

D-Sub – Waterproof subminiature D IP 67 connectors

Page

Technical characteristics

06.02

IP 67 versions with turned solder cups



06.04

IP 67 versions with turned solder cups and rear plastic mounting plate



06.06

IP 67 versions with turned solder cups and front plastic mounting plate



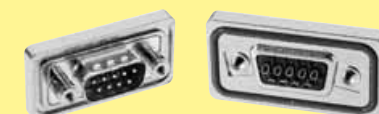
06.08

IP 67 versions with turned solder cups and rear metal mounting plate



06.10

IP 67 versions with turned solder cups and front metal mounting plate



06.12

IP 67 versions with straight turned solder pins, rear plastic mounting plate, spacer and board lock



06.14

IP 67 versions with angled turned solder pins, rear plastic mounting plate, bracket and board lock



06.16

Accessories for IP 67 connectors



06.18

IP 67 plastic hoods



06.19

IP 67 metallized plastic hoods



06.20

Accessories for IP 67 hoods



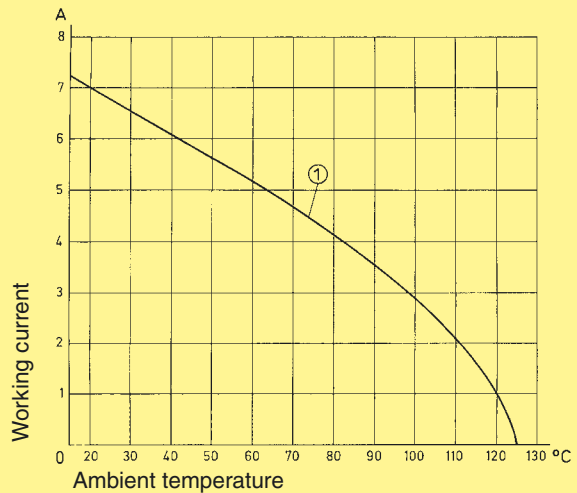
06.21

Number of contacts	9, 15, 25, 37, 50 UL recognized
Working current	5 A
Test voltage	1200 V for 1 minute between 2 contacts / contact and shell
Clearance and creepage	≥ 1.0 mm
Contact resistance	
Straight contact	≤ 10 mΩ
Angled contact	≤ 25 mΩ
Angled contact 50 pole	≤ 35 mΩ
Insulation resistance	≥ 5000 MΩ between contacts
Dielectric strength	50 kV/mm
Temperature range	-25 °C ... +70 °C
Protection	IP 67 (per DIN 40 050 / IEC 529)
Termination	
Solder cup	max. AWG 20
Solder pin straight	0.6 mm diameter
Solder pin angled	0.6 mm diameter
Material	
Shell	Brass, nickel plated
Insulator and plastic watertight frame	Thermoplastic, glass-fibre filled, UL 94-V0
Metal watertight frame	Nickel plated zinc die cast
Contact material	Machined copper alloy
Contact surface	
Contact zone	0.76 μm Au min. over Ni
Waterproofing element	Silicone
Mechanical	
Mating cycles	≥ 500
Mating force per signal contact	≤ 3.4 N
Unmating force per signal contact	≥ 0.2 N

Current carrying capacity

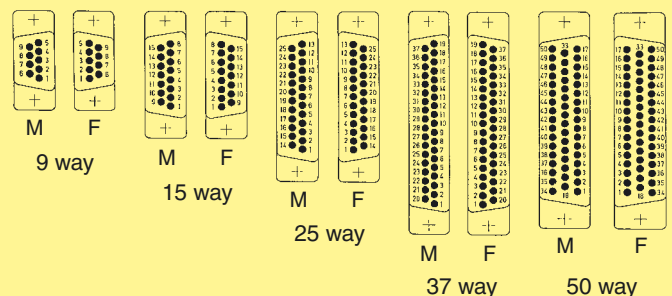
The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60 512.

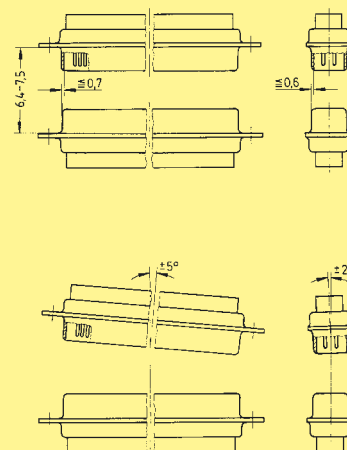


Example: 25 way connector
① Turned contacts

Contact arrangement View from termination side



Mating conditions as per DIN 41 652



D-Sub - W

Number of contacts

9-50



IP 67, turned solder cups

Identification	No. of contacts	Part No.
S4 ¹⁾		
Male connector metal shell with dimples	9 15 25 37 50	09 67 409 5615 09 67 415 5615 09 67 425 5615 09 67 437 5615 09 67 450 5615
Female connector metal shell	9 15 25 37 50	09 67 409 4715 09 67 415 4715 09 67 425 4715 09 67 437 4715 09 67 450 4715

