AT101DY

Digital DC Ammeter

User's Manual

V1.0

Hangzhou Antin Power Technology Co., Ltd

Statement

The Company reserves the right to make changes in the specifications of the products described in this manual without prior notice. Before ordering, please contact us or your local agent for the latest specifications of this product.

Content

Chapter 1 Product Overview

1.1 Product Introduction

This series of DC ammeter is an ideal device for monitoring the current the instrument can be programmed, automated measurement, LED display, open in open out, variable output, overrun alarm digital communication and other functions. The product adopts advanced microprocessor and digital signal processing technology, integrating digital intelligence and networking, with superior performance, high measurement accuracy, beautiful appearance and strong EMC compatibility, it can completely replace the traditional analogue and digital instruments, and at the same time, it can be used as the terminal component of the electric power monitoring and scheduling system, SCADA system, DCS system, BAS system, etc., to realize the remote data collection and monitoring of current. monitoring and control.

1.2 Product Features

- DC current calculation
- Modular design, flexible configuration of individual functions
- Current ratio adjustable
- Parameter setting password lock, power failure permanent save
- Support RS-485 communication, MODBUS-RTU protocol
- Adopts AC and DC dual-use power supply, high and low voltage isolation
- Digital tube display
- Simple and convenient installation and wiring

1.3 Product Parameter

Measurement and metrology	
Current	DC current
Communication function	
Communication protocols	MODBUS-RTU
Communication method	RS485

Chapter 2 Technical Specifications

2.1 Technical parameters

| Technical parameters			Norm
Applicable networks			DC 2-wire
Operating power	Voltage range		AC/DC85~265V; DC18V~72V(Optional)
	Power wastage		<2W
Accuracy level			0.5S Class
Input	Current	Rating	DC shunt DC75mV input
		Power wastage	<0.2VA/phase
		(electrical) impedance	≥0.1Ω
	Digital input		Dry contact input, optically isolated

Output	Digital output	Relay output; any power alarm can be set, default remote control
	Analogue output	0~20mA/0~5V(can be set arbitrarily)
	Digital communication interface	RS485/Modbus-RTU
EMC electromagnetic compatibility test	Electrostatic discharge immunity test	GB/T 17626.2-2006: Test level 4, test voltage 8kV
	Radio Frequency Electromagnetic Field Immunity Test	GB/T 17626.3-2006: test level 3, test field strength 10V/m
	Rapid transient pulse group test	GB/T 17626.4-2008: Test level 2, current voltage 1kV, other 500V
	Surge (shock) immunity test	GB/T 17626.5-2008: Test level 4, test voltage 4kV
	Conducted Nuisance Immunity Test for RF Field Induction	GB/T 17626.6-2008: Test level 3, test field strength 10V/m
	Immunity tests for voltage dips, short-term interruptions and	GB/T 17626.11-2008: Qualified current and voltage test error

	voltage variations	
	Oscillatory wave immunity test	GB/T 17626.12-1998: Class B ITE test, qualified

