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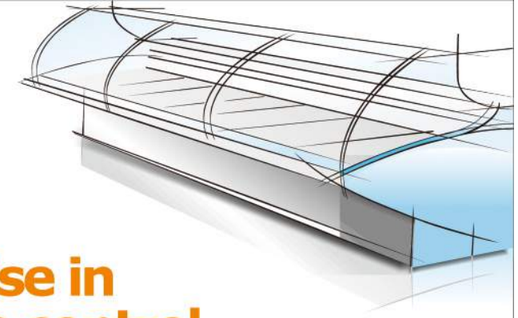
2017. 1

Elitech®



21 year expertise in refrigeration control

Cold Chain End Measurement and Control Business Unit

Product Selection Guide

Since 1996

Jiangsu Jingchuang Electronics Co.,Ltd

http://www.e-elitech.com

The largest microcomputer temperature controller production base in Asia.

Elitech

Founded in 1996, Jiangsu Jingchuang Electronics, Co.,Ltd (also referred to as Elitech) has now become one of the largest temperature measuring and controlling manufacturers in China. With strong R&D capacity in cold chain networking industry, Elitech has sold more than 15 million pieces of controllers . Our products cover various fields of the refrigeration and heating ventilation, including: cold chain (network) monitoring system, automobile air conditioning control system, new energy automobile air conditioning control system, temperature & humidity control system, temperature & humidity data logger, electrical control system for refrigeration unit, industrial refrigeration control system, etc. They are widely applied to storage and distribution of foodstuffs and pharmaceuticals at lower temperature, control of automobile and new energy vehicle air conditioning system, and industrial refrigeration.

Elitech has built strategic cooperation relationship with many well-known enterprises, such as Panasonic (Dalian), Xingxing, Haier, Hisense, Aucma, etc. Our market share is listed top one in the same industry nationally and also leading in the global market of the same industry.

Panasonic HOSHIZAKI Supco DeLaval 3M CPS GRAINGER

Haier Hisense KELON AUCMA XINGX ...

Our core suppliers are Hongfa, Schneider, Honeywell, NEC...

Company Certification

CERTIFICATE OF OCCUPATION HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATION GB/T28001-2001

CERTIFICATE OF ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION GB/T24001-2004/ISO14001-2004

CERTIFICATE OF QUALITY MANAGEMENT SYSTEM CERTIFICATION GB/T19001-2008/ISO9001-2008

CERTIFICATE OF DEKRA CERTIFICATION GMBH ISO/TS16949:2009

CE CERTIFICATE OF ETC

Our company has passed certifications of ISO9001:2008, ISO14001:2004, OHSAS18001:2011, TS16949:2009, CE, UL and ETL. It is qualified to produce environment-friendly products completely in accordance with EU ROHS directive.

Elitech has established four branches: ELITECH TECHNOLOGY Inc (in US Silicon Valley), ELITECH (UK) LIMITED (in London), Jiangsu Jingchuang Networking Technology Co.,Ltd (in Nanjing) and Joycontrol (Shanghai) Environment Technology Co.,Ltd (in Shanghai Free Trade Zone). We have eight business units: Cold Chain End Measurement and Control Business Unit, Cold Chain Networking Business Unit, Refrigeration Industrial Control Business Unit, Data Logger Business Unit, Environment Science and Technology Business Unit, Automobile Electronics Business Unit and Heat Pump Unit Business Unit.

Reading Guide

Please read this manual before you select products. We are here to help you find the products you want quickly.

1. The manual contains product overview, specifications, technical parameters and wiring diagrams of Elitech main series, such as Universal Controller Series—Refulgence Series,Commercial Display Case Controller Series, Medicine Cabinet Controller Series, etc. Please refer to the contents to start your selection.

2. Please make sure not to install and use the unit under such harsh circumstances as: extreamely humid, too high or too low temperature, contaminated places, etc. Please distinguish the power wire and other connecting wires to avoid possible interference.

3. For personal safety, please make sure our products are installed by professionals. Make sure the voltage, load capacity and the connection methed is in accordance with the requirement of each product's manual.

4. Disclaimer: If products are damaged due to the following reasons (including but not limited to): the installation environment does not meet the safety requirements; the load capacity exceeds the permitted scope; our components are misused, dismantled or replaced; we will not provide free repair service to damaged products, regardless of whether it is still in the period of quality assurance. Meanwhile, we won't bear the direct or indirect liabilities caused by such damage.

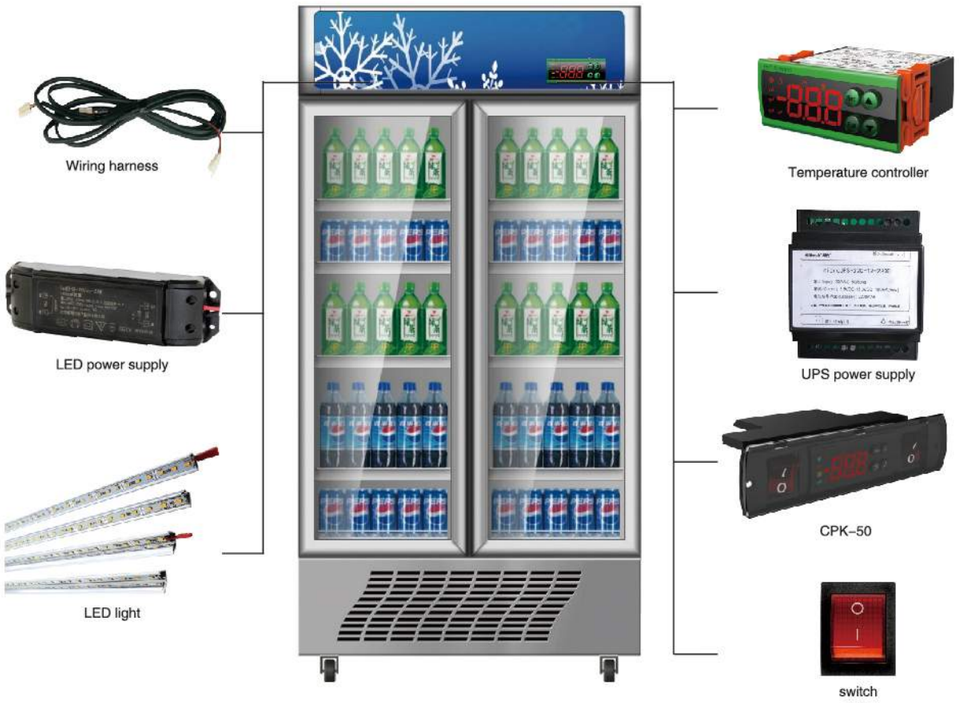
5. If you have any questions or advice concerning products, please do not hesitate to tell us. We also offer OEM and ODM based on your specific requirements. Please contact our sales representative in your region. (You can refer to the “Contact us” page in our website http://www.e-elitech.com)

6. Suggestion: It's important to select high-tech thermostats with stable and reliable performance. Elitech has big market share at home and broad, a strong research team, products of high quality and various series, large production capacity, and excellent after-sales service, it will be your best choice!

Contents

AII IN ONE

Commercial Refrigerator Integrated Solution



◆Elitech is dedicated to be an integrated resolution provider of commercial freezing/refrigerating control systems.
◆Over the last 21 years, we have developed a large number of various commercial cooling/heating cabinet control systems, provided convenience for commercial refrigerator manufacturers to take overall intensive purchase, sharply simplifying their supply management.
◆We always adhere to the four quality control systems of ISO9001, ISO14001, OHSAS18001 and ISO/TS16949. Being simple in design and reliable in quality, our products can ensure commercial display cases to run stably.

21 -year expertise in refrigeration control

Elitech®

Universal Temperature Controllers —Refulgence Series

Based on 21 year industrial experience, we release this universal modular temperature controller in series—Refulgence Series. With various accessories and parameter configuration, users can manage their freezing and refrigerating systems flexibly, simply and efficiently.

Refulgence series can be widely used in medium-high end medium-low temperature medicine cabinets, kitchen cabinets, split cabinets for supermarket, open display cases, wine cabinets, etc.

Modular design

◆Specially tailored for you, save every cent for you!
◆Each function module is independent. You may open or close it through configuring parameters as needed.
◆You can select the quantity of signal acquisition and control output, and contact capacity of control output.

Easy to set parameters

◆One-key reset: multiple groups of preset parameters can be reset to default. You may enjoy one-to-one service.
◆With the help of the accessory—copy card CPK-4, you may administrate the configuration of controller parameters. It is very intuitive and simple to operate.

Simple and flexible to install

◆The quick connect terminal helps you connect with just one simple plugging, and provides convenience for production and after-sale service to professional equipment manufacturers.
◆The traditional screw-type terminal can meet various manufacturers' needs.
◆The controller can be fixed from back by common elastic clamps.
◆Combined with the accessory CPK-50, the controller can be installed and dismounted from the front. It also integrates accessories, such as power supply, light control key etc. and increase 4 channels of external switches at maximum.

Appearance

◆Artistic and practical
◆Big display panel is 50% increase of display area compared with traditional controllers.
◆Multiple color panel frame and keys can match different cabinet types.
◆Traditional key-type controllers adopt keys with a special transparent wearproof covering layer, which is not only artistic but also reliable to be used in high oil contamination, high temperature and humidity conditions.
◆Touch control series controller is elegant and more convenient to clean.

www.e-elitech.com
Since 1996

Comprehensive protection

◆Protect your refrigerating system in 360°.
◆Multiple options of protection and alarm modes; system running status indication.
◆Front panel waterproof grade: IP65
◆Combined with the waterproof rear housing CPK-30, the controller can prevent failure caused in condensate water dripping and refrigerator cleaning.
◆It exceeds industry standard grade 4 in EMC test standard items.
◆CQC, CE, UL and ETL certified.

Compliant Refulgence series include 6 types of controller

ECS Series keypanel fast-on connect product (ECS-XX、ECS-XXX Series)	Common key + quick connect
ECS Series keypanel traditional connect product (ECS-2XXX Series)	Common key + traditional screw fastening
ECS Series keytouch fast-on connect product (ECS-3XXX Series)	Touch button + quick connect
ECS Series keytouch traditional connect product (ECS-4XXX Series)	Touch button + traditional screw fastening
ECS Series keypanel traditional connect compact product (ECS-6XXXSeries)	Common key + traditional screw fastening + minitype
ECS Series split type product (ECS-1XXX Series)	With separate terminal and control board

Main functions and features

LED digital display of measured temperature
℃/℉ switch
LED display of running status
3 channel temperature data collection at most (NTC) (cabinet temperature, evaporator temperature and condenser temperature)
1 channel of switch info collection (signal detection of door switch, parameter selective switch, sync defrost switch)
Various alarm functions
Cooling, heating
Defrost types — compressor off (OFF) during defrost — electric heating defrost — hot gas defrost
Fan
Light/external alarm relay (connect to external alarm bell)
Menus: common user menu, administrator menu (password protection)
Quick setting of parameters: one-key reset or use copy card CPK-4.

Elitech®

Basic technical parameters of Refulgence Series

Power supply 220 VAC ±10%, 50/60 Hz; 115 VAC ±10%, 50/60 Hz; 24 VDC ±10% or 24 VAC ±5%, 50/60 Hz; 12 VDC ±10% or 12 VAC ±5%, 50/60 Hz;	Overall power consumption: < 3W
Relay output: 30A/240VAC, normally open, directly drive single phase 1.5HP (220VAC) compressor load; 17A/240VAC, normally open, directly drive single phase 1.0HP (220VAC) compressor load; 10A/240VAC, normally open, directly drive maximum power 1200W (220VAC) electric heating wire.	
Mounting size: 71 * 29 (mm)	
Product size: 78.5 * 34.5 * 82 (mm) (fast-on connect series) 78.5 * 34.5 * 74 (mm) (traditional connect series) 78.5 x 34.5 x 39(mm) (ECS-6XXX series compact type) 78.5 x 34.5 x 36(mm) (ECS-1XXX series split type)	
Ways to install the controller: use common elastic clamps, fix from back. use installing housing CPK-50, fix with screw from front.	
Wiring modes: traditional screw-type (traditional connect series) quick plug-type (fast-on connect series)	
Operating ambient temperature: 0℃~55℃	Storage temperature: -25℃~75℃
Relative humidity: 20%~85% (non-condensing)	
Front panel waterproof grade: IP65	The back is protected from water dripping, seeping, splashing and spaying (Install waterproof rear housing CPK-30).
Operation interface: 4 keys Common key-type operation (keypanel series) Touch control key-type operation (keytouch series)	

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Universal Controller Refulgence Series
Keypanel fast-on connect

ECS–11

Functions

◆Switch between ℃ and ℉ via menu.
◆Two channels of temperature sensors can be configured at maximum to adjust cabinet temperature and control defrost.
◆Two channels of control output can be configured at maximum to control compressor, light/defrost. In light control mode, compressor is off during defrosting.
◆Set parameters to display cabinet temperature or evaporator temperature.
◆Display running status indicator, buzzer alarm output.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset; multiple groups of parameters are optional.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

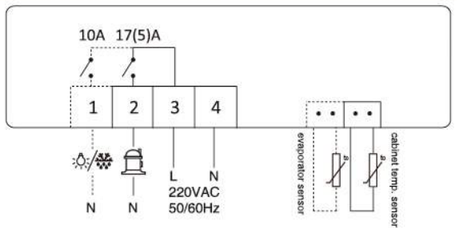
Technical parameters

◆Product size: 78.5 * 34.5* 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 1℃ or 1℉
◆Temperature control range: -50℃~90℃ or -58℉~194℉
◆Input/output port:

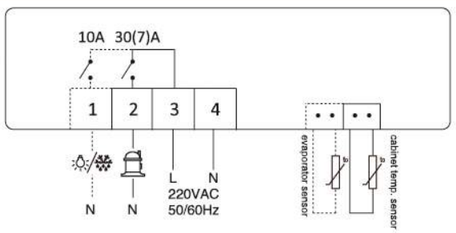
Serial code	Control output		Signal input		Buzzer beep (optional)
	Cooling	Light/Defrost (optional)	Cabinet temp	Defrost temp (optional)	
A(30.10.00.00)S2.B	30 A	10 A	√	√	√
A(17.10.00.00)S2.B	17 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

Wiring diagram (Quick connect type)



ECS-11 A(17.10.00.00)S2.B



ECS-11 A(30.10.00.00)S2.B

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ECS–15/ECS–16/ECS–16A/ECS–17

Functions

◆Switch between cooling and heating mode via menu.
◆One channel of temperature sensor for adjusting cabinet temperature.
◆Use parameter selective switch to directly switch between two groups of parameters (ECS-17).
◆Forced refrigeration (ECS-16A)
◆Compressor and light control.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset multiple groups of parameters are optional.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

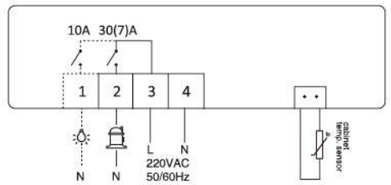
◆Product size: 78.5 * 34.5* 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port:

Serial code	Control output		Signal input	
	Cooling/ heating	Light (optional)	Cabinet temperature	Parameter selective switch (switch channels)
A(30.10.00.00)S4	30 A	10 A	√	Only ECS-17
A(17.10.00.00)S4	17 A	10 A	√	Only ECS-17

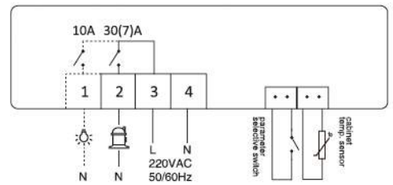
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-50℃~50℃); ±2℃(others)
◆Display resolution: 1℃
◆Temperature control range: -50℃~85℃

Wiring diagram (Quick connect type)



ECS-15/16/16A A(30.10.00.00)S



ECS-17

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Since 1996

ECS-100

Cooling Defrost Fan Light Door switch 3NTC Temperature Calibration

Functions

◆Three channels of temperature sensors are used to adjust cabinet temperature, control defrost and monitor condenser temperature.
◆One channel of switch is used to monitor the action of door.
◆Multiple channels of control output are for compressor, defrost, fan and light control.
◆Multiple choices of running modes, defrost, fan, etc. help save energy effectively.
◆Switch between cooling and non-cooling mode via key.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset; multiple groups of parameters are optional.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

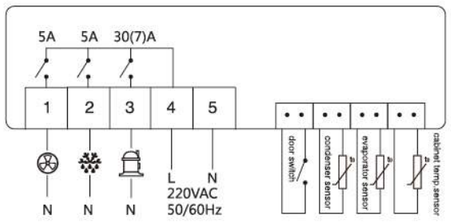
◆Product size: 78.5 * 34.5* 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Serial code	Control output				Signal input				Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light (optional)	Cabinet temp	Defrost temp (optional)	Condenser temp (optional)	Door switch (optional)	
A(30.05.05.00)S234.B	30 A	5A	5A	×	√	√	√	√	√
A(17.10.10.00)S234.B	17 A	10A	10A	×	√	√	√	√	√

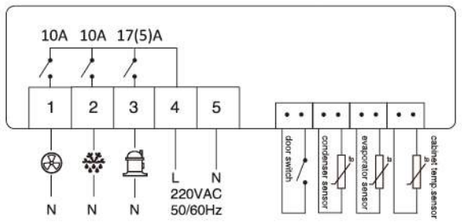
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~50℃

Wiring diagram (Quick connect type)



ECS-100 A(30.05.05.00)S234.B



ECS-100 A(17.10.10.00)S234.B

Elitech®

ECS-160

Cooling Liquid pump Alarm 2NTC Temperature Calibration

Functions

◆Two channels of temperature sensors are used to adjust liquid temperature and monitor ambient temperature.
◆Three channels of switches are used to undervoltage, pump overload and phase loss detection.
◆Multiple channels of control output are for cooling, liquid pump and external alarm control.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset rapid adjustment of controller parameters.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers

Technical parameters

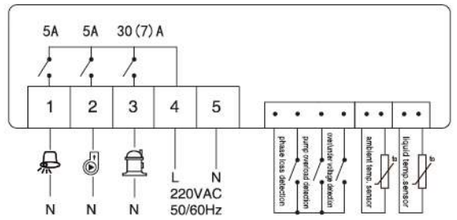
◆Product size: 78.5 * 34.5* 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Control output			Signal input					Buzzer beep (optional)
Cooling	Liquid pump	Alarm	Liquid temperature	Ambient temperature	Over/under voltage detection	Pump overload detection	Phase loss detection	
30A	5A	5A	√	√	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃) ±2℃(51℃~70℃) ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~50℃

Wiring diagram (Quick connect type)



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Since 1996

ECS-180\180neo

Functions

◆Three channels of temperature sensors are used to adjust cabinet temperature, control defrost and monitor condenser temperature.

