

**22 year expertise in
refrigeration control**

Refrigeration & Industrial Control Business Unit
Product Selection Guide
Since 1996

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For more details, please visit our website: <http://www.e-elitech.com>.

<http://www.e-elitech.com>



The largest microcomputer temperature controller production base in Asia.

New Production Base
R&D Center



Area:110,000 ㎡



Elitech



Capital	USD 1,837,500
Revenues	USD 45 million in 2017
Employee number	723
R&D Engineer	150
QC Engineer	50
Annual Production Capacity of Controller	4 million pcs
Annual Production Capacity of Leak Detector	200,000 pcs
Annual Production Capacity of data logger	2 million pcs
Business	Cold chain(network) monitoring system Automobile air conditioning control system New energy automobile air conditioning system Temperature & humidity control system Temperature & humidity data logger Electrical control system for refrigerant unit Industrial refrigeration control system
Branches	ELITECH TECHNOLOGY Inc in USA silicone valley ELITECH(UK) LIMITED Shanghai Environment Technology Co.,Ltd Nanjingcold chain networking Research Institute Co Ltd



Siemens has built strong relationships maintaining high energy and mission performance, more so in Personen (Electrical), Shipping, Water, Consumer Energy & Gas. Our investments in wind energy in the same industry community and contributing to the green market of the power industry.



For more details see People Selection Agreement 2019.

Company Certification



The company has received certification of their sites, facilities and departments for ISO 9001, ISO 14001, ISO 45001, ISO 50001, the number of sites assessed in each year is a company's total number of the three areas.

Siemens has established four business divisions (Healthcare, Infrastructure & Cities, Digital Industries Software, Energy) and eight business units. From these the following business units have Business Unit: Wind Power Business unit, Infrastructure Business unit, Building Business unit, Energy Sector Business unit, Infrastructure Business unit, Building Business unit, Energy Sector Business unit, Automotive Products Business unit and New Power and Business unit.

IoT in Cold Cabinet Saves Your Money and Energy

Terminal + Channel + APP + Platform = Overall IoT Solution

Cold Room Networking Solution

wireless connection, high penetration
Support hundreds of cold cabinets to unit and network
Low replacement cost, easy to implement



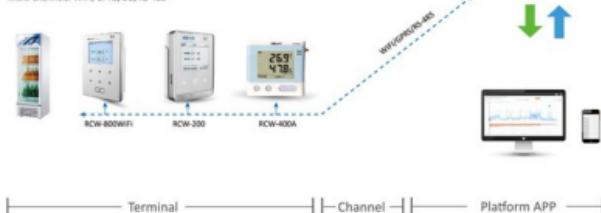
Traditional Cold Cabinet Networking Solution

Wireless connection, quick deployment
Powered by battery, long standby time



Convenience Store Networking Solution

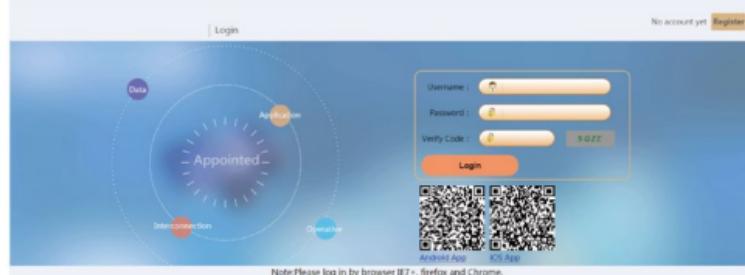
Multi-channels: WiFi, GPRS, 3G, RS-485



Elitech Cloud Login

Elitech Cloud focuses on monitoring the safety of food and pharmaceuticals in cold chain transport and features the functions of information collection, sensing, communication, control and cloud computing, etc. It provides supervision, diagnosis, pre-warning and control on the whole cold chain stages of food and pharmaceuticals, such as production, storage, transport and distribution. Via low-delay communicating mechanism and remote control system protocol with massive nodes, Elitech cloud can offer various cold chain PaaS and SaaS for food and pharmaceutical enterprises, refrigeration industry and government supervision.

Web Login www.i-elitech.com



APP Login



iOS

Android

EKW-3030/1000

Cloud Control

**Application**

Used on freezing and refrigerating, greenhouses, hatching and culture industries and etcetera.

Technical parameters

- ◆ Power supply: 220VAC±10%, 50/60Hz
- ◆ Temperature measurement range: -40°C~+99°C
- ◆ Temperature control range: -40°C~+85°C
- ◆ Temperature measuring accuracy: ±1°C±0.5 digit (-30°C~+50°C); ±2°C±0.5 digit (others)
- ◆ Display resolution: 0.1°C/1°C
- ◆ Operating voltage: 220VAC±10%, 50/60Hz
- ◆ Operating ambient temperature: -10°C~+55°C
- ◆ Relative humidity: 10%~90% (non-condensing)
- ◆ Storage temperature: -25°C~+75°C
- ◆ Temperature accuracy: ±1°C
- ◆ Sensor type: NTC sensor
- ◆ Case material: ABS anti-flaming plastic case

Specifications

Product size: 51* 100*82.5mm

Mounting size: 71 * 29mm

Product functions compare table

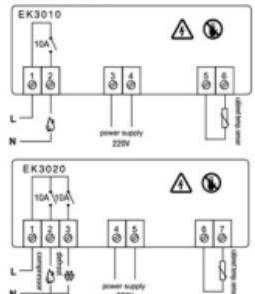
Cloud control EKW series		
	EKW-1000	EKW-3030
Cooling	●	●
Heating	● (Auto)	
Defrosting		●
Fan		
Alarm	buzzer	buzzer
Water pump		
Sensor	1	2
Networking method*	GPRS	GPRS

EK-3010 EK-3020**Technical parameters**

- ◆ Temperature measuring range: -40°C~+99°C
- ◆ Temperature control range: -40°C~+85°C
- ◆ Temperature measuring accuracy: ±1°C±0.5 digit (-30°C~+50°C); ±2°C±0.5 digit (others)
- ◆ Display resolution: 0.1°C/1°C
- ◆ Operating voltage: 220VAC±10%, 50/60Hz
- ◆ Operating ambient temperature: -10°C~+55°C
- ◆ Relative humidity: 10%~90% (non-condensing)
- ◆ Storage temperature: -25°C~+75°C

