



ELKO

ELKO HRN-43N/400V phase monitoring relay

Product code 50008 · Emergency lighting > Accessories

Voltage monitoring relay for three-phase networks (ELKO HRN-43N/400V) for star connection $3 \times 400/230$ V. Monitors overvoltage and undervoltage, phase sequence, phase failure and asymmetry.

- Star connection $3 \times 400/230$ V with neutral conductor
- Overvoltage and undervoltage at two separate levels
- Phase sequence, phase failure and adjustable asymmetry
- 2 changeover contacts 16 A, operating separately or in parallel
- Adjustable delay 0.1–10 s, selectable hysteresis 5/10%
- Galvanically isolated 400 V AC supply

Product description

ELKO HRN-43N/400V is a voltage monitoring relay for three-phase networks with a neutral conductor (star connection $3 \times 400/230$ V). The relay monitors phase voltages at two separate levels (upper and lower limit), phase sequence, phase failure and asymmetry between phases. Each fault condition is shown by its own LED indicator. The relay's supply voltage is a galvanically isolated 400 V AC.

Operation

The upper limit U_{max} is set between 138 and 276 V and the lower limit U_{min} at 35–99% of the upper limit. If any phase leaves the set range, the output contact opens after an adjustable delay (0.1–10 s); the delay filters out short dips and spikes. If two or three phases fail, the contacts open immediately. The asymmetry limit is adjusted between 5 and 20%, and the monitoring can be switched off. DIP switches are used to select the operation of the outputs (separately for overvoltage and undervoltage, or in parallel), a hysteresis of 5% or 10%, and the memory function.

Applications

The monitoring relay is used to protect equipment from mains disturbances and to control functions, such as starting standby power, in a fault situation. In emergency lighting systems, the phase monitoring relay can be used to ensure that the emergency lighting is activated if any phase fails; for example, according to the technical description of Panasonic MX emergency luminaires, the phase monitoring device is connected to a monitored input of I/O unit 4461/4462.

Installation

The relay is mounted on a DIN rail (EN 60715), and the mounting position is free. The outputs are two changeover contacts (16 A / AC1, 250 V AC).

Technical data

Product code	50008
Manufacturer	ELKO
Product group	Emergency lighting > Accessories
Operating voltage	400 V AC (50–60 Hz), –15%/+10%

Input power	Max. 5 VA / 2.5 W
Monitored mains supply	3 × 400/230 V, 50–60 Hz (L1-L2-L3-N)
Upper limit setting	138–276 V
Lower limit setting	35–99% of the upper limit
Asymmetry	Adjustable 5–20% or off
Delay	Fixed t1 max. 200 ms; adjustable t2 0.1–10 s
Hysteresis	Selectable 5% / 10%
Output	2 changeover contacts (AgNi), 16 A / AC1, 250 V AC / 24 V DC
Operating temperature	–20...+55 °C
Dimensions	90 × 52 × 65 mm
Weight	248 g
IP rating	IP40 (front panel), IP20 (terminals)
Mounting	DIN rail (EN 60715)
Connection	Conductors max. 1 × 2.5 mm ² or 2 × 1.5 mm ²
Standards	EN 60255-1, EN 60255-26, EN 60255-27

Documents

The manufacturer's original documents can be downloaded from the product page (QR code at the top of this sheet).

Technical datasheet: ELKO HRN-43N/400V phase monitoring relay

Installation guide: ELKO HRN-43N/400V phase monitoring relay

Request a quote or ask for more information

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Up-to-date information and documents: pap.fi/en/tuote/pap-vaihevahti-hrn-43n-400v/