◆One channel of switch is used to monitor the action of door or detect sync defrost switch signal in order to constitute sync defrost network.

◆Backup power supply is optional. After connection, power outage detection and alarm can be realized.

◆Multiple channels of control output are for compressor, defrost, fan and light /external alarm control.

◆Light/external alarm relay can be selected via software. When external alarm relay is selected, a remote bell can be connected.

◆Compressor start-up delay during hot gas defrosting can prevent compressor starting with voltage so as to lengthen its life.

◆Switch between ℃ and ℉ via menu.

◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

◆One-key reset (ECS-180)/copy card function (ECS-180neo), quick adjustment of controller parameters.

◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

◆Product size: 78.5 * 34.5* 82 (mm)

◆Mounting size: 71 * 29 (mm)

◆Operating voltage: 220VAC±10%, 50/60HZ

◆Overall power consumption: <3W

◆Input/output port:

Serial code	Control output				Signal input				Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light / external alarm (optional)	Cabinet temp	Defrost temp (optional)	Condenser temp (optional)	Door switch (optional)	
A(17.10.10.00)S234.B	17 A	10 A	10 A	×	√	√	√	√	√
A(17.10.00.10)S234.B	17 A	10 A	×	10 A	√	√	√	√	√
A(17.10.05.05)S234.B	17 A	10 A	5 A	5 A	√	√	√	√	√
A(30.10.00.00)S234.B	30 A	10 A	×	×	√	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

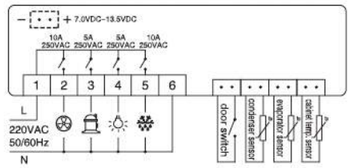
◆Temperature measuring range: -50℃~90℃ or -58 ℉~194 ℉

◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)

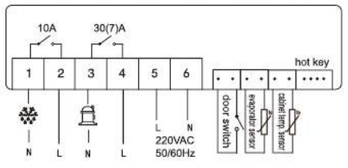
◆Display resolution: 0.1℃

◆Temperature control range: -50℃~85℃ or -58 ℉~185 ℉

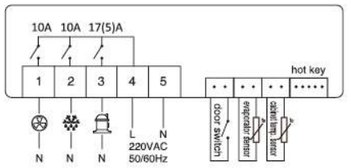
Wiring diagram (Quick connect type)



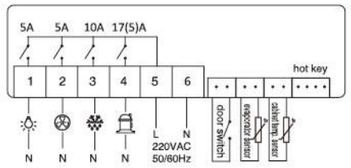
ECS-180B A(05 10 10 05)S234.B



ECS-180neo A(30 10 00 00)S24.B



ECS-180neo A(17 10 10 00)S24.B



ECS-180neo A(17 10 05 05)S24.B

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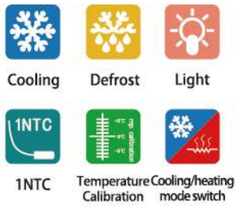
keypanel traditional connect

ECS-2016/L



Functions

- ◆Switch between cooling and heating mode via menu.
- ◆One channel of temperature sensor is used to adjust cabinet temperature.
- ◆Compressor and light control.
- ◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
- ◆One-key reset multiple groups of parameters are optional.
- ◆Wiring mode: traditional screw-type.

Technical parameters

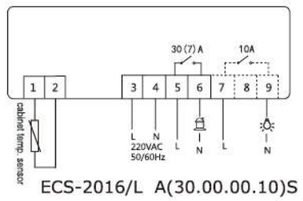
- ◆Product size: 78.5 * 34.5* 74 (mm)
- ◆Mounting size: 71 * 29 (mm)
- ◆Operating voltage: 220VAC±10%, 50/60HZ
- ◆Overall power consumption: <3W
- ◆Input/output port

Serial code	Control output		Control input
	Cooling/heating	Light (optional)	Cabinet temperature
A(30.00.00.10)S	30 A	10 A	√
A(17.00.00.10)S	17 A	10 A	√

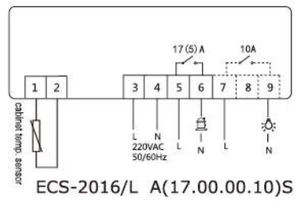
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- ◆Temperature measuring range: -50℃~90℃
- ◆Temperature measuring accuracy: ±1℃(-50℃~50℃); ±2℃(others)
- ◆Display resolution: 1℃
- ◆Temperature control range: -50℃~85℃

Wiring diagram (Screw type)



ECS-2016/L A(30.00.00.10)S



ECS-2016/L A(17.00.00.10)S

ECS–2011neo

Functions

- ◆Switch between ℃ and ℉ via menu.
- ◆Two channels of temperature sensors can be configured at maximum to adjust cabinet temperature and control defrosting.
- ◆Two channels of control output can be configured at maximum to control compressor, light/defrost. In light control mode, compressor is off during defrosting.
- ◆Set parameters to display cabinet temperature or evaporator temperature.
- ◆Display running status indicator, buzzer alarm output.
- ◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
- ◆Copy card function, special software configured, quick management and adjustment of product parameters.
- ◆Wiring mode: traditional screw-type.

Technical parameters

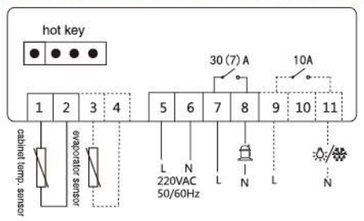
- ◆Product size: 78.5 * 34.5* 74 (mm)
- ◆Mounting size: 71 * 29 (mm)
- ◆Operating voltage: 220VAC±10%, 50/60HZ
- ◆Overall power consumption: <3W
- ◆Input/output port:

Serial code	Control output		Control intput		Buzzer beep (optional)
	Cooling	Light/defrost (optional)	Cabinet temp	Defrost temp (optional)	
A(30.10.00.00)S2.B	30 A	10 A	√	√	√
A(17.10.00.00)S2.B	17 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- ◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
- ◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
- ◆Display resolution: 1℃ or 1℉
- ◆Temperature control range: -50℃~90℃ or -58℉~194℉

Wiring diagram (Screw type)



ECS-2011neo A(30.10.00.00)S2.B

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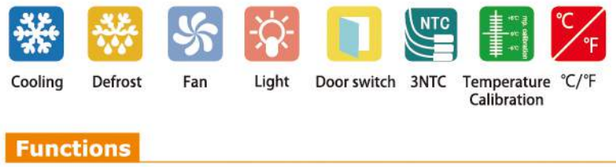
ECS-2180neo、ECS-2180



Functions

◆Three channels of temperature sensors are used to adjust cabinet temperature, control defrost and monitor condenser temperature.
◆One channel of switch is used to monitor the action of door or detect sync defrost switch signal in order to constitute sync defrost network.
◆Multiple channels of control output are for compressor, defrost, fan and light/external alarm control.
◆Light/external alarm relay can be selected via software. When external alarm relay is selected, a remote bell can be connected.
◆Compressor start-up delay during hot gas defrosting can prevent compressor starting with voltage so as to lengthen its life.
◆Switch between ℃ and ℉ via menu.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset (ECS-2180)/copy card function (ECS-2180neo); quick adjusting of controller parameters.
◆Wiring mode: traditional screw-type.

Technical parameters

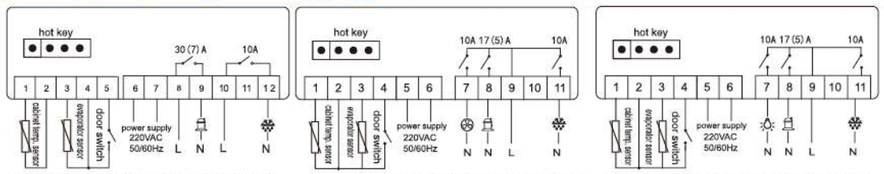
◆Product size: 78.5 * 34.5* 74 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Seriatode	Control output				Signal input				Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light/external alarm (optional)	Cabinet temp	Defrost temp (optional)	Condenser temp (optional)	Doorswitch (optional)	
A(17.10.10.00)S234.B	17A	10A	10A	×	√	√	√	√	√
A(17.10.00.10)S234.B	17A	10A	×	10A	√	√	√	√	√
A(17.10.05.05)S234.B	17A	10A	5A	5A	√	√	√	√	√
A(30.10.00.00)S234.B	30A	10A	×	×	√	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃ or -58℉~185℉

Wiring diagram (Screw type)



ECS-2180neo A(30.10.00.00)S24.B　ECS-2180neo A(17.10.10.00)S24.B　ECS-2180neo A(17.10.00.10)S24.B

ECS-04CX、ECS-02CX

Functions

◆Switch between cooling and heating mode via menu.
◆Switch between ℃ and ℉ via menu.
◆Two channels of temperature sensors are used to adjust cabinet temperature and control defrost.
◆Two channels of control output can be configured at maximum to control compressor and defrost.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Copy card function, special software configured, quick management and adjustment of product parameters.
◆Wiring mode: ECS-04CX quick connect type ECS-02CX traditional screw-type.

Technical parameters

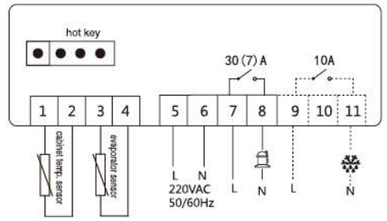
◆Product size: 78.5 * 34.5* 82 (mm) (ECS-04CX), 78.5 * 34.5* 74 (mm) (ECS-02CX)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Serial code	Control output		Signal input	
	Cooling	Defrost(optional)	Cabinet temperature	Defrost temperature (optional)
A(17.10.00.00)S2	17A	10A	√	√
A(30.10.00.00)S2	30A	10A	√	√

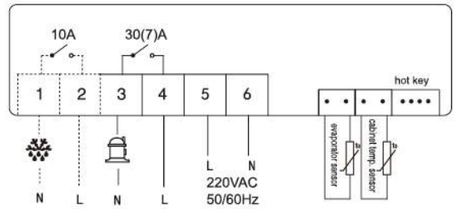
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~99℃ or -50℉~99℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃/℉(-9.9~9.9), 1℃/2℉(others)
◆Temperature control range: -50℃~99℃ or -50℉~99℉

Wiring diagram



ECS-02CX (Screw type)



ECS-04CX (Quick connect type)

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ECS–06CX

Cooling Defrost Fan 2NTC Temperature Calibration ℃/℉

Functions

- Switch between ℃ and ℉ via menu.
- Two channels of temperature sensors are used to adjust cabinet temperature and control defrost.
- Three channels of control output are for compressor, defrost and fan.
- Various fan running models to different cabinets demands.
- Defrost type is electric heating and hot gas to be optional.
- With Copy key function to quickly adjust product parameters recovery factory parameter settings.

Technical parameters

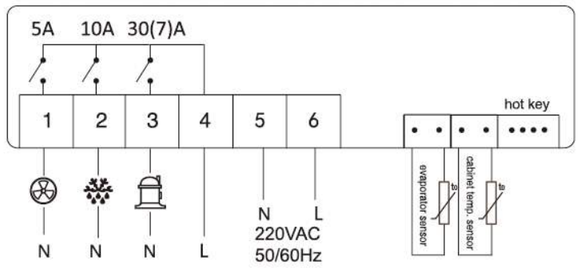
- Product size: 78.5 * 34.5* 82 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

Serial code	Control output			Signal input	
	Cooling	Defrost (optional)	Fan (optional)	Cabinet temperature	Defrost temperature (optional)
A(17.10.10.00)S2	30 A	10 A	10 A	√	√
A(30.10.05.00)S2	17 A	10 A	5 A	√	√
A(20.10.10.00)S2	20 A	10 A	10 A	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~99℃ or -50℉~99℉
- Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(50℃~70℃); ±3℃(others)
- Display resolution: 0.1℃/℉(-9.9~9.9); 1℃/2℉(others)
- Temperature control range: -50℃~99℃ or -50℉~99℉

Wiring diagram (Quick connect type)



ECS–06CX A(30.10.05.00)S2

Elitech®

Key touch trational connect

ECS-4011neo

Cooling Defrost Light 2NTC Temperature Calibration ℃/℉

Functions

- Touch control operation interface.
- Switch between ℃ and ℉ via menu.
- Two channels of temperature sensors can be configured at maximum to adjust cabinet temperature and control defrosting.
- Two channels of control output can be configured at maximum to control compressor, light/defrost. In light control mode, compressor is off during defrosting.
- Set parameters to display cabinet temperature or evaporator temperature.
- Display running status indicator, buzzer alarm output.
- With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
- Copy card function, special software configured, quick management and adjustment of product parameters.
- Wiring mode: traditional screw-type.

Technical parameters

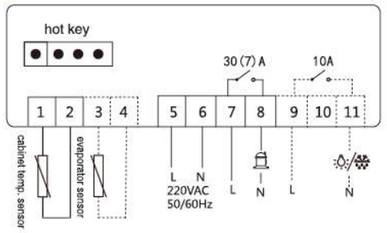
- Product size: 78.5 * 34.5* 74 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

Serial code	Control output		Signal input		Buzzer beep (optional)
	Cooling	Light/defrost (optional)	Cabinet temperature	Defrost temperature (optional)	
A(30.10.00.00)S2.B	30 A	10 A	√	√	√
A(17.10.00.00)S2.B	17 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~90℃ or -58℉~194℉
- Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
- Display resolution: 1℃ or 1℉
- Temperature control range: -50℃~90℃ or -58℉~194℉

Wiring diagram (Screw type)



ECS-4011neo A(30.10.00.00)S2.B

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Since 1996

ECS-4180neo

Functions

◆Touch control operation interface.
◆Three channels of temperature sensors are used to adjust cabinet temperature, control defrost and monitor condenser temperature.
◆One channel of switch is used to monitor the action of door or detect sync defrost switch signal in order to constitute sync defrost network.
◆Multiple channels of control output are for compressor, defrost, fan and light /external alarm control.
◆Light/external alarm relay can be selected via software. When external alarm relay is selected, a remote bell can be connected.
◆Compressor start-up delay during hot gas defrosting can prevent compressor starting with voltage so as to lengthen its life.
◆Switch between ℃ and ℉ via menu.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Copy card function; quick adjusting of controller parameters.
◆Wiring mode: traditional screw-type.

Technical parameters

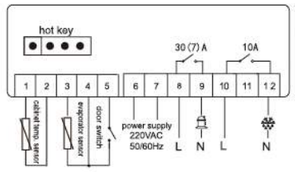
◆Product size: 78.5 * 34.5* 74 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Serial code	Cooling	Defrost (optional)	Fan (optional)	Light/external alarm(optional)	Cabinet temp	Defrost temp (optional)	Door switch (optional)	Buzzer beep (optional)
A(17.10.10.00)S24.B	17A	10A	10A	×	√	√	√	√
A(17.10.00.10)S24.B	17A	10A	×	10A	√	√	√	√
A(17.10.05.05)S24.B	17A	10A	5A	5A	√	√	√	√
A(30.10.00.00)S24.B	30A	10A	×	×	√	√	√	√

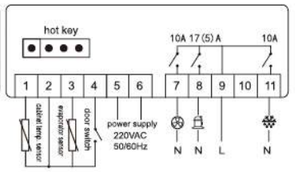
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃ or -58℉~185℉

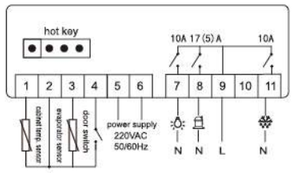
Wiring diagram (Screw type)



ECS-4180neo A(30.10.00.00)S24.B

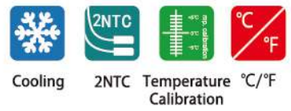


ECS-4180neo A(17.10.10.00)S24.B



ECS-4180neo A(17.10.00.10)S24.B

ECS-6011neo (Compact type)



Functions

◆Switch between ℃ and ℉ via menu.
◆Two channels of temperature sensors can be configured to adjust cabinet temperature and control defrosting.
◆Drive single-phase 1HP compressor; natural defrost.
◆Set parameters to display cabinet temperature or evaporator temperature.
◆Display running status indicator.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Copy card function helps quickly manage and adjust product parameters.
◆Wiring mode: traditional screw-type.

Technical parameters

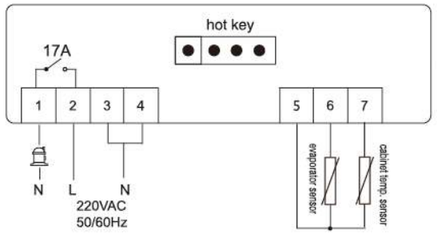
◆Product size: 78.5 * 34.5* 39 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port:

	Control output	Signal input	
	Cooling	Cabinet temperature	Defrost temperature (optional)
Configuration 1	17 A	√	√
Configuration 2	10 A	√	√

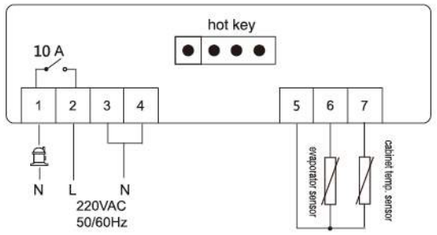
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 1℃ or 1℉
◆Temperature control range: -50℃~90℃ or -58℉~194℉

Wiring diagram (Screw type)



Configuration 1



Configuration 2

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ECS-1100 (Split Type)

Cooling Defrost Fan Light 3NTC Temperature Calibration

Functions

- Split-type: flexible and convenient for installation.
- Three channels of temperature sensors are used to adjust cabinet temperature, control defrost and monitor condenser temperature.
- Multiple channels of control output are for compressor, defrost, fan and light control.
- Multiple choices of running modes, defrost, fan, etc. help save energy effectively.
- With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
- One-key reset; multiple groups of parameters are optional.

