851 Series

Contacts & Accessories

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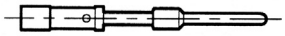
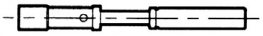
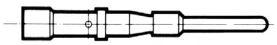
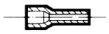
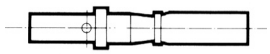
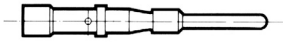
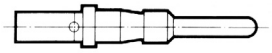
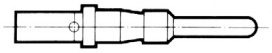
Crimp contacts

Standard version

Contact size	Specification	Wire size		Part number		insulator Ø	
		AWG	mm²	Male	Female	min.	max.
#20 Ø1 mm	For layouts 8-2, 8-3, 8-4 & 12-14	24-18	0.21-0.93	8500-9573* 	8500-9213 900* 	1.20	2.11
	For further contact layout	24-18	0.21-0.93	8500-697 	8500-1758A 900	1.20	2.11
	Reducing sleeve	30-24	0.06-0.21	8500-781 B1 		-	-
#16 Ø1.6 mm	-	18-14	0.93-1.91	8500-1300	8500-9331 900 	1.60	2.80
	Reducing sleeve	20	0.60	8500-1985 B1		-	-

Thermocouple version

Contact size	Specification	Wire size		Part number		insulator Ø	
		AWG	mm²	Male	Female	min.	max.
#20 Ø1 mm	Chromel	24-18	0.21-0.93	8500-809 A	8500-2054 900	1.20	2.11
	Alumel	24-18	0.21-0.93	8500-812 A 	8500-2055 900	1.20	2.11
#16 Ø1.6 mm	Chromel	18-14	0.93-1.91	8500-1053 	8500-1054 900	1.60	2.80
	Alumel	20	0.60	8500-812 A 	8500-1059 900	1.60	2.80

Note: all dimensions are in mm

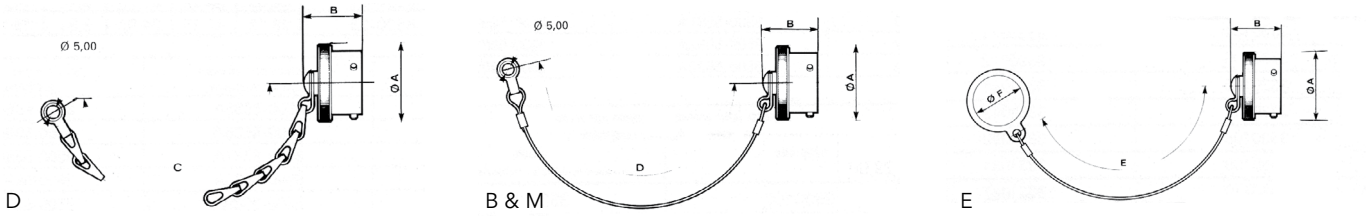
Caps / Ordering information

Basic Series								**8500**	**05**	**--**
Shell type:	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**22**	**24**	
Part numbers for receptacle	**02**	**03**	**04**	**05**	**27**	**06**	**07**	**08**	**09**	
Part numbers for plug	**10**	**11**	**12**	**13**	**28**	**14**	**15**	**16**	**17**	
Specifications: For cap & plating, see table below										

Type and plating

Cap type	Receptacle cap				Plug cap			
	Olive green cadmium	White cadmium	Black anodised	Nickel	Olive green cadmium	White cadmium	Black anodised	Nickel
Cap with chain and ring	D	02 D	29 D	44 D	D	02 D	29 D	44 D
Cap with nylon cord and ring	B	02 B	29 B	44 B	B	02 B	29 B	44 B
Cap with nylon cord and washer (shell 10, 12 , 14, 16 & 18)	-	-	-	-	E	-	-	-
Cap with nylon cord and washer	H	-	-	44 H	-	-	-	-
Cap with chain and washer	J	-	-	-	-	-	-	-
Cap 500hr salt spray	JQ7	-	-	-	-	-	-	-
Cap without chain	M	-	-	-	M	-	-	-

Caps for plugs



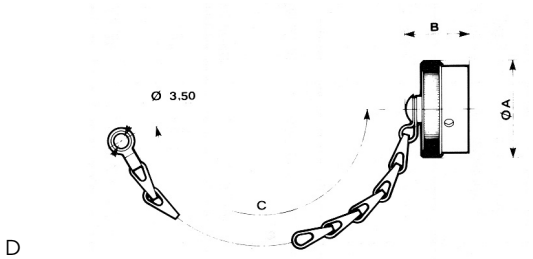
D B & M E

Shell size	Ø A max	B max	C^{+6}_{0}	D^{+2}_{0}	E	Ø F
8	16.80	19.84	132	128	consult us	consult us
10	19.80	19.84	132	128	132	14.00
12	23.90	19.84	148	140	148	17.60
14	27.00	19.84	148	140	148	20.80
16	30.20	19.84	148	140	148	25.60
18	33.40	19.84	148	140	148	28.70
20	36.50	21.44	168	153	consult us	consult us
22	39.80	21.44	168	153	consult us	consult us
24	42.90	22.22	168	153	consult us	consult us

