

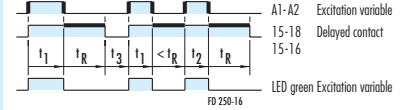
# NGZ 110, NGZ 210

OFF-delay single-range time relay without auxiliary supply

- Mono-voltage
- 1 function, OFF-delay
- 6 time ranges available
- 1 changeover contact
- 1 LED for function display

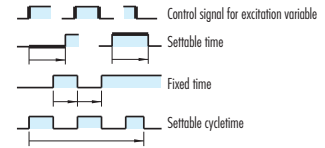
## Functions

Function code 13 = OFF-delay, without auxiliary supply



$t_R$  = Returning time  
 $t_1$  = Make time, must be > minimum ON time 1  
 $t_2$  = Make time, must be > minimum ON time 2  
 $t_3$  = Break time, must be > recovery time 1

### Legend



## Time ranges

Available time ranges:

- 0.05 to 1 s
- 0.15 to 3 s
- 0.5 to 10 s
- 1.5 to 30 s
- 5 to 100 s
- 15 to 300 s

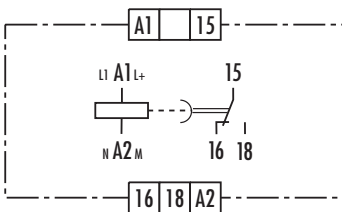
## Features

### Setting the time delay

The required delay time is set with a setting wheel. You can adjust it with a screwdriver.

The LED shows the state of the excitation input.

## Connection diagram

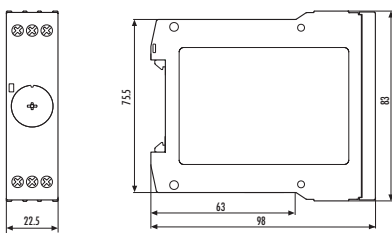


KS 250-10

## Note

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

## Dimensions



K 3-1

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

## Ordering designation

**NGZ 110** Nominal voltage and plus time range

Price code: 72.1

## Technical data

	<b>Device type</b>	<b>NGZ 110</b>	<b>NGZ 210</b>		
	<b>Product norm</b> (Time relays)	EN 61812-1:1999-08			
	Relay function according to IEC 60050	445-01-03			
	Function diagram	FD 250-16			
	Function display	1 LED green			
	Ambient operating temperature range	-20 to + 60 °C			
	<b>Input circuit</b>				
		V AC/DC	AC	AC	DC
	Rated voltage A1 - A2	24 V	110-127 V	230-240 V	110 V
	Rated power AC	0.1 VA	0.8 VA	1.3 VA	
	Rated power at 50 Hz a. $U_{A1/A2}(AC)$	0.06 W	0.5 W	0.9 W	
	Rated power DC	0.06 W			0.6 W
	Starting current inrush A/ms	0.4/40	0.1/40	0.05/150	0.06/15
	Rated voltage limits	80 to 110 %			
	Rated frequency $f_n$	50 to 60 Hz $\pm$ 5 %			
	Release value of input voltage (line capacitance approx. 150 pF/m)	-			
	Parallel load permitted	A1 - A2 yes			
	Internal one-way rectifier	A1 - A2 yes			
	<b>Time circuit</b>	analog/1			
	Time setting / number of time ranges	from 0.05 s to 300 s, available in ranges:			
	Setting ranges for time delay	0.05 to 1 s			
		0.15 to 3 s			
		0.5 to 10 s			
		1.5 to 30 s			
		5 to 100 s			
		15 to 300 s			
	Recovery time 1	ab. 250 ms			
	Minimum ON time 1/2	ab.200/ab.200ms/(ab.500ms/ab.500ms at 300s)			
	Setting tolerance	$\leq \pm$ 5 %			
	Repeatability (to set value)	$\leq \pm$ 1 % + $\pm$ 10 ms			
	Influence of temperature (within range)	$\leq \pm$ 0.04 %			
	Influence of voltage (within range)	$\leq \pm$ 0.05 %			
	<b>Output circuit</b>				
	Contact equipment	1 changeover contact			
	Contact material	AgNi 0.15 + HVT			
	Rated operating voltage	V AC/DC 230/230			
	Rated value for limiting continuous current $I_{th}$	5 A			
	Utilization category according to IEC 60947-5-1	AC-15 $U_e$ AC 230 V, $I_e$ 2 A DC-13 $U_e$ DC 24 V, $I_e$ 2 A			
	Permissible switching frequency	$\leq$ 3600 switching cycles/h			
	Mechanical service life	$10 \times 10^6$ switching cycles			
	Electrical service life	$1 \times 10^5$ at nominal load			
	Operate time / release time for excitation A1 - A2	15 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 3-1			
	Terminal connection diagram	KS 250-10			
	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	0.11 kg			
	<b>General Technical Specifications</b>	NGG Catalogue			