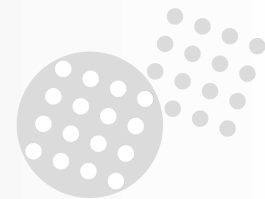


# 84 Series



## Presentation

The 84 bayonet series has been especially designed for light and harsh environment. Its physical characteristics and performances are appreciated in a large range of applications including :

- **Factory automation - Machine tool - Light electronics : 840 series**
- **Heavy transportation - Mining and harsh environment : 845 series**
- **Military Ground Equipment - Heavy weapons : 847 series**

## Large variety of backshells



## Wide range of wire gauges and current carrying capabilities

Wire sizes from 24 through 00 AWG can be accommodated. Contacts are rated from 7,5 amps up to 200 amps



# 84 Series



Series	840 Series	845 Series	847 Series
Shell material	Aluminium	Steel	Steel
Plating	Alodine 1200	Yellow cadmium olive green cadmium	White cadmium olive green cadmium
Endurance	500 cycles	500 cycles	500 cycles
Number of contacts	1 to 61 from Ø 1 to Ø 10 mm	1 to 61 from Ø 1 to Ø 10 mm	3 to 6 from Ø 1,5 to Ø 5 mm
Withstanding voltage	2000 Vrms	2800 Vrms	2000 Vrms
Current rating	7,5 A to 200 A (AWG 24 to AWG 00)	7,5 A to 200 A (AWG 24 to AWG 00)	16 A to 63 A
Protection class	IP 65 Hose proof protected against water jets from all directions	IP 68 Water tight	IP 67
Type of termination	Solder Crimp Straight spill	Solder Crimp	Crimp
Others	Straight spill contacts Ground contacts Plastic and metal backshells	Sealing grommet Gold plated contacts	Pilot contacts VDE contacts layouts

840 Series

845 Series

847 Series

# 840 Series



## Applications

- Factory automation & machine tools
- Test & measurement instrumentation
- Transportation



## Description

- A connector set consists of : a plug, a receptacle or in line receptacle, backshells & accessories
- A bayonet coupling system allows quick connection and disconnection of connectors
- A mechanical index is provided to guide housings for correct alignment and the insulators may be rotated at different angles to give a specific orientation to otherwise similar connectors.

## Characteristics

### Mechanical

- Shell : aluminium alloy and thermoplastic
- Plating : alodine
- Insulator : neoprene elastomer monobloc
- Contact : copper alloy
- Plating : silver or gold
- Endurance : 500 mating/unmating operations
- Contact retention : (for crimp version)
  - Ø 1 : 50 N Ø 3,5 : 100 N Ø 10 : 200 N
  - Ø 1,5 : 70 N Ø 5 : 150 N
  - Ø 2,5 : 80 N Ø 7 : 150 N

### Electrical

- Test voltage : 2000 Vrms (except Ø 1 contact) : 1500 Vrms
- Contact resistance :
  - Ø 1 : ≤ 3 mΩ Ø 1,5 : ≤ 1,5 mΩ
  - Ø 2,5 : ≤ 0,6 mΩ Ø 3,5 : ≤ 0,35 mΩ
  - Ø 5 : ≤ 0,25 mΩ Ø 7 : ≤ 0,15 mΩ
  - Ø 10 : ≤ 0,08 mΩ
- Insulation resistance : ≥ 5000 MΩ (at 500 Vdc)
- Current rating :
  - Ø 1 : 7,5 A Ø 3,5 : 40 A Ø 10 : 200 A
  - Ø 1,5 : 11 A Ø 5 : 63 A
  - Ø 2,5 : 25 A Ø 7 : 120 A

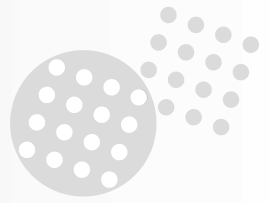
### Environmental

- Temperature range : -40°C +85°C
- Sealing : as per NFC 20010 - IP65
- Salt spray : as per NFC 20611 (48 hours)

## Ordering information

<b>basic series</b>	<b>840</b>	<b>21</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>•</b>	<b>••• XS</b>
<b>contact layout</b>	(see next page)						
<b>shell type</b>	<b>1</b>	square flange receptacle					
	<b>8</b>	plug					
	<b>5</b>	cable connecting receptacle					
	<b>9</b>	flange mounted plug					
		(without backshell - shell size 1 to 5 with 001 specification only)					
<b>contact type</b>	<b>1</b>	male crimp					
	<b>3</b>	male solder or spill					
	<b>5</b>	female crimp					
	<b>7</b>	female solder or spill					
<b>backshell</b>	<b>0</b>	connector supplied without backshell					
	<b>2</b>	connector supplied with backnut					
<b>orientation</b>		blank : standard orientation					
	<b>W</b> or <b>X</b>	other orientations (see next page)					
<b>specification</b>		without specification : silver plated crimp or solder contact					
	<b>001</b>	gold plated crimp contacts + metal retainer ring					
	<b>002</b>	gold plated crimp contacts					
	<b>SP2</b>	gold plated solder contacts					
	<b>004</b>	silver plated spill contacts Ø 0.8 mm length : 8.50 mm					
	<b>SP1</b>	male connector with one longest contact					
	<b>008</b>	male connector with one longest contact and grounding plate					
	<b>XS</b>	X = indicates the number of large barrel crimp contacts Ø 1.5 mm to be delivered with the connector (see p 11)					

