

HBB Series

HBB 5 Pole - User Manual



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1. Tooling

Crimp / Contact tooling

	Crimp tool	Crimp die assembly	Crimp positioner	Contact installing tool	Contact removal tool
Size 8 contacts	M22520/23-01	M22520/23-02	M22520/23-09	M81969/17-06	M81969/15-01
Size 20 contacts	M22520/1-01	N/A	M22520/1-02	M81969/1-03	M81969/1-03

Band-It® tooling

	Smiths Interconnect pt. no.
Hand tool for Band-It® screen braid clamps	HBO-0006 (Glenair 600-058)

Hot air gun

For fitting heat shrink boot – any suitable product can be used

Strap wrench and Torque wrench

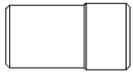
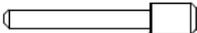
For torquing backshell fixing nut – any suitable product can be used. Glenair strap wrench TG70 for example.

2. Contacts, accessories & spare parts

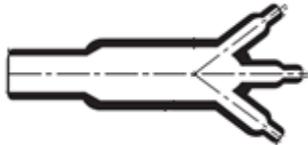
Contacts

Contact	Smiths Interconnect pt. no.	
Size 8 crimp power socket	850-1001156-000-14	
Size 8 crimp power pin	202-1001132-000-7	
Size 20 HVIL crimp socket	HCM-281-14-602	
Size 20 HVIL crimp pin	HCM-284-14-598	

Filler Plugs

	Smiths Interconnect pt. no.	
	Cavity filler plug	Grommet sealing plug
Size 8 cavities	HA-186-08-R 	HA-185-05 
Size 20 cavities	HA-186-20 	HA-185-20 

Heat shrink boots

Single outlet boot – lipped and epoxy lined	<p>VG 95343 T18 C001A</p> <p>10mm min overall cable diameter</p> <p>Available from Smiths Interconnect Pt. no. HBO-0008-C001A</p>	
Multi-outlet boots	<p>HellermannTyton 200, 300, 400 or 500 Series (or similar) are potential solutions – application dependant</p> <p>Not available from Smiths Interconnect</p>	

Cable shield termination

	Smiths Interconnect pt. no.
Band-It® clamping band	HBO-0005 (Glenair 600-052)
Constant force spring	HBB-971 (Zetalok HE-400-4)

O-ring spares

	Smiths Interconnect pt. no.
Receptacle interface O-ring	HR-02352-0178-F-70
Panel seal O-ring	
non-conductive	HR-03782-0178-F-70
conductive	HR-03782-0178-D-70

3. Crimping and fitting of contacts

Contact part numbers shown in Section 2.

Wire strip lengths:

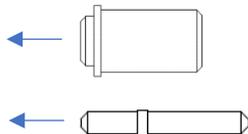
For size 8 contacts – 12.5mm

For size 20 contacts – 4.3mm

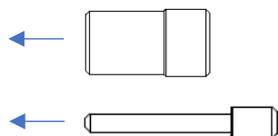
- Crimping operation to be carried out using the tooling shown in Section 1.
- Contacts are inserted from the rear and retained in the conventional manor using clips fitted within the insulator. Use the installation tooling shown in Section 1. If a grommet is fitted take care to not damage cavity sealing.
- If necessary, contacts can be removed from the rear using the extraction tooling shown in Section 1.

4. Fitting filler plugs

- Cavity filler plugs and grommet sealing plugs can be fitted if required, part numbers shown in Section 2.
- Cavity filler plugs are inserted from the rear and retained in the same manner as the contacts using clips. Orientate and fit as shown below.

