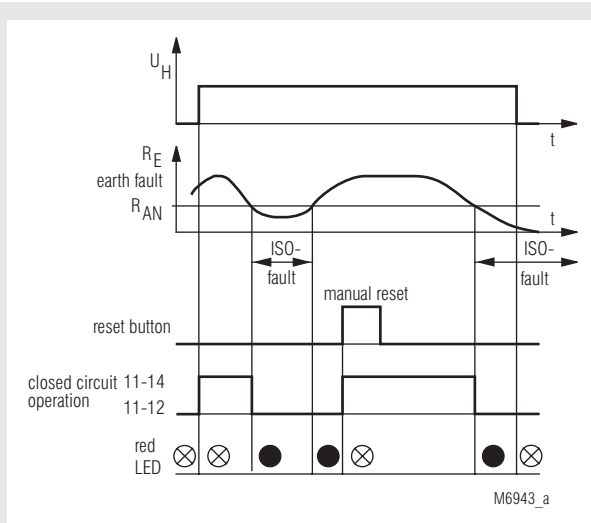




- According to IEC/EN 61 557-8
- For single- and 3-phase AC-voltage systems
- Adjustable response value R_{AN} from 5 ... 200 k Ω
- Closed circuit operation
- Manual reset
- Reset button LT
- External test button can be connected to PT1-PT2 to check the function of the device
- LED indicator for operation and state of contacts
- 1 changeover contact
- External connection of indicating instrument possible
- Width 50 mm

Function Diagram



Approvals and Markings



Applications

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

Indicators

green LED: on, when auxiliary supply connected
red LED: on, when earth fault detected

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 Ω) 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

Auxiliary Circuit

Auxiliary voltage U_H : AC 24, 42, 110, 230, 400 V
Voltage range: 0.8 ... 1.1 U_N
Frequency range: 40 ... 400 Hz

Measuring Circuit

Nominal voltage U_N : AC 0 ... 400 V
Voltage range: 0 ... 1.15 U_N
Frequency range: 40 ... 60 Hz
Response value R_{AN} : 5 ... 200 k Ω
Setting R_{AN} : infinite variable with screwdriver
Internal test resistor: 5 k Ω
Internal AC resistance: > 300 k Ω
Internal DC resistance: > 30 k Ω
Measuring voltage: DC 15 V
Max. measuring current (RE = 0): < 0.5 mA
Max. permissible noise DC voltage: DC 250 V
Operate delay
at $R_{AN} = 50$ k Ω , CE = 1 μ F
 R_E from ∞ to 0.9 R_{AN} : < 0.6 s
 R_E from ∞ to 0 k Ω : < 0.25 s
Hysteresis
at $R_{AN} = 50$ k Ω : approx. 8 %
Measuring error
at $R_{AN} = 50$ k Ω : < 10 %
ambient temperature -5 ... 50°C,
within the permitted voltage range
Nominal consumption: approx. 2.5 VA
Phase failure bridging: > 75 ms

Technical Data

Output

Contacts

AG 5870.11:	1 changeover contact	
Max. switching voltage:	AC 250 V	
Thermal current I_{th}:	6 A	
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:	5 A gL	IEC/EN 60 947-5-1

General Data

Operating mode:	Continuous operation	
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
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation:	10 V/m	IEC/EN 61 000-4-3
Fast transients:	2 kV	IEC/EN 61 000-4-4
Surge voltages between wires for power supply:	1 kV	IEC/EN 61 000-4-5
between wire and ground:	2 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 IEC/EN 60 068-1	
Terminal designation:	EN 50 005	
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
Mounting:	DIN rail IEC/EN 60 715	
Weight:	410 g	

Dimensions

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

Standard Type

AG 5870.11	AC 230 V	5 ... 200 kΩ	
Article number:	0031451		stock item
• Output:	1 changeover contact		
• Nominal voltage U_N :	AC 230 V		
• Width:	50 mm		

Variant

AG 5870/100: with internal test button

Ordering example for variant

AG 5870	.11	/	AC 230 V	5 ... 200 kΩ	
					Response value
					Auxiliary 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

Connection Examples