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-50



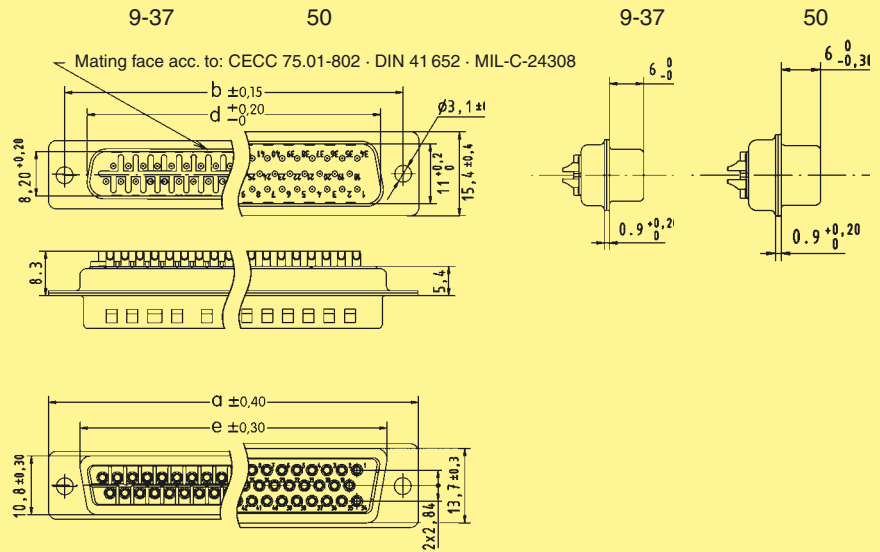
IP 67, turned solder cups

Identification

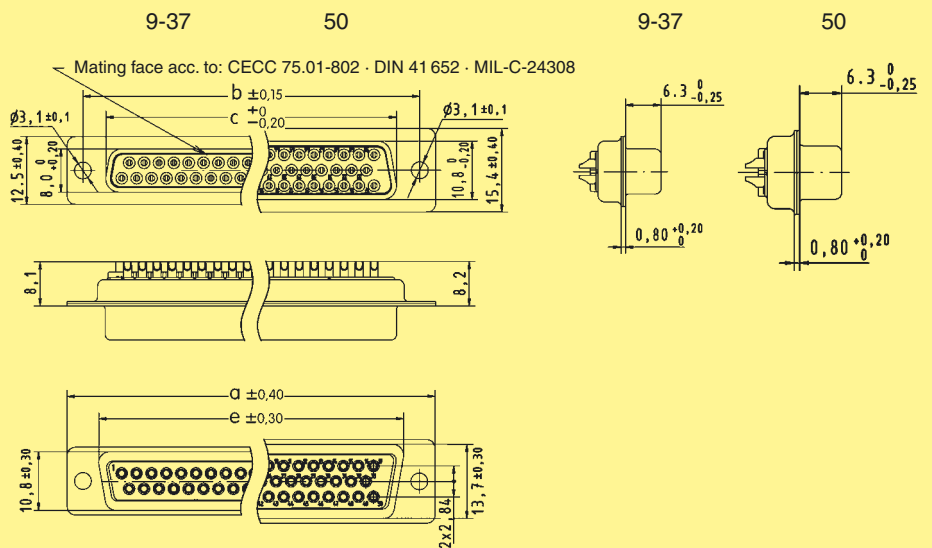
Drawing

Dimensions in mm

Male connector
9 – 50 contacts



Female connector
9 – 50 contacts



	a	b	c	d	e
9	30.8	25.00	16.4	16.9	19.3
15	39.1	33.30	24.7	25.2	27.5
25	53.0	47.04	38.5	38.9	41.3
37	69.3	63.50	54.9	55.3	57.7
50	66.9	61.10	52.5	52.8	55.3

Number of contacts

9-25



IP 67, turned solder cups, with rear plastic mounting plate

Identification	No. of contacts	Part No.	
		S4 ¹⁾	
Male connector metal shell with dimples	9 15 25	09 67 509 .	615
		09 67 515 .	615
		09 67 525 .	615
Please insert digit for flange thread			
4-40 UNC ▶	7		
M3 ▶	9		
Female connector metal shell	9 15 25	09 67 509 .	715
		09 67 515 .	715
		09 67 525 .	715
Please insert digit for flange thread			
4-40 UNC ▶	6		
M3 ▶	8		

