E3YM400VSY20

Manufacturer data sheet: V1.107

Monitoring relay - voltage monitoring

Status: Available Data sheet created: 01.07.2025

Item Number: 1341408 - **Serie:** Enya - **EAN:** 9008662007628



- Monitoring relays ENYA series
- Voltage monitoring in 3-phase and 1-phase networks
- Multifunction
- Phase sequence and phase failure monitoring
- Connection of neutral conductor optional
- Supply voltage = measuring voltage
- Supply voltage 3 x 400/230V AC
- 2 changeover contacts
- width 35mm
- Installation type

Description

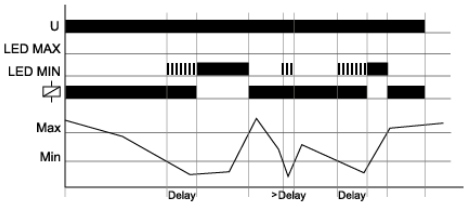
Voltage monitoring in 3-phase and 1-phase mains with adjustable thresholdes, adjustable tripping delay, monitoring of phase sequence, phase failure, asymmetry with adjustable asymmetry.

General information

Short description	Voltage monitoring 1- and 3-phase, 400V, multifunction, 2 changeover contacts
Item Number	1341408
EAN	9008662007628
Main category	Monitoring Relays
Series	Enya
Type	E3YM400VSY20
Design	Installation design
Supply	400V AC
Dimensions	35 x 87 x 65 mm

Functions and measurands

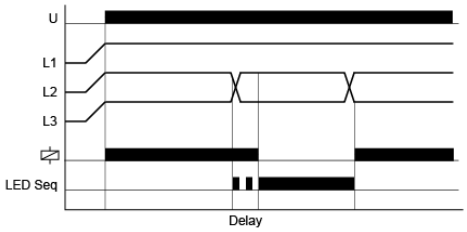
Amount of functions 6



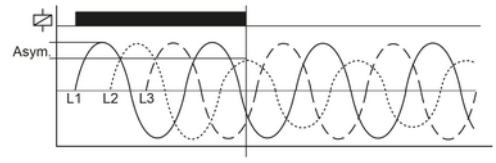
Undervoltage monitoring (UNDER, UNDER+SEQ)
The output relay R switches into on-position, if the measured voltage of all three phase voltages is beyond the Min-value. As soon as the measured voltage falls below the Min-value, the output relay R switches into off-position after the interval of the tripping delay (Delay) has expired.



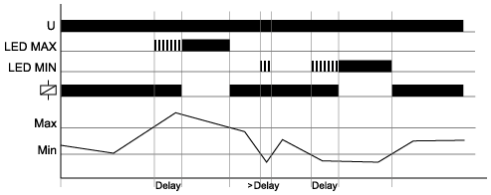
Phase failure (Pha)
As soon as one of the three phases fails, the output relay R pulls in and drops out (yellow LED does not light up). For safe detection of phase failures, the asymmetry function should be activated. It is recommended to connect the neutral conductor of the monitoring relay as soon as loads in the system use the neutral conductor connection.



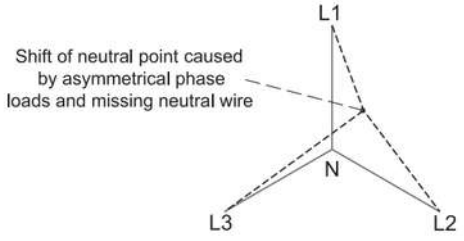
Phase sequence monitoring (SEQ)
Phase sequence monitoring is selectable for all functions. In single phase circuit, the phase sequence monitoring must be disconnected. If a change in phase sequence is detected (red LED SEQ illuminated), the output relay R switches into off-position after the set interval of tripping delay (Delay) has expired (yellow LED not illuminated).



Asymmetry monitoring (Asym)
If the asymmetry of the daisy-chained voltages exceeds the set ASYM value, the output relay drops out. If the neutral conductor is connected, the phase voltages (star voltage) are additionally monitored for asymmetry with respect to the neutral conductor. In this application, both values for the asymmetry are used for the evaluation. As soon as one of the two values exceeds the set value, the output relay drops out.



Windowfunktion (WIN, WIN+SEQ)
The output relay switches into on-position (yellow LED illuminated) when the measured voltage (mean value of phase-to-phase voltages) exceeds the value adjusted at the MIN-regulator. When the measured voltage exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated) the output relay switches into off-position (yellow LED not illuminated). The output relay again switches into on-position (yellow LED illuminated) when the measured voltage falls below the value adjusted at the MAX-regulator (red LED MAX not illuminated). When the measured voltage falls below the value adjusted at the MIN-regulator, the set interval of tripping delay (DELAY) begins again (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relay switches into off-position (yellow LED not illuminated).



Neutral wire break (-)
The device monitors every phase (L1, L2 and L3) against the neutral wire N. A shift of neutral point occurs by an asymmetrical phase load if the neutral wire breaks in the power line. If one of the phase voltages exceeds the value adjusted at the trip point, the set interval of tripping delay (Delay) begins (red LED Min or Max flashes). After the interval has expired (red LED Min or Max illuminated), the output relay switches into off-position (yellow LED not illuminated).