# 840 Series

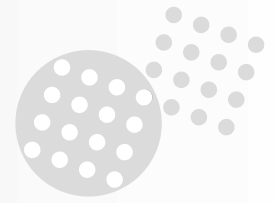


## Contact layouts and polarizations

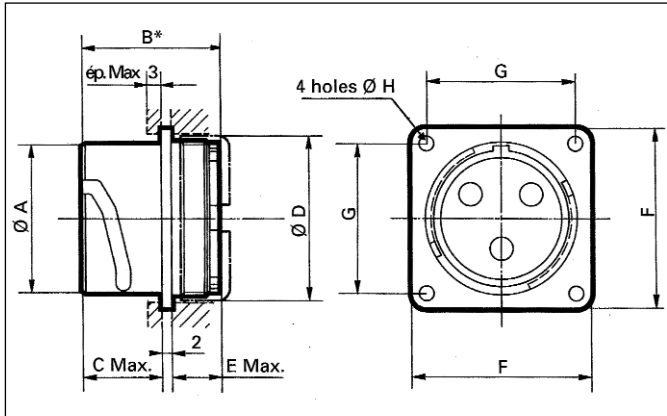
Viewed from front face of male insulator

shell 1	3 Ø 1,5  11 ● * ▲	2 Ø 1,5  12	1 Ø 3,5  13 ■	7 Ø 1  19 ■			
	7 Ø 1,5  21 ● * ▲	1 Ø 1,5 2 Ø 2,5  22	3 Ø 2,5  23 ● *	4 Ø 2,5  24 ●	3 Ø 1,5  26	12 Ø 1  29 ■	
shell 3	12 Ø 1,5  31 ● * ▲	3 Ø 3,5  32	4 Ø 3,5  33	2 Ø 3,5 4 Ø 1,5  34	1 Ø 10  35 □	19 Ø 1  39 ■	
	shell 4	19 Ø 1,5  41 ● * ▲	8 Ø 1,5 4 Ø 2,5  42	4 Ø 3,5 8 Ø 1,5  43	6 Ø 2,5 6 Ø 1,5  44	4 Ø 5  45	2 Ø 2,5 12 Ø 1,5  46
shell 5		37 Ø 1,5  51 ●	19 Ø 2,5  52	26 Ø 1,5  53	61 Ø 1  54 ■		
	shell 6	4 Ø 7  65	<p>Available arrangements :</p> <ul style="list-style-type: none"> <li>■ crimp only (specification 002)</li> <li>□ solder only</li> <li>* in 008</li> <li>▲ spill contacts</li> <li>● in SP1</li> </ul> <p><i>SP1 and 008 silver plated solder contacts only, the longest contact is always loaded in the cavity identified as 1 in insulator.</i></p>				

# 840 Series

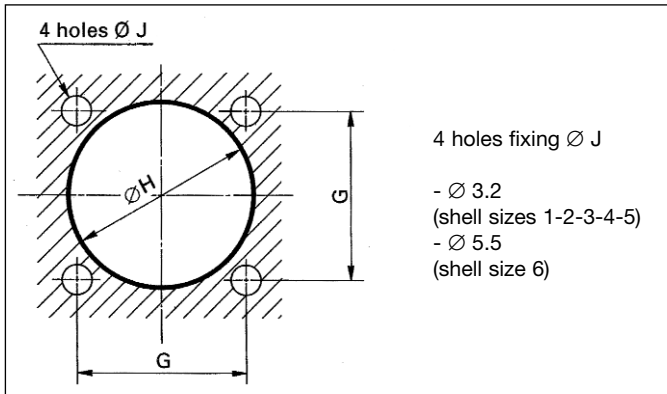


## Square flange receptacle type 1



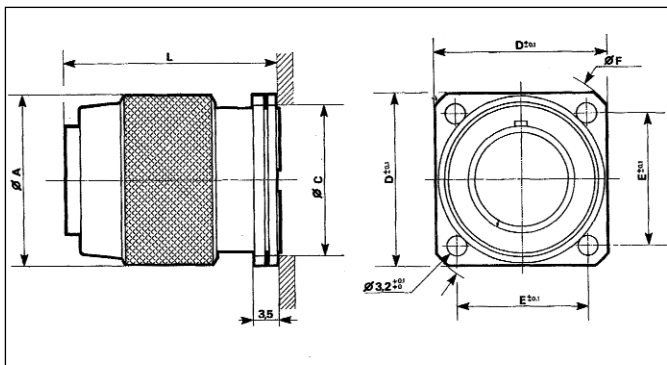
shells dim.	1	2	3	4	5	6
A	16 .63	20 .79	26 1.02	31 1.22	43 1.69	57 2.24
B*	27.50 1.08	27.50 1.08	27.90 1.10	27.90 1.10	39.10 1.54	39.10 1.54
C	16 .63	16 .63	17 .67	17 .67	17 .67	17 .67
D	18.50 .73	22.50 .89	27.50 1.08	33.50 1.32	44.50 1.75	61 2.40
E	12.50 .49	12.50 .49	12 .47	12 .47	23.50 .93	26 1.02
F	24 .94	27 1.06	31 1.22	37 1.46	49 1.93	66 2.60
G	18 .71	21 .83	25 .98	31 1.22	41 1.61	53 2.09
H	3.20 .13	3.20 .13	3.20 .13	3.20 .13	3.20 .13	5.50 .22