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-25



IP 67, turned solder cups, with rear plastic mounting plate

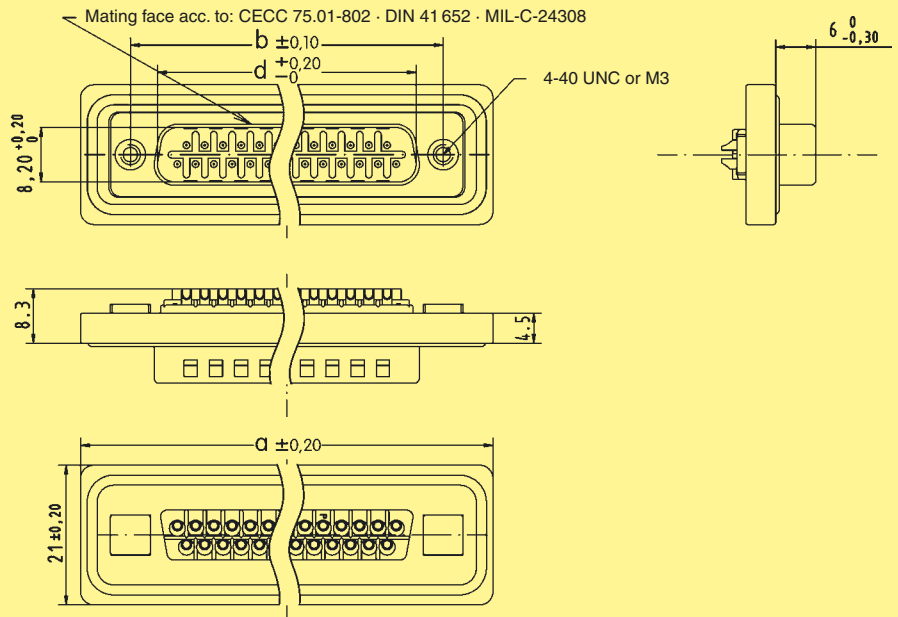
Identification

Drawing

Dimensions in mm

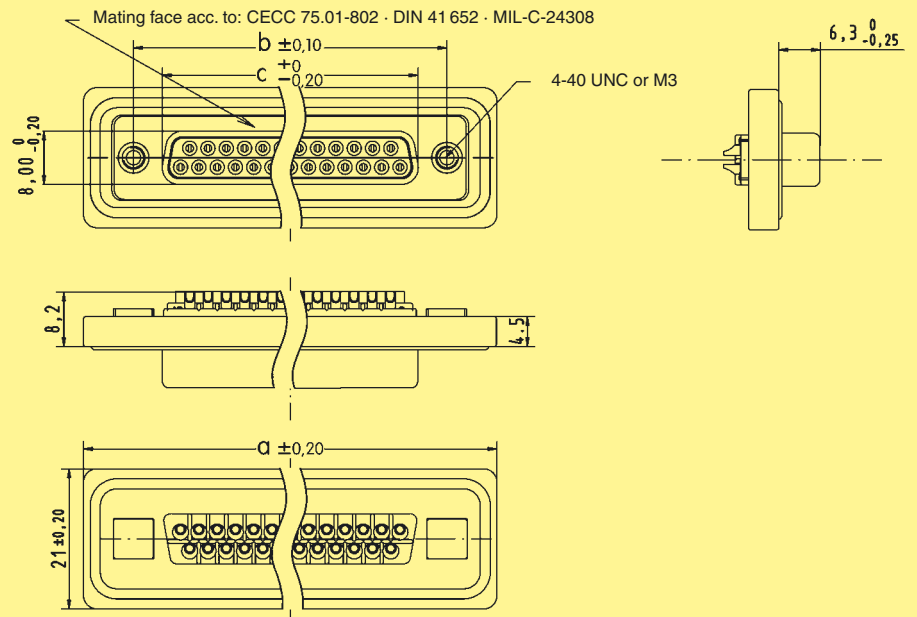
Male connector

9 – 25 contacts



Female connector

9 – 25 contacts



	a	b	c	d
9	40.0	25.00	16.4	16.9
15	48.3	33.30	24.7	25.2
25	62.0	47.04	38.5	38.9

Number of contacts

9-25



IP 67, turned solder cups, with front plastic mounting plate

Identification	No. of contacts	Part No.	
		S4 ¹⁾	
Male connector metal shell with dimples	9 15 25	09 67 709 .	615
		09 67 715 .	615
		09 67 725 .	615
Please insert digit for flange thread			
4-40 UNC ▶	7		
M3 ▶	9		
Female connector metal shell	9 15 25	09 67 709 .	715
		09 67 715 .	715
		09 67 725 .	715
Please insert digit for flange thread			
4-40 UNC ▶	6		
M3 ▶	8		

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-25



IP 67, turned solder cups, with front plastic mounting plate

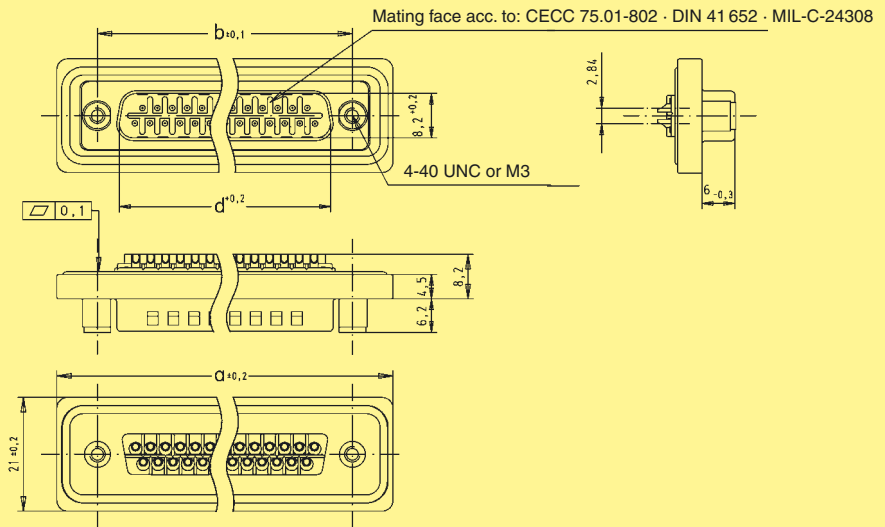
Identification

Drawing

Dimensions in mm

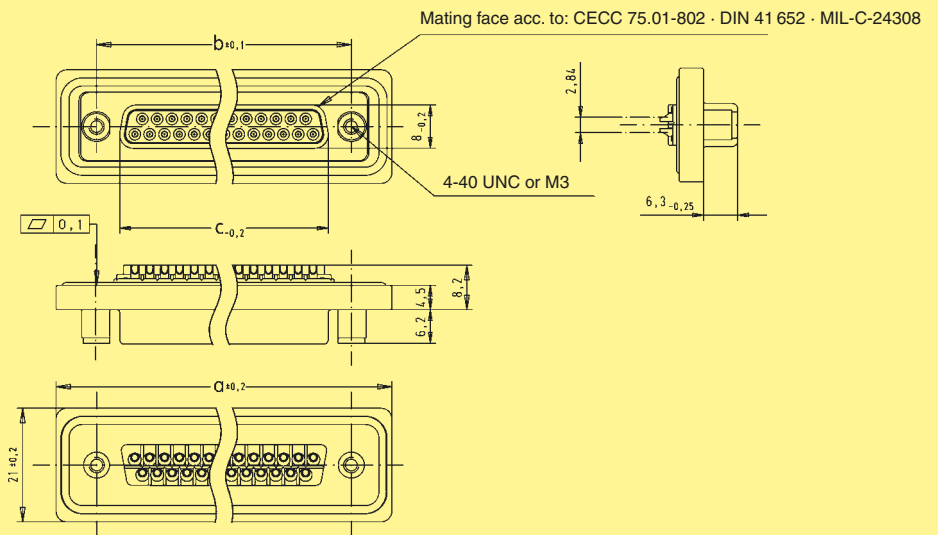
Male connector

9 – 25 contacts



Female connector

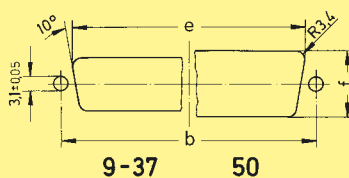
9 – 25 contacts



	a	b	c	d
9	40.0	25.00	16.4	16.9
15	48.3	33.30	24.7	25.2
25	62.0	47.04	38.5	38.9

Panel cut out for front/rear mount

Values are taken from the CECC 75 301-802



Front mount

Rear mount

	$b_{\pm 0.13}$	$e_{\pm 0.2}$	$f_{\pm 0.2}$
9	25.0	22.2	12.3
15	33.3	30.5	12.3
25	47.0	44.3	12.3

	$b_{\pm 0.13}$	$e_{\pm 0.2}$	$f_{\pm 0.2}$
9	25.0	20.5	11.4
15	33.3	28.8	11.4
25	47.0	42.5	11.4

