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CONNECTORS, AMPHENOL 26 SERIES

GENERAL AND TECHNICAL INFORMATION

BY COMMAND OF THE DEFENCE COUNCIL

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AMENDMENT RECORD SHEET

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CONNECTORS, AMPHENOL 26 SERIES

CONTENTS

TABLES

ILLUSTRATIONS

LEADING PARTICULARS

	Barrier polarization	*Pin polarization and circular styles*
Voltage rating	*Sea level* 70,000 *ft.*	*Sea level* 60,000 *ft.*
	800*V d.c.* 300*V d.c.*	750*V d.c.* 300*V d.c.*
Current rating, all types		5 *amp.*
Insulation resistance, at 500*V*		5 *megohms*
Millivolt drop at max. rated current		25*mV*
Polarization		*Moulding barriers and in some types, pins*
Dielectric		*Diallyl phthalate*
Contacts		*Gold plating over silver plating*
Mounting plates		*Passivated stainless steel*
No. of contacts rectangular		8 *to* 32
circular		50
Temperature range		−55 *deg.. C. to* +85 *deg. C.*
Altitude limits		70,000 *ft.*

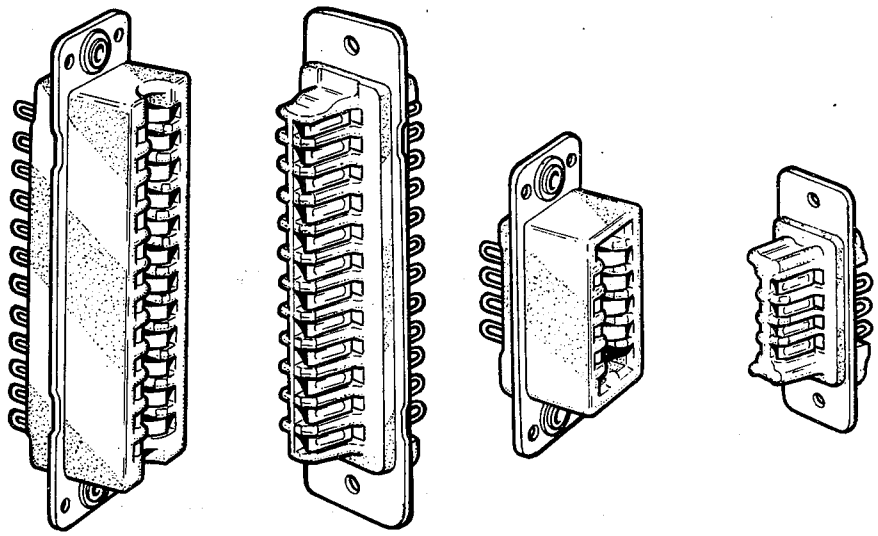


Fig. 1. Barrier polarization type without shells

Introduction

1. 26 Series rack and panel connectors provide multi-way connections for rack and panel assemblies, and in addition, may also be used for cable to panel and cable to cable connections. Mismating is eliminated by three alternative constructions described later, i.e. barrier, pin and keyed shells. The metal shells may also be fitted with a latch for applications where severe vibration conditions are likely to exist.

DESCRIPTION

Barrier polarization type without shells

2. A typical mating pair is illustrated at fig. 1. Connection to the contacts is made by soldering. Inter-contact moulded barriers are of differing heights to prevent incorrect mating. Male contacts are manufactured from a 'ribbon' of half hard copper, and female contacts from phosphor bronze. This construction cannot be distorted on mating and provides a self-wiping action. The mounting washers on receptacles allow a float in any direction of approximately 0·028 in. to allow for ease of mating in rack and panel assemblies. Contact arrangements are listed in Table 1.

