PRODUCT SELECTION GUIDE

Official strategic partners

State Grid Corporation STATE GRID

Zhejiang Liyi Technology Co,Ltd

Add: No.509,B9,XiXI Road Hangzhou Zhejiang China

Email :james@liyiep.com Whatsapp:+86 18005799412

Telegram: +86 18005799412 Web: www.liyiep.com

Contact name: James Lu

Both inside and outside the repair force to create a first class

Catalogue

01. Wireless temperature measurement device

04. Microcomputer integrated protection device

05. Intelligent microcomputer Detuning Device

06. Switch cabinet intelligent control Device

08. Switch Status Indicator

09. High Voltage Live Display Device

11. Temperature and humidity controller

14. Fan monitor

15. Supporting load equipment

16. Dehumidifier series

19. Infrared Window

20. Overvoltage Protector

22. Electrical Instrument Series

26. Motor Protector

28. Energy Management System

29. Low voltage monitoring system

Wireless temperature measurement device



ALE- CW-02B

Product

The temperature monitoring points of high voltage electrical equipment are in the environment of high voltage, high current and strong magnetic field, and even some monitoring points are still in a closed space. Due to strong electromagnetic noise and high voltage insulation, space restrictions and other problems, the usual temperature measurement method cannot solve these problems and can not be used. The wireless temperature monitoring system independently developed and designed by our company uses radio waves for signal transmission. The sensor is installed on the high voltage equipment, and there is no electrical connection with the receiving equipment. Therefore, the system fundamentally solves the problem that the operating temperature of the

major function		function Introduction
basic function	receive data	Receive the wireless temperature sensor uploaded by temperature and sensor work
	video data	Color display of the received data, the display effect is more intuitive, the backlight switch is controllable, suitable for a variety of
	The clock	The real-time clock is displayed and serves as
	shows	All the parameters can be set flexibly, easy to
	parameter setting	When an alarm event occurs, the relay dry contact signal output and issue a beep alarm
	Alarm output	Record the temperature, start time and end time of the temperature measurement position, can save up to 200 records, when
	Temperature alarm record	The password management mode is adopted. The password must be entered when setting the parameters, which is divided

qualific

technical parameter		qualification
wireless	Wireless frequency	433MHz
communication param	communication interface	A total of 240 individuals were present
	Number of host networks	Rs 485 communication interface, communication distance of 1200m (no relay)
	Communication statute	A total of 128 polyps
Call the police	Baud rate	Modbus Regulation: Communication Agreement of Wireless System for Temperature Measurement
	Temperature	1200,2400,4800,9600,19200bpsareoptional
Relay dry contact		Upper limit: + 90℃, lower limit: 20℃
working voltage		Upper limit: + 60℃, lower limit: 10℃
Complete machine power consumption		≤5 VA
working temperature		-10℃~+70℃
Working humidity		90% RH, no condensation, and no corrosion
height		≤2500米
way to install		Ip20
		100 MΩ (temperature at 10-30℃, relative humidity at less than 80%)



Mobile phone APP temperature measurement temperature interface

Touch-type wireless centralized temperature monitoring system



ALE-CWG-10B

major

	maj or function	function Introduction
basic function		Receive data to receive the temperature and operating voltage of the sensor
	video d	Color display of the received data, the display effect is more intuitive, the backlight switch is ll bl i bl f i f li i
	The clock shows	The real-time clock is displayed and serves as i b h kf di
	parameter setting	All the parameters can be set flexibly, easy to d h l d i l
		When an alarm event occurs, the relay dry contact signal output and issue a beep alarm
	Temperature alarm record	Record the temperature of the temperature measurement location
	Sensor restores h	The temperature returned ld f
	Historical curve	Can query the history curve of each temperature measurement point
	historical data	Historical data for each temperature point in the latest month can be queried for easy
		The monthly highest temperature record for each temperature measurement point was d d dth hi h t d b h
	data-frozen	When each temperature measurement point data freezing density is set to 5min, the
	Password manageme	Adopt the password management mode, and d h i h





Product overview, and technical parameters

The temperature monitoring points of high voltage electrical equipment are in the environment of high voltage, high current and strong magnetic field, and even some monitoring points are still in a closed space. Due to strong electromagnetic noise and high voltage insulation, space restrictions and other problems, the usual temperature measurement method can not solve these problems, leading to the use. The wireless temperature monitoring system independently developed and designed by our company uses radio waves for signal transmission. The sensor is installed on the high voltage equipment, and there is no electrical connection with the receiving equipment.

qualification

	technical parameter	qualification
wirel ess	Wireless frequency	433MHz
		A total of 240 i i l
comm unicati on param	communication mode	Rs485, Ethernet, optical fiber, RS485 Communication distance: 1200m
	Number of host networks	A total of 128 polyps
	Communicatio n statute	Modbus stipulations of an agreement
	Baud rate	1200,2400,4800, and 9600bpsareoptional
	Te m p e r a t u r e alarm	Upper limit:+90℃, lower limit:20℃
		Upper limit:+60℃, lower limit:10℃
Call the po lice Re cog		2700mV
		The alarm voltage value is 2,500 mV
	Internetfunction	4Gfunction(optional)WIFI(optional)Ethernetport (d d)
	data interface	2 USB ports, 1 Android data cable
	r e l a y o u t p u t	2 Two -way relay output (for the external output function box,
	Relay dry contact parame ters	The port of the device itself does not have the output function) is optional
	w orking voltage	DC9-30V
	Co m plete	≤5 VA
	ma c hi ne pow e r	-10℃~+70℃
	co n s u m p tio n	90% RH, no condensation, and no
	working temperature	corrosion
	Working humidity	≤2500米
	h i h	100 MΩ (temperature at 10-30℃, relative humidity at less than 80%)

Electrical contact temperature monitoring device



ALE-10000

Power Supply Voltage	AC/DC 85~265V
Temperature measurement	12 (1 to 12 temperature acquisition points supported)
Working environment h idi	-10℃~65℃
	<95%RH
Alarm output port	Relay passive node output (1 normally open + 1 normally closed)
communication interface	RS-485 (in isolation)
Acquisition module	≤5米
Distance between the temperature measurement module and the central processing unit	≤1200米
	-20℃~250℃
Temperature measurement range	±1℃
	≤ ± 2%
resolution ratio	2 to 7 years (data sent every 2 min test)

Product overview

Our company has developed a series of electrical contact temperature online monitoring devices to timely monitor the temperature of the contact point of the

ALE-10000 adopts low power consumption design, wireless temperature measurement and other technologies, which has the characteristics of thorough isolation, convenient installation, strong anti-interference ability, reliable work, and can well solve the problem of temperature measurement under high voltage state.

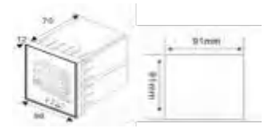
constitution of the plant

Central processing unit (1 unit)

apply

Temperature monitoring of high voltage switch cabinet contact and contact, switch switch, high voltage

Hardware installation



Overall dimension drawing (unit: mm) opening di i d i (i)

B. Installation of the sensor

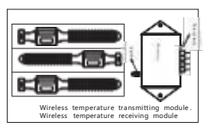
As shown in Figure 1, the temperature sensor is mounted for temperature monitoring (such as static contact). A, B and C shall install one temperature sensor for



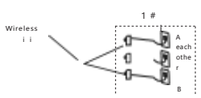
grap

C. Acquisition d l f h

Considering the problems of electrical insulation and live isolation, we adopt the latest wireless temperature transmission and receiving acquisition device as shown in Figure 2. Each set of isolation switches (A, B, C three phases) is composed of three temperature wireless transmitters and A wireless receiving temperature collector. The temperature of each phase is measured by the sensor and transmitted by the wireless transmitter, and then collected by the wireless receiving temperature collector. A wireless reception temperature box can receive the



gra h



Microcomputer integrated protection device





Product

ALE-Z9100 series digital microcomputer protection device is suitable for grounding or ungrounding systems of 10k and below, providing protection, control and monitoring functions for main equipment such as transmission and distribution lines, transformers, capacitors and motors. The device uses the programmable design idea of components, so that it can flexibly meet multiple applications and is an

Product overview

ALE-Z9300 series comprehensive protection measurement and control device is a power automation product integrating relay protection, measurement and control, communication and other functions. It is suitable for power system with 35KV and below and transformer and distribution stations of factories and mining enterprises. It can protect and monitor transmission and distribution lines, transformers, motors, capacitors and other equipment.

