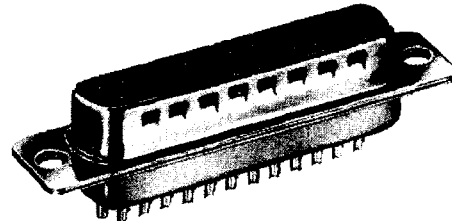
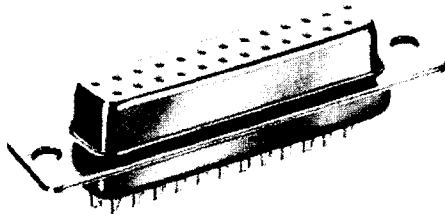


### D-Subminiature connectors

The Subminiature Connectors are mechanically in accordance to the MS-pages attached to MIL-C-24308 types



The pin and socket connectors are according to IEC recommendation 48 B available in 7 shell-sizes, containing 9, 15, 19, 23, 25, 37 and 50 contacts.

Connectors are used in industrial control, data processing and telecommunication equipment, with solder-, dipsolder-termination with angled contacts, flatcable-technique and crimp contacts.

Solder pin version for direct mounting on printed circuit boards are available.

Contacts: gold plating over nickel barrier.

The trapezium shaped shell provides protection against mechanical impact, equilateral mating and serves as electrical shielding.

All ASSMANN D-Subminiature connectors are fully interchangeable and compatible with the products of all other major D-SUB-manufacturers.

Insulators are made of creepage resistant polyamid.

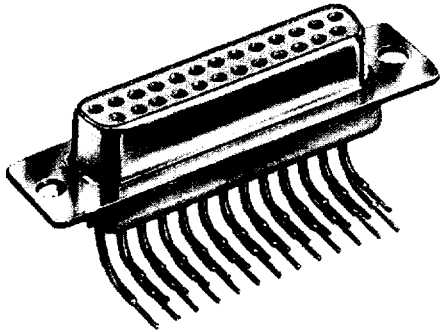
For the single sizes of connectors hoods with straight and right angled outlet as well as strain relief are available. We can also supply locking devices for fixing to the respective mating half.

#### Technical data:

Insulator:	Polyamid UL 94 VO
Contact pins:	Cu-alloy
Contact sockets:	Cu-alloy
Contact surface:	Hard gold over nickel
Requirements level I:	500 mating cycles
Requirements level II:	200 mating cycles
Requirements level III:	50 mating cycles
Shell:	Steel, tin plated
Creepage resistance (DIN 53480):	KB 220
Nominal voltage:	125 V~/isolation class A VDE 110
Test voltage:	1,0 m kV~/min.
Contact resistance:	≤ 10 m Ohms (measured at 10 mV and 10 mA)
Insulation resistance:	≥ 10 <sup>12</sup> Ohms
Current rating:	5 Amps max.
Temperature range:	- 55 °C to +125 °C
Terminal versions:	solder, straight solder pins for PC boards, right angled solder pins for PC boards, flat cable termination, crimp contacts

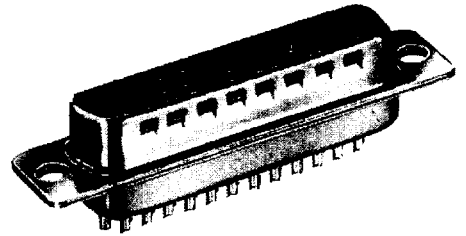
## D-Subminiature connectors Quality class 1 and 2

### Socket connectors

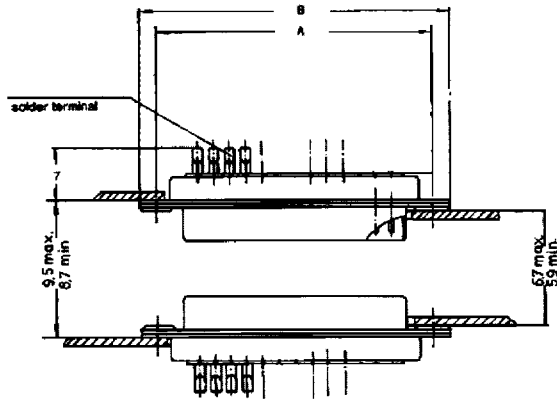


Screw machined contacts

### Pin connectors

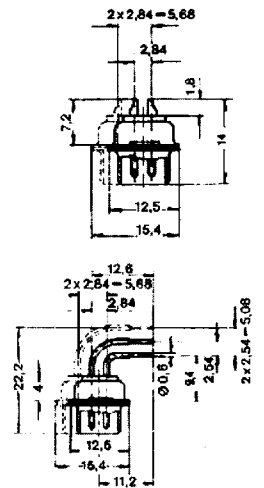


### Shell tin-plated

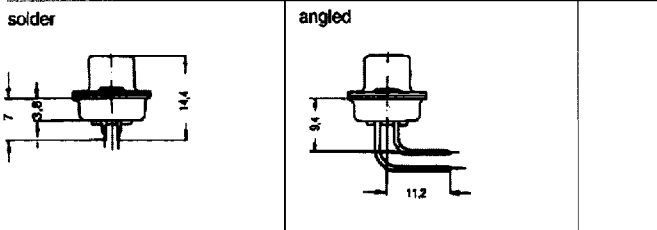


No. of contacts	Dimensions (mm / inch)	
	A	B
9	25,0 / 0.984	30,8 / 1.213
15	33,3 / 1.311	39,2 / 1.543
25	47,0 / 1.850	53,0 / 2.087
37	63,5 / 2.500	69,4 / 2.733
50	81,1 / 2.406	87,0 / 2.638

