Customer Drawing

RoHS Compliant

3170 SERIES D-SUB CONNECTORS RIGHT ANGLE (FEMALE) (8.08mm FOOT PRINT)

REV	DATE	DESCRIPTION	ECN NO.	NAME
A	97.12.15	NEW RELEASE		DEAN
D	04.06.07	⚠3 ADD INSTRUCTION	AK0406007	DEAN
E	04.07.03	⚠4 MODIFICATION	AK0405025	XZ
F	04.08.12	⚠5 ADD GREEN OPTION	AK0408013	XZ
G	04.12.25	⚠6 MODIFICATION	AK0412021	LIUFAN
H	06.05.20	⚠7 CHANGE SHOW	CECR06001319	Richard

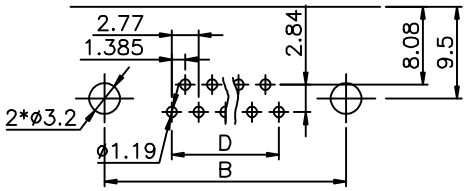
MATERIAL
HOUSING: SEE ORDERING INFORMATION (UL94V-0)
HOUSING COLOR: BLACK
TERMINAL: COPPER ALLOY
TERMINAL PLATING: SEE ORDERING INFORMATION
SHELL: STEEL
SHELL PLATING: SEE ORDERING INFORMATION
HARPOON: BRASS, 50~100u" min. Sn OVER 50u" min. Ni UNDERPLATE OVERALL

ORDERING INFORMATION

* 3170 – ** F * * * ** * *

- " ":NORMAL PRODUCT
- ⚠"G":GREEN PRODUCT
- 09,15,25,37
- A:WITH HARPOON GROUND BRACKET & #4-40 UNC THREAD RIVETED INSERT
- B:WITH HARPOON GROUND BRACKET & JACK SCREW
- SHELL PLATED&HOUSING MATERIAL
  - T: Sn THERMOPLASTIC
  - N: Ni THERMOPLASTIC
  - A: Ni HIGH THERMOPLASTIC
  - B: Sn HIGH THERMOPLASTIC
- TERMINAL PLATED
  - S1:1u" Au
  - S2:5u" Au
  - S3:10u" Au
  - S4:15u" Au
  - S5:30u" Au
  - S6:3u" Au (SELECTIVE Au)
  - F1:1u" Au
  - F2:5u" Au
  - F3:10u" Au
  - F4:15u" Au
  - F5:30u" Au
  - F6:3u" Au (FULL Au)
- X:WITHOUT JACK SCREW (ONLY FOR "A" TYPE) ⚠5
  - S:LOCK GSS6-A47511848 LONG: 11.8mm
  - 2:LOCK GSS6-A47513058 LONG: 13.0mm
  - D:ATTACH GSS6-A47511848 LONG: 11.8mm (ONLY FOR "A" TYPE) ⚠5
  - E:ATTACH GSS6-A47513058 LONG: 13.0mm (ONLY FOR "A" TYPE) ⚠5
- W:WIESON LOGO
- N:NO LOGO