Device function configuration

Function-configuredALE-Z9100	
def enc ive function	√
Protect the current	√
Protect the voltage	√
electric current measurement	X
Voltage test	√
Measurement function	X
Speed break protection	√
Set-ti me-li mit over-cu rre nt protection	√
over curre nt protectio n	√
Ove r curre nt reve rse ti me li mit	√
Overload alarm	√
Zero-sequence overcurrent protection (high voltage 1A)	√
Negative order current protectio n	√
Motor starting over current	√
Co mposite voltage ove r curre nt	X
overvoltage crowbar	√
undervoltage protection	√
Zero order ove r p ressure protectio n	√
i i i h	√

Functional configuration	ALE-Z9300	Functional configu ratio n	ALE-Z9300
def enc ive	√		√
functio n	√	Protect the current	√ √
Protect the voltage	√	electric current	√ √
electric current	√	measu re men t	Op tio na l
measure men t	√	Measure men t function	op tio na l
Speed cut curre nt protectio n	√	Exte nsion speed break protection	op tio na l
Set -ti me-li mit ove r - cu rre nt protection	√	overload	op tio na l
General countertime	√	Very inverse time limit	op tio na l
Ze ro -sequence over cu rrent protectio n	√	Ext re me co u nte rti me	op tio na l
Negative order curre nt protectio n	√	Directional overcurrent	op tio na l
Motor starting over current	√	Three-phase primary reclosing gate	op tio na l
Motor overheating protection	RS485 apoleg amy	Accelerate the ove r curre nt afte r closi ng	op tio na l
Bus-line charging protection	apoleg amy	Low frequency load reductio n	
Co mposite voltage -pot cu rre nt		Differe ntial speed break	
overvoltage crow bar		Ratio braking	
undervoltage protection		PT disconnection self-test	
Zero order over pressu re		CT disconnection self-test	
		Bus bar insulation monitoring	

Intelligent Microcomputer Detuning Device

Overview of the ALE-WX-Z products

In the power system, ferromagnetic resonance occurs frequently, and the resonance will produce overvoltage, which seriously threatens the safety of the system. Ferromagnetic resonance overvoltage can occur in any system at 3220 kV, especially in the power grid of 35 kV and below, and almost all internal overvoltage accidents are caused by ferromagnetic resonance. The overvoltage caused by ferromagnetic resonance lasts long and may even last long. In the frequency resonance, the general overvoltage is not high, but the PT current is large, easy to make PT overheating and explosion; the base wave and frequency resonance, the general current is not large, but the overvoltage is very high, often make the equipment insulation damage, causing malignant accidents.

ALE-WX-Z series power microcomputer elimination device is a new intelligent power resonance elimination device developed by our company, It is simple and convenient to use, without maintenance, can quickly eliminate ferromagnetic resonance of various frequencies, high accuracy. At the same time, the relevant information can be printed or transmitted to the superior monitoring system through the communication interface according to the users needs, which is suitable for the unattended substation.

Functions and characteristics

- Modular design, compact structure, advanced technology, high-speed 32-bit ARM kernel processor makes the real-time computing and action accuracy can be guaranteed.
- Real-time monitoring of the system status, real-time calculation, the system of low frequency, basic frequency, high frequency resonant fault to make accurate judgment, and make timely action.
- Real-time display of three-phase voltage, open voltage, can accurately judge the grounding, overvoltage, resonance.
- If the resonance of the system is removed and damping is excited again, the device can be started again to eliminate.
- Industrial standard RS-485 communication interface, can transfer the running status of the system in real time.
- Fault recall function, large capacity Flash memory to save the last 10 historical fault records.
- Has good electromagnetic compatibility and is suitable for application in a complex environment with strong electromagnetic interference.
- Dual hardware watchdog circuit ensures the reliability of the software operation.
- Chinese LCD display, clear running state, menu-type operation, convenient and easy to use.

technical parameter

scope of application	A 3 kV- -35 kV
Deharmonic road number	system 1 (2)
Applicable resonant frequency	High frequency, low frequency and power frequency resonance
Deharmonic start voltage	Lowfrequency resonance 30V, power frequency, high frequency resonance 120 V
Voltage measurement accuracy	2%
Alarm relay output contact capacity	AC240V/5A , DC30V/5A
communication mode	RS485@9600bps
working power supply	AC220V±10% , DC220V±10%
ambient temperature	–10℃ 至+ 50℃
above sea level	Less than 2,000 m
operating ambient temperature	-10℃- 60℃
relative air humidity	90% (25℃)、50% (40℃)

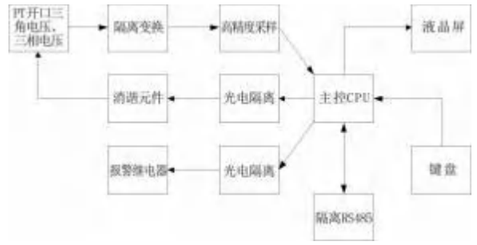
The place of use shall not have any corrosive gas, steam, conductive dust, and no explosive gas or destructive insulating gas

The installation site has wind, rain and dust proof facilities

operational principle

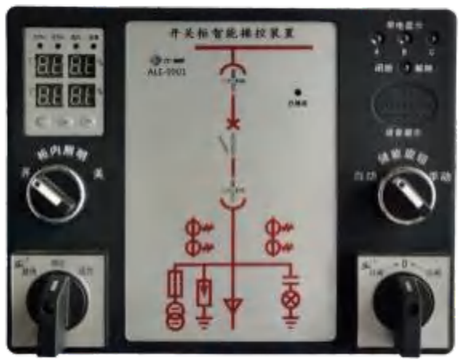
The device monitors the voltage and frequency at the open triangle of the PT in real time. When ferromagnetic resonance occurs, the device instantly starts the non-contact harmonic element (high-power SCR) to instantly short connect the PT open triangle winding to produce strong damping, thus eliminating the ferromagnetic resonance.

If the resonance is successfully eliminated, the resonance type and occurrence time are displayed on the LCD screen of the device, and the resonance alarm relay is engaged for 5 to 10 seconds to indicate that a ferromagnetic resonance has occurred.



functional block diagram

Switch Cabinet Intelligent Control Device



ALE-9901

Product overview

The switch cabinet intelligent control device produced by our company is a new generation of products designed and developed for 3~35 K V indoor switch cabinet, which is suitable for middle cabinets, mobile cabinets, fixed cabinets, ring network cabinets and other switch cabinets.

The product has powerful functions: live display, digital display of temperature and humidity, automatic heating and dehumidification control, state indication of circuit breaker switch; energy storage and ground switch indication; trolley position indication; primary loop simulation diagram, voice error prevention prompt, R S4 8 5 interface function, etc.

technical parameter

	AC220V±10% 50Hz DC220V/ DC110V(User-Optional)
Source environment	-20℃ ∽ + 60℃
circumference energy	0℃~ + 99℃
Ring fan consumption and	3W
news are strong	R S 4 85 Paud rate of 9 6 0 0
anti-interferen ce	Between enclosure and Compliance the GB/T17626.8-1998 criteria
	10∽ 55∽ 10Hz 2g1min

Product function characteristics

1, high degree of intelligence: not only can display the switch split and off state, but also can judge whether the switch car is between the test position and the working position or outside the cabinet.

2. Added voice error prevention prompt function and heating load break line alarm function.

3. Have digital display of temperature and humidity, and monitor the temperature and humidity of both environments; R S485 communication interface makes it have the ability of monitoring system with other equipment in the substation.

4. Strong anti-interference ability: using a unique anti-interference technology.

5. Reliability: using industrial-grade electronic components.

Selection table

功能表述	ALE-9906	ALE-9905	ALE-9903	ALE-9902	ALE-9901	ALE-9900
Dynamic simulation diagram (grounding / energy storage indication, working / experimental position indication, manual vehicle state indication circuit breaker / grounding switch prevention error indication)	●	●	●	●	●	●
Prevent false voice warning	●	●	●	●	–	–
Live display and locking	–	–	–	–	●	–
Temperature and humidity liquid, crystal display	–	–	–	–	–	●
Temperature and humidity digital pipe	●	●	●	●	●	●
display temperature and humidity analog	●	–	●	–	–	–
control	●	●	–	–	–	–
Close and closing, storage, energy, far, square / local operation	●	●	●	●	●	●
measurement display the electric energy parameters of the main circuit	●	●	●	●	●	●
Temperature measurement at the bus / contact	●	●	●	●	●	●
Live voice warning	●	●	●	●	●	●
Human body sensing probe	●	●	●	●	–	–
RS4 85 Communication interface	▪	▪	▪	▪	○	○
Power inspection function	▪	▪	▪	▪	○	○

注：“●”标配，“○”选配，“–”无

Product ordering

Users shall indicate the following items in the order form as required:

(1) Product name, type, number and quantity, the installation environment and lead length of the equipped temperature and humidity sensor (the standard configuration is 2 meters)

(2) Provide drawings

Switch Cabinet Intelligent Control Device



ALE-9902

Product overview

The liquid crystal intelligent control device produced by our company is a new generation of products designed for 335 Kv indoor switch cabinet, using the worlds most selected into DSP (digital signal processing) and single-chip computer technology to develop new digital measurement display and control instrument, suitable for the cabinet, hand cabinet, fixed cabinet, ring network and other switch cabinet.

