Comat products comply with different international standards and are certified accordingly.

Lloyd’s: IEC 61810; EN 60974
The MV52 (50Hz) or MV62 (60Hz) protects control systems, contactors and motors during undervoltage against thermal overload and malfunctions.

The monitoring can be set precisely in volts from \( U_n - 30\% \) up to \( U_n \).

The switching off or on again follows delayed by \( 0.1/0.5/1 \) second.

2 LEDs show the definite monitoring status.

<table>
<thead>
<tr>
<th>Setting range</th>
<th>( 0.7(-30%)U_n...U_n )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hysteresis</td>
<td>5%</td>
</tr>
<tr>
<td>( t ) (fail-ok)</td>
<td>0.1/0.5/1s</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Switching current/voltage</th>
<th>6A 250V~</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch rating</td>
<td>1500VA...180W</td>
</tr>
<tr>
<td>Mechanical switching cycles</td>
<td>30x10^6</td>
</tr>
<tr>
<td>Voltage tolerance</td>
<td>( U_n +15% )</td>
</tr>
<tr>
<td>Power consumption</td>
<td>3.5VA, 1W</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>(-25)...+60°C</td>
</tr>
</tbody>
</table>

**MV52 (50Hz), MV62 (60Hz) Protection**

Undervoltage Monitor

**Order-Nr.**
- MV52 /AC230V
- MV52 /AC115V

**Accessories**
- Label (5Piece) BS13-G
- Label (5Piece) BS13-K
The MV53 (50/60Hz) protects single phase consumers in AC networks from over- and undervoltage. Overvoltage and undervoltage thresholds can be set independently in percentage of the nominal voltage using two DIP-switches (see diagram above). Using a potentiometer allows setting an alarm delay of 25ms...2,5s. A two-colored LED shows the definite monitoring status.

<table>
<thead>
<tr>
<th>Setting range overvoltage</th>
<th>Setting range undervoltage</th>
<th>Hysteresis</th>
<th>t₀: Alarm delay</th>
<th>tᵣ: Reset time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uᵥm ± 2,5...17,5%</td>
<td>Uᵥm – 35...–5%</td>
<td>2,5%</td>
<td>25ms...2,5s</td>
<td>70ms</td>
</tr>
</tbody>
</table>

Data at Tₘₐₜ = 20°C

<table>
<thead>
<tr>
<th>Switching current/voltage</th>
<th>Switch rating</th>
<th>Mechanical switching cycles</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>6A 250V~</td>
<td>1750VA/...170W</td>
<td>2x10⁷</td>
<td>Uᵥm – 35%...+17,5%</td>
<td>3,5VA, 2W</td>
<td>(−25)–+60°C</td>
</tr>
</tbody>
</table>
CT524

Economy DC Voltage Monitoring Relay

with 3 twin changeover contacts.

4 functions can be selected:

- Overvoltage/undervoltage monitoring with adjustable hysteresis or 2 range monitors (INT or EXT).
- Adjustable alarm delay.
- LED display for errors and ok.
- Contact inspection window at the top.
- Manual safety operation.

### Specifications

- **Alarm delay**: \( t_a \) 0.1/0.5/2 s
- **Reset time**: \( t_{\text{r}} \) 100 ms
- **Switching current/voltage**: 6 A 250 V
- **Switch rating**: 1500 VA...
- **Mechanical switching cycles**: 100 x 10^6
- **Voltage tolerance**: 0.8...1.2 U_n
- **Power consumption**: ≤ 0.5 W
- **Ambient temperature**: -25...+60 °C

### Order No.

- **Range**: 0-30 V
- **U_{\text{max}}**: 40 V
- **Type No.**: Module + Relay (FS-C, HF-32 incl.)

### Accessories

- **Socket**: C1280

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Socket and Accessories: Page 97
Voltage Monitoring AC or DC

CUEBU15-700

Monitoring Relay for AC or DC voltages ranging from AC15...480 V, DC15...700 V. LCD display for the measured value and the parameter setting. LED indication for the alarm status. Snap on to DIN-rail TS35 conform DIN (43880).

- Monitoring range: AC15...480 V, DC15...700 V
- Hysteresis: 5...50%
- Input resistance RI: 1 MΩ
- Display/accuracy: ±xxx V/2% ±1 digit
- Alarm delay time t1: 0.1...12 s
- Switching current/voltage: 8 A 250 V AC1 /...240 W
- Switching power AC1: 2000 VA /...240 W
- Output contact: 1x u, AgNi
- Operation voltage AC50/60Hz: AC230V +10%; -15% 50/60Hz
- Power consumption Pmax: 4.5 VA/2.5 W
- Isolation: 3 kV rms/1 min
- Temperature: operating/storage -20...+55 °C/-40...+70 °C

Order-Nr.

CUEBU15-700/AC 230 V
The SSU11, SSU2x and SSU7x are high precision voltage monitoring relays for DC or RMS AC/DC with interactive front operation and display of values and voltmeter function. Two values for FAIL and OK can be programmed. With this, the hysteresis is automatically given. Depending of the programmed values the over- or undervoltage monitoring function is defined. Fixed max. and min. values are given for alarm triggering. However, the min. value monitoring can be disabled. The measuring input is galvanically isolated from the power supply (2-10). High EMC immunity design and self diagnostic features guarantee very high reliability and a long service life. Applications are for example monitoring of battery voltage in industrial installations.

### Measurement range (x)

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>Adjustment range</th>
<th>Resolution</th>
<th>t fail, t ok</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 210mV</td>
<td>0.1 - 200mV</td>
<td>0.5mW</td>
<td>0.1s - 600s</td>
</tr>
<tr>
<td>0 - 38V</td>
<td>0.1 - 35V</td>
<td>20mV</td>
<td></td>
</tr>
<tr>
<td>0 - 77V</td>
<td>0.1 - 10V</td>
<td>100mV</td>
<td></td>
</tr>
<tr>
<td>0 - 157V</td>
<td>10 - 75V</td>
<td>100mV</td>
<td></td>
</tr>
<tr>
<td>0 - 285V</td>
<td>40 - 150V</td>
<td>0.5V</td>
<td></td>
</tr>
</tbody>
</table>

*SSU76*

### Power supply

<table>
<thead>
<tr>
<th>UC110-240V</th>
<th>UC60-127V</th>
<th>UC24-48V</th>
<th>UC12-15V</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20% + 10%</td>
<td>-20% + 26%</td>
<td>-20% + 55%</td>
<td>-25% + 33%</td>
</tr>
</tbody>
</table>

### Ambient temp

+10...+50°C (-25...+60°C)

### Switching current/voltage

1 x 80μA, 250V; 1 x no Transistor NPN, DC50mA, 24V

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**Example of order**

SSU DC 0-38V/UC24-48V: SSU23/UC24-48V
SSU RMS AC/DC 0-200mV/UC110-240V: SSU79/UC110-240V

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**Attention:**

P/O numbers of several devices were changed (refer below). Devices are identical.
Kühn Controls AG

Notes:

You want more information about this product, please call us: tel: +49 (0)7082-940000 or send us a fax: +49 (0)7082-940001, or email: sales@kuehn-controls.de or visit our Website: www.kuehn-controls.de