D-Sub - W

Number of contacts

9-50



IP 67, turned solder cups, with rear metal mounting plate

Identification	No. of contacts	Part No.	
		S4 ¹⁾	
Male connector metal shell with dimples			
	9	09 67 609	. 615
	15	09 67 615	. 615
	25	09 67 625	. 615
	37	09 67 637	. 615
	50	09 67 650	. 615
Please insert digit for flange thread			
4-40 UNC ▶	7		
M3 ▶	9		
Female connector metal shell			
	9	09 67 609	. 715
	15	09 67 615	. 715
	25	09 67 625	. 715
	37	09 67 637	. 715
	50	09 67 650	. 715
Please insert digit for flange thread			
4-40 UNC ▶	6		
M3 ▶	8		

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-50



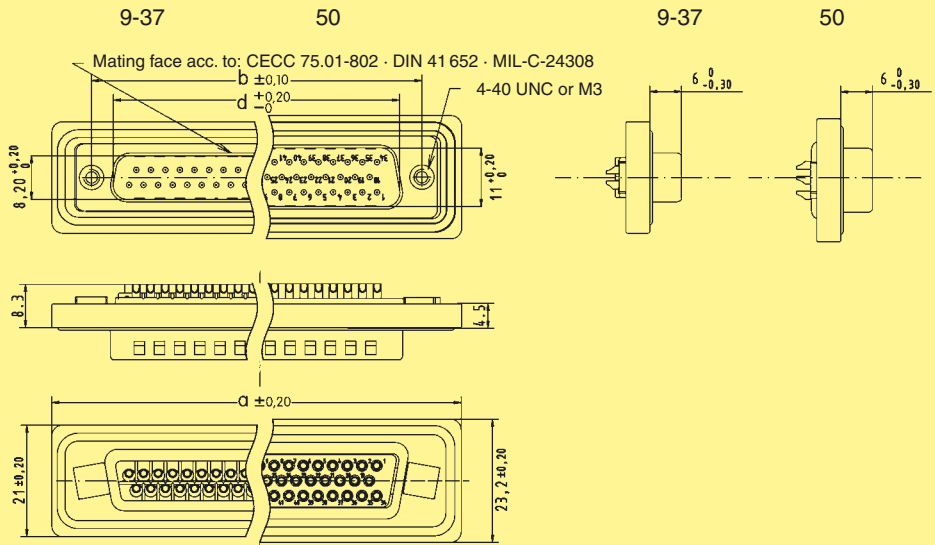
IP 67, turned solder cups, with rear metal mounting plate

Identification

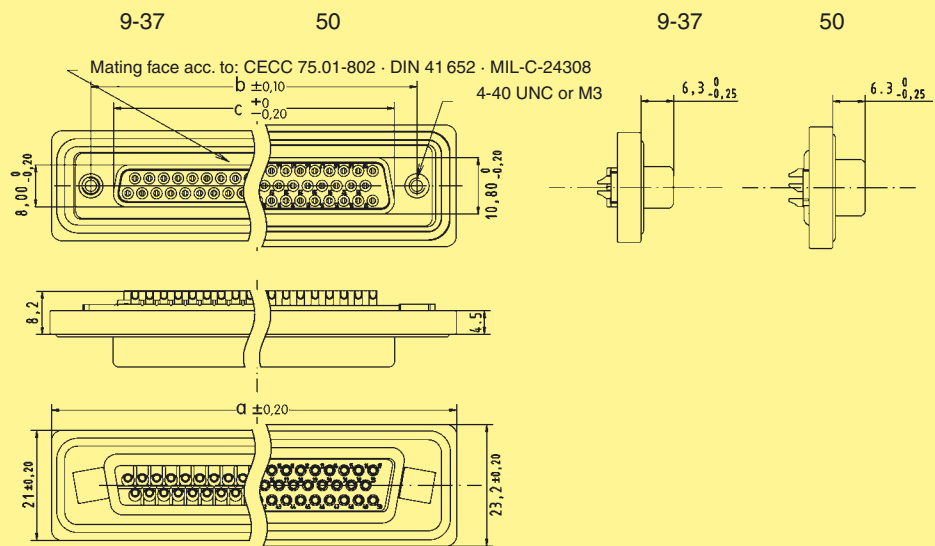
Drawing

Dimensions in mm

Male connector
9 – 50 contacts



Female connector
9 – 50 contacts

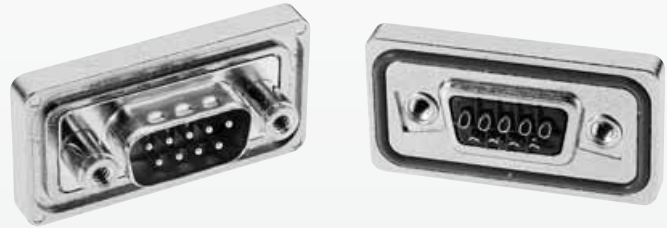


	a	b	c	d
9	40.0	25.00	16.4	16.9
15	48.3	33.30	24.7	25.2
25	62.0	47.04	38.5	38.9
37	78.5	63.50	54.9	55.3
50	76.1	61.10	52.5	52.8

D-Sub - W

Number of contacts

9-50



IP 67, turned solder cups, with front metal mounting plate

Identification	No. of contacts	Part No.	
		S4 ¹⁾	
Male connector metal shell with dimples			
	9	09 67 809	. 615
	15	09 67 815	. 615
	25	09 67 825	. 615
	37	09 67 837	. 615
	50	09 67 850	. 615
Please insert digit for flange thread			
4-40 UNC ▶	7		
M3 ▶	9		
Female connector metal shell			
	9	09 67 809	. 715
	15	09 67 815	. 715
	25	09 67 825	. 715
	37	09 67 837	. 715
	50	09 67 850	. 715
Please insert digit for flange thread			
4-40 UNC ▶	6		
M3 ▶	8		

