Technical Report No.: 874012310301-00

Date: 2023-04-13

Client:	Report holder's name:	Hangzhou Royal Craft Import & Export Co.,Ltd.
	Report holder's Address:	Room 2403-2404, Yinfeng Building, 1505 Center Business Zone Binsheng Road 310051 Hangzhou PEOPLE'S REPUBLIC OF CHINA
	Contact person of report holder:	N/A
	Manufacturer's name:	Same as abrove
	Manufacturer's address:	Same as abrove
Factory:	Factory's name:	Same as abrove
	Factory's address:	Same as abrove
Test object:	Product:	Digital pressure gauge
	Model:	346661/04094
	Trade mark:	N/A
Test specification:	EN 60529:1991+ A1:2000+ A2:2013 IEC 60529:1989+A1:1999+A2:2013	

Purpose of examination:

- Testing and evaluation (visual /~~ partial~~) according to the test specification
- Test according to the requirements for IP44 protection based on test specifications.

Test result: PASS

This report is the result of a visual examination.

The test results show that the presented product is in compliance with the above listed test specifications.

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No. 151 Heng Tong Road Shanghai 200070

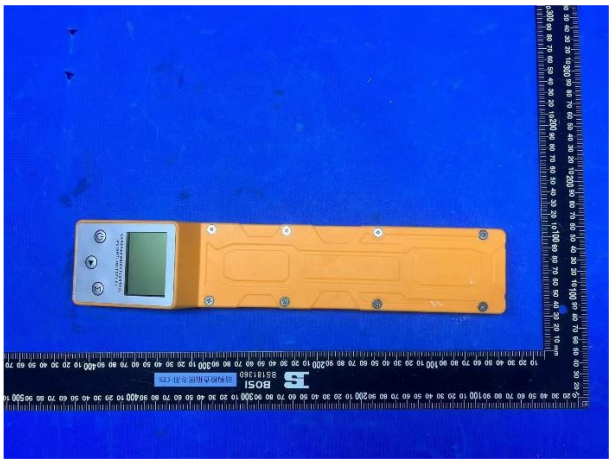
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1. Description of the test object

1.1 Picture(s)

Before test

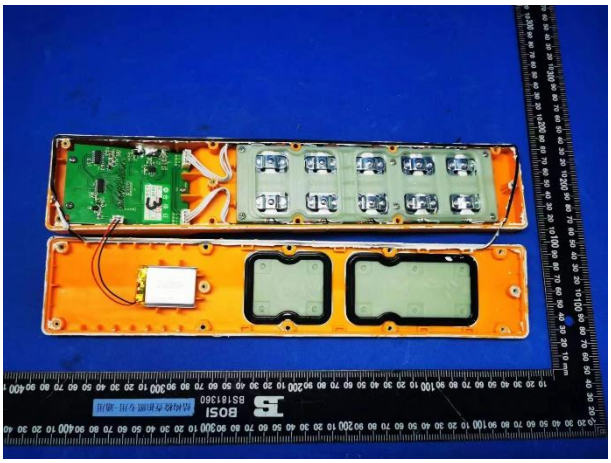


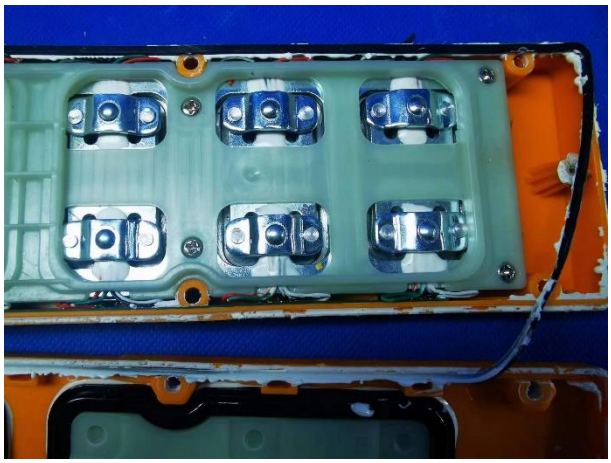




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After test







1.2 Function

Manufacturer’s specification for intended use:
Digital pressure gauge is intended for household use and indoor use.

1.3 Consideration of the foreseeable use

☐ Not applicable
☒ Covered through the applied standard
☐ Covered by the following comment*
☐ Covered by attached risk analysis

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1.4 Technical Data

Model	346661/04094
Rated Voltage	N/A
Rated Frequency	N/A
Rated input power	N/A
Protection Class	☐ Class I; ☐ Class II; ☒ Class III
Degree of Protection	IP44
Construction	☐ Stationary ☒ Portable ☐ Hand-held ☐ Open-frame ☐ Non detachable cord
Supply connection	☐ Permanent connection to fixed wiring ☒ Appliance inlet
Operation mode	☒ continuous operation; ☐ Intermittent operation; ☐ Short time operation;
Rated capacity (ml)	N/A
Weight (kg)	1,28 (approximate)
Others	N/A

2. Order

2.1 Date of Purchase Order, Customer's Reference

2023-02-08, Hangzhou Royal Craft Import & Export Co.,Ltd.