Technical parameters

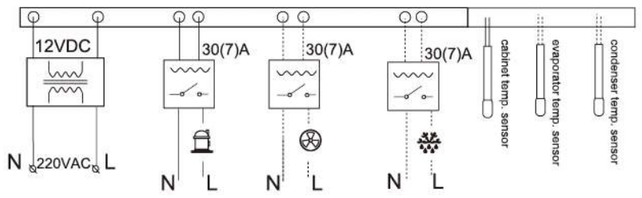
- Product size: 78.5 * 34.5* 36 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

Serial code	Controloutput				Signalinput			Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light (optional)	Cabinet temperature	Defrost temperature (optional)	Condensing temperature (optional)	
A(30.00.00.00)S23.B	30A	00	00	×	√	√	√	√
A(30.30.30.30)S23.B	30A	30A	30A	30A	√	√	√	√

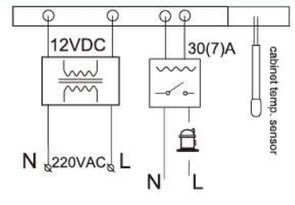
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~90℃
- Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
- Display resolution: 0.1℃
- Temperature control range: -50℃~50℃

Wiring diagram (Screw type)



ECS-1100 A(30.30.30.00)S24.B



ECS-1100 A(30.00.00.00)S.B

HT-102

Cooling Defrost 2NTC Temperature Calibration

Functions

- Switch between ℃ and ℉, cooling and heating via menu.
- Two channels of temperature sensors can be configured to adjust cabinet temperature and control defrosting.
- Two channels of control output at maximum can be configured to control compressor and defrost.
- Blue LED, running status indicator, front panel waterproof grade: IP65.
- Copy card function helps quickly manage and adjust product parameters.
- Wiring mode: traditional screw-type.

Technical parameters

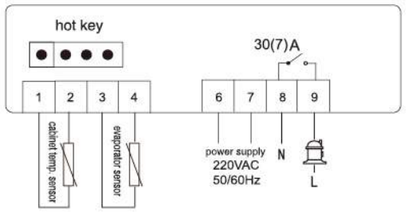
- Product size: 75.5 * 34.7* 74 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

Serial code	Control output		Signal input	
	Cooling	Defrost (optional)	Cabinet temperature	Defrost temperature (optional)
A(30.00.00.00)S2	30A	X	√	√
A(30.10.00.00)S2	30A	10 A	√	√

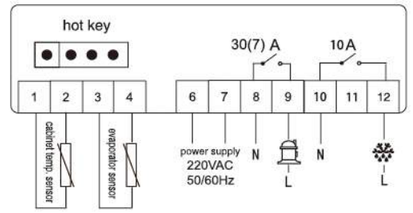
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~99℃
- Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(50℃~70℃); ±3℃(others)
- Display resolution: 1℃
- Temperature control range: -50℃~99℃

Wiring diagram



HT–102 A(30.00.00.00)S2



HT–102 A(30.10.00.00)S2

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Commercial Display Case Controller Series

LTC-2X+ LTC-2X LTC-3X

Cooling Defrost 1NTC

LTC-2X LTC-3X

LTC-2X+

Application

Various direct cooling kitchen refrigerators, freezers, etc.

Functions

- One channel of temperature sensor is used to adjust cabinet temperature.
- One channel of output control is used for refrigeration control.
- LTC-3X series: compressor off during defrosting, LTC-2X, LTC-2X+ series: no defrost function
- A rotary band switch is used to set temperature with 7 temperature control positions and OFF position.
- LTC-2X/3X with docking terminals, LTC-2X+ with plug-in terminals, convenient for professional equipment manufacturers in production and after-sale service.

Technical parameters

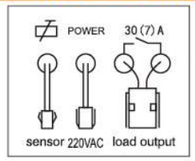
- Product size: 132.3 * 43.4 * 57mm (LTC-2X+), 137 * 56 * 69mm (LTC-2X, LTC-3X)
- Mounting size: 112 * 39 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Refrigeration output:
  30A/240VAC, normally open, directly drive a 1.5HP (220VAC) single phase load,
  or 17A/240VAC, normally open, directly drive a 1.0HP(220VAC) single phase load.
- Temperature measuring range: -40℃~90℃
- Temperature measuring accuracy: ±1℃
- Display resolution: 1℃

LTC-2X+, LTC-2X, TC-3X series basic models, temperature control points are as follows

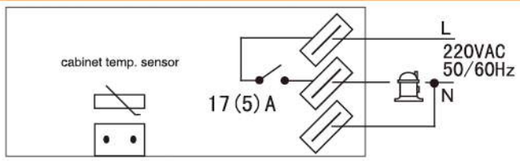
Model	Temperature control range	Compressor shutdown temperature	Differential	Delay time (mimute)
LTC-20+, LTC-20, LTC-30	10℃ ~ -5℃	6, 4, 2, 0, -1, -3, -5	4	2
LTC-21+, LTC-21, LTC-31	0℃ ~ -10℃	-4, -5, -6, -7, -8, -9, -10	4	2
LTC-22+, LTC-22, LTC-32	4℃ ~ -15℃	0, -3, -6, -8, -10, -12, -15	4	2
LTC-23+, LTC-23, LTC-33	-2℃ ~ -18℃	-6, -8, -10, -12, -14, -16-, 18	4	2
LTC-24+, LTC-24, LTC-34	-8℃ ~ -25℃	-12, -15, -17, -19, -21, -23, -25	4	2
LTC-25+, LTC-25, LTC-35	10℃ ~ 0℃	6, 5, 4, 3, 2, 1, 0	4	2
LTC-26+, LTC-26, LTC-36	-6℃ ~ -16℃	-10, -11, -12, -13, -14, -15, -16	4	2
LTC-27+, LTC-27, LTC-37	10℃ ~ -6℃	6, 4, 2, 0, -1, -3, -6	4	2

(Note: The table only lists the typical temperature control range of this series of controllers. For more details, please contact us.)

Wiring diagram



LTC-2X LTC-3X



LTC-2X+

LTC-50/50D

LTC–50

LTC–50D

Cooling Defrost Light 2NTC Temperature Calibration

Application

Various direct cooling kitchen refrigerators, freezers, etc.

Functions

- The front panel PVC can been customized according to requirements, economic convenience, waterproof and oil resistance
- Six keys,one key operation set control temperature,and one key to operation turn off device
- Two install ways Wrap-around fixed brackets and conventional side clamp to be optional.
- Copy card function helps quickly adjust product parameters.
- Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

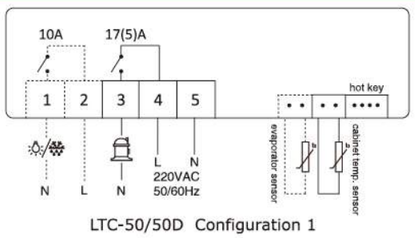
- Product size: 132 * 43 * 61.5 (mm)
- Mounting size: 112 * 39 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

	Control output		Signal input		Buzzer beep (optional)
	Cooling	Defrost /light (optional)	Cabinet temp	Defrost temp(optional)	
Configuration 1	17 A	10 A	√	√	√
Configuration 2	30 A	10 A	√	√	√

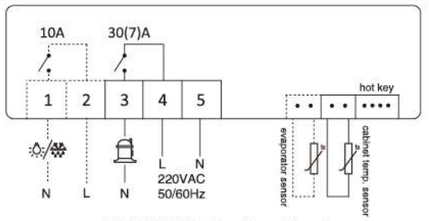
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -40℃~90℃
- Temperature measuring accuracy: ±1℃
- Display resolution: 0.1℃
- Temperature control range: -30℃~20℃

Wiring diagram



LTC-50/50D Configuration 1



LTC-50/50D Configuration 2

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LTC-55

Cooling Defrost Fan Light

Door switch 2NTC Temperature Calibration

Application

Kitchen cabinets, split cabinets for supermarket, open display cases, wine cabinets, etc.

Functions

◆Two channels of temperature sensors are used to adjust cabinet temperature and control defrosting.
◆One channel of switch is used to monitor the action of cabinet door.
◆Multiple channels of control output are for compressor, defrost, fan and light.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Copy card function helps quickly adjust product parameters.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

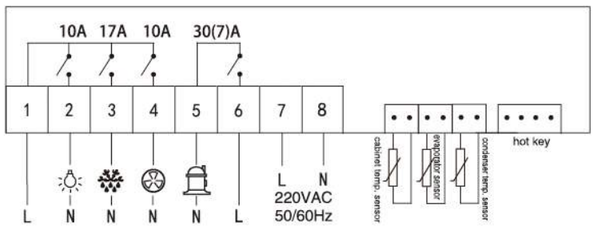
◆Product size: 132 * 43 * 61.5 (mm)
◆Mounting size: 112 * 39 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <5W
◆Input/output port

Serial code	Control output				Signal input			Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light/external alarm(optional)	Cabinet temperature	Defrost temperature (optional)	Door switch (optional)	
A(30.17.10.10)S24.B	30 A	17 A	10 A	10 A	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(50℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃

Wiring diagram



LTC-70

Cooling Defrost Fan Light

Demist Door switch 2NTC Temperature Calibration

Application

Kitchen cabinets, cabinets for supermarket, open display cases, wine cabinets, etc.

Functions

◆Defrost, fan, demist, light/external alarm control output function to be optional.
◆Customized front panel PVC can suitable for different appearance cool cabinets、wine cabinets.
◆Super thin front panel design is more suitable for display cabinets.
◆Device service worldwide in variety of voltage.
◆Easy operation, one key light control,one key demist control,one key defrost control, one key power off.
◆With temperature sensor self-detect function and variety alarm ways to be safer.
◆Two connect wire types of quick plug type terminal and harness connect to be optional.

Technical parameters

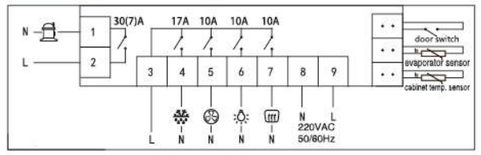
◆Product size: 148 * 43.5 * 47.5 (mm)
◆Mounting size: 137.5 * 33 (mm)
◆Operating voltage: 110~220VAC±10%, 50/60HZ
◆Overall power consumption: <5W
◆Input/output port

	Control output					Signal input			Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light/external alarm (optional)	Demist (optional)	Cabinet temp	Defrost temp (optional)	Door switch (optional)	
Configuration 1	30 A	17A	10 A	10 A	10 A	√	√	√	√
Configuration 2	30 A	10A	10 A	10 A	10 A	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃

Wiring diagram



Configuration 1

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LTC-80

Application

Medium-high end medium-low temperature medicine cabinets, kitchen cabinets, split cabinets for supermarket, open display cases, wine cabinets, etc.

Functions

◆Three channels of temperature sensors are used to adjust cabinet temperature, control defrosting and monitor condenser temperature.
◆One channel of switch is used to monitor the action of door or detect sync defrost switch signal in order to constitute sync defrost network.
◆Multiple channels of control output are for compressor, defrost, fan, light/external alarm control.
◆Light/external alarm relay can be selected via software. When external alarm relay is selected, a remote bell can be connected.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Compressor start-up delay during hot gas defrosting can prevent compressor starting with voltage so as to lengthen its life.
◆Switch between ℃ and ℉ via menu.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Split type design, easy to install, separate strong and weak electricity, much safer.

Technical parameters

◆Product size: 225 * 58 * 17.5 (mm)
◆Mounting size: 208 * 36 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <5W
◆Input/output port

	Control output					Signal input			Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light/external alarm (optional)	Demist (optional)	Cabinet temp	Defrost temp (optional)	Door switch (optional)	
Configuration 1	30 A	10 A	10 A	10 A	10 A	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃ or -58℉~185℉

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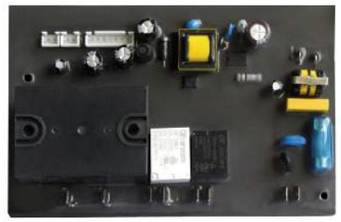
HT–206



Application

Various kitchen cabinets, freezers.

Functions

◆For refrigerant R290.
◆Split type design, separate strong and weak electricity, comply with European and American standard of security, easy to install.
◆Drive 2HP compressor at maximum.
◆Switch between ℃ and ℉ via menu.
◆Two channels of temperature sensors are used to adjust cabinet temperature and control defrost.
◆Four channels of control output can be configured to control compressor, defrost, fan and light.
◆Copy card function helps quickly adjust product parameters.

Technical parameters

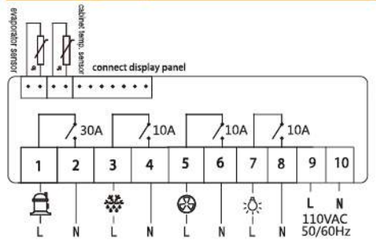
◆Product size: display panel: 78.5 * 34.5 * 40 (mm); control panel: 123 * 82 * 47 (mm)
◆Mounting size: display panel: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <5W
◆Input/output port

Serial code	Control output				Signal input		Buzzer beep (optional)
	Cooling	Defrost	Fan	Light	Cabinet temperature	Defrost temperature (optional)	
A(10.10.10.10)S2.B	10 A	10 A	10 A	10 A	√	√	√
A(30.10.10.10)S2.B	30 A	10 A	10 A	10 A	√	√	√
A(30.17.10.10)S2.B	30 A	17 A	10 A	10 A	√	√	√
A(40.10.10.00)S2.B	40 A	10 A	10 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~99℃ or -55℉~99℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(50℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃/℉(-9.9~9.9); 1℃/2℉(others)
◆Temperature control range: -50℃~99℃ or -50℉~99℉

Wiring diagram



A(30.10.10.10)S2.B

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LTC-800+

Application

Refrigerated cabinets, display cabinets.

Functions

◆Two channels of temperature sensors can be used to adjust cabinet temperature and control defrosting.
◆Multiple channels of control output are for cooling, defrost, fan, alarm, demist, and light control.
◆You may select fan operation modes: continuous running or controlled by temperature difference between cold storage and evaporator.
◆Split-type: flexible and convenient for installation.
◆You can use the Power button to turn the controller to sleep directly.
◆The keyboard can be locked. User menu is separate from administrator menu, which simplifies the operation for users and allows administrator to flexibly handle different status of equipment.

Technical parameters

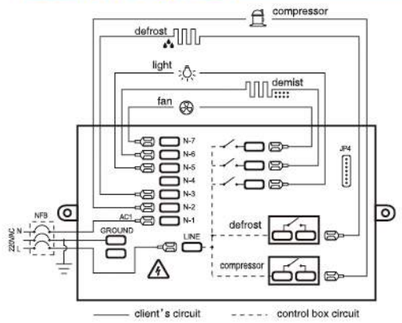
◆Panel size: 180 *40 (mm)
◆Mounting size: 140 * 33 * 27 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <10W
◆Input/output port

Control output						Signal input	
Cooling	Defrost	Fan	Light	Demist	Alarm	Cabinet temp	Defrost temp
20 A	20 A	8 A	8 A	8 A	8 A	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -40℃~40℃
◆Temperature measuring accuracy: ±1℃
◆Display resolution: 1℃
◆Temperature control range: -40℃~40℃

Wiring diagram



LTC-1000

Application

Commercial refrigerators with single/double temperature zones: freezing and refrigerating

Functions

◆Single/Double-temperature zone display and control—save installing hours and material cost.
◆Four channels of temperature sensors are used to monitor the temperature of two zones, evaporator and condenser.
◆Eight channels of control output at maximum can be used to control double refrigerating zones, defrost, fan and light.
◆Separate buttons for light and off, simple to operate. ◆Switch between ℃ and ℉ via menu.
◆Light/external alarm relay can be selected via software. When external alarm relay is selected, a remote bell can be connected.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Copy card function helps quickly adjust product parameters.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

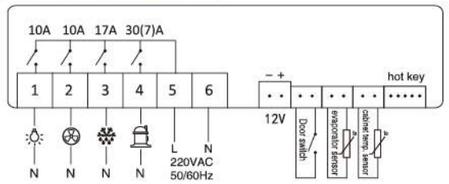
◆Product size: 375 * 91.9* 70.1 (mm)
◆Mounting size: 269 * 49.7 (mm)
◆Operating voltage: 110VAC~220VAC±10%, 50/60HZ
◆Overall power consumption: <5W
◆Input/output port

	Control output				Signal input						Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light (optional)	Cabinet temp. 1	Cabinet temp. 2	Evaporator temp. (optional)	Condenser temp. (optional)	Door switch 1 (optional)	Door switch 2 (optional)	
Configuration 1	30 A	17 A	10 A	10 A	√	√	√	√	√	√	√
Configuration 2	17 A	10 A	10 A	10 A	√	√	√	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50~90℃ or -58~194 ℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
or ±2 ℉(-40 ℉~122 ℉); ±4 ℉(123 ℉~158 ℉); ±6 ℉(others)
◆Display resolution: 0.1℃ ◆Temperature control range: -50~85℃ or -58~185 ℉

Wiring diagram



Configuration 1

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ECS-RF10

Cooling1 Cooling2 Defrost Light 2NTC Temperature Calibration

Application

Commercial refrigerators with double temperature zones: freezing and refrigerating

Functions

◆Double-temperature zone display and control—save installing hours and material cost.
◆Two channels of temperature sensors are used to adjust the temperature of two cabinets.
◆Three channels of control output at maximum can be used to control double refrigerating zones and light.
◆Three types of buttons: three buttons, two buttons and single button.
◆Flexible ways to install the contrtoller: use integrated fixing clamps, fix from back; install and fix it from front.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

Technical parameters

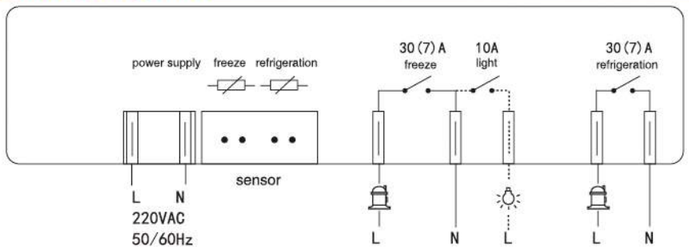
◆Product size: 210 * 57 * 84.2 (mm)
◆Mounting size: 157 * 39 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <4W
◆Input/output port

	Control output			Signal input		Buzzer beep (optional)
	Cooling 1	Cooling 2	Light (optional)	Cabinet temp 1	Cabinet temp 2	
Configuration 1	30 A	30 A	10 A	√	√	√
Configuration 2	17 A	17 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 1℃
◆Temperature control range: -40℃~50℃

Wiring diagram



Elitech®

WH–1

Cooling Defrost Fan Light
Door switch 3NTC Temperature Calibration ℃/℉

Application

Kitchen cabinets ,split cabinets for supermarket,open display case ,wine cabinets,etc. (for customized products)

Functions

◆Split type design, easy to install,
◆Three channels of temperature sensors are used to adjust cabinet temperature, control defrost and monitor condenser temper
◆One channel of switch is used to monitor the action of door or detect sync defrost switch signal in order to constitute sync network.
◆Multiple channels of control output are for compressor,defrost,fan,light/external alarm control.
◆Light/external alarm relay could be selected by the software, and when select the function of external alarm relay, it could connect the remote alarm bell.
◆Switch between ℃ and ℉ via menu.
◆It has temperature sensor self-test function, and once test the failures, it has multiple protection and alarm methods.
◆Simple to operate,one key light control,one key defrost control,one key turn off,
◆Copy card function helps quickly adjust product parameters.