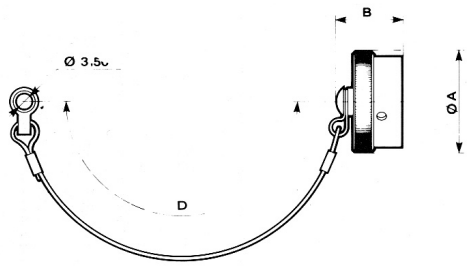
Note: all dimensions are in mm

Caps

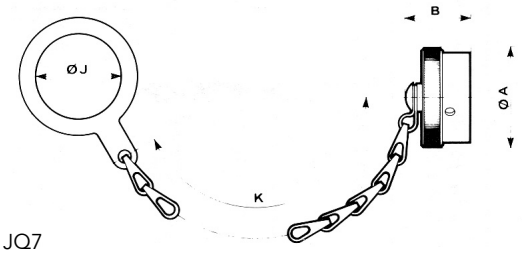
Caps for receptacles



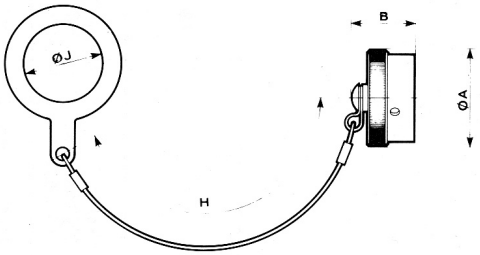
D



B & M



J & JQ7



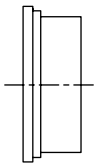
H

Shell size	Ø A max	B max	C^{+6}_{0}	D^{+2}_{0}	J max	H^{+2}_{0}	K^{+6}_{0}
8	19.00	21.44	84	77	14.80	80	84
10	21.80	21.44	84	77	17.90	80	84
12	26.10	21.44	100	89	22.70	90	100
14	29.30	21.44	100	89	25.90	90	100
16	32.50	21.44	100	89	29.00	90	100
18	35.30	21.44	100	89	32.20	90	100
20	38.80	21.44	116	102	35.40	110	116
22	42.00	21.44	116	102	38.60	110	116
24	45.10	22.22	116	102	41.70	110	116

Note: all dimensions are in mm

Accessories

Plastic protective caps for receptacles and plugs



Shell size	Caps for receptacles	Caps for plugs
8	8500-5585 A	8500-5594
10	8500-5586 A	8500-5595
12	8500-5587 A	8500-5596
14	8500-5588 A	8500-5597
16	8500-5589 A	8500-5598
18	8500-5590 A	8500-5599
20	8500-5591 A	8500-5600
22	8500-5592 A	8500-5601
24	8500-5593 A	8500-5602

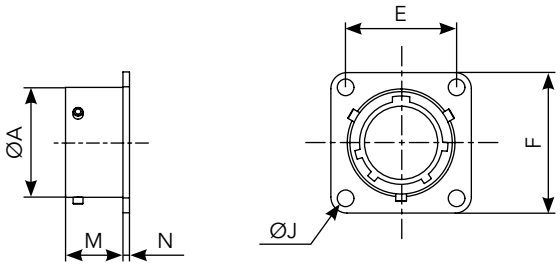
Filler plugs

Contact size	Part number	Color
#20 Ø1 mm	**8500-4144** 	grey
	8500-4144 A (MS 3187 A 20) 	red
#16 Ø1.6 mm	**8500-479** 	blue
	8500-4267 (MS 3187-16) 	

Note: all dimensions are in mm

Accessories

Dummy receptacles



Shell size	Part numbers	A	C max	E	J	M max	N max
8	8500-18	12.03	20.99	15.09	3.13	11.70	1.32
10	8500-19	15.01	24.19	18.26	3.13	11.70	1.32
12	8500-20	19.07	26.54	20.62	3.13	11.70	1.32
14	8500-21	22.25	28.89	23.00	3.13	11.70	1.32
16	8500-26	25.42	31.29	24.61	3.13	11.70	1.32
18	8500-22	28.60	33.69	26.97	3.13	11.70	1.32
20	8500-23	31.77	36.89	29.36	3.13	14.35	2.15
22	8500-24	34.95	39.99	31.75	3.13	14.35	2.15
24	8500-25	38.12	43.15	34.92	3.81	15.20	2.15

Gaskets

Shell size	Gaskets for square flange receptacle		Gaskets for jam nut receptacle	
	Néoprène	Fairprène	Néoprène	Vitton
8	8500-275	8500-4164	3330102	3330675
10	8500-276	8500-4165	3330103	3330670
12	8500-277	8500-4166	3330104	3330671
14	8500-278	8500-4167	3330105	3330672
16	8500-283	8500-4168	3330106	3331048
18	8500-279	8500-4169	3330107	3331049
20	8500-280	8500-4170	3330108	3331050
22	8500-281	8500-4171	3330109	3331051
24	8500-282	8500-4172	3330110	3331052

Note: all dimensions are in mm

Notes

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Technical Information

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Tooling

Crimp tooling - Contact #20

Part number
8365 (M 22520/1-01)

Locator - Contact #20

Part number
8365-02 (M 22520/1-02)

Crimp tooling - Contact #20 & 16

Part number
8476-01 (M 22520/2-01)

Locator - Contact #20 & 16

Part number
8476-01 (M 22520/2-01)