The product is powerful : a dynamic simulation diagram, charged display and locking function, temperureiand humidity display and control, distance opration function, circuit breaker points precomi fash display, human body induction and cabinet lkihing, voice error tips, secondary switch voltageasure ment and liquid crystal display.

technical parameter

	AC220V±10% 50Hz DC220V/ DC110V (User-Optional)
	-20℃∽＋60℃
	0℃~＋99℃
	Temperature ± 1℃ humidity ± 5% RH
	3.6W
	Between housing and terminal is greater than AC2000V
	Greater than 100 MΩ between housing and terminal

Switch Cabinet Intelligent Control Device(with wireless temperature measurement)



ALE-9905

Product overview

The liquid crystal intelligent control device produced by our company is a new generation of products designed for 335 Kv indoor switch cabinet, using the worlds most selected into DSP (digital signal processing) and single chip computer technology to develop new digital measurement display and control instrument, suitable for the cabinet, hand cabinet, fixed cabinet, ring network and other switch cabinet.

The product is powerful: a dynamic simulation diagram, charged display and locking function, temperature and humidity display and control, distance / local and operation function circuit breaker points / close state display, energy storage indication, ground switch status indication, car position indication, preview flash display, human body induction and cabinet lighting, voice error tips, secondary switch voltage measurement and liquid crystal display, electrical contact temperature, online temperature measurement function.

	Power supply AC/ DC 85 V-265 V
	Working environment-20℃ + 60℃
	Control range is 0℃ to + 99℃
	Control accuracy temperature ± 1℃ humidity ± 5% RH
	The measurement control number setting and resolution is 0.01
	Communication to the RS 485 MODBUS RTU
	Paud Rate 9600 (Setting)
	Power consumption is 15 W
	The electrical strength resistance between the shell and the terminal is greater than AC 2000 V
	Greater than 100 M Ω

Product function characteristics

1. High degree of intelligence: it can not only display the switch split and off state, but also judge the position of the car, whether it is between the test position and the working position or outside the cabinet, and has double temperature and humidity measurement and display.

2. Adopt large-screen LCD LCD display, measurement results and parameters, clear and eye-catching.

3. High reliability, using industrial-grade electronic components.

4. Strong anti-interference ability: using a unique anti-interference technology

5. High reliability: using industrial-grade electronic components

Product function characteristics

1. High degree of intelligence: it can not only display the switch split and off state, but also judge the position of the car, whether it is between the test position and the working position or outside the cabinet, and has double temperature and humidity measurement and display.

2. Adopt large-screen LCD LCD display, measurement results and parameters, clear and eye-catching.

3. High reliability, using industrial-grade electronic components.

4. Strong anti-interference ability: using a unique anti-interference technology

5. High reliability: using industrial-grade electronic components

6. Optional active / passive temperature measuring sensor

Switch Status Indicator





Product function features

Temperature and humidity simulation control function

With 12 channel temperature and humidity sensor, the ambient humidity is 85% ± 5% RH and the humidity is 75% ± 5%; 5% RH. Start heating at ambient temperature 0℃; exit heating when temperature 5℃.

Note: The start and exit values of humidity and temperature can be adjusted according to the parameters of the user, and the humidity and temperature share the heating load.

Dynamic simulation diagram

According to the users primary wiring mode, the voltage level is set in the simulation diagram, and the breakpoint part is represented in a dynamic way to form a real-time dynamic indication. The display content is roughly as follows: A. Split and close Display B. Energy storage indication C. Working position indication D. Test position indication E. Status indication during the exit of the vehicle

Product overview

This product is a new type of multi-functional, intelligent simulation dynamic indicator device developed and designed according to the development of the current medium voltage system switch cabinet technology. It sets primary loop simulation diagram, switch status, switch breaker position, grounding knife position, spring energy storage state, high voltage live indication, high voltage live lock and automatic (manual) heating de humidification control, load break line indication and other functions in one, these indication functions can be divided and combined, users can choose according to the needs. The product is equipped in the switch cabinet with an integrated layout, and simplifies the panel structure design of the switch cabinet, beautifies the panel layout of the switch cabinet, and improves the indicator function and safety performance of the switch status.

technical parameter

Ambient temperature-2,065℃	
Accuracy temperature ± 1℃ humidity 5% RH	
Relative humidity of 95% RH	
Medium strength of AC2000V	
insulating property	And 100 megaohms
working power supply	AC/DC110V～220V
Anti-electromagnetic interference performance	Compliance with the IEC255-22 criteria

manual function

Set the manual button, press the manual button to switch to the manual state, and the two heaters start, easy to check whether the heater and the heater loop are working normally.

Note: Please switch to the automatic position and let the equipment control according to the actual situation.

Instruction and locking

Three indicators are used to show that the ABC three-phase main circuit is charged. If any phase is charged, the electromagnetic lock is activated to prevent the high voltage chamber door from being opened.

A: LED Start-glow voltage (KV): rated phase voltage of 0.15

B: Lock start voltage (KV): rated phase voltage 0.65

Selection table

功能表述/型号ALE-8809 A	LE-8805	ALE-8803	ALE-8802	ALE-8801	ALE-8800	ALE-6600

High Voltage Live Display Device



Display the model meaning and function of the device (voltage indicator)

ALE-DXN8B-□/□ G
① ②③ ④⑤

① Indoor high-voltage live display device

② design serial number

③ Indicator specification: T prompt type indicator Q: Closed lock type indicator

④ Rated voltage rating

⑤ G: Full self-test function

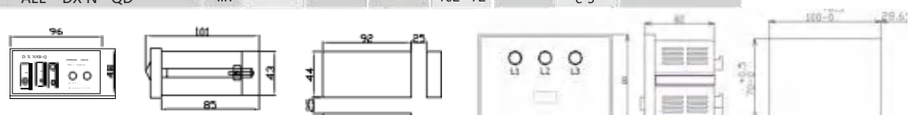
Function describes the self-check button function

1. When the high voltage power is cut off, when the secondary working power supply is connected, press the self-check button, the L1, L2 and L3 indicators showing high voltage should be on, and the output contact of the locking relay should be

Overview of the ALE-DXN products

This product is a voltage indicator with self-inspection function designed by our company according to the demand of the power supply bureau and the market. Self-test and power test buttons are set on the panel. Press the self-test button can detect the performance of the indicator itself and improve the reliability of the indicator. (see the display device function for details). Its internal circuit because of the use of low power consumption of light emitting elements, makes the whole machine power consumption is low, more stable performance, higher reliability. It is widely used in indoor 7.2, 12, 24,40.5 kV, 50Hz frequency high voltage electrical equipment, used with voltage sensor matching, can reflect the high voltage live condition with disconnecting switch

ts	High pressure i di type	Operating voltage, and effective life (V / h)	Locked-in workin	Opening size (mm)	Overall di mensions and	Back view connecting line	rem k
ALE - DX N 8 B -Q 12 G	exceed 高 bright lin	< DC2.5 > 50000	AC220	92 ×44	Figu	Figure 3	Using front end removable type, the indicator can be replaced
ALE - DX N 8 B - Q 12							
A L E - DX N - T							
ALE - DX N - Q						Figure 4	
A L E - DX N -T D			AC220	102 72	Figu	Figure 5	
ALE - DX N - QD							



Induction-type high-voltage live display device



ALE-GDXN-Q92 induction type high voltage live display device product overview

Induction high voltage charged display locking device is a new type of device to prevent electrical misoperation, a non-contact high voltage charged detection device, with electromagnetic lock, microcomputer error locking device, the line grounding knife, bus grounding knife and bus voltage variable grounding knife and other need to lock to realize safety interlocking, prevent electrical misoperation .

The sensor of this device does not directly contact with the charged body, which overcomes the disadvantage that the capacitance value of "pillar porcelain bottle sensor " is easy to undergo value change. The installation and maintenance, no need to do local release test, which is simple and convenient, with low maintenance cost and long service life.

The device has the functions of high voltage live display, sound alarm, self-check, reset, and starting the forced locking circuit. With the electromagnetic lock, microcomputer anti-error locking function, widely used in 7.2 kV~40.5 kV inside and outside the household electrical equipment or network, installed in the line grounding switch, bus grounding switch and bus voltage transformer grounding switch, can play a role to prevent the live grounding switch.

operational principle

ALE-GDXN-Q92 induction type high voltage charged display locking device consists of two parts: sensor and display. The sensor is installed directly in front of the charged body, and has no direct connection with the high voltage charged body, and maintains a certain safe distance. It is connected to the high-voltage charged body electric field signal and transmits it to the display.