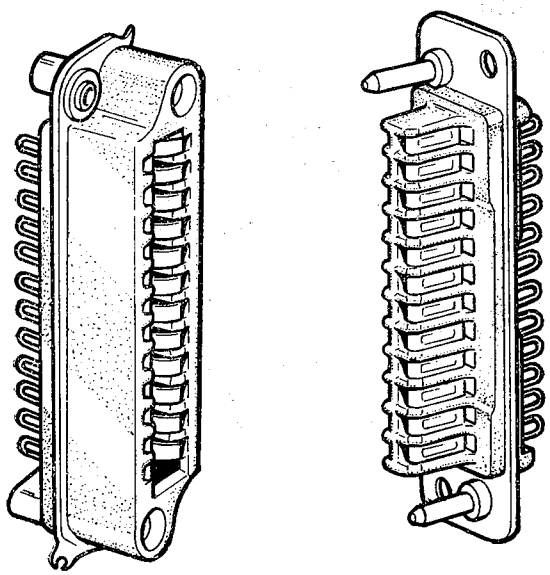


Fig. 2. Pin polarization type without shells

Pin polarization without shells

3. These are similar to those described in para. 2, additionally polarization pins are provided to prevent mismating. A typical mating pair are illustrated at fig. 2. Locating and guide pins are mounted, one at each end of a plug assembly. They are of different diameters and engage with corresponding sockets in the receptacle. Contact arrangements are listed in Table 2.

Barrier polarization type with keyed shells

4. A typical mating pair are illustrated at fig. 3. Contacts and moulding are similar to those described in para. 2. Additionally keyed shells are provided to prevent mismating and misconnection, where several plugs and sockets of similar size are used on one equipment. Key arrangements are illustrated at fig. 4 and are listed at Table 3.

Barrier polarization with latch-type keyed shells

5. Latch-type keyed shells are provided for use in situations where considerable vibration is to be expected. The key arrangements are as illustrated at fig. 4. A typical mating pair is illustrated at fig. 5. The latch is a simple locking arrangement mounted on the 'free' end and engages with a pin on either side of the 'fixed' end, when mounted the latch is secured by a screw. Either side or top cable entry is available and a cable clamp is provided to relieve strain on the electrical connections. Table 4 lists key arrangements.

Circular plugs and sockets

6. These provide connections for 50 contacts. The dielectric and contacts are similar to those

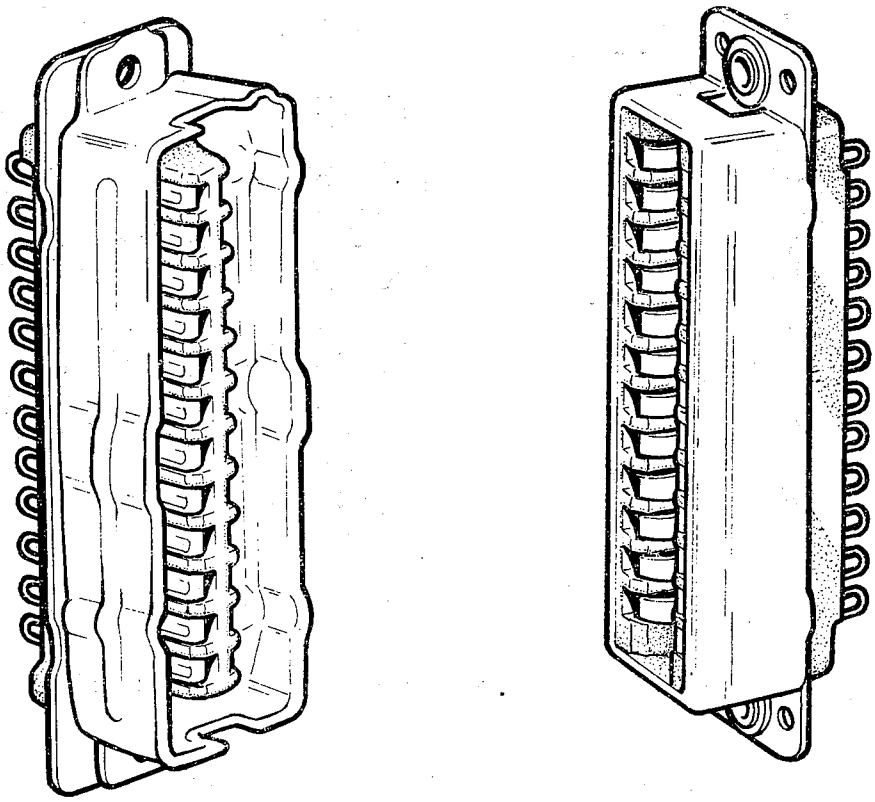
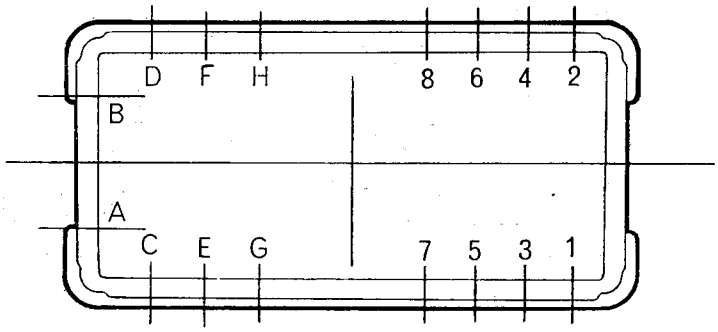
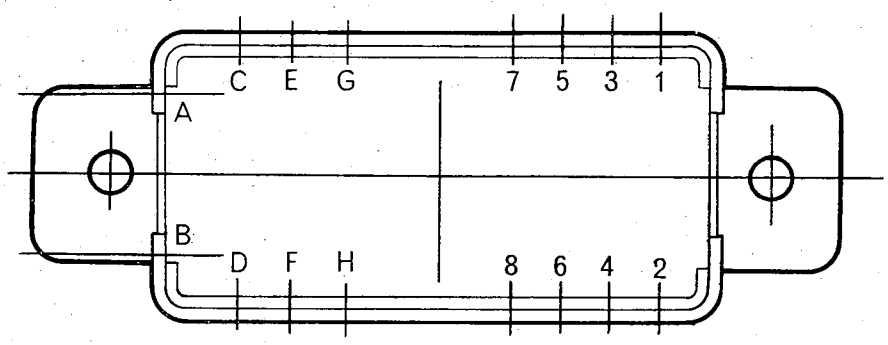