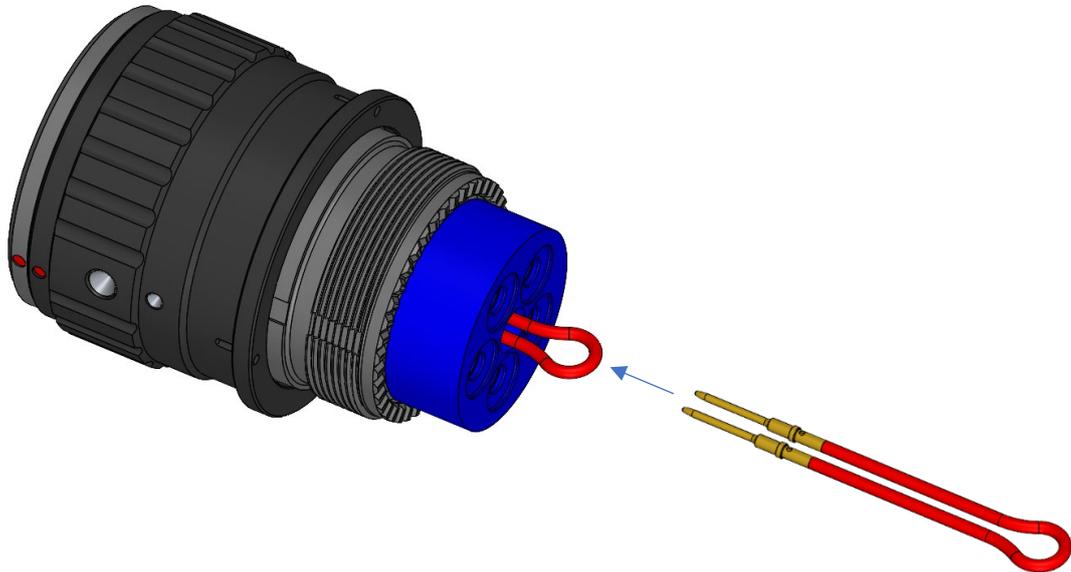


- Grommet sealing plugs are fitted from the rear and retained by friction. Orientate and fit as shown below. Insert such that the sealing plug shoulder touches rear face of grommet cavity.

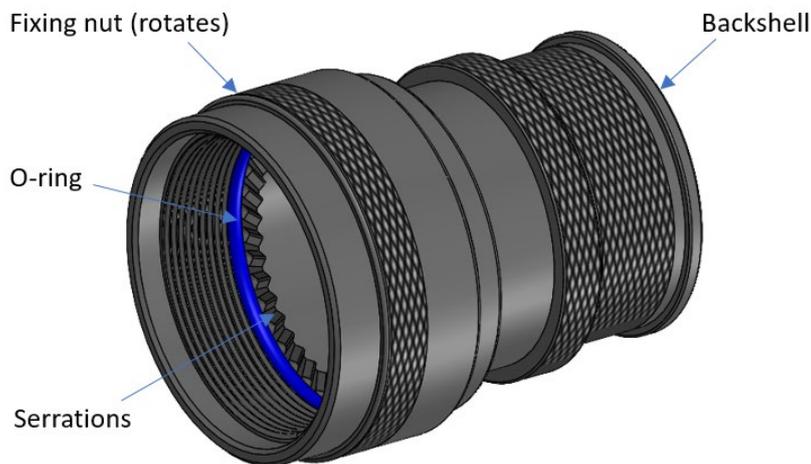


5. Wiring HVIL contacts

If the size 20 contacts are used as high voltage interlocks (HVIL, last make first break) the two contacts can be looped together using 20 AWG wire as shown below.



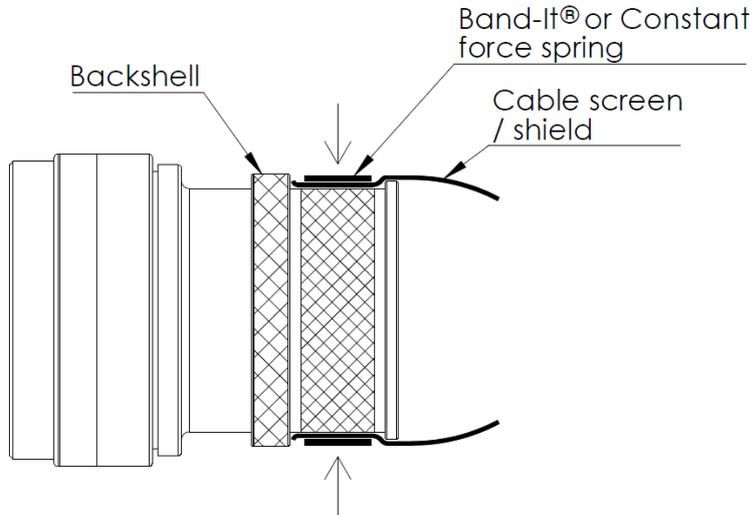
6. Backshell fitting



- Ensure that serrations on plug shell and backshell line up and are engaged before torquing the fixing nut.
- Torque backshell fixing nut to 13 Nm \pm 0.6 Nm using a strap wrench (e.g. Glenair TG70) and torque wrench or similar.
- Do not use Loctite®.

