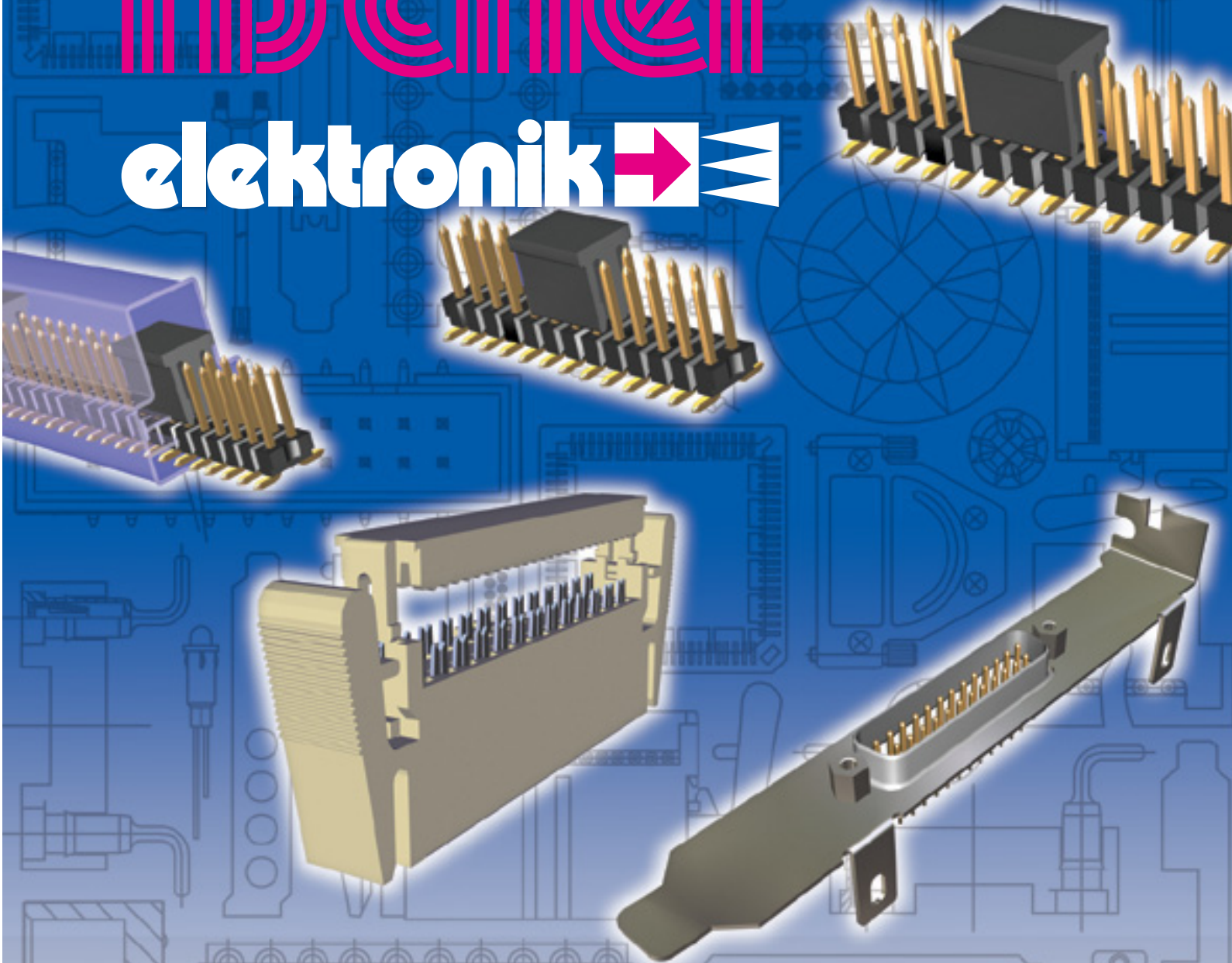


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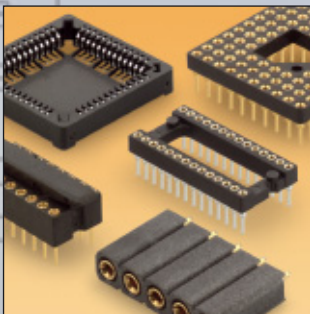
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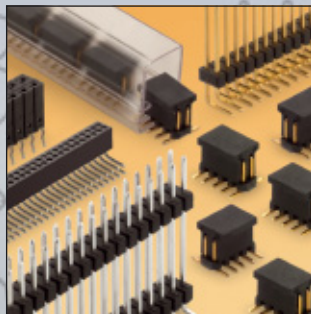
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TÜV
ISO 14001

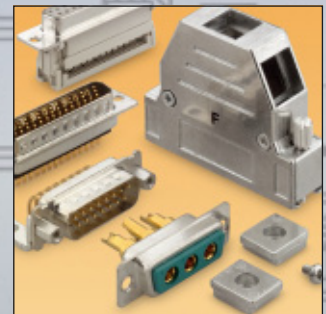
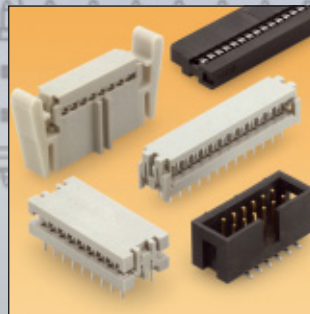

TÜV
CERT
ISO 9001



Sockets



Connectors



Brackets

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Fischer Elektronik GmbH & Co. KG

P.O. Box 1590
D-58465 Lüdenscheid

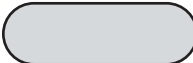
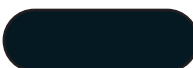
House address

Nottebohmstr. 28
D-58511 Lüdenscheid
Fon: +49 (0) 23 51 4 35-0
Fax: sales +49 (0) 23 51 4 57 54
purchasing +49 (0) 23 51 45 94 33
exports +49 (0) 23 51 43 51 85
info@fischerelektronik.de
www.fischerelektronik.de

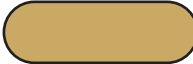
Fischer Elektronik Österreich GmbH

Hirschstettnerstraße 19-21/K
A-1220 Wien
Fon: +43 (0) 1 8 76 62 27
Fax: +43 (0) 1 8 76 62 27-11
online@fischerelektronik.co.at
www.fischerelektronik.at

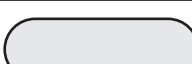
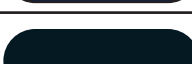
art. no.	HEATSINKS & CASES SURFACES
----------	----------------------------

AL	 raw degreased aluminium
BZ	 raw pickled aluminium
LP	 outside black lacquered RAL 9005/transparent passivated
ME	 clear anodised
MI	 solderable surface
SA	 black anodised
TP	 chrome-free transparent passivated

art. no.	CONNECTOR CONTACT SURFACE FINISH
----------	----------------------------------

G	 gold-coated
S	 selective gold plating
Z	 tinned

art. no.	RAL	COLOURS	ARTICLES
----------	-----	---------	----------

GO	6026	 opal green	19" system cases RackCase/shell cases
K	7032	 gravel grey	bench cases
LG	7035	 light grey	shell cases
NB	5022	 night blue	19" system cases RackCase/shell cases
S	9005	 deep black	bench cases/shell cases/19" system cases RackCase
TB	5018	 turquoise blue	19" system cases RackCase/shell cases
UL	5002	 ultramarine blue	Plusline/shell cases

Alphanumeric product list

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ASL ... SMD ... B SM	H 7	CAB 9 ...	G 77	DIL ... P ...	F 5	LB SL ...	G 20
ASLA ...	H 6	CB ...	F 24	DIL ... PEK	F 10	LB SLY 06 ...	G 20
ASLG ...	H 6	D W 9 37	H 11	DIL ... Q ...	F 6	LEB ... G	F 24
BADM ...	I 27	KK W		DIL ... SMD M	F 16	LL 30 HRP	L 9
BADP ...	I 27	PV W		DIL ... SMD PK3	F 15	LL 30 HRS	L 9
BK 01 32	H 11	PVY W		DIL ... SMD SK5	F 15	LL 30 PRB ...	L 11
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BL 16 SMD ...	G 46	DB BK 09 ... /	I 11	DIL SMD M ...	F 16	MAH 4 ...	L 2
BL 17 SMD ...	G 47	DB BK 15 ... /		DILS ... 6 PK 3 /	F 13	MAH 5 ...	L 3
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BL 19 ...	G 34	DB BK 37 ...		DILS ... GA LO /	F 14	MIC ...	F 14
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BL 21 ...	G 30	DB BK LP 25 ... /		DILS ... PK 3 /	F 13	MK 03 ...	G 3
BL 3 ...	G 27	DB BK LP 37 ...		DILS ... PK 5		MK 04 ...	G 3
BL 4 ...	G 27	DS WK ... / DB WK ...	I 5	DLH 21 ...	L 8	MK 05 ...	G 3
BL 5 ...	G 31	DB ... P	I 19	DS ... L	I 2	MK 06 ...	G 22
BL 6 ...	G 31	DBM 13K3 L20	I 14	DS ... LA	I 3	MK 07 ...	G 22
BL 7 ...	G 31	DBM 3K3 L20	I 14	DS ... P	I 16	MK 08 ...	G 4
BL 8 ...	G 31	DBM 7K2 L20	I 14	DS ... SMD TR	I 15	MK 10 ...	G 4
BL 9 ...	G 33	DDH 3 E	L 6	DS ... T	I 2	MK 11 ...	G 4
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MK LP 242 ...	G 6	SL 12 SMD ...	G 39	TF G	F 2
MK LP 40 ...	G 6	SL 13 ...	G 15	V	I 28
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Fischer Elektronik GmbH & Co. KG

Postfach 1590 • D-58465 Lüdenscheld

Hausadresse

Nottebohmstr. 28 • D-58511 Lüdenscheld

Telefon: 0 23 51 / 4 35-0

Telefax:

Verkauf

0 23 51 / 4 57 54

Einkauf

0 23 51 / 45 94 33

Export

0 23 51 / 43 51 85

info@fischerelektronik.de

www.fischerelektronik.de

Fischer Elektronik Österreich GmbH

Hirschstettner Straße 19-21/K • A-1220 Wien

Telefon: 01 / 8 76 62 27

Telefax: 01 / 8 76 62 27-11

online@fischerelektronik.co.at

www.fischerelektronik.at

Astrel AG

Churerstrasse 168

CH-8808 Pfäffikon SZ

Telefon: 055 / 415 66 15

Telefax: 055 / 415 66 10

astrel@swissonline.ch

www.astrel.ch

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Female contacts for Ø 0.5 mm

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art. no. 1831 Z	art. no. WWPS 1 G	art. no. SK 06 G ... Z
art. no. SK 13 X 2 G	art. no. TF G	art. no. SK 19 G ... Z
art. no. SIL 1 G ... Z		

Female contact for 0.64 mm □ and Ø 0.80 mm

art. no. SKB 5 Z	art. no. SKB 9 Z		
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contact shell surface: tin-plated

contact spring: gold-plated

High-precision contacts, loose

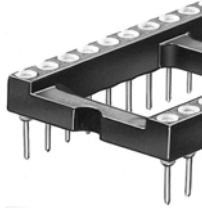
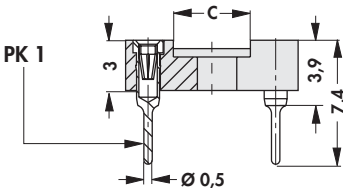
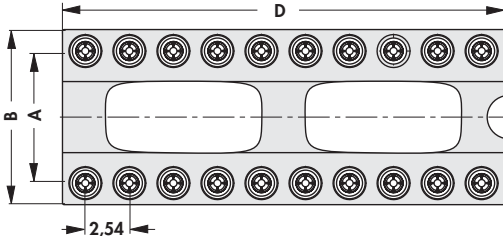
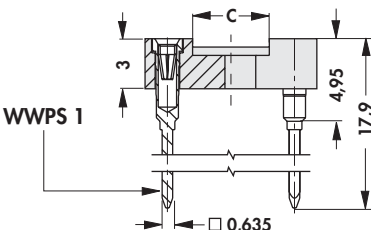
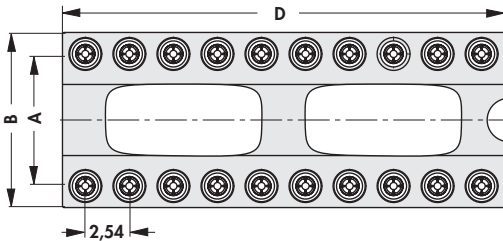
Contacts with solder head

art. no. PK 4 Z		art. no. SK 02 G ... Z		art. no. SK 03 G ... Z	
art. no. SK 04 Z		art. no. SK 08 G			

Male contacts

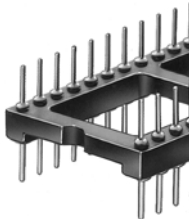
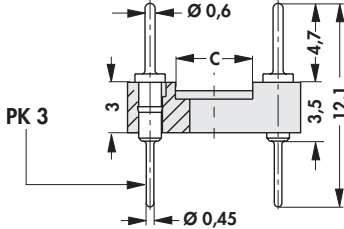
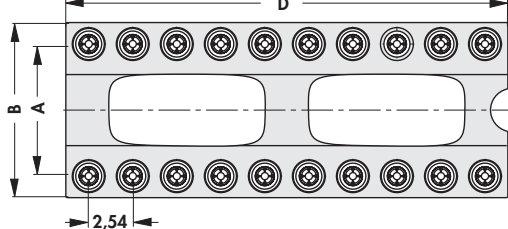
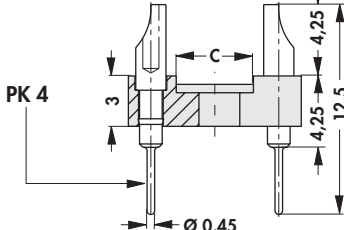
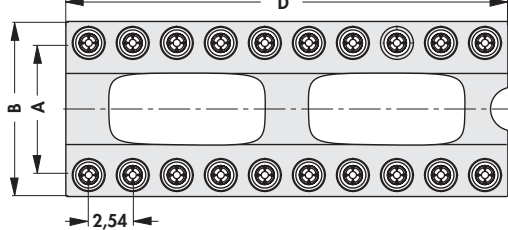
art. no. PK 3 G ... Z		art. no. SK 05 G ... Z		art. no. SK 11 G ... Z	
art. no. SK 14 X 2 G ... Z		art. no. SK 40 G		art. no. SK 41 G ... Z	
art. no. SK 42 G ... Z					

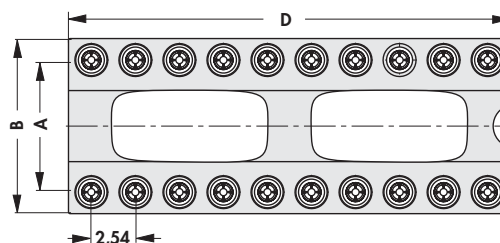
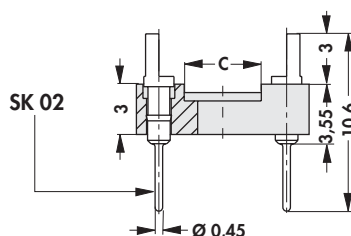
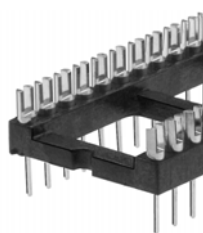
High-precision sockets for DIL-IC, open frame

											
art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
		A	B	C	D			A	B	C	D
DIL 6 M ...	6	7.62	10.10	4.10	7.60	DIL 22 03 M Z	22	7.62	10.10	4.10	27.90
DIL 8 M ...	8	7.62	10.10	4.10	10.10	DIL 24 M ...	24	15.24	17.70	11.70	30.60
DIL 10 M ...	10	7.62	10.10	4.10	12.70	DIL 24 03 M ...	24	7.62	10.10	4.10	30.60
DIL 14 M ...	14	7.62	10.10	4.10	17.70	DIL 24 04 M G	24	10.16	12.70	6.70	30.60
DIL 16 M ...	16	7.62	10.10	4.10	20.40	DIL 28 M ...	28	15.24	17.70	11.70	35.70
DIL 18 M ...	18	7.62	10.10	4.10	23.00	DIL 28 03 M ...	28	7.62	10.10	4.10	35.70
DIL 20 M ...	20	7.62	10.10	4.10	25.50	DIL 32 M ...	32	15.24	17.70	11.70	40.60
DIL 22 M ...	22	10.16	12.70	6.70	27.90	DIL 36 M G	36	15.24	17.70	11.70	45.60
											
art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
		A	B	C	D			A	B	C	D
DIL 6 N ...	6	7.62	10.10	4.10	7.60	DIL 22 03 N ...	22	7.62	10.10	4.10	27.90
DIL 8 N ...	8	7.62	10.10	4.10	10.10	DIL 24 N ...	24	15.24	17.70	11.70	30.60
DIL 10 N ...	10	7.62	10.10	4.10	12.70	DIL 24 03 N Z	24	7.62	10.10	4.10	30.60
DIL 14 N ...	14	7.62	10.10	4.10	17.70	DIL 24 04 N Z	24	10.16	12.70	6.70	30.60
DIL 16 N ...	16	7.62	10.10	4.10	20.40	DIL 28 N G	28	15.24	17.70	11.70	35.70
DIL 18 N Z	18	7.62	10.10	4.10	23.00	DIL 28 03 N Z	28	7.62	10.10	4.10	35.70
DIL 20 N Z	20	7.62	10.10	4.10	25.50	DIL 32 N Z	32	15.24	17.70	11.70	40.60
DIL 22 N ...	22	10.16	12.70	6.70	27.90	DIL 36 N ...	36	15.24	17.70	11.70	45.60
please indicate: ... surface G=gold-plated Z=tin-plated											

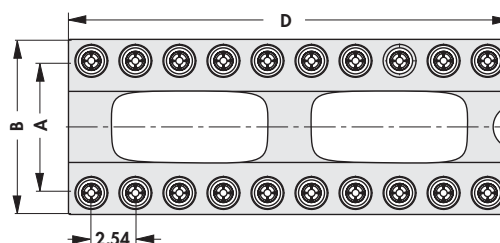
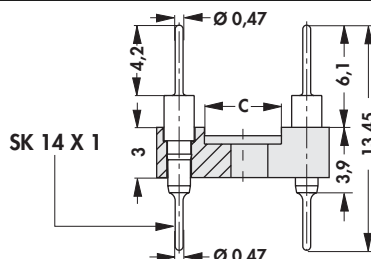
contact spring: gold-plated

High-precision sockets for DIL-IC, open frame

											
art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
DIL 6 O ...	6	7.62	10.10	4.10	7.60	DIL 22 03 O Z	22	7.62	10.10	4.10	27.90
DIL 8 O ...	8	7.62	10.10	4.10	10.10	DIL 24 O G	24	15.24	17.70	11.70	30.60
DIL 10 O Z	10	7.62	10.10	4.10	12.70	DIL 24 03 O ...	24	7.62	10.10	4.10	30.60
DIL 14 O ...	14	7.62	10.10	4.10	17.70	DIL 24 04 O Z	24	10.16	12.70	6.70	30.60
DIL 16 O ...	16	7.62	10.10	4.10	20.40	DIL 28 O ...	28	15.24	17.70	11.70	35.70
DIL 18 O ...	18	7.62	10.10	4.10	23.00	DIL 28 03 O Z	28	7.62	10.10	4.10	35.70
DIL 20 O ...	20	7.62	10.10	4.10	25.50	DIL 32 O ...	32	15.24	17.70	11.70	40.60
DIL 22 O ...	22	10.16	12.70	6.70	27.90	DIL 36 O Z	36	15.24	17.70	11.70	45.60
											
art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
DIL 6 P Z	6	7.62	10.10	4.10	7.60	DIL 22 P G	22	10.16	12.70	6.70	27.90
DIL 8 P ...	8	7.62	10.10	4.10	10.10	DIL 22 03 P ...	22	7.62	10.10	4.10	27.90
DIL 10 P ...	10	7.62	10.10	4.10	12.70	DIL 24 P G	24	15.24	17.70	11.70	30.60
DIL 14 P ...	14	7.62	10.10	4.10	17.70	DIL 24 03 P G	24	7.62	10.10	4.10	30.60
DIL 16 P ...	16	7.62	10.10	4.10	20.40	DIL 24 04 P ...	24	10.16	12.70	6.70	30.60
DIL 18 P ...	18	7.62	10.10	4.10	23.00	DIL 32 P Z	32	15.24	17.70	11.70	40.60
DIL 20 P ...	20	7.62	10.10	4.10	25.50	DIL 36 P ...	36	15.24	17.70	11.70	45.60
please indicate: ... surface											
G=gold-plated											
Z =tin-plated											



art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
		A	B	C	D			A	B	C	D
DIL 6 Q Z	6	7.62	10.10	4.10	7.60	DIL 20 Q Z	20	7.62	10.10	4.10	25.50
DIL 8 Q ...	8	7.62	10.10	4.10	10.10	DIL 24 03 Q G	24	7.62	10.10	4.10	30.60
DIL 10 Q Z	10	7.62	10.10	4.10	12.70	DIL 28 Q ...	28	15.24	17.70	11.70	35.70
DIL 14 Q Z	14	7.62	10.10	4.10	17.70	DIL 28 03 Q Z	28	7.62	10.10	4.10	35.70
DIL 16 Q ...	16	7.62	10.10	4.10	20.40	DIL 36 Q ...	36	15.24	17.70	11.70	45.60
DIL 18 Q ...	18	7.62	10.10	4.10	23.00						



art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
		A	B	C	D			A	B	C	D
DIL 6 U ...	6	7.62	10.10	4.10	7.60	DIL 22 03 U Z	22	7.62	10.10	4.10	27.90
DIL 8 U ...	8	7.62	10.10	4.10	10.10	DIL 24 U ...	24	15.24	17.70	11.70	30.60
DIL 10 U Z	10	7.62	10.10	4.10	12.70	DIL 24 03 U ...	24	7.62	10.10	4.10	30.60
DIL 14 U ...	14	7.62	10.10	4.10	17.70	DIL 24 04 U Z	24	10.16	12.70	6.70	30.60
DIL 16 U ...	16	7.62	10.10	4.10	20.40	DIL 28 U ...	28	15.24	17.70	11.70	35.70
DIL 18 U Z	18	7.62	10.10	4.10	23.00	DIL 32 U G	32	15.24	17.70	11.70	40.60
DIL 20 U Z	20	7.62	10.10	4.10	25.50	DIL 36 U ...	36	15.24	17.70	11.70	45.60
DIL 22 U ...	22	10.16	12.70	6.70	27.90						

please indicate:

... **surface**

G=gold-plated

Z = tin-plated

Mounting tool for DIL/PLCC
Programmable headers
Technical data
Single precision contacts

- F 14
- F 23
- F 31 - 34
- F 2 - 3

High-prec. male headers 2.54 solder → **G 21 - 24**
Sockets for LED → **F 11 - 12**
Fem. head. 2.54 solder, put through → **G 29**
Peel-off terminal strips → **G 25**

F 6

A

B

C

D

E

F

G

H

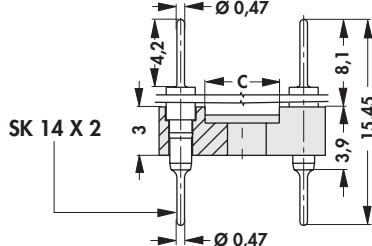
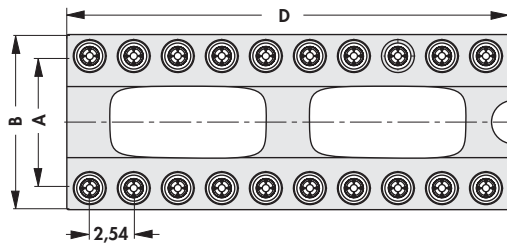
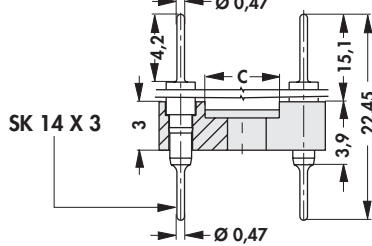
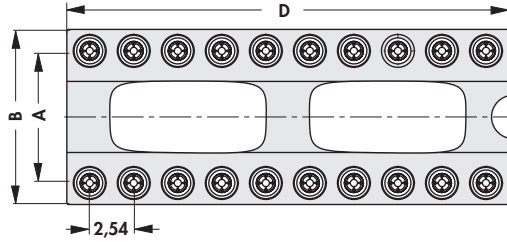
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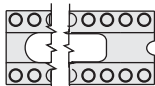
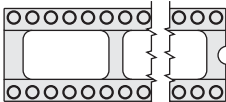
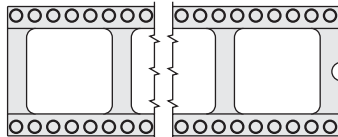
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N

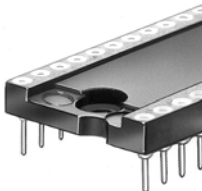
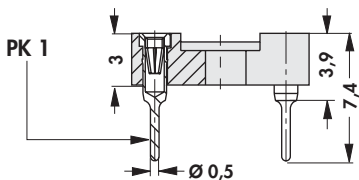
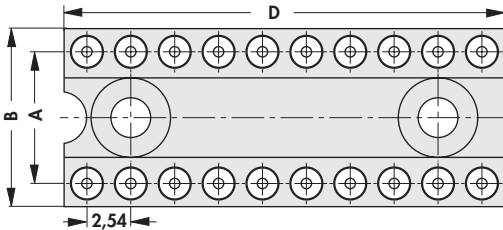
High-precision sockets for DIL-IC, open frame

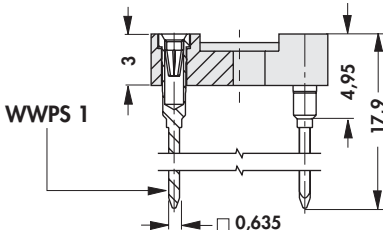
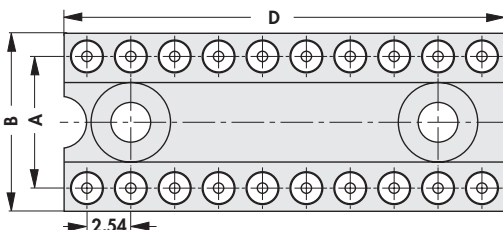
											
art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
		A	B	C	D			A	B	C	D
DIL 6 V ...	6	7.62	10.10	4.10	7.60	DIL 22 V G	22	10.16	12.70	6.70	27.90
DIL 8 V ...	8	7.62	10.10	4.10	10.10	DIL 22 03 V Z	22	7.62	10.10	4.10	27.90
DIL 10 V Z	10	7.62	10.10	4.10	12.70	DIL 24 03 V ...	24	7.62	10.10	4.10	30.60
DIL 14 V ...	14	7.62	10.10	4.10	17.70	DIL 24 04 V ...	24	10.16	12.70	6.70	30.60
DIL 16 V ...	16	7.62	10.10	4.10	20.40	DIL 28 V ...	28	15.24	17.70	11.70	35.70
DIL 18 V ...	18	7.62	10.10	4.10	23.00	DIL 28 03 V Z	28	7.62	10.10	4.10	35.70
DIL 20 V Z	20	7.62	10.10	4.10	25.50	DIL 36 V ...	36	15.24	17.70	11.70	45.60
											
art. no.	no. of contacts	dim. [mm]				art. no.	no. of contacts	dim. [mm]			
		A	B	C	D			A	B	C	D
DIL 6 W Z	6	7.62	10.10	4.10	7.60	DIL 22 W Z	22	10.16	12.70	6.70	27.90
DIL 8 W ...	8	7.62	10.10	4.10	10.10	DIL 22 03 W ...	22	7.62	10.10	4.10	27.90
DIL 10 W ...	10	7.62	10.10	4.10	12.70	DIL 24 03 W Z	24	7.62	10.10	4.10	30.60
DIL 14 W ...	14	7.62	10.10	4.10	17.70	DIL 24 04 W ...	24	10.16	12.70	6.70	30.60
DIL 16 W G	16	7.62	10.10	4.10	20.40	DIL 32 W ...	32	15.24	17.70	11.70	40.60
DIL 18 W ...	18	7.62	10.10	4.10	23.00	DIL 36 W ...	36	15.24	17.70	11.70	45.60
please indicate: ... surface G=gold-plated Z=tin-plated											

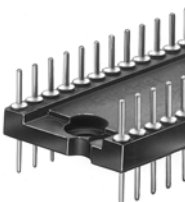
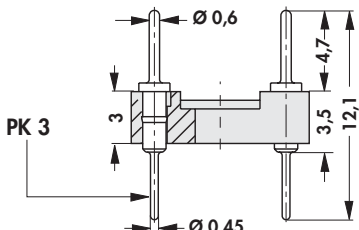
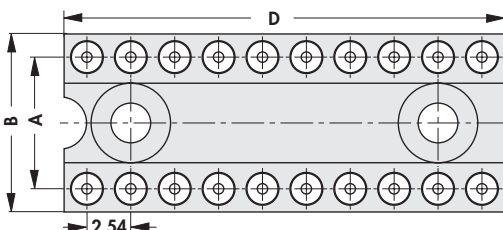
Socket layout of various numbers of contacts for DIL-IC, open frame

6-16 pol.	18-32 pol.	36-48 pol.
		

High-precision sockets for DIL-IC, closed frame

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 E ...	6	7.62	10.30	7.60	DIL 20 E ...	20	7.62	10.30	25.50
DIL 8 E ...	8	7.62	10.30	10.10	DIL 28 E ...	28	15.24	17.70	35.50
DIL 14 E ...	14	7.62	10.30	17.70	DIL 32 E ...	32	15.24	17.70	40.60
DIL 16 E ...	16	7.62	10.30	20.40	DIL 40 E ...	40	15.24	17.70	50.80
DIL 18 E ...	18	7.62	10.30	23.00					

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 H ...	6	7.62	10.30	7.60	DIL 22 H ...	22	10.16	12.70	27.90
DIL 8 H Z	8	7.62	10.30	10.10	DIL 28 H Z	28	15.24	17.70	35.50
DIL 14 H Z	14	7.62	10.30	17.70	DIL 32 H ...	32	15.24	17.70	40.60
DIL 16 H Z	16	7.62	10.30	20.40	DIL 36 H Z	36	15.24	17.70	45.60
DIL 18 H Z	18	7.62	10.30	23.00	DIL 40 H ...	40	15.24	17.70	50.80
DIL 20 H ...	20	7.62	10.30	25.50	DIL 48 H Z	48	15.24	17.70	61.30

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 A G	6	7.62	10.30	7.60	DIL 18 A ...	18	7.62	10.30	23.00
DIL 8 A ...	8	7.62	10.30	10.10	DIL 36 A Z	36	15.24	17.70	45.60
DIL 14 A ...	14	7.62	10.30	17.70	DIL 40 A Z	40	15.24	17.70	50.80
DIL 16 A G	16	7.62	10.30	20.40	DIL 48 A Z	48	15.24	17.70	61.30

please indicate:

... surface

G=gold-plated

Z=tin-plated

contact spring: gold-plated

SMD sockets for PLCC
Programmable headers
Technical data
High-prec. male headers 2.54 solder

→ F 18
→ F 23
→ F 31 - 34
→ G 21 - 24

Single precision contacts
Sockets for LED
Fem. head. 2.54 solder, put through
Peel-off terminal strips

→ F 2 - 3
→ F 11 - 12
→ G 29
→ G 25

A


High-precision sockets for DIL-IC, closed frame

B

C

D

E

F

G

H

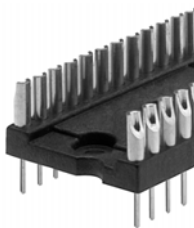
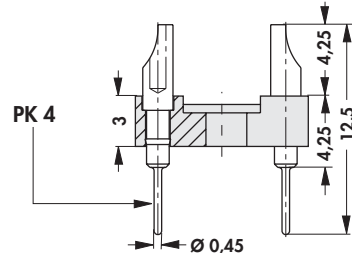
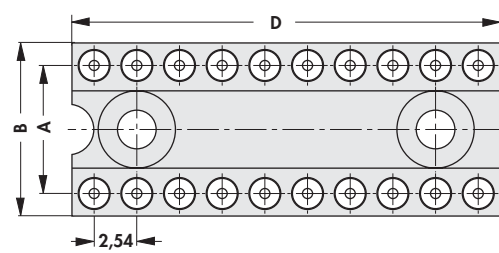
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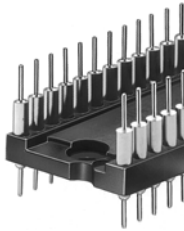
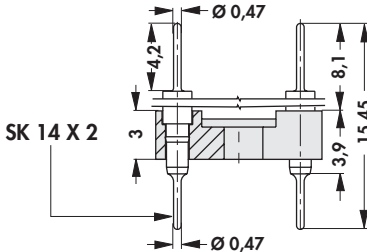
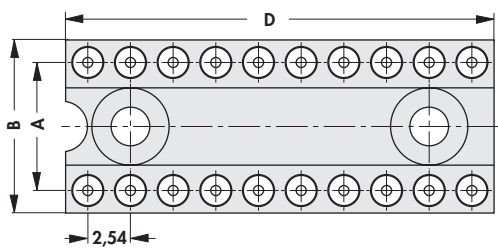
M

N

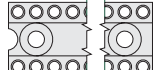
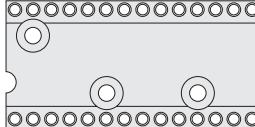
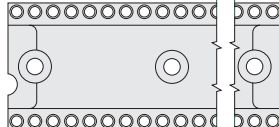
									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 B ...	6	7.62	10.30	7.60	DIL 28 B Z	28	15.24	17.70	35.50
DIL 8 B G	8	7.62	10.30	10.10	DIL 32 B Z	32	15.24	17.70	40.60
DIL 14 B ...	14	7.62	10.30	17.70	DIL 36 B ...	36	15.24	17.70	45.60
DIL 16 B ...	16	7.62	10.30	20.40	DIL 40 B G	40	15.24	17.70	50.80
DIL 18 B ...	18	7.62	10.30	23.00	DIL 48 B ...	48	15.24	17.70	61.30
DIL 20 B ...	20	7.62	10.30	25.50					

art. no.	no. of contacts	dim. [mm]			**art. no.**	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 D ...	6	7.62	10.30	7.60	**DIL 20 D ...**	20	7.62	10.30	25.50
DIL 8 D ...	8	7.62	10.30	10.10	**DIL 32 D G**	32	15.24	17.70	40.60
DIL 14 D Z	14	7.62	10.30	17.70	**DIL 36 D ...**	36	15.24	17.70	45.60
DIL 16 D ...	16	7.62	10.30	20.40	**DIL 48 D ...**	48	15.24	17.70	61.30
DIL 18 D ...	18	7.62	10.30	23.00					
art. no.	no. of contacts	dim. [mm]			**art. no.**	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 X ...	6	7.62	10.30	7.60	**DIL 28 X Z**	28	15.24	17.70	35.50
DIL 8 X G	8	7.62	10.30	10.10	**DIL 32 X ...**	32	15.24	17.70	40.60
DIL 14 X G	14	7.62	10.30	17.70	**DIL 36 X ...**	36	15.24	17.70	45.60
DIL 16 X ...	16	7.62	10.30	20.40	**DIL 40 X ...**	40	15.24	17.70	50.80
DIL 18 X ...	18	7.62	10.30	23.00	**DIL 48 X ...**	48	15.24	17.70	61.30
DIL 22 X ...	22	10.16	12.70	27.90					
please indicate: ... surface									
G=gold-plated									
Z=tin-plated									
F 9
SMD sockets for PLCC
Programmable headers
Technical data
Sockets for LED
→ F 18
→ F 23
→ F 31 - 34
→ F 11 - 12
Single precision contacts
High-prec. male headers 2.54 solder
Fem. head. 2.54 solder, put through
Mounting tool for DIL/PLCC
→ F 2 - 3
→ G 21 - 24
→ G 29
→ F 14

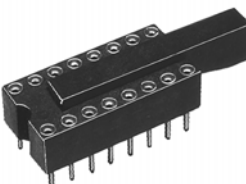
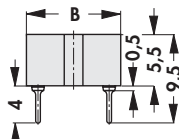
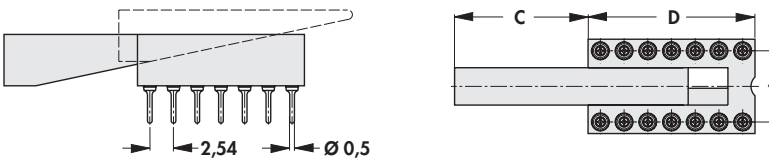
High-precision sockets for DIL-IC, closed frame

  									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	D			A	B	D
DIL 6 Y ...	6	7.62	10.30	7.60	DIL 22 Y G	22	10.16	12.70	27.90
DIL 8 Y ...	8	7.62	10.30	10.10	DIL 28 Y ...	28	15.24	17.70	35.50
DIL 14 Y Z	14	7.62	10.30	17.70	DIL 36 Y ...	36	15.24	17.70	45.60
DIL 16 Y ...	16	7.62	10.30	20.40	DIL 40 Y ...	40	15.24	17.70	50.80
DIL 18 Y ...	18	7.62	10.30	23.00	DIL 48 Y ...	48	15.24	17.70	61.30
please indicate: ... surface G=gold-plated Z=tin-plated									

Socket layout of various numbers of contacts for DIL-IC, closed frame

6 pol. 	8 pol. 	14-22 pol. 
28 pol. 	36-48 pol. 	

DIL-IC-sockets with extractor

  					
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
DIL 14 PEK	14	7.62	10.10	12.00	17.00
DIL 16 PEK	16	7.62	10.10	12.00	20.30

contact shell surface: gold-plated
contact spring: gold-plated

A

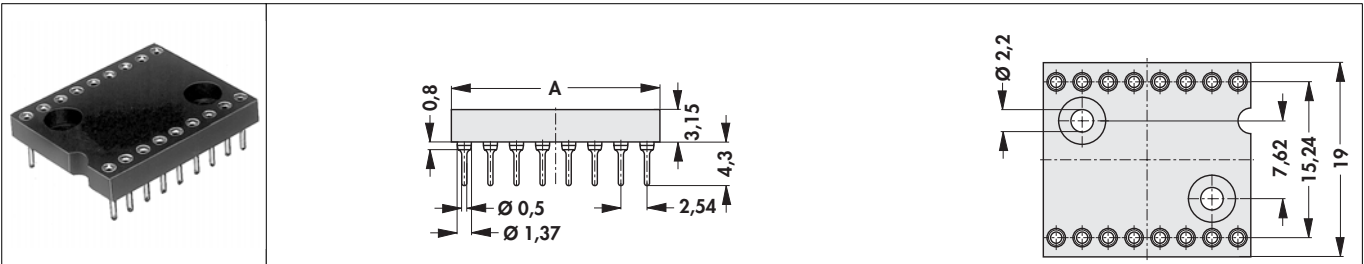


High-precision sockets for DIL-IC

B

LED display sockets of 0.6" pitch

C



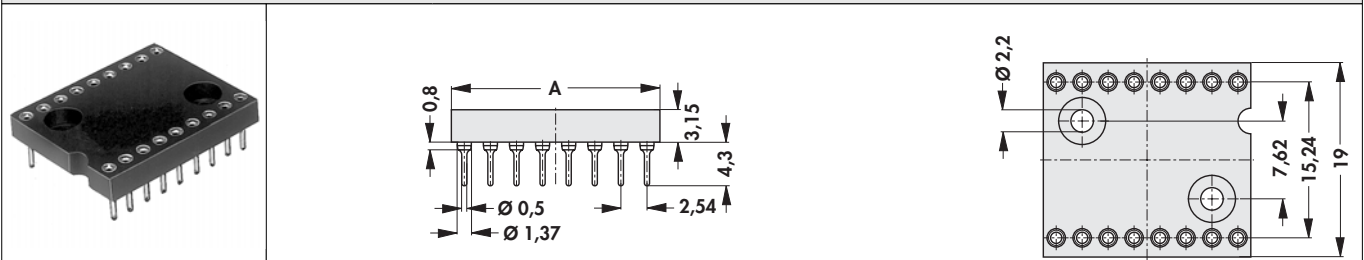
D

art. no.	no. of contacts	dim. [mm] A	art. no.	no. of contacts	dim. [mm] A
DIL 16 06 E Z	16	20.30	DIL 18 06 E ...	18	22.80

please indicate: ... surface
G=gold-plated
Z=tin-plated

E

F



art. no.	no. of contacts	dim. [mm] A	art. no.	no. of contacts	dim. [mm] A
DIL 16 06 H Z	16	20.30	DIL 18 06 H Z	18	22.80

contact spring: gold-plated

H

I

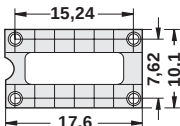
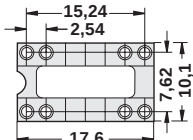
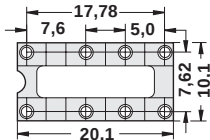
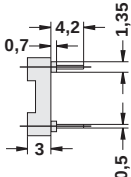
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L

M

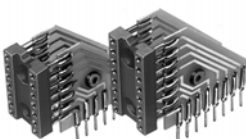
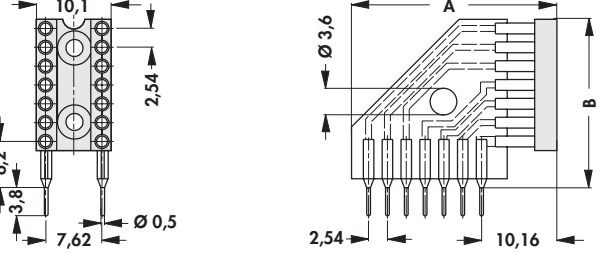
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IC-sockets partially equipped, e.g. for oscillators and relays

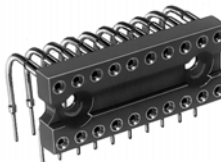
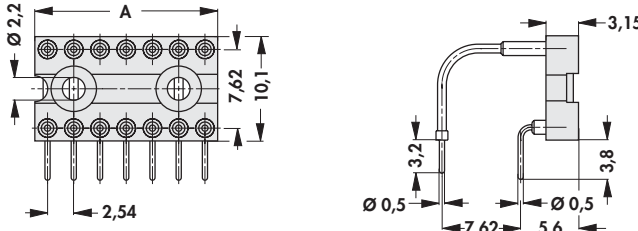
																	
	DIL 4 OR ...			DIL 8 1 OR ...			DIL 8 2 OR ...										
art. no.	no. of contacts			art. no.			no. of contacts										
DIL 4 OR ...	4			DIL 8 2 OR ...			8										
DIL 8 1 OR Z	8																
please indicate:												... surface G=gold-plated Z=tin-plated					

contact spring: gold-plated

LED display sockets in vertical construction

							
art. no.	no. of contacts	dim. [mm]		art. no.	no. of contacts	dim. [mm]	
		A	B			A	B
DIL 14 W 90	14	27.70	22.70	DIL 16 W 90	16	30.30	25.30

contact shell surface: tin-plated; contact spring: gold-plated

					
art. no.	no. of contacts	dim. [mm] A	art. no.	no. of contacts	dim. [mm] A
DIL 8 G ...	8	10.10	DIL 16 G ...	16	20.30
DIL 10 G ...	10	12.70	DIL 20 G ...	20	25.40
DIL 14 G ...	14	17.70			
please indicate: ... surface G=gold-plated Z=tin-plated					

contact spring: gold-plated

Mounting tool for DIL/PLCC

→ F 14

Single contacts metal strip
Jumpers

→ G 26
→ G 77 - 78
→ G 2

Jump. links 2.00 & 2.54 solder
Sockets for DIL-IC

→ G 20
→ F 4 - 10

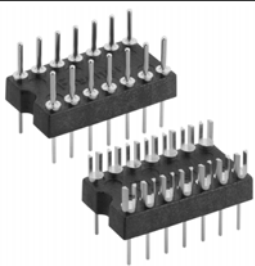
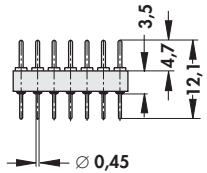
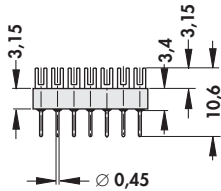
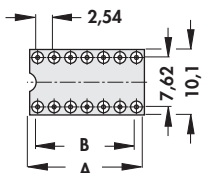
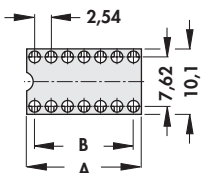
Male con./fem. con. 6.00 solder

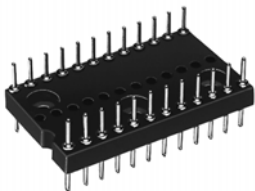
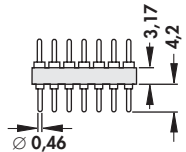
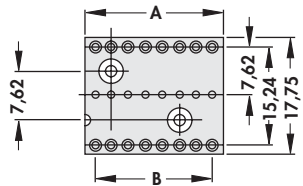
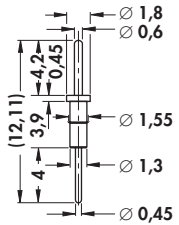
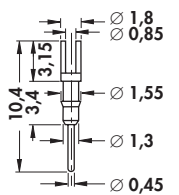
A



High-precision sockets for DIL-IC

DIL adaptor plugs

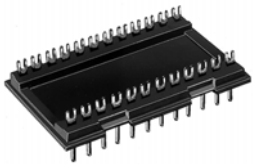
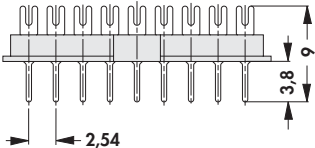
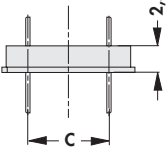
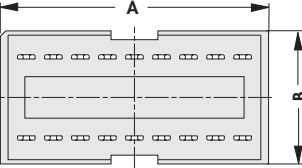
	PK 3		SK 02 ($\triangleq$ PK 5)		PK 3		SK 02 ($\triangleq$ PK 5)	
								
art. no.	no. of contacts	dim. [mm]		art. no.	no. of contacts	dim. [mm]		
		A	B			A	B	
DILS 04 PK 5	4	5.00	2.54	DILS 16 PK 3	16	20.30	17.78	
DILS 06 PK 3	6	7.60	5.08	DILS 16 PK 5	16	20.30	17.78	
DILS 08 PK 3	8	10.10	7.62	DILS 18 PK 5	18	23.00	20.32	
DILS 14 PK 3	14	17.70	15.24					

	PK 3		SK 02 ($\triangleq$ PK 5)				
							
							
art. no.	no. of contacts	dim. [mm]		art. no.	no. of contacts	dim. [mm]	
		A	B			A	B
DILS 16 6 PK 3	16	20.30	17.78	DILS 28 6 PK 3	28	35.50	33.02
DILS 24 6 PK 5	24	30.50	27.94	DILS 40 6 PK 3	40	50.80	48.26

contact surface finish: gold-plated

DIL platforms

suitable for **DIL-cases** DILS ... GA LO

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	C			A	B	C
DILS 08 GO	8	12.40	12.50	7.62	DILS 24 GO	24	32.80	20.10	15.24
DILS 14 GO	14	20.00	12.50	7.62	DILS 28 GO	28	37.80	20.10	15.24
DILS 16 GO	16	22.60	12.50	7.62	DILS 40 GO	40	53.10	20.10	15.24
DILS 18 GO	18	25.20	12.50	7.62					

contact surface finish: gold-plated

N



DIL cases - grid spacing 2.54 mm

suitable for platforms DIL DILS ... GO

art. no.	dim. [mm]			art. no.	dim. [mm]		
	B	H	L		B	H	L
DILS 08 GA LO	12.50	6.70	12.40	DILS 14 GB LO	12.50	11.70	20.00
DILS 14 GA LO	12.50	6.70	20.00	DILS 16 GB LO	12.50	11.70	22.60
DILS 16 GA LO	12.50	6.70	22.60	DILS 18 GB LO	12.50	11.70	25.20
DILS 18 GA LO	12.50	6.70	25.20	DILS 24 GB LO	20.10	11.70	32.80
DILS 24 GA LO	20.10	6.70	32.80	DILS 28 GB LO	20.10	11.70	37.80
DILS 40 GA LO	20.10	6.70	53.10	DILS 40 GB LO	20.10	11.70	53.10
DILS 08 GB LO	12.50	11.70	12.40				

contact spring: gold-plated

IC-mounting tools - Design DIL

art. no.	spacing of contact rows	
MIC 03	7.62	
MIC 06	15.24	

material: polyacetal, non-conductive; flammability: UL 94:HB

High-precision sockets for DIL-IC

SMD-plug for DIL

with PK 3-contacts

art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
DIL 08 SMD PK3 Z	8	7.62	10.10	3.50	10.00
DIL 16 SMD PK3 ...	16	7.62	10.10	3.50	20.10
DIL 20 SMD PK3 ...	20	7.62	10.10	3.50	25.20
DIL 24 SMD PK3 ...	24	15.24	17.60	11.70	30.30
please indicate: ... surface G=gold-plated Z=tin-plated					

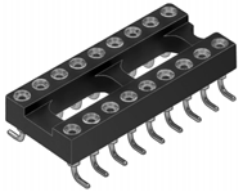
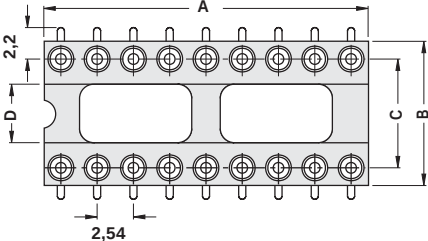
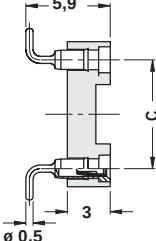
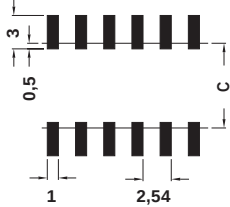
with SK5-contacts

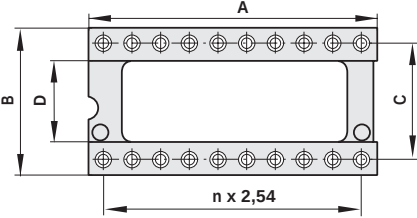
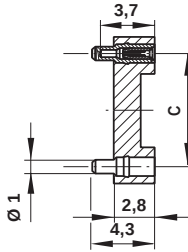
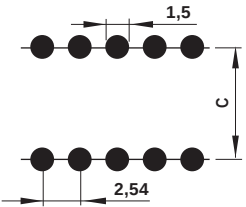
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
DIL 08 SMD SK5 ...	8	7.62	10.10	3.50	10.00
DIL 16 SMD SK5 ...	16	7.62	10.10	3.50	20.10
DIL 20 SMD SK5 ...	20	7.62	10.10	3.50	25.20
DIL 24 SMD SK5 ...	24	15.24	17.60	11.70	30.30
please indicate: ... surface G=gold-plated Z=tin-plated					

High-precision sockets for DIL-IC

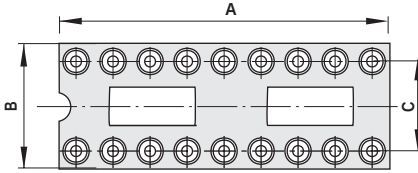
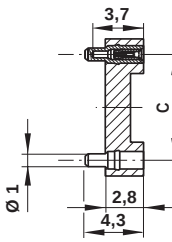
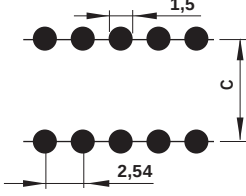
SMD-socket for DIL IC

Contacts, especially integrated into the insulating part, will adjust to the solder paste which possibly is not equally distributed.

