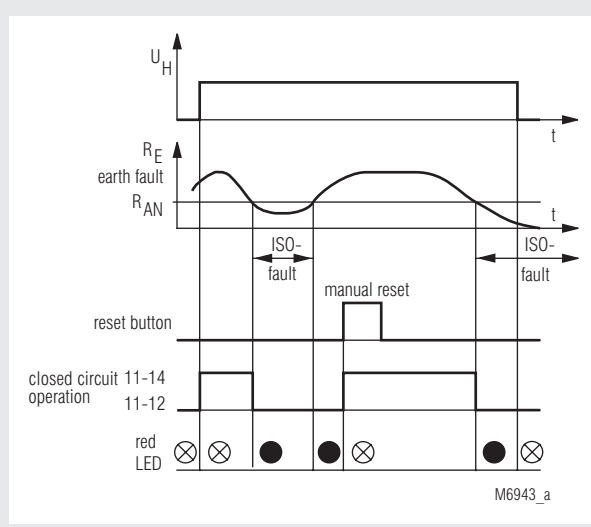




- According to IEC/EN 61 557
- For single- and 3-phase AC-voltage systems
- Adjustable response value R_{AN} from 5 ... 200 k Ω
- Closed circuit operation
- Manual reset
- Reset button LT
- External test button can be connected to PT1-PT2 to check the function of the device
- LED indicator for operation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

Function diagram



Approvals and marking



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.

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 %

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 overvoltage category / contamination level:	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 20 / 060 / 04 IEC/EN 60 068-1	
Climate resistance:	EN 50 005	
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



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

Connection examples