Specifications

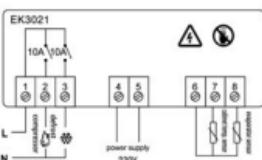
- ◆ Product size: 78.5(L) * 34.5(H) * 82(D) mm
- ◆ Mounting size: 71(L) * 29(H) mm

Wiring diagram**Technical parameters**

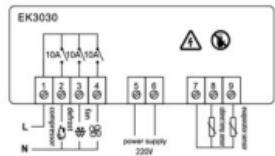
- ◆ Temperature measuring range: -40°C~+99°C
- ◆ Temperature control range: -40°C~+85°C
- ◆ Temperature measuring accuracy: ±1°C±0.5 digit (-30°C~+50°C); ±2°C±0.5 digit (others)
- ◆ Display resolution: 0.1°C/1°C
- ◆ Operating voltage: 220VAC±10%, 50/60Hz
- ◆ Operating ambient temperature: -10°C~+55°C
- ◆ Relative humidity: 10%~90% (non-condensing)

Specifications

- ◆ Product size: 78.5(L) * 34.5(H) * 82(D) mm
- ◆ Mounting size: 71(L) * 29(H) mm

Wiring diagram**Table of EK series functions**

	Feature	EK-3010	EK-3020	EK-3021	EK-3030	EK-3030E
Refrigeration	●	●	●	●	●	●
Defrost		●	●	●	●	●
Fan					●	●
Alarm	Buzzer	Buzzer	Buzzer	Buzzer	Buzzer	Buzzer
Input	Sensor	1 piece	1 piece	2 pieces	2 pieces	2 pieces
RS485					●	●



EK-3030E

RS-485

**Application**

The controller is mainly used in industrial refrigeration. It adopts Modbus communication protocol and can communicate with PLC devices etc.

Technical parameters

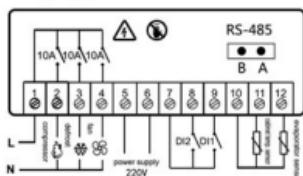
- ◆ Temperature measuring range: -40°C ~ +99°C
- ◆ Temperature control range: -40°C ~ +85°C
- ◆ Temperature measuring accuracy: ±1°C ±0.5 digit (-30°C ~ +50°C); ±2°C ±0.5 digit (others)
- ◆ Display resolution: 1°C/0.1°C (integer/decimal switch)
- ◆ Sensor type: NTC (10KΩ/25°C, B value 3435K)

Specifications

Product size: 85 * 35 * 63.8 mm

Mounting size: 71 * 29mm

Length of sensor and wire: 2m

Wiring diagram**ECB-1000Plus**

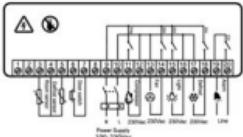
Cloud Control

**Applications**

Applicable for small refrigerated storage in refrigeration industry

Technical parameters

- ◆ Working voltage: 100~256VAC, 50/60Hz
- ◆ Power consumption: less than 10W
- ◆ Temperature measurement range: -45°C ~ +99°C
- ◆ Accuracy: ±1°C
- ◆ Temperature control range: -40°C ~ +99°C
- ◆ Resolution: 0.1°C/1°C or 1F
- ◆ Output capacity of relay:
 - For compressor, 50A/240VAC, can drive up to single-phase 3p load
 - For defrost, 30A/240VAC
 - For fan, 16A/240VAC
 - For light, 16A/240VAC
 - For alarm, 8A/220VAC
- ◆ Storage temperature: -20°C ~ -75°C
- ◆ Ambient temperature: -10°C ~ 65°C
- ◆ Sensor type: NTC (10KΩ/25°C, B value 3435K)
- ◆ Overall dimension: 265mmx167.5mm
- ◆ Length of sensor: 2m (including probe)

Wiring diagram**ECB-2010/2020/2030NET**

Cloud Control

**Applications**

Suitable for small and medium-sized medium and low temperature refrigeration storage; could realize automatic control on the refrigerating unit.

Functions

- ◆ ECB-2010: refrigeration only;
- ◆ ECB-2020: refrigeration and defrost;
- ◆ ECB-2030: refrigeration, defrost and fan.
- ◆ Creative combination design, freestyle extension of control unit is easy for function upgrading, and quick respond to customizing demands from customers;
- ◆ Specially designed control system for the refrigerating unit with 3.5kW/5.5kW/7.5kW, which can realize integrated control of all units including the compressor, fan, defrosting unit, light and alarm unit;
- ◆ The ABS anti-flaming engineering plastic case come with concise and elegant appearance; presenting safer and more reliable insulating property when compares to metal cabinet;
- ◆ The RS-485 communication interface enables users to not only connect and communicate with PLC and other equipment but also realized the centralized monitoring of the refrigeration storage through upper computer software;
- ◆ Certified by the HACCP;
- ◆ It consists an business/opening/shop mode, which can realize eco night energy conservations; clock settings and business/opening/shop mode could reduce refrigeration storage's energy consumption.

ECB-5060CN Series

Guaranteed food and drug safety by all-time awareness on the cold storage status, wherever and whenever possible; Refrigeration unit real-time monitoring and recordings on its temperatures, current, alarms and other working status ensuring a stable, reliable and high-performance operation for the refrigeration system; Remote setting and control via cell phones and other intelligent terminals; Intelligent diagnosis, smart early warning alarms and remote technology support not only improve repairs to maintenance but also improve user experiences and reducing operational costs.

Application

Suitable for freezing and refrigeration industrials, middle/low temperature and quick freezing cold storage.

Functions

- ◆ MTC-5060C temperature controller is adopted;
- ◆ Cooling and defrosting function, compressor over-current and voltage protection;485 communication function;
- ◆ Capable of remote setting and control by using the product as the terminal device that connect the supported Elitech RCW-2 relay module into the network.

