

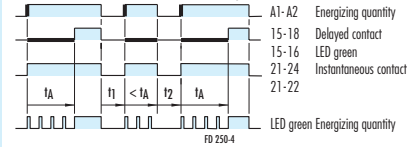
# NGZP 32 - S

## ON-delay single-range time relay

- Multi-voltage for AC/DC 24 to 240 V
- 1 function, ON-delay
- 13 time ranges available
- Remote potentiometer connection
- 1 instantaneous changeover contact and 1 timed changeover contact
- 2 LEDs for function display

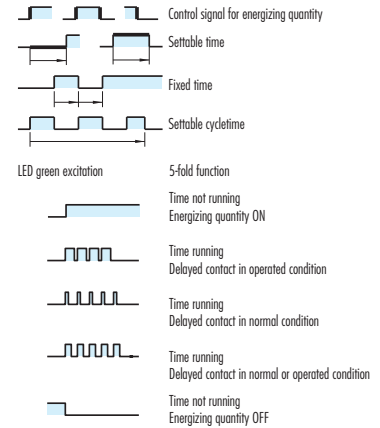
## Functions

### Function code 11-ON = ON-delay



$t_A$  = Operating time  
 $t_1$  = Break time, must be > recovery time 1  
 $t_2$  = Break time, must be > recovery time 2

### Legend



## Time ranges

Available time ranges:

|                   |               |
|-------------------|---------------|
| $\leq 0.1$ to 1 s | 0.5 to 10 min |
| 0.15 to 3 s       | 1.5 to 30 min |
| 0.5 to 10 s       | 3 to 60 min   |
| 1.5 to 30 s       | 0.5 to 10 h   |
| 5 to 100 s        | 1.5 to 30 h   |
| 15 to 300 s       | 5 to 100 h    |
| 50 to 1000 s      |               |

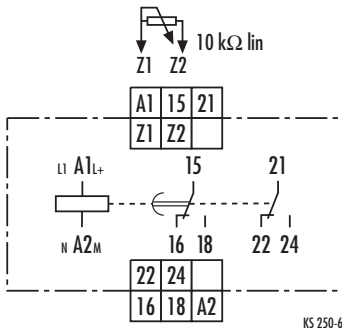
## Features

### Setting the time delay

The required delay time is set with a setting wheel.

Connecting a remote potentiometer allows you to set parameters from further away. When a remote potentiometer is used, set the time setting wheel to the right-hand stop above the largest value. Operation without remote potentiometer does not require a jumper on the device.

## Connection diagram

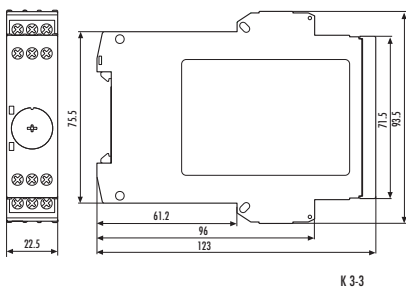


LEDs show the state of the excitation input and the position of the contacts. You can monitor the countdown on a flashing LED.

## Note

The device is designed for multi-voltage. Connect phase L1 or L + to terminal A1 and neutral N or M to terminal A2.

