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Powering Business Worldwide

EMR6-VM600-A-1 - Voltage monitoring relay, 3 - 30, 5 - 60, 30 - 300, 60 - 600 V, 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC



184784 EMR6-VM600-A-1

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## 184784 EMR6-VM600-A-1

Voltage monitoring relay, 3 - 30, 5 - 60, 30 - 300, 60 - 600 V, 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC

Alternate Catalog No.

EMR6-VM600-A-1

EL-Nummer (Norway)

4101980

Voltage monitor, Product range: EMR Measuring and monitoring relays, Monitoring of: Overvoltage, Undervoltage, Voltage measurement range: 3 - 30, 5 - 60, 30 - 300, 60 - 600 V, Supply voltage: 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC, Mounting position: As required, Fixing: Snap fixing, top-hat rail IEC/EN 60715, Width: 22.5 mm, Standards: UL508, CAN/CSA C22.2 No.14, GL, EAC, CCC, RMRS, RCM

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### Delivery program

Product range

EMR Measuring and monitoring relays

Basic function

Voltage monitor

Monitoring of

Overvoltage

Undervoltage

Voltage measurement range

3 - 30

5 - 60

30 - 300

60 - 600 V

Contact sequence

A1 - A2

B - C

12:15

13:15 14:15

22:25

21:25 24:25

Supply voltage

24 - 240 V AC, 50/60 Hz

24 - 240 V DC

Width

22.5 mm

# Technical data

## General

### Standards

UL508, CAN/CSA C22.2 No.14, GL, EAC, CCC, RMRS, RCM

### Lifespan, mechanical [Operations]

$30 \times 10^6$

### Climatic proofing

Damp heat, cyclical to IEC 60068-2-30: 24 h cycle, 55° C, 93% relative humidity, 96 h

Ambient temperature Operation Operating ambient temperature min.

-25 °C

Ambient temperature Operation Operating ambient temperature max.

+60 °C

Ambient temperature Storage

- 40 - 85 °C

### Mounting position

As required

### Shock resistance

Class 2

Degree of protection Terminals

IP20

Degree of protection Enclosures

IP50

Terminal capacities Solid

1 x 0.5-2.5 (1 x 18-14 AWG) mm<sup>2</sup>

Terminal capacities Flexible with ferrule

2 x 0.5-1.5 (2 x 18-16 AWG) mm<sup>2</sup>

Standard screw driver

5.5 x 0.8 mm

Tightening torque

0.5 - 0.8 Nm

### Fixing

Snap fixing, top-hat rail IEC/EN 60715

MTBF (mean time between failures)

393344 h

### Contacts

Rated impulse withstand voltage [ $U_{imp}$ ]

4000 V AC

Overvoltage category/pollution degree

III/3

### Power supply

Supply voltage

24 - 240 V AC, 50/60 Hz

24 - 240 V DC

Voltage tolerance

0.85 - 1.1 x  $U_c$

Power consumption

2.6 VA

Rated frequency [f]

