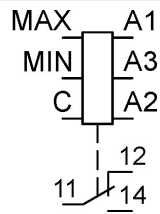




Level monitoring relays, 110 - 130 V AC, 50/60 Hz, 0.1 - 1000 kΩ

Part no. **EMR6-N1000-N-1**  
 Catalog No. **184756**  
 Alternate Catalog No. **EMR6-N1000-N-1**  
 EL-Nummer (Norway) **4101952**

## Delivery program

Product range		EMR Measuring and monitoring relays
Basic function		Level monitoring relays
Monitoring of		Fill level of conductive liquids Mixture ratio of conductive liquids
adjustable sensitivity range		0.1 - 1000 kΩ
Contact sequence		
Supply voltage		110 - 130 V AC, 50/60 Hz 220 - 240 V AC, 50/60 Hz
Width	mm	22.5

## Technical data

### General

Standards		IEC/EN 60255-6, EN 61557, UL, CSA, GL, DNV, RMRS, EAC, RCM
Lifespan, mechanical	Operations x 10 <sup>6</sup>	10
Climatic proofing		Damp heat, cyclical to IEC 60068-2-30: 24 h cycle, 55° C, 93% relative humidity, 96 h
Ambient temperature		
Operation	°C	
Operating ambient temperature min.	°C	-25
Operating ambient temperature max.	°C	+60
Storage	°C	-40 - 85
Mounting position		As required
Shock resistance		Class 2
Degree of protection		
Terminals		IP20
Enclosures		IP50
Terminal capacities	mm <sup>2</sup>	
Solid	mm <sup>2</sup>	1 x 0.5-2.5 (1 x 18-14 AWG)
Flexible with ferrule	mm <sup>2</sup>	2 x 0.5-1.5 (2 x 18-16 AWG)
Standard screwdriver	mm	5.5 x 0.8
Tightening torque	Nm	0.5 - 0.8
Fixing		Snap fixing, top-hat rail IEC/EN 60715

### Contacts

Rated impulse withstand voltage	U <sub>imp</sub>	V AC	4000
Overvoltage category/pollution degree			III/3

### Power supply

Supply voltage			110 - 130 V AC, 50/60 Hz 220 - 240 V AC, 50/60 Hz
Voltage tolerance		x U <sub>c</sub>	0.85 - 1.1
Power consumption		VA	2.6
Rated frequency	f	Hz	50 - 60

Duty factor	% DF	100
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### Measuring circuits

Sensor inputs		
B1		Earth reference sensor
B2		Maximum level
B3		Minimum level
Sensor voltage	V AC	6

### Status indication

Supply voltage		LED, green
Output relay energized		LED, yellow
Status indicator (LED)		Green, solid: Supply voltage Green, flashing: Release delay active Yellow, solid : MIN and MAX occupied Yellow, flashing: Min occupied Yellow, solid (R): Output relay excited

### Relay output contacts

Rated operational voltage	$U_e$	V AC	300
Rated operational current	$I_e$	A	
AC-12 at 230 V	$I_e$	A	5
AC-15 with 230 V	$I_e$	A	3
DC-12 at 24 V	$I_e$	A	2
Minimum Switching capacity			10 mA / 12 V
Lifespan, electrical (AC-12/230 V/4 A)	Operations	$\times 10^6$	
Lifespan, electrical	Operations	$\times 10^6$	0.1
Short-circuit rating			
max. fuse	Fast/gL	A	5

### Electromagnetic compatibility (EMC)

Electromagnetic compatibility			IEC/EN 60947-6-2
ESD	Air/contact discharge	kV	IEC/EN 61000-4-2 level 3
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

Technical data for design verification			
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
IEC/EN 61439 design verification			
10.9 Insulation properties			
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.

### Technical data ETIM 7.0

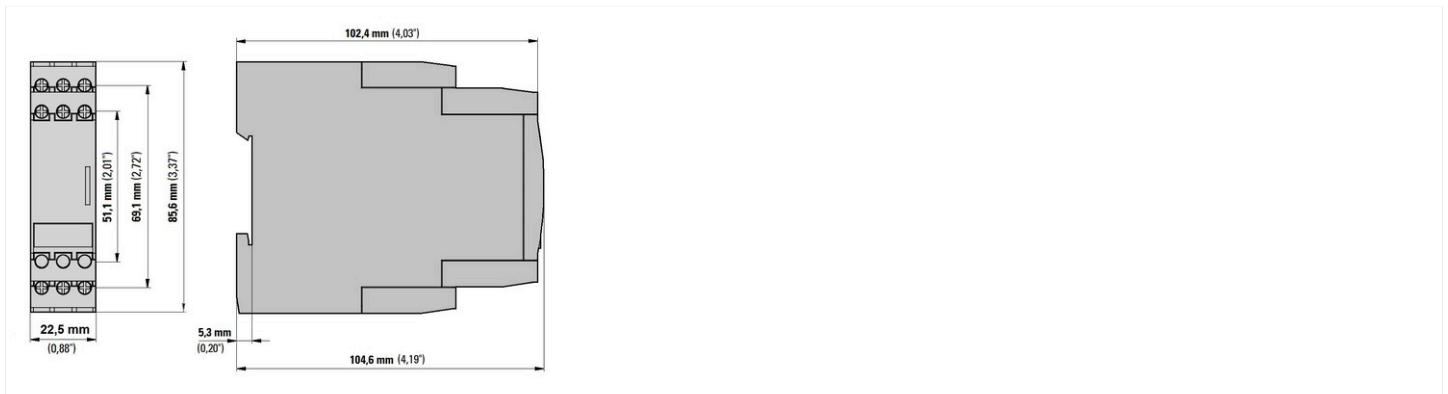
Relays (EG000019) / (Fill) level monitoring relay (EC001447)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Level monitoring relay (ecl@ss10.0.1-27-37-18-13 [AKF107014])		
Type of electric connection		Screw connection
Rated control supply voltage $U_s$ at AC 50HZ	V	110 - 240
Rated control supply voltage $U_s$ at AC 60HZ	V	110 - 240
Rated control supply voltage $U_s$ at DC	V	0 - 0
Voltage type for actuating		AC
With detachable clamps		No
Number of inputs for electrodes		3
Min. adjustable operate delay time	s	0
Max. permitted operate delay time	s	0
Min. adjustable off-delay time	s	0
Max. permitted off-delay time	s	0

Response value sensitivity adjustable		Yes
Number of contacts as normally closed contact		0
Number of contacts as normally open contact		0
Number of contacts as change-over contact		1
Physical measurement principle		Conductive
Cascadable		
Width	mm	22.5
Height	mm	85.6
Depth	mm	104.6

## 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



## Additional product information (links)

<b>IL121005ZU Liquid level monitoring relays</b>	
IL121005ZU Liquid level monitoring relays	<a href="https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL121005ZU.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL121005ZU.pdf</a>
IL121005ZU Liquid level monitoring relays	<a href="https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL121005ZU2018_07.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL121005ZU2018_07.pdf</a>