Fig. 3. Barrier polarization type with keyed shells



Plug Front Shell



Receptacle Front Shell

Fig. 4. Key arrangements

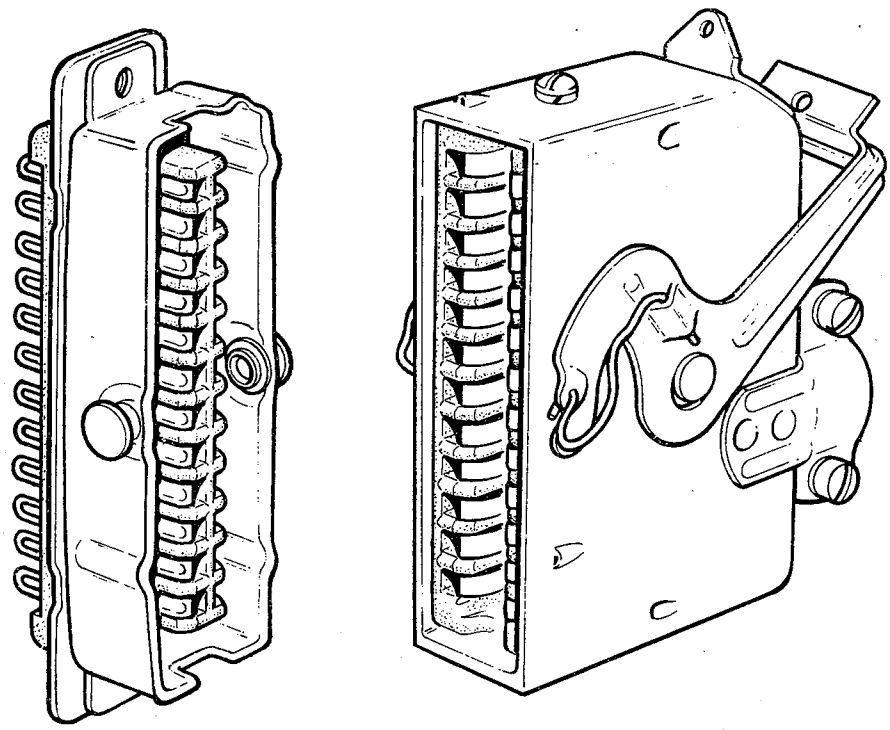


Fig. 5. Barrier polarization type with latch-type keyed shells

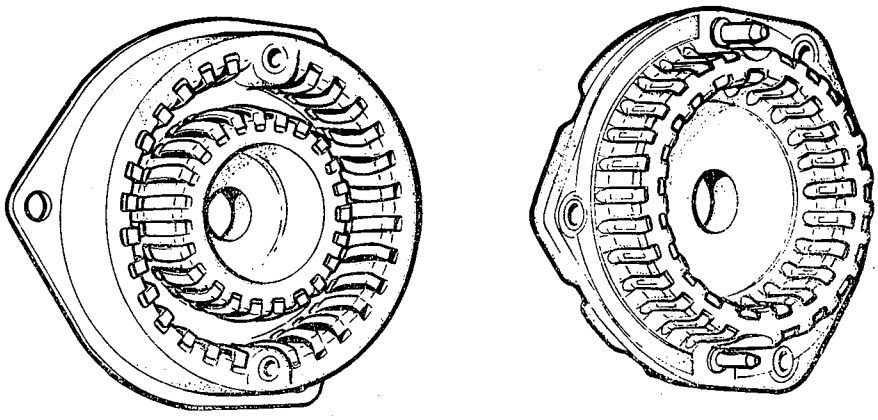


Fig. 6. Circular plugs and sockets

for all other types of plugs and sockets described in this chapter. A typical mating pair is illustrated at fig. 6. Polarization is provided by two pins of dissimilar diameter, also by a centre pin and bush.

SERVICING

7. Dielectric and contacts are resistant to oils, grease and fuel. Should the plugs and sockets become contaminated with foreign matter they may be cleaned using any approved cleaning agent, e.g. Inhibisol. During soldering process it is recommended that a low powered iron be used, excess heating of the contacts is to be avoided to minimize damage to the plated contacts. Shells and mounting plates should require no servicing as they are manufactured from stainless steel, the shells being cadmium plated.

8. Connectors when supplied new are wax coated, no cleaning is necessary—the contacts are self-cleaning. No servicing is necessary for shells.

Insulation resistance test

9. Using a 500V isulation resistance tester measure the insulation resistance between contacts and from each contact to shell, minimum permissible reading is 5 megohms.

TABLE 1

Barrier polarization type without shells

Plugs	Contacts	Mating receptacles
26-182	8	26-183
26-4100-8P	8	26-4200-8S
26-4100-16P	16	26-4200-16S