## Panel cut-out



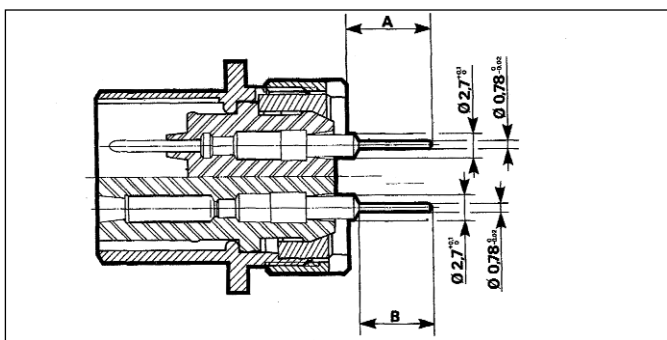
shells dim.	1	2	3	4	5	6
G ± 0,10	18 .71	21 .83	25 .98	31 1.22	41 1.61	53 2.09
H	19.50 .77	23.50 .93	28.50 1.12	34.50 1.36	46 1.81	62 2.44

## Flange mounted plug type 9



shells dim.	1	2	3	4	5
A	22.50 .89	26.50 1.04	33 1.30	39 1.54	51 2.01
L	32.50 1.28	32.50 1.28	32.50 1.28	32.50 1.28	43.50 1.71
C	19 .75	23 .91	28 1.10	34 1.34	45.50 1.79
D	24 .94	27 1.06	31 1.22	37 1.46	49 1.93
E	18 .71	21 .83	25 .98	31 1.22	41 1.61
F	31.50 1.24	36 1.42	41.50 1.63	50 1.97	64 2.52

## Square flange receptacle type 1 with straight spills contacts

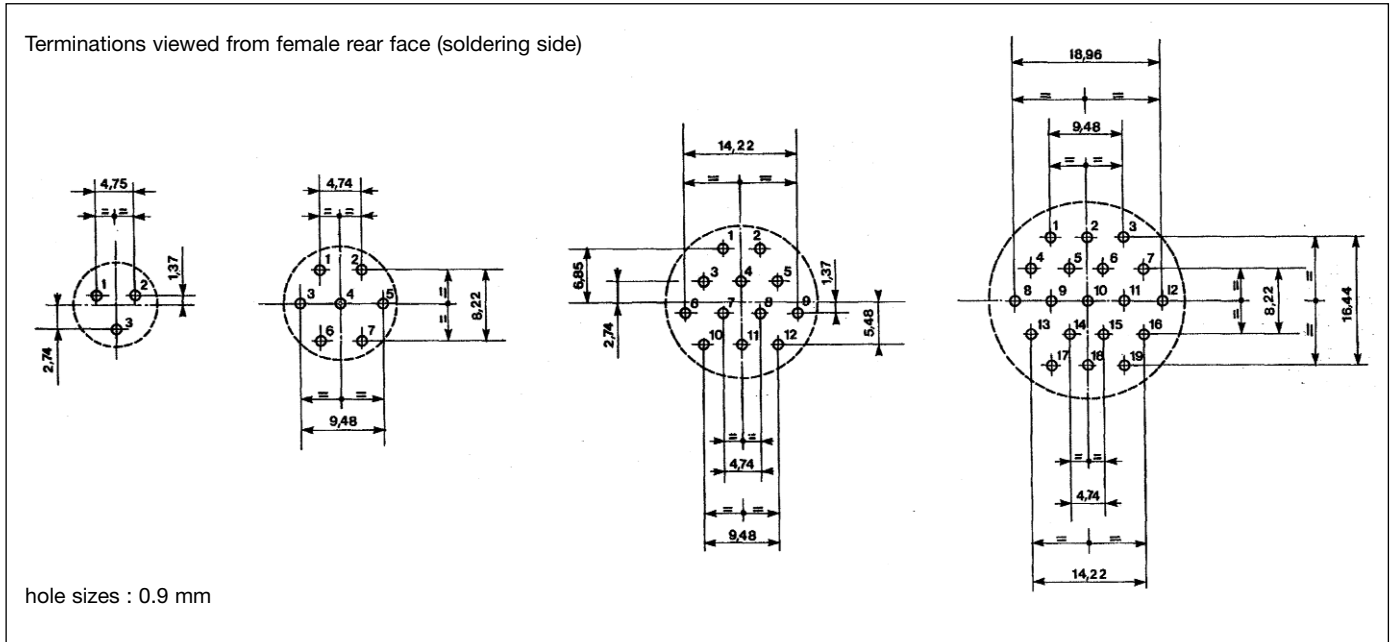


contact type	shells	A		B <sup>+0,1</sup> <sub>0</sub>
		min	Max.	
Long spills	1-2-3	9 .35	10.50 .41	8.50 .33
	4	9.50 .37	11 .43	

