

# NGZP 72

## ON-delay multi-range time relay

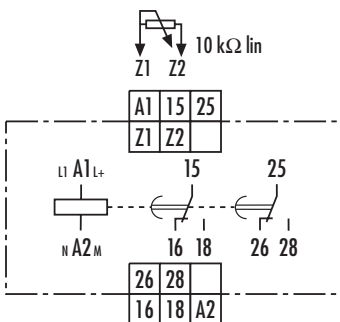
- Multi-voltage for AC/DC 24 to 240 V
- 1 function, ON-delay
- Setting range from 0.1 s to 300 h divided into 16 switchable time ranges
- Remote potentiometer connection
- 2 changeover contacts
- 2 LEDs for function display

### Time ranges

Setting range from 0.1 s to 300 h divided into:

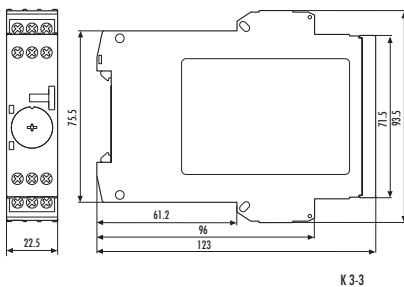
≤ 0.1 s	1 s	1.5 to 30 min
0.15 s	3 s	3 to 60 min
0.5 s	10 s	5 to 100 min
1.5 s	30 s	0.15 to 3 h
5 s	100 s	0.5 to 10 h
15 s	300 s	1.5 to 30 h
0.5 to 10 min	5 to 100 h	
50 to 1000 s	15 to 300 h	

### Connection diagram



KS 250-4

### Dimensions



K 3-3

### Ordering designation

**NGZP 72**

Price code: 50.1

### Features

#### Setting the time delay

The time range is set with the RANGE selector switch and displayed in the window next to it. 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.

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

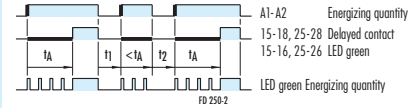
### Note

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

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

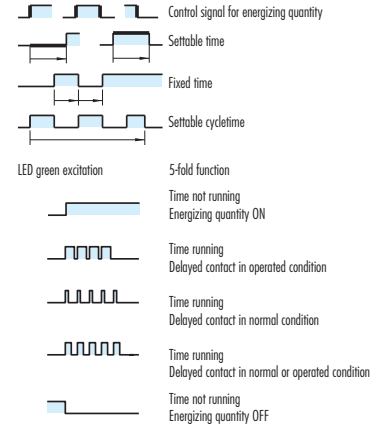
## Functions

### Function code 11 = 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



### Accessories

**Remote potentiometer FP 10 k**

Price code: 98.1

## Technical data

<b>Device type</b>	<b>NGZP 72</b>																								
<b>Product norm</b> (Time relays)	EN 61812 - 1:1999 - 08																								
Relay function according to IEC 60050	445 - 01 - 02																								
Function diagram	FD 250 - 2																								
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)/16																								
Setting ranges for time delay	from $\leq$ 0.1 s to 300 h divided into:																								
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"><math>\leq</math> 0.1 to 1 s</td> <td style="width: 33%;">1.5 to 30 min</td> <td style="width: 33%;"></td> </tr> <tr> <td>0.15 to 3 s</td> <td>3 to 60 min</td> <td></td> </tr> <tr> <td>0.5 to 10 s</td> <td>5 to 100 min</td> <td></td> </tr> <tr> <td>1.5 to 30 s</td> <td>0.15 to 3 h</td> <td></td> </tr> <tr> <td>5 to 100 s</td> <td>0.5 to 10 h</td> <td></td> </tr> <tr> <td>15 to 300 s</td> <td>1.5 to 30 h</td> <td></td> </tr> <tr> <td>0.5 to 10 min</td> <td>5 to 100 h</td> <td></td> </tr> <tr> <td>50 to 1000 s</td> <td>15 to 300 h</td> <td></td> </tr> </table>	$\leq$ 0.1 to 1 s	1.5 to 30 min		0.15 to 3 s	3 to 60 min		0.5 to 10 s	5 to 100 min		1.5 to 30 s	0.15 to 3 h		5 to 100 s	0.5 to 10 h		15 to 300 s	1.5 to 30 h		0.5 to 10 min	5 to 100 h		50 to 1000 s	15 to 300 h	
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Recovery time 1/2	$\leq$ 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	2 changeover contacts																								
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 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 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 - 4																								
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																								