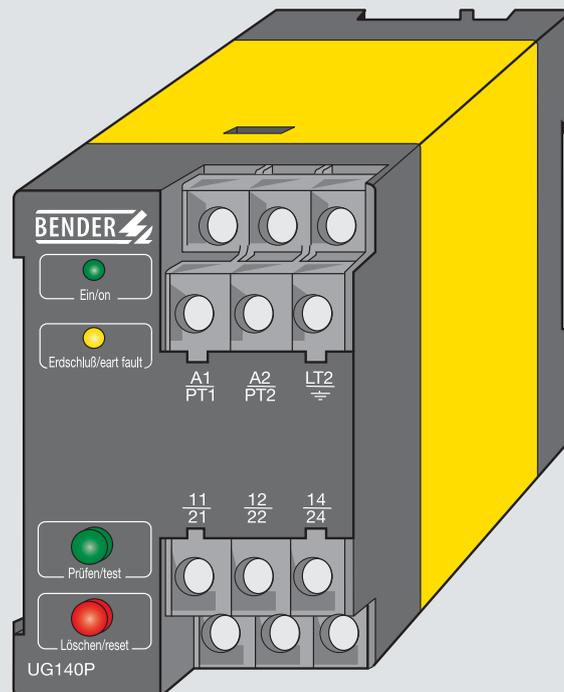
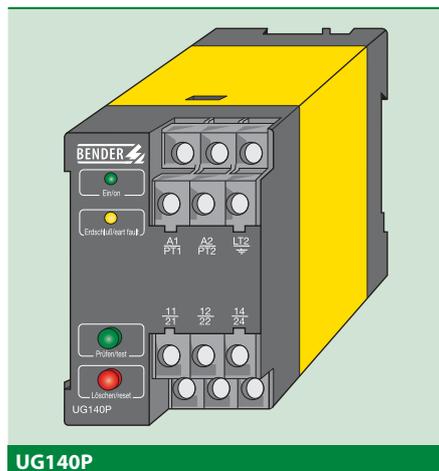


# UG-ISOMETER® UG140P

Earth fault relay for IT DC systems





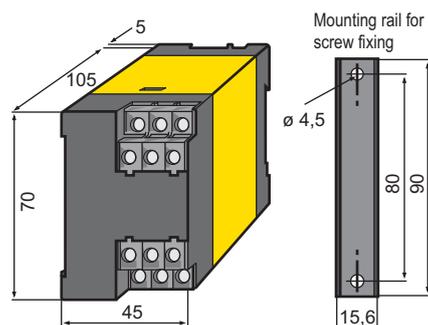
### Device characteristics

- Earth fault relay for IT DC systems
- Fixed adjusted response values
- Built-in Power On LED
- Built-in alarm LED
- Built-in test button
- Built-in reset button
- 45 mm enclosure
- N/C operation

### Certifications



### Dimension diagram



### Product description

The UG-ISOMETERS® UG140P monitor the insulation resistance of IT DC systems (isolated power) to earth. They are preferably used in simple control voltage systems of limited extent, which contain no control devices and whose system leakage capacitances are no greater than 1  $\mu\text{F}$ .

Versions are available for all common DC voltages between 12 and 220 V.

### Application in control voltage systems

- Simple battery systems
- Small DC control systems
- DC lighting circuits

### Measuring principle



The device uses a bridge circuit for automatic fault indication. The shift voltage measured when there is an insulation fault on a system conductor is evaluated using measurement technology. Because of the passive measuring principle, only unbalanced insulation faults can be recorded. Symmetrical insulation faults from the positive and negative lines to earth are not recorded.

### Standards

UG-ISOMETER® are not insulation monitoring devices as defined in IEC 61557-8. When installing the device, the safety instructions enclosed with the equipment must be observed!