Insertion tools - Crimp contact

Part number
8500-29B*

* Except 8-2, 8-3, 8-4, 12-14 contact layouts : insertion tool 8500-93B

Tooling

Extraction tools - Crimp contact

Part number #20	Part number #16
8500-38A	8500-36A

Strap backshell

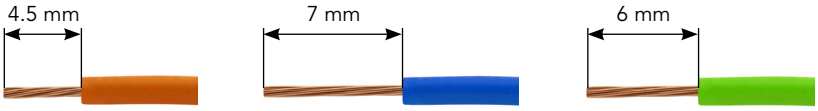
Part number
8490-04

Stripping instructions

• This operation should be carried out with great care. Use stripping pliers which are in good condition and which are designed for use with the size of wire being stripped.
• In order to maintain the connector's excellent sealing characteristics and, at the same time, meet the highest cabling standards the wires should have the following external sheath dimensions :

Contacts size	Ø over sheath	
	min.	max.
20	1.20	2.11
16	1.60	2.80

• Recommended loading:
  - 050 % with max. diam. wires
  - 050 % with min. diam. wires
  - 100 % with medium size wires.
• Size 20 contacts for cables:
  - when Ø over insulation ≤ 2 mm strip to a 4.5 mm length
  - when Ø over insulation > 2 mm strip to a 7 mm length.
• Size 16 contacts, strip the cable to a length of 6 mm.

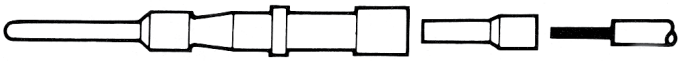


Cable-contact assembly

• Insert the wire into the crimp barrel and ensure that it has penetrated correctly by checking that it may be seen through the lateral hole in the barrel.

Reducing sleeve

• If a wire with a cross sectional area of less than 0.21 mm² is used with a size 20 contact, it will be necessary to use a reducing sleeve: ref. 8500-781.
• Wires of cross sectional area of 0.6 mm² may be used with size 16 contacts by using a reducing sleeve, ref. 8500-1985.



Crimping instructions

• With crimping pliers MS 22520/1-01 SOURIAU part number 8365 and turret MS 22520/1-02 8365-02:
  - «red» position for size 20 contacts
  - «blue» position for size 16 contacts.

• With crimping pliers MS 22520/2-01 SOURIAU part number 8476-01 and locator MS 22520/2-02 8476-02:
  - for size 20 contacts only.

Note : not be used with reducing sleeve.

Squeeze pliers firmly until a click is heard, the pliers should spring open when the ratched mechanism is released.
• Hold indentor side up-insert the wire-contact assembly or mire-reducing sleeve-contact assembly between the four indentors, ensuring that the contact bottoms in the locator.
• Fully close the jaws, once the contact is crimped the pliers must spring open remove wire + crimped contact, check crimp aspect.

Crimp contact insertion

First disassemble and slide connector rear accessory over cables.

Insertion tools
- Pliers 8500-29B.
- Except 8-2, 8-3, 8-4, 12-14 contact layouts: tool 8500-93B

Use of insertion tools
Manually insert the contact into the desired insert cavity.
- Insert the wire between the pliers jaws, the tip of the jaws butting the contact shoulder.

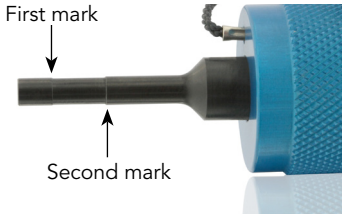
Introduce contacts one by one in insert cavities pushing straight in until the contact snaps into position and the clip ensures contact retention.

Filler plugs
Where certain contacts are unwired and where it is necessary to fully maintain the connector's sealing characteristics, a filler plug must be used. Note that the contact must be inserted before the filler plug.

Crimp contact extraction

All contacts for use in insulators with clips are extracted using a semi-automatic tool:
- size 20 contacts: tool type 8500-36A
- size 16 contacts: tool type 8500-38A.

First dissassemble and slide connector rear accessory over cables.
- Do not operate the tool slide button.
- Bring the tool tip over the male or female contact to be removed from connector front (mating face) as far as the first mark for male contacts and the second mark for female contacts.



- This operation, should be carried out delicately in a direction parallel to the contact centre line with a light turning action.
- Extract contact pushing the slide button fully forward, carefully remove tool and pull wire to release the wire-contact assembly.

Note : tools have an adjustable spring system (rear knurled knob) also for automatic contact disengagement.

Cross reference list

851 version with crimp contacts (olive green cadmium plating)

