

AIM-T500 Industrial Insulation Monitor



Device features

- Insulation monitoring for unearthed systems AC 0-800V, DC 0-650V.
- Two separately adjustable response value 1k-10MΩ.
- Automatic adaptation to the system leakage capacitance.
- Real-time measurement of leakage capacitance, insulation resistance.
- 3 separate alarm relays with 3 potential-free changeover contacts.
- RS-485 interface with modbus-RTU protocol.
- LCD display with backlit.
- Test button to start self-test.
- Connection monitoring of PE and IT systems.
- 20 text of warnings and alarms messages can be written to the history memory.

Typical applications

- Unearthed AC,DC main circuits
- IT systems including high leakage capacitances.
- Battery systems.
- Coupled IT systems.

Standards

The insulation monitoring device AIM-T500 complies with requirements of the device standards:

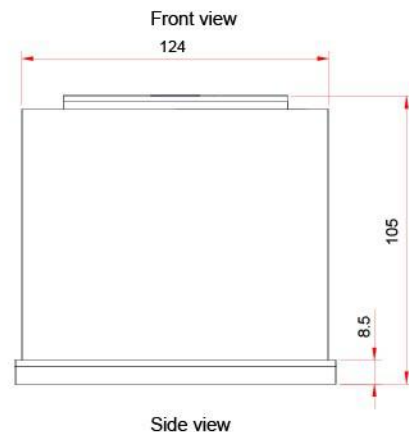
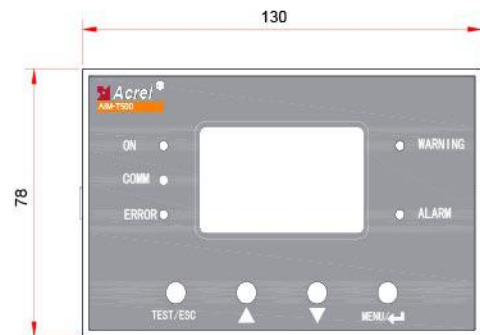
- GBT18216.8
- IEC 61557-8

Technical parameters

Specifications		Type	AIM-T500
Auxiliary power supply	Voltage		AC85...265V
	Power consumption		<8W
Monitored IT system	Voltage		Up to 800V (AC、DC、AC&DC)
	Frequency		40~60Hz

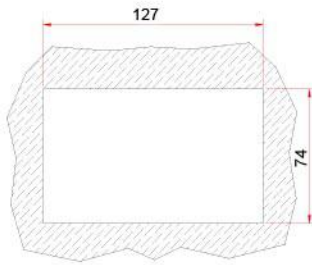
Specifications		Type	AIM-T300
Insulation Monitoring	Measuring range		1kΩ-10MΩ
	Alarm range		10kΩ-10MΩ
	Relative uncertainty		1...10k: 10k; 10k...10M: ±10%
	System leakage capacitance		<500uF
	Response time		<5s
Communication			RS485, Modbus-RTU
Internal parameters	Measuring current		<270uA
	EMC/EMR		IEC61326-2-4
	Rated impulse voltage /pollution degree		8kV/III
	Internal DC resistance		≥180kΩ
output	Relay output		Error, early warning, alarm
Environment	Operation temperature		-15—+55 C
	Storage temperature		-20—+70 C
	Relative humidity		5%-95%, No condensation
	Altitude		≤2500m

Dimension Drawings(Unit: mm)



Installation and wiring

■ Panel cut-out



■ Terminals description

T1	T2	F1	F2
31	32	23	24

T1/T2- External test button.

F1/F2- Standby by means of the function input

"F1,F2": with the contact in closed position no insulation measurement.
(Used in coupled IT systems)

L2			L1
5			4

L1/L2 – Connection to AC systems to be monitored. Or DC system with L1 to L+, L2 to L-.

12	13	14	15	16	17	28	29
Do1+	Do1-	Do2+	Do2-	Do3+	Do3-	PE	KE

D01+/D01- –relay1: Fault alarm.

D02+/D02- – relay2: Warning.

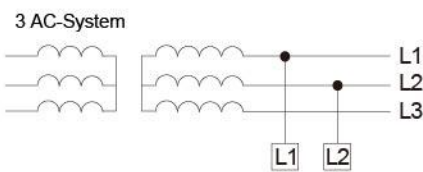
D03+/D03- –relay3: Alarm.

18	19		1	2
A	B		U1	U2

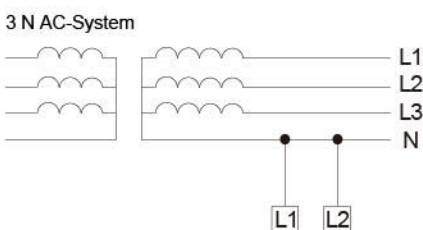
A/B- RS- 485 interface.

U1/U2- Power supply.

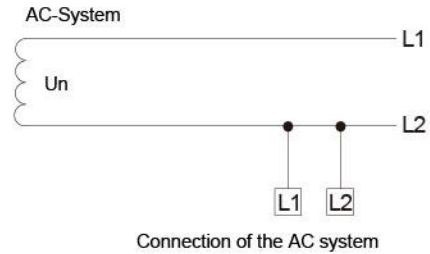
■ Wiring diagram



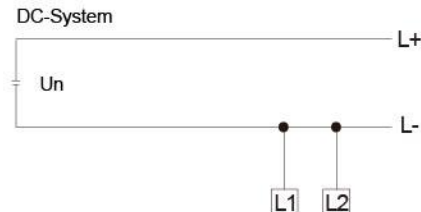
Connection to the 3AC system



Connection to the 3 N AC system



Connection of the AC system



Connection of the DC system

Operation and Display

■ LED indicator instructions

"On"	Flashes once per second during normal operation.
"Comm"	Flashes when communication
"Warning"	Flashes when insulation resistance blow the warning value.
"Alarm"	Flashes when insulation resistance blow the alarm value..

■ Button function descriptions

	In non-programming mode to start the self-test, in other state, used as return function.
	In programming mode, used to increase or decrease the value .
	In non-programming mode, used to enter the programming mode. In programming mode, used as Enter button.

■ Menu description

-	IT-SYSTEM
Insulat	Rf>10MΩ
Leak	Ce=100uF
2019-08-21	08:44:21

Main page

▶LCD Set	Time Set
AlarmSet	Comm Set
ClearSOE	Password
SW info.	Cap Set

Root Menu

LCD Set	
Contrast:	30
Time Hold:	060s
◀adjust	↵select

LCD parameter setting

Time Set	
Date Set:	2019-08-30
Time Set:	09:56:06
◀adjust	↵select

Time setting

Alarm Set	
Pre :	0060K
Alarm :	0038K
◀adjust	↵select

Alarm d setting

Comm Set	
Address :	001
Baud :	9600
◀adjust	↵select

Communication setting

Leakage Cap Set	
500 uF	
◀adjust	↵select

Leakage capacitance setting

Reset Set	
auto reset	
◀adjust	↵select

Reset mode

■ Data settings

First menu	Second menu	Range and description
LCD set	Contrast	15-60
	Time hold	15~250
Time set	Date set	Year- Month- Day
	Time set	Hour: Minute: Second
Alarm Set	Pre	60~4999
	Alarm	10~4999
Comm Set	Address	1...247
	Baud	4800,9600,19200,38400
Cap Set	Leakage Cap Set	100uF~500uF
Reset Set	Reset set	auto/manual