

## Three Phase Voltage Monitoring Relay

EPAK-VMR-3PH-480-ILP 7760054301  
EPAK-VMR-3PH-480-ILP-H 7760054302



### Safety instructions

#### DANGER

For safe installation and safe operation the following must be observed:  
 • The device may only be installed by qualified personnel familiar with the national and international laws, directives and standards that apply to this region.  
 • Until the device is installed, do not connect hazardous voltages to the device.  
 • In applications where hazardous voltage is connected to in-/outputs of the device, sufficient spacing or isolation from wires, terminals and enclosure to surroundings (incl. neighbouring devices), must be ensured to maintain protection against electric shock.

#### WARNING

Prior to installation, commissioning and maintenance of the device, the related safety regulations, technical specifications and operating instructions must be observed.  
 • Avoid direct sunlight, dust, high temperatures, mechanical vibrations and shock as well as rain and heavy moisture.  
 • All devices can be used for Measurement Category II and Pollution Degree 2. The device is designed to be safe at least under an altitude up to 2000 m.  
 • The device is provided with field wiring terminals and shall be supplied from a power supply having double or reinforced insulation. A power switch should be easily accessible and close to the device. The power switch shall be marked as the disconnecting unit for the device.  
 • Year of manufacture can be taken from the first two digits in the serial number.  
 • When disconnected, the device may be cleaned with a cloth moistened with distilled water.

#### CAUTION

Appropriate safety measures against electrostatic discharge (ESD) are be considered when handling the devices.

### Introduction

EPAK voltage monitoring relay can monitor 3-phase voltage. You can set the threshold value by DIP switch and potentiometer. If the voltage status is abnormal, the relay will reset.

Weidmüller Interface GmbH Klingenbergsstr. 16  
32758 Detmold  
Germany

Weidmüller Interface (Shanghai) Co.,Ltd.  
25F, BM Intercontinental Business Center, 100 Yutong Road, Shanghai,  
China, 200070  
Phone: +86 21 2219-5008  
Fax: +86 21 2219-5009  
www.weidmueller.com.cn

### Specification

Channel: 1

Input:

Input signal: 3-Phase(L1-L2-L3)  
Input range: 165~550VAC  
Rated voltage: 200,400,480VAC (L-L)  
Max Voltage: 550VAC(L-L)  
Input frequency: 40Hz~60Hz

Output:

Contacts of relay: 1 set of individual SPDT  
Max Switching voltage: 250VAC/30VDC  
Continuous current: 3A @ 250VAC/30VDC  
Mechanical endurance: 2x10<sup>7</sup>

Transmission:

Measure Accuracy: 5% of F.S.  
Device Initial time: ≤ 200ms  
Step response time: ≤ 200ms  
Temperature coefficient: ≤ 250ppm/K

Alarm:

Alarm mode: Window, Phase sequence, Phase failure, Asymmetry  
Window alarm setting:  
7760054301 -15% for min value (fixed)  
10% for max value (fixed)  
7760054302 -5~25% for min value (set by pot)  
5~25% for max value (set by pot)

Hysteresis: 10V

Asymmetry: 10%

\*asym=(Umax-Umin)/(Uab+Ubc+Uca)/3

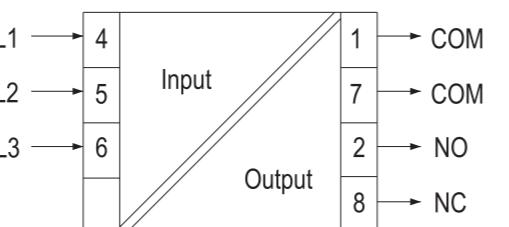
Insulation Coordination:

Standards: EN50178  
EMC standards: IEC61000-6-2, IEC61000-6-4  
Rated voltage: 300V  
Impulse withstand voltage: 4000V(1.2/50us)  
Isolation voltage: 2000VAC, 1min, 50Hz  
Overvoltage category: III  
Pollution degree: 2

General Data:

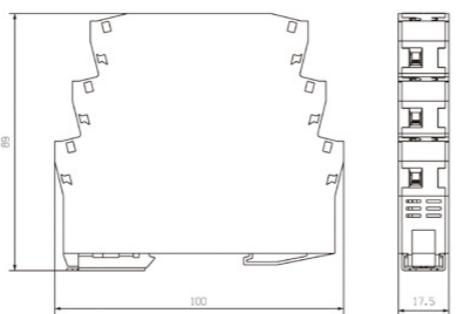
Operating temperature: -20 ~ +60°C  
Storage temperature: -40 ~ +85°C  
Humidity: 0 ~ 85%, Tu=40°C, no condensation  
Indicator:  
LED PWR: Green, power on  
LED ALM: Red, alarm  
Approval: CE