### Shell tin-plated and dimpled

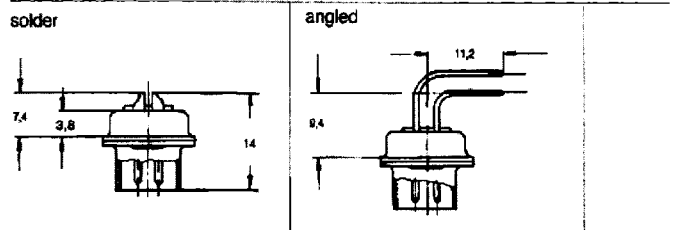


### Terminal versions



solder		angled		No. of contacts
Quality class 1	Quality class 2	Quality class 1	Quality class 2	
A-DF 09 L-I	A-DF 09 L-II	A-DF 09 A-I	A-DF 09 A-II	9
A-DF 15 L-I	A-DF 15 L-II	A-DF 15 A-I	A-DF 15 A-II	15
A-DF 25 L-I	A-DF 25 L-II	A-DF 25 A-I	A-DF 25 A-II	25
A-DF 37 L-I	A-DF 37 L-II	A-DF 37 A-I	A-DF 37 A-II	37
A-DF 50 L-I	A-DF 50 L-II	A-DF 50 A-I	A-DF 50 A-II	50

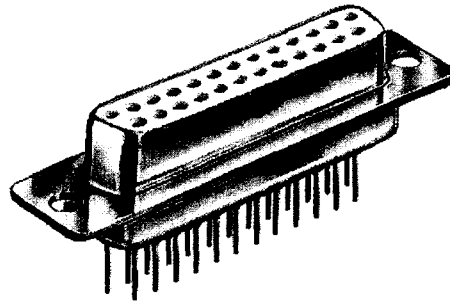
### Terminal versions



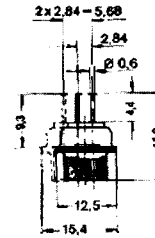
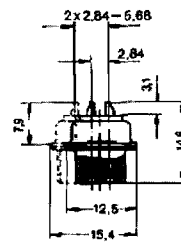
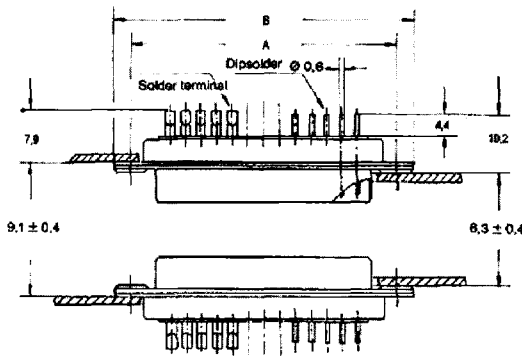
solder		angled		No. of contacts
Quality class 1	Quality class 2	Quality class 1	Quality class 2	
A-DS 09 L-I	A-DS 09 L-II	A-DS 09 A-I	A-DS 09 A-II	9
A-DS 15 L-I	A-DS 15 L-II	A-DS 15 A-I	A-DS 15 A-II	15
A-DS 25 L-I	A-DS 25 L-II	A-DS 25 A-I	A-DS 25 A-II	25
A-DS 37 L-I	A-DS 37 L-II	A-DS 37 A-I	A-DS 37 A-II	37
A-DS 50 L-I	A-DS 50 L-II	A-DS 50 A-I	A-DS 50 A-II	50

### D-Subminiature connectors Socket connectors, Requirements level 3

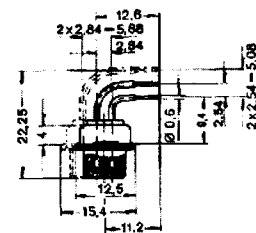
#### Socket connectors



Shell yellow chromated as well as solder cup terminal shell tinned available.



No. of contacts	Dimensions (mm / inch)	
	A	B
9	25,0 / 0.984	30,8 / 1.213
15	33,3 / 1.311	39,2 / 1.543
19	38,9 / 1.531	45,2 / 1.780
23	44,2 / 1.740	50,4 / 1.984
25	47,0 / 1.850	53,0 / 2.087
37	63,5 / 2.500	69,4 / 2.733
50	61,1 / 2.406	67,0 / 2.638

