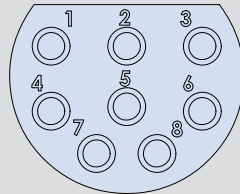
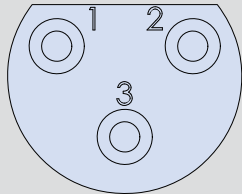




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 Qualification testing

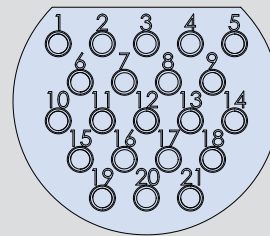
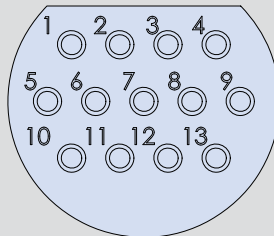
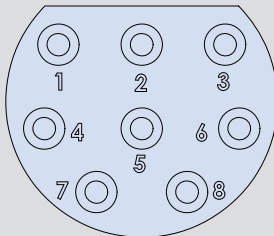


SUPERG55™ CONTACT ARRANGEMENTS Mating face view of socket insert (pin insert IDs are reversed)

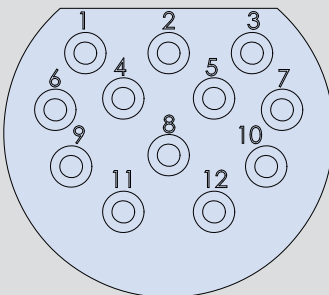


Bulkhead Mounting Torque	Size 15 - 14.12NM (125LB. INS.)
	Size 20 - 18.64NM (165LB.INS.)
	SIZE 24 - 25.42NM (225LB.INS.)

Shell Size 15	
1503	1508
3 Size #12 AWG Contacts	8 Size #16 AWG Contacts



Shell Size 20		
2008	2013	2021
8 Size #12 AWG Contacts	13 Size #16 AWG Contacts	21 Size #16 AWG Contacts



Shell Size 24
2412
12 Size #12 AWG Contacts

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Test Sequence.

The samples were divided into 5 groups as described in GTS 4131 4.1, testing was then carried out in the following sequence as in GTS 4131

Test Description	QTP-G55	Test Group		
	Requirement	1 & 3	2 & 4	5
Product Examination.	7.1	x	x	x
Insulation Resistance	7.2	x	x	
Line Resistance	7.3	x	x	
Dielectric Withstand Voltage	7.4	x	x	
Initial Hydrostatic Pressure Test	7.8 B	x	x	
Thermal Shock Test	7.5	x	x	
Durability	7.6	x		
Salt Spray	7.7	x		
Final Hydrostatic Pressure Test	7.8 A	x	x	
Final Insulation Resistance	7.2	x	x	
Final Line Resistance	7.3	x	x	
Final Dielectric Withstand Voltage	7.4	x	x	
Final Examination.	7.1	x	x	x

x - applicable

Test Method

Examination of Product (7.1).

All test items shall be visually examined for damage, burrs, quality of finish or other imperfections that may impair function.

Insulation Resistance (7.2)

IR shall be measured in accordance with EIA-364-21

Line Resistance, Low Level Signal Current (7.3)

Line resistance shall be measured in accordance with EIA-364-23.

Dielectric Withstand Voltage (7.4)

1800V (DC) shall be applied in accordance with EIA-364-20, the maximum leakage current will be recorded.

Initial Hydrostatic Pressure Test (7.8B)

Sample shall be tested at 6,000PSI. The test duration will be 2 hours.

IR measurements will be taken between odds & even numbered contacts and shell.

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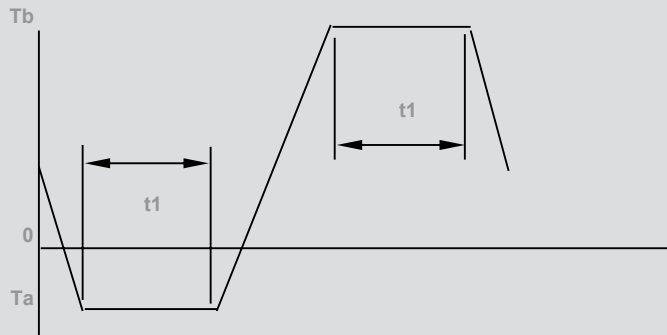


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Qualification testing



Test Method (continued)

Thermal Cycle(7.5)



Comments: Number of cycles:10 ,
 Ta: -20c
 Tb:+ 105c
 Testing was performed in accordance with EIA-364-32 Method A

Durability (7.6)

Samples are to be manually mated and unmated for 500 cycles, the samples will then be mated manually. The testing shall be performed in accordance with EIA-364-26

Salt Spray (7.7)

Tested in accordance with EIA-364-26, 5% salt spray, 35°C, 500 hours duration.

Final Hydrostatic Pressure Test (7.8A)

Sample will be tested at 15,000PSI. The pressure will be increased at a steady rate, hold for 1 min at 1000PSI increments, the test duration will be 2 hours.

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Test Results

PROPERTY	UNIT	REQUIREMENTS	TEST METHOD	PASSED
Electrical				
Insulation Resistance (IR)	Ω	>1G Ω	EIA-364-21	☑
Dielectric Withstand Voltage (DWV) 1800v, 30 secs	mA	<2mA Leakage Current	EIA-364-20	☑
Environmental				
Thermal Shock 10 Cycles, -20°C - +105°C		The samples maintained functionality (including pressure performance)	EIA-364-32 Method A	☑
Salt Spray 500 hours, 5% salt solution		The samples showed no signs of corrosion or delamination.	EIA-364-26 condition C	☑
Durability				
500 Mating Cycles		The samples maintained functionality (including pressure performance)	EIA-364-9	☑
Subsea Performance				
Hydrostatic Pressure Test 10,000psi 2 hour duration Open face and mated		All samples showed no signs of water ingress, mated connectors maintained IR >100MΩ throughout the test. Samples showed no signs of delamination or permanent deformation.		☑

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SuperG55 connector assemblies undergoing rigorous qualification testing in the salt spray chamber