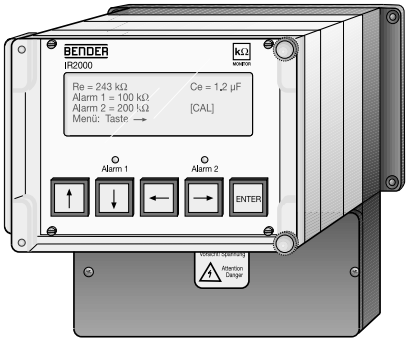
Device type	IR2000		
Insulation coordination acc. to IEC 60664-1:			
Rated insulation voltage	AC 500 V		
Rated impulse withstand voltage/contamination level	4 kV/3		
Voltage range			
Nominal voltage range U_n	(3)AC 0...575 V / DC 0...286 V		
Supply voltage U_S	up to 230 V *1)		
Operating range of U_S	0.8 ... 1.15 x U_S		
Max. power consumption	25 VA		
Response values			
Response value R_{an1}	10 kΩ to 100 kΩ		
Response value R_{an2}	50 kΩ to 500 kΩ		
Response time at $R_F = 0.5$ x R_{an} and $C_e = 1$ µF	< 100 s		
Max. admissible system leakage capacitance C_e	10 µF		
Measuring cicuit			
Measuring voltage U_m	50 V		
Measuring current I_m	max. 400 µA		
Internal DC resistance R_i	125 kΩ		
Impedance Z_i at 50 Hz	125 kΩ		
Max. admissible extraneous DC voltage	-		
Outputs			
Current output at measuring instrument SKMP *4)	120 kΩ		
Max. load	400 µA (5 kΩ)		
Contact circuit	2 separate alarm relays		
Switching components	1 change-over contact / 1 NO contact		
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 Annex	Yes		
General data			
Ambient temperature, during operation	-10°C to +55°C		
Storage temperature range	-40°C to +70°C		
Climatic class acc. to IEC 60721 (except condensation and formation of ice)	F		
Operating mode	continuous operation		
Mounting	any position		
Connection	screw terminals		
Cross sectional area of connecting cable, single wire	2.5...4 mm²		
Cross sectional area of connecting cable, flexible	2.5 mm²		
Protection class acc. to DIN EN 60529			
Built-in components	IP 20		
Terminals/with terminal covers	IP 10		
Type of enclosure/dimension diagram	enclosure for surface mounting X2000		
Screw fixing	-		
DIN rail mounting	-		
Flammability class	-		
Technical manual	TGH 1241 E		
Weight max.	3900 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® IR2000

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



Application in systems with extremely high interference stress

- One and three-phase systems with converter drives AC/DC
- One and three-phase systems with converter drives AC/DC/AC and a wide range of operating frequencies
- DC systems with power converters
- Mixed AC/DC supply systems
- Power supply systems for rolling-mill drives
- Power supply systems for scrapers and excavators

Product description

The A-ISOMETER® IR2000 monitors IT power supply systems in which frequently low-frequency voltages occur with relatively high amplitudes. Drive units of hauling means in the basic industry, such as scrapers or brown coal excavators, or rolling mill drives used in heavy industry are the most frequent cause of voltage fluctuations due to frequent control and regulating actions.

The A-ISOMETER® IR2000 works with a new frequency code measuring principle. This ensures safe insulation measuring in AC and DC IT systems, under all operating conditions.

Device characteristics

- Universal for 3/(N)AC systems AC/DC systems up to 575 V and DC systems up to 286 V.
- Voltage range extendable with coupling devices to AC 2750V and DC 1650V.
- Automatic adaptation to system leakage capacitances up to 10 µF.
- LC text display and real-time clock.
- Two adjustable response values 10 ... 100 kΩ / 50 ... 500 kΩ.
- RS485 interfaces (on request).
- Connection monitoring.
- Processor-controlled measuring principle.
- Type of construction: 19" Eurocards, enclosure for surface-mounting.

Ordering details

Type	Nominal voltage range U_n	Supply voltage U_S	Art. No.
IR2000	AC 0-575/DC 0-286 V	AC 230 V	B 919 573 [2]

Other supply voltages on request.

[2] for use in the household as well as industrial sector

Measuring principle

FC

IR2000 series works with a frequency code measuring principle.

The Annex contains a detailed description of the measuring principle.

