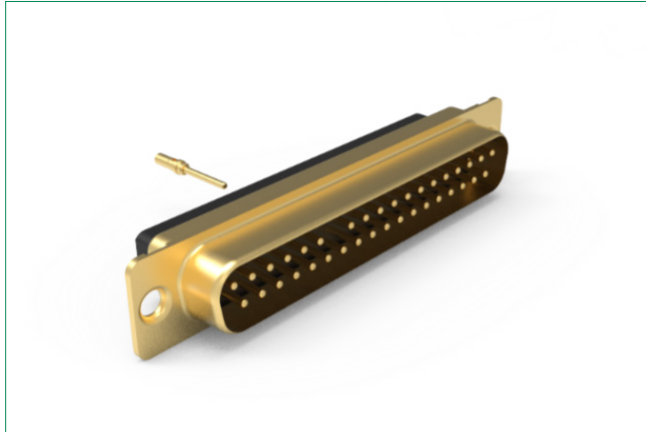


D-Sub Series

D*MA SD Connectors

ESCC 3401/002 Certified



Type	Mating force (N max)	Unmating force (N min)	Unmating force (N max)	Weight without male contacts nor accessories (g)	Weight without fem. contacts nor accessories (g)
Size E 9 Ways	30	3.5	20	5.5	6
Size A 15 Ways	50	4.5	34	7.6	8.3
Size B 25 Ways	83	8	55	12.5	13.6
Size C 37 Ways	123	11	83	17.4	18.9
Size D 50 Ways	166	14.5	120	20.5	22.3

Max weight	Pin ct	Skt ct
per contact 20/20	0.16 g	0.18 g
per contact 20/26	0.18 g	0.21 g
per contact 20/18	0.30 g	0.32 g

Add : 0.60 g for float mount (code Y)

Add : 0.65 g for captive nut (code E)

Quality Level

ESA / ESCC : code 3401 (Flying model).
Qualification reviewed every 2 years.

Options

Optional captive nuts or float mounting.

Packaging

Individual ESD plastic bag.
Traceability and documentation according to
ESA/ESCC specifications.
Each D*MA connector is sold with a dust cap and
an insertion / extraction tool.

Description

High performance D-Sub, Standard Density (SD), ESA qualified for space applications.

Connectors compliant to ESCC specification 3401/002.

Removable contacts compliant to ESCC specification 3401/005.

Compatible with ESCC specifications 3401/022 and 3401/072

(Accessories) and 3401/020 (Savers connectors).

Suitable for use in space.

High military performances and aerospace applications:

Board to Board, Board to Cable or Cable to Cable applications.

Standard Density Size 20 (SD) available:

9, 15, 25, 37 and 50 ways

Pitch between two contact rows: 2.84 mm (.112 inch)

Pitch between two horizontally adjacent contacts:

- Size E, A: 2.74 mm (.108 inch)

- Size B, C, D: 2.77 mm (.109 inch)

Features and Benefits

- Compliant with ESA specifications
- Socket Starclip contact system
- Removable crimp type contacts
- Harnesses length flexibility
- Non-Outgassing

Applications

- Space equipment
- Satellites harnesses and payloads

Electrical & Mechanical Characteristics

Characteristics	Specifications
Working voltage	300 Vrms max (at sea level) 250 Vrms max (33000m of altitude)
Rated current	7.5 A max (size 20/20 & 20/18) 3 A max (size 20/26)
Contact resistance (Low level current)	6 mΩ max (10 mA / 20 mV DC)
Contact resistance	5 mΩ max (Rated current)
Insulation resistance	5000 MΩ min (500 V DC)
Voltage proof	1250 Vrms / 2mA (Leakage Current)
Contact retention in insulator	40 N max (axial move 0.3 mm max)
Engagement force	3.33 N max per contact
Seperation force	0.28 N min / 2.22 N max per ct
Temperature range	-55+125 °C
Storage temperature range	-65+125 °C

