		02-508	**20020008**	**20020008-HxxxxxxLF**	02~24p
	Socket	**06-508**	**20020107**	**20020107-HxxxxxxLF**	02~24p
		06-508	**20020110**	**20020110-HxxxxxxLF**	02~24p
7.62mm	Plug	**04-762**	**20020516**	**20020516-MxxxxxxLF**	02~16p
		04-762	**20020517**	**20020517-MxxxxxxLF**	02~16p
	Socket	**07-762**	**20020618**	**20020618-MxxxxxxLF**	02~16p
		07-762	**20020619**	**20020619-MxxxxxxLF**	02~16p
		07-762	**20020620**	**20020620-MxxxxxxLF**	02~16p
		07-762	**20020621**	**20020621-MxxxxxxLF**	02~16p
		07-762	**20020622**	**20020622-MxxxxxxLF**	02~16p
3.50mm	Fixed Plug	**26-350**	**20020327**	**20020327-CxxxxxxLF**	02~24p
3.81mm		**26-381**	**20020327**	**20020327-DxxxxxxLF**	02~24p
5.00mm		**21-500**	**20020316**	**20020316-GxxxxxxLF**	02~24p
5.08mm		**21-508**	**20020316**	**20020316-HxxxxxxLF**	02~24p
		21-508	**20020336**	**20020336-HxxxxxxLF**	04~05p
7.62mm		**12-762**	**20020705**	**20020705-MxxxxxxLF**	02~03p

2.2 Other Standard and Specification

4.2.1 IEC 60998-1: Connecting Devices for Low Voltage Circuits for Household and Similar Purposes. Part 1: General Requirements.

4.2.2 IEC 60998-2-1: Connecting Devices for Low Voltage Circuits for Household and Similar Purposes. Part 2-1: Particular Requirements for Connecting Device as Separate Entities with Screw-type Clamping Units.

4.2.3 UL 1059: Terminal Blocks

4.2.4 EIA-364:

Electrical Connector/Socket Test Procedure Including Environmental Classifications

2.3 FCI SPECIFICATIONS

4.3.1 GES-03-601 Current Rating

4.3.2 GS-14 -1394 Package Specification

3.0 REQUIREMENTS

3.1 Design and Construction

Connectors shall be of the design, construction and physical dimensions specified on the applicable product drawings and shall consider the requirements mentioned on IEC 998-2-1 paragraph 10, relevant to clamping units.

3.2 Materials, Dimensions, Plating and Markings

All of these items are described on the individual drawings.

3.3 Ratings

Voltage rating, current rating, operation temperature and rated screw torque are described on the individual drawings.

3.4 Performance and Test Description

Product is designed to meet the electrical, mechanical and environment performance requirement list in section 3.5.

Unless otherwise specified, all tests shall be performed at ambient environmental conditions per IEC 160.

3.5 Test Requirements and Procedures Summary

3.5.1 ELECTRICAL REQUIREMENTS		
DESCRIPTION	**TEST CONDITION**	**REQUIREMENT**
3.5.1.1 Product Examination	Visual, dimensional and functional	Meet requirements of product drawing.
3.5.1.2 Low Level Contact Resistance	Mated connectors, apply a maximum voltage of 0.2 V between wire pole and terminated terminal.	20 milliohms maximum.
3.5.1.3 Insulation resistance	IEC 60998-1, paragraph 13e 13.3. Initial 1000Volts DC, or 500Volts DC after environment test applied between two adjacent contact with measurements made 1 minute after the application of the voltage.	1) 5000 MΩ Min. initial. 2) 5 MΩ minimum after environment test.
3.5.1.4 Dielectric Withstanding Voltage	IEC 60998-1, paragraph 13e 13.4. Apply 1.6K VAC, Test between adjacent contacts of connector assemblies.	No breakdown; Current leakage<5 mA

3.5.1.5 Temperature rise VS current	UL 1059 Measurements are made when the specimen had reached thermal equilibrium at the rated current specified on individual drawing.	+30 ℃ Maximum

