

AC Single Phase Ammeter User Manual

**This manual is applied to the following models:
LNF31**

JIANGSU SFERE ELECTRIC CO., LTD

1 Product description

1.1 Overview

This series of digital ac ammeter is suitable for measuring single phase ac current parameters of low voltage distribution system. This series of meter support programmable transformation ratio, and can be equipped with communication function to support Modbus-RTU communication protocol.

This series of meter can be widely used in various control systems, distribution automation system, industrial automation system and intelligent buildings.

1.2 Model selection

Function		LNF31
Appearance	Display mode	LCD
	Panel size(mm)	72×72
Real-time measurement	Current, frequency	■

Note: “■” Yes.

2 Technical parameters

2.1 Technical specification

Working environment	
Working temperature	-10°C -- 55°C
Storage temperature	-25°C -- 70°C
Relative humidity	≤95% RH, no condensation
Working altitude	≤2500m
Anti-pollution level	Non-corrosive gas
Protection degree	Front case IP54, rear case IP20.
Insulation	Between signal, power supply, output terminal to case resistance >100MΩ
Withstand voltage	Input and power supply ≥ 2kV, input and output ≥ 2kV, power supply and output ≥ 2kV

Display	
Display method	LCD
Working power supply	
Rated range	AC/DC (80~270) V
Power consumption	≤5VA
Withstand voltage	Input and power supply ≥ 2kV, input and output ≥ 2kV, power supply and output ≥ 2kV
Current input	
Range	5A/1A
Resolution	1 mA
Impedance	≤20mΩ/ per phase
Power consumption	≤0.2 VA/ per phase
Overload	Continuous:1.2In Instantaneous: 10In/5s
Frequency	45 Hz-65 Hz
Communication interface	
Physical interface	RS-485
Communication speed	Up to 9.6 kbps
Communication protocol	Modbus-RTU
Isolation voltage	2000 VAC (1 min)
EMC	
Electrostatic discharge immunity	IEC 61000-4-2-III
Radiated, radio-frequency, electromagnetic field immunity	IEC 61000-4-3-III
Electrical fast transient/burst immunity	IEC 61000-4-4-IV
Impact (surge) immunity	IEC 61000-4-5-IV
Immunity to conducted disturbances, induced by radio-frequency fields	IEC 61000-4-6-III
Power frequency magnetic field immunity	IEC 61000-4-8-III
Voltage dips, short interruptions and voltage	IEC 61000-4-11-III

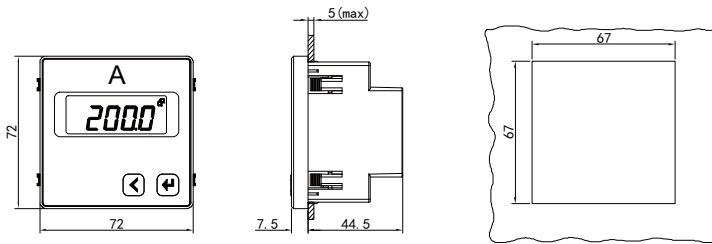
variations immunity

2.2 Measurement parameter

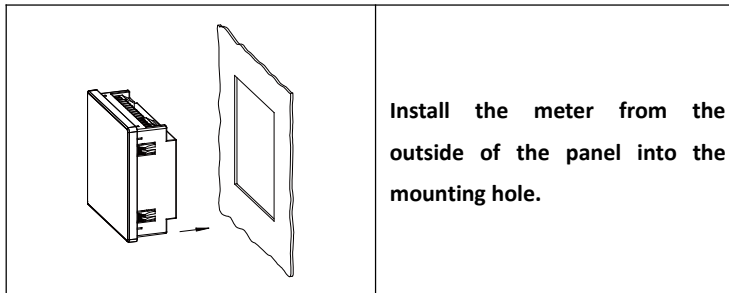
Measurement variable	Accuracy	Instant	Demand	Sum	Unit
I1/I2/I3	0.2	●	●	—	[A,kA]
F	$\pm 0.01\text{Hz}$	●	—	—	[Hz]

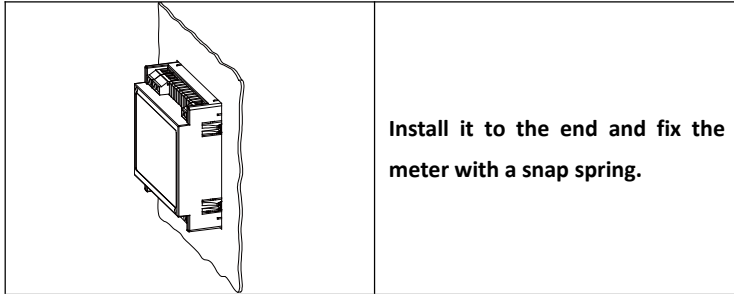
3 Installation

3.1 Dimension



3.2 Installation





3.3 Wiring

