all contacts loaded

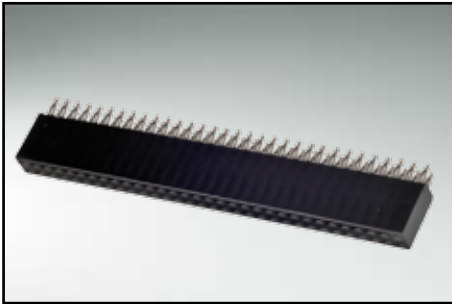


Derating-diagram 64-pol. connector – power contacts loaded in acc. to PC/104 specification



PC/104 CONNECTOR – NON-STACK-THROUGH VERSION

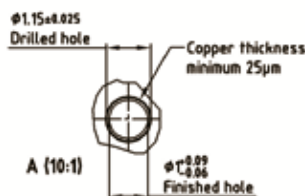
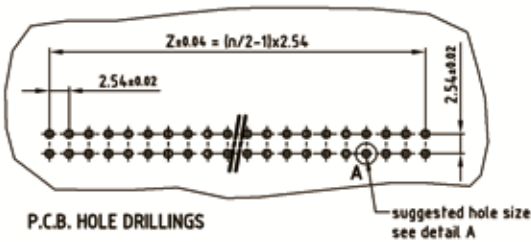
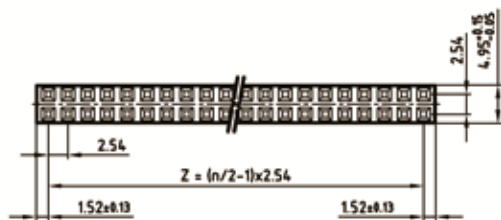
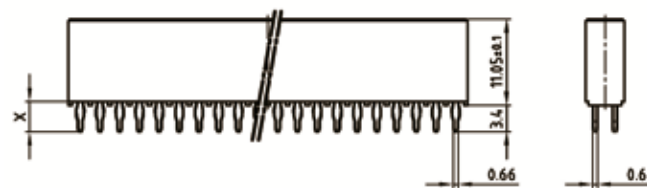
Press-Fit Contact – Contact Length 3,4 mm



PRODUCT FEATURES

- Flexible Θ Theta pin press-fit zone
- Double beam contact for high carrying capacity and reliable connections
- 40- / 64- / 100-pol. versions (other contact versions on request)
- Standard plating quality class 2
- Insulator black (other colors on request)

PRODUCT DRAWING



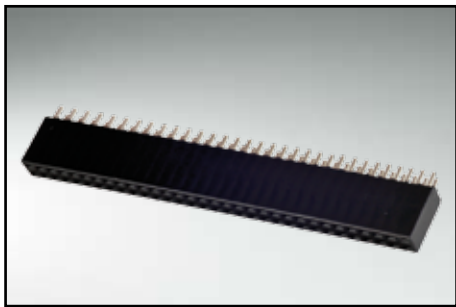
Plating		
Underplate min. 1,3 µm Ni		
Quality Class	Mating Area	Post Area „X“
3	0,25 µm Au	1,3 µm Sn 100 matt
2	0,40 µm Au	1,3 µm Sn 100 matt
1	0,80 µm Au	1,3 µm Sn 100 matt

ORDER DATA

Contacts	Version	Partnumber
40	Press-Fit Contact 3,4 mm QC 3	49-000013
64	Press-Fit Contact 3,4 mm QC 3	49-000093
100	Press-Fit Contact 3,4 mm QC 3	49-000133
40	Press-Fit Contact 3,4 mm QC 2	49-000012
64	Press-Fit Contact 3,4 mm QC 2	49-000092
100	Press-Fit Contact 3,4 mm QC 2	49-000132
40	Press-Fit Contact 3,4 mm QC 1	49-000011
64	Press-Fit Contact 3,4 mm QC 1	49-000091
100	Press-Fit Contact 3,4 mm QC 1	49-000131

PC/104 CONNECTOR – NON-STACK-THROUGH VERSION

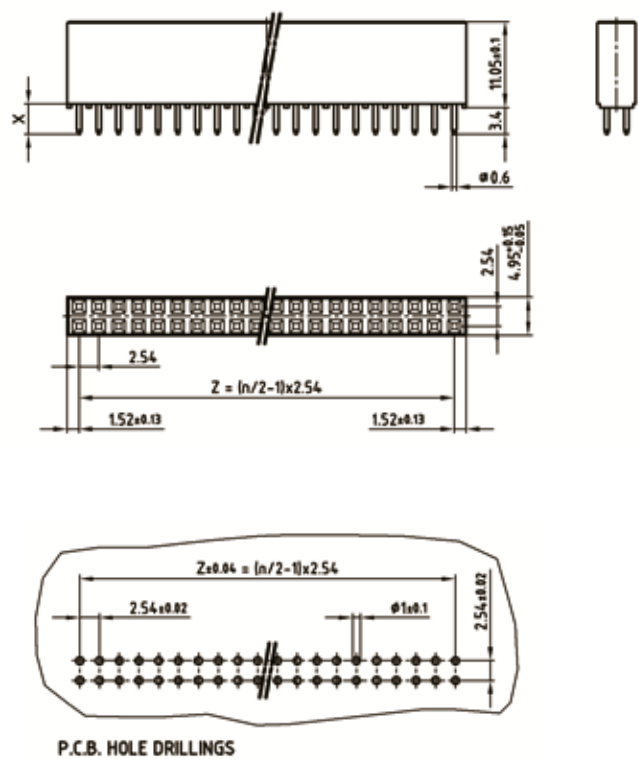
Solder Contact – Contact Length 3,4 mm



PRODUCT FEATURES

- Double beam contact for high carrying capacity and reliable connections
- 40- / 64- / 100-pol. versions (other contact versions on request)
- Standard plating quality class 2
- Insulator black (other colors on request)

PRODUCT DRAWING



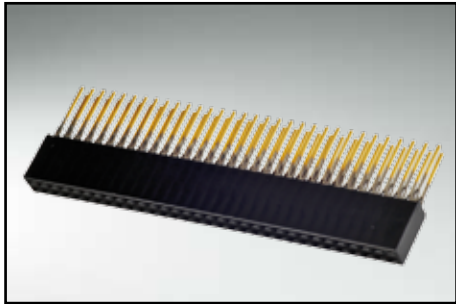
Plating		
Underplate min. 1,3 µm Ni		
Quality Class	Mating Area	Post Area „X”
3	0,25 µm Au	1,3 µm Sn 100 matt
2	0,40 µm Au	1,3 µm Sn 100 matt
1	0,80 µm Au	1,3 µm Sn 100 matt

ORDER DATA

Contacts	Version	Partnumber
40	Solder Contact 3,4 mm QC 3	49-000043
64	Solder Contact 3,4 mm QC 3	49-000123
100	Solder Contact 3,4 mm QC 3	49-000163
40	Solder Contact 3,4 mm QC 2	49-000042
64	Solder Contact 3,4 mm QC 2	49-000122
100	Solder Contact 3,4 mm QC 2	49-000162
40	Solder Contact 3,4 mm QC 1	49-000041
64	Solder Contact 3,4 mm QC 1	49-000121
100	Solder Contact 3,4 mm QC 1	49-000161

PC/104 CONNECTOR – STACK-THROUGH VERSION

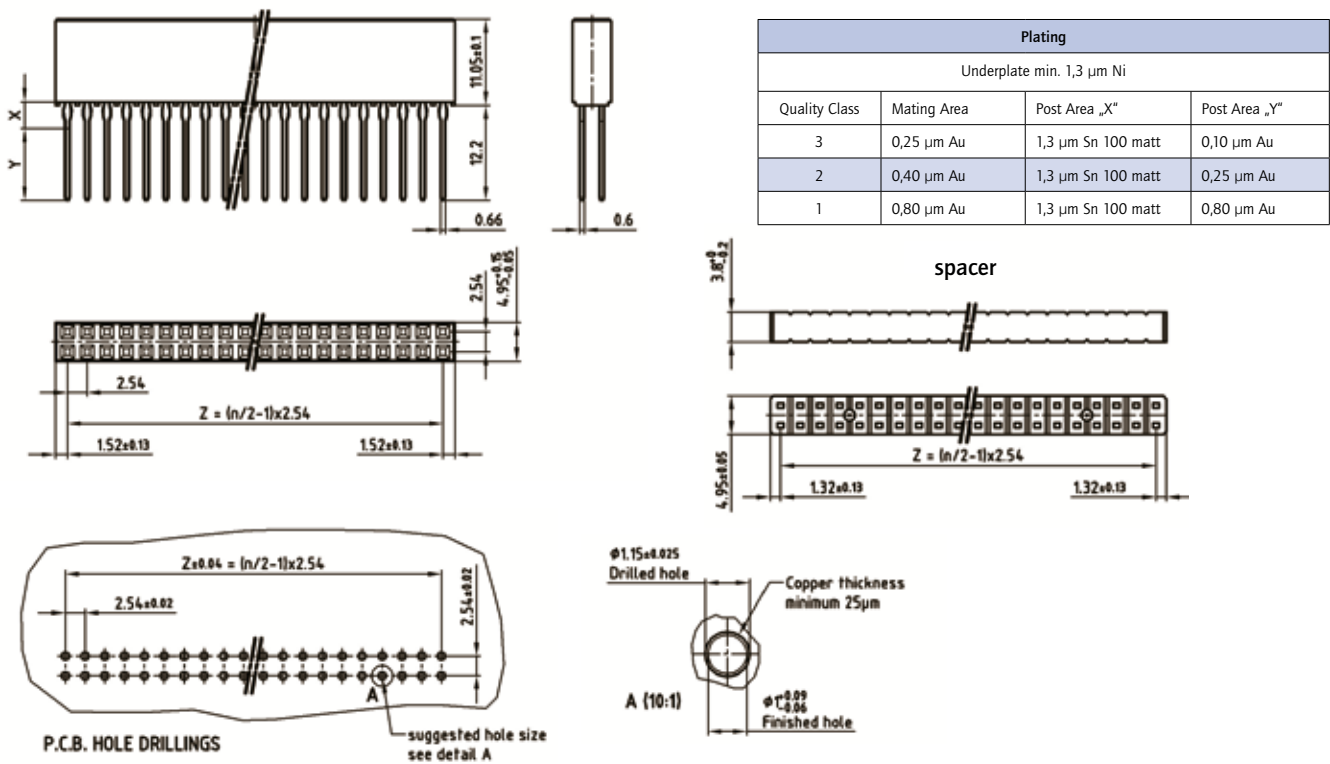
Press-Fit Contact – Contact Length 12,2 mm