# 840 Series

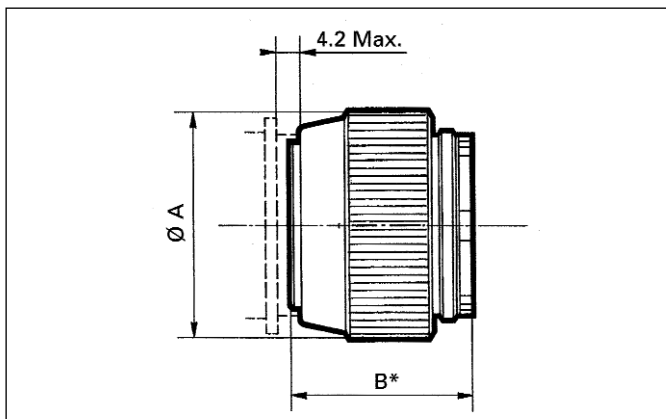


## Straight spill layout for arrangements 11-21-31 and 41



## Dimensions

### Plug type 8



To calculate overall dimensioning of connector and backshell assembly, add the 2 dimensions B of each part.

*Example :*

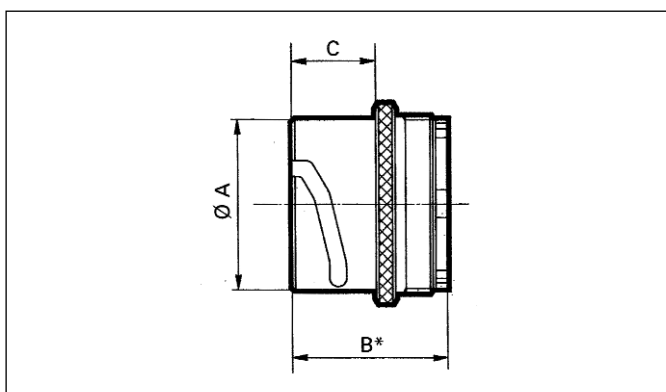
Plug type 8 + backnut (002) shell size 1 = 31.5 + 2.5 = 34 mm

Receptacle type 1 + backnut (002) shell size 1 = 27.5 + 2.5 = 30 mm

B\* includes retention cone

shells	1	2	3	4	5	6
dim.						
A	22.50 .89	26.50 1.04	33 1.30	39 1.54	51 2.01	65 2.56
B*	31.50 1.24	31.50 1.24	31.50 1.24	31.50 1.24	42.70 1.68	42.70 1.68

### Cable connecting receptacle type 5



shells	1	2	3	4	5	6
dim.						
A	16 .63	20 .79	26 1.02	31 1.22	43 1.69	57 2.24
B*	27.50 1.08	27.50 1.08	27.90 1.10	27.90 1.10	39.10 1.54	39.10 1.54
C	14.50 .57	14.50 .57	15.50 .61	15.50 .61	15.50 .61	15.50 .61

# 840 Series

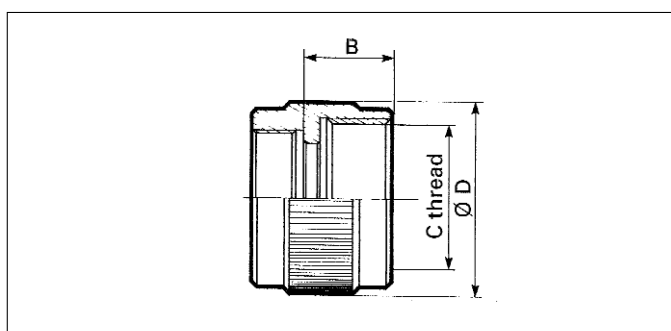


## Backshells

<b>basic series</b>	<b>840</b>	<b>2</b>	<b>0</b>	<b>002</b>	...	
<b>shell size</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>obligatory suffix</b>						
<b>backshell type</b>	<b>002</b> backnut <b>003</b> large outlet - straight metal backshells with cable clamp for crimp connector <b>004</b> standard outlet - elbow metal backshells with cable clamp for crimp connector <b>005</b> large outlet - elbow metal backshells with cable clamp for crimp connector <b>006</b> standard outlet - elbow metal backshells with cable clamp for crimp connector <b>008</b> plastic straight or angled backshell with cable clamp and sealing gland (shell sizes 1, 2, 3, 4, 5) <b>0010</b> metal straight backshell with cable clamp and sealing gland (shell sizes 2, 3, 4) <b>0011</b> metal straight backshell with sealing gland and threaded outlet (shell sizes 2, 3, 4) <b>0039</b> gaz thread adaptor (shell sizes 1, 2, 3, 4, 5)					
<b>specification</b>	indicates specification for backshell sealing gland diameter type 0010					

<b>basic series</b>	<b>840</b>	<b>2</b>	<b>PEF</b>	<b>16</b>														
<b>shell size</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>													
<b>backshell type</b>	electrical thread adaptor																	
<b>thread type</b>	<table border="1"> <thead> <tr> <th>shell</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>PE type</td> <td>13</td> <td>16</td> <td>21</td> <td>21</td> <td>29</td> <td>29</td> </tr> </tbody> </table>					shell	1	2	3	4	5	PE type	13	16	21	21	29	29
shell	1	2	3	4	5													
PE type	13	16	21	21	29	29												

