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EMR6-W400-M-1 - Phase monitoring relays, On- and Off-delayed, 400 V AC, 50/60 Hz



184778 EMR6-W400-M-1

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184778 EMR6-W400-M-1

Phase monitoring relays, On- and Off-delayed, 400 V AC, 50/60 Hz
Alternate Catalog No. EMR6-W400-M-1
EL-Nummer (Norway) 4101974

Phase monitoring relays, Product range: EMR Measuring and monitoring relays, On- and Off-delayed, 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: $U_N = 400 \text{ V AC, 50/60 Hz V AC}$, Monitoring of: Phase sequence (can be deactivated), Phase failure, Overvoltage, Undervoltage, Supply voltage: 400 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
On- and Off-delayed
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]
400 V AC, 50/60 Hz V AC
Monitoring of
Phase sequence (can be deactivated)
Phase failure
Overvoltage
Undervoltage
Contact sequence

Supply voltage
400 V AC, 50/60 Hz
Width

22.5 mm

Technical data

General

Standards

IEC, UL, CSA, CCC, GL

Lifespan, mechanical [Operations]

30 x 10⁶

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

400 V AC, 50/60 Hz

Voltage tolerance

0.85 - 1.1 x U_c

Power consumption

18 VA

Rated frequency [f]

50 - 60 Hz

Duty factor

100 % DF

Timing cycle

Response delay time

0.25 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 yellow
Overvoltage
LED red: F1 on
Undervoltage
LED red: F2 on
Status indicator (LED)
Yellow, solid: Supply voltage
Yellow, solid (RT): Relay energized
Yellow, flashing (RT): Delay time running
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]
 0.1×10^6
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

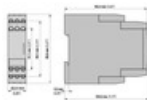
Relays (EG000019) / Phase monitoring relay (EC001441)
Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Asymmetry monitoring equipment (ecl@ss10.0.1-27-37-18-03 [AKF097014])
Type of electric connection
Screw connection
With detachable clamps
No
Rated control supply voltage U_s at AC 50HZ
400 - 400 V
Rated control supply voltage U_s at AC 60HZ
400 - 400 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
No
Voltage measurement range
400 - 400 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-W400-M-1](#)
File
(Web)


Step files

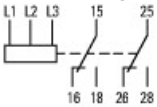
- [DA-CS-emr6_a_w_f](#)
File
(Web)

Additional product information

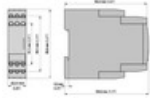
- [Phase monitoring relays](#)
(Web)

Wiring diagram

- 
[2431SW-10](#)
Line drawing

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

Product photo

- 
[2430DIM-4](#)
Photo

- 
[2431PIC-102](#)
Photo

Instruction Leaflet

- [Single-function three-phase monitoring relays \(IL121006ZU\)](#)
Asset
(PDF, multilingual)

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