	E	INNER SCREW THREAD	OUTER SCREW THREAD
S:GSS6-A47511848	4.8	#4-40 UNC	#4-40 UNC
2:GSS6-A47513058	5.8		

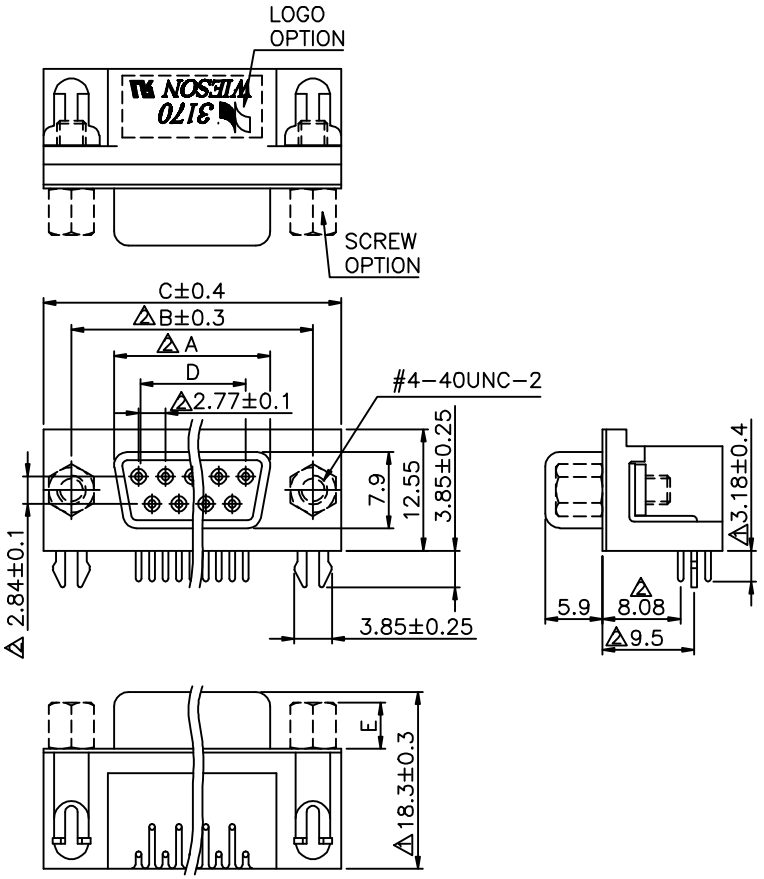


RECOMMENDED P.C.BOARD HOLE LAYOUT

NO. OF CONTACTS	A	B	C	D
09	16.33	24.99	30.80	11.08
15	24.66	33.32	39.10	19.39
25	38.38	47.04	53.00	33.24
37	54.84	63.50	69.32	49.86

⚠1

NOTE: 1. P.C.B LAYOUT TOLERANCE:±0.05MM.
2. TERMINAL OR SHEELL PLATED IS L/D FOR GREEN PRODUCT.



GENERAL TOLERANCE ±0.25MM GENERAL ANGLE TOLERANCE ±3°	WIESON TECHNOLOGIES CO, LTD	PART NO.:	⚠*3170-**F******
	DRAWN BY: DEAN(WST)	DRAWING NO.	3170-001
	CHECKED BY: KEVIN	DRAWING SIZE	A4
	APPROVED BY: JERRY	UNIT	mm
	SORTING NO. ⚠ P11990/CA0054⚠⚠	PAGE	1 OF 1

ISSUED

[ARTICLE:044033 V4]

TABLE OF CONTENT

Rev	Date	Description	Edited by	Approvals
A	2005/3/24	Modify	Cloud	Prepared : ***Cloud***
				Checked :
				Approved : ***Kevin***

1. Scope :

This specification covers the requirements for product performance, test methods and quality assurance provisions of **D-SUB Connector.**

2. Reference Documents :

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

A. EIA-364 : The Test Sequence and Test Procedures for Electrical Connectors and Sockets.

B. JEDEC : Test for Lead-free Solder.

C. UL Std-94 : Test for Flammability of Plastic material for Parts in Devices and Appliances.

3. Material of Components :

A. Housing : Thermoplastic, UL94V-0 Rated
B. Contact : Copper Alloy
C. Shell : SPCC
D. Rivet : Copper Alloy
E. Screw : Copper Alloy
F. Hook : Copper Alloy

4. Design and Construction :

Product shall be of the design, construction and physical dimensions specified in the applicable product drawing.

5. Ratings :

A. Voltage : 125Vrms maximum
B. Current : 1.5A
C. Temperature: -55~105°C

6. Performance and Test Descriptions :

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in paragraph 7. Unless otherwise specified, All tests are performed at ambient environmental conditions.

7. Test Requirements and Procedures Summary :

Electrical Performance		
Test Description	Test Procedures & Condition	Requirements
Temperature Rise vs Current Rating	EIA 364-70 Method B Measure temperature rise vs current at 1.0A when measured at an ambient temperature of 23±3°C.	The ΔT shall not exceed +30°C at any point in the connector under test.
Low Level Contact Resistance	EIA 364-23 Subject mated contacts assembled in housing to closed circuit current of 100 mA maximum at open circuit at 20 mV maximum.	1. 20 mΩ maximum initial per mated pair. 2. 30 mΩ maximum final per mated contact.
Insulation Resistance	EIA 364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Voltage : 500 Vdc.	1,000 MΩ minimum
Dielectric Withstanding Voltage	EIA 364-20 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Potential : 1000 Vac at sea level Test Duration : 60 seconds	1. No flashover, No sparkover, No excess leakage, No breakdown. 2. Current leakage : < 0.5 mA

Mechanical Performance		
Test Description	Test Procedures & Condition	Requirements
Mating and Unmating force (Per Pin)	EIA 364-13 Subject connector to mate and unmate to measure the mechanical forces required to engage and disengage at a rate of 12.5mm per minute. Record by using autograph.	1. Mating force：Maximum 300 gf 2. Unmating force：Minimum 40 gf Test steel gage: Standard type：∅1.0 ㎜ H/D type：∅0.76 ㎜
Durability	EIA 364-09 100 insertion / extraction cycles at a maximum rate of 200 cycles per hour.	1. No evidence of damage. 2. The electrical performances should meet the spec. specified.
Vibration (Random)	EIA 364-28 Condition V Test letter A Test condition : Random Frequency : 50 ~ 2000 Hz PSD value : 5.35 G_{rms} minimum Duration : 15 minutes/axis Times : Each of three mutually perpendicular planes.	1. No discontinuities of 1μs or longer duration. 2. No evidence of damage. 3. The electrical performances should meet the spec. specified.