PRODUCT FEATURES

- Standard Version for module height 15,0 mm
- Flexible Θ Theta pin press-fit zone
- Double beam contact for high carrying capacity and reliable connections
- 40- / 64- / 100-pol. versions (other contact versions on request)
- Standard plating quality class 2
- Insulator black (other colors on request)
- Connectors are delivered in a set with a spacer

PRODUCT DRAWING

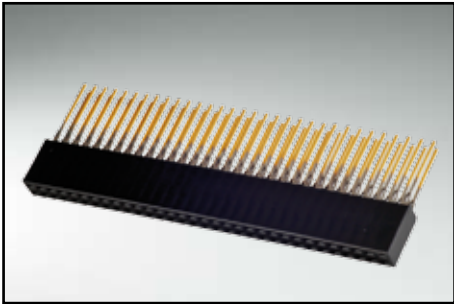


ORDER DATA

Contacts	Version	Partnumber
40	Press-Fit Contact 12,2 mm QC 3	49-000023
64	Press-Fit Contact 12,2 mm QC 3	49-000103
100	Press-Fit Contact 12,2 mm QC 3	49-000143
40	Press-Fit Contact 12,2 mm QC 2	49-000022
64	Press-Fit Contact 12,2 mm QC 2	49-000102
100	Press-Fit Contact 12,2 mm QC 2	49-000142
40	Press-Fit Contact 12,2 mm QC 1	49-000021
64	Press-Fit Contact 12,2 mm QC 1	49-000101
100	Press-Fit Contact 12,2 mm QC 1	49-000141

PC/104 CONNECTOR – STACK-THROUGH VERSION

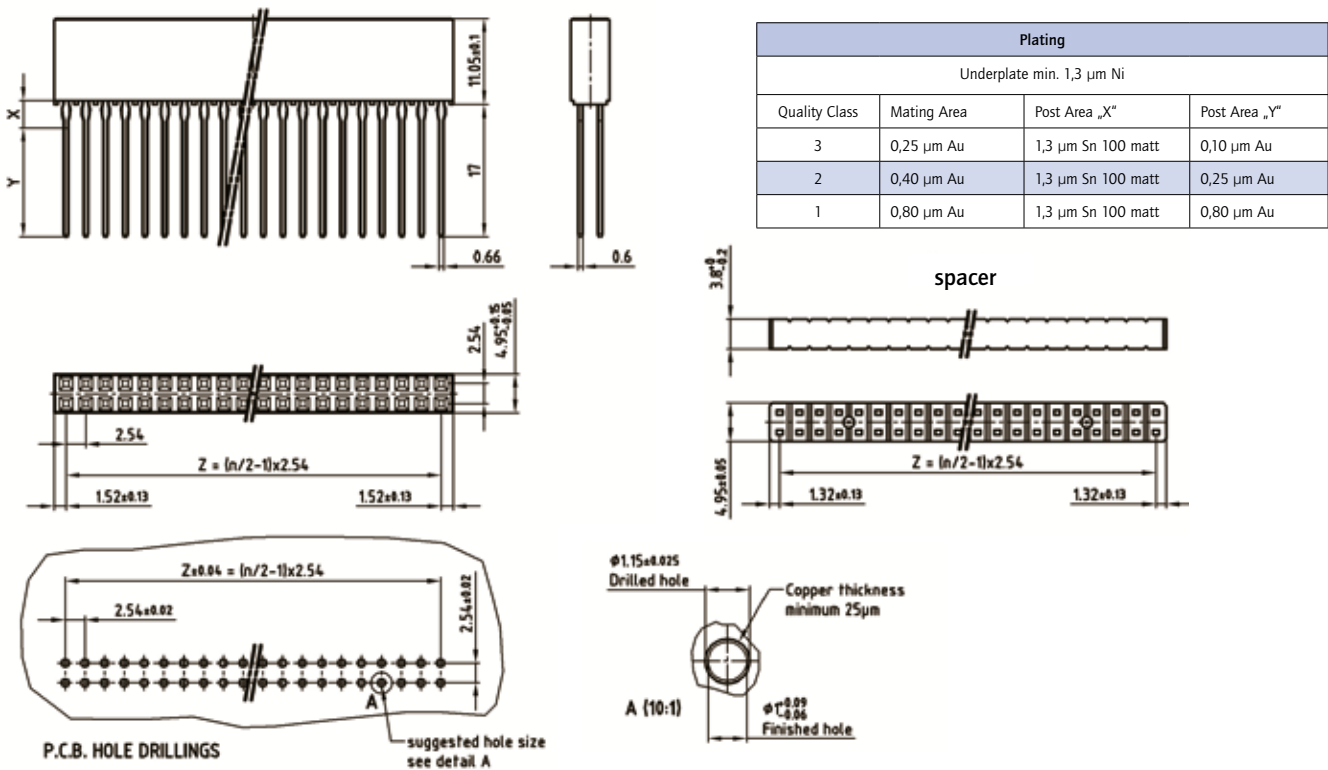
Press Fit Contact – Contact Length 17,0 mm



