

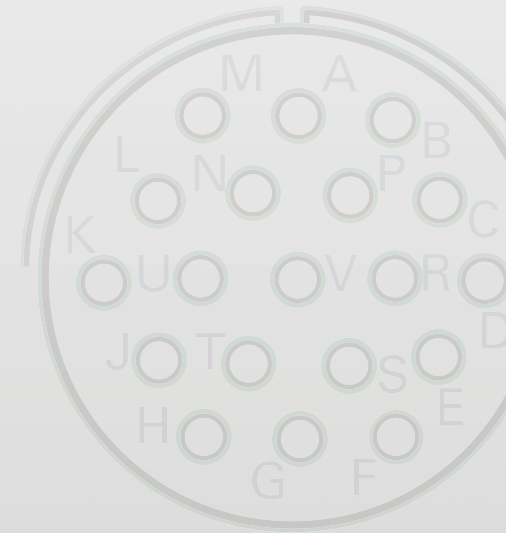
AN EASY GUIDE TO CHOOSING 62GB CONNECTORS (MIL-C_26482)



Amphenol

www.rs-components.com



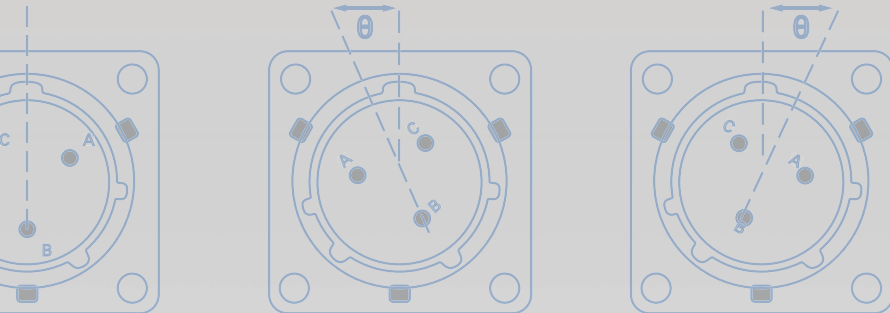


WELCOME

Dear customer,

Welcome to the guide on how to choose the perfect 62GB connector for your actual requirements. Through this guide, you will find step-by-step information on which product is the one you actually require. In future, you will not experience the heartache, of purchasing the wrong connector.

Kind Regards
The RS Connector Team



62GB - SELECTING THE SHELL TYPE

PLUGS

56T
Cable mount, threaded shell for cable accessories



16E
Cable mount, insert seal & grommet seal with grommet nut



16F
Cable mount, insert seal, grommet seal & grommet nut with integral strain relief clamp



16J
With cable clamp for unscreened jacketed cable



RECEPTACLES

12E
Box mount with plain shell



57A
Jam nut, single hole fixing. Plain shell



51T
Cable mounting with threaded shell. To accept cable accessories



11F
Cable mount with grommet & grommet nut with integral strain relief clamp



* See 62GB catalogue for complete list of available shell types



EXAMPLE

62GB **56T** 14 19 P N

↓

PLUG

Cable mount, threaded shell for cable accessories.

62GB - CHOOSING A PLATFORM

Shell Size

8	10	12	14	16	18	20	22	24
8-2* 	10-6 	12-10 	14-12† 	16-23* 	18-32 	20-41 	22-55 	24-61
8-3* 	10-7 		14-15 	16-26 				
8-33 			14-19 					
8-4* 								
8-98 	10-2 	12-3 	14-5 	16-8 	18-11 	20-16 	22-21 	

†Available to special order only

Shell Size
x 1/16th Inch
(E.g. Shell Size 14 = 14/16th)