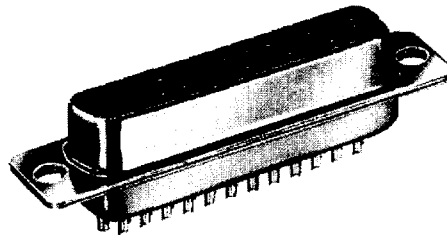


#### Terminal versions

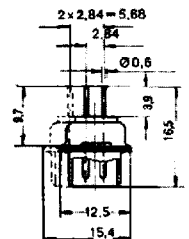
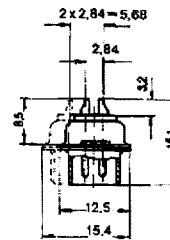
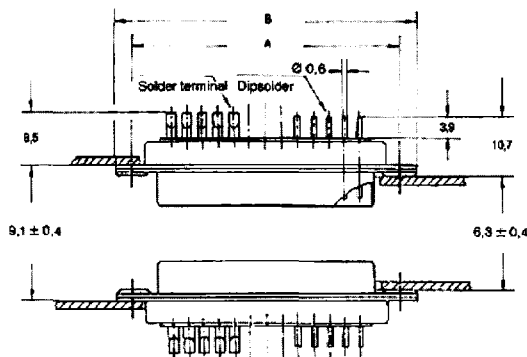
solder		dipsolder		angled		No. of contacts
Shell: yellow chromated	tinned	tinned	yellow chromated	yellow chromated		
A-DF 09 LL	A-DF 09 LL/Z	A-DF 09 LL/G	A-DF 09 PP	A-DF 09 AA		9
A-DF 15 LL	A-DF 15 LL/Z	A-DF 15 LL/G	A-DF 15 PP	A-DF 15 AA		15
A-DF 19 LL-EDV	—	—	—	—		19
A-DF 23 LL-EDV	—	—	—	—		23
A-DF 25 LL	A-DF 25 LL/Z	A-DF 25 LL/G	A-DF 25 PP	A-DF 25 AA		25
A-DF 37 LL	A-DF 37 LL/Z	A-DF 37 LL/G	A-DF 37 PP	A-DF 37 AA		37
A-DF 50 LL	A-DF 50 LL/Z	A-DF 50 LL/G	A-DF 50 PP	A-DF 50 AA		50
	Contacts: selective plating	Contacts: gold plating				

## D-Subminiature connectors Pin connectors, Requirements level 3

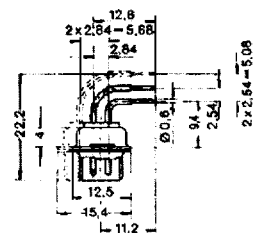
### Plug connectors



Shell yellow chromated as well as solder cup shell terminal tinned and dimpled available.



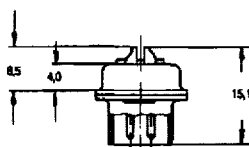
No. of contacts	Dimensions (mm / inch)	
	A	B
9	25,0 / 0.984	30,8 / 1.213
15	33,3 / 1.311	39,2 / 1.543
19	38,9 / 1.531	45,2 / 1.780
23	44,2 / 1.740	50,4 / 1.984
25	47,0 / 1.850	53,0 / 2.087
37	63,5 / 2.500	69,4 / 2.733
50	61,1 / 2.406	67,0 / 2.638



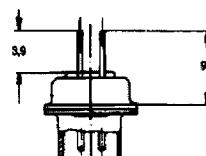
Solder cup tinned  
Gold plated contact area

### Terminal versions

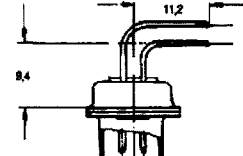
solder



dipsolder



angled

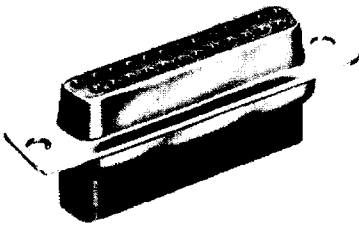


Shell: yellow chromated	tinned	tinned	yellow chromated	yellow chromated	No. of contacts
A-DS 09 LL	A-DS 09 LL/Z	A-DS 09 LL/G	A-DS 09 PP	A-DS 09 AA	9
A-DS 15 LL	A-DS 15 LL/Z	A-DS 15 LL/G	A-DS 15 PP	A-DS 15 AA	15
A-DS 19 LL-EDV	—	—	—	—	19
A-DS 23 LL-EDV	—	—	—	—	23
A-DS 25 LL	A-DS 25 LL/Z	A-DS 25 LL/G	A-DS 25 PP	A-DS 25 AA	25
A-DS 37 LL	A-DS 37 LL/Z	A-DS 37 LL/G	A-DS 37 PP	A-DS 37 AA	37
A-DS 50 LL	A-DS 50 LL/Z	A-DS 50 LL/G	A-DS 50 PP	A-DS 50 AA	50
	Contacts: selective plating	Contacts: gold plating	Contacts: gold plating	Contacts: gold plating	

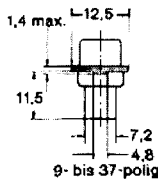
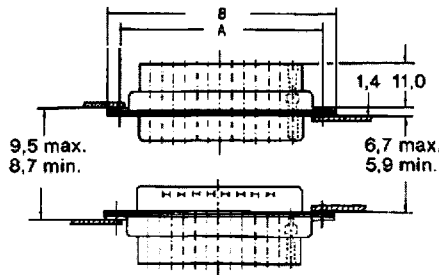
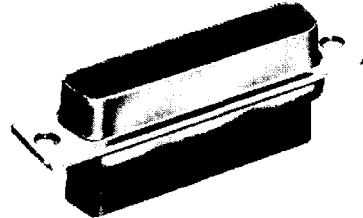
### D-Subminiature connectors

Housing socket connectors and pin connectors for crimp contacts AWG 20-30

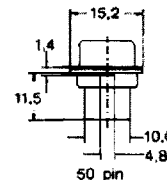
Housing socket connector



Housing pin connector



No. of contacts	Dimensions (mm / inch)	
	A	B
9	25,0 / 0.984	30,8 / 1.213
15	33,3 / 1.311	39,2 / 1.543
25	47,0 / 1.850	53,0 / 2.087
37	63,5 / 2.500	69,4 / 2.733
50	61,1 / 2.406	67,0 / 2.638