The display is a continuous operation mode, with flash display and self-check function, lock type and can output forced lock signal.

When the tested equipment or network is charged, the display "power" indicator is always on, the "A, B, C" three-phase indicator is shining, the "lock" indicator is always on, and the output forced lock signal is closed. When the equipment under test or the network is not

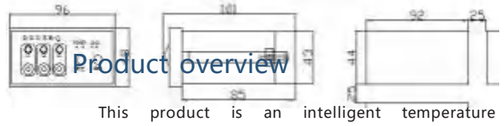
technical parameter

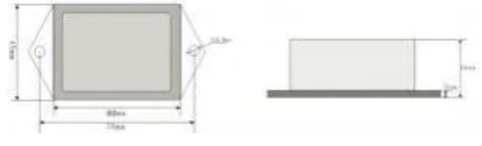
ambient temperature	-15~+65℃
relative humidity	Daily average 95% and monthly average 90%
th e	6-35kV
c las s if i cat i o n of	Red strobe, clear within 3 meters
vo ltag e	AC220V(or DC110V,220V)
Display the signal	2 pairs of normally closed nodes (K1, K2; K3,K4) and 1 pair of normally open nodes (K5, K6) (with auxiliary power supply without high voltage signal)
working power supply	AC220V (5A) (locking contact)
Number of contacts	5W
contact rating	
consumed power	

ALE-GDXN

– rated voltage
Q lock type T prompt type
Induction-type high-voltage live display device

Appearance and installation dimensions





Installation distance m(m)	61035		
	100~125	125~150	300~350

Intelligent Temperature and Humidity Controller



Product naming

The device is equipped with a "self-test" button, which can automatically detect the sensor and the functional modules of the device.

During any failure of the device, the "Lock" indicator is shining and the device is always locked.

Working principle and scope of application

The product automatically samples the environmental temperature and humidity and monitors the environmental temperature and humidity through the temperature and humidity sensor, so as to keep the

Technical indicators

supply	AC220±10%，50HZ
service condition	1. Humidity control: when the environmental humidity is higher than the humidity set value, the circuit can start the dehumidification load to achieve the effect of
control range	Temperature: -9℃ ~99℃; humidity: 0 ~ 99% RH
accuracy	The temperature is 0.5℃; the h idi i 5%
the difference	Temperature 0 20℃ (adjustable); humidity 0 ~
load capacity	Temperature-20℃ ~70℃; humidity, relative humidity, 95% RH
withstand voltage	50Hz, 1000VAC lasted for 1min, no breakdown and flying arc phenomenon
power dissipatio n	< 2W
volume	48×48×78 mm3

We recommend using the AC 220V 50Hz for:

1. Heater:power:50W,75W,100W,150W,200W,300W,500W

2. Fan: the power and volume are determined according to the needs.

Product overview

This product is an intelligent temperature and humidity digital display monitoring instrument. By digital displaying the temperature and humidity set value and measured value, the working environment temperature and humidity change can be monitored in real time, and

Conventional temperature and humidity controller



applied range

The product is mainly used for power equipment (such as terminal box, high and low voltage control cabinet, mobile car type switchgear, ring network switch cabinet, box type substation, circuit breaker mechanism box, instrument box, etc.) and other occasions that need to control the environmental temperature and humidity. The product can be used for a long time under strong electric field, strong magnetic field and various harsh natural environments to protect and guarantee the efficient and safe operation of automatic operation of power equipment, reduce costs and improve economic benefits.

Supporting load

We recommend using the AC220V 50Hz for:

1. Electric heater (power 50W, 100W, 150W, 200W, 300W, 500W, etc.)
2. Fan (the power and volume are determined according to the d)

operational principle

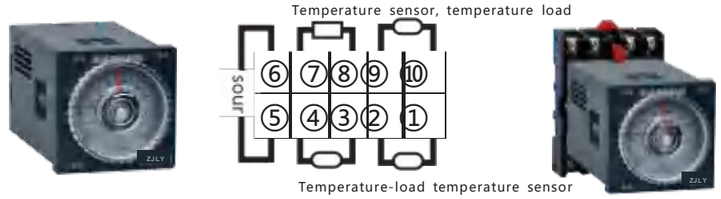
Equipment by external temperature and humidity sensor, detect the temperature and humidity of the surrounding environment, and get the relevant parameters to the subsequent circuit processing, when the possibility of temperature and humidity overrun, then drive the next level execution circuit, through external load heating, ventilation, forcing the medium to meet the standard working conditions, until the temperature and humidity is no longer in the monitoring system.

This product has two opposite temperature and humidity monitoring units, which can monitor the two environments.

Selection guide

产品功能 型号	ALE- WK	ALE- SK	ALE- WSK	ALE-W2 K	ALE-S2 K	ALE-W2S2K
	●	—	●	—	—	—
	—	●	●	—	—	—
1 Road temperature						
1 humidity 2 tempera	—	—	—	●	—	●

Dialplate temperature and humidity controller



Embedded, embedded, guide rail type

Product overview

This product is an automated industrial instrument to prevent condensation and control temperature. The product has a temperature monitoring unit, a humidity monitoring unit, each unit is independent of each other, the product is divided into cooling type and heating type. Small size, high accuracy, long life, good installation, easy to use and other characteristics.

operational principle

This product uses international advanced sensors to automatically monitor and sample the temperature and relative humidity index of the working environment for a long time. When the working environment has condensation possible instant start heating device, prevent condensation, or when the working environment temperature is low (high) in the set temperature value, the corresponding heating (cooling) load also instantly open, until the condensation conditions eliminate, the ambient temperature to stop working, to enter the monitoring state, so repeated automatic cycle.

technica

Power supply AC220 ± 10%, 50Hz	
Ambient temperature-20 + 70℃, relative humidity 95% RH	
Temperature control range cooling type 095℃, heating ℃	
Temperature control accuracy is ± 1℃	
Humidity start control 85% RH ± 5% RH (at 20℃)	
Response speed with a typical value of 5s	
Output resistance load, AC220V 3A normally open	
The power consumption is 2W	
No breakdown and flying arc at 1500V and 50Hz AC voltage	
Anti-vibration 20 m/s2,10150Hz, 3min working normally	
Three prevention (TH) to prevent the destruction of acid, alkali d l	

Volume of 484878 mm3

Product ordering

According to the requirements, the user shall indicate the following items in the order form:

1. Product specification, quantity, and length of humidity sensor lead (standard configuration of 3 meters); 2. Receiver unit, postal code, detailed address, consignee and its contact telephone number;

3, freight mode: mail, railway, air and arrival name; 4, for your VAT bill;

5. Other special requirements.

Temperature control dial

When the product is powered on, turn the dial (cooling type counterclockwise, heating type clockwise). When the temperature indicated by the pointer is lower than (above) the temperature of the current environment, the indicator light is on and the load works. In the opposite direction, when the temperature indicated by the pointer is higher than (below) the temperature of the current environment, The indicator light goes out and the load stops working. If so, the wiring is correct and normal.(This product has a control difference of 4-6°C, to avoid repeated control when setting in the critical state!)

Fan monitor

applied range

The ALE-ZID fan monitor can automatically control the stop and operation of the switch cabinet heat fan according to the monitored CT secondary current. When the open circuit or blocking phenomenon of the fan occurs, the alarm signal can be provided and the operation of the fault fan can be stopped to ensure the reliability of the fan operation. It is mainly used in power equipment (such as outdoor terminal box, high and low voltage switchgear, ring network cabinet, box type substation, dry transformer, circuit breaker mechanism box and other high current switch cabinet that need to use fan for heat dissipation), and other places with requirements for environmental heat dissipation and ventilation.

Product function characteristics

1 Using high-performance microprocessor 24-bit AD, software and hardware dual watchdog technology, strong anti-interference ability, stable operation.

2 LED digital tube timely display current current.

3 It can be adjusted, tested and parameters modified with keys.

4. With strong load capacity, it can directly control the high-power load, without the intermediate conversion link.

5 Double load monitoring, disconnection alarm function.

6 The product shell and some functional parts are made of high flame retardant, high temperature resistant and impact resistant plastic, suitable for a more complex operating environment.

Control instructions

Fan starting current setting value: can be adjusted in 1% ~ 99% Ie, interval ± 1%, factory set value is 80%.

When the CT secondary current reaches the setting current, start the fan. When the starting time of the fan reaches 6~9 seconds, judge whether the fan is running normally according to the operating current of the fan, if no wind, no turn, send out the fan fault signal.

When the running time of the fan reaches 6 seconds, the running current of the fan is detected. If the running current is less than the underload setting value and the duration is greater than 0.5S, the fault signal is output immediately, and the time from the start of the fan to the output of the fault signal is not greater than 9S.

