

## TEST REPORT

No. 126 / 07

<b>Client</b>	ROLEC Gehäuse-Systeme GmbH Management QM/QS Mr. Volker Borchering Kreuzbreite 2 D – 31737 Rinteln
<b>Date of order</b>	2007-05-07
<b>Date of receiving the specimens</b>	2007-05-09
<b>Period of testing</b>	2007-05-14 to 2007-05-16

### 1 TEST OBJECT

#### 1.1 Designation / Number of pieces

Enclosure of series handCASE

- |       |  |            |
|-------|--|------------|
| 1.1.1 | type HCF 080<br>Mat.-No. 270.080.000<br>labelling No. 1 to 4 | / 4 pieces |
| 1.1.2 | type HCF 100<br>Mat.-No. 270.100.000<br>labelling No. 1 to 4 | / 4 pieces |
| 1.1.3 | type HC 100<br>Mat.-No. 271.100.000<br>labelling No. 1 to 3  | / 3 pieces |

1.2 **Producer** see Client

### 2 TASK

- 2.1 Test to determine the degrees of protection IP Code 6X, IP Code X6 and IP Code X7 in accordance with DIN EN 60529 : 2000-09 (VDE 0470-1)
- 2.2 Test to determine the resistance against free fall in accordance with DIN EN 60068-2-32 : 1995-03, test Ed, procedure 1

### **3 TEST PROGRAMME**

#### **3.1 Initial Visual inspection**

#### **3.2 Testing to determine the degree of protection IP Code 6X in accordance with DIN EN 60529 (VDE 0470-1)**

specimens No. 1 // type HCF 080, No. 1 // type HCF 100 and No. 1 // type HC 100

##### **3.2.1 Protection against touching dangerous parts**

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

##### **3.2.2 Testing to determine the protection against the ingress of solid foreign bodies (dust protected)**

Dust chamber	in accordance with DIN EN 60529, figure 2
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)

Test criterion no dust shall be visible in the enclosure

- visual inspection with regard to entered dust

#### **3.3 Testing to determine the degree of protection against strong jet of water – IP Code X6 – in accordance with DIN EN 60529 (VDE 0470-1), Abschnitt 14.2.6 and table 8**

specimens No. 2 // type HCF 080, No. 2 // type HCF 100 and No. 2 // type HC 100

Jet nozzle 12,5 mm Ø in accordance with figure 6 of DIN EN 60529

Exposition of specimens distance jet nozzle / surface of enclosure 2.5 to 3 m; jet affects on the surface of enclosure from all possible directions

Flow rate of water 100 l / min ± 5 %

Water pressuer ≈ 100 kPa

Test duration 1 min per m<sup>2</sup> of splattered surface  
overall test duration 3 min

Test criterion in accordance with DIN EN 60529, sub-clause 14.3

- visual inspection with regard to entered water

### 3.4 Testing to determine the degree of protection – IP Code X7 – against temporary dipping in accordance with DIN EN 60529 (VDE 0470–1), Abschnitt 14.2.7 and Tabelle 8

specimens No. 3 // type HCF 080, No. 3 // type HCF 100 and No. 3 // type HC 100

Dipping basin water level over the enclosure 1 m from lower edge

Exposition of test object immersed

Water temperature difference of sample temperature no more than 5 K

Test duration 30 min

Test criterion see DIN EN 60529, sub-clause 14.3

- visual inspection with regard to entered water

### 3.5 Load by free fall in accordance with DIN EN 60068–2–32 : 1995–03, test Ed, procedure 1

specimen No. 4 // type HCF 080 and No. 4 // type HCF 100

Test surface concrete floor

Fall height distance between the lowest point of hanging specimen and the test surface

severity 1500 mm

Initial fall position perpendicular, narrow side downward

number of fall tests 2

- visual inspection
- function check connecting with test device supplied by the client

Test criterion 4 pieces LED's "Battery 1" to "Battery 4" are green illuminated

## 4 RESULTS

### 4.1 Initial Visual inspection

Damages or defects are not visible.

### 4.2 IP Code 6X

No dust is entered inside the enclosure.

#### 4.3 IP Code X6

No water is entered inside the enclosure.

#### 4.4 IP Code X7

No water is entered inside the enclosure.

#### 4.5 Free Fall

The function is given.

### 5 EVALUATION

The specimens No. 1 to 3 in accordance with sub-clause 1.1.1 to 1.1.3 have passed the tests to determine the degrees of protection IP Code 6X, IP Code X6 and IP Code X7 in accordance with DIN EN 60529 : 2000-09 (VDE 0470-1).

The specimens No. 4 in accordance with sub-clause 1.1.1 and 1.1.2 have passed the tests to determine the resistance against free fall in accordance with DIN EN 60068-2-32 : 1995-03, test Ed, procedure 1.

Leipzig, 2007-05-16

**Laboratory for Environmental  
Testing and Testing Materials**

Annex Sheet 1/1

Dr.-Ing. Frank Eler  
Laboratory Manager



figure 1 IP 6X



figure 2 IP X6



figure 3 IP X7