ECB-720WiFi

ECB-720WiFi electric cabinet adopts our company's WiFi networking temperature controller LTC-720. The user-friendly and smart man-machine interface is easy to operate without relying on the manual. It is displayed by dual screens and the current temperature can be remotely checked and set. With its performance stable and reliable, it is a highly cost-effective multi-functional electric control cabinet.

Application

Applicable for the remote monitoring of small and medium cold storage with low or medium temperature.

Technical parameters

- ◆ It has electric current display and WiFi networking function, applicable for controlling the temperature of the cold storage and remote operation.
- ◆ dual temperature sensor can control the temperature of the compressor and defroster respectively, which is safer and more energy-saving.
- ◆ It can conduct separate control on the compressor and defroster.
- ◆ It has lacking-phase protection, phase-sequence protection and three-phase unbalance protection functions.

Specifications

Overall dimensions: 340*420*135(mm)

ECB-5080S**Standard Electric Control Cabinet****Application**

Suitable for refrigeration industry, medium and low temperature refrigeration and quick freezing storage.

Functions

- ◆A refined and concise controller MTC-5060; dual temperature sensors; it can realize individual control over the compressor, defroster and fan;
- ◆Compressor startup delay is adjustable;
- ◆The self-developed motor product;
- ◆Electric current display; proportionally compressor startup or shutdown throughout sensor fault;
- ◆Manual/automatic rotary switch control;
- ◆Convenient operations, stable and reliable performance.

RCW-2/2C**Elitech Relay Module**

RCW-1/2



RCW-2C

Technical parameters

- ◆ Operating voltage: (100-240) VAC, 50-60Hz
 - ◆ Operating ambient temperature: -20°C~65°C
 - ◆ Data transmission: temperature and humidity data is transmitted to server via 3G network.
 - ◆ Communication interface: RS485
 - ◆ Indicator: bi-color LEDs (red and green)
 - ◆ Alarm: SMS, cloud platform
 - ◆ Radio frequency: WCDMA
 - ◆ RS485 load capacity: 16 pieces of terminal devices at maximum
 - ◆ RS485 communication address range: 1-16.
- Note: The terminal devices connected to the same module cannot have the same address.
- ◆ SIM card: micro SIM card in WCDMA network
 - ◆ Antenna type: sucker antenna
 - ◆ Product size: L: 80+8*2 (mounting hole) ± 2mm, W: 71±2 mm, H: 62±2 mm.

RCW-2C

- ◆ Mounting method: Magnet adsorption, 3M glue
- ◆ Networking method: dedicated GPRS IoT card
- ◆ Platform website: www.e-elitech.cn

ETC-974

Refrigeration Manual defrost Fan °C/°F 2NTC Temperature Calibration



The product is widely used in all kinds of cold storage, low-temperature freezers, and kitchen refrigerators.

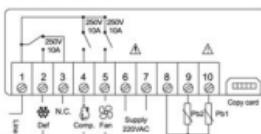
Technical parameters

- ◆ Temperature measuring range:NTC:-50~+110 °C (-50~+230°F) ; PTC:-55~140°C(-67~+284°F) ;
- ◆ Temperature controlling range:-5~+55 °C ;
- ◆ Relay contact output capacity:10A / 250VAC ;
- ◆ Working voltage:230VAC ± 10% , 50 / 60Hz ;
- ◆ Resolution:0.1°C ;
- ◆ Sensor:NTC (10K2 / 25 °C , B-value 3435K) , PTC (9900 / 25 °C)

Accessories

2 probes, 1 operation instruction, 2 elastic tabs

Wiring diagram

**ETC-961**

Refrigeration Manual defrost °C/°F Alarm 1NTC Temperature Calibration



The product is widely used in drinks cabinets, display cabinets and kitchen cabinets.

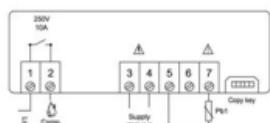
Technical parameters

- ◆ Machine dimensions : 77*32*58 (mm)
- ◆ Mounting dimensions:71 *29(mm)
- ◆ Operating voltage: 230VAC ±10% 50 / 60Hz ;
- ◆ Relay rated operating current:8A/220VAC;
- ◆ Temperature control range:-50 °C ~ 99 °C ;
- ◆ Display resolution:1 °C/0.1 °C (with integer and fractional switching mode) ;
- ◆ Temperature measurement accuracy:±0.5°C(-15 °C~+30 °C)
others , ± 1 °C ;
- ◆ Sensor type : NTC (-50 °C~+120 °C) ;
PTC (-55 °C~+150 °C) .

Accessories

1 probe, 1 operation instruction, 2 elastic tabs

Wiring diagram

**ETC-902**

Refrigeration °C/°F 1PTC/2NTC Temperature Calibration



The product is widely used in the beverage cabinets, display cases, kitchen cabinets, etc.

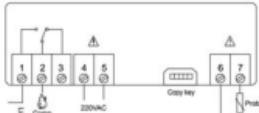
Technical parameters

- ◆ Working voltage : 230VAC ± 10% , 50 / 60Hz ;
- ◆ Working temperature controlling range:-50°C~+99°C ;
- ◆ Resolution:1°C/0.1°C (switch between Integer mode and decimal mode) ;
- ◆ Accuracy:± 0.5 °C (-15 °C~+30 °C) , others , ± 1 °C ;
- ◆ Sensor type : NTC (-50°C ~+120°C) ;
PTC (-50°C ~+150°C) .