19 Contacts
(19 x size 20 contacts,
7.5A max)

EXAMPLE

62GB 56T 14 19 P N

14-19 Platform
Shell size 14 with 19
size 20 contacts

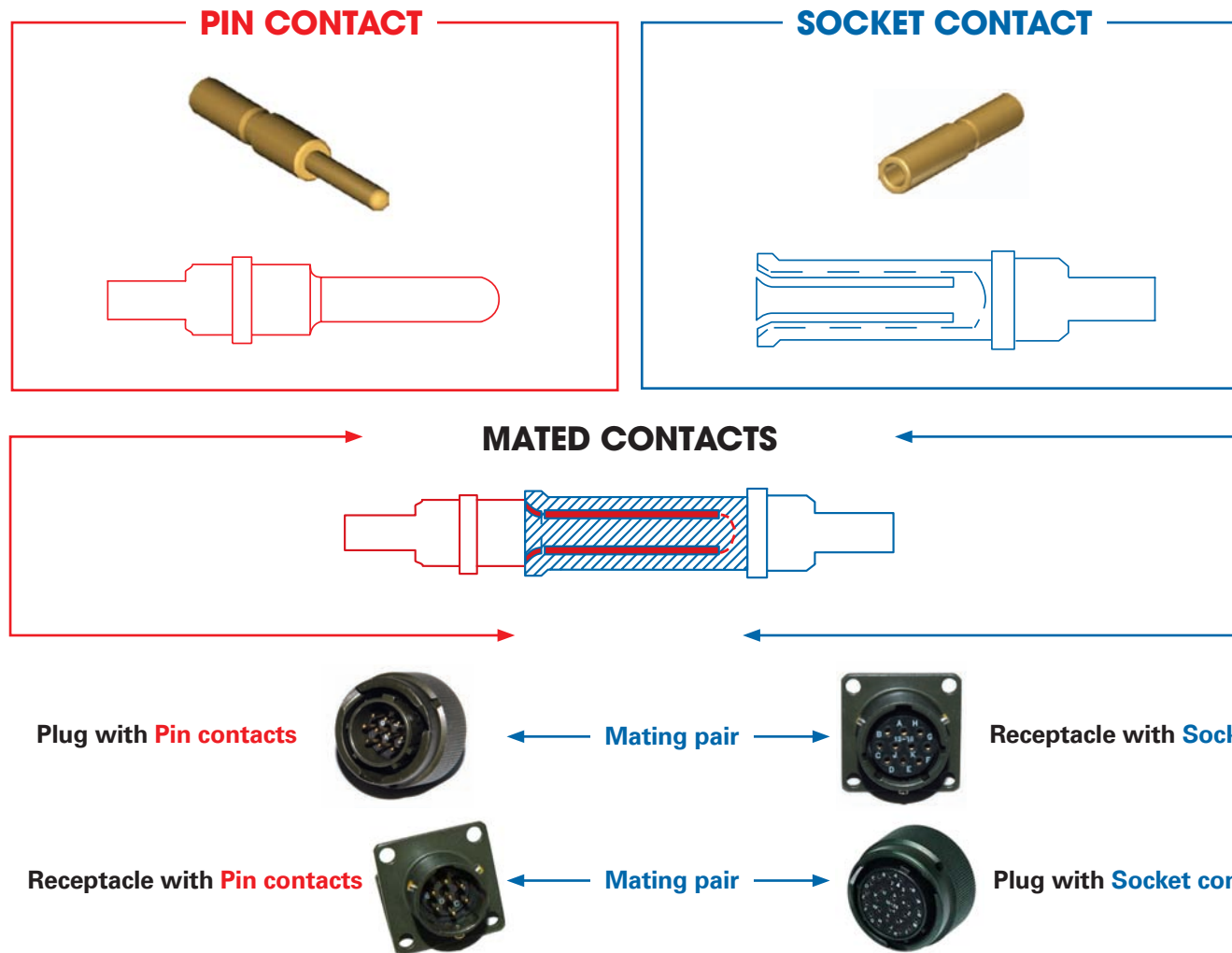
Insert Arrangement

KEY

• Size 16 contacts (13A max.)

◦ Size 20 contacts (7.5A max.)

62GB - CHOOSING A CONTACT TYPE



For a mating pair, one connector must be fitted with pin contacts and the other connector with socket contacts.