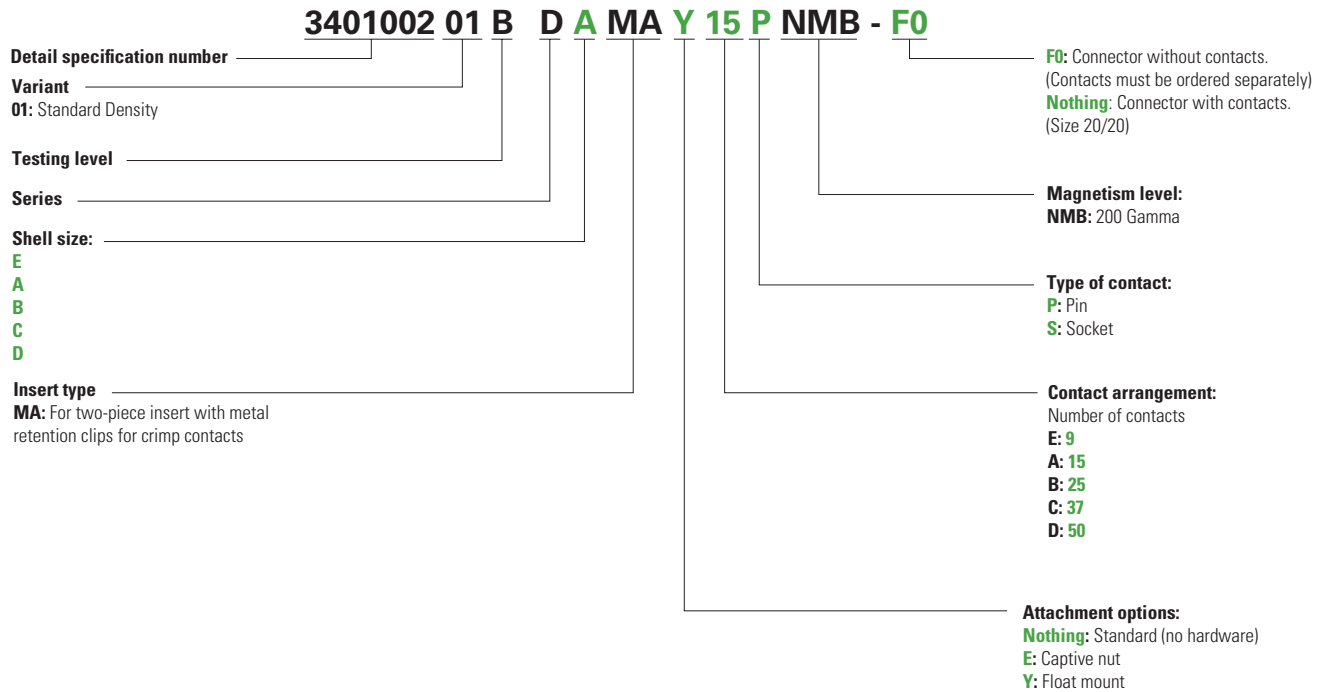
D-Sub Series

D*MA SD Connectors

ESCC 3401/002 Certified

How To Order Connector

ESA / ESCC specification:

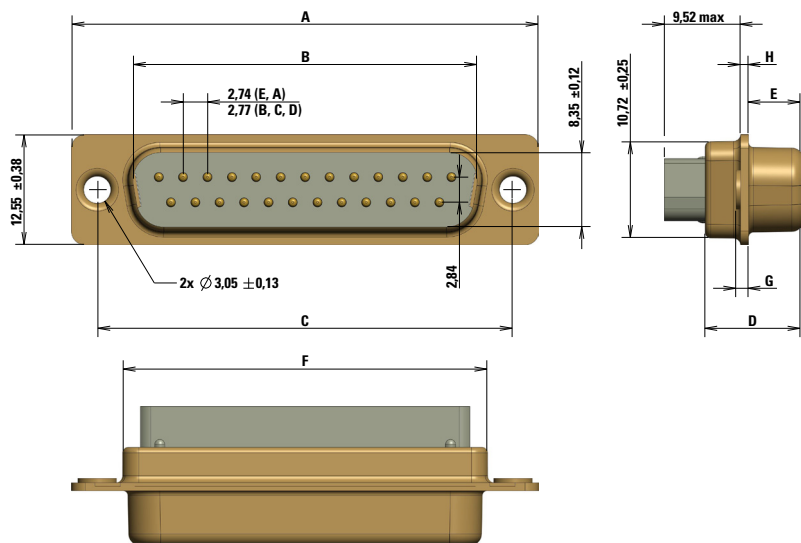


Materials & Finishes

Components	Materials	Finishes
Shell sizes E, A, B, C, D	Copper alloy	0.70 µm min Gold over Copper
Insulator	LCP	UL 94-V0, Glass-filled, Black color
Contact retaining clip	Beryllium copper	None
Contact bodies	Copper alloy Copper alloy	1.27 µm min Gold over Nickel 1.27 µm min Gold over Copper
Dust cap	Polyethylene	Black color, antistatic
Male screwlocks	Copper alloy Stainless steel	0.70 µm min Gold over Copper Passivated

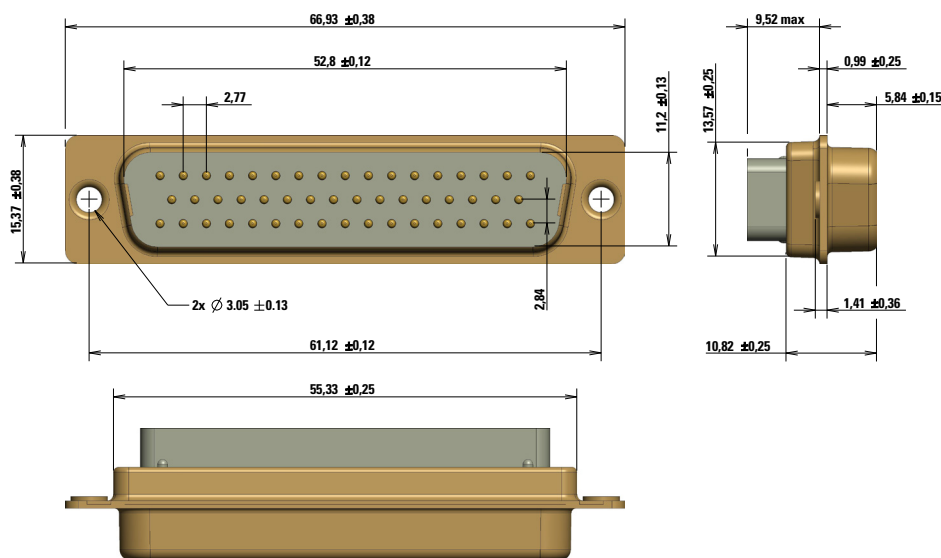
D-Sub Series
D*MA SD Connectors
ESCC 3401/002 Certified