**Technical data:**

Insulator: Polyamid, glass-reinforced, UL 94, VO  
 Test voltage:  $\geq 1.0$  kV  
 Insulation resistance: 5000 M  $\Omega$   
 Temperature range: -55 °C to +105 °C

**Technical data:**

Insulator: Polyamid, glass-reinforced, UL 94, VO  
 Test voltage:  $\geq 1.0$  kV  
 Insulation resistance: 5000 M  $\Omega$   
 Temperature range: -55 °C to +105 °C

Shell:  
Steel, galvanized and yellow chromate

Shell:  
Steel, tin plated

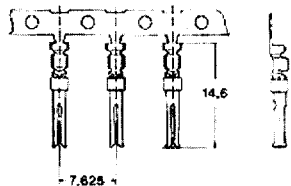
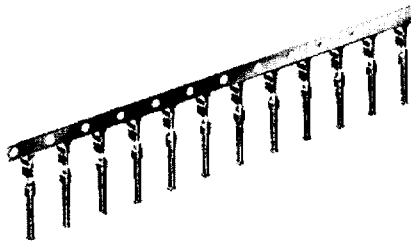
Shell:  
Steel, galvanized and yellow chromate

Shell:  
Steel, tin plated and dimpled

Part no.	Part no.	No. of contacts	Part no.	Part no.	No. of contacts
A-DFCR/09	A-DFCR/09/FZ	9	A-DSCR/09	A-DSCR/09/FZ	9
A-DFCR/15	A-DFCR/15/FZ	15	A-DSCR/15	A-DSCR/15/FZ	15
A-DFCR/25	A-DFCR/25/FZ	25	A-DSCR/25	A-DSCR/25/FZ	25
A-DFCR/37	A-DFCR/37/FZ	37	A-DSCR/37	A-DSCR/37/FZ	37
A-DFCR/50	A-DFCR/50/FZ	50	A-DSCR/50	A-DSCR/50/FZ	50

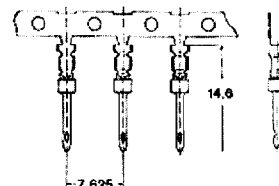
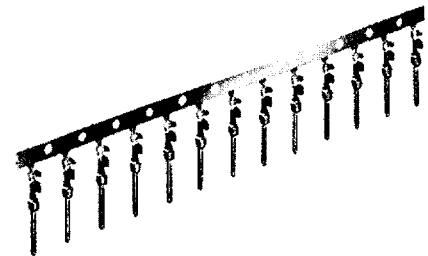
## Crimp contacts for D-Subminiature Crimp connectors

Socket connector contacts,  
feeding operation on reels from left to right



**Technical data:**

**Material:** Phosphor bronze  
**Surface:**  
 In contact area: Au over Ni  
 In crimp area: Sn Pb over Ni  
**Current rating:**  
 AWG 20 = 7.5 A  
 AWG 22 = 5.0 A  
 AWG 24 = 3.0 A  
 AWG 26 = 2.0 A  
 AWG 28 = 1.5 A  
**Contact resistance:**  $\leq 10 \text{ m}\Omega$



**Technical data:**

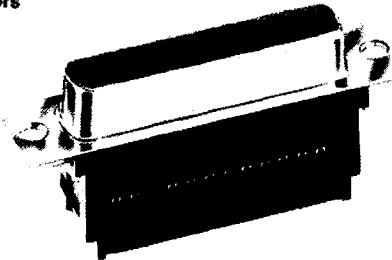
**Material:** Copper alloy  
**Surface:**  
 In contact area: Au over Ni  
 In crimp area: Sn Pb over Ni  
**Current rating:**  
 AWG 20 = 7.5 A  
 AWG 22 = 5.0 A  
 AWG 24 = 3.0 A  
 AWG 26 = 2.0 A  
 AWG 28 = 1.5 A  
**Contact resistance:**  $\leq 10 \text{ m}\Omega$

Part no.	No. of contacts	for cable	Part no.	No. of contacts	for cable
A-CRIF/20-10K	10.000 pieces/coil	AWG 20-26	A-CRIS/20-10K	10.000 pieces/coil	AWG 20-26
A-CRIF/20-500	500 pieces/coil	AWG 20-26	A-CRIS/20-500	500 pieces/coil	AWG 20-26
A-CRIF/20-100/B	100 pieces/bag	AWG 20-26	A-CRIS/20-100/B	100 pieces/bag	AWG 20-26
A-CRIF/24-10K	10.000 pieces/coil	AWG 24-28	A-CRIS/24-10K	10.000 pieces/coil	AWG 24-28
A-CRIF/24-500	500 pieces/coil	AWG 24-28	A-CRIS/24-500	500 pieces/coil	AWG 24-28

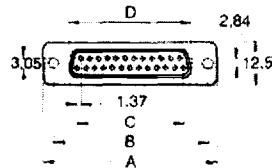
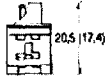
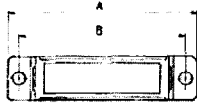
### D-Subminiature flat cable connectors

The subminiature connectors are mechanically in accordance to the MIL-C-24308 types and DIN 41651/2 Low profile version