2.2 Wiring Diagram
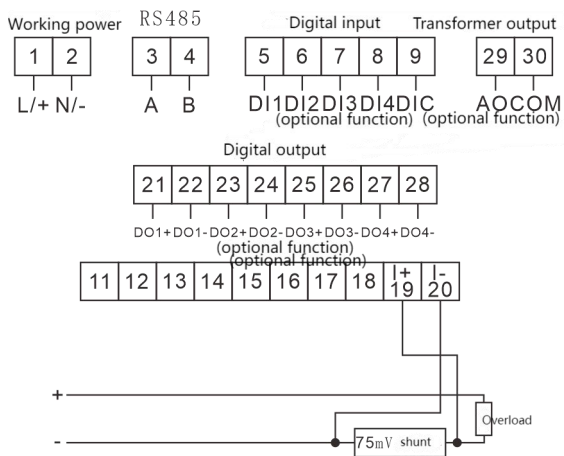
2.3 Shape/opening dimensions and installation

drawings
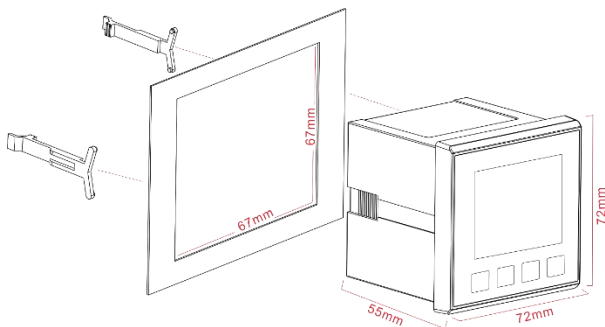
Chapter 3 Operating Instructions

3.1 Key Description

Bs	Bs key:Return to the previous menu. It is used as a shift key to move the blinking bit during parameter setting, if it is in the last level menu.
Up	Up key:View the previous screen display of the power, setup, select the previous option in the same level menu or type in the value when the value is incremented.
Dn	Dn key:View the next screen display of the power, setup when you select the next option in the same level menu or key in the value of the value decreases.

	St key:Go to the next level menu. In the parameter setting, if in the last level menu, it will be used as save and return to the previous level menu; when the current menu is the password input menu, it will judge whether the password is correct or not, if it is correct, it will enter the next level menu, otherwise, it will return to the previous level menu.

3.2 Launch Interface

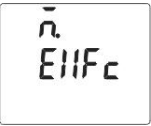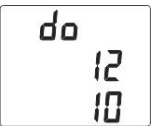|	
8.8.8.8 8.8.8.8 8.8.8.8	The startup interface displays all the segment codes on the full screen, and the interface stays for 1s, which is used to detect whether the LCD screen can display normally.
5.000	After the startup interface completes the self-test, it enters the DC current display interface and acts as the main interface to display the instrument power parameters.

3.3 Parameter setting

3.3.1 Power parameter query

5.000	By default, the DC Current screen is displayed.

3.3.2 Other parameter enquiry (optional function)

n̄. EllFc	Under the initial interface, press "St" and then press "Dn" continuously to find the other parameter query menu display interface (as shown in the left figure), and enter this menu to query other extended function parameters.
dı 1234 0100	Press "St", the extended function parameter is displayed, the left figure shows the open quantity function information which indicates that there are 4 channels in total at present, and the 2nd channel open quantity is valid.
do 12 10	Pressing "Dn", the left display shows the function information of the open quantity, which indicates that there are 2 open quantities at present, and the first open quantity is valid.

3.4 User parameter settings

Under the initial display interface, press "St" key continuously and "Dn" key continuously to find the menu item of user setting, as shown in the following figure, press "St" key to enter the user password input interface to complete the password input, increase or decrease the number through "Up" key and "Dn" key, and shift the number blinking through "Bs" key. Press "St" key to enter the user password input interface to complete the password input, through the "Up" key and "Dn" key to increase or decrease the number, and through the "Bs" key to shift the number blinking, the factory initial password is The initial factory password is "0001".

n. uSEr	In the initial interface, press the "St" key, and then press the "Dn" key continuously to find the menu item of user setting.
n. uSEr 0001	Press "St" key, the password input interface will be displayed, enter the correct setup parameter to enter the setup parameter interface, the factory initial password is 0001.

3.4.1 Power parameter setting

in	Enter the user parameter setting interface, press "Dn" key to find the power parameter setting menu item interface.
in ct	Press the "St" key to return to the electrical parameter setting option interface, and use the "Up" and "Dn" keys to find the CT ratio setting menu item.
in ct 0001	Press the "St" key to display the CT ratio parameter setting interface, and set the desired CT ratio value (setting value: 1-5000) through the numeric increase/decrease key and "Bs" shift key.

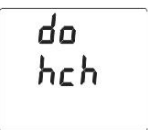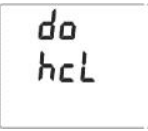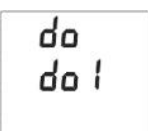|	
ı n y - - n	After setting, press "St" to confirm the setting, press "Bs" continuously to select "y" blinking, and press "St". Press "Bs" key continuously to select "y" blinking, and press "St" key to confirm to save the parameter.

