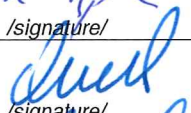
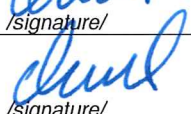


TEST REPORT No. 144/BT/2024

Subject:	Testing the IP68 ingress protection rating of QuMax XL / QuBox Octopus XL series enclosures
Orderer:	Wireless Instruments Kościuszki 27, 52-116 Iwiny
Project No:	UP/BT-33346/OR3
Release date of the Report:	07.10.2024
Date and place of tests:	30.09-04.10.2024 at the KOMAG Institute of Mining Technology at Pszczynska 37 in Gliwice, Poland

Project leader:	Arkadiusz Rybka, M. Sc. Eng. /name/	 /signature/
Authorized by:	Łukasz Orzech, Ph. D. Eng. /name/	 /signature/
Approved by:	Łukasz Orzech, Ph. D. Eng. /Laboratory Manager /	 /signature/

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

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Wireless Instruments – 2 copies

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 KOMAG Research Institute	Laboratory of Applied Tests	
	Test Report No. 144/BT/2024	page 2 / 3

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 170/24. The tested object is presented in Fig. 1 and the nameplate in Fig 2.



Fig. 1. Tested object sample no. 170/24

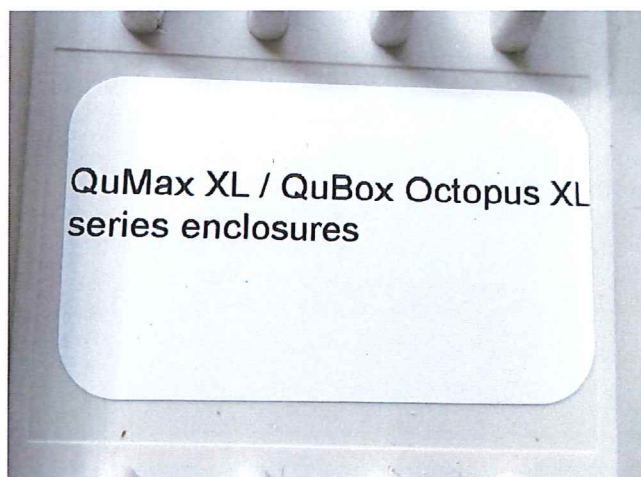


Fig. 2. Nameplate of the tested object

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*.

3. List of instruments used for tests

The following instruments were used for tests:

<i>Name of the instrument</i>	<i>Id number</i>
Dust chamber with vacuum pump	KiŚ5
Test stand for water ingress protection testing	KiŚ6

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 item 13.4 and 13.6 of the *PN-EN 60529:2003+A2:2014-07 Standard*.

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

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: $(23 \pm 3) ^\circ\text{C}$.

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

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

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

- END OF THE REPORT -