	  				
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
DIL 16 SMD M	16	20.10	10.10	7.62	3.50
DIL 20 SMD M	20	25.20	10.10	7.62	3.50
DIL 24 03 SMD M	24	30.30	10.10	7.62	3.50
DIL 28 SMD M	28	35.40	17.60	15.24	11.20

	  				
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
DIL SMD 08 Z	8	10.08	10.08	7.62	4.80
DIL SMD 10 Z	10	12.62	10.08	7.62	4.80
DIL SMD 16 Z	16	20.24	10.08	7.62	4.80
DIL SMD 22 03 Z	22	27.86	10.08	7.62	4.80
DIL SMD 22 04 Z	22	27.86	12.62	10.16	6.50
DIL SMD 28 06 Z	28	35.48	17.70	15.24	10.60
DIL SMD 32 Z	32	40.56	17.70	15.24	10.60
DIL SMD 40 Z	40	50.72	17.70	15.24	10.60

with centre bar for vacuum-mounting

	  				
art. no.	no. of contacts	dim. [mm]			
		A	B	C	
DIL SMD M 14 Z	14	17.70	10.08	7.62	
DIL SMD M 28 06 Z	28	35.48	17.70	15.24	
DIL SMD M 32 Z	32	40.56	17.70	15.24	

contact shell surface: tin-plated; contact spring: gold-plated (DIL ... SMD M; DIL SMD ...; DIL SMD M ...)

A



Sockets for IC-PLCC

B

C

D

E

F

G

H

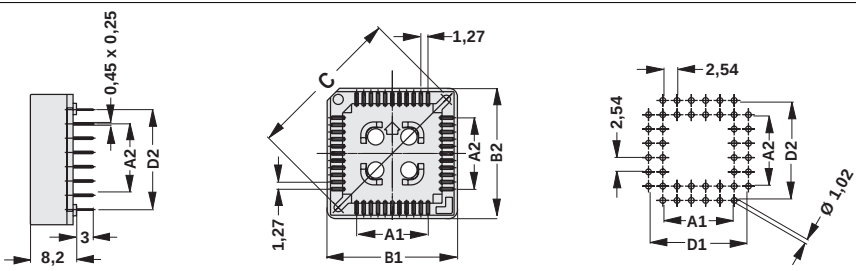
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M

N



art. no.	no. of contacts	VPE	dim. [mm]						
			A1	A2	B1	B2	C	D1	D2
PLCC 20	20	39	5.08	5.08	15.55	15.55	16.70	10.16	10.16
PLCC 28	28	33	7.62	7.62	18.10	18.10	20.30	12.70	12.70
PLCC 32	32	29	7.62	10.16	18.10	20.70	22.20	12.70	15.24
PLCC 44	44	25	12.70	12.70	23.20	23.20	27.50	17.78	17.78
PLCC 52	52	23	15.24	15.24	25.70	25.70	31.00	20.32	20.32
PLCC 68	68	19	20.32	20.32	30.80	30.80	37.30	25.40	25.40
PLCC 84	84	16	25.40	25.40	36.00	36.00	44.50	30.48	30.48

contact surface finish: tin-plated; VPE = packing unit (pieces/tube)

Data sheet for pin configuration of PLCC sockets available on request.
These sockets conform to EIA/JEDEC "A" package requirements for leaded plastic chip carriers.
Drain holes for easier inside cleaning.
Test probe holes are moulded next to each contact, providing easy access.
Insulating material as per UL 94 V-0.

colour: black

F 17

Mounting tool for DIL/PLCC
SMD sockets for PLCC
Connector-sleeves
Technical data

→ F 14
→ F 18
→ F 25 - 27
→ F 31 - 34

Teflon sockets/TO 5 & TO 18
Fem. head. 2.54 solder, put through
PGA sockets

→ F 21 - 22
→ G 29
→ F 21

Sockets for IC-PLCC

SMD sockets for PLCC - low profile housing

These sockets conform to EIA/JEDEC "A" package requirements for leaded plastic chip carriers.

art. no.	no. of contacts	VPE	dim. [mm]				
			A	B	C	D	Q
PLCC 20 SMD	20	39	15.58	15.58	5.08	5.08	16.00
PLCC 28 SMD	28	32	18.12	18.12	7.62	7.62	20.60
PLCC 32 SMD	32	29	18.12	20.66	7.62	10.16	22.50
PLCC 44 SMD	44	26	23.40	23.40	12.70	12.70	27.50
PLCC 52 SMD	52	23	25.74	25.74	15.24	15.24	31.10
PLCC 68 SMD	68	19	30.82	30.82	20.32	20.32	38.80
PLCC 84 SMD	84	15	35.90	35.90	25.40	25.40	44.80

VPE = packing unit (pieces/tube)*dimensions ± 0.2 mm
Tin-plated phosphorbronze socket contacts.

colour: black

packing: bar magazine

- Dual polarisation indicators guarantee the correct alignment of the device.
- Drain holes for easier inside cleaning.
- Test probe holes are moulded next to each contact, providing easy access.
- Efficient heat dissipation.

Insulating material (PBT) UL 94 V-0 rated.

SMD-sockets for PLCC - low profile housing

art. no.	no. of contacts						
PLCC 32 LP SMD ...	32						
please indicate:	... packing (option) SM = tube magazine TR = tape and reel (500 pcs/reel)						

A

Sockets for TO ... cases

B

C

D

E

F

G

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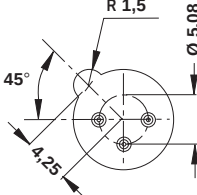
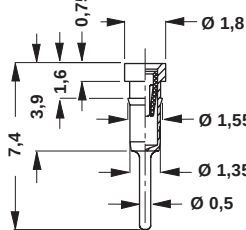
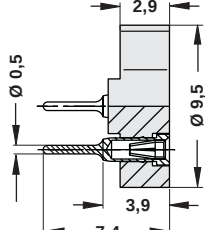
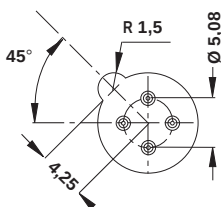
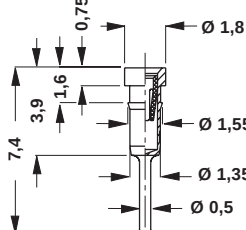
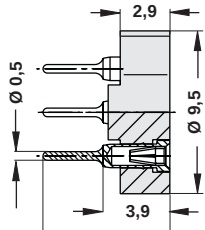
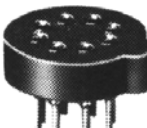
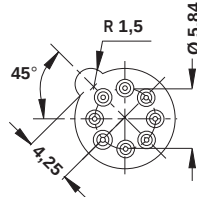
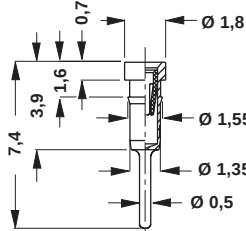
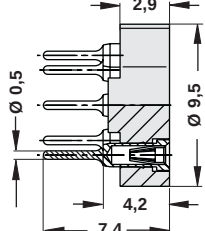
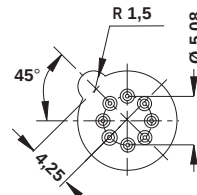
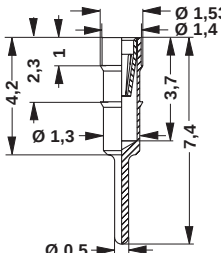
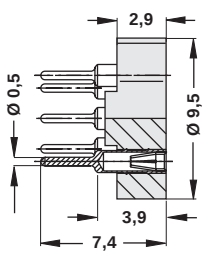
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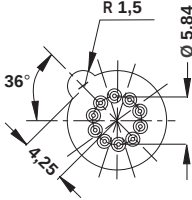
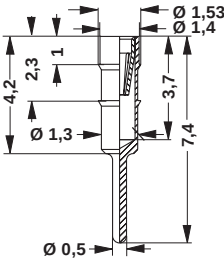
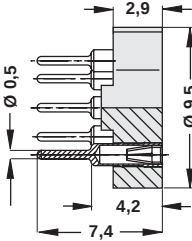
N

Sockets for TO 5

			
art. no.	no. of contacts		
PF 53 ...	3		
			
art. no.	no. of contacts		
PF 54 ...	4		
			
art. no.	no. of contacts		
PF 58 23 ...	8		
			
art. no.	no. of contacts		
PF 58 2 ...	8		
please indicate:	... surface G = gold-plated Z = tin-plated		

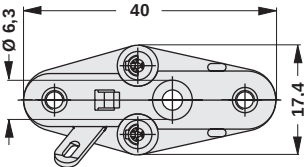
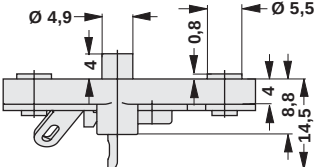
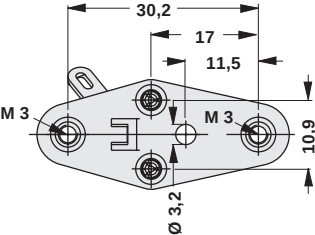
contact spring: gold-plated

Sockets for TO 5

			
art. no.	no. of contacts		
PF 510 ...	10		
please indicate:	... surface G=gold-plated Z=tin-plated		

contact spring: gold-plated

Sockets for power transistors TO 3

			
art. no.	no. of contacts		
TF 3 2	3		

insulator: PCT, glassfibre filled

contact: beryllium copper; 4 ... 6 µm Sn

Technical data:

current rating: 15 A max.

capacitance: 1 pF

contact resistance: <10 mΩ

insulation resistance: >10¹⁰ Ω/cm

temperature range: -65 °C ... +290 °C

test voltage: 1650 V

A

Sockets for TO ... cases

B

C

D

E

F

G

H

I

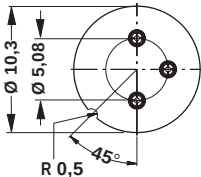
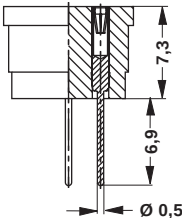
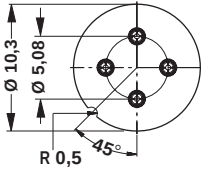
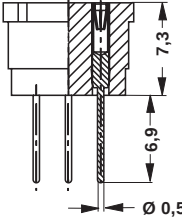
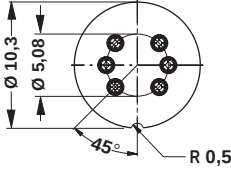
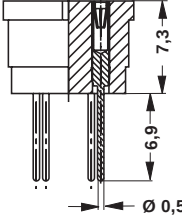
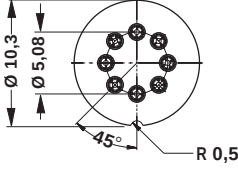
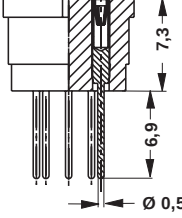
K

L

M

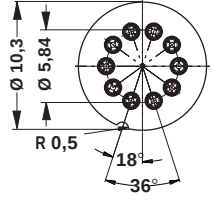
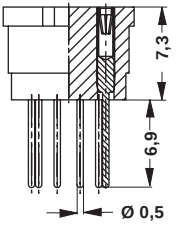
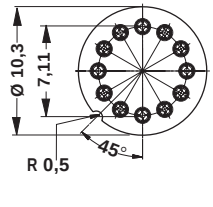
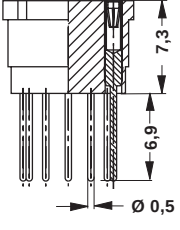
N

Transistor sockets - teflon sockets for TO 5

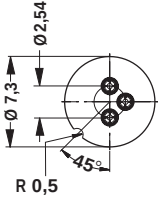
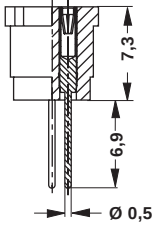
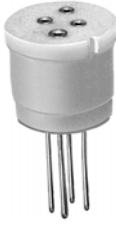
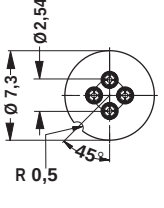
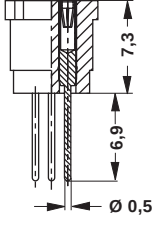
		
art. no.	no. of contacts	
TF 53	3	
		
art. no.	no. of contacts	
TF 54	4	
		
art. no.	no. of contacts	
TF 56	6	
		
art. no.	no. of contacts	
TF 58	8	

contact shell and contact spring: gold-plated

Transistor sockets - teflon sockets for TO 5

	 
art. no.	no. of contacts
TF 510	10
	 
art. no.	no. of contacts
TF 512	12

Transistor sockets - teflon sockets for TO 18

	 
art. no.	no. of contacts
TF 183	3
	 
art. no.	no. of contacts
TF 184	4

contact shell and contact spring: gold-plated

Programmable headers

Version for soldering technique

	art. no.	no. of contacts	dim. [mm] A B
CAB 3 02 03 Z	2	2.22	-
CAB 3 04 03 Z	4	4.76	2.54
CAB 3 06 03 Z	6	7.30	5.08
CAB 3 08 03 Z	8	9.84	7.62
CAB 3 10 03 Z	10	12.38	10.16
CAB 3 12 03 Z	12	14.92	12.70
CAB 3 14 03 Z	14	17.46	15.24
CAB 3 16 03 Z	16	20.00	17.78

contacts: brass

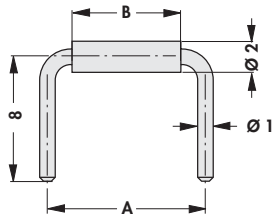
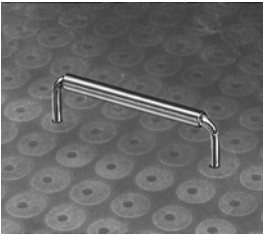
The contacts have a preformed dividing groove and can easily be separated with a screwdriver blade.

Version for SMD technology

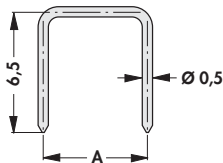
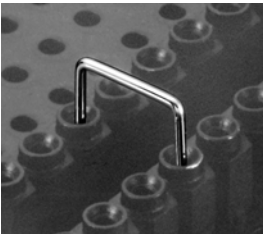
	art. no.	no. of contacts	dim. [mm] A B
CAB 3 SMD 04 Z	4	4.76	2.54
CAB 3 SMD 08 Z	8	9.84	7.62
CAB 3 SMD 10 Z	10	12.38	10.16
CAB 3 SMD 12 Z	12	14.92	12.70
CAB 3 SMD 14 Z	14	17.46	15.24
CAB 3 SMD 16 Z	16	20.00	17.78

contacts: brass

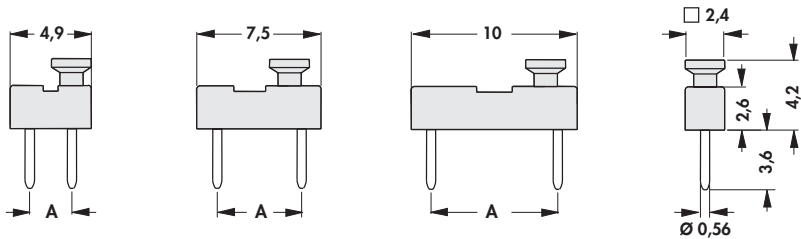
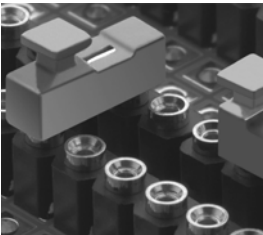
The contacts have a preformed dividing groove and can easily be separated with a screwdriver blade.



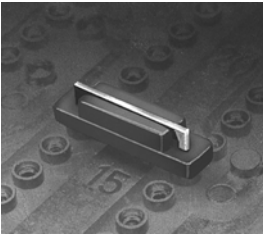
art. no.	dim. [mm]	
	A	B
LB 02 G	5.08	2.00
LB 03 G	7.62	4.50
LB 04 G	10.16	7.00
LB 06 G	15.24	12.00



art. no.	dim. [mm]
	A
CB 1 ...	2.54
CB 3 ...	5.08
CB 6 ...	7.62
please indicate: ... surface G=gold-plated Z =tin-plated	



art. no.	dim. [mm]	
	A	
LEB 01 G	2.54	
LEB 02 G	5.08	
LEB 03 G	7.62	



art. no.
PSB 03 G

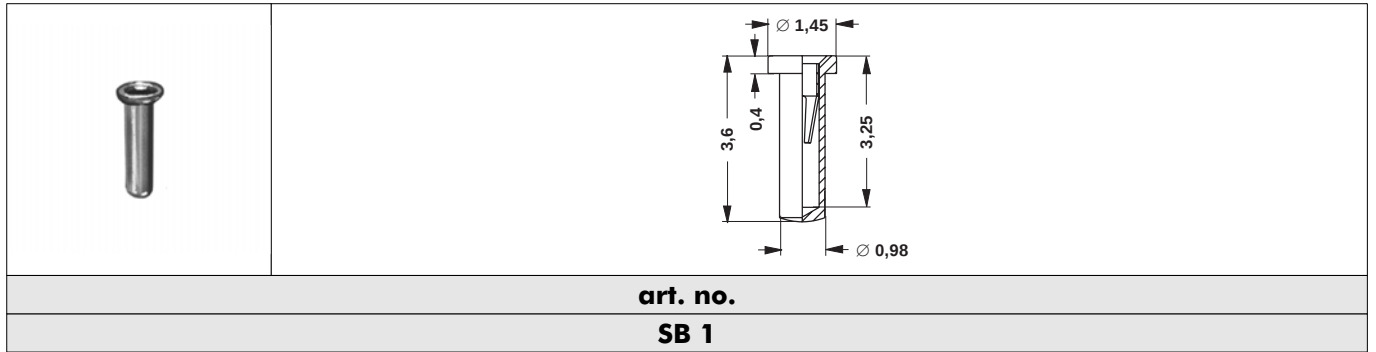
A

Connector-sleeves

B

for 0.4 mm with BeCu spring 3 μ m Ni, 1 μ m Au

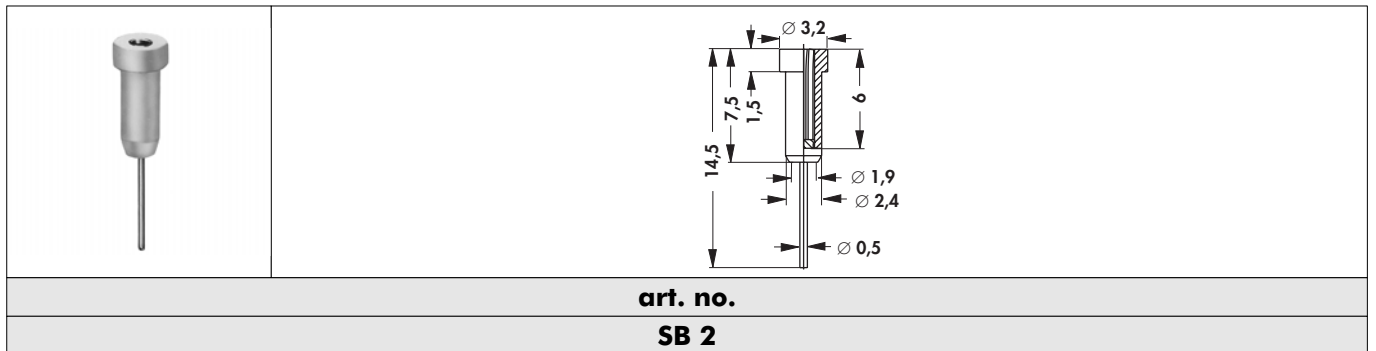
C



D

for 0.4 mm with bronze spring, teflon insulated

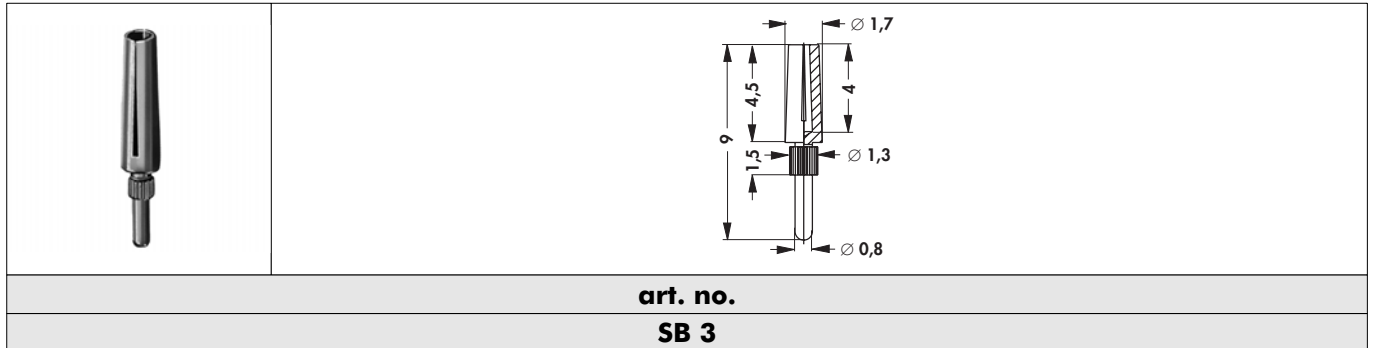
E



F

for 0.8 mm, slotted

G

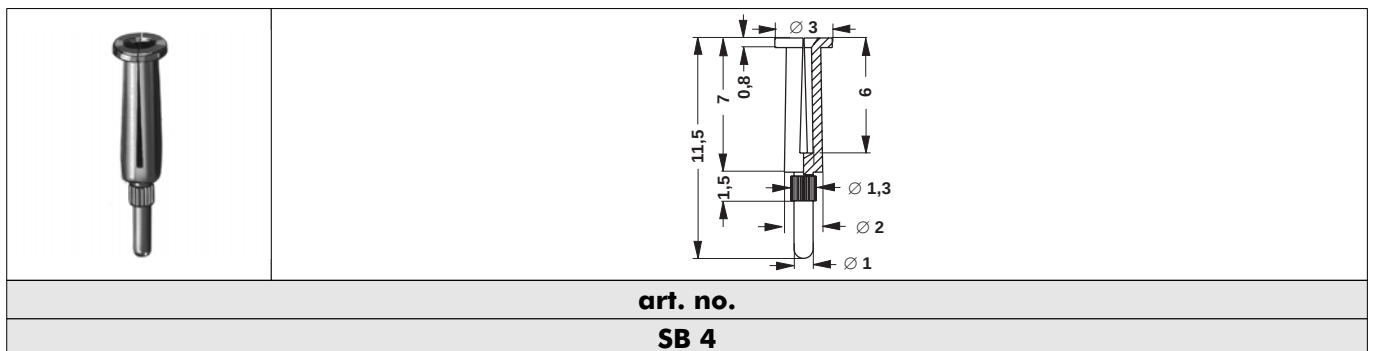


H

I

for 1 mm, slotted

K



L

M

material: brass 2 μ m Ni, 0.25 μ m Au (unless otherwise stated)

N

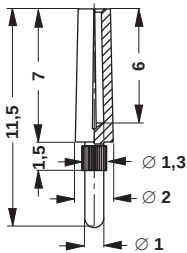
F 25

High-prec. male headers 2.54 solder → G 21 - 24
 Teflon sockets/TO 5 & TO 18 → F 21 - 22
 High-precision female headers → G 3 - 5
 Jumper links → F 24

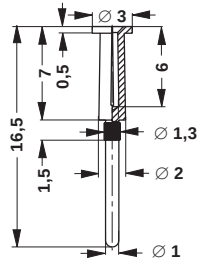
Sockets für PLCC
 Single precision contacts

→ F 17
 → F 2 - 3

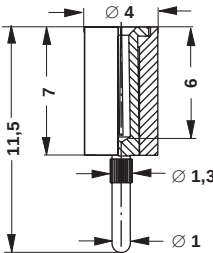
for 1 mm, slotted

	
art. no.	
SB 5	

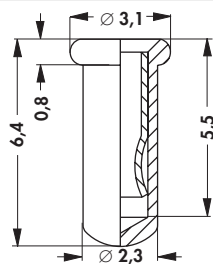
for 1 mm, slotted

	
art. no.	
SB 6	

for 1 mm, slotted, plastic insulated

	
art. no.	
SB 9	

for 1 mm, with BeCu spring 3 µm Ni, 1 µm Au

	
art. no.	
SB 12	

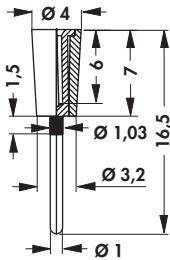
material: brass 2 µm Ni, 0.25 µm Au (unless otherwise stated)

A

Connector-sleeves

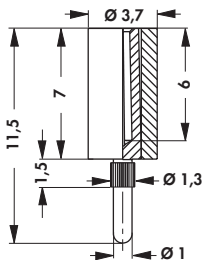
B

for 1 mm, slotted, plastic insulated

	
art. no.	
SB 16	

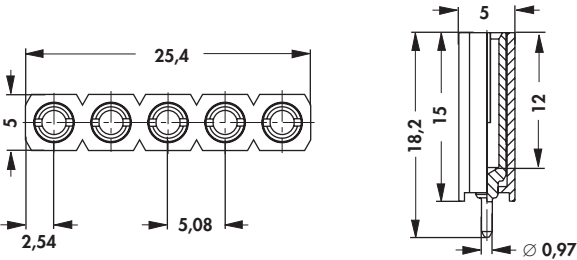
D

for 2 mm, slotted, plastic insulated

	
art. no.	
SB 13 ...	
please indicate: ... case colour B = blue R = red S = black	

G

for 2 mm, slotted, plastic insulated, separable

	
art. no.	
SB 15	

K

material: brass 2 µm Ni, 0.25 µm Au (unless otherwise stated)

L

M

N

F 27

Teflon sockets/TO 5 & TO 18
Sockets für PLCC
High-precision female headers
Jumper links

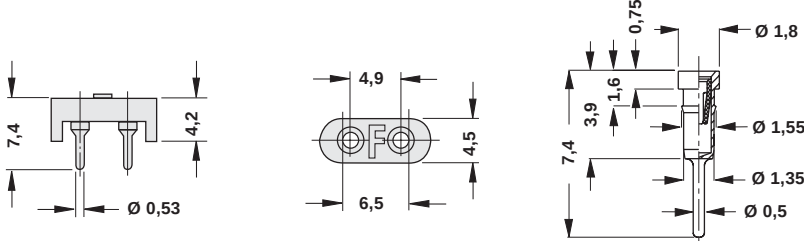
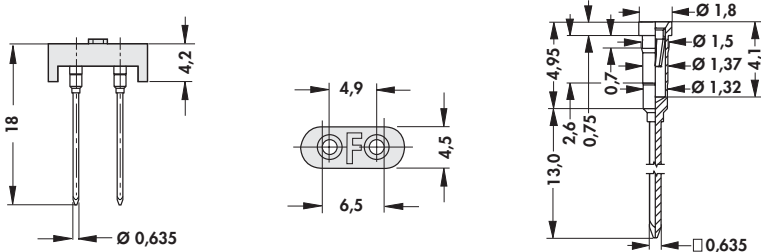
→ F 21 - 22
→ F 17
→ G 3 - 5
→ F 24

Single precision contacts → F 2 - 3
High-prec. male headers 2.54 solder → G 21 - 24
Sockets für PLCC → F 17

	
art. no.	
QS 25 GS	

contact surface finish: silver-plated

Precision sockets for crystal oscillators in case HC 18

	
art. no.	
PQ 18 ...	
please indicate:	... surface G=gold-plated Z=tin-plated
	
art. no.	
PQ 18 W ...	
please indicate:	... surface G=gold-plated Z=tin-plated

contact spring: gold-plated

A

B

C

D

E

F

G

H

I

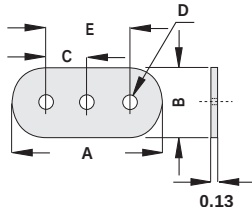
K

L

M

N

Insulators for crystal mounts

	 * 					
art. no.	case design	dim. [mm]				
		A	B	C	D	E (max.)
ISQ 01	HC-80/U	8.30	3.70	-	0.71	3.80
ISQ 02	HC-80/U	8.30	3.70	-	*	3.80
ISQ 03	HC-80/U	8.30	3.70	1.90	0.71	3.80
ISQ 04	HC-18/U, HC-43/U, HC-49/U	11.80	5.60	-	0.71	4.90
ISQ 05	HC-18/U, HC-43/U, HC-49/U	11.80	5.60	-	*	4.90
ISQ 06	HC-18/U, HC-43/U, HC-49/U	11.80	5.60	2.40	0.71	4.90
ISQ 07	HC-18/U, HC-43/U, HC-49/U	11.80	5.60	2.40	*	4.90
ISQ 08	HC-25/U, HC-42/U, HC-50/U	11.80	5.60	-	1.30	4.90

* = self retaining

Technical data:

foil: MYLAR

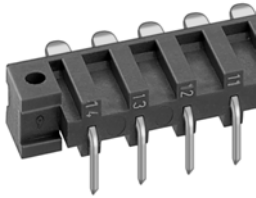
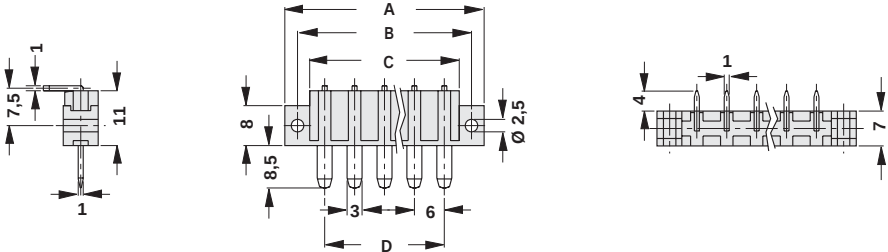
thickness: 0.127 mm

heat resistance: 250 °C

dielectric strength: 9 KV

Male connector

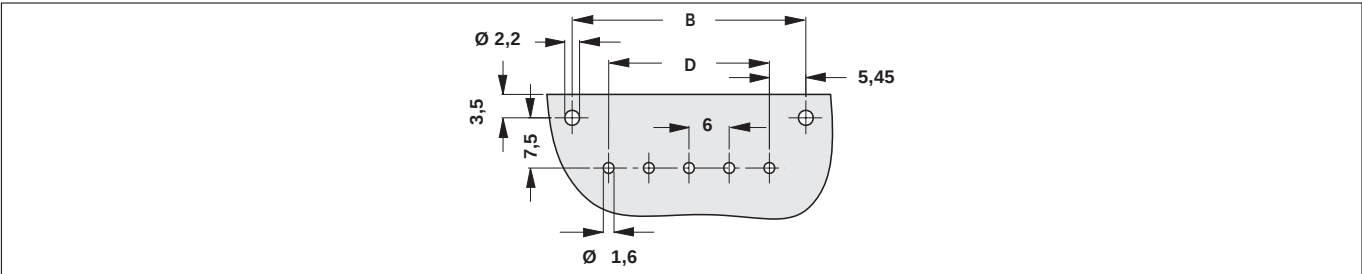
one row, angled

					
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
MELA 05	5	40.00	34.90	30.00	24.00
MELA 07	7	52.00	46.90	42.00	36.00

surface: silver-plated

As per DIN 41622.

PCB perforation



A

High-precision male headers soldering technique

Solder and plug pins, Ø 0.5 mm

art. no.			art. no.		
MK 05 ...			MK 205 ...		
art. no.			art. no.		
MK 03 ...			MK 203 ...		
art. no.			art. no.		
MK 04 ...			MK 204 ...		
art. no.			art. no.		
MK 02 ...			MK 202 ...		
please indicate:					
... no. of contacts		... surface			
one row 1-50		G=gold-plated			
two rows 2-100		Z=tin-plated			

Also available as single contact, SK ...

version:

MK 05 / MK 205: contact pin on both sides
 MK 03 / MK 203: with solder button
 MK 04 / MK 204: with diagonal solder bucket
 MK 02 / MK 202: with solder fork

High-precision male headers soldering technique

Wire wrap pin, □ 0,635 mm

art. no.			art. no.		
MK 11 ...			MK 211 ...		
art. no.			art. no.		
MK 10 ...			MK 210 ...		
art. no.			art. no.		
MK 08 ...			MK 208 ...		
please indicate:			... surface		
... no. of contacts			G=gold-plated		
one row 1-50			Z=tin-plated		
two rows 2-100					

version:

MK 11 / MK 211: solder and plug pin, Ø 0.5 mm

MK 10 / MK 210: with diagonal solder bucket

MK 08 / MK 208: with solder fork

A

High-precision male headers soldering technique

Solder and plug pins, Ø 0,5 mm

art. no.			art. no.			
MK 51 ...			MK 251 ...			
art. no.						
MK 15 ...						
art. no.	A	X	art. no.	A	B	X
MK 14 X 1 ...	13.4	2.7	MK 214 X 1 ...	13.4	1.9	2.7
MK 14 X 2 ...	15.4	4.7	MK 214 X 2 ...	15.4	3.9	4.7
MK 14 X 3 ...	22.2	11.7	MK 214 X 3 ...	22.2	10.9	11.7
please indicate:						
... no. of contacts			... surface			
one row 1-50			G=gold-plated			
two rows 2-100			Z=tin-plated			

version:

MK 51 ... / MK 251 ... / MK 15 ...: 90° PCB connection
MK 14 X ... / MK 214 X ...: parallel PCB connection

I

K

L

M

N

High-precision male headers soldering technique

Low profile

art. no.			art. no.		
MK LP 40 ...			MK LP 240 ...		
art. no.			art. no.		
MK LP 41 ...			MK LP 241 ...		
art. no.			art. no.		
MK LP 42 ...			MK LP 242 ...		
art. no.					
MK LP 43 ...					
please indicate: ... no. of contacts ... surface					
one row 1 - 50 G = gold-plated					
two rows 4 - 100 Z = tin-plated					

Also available as single contact, SK ...

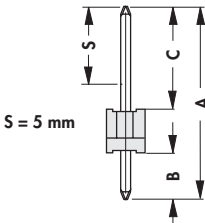
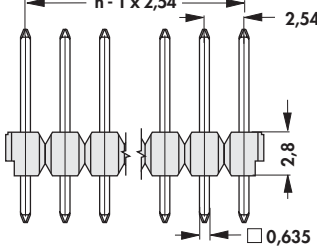
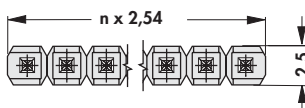
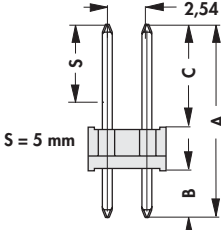
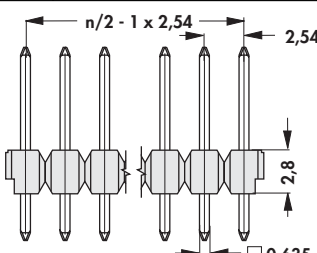
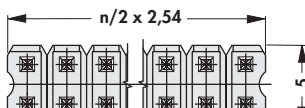
High-precision male headers soldering technique

Low profile

one row

art. no.				
SL 7 ...				
art. no.				
SL 8 ...				
art. no.				
SL 9 ...				
please indicate: ... no. of contacts ... surface one row 1 - 20 G = gold-plated Z = tin-plated				

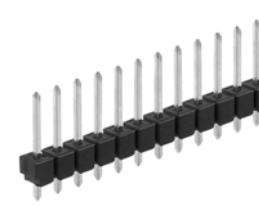
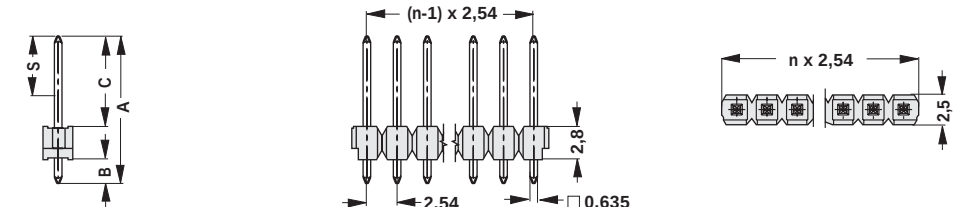
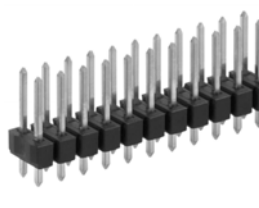
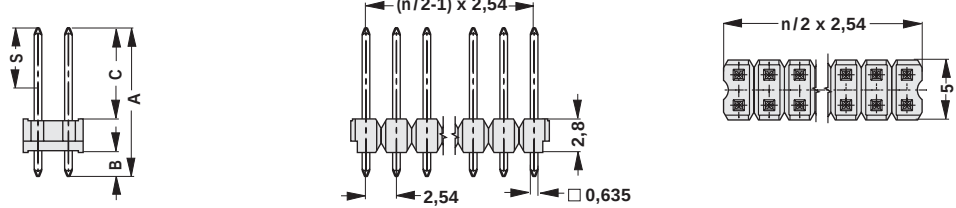
0.635 mm, standard

									
art. no.	dim. [mm]			art. no.	dim. [mm]				
	A	B	C		A	B	C		
SL 11 097...	9.70	3.00	3.90	SL 1 025 ...	11.20	2.60	5.80		
SL 11 112 ...	11.20	3.00	5.40	SL 1 053 ...	13.90	5.80	5.30		
SL 11 124 ...	12.40	3.00	6.60	SL 1 078 ...	16.40	5.80	7.80		
SL 11 139 ...	13.90	3.00	8.10	SL 1 104 ...	19.00	5.80	10.40		
SL 11 164 ...	16.40	3.00	10.60	SL 1 128 ...	21.40	5.80	12.80		
SL 11 190 ...	19.00	3.00	13.20	SL 1 154 ...	24.00	5.80	15.40		
SL 11 214 ...	21.40	3.00	15.60	SL 1 179 ...	26.50	5.80	17.90		
SL 11 240 ...	24.00	3.00	18.20	SL 1 230 ...	31.60	5.80	23.00		
SL 11 265 ...	26.50	3.00	20.70		-	-	-		
SL 11 316 ...	31.60	3.00	25.80						
									
art. no.	dim. [mm]			art. no.	dim. [mm]				
	A	B	C		A	B	C		
SL 22 097 ...	9.70	3.00	3.90	SL 2 025 ...	11.20	2.60	5.80		
SL 22 112 ...	11.20	3.00	5.40	SL 2 053 ...	13.90	5.80	5.30		
SL 22 124 ...	12.40	3.00	6.60	SL 2 078 ...	16.40	5.80	7.80		
SL 22 139 ...	13.90	3.00	8.10	SL 2 104 ...	19.00	5.80	10.40		
SL 22 164 ...	16.40	3.00	10.60	SL 2 128 ...	21.40	5.80	12.80		
SL 22 190 ...	19.00	3.00	13.20	SL 2 154 ...	24.00	5.80	15.40		
SL 22 214 ...	21.40	3.00	15.60	SL 2 179 ...	26.50	5.80	17.90		
SL 22 240 ...	24.00	3.00	18.20	SL 2 230 ...	31.60	5.80	23.00		
SL 22 265 ...	26.50	3.00	20.70		-	-	-		
SL 22 316 ...	31.60	3.00	25.80						
please indicate:									
		... no. of contacts		... surface					
		one row 1-36		S =selective gold-plated					
		two rows 2-72		G=gold-plated					
				Z =tin-plated					

Every pin length is available on request.

