TEST REPORT

N° 136204-673713

DELIVERED TO : **PRUDHOMME S.A.**
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Subject : VERIFICATION OF DEGREES OF PROTECTION PROVIDED BY THE ENCLOSURE OF ONE BI-STABLE UNLOCKING MODULE

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Fontenay-aux-Roses, 2015/08/04

By the technical manager,

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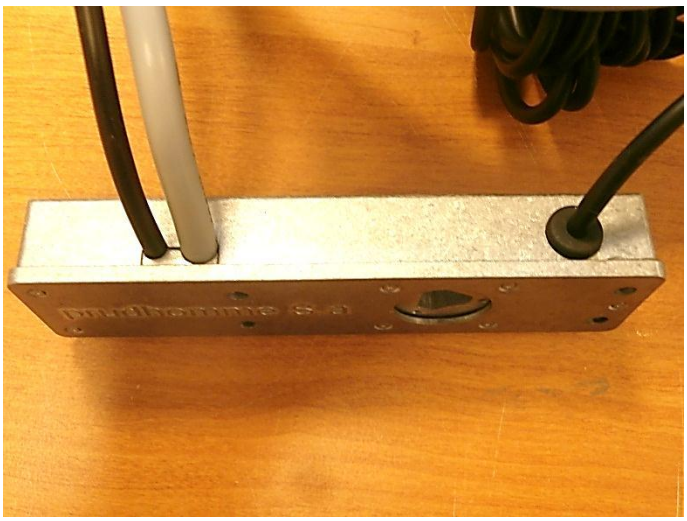
1. EQUIPMENT TESTED

The tests were carried out on the enclosure of two bi-stable unlocking modules from similar design provided by PRUDHOMME Company

Trademark	Reference	Serial N°
PRUDHOMME	MDV-21 bi-stable	Not specified

Photographs



2. TEST FACILITIES AND METROLOGICAL VALIDITY

- Dust chamber : FLONIC SCHLUMBERGER – D1086002 (Next verification 2015/08)
- Spray Nozzle : PTL Dr. GRABENHORST – F2000430 (Next verification 2015/08).
- Chronometer : QUANTUM – B2040110 (Next verification 2015/07).

3. TESTS PROCEDURES AND RESULTS

The equipment, according to the standards IEC 60529 edition 2013 and NF EN 60529/A2 edition 2014, was submitted to the following tests.

The opening of equipment being destructive, two modules were used to perform the tests.

One for IP5X test and the other for IPX4 test.

3.1. Test for the protection against access to hazardous parts and penetration of solid foreign bodies (IP4X)

The test was carried out according to the clauses 12 and 13 of quoted standards.

The object probe of (1.00 $\pm$ $^{0.05}$) mm diameter was pushed against any opening of the enclosure with a force of (1.0 ± 0.1) N.

Result

No penetration of object probe inside the sample was observed

Satisfactory result

3.2. Test for the protection against ingress of dust (IP5X)

The test was carried out according to the clauses 12 and 13 of quoted standards.

The equipment deemed category 2, was placed into the dust chamber (see photographs N°1 and 2).

The test duration was eight hours.

Result

No trace of talcum powder was observed inside the equipment.

Satisfactory result

3.3. Test for the protection against penetration of water (IPX4)

The test was carried out according to the clause 14.2.4 of quoted standards.

The equipment was sprayed in all possible direction by means of the spraying hand-held test device (see photographs N°3 and 4).

Before and after the test functional controls were carried out by our care.

This control was to change the state of switch by means of key and initialize it with electric pulse of 24VDC.

Test specifications

- Water flow rate : (10.0 ± 0.5) l/min
- Rotation equipment : 1 Rpm
- Test duration : 5 min

Result

The functional controls were satisfactory

No presence of water was observed inside the equipment.

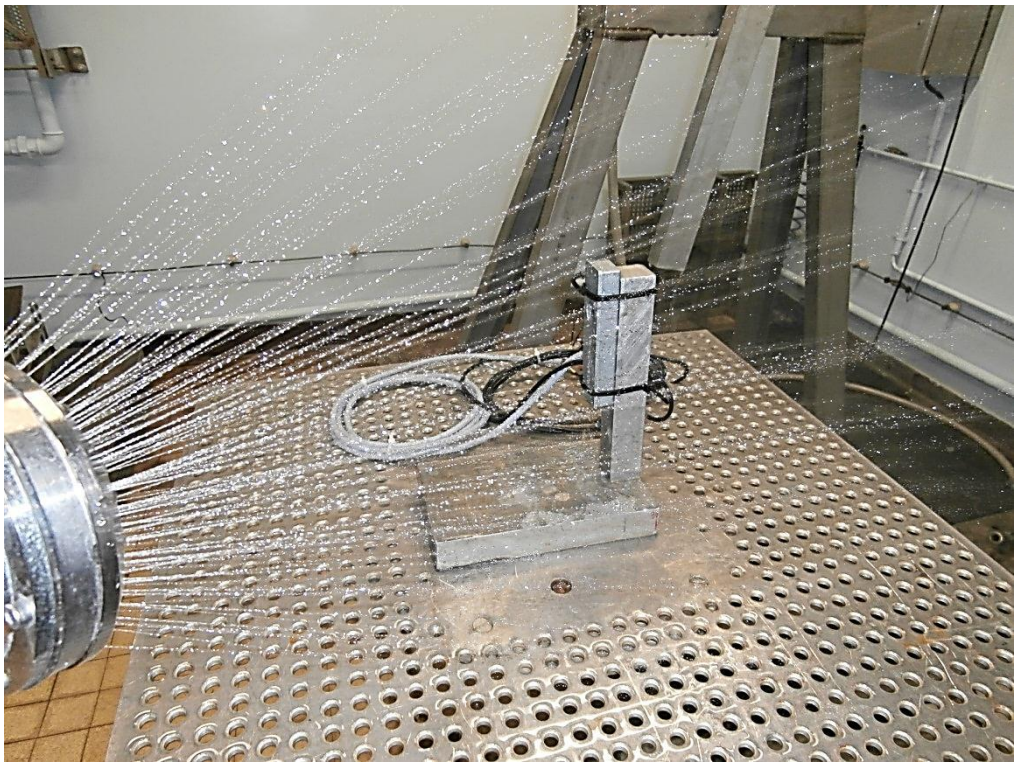
Satisfactory result

4. CONCLUSION

The equipment, presented on paragraph 1, satisfies the degrees of protection IP54

Photograph N°1: Equipment before test for the protection against ingress of dust (IP5X).

Photograph N°2: Equipment after test for the protection against ingress of dust (IP5X).



Photograph N°3: Equipment during test for the protection against penetration of water (IPX4).

Photograph N°4: Equipment during test for the protection against penetration of water (IPX4).