50 - 60 Hz

Duty factor

100 % DF

Timing cycle

Response delay time

Adjustable from 0.1 - 30 s

Reset delay/Off-delay time

Adjustable from 0.1 - 30 s

Measuring circuits

Response range for undervoltage [ $U_{min}$ ] Min. undervoltage response value

3 V AC

Response range for undervoltage [ $U_{min}$ ] Max. undervoltage response value

600 V AC

Response range for overvoltage [ $U_{max}$ ] Min. overvoltage response value

3 V AC

Response range for overvoltage [ $U_{max}$ ] Max. overvoltage response value

600 V AC

Hysteresis

3...30 %

Status indication

Supply voltage  
LED yellow  
Output relay energized  
LED yellow  
Error  
LED, red  
Status indicator (LED)  
Green, solid: Supply voltage  
Other states depending on fault (see IL): Measured value  
Relay output contacts  
Minimum Switching capacity  
10 mA / 24 V  
Lifespan, electrical (AC-12/230 V/4 A) [Operations] Lifespan, electrical [Operations]  
0.1 x 10<sup>6</sup>  
Electromagnetic compatibility (EMC)  
Electromagnetic compatibility  
IEC/EN 60947-6-2  
ESD [Air/contact discharge]  
IEC/EN 61000-4-2 level 3 kV  
HF-immunity to radiation  
IEC/EN 61000-4-3 level 3  
Burst  
IEC/EN 61000-4-4 level 3  
Surge  
IEC/EN 61000-4-5 Level 4  
HF-immunity to line-conducted interference  
IEC/EN 61000-4-6 level 3

## Design verification as per IEC/EN 61439

Operating ambient temperature min.  
-25 °C  
Operating ambient temperature max.  
+60 °C

## Technical data ETIM 7.0

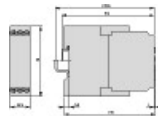
Relays (EG000019) / Voltage monitoring relay (EC001438)  
Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment  
(low-voltage switch technology) / Voltage monitoring equipment (ecl@ss10.0.1-27-37-18-01 [AKF095014])  
Type of electric connection  
Screw connection  
With detachable clamps  
No  
Single-phase under voltage possible  
Yes  
Three-phase under voltage possible  
No  
Single-phase over voltage possible  
Yes  
Three-phase over voltage possible  
No  
Single-phase hysteresis possible  
No  
Three-phase hysteresis possible  
No  
Contains function DC-under voltage  
Yes  
Contains function DC-over voltage  
Yes  
Contains function DC-voltage hysteresis  
No  
Voltage measurement range 1  
3 - 600 V  
Voltage measurement range 2  
0 - 0 V  
Type of voltage measurement range  
AC/DC  
Rated control supply voltage U<sub>s</sub> at AC 50HZ  
24 - 240 V

Rated control supply voltage  $U_s$  at AC 60Hz  
24 - 240 V  
Rated control supply voltage  $U_s$  at DC  
24 - 240 V  
Voltage type for actuating  
AC/DC  
Response value voltage  
3 - 600 V  
Mn. adjustable delay-on energization time  
0.1 s  
Max. permitted delay-on energization time  
30 s  
Mn. adjustable off-delay time  
0 s  
Max. permitted off-delay time  
0 s  
Number of contacts as normally closed contact  
0  
Number of contacts as normally open contact  
0  
Number of contacts as change-over contact  
2  
Width  
22.5 mm  
Height  
85.6 mm  
Depth  
104.6 mm

## Approvals

Product Standards  
IEC 255-6; UL 508; CSA-22.2 No. 14-05; CE marking  
UL File No.  
E29184  
UL Category Control No.  
NKCR, NKCR7  
CSA File No.  
UL report valid  
CSA Class No.  
3211-03  
North America Certification  
UL listed, certified by UL for use in Canada

## Dimensions



## CAD data

- [Product-specific CAD data](#)  
(Web)
- [3D Preview](#)  
(Web)

## DWG files

- [DA-CD-emr6\\_r\\_t\\_v\\_i](#)  
File  
(Web)

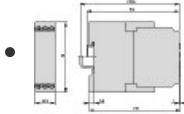
## edz files

- [DA-CE-ETN.EMR6-VM600-A-1](#)  
File  
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## Step files

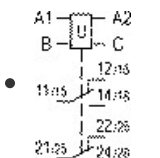
- [DA-CS-emr6\\_r\\_t\\_v\\_i](#)  
File  
(Web)

## Dimensions single product



• [240X003](#)  
Line drawing  
Measuring and monitoring relay

## Wiring diagram



• [2400SW-1](#)  
Line drawing

## Product photo



• [2400PIC-1](#)  
Photo

## Instruction Leaflet

- [Voltage monitoring relay \(IL121013ZU\)](#)  
Asset  
(PDF, multilingual)

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