3.5.2
MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT	Applicable
3.5.2.1 Mating force	Mate connector and measure the force required.	5.5N Maximum. (Per mating pole.)	Plug/socket
3.5.2.2 Unmating force	Unmate connector and measure the force required.	1.0N Minimum. (Per unmating pole.)	Plug/socket
3.5.2.3 Durability (mate/unmate)	After durability cycles, low level contact resistance shall be less than 20millionohm.	200 Cycles	Plug/socket
3.5.2.4 Wire Pull Strength	IEC 60998-2-1 paragraph 10.105, Subject connector to a pull force for 1 minute in the axis of tapping connector. Connector shall not slip out of the connecting device.	10AWG: Min 80N 12AWG: Min 60N 16AWG: Min 30N 24AWG: Min 13N	Plug/Fixed plug
3.5.2.5 Torque	UL1059 Apply the rated torque (refer to drawings) for wire attachment.	No visible crack	Plug/Fixed Plug
3.5.2.6 Pin Retention	Force required to unload pin from the housing in the direction of plug entry.	Min 20N.	Socket
3.5.2.7 Solder ability	Soldering time 5 second. (flux is applied) Soldering temperature: 250±10℃	95% min of solder area and the plastics have not been melted	Fixed plug/Socket

3.5.3
ENVIRONMENT REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
3.5.3.1 Heat Resistance	IEC 60998-2-1, paragraph 12.1 Subject specimens to 115±2℃ for 168 hours and shall be left alone for 1 to 2 hours in a room ambient for next examination/testing.	No cracks visible. No material becomes sticky. No material becomes greasy. Specimen shall not undergo any change impairing their further use.
3.5.3.2 Cold resistance	IEC 60998-2-1, paragraph 12.1 Subject specimens to -40±2℃ for 168 hours and shall be left alone for 1 to 2 hours in a room ambient for next examination/testing..	
3.5.3.3 Humidity	IEC 60998-1, paragraph 12.2. Subject specimens to 30±2℃, relative humidity 91%~95% for 48 hours and shall be left alone for 1 to 2 hours in a room ambient for next examination/testing...	
3.5.3.4 Salt Spray	EIA-364-26B, condition A Salt concentration: 5%, temperature 32±2℃, 48hours.	

	Samples were measured after salt is removed by running water.	
3.5.3.5 Fire Test (Glow wire test)	Specimens with no visible flame and no sustained glowing; or flames and glowing on the specimen extinguished 30 seconds after the removal of the glow wire.	IEC 60695-2-10,-2-11,-2-12 Apply the glow-wire once for no longer than 5 seconds.

4.0 QUALITY ASSUREANCE PROVISIONS

4.1 Equipment Calibration

All test equipment and inspection facilities used in the performance of any test shall be maintained in a calibration system in accordance with QS9000.

4.2 Inspection Conditions

Unless otherwise specified, all inspections shall be performed under the following conditions:

a) Temperature: 25+/- 5℃

b) Relative Humidity: 30% to 60%

c) Barometric Pressure: Local ambient

4.3 Acceptance

4.3.1 Electrical and Mechanical requirements shall be as indicated in Paragraphs 3.5 using test data and appropriate statistical techniques.

4.3.2 Failures attributed to equipment, test setup or operator error shall not disqualify the product.

4.4 Qualification Testing

Qualification testing shall be performed on sample units predicted with equipment and procedures normally used in production. Test sequence are shown in Table 1(Pluggable plug), Table 2(pluggable socket), and Table3(Fixed plug).

TABLE 1: QUALIFICATION TESTING SEQUENCE for Pluggable Plug

TEST	PARA	Test Group							
		A	B	C	D	E	F	G	H
		Test Sequence							
Product examination	3.5.1.1	1	1	1	1	1	1	1	1
LLCR	3.5.1.2	2						3	
Insulation Resistance	3.5.1.3	3			3	3	3	4	
Dielectric withstanding voltage	3.5.1.4	4		4	4	4	4		
Mating/Un-mating force	3.5.2.1 3.5.2.2		2						
Torque	3.5.2.5		3						
Wire Pull Strength	3.5.2.4			2					
Temperature rise	3.5.1.5			3					
humidity test	3.5.3.3				2				
Heat resistance	3.5.3.1					2			
Cold resistance	3.5.3.2						2		
Salt Spray	3.5.3.4							2	
Fire Test (Glow wire test)	3.5.3.5								2
Qualification connector per group		*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*

