

Docking Frame Series

1. INTRODUCTION

1.1 Purpose

This document provides the qualification summary of TE Connectivity Docking Frame Series.

1.2 Scope

This specification covers the mechanical, and environmental performance of Docking Frame Series. Testing was performed at the Shanghai Electrical Components Test Laboratory.

1.3 Conclusion

Based on the test results, all meet the requirements according to TE Connectivity Design Objectives 108-137168.

1.4 Product Description

Name	Remarks
H24BP-T6-M	
H24BP-T6-F	
H16BP-T4-M	
H16BP-T4-F	
H10BP-T3-M	
H10BP-T3-F	
H6BP-T2-M	
H6BP-T2-F	
FLOAT WASHER	

1.5 Qualification Test Sequence

Test or Examination	Test Group			
	A	B	C	D
	Test Sequence ¹⁾			
Visual and dimensional examination	1,4	1,4	1,4	1,4
Durability of marking	2			
Module retention in frame		2		
Mechanical strength impact	3			
Mechanical Operation (Durability)		3		
Vibration, Random				2
Shock				3
Cold			2	
Dry Heat			3	

*** Notes:**

1) Numbers indicate the sequence in which the tests are performed.

2. TEST PROCEDURE

General			
No.	Test Items	Requirements	Condition according to
2.1	Visual and dimensional examination	Meets requirements of product drawing	Visual and dimensional examination IEC 60512-1-1/-2, Test 1a and 1b 6.2 of EN 61984
Mechanical			
2.2	Durability of marking	Marking shall be still readable according to 6.2 of EN61984 (If marking made by impression, molding, pressing or engraving or the like are not subjected to this test)	Test piston: Size 1 Wet test with liquid: water Duration: 10 cycles Force:5N IEC 60068-2-70 Test Xb 7.3.2 of EN61984
2.3	Module retention in frame	300 N Minimum	Test load applied in axial direction, test speed:20mm/min, permissible shift inserts of 1.0mm, Test 15a of IEC 60512-15-1
2.4	Mechanical strength impact	No damage likely to impair normal use	Dropping height: - 750mm for specimens of mass ≤250g - 500mm for specimens of mass >250g Dropping cycles:8 positions in 45° step, one cycles per position IEC 60512-7-2 Test 7b
2.5	Mechanical Operation (Durability)	500 operation cycles; No damage likely to impair normal use	Shall be engaged and disengaged by means of A) a device simulating normal operating conditions at the speed of approximately 50mm/min B) manual mating/un-mating 300 Max. cycle per hour IEC 60512-9-1 Test 9a 7.3.9 of EN 61984
2.6	Vibration, Random	No damage likely to impair function	Frequency:5~150Hz Per EN 61373, Category 1, Class B (IEC60068-2-6 Test Fc)
2.7	Shock	No damage likely to impair function	Acceleration:50m/s ² ; Duration:30ms Total 18 shocks(three positive and three negative in each of the three orthogonal axes) Per EN 61373
Environmental			
2.8	Cold	No damage likely to impair function	Subject mated specimen to -40°C Duration time:16h, Test Ab Per IEC 60512-11-10 Test 11j (IEC 60068-2-1)
2.9	Dry Heat	No damage likely to impair function	Subject mated specimen to +125°C Duration time:168h Test Bb Per IEC 60512-11-9 Test 11i (IEC 60068-2-2)

3. SUMMARY OF TEST RESULTS:

Examination of product – all test group

Test Group	Test Item	Requirement	Test Result	Judgment
Group A	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Durability of marking	Marking shall be still readable	N/A(Mark made by laser engraving)	passed
	Mechanical strength impact	Frame shall no damage to impair normal use.	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group B	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Module retention in frame	300 N Minimum	>300N, Shift<1 mm	passed
	Mechanical Operation (Durability)	500 operation cycles; No damage likely to impair normal use	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group C	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Cold	No damage likely to impair function	No damage likely to impair function	passed
	Dry Heat	No damage likely to impair function	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
Group D	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed
	Vibration, Random	No damage likely to impair function	No damage likely to impair function	passed
	Shock	No damage likely to impair function	No damage likely to impair function	passed
	Visual and dimensional examination	Meets requirements of product drawing	No damage likely to impair function	passed