Pin connector dimensions - Sizes E-A-B-C



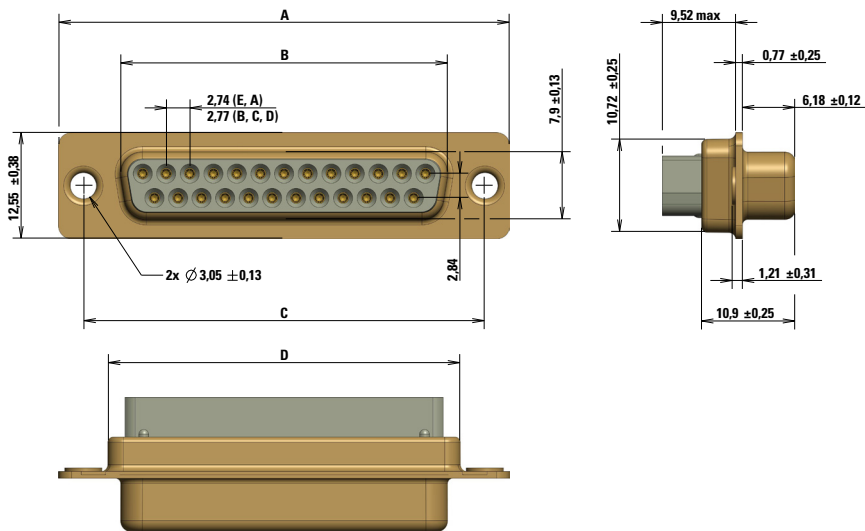
Shell Size	Contact Arrangement	Gender	A ±0.38	B ±0.12	C ±0.12	D ±0.25	E ±0.11	F ±0.25	G ±0.31	H ±0.25
E	9	Pin	30.81	16.91	24.99	10.72	5.94	19.28	1.21	0.77
A	15	Pin	39.14	25.24	33.32	10.72	5.94	27.51	1.21	0.77
B	25	Pin	53.04	38.96	47.04	10.82	5.84±0.15	41.28	1.41±0.36	0.99
C	37	Pin	69.32	55.42	63.50	10.82	5.84±0.15	57.71	1.41±0.36	0.99

Pin connector dimensions - Size D



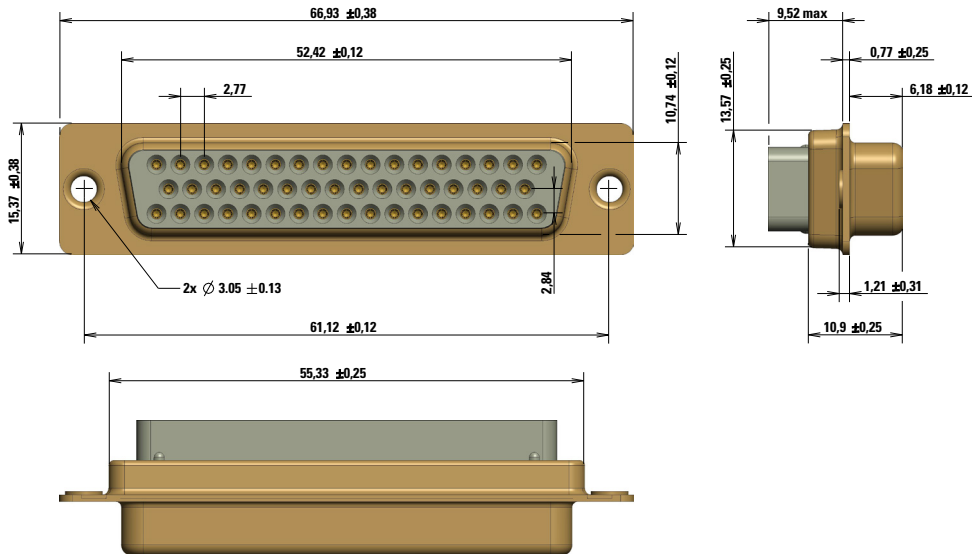
D-Sub Series
D*MA SD Connectors
ESCC 3401/002 Certified

Socket connector dimensions - Sizes E-A-B-C



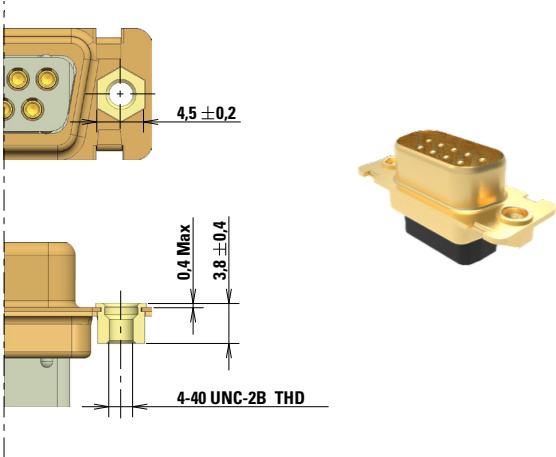
Shell Size	Contact Arrangement	Gender	A ±0.38	B ±0.12	C ±0.12	D ±0.25
E	9	SKT	30.81	16.33	24.99	19.28
A	15	SKT	39.14	24.66	33.32	27.51
B	25	SKT	53.04	38.38	47.04	41.28
C	37	SKT	69.32	54.84	63.50	57.71

