

Test Report




Nº B24-12-BG-01-e



Test of degree of protection IP56

TEST SAMPLE	WALL READER
MODEL	WRM 2000
REQUESTED BY	SALTO SYSTEMS, S.L.
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STANDARD	IEC 60529:1989+A1:1999
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* The present report refers only and exclusively to the sample tested and at the moment and conditions in which the measurements were made.
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ÍNDEX

1.	IDENTIFICATION AND CHARACTERISTICS OF TEST SAMPLE	3
2.	TEST FACILITIES ADDRESS	3
3.	TESTS PERFORMED. STANDARD	3
4.	PROTECTION AGAINST ACCESS TO HAZARDOUS AREAS, RESISTANCE AGAINST INGRESS OF FOREIGN PARTICLES AND DETRIMENTAL ENTRY OF WATER.....	3
4.1.	Protection against access to dangerous areas (IP5X)	3
4.2.	Protection against access of foreign particles (IP5X category 2)	4
4.3.	Protection against water (IPX6).....	4

1. IDENTIFICATION AND CHARACTERISTICS OF TEST SAMPLE

WALL READER

Model: i.Button WRM 2000

2. TEST FACILITIES ADDRESS

The performance of the tests were made in the TECNALIA's Laboratory allocated in Burtzeña-Barakaldo - Bizkaia- Spain.

3. TESTS PERFORMED. STANDARD

Tests for degree of protection against access to hazardous parts, against ingress of solid foreign objects and against water have been performed according to IEC 60529:1989+A1:1999 "Degrees of protection provided by enclosures (IP Code)".

A calculation of uncertainties for all measurements carried out is available.

4. PROTECTION AGAINST ACCESS TO HAZARDOUS AREAS, RESISTANCE AGAINST INGRESS OF FOREIGN PARTICLES AND DETRIMENTAL ENTRY OF WATER

Enclosures must provide a degree of protection **IP56**, according to the specifications.

4.1. Protection against access to dangerous areas (IP5X)

In order to meet the requirements according to the first characteristic figure 5, a test gauge of 1 mm Ø applied with a force of 1 N ± 10% shall not penetrate into the enclosure, and if penetrated the test gauge shall stop at a safe distance from hazardous parts.

Ambient conditions: 20°C – 65% HR – 1014 mbar.

RESULT. **CORRECT**: The test gauge does not penetrate into the enclosure.

4.2. Protection against access of foreign particles (IP5X category 2)

The test sample was placed inside a suitable test chamber containing a suspension of the required quantity (2 kg/m^3) of talcum powder (this powder must pass through a square-mesh screen of $50 \text{ }\mu\text{m}$ wire diameter and $75 \text{ }\mu\text{m}$ mesh size).

The test time was 8 hours.

Ambient conditions: 20°C – 65% HR – 1014 mbar.

RESULT: **CORRECT**. No powder deposit was observed inside the enclosure after the test.

4.3. Protection against water (IPX6)

Test is made by spraying the enclosure from all practicable directions for a test duration of 3 minutes and from a distance of 3 m. Applied water stream is as supplied from a standard nozzle (internal diameter 12,5 mm), with a water delivery rate of 100 l/min.

Ambient conditions: 20°C – 65% HR – 1005 mbar.

Water temperature: 20°C .

RESULT. **CORRECT**. No water entry is observed inside the sample.



Test sample

NOTE: The successfully tested degree of protection IP56, is also applicable over the following models.

i-Button: WRM 1000