

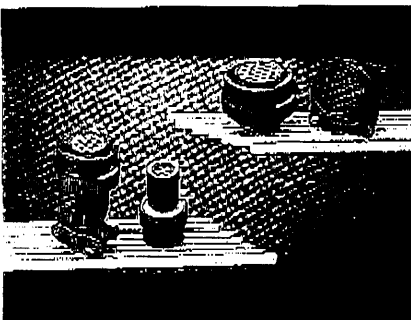
# 851 Series

## Applications

Former connector for military applications. Now used in the fields of professional and general electronics.

## Standards

MIL-C 26482 G Series 1  
NFC 93422-He 301 B  
VG 95328  
BS 9522 F 0017  
GAM T1 list  
QPL approved (solder version)



## Description

- Bayonet coupling
- Environmental and hermetic versions
- Solder, crimp, straight spills and wire wrap versions
- Thermocouple contacts available
- Cadmium free plating (Zinc Cobalt) version

## Characteristics

### Mechanical

- Shell :
  - environmental version : aluminum alloy plating
  - olive green cadmium
  - black anodized
  - white cadmium
  - satin finish bright nickel
  - zinc cobalt (olive green)
- hermetic version : steel
- plating : - Iridescent yellow cadmium, nickel
- Insulator :
  - front section : neoprene elastomer (85 shore)
  - rear section : neoprene elastomer (40 shore)
- Contact :
  - crimp : inserted and removed from rear of insulator retained by metallic clip ; solder and straight spills : non removable ; wire wrap : removable or not removable
  - material : copper alloy
  - plating : gold overall or gold plated active zone and tin/lead plated termination
  - min retention force of contacts in insulator

contact size	crimp	solder straight spill ww
20 (Ø 1 mm)	≥ 68 N	≥ 58 N
16 (Ø 1.6 mm)	≥ 113 N	≥ 113 N

- Mechanical endurance : 500 cycles (full mating-unmating)

### Electrical

- Dielectric withstanding voltage :
  - at standard pressure : mated and unmated connectors
  - 1 500 Vrms between size 20 contacts (service 1)
  - 2 300 Vrms between size 16 contacts (service 2)
  - 1 500 Vrms between mixed size 20 and 16 contacts (service 1)
  - at reduced pressure (10 mbar) : connectors mated and unmated
  - 200 Vrms between size 20 contacts (service 1)
  - 300 Vrms between size 16 contacts (service 2)
- Insulation resistance : ≥ 5 000 MΩ under 500 Vdc
- Current rating per contact :
  - size 20 : 7.5 A
  - size 16 : 13 A

- Contact resistance :
  - environmental version :
    - size 20 : 4 mΩ
    - size 16 : 3 mΩ
  - hermetic version :
    - size 20 : 30 mΩ
    - size 16 : 14 mΩ
- Shielding : 70 dB to 5 MHz  
40 dB to 100 MHz

### Climatic

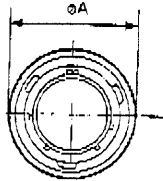
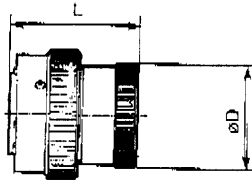
- Working temperature : -55°C to +125°C
- Sealing :
  - crimp contact version, 1 bar differential pressure, leakage ≤ 8 cm<sup>3</sup>/hr
  - solder contact version, 2 bar differential pressure, leakage ≤ 16 cm<sup>3</sup>/hr
- Hermeticity : 1 bar differential pressure leakage ≤ 2,8 mm<sup>3</sup>/hr
- Chemical resistance :
  - to MIL-C 26482 G Series 1 and
  - NFC 93422-HE 301 B code A
- Resistance to salt spray : 48 hours at environmental temperature
- Damp heat : 21 days
- Vibration : to NFC 20-616