Male header in through-hole-reflow-soldering technique

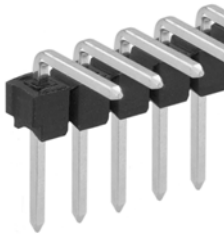
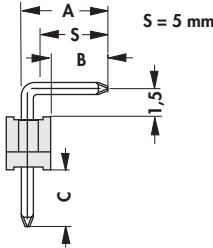
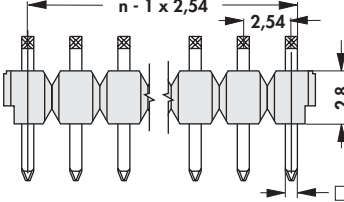
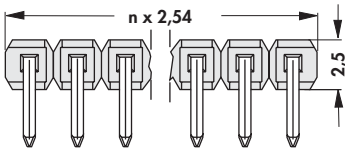
0.635 mm, THR soldering technique

			
art. no.	dim. [mm]		
	A	B	C
SL 20 THR 097 ...	9.70	2.00	4.90
SL 20 THR 112 ...	11.20	2.00	6.40
SL 20 THR 124 ...	12.40	2.00	7.60
SL 20 THR 139 ...	13.90	2.00	9.10
SL 20 THR 164 ...	16.40	2.00	11.60
please indicate:	... no. of contacts one row 1-36		
	... surface S = selective gold-plated G = gold-plated Z = tin-plated		
			
art. no.	dim. [mm]		
	A	B	C
SL 21 THR 097 ...	9.70	2.00	4.90
SL 21 THR 112 ...	11.20	2.00	6.40
SL 21 THR 124 ...	12.40	2.00	7.60
SL 21 THR 139 ...	13.90	2.00	9.10
SL 21 THR 164 ...	16.40	2.00	11.60
please indicate:	... no. of contacts two rows 2-72		
	... surface S = selective gold-plated G = gold-plated Z = tin-plated		

Every pin length is available on request.

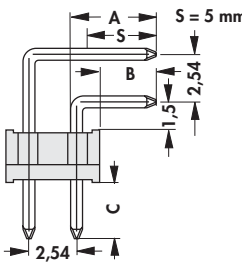
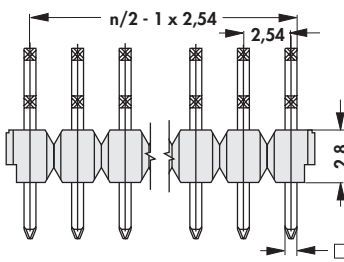
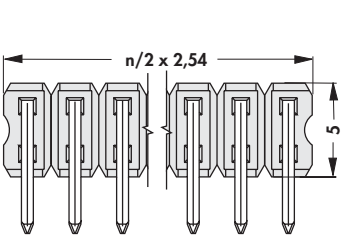
"dimensions A + B" changeable

one row, □ 0.635 mm

									
art. no.	dim. [mm]			art. no.	dim. [mm]				
	A	B	C		A	B	C		
SLK 3 025 ...	4.50	3.00	3.00	SL 3 131 ...	14.60	13.10	5.80		
SL 3 025 ...	4.50	3.00	5.80	SL 3 152 ...	16.70	15.20	5.80		
SL 3 053 ...	6.90	5.40	5.80	SL 3 182 ...	19.70	18.20	5.80		
SL 3 080 ...	9.50	8.00	5.80	SL 3 207 ...	22.20	20.70	5.80		
SL 3 101 ...	11.60	10.10	5.80						
please indicate:									
... no. of contacts one row 1-36				... surface S =selective gold-plated G=gold-plated Z =tin-plated					

The surface of dimension "C" of following articles is selective gold-plated: SLK 3 025 ... S, SL 3 025 ... S.

two rows, □ 0.635 mm

									
art. no.	dim. [mm]			art. no.	dim. [mm]				
	A	B	C		A	B	C		
SLK 4 025 ...	4.50	3.00	3.00	SL 4 101 ...	11.60	10.10	5.80		
SL 4 025 ...	4.50	3.00	5.80	SL 4 152 ...	16.70	15.20	5.80		
please indicate:									
... no. of contacts two rows 2-72				... surface S =selective gold-plated G=gold-plated Z =tin-plated					

The surface of dimension "C" of following articles is selective gold-plated: SLK 4 025 ... S, SL 4 025 ... S.

V-notches permit breaking! Therefore any required number of contacts is available.
Every pin length is available on request.

Male headers soldering technique

Insertion side "dimension C" changeable

one row, □ 0.635 mm

art. no.	dim. [mm] C		
SL 18 042 ...	4.20		
SL 18 082 ...	8.20		
SL 18 108 ...	10.80		
SL 18 132 ...	13.20		
SL 18 159 ... S	15.90		
please indicate:	... no. of contacts one row 1-36		
	... surface S = selective gold-plated G = gold-plated Z = tin-plated		

two rows, □ 0.635 mm

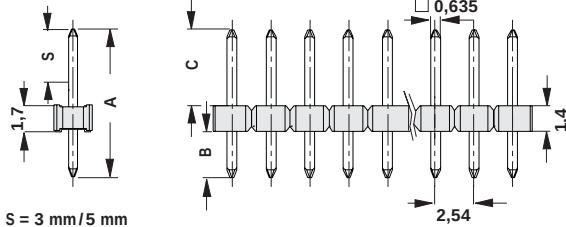
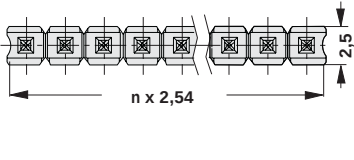
art. no.	dim. [mm] C		
SL 19 082 ...	8.20		
SL 19 108 ...	10.80		
SL 19 132 ...	13.20		
SL 19 159 ... S	15.90		
please indicate:	... no. of contacts two rows 2-72		
	... surface S = selective gold-plated G = gold-plated Z = tin-plated		

V-notches permit breaking! Therefore any required number of contacts is available.
Every pin length is available on request.

Male headers soldering technique

Low profile, straight

one row, □ 0.635 mm

	 S = 3 mm/5 mm						
art. no.	dim. [mm]			art. no.	dim. [mm]		
	A	B	C		A	B	C
SL LP 1 082 ...	8.20	3.00	3.50	SL LP 1 139 ...	13.90	3.00	9.20
SL LP 1 097 ...	9.70	3.00	5.00	SL LP 1 164 ...	16.40	3.00	11.70
SL LP 1 112 ...	11.20	3.00	6.50	SL LP 1 190 ...	19.00	3.00	14.30
please indicate:							
... no. of contacts one row 1-36				... surface S =selective gold-plated G=gold-plated Z=tin-plated			

two rows, □ 0.635 mm

art. no.	dim. [mm]			art. no.	dim. [mm]		
	A	B	C		A	B	C
SL LP 2 082 ...	8.20	3.00	3.50	SL LP 2 139 ...	13.90	3.00	9.20
SL LP 2 097 ...	9.70	3.00	5.00	SL LP 2 164 ...	16.40	3.00	11.70
SL LP 2 112 ...	11.20	3.00	6.50	SL LP 2 190 ...	19.00	3.00	14.30
please indicate:							
... no. of contacts two rows 2-72				... surface S =selective gold-plated G=gold-plated Z =tin-plated			

Every pin length is available on request.

A

Male headers soldering technique

B

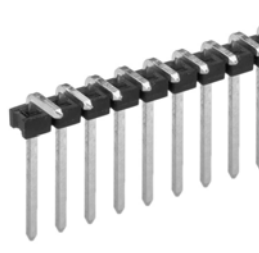
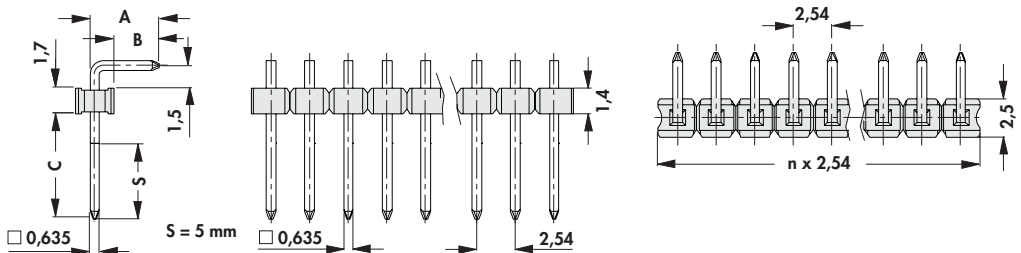
Low profile, angled

one row, □ 0.635 mm

C

D

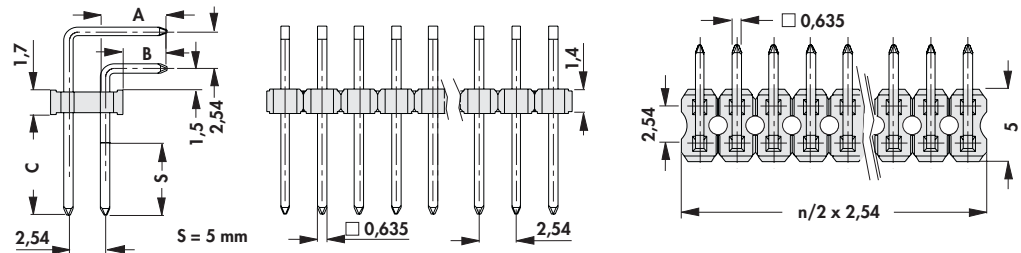
E

							
							
art. no.			dim. [mm]			art. no.	
			A	B	C		
SL LP 3 041 ...			4.50	3.00	4.10	SL LP 3 069 ...	
please indicate:			... no. of contacts one row 1-36			... surface S = selective gold-plated G = gold-plated Z = tin-plated	

F

two rows, □ 0.635 mm

G

							
							
art. no.			dim. [mm]			art. no.	
			A	B	C		
SL LP 4 041 ...			4.50	3.00	4.10	SL LP 4 069 ...	
please indicate:			... no. of contacts two rows 2-72			... surface S = selective gold-plated G = gold-plated Z = tin-plated	

H

I

Every pin length is available on request.

K

L

M

N

Male headers soldering technique

0.635 mm, Sandwich

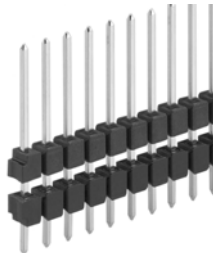
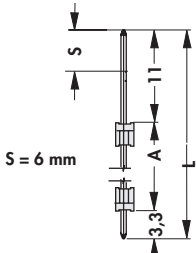
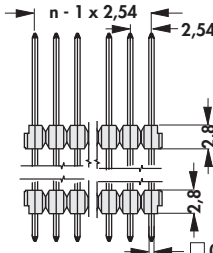
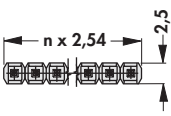
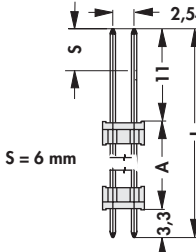
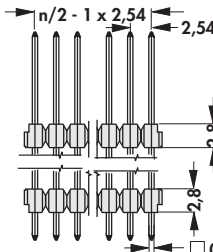
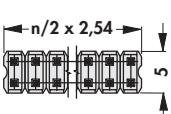
art. no.	dim. [mm]		art. no.	dim. [mm]	
	A	L		A	L
SL 5 071 ...	7.10	16.40	SL 5 223 ...	22.30	31.60
SL 5 097 ...	9.70	19.00	SL 5 237 ...	23.70	33.00
SL 5 121 ...	12.10	21.40	SL 5 285 ...	28.50	37.80
SL 5 147 ...	14.70	24.00	SL 5 315 ...	31.50	40.80
SL 5 156 ...	15.60	24.90	SL 5 360 ...	36.00	45.30
SL 5 172 ...	17.20	26.50	SL 5 415 ...	41.50	50.80
SL 5 197 ...	19.70	29.00	SL 5 525 ...	52.20	61.50
art. no.	dim. [mm]		art. no.	dim. [mm]	
	A	L		A	L
SL 6 071 ...	7.10	16.40	SL 6 223 ...	22.30	31.60
SL 6 097 ...	9.70	19.00	SL 6 237 ...	23.70	33.00
SL 6 121 ...	12.10	21.40	SL 6 285 ...	28.50	37.80
SL 6 147 ...	14.70	24.00	SL 6 315 ...	31.50	40.80
SL 6 156 ...	15.60	24.90	SL 6 360 ...	36.00	45.30
SL 6 172 ...	17.20	26.50	SL 6 415 ...	41.50	50.80
SL 6 197 ...	19.70	29.00	SL 6 525 ...	52.20	61.50
please indicate:	... no. of contacts		... surface		
	one row 1-36		S =selective gold-plated		
	two rows 2-72		G=gold-plated		
			Z =tin-plated		

"S" selective gold-plated to 33.0 mm pin length

For interconnections of stacked PCBs. Within the total length the insulator position can be changed as required. ... Design specification. V-notches permit breaking! Therefore any required number of contacts is available.

Male headers soldering technique

□ 0,635 mm, Sandwich

					
art. no.	dim. [mm]		art. no.	dim. [mm]	
	A	L		A	L
SL 13 071 ...	7.10	21.40	SL 13 235 ...	23.50	37.80
SL 13 097 ...	9.70	24.00	SL 13 265 ...	26.50	40.80
SL 13 122 ...	12.20	26.50	SL 13 310 ...	31.00	45.30
SL 13 147 ...	14.70	29.00	SL 13 365 ...	36.50	50.80
SL 13 187 ...	18.70	33.00			
					
art. no.	dim. [mm]		art. no.	dim. [mm]	
	A	L		A	L
SL 14 071 ...	7.10	21.40	SL 14 235 ...	23.50	37.80
SL 14 097 ...	9.70	24.00	SL 14 265 ...	26.50	40.80
SL 14 122 ...	12.20	26.50	SL 14 310 ...	31.00	45.30
SL 14 147 ...	14.70	29.00	SL 14 365 ...	36.50	50.80
SL 14 187 ...	18.70	33.00			
please indicate:					
... no. of contacts		... surface			
one row 1-36		S =selective gold-plated			
two rows 2-72		G=gold-plated			
		Z =tin-plated			

"S" selective gold-plated to 33.0 mm pin length

For interconnections of stacked PCBs. The male headers SL 13 and SL 14 are used to connect BL 11 (SL 13 ...) and BL 12 (SL 14 ...). Suitable for PCBs 1.5 mm - 3.0 mm thick.

V-notches permit breaking! Therefore any required number of contacts is available. Every pin length is available on request.

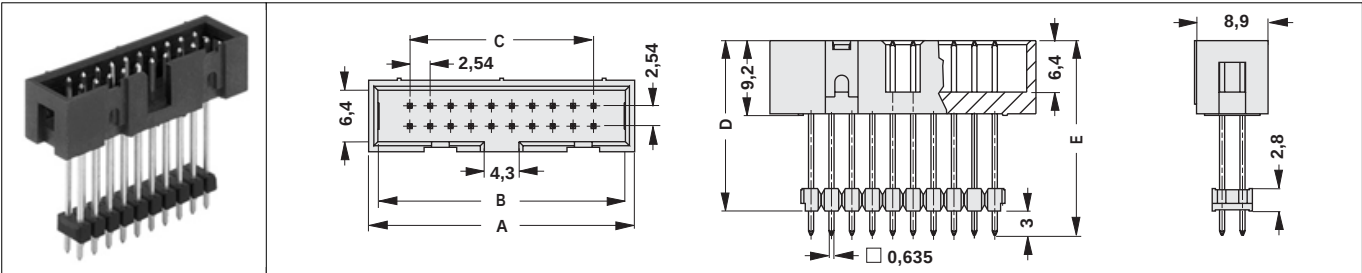


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Male headers soldering technique

Shroud male header, with coding, boltable

suitable for many flat cable connectors in 2.54 mm pitch



art. no.	no. of contacts	dim. [mm]		
		A	B	C
SLU 10 ...	10	20.40	17.80	10.16
SLU 16 ...	16	28.00	25.40	17.78
SLU 20 ...	20	33.10	30.50	22.86
SLU 26 ...	26	40.70	38.10	30.48
SLU 40 ...	40	58.50	55.90	48.26
SLU 50 ...	50	71.20	68.60	60.96

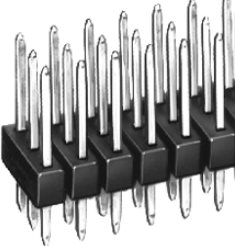
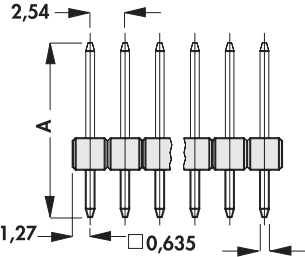
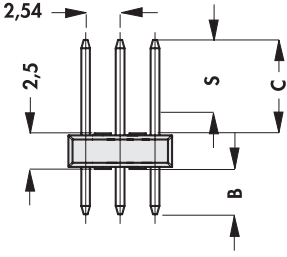
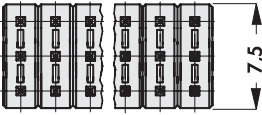
please indicate:	... surface	... height "E"
	S = selective gold-plated	165
	Z = tin-plated	191
		241
		266

height "E"	dim. [mm]	
	D	E (max.)
165	13.50	16.50
191	16.10	19.10
241	21.10	24.10
266	23.60	26.60

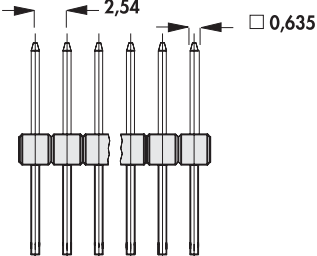
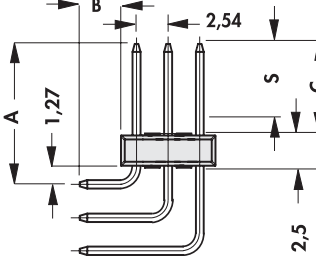
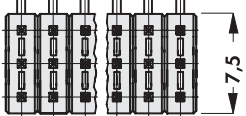
Male headers soldering technique

Three rows, 0.635 mm - standard

straight

   							
art. no.	dim. [mm]			art. no.	dim. [mm]		
	A	B	C		A	B	C
SL KG 3 113 ...	11.30	3.30	5.50	SL KG 3 147 ...	14.70	3.30	8.90
SL KG 3 126 ...	12.60	3.30	6.80				
please indicate: ... no. of contacts three rows 3-150 ... surface G=gold-plated Z=tin-plated							

angled

   							
art. no.	dim. [mm]			art. no.	dim. [mm]		
	A	B	C		A	B	C
SL KA 3 072 ...	7.20	3.30	3.40	SL KA 3 108 ...	10.80	3.30	7.00
SL KA 3 085 ...	8.50	3.30	4.70				
please indicate: ... no. of contacts three rows 3-150 ... surface G=gold-plated Z=tin-plated							

IDC-connectors

Female headers 2.54 solder

Jumpers

Fem. head. 2.54 solder, put through

→ H 1 - 14

→ G 27

→ G 77 - 78

→ G 29

Female headers 2.54 SMD

Special male & female headers

High-prec. fem. headers 2.54 sold.

Technical data

→ G 46 - 49

→ G 19

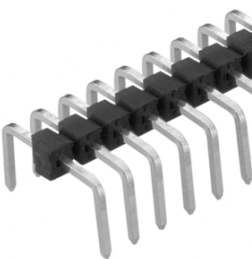
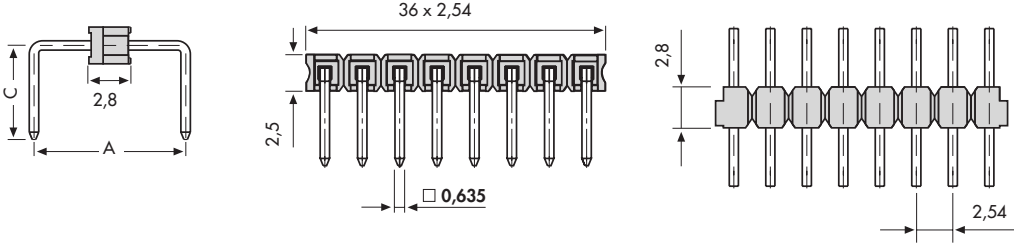
→ G 31 - 34

→ G 75 - 80

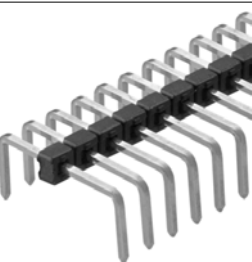
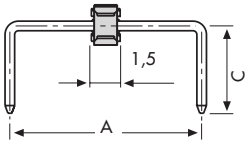
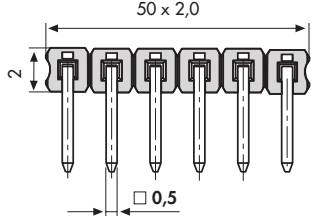
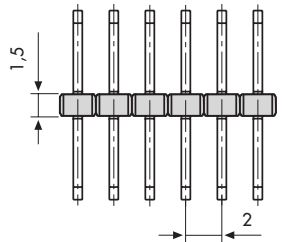
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Jumper links

Grid spacing 2.54 mm, □ 0.635 mm

			
art. no.	dim. [mm]		
	A	C	
LB SL 0508 ...	5.08	6.10	
LB SL 0762 ...	7.62	6.10	
LB SL 1016 ...	10.16	6.10	
LB SL 1524 ...	15.24	6.10	
please indicate: ... surface G=gold-plated Z=tin-plated			

Grid spacing 2.00 mm, □ 0.5 mm

			
art. no.	dim. [mm]		
	A	C	
LB SLY 06 ...	6.00	4.50	
please indicate:	... surface G=gold-plated Z = tin-plated		

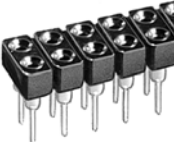
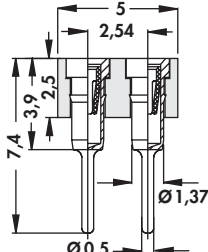
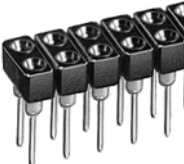
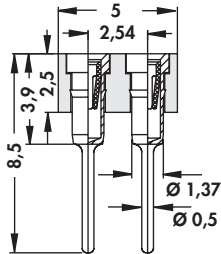
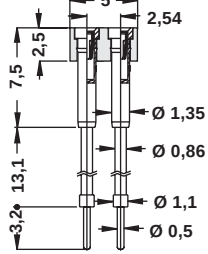
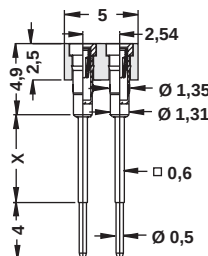
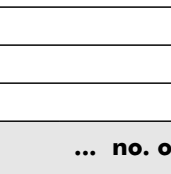
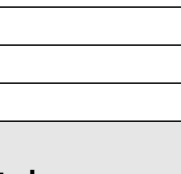
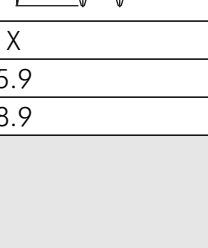
Dimension "A" available in 4 versions. Dimension "C" variable (on request).
Jumper links are also available in grid spacing 1.27 mm.

V-notches permit breaking! Therefore any required number of contacts is available.

A

High-precision female headers soldering technique

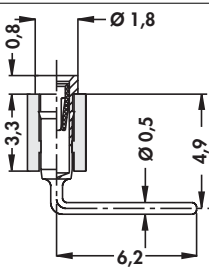
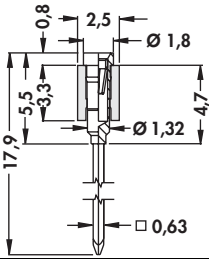
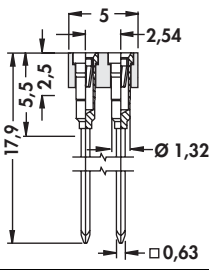
for Ø 0.5 mm

art. no.		art. no.	
MK 01 ...			
art. no.		art. no.	
MK 17 ...			
art. no.		art. no.	
MK 12 X 2 ...			
art. no.		art. no.	
MK 13 X 1 ...			
MK 13 X 2 ...			
please indicate:		...	
no. of contacts		surface	
one row 1-50		G=gold-plated	
two rows 2-100		Z=tin-plated	

contact spring: gold-plated

High-precision female headers soldering technique

for Ø 0.5 mm

art. no.				
MK 06 ...				
art. no.			art. no.	
MK 07 ...			MK 207 ...	
				
please indicate: ... no. of contacts one row 1-50 two rows 2-100				
... surface G=gold-plated Z=tin-plated				

contact spring: gold-plated

A

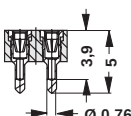
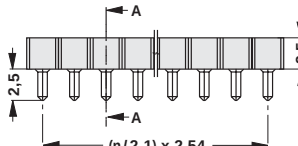
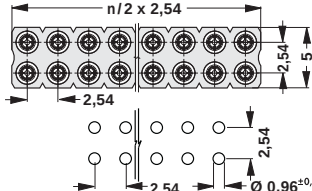
High precision female header in through-hole-reflow-soldering technique

B

High-precision female headers THR soldering technique for Ø 0.5 mm

THR: Through-Hole-Reflow-soldering technique, connector to be soldered with modified insert technique in Reflow-soldering method)

C

art. no.				
MK 228 THR ...				
please indicate:	... no. of contacts two rows 2-40		... surface G=gold-plated Z=tin-plated	

D

contact spring: gold-plated

E

F

G

H

I

K

L

M

N

High-precision female headers soldering technique

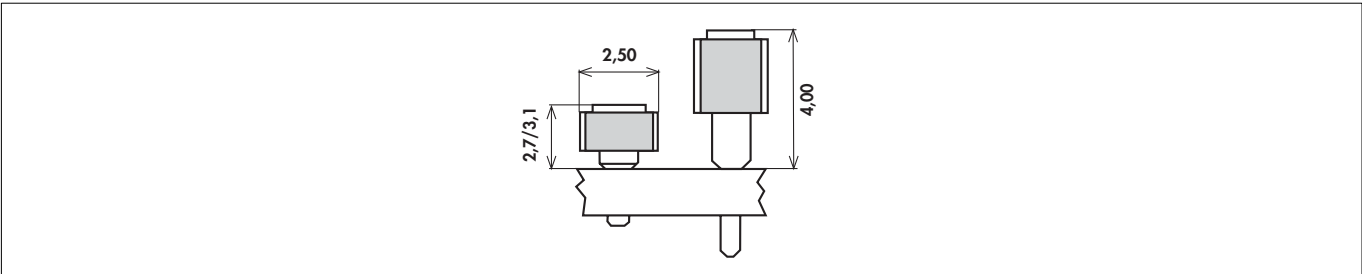
Low profile, less than 2.7/3.1 mm above P.C.B. - with contact spring for Ø 0.5 mm pins

solder and plug pin Ø 0.76 mm

art. no.			art. no.		
MK LP 18 ...			MK LP 218 ...		
MK LP 19 ...			MK LP 219 ...		
please indicate: ... no. of contacts ... surface					
one row 1 - 50 G = gold-plated					
two rows 4 - 100 Z = tin-plated					

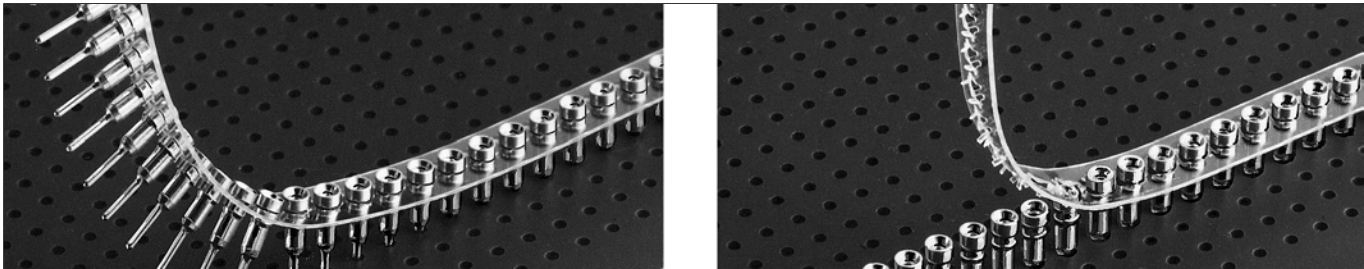
contact spring: gold-plated

Low profile: 2.7/3.1 mm above P.C.B.; standard profile: 4 mm



Terminal strips soldering technique

Peel-off



High-precision contacts are mounted into a temperature resistant carrier strip, which will be peeled off after soldering.
Specially equipped on request.

Technical data of carrier foil:

max. tensile strength (MD): 193 N/mm²
max. thermal expansion - longitudinal direction: 1.7 x 10⁻⁵ mm/°C
melting point: 250 °C

art. no.		
PO A ...		
art. no.		
PO B ...		
please indicate:	... no. of contacts customer's request	... surface G=gold-plated Z=tin-plated

contact spring: gold-plated

number of contacts: from 2 pins to endless

Single in-line carrier

art. no.			
SIL 1 ...			
art. no.			
SIL 2 ...			
art. no.			
SIL 3 ...			
please indicate:	... no. of contacts one row 2 - 100		... surface G=gold-plated Z=tin-plated

contact spring: gold-plated

A

Female headers soldering technique

B

Stamped contact spring (fork contact)

for □ 0.635 mm, straight

art. no. BL 1 ...				
art. no. BL 2 ...				
please indicate:		... no. of contacts one row 1-36 two rows 2-72		... surface G = gold-plated Z = tin-plated

F

V-notches permit breaking! Therefore any required number of contacts is available.

G

for □ 0.635 mm, angled

art. no. BL 3 ...				
art. no. BL 4 ...				
please indicate:		... no. of contacts one row 1-36 two rows 2-72		... surface G = gold-plated Z = tin-plated

K

V-notches permit breaking! Therefore any required number of contacts is available.

L

BL 4 ...: packing (option) bar magazine (min. 6 contacts)

M

N

G 27

 High-prec. fem. headers 2.54 sold.
 Female headers 2.54 press-fit
 Technical data
 Fem. head. 2.54 solder, put through

 → G 31 - 34
 → G 53
 → G 75 - 80
 → G 29

 Female headers 2.54 SMD
 Jump. links 2.00 & 2.54 solder
 Direct female connectors

 → G 46 - 49
 → G 20
 → G 54 - 55

Female headers soldering technique

Low profile, fork contact

for 0.635 mm, straight

art. no.				
BL LP 1 ...				
art. no.				
BL LP 2 ...				
art. no.				
BL LP 3 ...				
art. no.				
BL LP 4 ...				
please indicate:	... no. of contacts one row 1-36 two rows 2-72		... surface S = selective gold-plated Z = tin-plated	

V-notches permit breaking! Therefore any required number of contacts is available.

BL LP 4 ...: packing (option) bar magazine (min. 6 contacts)

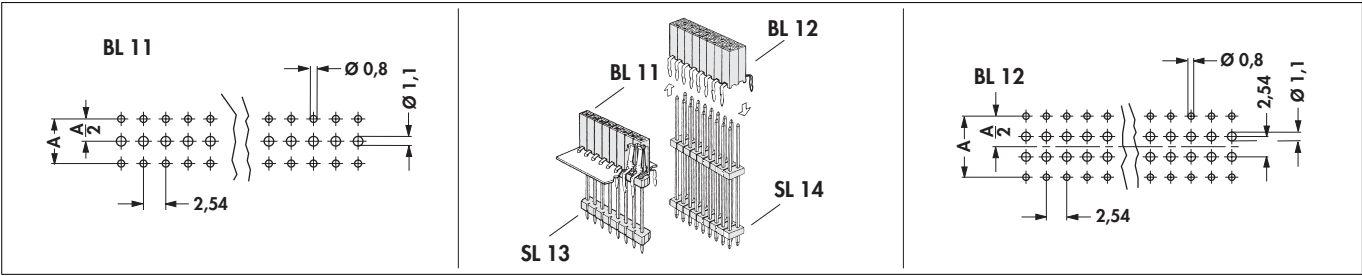
A



Female headers soldering technique

B

C



for ☐ 0.635 mm, can be put through from above or below / 260 °C Reflow

D

E

F

G

art. no.	dim. [mm]		
BL 11 254 ...	A		
BL 11 508 ...	2.54		
BL 11 508 ...	5.08		
please indicate:	... no. of contacts one row 1-45	... surface S = selective gold-plated Z = tin-plated	

packed: bar magazine
Stamped contact spring.
Can be cut! Every desired number of contacts can be delivered.

H

for ☐ 0,635 mm, can be put through from above or below

I

K

L

art. no.	dim. [mm]		
BL 12 650 ...	A		
BL 12 762 ...	6.50		
BL 12 762 ...	7.62		
please indicate:	... no. of contacts two rows 2-90	... surface S = selective gold-plated Z = tin-plated	

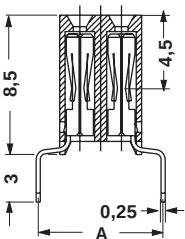
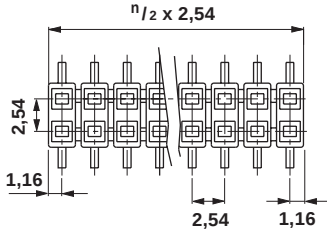
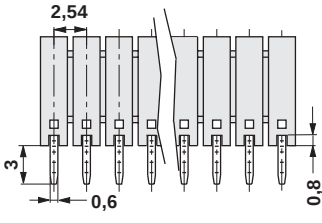
packed: bar magazine
Stamped contact spring.
Can be cut! Every desired number of contacts can be delivered.

M

N

Female headers soldering technique

for 0,635 mm, can be put through from above

			
art. no.	dim. [mm]		
BL 21 650 ...	A		
BL 21 762 ...	6.50		
BL 21 762 ...	7.62		
please indicate:	... no. of contacts two rows 2-64	... surface S = selective gold-plated Z = tin-plated	

packed: bar magazine
Stamped contact spring.
Can be cut! Every desired number of contacts can be delivered.

High-precision female headers soldering technique

for □ 0.635 mm and up to 0.85 mm Ø

art. no.			
MK 21 ...			
art. no.			
MK 221 ...			
please indicate: ... no. of contacts one row 1-50 two rows 2-100			

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

High-precision female headers soldering technique

for $\square$ 0.635 mm and up to 0.85 mm $\varnothing$

with aligned contact pin

art. no.			
BL 9 ...			
art. no.			
BL 10 ...			
please indicate: ... no. of contacts one row 1-36 two rows 2-72			

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

for PC 104 modules

art. no.			
BL 13 ...			
art. no.			
BL 14 ...			
please indicate: ... no. of contacts one row 1-36 two rows 2-72			

contact shell surface: gold-plated

contact spring: gold-plated

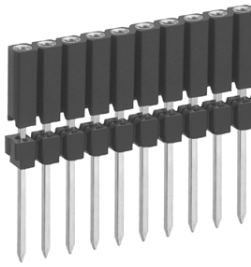
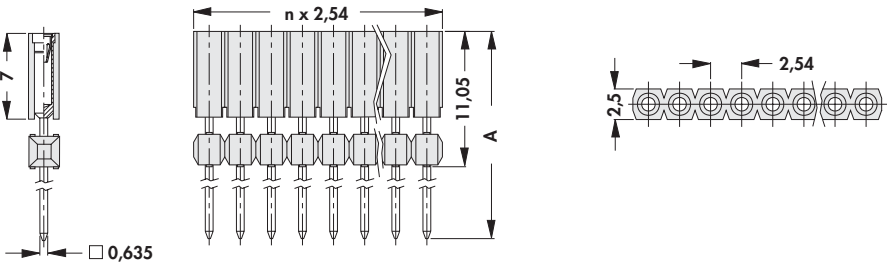
No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

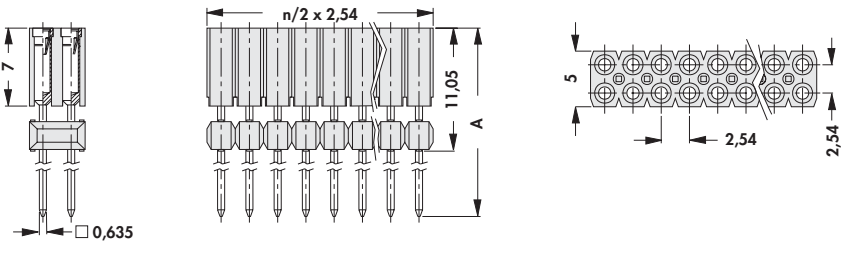
High-precision female headers soldering technique

for □ 0.635 mm and up to 0.85 mm Ø - for PC 104 modules

one row, 1-36 contacts

	
art. no.	dim. [mm] A
BL 18 141 ...	14.10
BL 18 219 ...	21.90
please indicate: ... no. of contacts one row 1-36	

two rows, 2-72 contacts

	
art. no.	dim. [mm] A
BL 19 141 ...	14.10
BL 19 219 ...	21.90
please indicate: ... no. of contacts two rows 2-72	

contact shell surface and contact spring: gold-plated

No capillary action when soldering due to protected contact insert.
V-notches permit breaking! Therefore any required number of contacts is available.

High-precision male headers in SMD mounting

Empty page

Male headers in SMD mounting

□ 0.635 mm

art. no.	dim. [mm] C		
SL 10 SMD 040 ...	4.00		
SL 10 SMD 052 ...	5.50		
SL 10 SMD 062 ...	6.70		
SL 10 SMD 078 ...	8.20		
SL 10 SMD 104 ...	10.80		
SL 10 SMD 130 ...	13.40		
please indicate: ... no. of contacts ... surface ... packing (option) one row 4-20 S = sel. gold-plated SM = bar magazine G = gold-plated B SM = pick and place pad and bar Z = tin-plated magazine B TR = pick and place pad and tape and reel (250 pcs/reel)			
art. no.	dim. [mm] C		
SL 11 SMD 040 ...	4.00		
SL 11 SMD 052 ...	5.50		
SL 11 SMD 062 ...	6.70		
SL 11 SMD 078 ...	8.20		
SL 11 SMD 104 ...	10.80		
SL 11 SMD 130 ...	13.40		
please indicate: ... no. of contacts ... surface ... packing (option) two rows 4-40 S = sel. gold-plated SM = bar magazine G = gold-plated B SM = pick and place pad and bar Z = tin-plated magazine B TR = pick and place pad and tape and reel (250 pcs/reel)			

... packing (option) - additions:

SL 10 SMD 052-104 ...: ... SM; ... B SM, 4-20 contacts

SL 10 SMD 052-078 ...: ... B TR, 4-12 contacts

SL 11 SMD 052-104 ...: ... SM; ... B SM, 6-40 contacts

Male headers in SMD mounting

SL 11 SMD 052-078 ...: ... B TR, 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Male headers 2.54 solder
Male headers 2.00 SMD
Single contacts metal strip
Technical data

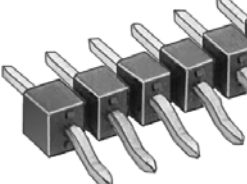
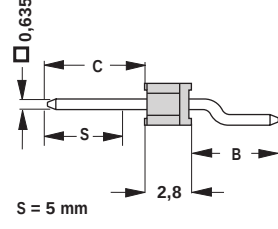
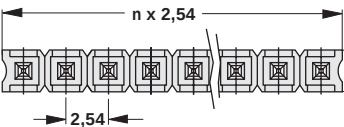
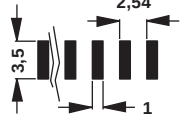
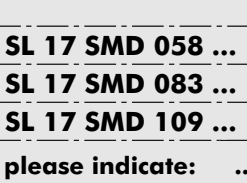
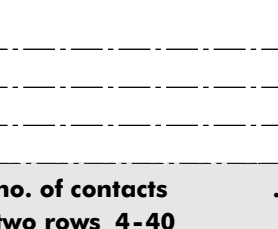
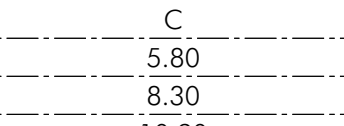
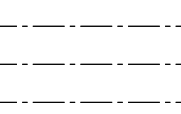
→ G 8
→ G 61 - 62
→ G 26
→ G 75 - 80

High-prec. fem. headers 2.54 sold.
Female headers 2.00 SMD
Female headers 2.54 press-fit
Jumpers

→ G 31 - 34
→ G 64
→ G 53
→ G 77 - 78

Male headers in SMD mounting

□ 0.635 mm

			
art. no.	surface	dim. [mm]	
SL 12 SMD 031 ...	S/ G/ Z	B	C
SL 12 SMD 032 ...	G/ Z	5.20	3.10
SL 12 SMD 058 ...	G/ Z	3.20	5.80
SL 12 SMD 083 ...	S/ G/ Z	5.20	5.80
SL 12 SMD 109 ...	S/ G/ Z	5.20	8.30
please indicate: ... no. of contacts one row 2-20		... surface S = sel. gold-plated G = gold-plated Z = tin-plated	
		... packing (option) B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (500 pcs/reel)	
			
art. no.		dim. [mm]	
SL 17 SMD 058 ...		C	
SL 17 SMD 083 ...		5.80	
SL 17 SMD 109 ...		8.30	
		10.90	
please indicate: ... no. of contacts two rows 4-40		... surface G = gold-plated Z = tin-plated	
		... packing (option) B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (300 pcs/reel)	

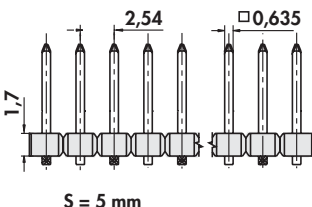
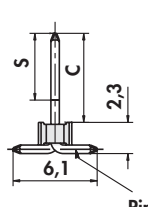
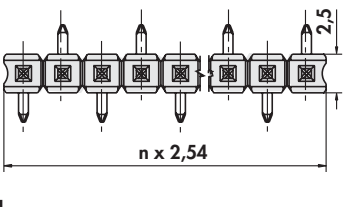
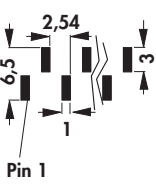
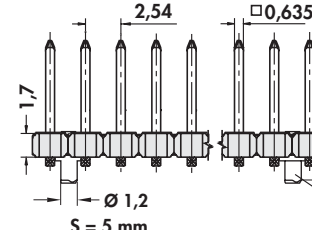
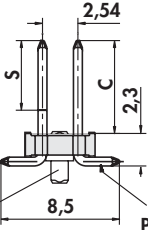
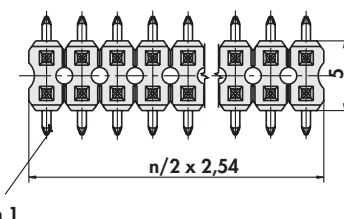
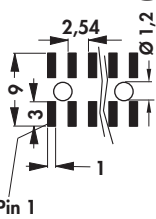
... packing (option) - additions:

SL 12 SMD ... B TR: 2-13 contacts
SL 17 SMD ... B TR: 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Male headers in SMD mounting

Low profile in SMD □ 0.635 mm

									
art. no.	dim. [mm]	art. no.	dim. [mm]	art. no.	dim. [mm]	art. no.	dim. [mm]	art. no.	dim. [mm]
	C		C		C		C		C
SL LP 5 SMD 038 ...	3.80	SL LP 5 SMD 066 ...	6.60						
SL LP 5 SMD 051 ...	5.10								
please indicate: ... no. of contacts one row 4-20 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel)									
									
art. no.	dim. [mm]	art. no.	dim. [mm]	art. no.	dim. [mm]	art. no.	dim. [mm]	art. no.	dim. [mm]
	C		C		C		C		C
SL LP 6 SMD 038 ...	3.80	SL LP 6 SMD 066 ...	6.60						
SL LP 6 SMD 051 ...	5.10								
please indicate: ... no. of contacts two rows 4-40 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel) ... position (option) PS = locating pin (2 pcs/bar bigger than 6 contacts)									

... packing (option) - additions:

SL LP 5 SMD ...: ... SM; ... B SM; 4-20 contacts

SL LP 5 SMD ...: ... B TR, 4-12 contacts

SL LP 6 SMD ...: ... SM; ... B SM; 6-40 contacts

SL LP 6 SMD ...: ... B TR, 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Female headers 1.27 solder
Female headers 2.00 SMD
Jumpers
Technical data

→ G 70
→ G 64
→ G 77 - 78
→ G 75 - 80

High-prec. fem. headers 1.27 solder → G 72
High-prec. male head. 1.27 solder → G 71
Male headers 2.00 solder → G 56 - 58

G 40

A



2.54

Male headers in SMD mounting

B

Empty page

C

D

E

F

G

H

I

K

L

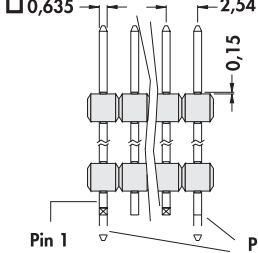
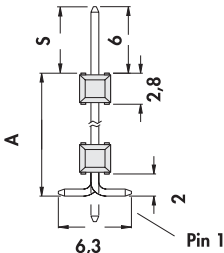
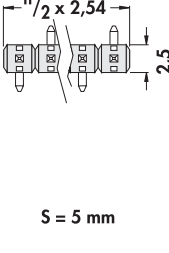
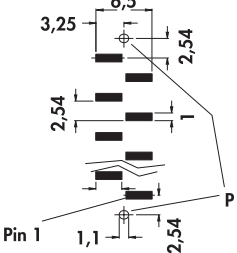
M

N

Male headers in SMD mounting

0.635 mm – for interconnections of stacked PCBs

one row, 4-20 contacts

				
art. no.	dim. [mm]			
	A			
SL 15 SMD 107 ...	10.70			
SL 15 SMD 182 ...	18.20			
SL 15 SMD 207 ...	20.70			
please indicate:	... no. of contacts one row 4-20	... surface S = sel. gold-plated G = gold-plated Z = tin-plated	... position (option) P = end pins straight for positioning	

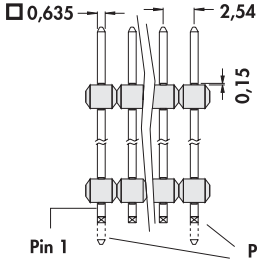
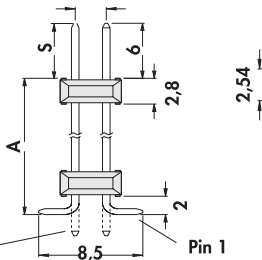
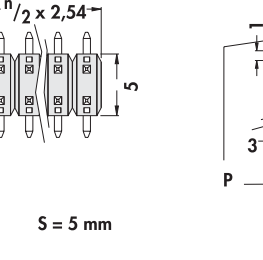
High-precision female headers in SMD mounting

for □ 0.635 mm and up to 0.85 mm Ø

art. no.				
BL LP 5 SMD ...				
please indicate:	... no. of contacts one row 4-20	... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel)		

Male headers in SMD mounting

two rows, 4-40 contacts

									
art. no.	dim. [mm]								
	A								
SL 16 SMD 107 ...	10.70								
SL 16 SMD 157 ...	15.70								
SL 16 SMD 182 ...	18.20								
SL 16 SMD 207 ...	20.70								
SL 16 SMD 247 ...	24.70								
please indicate:	... no. of contacts	... surface	... position (option)						
	two rows 4-40	S = sel. gold-plated	P = end pins straight for positioning						
		G = gold-plated							
		Z = tin-plated							

Within the total length the insulator can be changed according to customer's request.