Technical parameters

◆Product size: 117*45(mm)(Display board) 121*53(mm)(Control board)
◆Operating voltage: 220VAC±10%, 50/60H
◆Overall power consumption: <3W
◆Input/output port:

Serial code	Control output				Signal input				Buzzer beep (optional)
	Cooling	Defrost (optional)	Fan (optional)	Light / external alarm (optional)	Cabinet temp	Defrost temp (optional)	Condenser temp (optional)	Door switch (optional)	
A(30.10.10.10)S234.B	30 A	10 A	10 A	10 A	√	√	√	√	√
A(17.10.10.10)S234.B	17 A	10 A	10 A	10 A	√	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃ or -58℉~194℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃ or -58℉~185℉

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LTC-17

Cooling Defrost 2NTC Temperature Calibration

Application

Various freeing and refrigerated cabinets (for customized products)

Functions

- One channel control output is used to to control refrigeration.
- Two channels of temperature sensors are used to monitor cabinet and ambient temperature.
- Adopt specially designed waterproof housing to effectively avoid dripping on the wire at the back of the controller.
- Switch between freeze and refrigeration mode via button.
- With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

Technical parameters

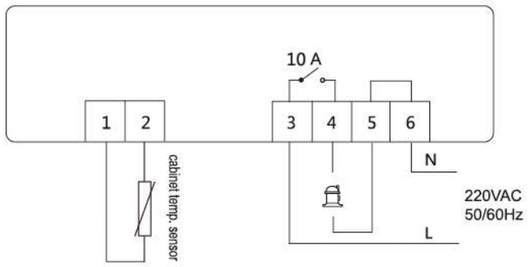
- Product size: 124.5 * 61.5* 51 (mm)
- Mounting size: 113.5 * 51 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Stand-by power consumption: <0.5W
- Input/output port

Control output	Signal input		Buzzer beep
Cooling	Cabinet temperature	Ambient temperature	√
20 A	√	√	

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~50℃
- Temperature measuring accuracy: ±1℃
- Display resolution: 1℃
- Ambient temperature: -5℃~55℃
- Storage temperature: -25℃~75℃
- Relative humidity: 20%~85% (non-condensing)

Wiring diagram



BCD-12

Cooling Fan 1NTC Temperature Calibration

Application

Various commercial refrigerated cabinets (for customized products)

Functions

- One channel of temperature sensor is used to measure cabinet temperature.
- Drive one 4W/12VDC fan to experdite cold air cycle in the cabinet.
- Compressor control; compressor off during scheduled defrost
- Two working modes: quick-freeze and cooling
- The curve of the back of the controller can effectively avoid dripping on the wire.

Technical parameters

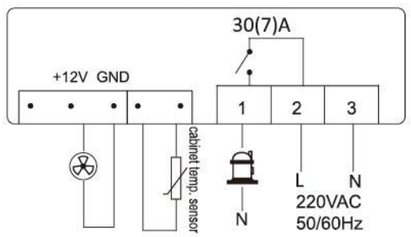
- Product size: 136 * 60* 97.27 (mm)
- Mounting size: 123.5 * 42 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- No-load power consumption: ≤1W
- Input/output port

Control output		Signal input	Buzzer beep
Cooling	Fan	Cabinet temperature	√
20 A	4W/12VDC	√	

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~99℃
- Temperature measuring accuracy: ±1℃(-30℃~50℃); ±2℃(others)
- Ambient temperature: 0℃~55℃
- Temperature control range: -40℃~50℃

Wiring diagram



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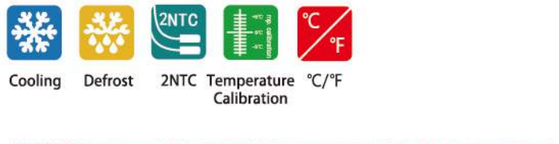
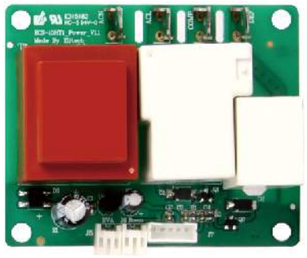
ECS-10HT3





Application

Wine cabinets(for customized products)

Functions

◆Split type design, easy to install.
◆Switch between ℃ and ℉ via menu.
◆Two channels of temperature sensors are used to adjust cabinet temperature and control defrost.
◆Two channels of control output can be configured to control compressor and defrost.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Copy card function helps quickly adjust product parameters.

Technical parameters

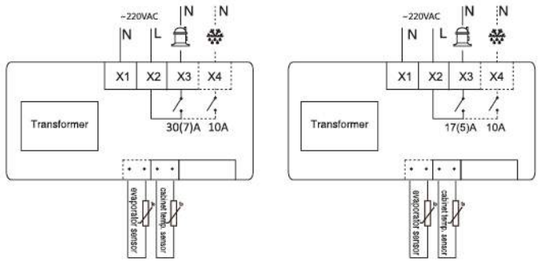
◆Product size: display panel: 153 * 15 (mm); control panel: 73 * 60 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Serial code	Control output		Signal input		Buzzer beep
	Cooling	Defrost (optional)	Cabinet temperature	Defrost temperature (optional)	
A(17.10.00.00)S2.B	17 A	10 A	√	√	√
A(30.10.00.00)S2.B	30 A	10 A	√	√	

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

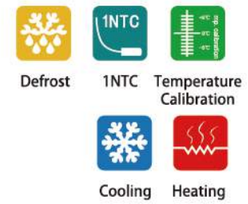
◆Temperature measuring range: -50℃~99℃ or -50℉~99℉
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(50℃~70℃); ±3℃(others)
◆Temperature control range: -50℃~99℃ or -50℉~99℉
◆Display resolution: 0.1℃/℉(-9.9~9.9), 1℃/2℉(others)

Wiring diagram



A(30.10.00.00)S2.B　　A(17.10.00.00)S2.B

STC–1/STC–1A



Application

Cake showcases, milky tea showcases, horizontal cabinets, etc.

Functions

◆Split-type: flexible and convenient for installation.
◆One channel of temperature sensor is used to adjust cabinet temperature.
◆One channel of output control is used for refrigeration control, or heating control or alarm output. (Switch operating modes of cooling, heating and alarm by adjusting internal parameters.)
◆Multiple protection and alarm modes are available in case fault is detected.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

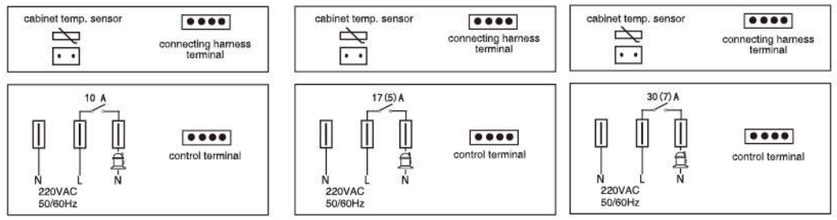
Technical parameters

◆Terminal size: 64 * 29 * 19.6 (mm)
◆Terminal mounting size: 25 * 60 (mm)
◆Control terminal size: 100 * 52 * 32 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

	Control output	Signal input
	Cooling or heating or alarm	Cabinet temperature
Configuration 1	10 A	√
Configuration 2	17 A	√
Configuration 3	30 A	√

◆Temperature measuring range: -40℃~99℃
◆Temperature measuring accuracy: ±1℃(-30℃~50℃); ±2℃(others)
◆Display resolution: 1℃
◆Temperature control range: -40℃~85℃

Wiring diagram



STC-1A Configuration 1　　STC-1A Configuration 2　　STC-1A Configuration 3

ETC-60HT

Cooling Defrost 2NTC Temperature Calibration

Application

Various high-temperature cold storage, direct cooling refrigerators and high-temperature direct cooling equipment.

Functions

- Two channels of temperature sensors are used to adjust cabinet temperature and control defrost.
- One channel of control output can be used to control compressor. Compressor is off during defrosting.
- Multiple protection and alarm modes.

Technical parameters

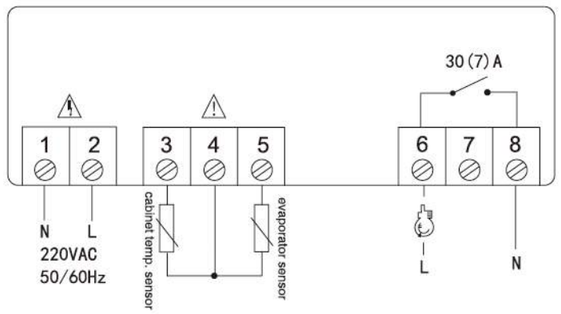
- Product size: 75 * 34.5* 58 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Input/output port
- Mounting size: 71 * 29 (mm)
- Overall power consumption: <3W

Control output	Signal input		Buzzer beep (optional)
Cooling	Cabinet temp	Evaporator sensor (optional)	
30 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -40℃~70℃
- Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃)
- Display resolution: 1℃
- Temperature control range: -40℃~50℃

Wiring diagram



ETC-50A

Cooling Defrost 2NTC Temperature Calibration

Application

Various beverage showcases and freezing and refrigerating equipment that needs cooling and defrost control, such as commercial kitchen refrigerators, etc.

Functions

- Two channels of temperature sensors are used to adjust showcase temperature and control defrost.
- Two channel of control output can be used to control compressor and defrost.
- Defrost modes can be adjusted by parameters: electric heating or hot gas.
- Multiple protection and alarm modes.
- One-key reset; multiple groups of parameters are optional.

Technical parameters

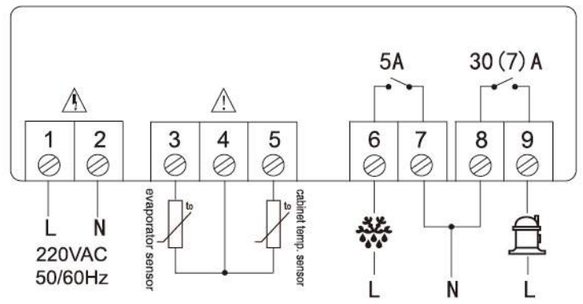
- Product size: 75 * 34.5* 58 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Input/output port
- Mounting size: 71 * 29 (mm)
- Overall power consumption: <3W

Control output		Signal input		Buzzer beep (optional)
Cooling	Defrost	Cabinet temp	Evaporator sensor (optional)	
30 A	5 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: -50℃~70℃
- Temperature measuring accuracy: ±1℃(-50℃~50℃); ±2℃(51℃~70℃)
- Display resolution: 1℃
- Temperature control range: -50℃~50℃

Wiring diagram



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STC-100A

Cooling Heating 1NTC Temperature Calibration

Application

Beverage showcases, seafood machines, etc.

Functions

- Switch between cooling and heating mode via menu.
- One channel of temperature sensor is used to adjust showcase temperature.
- One channel of output control is used for compressor control.
- With temperature sensor self-test function, protection and alarm functions are available in case fault is detected.

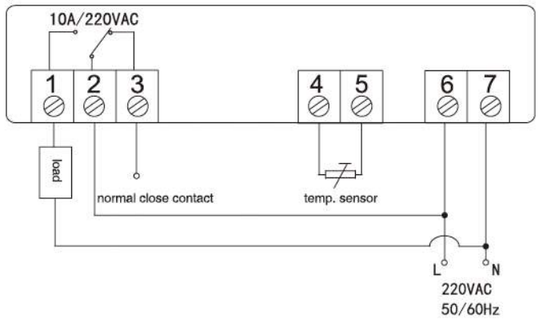
Technical parameters

- Product size: 77 * 34.5* 62 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

Control output	Signal input
Cooling	Showcase temperature
10 A	√

- Temperature measuring range: -40℃~99℃
- Temperature measuring accuracy: ±1℃(-40℃~70℃); ±2℃(other)
- Display resolution: 1℃
- Temperature control range: -40℃~99℃

Wiring diagram



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DHC-100+

Humidify Dehumidify 1NTC Temperature Calibration

Application

Widely used for humidity control of equipment, such as seafood cold storage, humidifiers, dehumidifiers, air humidity conditioners, etc. Used for measuring and displaying relative humidity.

Functions

- One channel of humidity sensor is used to monitor humidity.
- One channel of output control is used for humidity control.
- Humidity control modes can be adjusted by parameters: humidification or dehumidification
- Multiple protection and alarm modes are available in case fault is detected.

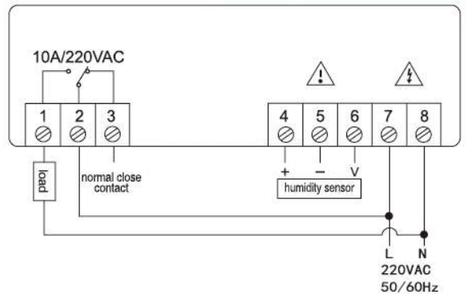
Technical parameters

- Product size: 75 * 34.5* 85 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <3W
- Input/output port

Control output	Signal input
Humidity control	Humidity
10 A	√

- Humidity measuring range: 0% ~ 99% RH
- Humidity measuring accuracy: ±5%RH + 0.5 digit, (25℃); ±6% RH + 0.5 digit (10℃~40℃, 0%RH~59%RH); ±8% RH + 0.5 digit (other)
- Annual sensor drift: ±0.5%RH
- Display resolution: 1% RH
- Humidity control range: 10%~99% RH

Wiring diagram



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LTC-2000
Disinfection cabinet controller

Application

Mainly disinfection cabinets.

Functions

◆Touch control operation interface. One-key entry to operating mode: running mode, standby mode, off mode.
◆Split-type: flexible and convenient for installation.
◆Double-screen display of temperature setpoint and running time.
◆One channel of temperature sensor is used to adjust cabinet temperature.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

◆Operating voltage: 220VAC±10 %, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Control output	Signal input	Buzzer beep (optional)
Heating	Cabinet temperature	
10 A	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -30℃~200℃
◆Temperature measuring accuracy: ±1℃(0℃~150℃); ±2℃(other)
◆Display resolution: 1℃
◆Temperature control range: 80℃~150℃

Elitech®

Medicine Cabinet Controller Series

ETC-H6

Application

Medicine cabinets, etc.

Functions

◆LCD backlight display
◆One channel of temperature sensor is used to adjust cabinet temperature.
◆One channel of output control is used for refrigeration control.
◆Working modes can be adjusted by parameters: ice lining-dedicated mode or normal mode.
◆Backup power supply can ensure power outage detection and alarm for 16 hours.
◆Copy card function helps to manage and adjust product parameters quickly.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

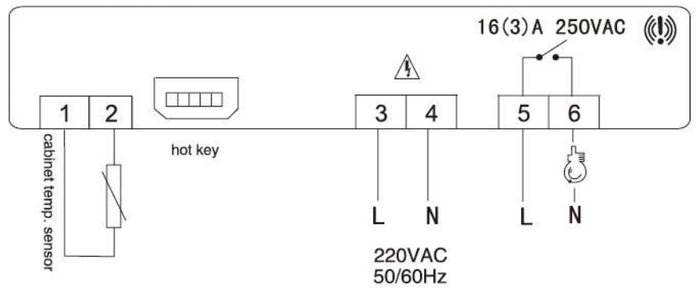
Technical parameters

◆Product size: 75 * 34.5 * 58 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Control output	Signal input	Buzzer beep (optional)
Cooling	Cabinet temperature	
16 A	√	√

◆Temperature measuring range: -50℃~85℃
◆Temperature measuring accuracy: ±0.5℃(0℃~15℃); ±1℃(other)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~50℃

Wiring diagram



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ECS-03

Application

Simple medicine cabinets, etc.

Functions

◆One channel of temperature sensor is used to adjust cabinet temperature and control defrosting.
◆One channel of switch is used to monitor the action of door.
◆Three channels of control output can be configured at maximum to control compressor, light and defrost.
◆With temperature sensor self-test function and ultra-high/low temperature alarm function. Multiple protection and alarm modes are available in case fault is detected.
◆One-key reset multiple groups of parameters are optional.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

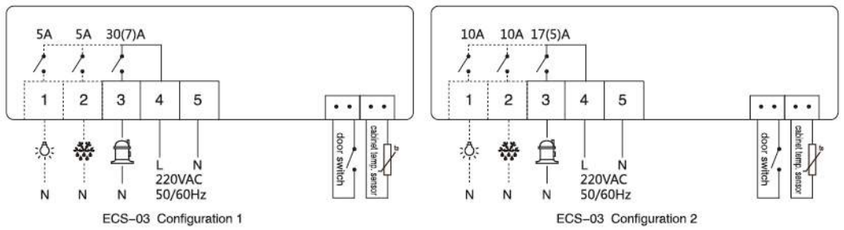
◆Product size: 78.5 * 34.5 * 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

	Control output			Signal input		Buzzer beep (optional)
	Cooling	Defrost (optional)	Light (optional)	Cabinet temperature	Door switch (optional)	
Configuration 1	30 A	5 A	5 A	√	√	√
Configuration 2	17 A	10 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(other)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~50℃

Wiring diagram



ECS-03 Configuration 1

ECS-03 Configuration 2

ECS-180(Auc1)+ MicroUPS

Application

Mainly for medicine cabinets, etc.

MicroUPS

MicroUPS is mainly used as power supply in case of power interruption of special equipment. It matches with ECS-180 series. It can supply controllers continuous alarm power for more than 48 hours.

Functions

◆One channel of temperature sensor is used to adjust cabinet temperature.
◆One channel of switch is used to monitor the action of door.
◆Backup power supply is optional. After connection, power outage detection and alarm can be realized.
◆Multiple channels of control output are for compressor, fan and light control.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset multiple groups of parameters are optional.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

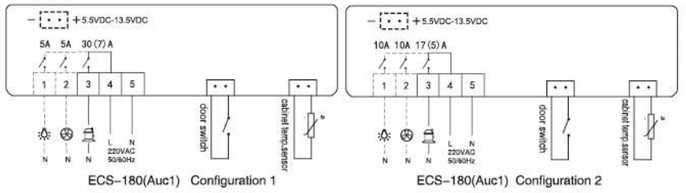
◆Product size: 78.5 * 34.5 * 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

	Control output			Signal input		Buzzer beep (optional)
	Cooling	Fan (optional)	Light (optional)	Cabinet temperature	Door switch (optional)	
Configuration 1	30 A	5 A	5 A	√	√	√
Configuration 2	17 A	10 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(other)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~85℃

Wiring diagram



ECS-180(Auc1) Configuration 1

ECS-180(Auc1) Configuration 2

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MEC-H10/H12

Application

Medicine cabinets, such as refrigerated cabinets, cool cabinets, etc., wine cellar, wine cabinets, etc.