## Electric thread adaptor

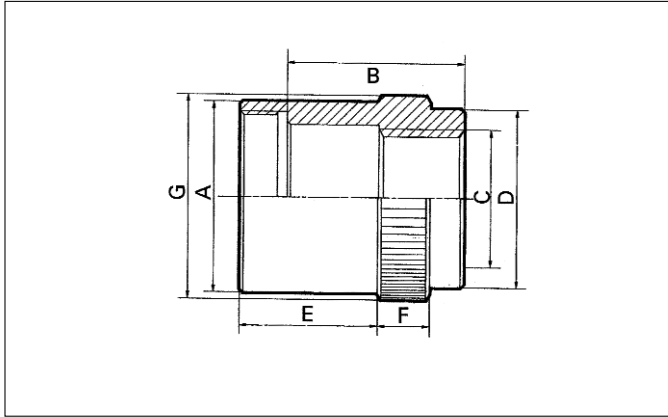


	<b>shells</b>					
<b>dim.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>		<b>5</b>
B Max.	18.70 .74	18.70 .74	19.30 .76	19.30 .76	18.70 .74	19.30 .76
C thread PE	13 .51	16 .63	21 .83	21 .83	29 1.14	29 1.14
D Max.	22.50 .89	26.50 1.04	33 1.30	43 1.69	43 1.69	51 2.01

# 840 Series

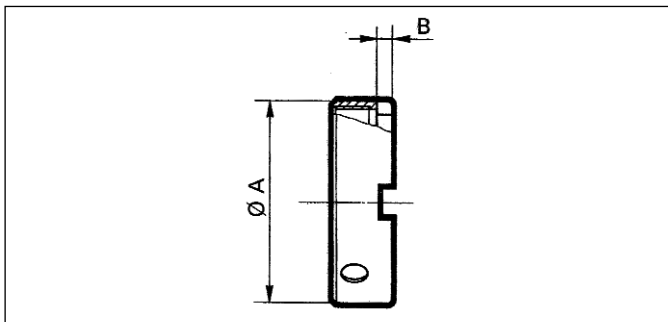


## Gaz thread adaptor type 0039



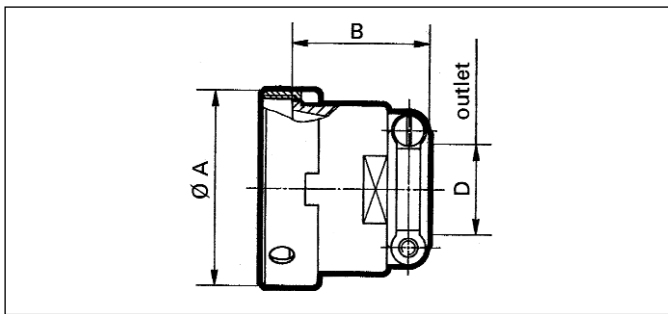
dim.	shells				
	1	2	3	4	5
A	19 .75	23 .91	29 1.14	35 1.38	46 1.81
B	15.50 .61	18 .71	21 .83	22 .87	31 1.22
C	G-1/4" 13.157	G-3/8" 16.662	G-1/2" 20.955	G-3/4" 26.441	G-1" 33.249
D	23.50 .93	22 .87	27 1.06	34 1.34	44 1.73
E	15 .59	17 .67	20 .79	25 .98	27.50 1.08
F	8 .31	8 .31	8 .31	8 .31	9 .35
G	24.50 .96	25 .98	31 1.22	37 1.46	48 1.89

## Metallic backnut type 002



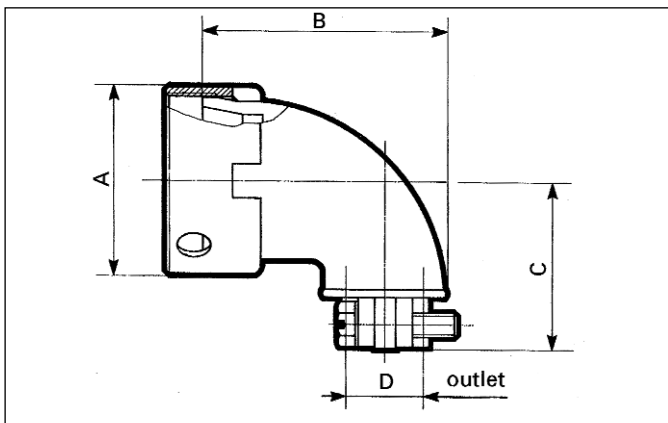
dim.	shells					
	1	2	3	4	5	6
A	18.50 .73	22.50 .89	27.50 1.08	33.50 1.32	44.50 1.75	61 2.40
B	2.50 .10	2.50 .10	2.50 .10	2.50 .10	2 .08	3 .12