PRODUCT FEATURES

- Special contact length to achieve higher module stacks
- Flexible Θ Theta pin press-fit zone
- Double beam contact for high carrying capacity and reliable connections
- 40- / 64- / 100-pol. versions (other contact versions on request)
- Standard plating quality class 2
- Insulator black (other colors on request)
- Connectors are delivered in a set with a spacer

PRODUCT DRAWING

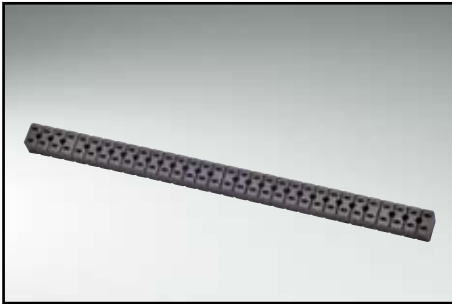


ORDER DATA

Contacts	Version	Partnumber
40	Press-Fit Contact 17,0 mm QC 3	49-000033
64	Press-Fit Contact 17,0 mm QC 3	49-000113
100	Press-Fit Contact 17,0 mm QC 3	49-000153
40	Press-Fit Contact 17,0 mm QC 2	49-000032
64	Press-Fit Contact 17,0 mm QC 2	49-000112
100	Press-Fit Contact 17,0 mm QC 2	49-000152
40	Press-Fit Contact 17,0 mm QC 1	49-000031
64	Press-Fit Contact 17,0 mm QC 1	49-000111
100	Press-Fit Contact 17,0 mm QC 1	49-000151

PC/104 CONNECTOR – ACCESSORIES

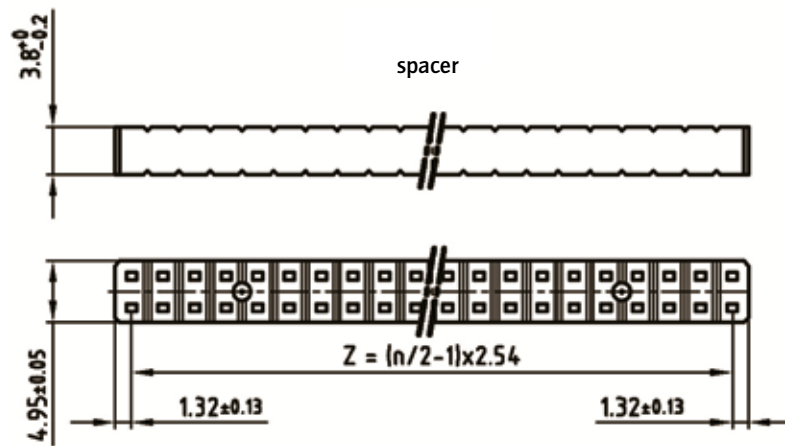
Spacer



PRODUCT FEATURES

- Spare accessory spacer
- 40- / 64- / 100-pol. version (other contact versions on request)
- Color black (other colors on request)

PRODUCT DRAWING



ORDER DATA

Contacts	Version	Partnumber
40	Spacer	49-100080
64	Spacer	49-100060
100	Spacer	49-100050

PC/104PLUS CONNECTORS

Technical Data

MATERIAL

Insulator	PBT, glas filled; UL94 V-0
Contact material	Copper alloy

ELECTRICAL DATA

Current rating	1 A in acc. to IEC 60512-5-2
Contact resistance	< 20 mOhm
Temperature range	-55°C to +95°C

