





| <b>TEST REPORT</b><br><b>IEC 60529</b><br><b>Degrees of protection provided by enclosures (IP code)</b>   |   |
|---|---|
| Report reference No..... :  | R-Nr. 15-IK-00XX.U0x  |
| Tested by..... :<br>(printed name and signature)  | M. Huber  |
| Approved by..... :<br>(printed name and signature)  | R. Egger  |
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|   |   |
| Applicant's name .....  | <b>Neutrik AG</b>   |
| Address .....   | <b>Im alten Riet 143<br/>9494 Schaan, LIECHTENSTEIN</b>   |
| <b>Test specification:</b>  |   |
| Standard .....  | IEC 60529:13 (edition 2.2)  |
| Test procedure .....  | Expert's test according to EN 60-1XX  |
| Non-standard test method..... :   |   |
| Test Report Form No..... :  | IEC60529  |
| Test Report Form(s) Originator .....  | <b>Electrosuisse</b>  |
| Master TRF .....  | Dated 2014-11   |
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| Test item description .....   |   |
| Trade Mark..... :   | <b>Neutrik</b>  |
| Manufacturer .....  | <b>Neutrik AG<br/>Im alten Riet 143, 9494 Schaan, LIECHTENSTEIN</b>   |
| Model/Type reference .....  | <b>NE8FDX-P6-W, NE8FDX-Y6-W</b>   |
| Ratings .....   | ---   |

**Test items particulars:**

Degree of protection :

IP x5

**Test case verdicts**

Test case does not apply to the test object :

N/A

Test item does meet the requirement :

Pass

Test item does not meet the requirement :

Fail

Test case not checked :

**Testing**

Date of receipt of test item :

2016-03-01

Date(s) of performance of test :

2016-03-01

Sample provides protection of IP

Copy of marking plate

| IEC 60529 |  |        |         |
|-----------|--|--------|---------|
| Cl.       | Requirement  | Result | Verdict |
| 5         | DEGREE OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS AND AGAINST SOLID FOREIGN OBJECTS |        |         |
|           | Test condition see Clause 12+13  |        |         |

|   |   |  |  |
|---|---|--|--|
| 6 | DEGREE OF PROTECTION AGAINST INGRESS OF WATER |  |  |
|   | Test condition see Clause 14                  |  |  |

|    |  |  |     |
|----|--|--|-----|
| 10 | MARKING  |  |     |
|    | The requirements for marking shall be specified in the relevant product standard.                              |  |     |
|    | Where appropriate, such a standard should also specify the method of marking which is to be used when:         |  |     |
|    | - one part of an enclosure has a different degree of protection to that of another part of the same enclosure; |  | N/A |
|    | - the mounting position has an influence on the degree of protection;  |  | N/A |
|    | - the maximum immersion depth and time are indicated.  |  | N/A |

|      |   |   |  |
|------|---|---|--|
| 12   | TEST FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL |   |  |
| 12.2 | Test condition:   |   |  |
| 12.2 | IP 0X: non protection: no test request  |   |  |
| 12.2 | Acceptance conditions for first characteristic numerals   |   |  |
|      | Sample no.  | 1 |  |

| IEC 60529 |   |             |         |
|-----------|---|-------------|---------|
| Cl.       | Requirement   | Result      | Verdict |
|           | IP 1X: Against solid foreign objects of 50mm diameter and greater.<br>The sphere of 50mm diameter shall not fully penetrate and adequate clearance shall be kept. Force 50N | not checked | --      |
|           | IP 2X: The jointed test finger of 12mm diameter, 80mm length, shall have adequate clearance from hazardous parts. Force 10N   | not checked | --      |
|           | IP 3X: Against solid foreign objects of 2.5mm diameter and greater.<br>The test rode of 2.5mm diameter shall not penetrate. Force 3N  | not checked | --      |
|           | IP 4X: Against solid foreign objects of 1mm diameter and greater.<br>The object probe of 1.0mm diameter shall not penetrate. Force 1N                                       | not checked | --      |
|           | IP 5X: Against solid foreign objects of 1mm diameter and greater.<br>The object probe of 1.0mm diameter shall not penetrate. Force 1N                                       | not checked | --      |
|           | IP 6X: Against solid foreign objects of 1mm diameter and greater.<br>The object probe of 1.0mm diameter shall not penetrate. Force 1N                                       | not checked | --      |

|      |  |             |    |
|------|--|-------------|----|
| 13   | TEST FOR PROTECTION AGAINST SOLID FOREIGN OBJECTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL  |             |    |
| 13.2 | Test condition:  |             |    |
| 13.1 | IP 0X: non protection: no test request   |             |    |
| 13.3 | Acceptance conditions for first characteristic numerals.   |             |    |
|      | IP 1X: Against solid foreign objects of 50mm diameter and greater.<br>The sphere of 50mm diameter shall not fully penetrate. Force 50N       | not checked | -- |
|      | IP2X: Against solid foreign objects of 12.5mm diameter<br>The sphere of 12.5mm diameter shall not fully penetrate. Force 30N                 | not checked | -- |
|      | IP 3X: Against solid foreign objects of 2.5mm diameter and greater.<br>The test rode of 2.5mm diameter shall not penetrate at all. Force 3N  | not checked | -- |
|      | IP 4X: Against solid foreign objects of 1mm diameter and greater.<br>The object probe of 1.0mm diameter shall not penetrate at all. Force 1N | not checked | -- |

