Timers
NGZ 720

OFF-delay multi-range timer relay with auxiliary supply

- Multi voltage for AC/DC 24 up to 240 V
- 1 function: OFF-delay (RV) with auxiliary supply
- Setting range from 0.1 s to 300 h divided into 16 selectable time ranges
- 2 change-over contact
- 2 LEDs for function display

Circuit diagram

Time ranges

<table>
<thead>
<tr>
<th>Setting range from 0.1 s to 300 h divided into:</th>
<th>0.1 ... 1 s</th>
<th>5 ... 100 s</th>
<th>1.5 ... 30 min</th>
<th>0.5 ... 10 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15 ... 3 s</td>
<td>15 ... 300 s</td>
<td>3 ... 60 min</td>
<td>1.5 ... 30 h</td>
<td></td>
</tr>
<tr>
<td>0.5 ... 10 s</td>
<td>50 ... 1000 s</td>
<td>5 ... 100 min</td>
<td>5 ... 100 h</td>
<td></td>
</tr>
<tr>
<td>1.5 ... 30 s</td>
<td>0.5 ... 10 min</td>
<td>0.15 ... 3 h</td>
<td>15 ... 300 h</td>
<td></td>
</tr>
</tbody>
</table>

Function

Setting the time delay

The time range is set with the RANGE selector switch and displayed in the window next to it. The desired delay time is set with a selecting wheel.

LEDs show the state of the excitation input and the position of the contacts. You can monitor the countdown on a flashing LED.

Notes

The device is designed for multi-voltage. Phase L1 or L+ must be connected to terminal A1; neutral conductor N or M must be connected to terminal A2.

You can change the delay time during operation. The change is effective immediately.

Description of the drawing

Control signal of the energizing quantity
Adjustable time

Fixed time

LED green Energizing quantity
5-fold function

Time out – energizing quantity ON
Time on – delayed switching element in ON position
Time on – delayed switching element in OFF position
Time on – delayed switching element in ON or OFF position
Time out – energizing quantity OFF
## Technical data

<table>
<thead>
<tr>
<th>Product standard (timer relays)</th>
<th>EN 61812-1:1999-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function type of the relay according to IEC 60050</td>
<td>445-01-04 + 445-03-02</td>
</tr>
<tr>
<td>Function display</td>
<td>2 LEDs green</td>
</tr>
<tr>
<td>Function diagrams</td>
<td>FD 250-11</td>
</tr>
</tbody>
</table>

### Input circuit
- Rated consumption AC: 3.5 VA / 1.7 W
- Rated consumption DC: 1.6 W
- Rated voltage limits: 70 – 110 %
- Rated frequency fₚ: 50 – 60 Hz ± 5 %
- Release value of the input voltage (power capacity approx. 150 pF/m): ≥ AC/DC 10 V; permissible line capacity 0.2 µF
- Rated current on control connection (B1-A2): 1 mA
- Rated consumption on control connection (B1-A2): < 0.25 W
- Parallel loads permissible: A1-A2 yes / B1-A2 yes
- Internal half-wave rectification: A1-A2 no / B1-A2 yes

### Time circuit
- Time setting / number of time ranges: analogous / 16
- Setting ranges for time delay: See table "Time ranges"
- Recovery time 1/2/3: 0 / 0 / – ms
- Minimum ON time 1/2: ≤ 25 / – ms
- Setting tolerance: ≤ ± 5 %
- Repeatability (to set value): ≤ ± 0.01 % + ± 10 ms
- Influence of temperature (within range): ≤ ± 0.002 %
- Influence of voltage (within range): ≤ ± 0.002 %

### Output circuit
- Contact assignment: 2 change-over contacts
- Contact material: AgNi 90/10
- Rated operating voltage: AC/DC 24 – 240 V
- Rated value for limiting continuous current Iₚ: 5 A
- Minimum contact load: ≥ AC/DC 5 V / ≥ 10 mA
- Application category according to IEC 60947-5-1: AC-15 Uₑ AC 230 V, Iₑ 3 A
- DC-13 Uₑ DC 24 V, Iₑ 2 A
- Permissible switching frequency: ≤ 3600 switching cycles/h
- Mechanical life: 30 x 10⁶ switching cycles
- Electrical life 20/2 A, AC 250 V, cos ϕ = 0.3: 0.12 x 10⁶ switching cycles AC-15
- Response time / release time at excitation of A1-A2: 40 ms
- Response time / release time at excitation of B1-A2: 20 ms

### Other data
- Creepage distances and clearances: according to IEC 60664-1
  - Degree of pollution: III
- Overvoltage category: III
- Rated voltage: AC/DC 275 V
- Degree of protection according to IEC 60529 housing/terminals: IP 40 / IP 20
- Noise immunity according to IEC 61000-4: Test severity 3
- Ambient temperature, operating range: -25 – +60 °C
- Dimension diagram (housing): K 3-3
- Circuit diagram of the terminals: KS 250-9
- Wire ranges: stranded or solid
- Stranded with ferrules: 1 x 0.2 – 6 or 2 x 0.2 to 2.5 mm²
  - 1 x 0.4 – 4 or 2 x 0.2 to 1.5 mm²
- Weight: 0.13 kg
- Accessories: –

## Overview of devices / Part numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Rated voltage</th>
<th>ON-delay time</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGZ 720</td>
<td>AC/DC 24-240 V</td>
<td>50-60 Hz</td>
<td>R2.065.0099.0</td>
</tr>
</tbody>
</table>