Accessories

1 probe, 1 operation instruction, 2 elastic tabs

Wiring diagram

**ECS-180neo**

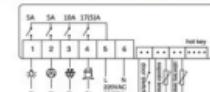
Cooling Defrost Fan Light Door switch 3NTC Temperature °C/°F Calibration



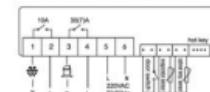
Technical parameters

- ◆ Product size: 76.5 * 34.5* 82 (mm)
- ◆ Mounting size: 71 * 29 (mm)
- ◆ Operating voltage: 220VAC±10%, 50/60Hz
- ◆ Overall power consumption: <3W
- ◆ Temperature measuring range: -50°C~+90°C or -58°F~+194°F
- ◆ Temperature measuring accuracy: ±10°C(-40°C~+50°C);
±2°C(51°C~70°C); ±3°C(others)
- ◆ Display resolution: 0.1°C
- ◆ Temperature control range: -50°C~+85°C or -58°F~+185°F

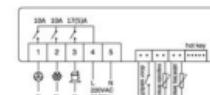
Wiring diagram (Quick connect type)



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



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

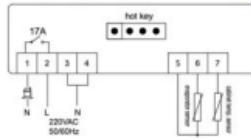


ECS-180neo A(17 10 10 00)S24.B

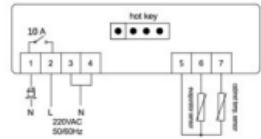
ECS-6011neo (Compact type)

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

Wiring diagram (Quick connect type)

Configuration 1



Configuration 2

Input/output port

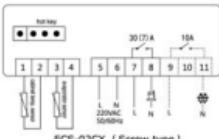
	Control output	Signal Input	
	Cooling	Cabinet temperature	Defrost temperature (optional)
Configuration 1	17 A	✓	✓
Configuration 2	10 A	✓	✓

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

ECS-04CX, ECS-02CX

**Technical parameters**

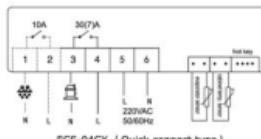
- Product size: 78.5 * 34.5* 82 (mm) (ECS-04CX), 78.5 * 34.5* 74 (mm) (ECS-02CX)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60Hz
- Overall power consumption: <3W
- Product size: 78.5 * 34.5* 82 (mm) (ECS-04CX), 78.5 * 34.5* 74 (mm) (ECS-02CX)
- Mounting size: 71 * 29 (mm)
- Operating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

Wiring diagram (Quick connect type)

ECS-02CX (Screw type)

Functions

- Switch between cooling and heating mode via menu.
- Switch between °C and °F via menu.
- Two channels of temperature sensors are used to adjust cabinet temperature and control defrost.
- 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: ECS-04CX quick connect type/ECS-02CX traditional screw-type.



ECS-04CX (Quick connect type)

Input/output port

Serial code	Control output		Signal input	
	Cooling	Defrost(optional)	Cabinet temperature	Defrost temperature (optional)
A(17.10.00.00)S2	17A	—	✓	✓
A(38.10.00.00)S2	30A	—	✓	✓

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

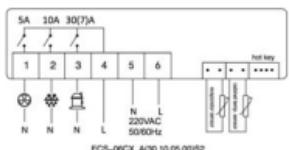
ECS-06CX

**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°C~+99°C or -50°F~+99°F
- Temperature measuring accuracy: ±1°C(-40°C~+50°C); ±2°C(50°C~70°C); ±3°C(others)
- Display resolution: 0.1°C/°F(-9.9~+9.9); 1°C/2°F(others)
- Temperature control range: -50°C~+99°C or -50°F~+99°F

Functions

- Switch between °C and °F 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.

Wiring diagram (Quick connect type)**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.)

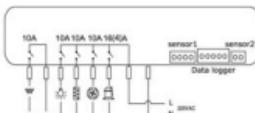
MEC-H10

**Application**

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

Technical parameters

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

Wiring diagram**Input/output port**

	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	✓	✓	✓	✓

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

LTC-55

**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.

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)	
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.)

LTC-80

**Application**

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

Technical parameters

- Product size: 225 * 58 * 17.5 (mm)
- Mounting size: 208 * 36 (mm)
- Operating voltage: 220VAC±10%, 50/60Hz
- Overall power consumption: <5W
- Temperature measuring range: -50°C~+90°C
- Temperature measuring accuracy: ±1°C (-40°C~+50°C); ±2°C(50°C~70°C); ±3°C(others)
- Display resolution: 0.1°C
- Temperature control range: -50°C~+85°C
- 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 C and T 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.

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.)

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.

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	✓	✓

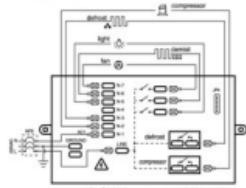
(Note: The table only lists the typical hardware configuration of this controller. For more details, please contact us.)

ETC-60HT**Application**

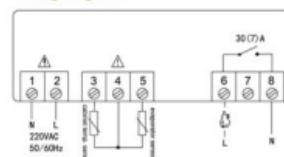
Various high-temperature cold storage, direct cooling refrigerators and high-temperature direct cooling equipment.

Technical parameters

- ◆ Panel size: 180 * 40 (mm)
- ◆ Mounting size: 140 * 33 * 27 (mm)
- ◆ Operating voltage: 220VAC±10%, 50/60Hz
- ◆ Overall power consumption: <10W
- ◆ Temperature measuring range: -40°C~+40°C
- ◆ Temperature measuring accuracy: ±1°C
- ◆ Display resolution: 1°C
- ◆ Temperature control range: -40°C~+40°C

Wiring diagram**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
- ◆ Temperature measuring range: -40°C~+70°C
- ◆ Temperature measuring accuracy: ±1°C (-40°C~+50°C); ±2°C (51°C~70°C)
- ◆ Display resolution: 1°C
- ◆ Temperature control range: -40°C~+50°C

Wiring diagram**Input/output port**

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.)

DHC-100+**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

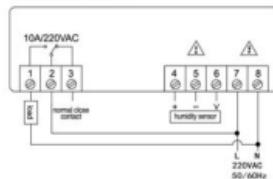
- One channel of humidity sensor is used to monitor humidity.
- One channel of output control is used for humidity control.
- Humidity control modes can be adjusted by parameters: humidification or dehumidification
- Multiple protection and alarm modes are available in case fault is detected.