Connector with backshells

SOURIAU	NCF 93422 (modèle HE 301B)	MIL-DTL-26482G série 1	VG 95328
851 00 R .. .. .. 50 ..	HE 301 B 00 R 1A	* MS 3120 E	VG 95328 A .. .. ..
851 00 RC .. .. .. 50 ..	HE 301 B 00 RC 1A	* MS 3120 F	VG 95328 B .. .. ..
851 00 RP .. .. .. 50 ..	HE 301 B 00 RP 1A	* MS 3120 P	
851 00 RG .. .. .. 50 ..	-	-	VG 95328 R .. .. ..
851 00 RA .. .. .. 50 ..	HE 301 B 00 RA 1A	-	-
851 01 R .. .. .. 50 ..	HE 301 B 01 R 1A	* MS 3121 E	-
851 01 RC .. .. .. 50 ..	HE 301 B 01 RC 1A	* MS 3121 F	-
851 01 RP .. .. .. 50 ..	HE 301 B 01 RP 1A	* MS 3121 P	-
851 01 RA .. .. .. 50 ..	HE 301 B 01 RA 1A	-	-
851 02 R .. .. .. 50 ..	HE 301 B 02 R 1A	* MS 3122 E	VG 95328 C .. .. ..
851 06 R .. .. .. 50 ..	HE 301 B 06 R 1A	* MS 3126 E	-
851 06 RC .. .. .. 50 ..	HE 301 B 06 RC 1A	* MS 3126 F	VG 95328 K .. .. ..
851 06 RP .. .. .. 50 ..	HE 301 B 06 RP 1A	* MS 3126 P	-
851 06 RT .. .. .. 50 ..	-	-	VG 95328 J .. .. ..
851 06 RA .. .. .. 50 ..	HE 301 B 06 RA 1A	-	-
851 36 RG .. .. .. 50 ..	-	-	VG 95328 M .. .. ..
851 36 RA .. .. .. 50 ..	-	-	-
851 07 R .. .. .. 50 ..	HE 301 B 07 R 1A	* MS 3124 E	VG 95328 D .. .. ..
851 07 RC .. .. .. 50 ..	HE 301 B 07 RC 1A	* MS 3124 F	VG 95328 E .. .. ..
851 07 RP .. .. .. 50 ..	HE 301 B 07 RP 1A	* MS 3124 P	-
851 07 RT .. .. .. 50 ..	-	-	VG 95328 S .. .. ..
851 07 RG .. .. .. 50 ..	-	-	VG 95328 T .. .. ..
851 08 RC .. .. .. 50 ..	HE 301 B 08 RC 1A	-	-

* Not QPL

851 version with crimp contacts (other plating)

Plating	SOURIAU		NFC 93422 (modèle HE 301B)
	Solder version	Crimp version	
Black anodised	851 5029	851 50031	HE 301B 4A
Nickel	851 5044	851 5044	HE 301B 5A

Cross reference list

851 version with solder contacts (olive green cadmium plating)

Connector with backshells

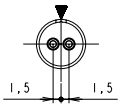
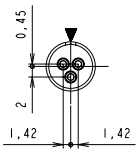
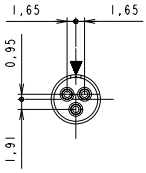
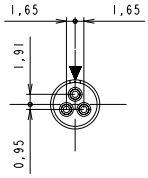
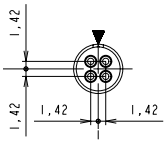
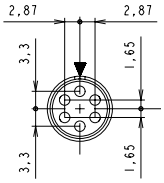
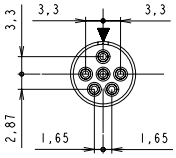
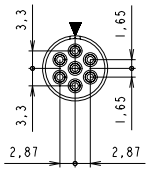
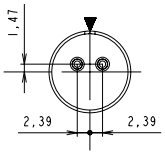
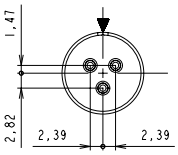
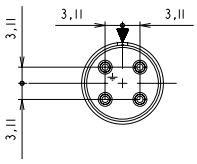
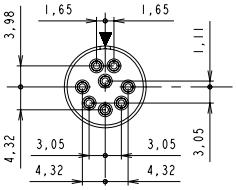
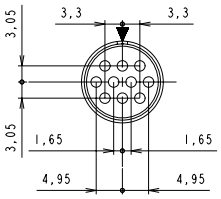
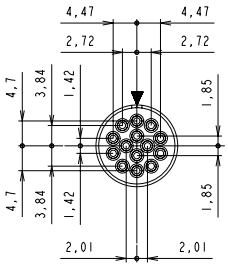
SOURIAU	NCF 93422 (modèle HE 301B)	MIL-DTL-26482G série 1	VG 95328
851 00 E .. .. .. 50 ..	HE 301 B 00 E 1A	MS 3110 E	-
851 00 EC .. .. .. 50 ..	HE 301 B 00 EC 1A	MS 3110 F	-
851 00 AC .. .. .. 50 ..	HE 301 B 00 AC 1A	-	-
851 00 P .. .. .. 50 ..	HE 301 B 00 P 1A	MS 3110 P	-
851 00 A .. .. .. 50 ..	HE 301 B 00 A 1A	-	-
851 00 J .. .. .. 50 ..	HE 301 B 00 J 1A	-	-
851 00 JC .. .. .. 50 ..	-	MS 3110 J	-
851 01 E .. .. .. 50 ..	HE 301 B 01 E 1A	MS 3111 E	-
851 01 EC .. .. .. 50 ..	HE 301 B 01 EC 1A	MS 3111 F	-
851 01 AC .. .. .. 50 ..	HE 301 B 01 AC 1A	-	-
851 01 P .. .. .. 50 ..	HE 301 B 01 P 1A	MS 3111 P	-
851 01 A .. .. .. 50 ..	HE 301 B 01 A 1A	-	-
851 01 J .. .. .. 50 ..	HE 301 B 01 J 1A	-	-
851 01 JC .. .. .. 50 ..	-	MS 3111 J	-
851 02 E .. .. .. 50 ..	HE 301 B 02 E 1A	MS 3112 E	VG 95328 H .. .. ..
851 06 E .. .. .. 50 ..	HE 301 B 06 E 1A	MS 3116 E	-
851 06 EC .. .. .. 50 ..	HE 301 B 06 EC 1A	MS 3116 F	-
851 06 AC .. .. .. 50 ..	HE 301 B 06 AC 1A	-	-
851 06 P .. .. .. 50 ..	HE 301 B 06 P 1A	MS 3116 P	-
851 06 A .. .. .. 50 ..	HE 301 B 06 A 1A	-	-
851 06 J .. .. .. 50 ..	HE 301 B 06 J 1A	-	-
851 06 JC .. .. .. 50 ..	-	MS 3116 J	-
851 08 EC .. .. .. 50 ..	HE 301 B 08 EC 1A	-	-
851 08 P .. .. .. 50 ..	HE 301 B 08 P 1A	-	-
851 07 E .. .. .. 50 ..	HE 301 B 07 E 1A	MS 3114 E	-
851 07 EC .. .. .. 50 ..	HE 301 B 07 EC 1A	MS 3114 F	-
851 07 AC .. .. .. 50 ..	HE 301 B 07 AC 1A	-	-
851 07 P .. .. .. 50 ..	HE 301 B 07 P 1A	MS 3114 P	-