A



High-precision female headers in SMD mounting

B

C

D

E

F

G

H

I

K

L

M

N

art. no.				
BL LP 6 SMD ...				
please indicate:	... no. of contacts two rows 4-40	... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel)		

High-precision female headers in SMD mounting

for □ 0.635 mm and up to 0.85 mm Ø

art. no.	dim. [mm]
	A B C
BL 15 SMD 043...	4.30 5.00 2.50
BL 15 SMD 089...	8.90 9.50 4.80
please indicate:	... no. of contacts one row 4-20
	... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine
art. no.	dim. [mm]
	A B C
BL 16 SMD 067 ...	6.70 7.50 2.50
BL 16 SMD 113 ...	11.30 12.00 4.80
please indicate:	... no. of contacts two rows 4-40
	... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel)
	... position (option) PS = locating pin (2 pcs/bar bigger than 6 contacts)

contact shell surface: tin-plated
contact spring: gold-plated

No capillary action when soldering due to protected contact insert.
V-notches permit breaking! Therefore any required number of contacts is available.

... packing (option) - additions:
BL 16 SMD ... B TR: 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Female headers 1.27 SMD → G 74
Female headers 2.00 SMD → G 64
Female headers 2.54 press-fit → G 53
Fem. head. 2.54 solder, put through → G 29

Technical data
Male headers 2.54 solder → G 75 - 80
Male headers 2.54 SMD → G 8
→ G 37 - 42

A

High-precision female headers in SMD mounting

for □ 0.635 mm and up to 0.85 mm Ø

art. no.				
BL 17 SMD ...				
art. no.				
BL 20 SMD ...				
please indicate: ... no. of contacts one row 2-20 two rows 4-40 ... packing (option) SM = bar magazine				
art. no.				
MK 22 SMD ...				
art. no.				
MK 222 SMD ...				
please indicate: ... no. of contacts one row 4-20 two rows 4-40 ... packing (option) B SM = pick and place pad and bar magazine				
art. no.				
MK 24 SMD ...				
please indicate: ... no. of contacts one row 2-20				

contact shell surface: tin-plated; **contact spring:** gold-plated

No capillary action when soldering due to protected contact insert.

... packing (option) - additions:

BL 17 SMD ... SM: 5-20 contacts; **BL 20 SMD ... SM:** 10-40 contacts

For further informations please see "for automatic assembly" following this series!

G 47

Technical data

Male headers 2.54 solder

Male headers 2.54 SMD

Fem. head. 2.54 solder, put through

→ G 75 - 80

→ G 8

→ G 37 - 42

→ G 29

Female headers 1.27 SMD

Female headers 2.00 SMD

Female headers 2.54 press-fit

→ G 74

→ G 64

→ G 53

N

High-precision female headers in SMD mounting

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A
B
C
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E
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G
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I
K
L
M
N

High-precision female headers in SMD mounting

for Ø 0.5 mm

one and two rows

art. no.				
MK 23 SMD ...				
art. no.				
MK 223 SMD ...				
please indicate: ... no. of contacts ... packing (option) one row 4-20 B SM =pick and place pad and bar magazine two rows 4-40				

Two row

art. no.				
MK 220 SMD ...				
please indicate: ... no. of contacts ... packing (option) two rows 4-40 B SM =pick and place pad and bar magazine B TR =pick and place pad and tape and reel (4-12 contacts 800 pcs/reel, 4-12 contacts; 14-40 contacts 500 pcs/reel)				

For further informations please see "for automatic assembly" following this series!

one row

art. no.				
MK 25 SMD ...				
please indicate: ... no. of contacts one row 2-20				

contact shell surface: tin-plated
contact spring: gold-plated

High-precision female headers in SMD mounting

Empty page

Connectors in press-fit mounting

Male connectors

one row, 1-36 contacts, for PCB thickness ≥ 1.6 mm dimension B = 3.5 mm and ≥ 3.0 mm dimension B = 4.5 mm

two rows, 2-72 contacts, for PCB thickness ≥ 1.6 mm dimension B = 3.5 mm and ≥ 3.0 mm dimension B = 4.5 mm

Technical drawing of the SLP 2 connector showing side and top views with dimensions. The side view shows dimensions A (total length), B (height), C (contact length), and 2.54 (pitch). The top view shows dimensions 0.635 (width), 2.54 (pitch), and $n/2 \times 2.54$ (total width).

contact material: Cu Sn 6

Press-fit mounting without soldering, resilient press-fit area, easy insertion into PCB. V-notches permit breaking!
Any required number of contacts available.

PCB layout please see BLP ...

G 51

Technical data
Jumpers
Female headers 2.54 press-fit
Programmable headers

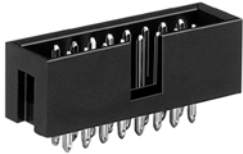
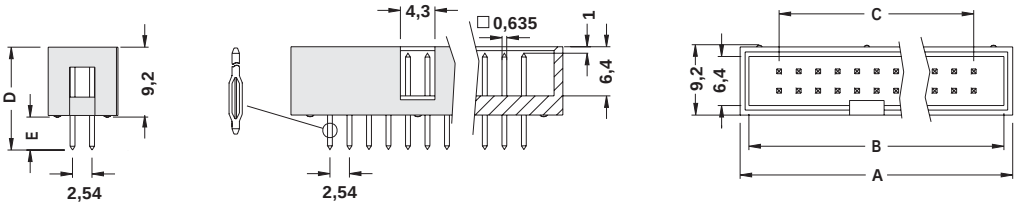
- G 73 - 78
- G 77 - 78
- G 53
- F 23

Male headers 2.00 solder
Single contacts metal strip
Male headers 2.54 solder

- G 56 - 58
- G 26
- G 8

Male header with shroud

suitable for bolttable female header VFL, can be combined with many other female headers with grid spacing 2,54 mm (e. g.: PV, BL)

						
art. no.	no. of contacts	dim. [mm]				
		A	B	C	D	E (max.)
SLUP 31 10 ...	10	20.40	17.80	10.16	12.60	3.50
SLUP 31 16 ...	16	28.00	25.40	17.78	12.60	3.50
SLUP 31 20 ...	20	33.10	30.50	22.86	12.60	3.50
please indicate: ... surface G=gold-plated Z=tin-plated						

contact material: Cu Sn 6

Press-fit mounting without soldering, resilient press-fit area, easy insertion into PCB.

PCB layout please see BLP ...

Connectors in press-fit mounting

High-precision female headers 0,635 mm and pins up to 0,85 mm Ø

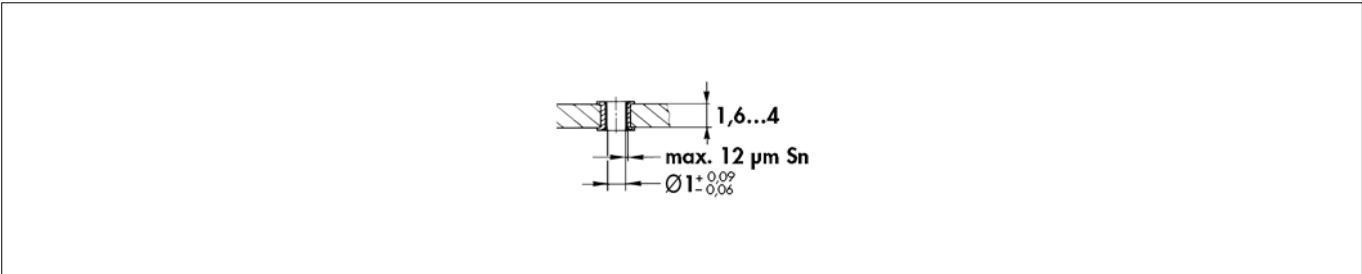
Press-fit mounting without soldering, resilient press-fit area.

art. no.				
BLP 1 ...				
art. no.				
BLP 2 ...				
please indicate: ... no. of contacts one row 1-36 two rows 2-72				

contact-insert: gold-plated
contact shell: tin-plated

V-notches permit breaking! Therefore any required numbers of contacts are available.

Hole diameter in PCB - PCB hole structure acc. to DIN EN 60352-5



Direct female connector

Without short circuit contact for PCB thickness: 0.7-0.9 mm

for removable connection of digital displays, coding switches, impulse counters

art. no.				
DF 1 OK 9 Z				
art. no.				
DF 2 OK 9 Z				

With short circuit contact for PCB thickness: 0.7-0.9 mm

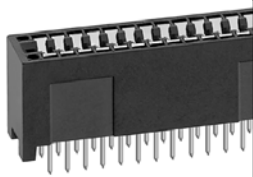
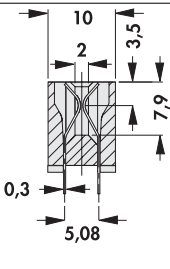
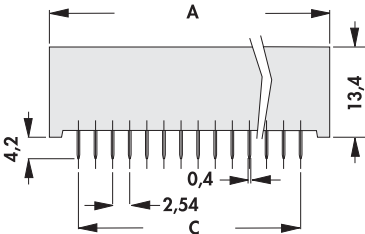
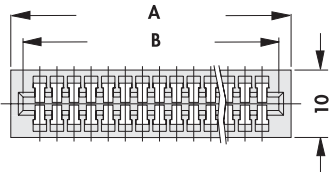
for removable connection of digital displays, coding switches, impulse counters

art. no.				
DF 1 MK 9 Z				
art. no.				
DF 2 MK 9 Z				

K* = arcing contact

Direct female connector

for PCB thickness: 1.4-1.8 mm

								
	art. no.	no. of contacts	dim. [mm]			A	B	C
DF OB 06	12	21.33	17.70	12.70				
DF OB 07	14	23.87	20.24	15.24				
DF OB 10	20	31.49	27.86	22.86				
DF OB 17	34	49.27	45.64	40.64				
DF OB 18	36	51.81	48.18	43.18				

contact surface finish: tin-plated

0.5 mm, straight

art. no.	dim. [mm]		
	A	B	C
SLY 1 081 ...	8.10	3.00	3.60
SLY 1 085 ...	8.50	3.00	4.00
SLY 1 098 ...	9.80	3.00	5.30
SLY 1 104 ...	10.40	3.00	5.90
SLY 1 139 ... G	13.90	3.00	9.40
SLY 1 139 ... Z	13.90	3.00	9.40
please indicate: ... no. of contacts one row 1 - 50 ... surface S = selective gold-plated G = gold-plated Z = tin-plated			
art. no.	dim. [mm]		
	A	B	C
SLY 2 081 ...	8.10	3.00	3.60
SLY 2 085 ...	8.50	3.00	4.00
SLY 2 098 ...	9.80	3.00	5.30
SLY 2 104 ...	10.40	3.00	5.90
SLY 2 139 ... G	13.90	3.00	9.40
SLY 2 139 ... Z	13.90	3.00	9.40
please indicate: ... no. of contacts two rows 4 - 100 ... surface S = selective gold-plated G = gold-plated Z = tin-plated			

A

Male headers soldering technique

0.5 mm, angled

art. no.	dim. [mm]		
	A	B	C
SLY 3 035 ...	1.50	2.80	3.50
SLY 3 041 ...	1.50	2.80	4.10
SLY 3 082 ...	1.50	2.80	8.20
please indicate: ... no. of contacts one row 1-50 ... surface S = selective gold-plated G = gold-plated Z = tin-plated			
art. no.	dim. [mm]		
	A	B	C
SLY 4 035...	1.50	2.80	3.50
SLY 4 041...	1.50	2.80	4.10
SLY 4 082...	1.50	2.80	8.20
please indicate: ... no. of contacts two rows 4-100 ... surface S = selective gold-plated G = gold-plated Z = tin-plated			

Therefore any required number of contacts is available.

K

L

M

N

G 57

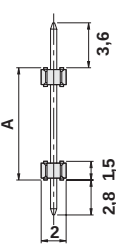
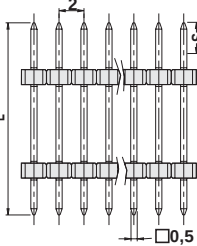
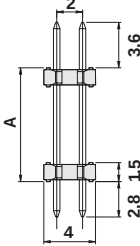
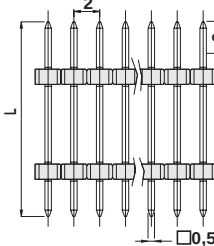
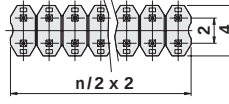
Technical data
Female headers 2.00 SMD
Jumpers
Male headers .05" solder

→ G 73 - 78 Male headers 2.00 solder
→ G 64 Male headers 2.54 solder
→ G 77 - 78 Female headers 2.00 solder
→ G 67

→ G 56 - 58
→ G 8
→ G 60

0.5 mm

suitable for female headers BLY

			
art. no.	dim. [mm]	art. no.	dim. [mm]
	A L		A L
SLY 5 040 ...	4.00 10.40	SLY 5 101 ...	10.10 16.50
SLY 5 075 ...	7.50 13.90	SLY 5 122 ...	12.20 18.60
SLY 5 081 ...	8.10 14.50		
			
art. no.	dim. [mm]	art. no.	dim. [mm]
	A L		A L
SLY 6 040 ...	4.00 10.40	SLY 6 101 ...	10.10 16.50
SLY 6 075 ...	7.50 13.90	SLY 6 122 ...	12.20 18.60
SLY 6 081 ...	8.10 14.50		
please indicate:	... no. of contacts one row 1-50 two rows 2-100		
	... surface S = selective gold-plated G = gold-plated Z = tin-plated		

Are used for interconnections of stacked PCBs.
The position of the insulator can be changed within the total length of the pin.

Therefore any required number of contacts is available.



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High-precision female headers soldering technique

for 0.5 mm and up to 0.56 mm Ø

art. no.			
BLY 1 ...			
art. no.			
BLY 2 ...			
art. no.			
BLY 3 ...			
art. no.			
BLY 4 ...			
please indicate: ... no. of contacts one row 1-50 two rows 2-100			

contact shell surface: tin-plated
contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

A

Male headers in SMD mounting

□ 0.5 mm

art. no.	dim. [mm] A B C S
SLY 7 SMD 036 ...	5.60 6.30 3.60 3.00
SLY 7 SMD 045 ...	6.50 4.60 4.50 3.50
SLY 7 SMD 062 ...	8.20 4.60 6.20 3.50
please indicate: ... no. of contacts one row 4-20 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine	
art. no.	dim. [mm] A B C S
SLY 8 SMD 036 ...	5.60 8.50 3.60 3.00
SLY 8 SMD 045 ...	6.50 6.50 4.50 3.50
SLY 8 SMD 062 ...	8.20 6.50 6.20 3.50
please indicate: ... no. of contacts two rows 4-40 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (650 pcs/reel)	

... packing (option) - additions:

SLY 8 SMD ... SM; ... B SM: 6-40 contacts

SLY 8 SMD 036/045 B TR: 6-30 contacts

For further informations please see "for automatic assembly" following this series!

K

L

M

N

G 61

Male headers 2.00 solder
High-prec.male head.in SMD mount.
Special male & female headers
Female header grid 2.00

→ G 56 - 58
→ G 35
→ G 19
→ H 10

Female headers 2.00 solder
Female headers 2.00 SMD
Technical data
Jumpers

→ G 60
→ G 64
→ G 75 - 80
→ G 77 - 78

Male headers in SMD mounting

□ 0.5 mm

art. no.	dim. [mm]			
	A	B	C	S
SLY 9 SMD 040 ...	8.80	3.30	4.00	3.50
SLY 9 SMD 055 ...	10.30	3.30	5.50	3.50
please indicate: ... no. of contacts one row 2-20 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) B SM = pick and place pad and bar magazine				
art. no.	dim. [mm]			
	A	B	C	S
SLY 10 SMD 040 ...	12.30	6.80	4.00	3.50
please indicate: ... no. of contacts two rows 4-40 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (700 pcs/reel)				

... packing (option) - additions:

SLY 10 SMD 040 ...: ... B TR, 4-16 contacts

For further informations please see "for automatic assembly" following this series!

A



Male headers in SMD mounting

B

Empty page

C

D

E

F

G

H

I

K

L

M

N

High-precision female headers in SMD mounting

for □ 0.5 mm and up to 0.56 mm Ø

art. no.		
BLY 5 SMD ...		
please indicate:	... no. of contacts one row 4-20	... packing (option) B SM =pick and place pad and bar magazine
art. no.		
BLY 6 SMD ...		
please indicate:	... no. of contacts one row 2-20	... packing (option) TR =tape and reel (2.400 pcs/reel)
art. no.		
BLY 8 SMD ...		
please indicate:	... no. of contacts two rows 4-40	... packing (option) B SM =pick and place pad and bar magazine B TR =pick and place pad and tape and reel (650 pcs/reel)

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

... packing (option) - additions:

BLY 6 SMD ... TR: 2-10 contacts

BLY 8 SMD ... B TR: 6-30 contacts

For further informations please see "for automatic assembly" following this series!

A



High-precision female headers in SMD mounting

B

Empty page

C

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E

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G

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I

K

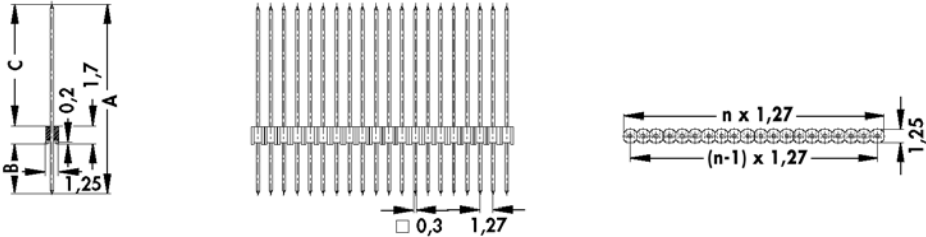
L

M

N

Straight, narrow insulator □ 0.3 mm

suitable for female header BLM, one row 1-20 contacts

			
art. no.	dim. [mm]		
	A	B	C
SLM N 1 063 ...	11.10	3.10	6.30
SLM N 1 092 ...	14.00	3.10	9.20
SLM N 1 117 ...	16.50	3.10	11.70
SLM N 11 063 ...	12.80	4.80	6.30
SLM N 11 117 ...	18.20	4.80	11.70
please indicate:	... no. of contacts one row 1 - 20		
	... surface G = gold-plated Z = tin-plated		

Male headers soldering technique

□ 0,4 mm

suitable for female header BLM, one row 1-36 contacts

art. no.	dim. [mm]		
	A	B	C
SLV W 1 055 ...	9.70	2.50	5.50
SLV W 1 080 ...	12.20	2.50	8.00
SLV W 1 105 ...	14.70	2.50	10.50
SLV W 1 130 ...	17.20	2.50	13.00
please indicate: ... no. of contacts one row 1-36 ... surface G=gold-plated Z=tin-plated			

suitable for female header BLM, two rows 4-72 contacts, grid spacing 1,27 x 2,54 mm

art. no.	dim. [mm]		
	A	B	C
SLV W 2 055 ...	9.70	2.50	5.50
SLV W 2 080 ...	12.20	2.50	8.00
SLV W 2 105 ...	14.70	2.50	10.50
SLV W 2 130 ...	17.20	2.50	13.00
please indicate: ... no. of contacts two rows 4-72 ... surface G=gold-plated Z=tin-plated			

Male headers soldering technique

0.4 mm, 90° angled

one row 1-36 contacts

art. no.	dim. [mm]		
	A	B	C
SLV W 1 KA 030 ...	3.90	2.50	3.00
SLV W 1 KA 055 ...	3.90	2.50	5.50
SLV W 1 KA 080 ...	3.90	2.50	8.00
SLV W 1 KA 105 ...	3.90	2.50	10.50
please indicate:	... no. of contacts one row 1-36		
	... surface G=gold-plated Z=tin-plated		

suitable for female header BLM, two rows 6-72 contacts, grid spacing 1,27 x 2,54 mm

art. no.	no. of contacts	VPE	dim. [mm]			art. no.	no. of contacts	VPE	dim. [mm]		
			A	B	C				A	B	C
SLVW2 KA 030 10...	10	78	3.70	2.50	3.00	SLVW2 KA 054 10...	10	78	3.70	2.50	5.40
SLVW2 KA 030 14...	14	55	3.70	2.50	3.00	SLVW2 KA 054 14...	14	55	3.70	2.50	5.40
SLVW2 KA 030 16...	16	50	3.70	2.50	3.00	SLVW2 KA 054 16...	16	50	3.70	2.50	5.40
SLVW2 KA 030 20...	20	40	3.70	2.50	3.00	SLVW2 KA 054 20...	20	40	3.70	2.50	5.40
SLVW2 KA 030 26...	26	31	3.70	2.50	3.00	SLVW2 KA 054 26...	26	31	3.70	2.50	5.40
SLVW2 KA 030 30...	30	27	3.70	2.50	3.00	SLVW2 KA 054 30...	30	27	3.70	2.50	5.40
SLVW2 KA 030 34...	34	24	3.70	2.50	3.00	SLVW2 KA 054 34...	34	24	3.70	2.50	5.40
SLVW2 KA 030 40...	40	20	3.70	2.50	3.00	SLVW2 KA 054 40...	40	20	3.70	2.50	5.40
SLVW2 KA 030 50...	50	16	3.70	2.50	3.00	SLVW2 KA 054 50...	50	16	3.70	2.50	5.40
SLVW2 KA 030 72...	72	11	3.70	2.50	3.00	SLVW2 KA 054 72...	72	11	3.70	2.50	5.40
please indicate:											
... surface											
G=gold-plated											
Z=tin-plated											

SLV W 2 KA ...: packing bar magazine

VPE = packing unit (pieces/tube);

preferred number of contacts, different ones between 6 and 72 can be made upon request

Female headers 1.27 SMD → G 74
High-prec. fem. headers 1.27 solder → G 72
High-prec.female headers SMD → G 76
Single contacts metal strip → G 26

High-prec.male head.in SMD mount. → G 35
Jumpers → G 77 - 78
Jump. links 2.00 & 2.54 solder → G 20

G 68

A

B

C

D

E

F

G

H

I

K

L

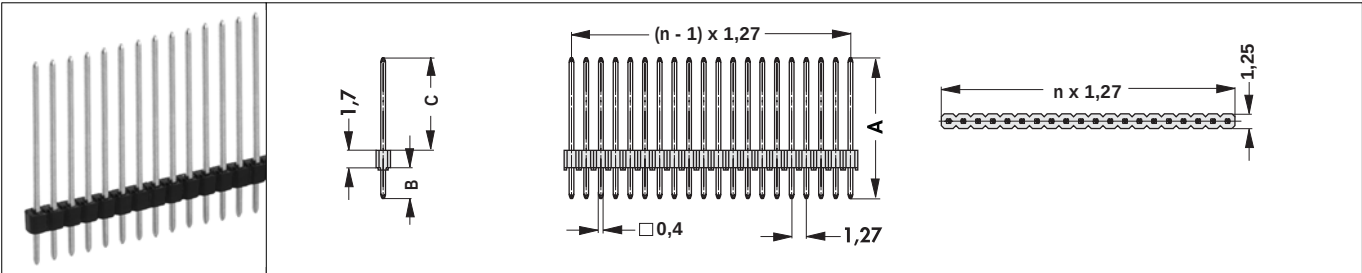
M

N

Male headers soldering technique

Straight, narrow insulator □ 0.4 mm

suitable for female header BLM, one row 1-20 contacts



art. no.	dim. [mm]		
	A	B	C
SLV N 1 055 ...	9.70	2.50	5.50
SLV N 1 080 ...	12.20	2.50	8.00
SLV N 1 105 ...	14.70	2.50	10.50
SLV N 1 130 ...	17.20	2.50	13.00
SLV N 11 055 ...	12.20	5.00	5.50
SLV N 11 080 ...	14.70	5.00	8.00
SLV N 11 105 ...	17.20	5.00	10.50

please indicate: ... no. of contacts one row 1-20 ... surface G= gold-plated Z= tin-plated

Female headers soldering technique

suitable for male header SLM and SLV, one row 1-36 contacts

art. no.	dim. [mm] A
BLM KG 1 ...	3.00
BLM LG 1 ...	5.10
art. no.	
BLM LA 1 ...	
please indicate:	... no. of contacts one row 1-36
	... surface G=gold-plated Z=tin-plated

suitable for male header SLV, two rows 4-72 contacts - grid spacing 1.27 x 2.54 mm

art. no.	dim. [mm] A
BLM KG 2 ...	3.00
BLM LG 2 ...	5.10
please indicate:	... no. of contacts two rows 4-72
	... surface G=gold-plated Z=tin-plated

A



High-precision male headers soldering technique

B

Ø 0.43 mm

turned precision contacts, less space required on PCB

C

D

E

F

G

H

I

K

L

M

N

art. no.	no. of contacts		
SLR 1 025 ...	25		
SLR 1 050 ...	50		
art. no.	no. of contacts		
SLR 2 050 ...	50		
SLR 2 100 ...	100		
art. no.	no. of contacts		
SLR 3 025 ...	25		
SLR 3 050 ...	50		
art. no.	no. of contacts		
SLR 4 050 ...	50		
SLR 4 100 ...	100		
please indicate:	... surface G=gold-plated Z=tin-plated		

Other number of contacts on request!

G 71

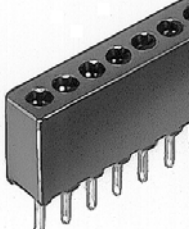
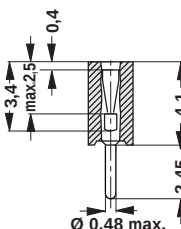
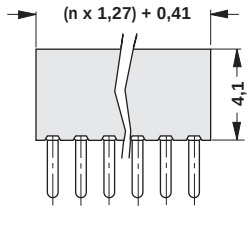
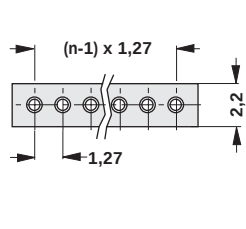
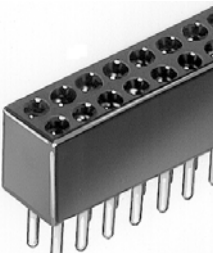
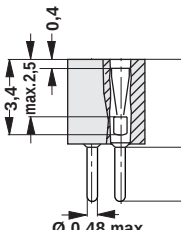
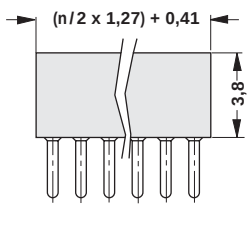
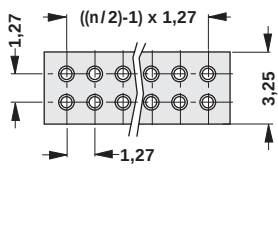
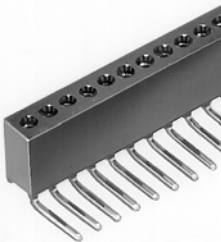
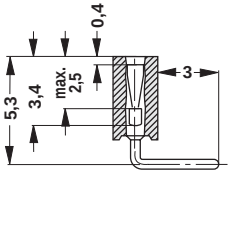
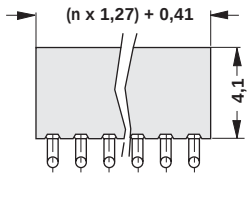
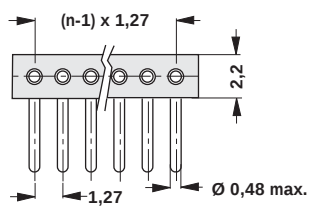
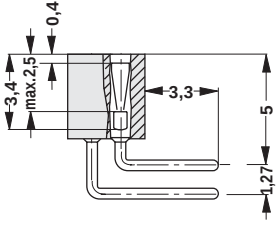
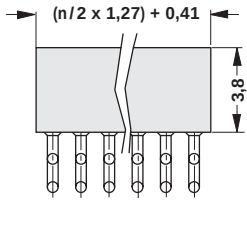
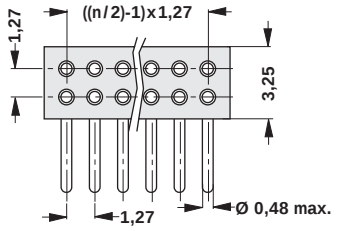
Jumpers
Male headers .05" solder
Special male & female headers
Technical data

→ G 77 - 78
→ G 67
→ G 19
→ G 73 - 78

High-prec. fem. headers 1.27 solder → G 72
High-prec. female headers SMD → G 76
Single contacts metal strip → G 26

High-precision female headers soldering technique

for Ø 0.35–0.45 mm

	  
art. no.	no. of contacts
BLR 1 025 Z	25
BLR 1 050 Z	50
	  
art. no.	no. of contacts
BLR 2 050 Z	50
BLR 2 100 Z	100
	  
art. no.	no. of contacts
BLR 3 025 Z	25
BLR 3 050 Z	50
	  
art. no.	no. of contacts
BLR 4 050 Z	50
BLR 4 100 Z	100

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

Other number of contacts on request!

Male headers in SMD mounting

0.4 mm

suitable for female header BLM, one row 4-20 contacts

art. no.	dim. [mm]
	A B C
SLV W 1 SMD 048...	8.20 4.00 4.80
SLV W 1 SMD 073...	10.70 4.00 7.30
please indicate:	... no. of contacts one row 4-20 ... surface G=gold-plated Z=tin-plated

suitable for female header BLM, two rows 4-40 contacts, grid spacing 1,27 x 2,54 mm

art. no.	dim. [mm]
	A B C
SLV W 2 SMD 048...	8.20 6.60 4.80
SLV W 2 SMD 073...	10.70 6.60 7.30
please indicate:	... no. of contacts two rows 4-40 ... surface G=gold-plated Z=tin-plated

Female headers in SMD mounting

Wide insulator with 0.3 mm and 0.4 mm

suitable for male header SLM and SLV, one row 4-20 contacts

art. no.

BLM 1 SMD ...

please indicate:	... no. of contacts one row 4-20	... surface G=gold-plated Z=tin-plated
------------------	-------------------------------------	--

Grid spacing 1.27 x 2.54 mm

suitable for male header SLV, two rows 4-40 contacts

art. no.

BLM 2 SMD ...

please indicate:	... no. of contacts two rows 4-40	... surface G=gold-plated Z=tin-plated
------------------	--------------------------------------	--

A



High-precision male headers in SMD mounting

B

Turned precision contacts

less space required on PCB

C

D

E

F

G

H

I

K

L

M

N

art. no.	no. of contacts
SLR 5 SMD ...	50
please indicate: ... surface G =gold-plated Z =tin-plated	
art. no.	no. of contacts
SLR 6 SMD ...	100
please indicate: ... surface G =gold-plated Z =tin-plated	
art. no.	no. of contacts
SLR 7 SMD ...	50
please indicate: ... surface G =gold-plated Z =tin-plated	

Other number of contacts on request!

G 75

Male headers .05" solder
 Peel-off terminal strips
 High-prec. male head. 1.27 solder
 Technical data

→ G 67
 → G 25
 → G 71
 → G 73 - 78

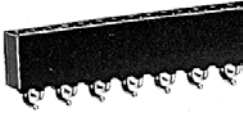
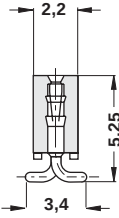
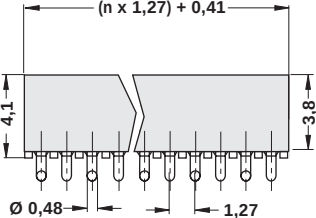
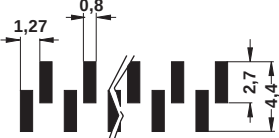
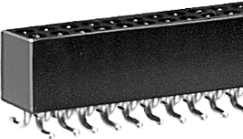
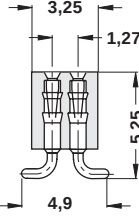
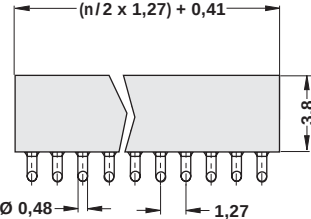
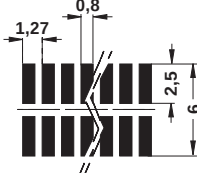
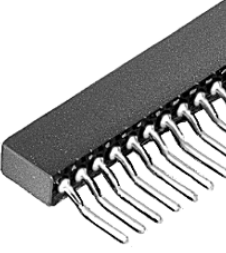
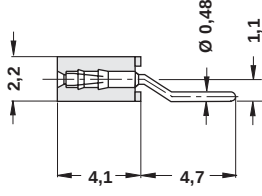
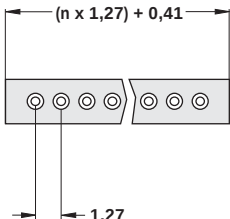
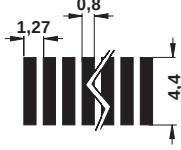
High-prec.female headers SMD
 High-prec. fem. headers 1.27 solder
 Female headers 1.27 SMD
 Female headers 1.27 solder

→ G 76
 → G 72
 → G 74
 → G 70

High-precision female headers in SMD mounting

Turned precision contacts for Ø 0.35-0.45 mm

less space required on PCB

	  
art. no. BLR 5 SMD	no. of contacts 50
	  
art. no. BLR 6 SMD	no. of contacts 100
	  
art. no. BLR 7 SMD	no. of contacts 50

contact shell: tin-plated
contact insert: gold-plated

Closed precision rotary part with 3-finger contact prevents rising of flux agents.

Other number of contacts on request!

A

Jumpers

for 0.6-0.64 mm wire wrap pins and Ø 0.6-0.7 mm

B

C

D

E

F

G

H

I

K

L

M

N

art. no.	no. of contacts	surface	version	grid			
CAB 4 G ...	2	0.1 μm gold	closed	2.54			
CAB 4 Z ...	2	5.0 μm tin	closed	2.54			
CAB 5 05 G ...	2	0.5 μm gold	closed, hole for probe trip	5.08			
CAB 5 10 G ...	2	1.0 μm gold	closed, hole for probe trip	5.08			
CAB 5 Z ...	2	5.0 μm tin	closed, hole for probe trip	5.08			
CAB 6 05 G ...	2	0.5 μm gold	open, suitable for miniature test probes	2.54			
CAB 6 10 G ...	2	1.0 μm gold	open, suitable for miniature test probes	2.54			
CAB 6 Z ...	2	5.0 μm tin	open, suitable for miniature test probes	2.54			
CAB 9 G ...	2	0.1 μm gold	tag, open	2.54			
please indicate:							

Colour "grey" except for CAB 9.

The flexible contacts are shorting two pins. The jumpers can be mounted behind and next to each other.

G 77

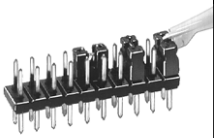
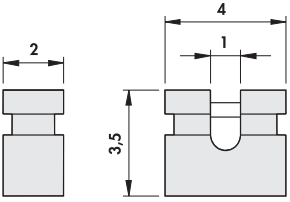
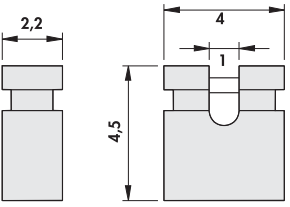
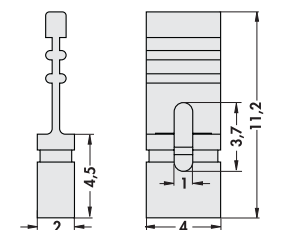
Male headers 2.54 SMD
Male headers 2.54 solder
Male headers 2.54 press-fit
Male headers 2.00 SMD

→ G 37 - 42
→ G 8
→ G 51
→ G 61 - 62

Male headers 2.00 solder
Technical data
Special male & female headers
Jump. links 2.00 & 2.54 solder

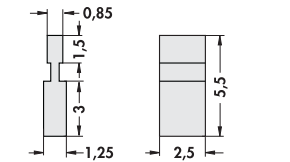
→ G 56 - 58
→ G 73 - 78
→ G 19
→ G 20

for square 0.5 mm and Ø 0.4-0.5 mm

art. no.	no. of contacts	surface	version	grid		
CAB 10 G S	2	0.1 µm gold	open, suitable for miniature test probes	2.00		
CAB 11 G S	2	0.1 µm gold	open, suitable for miniature test probes	2.00		
CAB 14 G S	2	<0,1 µm gold	tag, open, suitable for miniature test probes	2.00		

colour:
black

for square 0.3-0.4 mm and Ø 0.4-0.5 mm

art. no.	no. of contacts	surface	version	grid		
CAB 15 G S	2	<0,1 µm gold	closed, tag	1.27		

colour:
black

Technical data
High-prec. male head. 1.27 solder
High-prec. male headers 1.27 SMD
Male headers 2.54 press-fit

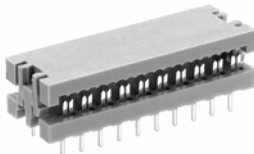
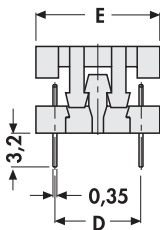
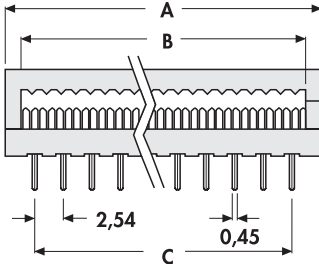
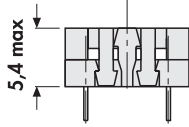
→ G 73 - 78
→ G 71
→ G 75
→ G 51

Single contacts metal strip
Male headers 2.00 solder
Male headers 2.00 SMD

→ G 26
→ G 56 - 58
→ G 61 - 62

Printed circuit connector

Design DIL

						
art. no.	no. of contacts	dim. [mm]				
		A	B	C	D	E (max.)
KK 04 Z	4	8.00	5.10	2.54	7.62	11.00
KK 06 Z	6	10.30	7.60	5.08	7.62	11.00
KK 08 Z	8	13.00	10.20	7.62	7.62	11.00
KK 10 Z	10	15.40	12.70	10.16	7.62	11.00
KK 12 Z	12	18.00	15.30	5.08	7.62	11.00
KK 14 Z	14	20.50	17.80	15.24	7.62	11.00
KK 16 Z	16	23.00	20.30	17.78	7.62	11.00
KK 18 Z	18	25.60	22.90	20.32	7.62	11.00
KK 20 Z	20	28.10	25.40	22.86	7.62	11.00
KK 24 Z	24	33.00	30.50	27.94	15.24	18.70
KK 28 Z	28	38.10	35.60	33.02	15.24	18.70
KK 40 Z	40	53.30	50.80	48.26	15.24	18.70

Use with ribbon cable:

round conductor flat strip:
AWG 28 = solid or stranded
AWG 30 = solid

conductor diameter:
AWG 28 ... 30 = 0.09 ... 0.05 mm²
insulation-Ø:
max. 1.1 mm

Sockets for DIL-IC
Application tools
Male headers 2.54 press-fit
PC connectors

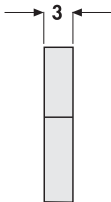
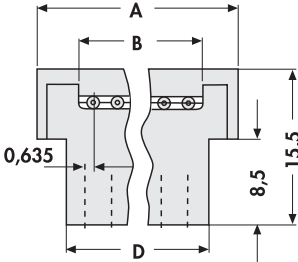
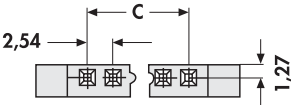
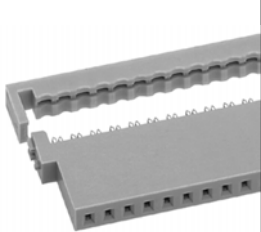
→ F 4 - 10
→ H 11
→ G 51
→ H 8

Technical data
D-Sub connectors /flat cable
Single precision contacts

→ H 12
→ I 11
→ F 2 - 3

Female connector

One row

					
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
FV 03 ...	3	15.24	7.62	5.08	8.89
FV 04 ...	4	17.78	10.16	7.62	11.43
FV 05 ...	5	20.32	12.70	10.16	7.62
FV 06 ...	6	22.86	15.24	5.08	16.51
FV 07 ...	7	25.40	17.78	15.24	19.05
FV 08 ...	8	27.94	20.32	17.78	21.59
FV 10 ...	10	33.02	25.40	22.86	26.67
FV 12 ...	12	38.10	30.48	27.94	31.75
FV 13 ...	13	40.64	33.02	30.48	34.29
FV 14 ...	14	43.18	35.66	33.02	36.83
FV 16 ...	16	48.26	40.64	38.10	41.91
FV 17 ...	17	50.80	43.18	40.64	44.45
FV 18 ...	18	53.34	45.72	43.18	46.99
FV 20 ...	20	58.42	50.80	48.26	52.07
FV 24 ...	24	68.58	60.96	58.42	62.23
FV 25 ...	25	71.12	63.50	60.96	64.77
FV 36 ...	36	99.06	91.44	88.90	92.71
please indicate: ... surface G = gold-plated Z = tin-plated					

recommended plugs
□ 0.635 mm
length 5 ... 8 mm

Use with ribbon cable:

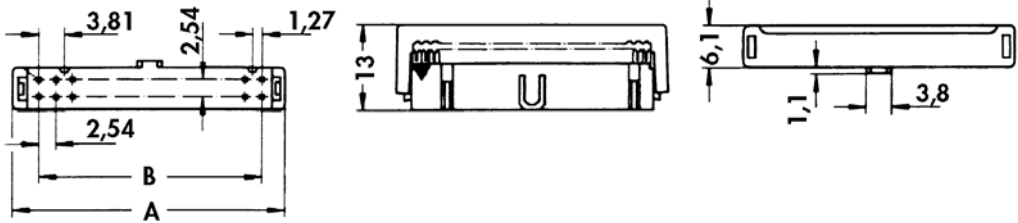
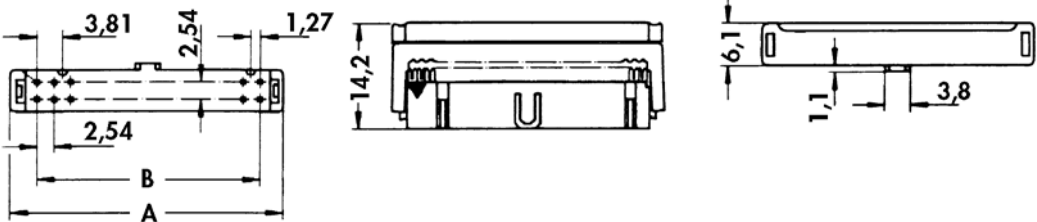
round conductor flat strip:
AWG 28 = solid or stranded
AWG 30 = solid

conductor diameter:
AWG 28 ... 30 = 0.09 ... 0.05 mm²
insulation-Ø:
max. 1.1 mm

Female connector

Two rows, with guiding nose

suitable for shrouded male header ASL ...

