

KARANDIKAR LABORATORIES PVT. LTD. BOISAR

Format: F#07 b.1 Rev 11

TYPE TEST REPORT

IEC 60529

Degrees of Protection Provided by Enclosures (IP Code)

Report No. : KLPL/BTG/26/05-43

ULR No. : TC4110260000000166F

Discipline : Electrical Discipline

Group/Category : Environmental Test Facility

Sub-category : Ingress protection test

Date of issue : 10.06.2026

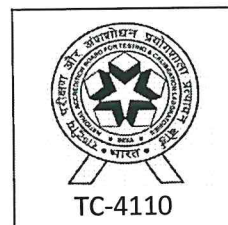
No. of pages : 05 PAGES + Annexure

Compiled by (+ signature) : Bhavesh Rawate

Designation: Testing Engineer

Approved by (+ signature) : Ajit Karandikar

Designation: CEO



Item Received On : 17.05.2026 in Good Condition

Test Completion Date : 20.05.2026

Client

Name : M/S. METRIX Instruments Co.

: METRIX Instruments Company Houston usa.

Test Specification

Standard : IEC 60529:1989/AMD2:2013/COR1:2019

Specified IP-Code : IP66

Equipment Under Test

Type of Test Object : 5497PM Probe Mounting System

Model No. : 5497PM

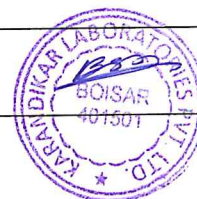
Sr. No. : ---

Manufacturer : M/s. METRIX Instruments Co.

Annexure :

Drawing No. : 1847913, Rev.No.C, Dated:19.04.2018, (Page 01).

NOTE : 1) This refers only to the particular item(s) submitted for testing.
2) If necessary, this report shall be reproduced ONLY in full.



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ULR No. TC411026000000166F

Date: 10.06.2026

Possible test case verdicts:

Test case does not apply to the test object : N (Not Applicable)

Test object does meet the requirement..... : P (Pass)

Test item does not meet the requirement : F (Fail)

Test case has not been checked : _____

General remarks:

"(See remark #)" refers to a remark appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

The test results presented in this report relate only to the object tested.

This test report shall not be reproduced except in full without the written approval of the testing Laboratory.

IP6X test conducted at Laboratory (Boisar).

IPX6 test conducted at Laboratory (Boisar).

Note: - MAJOR EQUIPMENTS USED

Tests	Required Instruments	Id. No.	Cal Due Date	Used Y/N
5X / 6X	Accessibility Probe 1mm Dia.	K&A 405/6A	03.02.2027	Y
	Vacuum Meter	K&A 1426/25 + 1108/1-17	14.10.2026	Y
	Rotameter	K&A 1346/23-4	27.12.2026	Y
	DTC with sensor	K&A 047/1	01.01.2027	Y
	Timer	K&A 047/2	07.01.2027	Y
X6	Rotameter	K&A 1103-17	15.03.2027	Y
	Nozzle 12.5 mm Dia	K&A 382	17.04.2027	Y
	Stop Watch	K&A 1171-18	10.10.2026	Y



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IEC 60529			
Clause	Requirement - Test	Result- Remark	Verdict
10	Marking.	--	N
11	General requirement for tests.		
11.1	Tests should be carried out under the standard atmospheric conditions described in IEC 60068-1 The recommended atmospheric conditions during the tests are as follows: Temperature range: 15°C to 35°C Relative humidity: 25 % to 75 % Air pressure: 86 kPa to 106 kPa (860 mbar to 1060 mbar)	Followed	P
11.2	Test samples shall be in a clean and new condition.	Sample found clean	P
	The relevant product standard shall specify details such as: The number of samples to be tested;	One	P
	-conditions for mounting, assembling and positioning of the samples;	Vertical	P
	-the pre-conditioning, if any, which is to be used;	--	N
	-whether to be tested energized or not;	--	N
	-whether to be tested with its parts in motion or not;	Non-Operational	P
11.5	Empty enclosures		
	If the enclosure is tested without equipment inside, the manufacturer shall ensure that after the electrical equipment is enclosed the enclosure meets the declared degree of Protection of the final product.	--	N