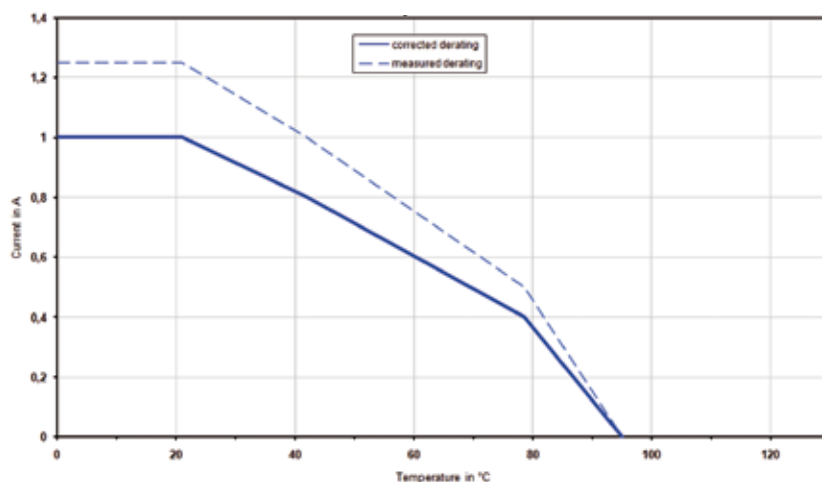
MECHANICAL DATA

Mating force	max. 1,5 N/pin with test pin Ø 0,5 mm
Withdrawal force	min. 0,3 N/pin with test pin Ø 0,5 mm
Press-In force	max. 80 N/pin
PCB thickness	1,4 mm
Creepage distance	min. 0,6 mm

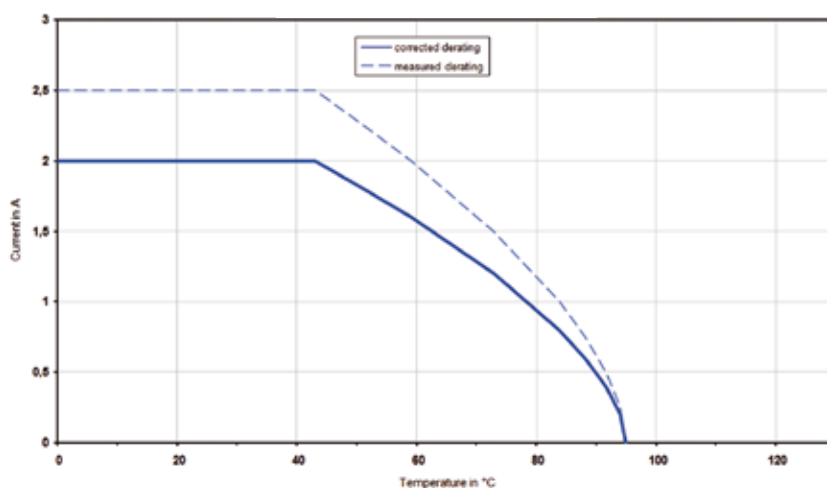
Directive 2002 95 EC
„RoHS“
Compliant

Technical alterations are subject to change without notice.

Derating-diagram 120-pol. connector – all contacts loaded

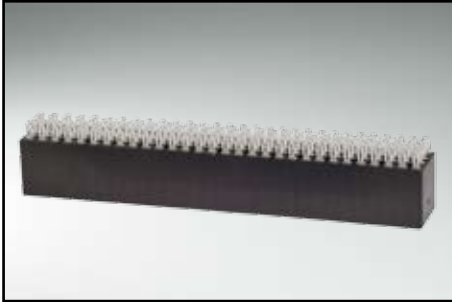


Derating-diagram 120-pol. connector – power contacts loaded in acc. to PC/104plus specification



PC/104PLUS CONNECTOR – NON-STACK-THROUGH VERSION

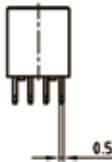
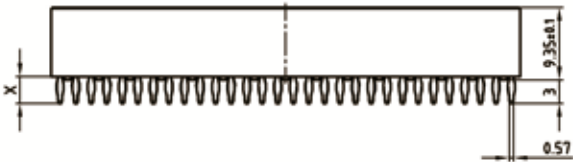
Press-Fit Contact – Contact Length 3,0 mm



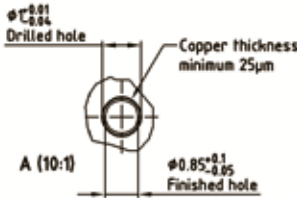
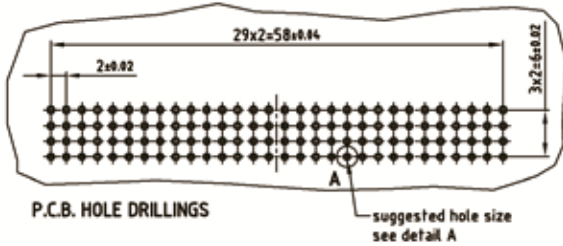
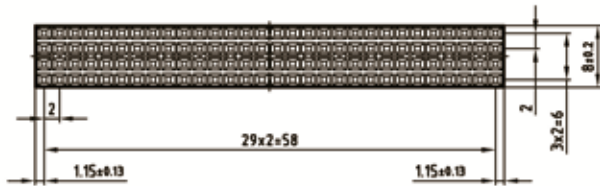
PRODUCT FEATURES