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-50



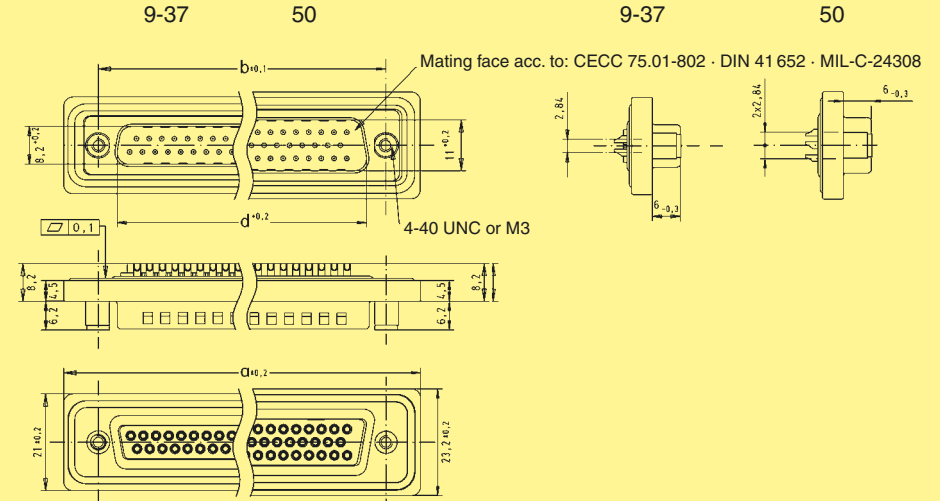
IP 67, turned solder cups, with front metal mounting plate

Identification

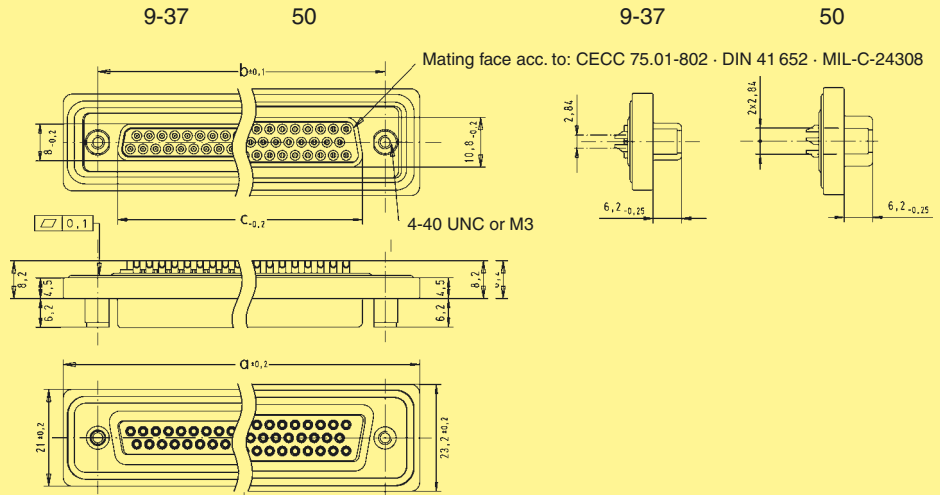
Drawing

Dimensions in mm

Male connector
9 – 50 contacts



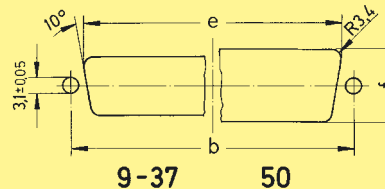
Female connector
9 – 50 contacts



	a	b	c	d
9	40.0	25.00	16.4	16.9
15	48.3	33.30	24.7	25.2
25	62.0	47.04	38.5	38.9
37	78.5	63.50	54.9	55.3
50	76.1	61.10	51.3	52.8

Panel cut out
for front/rear mount

Values are taken from the
CECC 75 301-802



Front mount

	$b_{\pm 0.13}$	$e_{\pm 0.2}$	$f_{\pm 0.2}$
9	25.0	22.2	12.3
15	33.3	30.5	12.3
25	47.0	44.3	12.3
37	63.5	60.7	12.3
50	61.1	58.3	15.1

Rear mount

	$b_{\pm 0.13}$	$e_{\pm 0.2}$	$f_{\pm 0.2}$
9	25.0	20.5	11.4
15	33.3	28.8	11.4
25	47.0	42.5	11.4
37	63.5	59.1	11.4
50	61.1	56.3	14.1

Number of contacts

9-25



IP 67, straight turned solder pins,
with rear plastic mounting plate, spacer and board lock

Identification	No. of contacts	Part No.
S4 ¹⁾		
Male connector metal shell with dimples	9 15 25	09 67 509 . 675 09 67 515 . 675 09 67 525 . 675
Please insert digit for flange thread	4-40 UNC ▶ 7 M3 ▶ 9	
Female connector metal shell	9 15 25	09 67 509 . 775 09 67 515 . 775 09 67 525 . 775
Please insert digit for flange thread	4-40 UNC ▶ 6 M3 ▶ 8	

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-25



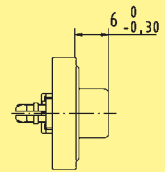
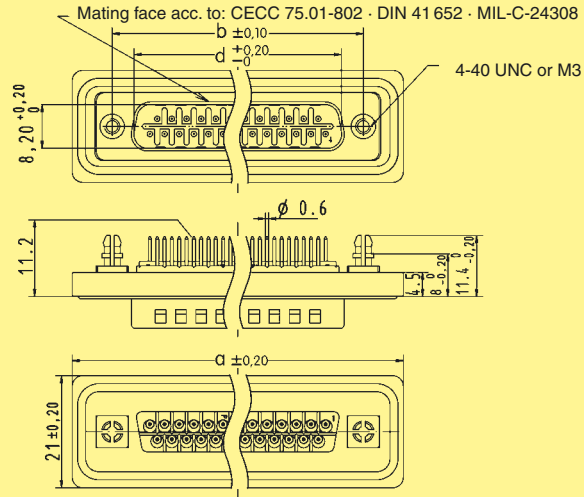
IP 67, straight turned solder pins, with rear plastic mounting plate, spacer and board lock

Identification

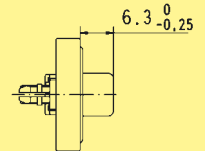
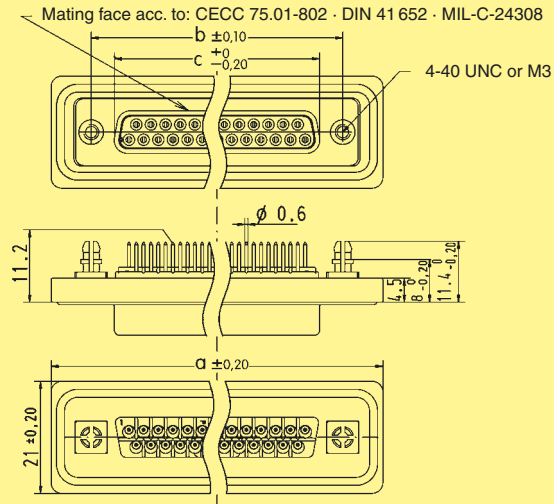
Drawing