Once the fan is started and run, after the CT secondary current is lower than the setting current, maintain the fan to operate for 1 minute, and this maintenance time can be modified by the pressing of the panel;

Dual run / single run. The fan control mode is set in the parameter setting, with two optional modes: single operation and dual operation. When the single operation mode is selected, only the fan of "fan 1 load" loop can be controlled operation, and the "fan load of" fan 2 load "loop will not run; when the dual operation mode is selected, the" fan 1 load "loop and" fan 2 load " loop are controlled operation.

the key technical indexes

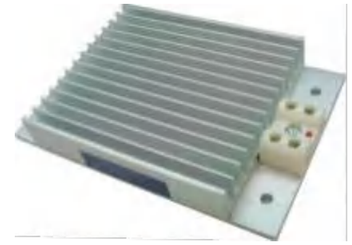
working voltage	AC220V±10% , 50Hz
bearing power	≤600W
way to install	DIN35mm Card rail or base fixed installation
Ct secondary	5A/ 1A (selected in parameter settings according to customer requirements)

Controller working environment	Ambient temperature 20℃ 60℃, humidity 93%
Power frequency and pressure	AC2.5KV, 1min
resistance	105010Hz, 2g,3min, and 2 cycles
Anti-vibration performance	Work normally at 4.4 kV / m field strength
Anti-electromagnetic interference	DC500V, 100MΩ
insulation resistance	

Supporting load

DJR-S Series heater specification sheet

model	power (W)	Heater Dimensions (LxWxH) mm	pitch-row (mm)	aperture (mm)
DJR-S-50/75	50-150	144x75x21	55	5.5
DJR-S-100/150/200	100-150-200	144x75x21	67	5.5
DJR-S-300/500	300-500	155x75x21	67	5.5



DJR-G series silicone heater specification table

model	power (W)	Heater Dimensions (LxWxH) mm	pitch of holes Opening size of mm	The conducto (customizable) mm
DJR-G-50	50	150x90x3	76x136 .4 - φ5	2500
DJR-G-75			76x136 .4 - φ5	
DJR-G-100	75	150x90x3	106x170 .4 - φ5	2500
DJR-G-150	100	185x120x3	106x170 .4 - φ5	2500



DJR-T cabinet

According to the actual use of users, the company has specially developed a new cabinet air regulator for the radiation heat conduction of the traditional heater, unsatisfactory heating and dehumidification effect, and thermal damage to the components in the cabinet. The product has the characteristics of small size, high efficiency and uniform thermal field.

It can be widely used in various power distribution cabinet terminal box, operation box, control cabinet and box-type substation.



Dehumidifier series



name	ALECS-DP120	ALECS-NJ60 ALECS-JL60	
Working power supply 10-264VAC, 127-370VDC AC90-240V AC90-240V			
	850ml/day (35℃	480mV at 35℃ and	500mU/day 160W at 35
Heating power (external):		50 - 500W (built-in) 50-500W	
	5℃-45℃	5℃-45℃	3℃-75℃
Dehumidification power		40W, 50W, 60W 30W, 40W, 60W	
Operating	0℃-+50℃	0℃-+50℃	-25℃-85℃
Temperature detection		20%RH-98%RH 0%RH-99%RH	
Slippage	-2.5℃-125℃	-25℃-125℃	-25℃-125℃
Dehumidification start		45%RH-98%RH	45%RH-98%RH Factory
	1%℃-55%℃	1%℃-55%℃ (factory	1%℃-55%℃ (factory
Humidity measurement		±3%RH	:3%RH
	±1℃	±1℃	±1℃
Display mode: double row 3		Double row 3 digit	LED light tube
Display	0.1	0.1	0.1
Shell material sheet metal		Sheet Metal	Aluminum Alloy
	330×215×280mmt	215×60×230mml	
Opening size (installation		Wall-mounted	Wall-mounted (four-
	1-3m	0.5-1m'	0.5-1m
Water pipe silicone D10mm,		Silicone D10mm,	Silicone D10mm,
Remote	Optional	Optional	none

Dehumidifier series



name	ALECS-BJ60	ALECS-JZ60	ALECS-DB120
Working	AC90-240V	AC90~240V	AC90-240V
Dehumidif	500mu day at 35℃ and 90%RH)	450mV/day 160W at 35℃, 80%RH	850ml/day (60W 35℃ 80%RH working
Heating power (external) 50-500W 50-500W 50-50.0W			
Dehumidif	3℃-75℃	5℃-45℃	5℃-45℃
Dehumidification power (optional) 30W, 40W, 60W		30W, 40W, 50W, 60W 80W, 100W, 120W	
Work Mix	-25℃-85℃	-25℃-85℃	-25℃-85℃
Humidity detection diagram 0%RH-99%RH		20%RH-98%RH 20%RH-98%RH	
Rationali	-25℃-125℃	-25℃-125℃	-25℃-125℃
Dehumidification start value 45%RH-98%RH Factory		45%RH-98%RH Factory setting 65%RH 45%RH-98%RH Factory setting 65%RH	
Temperatu	1%℃-55%℃ (factory setting 8	1%℃-55%℃ Factory setting 8℃	1%℃-55%℃ (factory setting 8℃)
Temperature measurement accuracy ±3%RH		±3%RH ±3%RH	
Temperatu	±1℃	±1℃	±1℃
Display Mode	LED light tube	LED light tube	Double row 3 digit display
Display resolutio	0.1	0.1	0.1
Shell material 304 stainless steel		304 Stainless Steel	304 Stainless Steel
Dimension	15×73×156mm(widt	1 15x73 x156mm (width x depth x	168×101×223mml width x depth x height
Opening size (installation method) Wall-mounted (fixed)		Wall-mounted (fixed) Wall-mounted (fixed)	
Dehumidif	0.5-1m²	0.5-1m	1-2m³
Water pipe silicone D10mm, L1.5m		Silicone D10mm, L1.5m	Silicone D10mm, L1.5m
Remote monitorin	none	none	Optional

Dehumidifier series



name	ALECS-DP120	ALECS-NJ60 ALECS-JL60	
Working power supply 10-264VAC, 127-370VDC AC90-240V AC90-240V			
Dehumidificatio	850ml/day (35℃85%RH working conditions	480mV at 35℃ and 80%RH	500mU/day 160W at 35℃ 90%RH
Heating power (external): 50-500W		50 - 500W (built-in) 50-500W	
Temperature	5℃-45℃	5℃-45℃	3℃-75℃
Dehumidification power (optional) 60W, 80W, 100W, 120W		40W, 50W, 60W 30W, 40W, 60W	
Operating temperature	0℃-+50℃	0℃-+50℃	-25℃-85℃
Temperature detection range: 20%RH-98%RH		20%RH-98%RH 0%RH-99%RH	
Slippage detection range	-2.5℃-125℃	-25℃-125℃	-25℃-125℃
Dehumidification start value 45%RH-98%RH factory setting 65%4		45%RH-98%RH Factory setting 65%RH0	45%RH-98%RH Factory setting 65%RH
Temperature start value	1%℃-55%℃ (factory setting 8℃)	1%℃-55%℃ (factory setting 8℃)	1%℃-55%℃ (factory setting 8℃)
Humidity measurement accuracy ±3%RH		±3%RH	:3%RH
Temperature measurement	±1℃	±1℃	±1℃
Display mode: double row 3 digits		Double row 3 digit display	LED light tube
Display resolution	0.1	0.1	0.1
Shell material sheet metal		Sheet Metal	Aluminum Alloy
Dimensions	330×215×280mmt width×depth×height	215×60×230mml width×depth×height	115×73×156mm(width×depth×heig
Opening size (installation method) 310*120mm (length × width		Wall-mounted (fixed)	Wall-mounted (four-fixed)
Dehumidificatio	1-3m	0.5-1m'	0.5-1m
Water pipe silicone D10mm, L1.5m		Silicone D10mm, L1.5m	Silicone D10mm, L1.5m
Remote monitoring	Optional	Optional	none

infraredwindow



Product overview

Infrared window alias infrared temperature measurement window, power distribution cabinet window, infrared imaging window, power detection window, is a kind of optical window that can pass through ultraviolet light, visible light and infrared light. Mainly used in LV, MV, HV switchgear, metal armored cabinet, infrared thermal imager, missile observation window, motor junction box, etc.