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|-----------|---|-------------|---------|
| Cl.       | Requirement   | Result      | Verdict |
| 13.5.2    | IP 5X: Dust protected.<br>Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety. | not checked | --      |
|           | - with or without depression.   | not checked | --      |
|           | - depression max.: (max. 20mbar)  | not checked | --      |
|           | - test time : (time: <8h, when 80x volume)  | not checked | --      |
| 13.6.2    | IP 6X: Against ingress of solid foreign object:<br>dust-tight   | not checked | --      |
|           | - depression max.: (max. 20mbar)  | not checked | --      |
|           | - test time : (time: <8h, when 80x volume)  | not checked | --      |

|        |   |        |      |
|--------|---|--------|------|
| 14     | TEST FOR PROTECTION AGAINST WATER INDICATED BY THE SECOND CHARACTERISTIC NUMERAL  |        |      |
| 14.1   | IP 0X: non protection: no test request  |        |      |
| 14.2   | Test condition:   |        |      |
|        | Ambient temperature:  | 20.5°C | Pass |
|        | Water temperature:  | 21.2°C | Pass |
| 14.2.1 | IP X1: Vertically falling drops shall have no harmful effects.  |        | Pass |
| 14.2.2 | IP X2: Vertically falling drops shall have no harmful effects. Enclosure ist tested of four fixed positions of tilt. These positions are 15° on either side of the vertical in two mutually perpendicular planes. |        | Pass |
| 14.2.3 | IP X3: Water sprayed at an angle of 60° on either side of the vertical shall have no harmful effect.  |        | Pass |
| 14.2.4 | IP X4: Water splashed against the enclosure from any direction shall have no harmful effect.  |        | Pass |
| 14.2.5 | IP X5: Water projected in jets against the enclosure from any direction shall have no harmful effect.   |        | Pass |
| 14.2.6 | IP X6: Water projected in powerful jets against the enclosure from any direction shall have no harmful effect.  |        | N/A  |
| 14.2.7 | IP X7: Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time:                       |        | N/A  |

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|-----------|--|-----------------------------|---------|
| Cl.       | Requirement  | Result                      | Verdict |
| 14.2.8    | IP X8: Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under conditions of which shall be agreed between manufacturer and user but which are more severe than for numeral 7 |                             | N/A     |
| 14.2.9    | IP X9: Water of 80 °C ± 5 °C projected in high pressure jets against the enclosure shall have no harmful effect.   |                             | N/A     |
| 14.3      | Acceptance conditions:   |                             |         |
|           | dielectric strength test   |                             | N/A     |
|           | In general, if any water has entered, it shall not:  |                             |         |
|           | - be sufficient to interfere with correct operation of the equipment or impair safety  | No water inside the housing | Pass    |
|           | - deposit on insulation parts where it could lead to tracking along the creepage distances   |                             | Pass    |
|           | - reach live parts or windings not designed to operate when wet  |                             | Pass    |
|           | - accumulate near the cable end or enter the cable if any  |                             | Pass    |

|      |   |  |     |
|------|---|--|-----|
| 15   | TEST FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS INDICATED BY THE OPTIONAL LETTERS (acc. to clauses 7,8) |  |     |
| 15.3 | IP XXA: Against access to hazardous parts with: the back of the hand  |  | N/A |
|      | IP XXB: Against access to hazardous parts with: a finger  |  | N/A |
|      | IP XXC: Against access to hazardous parts with: a tool  |  | N/A |
|      | IP XXD: Against access to hazardous parts with: a wire  |  | N/A |
|      | IP XXXH: Supplementary information specific to: High-voltage apparatus  |  | N/A |
|      | IP XXXM: Supplementary information specific to: Motion during water test                                      |  | N/A |
|      | IP XXXS: Supplementary information specific to: Stationary during water test                                  |  | N/A |
|      | IP XXXW: Supplementary information specific to: Weather conditions  |  | N/A |

