

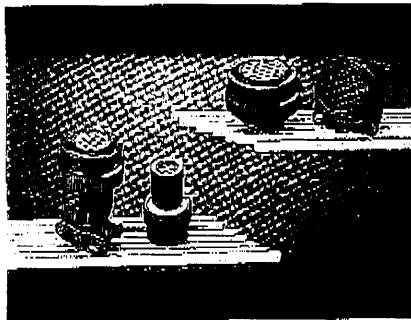
851 Series

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 9532B
BS 9522 F 0017
GAM T1 list
QPL approved (solder version)



Description

- Bayonet coupling
- Environmental and hermetic versions
- Solder, crimp, straight splices 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
 - galin finish bright nickel
 - zinc cobalt (olive green)
 - hermetic version : steel
 - plating : - lridescent 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 w/w
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 : $\geq 5\,000\text{ M}\Omega$ 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

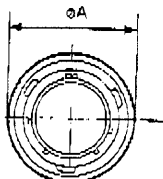
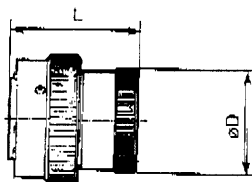
Climatic

- Working temperature : -55°C to +125°C
- Sealing :
 - crimp contact version, 1 bar differential pressure, leakage $\leq 8 \text{ cm}^3/\text{hr}$
 - solder contact version, 2 bar differential pressure, leakage $\leq 16 \text{ cm}^3/\text{hr}$
- Hermeticity : 1 bar differential pressure leakage $\leq 2.8 \text{ mm}^3/\text{hr}$
- Chemical resistance :
 - to MIL-C 28482 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		- 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 next page					
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)					
29	white cadmium plate					
35	black anodized (solder contacts)					
031	black anodized (crimp contacts)					
44	nickel plate					
38	nickel plate					
42	olive green cadmium plate					
	backshell type T and BR					

solder	HE 301 B 06 E MS 3116 E
crimp	HE 301 B 06 R MS 3126 E

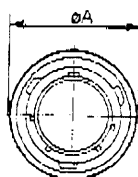
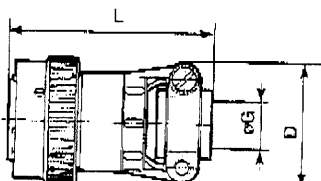


shell size	L Max		A Max	D Max	G Max
	solder	crimp			
08	32.54 1.281	32.00 1.260	19.05 .750	13.50 .531	
10	32.54 1.281	32.00 1.260	21.80 .858	16.70 .657	
12	32.54 1.281	32.00 1.260	26.15 1.030	19.90 .783	
14	32.54 1.281	32.00 1.260	29.35 1.156	23.40 .921	
16	32.54 1.281	32.00 1.260	32.50 1.280	26.60 1.047	
18	32.54 1.281	32.00 1.260	35.30 1.390	29.80 1.165	
20	33.30 1.311	32.10 1.264	38.85 1.530	32.70 1.287	
22	33.30 1.311	32.10 1.264	42.05 1.656	36.00 1.417	
24	33.30 1.311	32.10 1.264	45.10 1.776	39.10 1.539	

Plug with straight cable clamp

solder	HE 301 B 06 EC MS 3116 F
crimp	HE 301 B 06 RC MS 3126 F VG 95328 K

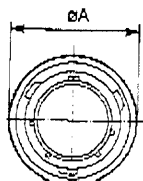
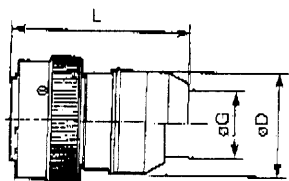
X



shell size	L Max		A Max	D Max	G
	solder	crimp			
08	48.00 1.890	47.30 1.862	19.05 .750	19.90 .783	3.50 .138
10	48.00 1.890	47.30 1.862	21.80 .858	21.50 .846	5.00 .197
12	48.00 1.890	47.30 1.862	26.15 1.030	25.00 .984	8.20 .323
14	48.00 1.890	47.30 1.862	29.35 1.158	27.80 1.094	10.00 .394
16	51.00 2.008	50.50 1.988	32.50 1.280	29.40 1.157	13.00 .512
18	51.00 2.008	50.50 1.988	35.30 1.390	35.30 1.390	16.00 .630
20	52.00 2.047	50.20 1.976	38.85 1.530	35.30 1.390	16.00 .630
22	52.00 2.047	50.20 1.976	42.05 1.656	41.10 1.616	19.30 .760
24	52.00 2.047	50.20 1.976	45.10 1.776	42.40 1.669	20.60 .811