- Flexible Θ Theta pin press-fit zone
- Double beam contact for high carrying capacity and reliable connections
- 120-pol. standard version
- Standard plating quality class 2
- Insulator black (other colors on request)

PRODUCT DRAWING



Plating		
Underplate min. 1,3 μ m Ni		
Quality Class	Mating Area	Post Area „X“
3	0,25 μ m Au	1,3 μ m Sn 100 matt
2	0,40 μ m Au	1,3 μ m Sn 100 matt
1	0,80 μ m Au	1,3 μ m Sn 100 matt

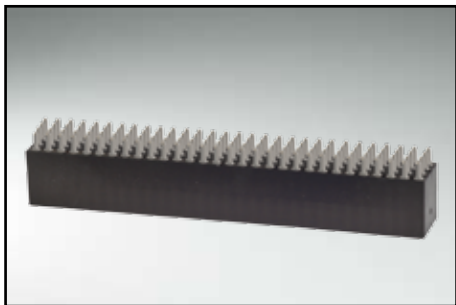


ORDER DATA

Contacts	Version	Partnumber
120	Press-Fit Contact 3,0 mm QC 3	49-100013
120	Press-Fit Contact 3,0 mm QC 2	49-100012
120	Press-Fit Contact 3,0 mm QC 1	49-100011

PC/104PLUS CONNECTOR – NON-STACK-THROUGH VERSION

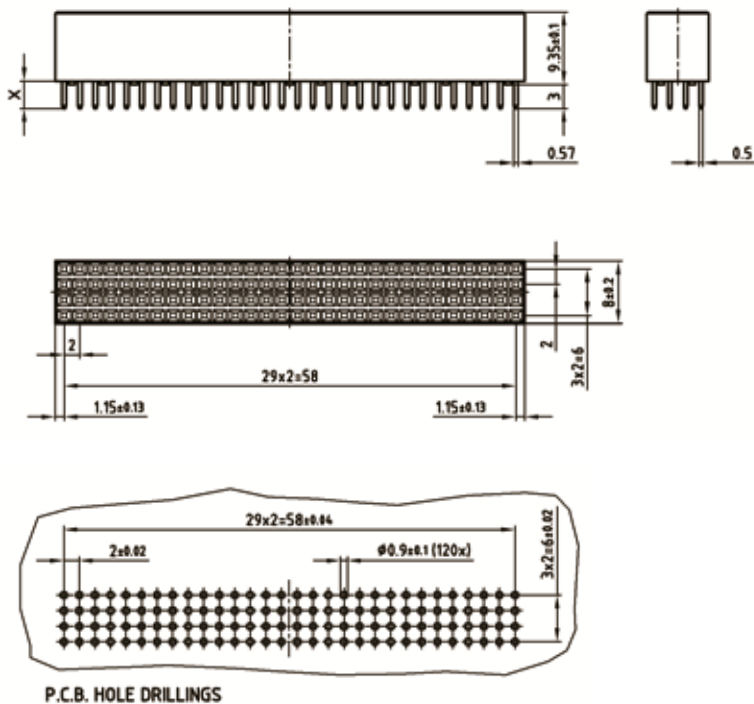
Solder Contact – Contact Length 3,0 mm



PRODUCT FEATURES

- Double beam contact for high carrying capacity and reliable connections
- 120-pol. standard version
- Standard plating quality class 2
- Insulator black (other colors on request)

PRODUCT DRAWING



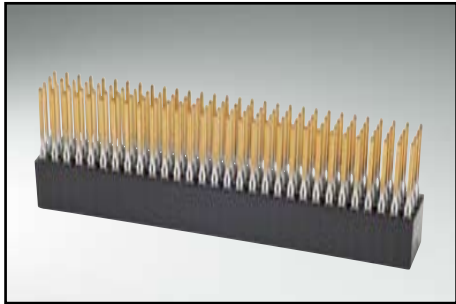
Plating		
Underplate min. 1,3 µm Ni		
Quality Class	Mating Area	Post Area „X“
3	0,25 µm Au	1,3 µm Sn 100 matt
2	0,40 µm Au	1,3 µm Sn 100 matt
1	0,80 µm Au	1,3 µm Sn 100 matt

ORDER DATA

Contacts	Version	Partnumber
120	Solder Contact 3,0 mm QC 3	49-100003
120	Solder Contact 3,0 mm QC 2	49-100002
120	Solder Contact 3,0 mm QC 1	49-100001

PC/104PLUS CONNECTOR – STACK-THROUGH CONNECTOR

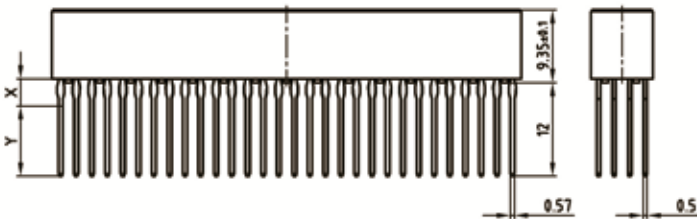
Press-Fit Contact – Contact Length 12,0 mm