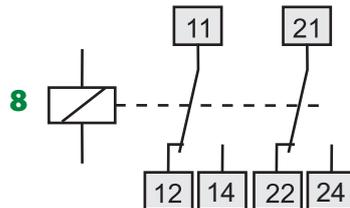
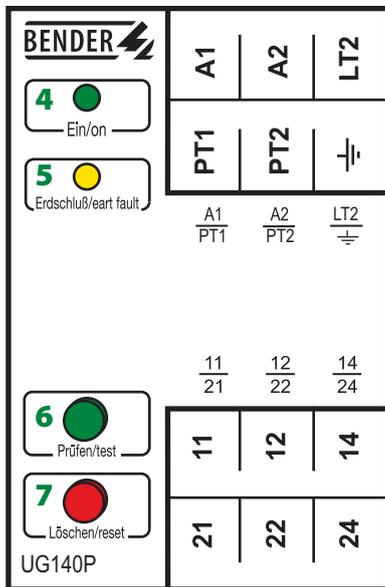
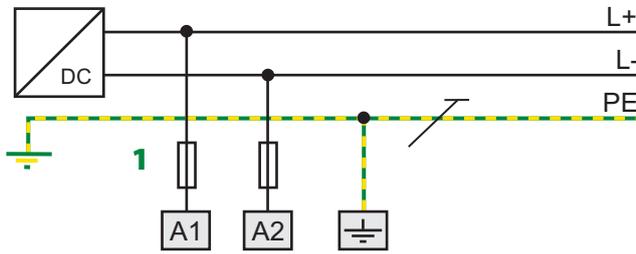
**Note:** Only permanently installed equipment providing at least overvoltage category II (300 V) may be connected to the outputs.

Response values		
Type	Nominal voltage $U_n$	Response value
UG140P	12 V	10 k $\Omega$
UG140P	24 V...60 V	25 k $\Omega$
UG140P	110 V...220 V	50 k $\Omega$

Ordering details		
Type	Nominal voltage range $U_n$	Art. No.
UG140P	DC 12 V	B 916 410 <sup>*)</sup>
UG140P	DC 24 V	B 916 382 <sup>*)</sup>
UG140P	DC 48 V	B 916 304 <sup>*)</sup>
UG140P	DC 60 V	B 916 259 <sup>*)</sup>
UG140P	DC 110 V	B 916 612 <sup>*)</sup>
UG140P	DC 220 V	B 916 170 <sup>*)</sup>

<sup>\*)</sup> for use in the household as well as industrial sector

Wiring diagram



- 1 - Fuse 6 A
- 2 - external test button
- 3 - external reset button
- 4 - Power ON LED
- 5 - Alarm LED
- 6 - Test button
- 7 - Reset button
- 8 - Alarm relay

Technische Daten

Isolationskoordination nach IEC 60664-1:

Rated insulation voltage	AC 250 V
Rated impulse withstand voltage/contamination level	4 kV/3

Voltage range

Nominal voltage range $U_n$	DC 12 V to 220 V <sup>*)</sup> - 0.8...1.3 (220V: 0.8...1.1) x $U_n$
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Supply voltage $U_S$	$U_S = U_n$
Max. power consumption	2.7 VA

Response values

Response value $R_{an1}$	10 / 25 / 50 k $\Omega$
Max. admissible system leakage capacitance $C_e$	1 $\mu$ F

Measuring circuit

Measuring current $I_m$	max. 0.3 mA / 2.2 mA
Internal DC resistance $R_i$	40 k $\Omega$ / 100 k $\Omega$

Contact circuit

Switching components	2 change-over contacts
Contact class acc. to DIN IEC 60255 part 0-20	IIB
Rated contact voltage	AC 250 V / DC 300 V
Admissible number of operations	12000 cycles
Making capacity	UC 5 A
Breaking capacity	
AC 230 V and cos phi = 0.4	2 A
DC 220 V and L/R = 0.04 s	0.2 A
Tests of the Electromagnetic Compatibility (EMC) acc. to EC directives	Yes

General data

Ambient temperature (during operation)	-10° C to +50° C
Storage temperature range	-20° C to +70° C
Climatic class acc. to IEC 60721 (except condensation and formation of ice)	3K5
Operating mode	continuous operation
Mounting	any position
Connection	modular terminals
Cross sectional area of connecting cable, single wire	0.2...4 mm <sup>2</sup>
Cross sectional area of connecting cable, flexible	0.2...2.5 mm <sup>2</sup>
Protection class acc. to DIN EN 60529	
Built-in components	IP 30
Terminals / with terminal covers	IP 20
Type of enclosure	X140
Screw fixing	with mounting plate
DIN rail mounting acc. to	DIN EN 50022
Flammability class	UL94V-0
Data sheet No.	TDB102001
Weight max.	200 g

\*) see device description "ordering details"



**Dipl.-Ing. W. Bender GmbH & Co. KG**  
P.O. Box 1161 • 35301 Grünberg • Germany  
Londorfer Straße 65 • 35305 Grünberg • Germany  
Tel.: +49 6401 807-0 • Fax: +49 6401 807-259  
E-Mail: [info@bender-de.com](mailto:info@bender-de.com) • [www.bender-de.com](http://www.bender-de.com)

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