Functions

◆One channel of humidity sensor is used to monitor cabinet humidity in real time; Two channels of temperature sensors at maximum are used to monitor cabinet and evaporator temperature.
◆Five channels of control output can be used to control cooling, fan, heating wire, light and (humidification) fan.
◆Mass data can be recorded after a logging module is connected.
◆Real-time curve can be copied via the USB of the logging module.
◆Lock button can prevent misoperation.
◆Switch between measurement and control mode and ECO mode
◆Touch control interface is much more artistic and easier to clean.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆The humidity sensor is condensation-proof.

Technical parameters

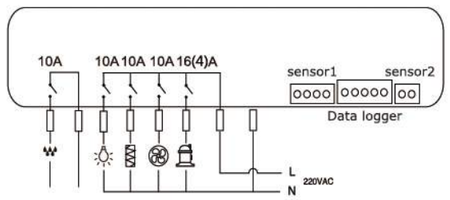
◆Product size: 132 * 43* 61.5 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Stand-by power consumption: <1W (MEC-H12)
◆Input/output port
◆Mounting size: 112 * 39 (mm)
◆Overall power consumption: <5W (MEC-H10)

	Control output					Signal input			Buzzer beep (optional)
	Compressor	Fan	Heating wire	Light	(Humidification) Fan	Humidity	Cabinet temperature	Evaporator temperature	
MEC-H10	16 A	10 A	10 A	10 A	10 A	√	√	√	√
MEC-H12	16 A	10 A	10 A	0.3A/12VDC (direct drive)	0.15A/12VDC (direct drive)	√	√	√	√

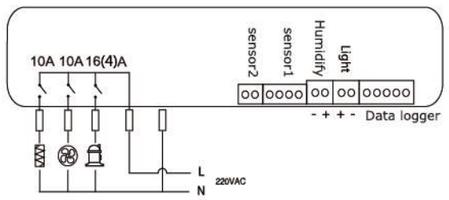
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -40℃~50℃
◆Temperature control range: -40℃~50℃
◆Humidity accuracy: ±5%RH
◆Temperature measuring accuracy: ±1℃
◆Humidity measuring range: 0%~99.9%RH
◆Humidity control range: 1%~99%RH

Wiring diagram



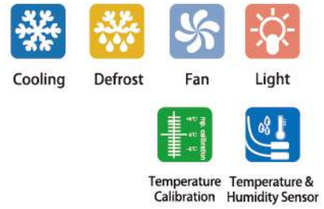
MEC–H10



MEC–H12

Elitech®

MEC-H11



Application

Medicine cabinets, such as refrigerated cabinets, cool cabinets, etc.

Functions

◆One channel of temperature and humidity sensor is used to adjust cabinet temperature and humidity.
◆Five channels of control output can be used to control cooling, fan, heating wire, drive LED, drive fan.
◆Record function is optional. Data can be downloaded via USB. It is very convenient to read and view.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

Technical parameters

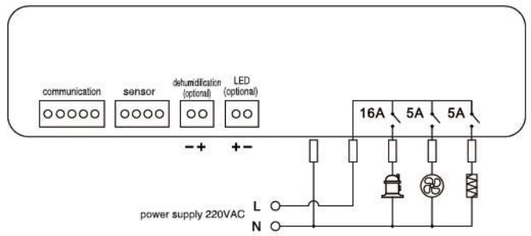
◆Product size: 178 * 48 * 86 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Input/output port
◆Mounting size: 157 * 39 (mm)
◆Overall power consumption: <3W

Control output					Signal input	Buzzer beep (optional)
Compressor control	Fan control	Heating wire control	Drive LED (DC12V)	Drive fan (DC12V)	Temperature, humidity	
16 A	5 A	5 A	0.3 A	0.15 A	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -40℃~99℃
◆Temperature display resolution: 0.1℃
◆Humidity measuring range: 0%~99.9% RH
◆Humidity display resolution: 0.1%RH
◆Temperature measuring accuracy: ±1℃
◆Temperature control range: -40℃~85℃
◆Humidity measuring accuracy: ±5%RH
◆Humidity control range: 1%~99% RH

Wiring diagram



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ECS–2012neo
Deep–cooling control

Cooling Defrost Light 2NTC Temperature Calibration ℃/℉

Application

Apply to ultra-low medicine cabinet,semi-conducting manufacturing equipment、High-end seafood/cookbook temperature control

Functions

◆Ultralow temperature control, up to -150℃.
◆Switch between ℃ and ℉ via menu.
◆Two channels of temperature sensors can be configured at maximum to adjust cabinet temperature and control defrosting.
◆Two channels of control output can be configured at maximum to control compressor, light/defrost. In light control mode, compressor is off during defrosting.
◆Set parameters to display cabinet temperature or evaporator temperature.
◆Multiple protection and alarm functions to ensure device safety.
◆Copy card function, special software configured, quick management and adjustment of product parameters.
◆Wiring mode: traditional screw-type.

Technical parameters

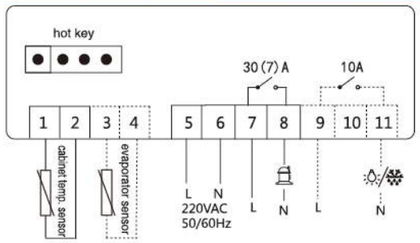
◆Product size: 78.5 * 34.5* 74 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Input/output port

Control output		Signal input		Buzzer beep (optional)
Cooling	Light/Defrost (optional)	Cabinet temp	Defrost temp (optional)	
30 A	10 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -150℃~50℃ or -238℉~122℉
◆Temperature measuring accuracy: ±1℃
◆Display resolution: 1℃ or 1℉
◆Temperature control range: -150℃~50℃ or -238℉~122℉

Wiring diagram



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EMC-2100

Cooling 4NTC Door switch Temperature Calibration Communication

Application

-70/-86℃ ultralow temperature cabinets.

Functions

◆Split-type: flexible and convenient for installation.
◆Four channels of temperature sensors are used to adjust cabinet temperature, limit the temperature of high-temperture evaporator, monitor condenser temperature and ambient temperature.
◆Four channels of control output are used to control high-temperature compressor, low-temperature compressor, heat capillary tube and alarm remotely.
◆All-round protection for control system: high-low temperature alarm, compressor protection alarm, sensor abnormity alarm, power outage alarm and remote alarm output.
◆Output temperature data via MODBUS commnunication.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

◆Power panel size: 132 * 72 (mm)
◆Display panel size: 215* 50 (mm)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <5W
◆Input/output port

Control output				Signal input					
High–temperature compressor	Low–temperature compressor	Capillary heating wire	Remote alarm	Cabinet temp	Condenser temp sensor	Ambient temp sensor	high–temp evaporator	Door switch	Power failure detection of main power source
17 A	17 A	10 A	10 A	√	√	√	√	√	√

◆Backup power input interface: 1, input voltage range: 5VDC～13.5VDC
◆Communication interface: one-channel 485 + MODBUS
◆Temperature measuring range: -99.9℃~35℃(cainet temperature),
-50℃~110℃(condensing, ambient and high-temperature evaporator)
◆Temperature measuring accuracy: cainet temperature: ±1℃;
Condensing, ambient and high-temperature evaporator: ±1℃(-40℃～50℃), ±2℃(51℃~70℃), ±3℃(others)
◆Display resolution: 0.1℃
◆Temperature control range: -99.9℃~35℃

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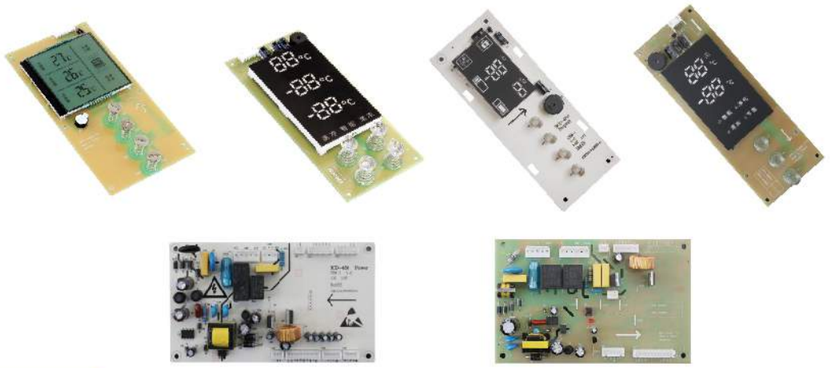
Household Refrigerator Horizontal Cabinet Controller Series

BCD-1/2/3/4/5/6/7/8/9



Application

Household Refrigerator Controller Series

Technical parameters

specially developed for professional household refrigerator manufacturers

Model	BCD-1	BCD-2	BCD-3	BCD-4	BCD-5	BCD-6/7/9	BCD-8
Temperature measuring range	-40℃ ~ 40℃	-40℃ ~ 40℃	-25℃ ~ 40℃	-40℃ ~ 50℃	-40℃ ~ 50℃	-40℃ ~ 50℃	-40℃ ~ 50℃
Operating ambient temperature	-20℃ ~ 55℃						
Storage temperature	-30℃ ~ 60℃						
Display resolution	1℃						
Temperature measuring accuracy	±1℃						
Power voltage	220VAC 50/60Hz						
Relay output	Normally open output 10A/277VAC	Normally open output 10A/277VAC	Normally open output 17A/277VAC	Normally open output 10A/277VAC	Normally open output 10A/277VAC	Normally open output 12A/277VAC	Normally open output 10A/277VAC
Features	Suitable for single-system three -chamber household refrigerators	Suitable for single-system two or three -chamber household refrigerators	Suitable for household refrigerators and freezing cabinets	Match with control module of inverter compressors, suitable for air cooling refrigerators	Two-system three-chamber refrigerators	Match with control module of inverter compressors, suitable for air cooling refrigerators	Suitable for simple air cooling household refrigerators

Milk Container Controller Series

TC-08

Application

Specially used for control of high-end milk containers.

Functions

- Five channels of control output are used to control compressor, stirring motor, cleaning motor, and drain valve.
- One channel of temperature sensor is used to adjust temperature.
- Three channels of switch input are used to detect compressor and control signal of cleaning pump.
- You may configure single compressor/double compressors, auto/manual modes via software.
- Multiple protection and alarm modes are available in case fault is detected.

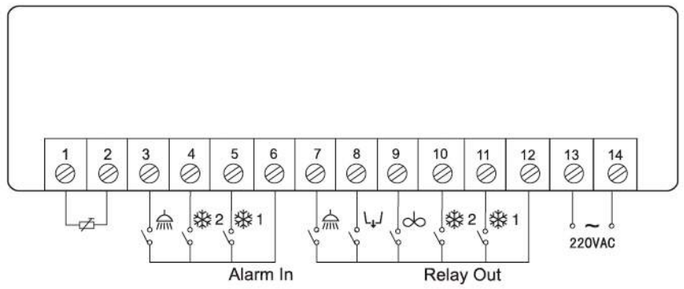
Technical parameters

- Product size: 180 * 100 * 54 (mm)
- Mounting size: 169.5 * 89.5 (mm)
- Operating voltage: 220VAC±10%, 50/60HZ
- Overall power consumption: <4W
- Input/output port

Control output					Signal input			
Compressor I	Compressor II	Stirring pump	Cleaning pump	Draining pump	Cabinet temperature	Compressor I Control signal	Compressor II Control signal	Cleaning pump Control signal
10 A	10 A	10 A	10 A	10 A	√	√	√	√

- Temperature measuring range: -10.0~70.0℃
- Temperature measuring accuracy: ±1℃(-10℃~50℃); ±2℃(50℃~70℃)
- Display resolution: 0.1℃
- Temperature control range: 0℃~25℃

Wiring diagram



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Panel Meter Series

TPM-900+/910+/920/930/TPM-940A/940B

TPM–900+

TPM–910+/920

TPM–930

TPM–940A

TPM–940B

Application

Applicable to various devices that require accurate temperature measurement, such as refrigerated cabinets, display cabintes, etc.

Functions

- ◆One channel of temperature for measurement.
- ◆Two channels of temperature for measurement; double digital display (TPM-940A).
- ◆Equipped with compressor and power indicators (TPM-940A, TPM-940B)
- ◆Measurement unit: ℉/℃. Temperature calibration value and display resolution can be set per actual demand.
- ◆Flush mounting structure; integral waterproof design; simple and artistic modeling.
- ◆Quick connect terminal provides convenience for production and aftersale service to professional equipment manufacturers.

Technical parameters

- ◆Product size: 64 * 31mm (TPM-900+/910+/920); 32 * 74 * 36 mm (TPM-930); 140*62mm(TPM-940A) ;83*35.9mm(TPM-940B)
- ◆Mounting size: 58.4 * 25.7 mm (TPM-900+/910+/920); 71 * 29 mm (TPM-930)
- ◆Operating voltage: 220VAC±10%, 50/60HZ
- ◆Overall power consumption: <3W
- ◆Temperature measuring range: -50℃~120℃ or -58℉~248℉
- ◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(other)
- ◆Display resolution: 0.1 or 1 ℃/℉
- ◆Temperature calibration value: -5~5℃

Elitech®

TPM-950/960/970

TPM–950

TPM–960

TPM–970

Application

Cake showcases, refrigerated cabinets, display cases, etc.

Features

TPM-950

- ◆Match with Refulgence Series controllers.
- ◆Communicate with the controller, display real-time temperature.
- ◆Fully waterproof, safe and artistic.
- ◆Silk-screen in front panel can be tailored.

TPM-960/970

- ◆Independent panel meter.
- ◆Big panel, digital display. (TPM-970)
- ◆One channel of temperature for measurement.
- ◆Measurement unit: ℉/℃. Temperature calibration value and display resolution can be set per actual demand.
- ◆Integral waterproof design; simple and artistic modeling.
- ◆Quick connect terminal provides convenience for production and aftersale service to professional equipment manufacturers.
- ◆Silk-screen in front panel can be tailored.

Technical parameters

TPM-950

- ◆Product size: 70 * 23.5 * 17.2 mm
- ◆Mounting size: 65.5 * 19 mm
- ◆Operating voltage: 5VDC±10% (It needs no independent power supply if matched with controller)
- ◆Overall power consumption: <1W
- ◆Temperature display range: -99℃~99.9℃ or -99℉~999℉
- ◆Display resolution: 1℃(-99℃~-10℃); 0.1℃(-9.9℃~99℃); 1℉

TPM-960/970

- ◆Product size: 70 * 23.5 * 34.2 mm; Mounting size: 65.5 * 19 mm (TPM-960)
- ◆Product size: 104 * 69 * 25 mm; Mounting size: 96 * 50 mm (TPM-970)
- ◆Operating voltage: 110~220 VAC±10%, 50/60Hz
- ◆Overall power consumption: <1W
- ◆Temperature measuring range: -50℃~120℃ or -58℉~248℉
- ◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(others)
- ◆Display resolution: 0.1 or 1 ℃/℉
- ◆Temperature calibration value: -5~5℃

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LTC–15/LTC–16

LTC–15

LTC–16

Application

Various direct cooling kitchen refrigerators, horizontal cabinets, freezers, etc.

Functions

◆One channel of temperature sensor is used to measure temperature.
◆With installing bracket for mechanical temperature controllers and rotary knob, the controller can be used as a panel meter to measure and display temperature in mechanical temperature control environment.
◆Compressor running indicator is reserved.
◆Measurement unit: ℉/℃. Temperature calibration value and display resolution can be set per actual demand.
◆Flush mounting structure; integral waterproof design; simple and artistic modeling.

Technical parameters

◆Product size: 147.8 * 39.8 * 20.7 mm (LTC-15)　134 * 66 * 59 mm (LTC-16)
◆Mounting size: 137.8 * 34.8 mm (LTC-15)　123.5 * 53mm (LTC-16)
◆Operating voltage: 220VAC±10%, 50/60HZ
◆Overall power consumption: <3W
◆Temperature measuring range: -50℃~99℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(51℃~70℃); ±3℃(other)
◆Display resolution: 0.1 or 1℃/℉
◆Temperature calibration value: -5~5℃

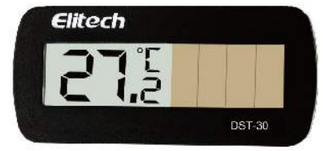
DST-30

Application

Solar power supply; omniseal waterproof design. It is applied to various devices that require measuring and displaying temperature, such as refrigerated cabinets, display cabinets, etc.

Technical parameters

◆Product size: 66 * 30 * 11.6 (mm)
◆Mounting size: 59.5 * 26 (mm)
◆Power supply: solar panel
◆Temperature measuring range: -50℃~150℃(When the temperature is greater than 80℃ or less than-20℃, the sensor needs to be tailored.)
◆Temperature measuring accuracy: ±1℃(-20℃~80℃); ±2℃(other)
◆Display resolution: 0.1℃
◆Operating environment: illuminance ≥100Lux, humidity: 5~85%RH, temperature: -10~45℃



DST-50

Application

Solar power supply; omniseal waterproof design. Backup battery is equipped to keep the product running without light source. It is applied to various devices that require measuring and displaying temperature, such as refrigerated cabinets, display cabinets, etc.

Technical parameters

◆Mounting size: 68 * 29 (mm)
◆Power supply: solar panel
◆Temperature measuring range: -50℃~150℃(When the temperature is greater than 80℃ or less than -20℃, the sensor needs to be tailored.)
◆Temperature measuring accuracy: ±1℃(-20℃~80℃); ±2℃(other)
◆Display resolution: 0.1℃
◆Operating environment: illuminance ≥100Lux, humidity: 5~85%RH, temperature: -10~45℃

DST-60

Application

Solar power supply; waterproof front panel; round stainless steel shell.

Technical parameters

◆Mounting size: diameter 52mm
◆Power supply: solar panel
◆Product start illuminance ≥70Lux,
◆Temperature measuring range: -50℃~150℃(When the temperature is greater than 80℃ or less than-20℃, the sensor needs to be tailored.)
◆Temperature measuring accuracy: ±1℃(-20℃~80℃); ±2℃(other)
◆Display resolution: 0.1℃

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Pressure Transmitters

Application

Various refrigerating units.

