

Technical data A-ISOMETER® IRDH265-P49213

TRACKWATCH
Insulation Monitoring Device

Chapter 1.5

Device type	IRDH265-P49213		
Insulation coordination acc. to IEC 60664-1:			
Rated insulation voltage	AC 630 V		
Rated impulse withstand voltage/contamination level	6 kV/3		
Voltage range			
Nominal voltage range U_N	(3)AC 0 ... 793 V / DC 0... 650 V		
Supply voltage U_S	AC 90...132 V		
Operating range of U_S	0.8 ... 1.15 x U_S		
Max. selfconsumption	6 VA		
Response values			
Response value R_{an1}	10 k Ω to 990 k Ω		
Response value R_{an2}	10 k Ω to 990 k Ω		
Response time at $R_F = 0.5 \times R_{an}$ and $C_E = 1 \mu F$	approx. 6 s / see characteristic curve		
Max. admissible system leakage capacitance C_E	150 (500) μF		
Measuring circuit			
Measuring voltage U_m	27 V		
Measuring current I_m	max. 230 μA		
Internal DC resistance R_i	120 k Ω		
Impedance Z_i at 50 Hz	>250 k Ω		
Max. admissible stray DC voltage	-		
Outputs			
Current output at measuring instrument SKMP *4)	120 k Ω		
Max. load	400 μA (12.5 k Ω)		
Contact circuit	2 separate alarm relays		
Switching components	1 change-over contact each		
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, test data see chapter "Standards"	Yes		
General data			
Ambient temperature, during operation	-40°C to +70°C		
Storage temperature range	-40°C to +70°C		
Climatic class acc. to IEC 60721			
(except condensation and formation of ice)	3K5		
Operation class	continuous operation		
Mounting	any position		
Connection	modular terminals		
Cross sectional area of connecting cable, single wire	0.2...4 mm ²		
Cross sectional area of connecting cable, flexible	0.2...2.5 mm ²		
Protection class acc. to DIN EN 60529			
Built-in components	IP 30		
Terminals / with terminal covers	IP 20		
Type of enclosure /dimension diagram	XM 112		
Screw fixing	Yes		
DIN rail mounting acc. to	DIN EN 50022		
Flammability class	UL94V-0		
Technical manual	TGH1249		
Weight max.	825 g		

*1) see device description "ordering details"

*2) see device description "measuring circuit"

*3) see device description "response values"

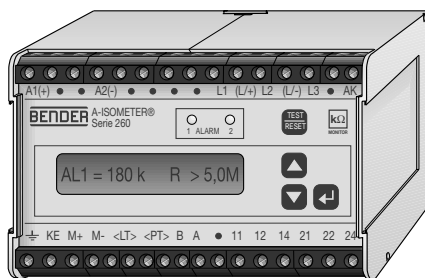
*4) SKMP = scale centre point

A-ISOMETER® IRDH265-P49213

TRACKWATCH

Insulation Monitoring Device

Insulation monitoring device for IT AC systems with DC components and IT DC systems



Product description

The A-ISOMETERS IRDH265 monitor modern power supply systems by micro-processor-controlled measuring voltage. These systems frequently contain converters, power converters, thyristor controls and directly connected DC components and due to interference suppression arrangements often high system leakage capacitances to earth exist. The integrated AMP measuring principle adapts it-self automatically to the respective system conditions. The voltage range can be extended with coupling devices. Further details on this subject you will find in chapter 1.9 "Coupling devices".

Device characteristics:

- universal for 3(N)AC systems, AC/DC systems up to 793 V and DC systems up to 650 V
- the voltage range can be extended with coupling devices
- automatic adaptation to system leakage capacitances up to 500 μF
- safe measuring thanks to the AMP measuring principle and microcontrollers
- Two adjustable response values 10 ... 990 k Ω
- LC display
- RS485 interface
- Connection monitoring
- Automatic self test

Application in modern power supply systems

- Three-phase systems with converter drives
- DC systems with power converters or direct DC converters
- Mixed AC/DC supply systems
- UPS systems
- Heaters with phase control
- Systems with switched-mode power supply
- Systems with very high leakage capacitances

Ordering details

Type	Nominal voltage range U_n	Supply voltage U_s	Art. No.
IRDH265-P49213	AC 0-793/ DC 0-650 V	AC 90...132 V	B 9106 8071 ²⁾

Other supply voltages on request.

* This information represents absolute values for the supply voltage, to which the working range is not applicable.

- 1) For use in industrial areas
- 2) Suitable for household and industrial use

Measuring principle



IRDH265 series operates with the AMP measuring principle.

This ensures safe monitoring of modern control voltage systems. The chapter on "Measurement Technology" contains a detailed description of the measuring principle.

