

Test Report




Nº B24-12-BG-02-e



Test of degree of protection IP56

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| TEST SAMPLE | WALL READER |
| MODEL | WRM 9000 |
| REQUESTED BY | SALTO SYSTEMS, S.L. |
| MANUFACTURER | SALTO SYSTEMS, S.L. Arkotz 9 Pol. Lanbarren 20180 OIARTZUN (Gipuzkoa) |
| STANDARD | IEC 60529:1989+A1:1999 |
| RECEPTION DATE | 8th May 2012 |
| TEST DATE | 9th May 2012 |
| ISSUE DATE | 17th May 2012 |

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| Test Chief | Head of Electrical Equipment Laboratory |
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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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1. IDENTIFICATION AND CHARACTERISTICS OF TEST SAMPLE

WALL READER

Model: Proximity WRM 9000

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.

Proximity: WRM 8000; WRM 7000; and WRM H000