851 Hermetic version

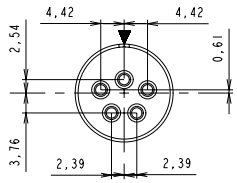
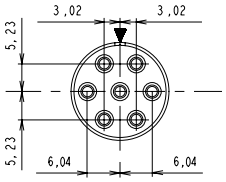
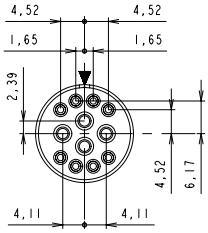
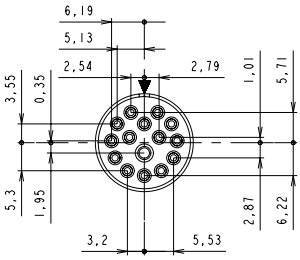
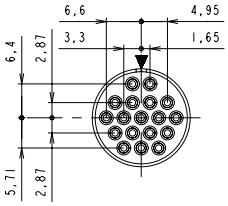
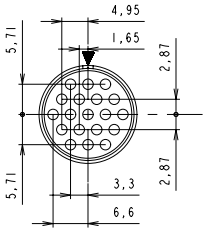
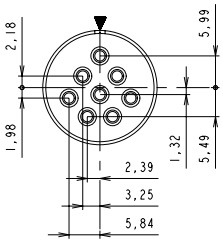
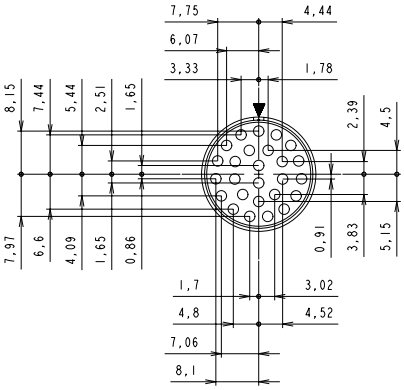
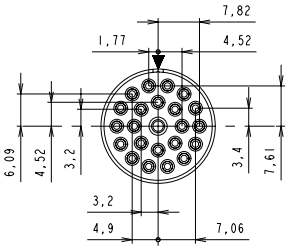
SOURIAU	NFC 93422 (modèle HE 301B)	MIL-DTL-26482G série 1	VG 95328
851 02 H P.50	HE 301 B 02 H P.3A		
851 07 H P.50	HE 301 B 07 H P.3A	* MS 3114 H .. .. P.	VG 95328 F .. .. ..
851 I H P.50	HE 301 B 1 H P.3A	* MS 3113 H .. .. P.	VG 95328 G .. .. .

* Not QPL

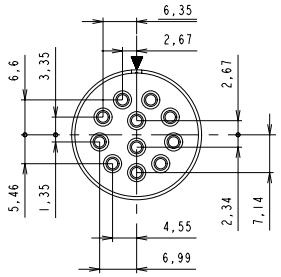
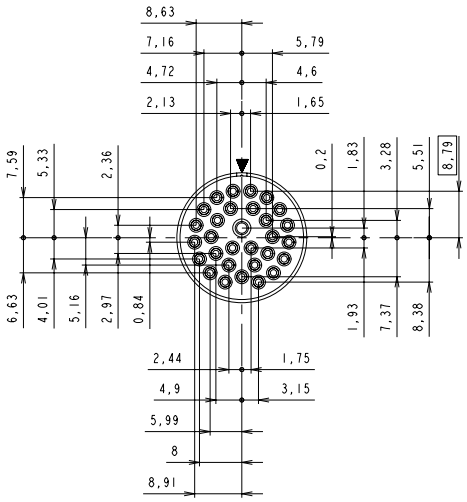
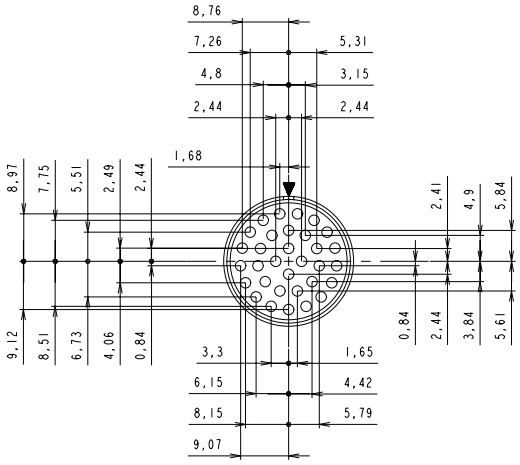
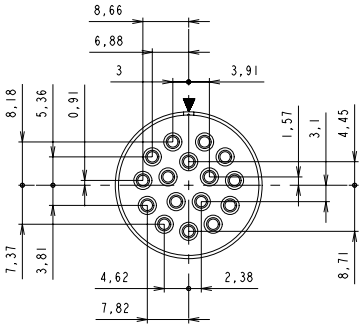
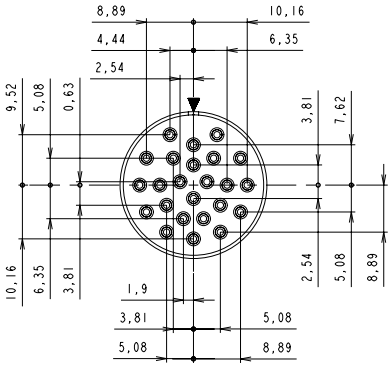
Drilling pattern - Male rear face

