Nano-AS400 Card Manual

1. Overview

Nano-AS400 card is a new generation of monitoring mainframe product developed for the existing platform system according to the actual demand.

Nano-AS400 card has the advantages of fast detection speed, high integration, strong anti-disturbance ability, high reliability, strong signal processing ability, etc. Its miniaturized structural design can adapt to the narrow installation space of the electric cabinet and facilitate product maintenance.

Figure 1 real shot of Nano-AS400

2. Technical Indicators

- Power Supply: 8 - 28 VDC
- DO: 5 digital output control ports
- DI: one digital input control port
- One RS232 interface
- Relay Contact Specifications: 30 VDC / 2 A，125 VAC / 0.5 A
- Diode Specifications: 50 mA of maximum forward current, 80 VDC of maximum reverse voltage

3. Functions

- Provide 5 dry contacts of output relay to act in real time according to alarm

- Provide one input dry contact to drive UPS according to the changes of external signal

- Provide one RS232 interface

4. Port Definition

4.1 The card size

Figure 2 the AS400 card

Measurement	Parameters	Error
Height	10.5 mm	< ±0.5 mm
Width	42.5 mm	< ±0.5 mm
Depth	81.5 mm	< ±0.5 mm

4.2 Pins of DB9 and terminal interface are defined as follows:

PINS	Pins' Definition	Signal Analyses	Input / Output	Action Phenomenon
PIN1	UPS malfunction	UPS internal failure	output	PIN 1 - to - PIN 5 short circuit
PIN2	system malfunction	UPS fault; low voltage of battery; abnormal mains power	output	PIN 2 - to - PIN 5 short circuit
PIN3	GND	/	input	/
PIN4	remote control	/	input	PIN 4 - to - PIN 3 short circuit
PIN5	public signal	/	input	/
PIN6	bypass mode	contravariant failure; mutually exclusive with PIN 8 in bypass mode	output	PIN 6 - to - PIN 5 short circuit
PIN7	low voltage of battery	low voltage of battery	output	PIN 7 - to - PIN 5 short circuit
PIN8	contravariant work of UPS	normal contravariance of UPS; mutually exclusive with PIN 6	output	PIN 8 - to - PIN 5 short circuit
PIN9	failure of mains power	failure of mains power	output	PIN 9 - to - PIN 5 short circuit

4.3 Internal DIP switch is defined as follows:

Dial Code		Definition	Analyses
PIN1	PIN2	signal function of remote control	00: remote switch on and off 01: remote starting up only 10: remote shutdown only 11: remote switch on and off
PIN3		button types	0: touch 1: self-locking
PIN4	PIN5	custom type	00: conventional 01: EA protocol with checksum

Note:

• It is in binary form.

• The dialing code towards the digital side is 0.

5. Application and Installation

5.1 Mechanism of self-adaption

• Self-adapting switch of Modbus protocol and EA protocol acquisition

• Self-adapting switch of baud rate 2400, 4800 and 9600 communication

5.2 Installation steps

1. Remove the baffle on the "INTELLIGENT SLOT" of UPS.

2. Push the AS400 card into the intelligent slot.

3. Tighten the screw when the baffle of the AS400 card touches the card slot.

4. Connect the AS400 card to the monitoring device with the connecting cable.

5.3 Application example of AS400 card

The following figure is an example of peripheral circuit construction, which can realize remote monitoring and control.