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EMR6-F500-G-1 - Phase sequence relays, 200 - 500 V AC, 50/60 Hz



184789 EMR6-F500-G-1

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# 184789 EMR6-F500-G-1

Phase sequence relays, 200 - 500 V AC, 50/60 Hz

Alternate Catalog No.

EMR6-F500-G-1

EL-Nummer (Norway)

4101985

Phase sequence relays, Product range: EMR Measuring and monitoring relays, Monitoring of three-phase networks, Phase failure detection at  $< 0.6 \times U_e$ , Power supply from the measuring circuit, Fixed response delay, Monitoring voltage per phase:  $U_N = 200 - 500 \text{ V AC, } 50/60 \text{ Hz V AC}$ , Monitoring of: Phase failure, Phase sequence, Supply voltage:  $200 - 500 \text{ V AC, } 50/60 \text{ Hz}$ , Mounting position: As required, Fixing: Snap fixing, top-hat rail IEC/EN 60715, Width: 22.5 mm, Standards: IEC/EN 60255-6,

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## Delivery program

Product range

EMR Measuring and monitoring relays

Basic function

Phase sequence relays

Monitoring of three-phase networks

Phase failure detection at  $< 0.6 \times U_e$

Power supply from the measuring circuit

Fixed response delay

Monitoring voltage per phase [ $U_N$ ]

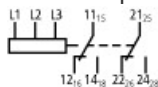
$200 - 500 \text{ V AC, } 50/60 \text{ Hz V AC}$

Monitoring of

Phase failure

Phase sequence

Contact sequence



Supply voltage

$200 - 500 \text{ V AC, } 50/60 \text{ Hz}$

Width

22.5 mm

## Technical data

General

Standards  
IEC/EN 60255-6,  
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.  
-20 °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  
 $2 \times 2.5 \text{ mm}^2$   
Terminal capacities Flexible with ferrule  
 $2 \times 2.5/2 \times \text{AWG14} \text{ mm}^2$   
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)  
628571 h  
Contacts  
Rated impulse withstand voltage [ $U_{imp}$ ]  
4000 V AC  
Overvoltage category/pollution degree  
III/3  
Power supply  
Supply voltage  
200 - 500 V AC, 50/60 Hz  
Voltage tolerance  
 $0.85 - 1.1 \times U_c$   
Power consumption  
11 VA  
Rated frequency [f]  
50 - 60 Hz  
Duty factor  
100 % DF  
Measuring circuits  
Monitoring voltage [ $U_h$ ] Monitoring voltage, min.  
200 V AC  
Monitoring voltage [ $U_h$ ] Monitoring voltage, max.  
500 V AC  
Frequency Min. frequency range  
50 Hz  
Frequency Max. frequency range  
60 Hz  
Frequency  
50 - 60 Hz  
Frequency  
50 - 60 Hz  
Measuring cycle  
500 ms  
Temperature error  
0.06 %/°C  
Error within supply voltage  
0.5 %  
Status indication  
Output relay energized

LED, yellow  
Status indicator (LED)  
Red, solid: Phase failure  
Red, flashing: Phase sequence fault  
Relay output contacts  
Rated operational voltage [ $U_e$ ]  
500 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]  
 $0.3 \times 10^6$   
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.  
-20 °C  
Operating ambient temperature max.  
+60 °C

## Technical data ETIM 7.0

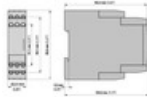
Relays (EG000019) / Phase monitoring relay (EC001441)  
Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Asymmetry monitoring equipment (ecl@ss10.0.1-27-37-18-03 [AKF097014])  
Type of electric connection  
Screw connection  
With detachable clamps  
No  
Rated control supply voltage  $U_s$  at AC 50HZ  
200 - 500 V  
Rated control supply voltage  $U_s$  at AC 60HZ  
200 - 500 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  
No  
Function over voltage detection  
No  
Phase imbalance monitoring  
No  
Voltage measurement range

200 - 500 V  
Mn. adjustable delay-on energization time  
0 s  
Max. permitted delay-on energization time  
0 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\\_a\\_w\\_f](#)  
File  
(Web)

## edz files

- [DA-CE-ETN.EMR6-F500-G-1](#)  
File  
(Web)

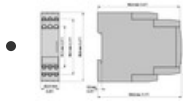
## Step files

- [DA-CS-emr6\\_a\\_w\\_f](#)  
File  
(Web)

## Additional product information

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

## Product photo



2430DIM-4

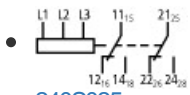
Photo



2431PIC-98

Photo

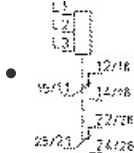
## Wiring diagram



240S025

Line drawing

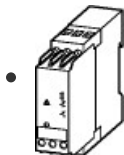
Phase sequence device



2431SW-12

Line drawing

## 3D drawing



240I010

Line drawing

Phase sequence relay


## Instruction Leaflet

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

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