Shell Size	Dimension (mm)
8	8-2 2 contacts 2xØ1.0 (#20)  8-3 3 contacts 3xØ1.0 (#20)  8-3A/8-98 3 contacts 3xØ1.0 (#20)  8-33 3 contacts 3xØ1.0 (#20)  8-4 4 contacts 4xØ1.0 (#20) 
10	10-6 6 contacts 6xØ1.0 (#20)  10-98 6 contacts 6xØ1.0 (#20)  10-7 7 contacts 7xØ1.0 (#20) 
12	12-2 2 contacts 2xØ1.6 (#16)  12-3 3 contacts 3xØ1.6 (#16)  12-4 3 contacts +ground 4xØ1.6 (#16)  12-8 8 contacts 8xØ1.0 (#20)  12-10 10 contacts 10xØ1.0 (#20)  12-14 14 contacts 14xØ1.0 (#20) 

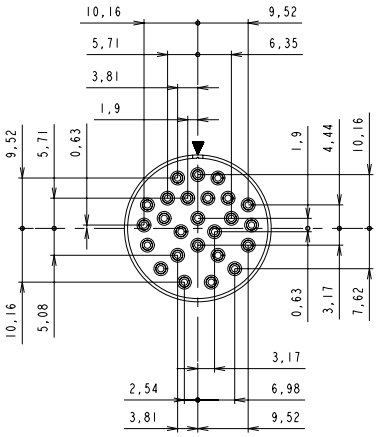
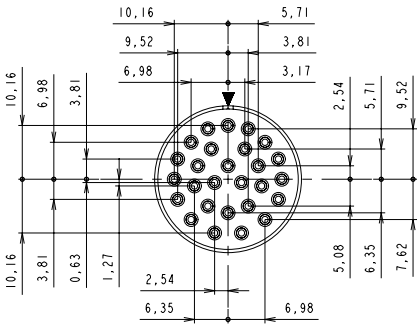
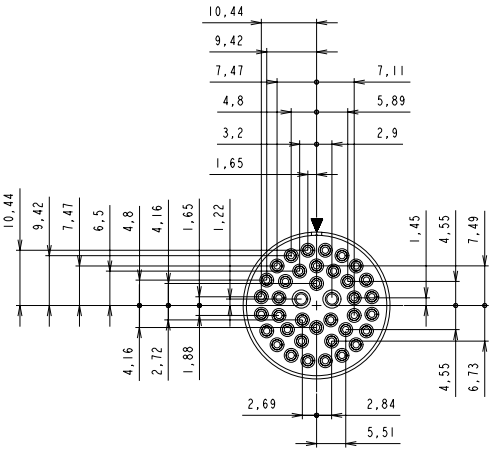
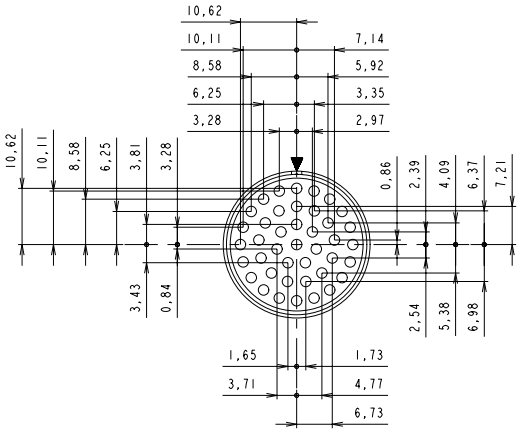
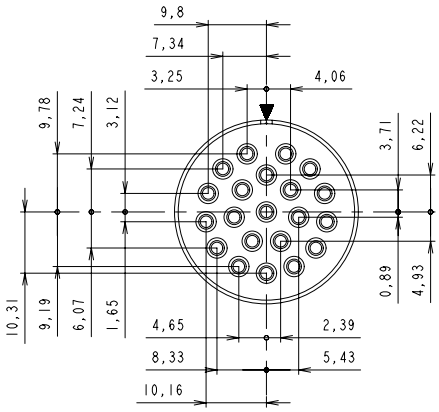
Drilling pattern - Male rear face