Socket connector dimensions - Size D

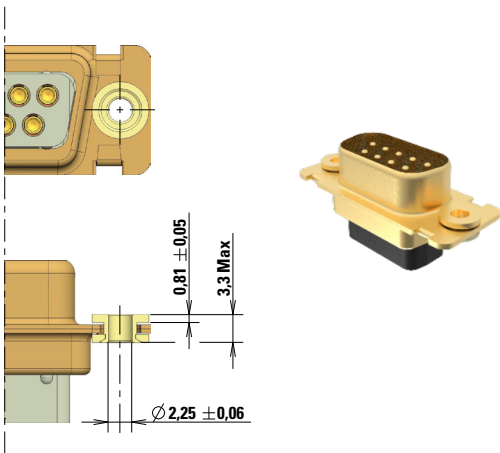


D-Sub Series
D*MA SD Connectors
ESCC 3401/002 Certified

Captive nut (Option E)



Floating mount (Option Y)

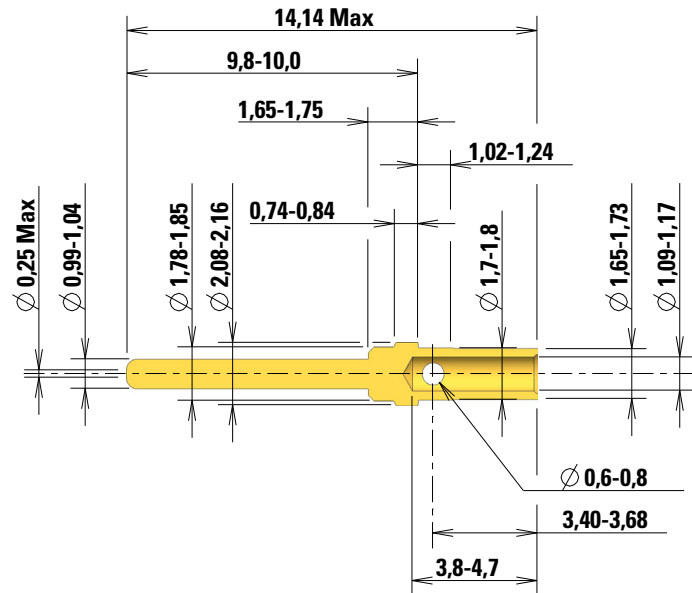
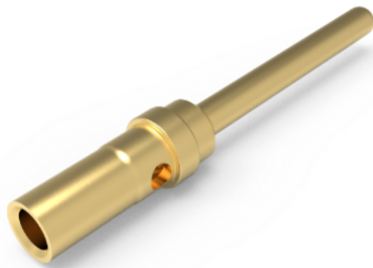


