

# TEMPORARY IMMERSION AND DUST TEST REPORT

Company : GradConn Ltd.  
 Address : No. 139 Wuhan Rd., Longtan Township, Taoyuan County, Taiwan  
 Sample Name : Refer to see page 2  
 Date Received : OCT 14, 2015  
 Date Tested : OCT 14, 2015 ~ OCT 19, 2015

## TESTING LABORATORY IS ACCREDITED BY:

IEC/IECQ 17025 certificate of independent test laboratory approval

Certificate No. : 1.72.0031

ISO 17025 accredited in respect of laboratory is approved by TAF

Certificate No. : L0835-140329

ISO 9001 certificate is approved by TUV CERT certification body of TUV NORD Cert GmbH

## WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

	Name	Signature	Date
Test Engineer	Quan Yang	<i>Quan Yang</i>	Oct 20, 2015
Manager	Injel Chen	<i>Injel Chen</i>	Oct 20, 2015

## **NOTE :**

1. This report will be invalid if reproduced in part or altered in any way.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used otherwise.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.



## TABLE OF CONTENTS

### 1. GENERAL INFORMATION

1.1 DESCRIPTION OF UNIT .....	2
1.2 UNIT OPERATING CONDITION .....	2

### 2. TEMPORARY IMMERSION TEST

2.1 TEST EQUIPMENT .....	3
2.2 LABORATORY AMBIENCE CONDITION .....	3
2.3 REFERENCE DOCUMENT .....	3
2.4 TEST CONDITION .....	3
2.5 SUMMARY OF TEST .....	3

### 3. DUST TEST

3.1 TEST EQUIPMENT .....	4
3.2 LABORATORY AMBIENCE CONDITION .....	4
3.3 REFERENCE DOCUMENT .....	4
3.4 TEST CONDITION .....	4
3.5 SUMMARY OF TEST .....	4

<b>ATTACHMENTS .....</b>	<b>5</b>
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## 1. GENERAL INFORMATION

### 1.1 DESCRIPTION OF UNIT

Manufacturer : GradConn Ltd.

Sample name and Sample quantity :

Sample name	Sample quantity
RFCT-BNC001-F74	1 unit
RFCT-SMA002-F78	1 unit
RFCT-SMA003-F78	1 unit
RFCT-SMA008-F78	1 unit
RFCT-TNC002-F74	1 unit
RFCT-TNC004-F78	1 unit

### 1.2 UNIT OPERATING CONDITION

None

## 2. TEMPORARY IMMERSION TEST

### 2.1 TEST EQUIPMENT

Model	Calibration Date
ETL-L180 Water Leakage Test Chamber	NCR

### 2.2 LABORATORY AMBIENCE CONDITION

Temperature : 25 °C ± 10 °C

Relative humidity : 50 % ± 25 % (RH)

### 2.3 REFERENCE DOCUMENT

This test method refers to IEC/EN 60529 (2013) IPX7 temporary immersion Test Protected.

### 2.4 TEST CONDITION

Units are non-operating.

The water temperature is +25 °C

The lowest point of unit is locating 1000mm below surface of the water.

The duration of test is 30 minutes

### 2.5 SUMMARY OF TEST

After testing, visual inspection showed no water permeated into unit.

### 3. DUST TEST

#### 3.1 TEST EQUIPMENT

Test Equipment	Serial Number	Calibration Date
Vötsch- VDT 1000A	59566059640010	DEC 13, 2014

#### 3.2 LABORATORY AMBIENCE CONDITION

Temperature : 25 °C ± 10 °C

Relative humidity : 50 % ± 25 % (RH)

#### 3.3 REFERENCE DOCUMENT

The test refers to IEC60529 (2013) IP6X Dust Test Protected.

#### 3.4 TEST CONDITION

Units are non-operating.

Dust material : Talcum powder (100 % dry fine)

Particle size	Amount (%)
< 5 µm (Diameter)	42.3 1% ± 5
5~10 µm (Diameter)	35.85 % ± 5
10~20 µm (Diameter)	21.15 % ± 5
20~40 µm (Diameter)	0.69 % ± 5
> 40 µm (Diameter)	0 %

Amount of talcum powder : 2 kg/m<sup>3</sup> (chamber volume)

Dust density : 2.03 g/cm<sup>3</sup>

Depression level : 20 mbar

Air direction : Vertically to achieve slowest possible downward settlement

Duration of exposure : 8 hours

#### 3.5 SUMMARY OF TEST

After testing, visual inspection showed no dust particle permeated into unit.

