ITC INDIA

TC-6601

**Institute of Testing and Certification (INDIA) Private Limited**

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# Laboratory Test Report
# Cable glands for electrical installations

| | |
|---|---|
| Test Report No. | ITC/TEST/N/2107/20-C |
| ULR No | TC660121000000168F |
| Discipline | Electrical |
| Group | Wiring and Accessories |
| Date of issue | 04-08-2021 |
| Sample date in | 22-07-2021 |
| Date of Performance | 27-07-2021 to 30-07-2021 |
| Applicant | SANJAY LIMBASIYA |
| Customer | **AKSHAR BRASS INDUSTRIES**<br>Plot No 46,47,50,51, Naghedi Ind. Area,<br>Jamnagar-361006, Gujarat, India |
| Sample description | CABTEK IP68 CABLE GLAND |
| Sample Condition | OK |
| Customer Reference | N/A |
| Trade mark / Manufacturer | CABTEK |
| Model / Type / Reference | M25 |
| Ratings | N/A |
| Test method(s) | Following 3 test have been conducted as per customer specifications accordance with IEC 62444:2010<br>Clauses No:<br>• 10.1 Equipotential bonding to electrical equipment<br>• 10.2 Equipotential bonding to metallic layer(s) of cable<br>• 10.3 Protective connection to earth |

**Overall verdict**

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**Pass** ☑
**Fail** ☐



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**Possible test case verdicts:**

- Test case does not apply to the test object.....N/A
- Test object meets the requirement.....P (Pass)
- Test object does not meet the requirement.....F (Fail)

**General remarks:**

- "See enclosure##" refers to additional information related to this report in the annexes section.
- "See table ##" refers to a table appended to this report in the annexes section.
- "See figure ##" refers to an image, picture or drawing appended to this report in the annexes section
- "See *" highlights those clauses which are not in our NABL Scope.
- Throughout this report, a comma is used as decimal separator.
- Overall Verdict is applicable to the clauses against which Testing has been performed, not to the clauses where it is N/A (Not Applicable).
- The results of this report is against the sample received through the customer only.
- The laboratory is not responsible for the authenticity of the data / documents submitted by the customer.
- The laboratory will perform the testing at ambient temperature unless Environmental Conditions are not specified in the Testing Standard.
- Measurement uncertainty will be mentioned in the Table i.e Test Details.
- If Test Verdict has been given in this Report. The Decision Rule as per ILAC G8:2009 where guard Value (W=1u) will be made (TL=AL+W), whether Decision Rule will only be applied if the measured value is within the Guard Band. In such case Reference of this clause will be given by marking.
- The list of documents submitted by the customer is mentioned as under:

| List of Documents | Remarks |
|---|---|
| Marking Plate of DUT | N/A |
| Rating of DUT | N/A |
| Instruction Manual | Provided |
| General Assembly Diagram | Provided |
| Bill of Material/ Critical Component List | N/A |
| Please specify, if any other | N/A |

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**General Product Information:**

CABTEK IP68 CABLE GLAND
**Model:** M25
**Pictures of Specimen received:**

Testing Engineer
**Vikesh Sharma**

Asst. General Manager (Technical)
**Naveen Chopra**

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| IEC-62444 | | | |
|---|---|---|---|
| **Clause no.** | **Requirement – Test** | **Results – Remarks** | **Verdict** |
| **10** | **Electrical properties** | | |
| **10.1** | **Equipotential bonding to electrical equipment** | | |
| - | Cable glands declared in accordance with 6.3.1.1 shall have adequate conductivity to the electrical equipment. | In Compliance | P |
| - | The resistance shall not exceed 0.1 Ω | **Refer Table: A** | P |
| **10.2** | **Equipotential bonding to metallic layer(s) of cable** | | |
| - | Cable glands declared in accordance with 6.3.1.2 shall ensure adequate electrical connection with the metallic layer(s) of the cable. | In Compliance | P |
| - | cable gland is loaded in accordance with the appropriate value given in Table 2. The load is maintained for 5 min and removed accordingly. | In Compliance | P |
| - | The resistance shall not exceed 0.1 Ω | **Refer Table : B** | P |
| **10.3** | **Protective connection to earth** | | |
| **10.3.1** | **General** | | |
| - | Cable glands declared in accordance with 6.3.1.3 shall be capable of passing an earth fault current. | | |
| **10.3.2** | **Electrical current test** | | |
| | This test is carried out after test in 9.4 and 10.2 | In compliance | P |
| | The samples shall be deemed to have passed the tests if: | | |
| | the contact resistance between the armour close to the samples and the earthing connections, measured with a source of at least 10 A, is equal to or less than 0,1 Ω; | Measured resistance value: 8.4mΩ | P |
| | they do not show any cracks to normal or corrected vision without magnification nor have any loose parts or deformations impairing normal use; | No crack found | P |

***Note: Test was conducted on Armoured gland***

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| IEC-62444 | | | |
|---|---|---|---|
| Clause no. | Requirement – Test | Results – Remarks | Verdict |