Product function characteristics

1.Intuitive

Ultraviolet light, visible light, infrared ray (0.15um-14um), suitable for all the current infrared thermal imager, infrared point thermometer, ultraviolet external thermal imager

2. Safety

The use of infrared window can avoid electromagnetic radiation, high pressure, high temperature and other harsh site damage to the user, the safety of the electrical cabinet, various high temperature equipment for live detection of contact temperature;

3. Fast

The installation and transformation of the electrical cabinet only takes a few minutes, after the installation is convenient to open the protective cover, you can quickly observe many targets, for internal detection;

4. Save money

Using infrared window, users in the premise of not interfering with the operation of equipment, the dangerous area for preventive detection, do not have to carry out outage maintenance, so as to save a lot of expenses;

5. No special maintenance is required

No external force damage, can be used for more than 20 years.

Selection table

size Model	number, ALE-	ALE-75	ALE-80	ALE-100
Visual diamete	55 mm	70mm	75mm	93mm
Basic diameter		75mm	80mm	100m
Open hole diar	76mm	89mm	95mm	114mm
The overall dia	86mm	100mm	106mm	125mm

Primary overvoltage protector



ALE-TBP

Product overview

This product is a gapless series protector, mainly to protect the 35KV and the following high voltage motor, transformer, parallel compensation capacitors, switches, cables, electric furnace, power distribution equipment, rectification equipment, generator, electrolytic cell and other electrical equipment and relative insulation from operating overvoltage and atmospheric overvoltage damage, can effectively limit the amplitude of overvoltage below the insulation tolerance level of electrical equipment, protect the insulation of electrical equipment, and maintain the safe operation of electrical equipment.

Although the traditional arrester can limit the overvoltage, it can only realize interphase protection between two lightning arrester, the residual pressure is relatively higher, which is not conducive to the interphase insulation protection of electrical equipment; and the series of products are combined, can effectively realize the relative insulation protection and interphase insulation protection of electrical equipment, can effectively limit the operating overvoltage and atmospheric overvoltage. This product adopts zinc oxide varistor with excellent performance, with the advantages of large 2ms flow capacity, excellent volt-ampere characteristics, low residual voltage ratio, high resistance of 4 / 10us; the action voltage is suitable and reliable.

Product naming

ALE-TBP port / port + J (discharge counter)
① ②③④

① Three-phase combined overvoltage protector

② Protector type: A-motor type, B-power station type, C-capacitor type

③ Protector continuous operating voltage

④ Type of protector: no clearance

Conditions of use of the product

1 The ambient temperature shall not be higher than + 50℃, not less than-40℃;

2 The elevation shall not exceed 1500m;

3 The power frequency voltage applied between the three-phase terminals of the protector A, B and C for A long time shall not exceed the continuous operating voltage of the protector;

4 Operating frequency is 50-60 Hz;

5 Working position: 10 kV and below products are installed vertically or horizontally, 35 kV products can only be vertical, all products are not allowed to install inverted (cable down).

Product function characteristics

The TBP series protectors produced by our company fully meet the requirements of GB11032-2000 AC No Gap Oxide Arrester, JB/T9672.2-1999 AC System with Series Gap Metal Oxide Arrester and DC / T620 "Overvoltage Protector and Insulation Coordination for AC Electrical Devices".

The TBP series protector produced by the company all adopts double sealing process structure, the outer shell of the protector is all synthetic silicone rubber coat, the external continuous line adopts high voltage insulated silicone rubber cable leads out,

All products are fully insulated closed structure, no metal exposed except cable terminal connection nose; flame retardant, explosion-proof.

Current transformer secondary overvoltage protector



ALE- CT8109

Product naming

ALE-CT81 □□
①② ③

① Company code ② overvoltage protector serial number

③ Number of windings (Example 01,03,04, etc.)

Basic functions of the product

▲After the protection, the fault point position is displayed to facilitate the troubleshooting;

▲After protection, the contact signal output is convenient for system connection and use;

▲Adopt a variety of installation design, convenient installation and use.

Product characteristics

▲ The product adopts the industrial-grade electronic chip to realize the industrial automation control.

▲The product adopts the unique anti-interference technology to enhance the anti-interference ability of the product. The product has the characteristics of high reliability, long life and fast action.▲

▲The product appearance is exquisite and easy to install.

Product use environment

▲Ambient temperature: -40℃ + 40℃

▲Ambient humidity: the monthly average maximum relative humidity is less than 90%

▲Altitude: no more than 2,000 meters

▲Atmospheric conditions: there is no pollution, erosive and explosive medium that seriously affects the insulation of the device shell

▲Environmental conditions: the product does not allow the use of severe vibration and impact

Product overview

In the power system, the current transformer (CT) is applied to the measurement and control of the primary current. During normal operation, the secondary side of the transformer is in a near short-circuit state, and the output voltage is very low. In operation, if the secondary winding is open or the primary winding flows through abnormal current (such as current current, resonance overcurrent, capacitor charging current, inductor starting current, etc.), the overvoltage of thousands or even tens of thousands of volts will be generated on the secondary side. It not only causes harm to the insulation of the secondary system, but also makes the transformer excessive and burn down, and even endanger the life safety of the staff.

According to the actual demand of the power system, our company on the basis of combining with domestic industry, we will technology in the update, take the strengths further developed with the action contact output, automatic luminous display, automatic locking, differential protection, action with manual resetting (available as per the product adopts new automatic control technology and high reliability components, long life, high reliability, more than 100000 times. Fast action speed, strong overload capacity, small static leakage current, and the needs of various current transformer (CTi) protection.

technical parameter

	5A、1A
	Temperature: -20℃ + 70℃
	Humidity: 95% RH
	Manual button reset
Normal leakage current IL 20 V	10-50-10 HZ2g 3 min
break-over voltage	Compliance with the IEC834-1 requirements
Guide time	AC220V、DC220V
Alarm output contact capacity	≤5W
Protective relay contact capacity	
Use the CT specifications	
Protect the current	
work environment	
initial condition mode	

Multi-function instrument



Product overview

Digital display multi-function network power instrument is a kind of power system, industrial and mining enterprises, public facilities, intelligent building of power intelligent monitoring and energy metering demand and design, can high precision measurement of all the three-phase grid, three-phase voltage, three-phase current, active power, reactive power, power, power, frequency, power factor, power, switching power input monitoring, with communication interface, analog output, relay output control, power pulse output, etc. Can complete the networking of different PLC, industrial control computer communication software.

The instrument has a variety of expanded input and output modes to choose from: 2 communication interface, 4 analog output, 4 relay output, local or remote switch signal monitoring and control output function ("remote communication" and "remote control" function), 8 switch monitoring, 2 power pulse output function.

Z type table selection table, the main function introduction

产品功能 \ 型号		ALE194Z-2S4	ALE194Z-2S7	ALE194Z-2S9	ALE194Z-9S4	ALE194Z-9S7	ALE194Z-9S9
实时测量	三相电流	●		●	●		●
	三相电压	●		●	●		●
	功率频率	●			●		
	功率因数	●			●		
电能计量	有功电能	●	●	■	■	■	●
	无功电能	●	●	■	●	●	●
	双向计量	●	■	●	■	●	■
电能脉冲	无源干节点						
变送输出	4-20mA						
开关量输入	无源干节点						
开关量输出	遥控/报警						
通讯	R s485	●	■	●	■	■	●
外形与开孔	外形尺寸	120*120	120*120	120*120	96*96	96*96	96*96
	开孔尺寸	111*111 108*108	111*111 108*108	111*111 108*108	91*91 88*88	91*91 88*88	91*91 88*88
显示方式		3排共12个数码管显示					

Voltage 1 A company instrument can be directly connected when the measured voltage is lower than 300V (phase voltage) / 520V (line voltage) without external PT, otherwise, external PT must be connected.

Usually, the companys instruments must use CT to measure the secondary rated output of CT needs to meet the rated current input requirements of the companys instruments.

Active power calculates the three-phase active power one by one Power Pa, Pb, and Pc as well as the sum, with signed bits.

Reactive power is calculated as three-phase reactive power Qa, Qb, Qc and sum, with symbolic bits.

Power factor A company instrument can measure the power factor and the total power

f t r f h h ith

产品功能 \ 型号		E型表选型(1)					
		ALE194E-2S4	ALE194E-2S7	ALE194E-2S9	ALE194E-9S4	ALE194E-9S7	ALE194E-9S9
实时测量	三相电流	●		●	●		■
	三相电压	●		●	●		■
	功率频率	●			●		
	功率因数	●			●		
电能计量	有功电能	●	●	■	●	■	■
	无功电能	●	●	■	●	●	■
	双向计量	●	●	●	●	●	■
电能脉冲	无源干节点						
通讯	R s485	●	●	■	●	●	■
外形与开孔	外形尺寸	120*120	120*120	120*120	96*96	96*96	96*96
	开孔尺寸	111*111 108*108	111*111 108*108	111*111 108*108	91*91 88*88	91*91 88*88	91*91 88*88
显示方式		3排共12个数码管显示					

产品功能 \ 型号		ALE194E-3S4	ALE194E-3S7	ALE194E-3S9	ALE194E-AS4	ALE194E-AS7	ALE194E-AS9
	三相电流	●		●	●		●

LED multi-function instrument



Product overview

LCD multi-function network power instrument is a kind of power system, industrial and mining enterprises, public facilities, intelligent building of power intelligent monitoring and energy metering demand and design, can high precision measurement of three-phase power grid all common electrical parameters, three-phase voltage, active power, reactive power, power, power, power frequency, power factor, 8 period 4 rate complex rate energy, 2-31 current voltage wave, total wave, switching, input monitoring, with communication interface, analog output, relay output control, electrical pulse output, and other functions. Can complete the networking of different PC and industrial control computer communication software in the industry.