Allowable Float	(mm)
Lateral	0.78
Axial	0.20

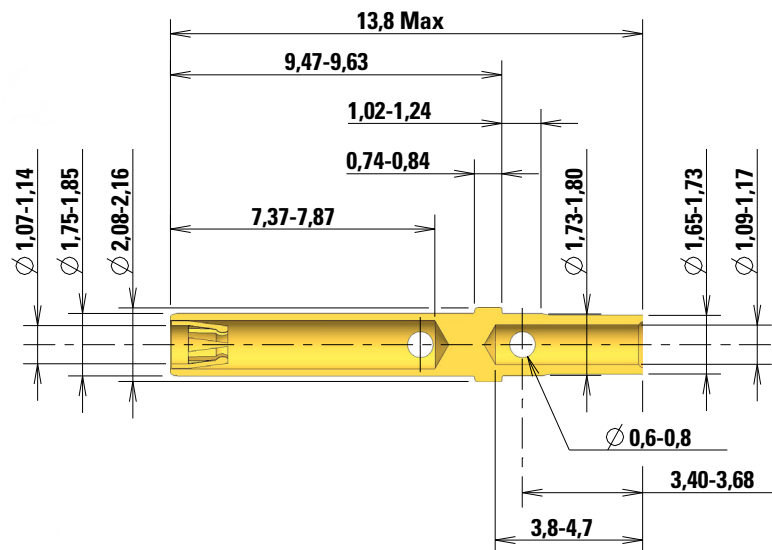
D-Sub Series

D*MA SD Connectors
ESCC 3401/002 Certified

Pin contact – 20/20 – Wire size AWG 20, 22, 24



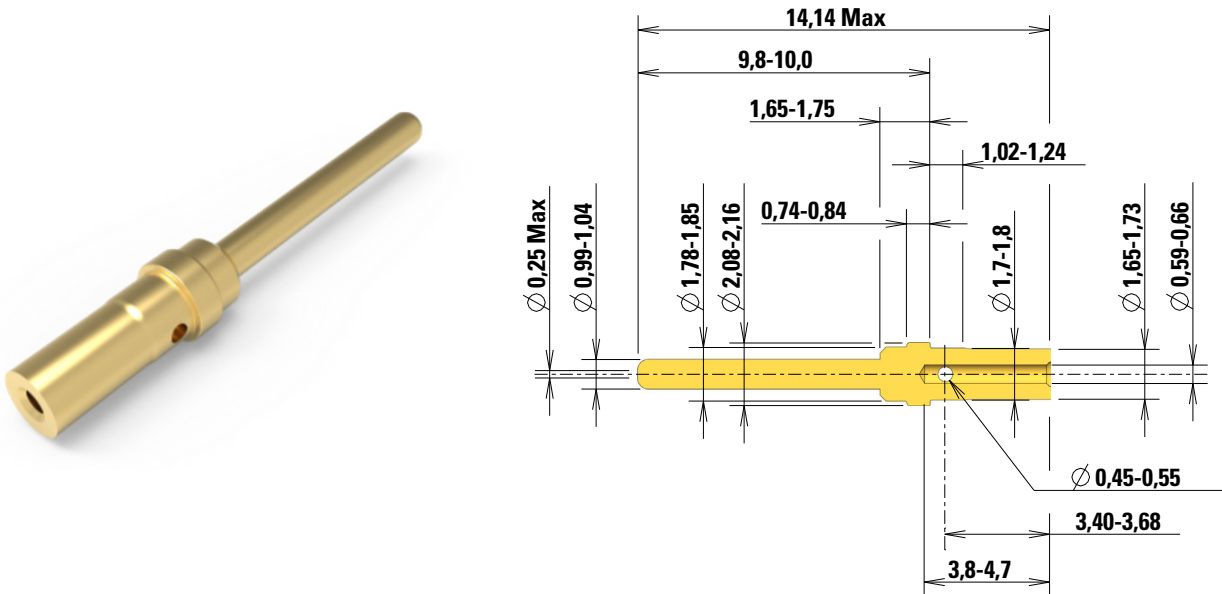
Socket contact – 20/20 – Wire size AWG 20, 22, 24



