

HIG93/CL500

The insulation monitoring device HIG93/CL400 produced by HAKEL for the ISOLGUARD series is designed for monitoring the insulation status of single-phase and 3-phase ungrounded IT power supply systems, is designed and operated according to standards IEC 61010-1:2010, EN 50522, IEC 61936-1:2010.

Device enables monitoring of single-phase and 3-phase ungrounded IT power supplies systems up to the maximum operating voltage 275V AC, eventually 3x275V AC. If the insulation status monitoring of a single-phase or 3-phase IT system with higher operating voltage is required, it is necessary to create an artificial centre using TL* inductors produced by HAKEL. Such a created centre is connected to the terminal of insulation monitoring device HIG93/CL400.

The insulation monitoring device enables to display the numeric value of the measured insulation resistance. Device is equipped with buttons for setting module parameters and with signalling LED diodes to display the status of monitored power supply system and status of the device.

HIG93/CL400 device is equipped with active current loop output $4 \div 20$ mA, which indicates actual measured insulation resistance value. Current loop is galvanic isolated from the monitored system and from the internal circuit of the device.

Two inbuilt signalling relays with switching contacts enables **alarm signalling for two independently set values of critical insulation resistance**. The insulation monitoring device has an optional alarm memory function with the option to terminate the alarm using the button on the insulation monitoring device.

Local and remote testing of the insulation monitoring device function can be done.

Basic characteristics

- Insulation monitoring device for AC systems with 0 to 275 V voltage without additional devices, for greater voltages additional inductor is needed
- Display of the measured insulation resistance R_{isol} in the range 5 k Ω to 900 k Ω
- Two insulation resistance status signalling relays equipped with switching contact
- Pasiv galvanic isolated current loop $4 \div 20$ mA for value output of the isolation resistance R_{isol}
- Adjustable hysteresis of the insulation resistance limit value in the range from 0 to 100 % using the display and push-buttons
- Possibility to adjust monitored insulation resistance R_{crit} values to: 1 k Ω , 3,5 k Ω , 7,5 k Ω , 22 k Ω , 50 k Ω , 80 k Ω using the display and push-buttons
- The characteristic of current loop $4 \div 20$ mA is automatically chosen according to set R_{crit} value
- Adjustable delay in signalling relay response t_{ON} in the range from 0 to 60 seconds using the display and push-buttons
- Access to the IMD parameter setting with the pushbuttons can be locked/unlocked by a button combination
- Separate supply voltage also allows to monitor IT power supply systems, which are not under voltage
- 2M (36 mm) width module for assembling on 35 DIN rail

PARAMETERS

Typ		HIG93/CL500
Supply voltage range	U_s	90 - 264 V AC (47÷63 Hz) or 120 - 370 V DC
Insulation voltage between power supply and internal circuits		3000 V AC
Maximum IT power supply system operating voltage (without external inductor)	U_n	275 V AC
Power consumption	P	max. 5 VA

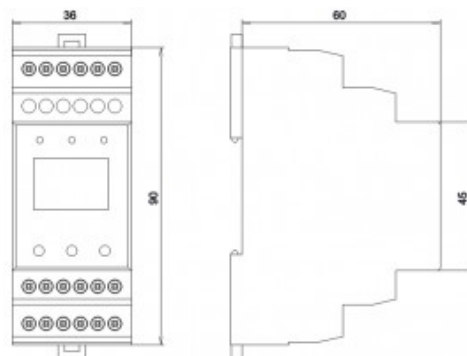
Measuring voltage	U_m	24 V DC
Measuring current	I_m	< 1 mA
Internal resistance of the measuring input	Z_i	> 1 M Ω
Displayed value's range	R_{isol}	5 k Ω - 900 k Ω
Measurement accuracy 5 k Ω ... 10 k Ω		2 k Ω
Measurement accuracy 10 k Ω ... 900 k Ω		\pm 10%
Critical insulation resistance	R_{crit}	adjustable 1 k Ω / 3,5 k Ω / 7,5 k Ω / 22 k Ω / 50 k Ω / 80 k Ω
Insulation resistance hysteresis	R_{hyst}	adjustable 0 - +100% R_{crit}
Delay in response of signalling	t_{ON}	adjustable 0 - 60 sec, with a 1 sec step
Signalling relay KA1. Potential-free switching contact / Electric strength to the internal circuits and to the supply circuits		230 V AC / 1A / 3750 V _{ef}
Signalling relay KA2. Potential-free switching contact. Electric strength to the internal circuits and to the supply circuits		230 V AC / 1A / 3750 V _{ef}
Current output type		Isolated passive current loop
Insulating strength against internal circuits and network circuits		3 kV AC
Maximum load resistor of the loop		500 Ω (power supply from a 24V DC source inside the module)
Operating range of insulation status value signalling		4 - 20 mA
Maximum range of current output		0 - 25 mA
Uncertainty of Risol value signalling – Typ.		< 1 %
Uncertainty of Risol value signalling – Max.		\pm 5 %
Degree of protection according to IEC 60529		IP20
Weight	m	160 g
Housing material		PA-UL 94 V0
Method of assembly		on the bar DIN 35
Recommended section of the connected conductors	S	1 mm ²
Operating temperature	ϑ	-10°C - +60°C
Atmospheric pressure		86 - 106 kPa
Operating position		any
External magnetic and electric field		according to IEC 61326-24
Overvoltage category / testing voltage		III, according to IEC 60664-1:2007
Pollution degree		2, according to IEC 60664-1:2007
Operational mode		permanent
Article number		
HIG93/CL500		70 932

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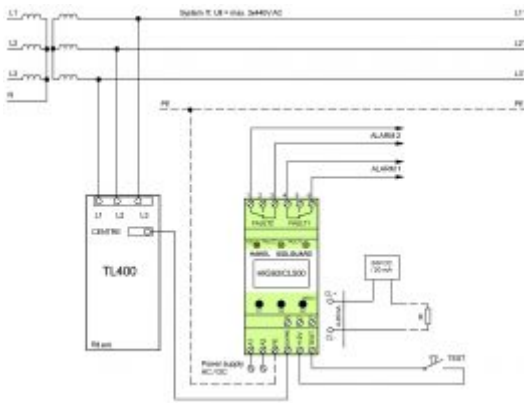
Product image



Dimension drawing



Installation diagram



Installation diagram