Plug with straight backshell for potting

solder	HE 301 B 06 P MS 3116 P
crimp	HE 301 B 06 RP MS 3126 P



shell size	L Max		A Max	D Max	G Max
	solder	crimp			
08	36.20 1.425	42.10 1.657	19.05 .750	15.34 .604	10.46 .412
10	36.20 1.425	42.10 1.657	21.80 .858	17.70 .697	13.55 .533
12	36.20 1.425	42.10 1.657	26.15 1.030	21.69 .854	13.96 .550
14	36.20 1.425	42.10 1.657	29.35 1.158	23.90 .941	17.42 .686
16	36.20 1.425	42.10 1.657	32.50 1.280	27.00 1.063	20.56 .809
18	37.70 1.484	45.40 1.787	35.30 1.390	30.50 1.201	23.66 .931
20	42.40 1.669	50.00 1.969	38.85 1.530	33.65 1.325	23.92 .942
22	42.40 1.669	50.00 1.969	42.05 1.656	37.10 1.461	25.52 1.005
24	42.85 1.687	50.00 1.969	45.10 1.776	40.00 1.575	32.00 1.260

Contact layouts

Viewed from front face of male insulator

8	2 2 Ø 1 (# 20)	3 3 Ø 1 (# 20)	3A 98 3 Ø 1 (# 20)	4 4 Ø 1 (# 20)	33 3 Ø 1 (# 20)
10	6 6 Ø 1 (# 20)	7 7 Ø 1 (# 20)	98 6 Ø 1 (# 20)		
12	3 3 Ø 1,6 (# 16)	8 8 Ø 1 (# 20)	10 10 Ø 1 (# 20)	2 2 Ø 1,6 (# 16)	14 14 Ø 1 (# 20)
14	5 5 Ø 1,6 (# 16)	12 8 Ø 1 (# 20) 4 Ø 1,6 (# 16)	15 14 Ø 1 (# 20) 1 Ø 1,6 (# 16)	18 18 Ø 1 (# 20)	19 19 Ø 1 (# 20)
16	8 8 Ø 1,6 (# 16)	23 22 Ø 1 (# 20) 1 Ø 1,6 (# 16)	26 26 Ø 1 (# 20)		
18	11 11 Ø 1,6 (# 16)	32 32 Ø 1 (# 20)	30 29 Ø 1 (# 20) 1 Ø 1,6 (# 16)		
20	16 16 Ø 1,6 (# 16)	39 37 Ø 1 (# 20) 2 Ø 1,6 (# 16)	41 41 Ø 1 (# 20)	24 24 Ø 1 (# 20)	25 25 Ø 1 (# 20)
22	21 21 Ø 1,6 (# 16)	36 36 Ø 1 (# 20)	55 55 Ø 1 (# 20)	32 32 Ø 1 (# 20)	34 34 Ø 1 (# 20)
24	61 61 Ø 1 (# 20)				

■ solder contact layouts (QPL)

□ solder contact layouts

+ solder contact layouts without grommet

▲ crimp contact layouts

■ SHTP

● hermetic version contact layouts

◆ straight spills contact layouts

○ wire wrap contact layouts

Backshell type

order	code	description	straight version				90° version				removable version			
			01	02	03	04	05	06	07	08	09	10	11	12
E	R	backnut	•	•	•	•	-	-	-	•	•	•	-	-
EC	RC	straight cable clamp	•	•	•	•	-	-	-	•	•	•	-	-
EC	RC	90° cable clamp	-	-	-	-	•	-	-	-	-	-	•	-
AC		straight cable clamp without grommet	•	•	•	•	-	-	-	-	-	-	-	-
P	RP	straight backshell for potting	•	•	•	•	-	-	-	•	•	•	-	-
P	RP	90° backshell for potting	-	-	-	-	•	-	-	-	-	-	•	-
A	RA	straight adapter	•	•	-	•	-	•	-	•	•	-	•	-
T	RT	straight backshell for heatshrink sleeving	•	•	•	•	-	-	-	•	•	•	-	-
M	RM	straight removable backshell for heatshrink sleeving	•	•	-	•	-	-	-	•	•	-	•	-
*T	*RT	straight removable backshell for screen termination and heatshrink sleeving	•	•	•	-	-	•	-	•	•	-	•	-
G	RG	straight removable backshell for screen termination and heatshrink sleeving	•	•	•	-	-	•	-	•	•	-	-	•
J		straight backshell with sealing gland	•	•	-	•	-	-	-	-	-	-	-	-
JC		straight backshell with sealing gland and cable clamp	•	•	-	•	-	-	-	-	-	-	-	-
U	RU	short backshell for screen termination and heatshrink sleeving	-	-	-	-	-	•	-	-	-	-	-	•
Z	RZ	straight adapter for electrical pitch access	-	-	-	•	-	-	-	-	-	•	-	-