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## TEST REPORT

### No. 284a/14

**Client** ROLEC Gehäuse-Systeme GmbH  
Mr. Volker Borchering  
Kreuzbreite 2  
D – 31737 Rinteln

**Date of order** 2014-09-02

**Date of receiving the specimens** 2014-09-03

**Period of testing** 2014-09-03 to 2014-09-08

### 1 TEST OBJECT

#### 1.1 Designation / Number of pieces

Enclosure of series inoCASE as follows:

- 1.1.1 mini A2, Type IC093 / 2 pieces
- 1.1.2 A2, Type IC110 / 2 pieces
- 1.1.3 mini A4, Typ ICC090 / 2 pieces
- 1.1.4 A4, Type ICC132 / 2 pieces

- one enclosure of each type with suction port for the tests in accordance with sub clause 3.2
- one enclosure of each type without suction port for the tests in accordance with sub clause 3.3 and 3.4

The cover of the enclosure has to be screwed with a torque (approx. 3.0 Nm). *given by the client*

**1.2 Producer** see Client

### 2 TASK

Testing to determine the degrees of protection IP Code 66 and IP Code 67 in accordance with  
DIN EN 60529 : 2000–09 (VDE 0470–1)

### 3 TEST PROGRAMME

#### 3.1 Initial visual inspection

#### 3.2 Testing to determine the degree of protection against foreign objects/protection against access IP Code 6X in accordance with DIN EN 60529

##### 3.2.1 Protection against touching dangerous parts

*Test is cancelled because no relevant openings are existing.*

##### 3.2.2 Protection against the ingress of solid foreign bodies (dust-tight)

Dust chamber in accordance with figure 2 of DIN EN 60529  
Test conditions in accordance with DIN EN 60529, sub-clause 13.4  
Test dust in accordance with DIN EN 60529, sub-clause 13.4 (talcum powder)

- visual inspection with regard to entered dust

Test criterion No dust shall be visible in the enclosure.

#### 3.3 Testing to determine the degree of protection against strong jet of water IP Code X6 in accordance with DIN EN 60529 , Chapter 14.2.6 and table 8

- Test was done in 4 runs.

Jet nozzle 12,5 mm Ø in accordance with figure 6 of DIN EN 60529  
Exposition of specimen distance jet nozzle / surface of enclosure 2.5 to 3 m;  
horizontal on turntable, jet affects the surface  
of enclosure from all possible directions  
Flow rate of water 100 l / min  $\pm$  5 %  
Water pressure  $\approx$  100 kPa  
Test duration 1 min per m<sup>2</sup> of splattered surface  
overall test duration 3 min

- visual inspection with regard to entered water

Test criterion No water shall be visible in the enclosure.

#### 3.4 Testing to determine the degree of protection IP Code X7 against temporary dipping in accordance with DIN EN 60529 , Chapter 14.2.7 and table 8

- Test was done in 2 runs.

Dipping basin water level over the enclosure 1 m from lower edge  
Exposition of test object immersed in general purpose  
Water temperature difference to sample temperature no more than 5 K  
Test duration 30 min

- visual inspection with regard to entered water

Test criterion No water shall be visible in the enclosure.

## **4 RESULTS**

### **4.1 Initial visual inspection**

Damages or defects are not visible.

### **4.2 IP Code 6X**

No dust is visible inside the enclosures.  
No changes are visible.

### **4.3 IP Code X6**

No water is visible inside the enclosures.  
No changes are visible.

### **4.4 IP Code X7**

No water is visible inside the enclosures.  
No changes are visible.

## **5 EVALUATION**

The specimens in accordance with sub-clause 1.1 have passed the tests to determine the degree of protection IP Code 66 and IP Code 67 in accordance with DIN EN 60529 : 2000-09 (VDE 0470-1).

Leipzig, 2014-09-08

**Laboratory for Environmental  
Testing and Material Testing**

Annex Sheet 1 and 2

Dr.-Ing. Frank Eler  
Laboratory Manager



Figure 1 Exposition IP Code 6X



Figure 2 Exposition IP Code X6, example



Figure 3 Exposition IP Code X7, example