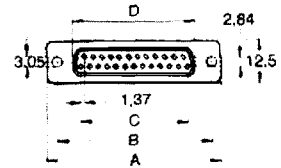
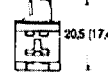
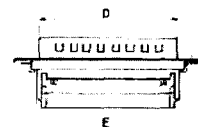
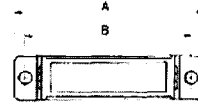
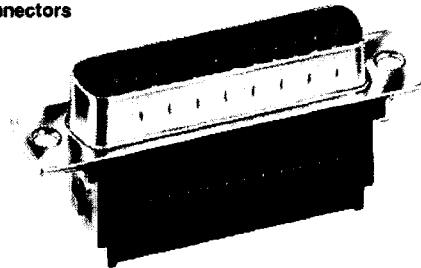
#### Female connectors



Shell tin-plated



#### Male connectors



No. of contacts	Dimensions (mm / inch)			D		E
	A	B	C	Female connectors	Male connectors	
9	30,8 / 1.213	25,00 / 0.984	10,96 / 0.431	16,3 / 0.642	17,8 / 0.701	16,2 / 0.638
15	39,1 / 1.539	33,32 / 1.312	19,33 / 0.801	24,5 / 0.965	26,2 / 1.032	24,5 / 0.965
25	53,1 / 2.901	47,04 / 1.852	33,13 / 1.304	38,3 / 1.508	39,8 / 1.567	37,5 / 1.476
37	69,5 / 2.737	63,50 / 2.500	49,70 / 1.957	54,8 / 2.157	56,2 / 2.212	53,8 / 2.118

Part no.	Female connectors	No. of contacts
A-DFF 09 LP III/Z		9
A-DFF 15 LP III/Z		15
A-DFF 25 LP III/Z		25
A-DFF 37 LP III/Z		37

Part no.	Male connectors	No. of contacts
A-DSF 09 LP III/Z		9
A-DSF 15 LP III/Z		15
A-DSF 25 LP III/Z		25
A-DSF 37 LP III/Z		37

All the above are supplied with strain relief

#### Technical data

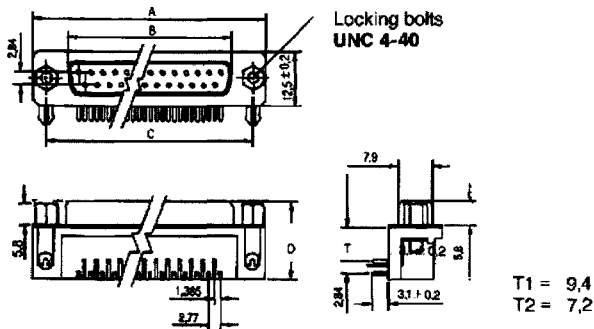
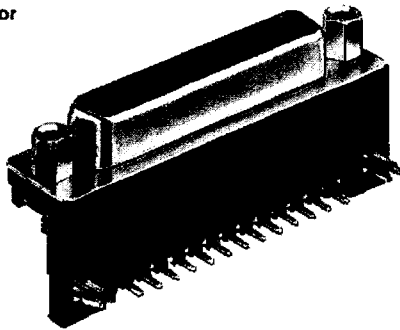
Material insulator: Glass-reinforced, polycarbonate, non inflammable according to UL 94, VO  
 Material shell: Steel, tin plated  
 Material contact: Copper alloy  
 Contact finish: Au on Ni plug area, other parts tin  
 Quality class: III, 50 mating cycles  
 Contact carrying:  $\geq 1$  A cable cross-section 0.08 mm<sup>2</sup>  
 $\geq 1.5$  A cable cross-section 0.14 mm<sup>2</sup>  
 Test voltage: 1000 V<sub>eff</sub>  
 Temperature range: -65 °C to +105 °C  
 Rate of moisture: 75% rel. moisture according DIN 40040 or MIL-C-21097 B

Other qualities available on request

## D-Subminiature connectors

90° angled, for PCB-mounting in plastic housing with "Snap-In" technique and locking bolts

Socket connector



No. of contacts	Dimensions (mm / inch)		C	D for	
	A	B		T1	T2
9	30,8 1.213	16,3 0.642	25,0 0.984	21,05 0.829	18,85 0.742
15	39,2 1.543	24,6 0.969	33,3 1.311	21,05 0.829	18,85 0.742
25	53,0 2.087	38,3 1.508	47,0 1.850	21,05 0.829	18,85 0.742
37	89,4 2.733	54,8 2.157	63,5 2.500	21,05 0.829	18,85 0.742

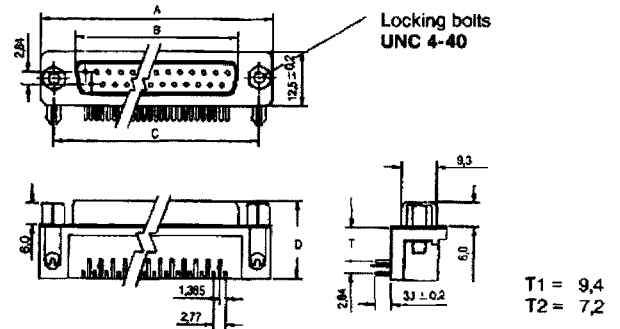
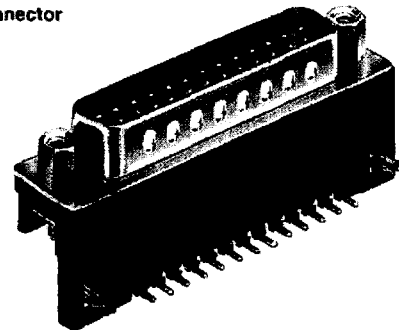
**Technical descriptions:**