Time ranges

Number Of Areas	1	
Time ranges	**Setting range**	
	Start-up delay (Start)	-
	Shutter delay (Delay)	0 ... 30s

Indicators

Relay state	Yellow LED ON/OFF: output relay position
Error / monitoring function	Red LED ON/OFF: Display error for corresponding threshold
Error / monitoring function	Red LED flashes: Indication of tripping delay for corresponding threshold

Mechanical design

Housing material	made of self-extinguishing plastic
Housing - protection degree	IP40
Mounting	top hat rail TH 35 7,5-15 according to IEC 60715:2017 / EN 60715:2017
Terminals/connections	Touch-proof clamping yoke terminals according to DGUV 3 (Screwdriver PZ1 required)
Terminals - protection degree	IP20
Mounting position	any
Max. Tightening Torque	1 Nm
Terminal capacity	• 1 x 0.5 to 2.5mm² with/without ferrule • 1 x 4mm² without wire end ferrule • 2 x 0.5 to 1.5mm² with/without end sleeves • 2 x 2.5mm² flexible without ferrules

Supply circuit

Supply	(= measuring voltage)
Terminals/connections	(N)-L1-L2-L3
Supply voltage a.c.	3(N)~400/230V
Supply voltage tolerance a.c.	-30% ... +30% norminal voltage
Rated frequency [Hz]	a.c. 48 ... 63 Hz
Rated consumption a.c.	1,2 W / 11 VA
Duty cycle	100%
Recovery time	500 ms
Drop-out voltage	>20% the supply voltage
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	4 kV

Output curcuit

Type	Relay
Contact 1	1 change over contact
Terminals 1	15-16-18
Contacts 2	1 change over contact
Terminals/connections 2	25-26-28
Rated voltage	250 V a.c.
Switching Capacity 1	1250 VA (5 A/250 V a.c.)
Fuse Protection	5 A quick
Mechanical life	15 x 10^6 Switching cycles
Electrical life	100 x 10^3 Switching cycles (1000VA)
Switching frequency	max. 6/min at 1000 VA (in accordance with IEC 60947-5-1)
Rated surge voltage	4 kV
Overvoltage category	III (IEC 60664-1)

Measuring circuit

Measurand	Voltage - one and three phase
Measuring range	(= supply voltage)
Terminals/connections	(N)-L1-L2-L3
Overload capacity	determined by tolerance specified for supply voltage
Switching threshold minimum	70 ...120% of Un
Switching threshold maximum	80 ...130% of Un
Switching threshold asymmetrical	5 ... 25 %, OFF
Rated surge voltage	4 kV
Rated impulse withstand voltage	480 V
Overvoltage category	III (nach IEC 60664-1)

Accuracy

Base accuracy	≤5 %
Adjustment accuracy	≤5 %
Repetition accuracy	≤2 %
Temperature influence	≤0.05 % / °C

Ambient conditions and general specifications

Ambient temperature IEC	-25 to +55°C
Storage temperature	-25 ... +70 °C
Transport temperature	-25 ... +70 °C
Relative humidity	15% to 85% (in accordance with IEC 60721-3-3 class 3K3)
Pollution degree	2, pollution level can be increased by installation in suitable enclosures (according to IEC 60664-1)

Logistics

Minimum Quantity	1
Tariff Number	85364900
EAN	9008662007628
Country of Origin	AT
Product Weight (g)	116.6

Available declarations / conformities

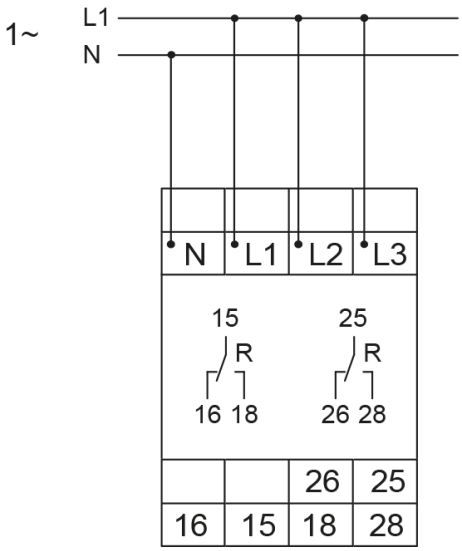
EAC	✓
CE	Open document
REACH	Open document
WEEE	Open document
TSCA	Open document
RoHs	Open document
CMRT	Open document

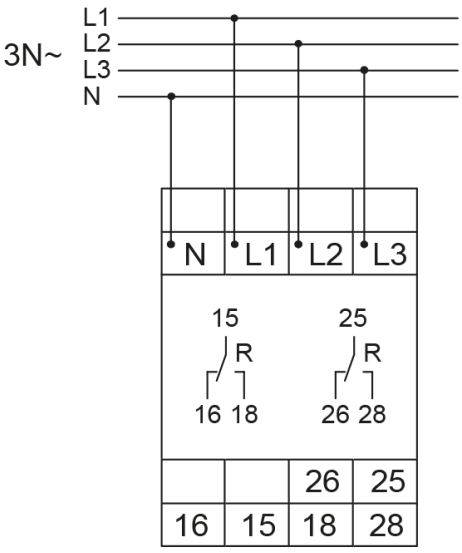
CAD Files

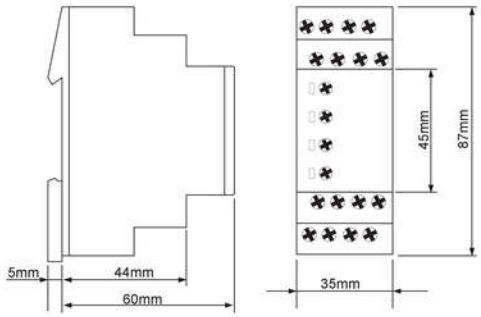
STEP_E3_en.STEP	Download file

Media & drawings









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Changes and errors excepted