Model	Measuring range	Adaptor	Electric interface	Cable
PA-1000-FS3-A-X1	-1～16bar	7/16-20UNF-2B internal thread	Mini DN43650 port	NO
PA-1001-FS3-A-X1	-1～40bar	7/16-20UNF-2B internal thread	Mini DN43650 port	NO
PA-1002-FS3-A-X1	-0.5～11bar	7/16-20UNF-2B internal thread	Packard interface	1.5m Packard cable
PA-1003-FS3-A-X1	-0.5～11bar	7/16-20UNF-2A external thread	Packard interface	1.5m Packard cable
PA-1004-FS3-A-X1	0～30bar	7/16-20UNF-2B internal thread	Packard interface	1.5m Packard cable
PA-1005-FS3-A-X1	0～30bar	7/16-20UNF-2A external thread	Packard interface	1.5m Packard cable
PA-1006-FS3-A-X1	-0.5～7bar	7/16-20UNF-2A external thread	Packard interface	1.5m Packard cable

Functions

◆Germany ceramic chip: special ceramic material, solid ceramic sensitive diaphragm, strong output signals, long term stability

◆Pressure chips specialized for refrigeration systems; anti-corrosion, shock resistance, good performace of strong anti-corrosion to refrigerant; completely meet the vibration and shock requirements of refrigerating units, more stable and reliable performance

◆Interior sealing compound technology; high level of protection; full consideration of application environment of refrigerating systems; interior sealing treatment can effectively avoid ship and circuit failure caused by condensation by inner negative pressure

◆Anti-interference design ensures stable output signals; It has passed anti-interference tests, such as electromagnetic radiation, electromagnetic radiation sensitivity, electrostatic discharge, etc. so it can run stably and reliably under harsh electromagnetic conditions, thus avoiding distortion or loss of measured information caused by interference signals generated by refrigerating unit motor.

◆Auto tuning and digital compensation technology helps effectively restrain errors caused by temperature drift, so the product is highly accurate and stable.

◆Multiple options of pressure ports; flexible and convenient for installation.

Cold Storage/Warehouse LED
LED Power Supply, Switching Power Supply

Cold Storage LED Light

Save energy for your cold storage—80%

Functions

◆Power supply: 220VAC, 50/60Hz; Power: 10W , 15W , 20W , 25W , 30W

◆Damproof, anti-freezing, highly efficient and safe

◆Protection grade: IP65; prevent the light from short circuit caused by poor waterproof property or fire caused by short circuit.

◆Constant current drive; isolation-type LED power supply; safe, without stroboflash; guaranteed service life.

Model	Rated output power	Rated output current	Input voltage range	Product size	Mounting model	Operating temperature	Operating ambient humidity	Storage ambient temperature	Storage ambient humidity	Mean time between failures(MTBF)
ledD-L-300mA-10W	10W	300mA	185Vac ~ 264Vac	139.9×139.9×61.7	Fixed by 4 tapping screws or mounting bracket	-40～55℃	10～90% RH (no-condensing)	-40～75℃	10～90% RH (no-condensing)	≥50000
ledD-L-300mA-15W	15W									
ledD-L-300mA-20W	20W			184×125×52	Fixed by 4 tapping screws or magnet					
ledD-L-300mA-25W	25W									
ledD-L-300mA-30W	30W									

Warehouse LED Light

Save energy from lighting ELitech LED

Application

Warehouse, corridor, aisle, etc.

Functions

- Power voltage: 220VAC, 50/60Hz; Power: 10W, 15W
- Intensified brightness, low light attenuation, power saving and economic.
- Dampproof, antifreezing, efficient and safe.
- Protection grade: IP65; avoid short circuit caused by poor water resistence or fire caused by short circuit.
- Constant current drive, no strobe, service life guaranteed.

Model	Rated output power	Rated output current	Input voltage range	Product size	Mounting model	Operating temperature	Operating ambient humidity	Storage ambient temperature	Storage ambient humidity	Mean time between failures(MTBF)
ledD-L-300mA-10W	10W	300mA	185Vac ~ 264Vac	139.9×139.9×61.7	Fixed by 4 tapping screws or mounting bracket	-40 ~ 55℃	10 ~ 90% RH (no-condensing)	-40 ~ 75℃	10 ~ 90% RH (no-condensing)	≥50000
ledD-L-300mA-15W	15W									

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Constant Voltage/Current LED Power Source

Application

For LED illumination control of beverage cabinets, showcases and cake showcases.

Functions

- Energy saving and environment friendly; more than 80% energy saving compared with traditional light sources with same light effects.
- Service life is up to 50000 hours.
- The product has passed surge test. Its anti-interference level reaches industry standard grade four.
- Surge test reaches industry standard grade four. With stable and reliable performance.
- Waterproof and dustproof; high protection grade can meet the requirements of operating environment of commercial refrigerators.
- Match different powers; with complete range of specifications; with 35W/25W/15W/8W mainstream configuration.

Technical parameters (constant voltage)

- Power input:
  - Rated input voltage: 220VAC
  - Input voltage range: 185VAC~264VAC
  - Grid freaquency range: 47HZ~63HZ
  - Max no-load loss: ≤1W
  - Full-load transfer efficiency: ≥75 %(220VAC)
- Operating environment:
  - Operating ambient temperature: -10℃~55℃
  - Operating ambient humidity: 10% ~ 90% RH(non-condensing)
  - Storage ambient temperature: -25℃~75℃
  - Storage ambient humidity: 10% ~ 90% RH(non-condensing)

Technical parameters (constant current)

- Power input :
  - Rated input voltage: 100VAC~240VAC
  - Input voltage range: 90VAC~264VAC
  - Grid freaquency range: 47HZ~63HZ
  - Max no-load loss: ≤1W
  - Full-load transfer efficiency: ≥80%(110VAC/220VAC)
  - Full-load power factor: ≥0.9(110VAC/220VAC)
- Operating environment:
  - Operating ambient temperature: -10℃~55℃
  - Operating ambient humidity: 10% ~ 90%RH (non-condensing)
  - Storage ambient temperature: -25℃~75℃
  - Storage ambient humidity: 10% ~ 90%RH (non-condensing)

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Constant voltage

No	Model	Rated output power	Rated output voltage	Rated output current	Output ripple	Full-load transfer efficiency	Input voltage range	Full-load power factor	Short circuit protection	Open circuit protection	Authenti-cation
1	ledD-B-12Vdc-8W	8W	12V	0.7A	≤5%	≥75%	185Vac ≈ 264Vac	≥0.9	With short circuit protection: auto recovery to running after trouble-shooting.	With open circuit protection: auto recovery to running after trouble-shooting.	-
2	ledD-B-12Vdc-15W	15W		1.3A							-
3	ledD-B-12Vdc-25W	25W		2.1A		≥80%					3C
4	ledD-B-12Vdc-35W	35W		3.0A							
5	ledD-B-24Vdc-8W	8W	24V	0.35A		≥75%					-
6	ledD-B-24Vdc-15W	15W		0.65A							-
7	ledD-B-24Vdc-25W	25W		1.05A		≥80%					3C
8	ledD-B-24Vdc-35W	35W		1.5A							
9	SPS-13Vdc-15W	15W	13V	1.16	≤2%	≥80%	100~240 Vac	--			UL

Constant current

No	Model	Rated output power	Rated output current	Output voltage range	Output ripple	Full-load transfer efficiency	Input voltage range	Full-load power factor	Short circuit protection	Open circuit protection	Authenti-cation
1	ledD-B-320mA-15W	15W	320mA	20 ~ 40V	≤2.5%	≥80%	90Vac ≈ 264Vac	≥0.9	With short circuit protection: auto recovery to running after trouble-shooting.	With open circuit protection: auto recovery to running after trouble-shooting.	3C
2	ledD-B-320mA-25W	25W		40 ~ 70V							
3	ledD-B-1050mA-15W	15W	1050mA	12 ~ 16V	≤15%	≥75%					

High-Power LED Power Supply
60W/90W/120W/150W

Application

For LED illumination control of commercial supermarket cabinets and large display cabinets.

Functions

- Power coverage: 60W/90W/120W/150W; meet the demand of different power for various commercial supermarket cabinets.
- High power factor; PFC>0.9; service life of LED light is efficiently improved; luminous decay is avoided.
- Thunderstrike surge test reaches industry standard grade four. With stable and reliable performance.
- Conform to the latest state 3C requirements for LED control devices.

Technical parameters

- Power input:
  Rated input voltage: 220VAC
  Input voltage range: 185VAC~264VAC
  Grid freaquency range: 63HZ
  Max no-load loss: ≤1W
  Full-load transfer efficiency: ≥80 %
  (220VAC)
  Full-load power factor: ≥0.9 (220VAC)
- Power output:
  Rated output voltage: 24VDC
  Output voltage deviation: ≤5% (typ=24VDC)
  Rated output power: ≥90W
  Output ripple range: ≤2 % (220VAC)
  Output overpower protection: ≤150% (185VAC); auto recovery to running after troubleshooting.

Operating environment

- Operating ambient temperature: -10℃~55℃
- Operating ambient humidity: 10% ~ 90% (non-condensing)
- Storage ambient temperature: -25℃~75℃
- Storage ambient humidity: 10% ~ 90% (non-condensing)

Electrical specifications

- Safety class: CLASS B
- Insulation resistance: ≥100MΩ
- Leakage current: ≤10mA
- Max temperature rise: ≤50℃
- Mean time between failures (MTBF): ≥50000 hours

Constant voltage

Model	Rated output power	Rated output voltage	Rated output current	Output ripple	Full-load transfer efficiency	Input voltage range	Full-load power factor	Short circuit protection	Open circuit protection	Authenti-cation
ledD-B-24Vdc-60W	60W	24V	2.5A	≤5%	≥80%	185Vac ~ 264Vac	≥0.9	With short circuit protection: auto recovery to running after trouble-shooting.	With open circuit protection: auto recovery to running after trouble-shooting.	3C
ledD-B-24Vdc-90W	90W		3.75A							
ledD-B-24Vdc-120W	120W		5A							
ledD-B-24Vdc-150W	150W		6.25A							

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Refrigerated Truck Controllers

STC-620A/B/C

Application

Refrigerated trucks

Functions

◆Control refrigeration, evaporator fan at low speed, fan at medium and high speed.
◆With functions of 12/24V voltage abnormity protection, switch input, power-lack of storage battery protection.
◆Remote control function: to regulate temperature settings, switch wind speed, turn on/off, etc.
◆LED display; running status indicator.

Technical parameters

◆Product size: 103.5 * 52.8 (mm)
◆Operating voltage: 9V-32V
◆Overall power consumption: <3W
◆Input/output port:
Basic input:
Defrost temperature sensor
Return air temperature sensor
High/low pressure switch signal
Voltage detection signal
Basic output:
Compressor (250mA Max)
Evaporator fan at low speed (250mA Max)
Evaporator fan at medium speed (250mA Max)
Evaporator fan at high speed (250mA Max)
Power-lack of main battery (250mA Max)
Power-lack of auxiliary battery (250mA Max)
◆Temperature measuring range: -35℃~70℃
◆Temperature measuring accuracy: ±1℃
◆Temperature control range: -35℃~70℃
◆Display resolution: 1℃
◆Operating temperature: -35℃~70℃
◆Relative humidity: 20%~85%
◆Storage temperature: -30℃~70℃

ACT-007

Application

For the non-stand-alone compressor cooling system of refrigerated trucks.

Functions

◆Cooling, heating, defrosting, standby battery, parameter memory, inner temperature and defrosting temperature display, sensor failure alarm.
◆The combine touch switch and rubber key cap, so it presses clear and greatly lengthens the service life of PVC surface.
◆It provides system solutions.

Technical parameters

◆Operating voltage: 9VDC~48VDC, nominal operating voltage: 12VDC~24VDC
◆Max output current: 800mA, with protection of short circuit to earth
◆Input/output port:
Basic input:
Defrost temperature sensor
Return air temperature sensor
High/low pressure switch signal
Voltage detection signal
Automobile power supply (storage battery)

Basic output:
Heating relay (800mA Max)
DC compressor clutch (800mA Max)
Evaporator fan relay (800mA Max)
AC compressor clutch (800mA Max)
Solenoid valve for standby battery (800mA Max)
Defrost solenoid valve (800mA Max)

◆Display range of return air temperature: -40℃~60℃, resolution: 0.1℃, accuracy: ±1℃
◆Display range of defrost temperature: -30℃~60℃, resolution: 0.5℃, accuracy: ±1℃
◆Temperature control range: -30℃~30℃
◆Operating temperature: -35℃~70℃
◆Relative humidity: 20%~85%
◆Storage temperature: -30℃~70℃

Cold Chain Networking Series

Coldwatch RCW-200/RCW-600A

The product is widely used in storage and transportation of foodstuff, medicine, fresh and alive commodities. It is suitable for temperature and humidity monitoring, recording and remote alarm of places such as cold storage, refrigerators, garden houses, vegetable greenhouses, hatching houses, laboratories, etc.

Specification

◆Product size: 110 * 80 * 30 (mm)

Features and functions

◆2.4 inch color LCD display, touch buttons, delicate in shape and artistic in design;
◆Query of real-time data for various devices and places, such as cold storage, refrigerators, etc. through short message; real-time data push according to the time client has set;
◆Short message alarm or cellphone call alarm in case of ambient temperature abnormity or device breakdown;
◆Keep working for more than 12 hours after power outage;
◆Temperature record 200,000 points; data can be downloaded via USB and is convenient to trace, query and analyze in maintenance. (RCW-200)

Technical parameters

◆Power supply: 5V/1A (DC). It could connect with power supply of 220V, 50/60HZ by external power adapter.
◆Ambient temperature: -10℃～45℃;
◆Temperature measuring range: -40℃～70℃;
◆Temperature accuracy: ±1℃(-25℃~40℃); ±2℃(others)
(If the length of probe wire is longer than 50m, the accuracy will deviate 1%.);
◆Humidity measuring range: 10～90%RH;
◆Humidity accuracy: ±5%RH;
◆Temperature sensor: NTC;
◆Humidity sensor: Honeywell;
◆Calibration range: -9.9℃～9.9℃(temperature), -9.9%RH～9.9%RH (humidity);
◆Record cycle: 1 sec ~ 24 hour adjustable;
◆Record capacity: 20000 points;
◆Number of cellphones bound: 5 (Max, including administrator);
◆Communication interface: WCDMA(3G);
◆Running time after power outage: 12 hours;
◆Battery: 3.7V 1100mAH lithium battery.

RCW-800A/800WIFI

General descriptions

RCW-800A is an intelligent temperature&humidity remote monitor, widely used in medical cold rooms.

Main features

◆ In complete conformity with GSP standard;
◆ 2.4 inch color LCD display, touch buttons;
◆ Query real-time data of cold storage through short message or cellphone app;
◆ Short message alarm or cellphone call alarm in case of cold storage abnormity or unit breakdown;
◆ Visit cloud management platform via webpage or smart phone (support Apple iOS and Android system);
◆ Upload all data wirelessly and store it in the cloud server;
◆ Keep working for more than 12 hours after power outage;
◆ Temperature / humidity sensor optional;
◆ Program version can be upgraded.

Technical parameters

◆Temperature measuring range: -50℃~99℃;
◆Temperature display resolution: 0.1℃;
◆Temperature accuracy: ±1℃(-25℃~0℃); ±0.5℃(0~40℃); ±2℃(others);
◆Humidity measuring range: 5%RH~99%RH;
◆Humidity display resolution: 0.1%RH;
◆Humidity accuracy: ±5%RH;
◆Communication interface: WCDMA(3G) / WIFI.

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Intelligent Solutions for Cold Chain Network

Various cold storage

Collector

Commercial freezer

Collector

Medical cabinets

◆Data collector will send the status information, alarm information and services information.

RCW–400A

Main features

RCW-400A is a data logger with four channels of temperature or humidity detectors (more details in specification), It has the advantages of wide temperature measuring range and high measuring precision. RCW-400A communicates with Cold-Chain Cloud on Internet. The LCD screen displays current working state, the recording capacity and the recording data. It can alarm by buzzer or by the SMS. Users can view and download data of temperature and humidity through cloud anywhere and anytime. Users can also view data by smart phones (Support iOS and Android only).

Specification

Product size: 133*128*34 (mm)

Technical parameters

◆Power supply: 12V AC / DC~24V AC / DC.
It could connect with power supply of 100~264VAC, 50/60HZ by external power adaptor;
◆Temperature measuring range: -40℃~70℃;
◆Temperature accuracy:
± 0.5℃ (0℃~40℃);
± 1℃ (-25℃~0℃);
± 2℃ (others) (If sensor wire is longer than 50 M, accuracy deviates 1%);
◆Humidity measuring range: 10~90%RH;
◆Display resolution: 0.1;
◆Humidity accuracy:
(@10℃, 25℃, 40℃): ±5%(30-80%);
◆Temperature sensor type: NTC;
◆Humidity sensor type: SHT21;
◆Record cycle: 1 min to 24 hours continuously set;
◆Record capacity: each channel 20000 points (MAX);
◆Applicable environment: temperature -20℃~50℃; humidity 0%~95%;
◆External alarm relay: 10A/220VAC;
◆Communication interface: WCDMA(3G).

Cold Chain Networking Series

RCW–2000 RCW–2100

Main features

The wireless temperature and humidity acquisition system RCW-2100 and wireless repeater RCW-2000 are based on Internet of Things technology LoRa. They can be widely used in food, catering, logistics and HACCP certified industries. Data can be transmitted via 2G/3G/WiFi/RJ45, etc. Users can monitor, view and manage real-time data online remotely via browser or mobile phone. The system can alarm via cloud platform, indicator and buzzer.

Technical parameters

- ◆Measurement range: temperature: -30~65℃ humidity: 10~100%RH
- ◆Accuracy: temperature: ±0.5℃; ±5%RH
- ◆Memory capacity: 20000 points
- ◆Log interval: 1min~24h
- ◆Battery life: no less than 12 months
- ◆Protection grade: IP 65 (single temperature sensor), IP64 (temp-humidity combined sensor)
- ◆Operating frequency: 433 MHz, ISM Band
- ◆Transmission distance: 1000m at open space
- ◆Configuration: automatic networking
- ◆Sensor type: single temperature sensor or temp-humidity combined sensor
- ◆Indicator: status and alarm indicator
- ◆Power supply: 12V/2.5A
- ◆Upload mode: 2G and/or Wi-Fi; GPS module optional
- ◆Max acceptable acquisition systems: 30pcs
- ◆Operation mode: automatically connected with wireless sensor
- ◆Battery life: over 12h without external power source
- ◆Ambient temperature: -10℃~40℃
- ◆Alarm mode: via indicator
- ◆It can be vehicle-mounted
- ◆Parameters can be set on cloud platform

RCW–2100

RCW–2000

Elitech®

RCW–10B

This is a GPRS remote temperature monitor for cooler boxes in cold chain logistics. It is equipped with functions of temperature detection and alarm, online remote query and storage of real–time temperature data, etc. It can monitor the storage temperature of thermal sensitive objects and indicate the temperature in the cooler box remotely in time.

