

Amphenol 62GB Series



MIL-DTL-26482 PERFORMANCE WITHOUT MIS-MATING

Amphenol's 62GB series connectors are similar to MIL-DTL-26482 but with the advantage of keyway orientation to reduce mis-mating among multiple connectors. They feature aluminum shells with brass or stainless steel options available. PEI-Genesis is the largest assembler of 62GB connectors in the world.

- Meets British Standard Specification BS 9522 F00 17 & Pattern 105

APPLICATIONS

Industrial, commercial and medical applications where mis-mating or cross-plugging are a concern.

- Aircraft
- Communications systems
- Factory automation
- Industrial machinery
- Medical instrumentation
- Mobile equipment
- Sensors
- Ships

FEATURES

RUGGED SHELL

Machined aluminum alloy shell and hardware create an exceptionally strong connector. These connectors have been used extensively in commercial, military, and aerospace environments. Standard shells accept most MIL-DTL-26482 accessories.

ENVIRONMENTALLY-SEALED

Complete moisture sealing is achieved by combining four seals: shell, peripheral, interfacial, and wire. Wire seal is accomplished by multiple ripple design, exceeding the wire sealing requirements of MIL-DTL-26482.

RESISTANT TO HARSHTEST ENVIRONMENTS

These connectors will operate in temperatures from -67°F to +257°F (-55°C to +125°C) under the harshest possible conditions.

WIDE RANGE OF WIRE GAUGES AND CURRENT-CARRYING CAPABILITY

Up to 22 amps with wire gauges from size 24 to 8 AWG wire.

RESILIENT INSULATOR & GROMMET

A resilient neoprene insulator and integrated rear-wire sealing grommet guarantees a liquid-tight assembly. Solder contacts are permanently bonded into the insulator.

SOLDER GOLD-PLATED CONTACTS

62GB connector contacts are gold-plated. Socket contacts are closed to eliminate damage from test probes and to help prevent misaligned pins during engagement.

AGENCY APPROVALS

- Based on MIL-DTL-26482
- BS 9522 F0017

TECHNICAL SPECIFICATIONS

MATERIALS & FINISHES

Shell	Aluminum alloy
Plating	Standard-green zinc; electroless nickel; black-anodized; clear chromate over cadmium; olive drab chromate over cadmium; black zinc cobalt; unplated stainless steel; unplated brass
Contacts	Copper alloy
Platings	Gold plate, 50 microinches minimum per MIL-G-45204 type II
Insulator	Polychloroprene rubber compound

ELECTRICAL DATA

Operating Voltage & Test Voltage per BS9500 F0017, clause 7.1.2

SERVICE RATING	TEST ALTITUDE	NOMINAL WORKING VOLTAGE PEAK DC OR AC	VOLTAGE PROOF DC OR AC - DWV
I	Sea Level	700	2100
II		1200	3000
III		1500	3000
I	70,000 Feet	330	660
II		380	760
III		450	750

*Each insulator layout has a specific "service rating." The service ratings for each layout are listed on [pages 143 & 144](#).

Current Rating

CONTACT SIZE	RATED CURRENT AMPS (MAX.)	TEST CURRENT AMPS (WORKING)	POTENTIAL DROP (MILLIVOLTS) INITIAL	CONTACT RESISTANCE MILLIOHMS (MAX)
20	13	7.5	< 55	10
16	22	13	< 50	10
12	41	23	< 50	10
8	45	40	< 50	10

Wire Range Sizes 24 to 8 AWG

Contact Resistance When tested to MIL-STD-1344 Method 3004, will not exceed voltage drops listed in table above. Consult MIL-DTL-26482, 3.6.4 for details.

Insulation Resistance 5,000 megohms minimum at 77°F (25°C)

MECHANICAL

Operating Temperature -67°F to +257°F (-55°C to +125°C)

Sealing 48 hours in six feet of water per MIL-DTL-26482 4.6.14. Meets 10- and 20-day 50-95% humidity testing per MIL-STD-1344 Method 1002.2 per MIL-DTL-26482.

Wire Sealing Range

CONTACT SIZE	AWG WIRE SIZE	INSULATION O.D. LIMITS: INCHES (MM)	
		MIN.	MAX.
20	24, 22, 20	.060 (1.52)	.085 (2.16)
16	20, 18, 16	.066 (1.68)	.109 (2.77)
12	12, 14	.097 (2.46)	.142 (3.78)
8	8	.135 (3.43)	.145 (3.68)

Insulation Strip Lengths

CONTACT SIZE	WIRE SIZE (AWG)	STRIP LENGTH INCHES (mm)
20	20-24	.275 (7.0)
16	16-20	.250 (6.4)
12	12-14	.250 (6.4)
8	8-10	.232 (5.9)

Mating Life	500 cycles minimum
Salt Spray	48 hours per BS9522: 1974, clause 1.2.6.17 Severity 1 tested in mated conditions. The salt spray endurance of 62GB connectors with specific plating deviations could potentially be extended (for example, cadmium plating can withstand 500h exposure to salt spray and stainless steel as much as 2000h), but without testing, the plating on a 62GB connector performance cannot be guaranteed. (There is the potential for galvanic corrosion to occur between the plating and other metal components within the connector)
Heat	+347°F (+175°C) for 1000 hours to MIL-STD-1344 Method 1005.1 per MIL-DTL-26482.
Chemical Resistance	Immersion in four solvents and nine fluids including aircraft fuels, lubricating oils and hydraulic fluids.
Vibration	10 to 2,000Hz (15g's) 10 microseconds maximum discontinuity. To MIL-STD-1344 Method 2005 per MIL-DTL-26482.
Shock	50g's. 11ms duration, three major axes. 10 microseconds maximum discontinuity. To MIL-STD-1344 Method 2004 per MIL-DTL-26482.
Contact Type	Solder, crimp, PC
Number of Circuits	2 - 61
Contact Retention	To MIL-STD-1344 Method 2007 per MIL-DTL-26482

CONTACT SIZE	AXIAL LOAD MIN. NEWTONS (LBS)
20	66.7 (15)
16	112 (25)
12	112 (25)
8	178 (40)

Polarization	Five-keyway, three-point bayonet with optional rotational polarization and keyway positions. ↔ See pages 143-145.
Approvals	BS 9522 F0017



NEED HELP? PEI engineers will help you find the most cost-effective connector for your application. Email us at techsupport@peigenesis.com or fill out our online technical request at www.peigenesis.com/technical-support. To contact us by phone, please see the back cover for a complete listing of our branch offices and contact numbers.