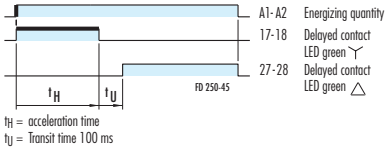
NGD 32

Star-Delta Relay

- Multi-voltage for AC/DC 24 to 240 V
- 1 function, star-delta switching
- 3 time ranges available
- 2 No contacts
- 2 LEDs for function display

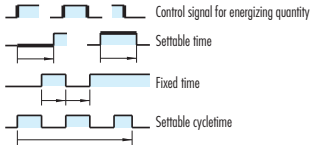
Functions

Function code 51 = star-delta switching, interval ON



t_H = acceleration time
t_U = Transit time 100 ms

Legend

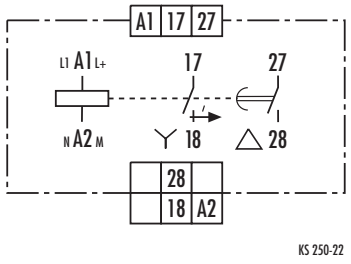


Time ranges

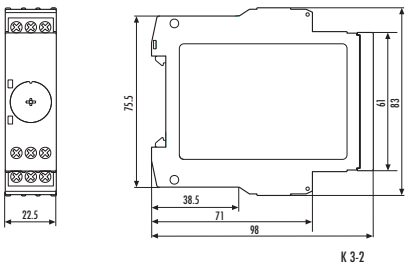
Available time ranges:

0.5	to	10	s
1.5	to	30	s
5	to	100	s

Connection diagram



Dimensions



Ordering designation

NGD 32

Price code: 56.1

Features

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

Method of operation: The NGD 32 has two sequentially switching delayed outputs for starting motors in star-delta mode.
After expiry of the preselected acceleration time t_H for star mode and a fixed transit time t_U the second contact switches to operated condition for delta mode. When the energizing quantity switches off the contact switches to normal condition.

LEDs display the position of the contacts. You can follow the countdown on the LEDs.

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.

Technical data

Device type	**NGD 32**
Product norm (Time relays)	EN 61812-1:1999-08
Relay function according to IEC 60050	445-01-10 + 445-01-08
Function diagram	FD 250-45
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/1
Setting ranges for time delay	from 0.5 s to 100 s, available in ranges:
	0.5 to 10 s
	1.5 to 30 s
	5.0 to 100 s
Fixed transit time	100 ms ≤ ± 2 %
Recovery time	≤ 50 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 NO 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
Interference immunity acc. to IEC 61000-4	Test level 3
Dimensions (housing)	K 3-2
Terminal connection diagram	KS 250-22
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 Specification	NGG Catalogue