## Ordering information - Environmental connectors

basic series	solder version	851 - 00 E	8 - 3A	P	•	50	•••
	crimp version	851 - 00 R	8 - 3A	P	•	50	•••
shell type		✓ 06					
	solder	crimp					
	00	00	- square flange receptacle accepting backshells				
	01	01	- cable connecting receptacle				
	02E	02R	- square flange receptacle not accepting backshells				
	07	07	- jam nut receptacle accepting backshells				
	07A	07A	- jam nut receptacle not accepting backshells				
	06	06	- plug for use with straight backshells				
	08	08	- plug for use with 90° backshells				
	36	36	- screened plug for use with straight backshells				
	76	76	- screened plug with lock finger				
backshell type	see table p. 20						
shell size	8 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24						
contact layout	see table p. 20						
contact type	P = male - S = female						
orientation	normal (not included in part number w, x, y, z, see table p. 21)						
obligatory suffix	50	gold plated crimp contacts - solder contacts size 20 - contacts with a gold plated active zone and tin plated terminations - other gold plated terminations					
	51	solder contacts gold plated size 20					
	52	zinc cobalt olive green plated (contacts : idem specif. 50)					
specification	02	olive green cadmium plate (without specification)					
	03	white cadmium plate					
	29	black anodized (solder contacts)					
	031	black anodized (crimp contacts)					
	44	nickel plate					
	38	nickel plate					
	42	olive green cadmium plate					

solder	HE 301 B 06 E MS 3116 E
06 E	

crimp	HE 301 B 06 R MS 3126 E
06 R	



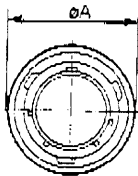
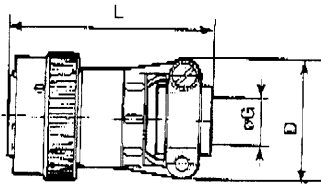
shell size	L Max		A Max	D Max	G Max
	solder	crimp			
08	32.54	32.00	19.05	13.50	13.50
	1.281	1.260			
10	32.54	32.00	21.80	16.70	16.70
	1.281	1.260			
12	32.54	32.00	26.15	19.90	19.90
	1.281	1.260			
14	32.54	32.00	29.35	23.40	23.40
	1.281	1.260			
16	32.54	32.00	32.50	26.60	26.60
	1.281	1.260			
18	32.54	32.00	35.30	29.80	29.80
	1.281	1.260			
20	33.30	32.10	38.85	32.70	32.70
	1.311	1.264			
22	33.30	32.10	42.05	36.00	36.00
	1.311	1.264			
24	33.30	32.10	45.10	39.10	39.10
	1.311	1.264			

### Plug with straight cable clamp

solder	HE 301 B 06 EC MS 3116 F
06 EC	

crimp	HE 301 B 06 RC MS 3126 F VG 95328 K
06 RC	

X

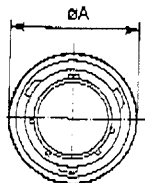
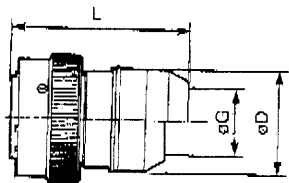


shell size	L Max		A Max	D Max	G
	solder	crimp			
08	48.00	47.30	19.05	19.90	3.50
	1.890	1.862			
10	48.00	47.30	21.80	21.50	5.00
	1.890	1.862			
12	48.00	47.30	26.15	25.00	8.20
	1.890	1.862			
14	48.00	47.30	29.35	27.80	10.00
	1.890	1.862			
16	51.00	50.50	32.50	29.40	13.00
	2.008	1.988			
18	51.00	50.50	35.30	35.30	16.00
	2.008	1.988			
20	52.00	50.20	38.85	35.30	16.00
	2.047	1.976			
22	52.00	50.20	42.05	41.10	19.30
	2.047	1.976			
24	52.00	50.20	45.10	42.40	20.60
	2.047	1.976			

