

# 8D Series High Power Contacts



## High Power Contacts - Up to 850A

Designed to meet the harshest military requirements where high power and shielding are needed.

**3 aluminum shell sizes available** ■ Size 19 (450 A max); size 23 (650 A max); size 25 (850 A max) - at 40°C.  
Finishes: cadmium or zinc nickel.  
Threaded coupling.

**Superior contact technology equipped with a silver plated braid** ■ No micro disconnect under vibration.  
High contact endurance.  
Low contact resistance.

**Modular design for easy installation** ■ Removable backshell: straight, right angle or threaded contact.  
Backshell termination: shrink boot.  
Possible to crimp various cables from 50 to 185 mm<sup>2</sup>.

**Safety** ■ Pin contact is equipped with a plastic cap to prevent electrical shock.  
Recessed engagement point to prevent electric arc during mating/unmating.

## Description

- Threaded coupling connector with single power contact
- Aluminum shell
- 3 shell sizes available:
  - size 19: Up to 450 A at 40°C
  - size 23: Up to 650 A at 40°C
  - size 25: Up to 850 A at 40°C
- Silver plated contact
- Pin contact is equipped with a plastic cap to prevent electrical shock
- Modular design:
  - . Removable backshell: straight, right angle or threaded contact
  - . Backshell termination: shrink boot



## Technical features

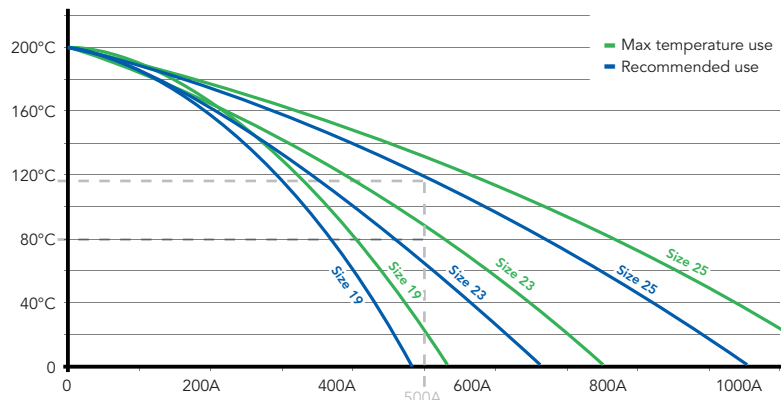
### Mechanical

- **Shell:** Aluminum alloy
- **Shell plating:**
  - Black zinc nickel (Z)
  - Cadmium olive drab (W)
- **Insulator:** Thermoplastic
- **Grommet and interfacial seal:** Silicone elastomer
- **Contact body:** Copper alloy
- **Endurance:** 500 mating/unmating operations
- **Vibration:**
  - According Def Stan 00-35
  - 4.2 g rms vert - 6h/3 axes

### Electrical

- **Test voltage** > 1500 V
- **Shell to shell continuity** (no backshell) < 2.5 mΩ
- **EMI** 85 dB @ 1GHz (F)

### • Connector rating



Example for 500A:  
 Shell size 25 with contact diameter 20: max temperature 135°C; recommended 120°C  
 Shell size 23 with contact diameter 18: max temperature 90°C; recommended 80°C  
 Shell size 19 with contact diameter 14: not recommended  
 Wire must be compatible with current and temperature used for the connector.

### Environmental

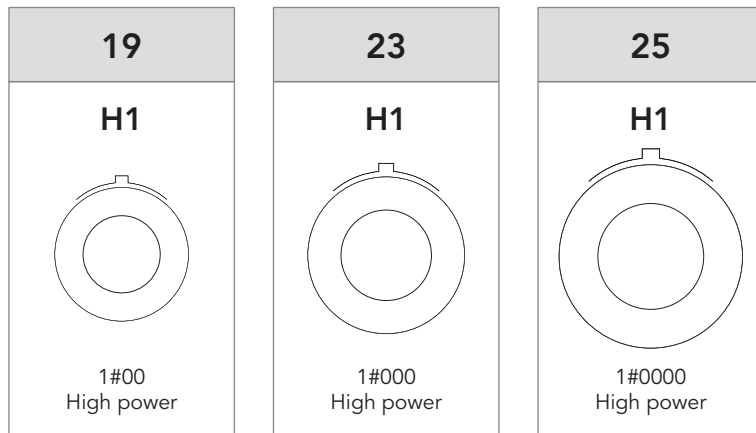
- **Temperature range:** -65°C +175°C
- **Sealing:** IP67 on mated connector (1 meter/30 min)
- **Salt spray:** 500 hours
- **Creepage and clearance:** Min length in mm according to IEC60664-1