TABLE 2: QUALIFICATION TESTING SEQUENCE-Pluggable Socket

TEST	PARA	Test Group							
		A	B	C	D	E	F	G	H
		Test Sequence							
Product examination	3.5.1.1	1	1	1	1	1	1	1	1
Insulation Resistance	3.5.1.3	2		3	3	3			
Dielectric withstanding voltage	3.5.1.4	3		4	4	4			
Pin Retention (Pull force)	3.5.2.6		2						
Humidity	3.5.3.3			2					
Heat resistance	3.5.3.1				2				
Cold resistance	3.5.3.2					2			
Salt Spray	3.5.3.4						2		
Fire Test (Glow wire test)	3.5.3.5							2	
Solder ability	3.5.2.7								2

Qualification connector per group	***3***	***3***	***3***	***3***	***3***	***3***	***3***	***3***

TABLE 3: QUALIFICATION TESTING SEQUENCE-Fixed Plug

TEST	PARA	Test Group								
		A	B	C	D	E	F	G	H	J
		Test Sequence								
Product examination	**3.5.1.1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
LLCR	**3.5.1.2**	**2**						**3**		
Insulation Resistance	**3.5.1.3**	**3**			**3**	**3**	**3**	**4**		
Dielectric withstanding voltage	**3.5.1.4**	**4**		**4**	**4**	**4**	**4**			
Torque	**3.5.2.5**		**2**							
Wire Pull Strength	**3.5.2.4**			**2**						
Temperature rise	**3.5.1.5**			**3**						
humidity test	**3.5.3.3**				**2**					
Heat resistance	**3.5.3.1**					**2**				
Cold resistance	**3.5.3.2**						**2**			
Salt Spray	**3.5.3.4**							**2**		
Solder ability	**3.5.2.7**								**2**	
Fire Test (Glow wire test)	**3.5.3.5**									**2**
Qualification connector per group		***3***	***3***	***3***	***3***	***3***	***3***	***3***	***3***	***3***

REVISION RECORD

REV	PAGE	DESCRIPTION	ECR#	DATE
A	All	Initial Release	DG09-0204	Nov 11th, 2009
B	3	3.5.2.7 solderability test, Temperature change form 260 +/- 5 ℃ to 250 +/- 10℃	T09-1162	Dec 17th, 2009
C	All	Add phase-2 product series	T10-0079	Jun 15th, 2010
D	2	Add p/n 20020336		Jan 31th, 2010

Mouser Electronics

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Amphenol:

HA02015000J0G HW15505100J0G VK04125000J0G OQ13325100J0G 20020004-C044A01LF 20020627-U081A01LF 20020108-C141A01LF TS14115D00J0G TS10315A00J0G HA19705000J0G VM04355000J0G EW06625100J0G T211215100J0G HW04705100J0G 20020130-C151A01LF TV17315000J0G TJ21115200J0G OQ05355000J0G 20020007-H201B01LF TS04315D00J0G VI11215500J0G OQ20355100J0G 20020131-G231A01LF TS03315C00J0G HA09715000J0G VK21525000J0G TS18115C00J0G TJ12115300J0G 20020010-H171B01LF TJ10115300J0G HW08705200J0G HA21005000J0G EW03615100J0G 20020520-U051B01LF VK18525000J0G VM07155000J0G 20020010-G171B01LF VC12005000J0G T204215100J0G HW02305000J0G TV24115000J0G TS22115B00J0G HA11015000J0G 20020131-H221A01LF TJ10115200J0G TS20115D00J0G OQ24325000J0G 20020007-G141B01LF TV12115000J0G HA10705000J0G VM03155000J0G VK13115000J0G 20020007-G241B01LF HW04505400J0G HW09705000J0G VK03125000J0G HW23505300J0G OQ09125000J0G VM03355200J0G HA24705000J0G 20020012-H042B01LF VM23355000J0G VI13215500J0G HW02705200J0G 20020010-D111B01LF HW09705300J0G HW16505100J0G HW11505200J0G ER02015100J0G EV04615000J0G 20020108-D141A01LF VM17355200J0G TJ24115200J0G VC08005000J0G EW05625100J0G TS24115B00J0G EW07625100J0G 20020130-G201A01LF HW05305000J0G 20020004-C044B01LF VI10215500J0G 20020007-G161B01LF HW11505400J0G OQ11125000J0G OQ07155000J0G HW13705100J0G VM06155000J0G HW05705200J0G T217015000J0G HW09105000J0G HA07015000J0G HW19105200J0G YC06215000J0G HW21705100J0G TS14115A00J0G VK15325000J0G TS11115A00J0G YL04215000J0G HW18705300J0G YO14215000J0G