Shell: Steel, tin plated  
 Insulator: Polyamid, glass-reinforced  
 Contact pins: Cu-alloy  
 Contact sockets: Cu-alloy  
 Contact surface: hard gold plated over nickel in contact area  
 tinned on solder end

Part no.	No. of contacts
A-DF 9 A/KG-X <sup>1</sup>	9
A-DF 15 A/KG-X <sup>1</sup>	15
A-DF 25 A/KG-X <sup>1</sup>	25
A-DF 37 A/KG-X <sup>1</sup>	37

<sup>1</sup>) X = Please replace X by: T1 = 9,4 european standard  
 T2 = 7,2 USA standard

Plug connector



No. of contacts	Dimensions (mm / inch)		C	D for	
	A	B		T1	T2
9	30,8 1.213	16,9 0.665	25,0 0.984	21,25 0.837	19,05 0.750
15	39,2 1.543	25,3 0.996	33,3 1.311	21,25 0.837	19,05 0.750
25	53,0 2.087	39,0 1.535	47,0 1.850	21,25 0.837	19,05 0.750
37	89,4 2.733	55,4 2.181	63,5 2.500	21,25 0.837	19,05 0.750

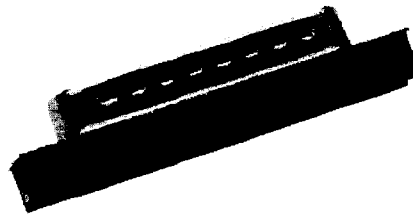
Part no.	No. of contacts
A-DS 9 A/KG-X <sup>1</sup>	9
A-DS 15 A/KG-X <sup>1</sup>	15
A-DS 25 A/KG-X <sup>1</sup>	25
A-DS 37 A/KG-X <sup>1</sup>	37



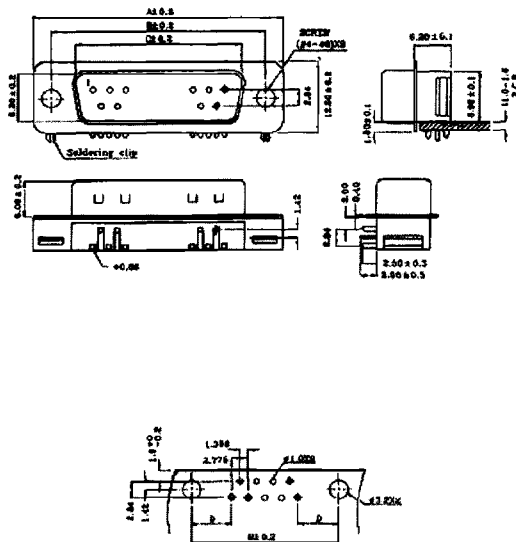
### D-Subminiature connectors, low-profile version

90° angled, for PCB-mounting in plastic housing with "Snap-In" technique

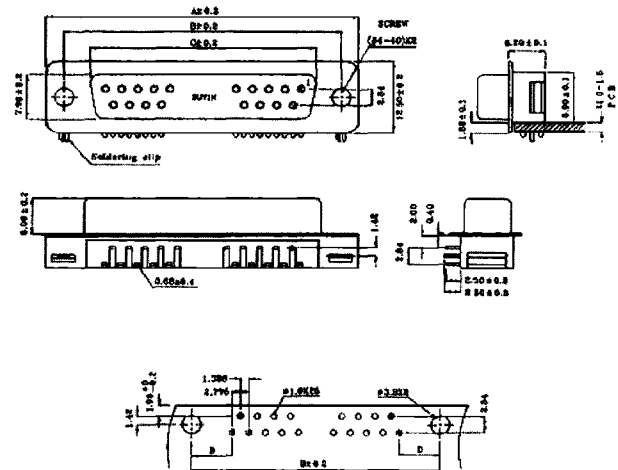
**NEW**



**Plug connector**  
with dimpled shell



**Socket connector**



Part no.	No. of contacts	Dimensions (mm)			
		A	B	C	D
A-DS 09 A/KG-LP	9	30,81	24,99	16,85	6,95
A-DS 25 A/KG-LP	25	53,04	47,04	38,96	6,87

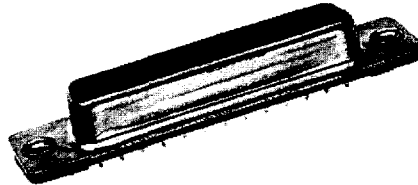
Part no.	No. of contacts	Dimensions (mm)			
		A	B	C	D
A-DF 09 A/KG-LP	9	30,81	24,99	16,85	6,95
A-DF 15 A/KG-LP	15	39,14	33,32	24,66	6,95
A-DF 25 A/KG-LP	25	33,04	47,04	38,88	6,87
High-density:					
A-HDF 15 A/KG-LP	15 HD	30,81	24,99	16,33	7,92