**Table A**

| 10.1 Equipotential bonding to electrical equipment | | | | |
|---|---|---|---|---|
| Test Current (A) | Test Duration (Seconds) | Maximum allowed resistance (Ω) | Measured Resistance (Ω) | Result |
| 10 A | 60 sec | 0.1 Ω | 34.5 mΩ | P |

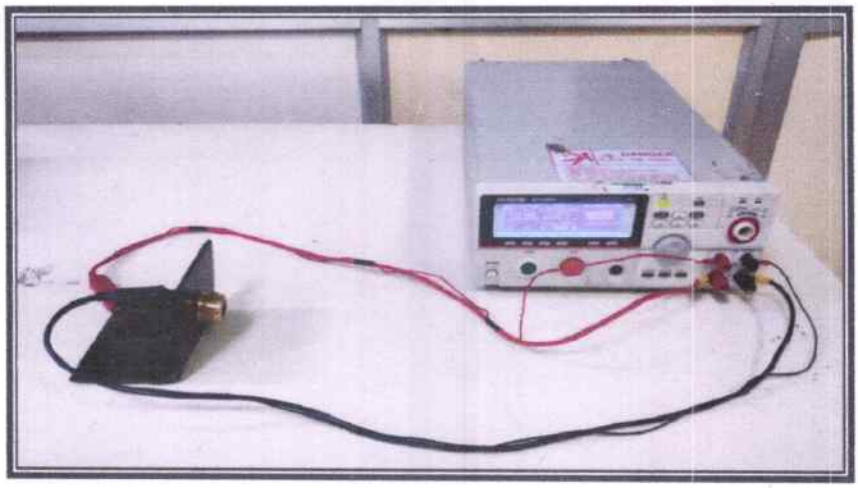
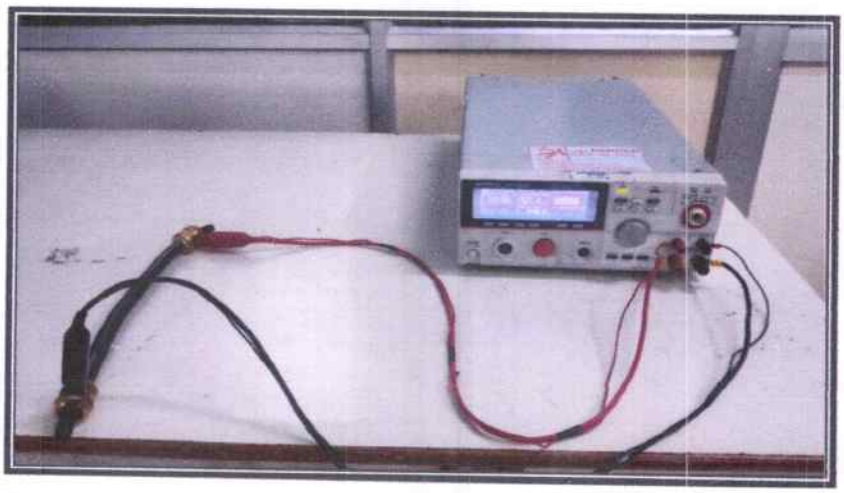


**Table B**

| 10.2 Equipotential bonding to metallic layer(s) of cable | | | | |
|---|---|---|---|---|
| Test Current (A) | Test Duration (Seconds) | Maximum allowed resistance (Ω) | Measured Resistance (Ω) | Result |
| 10 A | 60 sec | 0.1 Ω | 2.4 mΩ | P |



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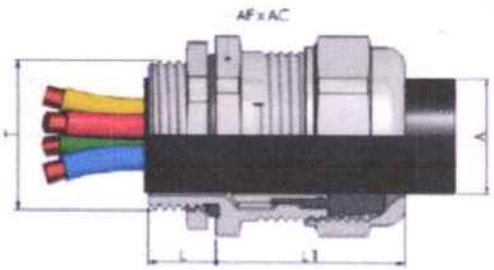
| IEC-62444 | | | |
|---|---|---|---|
| **Clause no.** | **Requirement – Test** | **Results – Remarks** | **Verdict** |

## General Assembly Diagram

### IP 68 Cable Gland

| | | | |
|---|---|---|---|
| **Size** | : 8mm to 63mm | **Material** | : Brass Nickle Plated |
| **Function** | : Excellent shield contact through the contact sleeve with the braided shield terminating in the screwed cable gland | **Thread** | : Long Type Metric |
| | | **Features** | : Outer Displacement Seal |
| **Ingress Protection** | : IP68 as per EN 60529. | **Seal Material** | : Nitrile Black Rubber |
| **Operating Temp.** | : -35°C to +120°C | **O-Ring Material** | : NBR |




**Gland Selection Chart**

| Item Code | Size T | Cable Dia. A Min. | Cable Dia. A Max. | A/F | A/C | Thread Length L | Uncompressed Length L1 | Pack Pcs |
|---|---|---|---|---|---|---|---|---|
| CIP68-25-16 | M25x1.5 | 13.0 | 16.0 | 30.0 | 33.0 | 11.0 | 30.0 | 25 |
| CIP68-25-19 | M25x1.5 | 16.0 | 19.0 | 30.0 | 33.0 | 11.0 | 33.0 | 25 |

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