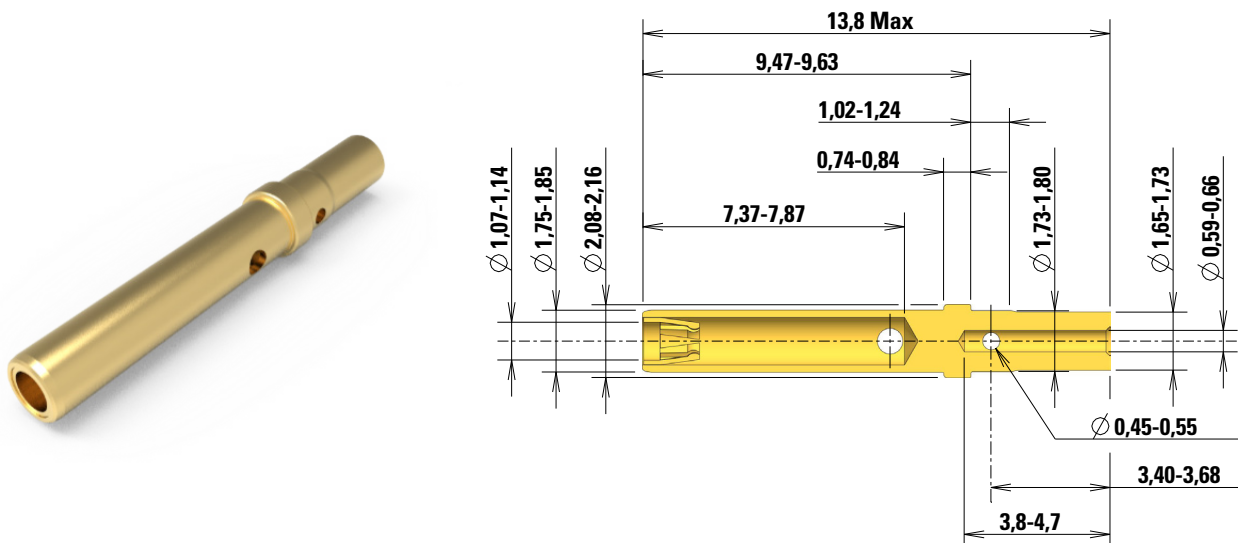
D-Sub Series

D*MA SD Connectors
ESCC 3401/002 Certified

Pin contact – 20/26 – Wire size AWG 26, 28

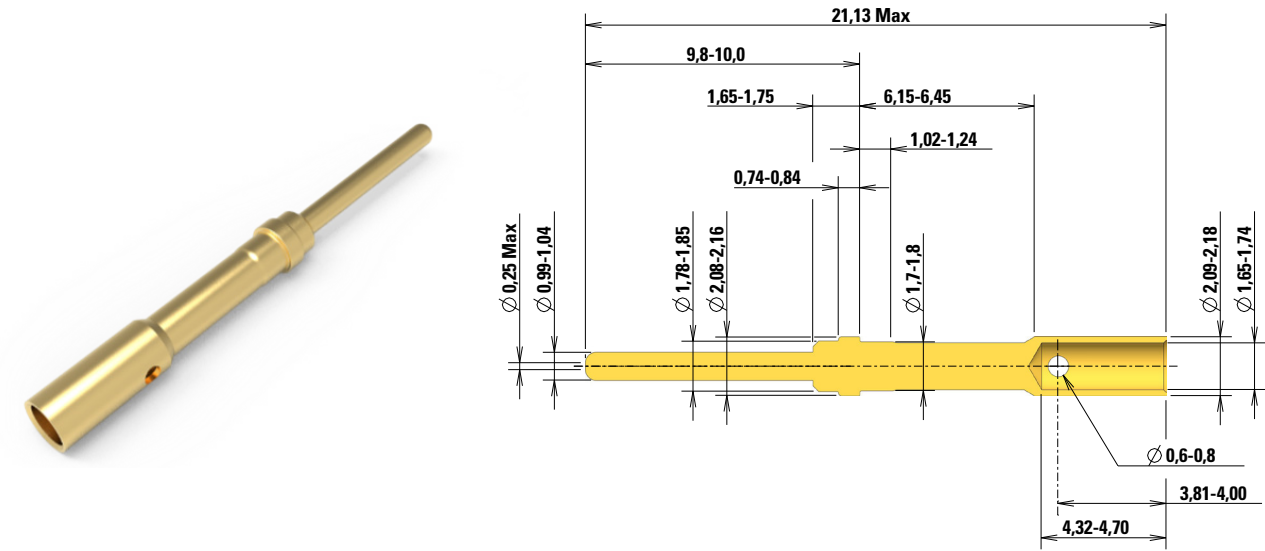


Socket contact – 20/26 – Wire size AWG 26, 28

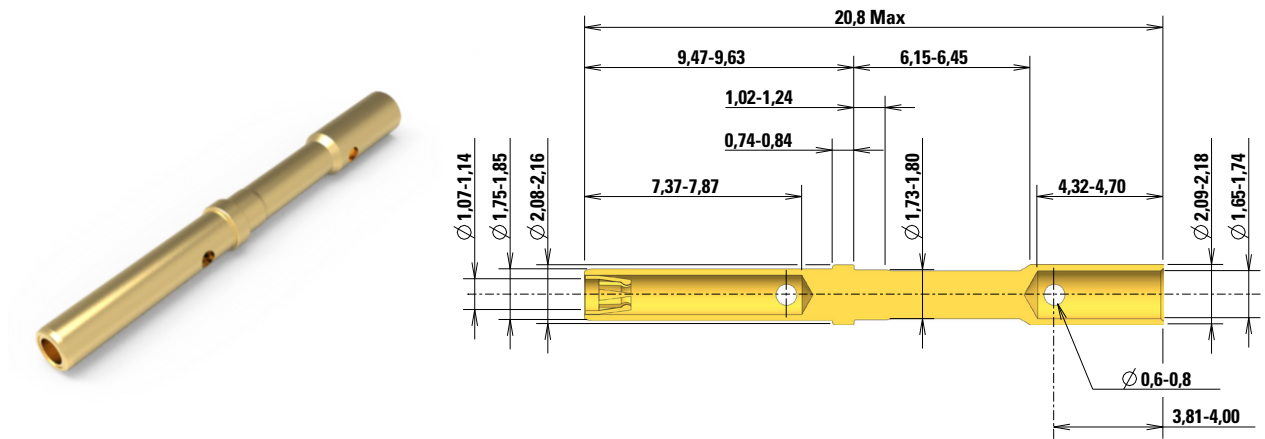


D-Sub Series
D*MA SD Connectors
ESCC 3401/002 Certified

Pin contact – 20/18 – Wire size AWG 18



Socket contact – 20/18 – Wire size AWG 18



D-Sub Series

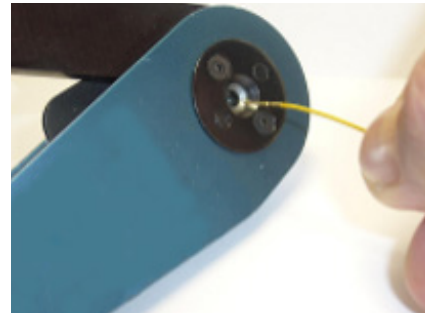
D*MA SD Connectors

ESCC 3401/002 Certified

Crimping process & Cable insertion process

- Previously, strip the jacket of the wire : Length of 5.03mm $\pm$ 0.25
- Contact crimping process:
 1. Choose the dedicated locator corresponding to type of contact and install it on the crimping tool.
 2. Choose the correct selector position in function of the wire AWG, on the crimping tool (see table below).
 3. Insert the wire into the contact body.
 4. Insert the equipped contact into the crimping tool (see picture).
 5. Crimp till opening of the crimping tool.