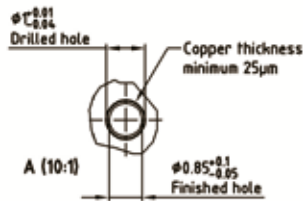
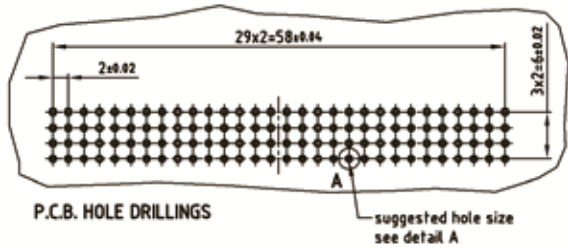
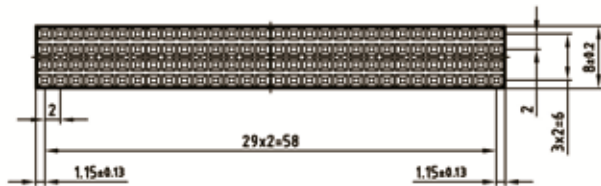
PRODUCT FEATURES

- Flexible Θ Theta pin press-fit zone
- Double beam contact for high carrying capacity and reliable connections
- 120-pol. standard version
- Standard plating quality class 2
- Insulator black (other colors on request)

PRODUCT DRAWING



Plating			
Underplate min. 1,3 µm Ni			
Quality Class	Mating Area	Post Area „X”	Post Area „Y”
3	0,25 µm Au	1,3 µm Sn 100 matt	0,10 µm Au
2	0,40 µm Au	1,3 µm Sn 100 matt	0,25 µm Au
1	0,80 µm Au	1,3 µm Sn 100 matt	0,80 µm Au



ORDER DATA

Contacts	Version	Partnumbers
120	Press-Fit Contact 12,0 mm QC 3	49-100023
120	Press-Fit Contact 12,0 mm QC 2	49-100022
120	Press-Fit Contact 12,0 mm QC 1	49-100021

PC/104PLUS CONNECTOR – ACCESSORIES

Connector Shroud

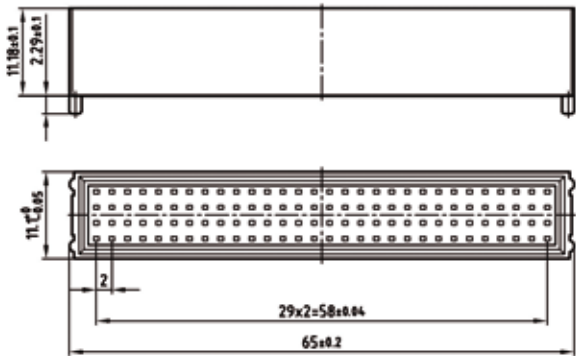


PRODUCT FEATURES

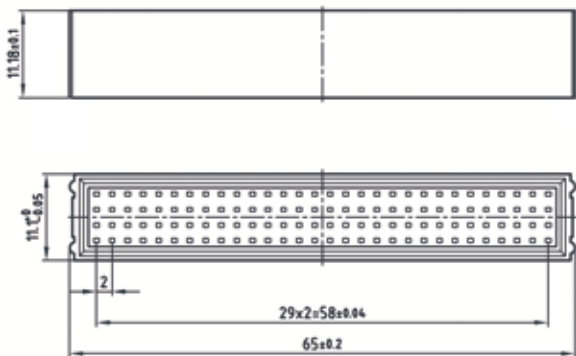
- PC/104plus specified shroud to stabilize and guide stack-through pins
- with and w/o positioning pegs available
- Color black (other colors on request)

PRODUCT DRAWING

Version with positioning pegs



Version w/o positioning pegs

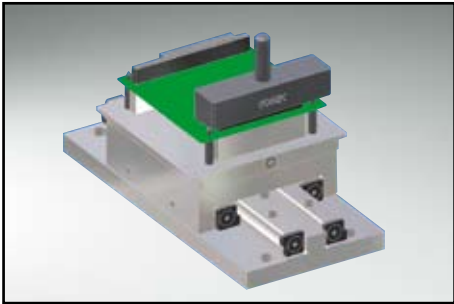


ORDER DATA

Contacts	Version	Partnumber
120	shroud with positioning pegs	49-100030
120	shroud w/o positioning pegs	49-100040