Shell Size	Dimension (mm)
14	14-5 5 contacts 5xØ1.6 (#16)  14-7 6 contacts +ground 7xØ1.6 (#16)  14-12 12 contacts 8xØ1.0 (#20) 4xØ1.6 (#16)  14-15 15 contacts 14xØ1.0 (#20) 1xØ1.6 (#16)  14-18 18 contacts 18xØ1.0 (#20)  14-19 19 contacts 19xØ1.0 (#20) 
16	16-8 8 contacts 8xØ1.6 (#16)  16-26 26 contacts 26xØ1.0 (#20)  16-23 23 contacts 22xØ1.0 (#20) 1xØ1.6 (#16) 

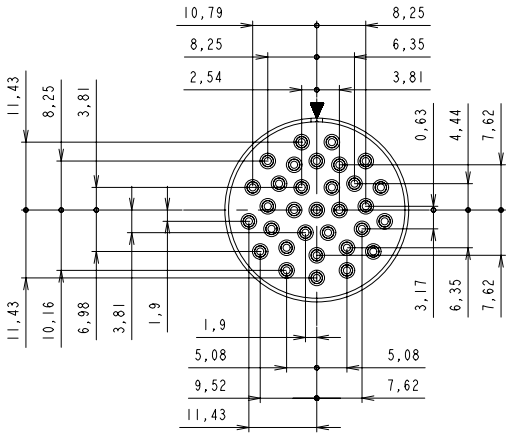
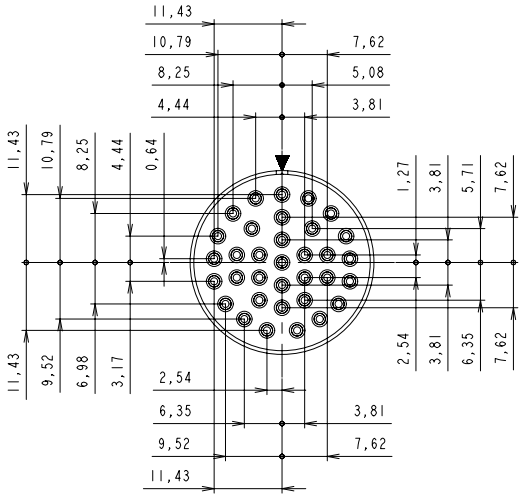
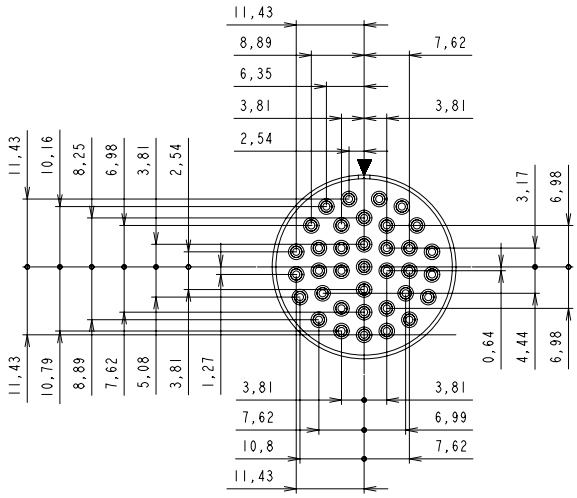
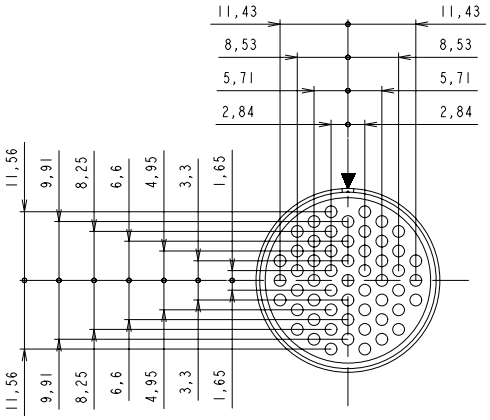
Drilling pattern - Male rear face

Shell Size	Dimension (mm)
18	18-11 11 contacts 11xØ1.6 (#16)  18-30 30 contacts 29xØ1.0 (#20) 1xØ1.6 (#16)  18-32 32 contacts 32xØ1.6 (#16) 
20	20-16 16 contacts 16xØ1.6 (#16)  20-24 24 contacts 24xØ1.0 (#20) 