Crimping tool :
M22520/2-01
P/N : C995-0001-584



Locator for contact 20/20 :
M22520/2-08
P/N : C995-0001-604



Locator for contact 20/18 :
K250
P/N : C980-0005-722



Wire AWG Sizes	Selector positions
AWG 20	7
AWG 22	6
AWG 24	5

Wire AWG Sizes	Selector positions
AWG 18	8

Locator for contact 20/26 :
M22520/2-08
P/N : C995-0001-604

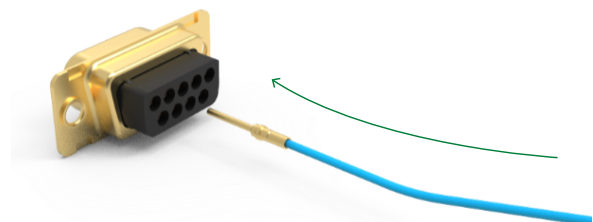
Wire AWG Sizes	Selector positions
AWG 26	7
AWG 28	6

- Contact insertion process:

1. Insert contact with wire into rear insulator cavity until positive stop.

Possibility to use the green side insertion / extraction tool for connectors size 20 Standard Density:
M81969/39-01
P/N : C980-2000-426

2. To avoid any stress on the retention clip, insert contact in the axis (without insertion angle).
3. To be sure contact is securely locked, pull back slightly on the wire or use calibrated test retention tool.



D-Sub Series

D*MA SD Connectors

ESCC 3401/002 Certified

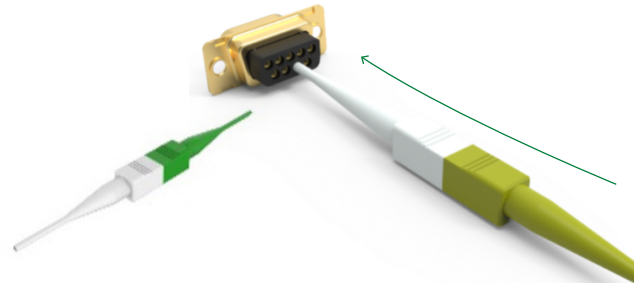
Cable extraction process

1. Select white side insertion / extraction tool for connectors size
20 Standard Density: M81969/39-01
P/N: C980-2000-426

For AWG 18 wire only: Select white extraction tool
CET-20-15
P/N: C274-5016-002

2. Insert tool tip into the contact cavity until the tip bottoms
against contact shoulder for releasing time.

3. Hold wire against tool with finger and remove tool
and equipped contact.



D-Sub Series

D*MA SD Connectors

ESCC 3401/002 Certified

Connectors description and Part Numbers

Version	Shell type	Gender type	Size	Attachment options					
				Standard connector		Connector with captive nut (E)		Connector with floating mount (Y)	
				ESA / ESCC description	P/N	ESA / ESCC description	P/N	ESA / ESCC description	P/N
Delivered in ESD bag without contact (Contacts to order separately, see chart below)	Shell gold plated	Pin	E	340100201B DEMA9PNMB-F0	C115370-5010	340100201B DEMA9PNMB-F0	C115370-5050	340100201B DEMAY9PNMB-F0	C115370-5030
			A	340100201B DAMA15PNMB-F0	C115370-5012	340100201B DAMAE15PNMB-F0	C115370-5052	340100201B DAMAY15PNMB-F0	C115370-5032
			B	340100201B DBMA25PNMB-F0	C115370-5014	340100201B DBMAE25PNMB-F0	C115370-5054	340100201B DBMAY25PNMB-F0	C115370-5034
			C	340100201B DCMA37PNMB-F0	C115370-5016	340100201B DCMAE37PNMB-F0	C115370-5056	340100201B DCMAY37PNMB-F0	C115370-5036
			D	340100201B DDMA50PNMB-F0	C115370-5018	340100201B DDMAE50PNMB-F0	C115370-5058	340100201B DDMAY50PNMB-F0	C115370-5038
		Socket	E	340100201B DEMA9SNMB-F0	C115370-5011	340100201B DEMA9SNMB-F0	C115370-5051	340100201B DEMAY9SNMB-F0	C115370-5031
			A	340100201B DAMA15SNMB-F0	C115370-5013	340100201B DAMAE15SNMB-F0	C115370-5053	340100201B DAMAY15SNMB-F0	C115370-5033
			B	340100201B DBMA25SNMB-F0	C115370-5015	340100201B DBMAE25SNMB-F0	C115370-5055	340100201B DBMAY25SNMB-F0	C115370-5035
			C	340100201B DCMA37SNMB-F0	C115370-5017	340100201B DCMAE37SNMB-F0	C115370-5057	340100201B DCMAY37SNMB-F0	C115370-5037
			D	340100201B DDMA50SNMB-F0	C115370-5019	340100201B DDMAE50SNMB-F0	C115370-5059	340100201B DDMAY50SNMB-F0	C115370-5039
Delivered in ESD bag with contacts Size 20/20	Shell gold plated	Pin	E	340100201B DEMA9PNMB	C115370-5000	340100201B DEMA9PNMB	C115370-5040	340100201B DEMAY9PNMB	C115370-5020
			A	340100201B DAMA15PNMB	C115370-5002	340100201B DAMAE15PNMB	C115370-5042	340100201B DAMAY15PNMB	C115370-5022
			B	340100201B DBMA25PNMB	C115370-5004	340100201B DBMAE25PNMB	C115370-5044	340100201B DBMAY25PNMB	C115370-5024
			C	340100201B DCMA37PNMB	C115370-5006	340100201B DCMAE37PNMB	C115370-5046	340100201B DCMAY37PNMB	C115370-5026
			D	340100201B DDMA50PNMB	C115370-5008	340100201B DDMAE50PNMB	C115370-5048	340100201B DDMAY50PNMB	C115370-5028
		Socket	E	340100201B DEMA9SNMB	C115370-5001	340100201B DEMA9SNMB	C115370-5041	340100201B DEMAY9SNMB	C115370-5021
			A	340100201B DAMA15SNMB	C115370-5003	340100201B DAMAE15SNMB	C115370-5043	340100201B DAMAY15SNMB	C115370-5023
			B	340100201B DBMA25SNMB	C115370-5005	340100201B DBMAE25SNMB	C115370-5045	340100201B DBMAY25SNMB	C115370-5025
			C	340100201B DCMA37SNMB	C115370-5007	340100201B DCMAE37SNMB	C115370-5047	340100201B DCMAY37SNMB	C115370-5027
			D	340100201B DDMA50SNMB	C115370-5009	340100201B DDMAE50SNMB	C115370-5049	340100201B DDMAY50SNMB	C115370-5029

