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Laboratory of Applied Tests

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AB 665

TEST REPORT No. 182/BT/2025

Subject:	Testing the IP68 ingress protection rating of "QuSPOT BOX with RJ45, SIM, QuPS" enclosure.
Orderer:	Wireless Instruments Kościuszki 27, 52-116 Iwiny
Project No:	UP/BT-34444/OR1
Release date of the Report:	26.11.2025
Date and place of tests:	18-20.11.2025 at the KOMAG Institute of Mining Technology at Pszczynska 37 in Gliwice, Poland

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Reservation: Test report includes only the results, which are related to the tested object.

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Copies:
Wireless Instruments – 2 copies
KOMAG Laboratory of Applied Tests – 1 copy

1. Subject of testing

The enclosure, delivered by the Orderer, was the object of testing. The object was marked by the Laboratory with sample number 147/25. The tested object is presented in Fig. 1 and the nameplate in Fig 2.

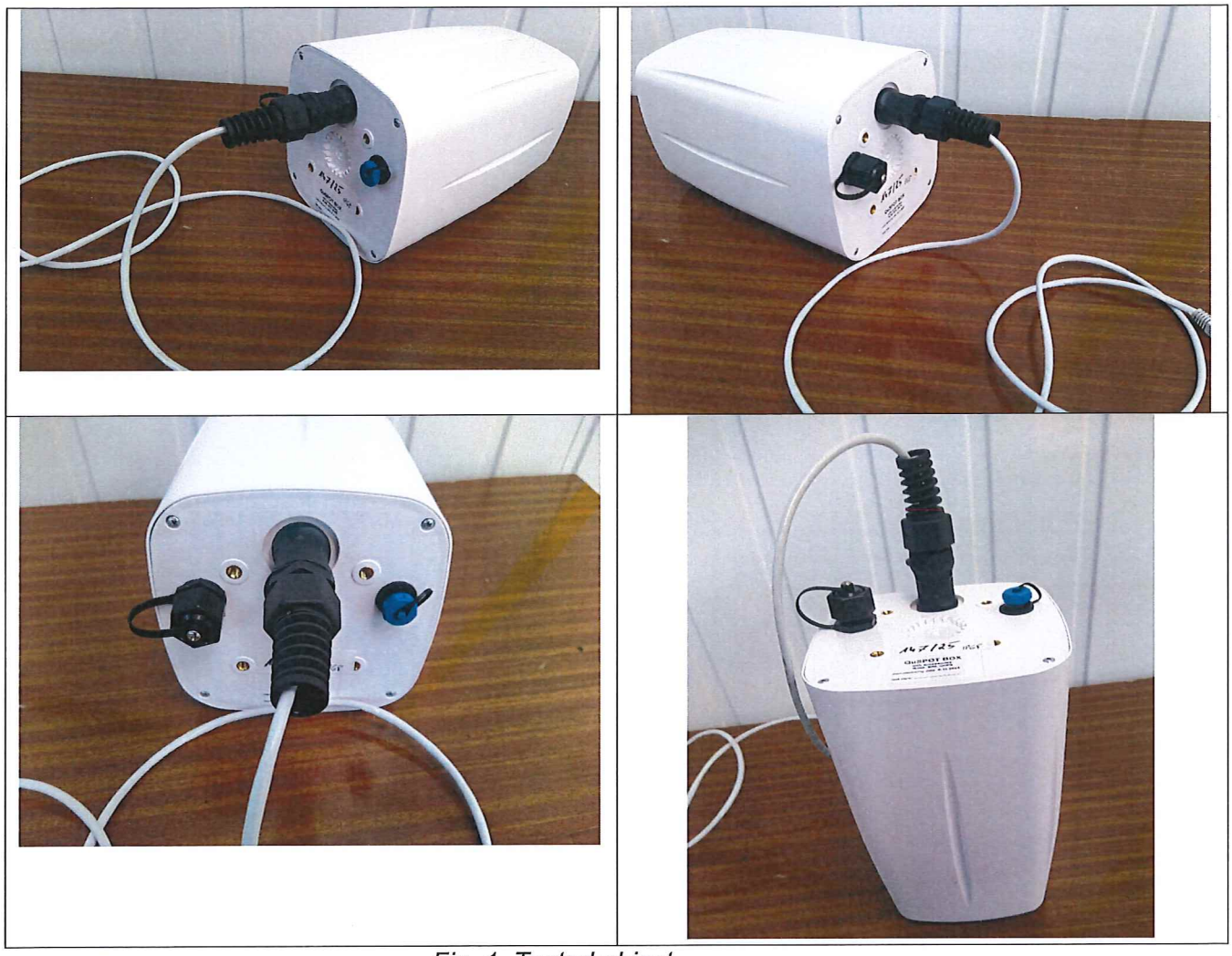

Fig. 1. Tested object

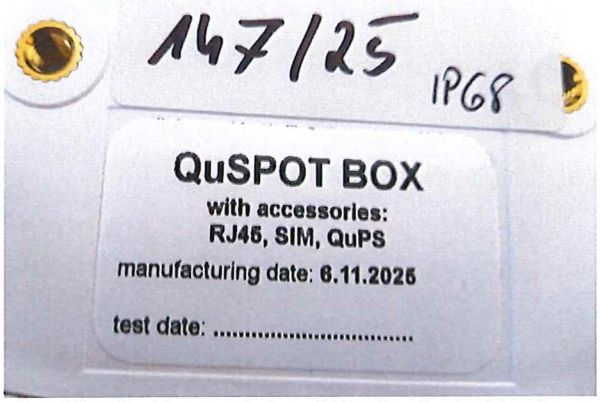

Fig. 2. Nameplate of the tested object

2. Scope of tests

The scope of tests included testing the IP68 ingress protection rating, according to the requirements of the *PN-EN 60529:2003+A2:2014-07 Degrees of protection provided by enclosures (IP Code) standard.*

Fig. 3. Torque values and tightening sequence

Torque settings for sockets (specified and tightened by the Orderer):

POE = 1,54 Nm.

SIM = 1,10 Nm.

QUPS = 0,37 Nm.

Torque and sequence for tightening the enclosure screws:

1->2->3->4 = 0,7 Nm.

3. List of instruments used for tests

The following instruments were used for tests:

