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CONNECTORS, AMPHENOL 57 SERIES

GENERAL AND TECHNICAL INFORMATION

BY COMMAND OF THE DEFENCE COUNCIL

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AMENDMENT RECORD SHEET

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CONNECTORS, AMPHENOL 57 SERIES

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ILLUSTRATIONS

LEADING PARTICULARS

Rating, voltage	*700V d.c. at sea level*
	200V d.c. at 70,000 ft.
current	*5 amp.*
Contacts	*Gold plate over silver plate*
Dielectric	*Diallyl phthalate*
Shells	*Cadmium plated*
Temperature range	*−55 deg. C. to +85 deg. C.*
Millivolt drop at max. rated current	*25mV*
Insulation resistance	*5 megohms*

Introduction

1. This range of connectors is designed for making rack to panel and chassis to cable electrical connections. Contacts are self-wiping and cleaning. The number of contacts contained in a shell ranges from 14 to 50. They are often referred to as 'Blue Ribbon' connectors, from the blue dielectric and contacts which are formed from a strip or ribbon of material.

DESCRIPTION

2. In addition to the basic rack and panel style, illustrated in fig. 1, cable to chassis mounting types, as illustrated in fig. 2 are also available. Cable to chassis types have a spring clip latch attached to the receptacle which locates in a flange fitted to the plug. Chassis mounted receptacles can be adapted for cable mounting by the addition of a back shell and cable clamp assembly to the standard panel receptacle.

3. Right angled cable outlets are also available for 14, 24 and 50 contact sizes.

Shell keying

4. Cable to panel and cable to cable connectors are available with keyed shells to prevent mismating. Four alternative key/keyway arrangements are available, A, B, C or D. Receptacle shells have floating bushes allowing approximately 0·020 in. movement, this makes mating easier.

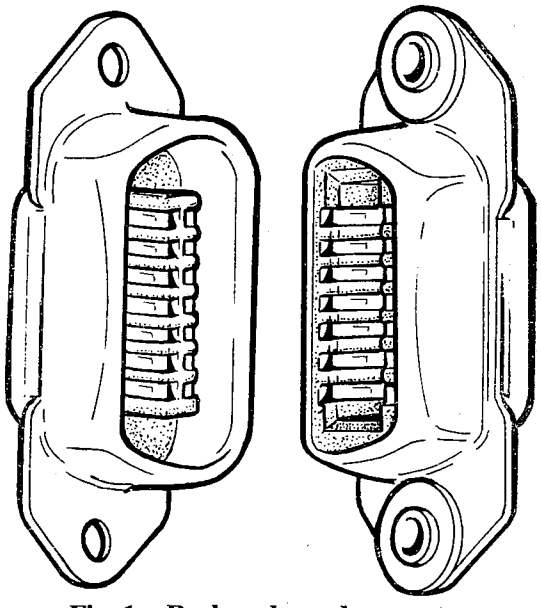

Fig. 1. Rack and panel connector

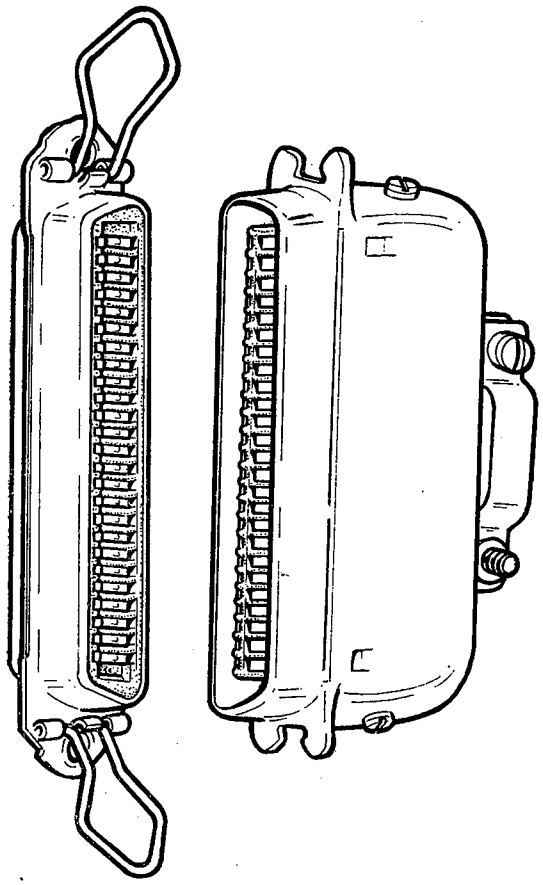

Fig. 2. Cable to chassis connector

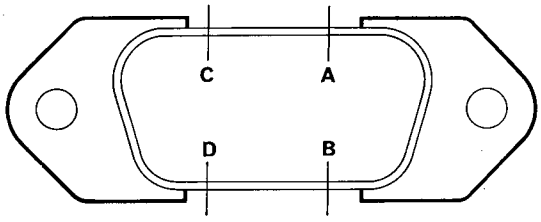

Fig. 3. Key arrangement

5. Contacts are gold plated over silver plate and the electrical connection is made by soldering. It is recommended that a small heat capacity iron is used to prevent damage to contact surface, say 30 watt.

Significance of part number

6. A typical part number for a 57 Series connector is 57-20140, the significance of this part number is as follows:—

57 — series of plug and socket

20 — shell style—alternatives are
- 10 Rack and panel plug
- 20 Rack and panel receptacle
- 30 Cable to chassis plug
- 40 Cable to chassis receptacle
- 50 Cable to cable plug
- 60 Cable to cable receptacle

14 — number of contacts—alternatives are
- 14
- 24
- 36
- 50

0 — keying alternatives
- 0 — no key
- 1 — key position A
- 2 — key position B
- 3 — key position C
- 4 — key position D

SERVICING

7. Servicing is restricted to a physical examination for damage to contacts, dielectric material and hardware. Should cleaning be necessary, due to contamination with oil, grease, etc., any approved cleaning agent may be used, e.g. Inhibisol.

Contact resistance test

8. Contact resistance can be checked by measuring the mV drop across mated contacts with the full rated current flowing. Readings obtained should not be more than 25mV.

Insulation resistance test

9. Using a 500V insulation resistance tester measure the insulation resistance between adjacent contacts. The readings obtained should not be less than 5 megohms.

TABLE 1

Plugs

Part No.	NATO. No.
57-10140	5935-99-914-9589
57-10240	914-9588
57-10360	580-5228
57-10500	971-8799
57-30140	580-1796
57-30240	580-1797
57-30360	580-1798
57-30500	580-1799
57GB-10240-1	952-2713
57GB-10360-1	952-2712
57GB-10500-1	952-2710

TABLE 2

Sockets (receptacles)

Part No.	NATO. No.
57-20140	5935-99-914-9590
57-20240	914-9591
57-20360	
57-20500	971-8800
57-40140	580-2925
57-40240	580-2926
57-40360	580-1794
57-40500	580-1795
57GB-20140-1	580-5043
57GB-20240-1	952-2719
57GB-20360-1	580-1792
57GB-40140-1	952-2711
57GB-40360-1	952-2714