Shell size	Creepage	Clearance
19	2.805	2.492
23	2.830	4.492
25	2.715	4.492

### Resistance to fluids

- **According to MIL-DTL-38999 standard**
  - . Gasoline: JP5 (OTAN F44)
  - . Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
  - . Synthetic hydraulic fluid: Skydrol 500 B4
- **LD4 (SAE AS 1241)**
  - . Mineral lubricating: MIL-L-7870A (OTAN 0142)
  - . Synthetic lubricating: MIL-L-23699 (OTAN 0156), MIL-L-7808
  - . Cleaning fluid: MIL-C-87936 diluted
  - . De-icing fluid: MIL-A-8243
  - . Extinguishing fluid: Bromochloromethane
  - . Cooling fluid: Coolanol

## Contact layouts



Other size: Please consult us.

## Ordering information

<b>Basic Series</b>	<b>8D</b>	<b>0</b>	<b>25</b>	<b>W</b>	<b>H1</b>	<b>P</b>	<b>N</b>	<b>R1</b>	<b>A</b>
<b>Style:</b>									
0: Square flange receptacle									
5: Plug (available with backshell D1, R1, G0 & W0 Types)									
7: Jam nut receptacle									
<b>Shell size: 19, 23, 25</b>									
<b>Plating:</b>									
Z: Zinc Nickel									
W: Olive green cadmium									
H1: Single power									
<b>Contact style:</b>									
P: Pin contact									
S: Socket contact									
<b>Orientation: N, A, B, C, D, E</b>									
<b>Backshell type:</b>									
D1: Straight backshell shrink boot & EMI (crimp version)									
R1: Right angle backshell shrink boot & EMI (crimp version)									
G0: Backshell low profile (threaded termination)									
W0: Without backshell (threaded termination)									

### Specification for backshells D1 & R1 Types (crimp version):

Specification	Shell size	Admissible cable (mm)		Barrel diameter (mm $\pm 0.05$ )
		Outer Ø max	Nominal core Ø	
A	19	17	10.15	10.8
B	19	17	11.1	11.8
C	19	17	12	12.5
D	23	22	14.05	15
E	23	22	16.3	17
	25	26.5		
F	25	26.5	19	20.5

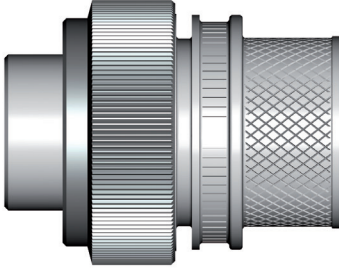
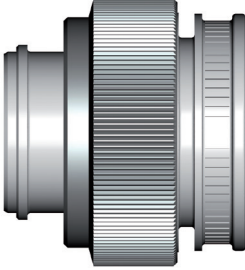
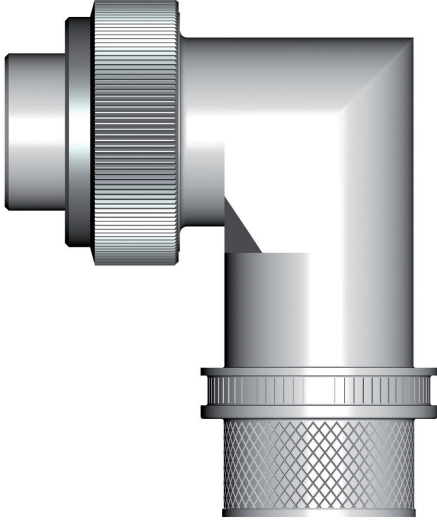
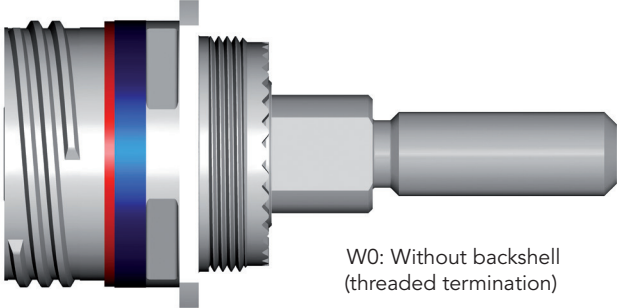
### Specification for backshells G0 & W0 Types (only threaded termination):