Dimensions in mm

Male connector
9 – 25 contacts

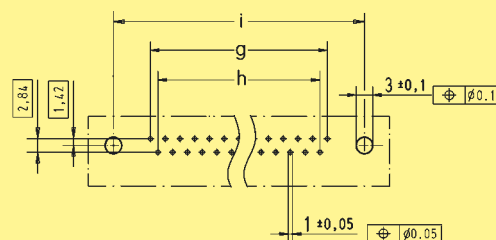


Female connector
9 – 25 contacts



	a	b	c	d	g	h	i
9	40.0	25.00	16.4	16.9	4 x 2.74 = 10.96	3 x 2.74 = 8.22	25.0
15	48.3	33.30	24.7	25.2	7 x 2.74 = 19.18	6 x 2.74 = 16.44	33.3
25	62.0	47.04	38.5	38.9	12 x 2.76 = 33.12	11 x 2.76 = 30.36	47.0

Board drillings



Number of contacts

9-25



IP 67, angled turned solder pins,
with rear plastic mounting plate, bracket and board lock

Identification	No. of contacts	Part No.	
		S4 ¹⁾	
Male connector metal shell with dimples	9 15 25	09 67 509 .	658
		09 67 515 .	658
		09 67 525 .	658
Please insert digit for flange thread			
4-40 UNC ▶	7		
M3 ▶	9		
Female connector metal shell	9 15 25	09 67 509 .	758
		09 67 515 .	758
		09 67 525 .	758
Please insert digit for flange thread			
4-40 UNC ▶	6		
M3 ▶	8		

D-Sub - W

¹⁾ S4: ≥ 0.76 µm Au (30 µinch)

Number of contacts

9-25



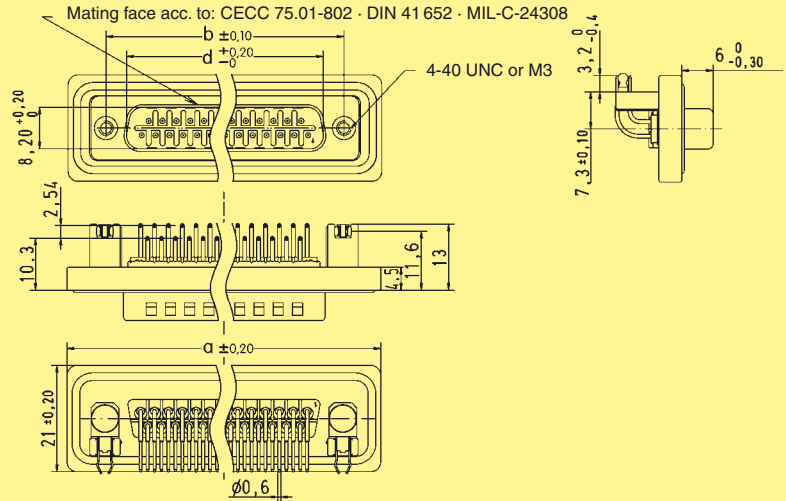
IP 67, angled turned solder pins,
with rear plastic mounting plate, bracket and board lock