### Wiring

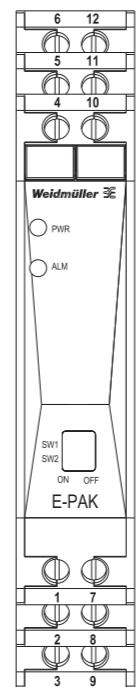
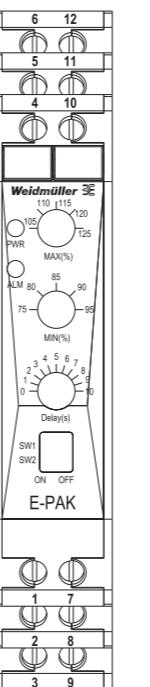


### Dimensions

Height x Length x Width : 100 x 89 x 17.5 (mm)



### Front cover and terminal definition



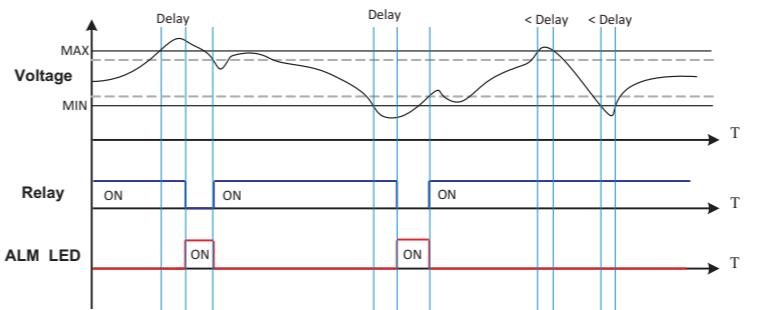
EPAK-VMR-3PH-480-ILP-H  
7760054302  
EPAK-VMR-3PH-480-ILP  
7760054301

### Settings

Rated Voltage	SW1	SW2
220V	OFF	ON
400V	ON	OFF
480V	OFF	OFF

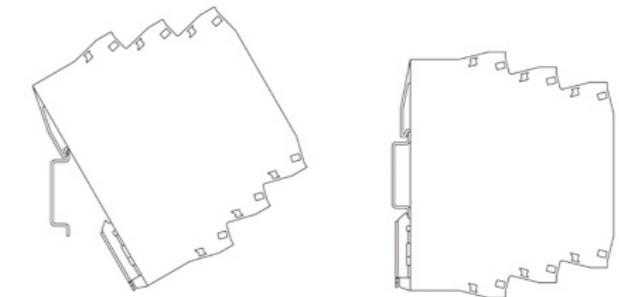
\* Default setting: SW1-OFF, SW2-OFF

### Working sequence drawing



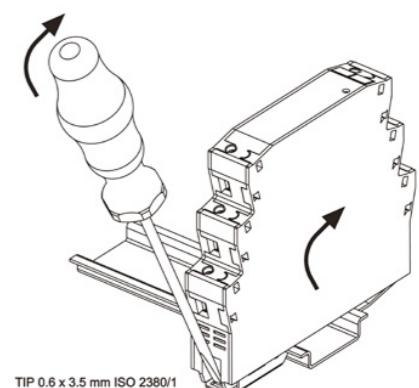
### Installation

The product is designed to be mounted onto a TS 35 DIN rail. It clips onto the rail via a spring-loaded mounting foot and can be removed via a spring release on the edge of the product near the mounting rail.



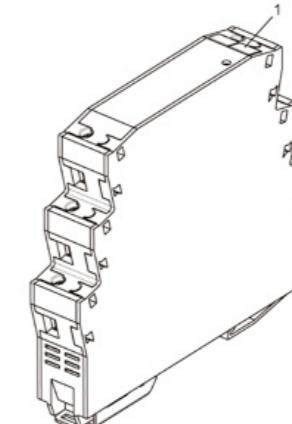
### Uninstallation

Please refer to the following picture when try to uninstall the isolator from the Din rail. Insert the screw driver into the hold of the house feet and turn the screw driver to take off the isolator.



### Marker

A device marker is located below the upper set of terminals for customer identification.



### Maintenance

- Before powering the isolator, make sure the models type is correct according to the design and the application environmental conditions.
- Please choose the power supply with short circuit protection function.
- After the electronic products have been powered for more than fifteen minutes, the temperature of them should be stable.
- It is strictly prohibited to test the insulation capability between any two terminals of the product by a mega-ohmmeter. All of the connecting wires of the isolator must be disconnected, before testing the insulation of the system, otherwise internal components will be destroyed.
- Each product has been tested strictly and the quality is controlled rigidly. If you have any questions regarding this product, contact the nearest distributor or our company technical support hotline directly for assistance.
- In 12 months from delivery date, if the product works improperly in the process of normal usage, we will repair or replace it without charge.

Mat No. : 2016910000 V00