Specification	Shell size	Thread
C	19, 23 & 25	M12

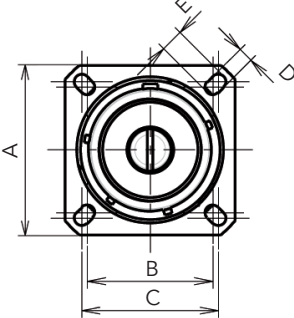
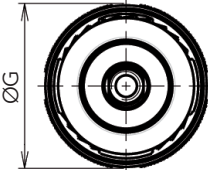
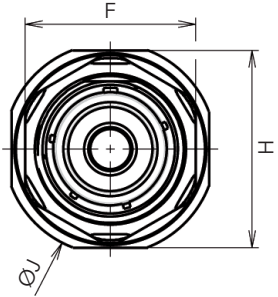
Note: Plug not available with backshell W0 Type. Other thread, please consult us.

Note: For other configuration, please consult us.

## Backshell type

Description		
 <p>D1: Straight backshell shrink boot &amp; EMI (crimp version)</p>	 <p>G0: Backshell low profile (threaded termination)</p>	 <p>R1: Right angle backshell shrink boot &amp; EMI (crimp version)</p>
 <p>W0: Without backshell (threaded termination)</p>		

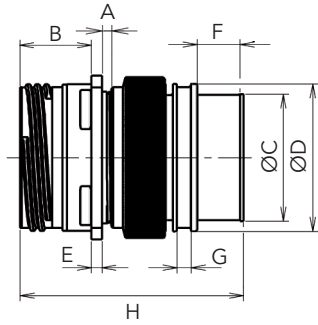
## Dimensions

Plug & receptacles									
8D0 Square flange receptacle			8D5 Plug			8D7 Jam nut receptacle			
									
Shell size	A $\pm 0.1$	B $\pm 0.1$	C $\pm 0.1$	D $\pm 0.1$	E $\pm 0.1$	F Max	ØG Max	H $\pm 0.25$	ØJ $\pm 0.25$
19	36.5	26.97	29.36	3.29	4.98	41	38.5	45.95	49.15
23	42.9	31.75	34.93	3.96	6.2	47	44.9	52.35	55.55
25	46	34.93	38.1			52	48	55.55	58.65

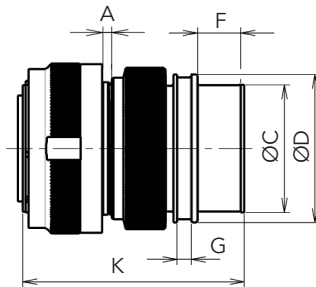
Note: All dimensions are in millimeters (mm)

### Backshell D1 type

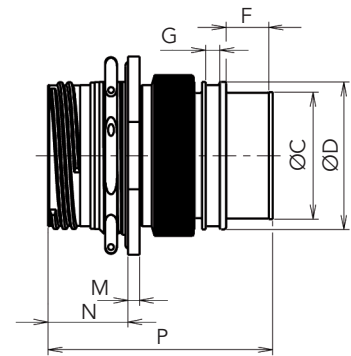
With 8D0  
(square flange receptacle)



With 8D5  
(plug)



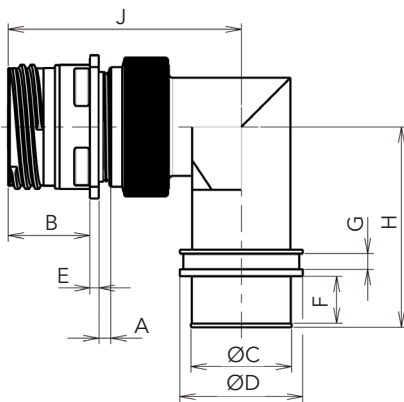
With 8D7  
(jam nut receptacle)



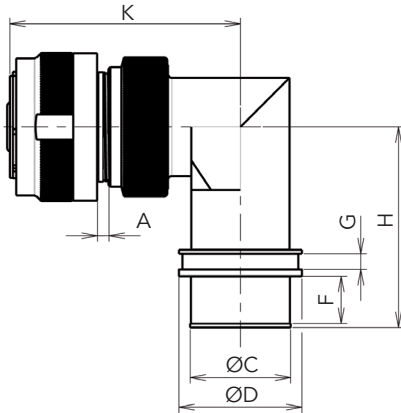
Shell size	A Max	B Max	ØC±0.1	ØD±0.1	E±0.1	F±0.2	G±0.2	H Max	K Max	M±0.25	N Max	P Max
19	2.65	20.9	25.6	31.6	2.26	12	4	62.5	62	3.25	22.8	63
23		20.1	32.4	38.6	2.97							
25		35.6	42.1	2.97								