## Straight metal backshell with cable clamp type 003 and 004 depending on outlet Ø



dim.	shells						
	1	2	3	4	5	6	
004	A	18.50 .73	22.50 .89	27.50 1.08	33.50 1.32	45 1.77	61 2.40
	B	15.50 .61	16.50 .65	23.50 .93	23.50 .93	27.50 1.08	45 1.77
	D	7 .28	10 .39	13.50 .53	15.50 .61	22.50 .89	36 1.42
003	B	22 .87	22 .87	23.50 .93	26.50 1.04	36.50 1.44	-
	D	8.50 .33	12 .47	15 .59	18 .71	27 1.06	-

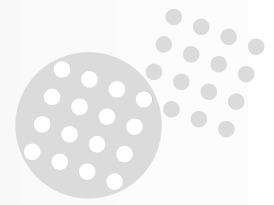
## Angled metal backshell with cable clamp type 005 and 006 depending on outlet Ø



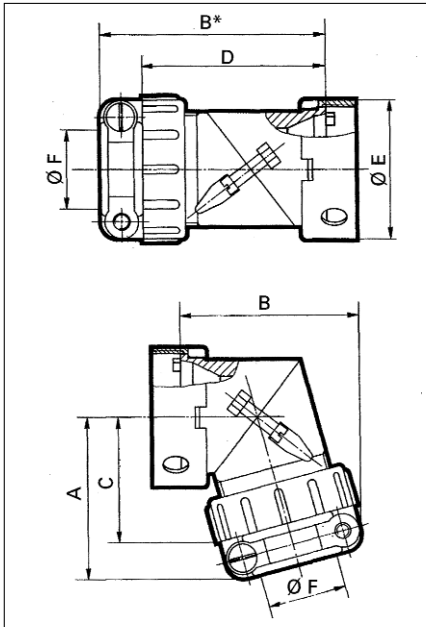
dim.	shells							
	1	2	3	4	5	6		
A	18.50 .73	22.50 .89	27.50 1.08	33.50 1.32	45 1.77	-		
standard outlet	006	B	27.50 .73	30 1.18	34.50 1.36	37.50 1.48	51 2.01	-
		C	16 .63	20.50 .81	22.50 .89	28 1.10	40 1.57	-
		D	6.50 .26	9.50 .37	13 .51	15 .59	22.50 .89	-
		large outlet	005	B	-	43.50 1.71	45 1.77	51.50 2.03
C	-			48 1.89	40.50 1.59	41.50 1.63	-	-
D	-			17 .67	16 .63	20 .79	-	-



# 840 Series

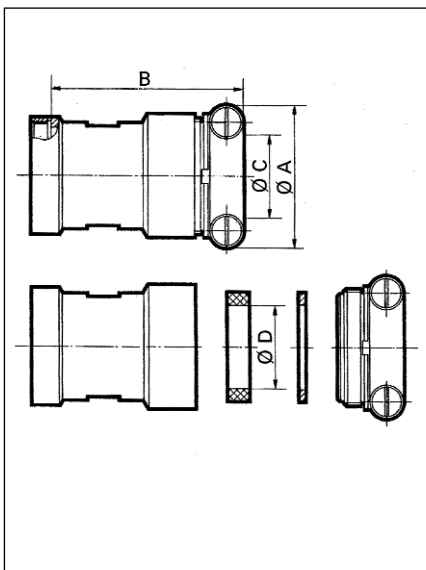


## Convertible straight angled backshell type 008 with cable clamp and sealing gland



dim.	shells				
	1	2	3	4	5
A	22.50 .89	27.50 1.08	31.50 1.24	33 1.30	50.50 1.99
B	26 1.02	31.50 1.24	36.50 1.44	43.50 1.71	57 2.24
B*	33.50 1.32	40.50 1.59	46 1.81	55 2.17	74 2.91
C	18 .71	21.50 .85	25 .98	29.50 1.16	43.50 1.71
D	28.50 1.12	34.50 1.36	39 1.54	45 1.77	65.50 2.58
E	18.50 .73	22.50 .89	27.50 1.08	33.50 1.32	45 1.77
F	7 .28	10	15 .59	19 .75	22.50 .89

## Metal backshell with sealing gland and cable clamp type 0010

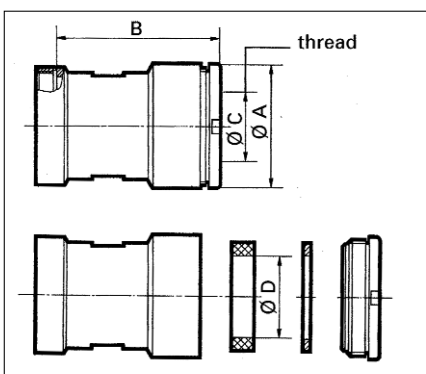


Ø of sealing gland gasket for backshell type 0010

dim.	shells		
	2	3	4
A	27.50 1.08	37 1.46	42 1.65
B	44.50 1.75	52.50 2.07	47.50 1.87
C	14.60 .57	19.60 .77	24.60 .97

shells	Ø D	specification
2	10.00 .39	003
	12.50 .49	004
	14.50 .57	005
3	14.00 .55	006
	16.00 .63	007
	18.00 .71	008
	19.50 .77	009
4	16.00 .63	010
	18.50 .73	011
	20.50 .81	012
	22.50 .89	013
	24.50 .96	014