SMT version on request

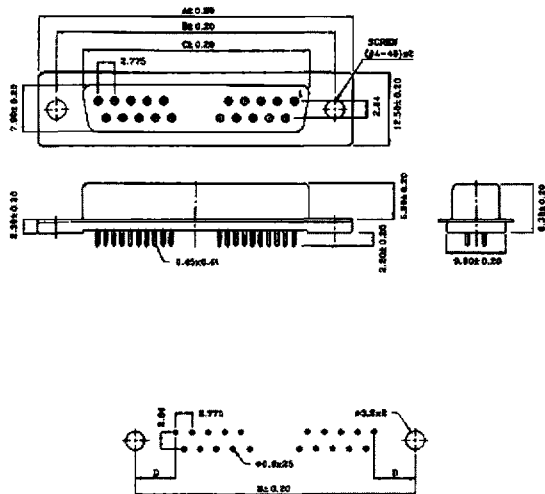
**Technical data**

Shell: Steel, nickel plated  
 Insulator: High-temperature plastic  
 Contact pins: Cu-alloy  
 Contact sockets: Cu-alloy  
 Contact surface: hard gold plated over nickel in contact area

## D-Subminiature connectors, low-profile version 180°, for PCB-mounting

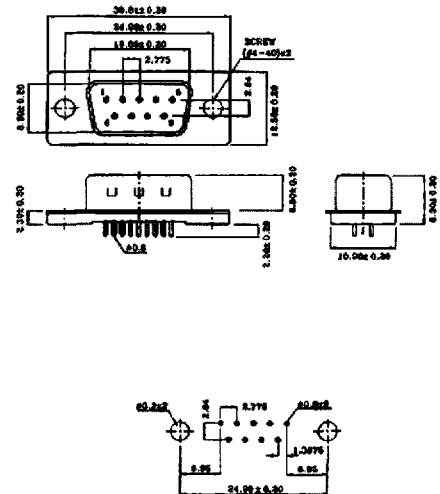


### Socket connector



### Plug connector

with dimpled shell



Part no.	No. of contacts	Dimensions (mm)			
		A	B	C	D
A-DF 15 LP/Z	15	39,14	33,32	24,66	6,95
A-DF 25 LP/Z	25	53,04	47,04	38,38	6,87
High-density:					
A-HDF 15 LP/Z	15	30,81	24,99	16,33	6,82

Part no.	No. of contacts
A-DS 09 LP/Z	9

### Technical data

Shell:	Steel, nickel plated
Insulator:	High-temperature plastic
Contact pins:	Cu-alloy
Contact sockets:	Cu-alloy
Contact surface:	hard gold plated over nickel in contact area

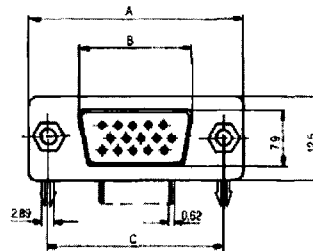
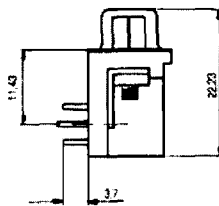
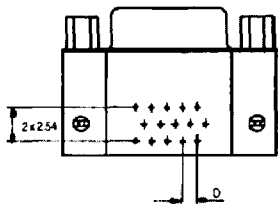
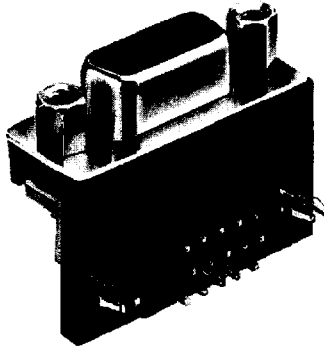
### High-Density D-Subminiature connectors

90° angled, for PCB-mounting with "Snap-In" technique and locking bolts

Socket connector

Plug connector with dimpled shell

Locking bolts  
UNC 4-40



No. of contacts	Dimensions (mm / inch)			
	A	B	C	D
15	30,8 / 1.213	16,3 / 0.642	25,0 / 0.984	2,29 / 0.090
26	39,1 / 1.539	24,6 / 0.969	33,3 / 1.311	2,29 / 0.090
44	53,0 / 2.087	38,4 / 1.512	47,0 / 1.850	2,29 / 0.090
62	69,3 / 2.729	54,8 / 2.157	63,5 / 2.500	2,41 / 0.096

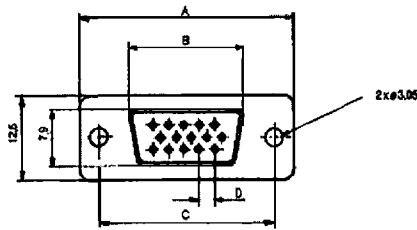
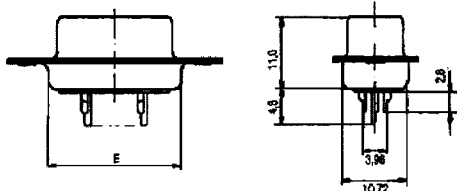
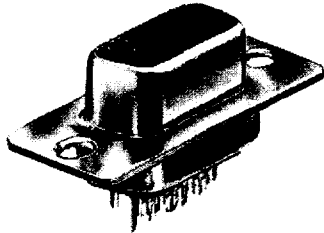
**Technical descriptions:**

Shell: Steel, tin plated  
 Insulator: Polyester, glass-reinforced, UL 94, VO  
 Contact: Cu-alloy  
 Contact surface: hard gold plated over nickel

Part no.	No. of contacts	Part no.	No. of contacts
A-HDF 15 A-KG/T	15	A-HDS 15 A-KG/T	15
A-HDF 26 A-KG/T	26	A-HDS 26 A-KG/T	26
A-HDF 44 A-KG/T	44	A-HDS 44 A-KG/T	44
A-HDF 62 A-KG/T	62	A-HDS 62 A-KG/T	62