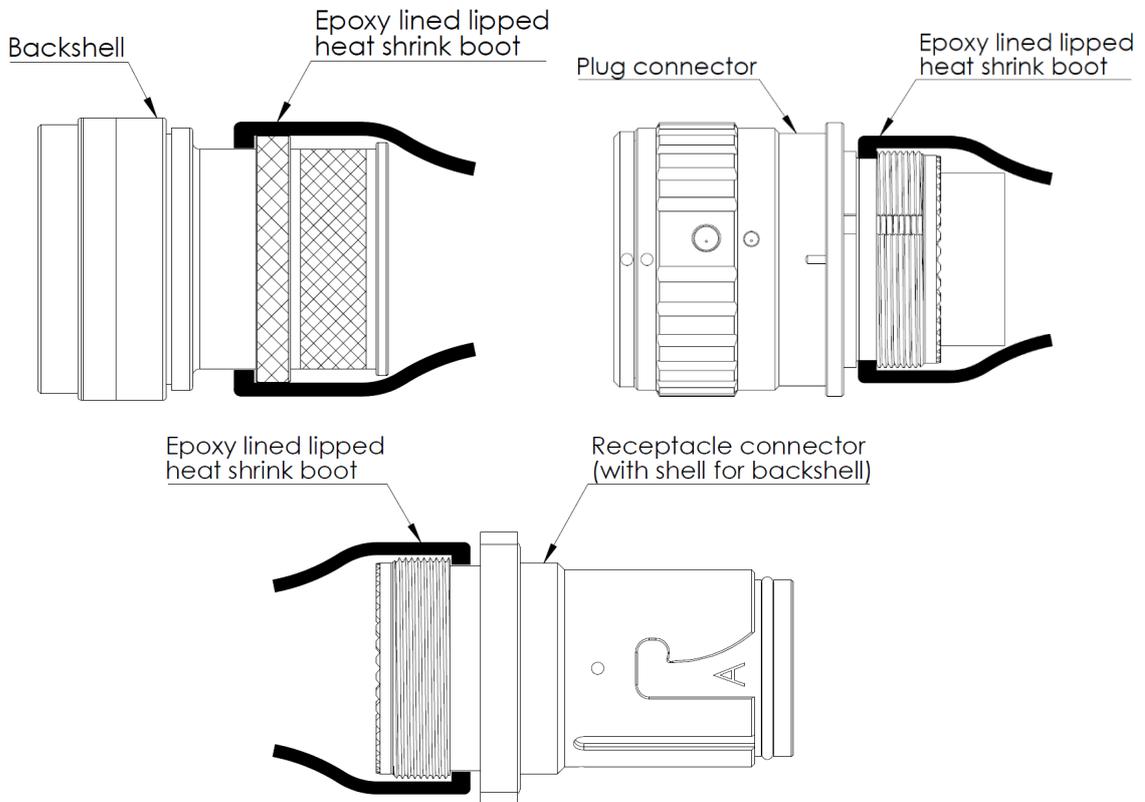
7. Cable screen / shield termination

Terminate cable screen / shield / braid to backshell as shown below, Band-It® and constant force spring part numbers shown in Section 2.



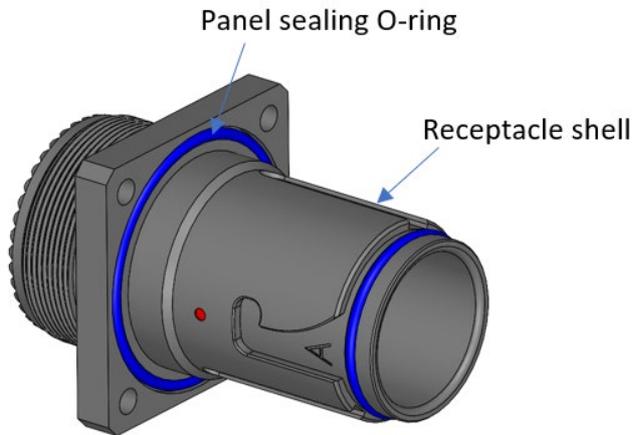
8. Fitting heat shrink boot

Epoxy lined lipped heat shrink boot (P/N HBO-0008-C001A) can be fitted to backshell, plug connector and receptacle connector (with shell for backshell) as shown below. Other boots can be used but their suitability needs to be verified by the user.



Shrink boot using hot air gun following boot manufacturer's instructions.