## Metal backshell with sealing gland type 0011



dim.	shells		
	2	3	4
A	26 1.02	31 1.22	36 1.42
B	39 1.54	44 1.73	49 1.93
C	15.25 .60 thread 1.41 .06	18.65 .73 thread 1.41 .06	20.45 .81 thread 1.41 .06
D	14.50 .57	19.50 .77	24.50 .96

# 840 Series



## Crimp contacts

Contact Ø	Contact type	Part numbers	Admissible wire section				Max Ø over insulator	Part numbers Reducing sleeves	Admissible wire section			
			AWG		mm <sup>2</sup>				AWG		mm <sup>2</sup>	
			min	Max	min	Max			min	Max.	min	Max.
Ø 1 all shells	male	8500-697	24	18	0.21	0.93	2.40	8500-781	30	26	0.06	0.15
	female	8500-1758										
Ø 1,5 small barrel shells 1, 2, 3, 4	male	8400-307A	22	18	0.38	0.93	3.30	63-584	30	24	0.06	0.21
	female	8400-619B										
Ø 1,5 large barrel shells 1, 2, 3, 4	male	8400-144A	16	14	1.34	1.91	3.30	-	-	-	-	-
	female	8400-618B										
Ø 2,5 shells 1, 2, 3, 4	male	8400-270A	12	10	3.18	5.30	5.10	8400-1665	14	-	1.91	-
	female	8400-147A										
Ø 3,5 all shells	male	8400-352A	-	8	8.98	-	6.40	8400-1029	10	-	5.30	-
	female	8400-148A										
Ø 5	male	8400-833	12	-	13.40	-	8.00	8400-2315	8	-	8.98	-
	female	8400-834										
Ø 10	male	8400-1799	-	-	16.00	-	8.50	-	-	-	-	-
	female	8400-1801										

## Crimp contacts for shell sizes 5 and 6

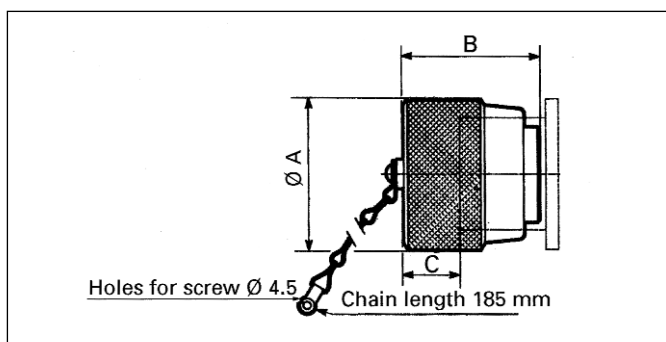
Ø 1,5 small barrel	male	8400-309A	22	18	0.38	0.93	3.30	63 584	30	24	0.06	0.21
	female	8400-621B										
Ø 1,5 large barrel	male	8400-242A	16	14	1.34	1.91	3.30	-	-	-	-	-
	female	8400-620B										
Ø 2,5	male	8400-1407	12	10	3.18	5.30	5.10	8400-1665	14	-	1.91	-
	female	8400-1405										

# 840 Series



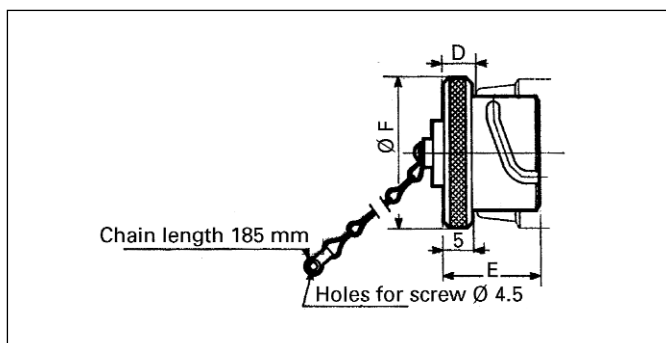
## Accessories and tooling

### Caps for receptacle



shells	caps for receptacle	caps for plug
1	8400-11	8400-21
2	8400-12	8400-22
3	8400-13	8400-23
4	8400-14	8400-24
5	8400-15	8400-25
6	8400-16	8400-26

### Cap for plug



dim.	shells					
	1	2	3	4	5	6
A	22.50 .89	26.50 1.04	33 1.30	39 1.54	51 2.01	65 2.56
B	24.40 .96	24.30 .96	24.80 .98	24.80 .98	27.20 1.07	28.70 1.13
C	10.20 .40	10.20 .40	10.30 .41	10.30 .41	13.80 .54	14.30 .56
D	5.80 .23	5.80 .23	5.90 .23	5.90 .23	5.90 .23	5.90 .23
E	17 .67	17 .67	18 .71	18 .71	18 .71	18 .71
F	22.50 .89	26.50 1.04	33 1.30	39 1.54	49.80 1.96	64.50 2.54

### Gasket for receptacle type 1

shells	1	2	3	4	5	6
Part numbers	8400-943	8400-944	8400-945	8400-2004	8400-2005	8400-1564