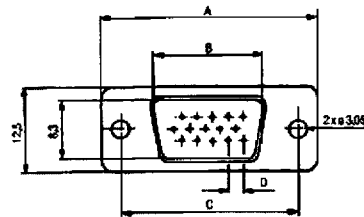
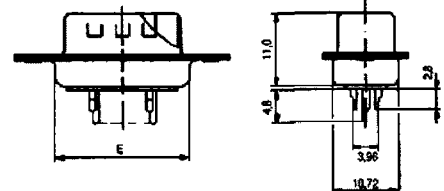
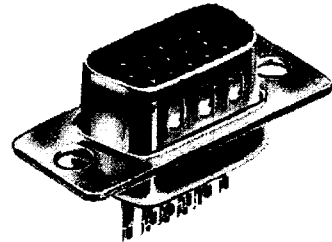
## High-Density D-Subminiature connectors

Socket connector



Plug connector

with dimpled shell



No. of contacts	Dimensions (mm / inch)					E
	A	B Female connector	B Male connector	C	D	
15	30,8 / 1.213	16,3 / 0.642	16,9 / 0.665	25,0 / 0.984	2,29 / 0.090	19,3 / 0.800
26	39,1 / 1.539	24,7 / 0.973	25,3 / 0.996	33,3 / 1.311	2,29 / 0.090	27,5 / 1.083
44	53,0 / 2.087	38,4 / 1.512	39,0 / 1.535	47,0 / 1.850	2,29 / 0.090	41,3 / 1.626
62	69,3 / 2.729	54,8 / 2.157	55,4 / 2.181	63,5 / 2.500	2,41 / 0.096	57,7 / 2.272

**Technical descriptions:**

Shell: Steel, tinned  
 Insulator: Polyester, glass-reinforced, UL 94, VO  
 Contact: Cu-alloy  
 Contact surface: hard gold plated over nickel  
 Contact terminal: solder cup

Part no.	No. of contacts
A-HDF 15 LL/Z	15
A-HDF 26 LL/Z	26
A-HDF 44 LL/Z	44
A-HDF 62 LL/Z	62

Part no.	No. of contacts
A-HDS 15 LL/Z	15
A-HDS 26 LL/Z	26
A-HDS 44 LL/Z	44
A-HDS 62 LL/Z	62

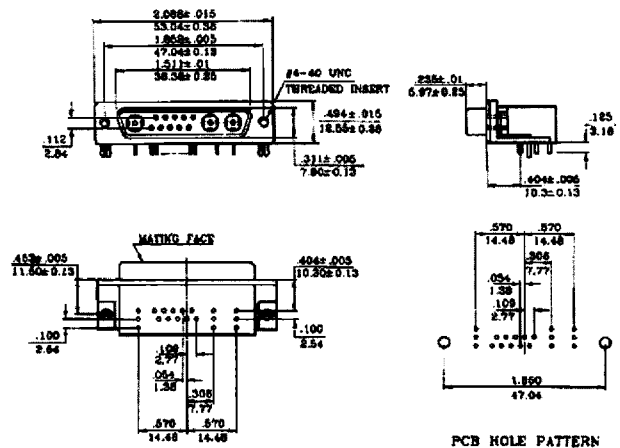
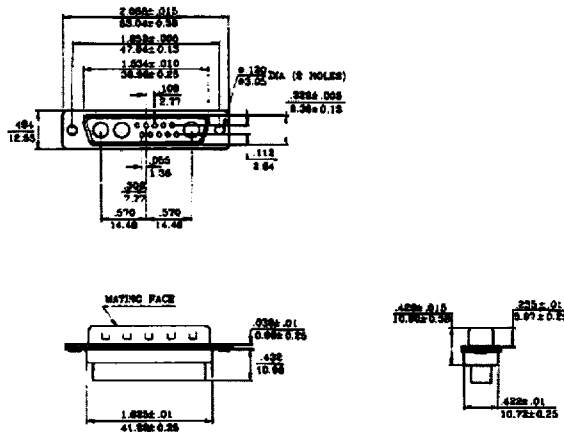
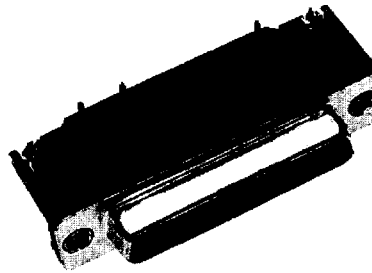
### D-Subminiature connectors with mixed contacts

#### D-SUB Coaxial 13 W 3

with crimp-contacts, pin connector

#### D-SUB Coaxial 13 W 3

for PCB-mounting, socket connector 90° angled



Part no.	No. of contacts
A-DSCR13W3	10 + 3 Coax

Part no.	No. of contacts
A-DF13W3A	10 + 3 Coax

#### Technical data:

Shell:	Steel, tin plated
Insulator:	Polyamid, glass-reinforced, UL 94, VO
Contact sockets:	Cu-alloy
Contact surface:	hard gold plated over nickel in contact area, tinned on solder end
Crimp-contacts:	hard gold plated over nickel
Impedance:	50 Ω
Dielectric withstanding voltage:	1000 VAC
Insulation resistance:	5000 M Ω
Temperature range:	-55°C to +125°C