The instrument has a variety of expanded input and output modes to choose from: 2 communication interface, 4 analog output, 4 relay output, local or remote switch signal monitoring and control output function ("remote communication" and "remote nt ro e" function), 8 switch monitoring, 2 power pu lse output function.

the key technical indexes

functi	parameter		
on	network		Three-phase three-wire, three-phase four-wire
	Voltage power consumption	rating	AC100V,400V (instructions when ordering)
		overload	Duration: 1.2 times instantaneous: 10 x / 10s
		impedance	<1VA(per phase)
			>500kΩ
Transmission accuracy RMS measurement, accuracy level 0.5			
AC1A, 5A (please specify when ordering)			
Overload duration: 1.2 times instantaneous: 10 times / 10s			
Volume current power consumption <0.4VA (per phase)			
Significant impedance was <2m Ω			
示	accuracy		RMS measurement, with an accuracy level of 0.5
	frequency		40~60Hz, accuracy 0.1Hz
	power		Active power, reactive power, apparent power, accuracy of 0.5 level
	electric energy		Four-quadrant measurement, active power accuracy level 0.5, reactive power precision leve 1
	show		Cycle (LCD)display
source	Working power supply AC/ DC 85~270V		
	Power consumption is 5 VA		
output	Communication RS-485, MODBUS- -RTU protocol		
	Electric energy pulse 2-channel electric power pulse output		

Main function introduction

Voltage 1 A company instrument can be directly connected when the measurement voltage is lower than 300V (phase voltage) / 520V (line voltage) without external PT, otherwise, external PT must be connected.

Usually, the companys instruments must use CT to measure the secondary rated output of CT needs to meet the rated current input requirements of the companys instruments.

Active power: three-phase active power Pa, Pb, Pc and sum, with symbolic bits.

Reactive power is calculated as three-phase reactive power Qa, Qb, Qc and sum, with symbolic bits.

Power factor A company instrument can measure the power factor and the total power factor of

产品功能 型号

		ALE194E-2SY	ALE194E-9SY	ALE194E-3SY	ALE194E-ASY	
实时测量	三相电流	●	●		●	
	三相电压	●	●		●	
	功率频率	●	●		●	
	功率因数	●	●		●	
电能计量	有功电能	●	●		●	
	无功电能	■	■		●	
	双向计量	●	●		●	
复费率分时计量	8个时段4种费率	■	■			F系列复费率表

Single-phase electric power instrument,



Product overview of the main technical indicators

Single-phase power instrument series ac-dc power measurement control instrument, can be real-time electrical circuit ac or DC voltage, current, by RS485 communication or analog transformer output interface to the test power data submitted, at the same time, can also through on the instrument, the lower limit alarm value setting, for the current or voltage of various electrical equipment overrun protection.

Note: 1 # instrument has two groups of relay over-limit alarm, all with one normally open and one normally closed.

2 # This product only provides 010 mA, 020 mA or 420 mA three current output signals. If the user needs the voltage signal to send output, he can obtain 15V or 05 V from the manufacturer or 250 Ω resistance. (Note: the accuracy of the combined resistance directly affects the accuracy of the output voltage)

Technical indicators of the main projects	
Input signal measurement and output power supply	alternating-current AC current 0-5A through, continuous working 1.2 times, instantaneous 10 times / 5 seconds above 6A, using a current transformer
	alternating voltage Voltage 0-500V through, continuous working 1.2 times, instantaneous 2 times/ 1 second above 600V requires a voltage transformer
	direct current DC current 0-5A through, continuous work 1.2 times, instantaneous 10 times/ 5 seconds more than 6A need to use a current shunt
	volts d.c DC voltage 0-500V straight through, continuous
	Measurement method working 1.2 times, instantaneous 2 times/ 1 second
	indication range
	accuracy
	resolving power Effective value measurement
	Instrument type selection 0-9999
	Excess indication Level 0.5
	Transform output 0.001,0.01,0.1, or 1
	Contact point output Ammeter (indicator light on panel A) Voltmeter (Vindicator light on panel)
	communication Upper range limit shows EEEE and the lower range limit shows " -EEE
	voltage range
	Power power consumption Current output of DC0-10mA, 0-20mA, 4 Load capacity of 500Ω
other	insulation resistance ≥100mΩ
	Power 2KV / 1min AC effective value
	work Operating temperature: 0-50℃, relative humidity of 90%

Basic functions of the product

▲The instrument whole four measurement, precision 0.5 level.

▲Internal processing adopts SMT patch process.

▲It can freely set the upper and lower range limits corresponding to the measurement signal, and the alarm value and transmission value corresponding to the transmission range of the alarm point.

▲The analog transmitter output type is optional (0-10 mA, 0-20 mA, 4-20 mA).

▲With RS485 communication function, using the standard Modbus- -Rt communication protocol. The upper oversized range limit displays "EEEE". Low range limit displays "-EEE".▲

m Meaning and function of No

ALE19 □ □ □ — □ □ □ / □

- Auxiliary code, specific function description B-transformer J-relay output K-switch quantity input T-upgrade product
- Auxiliary code, indicating the display mode 1 single row number display Y-liquid crystal display
- Series code: X-electrical test meter D-transformer table S-alarm table K-programmable table
- Auxiliary code, indicating the instrument shape 2-120X120 square 9-96X96 square 5-48X96 3-80X80 square A-72X72 square
- For power and power factor, it is not labeled as single phase and 3 is three phase

Three-phase electric power instrument







Performance overview

1.194 series of programmable three-phase power instrument, which can measure real-time three-phase voltage, three-phase voltage and three-phase current in power lines. By installing different functional modules, the functions of switching input, switching output, analog transmission and R S 4 8 5 communication are realized.

2, the instrument whole four display, precision 0.5 level.

3, using the standard M o d b u s-RTU communication protocol.

4. The user can set the relay alarm parameters, transmission output parameters and communication parameters by pressing the button.

the key technical indexes

incoming signal	
Current signal	AC current 0-5A straight through, continuous working 1.2 times, instantaneous 10 times/ 1 second
Voltage signal	AC voltage 0-500V straight through, continuous working 1.2 times, instantaneous 2 times/ 1 second
freque	40-60Hz
Voltmeter> 500 KΩ, ammeter <2m Ω	

Measurements show	
indicati on	0-9999
range	Level 0.5

output function	
Switch output	Relay contact output, contact capacity AC220V, 3A (resistance)
Analog output	DC4-20mA、DC0-20mA、DC0-10mA

Other functions	
sourc e	AC220V± 10% 50Hz (special voltage can be customized), power consumption of 3VA

resolving	0.1 (voltage); 0.001 (current)
work i	Operating temperature: -1050℃, relative humidity % i

Model

ALE19 i o - odo □ /

- Auxiliary code, specific function description B-transformer J-relay output K-switch quantity input T-upgrade product
- Auxiliary code number, 4-Three Y-liquid-
- Series code name: X D- S-Alarm K-
- Auxiliary code number, 2-120X120 Square 9-96X96 Square 5-48X96 3-80X80 Square A-
- Functio d I-Current U-voltage P-Single-phase active power Q-Single-phase reactive power P3-Three-phase three-line active power P4-three-phase four-wire active power Q3-three-phase three-wire reactive H-power

Motor protector



ALE-DB-200 Digital Tube Display Edition Product Overview



ALE-DB-200Y LCD Edition

Product function characteristics

1. Power supply supports AC and DC power supply, with wide power supply range (AC/ DC 80V~270V);
2. DO supports AC load or DC load
3. Modular design, with small size, flexible structure;

4, the protection function of the projection, return, protection parameters can be fixed by professionals according to the actual operation of the motor, the power is not lost;

Easy to achieve fast

Three-phase ac asynchronous electric motor (hereinafter referred to as electric motor) has been widely used in all walks of life due to its advantages of simple structure and low price. However, due to the characteristics of the motor itself, the motor will have a great impact on the power grid in the abnormal operation of the motor, so in order to ensure the normal operation of the motor and fault monitoring is very important.