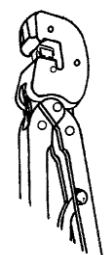
## Crimping

Contacts Ø	Plier	Locator	
		shells 5 and 6	shells 1, 2, 3 and 4
Ø 1	MS 3191-1 SOURIAU 8465	MS 3191-20A	MS 3191-20A
Ø 1,5 small barrel	MS 3191-1 SOURIAU 8465	8400-1608	8400-1607
Ø 1,5 large barrel	MS 3191-1 SOURIAU 8465	8400-1609	MS3191-16A
Ø 2,5	MS 3191-1 SOURIAU 8465	8400-1721	8400-1610
Ø 3,5	8459	8459-130	8459-130
Ø 5	8459	8459-129	8459-129
Ø 10	8459	8459-168	8459-168

Ref : 8465



Ref : 8459

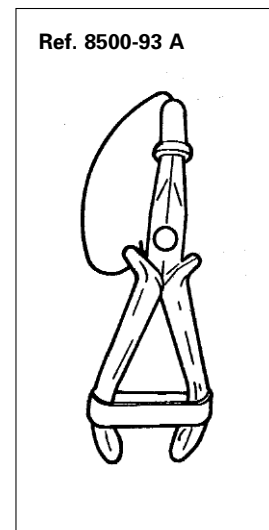
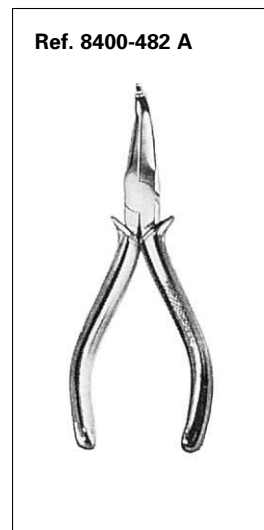
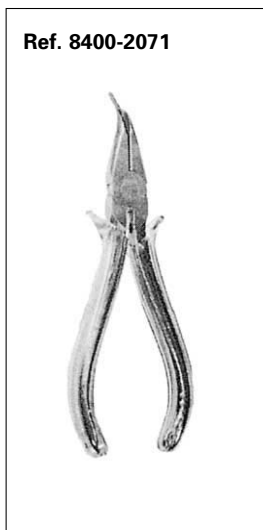


# 840 Series



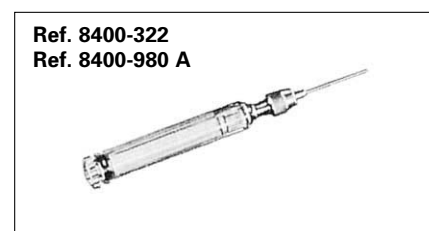
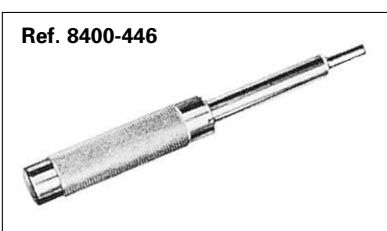
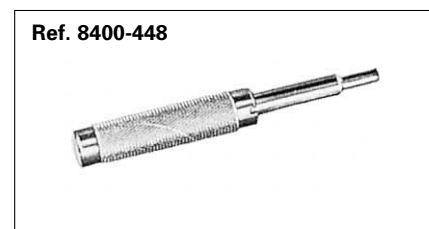
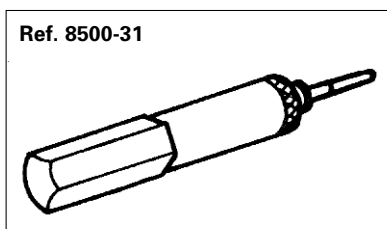
## Insertion tools

Contacts Ø	Shells 5 and 6	Shells 1, 2, 3 and 4
Ø 1	8400-2071	8500-93 B
Ø 1,5 small barrel	8400-482 A	
Ø 1,5 large barrel	8400-482 A	
Ø 2,5	8400-482 A	
Ø 3,5	8400-482 A	
Ø 5	8400-2129	
Ø 10	To insert contact : push in with wire	



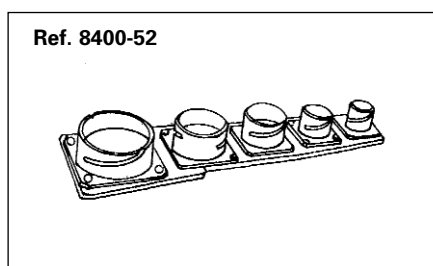
## Extraction tools

Contacts Ø	Male contacts	Female contacts
Ø 1	8500-31	8500-31
Ø 1,5 small barrel	8400-448	8400-446
Ø 1,5 large barrel	8400-448	8400-446
Ø 2,5	8400-448	8400-322
Ø 3,5	8400-448	8400-322
Ø 5	8400-448	8400-980 A
Ø 10	manual extraction	

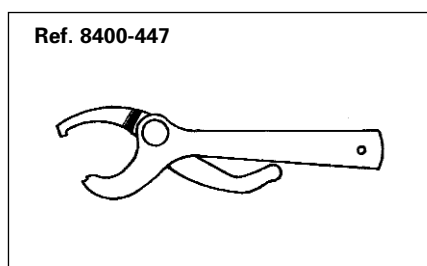


Note : for Ø 1 contact extraction from shell sizes 5 and 6 use tool part number 8310-31

## Tightening support



## Backshell spanner



## Strap clamp

