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Powering Business Worldwide

EMR6-RC690 - Insulation monitoring relays, 0 - 690 V AC, 0 - 1000 V DC



184775 EMR6-RC690

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## 184775 EMR6-RC690

Insulation monitoring relays, 0 - 690 V AC, 0 - 1000 V DC

Alternate Catalog No.

EMR6-RC690

EL-Nummer (Norway)

4101971

Insulation monitoring relays, Product range: EMR Measuring and monitoring relays, Coupling module, Expands the rated voltage range for the EMR6-R400-A-2 to 690 V AC or 1000 V DC, no supply voltage required, Rated operating voltage for the supply system being monitored: 0 - 690 V AC, 0 - 1000 V DC, Mounting position: As required, Fixing: Snap fixing, top-hat rail IEC/EN 60715, Width: 45 mm, Standards: IEC/EN 60255-6,

- [Delivery program](#)
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### Delivery program

Product range

EMR Measuring and monitoring relays

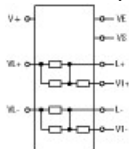
Basic function

Insulation monitoring relays

Coupling module

Expands the rated voltage range for the EMR6-R400-A-2 to 690 V AC or 1000 V DC no supply voltage required

Contact sequence



Rated operating voltage for the supply system being monitored

0 - 690 V AC

0 - 1000 V DC

Width

45 mm

### Technical data

General

Standards

IEC/EN 60255-6,  
 Lifespan, mechanical [Operations]  
 30 x 10<sup>6</sup>  
 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)  
 4316876 h  
 Contacts  
 Rated impulse withstand voltage [U<sub>imp</sub>]  
 4000 V AC  
 Overvoltage category/pollution degree  
 III/3  
 Power supply  
 Voltage tolerance  
 0.85 - 1.1 x U<sub>c</sub>  
 Rated frequency [f]  
 50 - 60 Hz  
 Duty factor  
 100 % DF  
 Measuring circuits  
 Cable length for cancellation- and test button  
 10 m  
 Status indication  
 Supply voltage  
 LED, green  
 Fault at L+  
 LED, red  
 Fault at L-  
 LED, red  
 Relay output contacts  
 Rated operational current [I<sub>e</sub>] AC-12 at 230 V [I<sub>e</sub>]  
 5 A  
 Rated operational current [I<sub>e</sub>] AC-15 with 230 V [I<sub>e</sub>]  
 3 A  
 Rated operational current [I<sub>e</sub>] DC-13 at 24 V [I<sub>e</sub>]  
 2.5 A  
 Lifespan, electrical (AC-12/230 V/4 A) [Operations] Lifespan, electrical [Operations]  
 0.1 x 10<sup>6</sup>  
 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 ETIM 7.0

Relays (EG000019) / Insulation and earth fault monitoring relay (EC001444)  
Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Insulation-/earth connection monitoring equipment (ecl@ss10.0.1-27-37-18-07 [AKF101014])  
Type of electric connection  
Screw connection  
Rated control supply voltage  $U_s$  at AC 50HZ  
0 - 0 V  
Rated control supply voltage  $U_s$  at AC 60HZ  
0 - 0 V  
Rated control supply voltage  $U_s$  at DC  
0 - 0 V  
Voltage type for actuating  
AC/DC  
With detachable clamps  
No  
Function  
For mixed system  
Rated voltage  
0 - 690 V  
Rated frequency  
15 - 400 Hz  
Line capacity  
20  $\mu$ F  
Response value impedance 1  
1 - 100 kOhm  
Response value impedance 2  
1 - 200 kOhm  
Indication of insulation value  
No  
Error registration possible  
No  
Number of contacts as normally closed contact  
0  
Number of contacts as normally open contact  
0  
Number of contacts as change-over contact  
0  
Width  
45 mm  
Height  
85.6 mm  
Depth  
104.6 mm

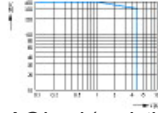
## Approvals

Product Standards  
IEC 255-6; UL 508; CSA-22.2 No. 14-05; CE marking  
UL File No.  
E29184  
UL Category Control No.

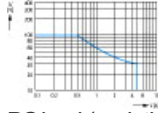
NKCR, NKCR7  
CSA File No.  
UL report valid  
CSA Class No.  
3211-03  
North America Certification  
UL listed, certified by UL for use in Canada

## Characteristics

Characteristic curve



AC load (resistive)  
Characteristic curve



DC load (resistive)  
Characteristic curve



Derating factor F with inductive AC load  
Characteristic curve



## Dimensions



## CAD data

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

## DWG files

- [DA-CD-emr6\\_rc690](#)  
File  
(Web)

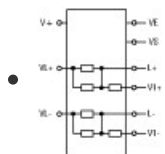
## edz files

- [DA-CE-ETN.EMR6-RC690](#)  
File  
(Web)

## Step files

- [DA-CS-emr6\\_rc690](#)  
File  
(Web)

## Wiring diagram



[2431SWM-9](#)

Line drawing

Insulation monitoring relay, coupling module

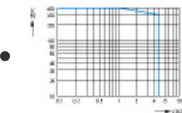
# Product photo

- [2430DIM-1](#)  
Photo

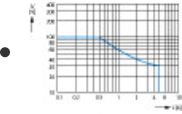


- [2433PIC-5](#)  
Photo

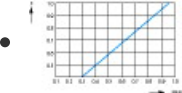
# Characteristic curve



[240U018](#)  
Coordinate visualization  
Limit curve: resistive AC load (45 mm)



[240U019](#)  
Coordinate visualization  
Limit curve: resistive DC load (45 mm)



[240U020](#)  
Coordinate visualization  
Limit curve: reduction factor

- [240U021](#)  
Coordinate visualization  
Contact life

# Instruction Leaflet

- [Coupling unit for insulation monitoring relay EMR6-R400-A-2 \(IL121010ZU\)](#)  
Asset  
(PDF, multilingual)

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