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IEC 60529					
Clause	Requirement – Test			Result-Remark	Verdict
12&13	Tests for protection against solid foreign objects indicated by the First characteristic numeral.				
First, characteristic Numeral.	Test means (object probes and dust chamber	Test force	Test Conditions Refer IEC 60529	--	
6	Test conditions for IP 6X: Same As Above	1N± 10%	Cl.12.2	--	N
6	Dust chamber, The enclosure is maintained below the Surrounding atmospheric pressure by a vacuum pump.	NA	Cl.13.4+13.6	For 8 Hrs, As extraction rate is less than 40 volumes per hour and max depression of 20 mbar.	P
13.5.2	Acceptance conditions for the first characteristic numeral 6X. The protection is satisfactory if no hazardous deposit of dust is observable inside the UUT at the end of test.			No ingress of Powder found inside the UUT.	P

IEC 60529				
Clause	Requirement – Test		Result-Remark	Verdict
14	Tests for protection against water indicated by the second characteristic numeral.			
Second, characteristic Numeral.	Test means	Test Conditions Refer IEC 60529	--	
6	12.5-mm nozzle, tested with a spraying nozzle, distance 2.5 m to 3 m, water flow rate 100 L/min	Cl.14.2.6	12.5 mm nozzle, Flow rate 95 to 105 lit/min, 2.5 – 3 m distance, 3 min duration.	P
-	Acceptance conditions for IPX6: The protection is satisfactory if no water has accumulated near the insulation, cable end or entered cables or interferes with the correct operation of the equipment.	Cl.14.3	No ingress of water observed inside the UUT.	P

SUMMARY OF INGRESS PROTECTION TESTS ACCORDING TO IEC 60529:1989/AMD2:2013/COR1:2019)

Conclusion of the IP66 test: PASS.

The results of the tests were in compliance with the requirements in the standard

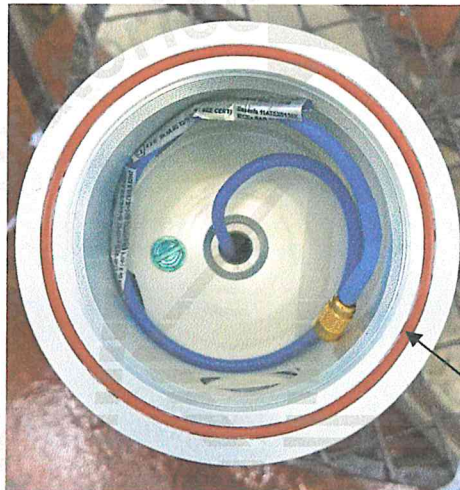
IEC 60529:1989/AMD2:2013/COR1:2019)

UUT=Unit Under Test





Picture1: 5497PM Probe Mounting System



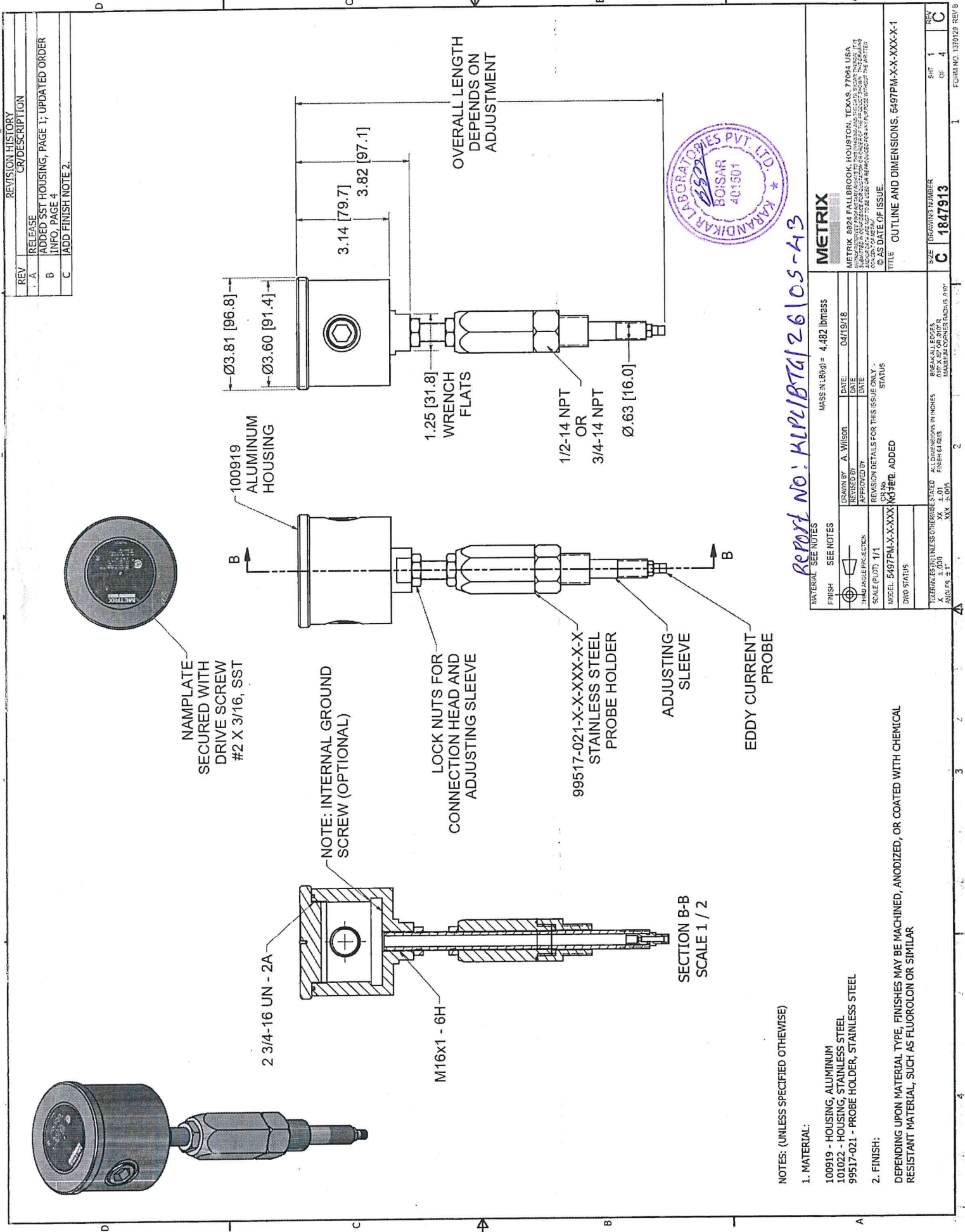
Picture2: No ingress of powder and water observed