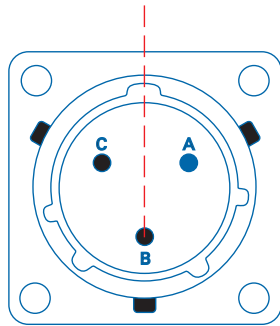
EXAMPLE

62GB 56T 14 19 **P** N

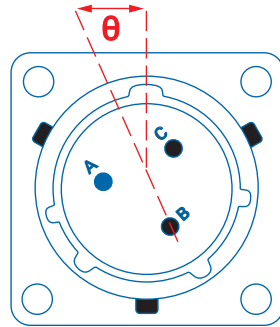
P = Pin Contacts
S = Socket Contacts

62GB - ORIENTATION OPTIONS

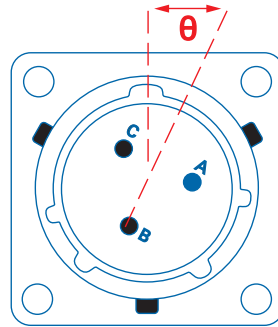
INSERT ORIENTATION



Normal Orientation

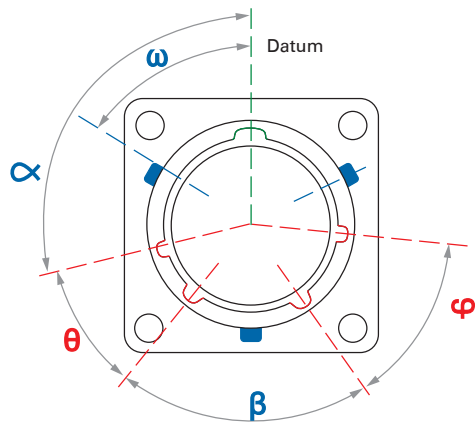


Alternate orientation
Insert counter-clockwise



Alternate orientation
Insert clockwise

KEYWAY ORIENTATION



The **minor keyways** and the **bayonet pins** are rotated in relation to the **major keyway**

N = Normal orientation

A = Keyway orientation A

B = Keyway orientation B

C = Keyway orientation C

D = Keyway orientation D

E = Keyway orientation E

F = Keyway orientation F

W = Insert orientation W

X = Insert orientation X

Y = Insert orientation Y

Z = Insert orientation Z

To facilitate mating, both connectors must have the same orientation code.



EXAMPLE

62GB 56T 14 19 P **N**

Orientation Code

N = Normal Orientation

62GB - DEVIATION CODES

Deviation codes are used to indicate a modification or departure from the standard specification.

This can be anything from a heavy duty coupling nut, an alternative shell plating, or a different shell material altogether.

Customer specials are also typically differentiated by the use of a deviation code.

044 - Heavy duty coupling ring

046 - Box mounting plug

219 - Contacts with printed circuit tails

416 - Electroless nickel plated shell

608 - Black anodised shell

639 - Bright cadmium plated shell

714 - Olive drab cadmium plated shell

I have listed some of the more common deviation codes below. If you need to identify a code not listed, please call your RS Techno-Geek!



EXAMPLE

62GB 56T 14 19 P N (044)

Deviation Code

Blank = No deviation

(044) = Heavy duty coupling ring

62GB - SPECIFICATIONS

Miniature bayonet lock connector series, developed and manufactured in the U.K. by AMPHENOL Ltd, having full qualification approval to British Standards Specification BS 9522 F0017 and British Defence Specification DEF STAN 59-35 (Part 3) Sec. 7.

Basic Construction

The normal shell finish used, which has a high resistance to corrosion, is zinc cobalt olive drab. Other finishes may be supplied to special order, such as cadmium plate which is available by adding deviation (714) to the end of part number. Inserts are of polychloroprene rubber compounded to an Amphenol specification. Operating temperature range is -55°C to 125°C, and the connectors have gold-plated contacts designed for soldered connections. Configurations for size 20 contacts range between 2 contacts in the size 8 12.7mm (0.5in diameter) shell up to a maximum of 61 contacts in the size 24 36.1 mm (1.5in diameter) shell. Hermetic connectors with glass sealed dielectric are manufactured with mild steel shells and nickel iron contacts plated tin over copper.

Military Specifications

British Standards Specification BS 9522 F00 17 closely corresponds to the United States Military Specification MIL-C-26482 solder terminations. Approved gauges are used to check interchangeability of 62GB series with other connectors manufactured to BS 9522 F00 17 or MIL-C-26482.

Derating

Connectors must be derated under the following operating conditions:

1. At elevated ambient temperatures, the current ratings are reduced so that total maximum hot spot temperature of 125°C is not exceeded.
2. At high altitudes, revised voltage ratings become effective.
3. When connectors to different specifications are intermated (e.g. BS 9522 F00 17 and MIL-C26482), the combination must not be operated under conditions more severe than the less stringent clause of either specification. Amphenol 62GB connectors are designed to meet the most stringent requirements of both specifications.