26-4100-24P	24	26-4200-24S
26-4100-32P	32	26-4200-32S

TABLE 2

Pin polarization type without shells

Plugs	Contacts	Mating receptacles
26-159-16	16	26-190-16
26-159-24	24	26-190-24
26-159-32	32	26-190-32

TABLE 3

Barrier polarization type with keyed shells

Plugs	Contacts	Shell keys		Mating receptacles
		Letters	Numbers	
26-4101-8P	8	A	1	26-4201-8S
26-4102-8P	8	A	2	26-4202-8S
26-4103-8P	8	B	1	26-4203-8S
26-4104-8P	8	B	2	26-4204-8S
26-4101-16P	16	A-C	3-6	26-4201-16S
26-4102-16P	16	A-D	2-5	26-4202-16S
26-4103-16P	16	A-E	5-6	26-4203-16S
26-4104-16P	16	A-F	4-5	26-4204-16S
26-4105-16P	16	B-C	1-6	26-4205-16S
26-4106-16P	16	B-D	1-2	26-4206-16S
26-4107-16P	16	B-E	1-4	26-4207-16S
26-4108-16P	16	B-F	2-3	26-4208-16S
26-4101-24P	24	A-C	3-6	26-4201-24S
26-4102-24P	24	A-D	4-7	26-4202-24S
26-4103-24P	24	A-E	5-6	26-4203-24S
26-4104-24P	24	A-F	4-5	26-4204-24S
26-4105-24P	24	A-G	6-7	26-4205-24S
26-4106-24P	24	A-H	1-6	26-4206-24S
26-4107-24P	24	B-C	2-7	26-4207-24S
26-4108-24P	24	B-D	1-2	26-4208-24S
26-4109-24P	24	B-E	1-4	26-4209-24S
26-4110-24P	24	B-F	2-3	26-4210-24S
26-4111-24P	24	B-G	3-4	26-4211-24S
26-4112-24P	24	B-H	2-5	26-4212-24S
26-4101-32P	32	A-C	3-6	26-4201-32S
26-4102-32P	32	A-D	4-7	26-4202-32S
26-4103-32P	32	A-E	5-6	26-4203-32S
26-4104-32P	32	A-F	4-5	26-4204-32S
26-4105-32P	32	A-G	6-7	26-4205-32S
26-4106-32P	32	A-H	1-6	26-4206-32S
26-4107-32P	32	B-C	2-7	26-4207 32S
26-4108-32P	32	B-D	1-2	26-4208-32S
26-4109-32P	32	B-E	1-4	26-4209-32S
26-4110-32P	32	B-F	2-3	26-4210-32S
26-4111-32P	32	B-G	3-4	26-4211-32S
26-4112-32P	32	B-H	2-5	26-4212-32S