### Backshell R1 type

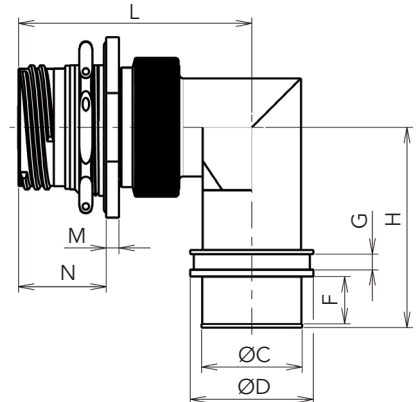
With 8D0  
(square flange receptacle)



With 8D5  
(plug)



With 8D7  
(jam nut receptacle)

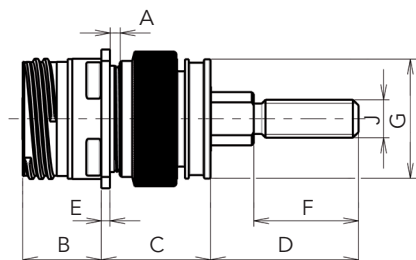


Shell size	A Max	B Max	ØC±0.1	ØD±0.1	E±0.1	F±0.2	G±0.2	H Max	J Max	K Max	L Max	M±0.25	N Max
19	2.85	20.9	25.6	31.3	2.26	12	4	51.1	59.8	59.3	59.8	3.25	22.8
23		20.1	32.4	38.1	2.97			54.4	63.2	62.7	63.2		
25		35.6	41.3	2.97	56.1			64.8	64.3	64.8			

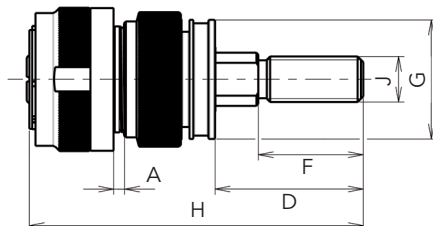
Note: All dimensions are in millimeters (mm)

## Backshell G0 type

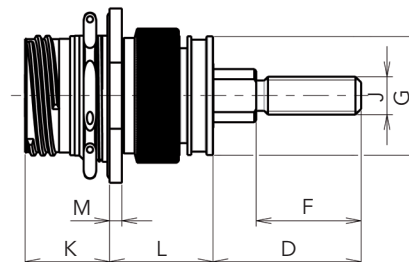
With 8D0  
(square flange receptacle)



With 8D5  
(plug)



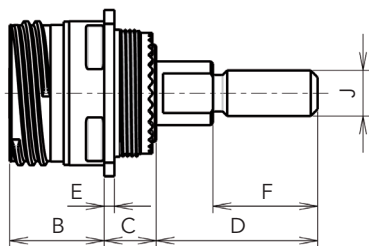
With 8D7  
(jam nut receptacle)



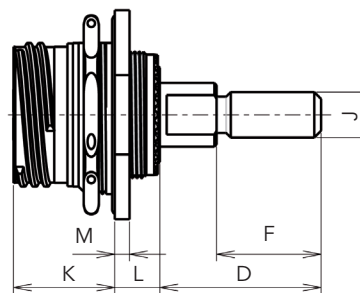
Shell size	A Max	B Max	C Max	D Max	E $\pm 0.1$	F $\pm 0.2$	$\varnothing G \pm 0.1$	H Max	J Max	K Max	L Max	M $\pm 0.25$
19	2.65	20.9	29	39.4	2.26	25	31.3	88.1	M12 x 1.75	22.6	27.6	3.25
23		20.1	29.8		2.97		38.1				28.4	
25					2.97		41.3				28.4	

## Backshell W0 type

With 8D0  
(square flange receptacle)



With 8D7  
(jam nut receptacle)



Shell size	B Max	C Max	D Max	E $\pm 0.1$	F $\pm 0.2$	J Max	K Max	L Max	M $\pm 0.25$
19	20.9	14	40	2.26	25	M12 x 1.75	22.6	12	3.25
23	20.1			2.97					
25				2.97					

Note: All dimensions are in millimeters (mm)

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