**And finally,
some of the
Techie stuff...**

**for those that
like that sort
of thing!**



62GB - SCHEDULE OF TESTS REQUIRED FOR QUALIFICATION

TESTS	BRIEF DESCRIPTION
Visual Examination	
Dimensions, outline mass (including contacts) Compatability Gauging procedure	
Polarization	
Engaging and separating force, connector	Engagement max: 0,90 Nm (8.0 lbf.in.) to 4,97 Nm (44 lbf.in.) according to shell size. Separation min: 0,22 Nm (2.0 lbf.in.) to 1,58 Nm (14.0 lbf.in.) according to shell size.
Contact Holding Force	0,21 N (0.047 lbf) min.size 20 0,56 N (0.126 lbf)min. size 16
Sealing (air pressure)	Max leakage 28,53 uNm/s (1 cm3/h), 1bar (14.5 p.s.i.) differential.
Sealing Hermetic	Hermetic receptacles have a max leak of 0.1 micron cubic foot per hour (1 x 10-6Cm3/s)
Contact Resistance	5 milliohms max.
Housing (Shell) Continuity	200 milliohms max. 5 milliohms max. grounding spring styles.

TESTS	BRIEF DESCRIPTION
Insulation Resistance	5,000 Megaohms at 500 - 50 V d.c.
Voltage Proof	See page 7. Duration 1 minute
Soldering	As BS 9520: 1974, Clause 1.2.6.6, Method 2.
Bumping	As BS 9520: 1974, Clause 1.2.6.1. 4,000 -10 bumps / 390m / s2 (40 gn).
Vibration	As BS 9520: 1974, Clause 1.2.6.2.1. Procedure A. 10 Hz to 5000 Hz, 0.75 mm / 10 gn.
Shock	As BS 9520: 1974, Clause 1.2.6.3. 981 m/s2 (100 g n).
Acceleration (Steady State)	As BS 9520: 1974, Clause 1.2.6.4. 490 m/s2 (50 gn).
Rapid Change of Temperature	As BS 9520: 1974, Clause 1.2.6.7. -550 C to - 1250 C.
Climatic Sequence	As BS 9520: 1974, Clause 1.2.6.11. Severity 55/125/56.
Flammability	As BS 9520: 1974, Clause 1.2.6.8. Direct flame applied, duration 1 minute.
Damp Heat (Steady State)	As BS 9520: 1974, Clause 1.2.6.14. Severity 56 days.

62GB - SCHEDULE OF TESTS REQUIRED FOR QUALIFICATION (Continued)

TESTS	BRIEF DESCRIPTION
Immersion (at low air pressure)	3 cycles at 30 mins each cycle, total immersion in water at pressure 44 m bar.
Mechanical Endurance	500 operations minimum
High Temperature Endurance	Long term: 1,000 hrs. at 850C ambient carrying the specified current. Short term: 250 hrs at 1250C, no current.
Mould Growth	As BS 9520: 1983, Clause 1.2.6.16. 28 days duration.
Salt Mist	As BS 9520: 1983, Clause 1.2.6.17. Severity 1.
Dust	As BS 9520: 1983, Clause 1.2.6.18 Exposure 30 minutes.
Robustness of Terminations	44,5 N (101bf) size 16 22,2 N (5 lbf) size 20
Contact Retention (in insert)	67,0 N (15 lbf) min. size 20 112,0 N (25 lbf) min. size 16
Insert Retention (in shell)	517 KN1m2 (751bf/in2) min.

TESTS	BRIEF DESCRIPTION
Test Prod Damage	Moment: 0,056 Nm (0.5 lbf in) size 20 0,225 Nm (2 lbf in) size 16
Impact	Five impacts, drop height 1 m (3ft.3 in.).
Grounding Spring Holding Force Plugs with grounding springs only.	1,17 N (0.263 lbf) to 2,74 N (0.616 lbf) according to size.
Fluid Resistance	Immersion in 4 solvents and 9 fluids including aircraft fuels, lubricating oils and hydraulic fluids.
Compass Safe Distance	As BS 9520: 1974, Clause 1.2.5.11. 127mm (5.0 in) min.

Well, that's about it for now, but if you need to know something I've not covered, please give me a call at RS!