Contacts description and Part Numbers

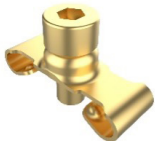
Size	Used for wire size AWG	Contact type	ESA / ESCC description	P/N
20/20	20 / 22 / 24	Pin, Gold over Nickel	340100501B	C330-8996-101H
		Pin, Gold over Copper	340100511B	C330-8996-104H
		Socket, Gold over Nickel	340100502B	C031-8996-101H
		Socket, Gold over Copper	340100512B	C031-8996-104H
20/26	26 / 28	Pin, Gold over Nickel	340100503B	C330-8997-101H
		Pin, Gold over Copper	340100513B	C330-8997-104H
		Socket, Gold over Nickel	340100504B	C031-8997-101H
		Socket, Gold over Copper	340100514B	C031-8997-104H
20/18	18	Pin, Gold over Nickel	340100505B	C330-8995-101H
		Pin, Gold over Copper	340100515B	C330-8995-104H
		Socket, Gold over Nickel	340100506B	C031-8995-101H
		Socket, Gold over Copper	340100516B	C031-8995-104H

D-Sub Series

D*MA SD Connectors

ESCC 3401/002 Certified

Accessories description and Part Numbers (To order separately)

Male screwlocks	Application	Backshell	Material	ESA / ESCCC description	P/N
	E, A Pin / E, A, B, C Skt	Without	Brass	340102265B NMB	C115419-0100C
	B, C Pin	Without	Brass	340102266B NMB	C115419-0101C
	D Skt	Without	Brass	340102267B NMB	C115420-0100C
	D Pin	Without	Brass	340102268B NMB	C115420-0101C
	E, A Pin / E, A, B, C Skt	With	Brass	340102269B NMB	C115419-0102C
	B, C Pin	With	Brass	340102270B NMB	C115419-0103C
	D Skt	With	Brass	340102271B NMB	C115420-0102C
	D Pin	With	Brass	340102272B NMB	C115420-0103C
	E, A Pin / E, A, B, C Skt	Without	Stainless Steel	340102273B	C115419-1004C
	B, C Pin	Without	Stainless Steel	340102274B	C115419-1005C
	D Skt	Without	Stainless Steel	340102275B	C115420-1004C
	D Pin	Without	Stainless Steel	340102276B	C115420-1005C
	E, A Pin / E, A, B, C Skt	With	Stainless Steel	340102277B	C115419-1006C
	B, C Pin	With	Stainless Steel	340102278B	C115419-1007C
	D Skt	With	Stainless Steel	340102279B	C115420-1006C
	D Pin	With	Stainless Steel	340102280B	C115420-1007C
	E, A Pin / E, A, B, C Skt	Without	Brass	340102202B NMB	C020419-0074C
	B, C Pin	Without	Brass	340102203B NMB	C020419-0048C
	D Skt	Without	Brass	340102204B NMB	C020420-0067C
	D Pin	Without	Brass	340102205B NMB	C020420-0049C
	E, A Pin / E, A, B, C Skt	With	Brass	340102244B NMB	C020419-0073C
	B, C Pin	With	Brass	340102245B NMB	C020419-0084C
	D Skt	With	Brass	340102246B NMB	C020420-0063C
	D Pin	With	Brass	340102247B NMB	C020420-0088C
	E, A Pin / E, A, B, C Skt	Without	Stainless Steel	340102249B	C115419-1000C
	B, C Pin	Without	Stainless Steel	340102250B	C115419-1001C
	D Skt	Without	Stainless Steel	340102251B	C115420-1000C
	D Pin	Without	Stainless Steel	340102252B	C115420-1001C
	E, A Pin / E, A, B, C Skt	With	Stainless Steel	340102254B	C115419-1002C
	B, C Pin	With	Stainless Steel	340102255B	C115419-1003C
	D Skt	With	Stainless Steel	340102256B	C115420-1002C
	D Pin	With	Stainless Steel	340102257B	C115420-1003C
	All Sizes Pin / Skt	Without	Brass	340102288B NMB	C115366-2409C
	All Sizes Pin / Skt	With	Brass	340102289B NMB	C115366-2410C
	All Sizes Pin / Skt	Without	Brass	340102286B NMB	C115366-2407C
	All Sizes Pin / Skt	With	Brass	340102287B NMB	C115366-2408C