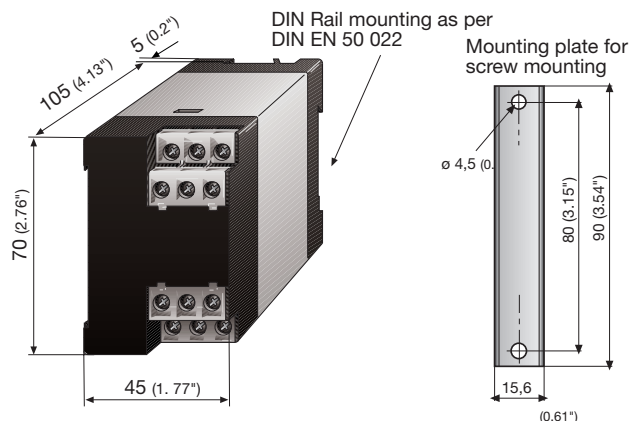




VDE IEC



Dimension Diagram (mm)

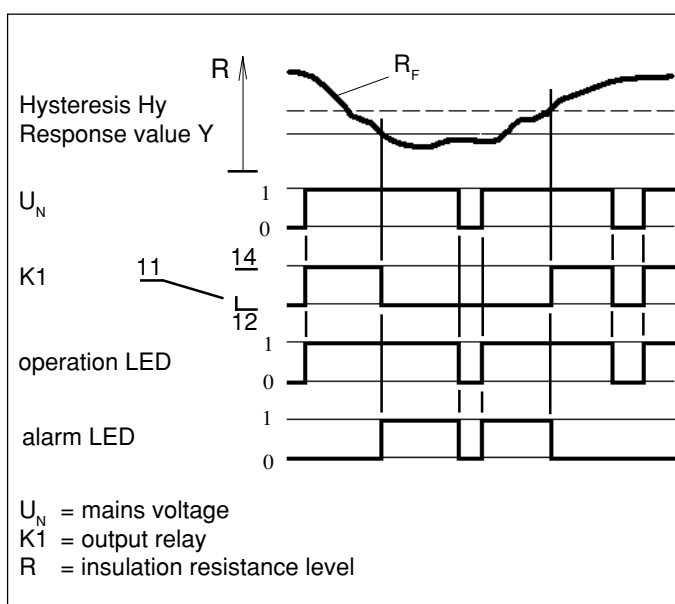


DIN Rail mounting as per DIN EN 50 022

Product Description

The Ground Fault Monitor UG140P monitors the insulation resistance of an ungrounded (floating) DC system to ground. The device uses a bridge circuit for automatic fault indication. The voltage shift measured when a ground fault occurs is evaluated by electronic measuring circuitry.

As soon as the preselected response value is reached, the output relay K1 deenergizes and the red alarm LED signals earth fault.



Note:

Please check for correct voltage.

Only one insulation monitoring device may be used in each interconnected system.

In order to check the proper connection of the device, it is recommended to carry out a functional test using a genuine ground fault, e.g. via a suitable resistance, before starting operation.

When insulation and voltage tests are to be carried out, the device must be isolated from the system for the test period.

Electrical equipment shall only be installed by qualified personnel in consideration of the current safety regulations.

- For Ungrounded (floating) DC systems DC 12V, 24V, 48V, 60V, 110V, 125V, 220V
- Alarm set-points at 10kΩ, 25kΩ or 50kΩ
- Operation and alarm LEDs
- Two voltage-free change-over contacts
- Fault memory capability
- Test and reset button
- Meets IEC801-4, Class III EMC requirements
- UL and CSA listed

Technical Data UG140P

Insulation

Rated insulation voltage	DC 300 V/AC 250 V
Rated impulse voltage/ disturbance grade	4kV/3
Operation class	continuous operation

Monitored System

Rated mains voltage U_N	DC 220, 125, 110, 60, 48, 24, 12 V
Operating range	0.8 ... 1.1 U_N

Supply voltage

Supply voltage	-
Operating range	-
Self-consumption	2.7 W

Response values

	110 ... 220 V	24 ... 60 V	12 V
Response value R_{AN1}	50 k Ω	25 k Ω	10 k Ω
Response value R_{AN2}	-	-	-
Hysteresis	-	-	-
Response delay	-	-	-
Max. mains leakage capacitance	-	-	1 μ F
Adjustment by factory	-	-	-