TABLE 4

Barrier polarization with latch-type keyed shells

Plugs Top Outlet	Plugs Side Outlet	Contacts	Shell keys		Mating receptacles
			Letters	Numbers	
26-4301-8	26-4501-8	8	A	1	26-4401-8
26-4302-8	26-4502-8	8	A	2	26-4402-8
26-4303-8	26-4503-8	8	B	1	26-4403-8
26-4304-8	26-4504-8	8	B	2	26-4404-8
26-4301-16	26-4501-16	16	A-C	3-6	26-4401-16
26-4302-16	26-4502-16	16	A-D	2-5	26-4402-16
26-4303-16	26-4503-16	16	A-E	5-6	26-4403-16
26-4304-16	26-4504-16	16	A-F	4-5	26-4404-16
26-4305-16	26-4505-16	16	B-C	1-6	26-4405-16
26-4306-16	26-4506-16	16	B-D	1-2	26-4406-16
26-4307-16	26-4507-16	16	B-E	1-4	26-4407-16
26-4308-16	26-4508-16	16	B-F	2-3	26-4408-16
26-4301-24	26-4501-24	24	A-C	3-6	26-4401-24
26-4302-24	26-4502-24	24	A-D	4-7	26-4402-24
26-4303-24	26-4503-24	24	A-E	5-6	26-4403-24
26-4304-24	26-4504-26	24	A-F	4-5	26-4404-24
26-4305-24	26-4505-24	24	A-G	6-7	26-4405-24
26-4306-24	26-4506-24	24	A-H	1-6	26-4406-24
26-4307-24	26-4507-24	24	B-C	2-7	26-4407-24
26-4308-24	26-4508-24	24	B-D	1-2	26-4408-24
26-4309-24	26-4509-24	24	B-E	1-4	26-4409-24
26-4310-24	26-4510-24	24	B-F	2-3	26-4410-24
26-4311-24	26-4511-24	24	B-G	3-4	26-4411-24
26-4312-24	26-4512-24	24	B-H	2-5	26-4412-24
26-4301-32	26-4501-32	32	A-C	3-6	26-4401-32
26-4302-32	26-4502-32	32	A-D	4-7	26-4402-32
26-4303-32	26-4503-32	32	A-E	5-6	26-4403-32
26-4304-32	26-4504-32	32	A-F	4-5	26-4404-32
26-4305-32	26-4505-32	32	A-G	6-7	26-4405-32
26-4306-32	26-4506-32	32	A-H	1-6	26-4406-32
26-4307-32	26-4507-32	32	B-C	2-7	26-4407-32
26-4308-32	26-4508-32	32	B-D	1-2	26-4408-32
26-4309-32	26-4509-32	32	B-E	1-4	26-4409-32
26-4310-32	26-4510-32	32	B-F	2-3	26-4410-32
26-4311-32	26-4511-32	32	B-G	3-4	26-4411-32
26-4312-32	26-4512-32	32	B-H	2-5	26-4412-32