**Specifications**

- **Aux. Supply:** 100-120, 200-240, 380-415, or 440-460VAC, 40-70Hz (Fuse 0.5A)
- **Supply tolerance:** +/- 10%
- **Power consumption:** 1.6VA
- **Contact rating:** AC: 100VA - 250V/2A max. DC: 50W - 100V/1A max.
- **Measurement category:** CAT III
- **Output:** 0-1mA = 10Mohm-0ohm, (max 500R)
- **Trip adjustment:**
  - KRM161E: 0-1000kohm
  - KRM163E: 0-10Mohm
- **Temperature:** -20 to +70ºC
- **Humidity, relative:** 0-80%
- **Operating altitude:** < 2000m above sea level
- **Location:** Indoor
- **Pollution degree:** 3
- **Weight:** 0.3kgs
- **Front protection:** P20
- **Dimensions:** L: 70mm, H: 90mm, D: 58mm
- **Mounting:** 35mm Rail Mount EN 60715
- **Safety:** EN 61010-1, EN 61010-2-030 CAT III
- **EMC:** EN61000-6-2, EN61000-6-4, EN 61326-2-4
- **Terminal type:** Terminal Clamp and Screw
- **Wire max/min:** AWG14 - AWG24
- **Screw Torque:** 0.5Nm/4.5lb-inch

**Description**

The digitally controlled KRM16xE uses the Megacon “IDV” insulation measuring principle and monitors insulation level between a non-grounded (IT) mains and its protective earth.

Unit is AC powered. Only ONE KRM16xE can be connected to each IT-system. The status LED gives the clear safety message:

- **ALARM:** Red LED
- **NORMAL:** Green LED

**IDV MEASURING PRINCIPLE**

Insulation is measured between the AC network and its protective earth. The unit injects a DC measuring signal into the monitored system. The signal flows to ground via the path of the insulation fault; the level of flow indicates the insulation resistance. The measuring accuracy is not influenced by any normal kind of load attached to the AC network.

**OUTPUTS**

Unit is fitted with a non-isolated 0-1mA output for local/remote meter reading (optional slave instrument). Alarm relay is a potential free contact. Relay is fail-safe and change state when powered.

A status LED indicator on the KRM16xE informs the service engineer whether or not the equipment is in an Alarm or Normal state at any time.

**TRIP LEVEL**

Trip levels are settable under the terminal lid. When the adjustable trip setting is exceeded by the monitored line-earth resistance, the fail-safe relay changes state following a fixed 3 secs. delay period, indicating an alarm condition.

Start of monitoring function is delayed when auxiliary power is switched on (KRM161E: default 5 secs / KRM163E: default 10 secs).

**Output table** (example for 0-1mA)

<table>
<thead>
<tr>
<th>KRM161E Value (scale)</th>
<th>KRM163E Value (scale)</th>
<th>mA output</th>
</tr>
</thead>
<tbody>
<tr>
<td>0Ω</td>
<td>0Ω</td>
<td>1mA</td>
</tr>
<tr>
<td>10kΩ</td>
<td>100kΩ</td>
<td>0.71mA</td>
</tr>
<tr>
<td>20kΩ</td>
<td>200kΩ</td>
<td>0.52mA</td>
</tr>
<tr>
<td>30kΩ</td>
<td>300kΩ</td>
<td>0.41mA</td>
</tr>
<tr>
<td>50kΩ</td>
<td>500kΩ</td>
<td>0.29mA</td>
</tr>
<tr>
<td>100kΩ</td>
<td>1MΩ</td>
<td>0.16mA</td>
</tr>
<tr>
<td>300kΩ</td>
<td>3MΩ</td>
<td>0.06mA</td>
</tr>
<tr>
<td>1MΩ</td>
<td>10MΩ</td>
<td>0.02mA</td>
</tr>
<tr>
<td>Open (&gt;6MΩ)</td>
<td>Open (60MΩ)</td>
<td>0mA</td>
</tr>
</tbody>
</table>

**Alarm trip adjustment**

Remove terminal lid for alarm trip adjustment.
INSULATION RELAY FOR NON-GROUNDED AC SYSTEMS

KRM16xE

NEUTRAL VOLTAGE INPUT

LINE VOLTAGE INPUT

R (L1) S (L2) T (L3)

KRM161E / KRM163E

KRM161E / KRM163E

N

N

Aux. Supply

Aux. Supply

(>690V)

(>690V)

CH163/1,4 (≤ 1.4kV)

CH163/5 (≤ 5kV)

Anlite163/3,6 (≤ 3.6kV)

KRM163E

KRM163E

KRM163E

KRM163E

(≤6,6kV)

(≤6,6kV)

<6,6kV)

<6,6kV)

Aux.Supply

Aux.Supply

KRM161E/KRM163E

CH163/1,4 (≤ 1.4kV)

CH163/3,6 (≤ 3.6kV)

KRM163E

KRM163E

KRM163E

KRM163E

~

~

Aux.Supply

Aux.Supply

KRM161E/KRM163E

KRM161E/KRM163E

KRM161E/KRM163E

KRM161E/KRM163E

 Sphinx

High Voltage Adaptors up to 6,6kVAC for KRM163E series

KRM161E - Scale range: 0-1000kΩ - ∞ (>6MΩ)

Not shown in the diagram:
- Indicates alarm trip zone
- Indicates warning trip zone
- Indicates healthy zone

Alarm trip adjustment
Trip level are settable under the terminal lid. (See image on page 1)

KRM163E - Scale range: 0-10MΩ - ∞ (>60MΩ)

Not shown in the diagram:
- Indicates alarm trip zone
- Indicates warning trip zone
- Indicates healthy zone

Alarm trip adjustment
Trip level are settable under the terminal lid. (See image on page 1)

Dimensions for optional slave instrument

Panel cut-out

Maximum panel thickness 10mm

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