**Insulation Relay for Non-Grounded Live DC Mains**

- Insulation relay for non-grounded live DC systems
- Self powered from any input from 12 to 60VDC
- For both battery and power generated DC networks
- “SEV” measuring principle
- For use in land, marine and offshore installations

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### Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Voltage</td>
<td>12-60VDC</td>
</tr>
<tr>
<td>Contact Rating</td>
<td>AC: 100VA - 250V/2A max. DC: 50V - 100V/1A max.</td>
</tr>
<tr>
<td>Trip Level Adjustment</td>
<td>5 to 110kohm</td>
</tr>
<tr>
<td>Trip Delay</td>
<td>Fixed 3 secs.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>5% of full range</td>
</tr>
<tr>
<td>Temperature</td>
<td>-20 to +70ºC</td>
</tr>
<tr>
<td>Weight</td>
<td>0.1kgs</td>
</tr>
<tr>
<td>Front Protection</td>
<td>IP21</td>
</tr>
</tbody>
</table>

### Description

The digitally controlled low cost KRM169E is self powered and uses the Megacon “SEV” insulation measuring principle to measure the insulation in live non-grounded DC systems.

The resultant insulation level is measured between the complete galvanically interconnected DC network and its protective earth. The signals flow to ground via the path of the insulation fault, the level of flow expresses the insulation resistance, the direction of flow expresses the fault polarity.

The high measuring accuracy and trip repeatability of the KRM169E is not influenced by variation of the DC voltage level (including imposed AC ripple) between 12 and 60VDC, or by symmetrical earth faults. The measuring method does not support corrosion.

**Alarm relay output**

The alarm relay is fail-safe and energises when powered. The relay trip level is adjustable between 5 and 110kohm with a fixed alarm delay of 3 seconds.

Remove the lower terminal lid for access to the trip level adjustment. The relay will automatically return to the normal state when the insulation level is above the trip level.

**Faulty polarity “Pathfinder” function**

The LED continuously shows the condition of the insulation:

- **Normal (High Insulation)** : Steady Green LED
- **Positive fault** : Flashing Red LED
- **Negative fault** : Steady Red LED

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### Dimensions

The unit meets IEC60092-504 and the relevant environmental and EMC tests specified in IEC600068-2-33 and IEC61000-6-33 respectively, to comply with the requirements of the major Classification Societies.

The MEGA CON policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

**ORDERING EXAMPLE:**

- Type : KRM169E
- Monitored Voltage : 12-60VDC
- Trip level : 5 to 110kohm

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Electronic Control and Instrumentation

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