Input/output port

Control output	Signal input
Humidity control	Humidity
10 A	v

**Technical parameters**

- Product size: 75 * 34.5* 85 (mm)
- Mounting size: 71 * 29 (mm)
- Operating voltage: 220VAC±10%, 50/60Hz
- Overall power consumption: <3W
- Humidity measuring range: 0% ~ 99% RH
- Humidity measuring accuracy: ±5%RH + 0.5 digit, (25°C); ±6% RH + 0.5 digit (10°C~40°C, 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**Cold Storage LED Light**

Save energy for your cold storage—80%

**Functions**

- Power supply: 220VAC, 50/60Hz; Power: 10W , 15W , 20W , 25W , 30W
- Damp-proof, 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 x 139.9 x 61.7 194 x 125 x 52	Fixed by 4 tapping screws or mounting bracket	-40 ~ 55°C	10 ~ 90% RH (no condensing)	-40 ~ 75°C (no condensing)	10 ~ 30% RH (no condensing)	≥ 50000
ledD-L-300mA-15W	15W				Fixed by 4 tapping screws or magnet					
ledD-L-300mA-20W	20W									
ledD-L-300mA-25W	25W									
ledD-L-300mA-30W	30W									

Pressure Tranducer



The product is widely used in various refrigerating units.

Technical Parameters

- ◆ Germany ceramic chip , special ceramic material , solid ceramic sensitive
- ◆ Pressure chips specialized for refrigeration systems ; anti - corrosion , shock diaphragm, with strong output signals and long term stability; resistance, good performance of strong anti-corrosion to refrigerant; they are 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 ensure stabler 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.

Type	Span	Accuracy	Voltage range
PA-1000-FS3-X1	-1 ~ 16 bar	1%	8 ~ 36VDC
PA-1001-FS3-X1	-1 ~ 40 bar		
PA-1002-FS3-X1	-0.5 ~ 11bar		
PA-1003-FS3-X1	-0.5 ~ 11bar		
PA-1004-FS3-X1	0 ~ 30bar		
PA-1005-FS3-X1	0 ~ 30bar		
PA-1006-FS3-X1	-0.5 ~ 7bar		

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 cabinets, etc.

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°C~120°C or
-58°F~248°F
- ◆ Temperature measuring accuracy: ±1°C(-40°C~50°C);
±2°C(51°C~70°C); ±3°C(other)
- ◆ Display resolution: 0.1 or 1 °C/°F
- ◆ Temperature calibration value: -5~5°C

Functions

- ◆ One channel of temperature for measurement.
- ◆ Two channels of temperature for measurement; double digital display (TPM-940A).
- ◆ Equipped with a compressor and power indicators (TPM-940A, TPM-940B)
- ◆ Measurement unit: °C/°F. 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 after-sale service to professional equipment manufacturers.

TPM-950/960/970



TPM-950



TPM-960



TPM-970

Application

Cake showcases, refrigerated cabinets, display cases, etc.

Functions

TPM-950

- ◆ Match with RefugeLine 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: $^{\circ}\text{C}$, 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 aftersales service to professional equipment manufacturers.

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 $^{\circ}\text{C}$ or -99~999 $^{\circ}\text{F}$
- ◆ Display resolution: 1 $^{\circ}\text{C}$ (-99 $^{\circ}\text{C}$ ~10 $^{\circ}\text{C}$); 0.1 $^{\circ}\text{C}$ (-9.9 $^{\circ}\text{C}$ ~99 $^{\circ}\text{C}$); 1 $^{\circ}\text{F}$

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 $^{\circ}\text{C}$ ~120 $^{\circ}\text{C}$ or -58 $^{\circ}\text{F}$ ~248 $^{\circ}\text{F}$
- ◆ Temperature measuring accuracy: ±1 $^{\circ}\text{C}$ (-40 $^{\circ}\text{C}$ ~50 $^{\circ}\text{C}$); ±2 $^{\circ}\text{C}$ (51 $^{\circ}\text{C}$ ~70 $^{\circ}\text{C}$); ±3 $^{\circ}\text{C}$ (others)
- ◆ Display resolution: 0.1 or 1 $^{\circ}\text{C}$ / $^{\circ}\text{F}$
- ◆ Temperature calibration value: -5~5 $^{\circ}\text{C}$

DST-30



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

TPM-950

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

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 $^{\circ}\text{C}$ ~150 $^{\circ}\text{C}$ (When the temperature is greater than 80 $^{\circ}\text{C}$ or less than -20 $^{\circ}\text{C}$, the sensor needs to be tailored.)
- ◆ Temperature measuring accuracy: ±1 $^{\circ}\text{C}$ (-20 $^{\circ}\text{C}$ ~80 $^{\circ}\text{C}$); ±2 $^{\circ}\text{C}$ (other)
- ◆ Display resolution: 0.1 $^{\circ}\text{C}$
- ◆ Operating environment: illuminance \geq 100Lux, humidity: 5~85%RH, temperature: -10~45 $^{\circ}\text{C}$

BT-3

**Features**

Dual way indoor/outdoor temperature display; with body comfort degree response; big LCD display, convenient to view data; clock alarm function; beautiful and fashionable.

Technical parameters

- ◆ Power supply: DC 1.5V one AAA size alkaline battery (optional);
- ◆ Measuring range:
Indoor temperature : -30 °C ~ 50 °C;
Outdoor temperature : -50 °C ~ 70 °C;
Relative humidity: 20% ~ 90% RH;
- ◆ Accuracy: temperature : ± 1 °C, Humidity : ± 5% RH
- ◆ Display size: 74 * 61.5 (mm)
- ◆ LCD screen size: 79 * 69 (mm)

WT-1B

**Features**

Pen styled, portable, lengthened metal probe, temperature memory, low power consumption, low battery indicating and sensor fault indicating , switch between °C / °F , widely applied to foodstuff industry.