The ALE-DB-200 series low-voltage economical motor protection controller launched by our company is suitable for motor applications with rated frequency of 50 Hz and rated current of 820A. The product and contactor, plastic shell circuit breaker and other products to provide a set of control, protection, detection and communication solutions for low-voltage motor. Simplify the traditional motor secondary control protection circuit, is the ideal choice for intelligent MCC.

qualification

System operation parameters	
Controller rated current (Ie)	2A、5A、6.3A、25A、100A、250A、500A、0A
Rated working frequency	50Hz
insulation resistance	100MΩ/500V
Medium strength test	2kV（r.m.s）, 50Hz, Imin
impulse voltage test	5kV(peak), 1.2/50us,0.5J3positive, 3 negative, 5s apart
Auxiliary working power supply	
Rated operating voltage (US)	AC/DC 80V-270V
power dissipation	4W/4VA
work environment	
Work allows temperature	-20℃, 70℃
storage temperature	-25℃, 85℃2000 m
Install the altitude	Ⅲ
Installation category	
Control the relay output	
Control the relay output capacity	Damresistance: AC240V 3A AC-15:AC240V 3A AC380V1.9A
Maximum disconnect voltage	400VAC
Maximum disconnection capacity AC	2000VA
Signal relay output	AC250V 3A (resistance)
output capacity	DC30V3ADamper resistance
Maximum disconnect voltage	300VAC
Maximum disconnection capacity AC	1500VA
EMC electromagnetic compatibility	
	The harsh level is Grade IV
	The harsh level is the level field strength of 10V / m
	The grade is ovulation induction
	Power and input output 4KV, communication 2KV
	The harsh level is Grade IV
	Radiation emission limit at a measured distance of 10m: 40dB (μ V/ m)
	50 ms

Motor protector



ALE-MD-500

Product function characteristics

1. The power supply supports AC and DC power supply, with a wide power supply range (AC/ DC 80V~270V);

2.12 road DIdry node, wet node input, dry contact internal DC24V power supply, input function is optional;

3. DO supports AC load or DC load, and "start control DO" is separated from "protection / stop control DO"; signal DO is used for device self-inspection or fault alarm output, and DO output function is optional;

4. The measurement function is divided into basic measurement (current parameters) and co-selection measurement (voltage parameters, surplus

Product overview

Three-phase ac asynchronous motor (hereinafter referred to as electric motor) has been widely used in all walks of life due to its advantages of simple structure. However, due to the characteristics of the motor itself, the motor will have a great impact on the power grid in the case of abnormal operation of the motor, so in order to ensure the normal operation of the motor and fault monitoring is very important. The traditional motor protection and control circuit is composed of non-intelligent devices such as relays, the control principle is complex, and the design, debugging and maintenance workload is large.

The ALE-MD-500 series low-voltage motor protection controller launched by our company is suitable for motor application places with rated frequency of 50Hz, rated voltage to AC690V and rated current to 820A.

The product and contactor, plastic shell circuit breaker and other products to provide a set of control, protection, detection and communication solutions for low-voltage motor. Simplify the traditional motor secondary control protection circuit, is the ideal choice for intelligent MCC.

ALE-MD-500 series motor protection controller adopts modular design, mainly composed of three parts: controller body, current transformer and display terminal. The controller body can operate independently and realize the functions of measurement, protection, motor control and remote communication. All Chinese display terminal can provide friendly man-machine interface.

quoted standard

GB 14048.1 Low-voltage switchgear and control equipment General provisions GB 14048.4 Low-voltage switchgear and control equipment
Low-voltage electromechanical contactor and electric motor starter

GB 14048.5 Control circuit electrical appliances and switch components electromechanical control circuit electrical appliances

B 3836.3-2000 Electrical equipment for explosive gas environment-Part 3: "e "

JB / T10613-2006 Digital motor integrated protection device General technical conditions JB / T10736-2007 AC motor protector

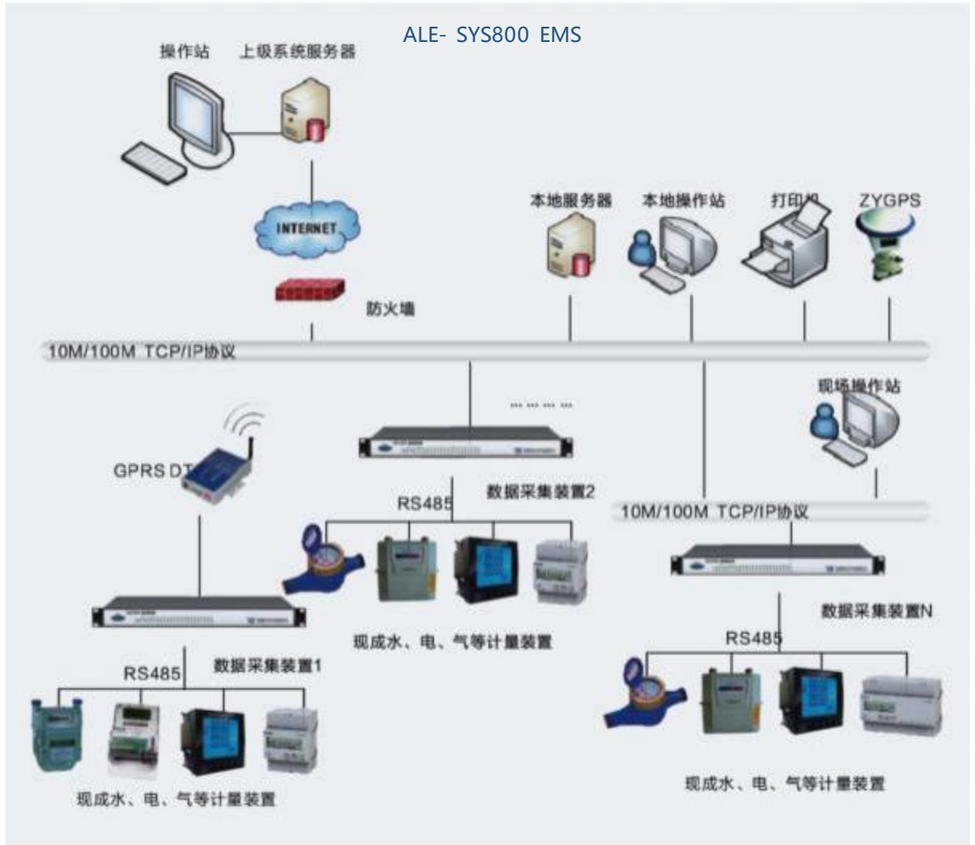
Energy management system

Product overview

With the rapid development of economy, energy shortage and environmental deterioration have been closely concerned by the world. Energy is an important basis for the development of national economy. In order to respond to the call of the country and take the road of sustainable development, energy saving and consumption reduction is the primary task, and the unified

management of electric energy is particularly important. Only by making accurate and reliable measurement of energy can we save energy in a true sense.

ALE-SYS800 EMS energy management system is a set of energy management system with strong professionalism, high automation, high performance, high reliability and following the standards and specifications of power system.



ALE-SYS800 EMS energy management system is an energy management software platform developed by adopting advanced data acquisition technology, database technology, data communication technology and data mining technology, with the concept o accurate acquisition and control and lean management. According to the needs of different industries and different users customized development can be done to ensure the realization of accurate and lean concepts, and finally achieve the purpose o environmental protection, energy saving and consumption reduction, and reduce enterprise costs.

Low voltage monitoring system

Product overview

Monitoring background software is a professional dynamic software used for the comprehensive automation of electric power system. The software adopts the client / server system mechanism at the station-level control layer. The host of each monitoring software can be used as the client, which has full access to the data and control operations collected by the server, and at the same time, it can be used as a server to provide data for the client and execute the control operation commands applied by the client.

The monitoring software platform consists of four subsystems: monitoring operation, interface design, logic control and communication configuration. Each subsystem is independent of each other and exchanges data through a unified interface to form a powerful organic whole. Each subsystem has a strong configuration function, which can be very convenient to design various characteristic interfaces and various operation reports.

ALE-SYS400 factory automation system with open, modular and object-oriented design idea as the leading factor, the system can be infinite smooth extension, can provide with other manufacturers of intelligent equipment communication do seamless connection, which can speak all kinds of no function of intelligent equipment integrated into the integrated automation system, make the system function more powerful, greatly meet the demand of modern automation system integration. System in the design of the reliable operation under harsh environment, constitute all the hardware and software are considered the electromagnetic compatibility performance and reliable operation under extreme natural environment, but also balance the conventional protection, control measurement and signal compatibility problems with the dispatching automation system networking, become part of the power dispatching integrated automation system, or DCS system into large factories and mines, become a subsystem.

The system has been widely used in electric power, chemical industry, mining, metallurgy, steel and other industries, favored by users.