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Photo-documentation

IP test's

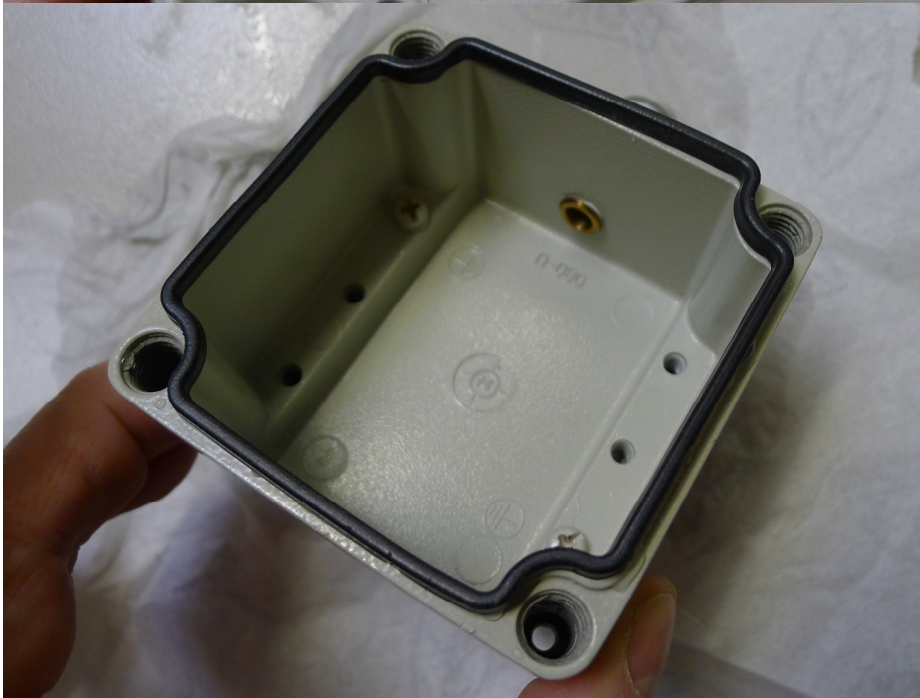
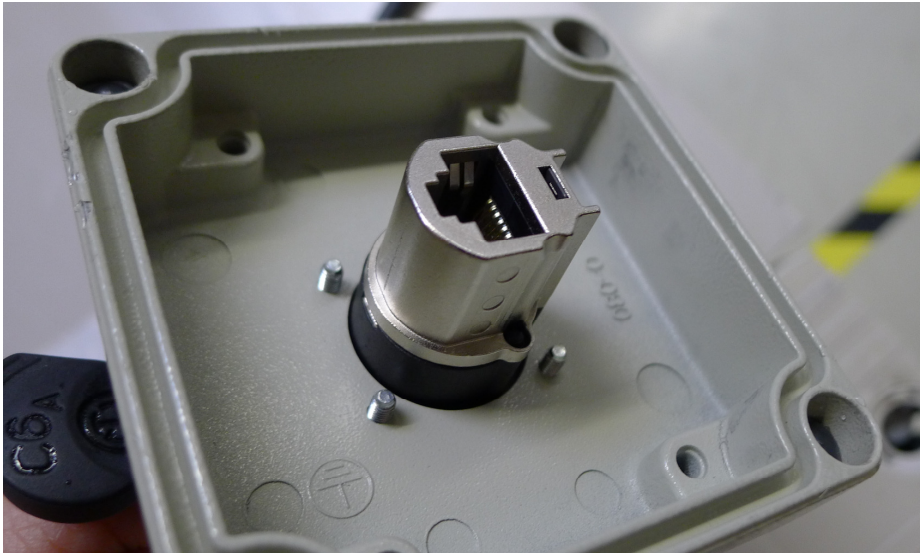
Sample after the test with connector inserted.



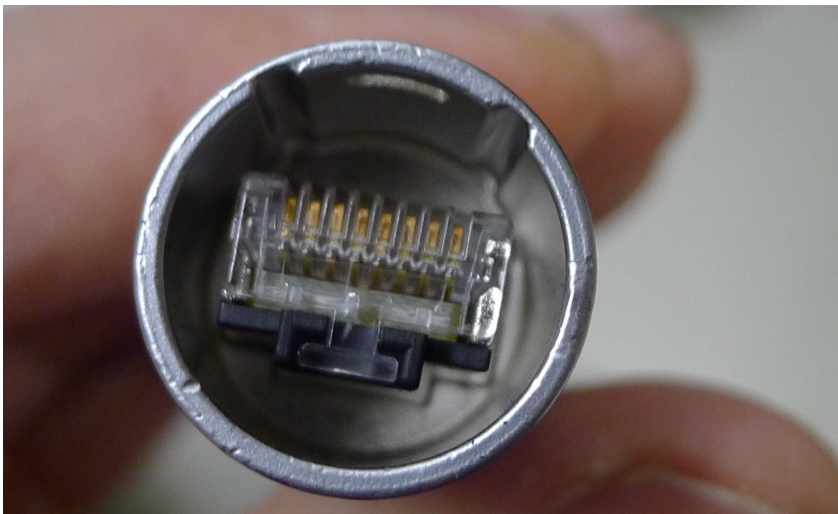
Connector removed. No water inside



No water on the backside or inside the box.



No water in the connector





Test with closed lid. After opening the lid, no water inside the socket.



No water in the box.

