

**ISOLGUARD insulation monitoring device HIG24VDC**

The insulation monitoring device ISOLGUARD HIG24VDC produced by HAKEL is designed for monitoring the insulation status of direct current IT power supply systems with a nominal voltage of 24V DC. The device continuously monitors the insulation state of the positive and negative output of an insulation power supply system against the base point. For stationary devices it is usually PE conductor. The potential free switching contact of the signalization relay will switch during the insulation resistance decrease of + or - output. A fault is also indicated by LEDs on the front panel.

The insulation monitoring device is equipped to display the numeric values of the measured insulation resistance. The measured resistance value of the positive and negative output of a controlled network is displayed on the device's screen. There are buttons for setting the parameters of the insulation monitoring device and signalling LEDs to display the status of the controlled network and the device itself.

It is possible to connect the insulation monitoring device to the panel MDS-D equipped with a touchscreen by means of the RS485 busbar. The MDS-D panel displays the actual measured values and the actual insulation monitoring device setting.

HIG24VDC can communicate with the master computer via the RS485 busbar with the protocol derived from the PROFIBUS protocol.

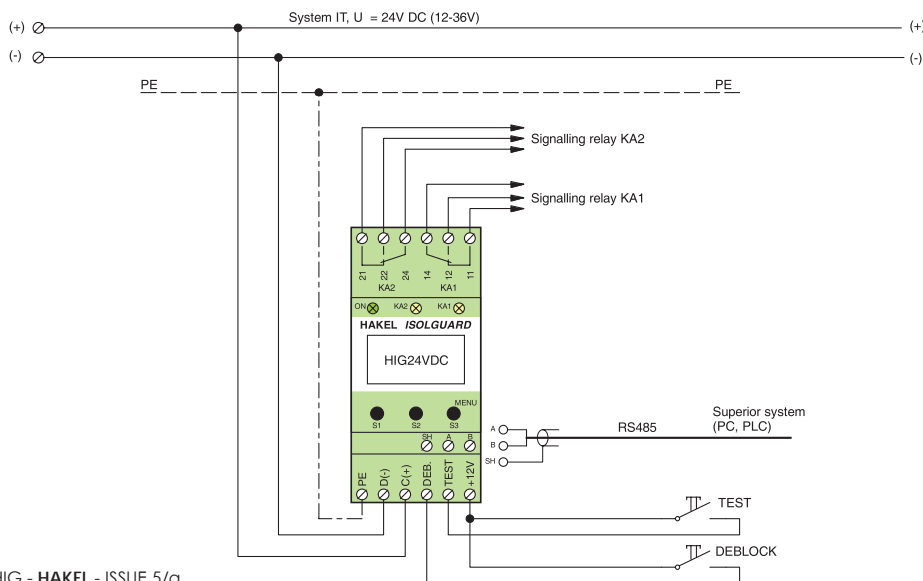
**Only one insulation monitoring device can be connected to the same ungrounded IT power supply system.**

**Basic characteristics**

- The monitor for insulating statuses of DC systems with the voltage 24 V DC
- Displaying the measured values of the positive and negative output of a controlled network on the device's screen
- Two signalling relays of the IMD status and status of monitored system
- Optional memory of the alarm called with the option to unblock with the button on the insulation monitoring device
- Connection to the RS485 busbar, insulation strength 2500 V against internal circuits and network circuits
- Option to set the critical values, hysteresis values and other parameters using the insulation monitoring device buttons
- Access to setting the insulation monitoring device by button can be locked, the insulation monitoring device is unlocked by a combination of buttons
- Module for assembly on the DIN rail 35 mm with the total width 2M (36 mm)

Type	Signalling relay	Range of displayed value	Critical insulation resistance	RS485
HIG24VDC	2 relays 1P	5 kΩ ÷ 990 kΩ	Adjustable 5 kΩ ÷ 500 kΩ	Yes
Art. number 70 933				

**Recommended connection of HIG24VDC to monitored ungrounded IT power supply system**



### Technical data HIG24VDC

Type		HIG24VDC
Maximum operating voltage of the monitored ungrounded IT power supply system	$U_{it}$	12 to 36V DC
Consumption	P	max. 2 VA
Internal impedance of the measuring input	$R_v$	> 200k $\Omega$
Range of the value shown on the display	$R_{isol}$	5 k $\Omega$ to 990 k $\Omega$
Precision of measurement		$\pm 10\%$
Critical insulation resistance	$R_{crit}$	adjustable 5 k $\Omega$ to 500 k $\Omega$
Hysteresis of monitored insulation resistance	$R_{hyst}$	adjustable 0 to +100% $R_{crit}$
Additional time of delay of signalling the insulation status	$t_{ON}$	adjustable 0 to 60 sec, with the step 1 sec
<b>Outputs</b>		
Signalling of the insulation status FAULT Potential-free switching contact: Electric strength against internal circuits and supply circuits		250 V AC / 1A 3750 V <sub>rms</sub>
Signalling of the insulation monitoring device function ERR Potential-free switching contact: Electric strength against internal circuits and supply circuits		250 V AC / 1A 3750 V <sub>rms</sub>
Communication line: RS485 type MASTER-SLAVE, 9600 Bd, even parity Insulating strength against internal circuits		Yes 2500 V <sub>rms</sub>
<b>General data</b>		
Protection type according to IEC 60 529		IP20
Weight	m	110 g
Housing material		PA-UL94 V0
Mounting on		DIN rail 35 mm
Recommended cross-section of connected conductors	S	1 mm <sup>2</sup>

Operating conditions	
Working temperature	-10°C ~ +60°C
Relative moisture of the environment	28 g H <sub>2</sub> O /kg of dry air
Atmospheric pressure	86 to 106 kPa
Working position	any
External magnetic and electric field	max. 400A/m
Category of over-voltage / testing voltage	III according IEC 60664-1:2007
Level of pollution	2 according IEC 60664-1:2007
Type of operation	permanent

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