Name of the instrument	*Id number*
Dust chamber with vacuum pomp	KiŚ5
Test stand for water ingress protection testing	KiŚ6
Torque screwdriver	S30

4. Test results

4.1. Testing the IP6X ingress protection rating

The test consisted in verification of protection level against ingress of dust (the first characteristic numeral IP6X). The test was carried out according to the requirements of items 13.4 and 13.6 of the PN-EN 60529:2003+A2:2014-07 standard.

Fig. 4. The tested object inside dust chamber (after the IP6X test)

After the test for the first characteristic numeral IP6X, no dust was found inside the tested enclosure.

Fig. 5. View inside the enclosure after the IP6X test

Test result for the first characteristic numeral IP6X of the tested enclosure is positive.

4.2. Testing the IPX8 ingress protection rating

The test consisted in verification of water ingress protection (second characteristic numeral IPX8). The test was carried out according to the requirements of item 14.2.8 of PN-EN 60529:2003+A2:2014-07 standard and following conditions agreed with the Orderer:

- immersion: 2 m below water surface (immersion simulated by placing the tested sample in a pressure enclosure under the water pressure of 0.2 bar),
- exposure time: 1 day (24 h),
- water temperature: (23 ± 3) °C.

Fig. 6. The tested object inside the tube (during the IP8X test)

After the test for the second characteristic numeral IPX8, no water was found inside the tested enclosure.

Fig. 7. View inside the enclosure after the IPX8 test

Test result for the second characteristic numeral IPX8 of the tested enclosure is positive.

On the basis of tests, protection level IP68 is confirmed.

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