Environmental Performance		
Test Description	Test Procedures & Condition	Requirements
Humidity (Temperature Cycling)	EIA 364-31 Method III Test Condition A Temperature : 25 ~ 65°C Humidity : 90 ~ 95% (R.H) Duration : 96 hours	1. No evidence of damage. 2. The electrical performances should meet the spec. specified.
Thermal Shock	EIA 364-32 Temperature : -55 ~ 105°C Cycles : 5 cycles Exposure time at temp. extremes : 30 minutes	1. No evidence of damage. 2. The electrical performances should meet the spec. specified.
Salt Spray	EIA 364-26 Test Condition A Temperature : 35±1.1°C Humidity : 95 ~ 98% (R.H.) PH Value : 6.5 ~ 7.2 Duration : 48 hours	1. No evidence of damage. 2. The electrical performances should meet the spec. specified.
Heat Resistance	Temperature : 105±2°C Duration : 96 hours	1. No evidence of damage. 2. The electrical performances should meet the spec. specified.
Cold Resistance	Temperature : -55±2°C Duration : 96 hours	1. No evidence of damage. 2. The electrical performances should meet the spec. specified.

Test Description	Test Procedures & Condition	Requirements
Solderability	JESD 22-B102 Condition-C Method 1 Subject unmated connectors should be tested according to the condition listed below : Steam Aging Temperature : 93℃/+3-5°C Steam Aging Duration : 8 hours±15 min. Soldering Temperature : 245±5°C Soldering Time : 4 ~ 5 seconds Flux Type : ROL 1	Continuous solder coating with a minimum 95% coverage.
Resistance to Soldering Heat	Subject connectors should be tested according to the condition listed below : Heat: 250°C Duration: 5seconds	1. No evidence of damage. 2. The electrical performances should meet the spec. specified. 3. The mechanical performances should meet the spec. specified.

Note : Shall meet visual requirements, show no physical damage, and shall meet requirements of additional tests as specified in Test Sequence in paragraph 8.

8. Product Qualification and Requalification Test Sequence :

A. Sample Selection :

Test samples shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production.

B. Test Sequence :

The following is an example of how the test sequence works : In Test Group 8, the first test is (1), examination of product, followed by test (2), temperature rise vs current, followed by test (3), examination of product. Six samples are tested in this test group.

Test Description Sequence	Test Group								
	1	2	3	4	5	6	7	8	9
Examination of product	1,7	1,3	1,5	1,5	1,8	1,9	1,3	1,3	1,3
Low Level Contact Resistance	2,6		2,4	2,4		2,6			
Insulation Resistance					2,6	3,7			
Dielectric Withstanding Voltage					3,7	4,8			
Mating/Unmating Force	3,5								
Durability	4								
Solderability							2		
Vibration		2							
Humidity					5				
Thermal Shock					4				
Salt Spray						5			
Heat Resistance			3						
Cold Resistance				3					
Temperature Rise vs Current								2	
Resistance to Soldering Heat									2
Sample Size per Test Group	6	6	6	6	6	6	6	6	6

9. Quality Assurance Provisions :

Unless otherwise specified, in the contract or purchase order, we will be responsible for the quality of the part as it is delivered to client. We will be responsible for having controlled processes to ensure product is in total compliance with this specification. Failing lots shall be subject to return or other corrective action.

Further, WIESON will not substitute components of the assembly (connector, cable, etc.) without prior written approval from client. Any such substitutions shall be submitted to client for approval prior to implementation. Substitution shall be deemed as any change in WIESON different than those previously submitted to and approved by client.

A. Re-qualification Testing :

If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

B. Re-testing :

Connectors stored for a period of more than 12 months after the release of the lot shall be tested prior to delivery.

C. Acceptance :

Acceptance is based on verification that the product meets the requirements of paragraph 7. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Test to confirm corrective action is required before resubmittal.

D. Inspection Data :

Inspection and test data shall be recorded, evaluated, and maintained as evidence of performance to these provisions.

E. Quality Conformance Inspection :

Applicable WIESON quality inspection plan will specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification.

F. Preparation for Delivery :

Overall packaging shall be sufficient to protect against damage or loss during shipment from WIESON to destination specified in the purchase order.