Measuring circuit

	220 V	12 V
Measuring voltage U_M	-	-
Measuring current I_M	2.2 mA	0.3 mA
Internal DC resistance R_i	100 k Ω	40 k Ω
Internal measuring resistance	-	-
Impedance Z_i , 60 Hz-	-	-
Max. admissible stray DC voltage	-	-

Outputs

Meter output SKMP	-
Current output (max. load)	-
Terminal AK for coupling device	-

Alarm Relay

Switching components	2 voltage-free SPDT contacts
Rated contact voltage	AC 250 V/DC 300 V
Rated current	UC 5 A
Break capacity AC 230 V, p.f. = 0.4	AC 2 A
Break capacity DC 110 V and L/R = 0.04 s	DC 0.2 A
Operating mode	Normally Energized / De-energized
Adjustment by factory	Normally De-energized

Testing

Dielectric test: Test voltage	2 kV
Impulse voltage test acc. to IEC255-5	class III
Electrical disturbance test acc. to IEC255-5	class III
Elec. fast transient burst acc. to IEC801-4	severity degree 2
Shock resistance acc. IEC68-2-27	15g / 11sec
Vibration strength acc. to IEC68-2-6	10...15kHz / 0.15mm - 2g
Bumping acc. to IEC68-2-29	40g / 11msec

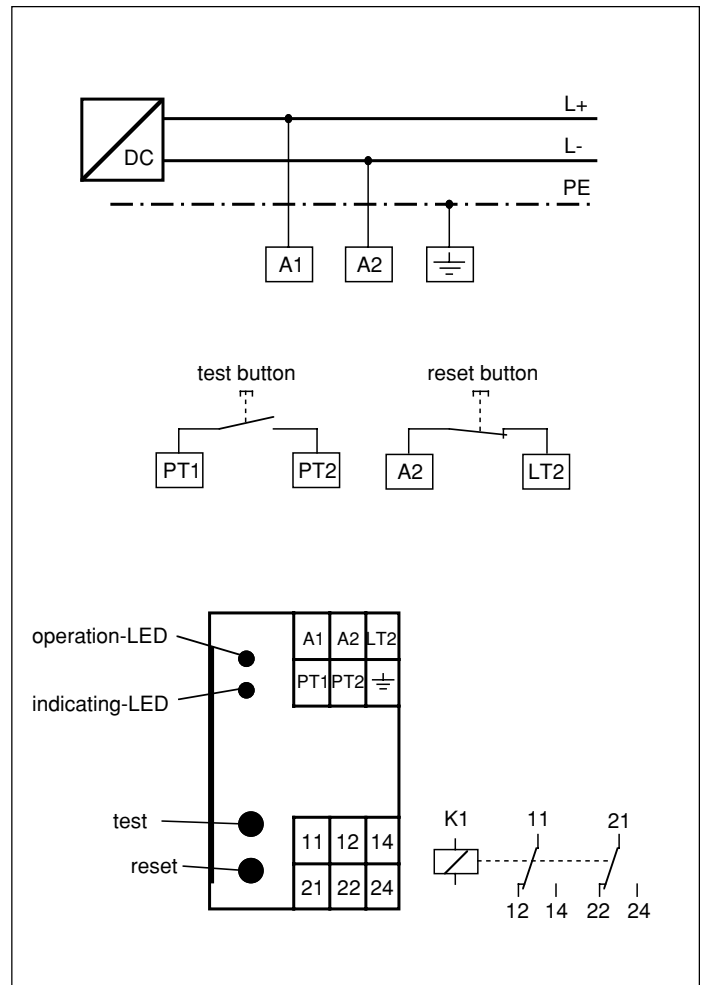
Environmental Conditions

Ambient temperature, during operation	-10°C ... +55°C
Storage temperature range	-40°C ... +70°C

General Data

Type of connection	screw terminals
Wire size, solid	14 AWG
Wire size, stranded with end sleeve	16 AWG
Mounting	DIN rail or screw (#990 056)
Weight	1 lb

Wiring diagram



Legend to Wiring Diagram

If the fault indication is to be stored, the terminals A2-LT2 must be linked by a bridge or an external reset button.

K1 alarm output relay

Ordering Guide

Type	Rated mains voltage U_N	Art. No.
UG140P	DC 12 V	916 410
	DC 24 V	916 382
	DC 48 V	916 304
	DC 60 V	916 259
	DC 110 V	916 612
	DC 125 V	916 613
	DC 220 V	916 170