2.2 Test Sample(s)

- Reception date(s): 2023-02-08
- Location(s) of reception: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
- Condition of test sample(s): OK

2.3 Date(s) of Testing	2023-02-08 to 2023-04-13
2.4 Location(s) of Testing	TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch No. 1999, Duhui Road, Shanghai, 201108, P. R. China

2.5 Points of Non-Compliance or Exceptions of the Test Procedure

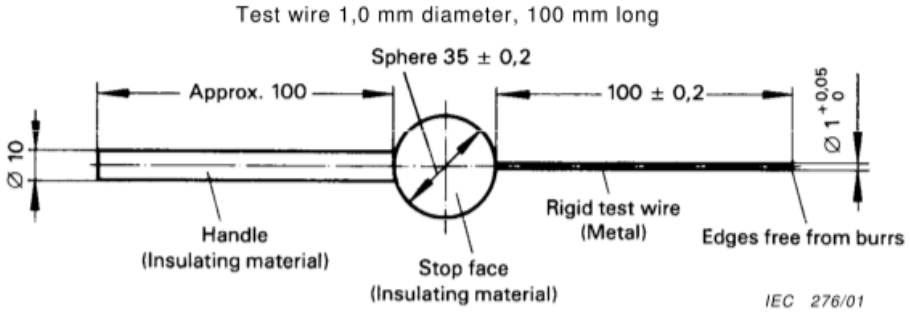
- None

3. Test Results

☒ Decision rule according to ILAC-G8:09/2019 clause 4.2.1 or IEC Guide 115:2021, clause 4.4.3, 4.5.1 was applied.

3.1 Positive Test Results

IP4X – Protection against soild foreign objects, dust-tight



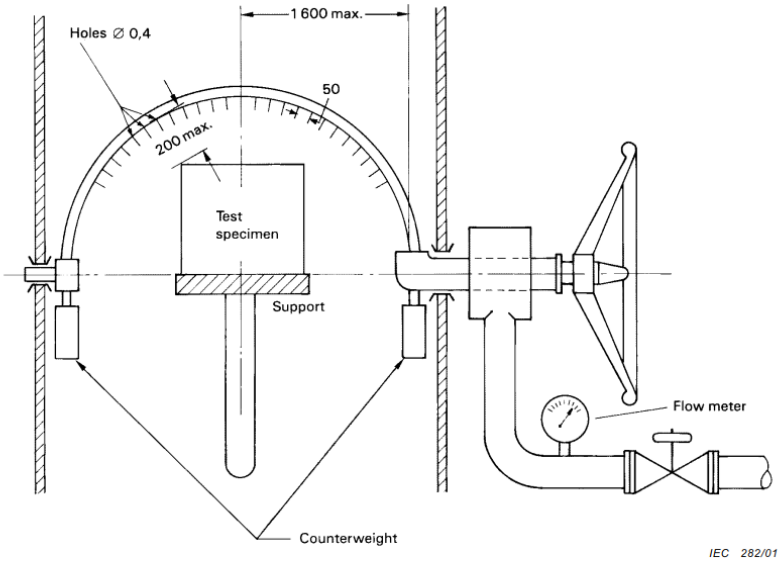
The object probe is pushed against any openings of the enclosure with the force specified in Table.
The protection is satisfactory if the full diameter of the probe does not pass through any opening.
For first characteristic numerals 3 and 4 the probes are intended to simulate foreign objects which may be spherical. Where an enclosure has an indirect or tortuous entry path and there is any doubt about ingress of a spherical object capable of motion, it may be necessary to examine drawings or to provide special access for the object probe to be applied with the specified force to the opening(s) where ingress has to be checked.

After test, the probe can not pass through any opening to touch electrical component, it is PASS

IPX4 – Protection against water

The test is made using the test devices described in Fig. 4 in accordance with the relevant product standard.

Conditions when using the test device as in figure 4 (oscillating tube):



Dimensions in millimetres

NOTE The range of holes is shown as for second characteristic numeral 3 (see 14.2.3 a)).

Figure 4 – Test device to verify protection against spraying and splashing water; second characteristic numerals 3 and 4 (oscillating tube)

The oscillating tube has spray holes over the whole 180° of the semicircle. The total flow rate is adjusted as specified in table 9 and is measured with a flow meter.

The tube is caused to oscillate through an angle of almost 360°, 180° on either side of the vertical, the time for one complete oscillation (2 × 360°) being about 12 s.

The duration of the test is 10 min.

If not specified otherwise in the relevant product standard, the support for the enclosure under test is perforated so as to avoid acting as a baffle and the enclosure is sprayed from every direction by oscillating the tube to the limit of its travel in each direction.

Table 9 – Total water flow rate q_V under IPX3 and IPX4 test conditions – Mean flow rate per hole q_{Vl} = 0,07 l/min

Tube radius *R* mm	Degree IPX3		Degree IPX4	
	Number of open holes *N*[1)]	Total water flow q_V l/min	Number of open holes *N*[1)]	Total water flow q_V l/min
200	8	0,56	12	0,84
400	16	1,1	25	1,8
600	25	1,8	37	2,6
800	33	2,3	50	3,5
1 000	41	2,9	62	4,3
1 200	50	3,5	75	5,3
1 400	58	4,1	87	6,1
1 600	67	4,7	100	7,0

1) Depending on the actual arrangement of the hole centres at the specified distance, the number of open holes *N* may be increased by 1.

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After the test, no water is found in internal compartment, it is PASS.

4. Remarks

There are little water stains on the charging terminals (The part that is exposed to the outside).

5. Summary

"The test specifications are met."

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Tested by: Haoyu LU
(Project handler)
printed name, function & signature

Approved by: Chen SHENG
(Designated reviewer)
printed name, function & signature



--- End of Report ---

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