Press-In Equipment

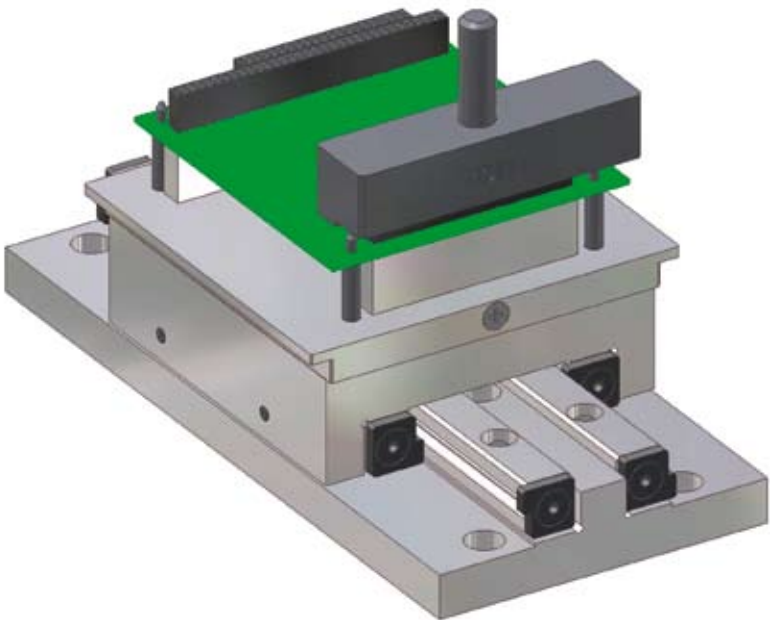
For Processing PC/104 And PC/104plus Connectors



PRODUCT FEATURES

- flexible press-in equipment for pcb mount of PC/104 and PC/104plus connectors
- other tools on request

PRODUCT DRAWING



ORDER DATA

Part	Partnumber
Press-In equipment for PC/104 and PC/104plus connectors	36-000130

CONEC

Elektronische Bauelemente GmbH
Ostenfeldmark 16
59557 Lippstadt
Tel. +49 2941 765-0
Fax +49 2941 76565
E-Mail info@conec.de
www.conec.com

CONEC Corporation

125 Sun Pac Blvd.
Brampton Ontario
Canada L6S 5Z6
Tel. +1 905 790 2200
Fax +1 905 790 2201
E-Mail info@conec.com

American CONEC Corporation

343 Technology Drive
Garner, NC, USA 27529
Tel. +1 919 460 8800
Fax +1 919 460 0141
E-Mail info@conec.com

CONEC (UK) Limited

Ringway House East
Kelvin Road
Newbury, Berkshire
RG14 2DB
Tel. +44 1635 3692
Fax +44 1635 36925
E-Mail info@conec.co.uk

CONEC Agente Comercial

C/ Salvador Espriu 75, 3-1
08005 Barcelona
Tel: +34 935 398942
Fax. +34 93
E-Mail info@conec-hispana.com

CONEC Polska Sp. zo.o

ul.Szmaragdowa 10
52-215 Wrocław
Tel. +48 713643002
Fax +48 713643010
E-Mail info@conec.pl

CONEC Nordic Region

Lundtoftevej 264 C
2800 Kgs. Lyngby
Denmark
Tel. +45 4593 5533
Fax +45 4593 5523
E-Mail info@conec.dk

CONEC France SARL

202 Rue de Chevreuils
30320 Poulx
Tel. +33 9 75267217
Fax +33 4 66570916
E-Mail info@conec.fr

CONEC (Shanghai)

Int. Trading Co., Ltd.
Rm. 715 Yongding Bldg.
No. 3388 Gong He Xin Rd.
200436 Shanghai
Tel. +86 21 66300930
Fax +86 21 66300911
E-Mail info@conec.cn

CONEC s.r.o.

Loucka 119
76325 Ujezd
Czech Republic
Tel. +420 0577 350132
Fax +420 0577 350134
E-Mail info@conec.cz

CONEC GmbH Schatz Electronic

Schubertstr. 14a
99096 Erfurt
Tel. +49 361 340110
Fax +49 361 3401111
E-Mail info@schatz-electronic.de



THE COMPANY

CONEC Elektronische Bauelemente GmbH was founded 1978 in Lippstadt, Germany. Currently more than 400 employees work at the company production sites. Precision connectors for high-end applications are produced at production plants in Lippstadt (Germany), Brampton (Canada), Garner (USA) and Loucka (Czech Republic).

THE COMPETENCE

CONEC is an ISO/TS 16949:2002 certified company and is a qualified vendor to many well-known telecommunications, automotive, avionics and industrial electronics manufacturers. The company maintains a very high degree of vertical integration to ensure that it can react quickly to customer expectations and changes in the market. In-house tool making capability gives CONEC ample flexibility to quickly build or modify tools to accommodate customer-specific solutions.

THE QUALITY

The company is one of the world market leaders in filter connectors, combination D-SUB connectors and water resistant connectors.

THE FLEXIBILITY

The company also produces standard D-SUB, DIN/EN, coax, fiber optics and RJ45 connectors as well as PICMG-compliant connectors and M12 and M8 circular connectors. Besides the broad product range, customers also value the company's ability to provide customer-specific solutions.

www.conec.com