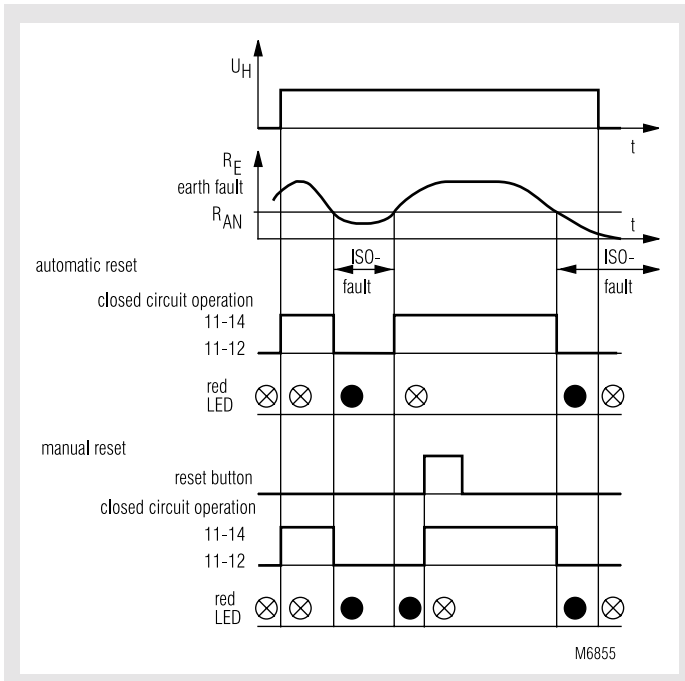


0225237



- According to VDE 0413
- For DC-voltage systems
- Fixed response value
- Closed circuit operation
- Programmable for
 - manual reset (bridge LT1-LT2)
 - automatic reset (without bridge)
- External reset button on LT1-LT2
- Test button to check the function of the device
- LED indicators
- 1 changeover contact
- Width 45 mm

Function diagram



Approvals and marking



Applications

Monitoring of insulation resistance in ungrounded DC-voltage systems.

Indicators

- LED "Ein": on, when no fault
(output relay energised)
- LED "Erdschluß": on, when ground fault

Notes

Symmetric ground faults (same resistance between L+ - PE and L- - PE) will not be detected because of the measuring principle. In practice this is of no importance.

Technical data

Auxiliary circuit

- Auxiliary voltage U_H :** AC 24, 42, 110, 230 V
DC 24, 60, 110, 220 V at AI 898/20
- Voltage range:** 0,8 ... 1,1 U_N
- Frequency range:** 45 ... 400 Hz

Measuring circuit

- Nominal voltage U_N :** DC 24, 48, 60, 110, 220 V
to 660 V on request
- Voltage range:** 0,8 ... 1,1 U_N
- Response value R_{AN} :** DC 24 ... 60 V: 6 k Ω
DC 110 V: 11 k Ω
DC 220 V: 22 or 50 k Ω
special values on request
- Setting R_{AN} :** fixed
- Internal test resistor:** equivalent to $R_E < 6$ k Ω
- Internal DC resistance:** DC 24 V: 5 k Ω
DC 48 ... 60 V: 3 k Ω
DC 110 V: 8 k Ω
DC 220 V: 30 k Ω
- Max. measuring current (RE = 0):** DC 24 V: 6 mA
DC 48 V: 19 mA
DC 60 V: 22 mA
DC 110 V: 15 mA
DC 220 V: 9 mA

Operate delay

- at $R_{AN} = 50$ k Ω , CE = 1 μ F
- R_E from ∞ to 0,9 R_{AN} : approx. 0,4 s
- R_E from ∞ to 0 k Ω : approx. 0,1 s

Hysteresis

- at $R_{AN} = 50$ k Ω : approx. 20 - 30 %

Technical data		
Measuring error at R _{AN} = 50 kΩ:		
	< 25 % ambient temperature -5 ... 50°C, within the permitted voltage range approx. 2,5 VA	
Nominal consumption:		
Output		
Contacts:	1 changeover contact	
Max. switching voltage:	AC 400 V	
Thermal current I_{th}:	6 A	
Switching capacity to AC 15:	5 A / AC 230 V	EN 60 947-5-1
Short circuit strength max. fuse rating:	5 A gL	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)	EN 61 000-4-2
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between wires for power supply:	2 kV 0,5 kV at AI 898/20	EN 61 000-4-5
between wire and ground:	4 kV	EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	
Climate resistance:	20 / 060 / 04	EN 60 068-2-6
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	
Mounting:	DIN rail	EN 50 022
Weight:	240 g	
Dimensions		
Width x height x depth:	45 x 77 x 115 mm	

Standard type		
AI 898	DC 24 V	6 k Ω AC 230 V
Article number:	0001044	stock item
• Output:	1 changeover contact	
• Nominal voltage U_N :	DC 24 V	
• Auxiliary voltage U_H :	AC 230 V	
• Fixed response value R_{AN} :	6 k Ω	
• Width:	45 mm	

Variant	
AI 898/20:	for auxiliary supply DC 24 V for DC 60, 110 or 220 V the relay is delivered with an external drop resistor
Ordering example vor Variant	
AI 898	/
DC 220 V	AC 230 V
	50 kΩ
	Response value
	Auxiliary voltage
	Nominal voltage
	Variant, if required
	Type

