

## Description

In combination with a transducer W1 – W5 the earth fault evaluator module MUAH1000 forms a functional unit for identifying and evaluating the fault current signals generated by the earth fault tester PGAH1000. This combination of modules is also universally suitable for DC, AC and three phase circuits.

The unit requires an auxiliary AC voltage of 220/110/42 V, 50...60 Hz.

## Construction

The earth fault evaluator module MUAH1000 is mounted on a plug-in Euro-board 100 x 160 mm. The indicators and controls are mounted on the front panel using 40, 64 mm (8 te). The module is connected by a plug-socket connector as per DIN 41 612 type E

## Operation

The earth fault evaluator module MUAH1000 recognizes the fault current signals generated by the earth fault tester PGAH whenever there is an insulation fault in an IT-circuit. The MUAH1000 unit is linked to the transducers W1 – W5. All signals occurring in the fault current circuit and exceeding 10 mA are evaluated.

Residual currents up to 20 A which are evaluated by the transducers, are automatically removed by filters provided the circuit frequency is equal to the supply voltage frequency and the circuit is a DC circuit. If the residual currents exceed 20 A the measuring cycle is interrupted and the module gives a fault indication.

An earth fault is signalled after a minimum period of 15 seconds provided the insulation fault is located in the cable running through the transducer.

The earth fault indication either is maintained continuously or for approx. 30 seconds with automatic acknowledgement. Automatic acknowledgement takes place provided no further earth fault signal is generated within this period.

The user can start a function check of the MUAH1000 module by pressing the built-in toggle switch.

1. Indication „earth fault“ when the earth fault has been identified by the test cadence (PGAH1000)

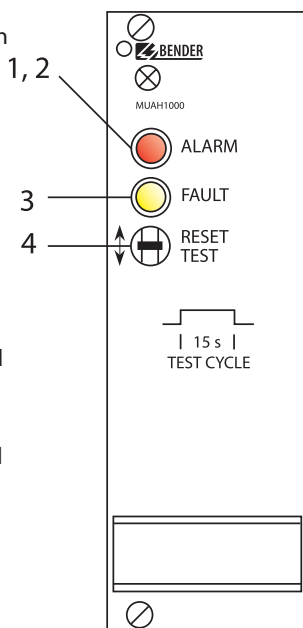
2. Self-test:

LED flashes during the test expiration ( 15 sec) and changes over to permanent light after successful test.

3. Indication fault when measurement is interrupted in the transducer by eminent residual currents.

4. a) Button to start a functional test

b) Button to reset an earth fault indication (with system reset)



### Technical Data MUAH1000

Nominal insulation voltage	250 V
Insulation group according to VDE0110	C
Test voltage	2000 V
Nominal operating class	continuous working
Supply voltage $U_s$	AC 50...60 Hz 220/110/42 V
Operating range of $U_s$	0,8...1,15 $U_s$
Max. self-consumption	approx. 5 VA
Response retardation	> 15 sec
Response sensitivity in connection with transducer type	
W1-W5 and tester PGAH1000	10 mA
Max. mains leakage capacitance	at 220 V approx. 6 $\mu$ F at 380 V approx. 2,5 $\mu$ F at 500 V approx. 2 $\mu$ F
Switch components for indication „interferences“	1 change-over contact
Switch components for indication „earth fault“	2 change-over contacts
Operating principle	circuit closing connection

### Other details

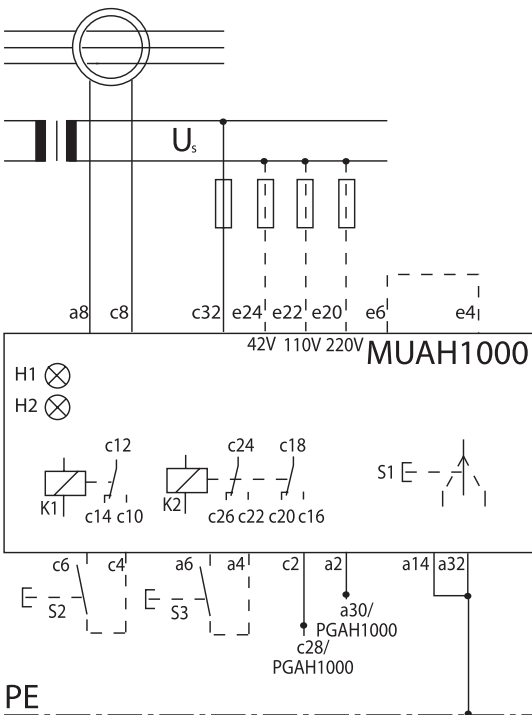
Euro board	100 x 160 mm
Width of front plate	40,64 mm ( 8 te)
Plug according to DIN 41 612	design E 48
Switch components	
Rated contact voltage	220 V
Switching capacity	440 VA
Break capacity:	
at DC 220 V and L/R = 0	0,25 A
Permanent contact current	2 A
Relay only	
Test voltage coil-contact	2500 V
Test voltage contact-contact	2500 V

### Admissible ambient temperature

when stored	-20...+60 °C / 253...333 K
when operating	- 5...+55 °C / 268...328 K
Wiring Diagram	Z 160 021
Weight	approx. 450 g

### Ordering details

Type	Supply voltage $U_s$	Art. No.
MUAH1000	AC 220/110/42 V	B 980 394



### Key to wiring diagram

- S1 built-in combined unit test/reset switch
- S4 external reset switch; for resetting several MUAH1000 units simultaneously, a4 and a6 of all MUAH1000 modules should be linked
- S5 external test switch; for checking several MUAH1000 units simultaneously, a4 and a6 of all MUAH1000 units should be linked.
- H1 LED for earth fault indication when an earth fault has been identified by the test cycle of the PGAH1000 unit.
- H2 LED for fault indication when the measurement is being interfered with by excessive residual AC currents in transducer.
- K1 output relay for fault indication
- K2 output relay for earth fault indication
- a8, c8 transducer input
- e4, e6 if the link is not fitted the earth fault indication is stored for approx. 30 seconds; if the link is fitted the earth fault indication is stored until the reset switch of the unit is operated or all the units are reset simultaneously.
- c2, a2 release signal from PGAH1000

Right to modifications reserved