3.4.2 Communication parameter setting
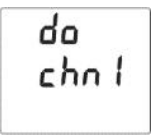
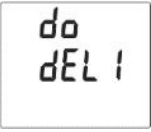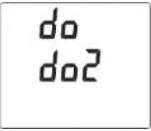|	
conn	Enter the user parameter setting interface, press the "Dn" key to find the communication parameter setting menu item interface.
conn Addr	Press the "St" key to display the communication parameter option screen, use the "Up" and "Dn" keys to find the communication address setting menu item.
conn Addr 0001	Press the "St" key to display the communication address setting interface, and set the desired communication address value (setting value: 1-253) with the "Up" and "Dn" keys.
conn bAud	Press the "St" key to return to the communication parameter option interface, and use the "Up" and "Dn" keys to find the communication baud rate menu item.

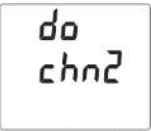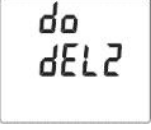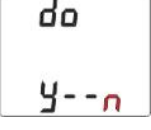|	
conn bAud 9600	Press the "St" key to display the baud rate setting interface, and set the desired communication baud rate through the "Up" and "Dn" keys (setting options: 4800/9600/9600). 19200).
conn dAtA	Press the "St" key to return to the communication parameter option interface, and use the "Up" and "Dn" keys to find the communication verification setting menu item.
conn dAtA no	Press the "St" key to display the parity parameter setting interface, set the required parity bit (setting value: no/even/odd) by "Up" and "Dn" keys.
conn y--n	After setting, press "St" to confirm the setting, press "Bs" continuously to select "y" blinking, and press "St". Press "Bs" key continuously to select "y" blinking, and press "St" key to confirm to save the parameter.

3.4.3 Parameter setting for open volume

do	Enter the user parameter setting interface, press the "Dn" key, and find the menu item of parameter setting interface.

do hch	Press the "St" key to display the open volume setting options screen, and use the "Up" and "Dn" keys to find the upper limit return parameter setting menu item.
do hch 0.90	Press "St" key to display the upper limit return parameter setting interface, use "Up" and "Dn" keys to set the upper limit return value (default is 0.9: i.e. the action value is 0.9% of the set value). 0.9 times of the set value).
do hcL	Press the "St" key to return to the output setting option interface, and use the "Up" and "Dn" keys to find the lower limit return parameter setting menu item.
do hcL L10	Press "St" key to display the lower limit return parameter setting interface, through the "Up" and "Dn" keys, set the lower limit return value (the default is 1.1: i.e. the action value is the setting value). The default is 1.1: i.e. the action value is 1.1 times of the setting value).
do do1	Press the "St" key to return to the output setting options screen, and use the "Up" and "Dn" keys to find the DO1 output setting menu item.

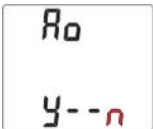|	
do chn 1	Press the "St" key to display the DO1 output parameter setting interface, the default is DO1 output parameter channel selection menu item.
do chn 1 no	Press the "St" key to display the DO1 parameter channel setting interface, and use the "Up" and "Dn" keys to set the desired channel parameters.
do dEL 1	Press the "St" key to return to the DO1 output parameter setting interface, and use the "Up" and "Dn" keys to find the DO1 parameter setting menu item.
do dEL 1 250.0	Press the "St" key to display the parameter setting option interface, and use the "Up" and "Dn" keys to set the DO1 channel parameters.
do do2	Press "St" and "Bs" key to return to the output setting option screen, and then press "Up" and "Dn" key to select "Up" and "Dn". Up" and "Dn" keys to locate the DO2 output setting menu item.

do chn2	Press the "St" key to display the DO2 output parameter setting interface, the default is the DO2 output parameter channel selection menu item.
do chn2 no	Press the "St" key to display the DO1 parameter channel setting interface, and use the "Up" and "Dn" keys to set the desired channel parameters.
do dEL2	Press the "St" key to return to the DO2 output parameter setting interface, and use the "Up" and "Dn" keys to find the DO2 parameter setting menu item.
do dEL2 150.0	Press the "St" key to display the parameter setting option interface, and use the "Up" and "Dn" keys to set the parameters of the DO2 channel.
do y--n	After setting, press "St" to confirm the setting, press "Bs" continuously to select "y" blinking, and press "St". Press "Bs" key continuously to select "y" blinking, and press "St" key to confirm to save the parameter.