Identification

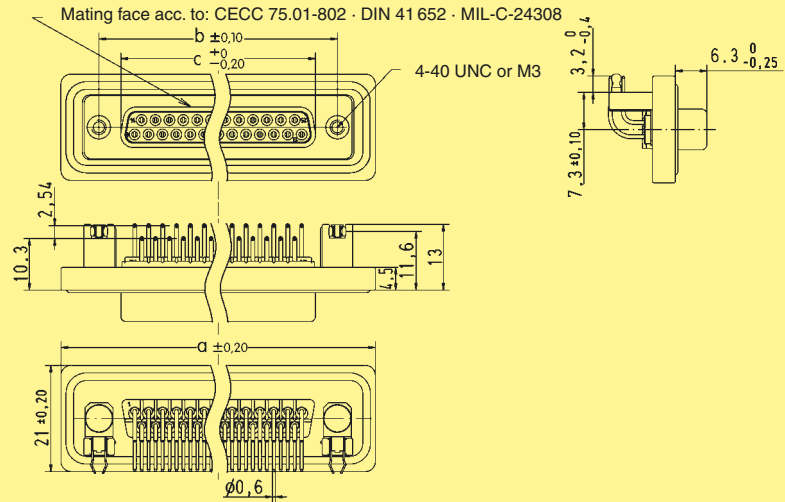
Drawing

Dimensions in mm

Male connector
9 – 25 contacts

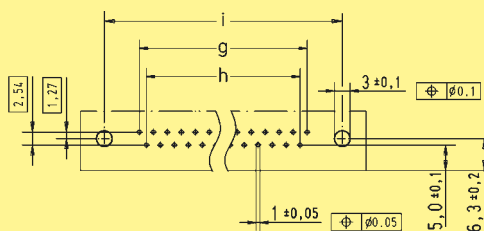


Female connector
9 – 25 contacts

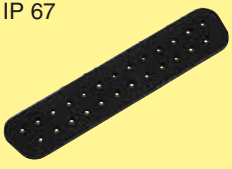
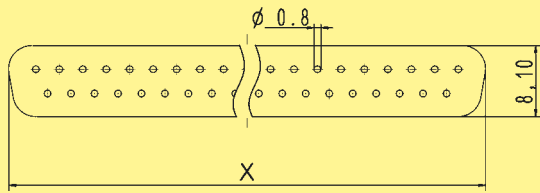
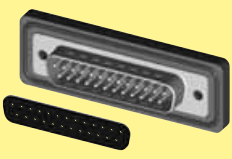
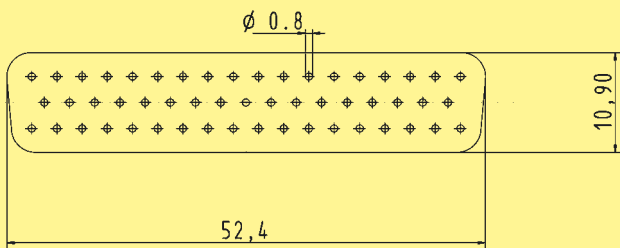
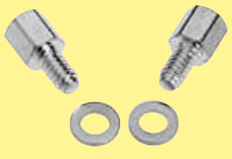
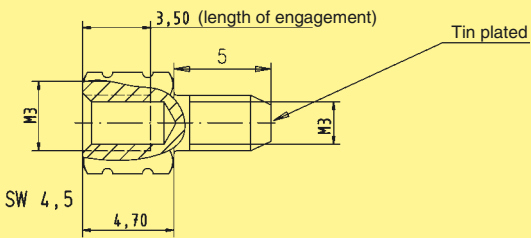
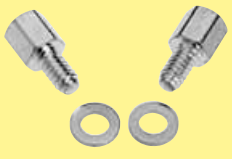
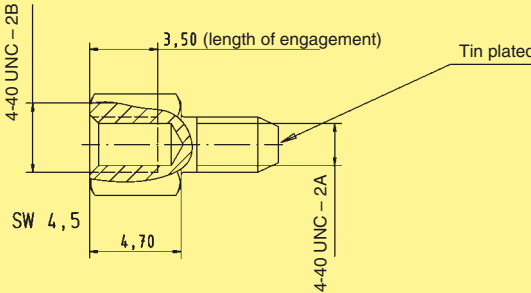


	a	b	c	d	g	h	i
9	40.0	25.00	16.4	16.9	4 x [2.74] = 10.96	3 x [2.74] = 8.22	25.0
15	48.3	33.30	24.7	25.2	7 x [2.74] = 19.18	6 x [2.74] = 16.44	33.3
25	62.0	47.04	38.5	38.9	12 x [2.76] = 33.12	11 x [2.76] = 30.36	47.0

Board drillings



Accessories for IP 67 connectors

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm										
Front sealing rubber¹⁾ IP 67 	9 15 25 37	09 67 002 9001 09 67 002 9002 09 67 002 9003 09 67 002 9004		<table border="1"> <thead> <tr> <th></th> <th>x</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>16.7</td> </tr> <tr> <td>15</td> <td>24.8</td> </tr> <tr> <td>25</td> <td>38.8</td> </tr> <tr> <td>37</td> <td>54.7</td> </tr> </tbody> </table>		x	9	16.7	15	24.8	25	38.8	37	54.7
	x													
9	16.7													
15	24.8													
25	38.8													
37	54.7													
Mounting example 	50	09 67 002 9005												
Female screw lock M3 		09 67 002 9006												
Female screw lock 4-40 UNC 		09 67 002 9007												

D-Sub - W

¹⁾ The front sealing rubber is necessary when a mated system needs to have the IP 67 performance; in this case, the front sealing rubber is positioned in the IP 67 male connector prior to the mating operation with the facing IP 67 connector; it provides a full protection of the contacts at the mated area by preventing possible ingress of liquids or dust between the shells.

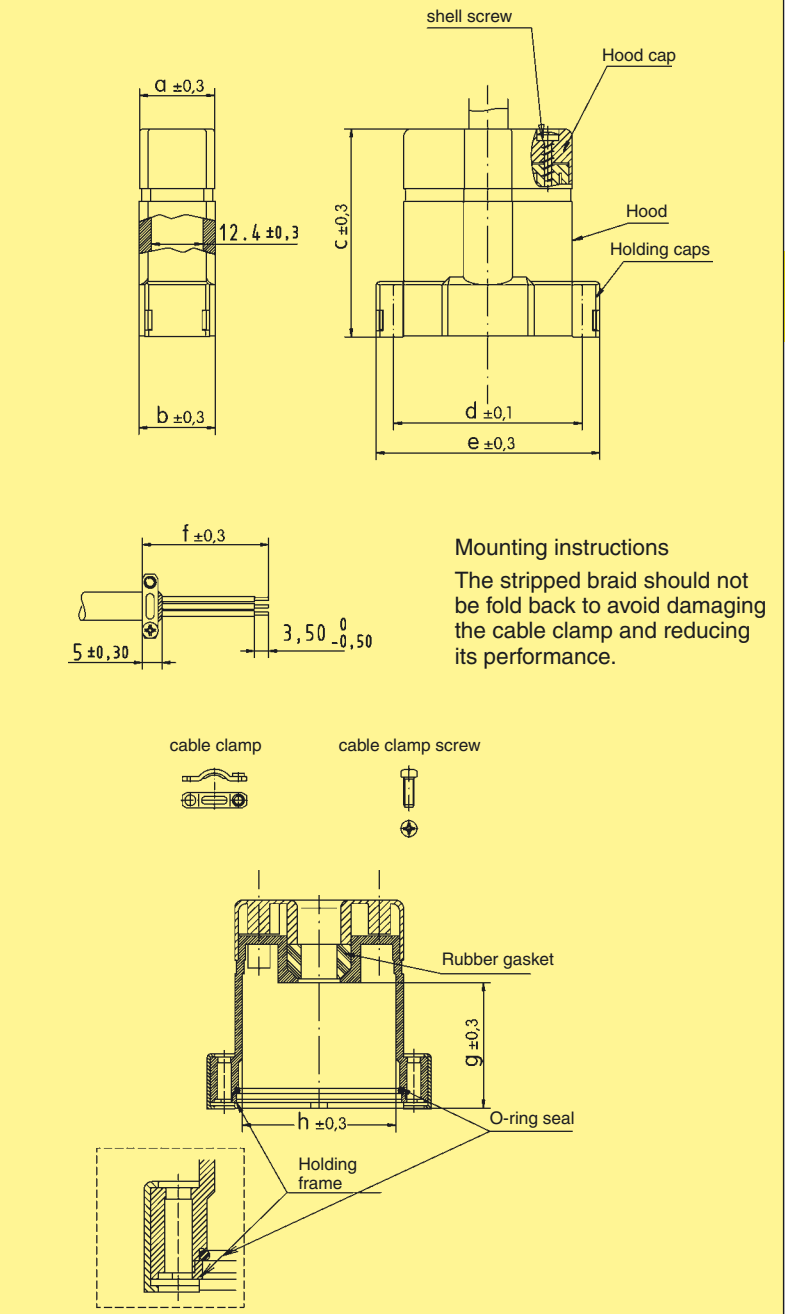


IP 67 plastic hoods

Identification No. of contacts Part No. Drawing Dimensions in mm

Hood
Black thermoplastic

9	09 67 009 0436
15	09 67 015 0436
25	09 67 025 0436



Mounting instructions
The stripped braid should not be fold back to avoid damaging the cable clamp and reducing its performance.