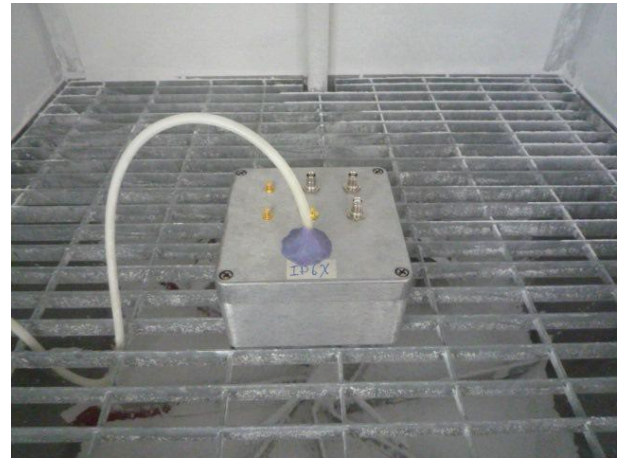
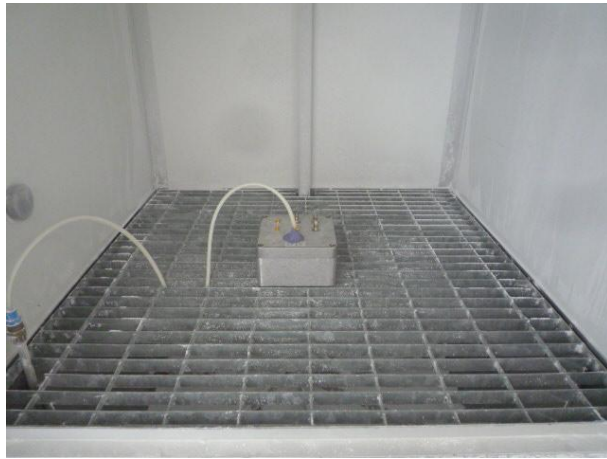
**Attachment 1 : Photo of temporary immersion test setup**





## Attachment 2 : Photo of dust test setup

Setup



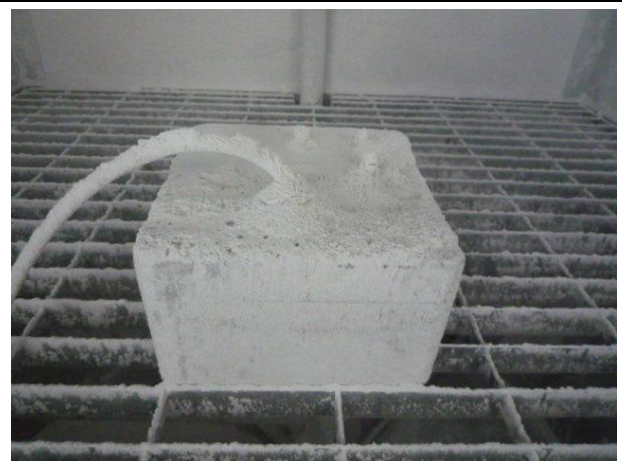
Setup



Depression level

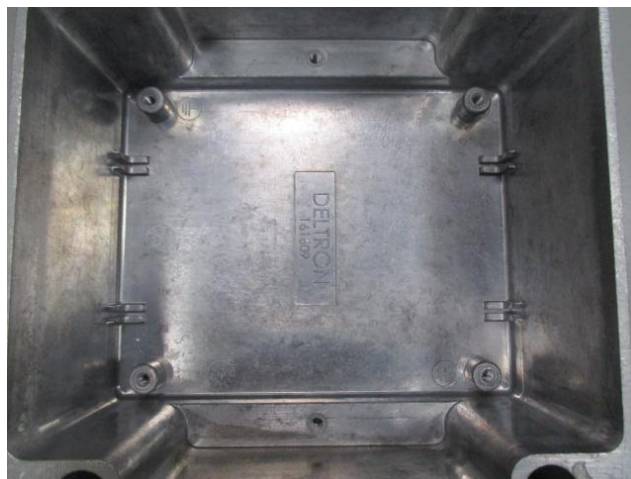
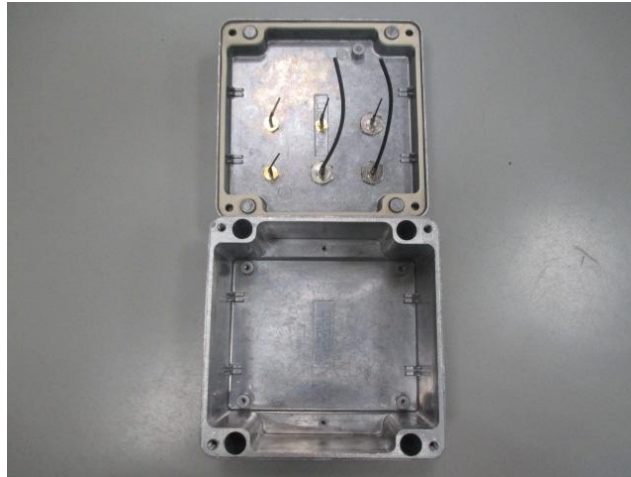


After testing



**Attachment 3 : Photo of unit after temporary immersion test**

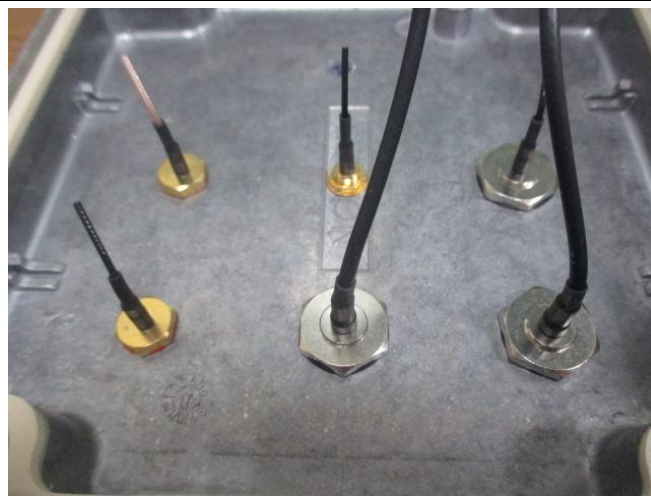
**No water permeated into unit**





**Attachment 4 : Photo of unit after dust test**

**No dust particle permeated into unit**



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