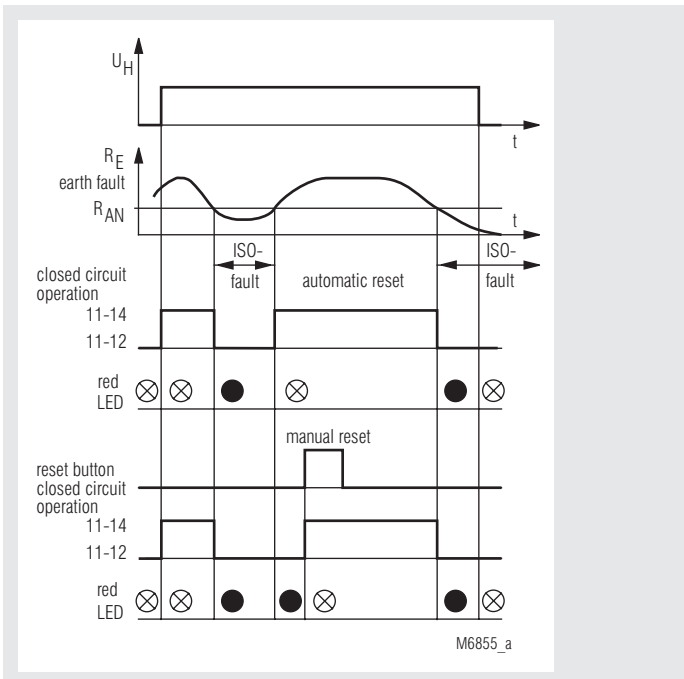




- According to IEC/EN 61 557-8
- For single- and 3-phase AC-voltage systems, IT-system
- Without auxiliary supply
- Fixed response value  $R_{AN} = 50 \text{ k}\Omega$   
other values on request
- LED indicator for ground fault
- Programmable with automatic or manual reset (bridge LT1/LT2)
- 1 changeover contact
- Closed circuit operation
- Test button to check the function of the device
- External reset button on LT1-LT2
- External connection of indicating instrument possible
- Can be used as pre-warning device AG 5876.11/0--
- Width 50 mm

### Function Diagram



### Approvals and Markings



### Applications

Monitoring of the resistance to earth in ungrounded single- and 3-phase-voltage systems.

### Notes

When monitoring 3-phase IT systems it is sufficient to connect the insulation monitor only to one phase. The 3-phases have a low resistive connection (approx. 3 - 5  $\Omega$ ) via the feeding transformer. So failures that occur in the non-connected phases will also be detected. In one voltage system only one Insulation monitor must be connected. This has to be observed when coupling voltage system.

### Technical Data

#### Measuring Circuit

<b>Nominal voltage <math>U_N</math>:</b>	AC 24, 42, 110, 230, 400 V
<b>Voltage range:</b>	0.8 ... 1.1 $U_N$
<b>Frequency range:</b>	40 ... 400 Hz
<b>Response value <math>R_{AN}</math>:</b>	50 k $\Omega$ , 5 ... 200 k $\Omega$ on request
<b>Setting <math>R_{AN}</math>:</b>	fixed
<b>Internal test resistor:</b>	5 k $\Omega$
<b>Internal AC resistance:</b>	> 300 k $\Omega$
<b>Internal DC resistance:</b>	> 30 k $\Omega$
<b>Measuring voltage:</b>	DC 15 V
<b>Max. measuring current (<math>R_E = 0</math>):</b>	< 0.5 mA
<b>Max. permissible noise</b>	
<b>DC voltage:</b>	DC 250 V
<b>Operate delay</b>	
at $R_{AN} = 50 \text{ k}\Omega$ , CE = 1 mF	
$R_E$ from $\infty$ to 0.9 $R_{AN}$ :	< 1.3 s
$R_E$ from $\infty$ to 0 k $\Omega$ :	< 0.3 s
<b>Hysteresis</b>	
at $R_{AN} = 50 \text{ k}\Omega$ :	approx. 8 %
<b>Measuring error</b>	
at $R_{AN} = 50 \text{ k}\Omega$ ,	< 10 %
	ambient temperature - 5 ... 50 °C,
	within the permitted voltage range
<b>Nominal consumption:</b>	approx. 2.5 VA
<b>Phase failure bridging:</b>	> 300 ms

### Output

<b>Contacts</b>	
AG 5876.11:	1 changeover contact
<b>Max. switching voltage:</b>	AC 250 V
<b>Thermal current <math>I_{th}</math>:</b>	8 A

## Technical Data

### Switching capacity

to AC 15		
NO contact:	3 A / AC 230 V	IEC/EN 60 947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60 947-5-1

### Short circuit strength

max. fuse rating:	6 A gL	IEC/EN 60 947-5-1
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## General Data

### Permissible ambient and stocking temperature:

-20 ... +60°C / -25 ... 70°C

### Clearance and creepage distances

rated impulse voltage / pollution degree:	4 kV / 2	IEC 60 664-1
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### EMC

Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
Fast transients:	2 kV	IEC/EN 61 000-4-4

### Surge voltage

between wires for power supply:	2 kV	IEC/EN 61 000-4-5
between wire and ground:	4 kV	IEC/EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011

### Degree of protection:

Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529

### Housing:

Thermoplastic with V0 behaviour according to UL subject 94

### Vibration resistance:

Amplitude 0.35 mm frequency 10...55Hz IEC/EN 60 068-2-6

### Climate resistance:

20 / 060 / 04 EN 60 068-1

### Terminal designation:

EN 50 005

### Wire connection:

2 x 2.5 mm<sup>2</sup> solid or 2 x 1.5 mm<sup>2</sup> stranded wire with sleeve DIN 46 228-1/-2/-3/-4

### Wire fixing:

Flat terminals with self-lifting clamping piece IEC/EN 60 999

### Mounting:

DIN rail IEC/EN 60 715

### Weight:

450 g

## Dimensions

Width x height x depth: 55 x 77 x 115 mm

## Standard Type

AG 5876.11	AC 230 V	40 ... 400 Hz	50 kΩ	
Article number:			0031854	stock item
• Output:			1 changeover contact	
• Nominal voltage $U_N$ :			AC 230 V	
• Frequency range:			45 ... 400 Hz	
• Response value $R_{AN}$ :			50 kΩ	
• Width:			50 mm	

## Variants

AG 5876.11/0--:	pre-warning device
	This device can indicate a second resistance value. It is possible to connect several pre-warning devices to one insulation monitor. With this device an early detection of a slowly decreasing insulation resistance with pre-warning is possible.
	The following pre-warning devices are available:
	AG 5876.11/010 für AG 5870, AG 5876, AN 5871, AN 5872, EH 5878
	AG 5876.11/030 für AN 5890
	AG 5876.11/031 für AN 5873

## Ordering example for variants

AG 5876	.11	/	---	AC 230 V	50 kW	
						Response value
						Nominal voltage
						Variant, if required
						Contacts
						Type

## Accessories

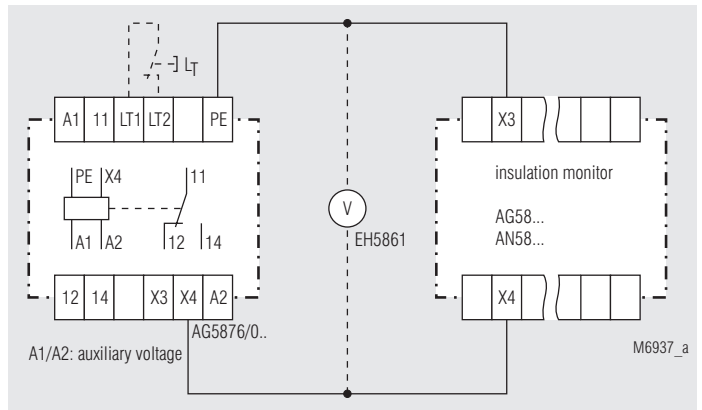
AG 5876.11/010:	pre-warning device
EH 5861/002:	indicating instrument, degree of protection: IP 52 Article number: 0030616



The indicating device EH 5861 externally connected to the insulation monitors and shows the actual insulation resistance of the voltage system to ground.

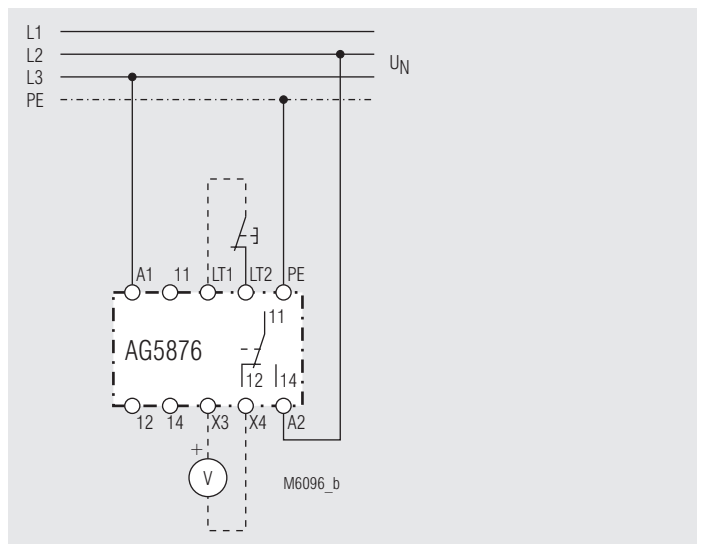
Dimensions:  
Width x height x depth  
96 x 96 x 52 mm

## Application Example



Insulation monitor with pre-warning device

## Connection Example



A1/A2: UN = UH  
Bridge LT1/LT2: manual reset  
without Bridge LT1/LT2: automatic reset