Application

Food, medicine, cold chain logistics

Technical parameters

- ◆Temperature measuring range: –40℃~70℃
- ◆Temperature accuracy: ±0.5℃(0℃~40℃); ±1℃(others)
- ◆Humidity measuring range: 10~90%RH, MAX error of relative humidity: ±5%RH
- ◆Display resolution: temperature: 0.1, humidity: 0.1%
- ◆Temperature sensor: NTC thermistor; Humidity sensor: HIH5030
- ◆Data export: via USB, format: txt. It takes no more than 5 min to export all the data.
- ◆Record capacity: 10000 points
- ◆Communication interface: GPRS
- ◆Alarm: SMS, LED (red), buzzer
- ◆Data transmission: temperature and humidity data is transmitted to cloud platform via GPRS
- ◆Screen: 2.4 inch color TFT screen
- ◆Basttery: rechargeable 3.7V/10000mAh lithium battery
- ◆Battery duration: 72h in full power
- ◆Ambient temperature: –10℃~45℃

Cold Chain Networking Series

Data Logger Series

RC-4　RC-4H

The product is applied to various industries that require conformity to HACCP system, such as foodstuff, medicine, cold chain transportation, etc.

RC-4

Features and functions

It is compact in size and graceful in design. The LCD display is convenient for users to view data and running status of the recorder. It has an external probe and large record capacity of 16000 points. Direct data exchange with computer can be realized by USB cable. It is equipped with user-friendly and powerful data visualization management and analysis software, which can automatically unload data or send email and support WinXP, Win7, Win8 and Mac (available soon). Button battery is easy to replace.

Technical parameters

- ◆ Power supply: built-in CR2450 battery or power supply via USB interface;
- ◆ Temperature measuring range: -30℃~60℃; for external probe (optional), -40℃~85℃;
- ◆ Temperature accuracy: ±0.5℃(-20℃~20℃); ±1℃(others);
- ◆ Humidity measuring range: 0~99%RH;
- ◆ Humidity accuracy: ±3%RH (25℃, 20~90%RH); ±5%RH (others);
- ◆ Sensor: thermistor;
- ◆ Display resolution: temperature 0.1℃; humidity 0.1%RH;
- ◆ Record cycle: 10 sec~24 hour adjustable;
- ◆ Memory capacity: RC-4HA: 8000 points (MAX); RC-4HC: 16000 points (MAX).

Specification

- ◆ Product size: 84* 44* 20 (mm)

RC-4HC

Technical parameters

◆Temperature memory capacity:
RC-4　16000 (MAX)
RC-4HA　8000 (MAX)
RC-4HC　16000 (MAX)
◆Humidity memory capacity:
RC-4HA　8000 (MAX)
RC-4HC　16000 (MAX)
◆Record cycle: 10s~24hour adjustable;
◆Sensor: Internal NTC thermal resistor;
◆Communication: USB interface;
◆Power supply: CR2450 battery or power supply via USB interface;
◆Battery life: in normal temperature, if the record interval sets as 15 min, it could be used above one year.

DR-210A

It is a two-way temperature and humidity recorder with one way temperature and one way humidity. Products of this series are widely used in industries of foodstuff, medicine and cold chain transportation and other industries in conformity with HACCP system certification.

Features and functions

- ◆ One way temperature and one way humidity measurement and record, with a wide temperature range and wide application.
- ◆ Reserved RS485 interface and mini printer interface, with flexible expansion, meet the customers demand on local or long distance data management.
- ◆ Matched with host data-processing software, for customers' convenience to set, view or print the data.
- ◆ USB port.
- ◆ Accordance with HACCP System Certification and related medical industry standard.

Specification

- ◆ Mounting size: 131.5*131.5 (mm)
- ◆ Product size: 144*144 *83 (mm)

Technical parameters

- ◆ Power supply: 12VAC/DC or 24VAC/DC, 220VAC optional;
  with rechargeable backup batteries;
- ◆ Temperature measuring range: -50℃~120℃;
- ◆ Temperature accuracy: ±0.5℃(-30℃~20℃);
  ±1℃(-40℃~-30℃ or 20℃~70℃);
  ±2℃(others);
- ◆ Huimidity measuring range: 0~95%RH;
- ◆ Huimidity accuracy: (@25℃): ±5%RH;
  (@10℃~40℃): 0~59%RH: ±6%RH (MAX);
  60~95%RH: ±8%RH (MAX);
- ◆ Display resolution: 0.1℃;
- ◆ Record cycle: 1min~24hours continuously set;
- ◆ Memory capacity: each 13,000 points (MAX);
- ◆ Alarm relay output contact capacity: 10A/220VAC.

www.e-elitech.com
Since 1996

EASYLOG—Single-Use Data Logger
RC-12

General descriptions

- Automatic processing software, no complication;
  One time installation, permanent usage. Auto-run, auto-upload, auto-report, auto-save;
- Support the comparison of multiple data from different devices;
- Auto-save function
  Easy-tracking has the function of only showing Over Temperature Device, which makes the quick lookup of large quantity data logger possible.

Application

EASYLOG series label is one type of Elitech cold chain data logger, especially for temperature monitoring during the distribution and storage of food, pharmaceuticals, chemicals and other perishable products. EASYLOG is idea for in need of single–use data logger, offering a more convenient and rapid operating experience.

Main features

- Record the temperature of overall process of cold chain transport.
- Mean Kinetic Temperature (MKT).
- PC software: One iCon, one function, no more menu operation.
- Both EASYLOG itself and Easy-tracking software has the function of indicating over temperature by lights.
- Double bar code label for further use.

Technical parameters

Recording Options	Single-Use
Temperature Measurement Range	-30℃~70℃
Temperature Accuracy	±0.5℃(-20~40℃); ±1℃(others).
Temperature Resolution	0.1℃
Memory Capacity	14400(MAX)
Shelf Life/Battery	1 year/3.0v lithium battery
Log interval	1, 2, 3, 5, 6(min) selectable
Log Duration	6, 15, 30, 45, 60(days) selectable
Alarm type	Cumulative or single
Waterproof grade	IP67
Size	79.9* 47*4.4 (mm)

RC-5 RC-51

The product is widely used in food and pharmaceutical, cold chain transportation and other industries which conform to HACCP system.

It is smart, compact, with elegant design ; LCD display for convenient data/status checking; large memory capacity 32000 points; data exchange with computer by USB; export data to PDF; with powerful and visualized data processing software; the software supports the system of WinXP, Win7,Win8, Mac; with button battery, easy to replace.

Specification

- Product size: 80*25*12 (mm)

Technical parameters

- Power supply: inner CR2032 battery or power supply via USB interface;
- Temperature measuring range: -30℃~70℃;
- Temperature accuracy: ±0.5℃ (-20~40℃), ±1℃ (others);
- Resolution: 0.1℃;
- Sensor: NTC;
- Memory capacity: 32000points (MAX);
- Record cycle: 10sec~24hour adjustable;
- Communication interface: USB;
- Waterproof grade: IP65.

RC-5

RC-51 AI Reusable Temperature Recorder

The product is mainly used for repeated temperature monitoring and recording in storage and transportation environment of foodstuff and medicine, such as refrigeration packages, refrigerator cars, containers, etc.
It can be connected to a computer as a USB flash disk and export data to AI report. It can also be connected to a computer via USB port for data communication. It is equipped with built-in temperature probe. On the back of the recorder is pasted serial number and barcode, convenient to be scanned.

Technical parameters

- Power supply: ER14250 (Typically one year. It can be replaced by 3.6V lithium battery.);
- Temperature measuring range: -30℃~70℃/22°F~158°F;
- Temperature accuracy: ±0.5℃/0.9°F(-20℃~-40℃), ±1℃/1.8°F (others);
- Resolution: 0.1℃;
- Sensor: built-in NTC;
- Memory capacity: 32000 points (Max), support data cycle and loop;
- Display type: multifunction LCD, status indicator;
- Operation mode: multifunction keyboard;
- Alarm range: high/low temperature alarm setting / multiple alarm setting (5 wire 6 area);
- Alarm type: unitary/cumulative;
- Communication type: USB2.0;
- Operating system: WIN XP/VISTA/7/8/MAC (It does not support upper computer operation but only AI report view in MAC system);
- Water-proof grade : IP65.

RC-51

www.e-elitech.com
Since 1996

The product is applied to temperature measuring in transportation of blood, vaccine, etc.

TI–10

Features and functions

- ◆ Clear and direct perception of out–of–range events can ensure blood and vaccine safety;
- ◆ Real and reliable detection of the actual and non-ambient temperature of blood and vaccine;
- ◆ More convenient and with higher economic benefit compared with traditional chemical reagents;
- ◆ The attached barcode is easy to track and query for users;
- ◆ Waterproof grade : IP68.

Technical parameters

- ◆ Power supply: built-in CR2032 battery;
- ◆ Temperature measuring range: -10℃~30℃;
- ◆ Temperature accuracy: ±0.5℃(1~8℃), ±1℃ (others);
- ◆ Resolution: 0.1℃; ◆ Alarm type: cumulative;
- ◆ Record cycle: 180 days at least; ◆ Temperature unit: ℃;
- ◆ Alarm mode: LED alarm;
- ◆ Operation mode: multifunction keyboard;
- ◆ Water-proof grade : IP68; ◆ Use type: single–use.

DR-820

Application

Match with temperature and humidity controllers MEC-H10 and MEC-H12, used to record and store temperature and humidity data of the controllers. Data report can be exported to PDF format.

Functions

- ◆ Compact size, easy to install, simple to operate.
- ◆ Sealed, safe and stable.

Technical parameters

- ◆ DR-820A has no buzzer module or rechargeable lithium battery module.
- ◆ With a buzzer module and a rechargeable lithium battery module, DR-820B is equipped with buzzer alarm in case of power cut and continuous running for 48 hours when the lithium battery is fully charged.
- ◆ Temperature recognition range: -50℃~120℃; resolution: 0.1℃
- ◆ Humidity recognition range: 0%~100%; resolution: 0.1%
- ◆ Memory capacity: 360448 points (Max) ◆ Log interval: 10s~24h continuously settable
- ◆ Data interface: USB; PDF report can be generated in USB disk.
- ◆ Power supply: 5V power source via Serial Communications Interface (DR-820A)
- ◆ 5V power source via SCI and built-in 14500 chargeable battery (DR-820B)

The product is widely used in global medical market.

RC–61

Features and functions

- ◆ In complete conformity with GSP standard of new edition;
- ◆ Brand new appearance, large LED screen with clear view, single button operation, easy for use;
- ◆ Over limit sound-light alarm ensures product safety and users are easy to find over-temperature status;
- ◆ Imported sensor of temperature and humidity integrated type, more accurate and stable.

Technical parameters

- ◆ Memory capacity: 16000 points for temperature / humidity;
- ◆ Temperature measuring range and accuracy: with certificate of inspection, in conformity with GSP standard;
- ◆ With battery display; battery life is more than one year in typical running status without buzzer alarm;
- ◆ Control mode: one button operation; buttons with start / stop function; shortly press buttons to show max / min parameters alternately;
- ◆ Alarm types: over-temperature indicator flash alarm, buzzer alarm, display screen alarm icon flashing, over-temperature record interval shortened (in conformity with GSP standard);
- ◆ With data management software, disk optional;
- ◆ Communication interface: cellphone USB connected to computer via cellphone data cable; external temperature / humidity probe connected via headphone jack;
- ◆ Display type: large screen display, fixed by magnet or velcro.

www.e-elitech.com
Since 1996

ETAG–1 Single–use NFC Data Logger

Application

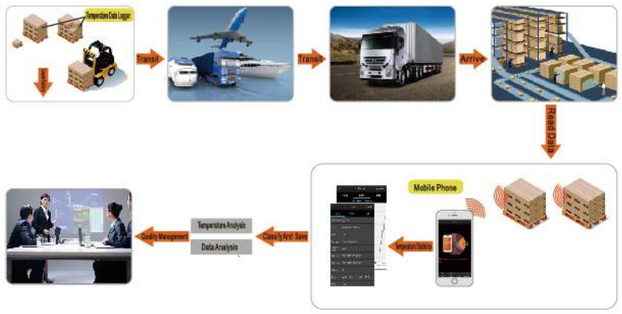
Medicine, food, life science, modern agriculture, flowers and plants, breeding industry, chemical industry, cooler boxes, refrigerated trucks, cooler bags, containers, cool cabinets, medical cabinets, fresh food cabinets, freezer cabinets, fresh food lockers, incubators, laboratories, cold storage, greenhouses, blood bags, vaccine, fresh food.

Features

- ◆Near field reading of data via mobile phone, no need to unpack
- ◆Export data report in PDF or Excel format from mobile phone
- ◆Share data report via email, WeChat, QQ, etc.
- ◆Upload data to cloud platform
- ◆Read data via NFC mobile phone in case indicator is power off

Technical parameters

- ◆Temperature measuring range: –25℃~60℃
- ◆Temperature accuracy: ±0.5℃
- ◆Resolution: 0.1℃
- ◆Record interval: 1~240 min
- ◆Memory capacity: 4000 points (MAX)
- ◆Display: indicator
- ◆Operating mode: single button
- ◆Sensor: internal
- ◆Data interface: Near Field Communication (NFC)
- ◆Data management software: supports Android 4.0 and above, export PDF and Excel report via cloud platform and exports reports in PDF and Excel format
- ◆Power supply: 3.0V lithium battery CR2032
- ◆Protection grade: IP67
- ◆Size: 70 (L) * 50 (W) * 2.4 (H) mm
- ◆Weight: 10g



RC–55

Application

Medicine, food, life science, flowers and plants, cooler boxes, refrigerated trucks, cooler bags, containers, fresh food lockers, incubators, blood bags, vaccine.

Features

- ◆Automatic generation of data report in AI format
- ◆Food grade colloidal injection molding technology, high protection grade
- ◆Double LED indicators
- ◆Super–long battery life

Technical parameters

- ◆Temperature measuring range: –30℃~70℃(–22℉~158℉)
- ◆Temperature accuracy: ±0.5℃/0.9℉(–20℃~40℃); ±1℃/1.8℉(other)
- ◆Resolution: 0.1℃
- ◆Record interval: 10 sec ~ 12 hr.
- ◆Memory capacity: 32000 points (MAX)
- ◆Display: indicators
- ◆Operating mode: single button
- ◆Alarm: enabled, via indicators
- ◆Sensor: internal
- ◆Data interface: USB 2.0
- ◆Auto generation of AI report: supports WIN XP/7/8/10 and MAC
- ◆Data management software: no
- ◆Power supply: 3.6V lithium battery (2 year)
- ◆Protection grade: IP67
- ◆Size: 59 (L) * 30 (W) * 14 (H) mm
- ◆Weight: 16g

RC–55
Single–use AI temperature data logger

www.e-elitech.com
Since 1996

RMS-300/3G RMS-600

Application

6 channels of temperature and humidity are configurable. The monitor can record real-time temperature/humidity data online. Data can be exported via USB and viewed on mobile phone or computer in real time. Real-time positioning of refrigerated truck can be replayed on computer. The monitor is equipped with screen display alarm, buzzer alarm and SMS alarm.
Application: to monitor the temperature and humidity of medicine, vaccine, biochemical sample and fresh food in their transportation.

Features

- Completely meet the newest GSP standard.
- 3.5 inch color touch screen with high resolution.
- Built-in GPS/GPRS (RMS-300)/3G (RMS-600) module can connect to Internet and supports real-time view via mobile phone APP.
- External printer can be connected to print record data.
- Powerful over-limit alarm function
- Real-time display of date and time
- External antenna, length: 3m (customizable)
- CAN bus interface: reserved for further expansion

Technical parameters

- Operating voltage: 12V
- Power supply: external power source & internal rechargeable lithium battery
- Measuring channel: 4-channel temperature & 2-channel temperature/humidity
- Sensor: temperature: NTC (external), humidity: Honeywell
- Measuring range: temperature: -40℃~100℃, humidity: 0~95%
- Measuring accuracy: temperature:
  ±0.5℃(0℃~40℃), ±1℃(-25℃~0℃), ±2℃(others); humidity: ±3%RH (11%~89%), ±7%RH(others)
- Resolution: 0.1℃
- Length of sensor: 8m
- Record capacity: ≥25000 points
- Log & uploading interval: 1 minute to 24 hours adjustable
- Real-time display interval: ≤2 seconds
- Sensor status display:
  sensor status can be detected and displayed, such as short circuit or open circuit
- Range of upper and lower limit for alarm: -40℃~100℃
- Data export mode: USB

Elitech®

Electronic Control Box Series

ECB-500NET

Functions

◆ Cloudwatch ECB-500NET is designed for low and medium temperature cold storage with remote monitoring function. It features touch controller LTC-500 with big panel, displaying temperature, current and clock.
◆ Remote centralized monitoring of cold storage, convenient for management.
◆ Phase sequence, phase loss and overload protection.
◆ Big panel with color LED, touch buttons.
◆ Double sensor input, light and alarm output, buzzer alarm.

ECB-5060CN

Functions

◆ It adopts Elitech MTC-5060C temperature controller and has the functions of cooling, defrost, protecting compressor current and voltage, RS-485 communication.
◆ It can also be used as control terminal with an Elitech trunk module RCW-1/2 configured to access to internet, thus monitoring and setting remotely.

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Since 1996

Electronic Control Box Series

ECB-1000Q

Application

Small cold storage in freezing and refrigerating industry.

Functions

- ◆Temperature measurement and display, cooling, defrosting, fan, light, alarm.
- ◆Directly drive single phase 3HP (220VAC) compressor load.
- ◆Energy-saving mode at night.
- ◆Real-time clock controls defrosting and displays time simultaneously.
- ◆Six buttons; manual on/off; blue large LED; display of running status indicator.
- ◆System password protection avoids misoperation.
- ◆Integrated design—easy to operate; waterproof cover—convenient to operate and debug.

Product size: 265 * 167.5 mm

ECB-2010/220/2030

Application

Small and medium size refrigerated and freezing storage.

Functions

- ◆Modularized combined-type electric control box in plastic housing; large display panel; touch buttons.
- ◆Innovative combined design allows free expansion of control units without limit, easy upgrading of functions and quick response to clients' demands.
- ◆Specially designed for 3.8KW/5.5KW/7.5KW control systems of refrigerating units. Centralized control of all the units, including compressor, fan, defrost, light and alarm.
- ◆Flame retardant housing; simple and elegant appearance. Compared with metal housing, it has better insulating property, so it is more reliable and secure.
- ◆With functions of current display, overload, phase loss, three-phase imbalance, phase sequence protection, and high/low voltage alarm.
- ◆The non-business hour mode helps to save energy at night. Business hour mode can be set via the clock, reducing energy consumption of cold storage.

Product size: 329 * 380 * 140 (mm)

ECB-2020/2030

ECB-2010

ECB-2020

ECB-2030

ECB-5080 ECB-5060

Application

Medium and low temperature cold storage and quick-cooling storage in freezing and refrigerating industry.