Technical parameters

- ◆ Power : DC 1.5V LR44 button battery ;
- ◆ Measuring range : -50 °C ~ 300 °C (-58 °F ~ 572 °F) ;
- ◆ Resolution : 0.1 (2400 °F), 0.1 (others) ;
- ◆ Accuracy : ± 1 °C (-20 °C ~ 80 °C) ; ± 5 °C (others)
- ◆ Product size : φ20 * 207 (mm)

WT-9A

**Technical parameters**

- ◆ Temperature Measurement Range: -50°C ~ +300°C
- ◆ Resolution: 0.1°C
- ◆ Accuracy:
 - ±1°C (-20 °C ~ +70 °C)
 - ±2°C (-50 °C ~ -19 °C, 71 °C ~ 169 °C)
 - ±3°C (70 °C ~ 199 °C)
 - ±5°C (200 °C ~ 219 °C)
 - ±10°C (220 °C ~ 269 °C)
 - ±15°C (270 °C ~ 300 °C)
- ◆ Battery life: 1 year
- ◆ Sensor length: 160mm

SS-1 SS-2

Magnetic close to door switch

**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,workstable.
- ◆ 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
- ◆ Electric endurance: 100000 @100V,100mA
- ◆ Operating temperature: -25°C ~ 85°C
- ◆ Storage temperature: -25°C ~ 85°C
- ◆ Shocks: 30g
- ◆ Vibration: 20g
- ◆ Waterproof grade: IP67
- ◆ 33mm:sensing distances 37mm action (SS-1)
- ◆ 30mm:sensing distances 40mm action (SS-2)
- ◆ Not any Magnetic environment
- Sensing distance <35mm,contacts close, sensing distance>35mm,contacts open

WT-2

Features

Fashionable appearance , lengthened metal probe with lead wire , date keeping , switch between °C Max/Min, temperature memory, temperature upper and lower limit setting and exceeding temperature alarming, widely applied to HVAC and foodstuff industry .

**Technical parameters**

- ◆ Power : DC 1.5V AAA alkaline battery (optional)
- ◆ Measuring range : -50 °C ~ 300 °C (-58 °F ~ 572 °F)
- ◆ Resolution : 0.1 (-19.9 °C ~ 199.9 °C), 1 (others)
- ◆ Accuracy : ± 1 °C (20 °C ~ 80 °C) ; ± 5 °C (others)
- ◆ Product size : 59 * 105 * 19 (mm)

CLD-100**Application**

This detector is an economic and practical halogen detection device with latest leak detection technology. It is easy to operate, reliable in performance and compact in size.

Functions

- Detects all the refrigerants containing halogen.
- Adjusts sensitivity anytime to reach the best detection status automatically.
- Imported chip to dispose signals, with accurate detecting result.
- Internal high precision and stabilivolt IC, ultra-low power consumption circuit design, more stable operation, longer service life of batteries.
- Power voltage indication in bi-color;
- Exclusive designed sensor, high sensitivity and longer life.

Technical parameters

- Operation temperature: 0°C~52°C
- Response time: instant
- Detection mode: continuous, unlimited
- Reset time: 2~10s
- MAX sensitivity: 5g/yr
- Warm-up time: about 6s
- Battery life: about 20h
- Power supply: 4 AAA batteries (6VDC)
- Conform to SAE_J1627 and EN14624 standards
- Conform to RoHS

Specifications

- Overall size: 53*50 * 175 mm
- Probing rod length: 20 cm
- Weight: 150 g

ILD-200 Infrared Leak Detector

High Tech



New!

Functions

With the development of technology, refrigerant leak detection technology is also constantly upgrading, non-dispersive infrared gas detection technology is a new method which is applied to infrared leak detector for detection positioning with good selectivity, long life, high sensitivity; With the principle that halogen gas on a specific wavelength of infrared light absorption. When the measured gas into the infrared chamber, it will have different degrees of absorption of infrared light to calculate the halogen gas content, and then precisely positioning of the leak. The Infrared sensor with good advantages like strongly anti-interference, widely range, responsive and so on.

Technical parameters

- IRSENSOR infrared sensor
- Sensor life :10 years
- the world's first TFT LCD display infrared leak detector
- strongly anti-interference
- can detect the latest R32, R1234yf and other refrigerants like HFCs, HCFCs, CFCs
- Accuracy : up to 2 g / year
- Per SAE-J2913, SAE-J2791, EN14624, CE.

WJL-6000

Hot Sell

**Application**

This electronic halogen leak detector is an ideal economic halogen detection device. It is easy to operate, reliable in performance and compact in size.

Functions

- Detects all the refrigerants containing halogen.
- Adjusts sensitivity anytime to reach the best detection status automatically.
- Internal high precision and stabilivolt IC, ultra-low power consumption circuit design, more stable operation, longer service life of batteries.
- Bi-color indication for battery and voltage.
- Superior sensor, with higher sensitivity & longer life.
- Automatic calibration, applied to harsh environment.

Technical parameters

- Ultimate sensitivity: 6g/yr
- Response time: instant
- Reset time: 2~10s
- Warm-up time: about 10s
- Power supply: 4 AAA batteries (6VDC)
- Operating temperature: 0°C~52°C;
- Detection mode: continuous, unlimited
- Conform to RoHS
- Conform to SAE_J1627 and EN14624 standards

Specifications

- Overall size: 151*35*35mm
- Probing rod length: 20cm

CPU-C**Application**

This detector is a practical halogen detection device with higher cost performance. With micro-processing signal and digital processing capacity, it can manage electrical system and probe signal better and catch subtle change of signals.

Functions

- Detects all the refrigerants containing halogen
- Single-color LED display of leak
- Adjust accuracy according to real time
- 7-level sensitivity regulation in cycle and real time
- Low-voltage and undervoltage alarm
- Button-style switch is easy to operate
- Detects all halogen refrigerants, R134A, R12 and R22 etc
- Auto calibration after start: the detector automatically detects the current refrigerant concentration and takes it as zero point

Technical parameters

- Ultimate sensitivity: 3g/yr
- Response time: instant
- Reset time: 2s
- Warm-up time: about 6s
- Operating temperature: 0°C~52°C;
- Detection mode: continuous, unlimited
- Battery life: about 20h

Specifications

- Overall size: 229*65*65 mm
- Probing rod length: 36.5 cm

LMC-200

**Functions**

- Molded with aeronautical aluminum alloy, not deform in long-term use.
- Embedded design for the bottom of the scale, with hand-held device placed inside.
- Rubber corner armors prevent external shock. It's your first choice of high performance scale!

Technical parameters

- Max capacity: 100kg
- Accuracy: $\pm 0.05\%$ rdg+10g
- Resolution: 5g
- Power supply: 5 AAA batteries
- Operating temperature: $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Storage temperature: $-15^{\circ}\text{C} \sim 50^{\circ}\text{C}$
- Product size: 271*271*74 mm

APP QR

iOS



Android

LMC-310

**Functions**

- Free or coil cord, real-time view and control via mobile APP; real-time control in charging and recovery process, easy operation.