	a	b	c	d	e	f	g	h
9	15.6	15.6	41.0	25.00	33.6	23.0	25.0	17.0
15	15.6	15.6	46.8	33.30	42.0	27.5	30.8	25.1
25	18.8	19.1	52.0	47.04	55.7	31.5	33.8	38.8

D-Sub - W

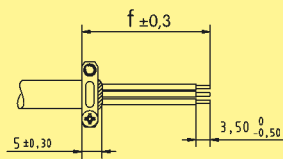
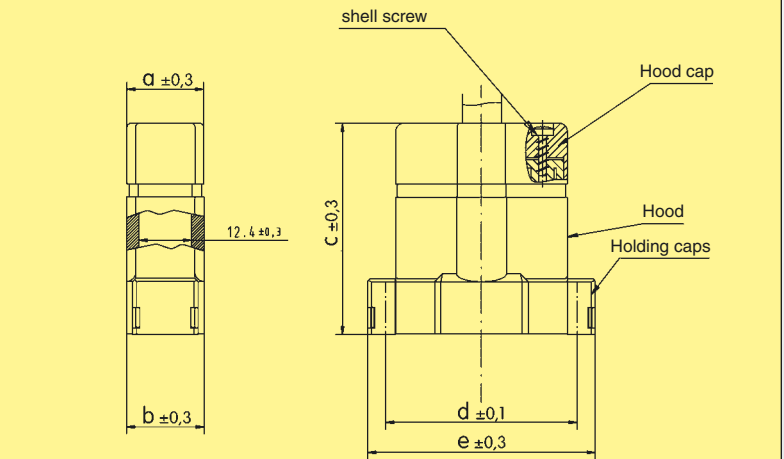


IP 67 metallized plastic hoods

Identification No. of contacts Part No. Drawing Dimensions in mm

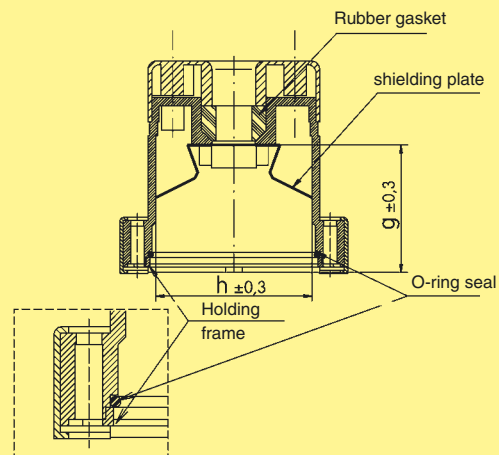
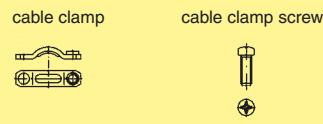
Hood
Metallized
thermoplastic

9 09 67 009 0437
15 09 67 015 0437
25 09 67 025 0437



Mounting instructions


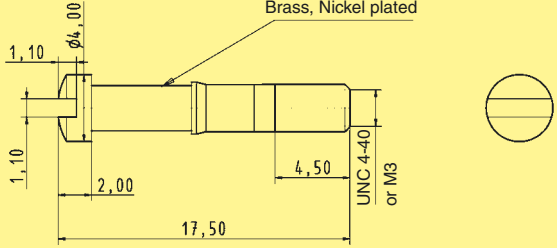


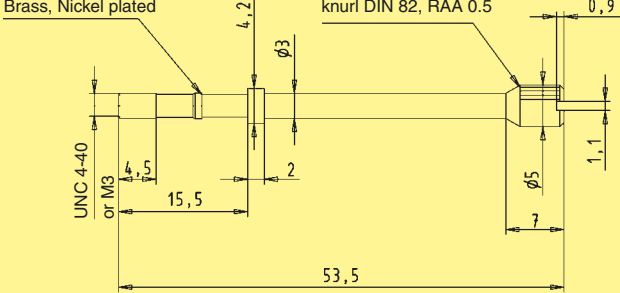


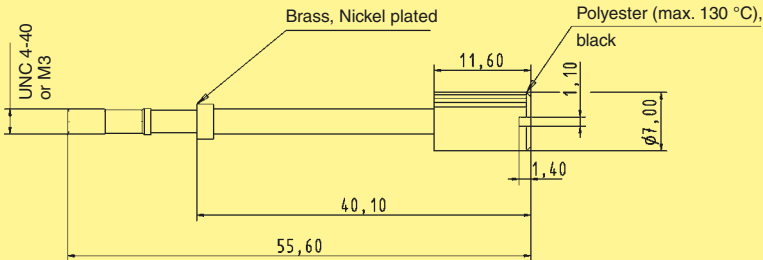

The stripped braid should not be fold back to avoid damaging the cable clamp and reducing its performance.



	a	b	c	d	e	f	g	h
9	15.6	15.6	41.0	25.00	33.6	23.0	25.0	17.0
15	15.6	15.6	46.8	33.30	42.0	27.5	30.8	25.1
25	18.8	19.1	52.0	47.04	55.7	31.5	33.8	38.8

D-Sub - W

Accessories for IP 67 hoods

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
Short locking screw 4-40 UNC 		09 67 002 9008		
Short locking screw M3 		09 67 002 9009		
Knurled locking screw 4-40 UNC 		09 67 002 9010		
Knurled locking screw M3 		09 67 002 9011		
Knurled locking screw 4-40 UNC with plastic cap 		09 67 002 9012		
Knurled locking screw M3 with plastic cap 		09 67 002 9013		

D-Sub - W

