

Select your language

- German
- English
- Spanish
- French
- Dutch
- Italian
- Polish
- Czech
- Russian
- Norwegian Bokmål

Worldwide English



Powering Business Worldwide

EMR6-AW300-C-1 - Phase monitoring relays, Multi-functional, 160 - 300 V AC, 50/60 Hz



184763 EMR6-AW300-C-1

[Overview](#) [Specifications](#) [Resources](#)



184763 EMR6-AW300-C-1

Phase monitoring relays, Multi-functional, 160 - 300 V AC, 50/60 Hz

Alternate Catalog No.

EMR6-AW300-C-1

EL-Nummer (Norway)

4101959

Phase monitoring relays, Product range: EMR Measuring and monitoring relays, Multi-functional, Power supply from the measuring circuit, On-delay/off-delay: none = 0 or adjustable between 0.1 - 30 s, Imbalance threshold values adjustable 2 - 25 % of mean value of phase voltages, Three-phase networks, Monitoring voltage per phase: $U_N = 160 - 300 \text{ V AC, 50/60 Hz V AC}$, Monitoring of: Phase sequence (can be deactivated), Phase failure, Overvoltage, Undervoltage, Imbalance, Supply voltage: 160 - 300 V AC, 50/60 Hz, Mounting position: As required, Fixing: Snap fixing, top-hat rail IEC/EN 60715, Width: 22.5 mm, Standards: IEC, UL, CSA, CCC, GL

- Delivery program
- Technical data
- Design verification as per IEC/EN 61439
- Technical data ETIM 7.0
- Approvals
- Dimensions

Delivery program

Product range

EMR Measuring and monitoring relays

Basic function

Phase monitoring relays

Function

Multi-functional

Power supply from the measuring circuit

On-delay/off-delay: none = 0 or adjustable between 0.1 - 30 s

Imbalance threshold values adjustable 2 - 25 % of mean value of phase voltages

Three-phase networks

Monitoring voltage per phase [U_N]

160 - 300 V AC, 50/60 Hz V AC

Monitoring of

Phase sequence (can be deactivated)

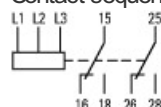
Phase failure

Overvoltage

Undervoltage

Imbalance

Contact sequence



Supply voltage
160 - 300 V AC, 50/60 Hz
Width
22.5 mm

Technical data

General

Standards

IEC, UL, CSA, CCC, GL

Lifespan, mechanical [Operations]

30×10^6

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) mm²

Terminal capacities Flexible with ferrule

2 x 0.5-1.5 (2 x 18-16 AWG) mm²

Standard screw driver

5.5 x 0.8 mm

Tightening torque

0.6 - 0.8 Nm

Fixing

Snap fixing, top-hat rail IEC/EN 60715

MTBF (mean time between failures)

382977 h

Contacts

Rated impulse withstand voltage [U_{imp}]

4000 V AC

Overvoltage category/pollution degree

III/3

Power supply

Supply voltage

160 - 300 V AC, 50/60 Hz

Voltage tolerance

0.85 - 1.1 x U_c

Power consumption

3 VA

Rated frequency [f]

50 - 60 Hz

Duty factor

100 % DF

Timing cycle

Response delay time

0.2 s

Reset delay/Off-delay time

Adjustable from 0.1 – 30 s

Time error within supply voltage

0.5 %

Time error within temperature range

0.06 %/°C

Measuring circuits

Frequency

50/60 ± 10 % Hz

Hysteresis

0..5 %
 Frequency
 50/60 ± 10 % Hz
 Measuring cycle
 50 ms
 Temperature error
 0.06 %/°C
 Error within supply voltage
 0.5 %
 Status indication
 Supply voltage
 LED green: R on
 Output relay energized
 LED green: R flashes
 Overvoltage
 LED red: F1 on
 Undervoltage
 LED red: F2 on
 Phase failure
 LED red: F1 on, F2 flashes
 Phase sequence error
 LED red: F1, F2 flashing
 Status indicator (LED)
 Green, solid: Supply voltage
 Yellow, solid: Relay energized
 Yellow, flashing: Delay time running
 Red, solid (F1 & F2): Imbalance
 Red, solid (F1): Overvoltage
 Red, solid (F2): Undervoltage
 Red: F1 solid, F2 flashing: Phase failure
 Red, flashing (F1 & F2 alternating): Phase sequence fault
 Relay output contacts
 Rated operational voltage [U_e]
 250 V AC
 Rated operational current [I_e] AC-12 at 230 V [I_e]
 4 A
 Rated operational current [I_e] AC-15 with 230 V [I_e]
 3 A
 Rated operational current [I_e] DC-12 at 24 V [I_e]
 4 A
 Rated operational current [I_e] DC-13 at 24 V [I_e]
 2 A
 Minimum Switching capacity
 10 mA / 24 V
 Lifespan, electrical (AC-12/230 V/4 A) [Operations] Lifespan, electrical [Operations]
 0.1 x 10⁶
 Short-circuit rating max. fuse [Fast/gL]
 5 A
 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 E 1111 / 1.0

Relays (EG000019) / Phase monitoring relay (EC001441)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Asymmetry monitoring equipment (ecl@ss10.0.1-27-37-18-03 [AKF097014])

Type of electric connection

Screw connection

With detachable clamps

No

Rated control supply voltage U_s at AC 50HZ

160 - 300 V

Rated control supply voltage U_s at AC 60HZ

160 - 300 V

Rated control supply voltage U_s at DC

0 - 0 V

Voltage type for actuating

AC

Phase sequence monitoring

Yes

Phase failure detection

Yes

Function under voltage detection

Yes

Function over voltage detection

Yes

Phase imbalance monitoring

Yes

Voltage measurement range

160 - 300 V

Mn. adjustable delay-on energization time

0.1 s

Max. permitted delay-on energization time

30 s

Mn. adjustable off-delay time

0.1 s

Max. permitted off-delay time

30 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_a_w_f](#)
File
(Web)

edz files

- [DA-CE-ETN.EMR6-AW300-C-1](#)
File
(Web)


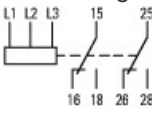
Step files

- [DA-CS-emr6_a_w_f](#)
File
(Web)

Additional product information

- [Phase monitoring relays](#)
(Web)

Wiring diagram

- 
[2431SW-10](#)
Line drawing
- 
[2431SW-4](#)
Line drawing
Current monitor

Product photo

- 
[2430DIM-4](#)
Photo
- 
[2431PIC-85](#)
Photo

Instruction Leaflet

- [Multifunction three-phase monitoring relays \(IL121007ZU\)](#)
Asset

(PDF, multilingual)

Download-Center

- [Download-Center \(this item\)](#)
Eaton EMEA Download-Center - download data for this item
- [Download-Center](#)
Eaton EMEA Download-Center

 [Generate data sheet in PDF format](#)

 [Generate data sheet in Excel format](#)

 [Write a comment](#)

[Imprint](#) [Privacy Policy](#) [Legal Disclaimer](#) [Terms and Conditions](#)

© 2021 by Eaton Industries GmbH