CIM2, CIM2R (Railway)

**Time relay with mechanical changeover output contact**

7 time functions and 7 time ranges from 50 ms ... 60 h,
DIN Rail mounting according to DIN 43 880

**Type: CIM2/UC24-240V**

Sophisticated multifunction time relay, 1 changeover power contact switching in zero crossing (50/60 Hz), 7 time functions and service function ON/OFF, 7 time ranges from 50 ms to 60 h, multifunction LED state indicator, suitable for any time-control application, light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz power supply applications. Railway version available.

**Maximum contact load** 16 A / 250 V AC-1 384 W DC-1

**Recommended minimum contact load** 10 mA / 10 V

**Time functions and related connection diagrams** (Function diagrams: refer to page 130)

The functions are selectable by rotary switch

**LED function table:**

<table>
<thead>
<tr>
<th>LED</th>
<th>Relay</th>
<th>Time run</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>NO</td>
</tr>
<tr>
<td>Continuous</td>
<td>ON</td>
<td>NO</td>
</tr>
<tr>
<td>Short blinking</td>
<td>OFF</td>
<td>YES</td>
</tr>
<tr>
<td>Long blinking</td>
<td>ON</td>
<td>YES</td>
</tr>
</tbody>
</table>

**Time data**

7 partial time ranges, \( t_{\text{max}} \) (rotary switch) 0.6, 6, 60 s / 6, 60 min / 6, 60 h

Fine adjustment range (rotary knob) \( t_{\text{min}} \ldots t_{\text{max}}, 0.5 \ldots 6 \)

Time range tolerance \( t_{\text{min}}: -5 \% \ldots +0 \% / t_{\text{max}}: -0 \% \ldots +5 \% \)

Repetition accuracy \( t_{\text{min}} \leq 0.1 \% \) or DC: 2 ms / AC: 10 ms

Response time, power on, on A1 \( \leq 45 \text{ ms} \)

Min. trigger pulse on B1 \( 20 \text{ ms} \) (AC / DC)

Reset time B1 (AC/DC) \( \leq 30 \text{ ms} \)

Voltage failure buffering (50 / 60 Hz) \( \geq 20 \text{ ms} \)

**Contacts**

Material CIM2 / CIM2R / Type AgNi / 1 CO, micro disconnection

Rated operational current at 40 °C / 60 °C 16 A / 13 A

Max. inrush current 30 A

Max. switching voltage AC-1 250 V

Max. AC load AC-1 (Fig.1) 4 kVA

Max. DC load AC-1 30 V / 250 V (Fig.2) 240 W / 85 W

**Power supply- and control input**

Nominal voltage (A1, B1) UC 24-240 V (UC = AC / DC)

Operating voltage range UC 19 ... 250 V

Power consumption approx. 1 W

Frequency range 15 ... 60 Hz

Allowed DC residual current into B1 \( \leq 0.5 \text{ mA} \)

AC Neon lamp residual current into B1 \( \leq 10 \text{ mA} \)

Trigger threshold voltage on B1, AC / DC 15 / 17 V

**Insulation**

Test voltage open contact 1 kVrms 1 minute

Test voltage between contacts and control input 2.5 kVrms 1 minute

**General Specifications**

Ambient temperature storage /operation -40 ... 85 °C / -40 ...60 °C (Railway: -46 °C)

Mechanical life of contact \( 30 \times 10^6 \) operations

Conductor cross section Stranded wire 2.5 mm², 2 x 1.5 mm²

Ingress protection degree IP 20

Max. Screw torque 0.4 Nm

Housing material / weight Lexan / 70 g

**Standard types**

UC (AC/DC) 15...60 Hz CIM2/UC24-240V

Railway CIM2R/UC24-240V

**Technical approvals, conformities**

EN 50155, EN 60730