 PV				
 PV + ZEPV				
art. no.	no. of contacts	dim. [mm]		suitable strain relief
		A	B	
PV 06 G	6	12.20	5.08	ZEPV 06
PV 10 G	10	17.30	10.16	ZEPV 10
PV 14 G	14	22.40	15.24	ZEPV 14
PV 16 G	16	24.90	17.78	ZEPV 16
PV 20 G	20	30.00	22.86	ZEPV 20
PV 26 G	26	37.60	30.48	ZEPV 26
PV 34 G	34	47.80	40.64	ZEPV 34
PV 40 G	40	55.40	48.26	ZEPV 40
PV 50 G	50	68.10	60.96	ZEPV 50

contact surface finish: gold-plated

Use with ribbon cable:

round conductor flat strip:

AWG 28 = solid or stranded

AWG 30 = solid

conductor diameter:

AWG 28 ... 30 = 0.09 ... 0.05 mm²

insulation-Ø:

max 1.1 mm

Male headers 2.54 solder
Application tools
Single contacts metal strip
Technical data

→ G 8
→ H 11
→ G 26
→ H 12

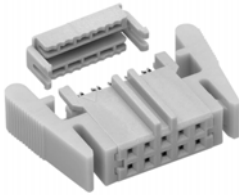
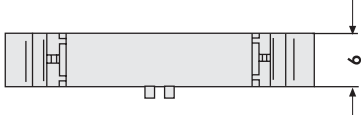
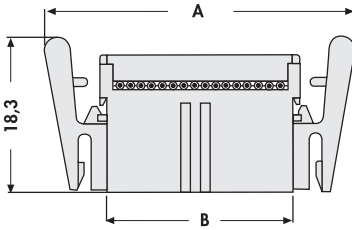
Boltable female header
Shroud. male header SMD
Shrouded male header

→ H 5
→ H 7
→ H 6

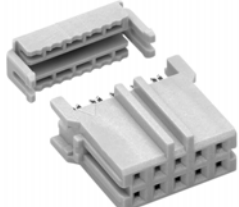
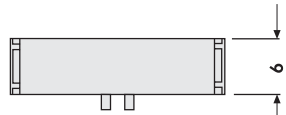
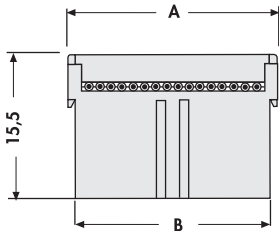
Female connector

Two rows, with guiding nose

boltable female header, suitable for shrouded male header ASL ...

							
art. no.	no. of contacts	dim. [mm]		art. no.	no. of contacts	dim. [mm]	
		A	B			A	B
VFL 06 ...	6	23.58	9.56	VFL 20 ...	20	41.36	27.34
VFL 08 ...	8	26.12	12.10	VFL 26 ...	26	48.98	34.96
VFL 10 ...	10	28.66	14.64	VFL 34 ...	34	59.14	45.12
VFL 12 ...	12	31.20	17.18	VFL 40 ...	40	66.76	52.74
VFL 14 ...	14	33.74	19.72	VFL 50 ...	50	79.46	65.44
VFL 16 ...	16	36.28	22.26				
please indicate: ... surface G=gold-plated Z=tin-plated							

suitable for shrouded male header ASL ...

							
art. no.	no. of contacts	dim. [mm]		art. no.	no. of contacts	dim. [mm]	
		A	B			A	B
FLMP 06 ...	6	10.97	9.56	FLMP 20 ...	20	28.75	27.34
FLMP 08 ...	8	13.51	12.10	FLMP 26 ...	26	36.37	34.96
FLMP 10 ...	10	16.05	14.64	FLMP 34 ...	34	46.53	45.12
FLMP 12 ...	12	18.59	17.18	FLMP 40 ...	40	54.15	52.74
FLMP 14 ...	14	21.13	19.72	FLMP 50 ...	50	66.85	65.44
FLMP 16 ...	16	23.67	22.26				
please indicate: ... surface G=gold-plated Z=tin-plated							

Use with ribbon cable:

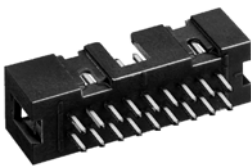
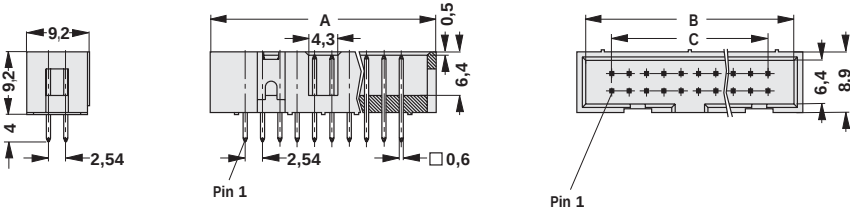
round conductor flat strip:
AWG 28 = solid or stranded
AWG 30 = solid

conductor diameter:
AWG 28 ... 30 = 0.09 ... 0.05 mm²
insulation-Ø: max 1.1 mm

Male header

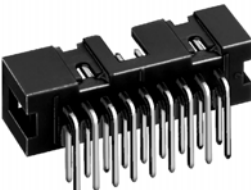
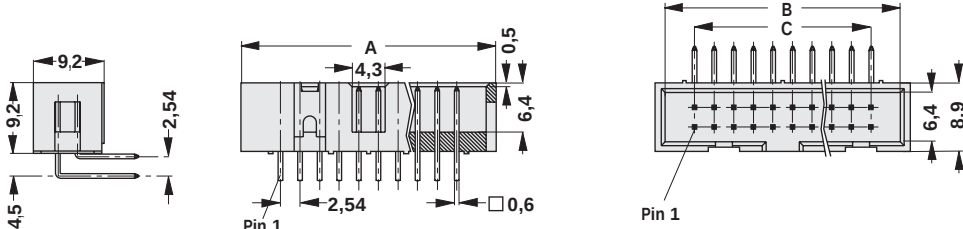
Straight, two rows, shrouded

suitable for boltable female header VFL, FLMP, PV

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	C			A	B	C
ASLG 06 ...	6	15.30	12.70	5.08	ASLG 20 ...	20	33.10	30.50	22.86
ASLG 08 ...	8	17.80	15.20	7.62	ASLG 26 ...	26	40.70	38.10	30.48
ASLG 10 ...	10	20.40	17.80	10.16	ASLG 34 ...	34	50.90	48.30	40.64
ASLG 12 ...	12	22.90	20.30	12.70	ASLG 40 ...	40	58.50	55.90	48.26
ASLG 14 ...	14	25.40	22.90	15.24	ASLG 50 ...	50	71.20	68.60	60.96
ASLG 16 ...	16	28.00	25.40	17.78					
please indicate: ... surface G=gold-plated Z=tin-plated									

Angled, two rows, shrouded

suitable for boltable female header VFL, FLMP, PV

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	C			A	B	C
ASLA 06 ...	6	15.30	12.70	5.08	ASLA 20 ...	20	33.10	30.50	22.86
ASLA 08 ...	8	17.80	15.20	7.62	ASLA 26 ...	26	40.70	38.10	30.48
ASLA 10 ...	10	20.40	17.80	10.16	ASLA 34 ...	34	50.90	48.30	40.64
ASLA 12 ...	12	22.90	20.30	12.70	ASLA 40 ...	40	58.50	55.90	48.26
ASLA 14 ...	14	25.40	22.90	15.24	ASLA 50 ...	50	71.20	68.60	60.96
ASLA 16 ...	16	28.00	25.40	17.78					
please indicate: ... surface G=gold-plated Z=tin-plated									

Gold-plated resp. tin-plated contacts are available with either straight or squared terminations.
In addition they can be combined with many other stripline connectors in 2.54 mm pitch.

Male header

SMD, two rows, shrouded

suitable for bolttable female header VFL, FLMP, PV

art. no.	no. of contacts	VPE	dim. [mm]		art. no.	no. of contacts	VPE	dim. [mm]	
			A	B				A	B
ASL 06 SMD ...	6	32	15.30	5.08	ASL 20 SMD ...	20	15	33.10	22.86
ASL 08 SMD ...	8	27	17.80	7.62	ASL 26 SMD ...	26	12	40.70	30.48
ASL 10 SMD ...	10	24	20.40	10.16	ASL 34 SMD ...	34	9	50.90	40.64
ASL 12 SMD ...	12	21	22.90	12.70	ASL 40 SMD ...	40	8	58.50	48.26
ASL 14 SMD ...	14	19	25.40	15.24	ASL 50 SMD ...	50	7	71.20	60.96
ASL 16 SMD ...	16	17	28.00	17.78					

please indicate:

... surface
G=gold-plated
Z=tin-plated

... packing (option)
SM =bar magazine
B SM =pick and place pad and bar magazine

VPE = packing unit (pieces/tube); Gold-plated resp. tin-plated contacts are available with either straight or squared terminations.

In addition they can be combined with many other strip-line connectors in 2.54 mm pitch.

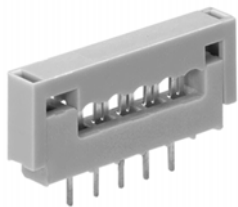
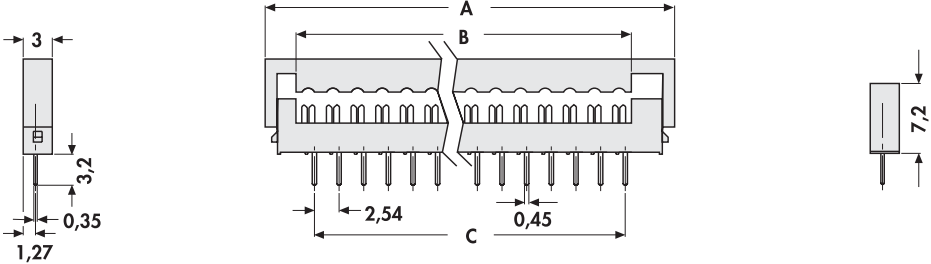
For automatic assembly: Pick and place pad "B" and tube magazin "SM"

– position in the middle

art. no.
... B SM

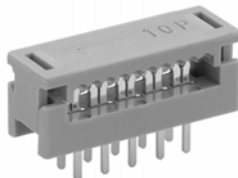
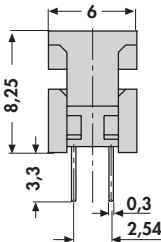
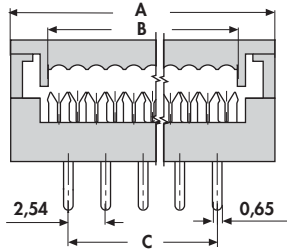
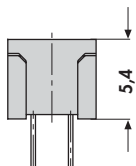
Printed circuit connector

One row

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	C			A	B	C
SBAU 1 04 Z	4	17.78	10.16	7.62	SBAU 1 14 Z	14	43.18	35.56	33.02
SBAU 1 06 Z	6	22.86	15.24	12.70	SBAU 1 16 Z	16	48.26	40.64	38.10
SBAU 1 08 Z	8	27.94	20.32	17.78	SBAU 1 17 Z	17	50.80	43.18	40.64
SBAU 1 10 Z	10	33.02	25.40	22.86	SBAU 1 18 Z	18	53.34	45.72	43.18
SBAU 1 12 Z	12	38.10	30.48	27.94	SBAU 1 20 Z	20	58.42	50.80	48.26

contact surface finish: tin-plated

Two rows

										
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]			
		A	B	C			A	B	C	
SBAU 06 S	6	12.90	7.80	5.08	SBAU 20 S	20	30.70	25.60	22.86	
SBAU 10 S	10	18.00	12.90	10.16	SBAU 26 S	26	38.30	33.20	30.48	
SBAU 14 S	14	23.00	18.00	15.24	SBAU 34 S	34	48.50	43.40	40.64	
SBAU 16 S	16	25.60	20.50	17.78						

contact surface finish: selective gold-plated: solder area gold-plated, IDC area nickel-plated

Use with ribbon cable:

round conductor flat strip:

AWG 28 = solid or stranded, AWG 30 = solid

conductor diameter:

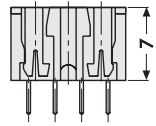
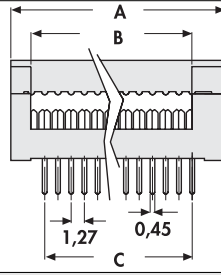
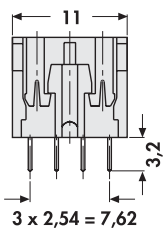
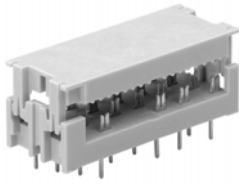
AWG 28 ... 30 = 0.09 ... 0.05 mm²

insulation-Ø:

max. 1.1 mm

Printed circuit connector

Four rows

									
art. no.	no. of contacts	dim. [mm]			art. no.	no. of contacts	dim. [mm]		
		A	B	C			A	B	C
SBAU 4 10 S	10	17.78	12.70	11.43	SBAU 4 26 S	26	38.10	33.02	31.75
SBAU 4 16 S	16	25.40	20.32	19.05	SBAU 4 50 S	50	68.58	63.50	62.23
SBAU 4 20 S	20	30.48	25.40	24.13					

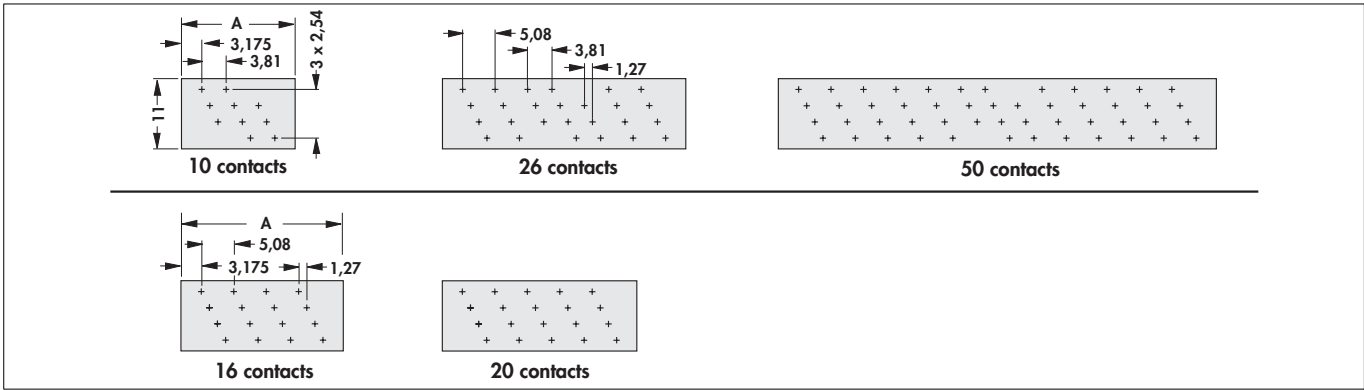
contact surface finish: **S** = selective-gold-plated: soldering area gold plated, IDC nickel-plated

Use with ribbon cable:

round conductor flat strip:
AWG 28 = solid or stranded, AWG 30 = solid

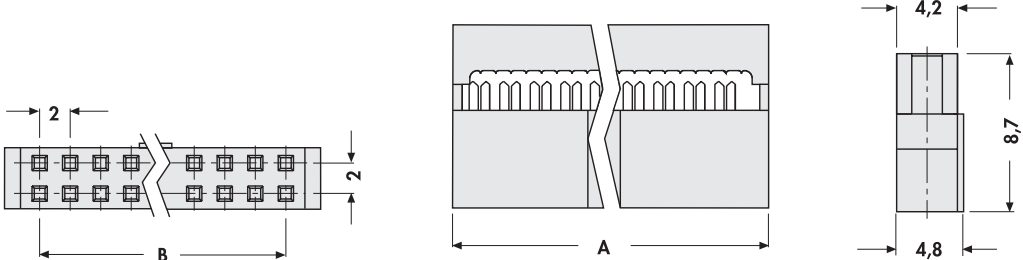
conductor diameter:
AWG 28 ... 30 = 0.09 ... 0.05 mm²
insulation-Ø:
max. 1.1 mm

Print-layout for SBAU 4 ...



Female connector

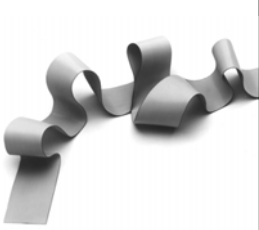
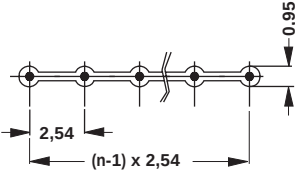
Two rows

			
art. no.	no. of contacts	dim. [mm]	
		A	B
PVY 20 S	20	25.10	18.00
PVY 40 S	40	45.30	38.00
PVY 44 S	44	49.30	42.00
PVY 50 S	50	55.10	48.00

contact surface finish: selective gold-plated

Accessories for flat ribbon cable and application tools

Flat ribbon cable - spacing 2,54 mm - suitable for connectors FV, SBAU 1

	
art. no.	no. of contacts
BK 01 32	32

Technical data:
current rating: 2 A; conductor resistance: ≤ 230 mΩ/m; capacitance: ≤ 65 pF/m symmetrical; wave impedance: 170 Ω symmetrical
cross section: AWG 28/~0.089 mm²; conductor: 7 x Ø 0,127 mm; operating voltage: 300 V_{eff} max. operating temperature range: -30 ... +105 °C

Bench press

height without handle: 28 cm, weight: 9.02 kg

	
art. no.	
VBK 1	

The bench press VBK 1 connects all contacts of IDC connector types KK, SB, FV, PV, PVZ and VFL in one simple operation.

By piercing through the insulation, the contacts form, due to their conception, a gas-tight and corrosion-proof connection.

Accessories, suitable for strip-line connector

art. no.	suitable for male connectors and female headers
KK W	KK
SB W	SB
PV W	PV, VFL, FLMP
PVY W	PVY
D W 9 37	D-Sub (9-37 contacts)

Removable locating frames for every indicated type available.

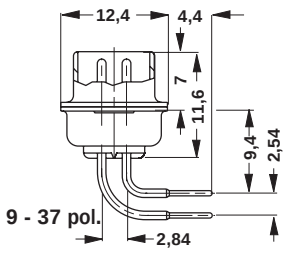
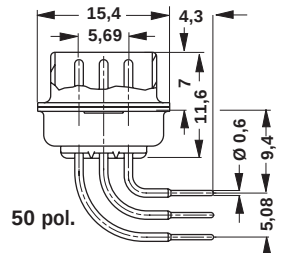
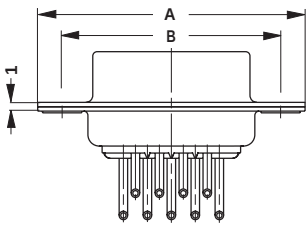
A

D-Sub standard connectors

B

C

D

						
art. no.	no. of contacts	contact	connection type	dim. [mm]		
				A	B	
DS 37 LA	37	male	90° angled	69.50	63.50	
DS 50 LA	50	male	90° angled	67.00	61.10	

cases: tin-plated
With turned precision contacts. The screened version.

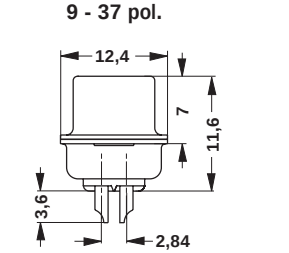
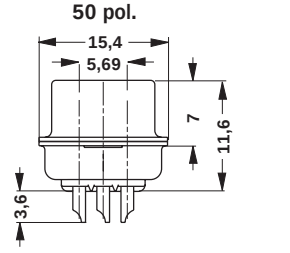
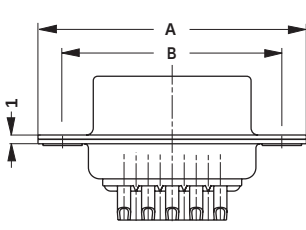
E

Female headers manual soldering

F

G

H

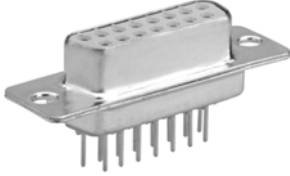
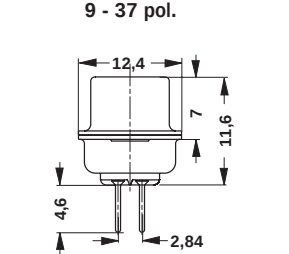
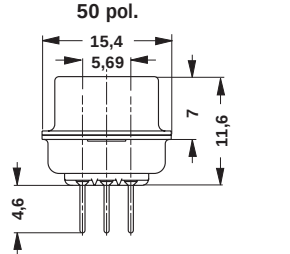
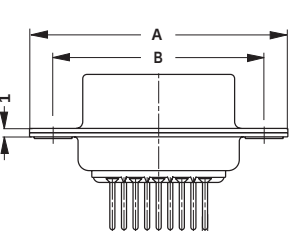
						
	9 - 37 pol.		50 pol.			
art. no.	no. of contacts	contact	connection type	dim. [mm]		
				A	B	
DB 09 L	9	female	manual soldering	30.80	25.00	
DB 15 L	15	female	manual soldering	39.20	33.30	
DB 25 L	25	female	manual soldering	53.10	47.00	
DB 37 L	37	female	manual soldering	69.50	63.50	
DB 50 L	50	female	manual soldering	67.00	61.10	

I

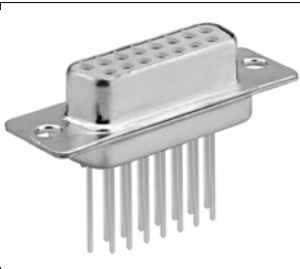
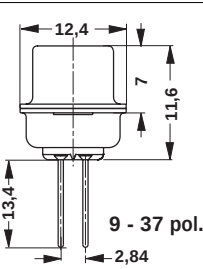
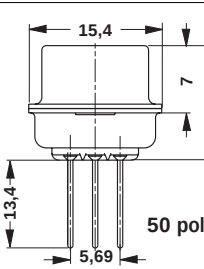
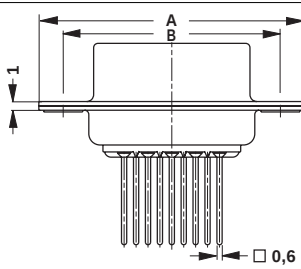
K

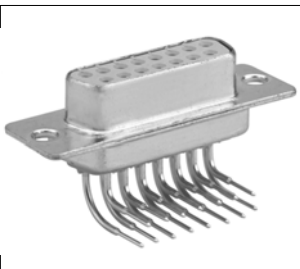
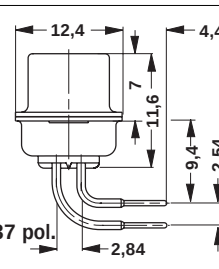
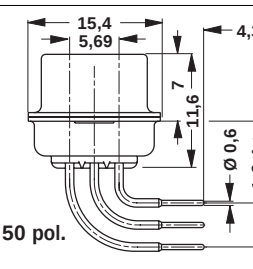
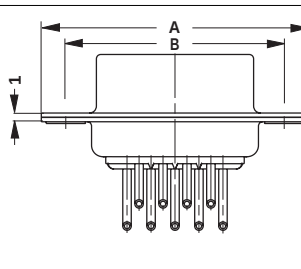
L

M

						
	9 - 37 pol.		50 pol.			
art. no.	no. of contacts	contact	connection type	dim. [mm]		
				A	B	
DB 09 T	9	female	dip soldering	30.80	25.00	
DB 15 T	15	female	dip soldering	39.20	33.30	
DB 25 T	25	female	dip soldering	53.10	47.00	
DB 37 T	37	female	dip soldering	69.50	63.50	
DB 50 T	50	female	dip soldering	67.00	61.10	

N

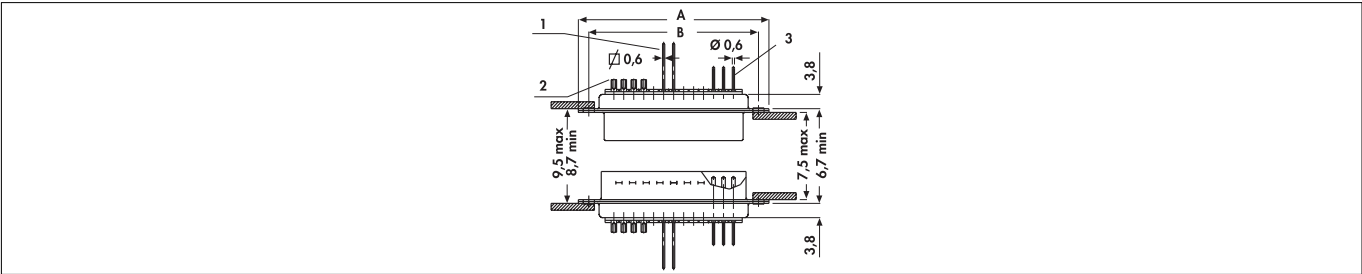
					
art. no.	no. of contacts	contact	connection type	dim. [mm]	
				A	B
DB 09 WW 3	9	female	wire wrap	30.80	25.00
DB 15 WW 3	15	female	wire wrap	39.20	33.30
DB 25 WW 3	25	female	wire wrap	53.10	47.00
DB 37 WW 3	37	female	wire wrap	69.50	63.50
DB 50 WW 3	50	female	wire wrap	67.00	61.10

					
art. no.	no. of contacts	contact	connection type	dim. [mm]	
				A	B
DB 25 LA	25	female	90° angled	53.10	47.00
DB 37 LA	37	female	90° angled	69.50	63.50
DB 50 LA	50	female	90° angled	67.00	61.10

cases: tin-plated

With turned precision contacts. The screened version.

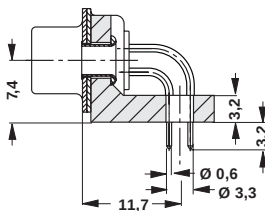
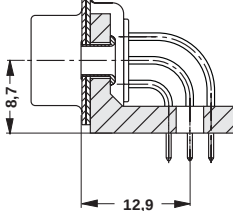
Einbaudarstellung

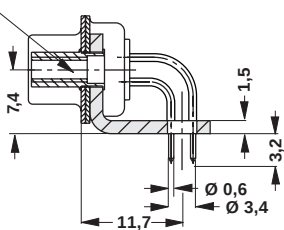


- 1 = wire wrap pin
- 2 = solder terminal
- 3 = solder pin for PCB

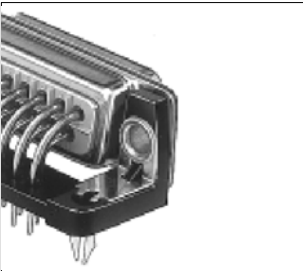
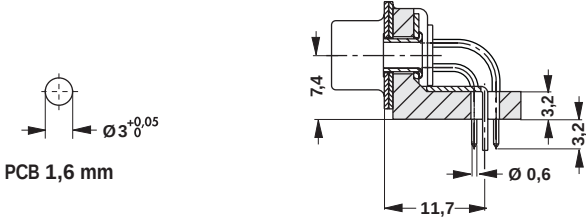
A
B
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K
L
M
N

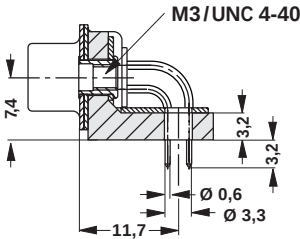
D-Sub standard connectors with mounting bracket

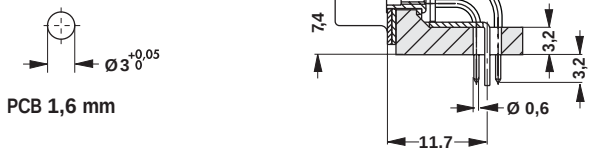
	9 - 37 pol.			
art. no.	contact	mounting angle		
DB WK 9	female	plastic angle, riveted		

	UNC 4-40		
art. no.	contact	mounting angle	
DS WMV 4 ...	male	metal angle with screw fastening, thread UNC 4-40	
DB WMV 4 ...	female	metal angle with screw fastening, thread UNC 4-40	

please indicate:	... no. of contacts
	9, 25

		
art. no.	contact	mounting angle
DS WR ...	male	plastic angle with earthing plate and snap-on clip
DB WR ...	female	plastic angle with earthing plate and snap-on clip
please indicate: ... no. of contacts 25, 37		

		
art. no.	contact	mounting angle
DS WE 3 ...	male	plastic angle with earthing plate and threaded rivet M3
DS WE 4 ...	male	plastic angle with earthing plate and threaded rivet UNC 4-40
DB WE 3 ...	female	plastic angle with earthing plate and threaded rivet M3
DB WE 4 ...	female	plastic angle with earthing plate and threaded rivet UNC 4-40
please indicate: ... no. of contacts 9, 15, 25, 37		

		
art. no.	contact	mounting angle
DS WR 3 ...	male	plastic angle with earthing plate, snap-on clip and threaded rivet M3
DS WR 4 ...	male	plastic angle with earthing plate, snap-on clip & threaded rivet UNC 4-40
DB WR 3 ...	female	plastic angle with earthing plate, snap-on clip and threaded rivet M3
DB WR 4 ...	female	plastic angle with earthing plate, snap-on clip & threaded rivet UNC 4-40
please indicate: ... no. of contacts 9, 15, 25, 37		

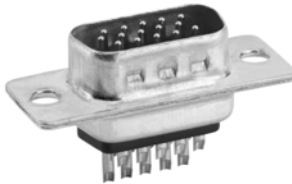
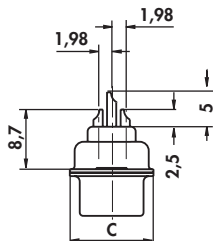
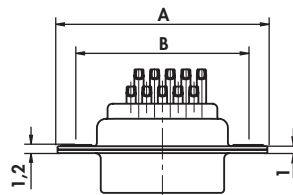
A

D-Sub connectors High Density

B

Male headers

C

									
art. no.	no. of contacts	contact	dim. [mm]						
			A	B	C	D	E (max.)	F	
	HD S 15 L	15	male	30.60	25.00	12.20	7.10	7.60	2.29
	HD S 26 L	26	male	39.00	33.30	12.20	6.80	7.00	2.29
	HD S 44 L	44	male	52.80	47.00	12.20	7.00	6.80	2.29

D

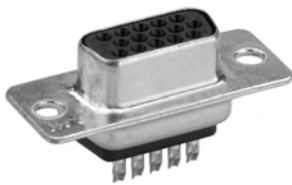
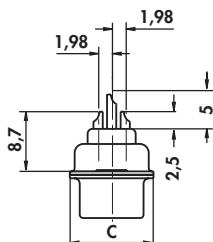
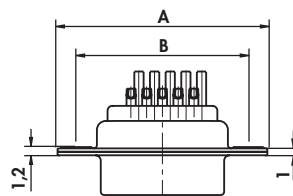
cases: tin-plated; kind of terminal: manual soldering

With turned precision contacts. The screened version.

E

Female headers

F

									
art. no.	no. of contacts	contact	dim. [mm]						
			A	B	C	D	E (max.)	F	
	HD B 15 L	15	female	30.80	25.00	12.20	7.60	7.10	2.29
	HD B 26 L	26	female	39.20	33.30	12.20	7.00	6.80	2.29
	HD B 44 L	44	female	53.00	47.00	12.20	6.80	7.00	2.29

G

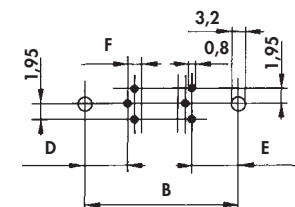
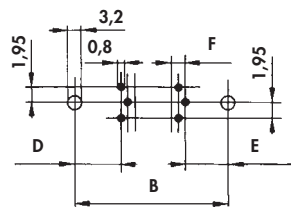
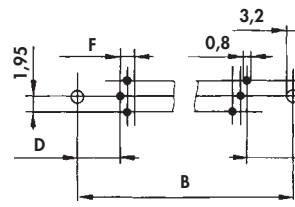
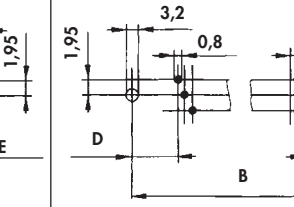
H

cases: tin-plated; kind of terminal: manual soldering

With turned precision contacts. The screened version.

I

K

							
1		2		3		4	

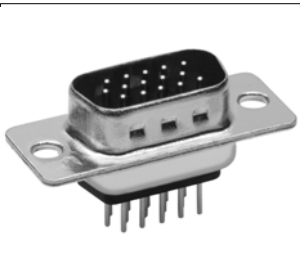
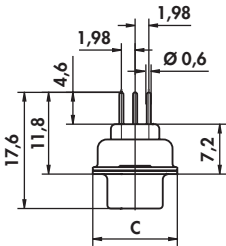
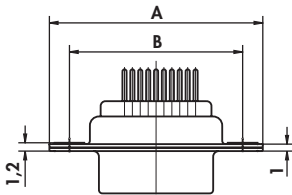
L

1 = male, 15 contacts; 2 = female, 15 contacts
3 = male, 26/44 contacts; 4 = female, 26/44 contacts

M

N

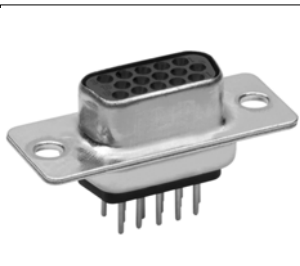
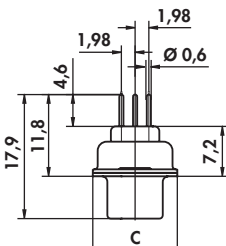
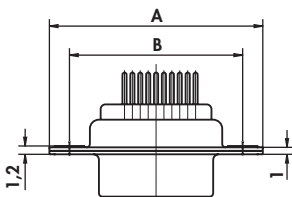
Male headers

								
art. no.	no. of contacts	contact	dim. [mm]					
			A	B	C	D	E (max.)	F
HD S 15 T	15	male	30.60	25.00	12.20	7.10	7.60	2.29

cases: tin-plated; kind of terminal: dip soldering

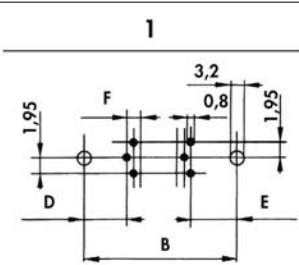
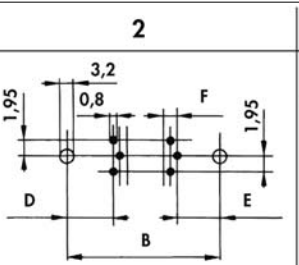
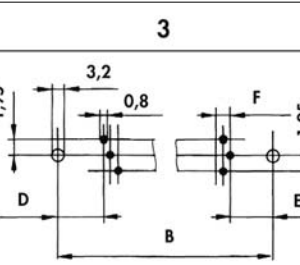
With turned precision contacts. The screened version.

Female headers

								
art. no.	no. of contacts	contact	dim. [mm]					
			A	B	C	D	E (max.)	F
HD B 15 T	15	female	30.80	25.00	12.20	7.60	7.10	2.29
HD B 26 T	26	female	39.20	33.30	12.20	7.00	6.80	2.29

cases: tin-plated; kind of terminal: dip soldering

With turned precision contacts. The screened version.

		
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1 = male, 15 contacts; 2 = female, 15 contacts; 3 = female, 26 contacts

A

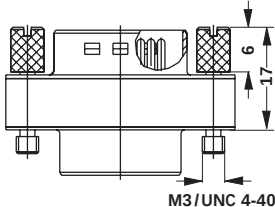
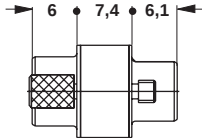
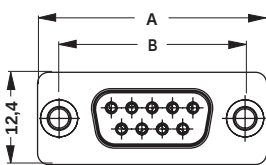
D-Sub filter connector

B

Adapter, 9-37 contacts

capacity per contact: 1000 pF

C

				
art. no.	no. of contacts	type of thread	dim. [mm]	
			A	B
FD A ... 09 1000	9	3	30.80	25.00
FD A ... 15 1000	15	3	39.20	33.30
FD A ... 25 1000	25	3	53.10	47.00
FD A ... 37 1000	37	3	69.50	63.50
please indicate: ... type of thread 3 = M 3 4 = UNC 4-40				

D

E

F

Standard installation dimensions.
HF-tight, stud bolt mountable on both sides.
Compatible with standard accessories.

G

H

I

K

L

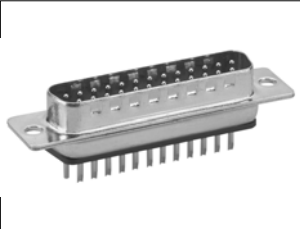
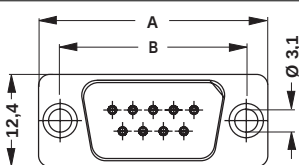
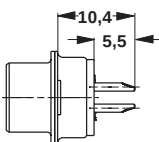
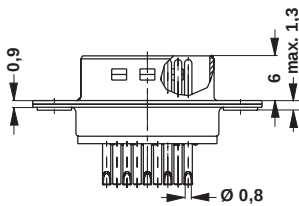
M

N

D-Sub filter connector

Male headers, mit Lötkelch

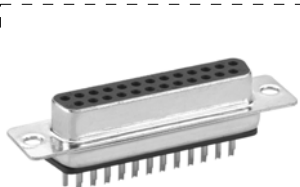
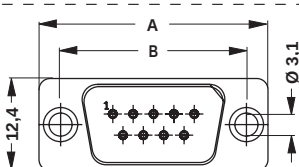
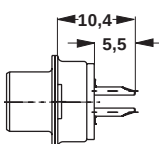
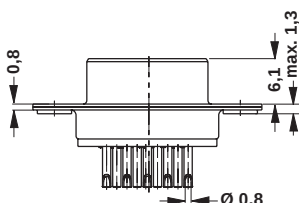
capacity per contact: 1000 pF - other components on request; geeignet für Kabel AWG 22

				
art. no.	no. of contacts	contact	dim. [mm]	
			A	B
FD S 09 L 1000	9	male	30.80	25.00
FD S 15 L 1000	15	male	39.20	33.30
FD S 25 L 1000	25	male	53.10	47.00
FD S 37 L 1000	37	male	69.50	63.50

Standard installation dimensions.
HF-tight, closed metal rear panel.
Compatible with standard accessories.

Female headers, mit Lötkelch

capacity per contact: 1000 pF - other components on request; geeignet für AWG 22

				
art. no.	no. of contacts	contact	dim. [mm]	
			A	B
FD B 09 L 1000	9	female	30.80	25.00
FD B 15 L 1000	15	female	39.20	33.30
FD B 25 L 1000	25	female	53.10	47.00
FD B 37 L 1000	37	female	69.50	63.50

Standard installation dimensions.
HF-tight, closed metal rear panel.
Compatible with standard accessories.

A

D-Sub connector for flat ribbon cable

B

C

D

E

F

G

H

I

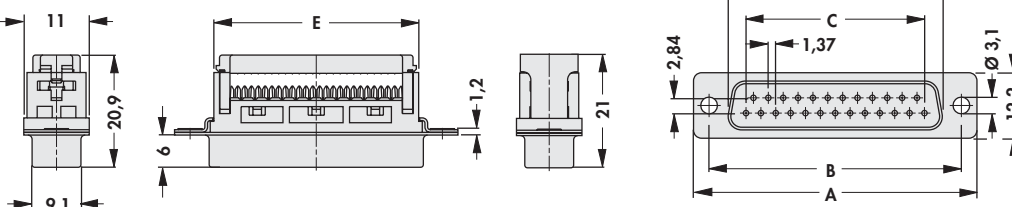
K

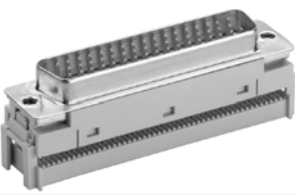
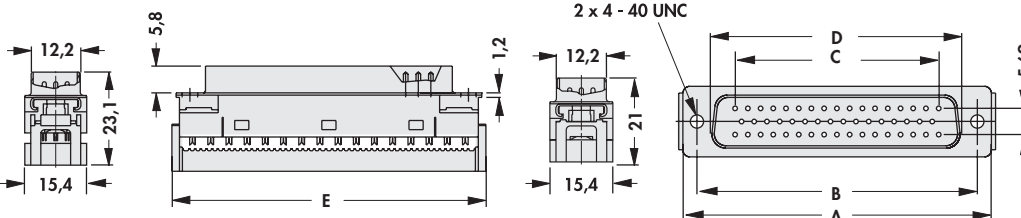
L

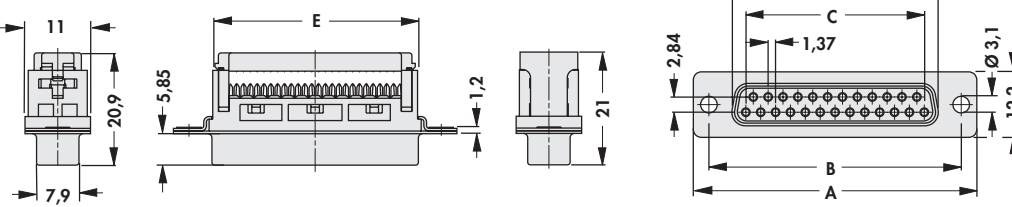
M

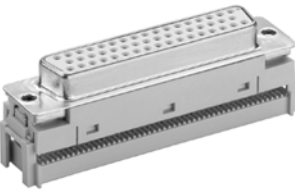
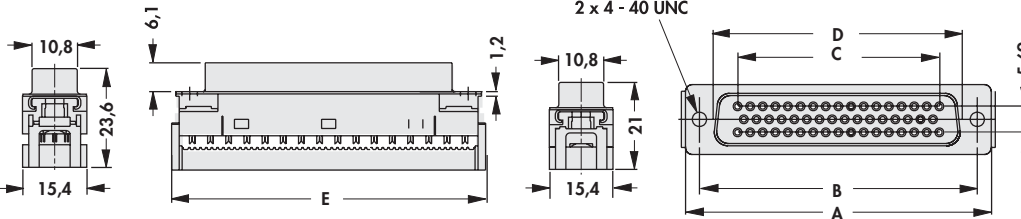
N

Male headers and female headers

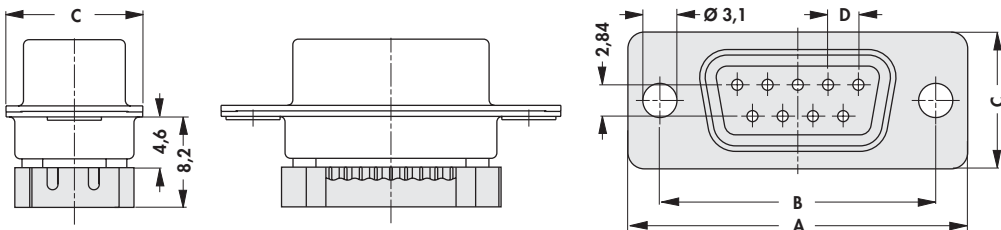
							
art. no.	no. of contacts	contact	dim. [mm]				
			A	B	C	D	E (max.)
DS BK 09	9	male	30.60	25.00	10.96	17.90	16.10
DS BK 15	15	male	39.00	33.30	19.33	26.20	23.90
DS BK 25	25	male	52.80	47.00	33.13	39.90	38.10
DS BK 37	37	male	69.20	63.50	49.70	56.30	54.70

							
art. no.	no. of contacts	contact	dim. [mm]				
			A	B	C	D	E (max.)
DS BK 50	50	male	66.80	61.10	44.20	54.00	68.60

							
art. no.	no. of contacts	contact	dim. [mm]				
			A	B	C	D	E (max.)
DB BK 09	9	female	30.60	25.00	10.96	16.30	16.10
DB BK 15	15	female	39.00	33.30	19.33	24.50	23.90
DB BK 25	25	female	52.80	47.00	33.13	38.50	38.10
DB BK 37	37	female	69.20	63.50	49.70	54.80	54.70

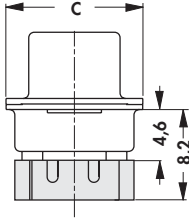
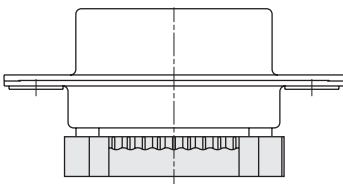
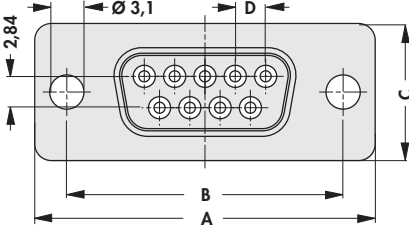
							
art. no.	no. of contacts	contact	dim. [mm]				
			A	B	C	D	E (max.)
DB BK 50	50	female	66.80	61.10	44.20	52.40	68.60

Male headers, low profile

						
art. no.	no. of contacts	contact	dim. [mm]			
			A	B	C	D
	DS BK 09 LP	9 male	30.80	25.00	12.40	2.74
	DS BK 15 LP	15 male	39.20	33.30	12.40	2.74
	DS BK 25 LP	25 male	53.10	47.00	12.40	2.77
DS BK 37 LP	37 male	69.50	63.50	12.40	2.77	

useable ribbon cable: AWG 26 - 28

Female headers, low profile

						
art. no.	no. of contacts	contact	dim. [mm]			
			A	B	C	D
DB BK 09 LP	9	female	30.80	25.00	12.40	2.74
DB BK 25 LP	25	female	53.10	47.00	12.40	2.77
DB BK 37 LP	37	female	69.50	63.50	12.40	2.77

useable ribbon cable: AWG 26 - 28

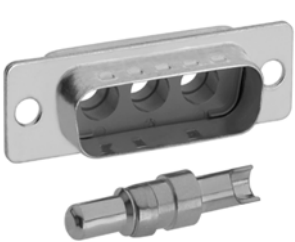
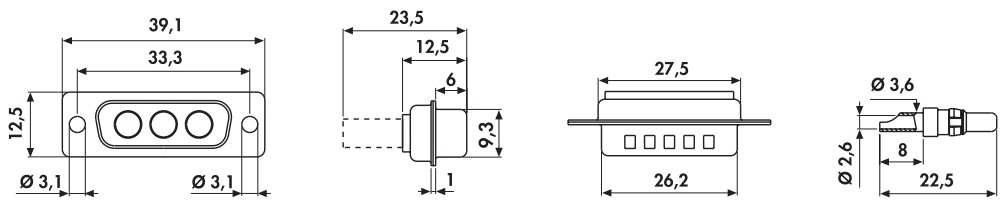
A

D-Sub mixed layout connectors

B

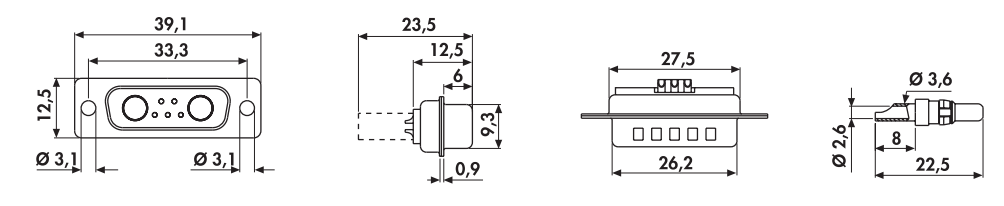
Male headers - suitable for standard D-Sub accessories

3 high current contacts

	
art. no.	contact
DSM 3K3 L20	male

D

2 high current contacts, 5 signal contacts

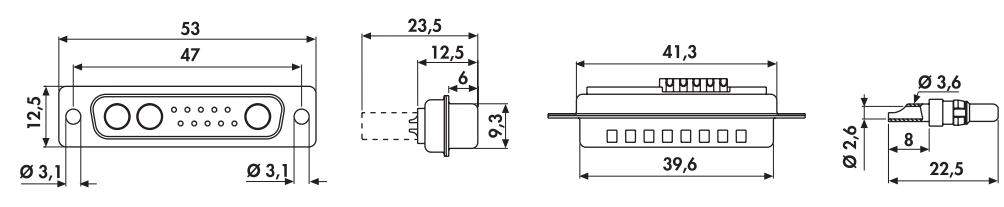
	
art. no.	contact
DSM 7K2 L20	male

E

F

G

3 high current contacts, 10 signal contacts

	
art. no.	contact
DSM 13K3 L20	male

H

I

Gold-plated contacts.