Technical parameters

- Max capacity: 100kg
- Accuracy: $\pm 0.05\%$ rdg+10g
- Resolution: 5g
- Power supply: handle device: 5 AAA batteries
scale body: 5 AA batteries
- Operating temperature: $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Storage temperature: $-15^{\circ}\text{C} \sim 50^{\circ}\text{C}$
- Product size: 271*271*74 mm

LD-100/200

**Functions**

- Light nixie tube display
- Ergonomic design, more comfortable in operation
- Flexible stainless steel probing rod can detect hard-to-reach places
- Responds to all halogen refrigerants (including Chlorine and Fluorine), which include but not limited to:

- | | |
|------|---|
| CFCs | e.g. R12, R11, R500, R502 etc. |
| HFCs | e.g. R22, R123, R124, R502 etc. |
| HFCs | e.g. R134a, R404a, R410a, R407c, R32 etc. |
| HCS | e.g. R600a, R290 etc. |
| HFOs | e.g. R1234yf etc. |

- With getter pump, response time and alarm clear time is reduced.

- Replaceable probe

Specifications

- Overall size: 256*53*58 mm
- Probing rod length: 417 mm

Application

- Brand new appearance, unique shape; LED display of power, sensitivity, etc. clear at a glance; convenient to operate.

Technical parameters

- Sensitivity range: 6(LD-100); 7(LD-200)
- Max leak detection: 3g/yr (LD-200: 7-level)
- Response time: < 3s
- Warm-up time: about 60s
- Recovery time: <10s
- Power supply: 3 AA batteries (LD-200: rechargeable lithium battery)
- Battery life: 4h (LD-200: 6h)
- Conform to RoHS
- Conform to SAE_J1627 and EN14624 standards

HLD-100
Functions

- Detects all the refrigerants containing halogen.
- Single-color LED display, 6-level leak indication.
- Power voltage indication in double color.
- Reset key: more convenient and efficient.
- Realtime stepless regulation of sensitivity level.

Technical parameters

- MAX sensibility: 3g/yr
- Response time: instant
- Reset time: 2s
- Warm-up time: about 6s
- Power supply: 2 "C" batteries (3VDC)
- Operating temperature: 0°C~52°C
- Detection mode: continuous, unlimited
- Battery life: about 30h in normal use
- Conform to RoHS
- Conform to SAE_J1627 and EN14624 standards

Specifications

- Overall size: 229 * 65 * 65 mm
- Probing rod length: 355 mm
- Weight: 560g

HLD-200+
Application

The detector is new and intelligent with high performance. With novel housing and artistic appearance, it is easy to carry, operate and maintain.

Functions

- Visual display: single LEDs light gradually.
- Display leak in wide range.
- Detect all the refrigerants containing halogen.
- Three-color LED display of leak.
- 7-level sensitivity regulation in cycle and real time.
- Auto calibration after start: the detector automatically detects the current refrigerant concentration and takes it as zero point.

Technical parameters

- Ultimate sensibility: 3g/yr
- Response time: instant
- Reset time: 2s
- Warm-up time: about 6s
- Power supply: 2 AA batteries (3VDC)
- Operating temperature: 0°C~52°C
- Detection mode: continuous, unlimited
- Conform to SAE_J1627 and EN14624 standards
- Conform to RoHS

Specifications

- Overall size: 44* 61 * 176 mm
- Probing rod length: 30.5 cm
- Weight: 185 g

**PGW-500/800
Wireless pressure gauge**
**Technical parameters**

- Measuring range: PGW-500 is 0-500psi and PGW-800 is 0-800psi
- Resolution: 0.5psi;
- Pressure unit: MPa kPa,bar,psi kg/em²,cmHg,inHg;
- Battery life: 300 hours
- Accuracy : pressure: ± 0.5 % FS ;
- Battery:3AA
- Wireless range: 30 meters;
- Offline records: 9000 readings;

APP QR

iOS



Android

**Wireless Pressure Gauge
Digital Manifold**
**DMG-1
Digital manifold**
**Technical parameters**

- Internal database for refrigerant pressure and temperature
- Measures vacuum pressure. Displays vacuum degree in percentage
- Low battery indication: CR2450; battery life: operates continuously 50h
- Pressure unit: Kpa, Bar, Psi, Kg /cm², Mmhg
- Temperature unit: C /F
- Measuring range: -0.1mpa~5Mpa
- Min: 1Kpa
- Sensor accuracy: ±0.5%
- Overload limit value: 100Bar, 10Mpa
- Temperature range: -20 ~ 60°C

Refrigerant Recovery Schematic Diagram

RCW-200 +3G

**Technical Parameters**

- Power supply:5V/2A (DC)
- Temperature measuring range:-40°C ~ +70°C
- Temperature accuracy: $\pm 0.5\%$; $\pm 0.7\%$ (-25°C ~ +40°C);
 $\pm 1\%$ (other)
- Humidity measuring range:10%~99%
- Humidity accuracy: $\pm 5\%$ RH
- Sensor:Sensor SHT30
- Record capacity:10,000 points
- Data export:via USB in CSV or TXT format
- Battery life:above 24 HR
- Alarm output:buzzer, SMS and APP push
- Stand-by battery:3.7V lithium battery

RMS-020

Cab Temperature Data Logger



	RMS-020	RMS-021	RMS-022
Global Positioning System(GPS)			
Cloud platform data management		●	●
Mobile APP data management		●	●
Record capacity: 75000*	●		
Built-in thermal printer	●	●	●
File format: CSV, TXT	●		
Print format: A4			
Two door switch test	●		
Buzzer alarm	●	●	●
Alarm switching value output			
SMS Alarm			
Probe quantity	two channel (one expansion port)	two channel (one expansion port)	two channel (one expansion port)

RMS-010+

Trailer Temperature

**New Function**

- GPS & GPRS
- Unloading mode
- Cloud data management
- Mobile APP data management
- Low voltage alarm via SMS
- 2-channel door switch