'O' Ring Material: Silicone
'O' Ring Size (thickness):2.5mm

END OF REPORT



Annexure



Report No: KLP/BTG/26105-43

REVISION HISTORY		REV		RELEASE		CWD/DESCRIPTION	
A		A		A		ADDED SST HOUSING, PAGE 1; UPDATED ORDER INFO, PAGE 4	
B		B		B		INFO, PAGE 4	
C		C		C		ADD FINISH NOTE 2.	

MATERIAL SEE NOTES		FINISH SEE NOTES		DATE		DATE		DATE		DATE	
DRAWN BY: A. WILSON		REVIEWED BY:		DATE: 04/19/18		DATE:		DATE:		DATE:	
APPROVED BY:		REVISION DETAILS FOR THIS ISSUE ONLY:		DATE:		DATE:		DATE:		DATE:	
SCALE (PLOT): 1/1		OR NO.		STATUS:		STATUS:		STATUS:		STATUS:	
MODEL: 5497PM-X-X-XXX-K1780		OR NO.		STATUS:		STATUS:		STATUS:		STATUS:	
DWG STATUS:		ALL DIMENSIONS IN INCHES		BREAK ALL EDGES		RIP X 27" OR RIPR		FINISH 14 RUS		MATERIAL CORNER RADIUS 90°	
TOLERANCES UNLESS OTHERWISE STATED:		XX ±.01		XX ±.005		XX ±.01		XX ±.005		XX ±.01	
1. MATERIAL:		100919 - HOUSING, ALUMINUM		101022 - HOUSING, STAINLESS STEEL		99517-021 - PROBE HOLDER, STAINLESS STEEL		2. FINISH:		DEPENDING UPON MATERIAL TYPE, FINISHES MAY BE MACHINED, ANODIZED, OR COATED WITH CHEMICAL RESISTANT MATERIAL, SUCH AS FLUOROLON OR SIMILAR	
NOTES: (UNLESS SPECIFIED OTHERWISE)		MASS IN LB(OZ) = 4.482 lbmass		SIZE		DRAWING NUMBER		SHEET		REV	
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METRIX

METRIX 8824 FALLBROOK, HOUSTON, TEXAS 77064 USA

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO BE USED OR APPROVED BY METRIX WITHOUT THE WRITTEN CONSENT OF METRIX

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TITLE: OUTLINE AND DIMENSIONS, 5497PM-X-X-XXX-X-1

SIZE: C 1847913

SHEET: 1 OF 4

REV: C

FORM NO. 137023 REV. 6