With high current contacts up to 20 A.

For cables up to AWG 16.

K

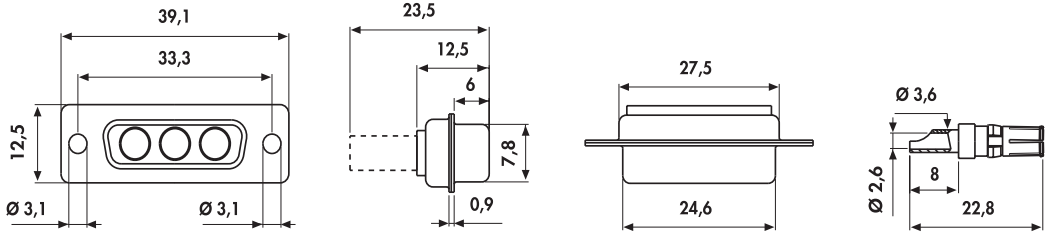
L

M

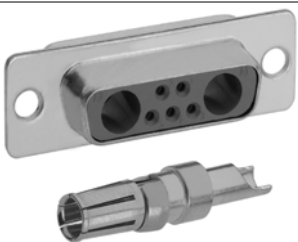
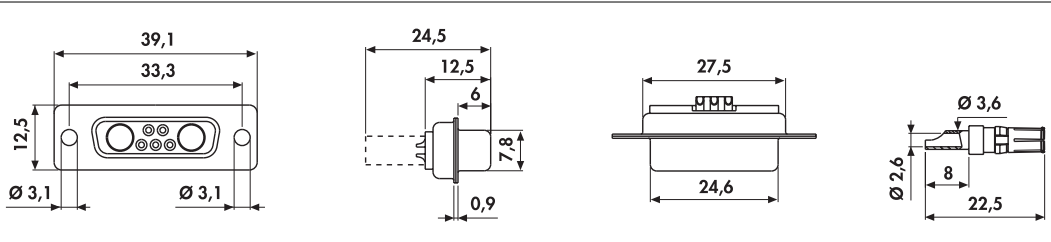
N

Female headers - suitable for standard D-Sub accessories

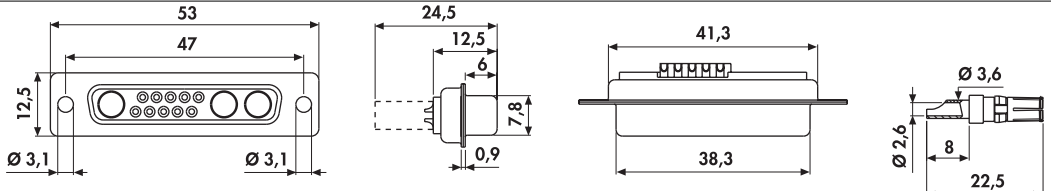
3 high current contacts

	
art. no.	contact
DBM 3K3 L20	female

2 high current contacts, 5 signal contacts

	
art. no.	contact
DBM 7K2 L20	female

3 high current contacts, 10 signal contacts

	
art. no.	contact
DBM 13K3 L20	female

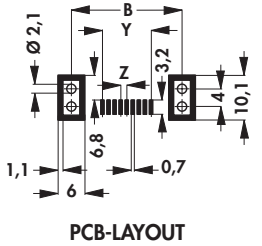
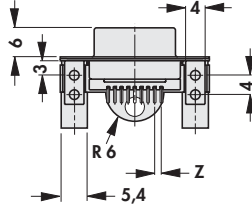
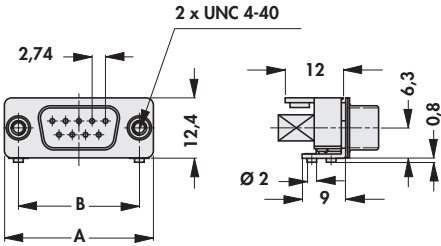
Gold-plated contacts.

With high current contacts up to 20 A.
For cables up to AWG 16.

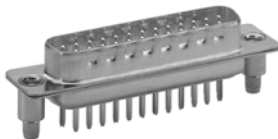
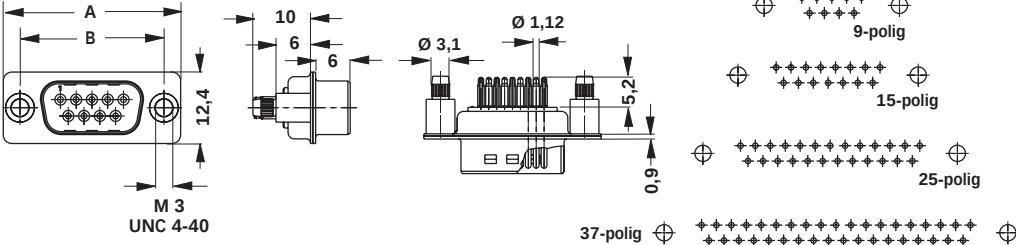


D-Sub in SMD-mounting

Male headers

 PCB-LAYOUT					
art. no.	no. of contacts	dim. [mm]			
		A	B	Y	Z
DS 09 SMD TR	9	30.80	25.00	10.98	1.37
DS 15 SMD TR	15	39.20	33.30	19.20	1.37
DS 25 SMD TR	25	53.10	47.00	33.12	1.38
DS 37 SMD TR	37	69.50	63.50	49.68	1.38

packing: tape and reel (150 pcs/reel); reel outer diameter 330 mm

				
art. no.	no. of contacts	type of thread	dim. [mm]	
			A	B
DS ... 9 P	9	3	30.80	25.00
DS ... 15 P	15	3	39.20	33.30
DS ... 25 P	25	3	53.10	47.00
DS ... 37 P	37	3	69.50	63.50
please indicate: ... type of thread 3 = M 3 4 = UNC 4-40				

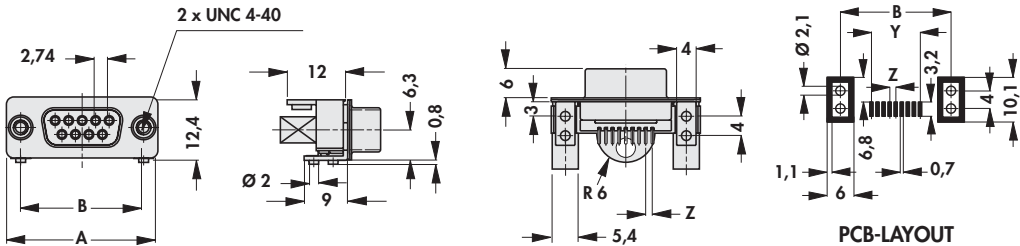
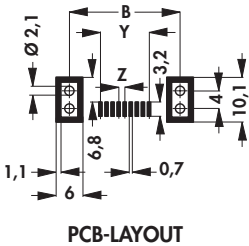
A

D-Sub in SMD-mounting

B

Female headers

C

	 					
art. no.	no. of contacts	dim. [mm]				
		A	B	Y	Z	
	DB 09 SMD TR	9	30.80	25.00	10.98	1.37
	DB 15 SMD TR	15	39.20	33.30	19.20	1.37
	DB 25 SMD TR	25	53.10	47.00	33.12	1.38
	DB 37 SMD TR	37	69.50	63.50	49.68	1.38

D

packing: tape and reel (150 pcs/reel); reel outer diameter 330 mm

E

F

G

H

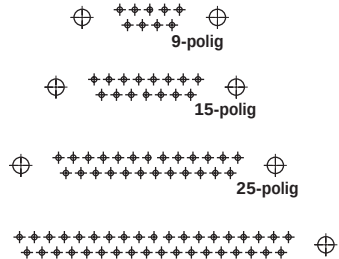
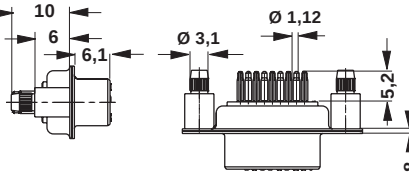
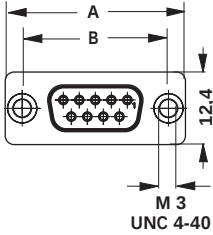
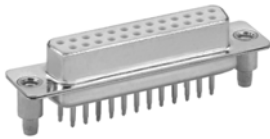
I

K

L

M

N

				
art. no.	no. of contacts	type of thread	dim. [mm]	
			A	B
DB ... 9 P	9	3	30.80	25.00
DB ... 15 P	15	3	39.20	33.30
DB ... 25 P	25	3	53.10	47.00
DB ... 37 P	37	3	69.50	63.50
please indicate: ... type of thread 3 = M 3 4 = UNC 4-40				

A

D-Sub hoods, standard

B

C

D

E

F

G

H

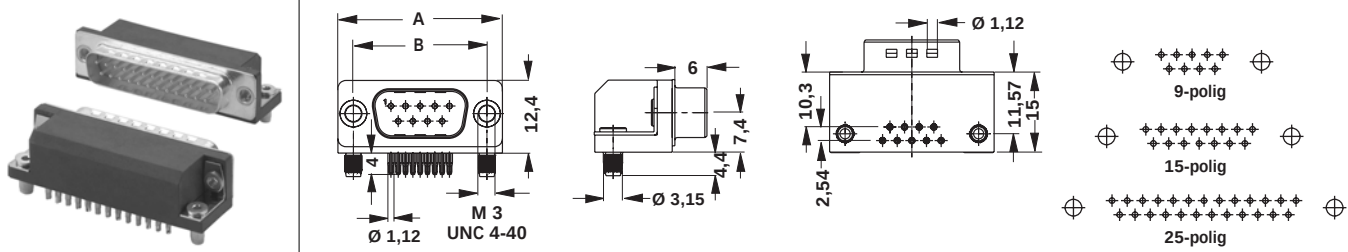
I

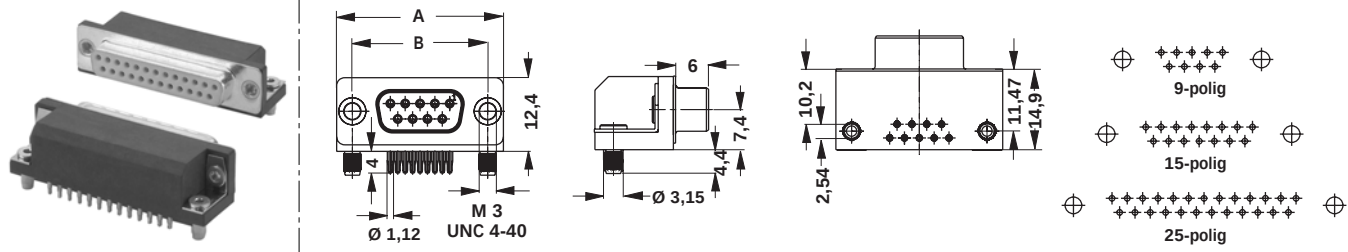
K

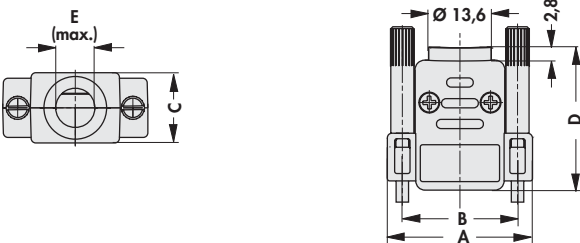
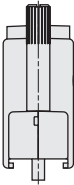
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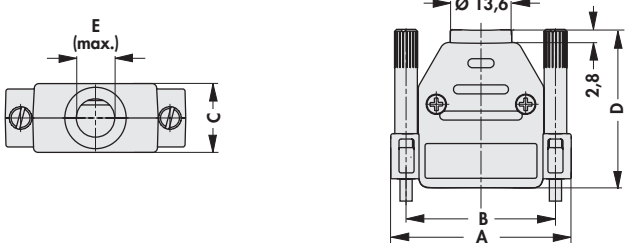
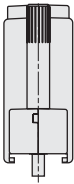
M

N

				
art. no.	no. of contacts	type of thread	dim. [mm]	
			A	B
DS WP ... 9	9	3	30.80	25.00
DS WP ... 15	15	3	39.20	33.30
DS WP ... 25	25	3	53.10	47.00
DS WP ... 37	37	3	69.50	63.50
please indicate: ... type of thread 3 = M 3 4 = UNC 4-40				

				
art. no.	no. of contacts	type of thread	dim. [mm]	
			A	B
DB WP ... 9	9	3	30.80	25.00
DB WP ... 15	15	3	39.20	33.30
DB WP ... 25	25	3	53.10	47.00
DB WP ... 37	37	3	69.50	63.50
please indicate: ... type of thread 3 = M 3 4 = UNC 4-40				

		
art. no.	no. of contacts	dim. [mm]
		E (max.) A B C D
DH 09 ...	9	8.50 31.50 25.00 15.20 31.00
please indicate: ... case surface: S = plastic, black M = plastic, metallized		

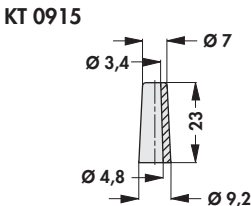
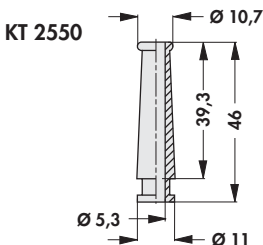
		
art. no.	no. of contacts	dim. [mm]
		E (max.) A B C D
DH 15 ...	15	8.50 40.00 33.30 15.20 33.50
DH 25 ...	25	11.00 53.50 47.00 15.20 38.00
DH 37 ...	37	11.00 70.00 63.50 15.20 40.00
DH 50 ...	50	12.00 67.50 61.10 18.20 40.00
please indicate: ... case surface: S = plastic, black M = plastic, metallized		

E = max. diameter of the bushing in mm
Threaded bolt UNC 4-40. Large cable space with few components.

version: 9-37 can be mounted in series in 3 HP grid, thus especially suitable for 19" technology.
plastic material according: to UL 94:V-0

Suitable cable bushing

Protects the cable against damage by buckling.

		
art. no.	for no. of contacts	
KT 0915	9, 15	
KT 2550	25, 37, 50	

A

D-Sub hoods, standard

B

With self-cutting threaded bolt

straight cable outlet with pre-assembled strain relief

C

D

E

F

G

H

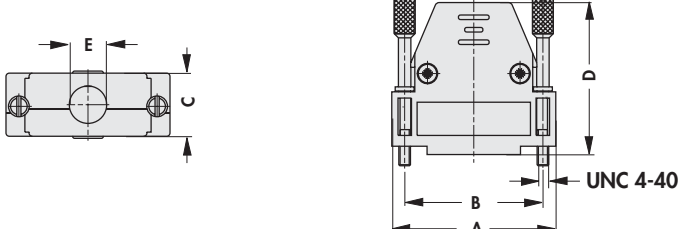
I

K

L

M

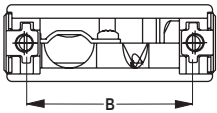
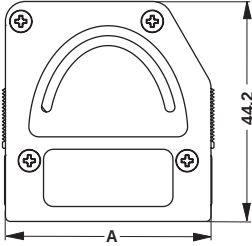
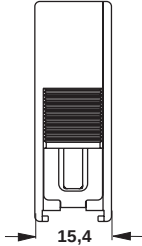
N

						
art. no.	no. of contacts	dim. [mm]				
		E (max.)	A	B	C	D
DH SG 09 ...	9	8.00	31.00	25.00	16.00	35.60
DH SG 15 ...	15	9.00	39.50	33.30	16.00	36.60
DH SG 25 ...	25	10.00	53.00	47.00	16.00	41.00
DH SG 37 ...	37	11.00	69.50	63.50	16.00	45.30
DH SG 50 ...	50	14.00	67.00	61.10	19.80	51.40
please indicate: ... case surface: S = plastic, black M = plastic, metallized						

material: thermoplastic ABS

D-Sub hoods with quick-action locking system

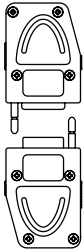
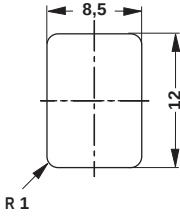
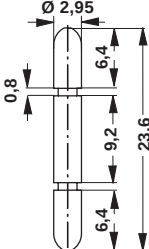
straight and side-gated cable outlet

			
art. no.	no. of contacts	dim. [mm]	
DH SV 09 S	9	A	B
DH SV 15 S	15	33.00	25.00
DH SV 25 S	25	41.30	33.30
		55.00	47.00

option: metallised surface on request

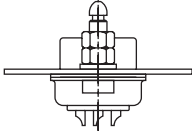
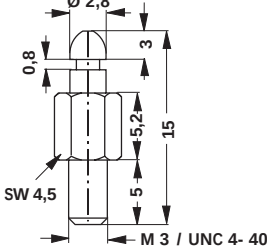
material: thermoplastic ABS

Accessories – latch pin for hood – hood connection

			
art. no.			
RS HH			

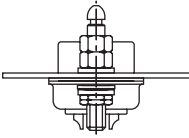
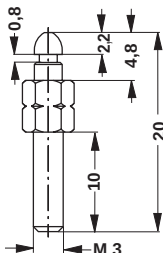
Accessories – latch pin for plug connector – hood connection

latch pin for connectors with thread M3 / UNC 4-40

		
art. no.	type of thread	
RS SH 3	M 3	
RS SH 4	UNC 4-40	

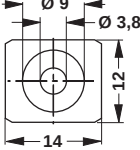
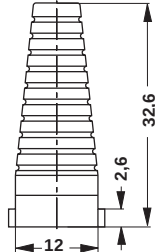
Accessories – latch pin for plug connector – hood connection

latch pin for existing connector with through hole

	  
art. no.	
RS SH D	

Cable sleeve - quick-acting closure hood DH SV ...

for cable diameters 3-9 mm

	 
art. no.	no. of contacts
KT SV	9, 15, 25

Cable sleeves are supplied with chamfers, which are adequate to a diameter-grading of 0.5 mm. They can be cut off depending on the existing diameter of the cable.

flammability: UL 94 HB

9-50 pins



Width C - 3 HP.

version: 9-37 pins can be mounted in series in 3 HP grid, thus especially suitable for 19" technology

plastic material: according to UL 94 V-0

Metallized version with excellent shielding against electrical and magnetic alternating fields.

2-at side cable outputs (25-50 pins).

40° opening, open (9-50 pins). 90° opening, covered (25-50 pins).

Integrated dust protective shroud.

Captive latching screws with UNC 4-40 treads.

art. no.	no. of contacts	dim. [mm]				
		A	B	C	D	E (max.)
DH 09 ...	9	31.50	25.00	15.20	37.00	8.50
DH 15 ...	15	40.00	33.30	15.20	37.00	8.50
DH 25 ...	25	53.50	47.00	15.20	41.00	11.00
DH 37 ...	37	70.00	63.50	15.20	41.00	11.00
DH 50 ...	50	67.80	61.10	18.20	41.00	12.00
please indicate:		... case surface: K = plastic, black KM = plastic, metallized				

E = max. diameter of the bushing in mm

A

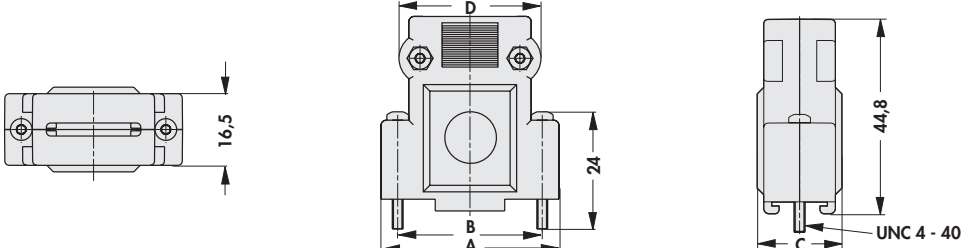
D-Sub cover for flat cable

B

D-Sub cover for flat cable, 9-25 contacts

for D-Sub connectors DS BK ... and DB BK ...

C

					
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
DH BK 09 ...	9	33.00	25.00	19.50	24.60
DH BK 25 ...	25	54.80	47.00	19.50	47.60
please indicate: ... case surface: K = plastic, grey KM = plastic, metallized					

material: ABS; Internal strain relief. Two-part plastic hood with UNC 4-40 screws.

F

G

H

I

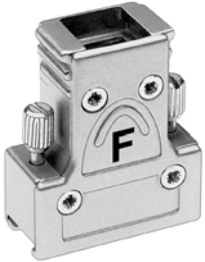
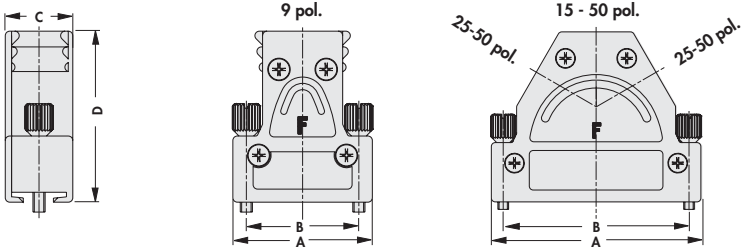
K

L

M

N

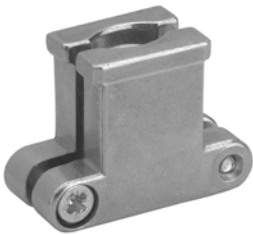
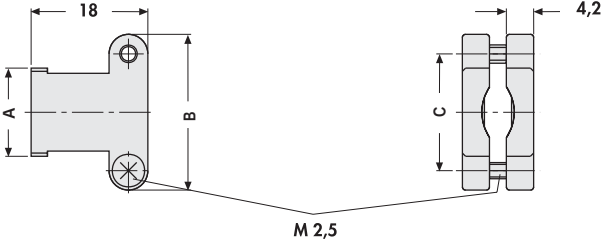
Vertical cable clamp

								
art. no.	no. of contacts	cable clamps	crimp flange	crimp sleeve	dim. [mm]			
					A	B	C	D
DH 09 VM	9	KKS 937	CF ...	CH ...	31.00	25.00	15.00	38.00
DH 15 VM	15	KKS 937	CF ...	CH ...	39.50	33.30	15.00	35.00
DH 25 VM	25	KKS 937	CF ...	CH ...	53.00	47.00	15.00	43.00
DH 37 VM	37	KKS 937	CF ...	CH ...	69.50	63.50	15.00	43.00
DH 50 VM	50	KKS 050	CF ...	CH ...	67.20	61.10	17.80	43.00

Lateral knurled screws with UNC 4-40 thread. Easy mounting due to pre-tapped thread.
HF-tight due to crimp flange CF ...

Accessories for D-Sub hoods made of full metal - screwable cable clamp

For clamping the screen and as strain relief.

				
art. no.	no. of contacts	dim. [mm]		
		A	B	C
KKS 050	50	19.80	25.00	19.00

A

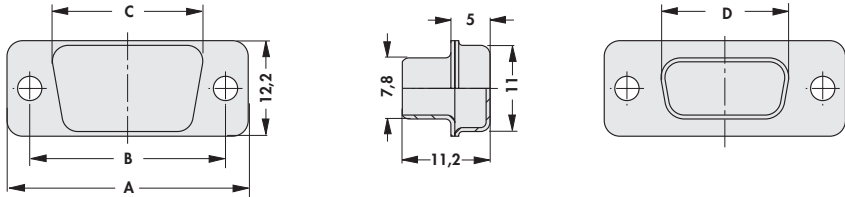
Cut-out cover

B

Cover for D-Sub cut outs in front and backpanel

suitable for EMC application, closed one side

C

					
art. no.	no. of contacts	dim. [mm]			
		A	B	C	D
BADM 09	9	30.80	25.00	19.20	16.30
BADM 15	15	39.30	33.30	27.50	24.50
BADM 25	25	53.00	47.00	41.20	38.30
BADM 37	37	69.40	63.50	57.70	54.80

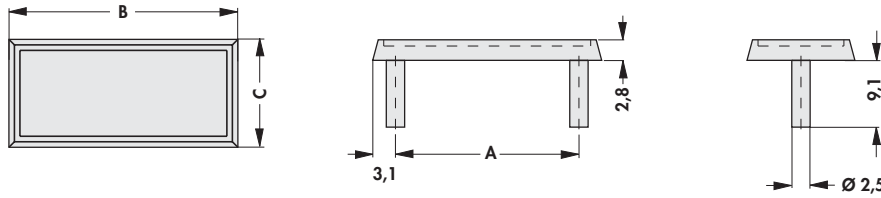
D

surface metal case: tin-plated

Blank covers for exact sealing of unused D-Sub cut outs in front- and backpanels.
Size and form are as D-Sub housings.

F

G

				
art. no.	no. of contacts	dim. [mm]		
		A	B	C
BADP 09	9	25.00	31.20	14.70
BADP 15	15	33.30	39.60	14.70
BADP 25	25	47.00	53.30	14.70
BADP 37	37	63.50	69.90	14.70
BADP 50	50	61.10	67.60	14.70

H

Plastic cover, blank, for blind D-Sub and other connector cutouts in front and rear panels.
Easy to mount with enclosed clamping springs.

material: ABS
flammability: UL 94 V-0
colour: black
clamping spring: steel

K

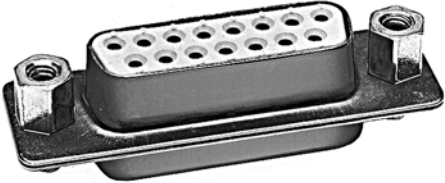
L

M

N

Screw fastening, mounted

2 screw fastenings incl. spacer, washer, nut



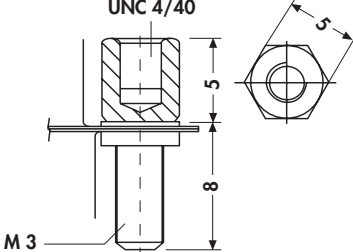
art. no.
... V

Please add a V to the corresponding art. no. ...

Screw fastening, loose

2 separate screw fasteners, with washer and nut





art. no.
V 2

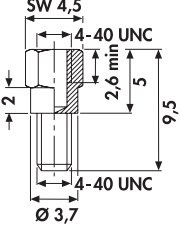
material:

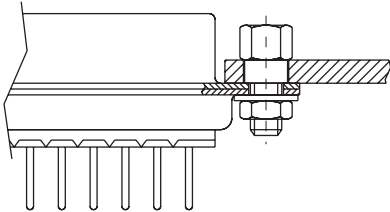
screw - brass nickel-plated; **screw-nut** - steel nickel-plated; **washer** - steel tin-plated

Screw fastening for assembly of cases, separate

2 screw fastenings incl. spacer, washer, nut







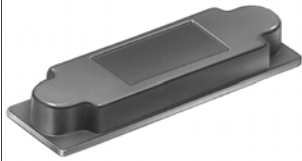
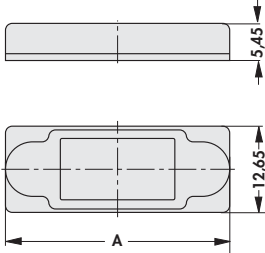
art. no.
VG 2

material:

screw and screw-nut - steel nickel-plated; **washer** - steel tin-plated

HF-tight caps, male headers and female headers

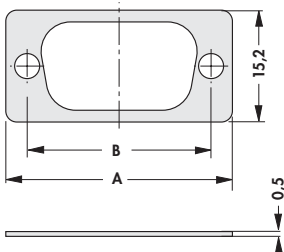
prevent HF-radiation at open interfaces

				
	art. no.	no. of contacts	colour	contact
				dim. [mm] A
	HFK S 09	9	blue	male
	HFK S 15	15	blue	male
	HFK S 25	25	blue	male
	HFK B 09	9	red	female
	HFK B 15	15	red	female
	HFK B 25	25	red	female

material: ABS plastics UL 94:V-0, nickel-plated on the inside
flammability: <1 Ω
temperature range: -25 °C ... +70 °C

HF-seals

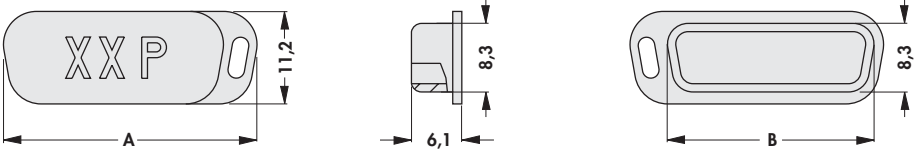
as seal between plug and housing

			
	art. no.	no. of contacts	dim. [mm]
			A B
	HFD 09	9	30.80 25.00
	HFD 15	15	39.40 33.30
	HFD 25	25	53.40 47.00
	HFD 37	37	70.70 63.50

material: silicone, filling of silvered copper particles

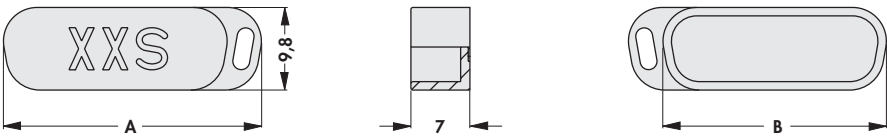
Extremely low contact resistance.

For male headers

							
art. no.	no. of contacts	dim. [mm]					
		A	B				
SSK S 09	9	22.50	18.20				
SSK S 15	15	30.60	26.50				
SSK S 25	25	43.70	39.80				
SSK S 37	37	60.30	56.20				

material: polyethylere

For female headers

							
art. no.	no. of contacts	dim. [mm]					
		A	B				
SSK B 09	9	22.30	17.00				
SSK B 15	15	30.60	25.00				
SSK B 25	25	44.10	38.65				
SSK B 37	37	60.70	55.30				

material: polyethylere

A

B

C

D

E

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G

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I

K

L

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N

A

Brackets for PC

B

C

D

E

F

G

H

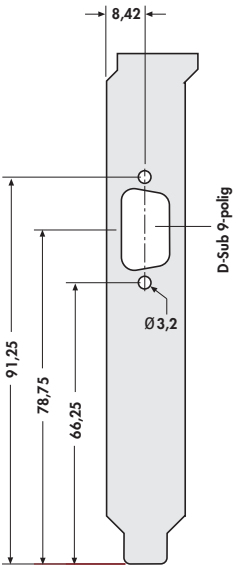
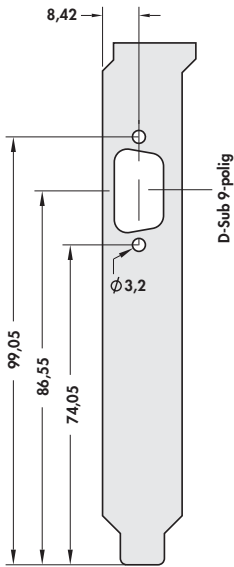
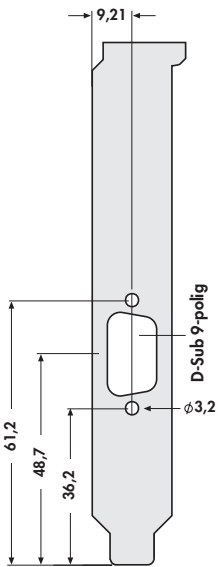
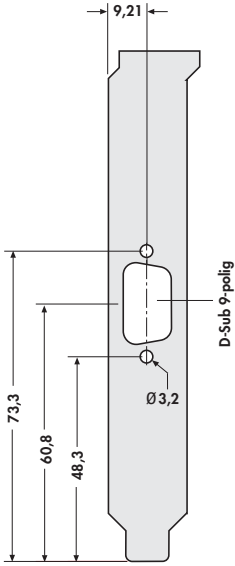
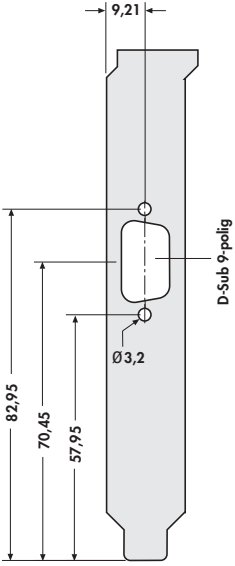
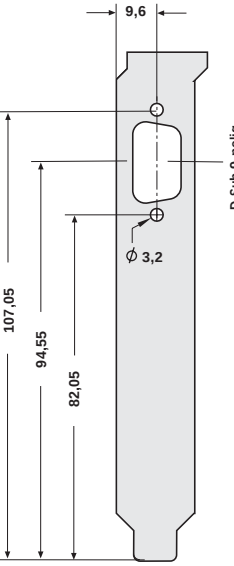
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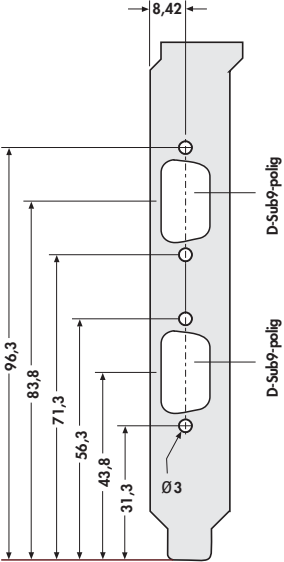
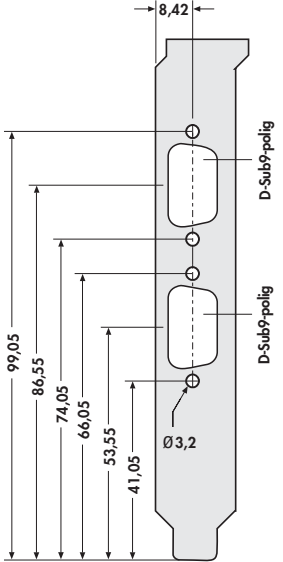
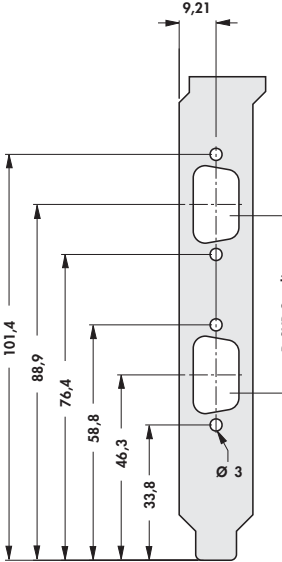
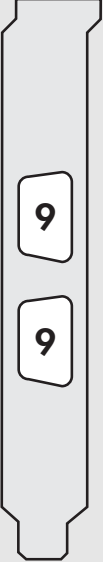
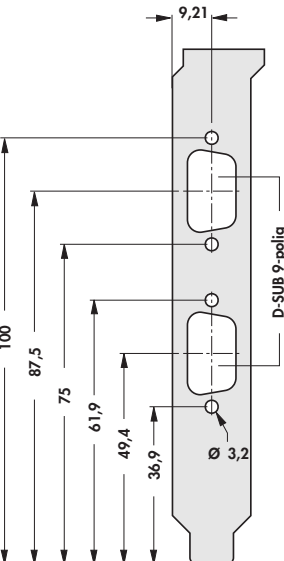
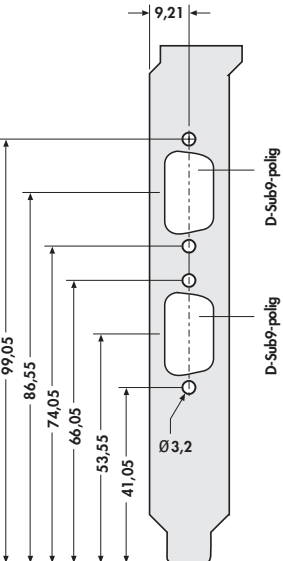
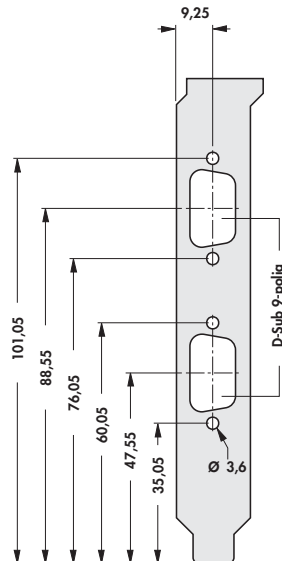
K

L

M

N

	PCI 006 ... 	PCI 007 ... 	PCI 055 ... 
	PCI 004 ... 	PCI 005 ... 	PCI 029 L 

PCI 011 ... 	PCI 013 ... 	PCI 039 ... 	
PCI 041 ... 	PCI 012 ... 	PCI 040 O 	

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

B

C

D

E

F

G

H

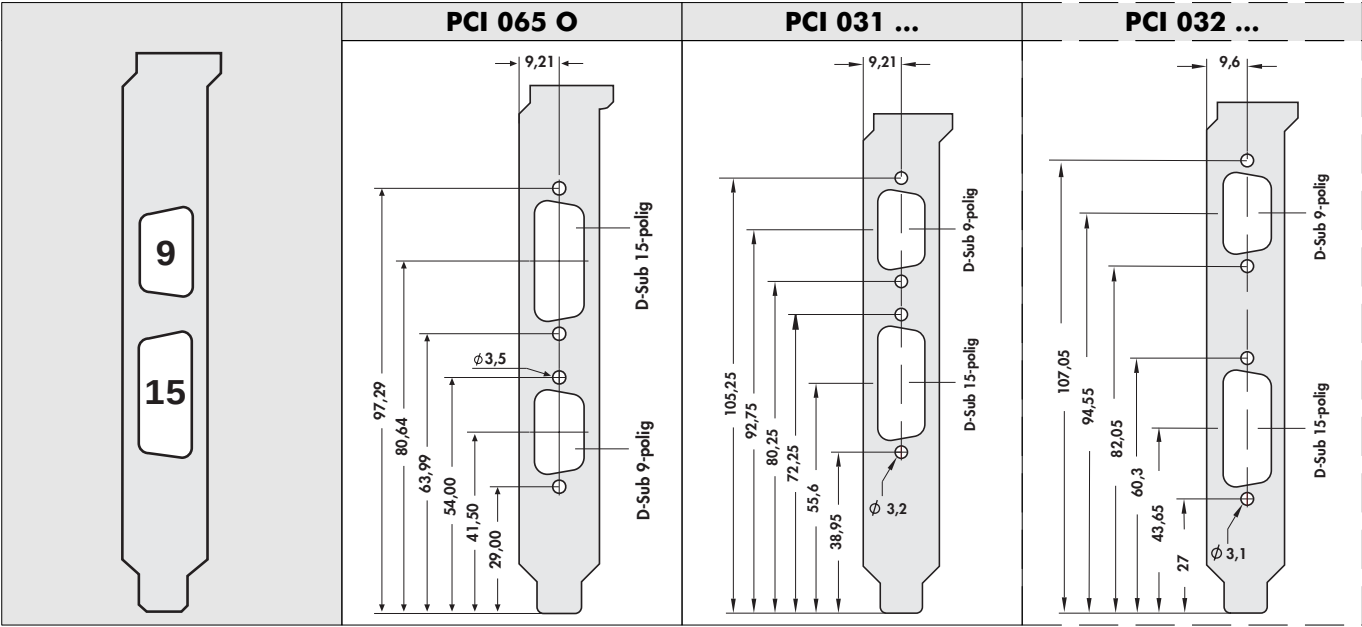
I

K

L

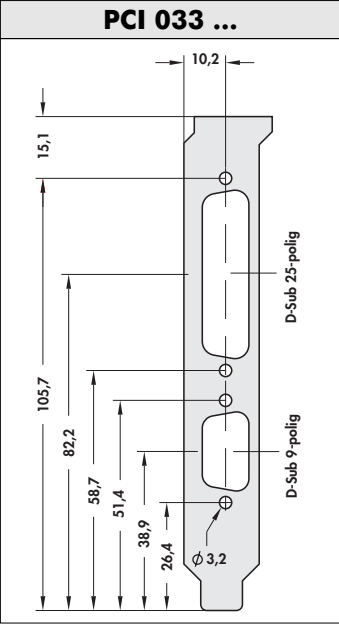
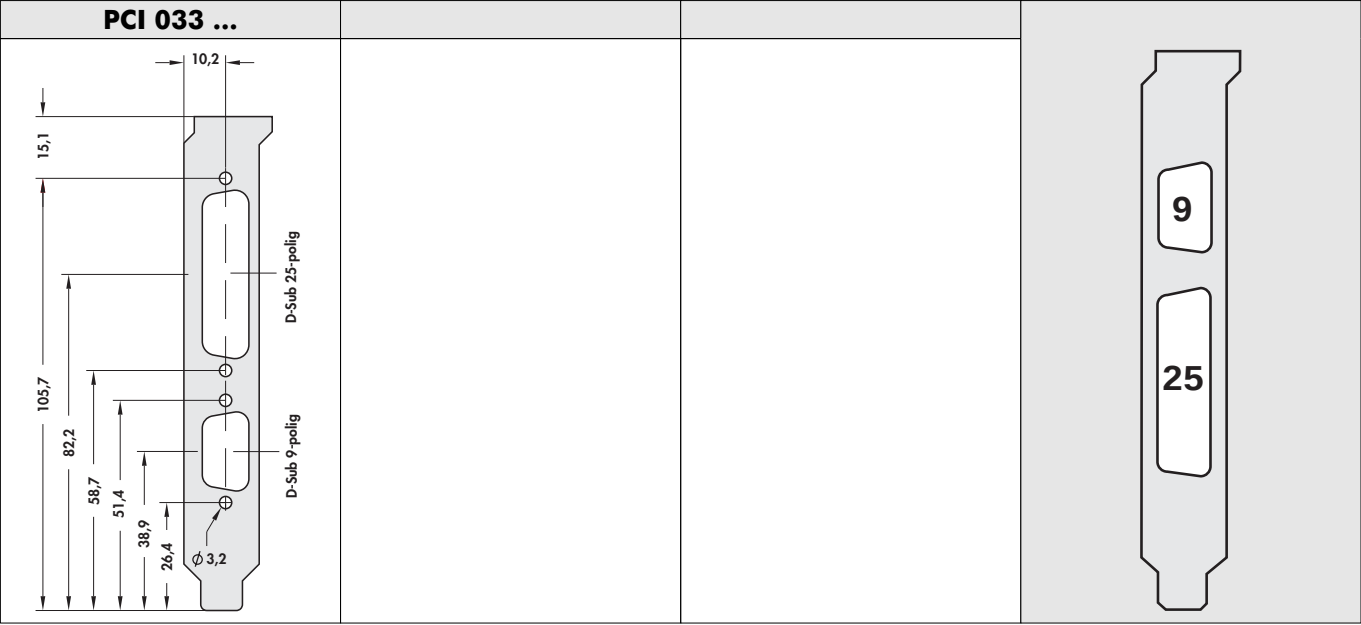
M

N



K 9

If you do not find a suitable bracket,
please use the PCI / KHPC design sheet
at the end of section "K".

PCI 033 ...			
			