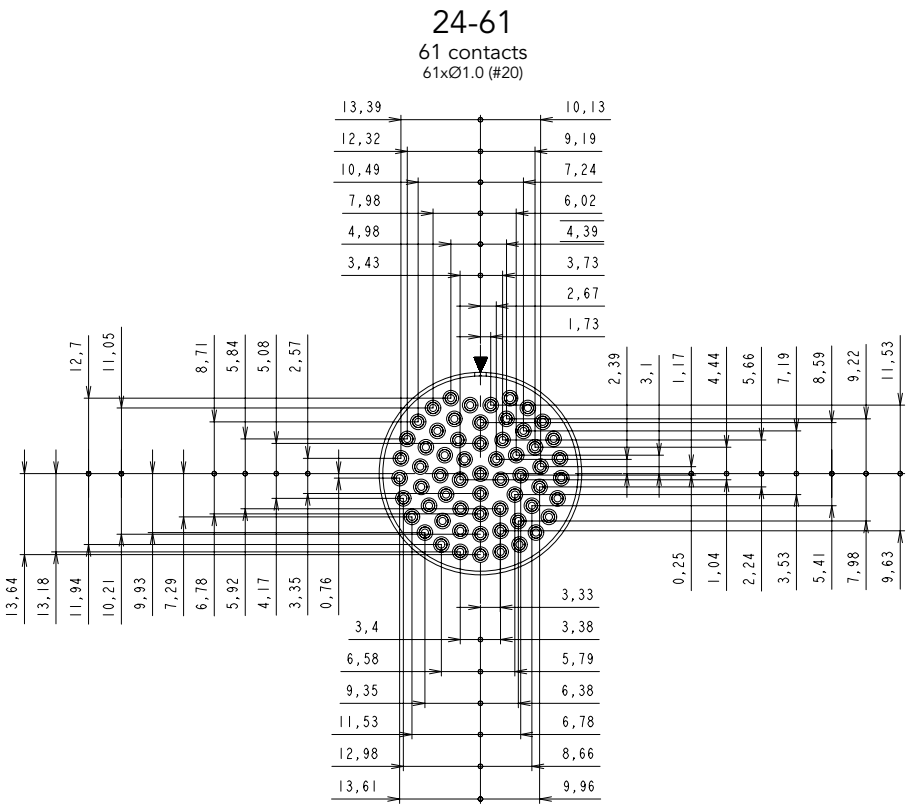
Drilling pattern - Male rear face

Shell Size	Dimension (mm)
20	20-25 25 contacts 25xØ1.0 (#20)  20-27 27 contacts 27xØ1.0 (#20)  20-39 39 contacts 37xØ1.0 (#20) 2xØ1.6 (#16)  20-41 41 contacts 41xØ1.0 (#20) 
22	22-21 21 contacts 21xØ1.6 (#16) 

Drilling pattern - Male rear face

Shell Size	Dimension (mm)
22	22-32 32 contacts 32xØ1.0 (#20)  22-34 34 contacts 34xØ1.0 (#20)  22-36 36 contacts 36xØ1.0 (#20)  22-55 55 contacts 55xØ1.0 (#20) 

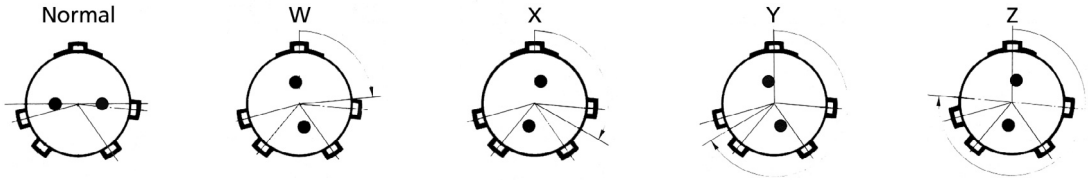
Drilling pattern - Male rear face

Shell Size	Dimension (mm)
24	

Discrimination / Keying methods

Insulator rotated inside metal bod

Viewed from front face of male insulator (receptacle or plug)



Shells	Layouts	Angle in degrees				NFC 93422 HE 301B		MIL-DTL-26482G serie 1		Service1 1500 Vrms	Service 2 2300 Vrms
		W	X	Y	Z	Solder	Crimp	Solder	Crimp		
8	2	58	122	-	-			•		X	
	3	60	210	-	-			•		X	
	3A (98)*	60	210	-	-			•	•	X	
	4	45	-	-	-			•		X	
	33	90	-	-	-		•	•	•	X	
10	6	90	-	-	-	•	•	•	•	X	
	7*	90	-	-	-					X	
	98	90	180	240	270			•	•	X	
12	3	-	-	180	-	•	•	•	•		X
	4										
	8	90	112	203	292			•	•	X	
	10	60	155	270	295	•	•	•	•	X	
	2	-	-	-	-						X
	14*	45						•		X	
14	5	40	92	184	273	•	•	•	•		X
	7										
	12	43	90	-	-	•	•	•	•	X	
	15	17	110	155	234	•	•	•	•	X	
	18	15	90	180	270			•	•	X	
	19	30	165	315	-	•	•	•	•	X	
16	8	54	152	180	331	•	•	•	•		X
	23	158	270	-	-	•	•	•	•	X	
	26	60	-	275	338	•	•	•	•	X	
18	11	62	119	241	340	•	•	•	•		X
	32	85	138	222	265	•	•	•	•	X	
	30	180	193	285	350		•		•	X	
20	16	238	318	333	347	•	•	•	•		X
	39	63	144	252	333	•	•	•	•	X	
	41	45	126	225	-	•	•	•	•	X	
	24	70	145	215	290			•	•	X	
	25	72	144	216	288					X	
	27	72	144	216	288		•		•	X	
22	21	16	135	175	349	•	•	•	•		X
	36	72	144	216	288		•			X	
	55	30	142	226	314	•	•	•	•	X	
	32	72	145	215	288				•	X	
	34	62	142	218	298				•	X	
24	61	90	180	270	324	•	•	•	•	X	

* 8-98 layout, W and X non standard ortientations
10-7 & 12-14 layouts, W non standard orientation

Notes

Notes

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Your local contact

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