Functions

- ◆Optimal design specially for refrigerating units.
- ◆Great human-computer interface; easy to operate; intelligent and simple to use.
- ◆Double screens to display current cold storage temperature and temperature set-point.
- ◆With stable and reliable property and high cost performance.

Product size: 300 * 400 * 150 (mm)

ECB-5060

Application

Medium and low temperature cold storage and quick-cooling storage in freezing and refrigerating industry.

Functions

- ◆Great human-computer interface; easy to operate; intelligent and simple to use.
- ◆Double screens to display current cold storage temperature and temperature set-point.

Product size: 300 * 400 * 150 (mm)

ECB-5080

www.e-elitech.com
Since 1996

Vehicle Air Condition Controllers (engineering vehicles)

ACT-100

Application

For engineering vehicles, such as small excavators, bulldozers, etc.

Functions

- Windshield switch has strong loading capacity, up to 16A at maximum.
- A positioner is added to the temperature knob, which can prevent excessively strong twisting force.
- The exclusive protection seal has good dustproof and waterproof effect.
- Handsome and artistic appearance can improve the overall decoration of vehicles.

Technical parameters

- Front panel size: 105 * 65 (mm)
- Mounting size: 89 * 49 (mm)
- Mounting boundary: 90 * 42 * 61 (mm)
- Operating voltage: 24V/12V
- Operating current: 100mA (Max)
- Input/output port:

  Basic input:

  defrost temperature sensor

  Basic output:

  Compressor: 5A (Max)
  Condensing fan: 15A (Max)
  Wind at high speed: 16A (Max)
  Wind at medium speed: 16A (Max)
  Wind at low speed: 16A (Max)
- Temperature measuring accuracy: ±1.5℃
- Temperature control range: 3℃~18℃
- Operating temperature: 0℃~55℃
- Relative humidity: ≤90%
- Ambient pressure: 86~106Kpa
- Storage temperature: -30℃~70℃

Elitech®

ACT-003

Application

Engineering vehicles, such as excavators, loaders, etc. e.g. XCMG excavators and Zoomlion excavators.

Functions

- Precise control.
- Strong anti-interference capacity but no interference to the outside world.
- Short-circuit protection.
- Blue backlight for buttons, simple appearance.

Technical parameters

- Front panel size: 180 * 65 (mm)
- Mounting size: 197 * 32.5 (mm)
- Mounting boundary: 174 * 59 (mm)
- Operating voltage: 24VDC, nominal operating voltage: 24VDC
- **Input/output port:**

Basic input:	**Basic output:**
Defrost temperature sensor	Compressor (800mA Max)
Return air temperature sensor	Wind speed with stepless change (800mA Max)
Pressure switch signal	Head motor drive 1 (800mA Max)
Voltage detection signal	Head motor drive 2 (800mA Max)
Automobile power supply (storage battery)	Pressure switch (800mA Max)
Water valve feedback	Foot motor drive in defrosting 1 (800mA Max)
	Foot motor drive in defrosting 2 (500mA Max)
	Fresh air motor 1 (500mA Max)
	Fresh air motor 2 (500mA Max)
	Water valve 1 (500mA Max)
	Water valve 2 (500mA Max)

- Temperature measuring accuracy: ±1℃
- Display resolution: 0.5℃
- Temperature control range: 18℃~32℃
- Operating temperature: -30℃~70℃
- Relative humidity: 25%~75%
- Ambient pressure: 86~106Kpa
- Storage temperature: -40℃~75℃

Vehicle Air Condition Controllers

NEV-B12

Application

New energy electric coaches and refrigerated trucks.

Functions

Air regulation, cooling, heating, temperature adjustment, fresh air, power-off memory, high and low pressure failure alarm for refrigerant, power voltage detection, indoor temperature display, mode switch and corresponding LED display, etc.

Technical parameters

- Nominal operating voltage: 24VDC
- Input/output port:

Basic input:
Live wire (220V)
High pressure signal input
Low pressure signal input
Defrost temperature sensor
Return air temperature sensor
Condensing temperature sensor
Pressure switch
Voltage detection signal
Automobile power supply (24V)

Basic output:
Pressure signal circuit
Evaporator fan at high speed (220mA, 1A Max)
Evaporator fan at medium speed (220mA, 1A Max)
Evaporator fan at low speed (220mA, 1A Max)
Hot water valve output (220mA, 1A Max)
Linked switch S1
Linked switch S2
Compressor control signal F1 valve
Compressor control signal F2 valve
Compressor control signal F3 valve

- Temperature measuring range: 2℃~60℃
- Temperature measuring accuracy: ±1℃
- Display resolution: 0.5℃
- Temperature control range: 10℃~30℃
- Operating temperature: -30℃~70℃
- Relative humidity: ≤90%
- Ambient pressure: 86~106Kpa
- Storage temperature: -40℃~85℃

ACT-002

Application

For coaches and city buses, such as Cranton and Haiger coaches.

Functions

- Heating, cooling, temperature setting, inner and outer air cycle, air regulation, defrosting.
- Inner temperature and defrosting temperature display, refrigerant failure, high and low voltage alarm of power supply, sensor failure alarm.
- Waterproof grade reaches IP65 and sealing technology is used for juncture.
- Static-free paint is sprayed with its rust-proof and anti-static grade up to 15KV.
- Thickened iron case has strong impact resistant capacity.

Technical parameters

- Front panel size: 140 * 78 (mm)
- Mounting size: 128 * 67 (mm)
- Mounting boundary: 113 * 60 * 49 (mm)
- Operating voltage: 18~32VDC, nominal operating voltage: 24VDC
- Operating current: 200mA (Max)
- Input/output port:

Basic input:
Defrost temperature sensor
Return air temperature sensor
Pressure switch signal
Voltage detection signal
Automobile power supply (storage battery)

Basic output:
Compressor clutch (800mA Max)
Wind at high speed: (800mA Max)
Wind at medium speed: (800mA Max)
Wind at low speed: (800mA Max)
Hot water valve output: (800mA Max)
Fresh air motor: (800mA Max)

- Temperature measuring range: -30℃~50℃
- Temperature measuring accuracy: ±1℃
- Display resolution: 0.5℃
- Temperature control range: 15℃~30℃
- Operating temperature: -30℃~70℃
- Relative humidity: ≤90%
- Ambient pressure: 86~106Kpa
- Storage temperature: -40℃~85℃

DC-DC/AC-DC
Power Converter for High-Power Vehicles

Application

Pure electric vehicle, hybrid electric vehicle (HEV), minibus, coach, etc.

Functions

- ◆Wide voltage input range; various voltage output ranges
- ◆Adopts military-grade and vehicle-grade components; design from US Silicon Valley
- ◆Protection grade: IP67; compact size; high conversion ratio

Technical parameters

Power	Input voltage	Output voltage	Cooling mode	Control	Wiring method
1.2KW	108~120VDC	12VDC	National cooling Air cooling Water cooling (selectable)	CAN communication Enable control (selectable)	Wiring Terminal Connector (selectable)
1.5KW	108~120VDC	24VDC			
2KW	200~880VDC	12VDC			
	200~880VDC	24VDC			
	200~880VDC	48VDC			
3KW	200~880VDC	24VDC			
	200~880VDC	48VDC			
	220VAC	60~100VDC			
5KW	200~880VDC	24VDC			
	200~880VDC	48VDC			

X Series Compressor Inverter Controllers

Application

This series are co-developed with YASKAWA and dedicated to coach A/C systems.

Functions

- ◆Modular design: easy for disassembly and convenient for maintenance
- ◆Adopt international RC485 communication interface and standard MODBUS protocol
- ◆Built-in EMI filter can efficiently reduce electromagnetic interference.
- ◆Compact in size, space saved
- ◆Common DC bus can stabilize the voltage of each inverter DC bus
- ◆The panel can be dismounted. The standard panel can monitor the state of the inverter.
- ◆With PLC function: simple PLC form can be programmed
- ◆Power range: 18.5KW~7.5KW

Technical parameters

Voltage class	Inverter model	Dimension													
		W1	H1	W	H2	D	t1	H5	D1	H	H4	H3	H6	d	G.W. (kg)
Three phase 400V	X-18	122	234	140	248	140	5	13	55	254	13	6	1.5	M5	3.8
	X-23	122	234	140	248	140	5	13	55	254	13	6	1.5	M5	3.8
	X-31	160	270	180	284	143	5	13	55	290	15	6	1.5	M5	5.2
	X-38	160	270	180	284	163	5	13	75	290	15	6	1.5	M5	5.5

Controllers for Industrial System Cooling

T-503

Application

Machine tools, laser gear and electrical cabinet air conditioners.

Functions

◆Two channels of temperature sensors are used to adjust water temperature and monitor room temperature.
◆Two channels of control output are used to control compressor and refrigerant solenoid valve.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

Technical parameters

◆Product size: 75 * 34.5 * 85 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 24 VDC-20 /+10%
◆Overall power consumption: <3W
◆Input/output port:

Control output		Signal input	
Compressor	Solenoid valve	Room temperature	Water temperature
16 A	10 A	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -20℃~50℃
◆Temperature measuring accuracy: ±1℃
◆Display resolution: 0.1℃
◆Temperature control range: -20℃~40℃

ECS-160

Application

Machine tools, laser gear and electrical cabinet air conditioners.

Functions

◆Two channels of temperature sensors are used to adjust liquid temperature and monitor ambient temperature.
◆Three channels of switches are used to Over/under-voltage, pump overload and phase loss detection.
◆Multiple channels of control output are for cooling, liquid pump and external alarm control.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.
◆One-key reset; rapid adjustment of controller parameters.
◆Quick connect terminal provides convenience for production and after-sale service to professional equipment manufacturers.

Technical parameters

◆Product size: 78.5 * 34.5 * 82 (mm)
◆Mounting size: 71 * 29 (mm)
◆Operating voltage: 220VAC±10%, 50/60Hz
◆Overall power consumption: <3W
◆Input/output port:

Control output			Signal input					
Cooling	Liquid pump	Alarm	Liquid temperature	Ambient temperature	Over/ under-voltage detection	Pump overload detection	Phase loss protection	Buzzer beep (optional)
30 A	5 A	5 A	√	√	√	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -50℃~90℃
◆Temperature measuring accuracy: ±1℃(-40℃~50℃); ±2℃(50℃~70℃); ±3℃(other)
◆Display resolution: 0.1℃
◆Temperature control range: -50℃~50℃

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T-506

Application

Machine tools, laser gear and electrical cabinet air conditioners.

Functions

◆Two channels of temperature sensors are used to adjust water temperature and monitor room temperature.
◆Four channels of control output are used to control compressor, solenoid valve, electric heating rod and alarm.
◆Multiple operating modes: intelligent control mode, constant temperature mode, parameter setting mode.
◆Manual reset to default parameters.
◆With temperature sensor self-test function, multiple protection and alarm modes are available in case fault is detected.

Technical parameters

◆Panel size: 92 * 44 (mm)
◆Operating voltage: 220VAC/110V±10%, 50/60Hz
◆Overall power consumption: <3W
◆Input/output port:

Control output				Signal input		
Compressor	Solenoid valve	Electric heating rod	Alarm	Room temperature	Water temperature	Alarm signal
16 A	10 A	16 A	3 A	√	√	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

◆Temperature measuring range: -45℃~99.9℃
◆Temperature measuring accuracy: ±1℃(-30℃~50℃); ±2℃(other)
◆Display resolution: 0.1℃
◆Temperature control range: -45℃~99.9℃

T-507

Application

Laser machines.

Functions

◆Measure and display temperature.
◆Electromagnetic flowmeter input; display of instantaneous flow rate.
◆Display real-time conductivity.
◆Three phase sequence detection; current measurement, display and overload protection.
◆Support MODBUS-485 communication.
◆Select phase sequence detection of three-phase 380V or three phase 220V by toggle switch.
◆Select control logic T-507-1or T-507-2 by toggle switch.
◆Split-type: flexible and convenient for installation.

Technical parameters

◆Panel size: 92 * 44 (mm)
◆Overall power consumption: <10W
◆Input/output port:
◆Operating voltage: 220VAC, 50/60Hz

Control output												
Comp-ressor	High-temp water pump	Low-temp water pump	Conden-sing fan	Solenoid valve	Low-temp refrigerant	Low-temp heating rod	Crank-shaft heater	High-temp cooling	High-temp heating rod	Lower limit of conductivity	Alarm	Buzzer
20 A	20 A	10 A	10 A	16 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	√

Signal input															
Room temp	Low-temp water temp	High-temp water temp	Dischar-ge temp	Flow pulse 1	Flow pulse 2	Conduc-tivity	Low-temp water pump current	High-temp water pump current	Compres-sor current	Water level switch	Condensing high-voltage switch	Condensing low-voltage switch	Backup switch of water flow 1	Backup switch of water flow 2	485 commu-nication
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

◆Temperature measuring range:
Room/water temperature sensor (high/low temperature): -25℃~100℃, resolution: 0.1℃
Compressor discharge temperature sensor: 0℃~140℃,resolution: 1℃
Conductivity: 0.1~500us/cm, resolution: 0.1us/cm
Electromagnetic flow pulse (two channels): 0.1～200L/min Current: 0~50A, resolution: 0.1A
◆Temperature measuring accuracy:
Room/water temperature sensor (high/low temperature): ±1℃(-25℃~60℃); ±2℃(other)
Discharge temperature sensor: ±2℃(-40℃~125℃); ±3℃(other)
Current measuring accuracy: ±2% (within the nominal range of mutual inductor), ±1A(0~20A)
◆Temperature control range: -25℃~100℃
◆Operating ambient temperature: 0℃~60℃

Aquarium Controllers

ATC-400+

Application

The temperature timing controller is specially developed for pet market.

Functions

- Temperature measurement, display and control; light control.
- Clock in 24 hour system; day mode and night mode; running period can be set freely.
- Switch between cooling and heating mode via menu; delay protection. (It delays 3 minutes during cooling.)
- Sensor fault alarm; over temperature limit alarm.

Technical parameters

Product size:

- Display box: 144 * 36 * 21 (mm), control box: 106 * 57 * 40 (mm)
- Operating voltage: 220VAC±10%, 50/60Hz
- Overall power consumption: <3W
- Input/output port:

Control output		Signal input
Cooling/heating	Light	Cabinet temperature
10 A	10 A	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Temperature measuring range: 0℃~50℃
- Temperature measuring accuracy: ±1℃
- Display resolution: 0.1℃
- Temperature control range: 0℃~50℃

ATC-700+

Application

Humidity control in fields of weather, environmental protection, tobacco, pharmacy, chemical industry, grain depot, textile, papermaking, incubation, medical treatment, etc.

Functions

- Humidity measurement, display and control; light control.
- Clock in 24 hour system; day mode and night mode; running period can be set freely.
- Switch between humidification and dehumidification mode via menu; humidity is controlled by return difference.
- Sensor fault alarm; over humidity limit alarm.

Technical parameters

- Product size: Display box: 144 * 36 * 21 (mm), control box: 106 * 57 * 40 (mm)
- Operating voltage: 220VAC±10%, 50/60Hz
- Overall power consumption: <5W
- Input/output port:

Control output		Signal input
Humidification/dehumidification	Light	Humidity
10 A	10 A	√

(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

- Humidity measuring range: 0%~99%
- Humidity measuring accuracy: ±10%
- Display resolution: 1%
- Humidity control range: 0%~99%

Optional Parts

CPK-30

Application

Match with ECS Refulgence Series controllers. It can prevent controller failure caused in condensate water dripping and cleaning refrigerator

Functions

Rear waterproof grade: IPX4; It can effectively impreove controllers' protection grade and reduces customers' after-sales repair fees.

Waterproof housing CPK-50

Application

Match with ECS series controllers and prevent failure caused in condensate water dripping and refrigerator cleaning.

Functions

Its front panel is a transparent and shifting housing for installing a controller in. It integrates power button and light button. Its rear apron can effectively prevent condensing water dropping in. It has high protection grade and is convenient to install.

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Magnetic close to door switch

SS-1 SS-2

Application

Normally open typical switch,Embedded-installed,Widely applied to monitor doors and windows open and close.

Functions

◆Small size,easy to install,reliable performance,abrasion resistance,high temperature resistant
◆Safety sealed,workssteady.
◆Easy to install and adjust.

Technical parameters

◆Initial connect resistance: ≤ 150mΩ (Don't cables)
◆Max switching voltage: 200VDC
◆Max switching current: 500mA
◆Max switching power: 10W /12VA
◆Max carrycurrent : 1A
◆Break contacts dielectric hipot : 150VDC
◆Insulation resistance: 1000MΩ
◆Mechanical endurance: 100000000
◆Electic endurance: 100000 @100V,100mA
◆Operating temperature: -25℃~85℃
◆Storage temperature: -25℃~85℃
◆Shocks: 30g
◆Vibration: 20g
◆Waterproof grade: IP67
◆33mm≤sensing distance≤37mm action (SS-1)
◆30mm≤sensing distance≤40mm action (SS-2)
◆Not any Magnetic environment
Sensing distance <35mm,contacts close, sensing distance>35mm,contacts open

Optional Parts

Copy Card CPK-4

Application

Match with ECS Refulgence Series controllers. Used for quickly revising and managing parameters in batch mode.

Functions

◆Convenient for manufacturers and distributors' production and after-sales maintenance.
◆Special software configured; download or upload copy card data directly via computer USB.
◆Freely add the control parameters of Refulgence series controllers by loading EXCEL sheet.
◆Administrate controller parameters of various cabinets in file.
◆Auto read of the stored parameters in the copy card by software.
◆Software language: Chinese, English; compatiable with WIN7, WIN8 and WIN10.

Quick-Freezing Cabinet Sensor

Application

Quick-freezing cabinets.

Functions

◆Food contact materials; energy saving and environment friendly
◆Easy to install; drawing resistance; bending resistance
◆Plug-in probe can reach inside of goods, and sense temperature quickly and accurately.

Elitech®

Temperature Sensor

Functions

◆Adopt TPE material with high elasticity and strength; apply to low temperature environment; conform to environment protection requirements.
◆Adopt imported chip from Japanese with high accuracy, small annual drift value and long service life.
◆Withstand 3000 times of high and low temperature shock; reliable packaging; durable in use.

Various lengths for temperature sensors (1.5m, 2m, 2.5m, 3m, etc.)

Description	Measuring range	Protection grade
NTC sensor in sealant Bulb size: 5*6*15mm; TPE material	-50 ~ +105℃	IP67
NTC sensor Bulb size: Φ5*25, round bottom, stainless steel; TPE material	-50 ~ +105℃	IP67
PT1000 (PT deep temperature) sensor Bulb size: Φ5*30, stainless steel in soft; PTFE material	-95 ~ +105℃	IP67