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

B

C

D

E

F

G

H

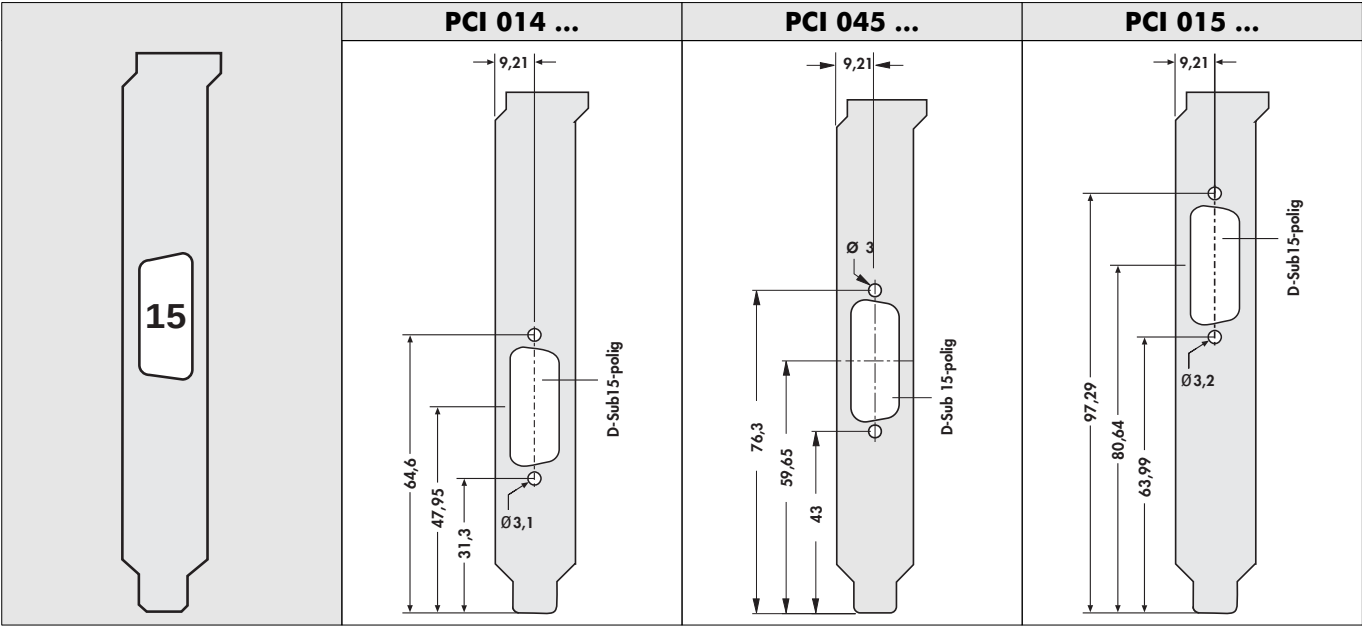
I

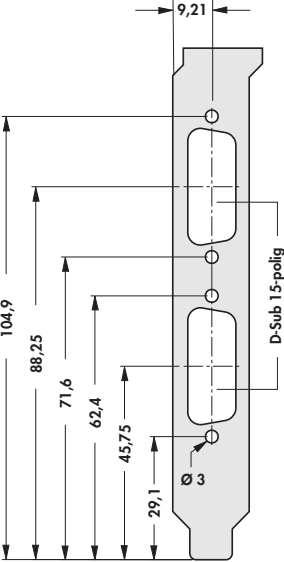
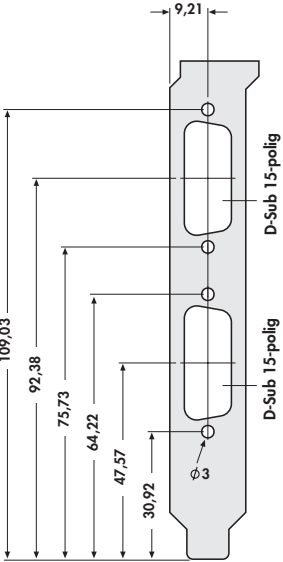
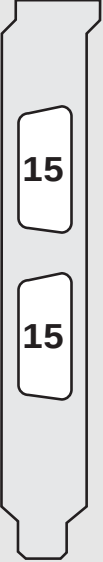
K

L

M

N



PCI 047 O	PCI 071 O	
		

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

B

C

D

E

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G

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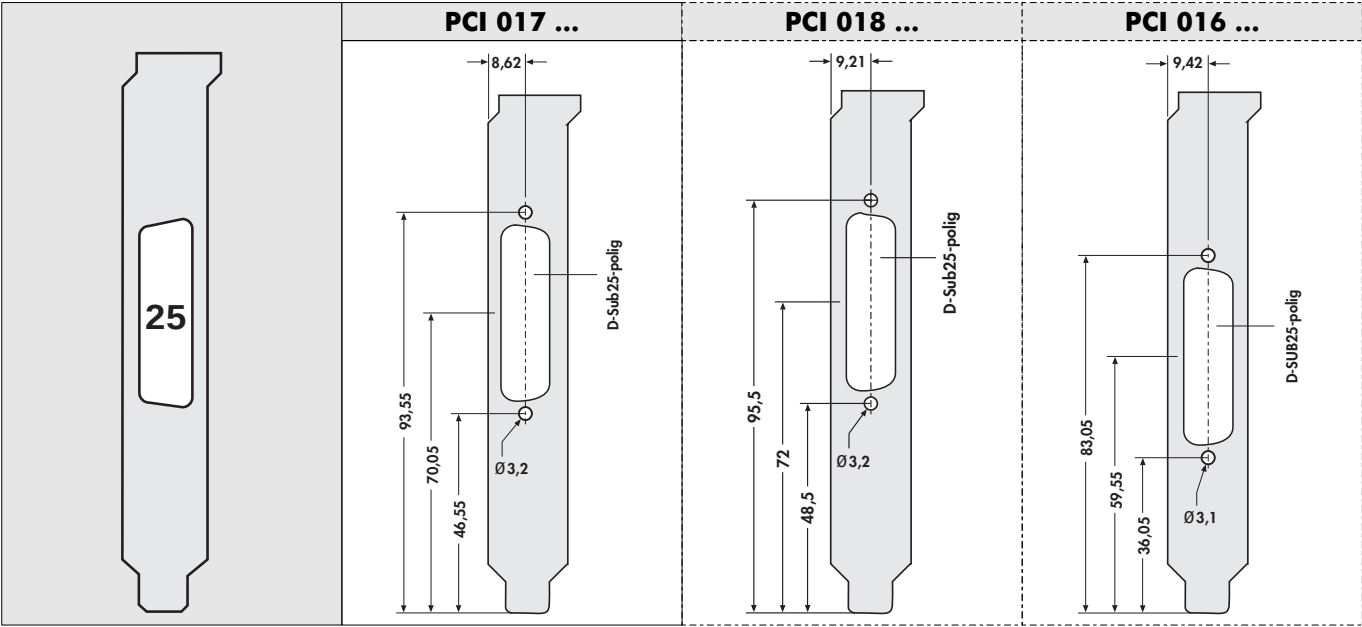
I

K

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B

CD

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FGH1

K

LM**K 14**

A

Brackets for PC

B

C

D

E

F

G

H

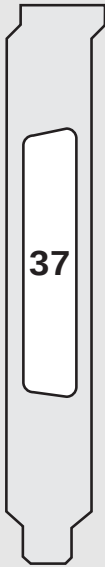
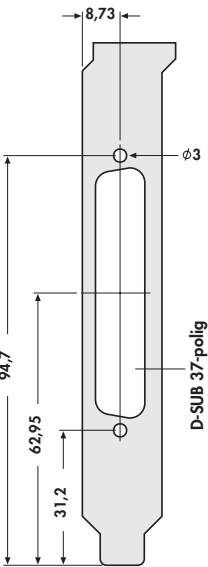
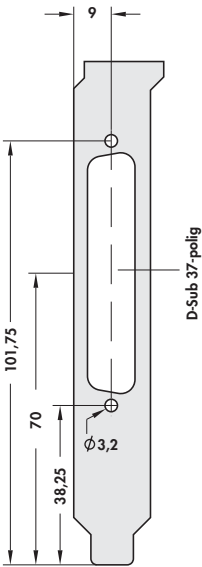
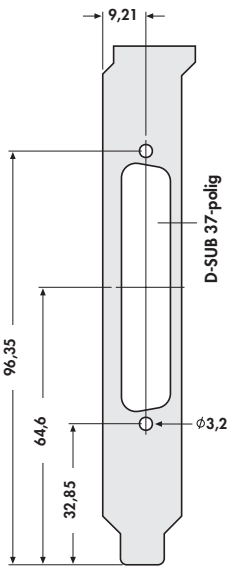
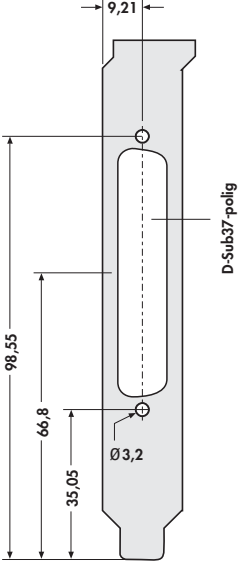
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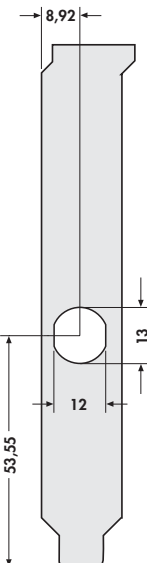
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 37	PCI 076 O	PCI 035 ...	PCI 077 ...
			
PCI 020 ...			
			

PCI 021 O			
			

please indicate: ... fixing tab
L =bracket with fixing tab
O =bracket without fixing tab

A

Brackets for PC

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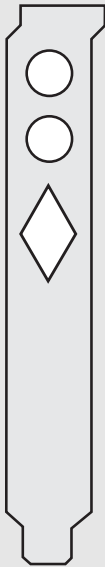
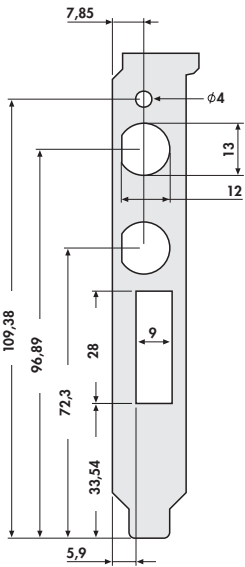
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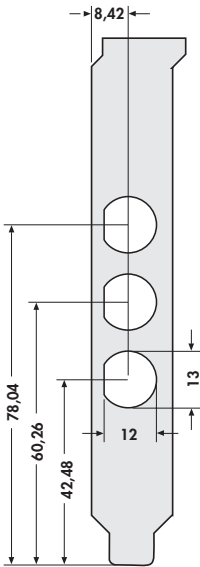
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PCI 083 L			
			

PCI 023 ...			
			

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

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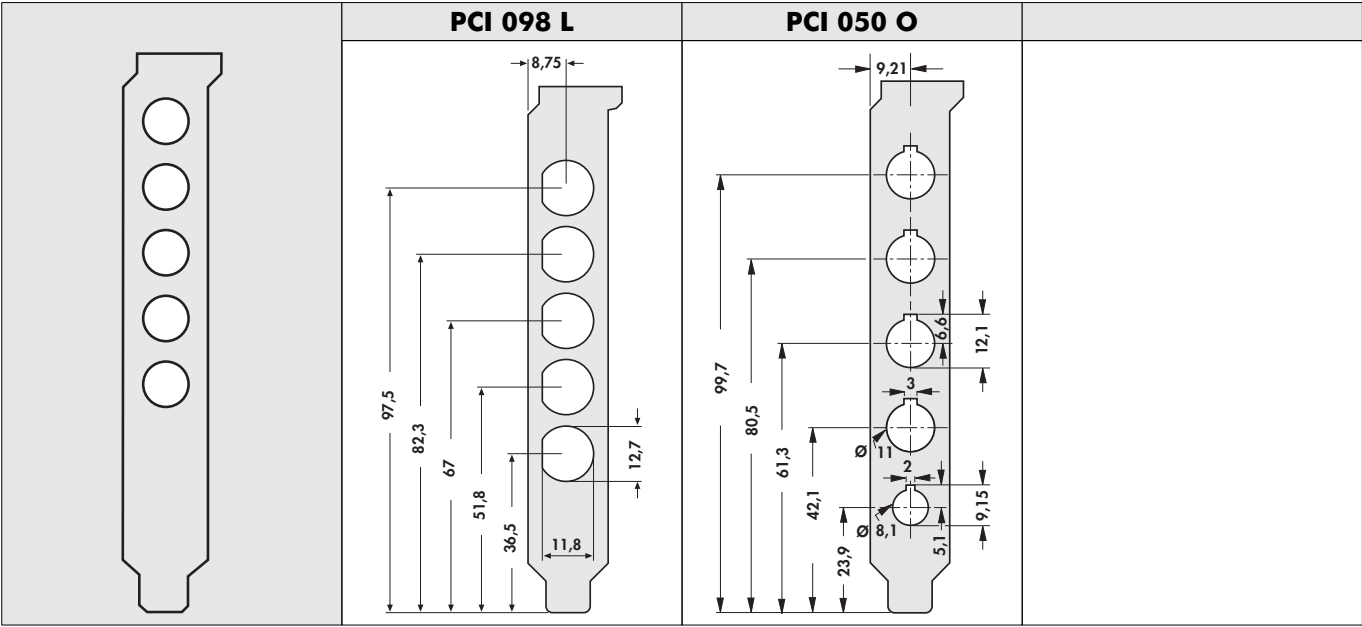
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PCI 027 L	PCI 105 L	PCI 104 O	
PCI 106 L			

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

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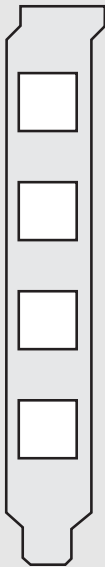
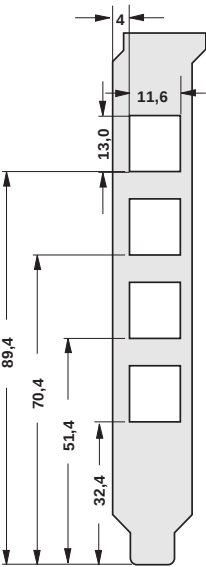
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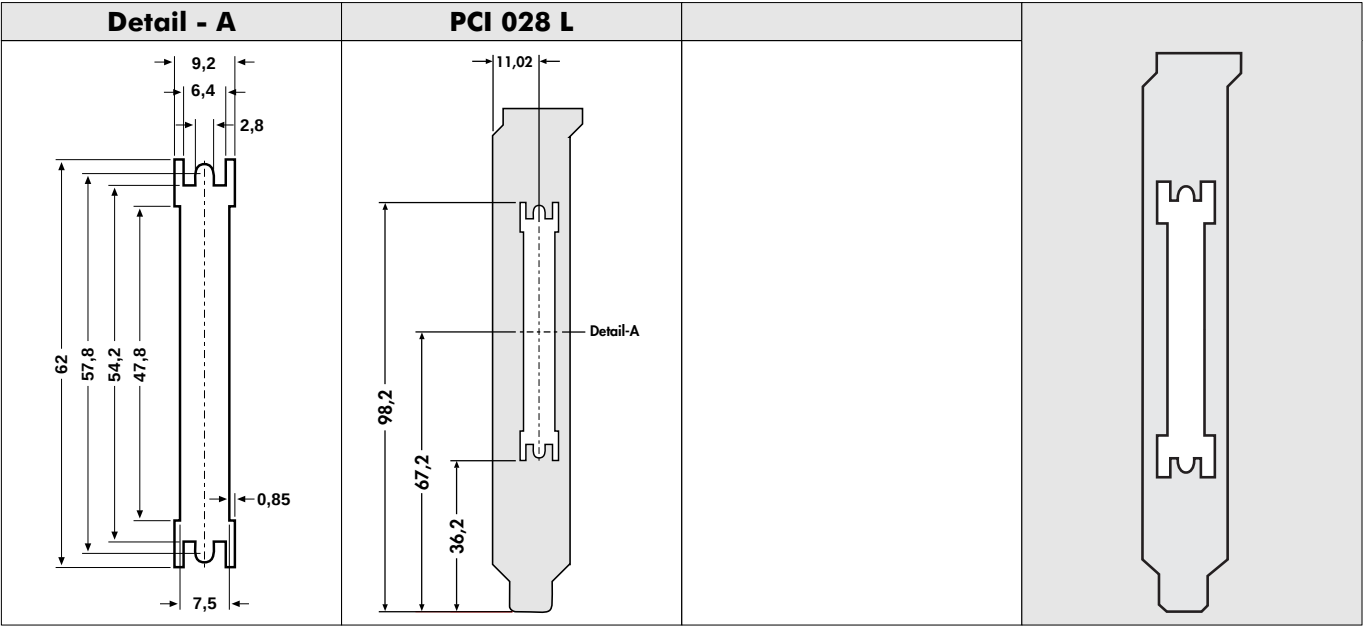
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PCI 051 ...			
			



please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

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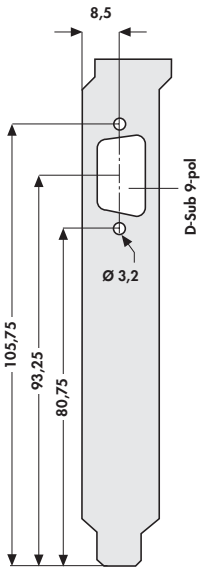
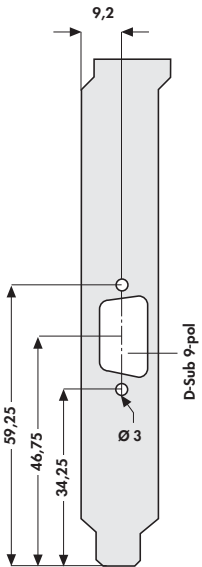
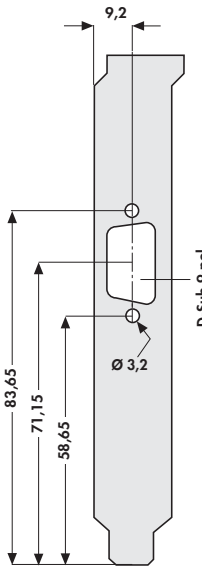
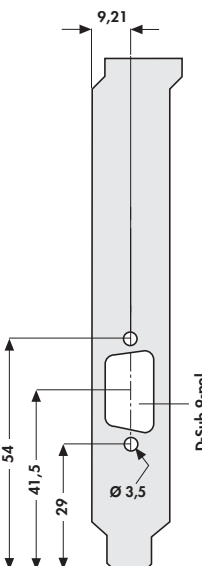
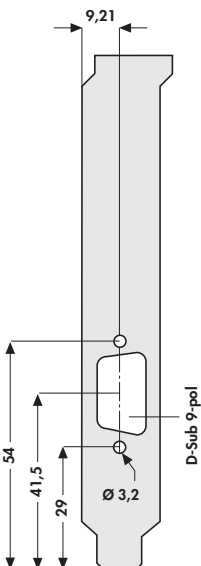
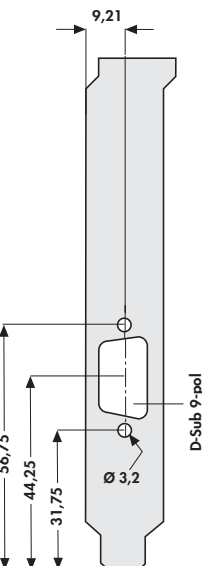
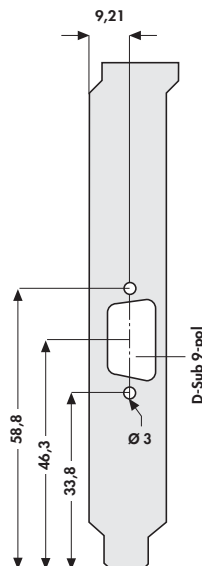
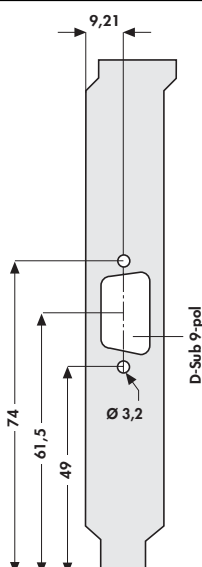
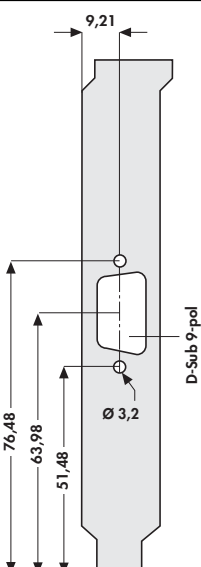
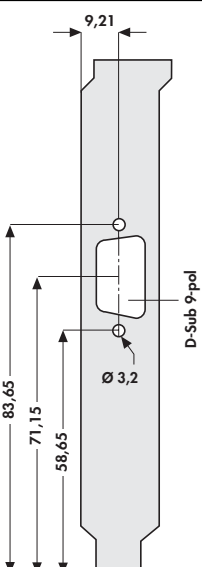
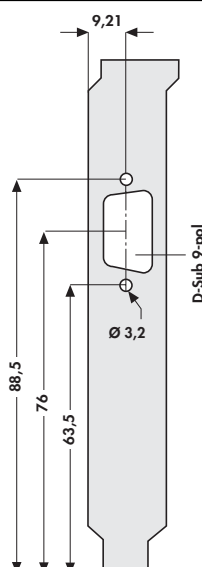
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	KHPC 002 O 	KHPC 092 ... 	KHPC 003 ... 
KHPC 007 O 	KHPC 011 O 	KHPC 004 O 	KHPC 013 O 
KHPC 010 ... 	KHPC 093 L 	KHPC 094 O 	KHPC 096 O 

KHPC 008 O	KHPC 014 O	KHPC 016 O	
KHPC 095 O	KHPC 017 ...	KHPC 102 O	

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

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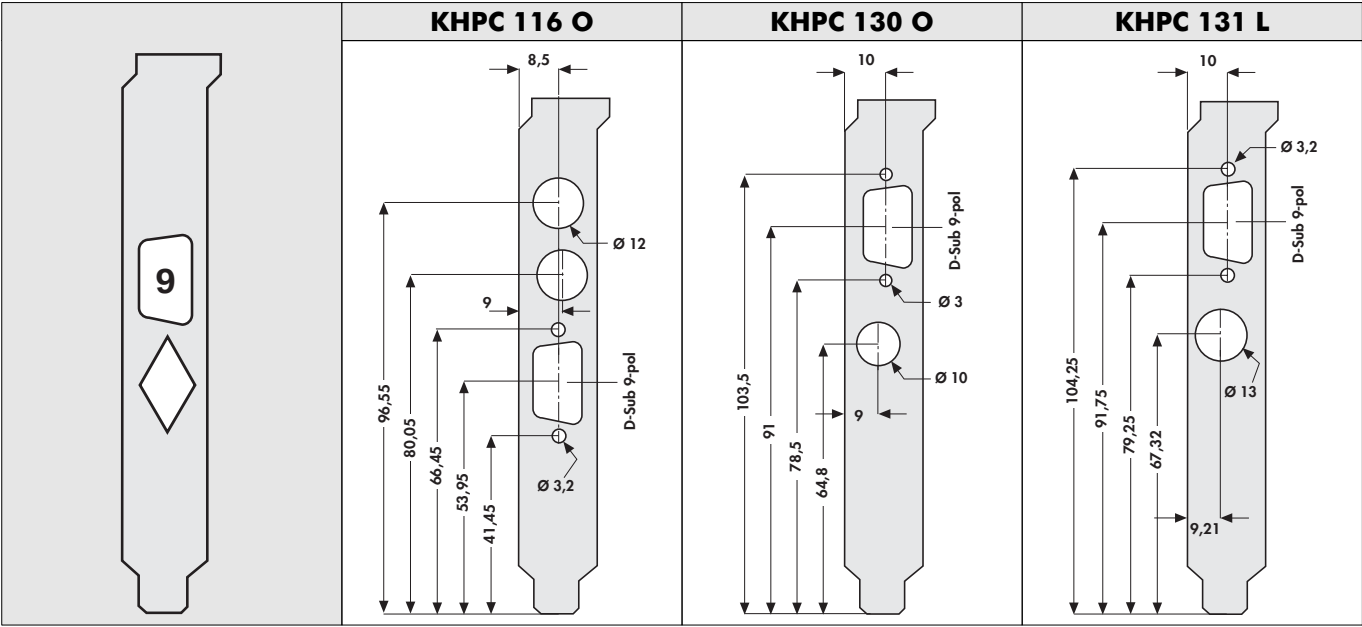
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KHPC 144 O	KHPC 142 O	KHPC 053 O	
KHPC 138 O	KHPC 006 O	KHPC 141 O	KHPC 012 O
KHPC 072 O	KHPC 150 O	KHPC 009 O	KHPC 143 O

please indicate: ... fixing tab
L = bracket with fixing tab
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A

Brackets for PC

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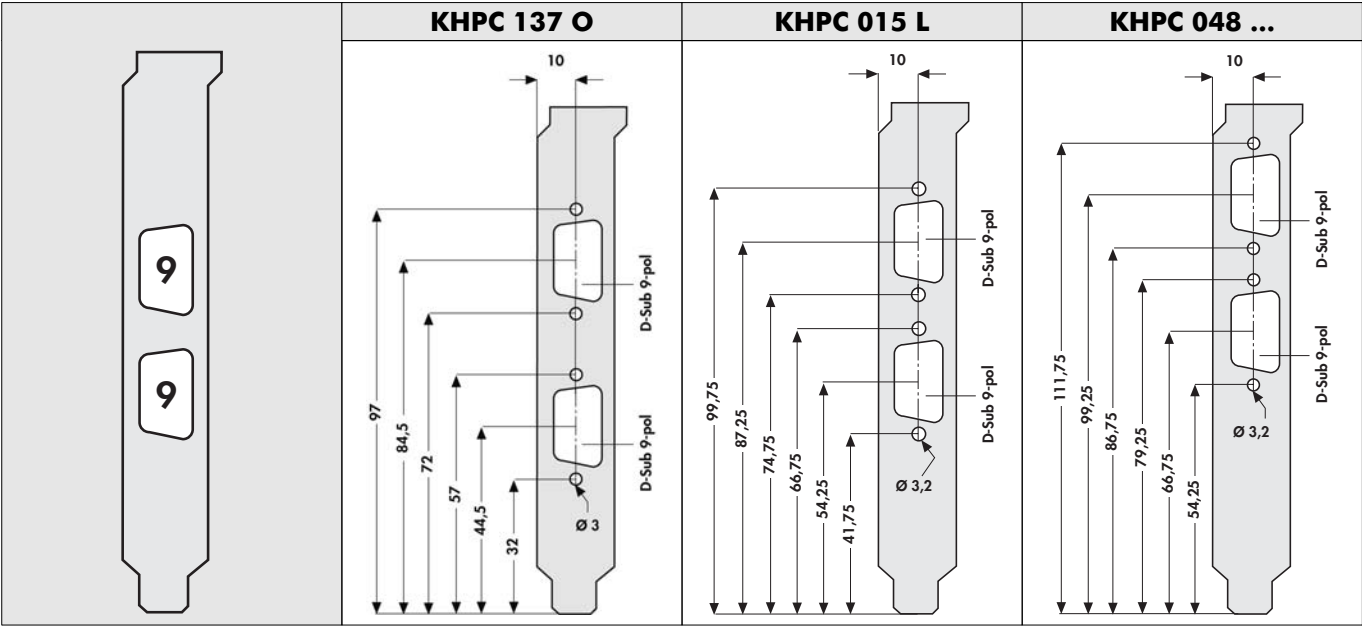
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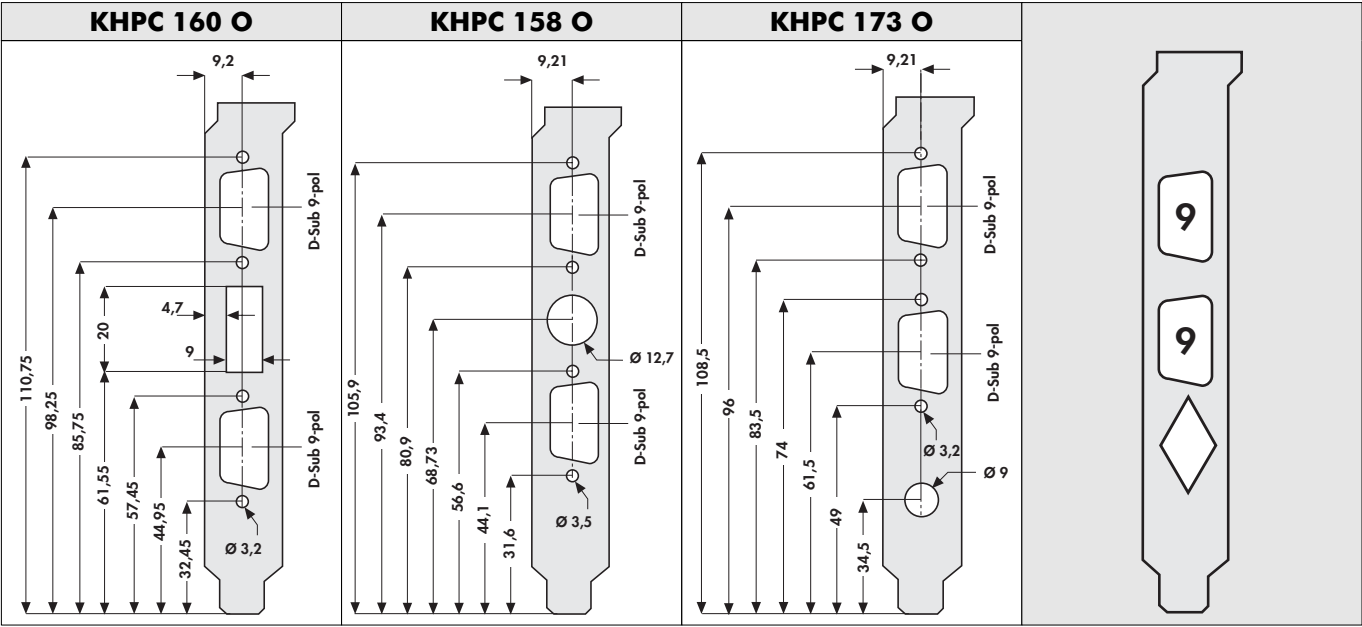
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please indicate: ... fixing tab
L = bracket with fixing tab
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A

Brackets for PC

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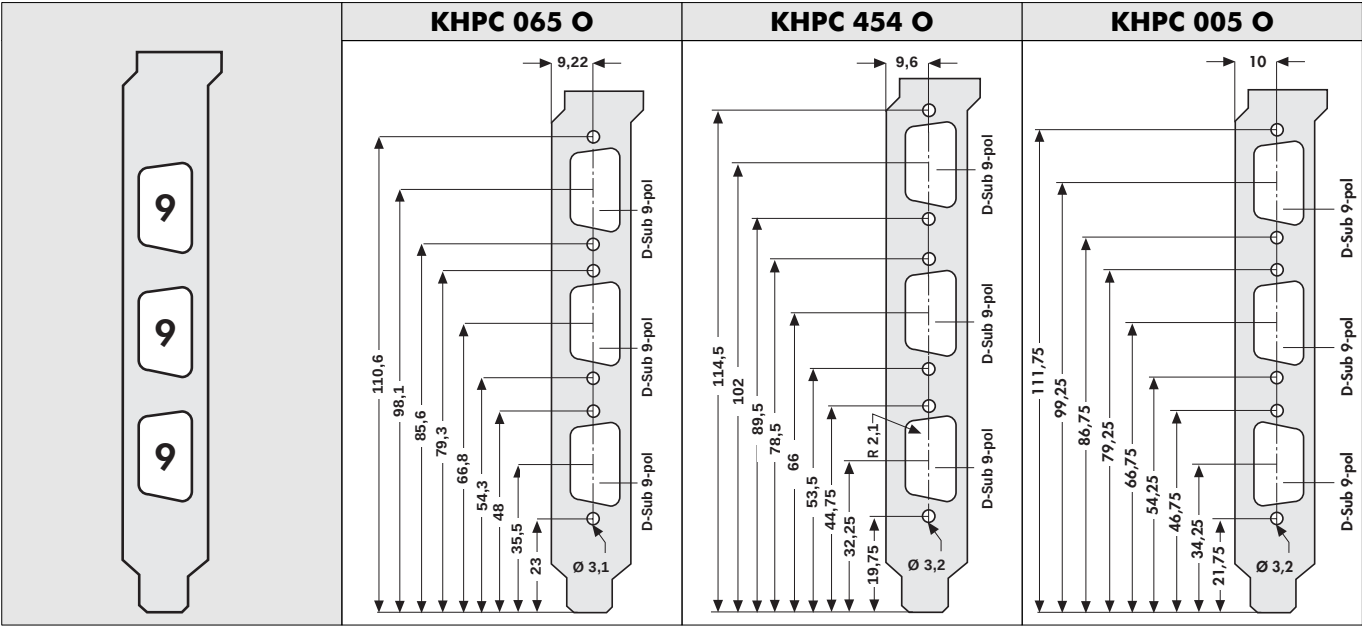
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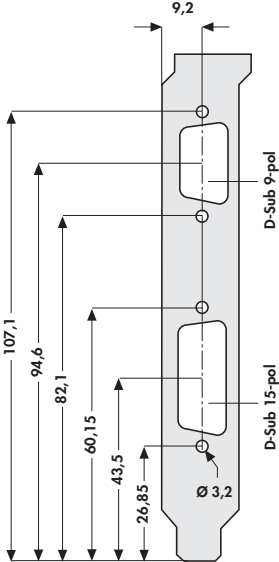
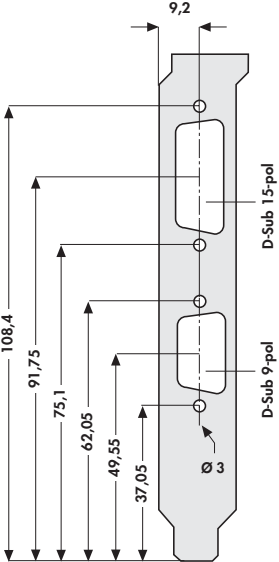
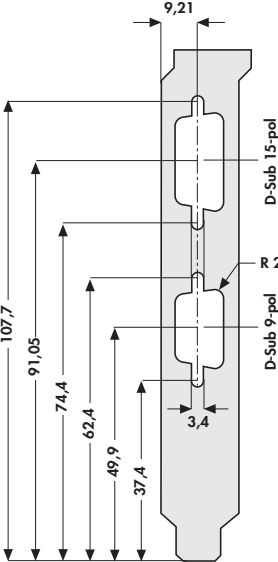
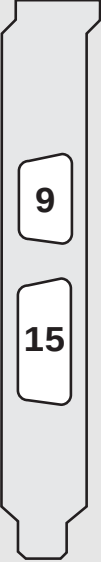
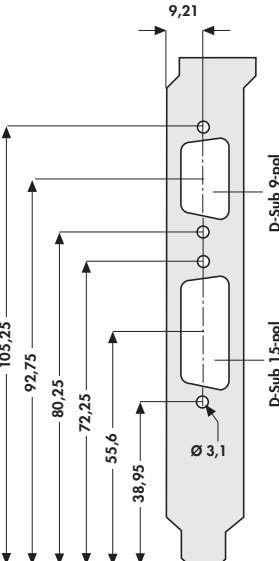
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KHPC 179 O 	KHPC 177 ... 	KHPC 178 O 	
KHPC 076 O 			

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

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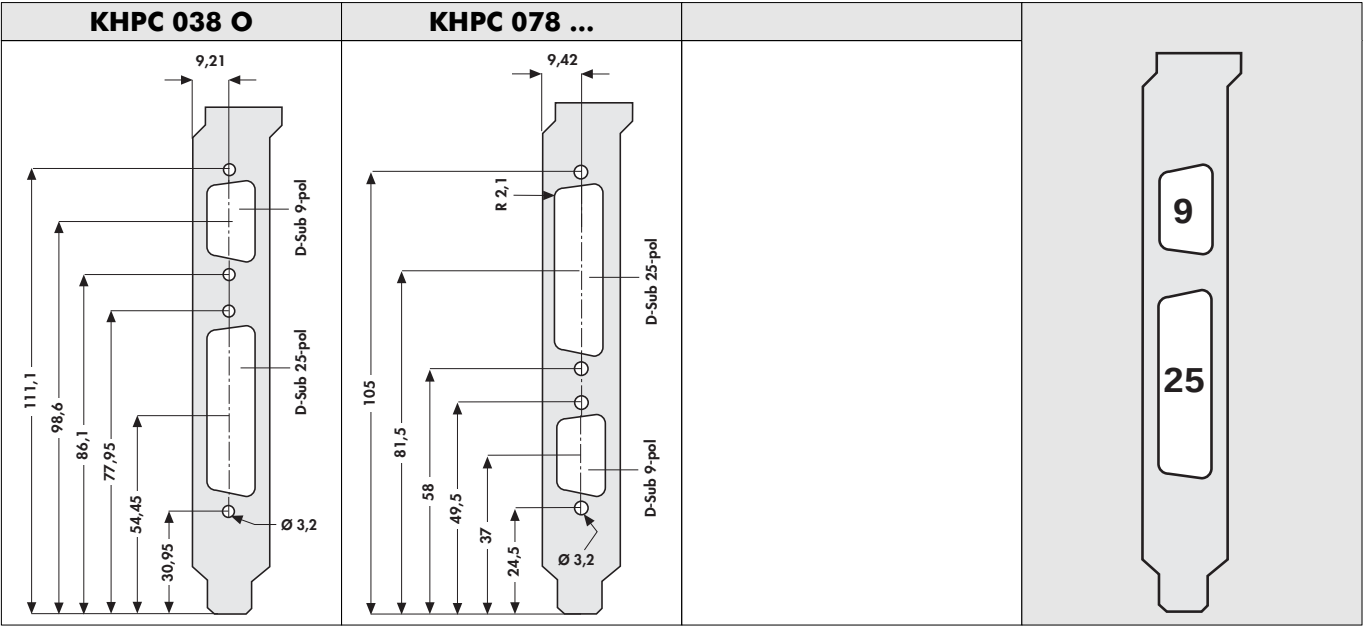
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	KHPC 189 L 	KHPC 488 O 	KHPC 040 O
KHPC 041 O 	KHPC 185 O 	KHPC 061 O 	KHPC 187 O
KHPC 188 O 	KHPC 039 O 	KHPC 037 L 	KHPC 191 O



please indicate: ... fixing tab
L = bracket with fixing tab
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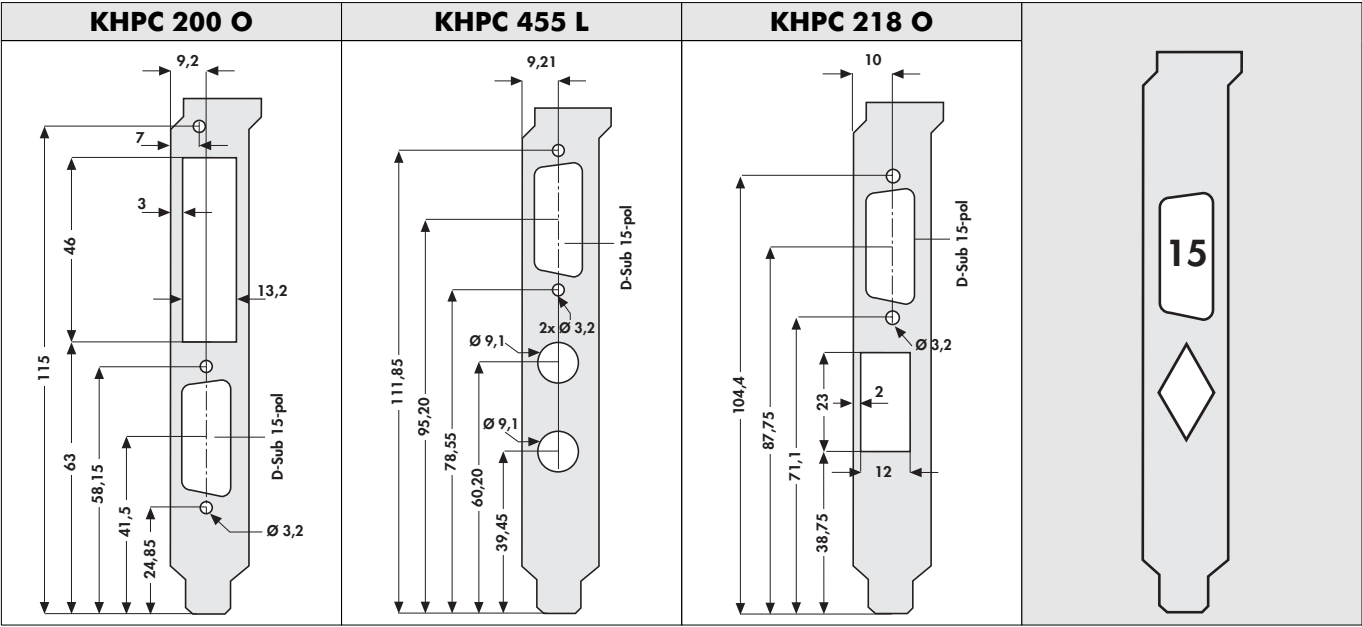
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	KHPC 195 L	KHPC 023 L	KHPC 019 O
15			
	KHPC 074 O	KHPC 073 ...	KHPC 024 O



please indicate: ... fixing tab
L = bracket with fixing tab
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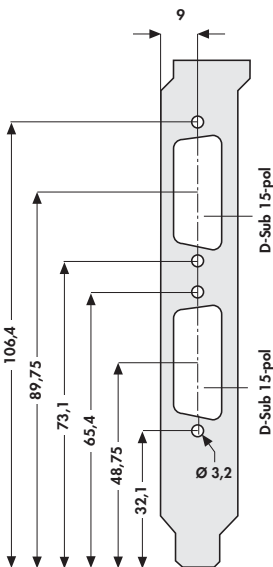
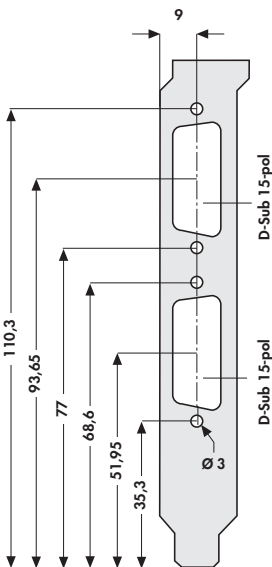
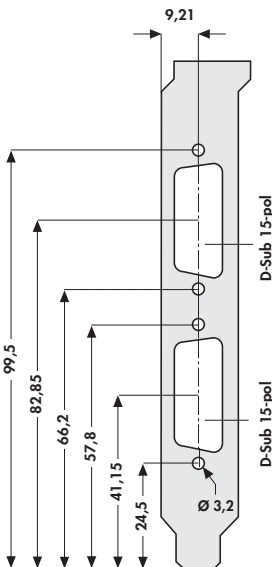
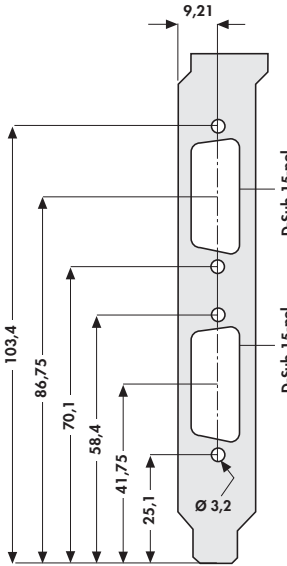
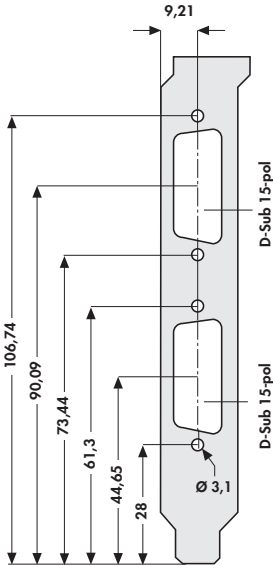
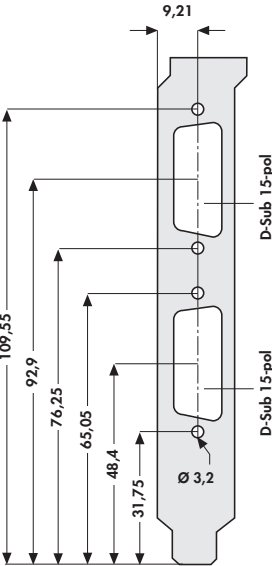
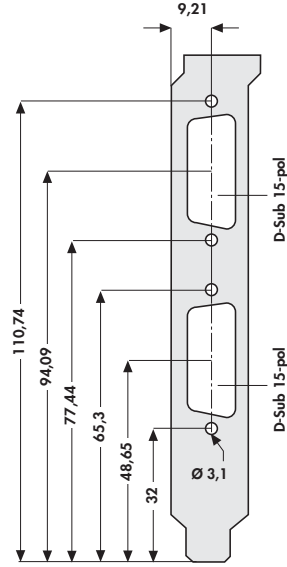
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	KHPC 230 O 	KHPC 231 O 	KHPC 223 O 
	KHPC 022 L 	KHPC 225 O 	KHPC 069 O 
KHPC 018 O 			

