

Select your language

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

Worldwide English



EMR6-IF1-A-1 - Window-current monitoring relay, Current measuring range: 3 - 30 mA, 10 - 100 mA, 0.1 - 1 A, Supply voltage: 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC



184782 EMR6-IF1-A-1

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



184782 EMR6-IF1-A-1

Window-current monitoring relay, Current measuring range: 3 - 30 mA, 10 - 100 mA, 0.1 - 1 A, Supply voltage: 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC

Alternate Catalog No.

EMR6-IF1-A-1

EL-Nummer (Norway)

4101978

Current monitoring relays, Product range: EMR Measuring and monitoring relays, Monitoring of single-phase DC and AC networks, Switch-on delay: none = 0 or adjustable from 0.1 to 30 s, Extension of the measurement range possible with current transformers, Monitoring of: Overcurrent, Undercurrent, Overcurrent and undercurrent (window), Current measuring range: I/F 3 - 30 mA, 10 - 100 mA, 0.1 - 1 A A, 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: UL 508, CAN/CSA C22.2 No.14, GL, EAC, CCC, FMRS, RCM

- [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

Current monitoring relays

Monitoring of single-phase DC and AC networks

Switch-on delay: none = 0 or adjustable from 0.1 to 30 s

Extension of the measurement range possible with current transformers

Monitoring of

Overcurrent

Undercurrent

Overcurrent and undercurrent (window)

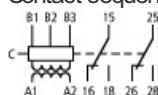
Current measuring range [I/F]

3 - 30 mA

10 - 100 mA

0.1 - 1 A A

Contact sequence



Supply voltage

24 - 240 V AC, 50/60 Hz

24 - 240 V DC

Width

22.5 mm

Technical data

General

Standards

UL 508, CAN/CSA C22.2 No.14, GL, EAC, CCC, FMRS, RCM

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

4 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)

382467 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

30 s

On-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

Inputs B1-C

0.003 - 0.03 A

Inputs B2-C

0.01 - 0.1 A

Inputs B3-C

0.1 - 1 A
 Hysteresis Hysteresis, max.
 5 %
 Measuring cycle
 80 ms
 Temperature error
 0.06 %/°C
 Error within supply voltage
 0.5 %
 Status indication
 Supply voltage
 LED, green
 Output relay energized
 LED, yellow
 Measured value
 LED, red
 Status indicator (LED)
 Green, solid: Supply voltage
 Other states depending on fault (see IL): Measured value
 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
 Short-circuit rating max. fuse [Fast/gL]
 10 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 ETIM 7.0

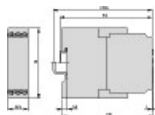
Relays (EG000019) / Current monitoring relay (EC001440)
 Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment
 (low-voltage switch technology) / Current monitoring equipment (ecl@ss10.0.1-27-37-18-02 [AKF096014])
 Type of electric connection
 Screw connection
 With detachable clamps
 No
 Single-phase under current possible
 Yes
 Three-phase under current possible
 No

Single-phase over current possible
Yes
Three-phase over current possible
No
Single-phase hysteresis possible
Yes
Three-phase hysteresis possible
No
Contains function DC-voltage under current
Yes
Contains function DC-voltage over current
Yes
Function DC-current hysteresis
Yes
Rated control supply voltage U_s 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
Current measurement range
0.01 - 1 A
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
External current transformer
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



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

DWG files

- [DA-CD-emr6_r_t_v_i](#)
File
(Web)

edz files

- [DA-CE-ETNEMR6-IF1-A-1](#)
File
(Web)

Step files

- [DA-CS-emr6_r_t_v_i](#)
File
(Web)

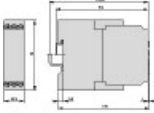
Additional product information

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

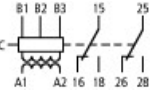
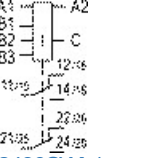
Product photo

- 
[2430PIC-6](#)
Photo

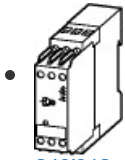
Dimensions single product

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

Wiring diagram

- 
[240S024](#)
Line drawing
Current monitor
- 
[2430SM-1](#)
Line drawing

3D drawing



240I012

Line drawing

Phase imbalance monitoring relay

Instruction Leaflet

- [Window current monitoring relay \(IL121012ZU\)](#)
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