9. Mounting receptacles on panel

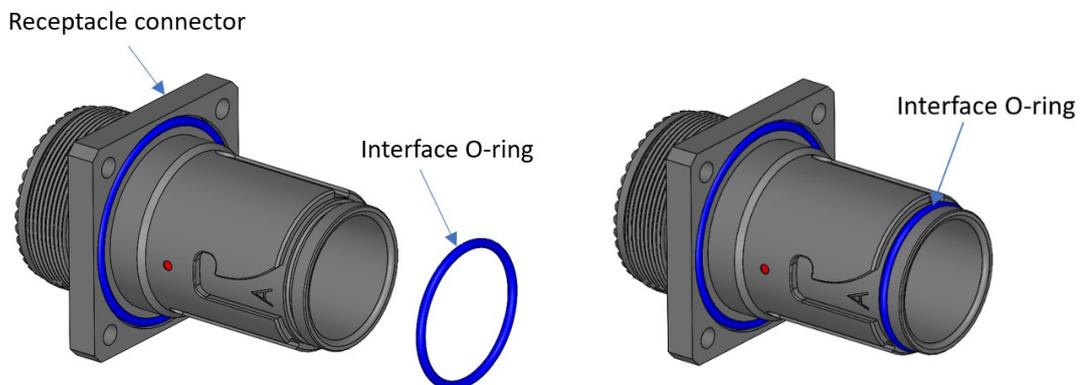


Rear mount receptacle shown

- See catalogue / brochure for panel cut-out dimensions.
- Fit panel sealing O-ring in shell flange groove.
- Torque M4 fixing screws to 0.9 Nm \pm 10%.

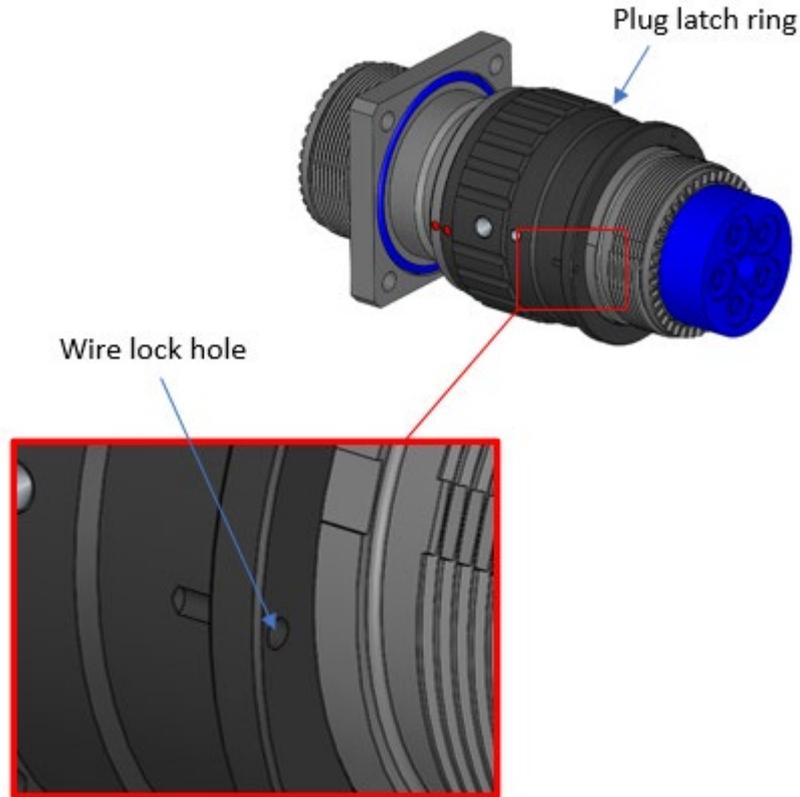
10. Replacing receptacle interface O-ring

- Carefully remove old O-ring to avoid damage to shell plating finish.
- Fit new O-ring into shell groove, ensure that O-ring is not twisted.
- It may be necessary to apply a very small amount of Parker Super O-Lube (or similar) to help reduce connector mating force and reduce the risk of O-ring damage.



11. Wire locking of latch ring

HBB connectors do not need to be wire locked but some users may require this additional safety / tamper-proof feature. HBB 5-Pole can be wire locked using the three holes in the plug latch ring – see below.



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Revision	Date	Initiated by	ECO	Description
A	14/06/2022	Ian Parry	N/A	Initial Release