KHPC 241 O D-Sub 25-pol D-Sub 15-pol	KHPC 042 O D-Sub 15-pol D-Sub 25-pol	KHPC 242 O D-Sub 15-pol D-Sub 25-pol	15 25
KHPC 075 O D-Sub 15-pol D-Sub 25-pol			

please indicate: ... fixing tab
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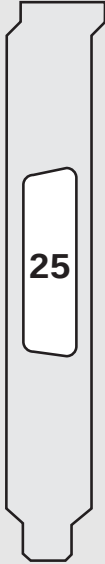
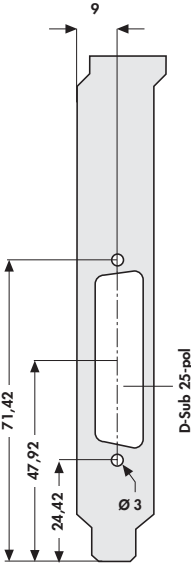
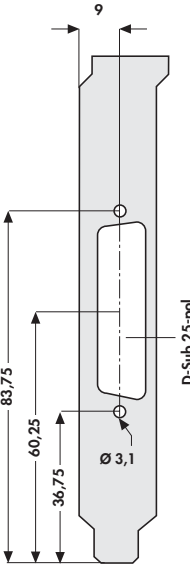
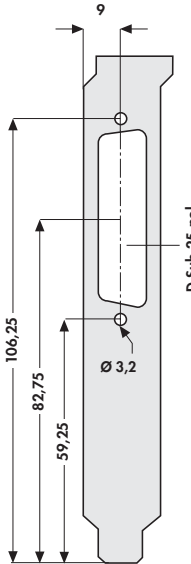
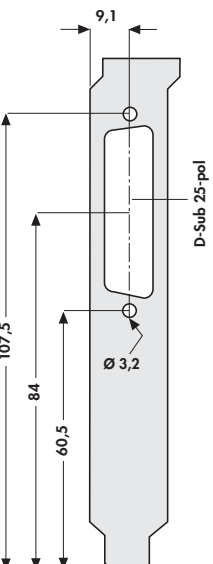
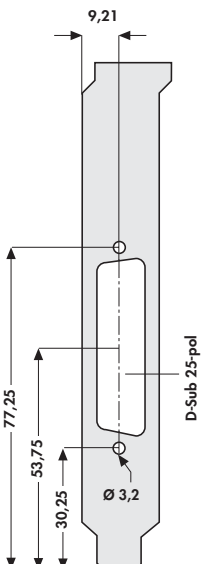
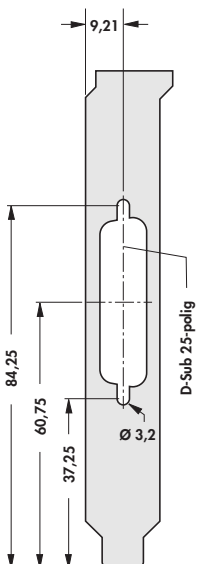
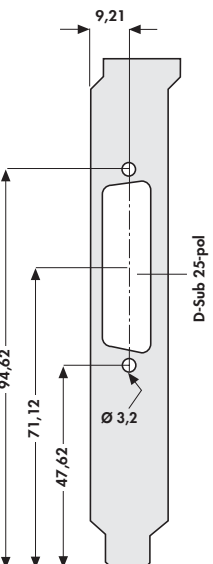
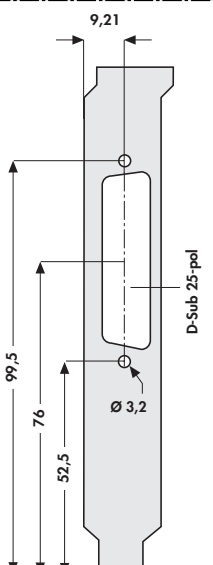
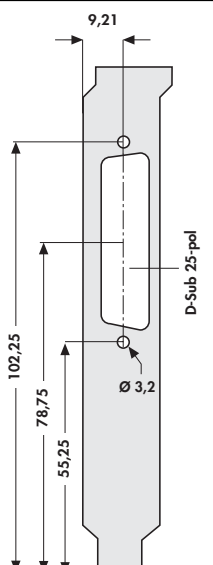
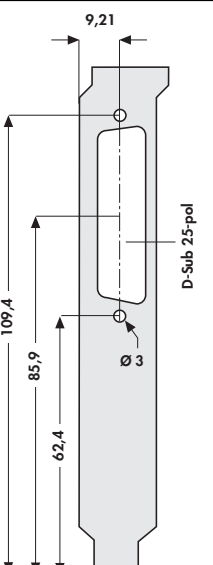
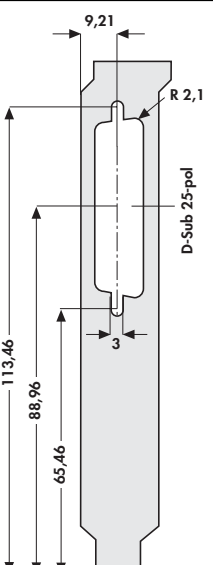
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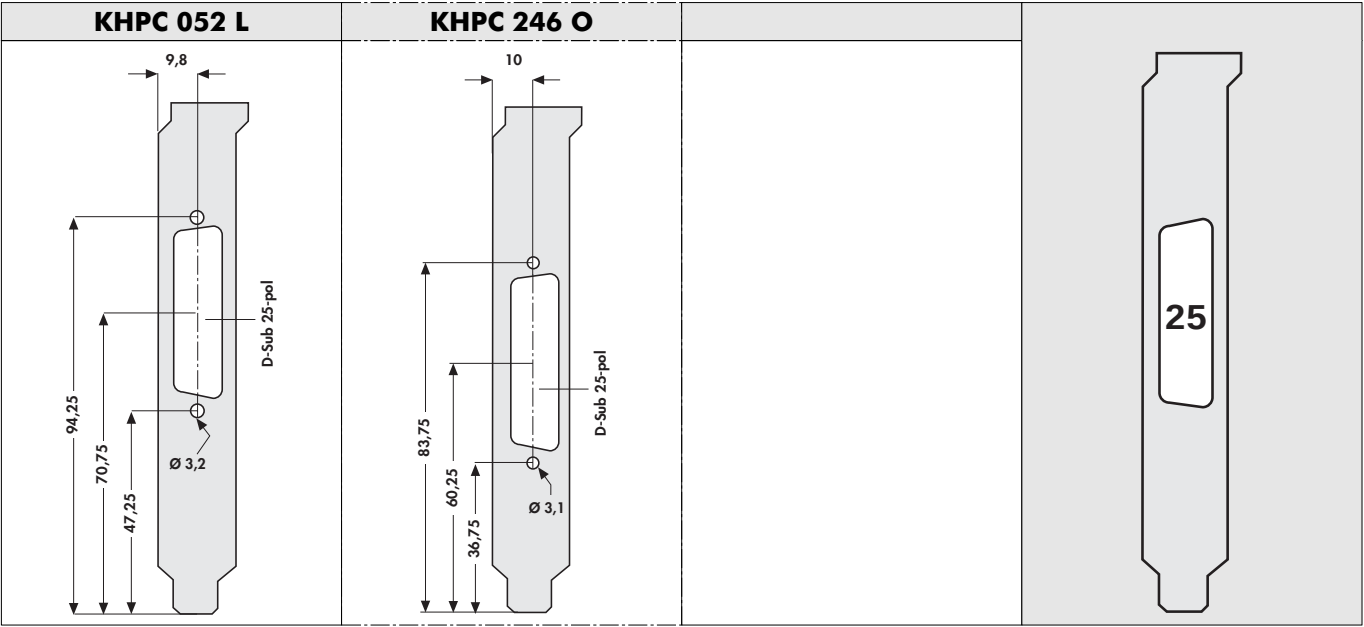
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 25	KHPC 243 O 	KHPC 070 O 	KHPC 027 O 
KHPC 054 O 	KHPC 028 O 	KHPC 491 O 	KHPC 026 ... 
KHPC 252 O 	KHPC 255 O 	KHPC 257 O 	KHPC 258 L 



please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

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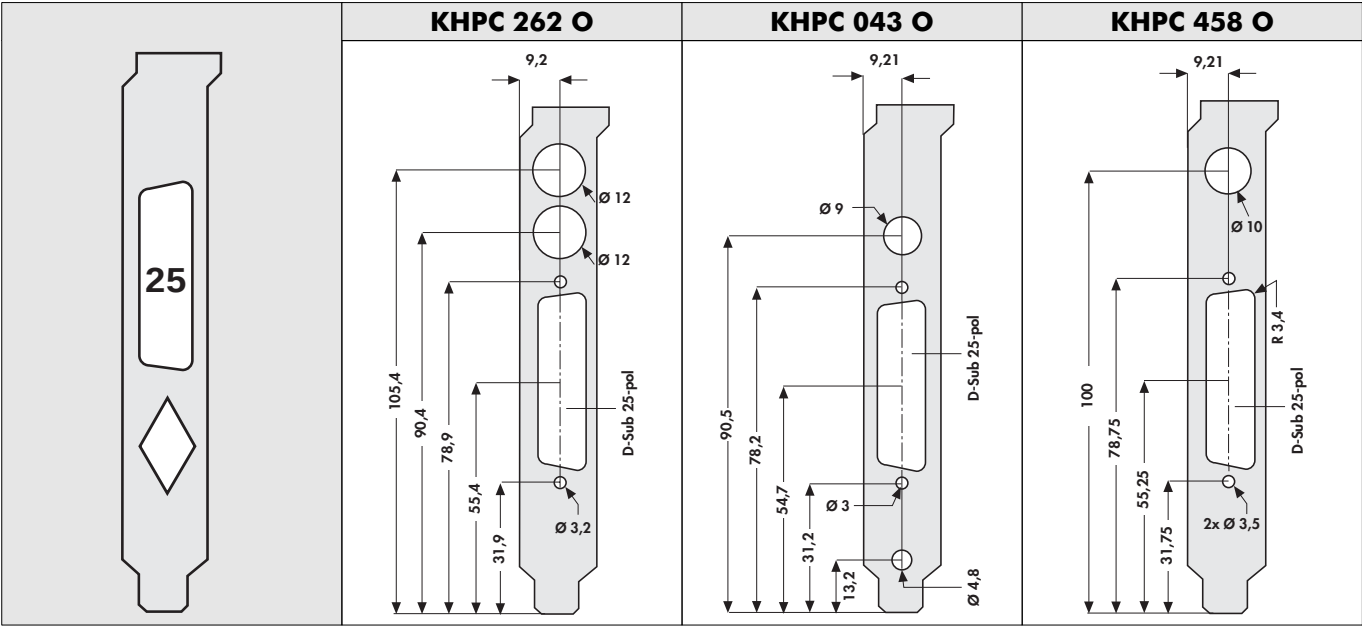
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KHPC 058 O	KHPC 035 O	KHPC 277 O	37
KHPC 267 ...	KHPC 033 O	KHPC 269 O	KHPC 270 O
KHPC 271 O	KHPC 274 O	KHPC 278 O	KHPC 034 O

please indicate: ... fixing tab
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Brackets for PC

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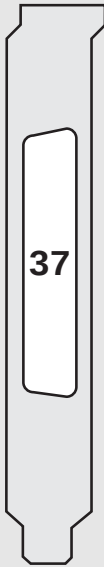
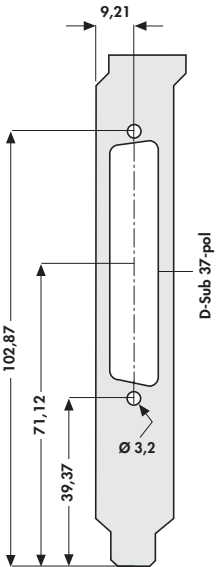
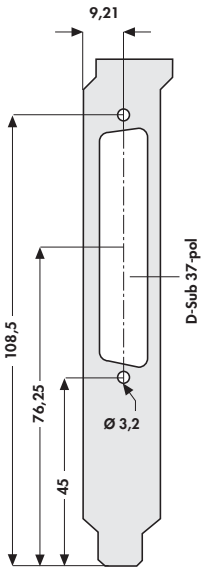
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	KHPC 031 ...	KHPC 032 O	
			

KHPC 295 O		KHPC 029 O	

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

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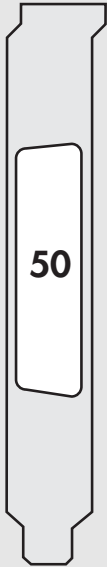
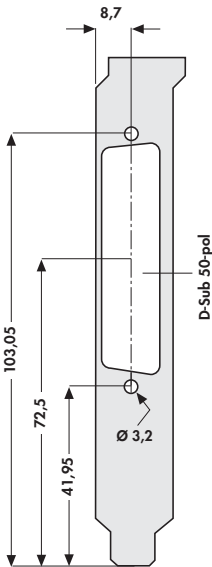
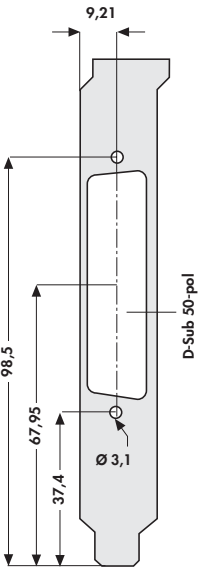
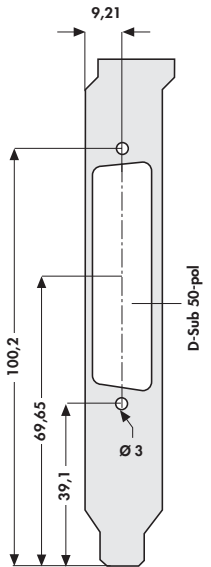
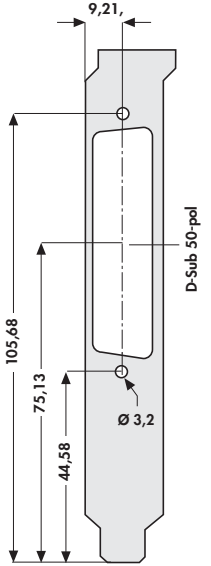
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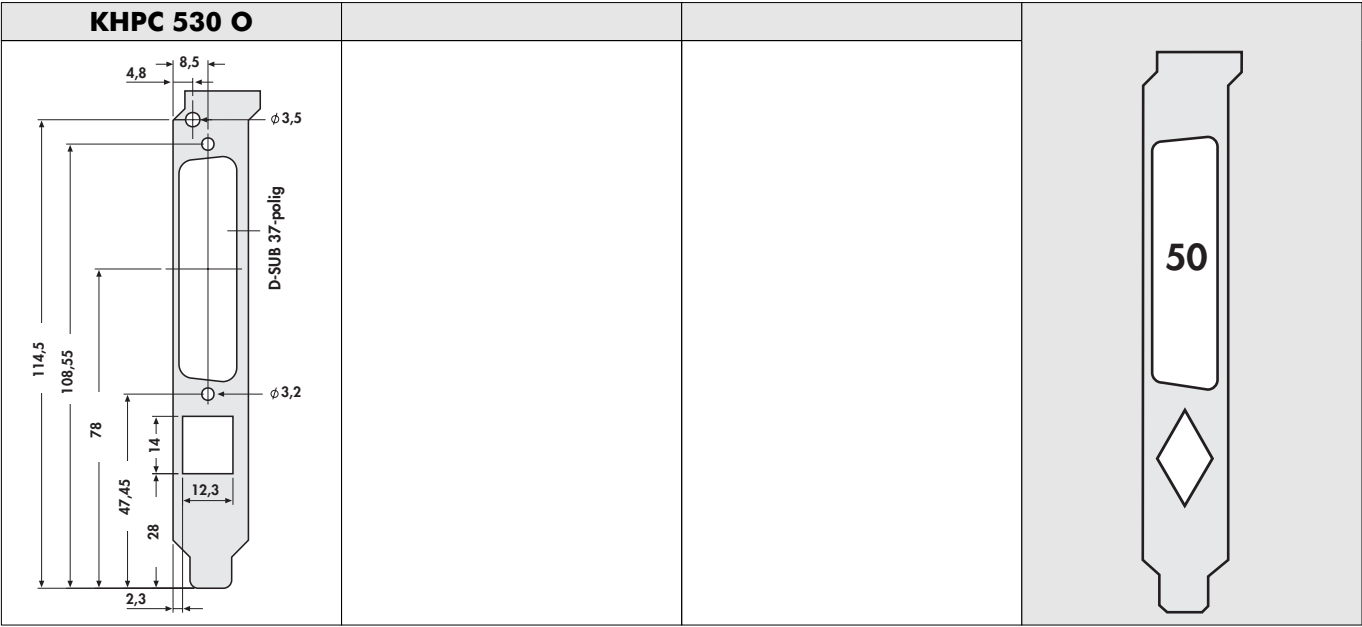
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	KHPC 036 ...	KHPC 051 O	KHPC 083 O
			
KHPC 308 L			
			



please indicate: ... fixing tab
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A

Brackets for PC

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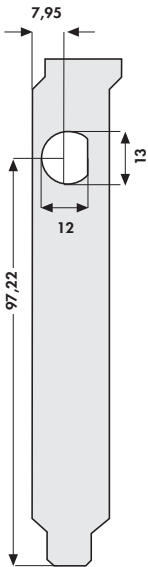
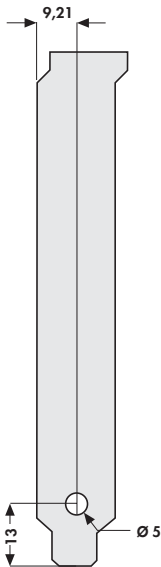
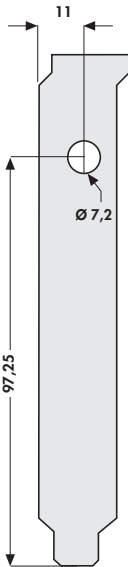
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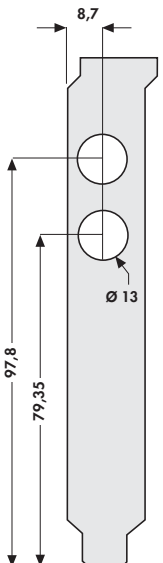
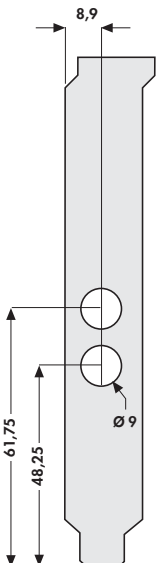
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	KHPC 312 O	KHPC 310 L	KHPC 313 L
			

KHPC 325 O	KHPC 320 L	
		

please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

A

Brackets for PC

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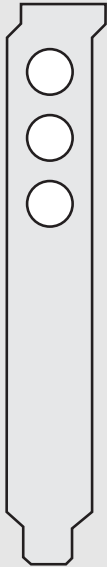
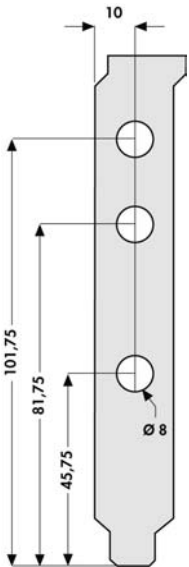
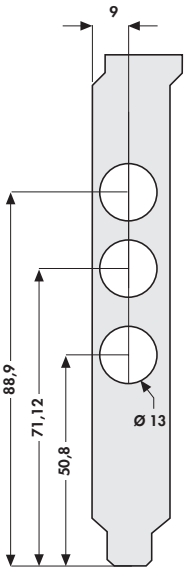
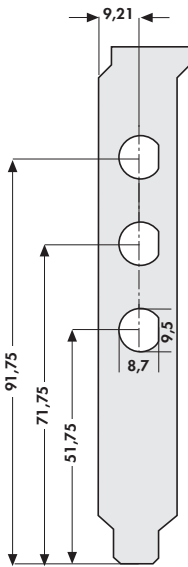
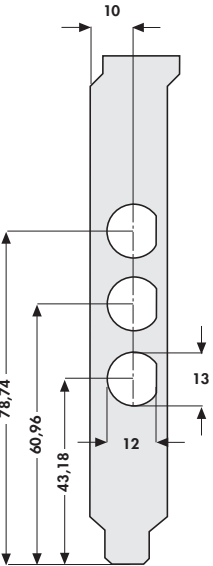
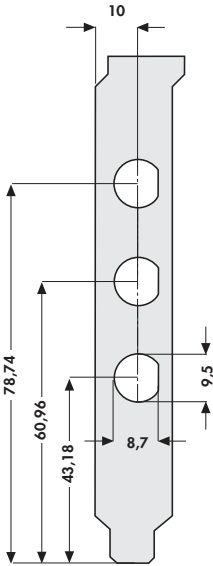
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	KHPC 333 L	KHPC 335 L	KHPC 463 O
			
KHPC 044 L	KHPC 332 L		
			



please indicate: ... fixing tab
L = bracket with fixing tab
O = bracket without fixing tab

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	KHPC 055 L	KHPC 377 L	KHPC 389 O
	KHPC 390 L	KHPC 394 ...	KHPC 380 L
	KHPC 371 L	KHPC 367 L	KHPC 365 L
	KHPC 085 L	KHPC 384 L	

KHPC 062 L	KHPC 059 L	KHPC 398 ...	
KHPC 399 L	KHPC 391 O	KHPC 086 O	KHPC 366 O

please indicate: ... fixing tab
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O = bracket without fixing tab

A

Brackets for PC

B

C

D

E

F

G

H

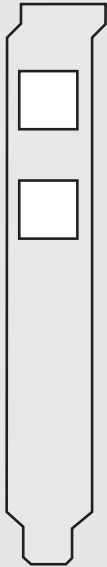
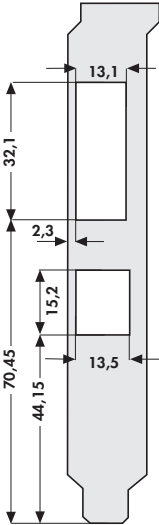
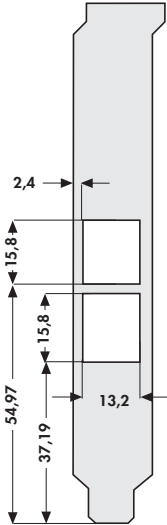
I

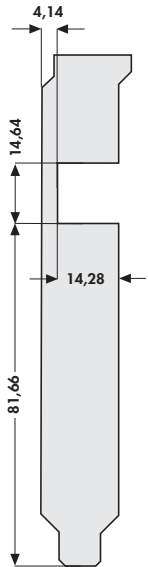
K

L

M

N

	KHPC 404 L	KHPC 407 L	
			

KHPC 439 O			
			

please indicate: ... fixing tab
L =bracket with fixing tab
O =bracket without fixing tab

A

Brackets for PC

B

C

D

E

F

G

H

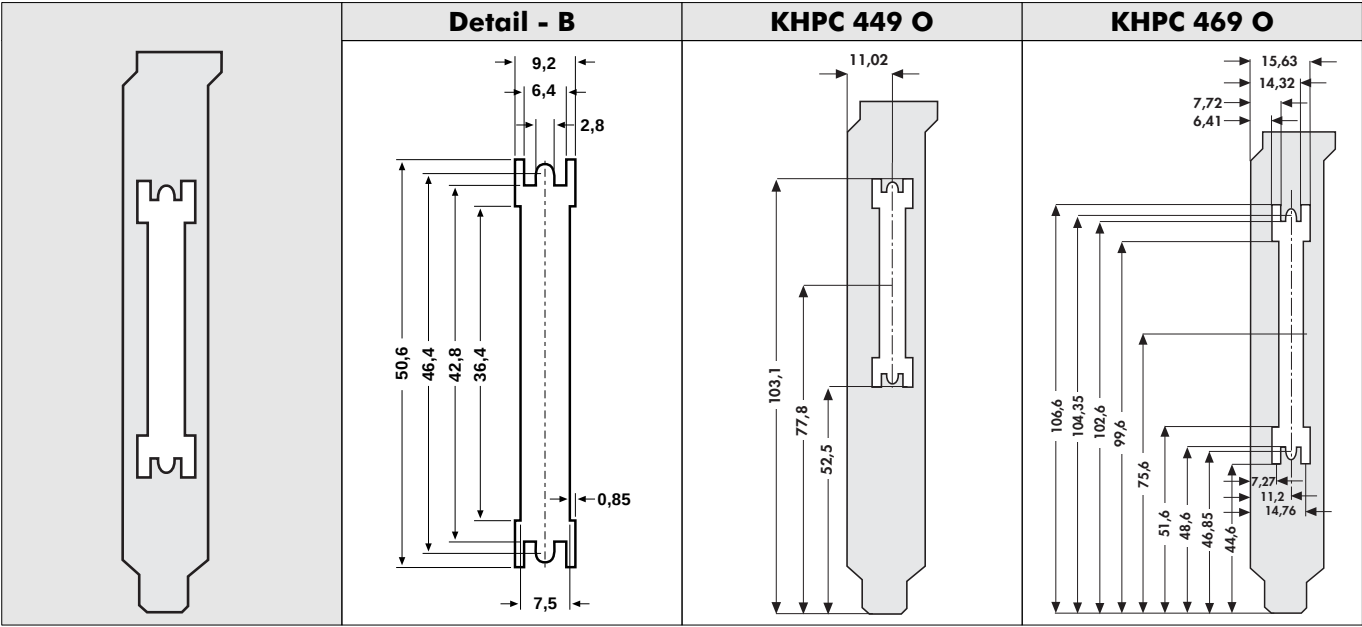
I

K

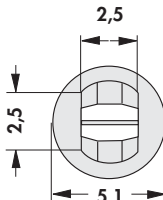
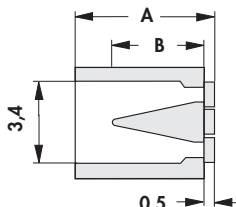
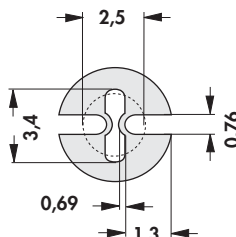
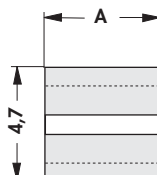
L

M

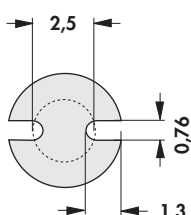
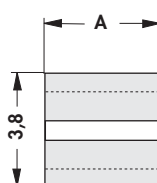
N



universal mount for LED Ø 3 mm and 5 mm, self retaining

					
art. no.	dim. [mm]		art. no.	dim. [mm]	
	A	B		A	B
MAH 31	3.10	1.50	MAH 71	7.10	4.70
MAH 41	4.10	1.50	MAH 81	8.10	4.70
MAH 51	5.10	1.50	MAH 89	8.90	4.70
MAH 61	6.10	1.50	MAH 99	9.90	7.90
					
art. no.	dim. [mm]		art. no.	dim. [mm]	
	A			A	
MAH 401	1.00		MAH 406	6.00	
MAH 402	2.00		MAH 407	7.00	
MAH 403	3.00		MAH 408	8.00	
MAH 404	4.00		MAH 409	9.00	
MAH 405	5.00		MAH 410	10.00	

for LED Ø 3 mm, thin mount

				
art. no.	dim. [mm]		art. no.	dim. [mm]
	A			A
MAH 301	1.00		MAH 306	6.00
MAH 302	2.00		MAH 307	7.00
MAH 303	3.00		MAH 308	8.00
MAH 304	4.00		MAH 309	9.00
MAH 305	5.00		MAH 310	10.00

material: PVC blend, black
temperature range: -40 °C ... +85 °C
flammability: UL 94 V-0

Spacers & mounting strips
LED-hold.for front panel assembly
Technical data of the LEDs
Light pipes for SMDs

→ L 2 - 3
→ L 4
→ L 12
→ L 9 - 11

LED-holders for PCB assembly
Sockets for LED

→ L 5 - 8
→ F 11 - 12

A

Spacers and mounting strips for LED

for LED Ø 5 mm, self retaining

B

C

D

E

F

G

H

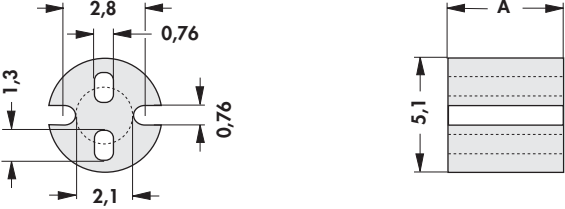
I

K

L

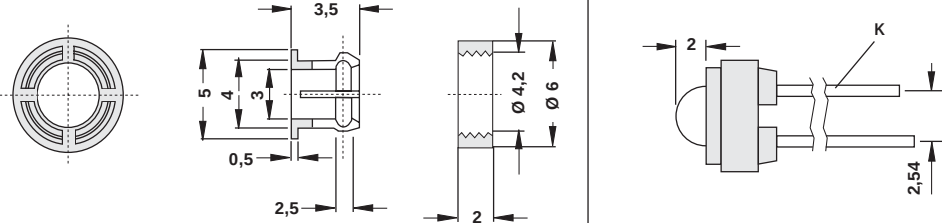
M

N

			
art. no.	dim. [mm] A	art. no.	dim. [mm] A
MAH 501	1.00	MAH 506	6.00
MAH 502	2.00	MAH 508	8.00
MAH 503	3.00	MAH 509	9.00
MAH 504	4.00	MAH 510	10.00
MAH 505	5.00		

material: PVC blend, black
temperature range: -40 °C ... +85 °C
flammability: UL 94 V-0

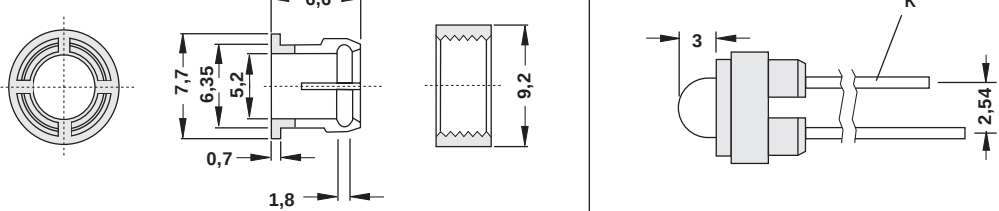
suitable for 3 mm diodes with a collar height of 0.6 mm

	
art. no.	type
DH 3 V	for LED Ø 3 mm

K = cathode

material: glass fibre reinforced polyamide

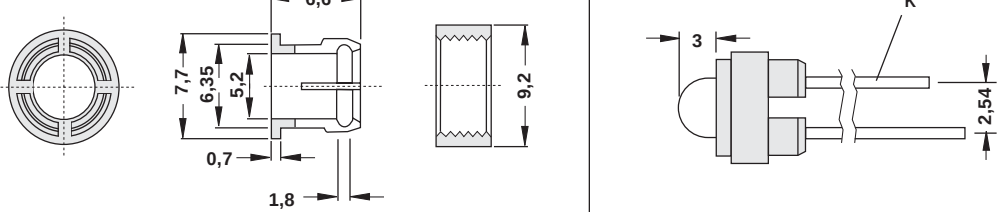
suitable for 5 mm diodes with a collar height of 0.6 mm/1 mm

	
art. no.	type
DH 5 VC	for LED Ø 5 mm

K = cathode

material: glass fibre reinforced polyamide

suitable for 5 mm diodes with a collar height of 0.6 mm/1 mm

	
art. no.	type
DH 5 SRC	for LED Ø 5 mm

material: glass fibre reinforced polyamide

A

LED-holders for PCB assembly

B

C

D

E

F

G

H

I

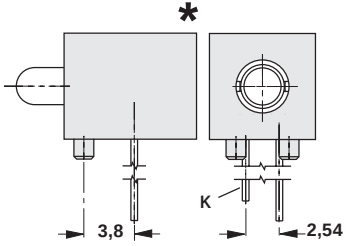
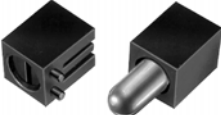
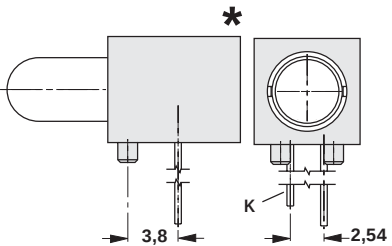
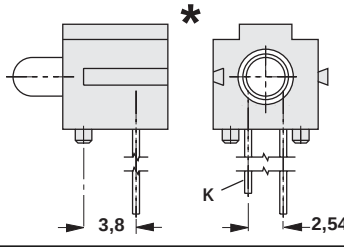
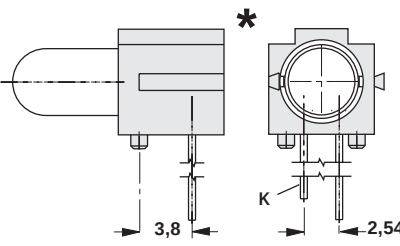
K

L

M

N

LED-holder for LED Ø 3 mm and 5 mm

		
art. no.	type	
DH 3 W	for LED Ø 3 mm	
		
art. no.	type	
DH 5 W	for LED Ø 5 mm	
		
art. no.	type	
DH 3 R	for LED Ø 3 mm	
		
art. no.	type	
DH 5 R	for LED Ø 5 mm	

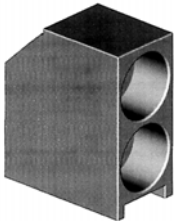
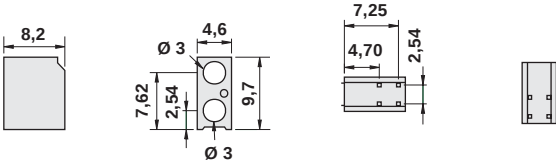
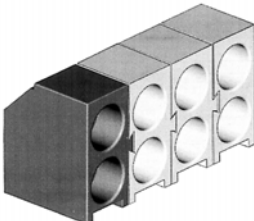
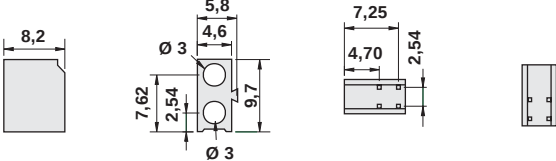
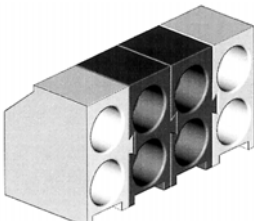
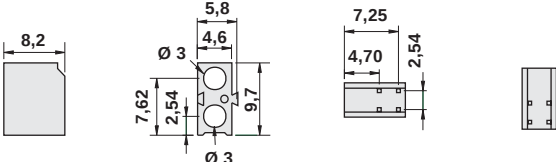
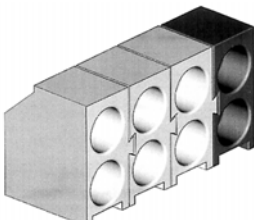
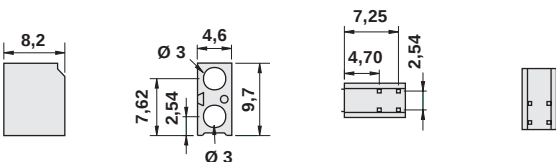
* = presentation with diode

K = cathode

material: glass fibre reinforced polyamide

LED-holder for LED Ø 3 mm

multiple LED-holders: single holder/can be strung, left/can be strung, middle/can be strung, right

	
art. no.	type
DDH 3 E	for LED Ø 3 mm
	
art. no.	type
DDH 3 L	for LED Ø 3 mm
	
art. no.	type
DDH 3 M	for LED Ø 3 mm
	
art. no.	type
DDH 3 R	for LED Ø 3 mm

material: nylon, black
temperature range: -20 °C ... +85 °C
flammability: UL 94 V-0

A

LED-holders for PCB assembly

B

LED-holder for LED Ø 5 mm

multiple LED-holders: single holder/can be strung, left/can be strung, middle/can be strung, right

C

D

E

F

G

H

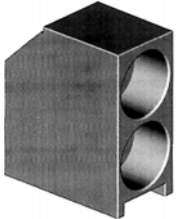
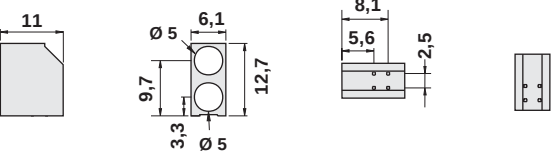
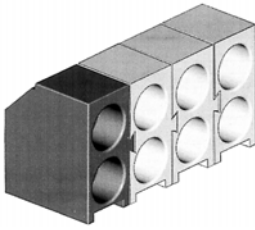
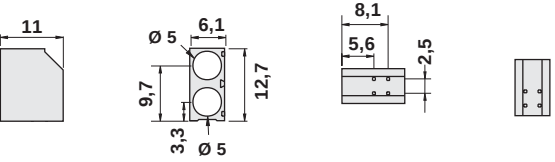
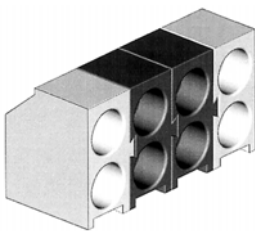
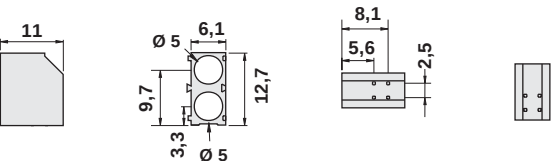
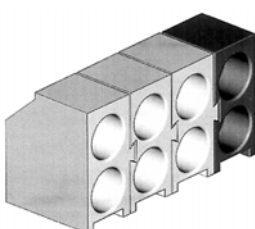
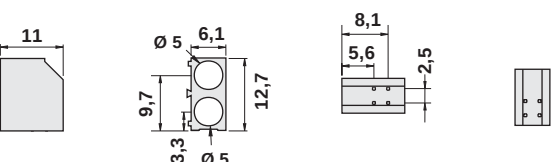
I

K

L

M

N

	
art. no.	type
DDH 5 E	for LED Ø 5 mm
	
art. no.	type
DDH 5 L	for LED Ø 5 mm
	
art. no.	type
DDH 5 M	for LED Ø 5 mm
	
art. no.	type
DDH 5 R	for LED Ø 5 mm

material: nylon, black
temperature range: -20 °C ... +85 °C
flammability: UL 94 V-0

L 7

Screw fastening
D-Sub cut-out cover
Spacers & mounting strips
Technical data of the LEDs

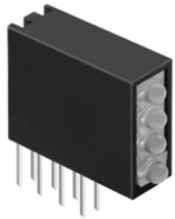
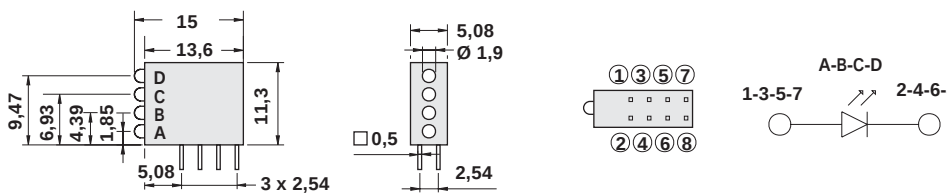
→ I 28
→ I 27
→ L 2 - 3
→ L 12

Sockets for LED
LED-holders for PCB assembly
LED-hold.for front panel assembly
Light pipes for SMDs

→ F 11 - 12
→ L 5 - 8
→ L 4
→ L 9 - 11

Fourfold-LED-holders

standard case, diffuse lens, standard colours, space-saving version, round lens, rectangular lens

		
art. no.	type	emission colour
DLH 21 ASEH	with LED Ø 2 mm, fourfold	red
DLH 21 AYEh	with LED Ø 2 mm, fourfold	yellow
DLH 21 AGEH	with LED Ø 2 mm, fourfold	green

material: nylon, black
temperature range: -20 °C ... +85 °C
flammability: UL 94 V-0

A

Light pipes for SMDs

suitable for common SMD types, 3 mm light pipes, horizontal, ESD-protection from panel to PCB

B

C

D

E

F

G

H

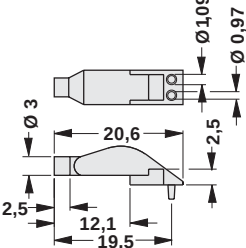
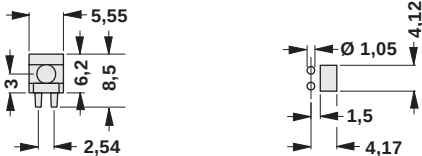
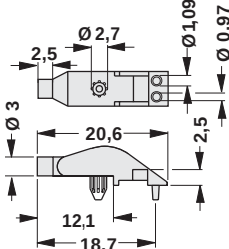
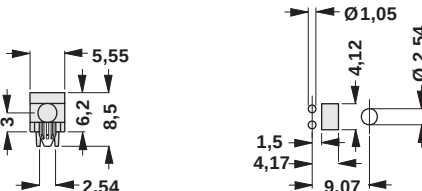
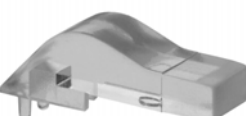
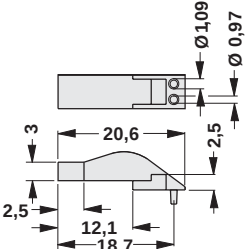
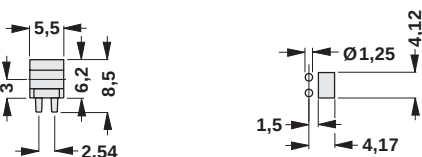
I

K

L

M

N

		
art. no. LL 30 HRS	way of fixation by alignment pins	diameter of lense Ø 3 mm
		
art. no. LL 30 HRP	way of fixation by press-in pins	diameter of lense Ø 3 mm
		
art. no. LL 35 HVS	way of fixation by alignment pins	diameter of lense rectangle 5.5x3 mm

material: polycarbonat, clear colour

temperature range: -30 °C ... +100 °C

flammability: UL 94 V-0

L 9

Spacers & mounting strips
 Sockets for LED
 LED-holders for PCB assembly
 Technical data of the LEDs

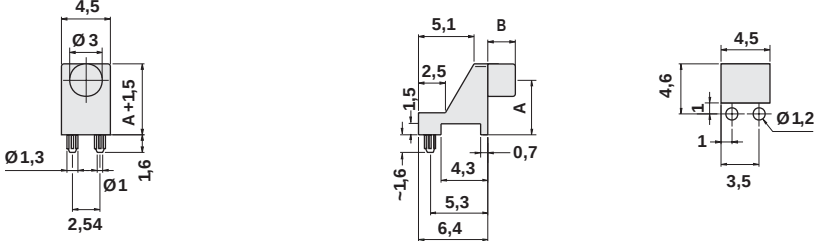
→ L 2 - 3
 → F 11 - 12
 → L 5 - 8
 → L 12

Screw fastening
 D-Sub cut-out cover
 LED-hold.for front panel assembly
 Light pipes for SMDs

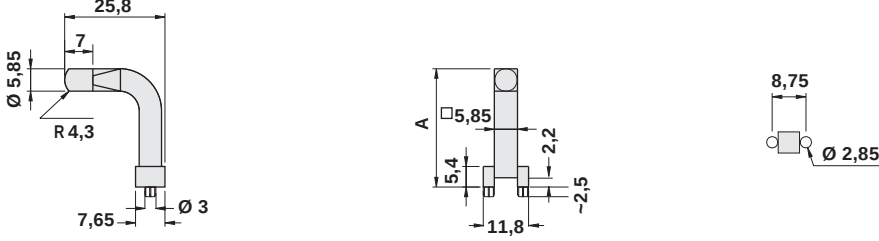
→ I 28
 → I 27
 → L 4
 → L 9 - 11

Light pipes for SMDs

suitable for common SMD types, 3 mm light pipes, horizontal, ESD-protection from panel to PCB

			
art. no.	way of fixation	dim. [mm]	
		A	B
LL 30 WRFP 038	by press-in pins	3.80	2.50
LL 30 WRFP 050	by press-in pins	5.00	2.50
LL 30 WRFP 076	by press-in pins	7.60	2.50
LL 30 WRFP 102	by press-in pins	10.20	2.50

panel light pipe, 6 mm lens, suitable for common SMD LEDs, white lens, large angle of radiation

		
art. no.	way of fixation	dim. [mm]
		A
LL 60 WRB 254	by press-in pins	25.40

material: polycarbonat, clear colour

temperature range: -30 °C ... +100 °C

flammability: UL 94 V-0

A

Light pipes for SMDs

B

C

D

E

F

G

H

I

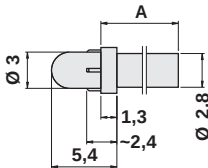
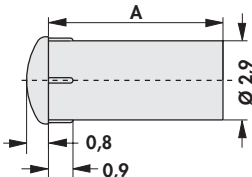
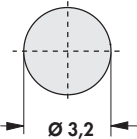
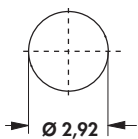
K

L

M

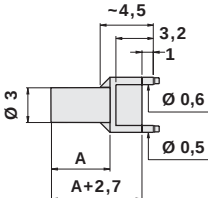
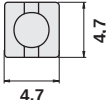
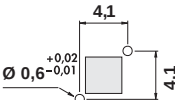
N

panel light pipe 3 mm, ESD protection from panel to PCB

							
art. no.		dim. [mm]		art. no.		dim. [mm]	
		A				A	
LL 30 PRB 032		3.20		LL 30 PRB 089		8.90	
LL 30 PRB 064		6.40					
							
art. no.		dim. [mm]		art. no.		dim. [mm]	
		A				A	
LL 30 PRL 032		3.20		LL 30 PRL 127		12.70	
LL 30 PRL 064		6.40		LL 30 PRL 159		15.90	
LL 30 PRL 089		8.90					

material: polycarbonat, clear colour
temperature range: -30 °C ... +100 °C
flammability: UL 94 V-0

suitable for common SMD LEDs, vertical, rigid light pipe Ø 3 mm, ESD protection from panel to PCB

							
art. no.		way of fixation		dim. [mm]		A	
LL 30 VRFS 024		by alignment pins				2.40	
LL 30 VRFS 050		by alignment pins				5.00	
LL 30 VRFS 075		by alignment pins				7.50	

material: polycarbonat, clear colour
temperature range: -30 °C ... +100 °C
flammability: UL 94 V-0

L 11

Screw fastening
Spacers & mounting strips
Sockets for LED
D-Sub cut-out cover

→ I 28
→ L 2 - 3
→ F 11 - 12
→ I 27

LED-holders for PCB assembly
Light pipes for SMDs
Technical data of the LEDs
LED-hold.for front panel assembly

→ L 5 - 8
→ L 9 - 11
→ L 12
→ L 4