3.4.4 Transmission parameter setting
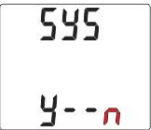
Ao	Enter the user parameter setting interface, press the "Dn" key to find the menu item of parameter setting interface of variable transmission.
Ao **chnL**	Press the "St" key to display the variable output setting option interface, use the "Up" and "Dn" keys to find the variable output channel setting menu item.
Ao **chnL** **no**	Press the "St" key to display the channel setting interface of the transmission parameters, and set the required channel parameters by using the "Up" and "Dn" keys.
Ao **AoAh**	Press the "St" key to display the variable output setting option interface, and use the "Up" and "Dn" keys to find the variable output upper limit setting menu item.
Ao **AoAh** **20**	Press "St" key to display the upper limit setting interface of variable output, set the required upper limit parameter through "Up" and "Dn" keys (setting value: 4-20; default 20).).

Ao **AoAL**	Press the "St" key to return to the variable output setting option interface, and use the "Up" and "Dn" keys to find the variable output lower limit setting menu item.
Ao **AoAL** **04**	Press "St" key to display the lower limit setting interface of variable output, set the required lower limit value parameter by "Up" and "Dn" keys (setting value: 4-20; default 4). Setting value: 4-20; default 4).
Ao **AoEh**	Press the "St" key to return to the variable setting option interface, and use the "Up" and "Dn" keys to find the variable channel parameter upper limit setting menu item.
Ao **AoEh** **230.0**	Press the "St" key to display the upper limit setting interface of the transmission parameters, and use the "Up" and "Dn" keys to set the required parameters.
Ao **AoEL**	Press the "St" key to return to the variable setting option interface, and use the "Up" and "Dn" keys to find the lower limit setting menu item of the variable channel parameters.

Ro RoEL 0.0	Press the "St" key to display the lower limit setting interface of the transmission parameters, and set the required parameters by using the "Up" and "Dn" keys.
Ro y - - n	After setting, press "St" to confirm the setting, press "Bs" continuously to select "y" blinking, and press "St". Press "Bs" key continuously to select "y" blinking, and press "St" key to confirm to save the parameter.

3.4.5 User Password Setting

SYS	Enter the user parameter setting interface, press the "Dn" key to find the system parameter setting menu item interface.
SYS uPSd	Press the "St" key to display the system parameter setting interface, and use the "Up" and "Dn" keys to find the user password menu item.
SYS uPSd 0000	Press the "St" key to display the user password setting interface, and use the "Up" and "Dn" keys to set the desired new user password.

	After setting, press "St" to confirm the setting, press "Bs" continuously to select "y" blinking, and press "St". Press "Bs" key continuously to select "y" blinking, and press "St" key to confirm to save the parameter.

Digital Tube English Correspondence Table

After-sales service

1. If the user does not understand the description in the manual during installation and commissioning, please contact the aftersales team.

2. The company's technology is ready to answer product-related questions.

3. The problems arising in the use of the product will be replied within one working day.

4. Our company has a one-year free warranty for the above products from the date of sale.

Technical descriptions are subject to change without notice

Hangzhou Antin Power Technology Co.,Ltd.

R&D headquarters: 8th floor, Lufang Science and Technology Innovation Building, Xihu District, Hangzhou City, Zhejiang Province

Intelligent manufacturing base: 4th Floor, Building 3, Block C, Qinglan Science and Technology Innovation Park, Xihu District, Hangzhou City, Zhejiang Province

Email: sales@china-antin.com

Website: http://www.china-antin.com