### Plug with straight backshell for potting

solder	HE 301 B 06 P MS 3116 P
06 P	

crimp	HE 301 B 06 RP MS 3126 P
06 RP	



shell size	L Max		A Max	D Max	G Max
	solder	crimp			
08	36.20	42.10	19.05	15.34	10.46
	1.425	1.657			
10	36.20	42.10	21.80	17.70	13.55
	1.425	1.657			
12	36.20	42.10	26.15	21.69	13.96
	1.425	1.657			
14	36.20	42.10	29.35	23.90	17.42
	1.425	1.657			
16	36.20	42.10	32.50	27.00	20.56
	1.425	1.657			
18	37.70	45.40	35.30	30.50	23.86
	1.494	1.787			
20	42.40	50.00	38.85	33.65	23.92
	1.668	1.968			
22	42.40	50.00	42.05	37.10	25.52
	1.668	1.968			
24	42.85	50.00	45.10	40.00	32.00
	1.687	1.968			

# Contact layouts

Viewed from front face of male insulator

shells <b>8</b>	<b>2</b>  2 Ø 1 (# 20)	<b>3</b>  3 Ø 1 (# 20)	<b>3A OU 98</b>  3 Ø 1 (# 20)	<b>4</b>  4 Ø 1 (# 20)	<b>33</b>  3 Ø 1 (# 20)	
<b>10</b>	<b>6</b>  6 Ø 1 (# 20)	<b>7</b>  7 Ø 1 (# 20)	<b>98</b>  6 Ø 1 (# 20)			
<b>12</b>	<b>3</b>  3 Ø 1,6 (# 16)	<b>8</b>  8 Ø 1 (# 20)	<b>10</b>  10 Ø 1 (# 20)	<b>2</b>  2 Ø 1,6 (# 16)	<b>14</b>  14 Ø 1 (# 20)	
<b>14</b>	<b>5</b>  5 Ø 1,6 (# 16)	<b>12</b>  8 Ø 1 (# 20) 4 Ø 1,6 (# 16)	<b>15</b>  14 Ø 1 (# 20) 1 Ø 1,6 (# 16)	<b>18</b>  18 Ø 1 (# 20)	<b>19</b>  19 Ø 1 (# 20)	
<b>16</b>	<b>8</b>  8 Ø 1,8 (# 16)	<b>23</b>  22 Ø 1 (# 20) 1 Ø 1,6 (# 16)	<b>26</b>  26 Ø 1 (# 20)			
<b>18</b>	<b>11</b>  11 Ø 1,8 (# 16)	<b>32</b>  32 Ø 1 (# 20)	<b>30</b>  29 Ø 1 (# 20) 1 Ø 1,8 (# 16)			
<b>20</b>	<b>16</b>  16 Ø 1,8 (# 16)	<b>39</b>  37 Ø 1 (# 20) 2 Ø 1,6 (# 16)	<b>41</b>  41 Ø 1 (# 20)	<b>24</b>  24 Ø 1 (# 20)	<b>25</b>  25 Ø 1 (# 20)	<b>27</b>  27 Ø 1 (# 20)
<b>22</b>	<b>21</b>  21 Ø 1,6 (# 16)	<b>36</b>  36 Ø 1 (# 20)	<b>55</b>  55 Ø 1 (# 20)	<b>32</b>  32 Ø 1 (# 20)	<b>34</b>  34 Ø 1 (# 20)	
<b>24</b>	<b>61</b>  61 Ø 1 (# 20)	<ul style="list-style-type: none"> <li>■ solder contact layouts (QPL)</li> <li>□ solder contact layouts</li> <li>+ solder contact layouts without grommet</li> <li>▲ crimp contact layouts</li> <li>■ SHTP</li> <li>● hermetic version contact layouts</li> <li>◆ straight spills contact layouts</li> <li>○ wire wrap contact layouts</li> </ul>				