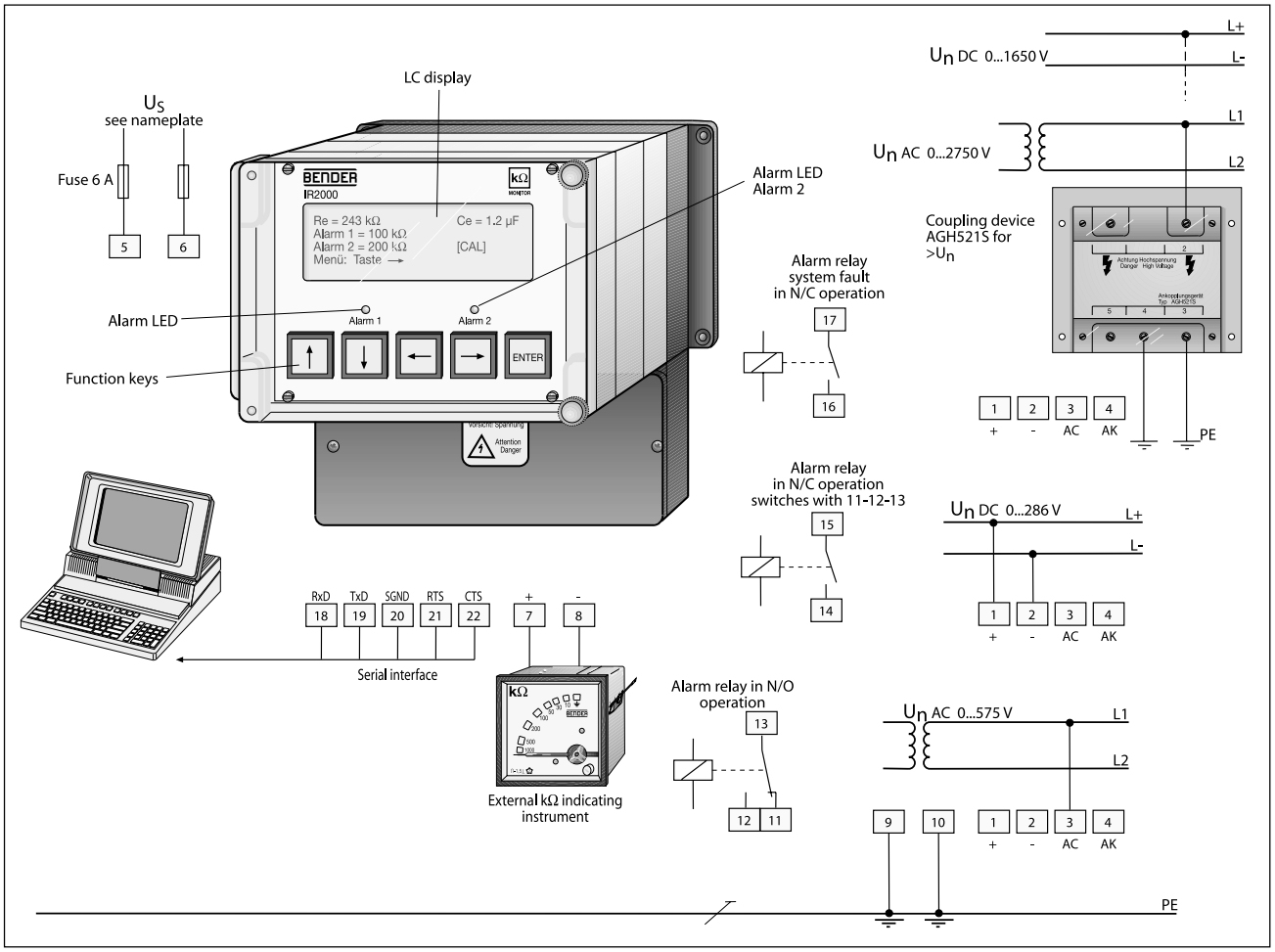
Standards

The IR2000 series complies with the standards DIN EN 61557-1 (VDE0413 part1):1998-05, IEC 61557-8, EN 61557-8 and ASTM F-1669M-96.

Details about these standards you will find in the Annex.

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

Wiring diagram



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. No.
AGH521S	AC 0 ... 2750 V DC 0 ... 1650 V	B 920 001

Wiring diagrams see chapter 1.9