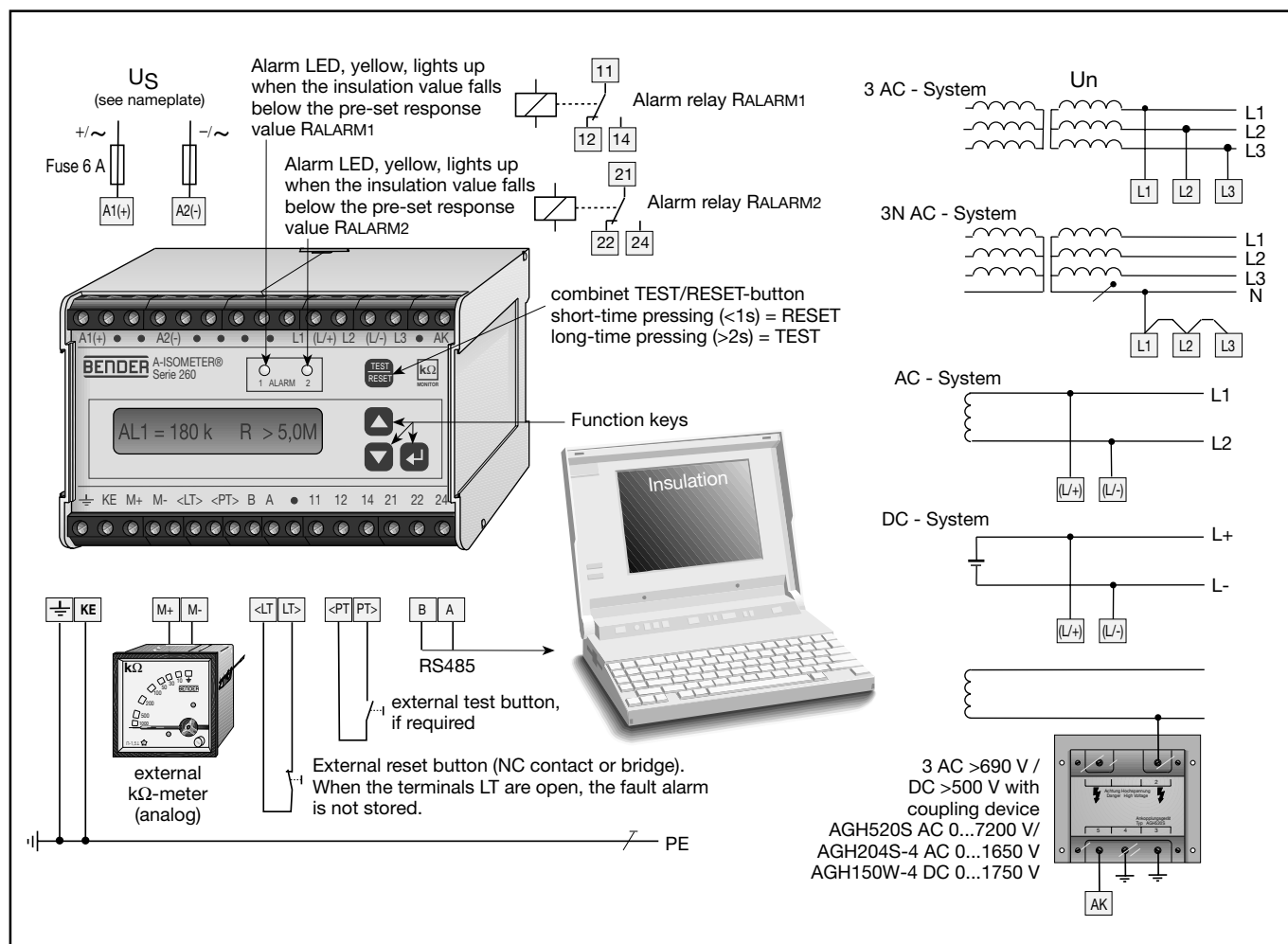
Standards

IRDH265 series complies with the standards DIN 57413 T8 / VDE 0413 T8, IEC 61557-8, EN 61557-8 and ASTM F1669M-96.

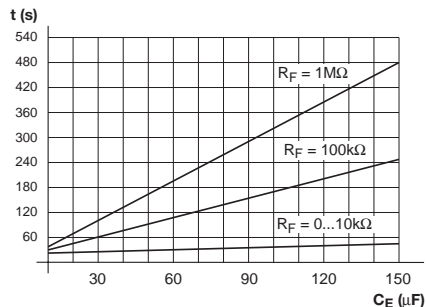
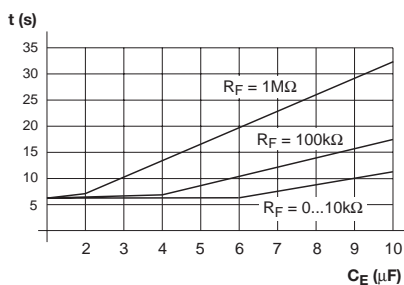
Further details on these standards and certifications you will find in chapter "Standards".

When installing the device, the safety instructions supplied with the equipment must be observed !

Wiring diagram



Response time



Accessories

External kΩ- measuring instruments

Type	Art. No.
7204-1421	B 986 763
9604-1421	B 986 764

Coupling devices

Type	Nominal voltage range U_n	Art.-Nr.
AGH150W-4	DC 0 ... 1760 V	B 98018006
AGH204S-4	AC 0...1300 / 0...1650 V	B 914 013
AGH520S	AC 0 ... 7200 V	B 913 033

Wiring diagrams see chapter 1.9