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Operating manual FW 125 D Archivedocument

General

Frequency-Relays type FW 125 D monitor the frequency of their own supply-voltage.

The actual frequency is beeing displayed.

A built-in relay releases when a limit is exceeded.

The limits are programmable.

- Microprocessr-controlled
- Monitoring of own supply-voltage
- LED-display for frequency and state
- Monitoring of under- and/or over-frequenncy
- programmable hysteresis
- programmable switching-delay
- relay-output 1 changeover-contact

Function

When the upper limit is exceeded, the LED-segment on the left upper side blinks. After the programmed delay time, the relay releases and the LED segment is lighting. When the frequency drops under the limit (-hysteresis), the vertikal LED-segment on the upper left side blinks for the time of the switching delay and after that, the relay picks up.

When the lower limit is exceeded, the LED-segment on the left lower side blinks. After the programmed delay time, the relay releases and the LED segment is lighting. When the frequency rises above the limit (+hysteresis), the vertikal LED-segment on the lower left side blinks for the time of the switching delay and after the delay, the relay picks up.

Installation - Putting into operation

The plug base can be mounted either with

- 35 mm mounting rail according to DIN 50 002 or
- M4 screws
- Wiring directly to plug base
- Connect wires as per wiring scheme
- Plug in electronics and fix with knurled screw

ATTENTION

Before switching on voltage make sure, that the operational voltage Us of the lateral type plate and the mains voltage connected to the relay are the same.

Setting the limits

Standard-settings ex works:

- lower limit: 48 Hz / hysteresis 1,0 Hz
- upper limit: 52 Hz / hysteresis 1,0 Hz
- switching delay: 1 s

The settings can be changed as follows:

Upper limit:

- press "Mode" 1x – display of actual limit, i.e. "h52.0"
- change limit with "Up/Down"
- limit "00.0" = only monitoring of under-frequency
- press "Mode" until actual frequency is being displayed

Hysteresis of upper limit:

- press "Mode" 2x – display of actual hysteresis of upper limit, i.e. "hh1.0"
- change hysteresis with "Up/Down"
- press "Mode" until actual frequency is being displayed

Lower limit:

- press "Mode" 3x – display of actual limit, i.e. "L48.0"
- change limit with "Up/Down"
- limit "00.0" = only monitoring of over-frequency
- press "Mode" until actual frequency is being displayed

Hysteresis of lower limit:

- press "Mode" 4x – display of actual hysteresis of upper limit, i.e. "hL1.0"
- change hysteresis with "Up/Down"
- press "Mode" until actual frequency is being displayed

Switching delay:

- press "Mode" 5x – display of actual hysteresis of upper limit, i.e. "d00.1"
- change switching delay with "Up/Down"
- press "Mode" until actual frequency is being displayed

The values are stored when pressing "Mode" after making the setting.

When there is no button pressed after 20 seconds, the relay returns in the monitoring mode. The (new) set values are being stored.

When the monitored window is too small, "Erro" blinks in the display.

The window has to be set as follows:

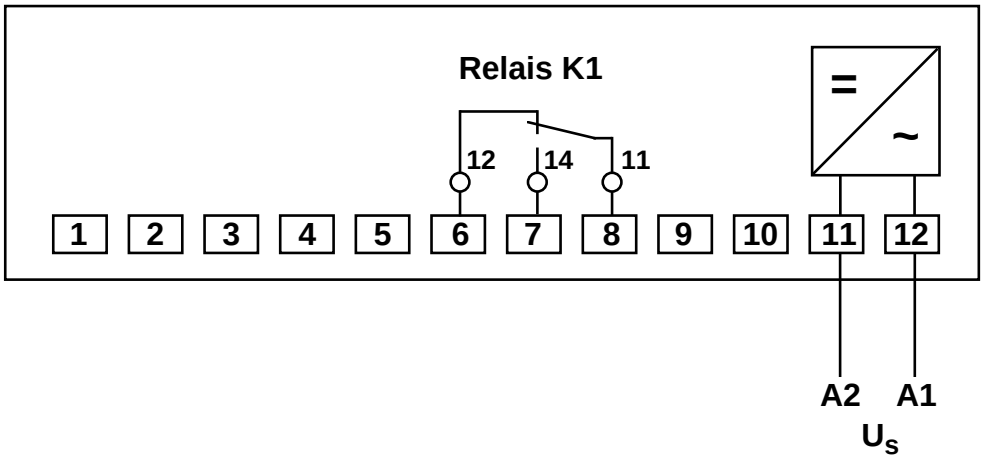
(upper limit – upper hysteresis) - (lower limit + lower hysteresis) ≥ 0,2 Hz

Technical data

	…….
type-name	
order-no.	see type plate
supply voltage Us	
power consumption	on the device
other	
	…….
admissible tolerance of supply voltage	AC - 15 ... + 10 %
<u>measured frequency</u>	own supply over built-in transformer
<u>setting ranges</u>	
frequency	40 ... 70 Hz
monitoring function	window / over / under
max. error of switching points	± 0,1 Hz
switching delay	0,05 s ... 9,9 s programmable
hysteresis	0,1 Hz ... 9,9 Hz
<u>relay output</u>	1x U
switching voltage	max. AC 400 V
switching current	max. AC 6 A
switching power	max. 2000 VA (ohmic load)
	max. 48 W at DC 24V
rated operational current I_e	2A AC15 400 V / 2A DC13 24 V
	4A AC15 230 V
testing conditions	VDE 0660/0160
isolation	VDE 0110 AC 400V/I.Gr.C
transformer	VDE 0550
on-period	100 %
admissible ambient temperature	-20 ... +55 °C

housing	design S12
line connection	12 - pole, 2 x 1,5 mm^2 or 1 x 2,5 mm^2
each protection housing	IP 30 (DIN 40 050)
protection terminals	IP 20 (DIN 40 050)
inclination	any
mounting	35 mm- rail according to DIN EN50022 or 2 screws M4
weight	app. 0,3 kg

wiring scheme:



housing design S12: