

# Test Report

## Nº B24-14-DE-01E v2

(This v2 cancels and replaces B24-14-DE-01E report)  
(New models are included)



### Degree of protection test IP66

<b>TEST SAMPLE</b>	WALL READERS
<b>MODEL</b>	WRDi0E4, WRDi0A4
<b>REQUESTED BY</b>	SALTO SYSTEMS, S.L.
<b>MANUFACTURER</b>	SALTO SYSTEMS, S.L. Arkotz 9 Pol. Lanbarren 20180 OIARTZUN (Gipuzkoa)
<b>STANDARD</b>	IEC 60529:1989+A1:1999+A2:2013
<b>RECEPTION DATE</b>	2 <sup>nd</sup> December 2014
<b>TEST DATE</b>	2 <sup>nd</sup> to 4 <sup>th</sup> December 2014
<b>ISSUE DATE</b>	5 <sup>th</sup> October 2015

Test Chief	Head of Electrical Equipment Laboratory
Endika Mendiola	Luis Martínez

\* The present report refers only and exclusively to the sample tested and at the moment and conditions in which the measurements were made.  
\* The partial reproduction of the present document is categorically forbidden without the permission in writing of TECNALIA Research & Innovation

## 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 (IP66) .....	3
4.1.	Protection against access to dangerous areas (IP6X).....	3
4.2.	Protection against access of foreign particles (IP6X) .....	4
4.3.	Protection against water (IPX6) .....	4
5.	CONCLUSIONS.....	4

## 1. IDENTIFICATION AND CHARACTERISTICS OF TEST SAMPLE

WALL READERS

Model: WRDi0E4

## 2. TEST FACILITIES ADDRESS

The performance of the tests were made in the TECNALIA's Laboratory allocated in ZAMUDIO 413 (Bizkaia).

## 3. TESTS PERFORMED. STANDARD

Tests for degree of protection IP66 against access to hazardous parts, against ingress of solid foreign objects and against water have been performed according to IEC 60529:1989+A1:1999+A2:2013 "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 (IP66)

### 4.1. Protection against access to dangerous areas (IP6X)

To comply with the conditions of the first characteristic numeral 6 the access probe of 1 mm Ø applied with a force of 1 N ± 10% shall not penetrate into the enclosure.

Ambient air conditions: 19 °C – 49% HR – 1017 mbar.

RESULT. **CORRECT:** The access probe does not penetrate into the enclosure.

#### 4.2. Protection against access of foreign particles (IP6X)

The test sample was placed inside a suitable test chamber containing a suspension of the required quantity ( $2 \text{ kg/m}^3$ ) of talcum powder (this powder must pass through a square-mesh screen of  $50 \mu\text{m}$  wire diameter and  $75 \mu\text{m}$  mesh size). The test was performed with sub-pressure of 20 mbar, the duration of the test is 8h.

The test time was 8 hours for each test sample.

Atmosphere air conditions: 19 °C – 49% HR – 1017 mbar.

RESULT: **CORRECT**. No powder deposit was observed inside the sample 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: 19 °C – 49% HR – 1017 mbar.

Water temperature: 16 °C.

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

### 5. CONCLUSIONS

In view of the results performed to the sample unit, and in the test conditions expressed in the present report, the tested sample of:

WALL READERS

Model: WRDi0E4

Is **CONFORMS** to IEC 60529:1989 + A1:1999 + A2:2013 “Degrees of protection provided by enclosures (IP Code)”. (IP66).



**NOTE: From the detailed study of each manufacturing range, the results obtained over the test sample are also applicable to the following models:**

WRDi0E4cK, WRDi0A4, WRDi0A4cK

Where “i” is the technology variable and “c” the colour variable.



**Test sample IP6X (WRDi0E4)**



**Test sample IPX6 (WRDi0E4)**



WRDi0E4cK



WRDi0A4cK





**WRDi0A4**