## Dimensions



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

## Ordering designation

**NGZP 32 - S** plus time range

Price code: 82.1

## Accessories

**Remote potentiometer FP 10 k**

Price code: 98.1

## Technical data

|                   |  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|-------------------|--|---|-------------------|---------------|--|-------------|---------------|--|-------------|-------------|--|-------------|-------------|--|------------|-------------|--|-------------|------------|--|--------------|--|--|
|                   | <b>Device type</b>   | <b>NGZP 32 - S</b>  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | <b>Product norm</b> (Time relays)                                  | EN 61812-1:1999-08  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Relay function according to IEC 60050                              | 445-01-02 + 445-04-05   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Function diagram   | FD 250 - 4  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Function display   | 2 LEDs green  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Ambient operating temperature range                                | -25 to + 60 °C  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | <b>Input circuit</b>   |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated voltage A1 - A2  | AC/DC 24 to 240 V   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated power AC   | 3.5 VA/1.7 W  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated power DC   | 1.6 W   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated voltage limits   | 70 to 110 %   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated frequency $f_n$  | 50 to 60 Hz $\pm$ 5 %   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Release value of input voltage (line capacitance approx. 150 pF/m) | $\geq$ AC/DC 10 V; permissible line capacitance 0.2 $\mu$ F   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Parallel load permitted  | A1 - A2 yes   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Internal one-way rectifier   | A1 - A2 no  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | <b>Time circuit</b>  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Time setting / number of time ranges                               | analog (internal + external)/1  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Setting ranges for time delay                                      | from $\leq$ 0.1 s to 100 h, available in ranges:  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   |  | <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><math>\leq</math> 0.1 to 1 s</td> <td style="width: 33%;">0.5 to 10 min</td> <td style="width: 33%;"></td> </tr> <tr> <td>0.15 to 3 s</td> <td>1.5 to 30 min</td> <td></td> </tr> <tr> <td>0.5 to 10 s</td> <td>3 to 60 min</td> <td></td> </tr> <tr> <td>1.5 to 30 s</td> <td>0.5 to 10 h</td> <td></td> </tr> <tr> <td>5 to 100 s</td> <td>1.5 to 30 h</td> <td></td> </tr> <tr> <td>15 to 300 s</td> <td>5 to 100 h</td> <td></td> </tr> <tr> <td>50 to 1000 s</td> <td></td> <td></td> </tr> </table> | $\leq$ 0.1 to 1 s | 0.5 to 10 min |  | 0.15 to 3 s | 1.5 to 30 min |  | 0.5 to 10 s | 3 to 60 min |  | 1.5 to 30 s | 0.5 to 10 h |  | 5 to 100 s | 1.5 to 30 h |  | 15 to 300 s | 5 to 100 h |  | 50 to 1000 s |  |  |
| $\leq$ 0.1 to 1 s | 0.5 to 10 min  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
| 0.15 to 3 s       | 1.5 to 30 min  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
| 0.5 to 10 s       | 3 to 60 min  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
| 1.5 to 30 s       | 0.5 to 10 h  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
| 5 to 100 s        | 1.5 to 30 h  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
| 15 to 300 s       | 5 to 100 h   |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
| 50 to 1000 s      |  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Recovery time 1/2/3  | $\leq$ 50/ $\leq$ 50 ms   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Minimum ON time 1/2  | - / - ms  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Setting tolerance  | $\leq \pm$ 5 %  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Repeatability (to set value)                                       | $\leq \pm$ 0.01 % + $\pm$ 10 ms   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Influence of temperature (within range)                            | $\leq \pm$ 0.002 %  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Influence of voltage (within range)                                | $\leq \pm$ 0.002 %  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | <b>Output circuit</b>  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Contact equipment  | 1 instantaneous changeover contact and 1 timed changeover contact   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Contact material   | AgNi 90/10  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated operating voltage  | AC/DC 24 to 240 V   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated value for limiting continuous current $I_{th}$               | 5 A   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Minimum contact load   | $\geq$ AC/DC 5 V/ $\geq$ 10 mA  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Utilization category according to IEC 60947-5-1                    | AC-15 $U_e$ AC 230 V, $I_e$ 3 A<br>DC-13 $U_e$ DC 24 V, $I_e$ 2 A   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Permissible switching frequency                                    | $\leq$ 3600 switching cycles/h  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Mechanical service life  | 30 x 10 <sup>6</sup> switching cycles   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Electrical service life<br>20/2 A, AC 250 V, $\cos \varphi = 0,3$  | 0.12 x 10 <sup>6</sup> switching cycles AC-15   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Operate time / release time for excitation A1 - A2                 | 40 ms   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | <b>Other data</b>  |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Clearance/creepage distances to IEC 60664 - 1                      |   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Contamination level  | 3 outside, 2 inside   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Overvoltage category   | III   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Rated voltage  | AC/DC 275 V   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Protection class housing / terminals acc. to IEC 60529             | IP 40/IP 20   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Interference immunity acc. to IEC 61000-4                          | Test level 3  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Dimensions (housing)   | K 3-3   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Terminal connection diagram  | KS 250 - 6  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Connection cross sections single or fine wire                      | 1 x 0,2 to 6 or 2 x 0,2 to 2,5 mm <sup>2</sup>  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | fine wire with connector sleeve                                    | 1 x 0,4 to 4 or 2 x 0,2 to 1,5 mm <sup>2</sup>  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Weight   | 0.14 kg   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | Accessories  | Remote potentiometer FP 10 k  |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |
|                   | <b>General Technical Specification</b>                             | NGG Catalogue   |                   |               |  |             |               |  |             |             |  |             |             |  |            |             |  |             |            |  |              |  |  |