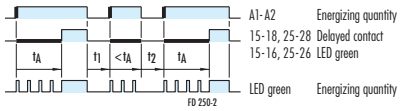
NGZ 72

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
- 2 changeover contacts
- 2 LEDs for function display

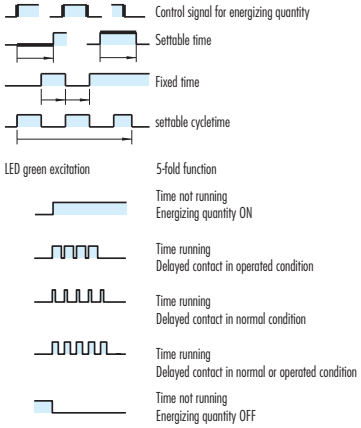
Functions

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



Time ranges

Setting range from 0.1 s to 300 h divided into:

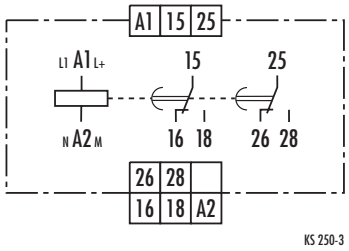
≤ 0.1	to	1	s	1.5	to	30	min
0.15	to	3	s	3	to	60	min
0.5	to	10	s	5	to	100	min
1.5	to	30	s	0.15	to	3	h
5	to	100	s	0.5	to	10	h
15	to	300	s	1.5	to	30	h
0.5	to	10	min	5	to	100	h
50	to	1000	s	15	to	300	h

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.

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

Connection diagram

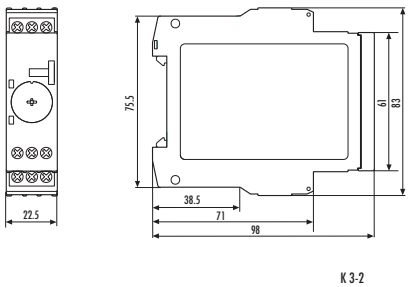


Note

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.

Dimensions



Ordering designation

NGZ 72

Price code: 40.1

Technical data

Device type	**NGZ 72**
Product norm (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
Input circuit	
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 ± 5 %
Release value of input voltage (line capacitance approx. 150 pF/m)	≥ AC/DC 10 V; permissible line capacitance 0.2 µF
Parallel load permitted	A1-A2 yes
Internal one-way rectifier	A1-A2 no
Time circuit	
Time setting / number of time ranges	analog/16
Setting ranges for time delay	from ≤ 0.1 s to 300 h divided into: ≤ 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
Recovery time 1/2	≤ 50/ ≤ 50 ms
Minimum ON time 1/2	-/- 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 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	≥ AC/DC 5 V/≥ 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	≤ 3600 switching cycles/h
Mechanical service life	30 x 10^6 switching cycles
Electrical service life	
20/2 A, AC 250 V, cos φ = 0.3	0.12 x 10^6 switching cycles AC–15
Operate time / release time for excitation A1 - A2	40 ms
Other data	
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 Test level 3
Interference immunity acc. to IEC 61000-4	
Dimensions (housing)	K 3-2
Terminal connection diagram	KS 250 - 3
Connection cross sections single or fine wire fine wire with connector sleeve	1 x 0,2 to 6 or 2 x 0,2 to 2,5 mm² 1 x 0,4 to 4 or 2 x 0,2 to 1,5 mm²
Weight	0.11 kg
General Technical Specifications	NGG Catalogue