Technical Parameters

- Power supply:9~18VDC, nominal voltage: 12VDC
- Temperature control accuracy: $\pm 0.1\%$
- Temperature display range:-30.0 ~100.0 °C,
resolution: 0.1°C
- Temperature measuring accuracy: $\pm 0.5\%$ (0°C ~40°C);
 $\pm 1\%$ (-25°C ~0°C); $\pm 2\%$ (others)
- Sensor:NTC (10K-25°C), two channels.
- Sensor length: 6M and 18M
- Record capacity:75000*2 points
- IP rating:IP65
- Printer:Built-in thermal printer
- Data export by USB:Export data by USB disk in PDF and
TXT format
- Alarm:Door open alarm, alarm relay

RCW-2000 RCW-2100

RCW-2000
ReceiverRCW-2100
Transmitter**Technical Parameters**

- Power supply:12V/2.5A (DC)
- Temperature measuring range:-10°C ~+45°C
- Temperature accuracy: $\pm 0.5\%$ (-20°C ~+40°C); $\pm 1\%$ (others)
- Communication port:GPRS/WIFI (depend on model No.)
- Stand-by battery:5000 mAh, battery duration 12 hours
- Max.communication distance:1000m(in open area)
when communicate with RCW-2100
- Max.connection quantity:connect with RCW-2100 max.30pcs
with interval \geq 5min; max.12pcs with interval 1~4 min
- Alarm:SMS alarm sent by cloud.

Technical Parameters

- Power supply:Two ER14335 3200mAh lithium battery
- Temperature measuring range:-30°C ~+65°C
- Temperature accuracy: $\pm 0.5\%$ (-20°C ~+40°C); $\pm 1\%$ (others)
- Temperature Sensor type:NTC
- Humidity measuring range:10%RH ~100%RH
- Humidity accuracy: $\pm 5\%$ RH
- Combined T&H Sensor type:SHT30
- Data record interval:1min to 24H
- Record capacity:20,000 points
- Working frequency:470~510MHzISM
- Communication port: LoRa

RCW-310 +2G



Bluetooth Printer

RCW-400A

Wireless Data Logger

**Technical Parameters**

- Power supply: Rechargeable 3600mAh low temperature lithium battery
- Temperature measuring range: -30°C ~ +70°C
- Temperature accuracy: ±0.5°C (-20°C ~ 40°C); ±1°C (others)
- Humidity measuring range: 10%RH~100%RH
- Humidity accuracy: ±5%RH
- Sensor type: Temperature sensor or combined temperature-humidity sensor
- Record interval: 1min~24hours adjustable, default 5min
- Off-line record capacity: 20,000 points; support USB data copy
- Alarm output: LED indicator, buzzer and cloud reminder
- Communication port: GSM (850, 900, 1800, 1900 MHz)
- Onsite printing: Bluetooth printer optional
- Location: build-in GPS module

Technical Parameters

- Power supply: 12V/2.5A (DC)
- Temperature measuring range: -40°C ~ +70°C
- Temperature accuracy: ±1.0°C (0°C ~ 40°C); ±1°C (-25°C ~ 0°C); ±2°C (others)
- Humidity measuring range: 10%~99%
- Humidity accuracy: ±5%RH
- Temperature Sensor: NTC thermistor
- Humidity Sensor: Honeywell
- Record capacity: 20,000 points for each channel(Max)
- Date export: via USB in CSV or TXT format
- Battery life: above 24 HR
- Communication interface: 3G, GPRS
- Alarm output: buzzer and relay alarm
- Stand-by battery: 3.7V lithium battery

RCW-600wifi

Smart Wireless Data Logger
Dual Temperature Channel

RCW-800wifi

Smart Wireless Data Logger
For temperature and humidity**Technical Parameters**

- Power supply: 5V/1A (DC)
- Temperature measuring range: -40°C ~ +80°C
- Temperature accuracy: ±0.5°C (-20°C ~ +40°C); ±1°C (others)
- Temperature Sensor type: NTC
- Temperature Sensor wire length: 5M
- Data uploading interval: 1min to 24H
- Off-line record capacity: 20,000 points
- Alarm output: LED indicator, buzzer and Cloud reminder
- Communication port: WiFi
- Stand-by battery: 3.7V 1100mAH lithium battery

LogEt 8 (Food)

Multi-use PDF
Temperature Data Logger

**Technical Parameters**

- Temperature measuring range:-30~+70°C (-22~+158°F)
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~-+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Resolution:0.1°C
- Record interval:10 sec ~ 24 hr
- Memory capacity:16000 points (MAX)
- Alarm:multiple alarm zone
- Power supply:3.6V lithium battery (2 years),
- IP rating:IP65
- Sensor:internal
- Data management software:support WIN and Mac

RC-55

Single-use PDF
Temperature Data Logger

**Technical Parameters**

- Temperature measuring range:-30°C~+70°C (-22°F~+158°F)
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~-+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Resolution:0.1°C
- Record interval:10 sec ~ 24 hr
- Memory capacity:32000 points (MAX)
- Alarm:Three upper limits and two lower limits, LED alarm
- Power supply:3.0V CR2450 lithium battery (2 years)
- IP rating:IP67
- Auto generation of data report:support WIN and Mac

RC-18 RC-19

Single-use PDF
Temperature Data Logger

**Technical Parameters**

- Temperature measuring range:-30°C~+70°C (-22°F~+158°F)
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~-+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Resolution:0.1°C
- Start delay:1 min ~ 6 hr
- Record interval:10 sec ~ 12 hr
- Memory capacity:16000 points (MAX)
- Alarm:LED alarm (RC-18: single alarm; RC-19: Multiple alarm)
- Power supply:3.0V CR2450 lithium battery (2 years)
- IP rating:IP67
- Auto generation of PDF report:support WIN and Mac
- Data management software:support WIN and Mac

RC-4

Multi-use Temperature
Data Logger

**Technical Parameters**

- Temperature measuring range:-30°C~+60°C (internal sensor), -40°C~-+85°C (optional external sensor)
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~-+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Resolution:0.1°C
- Record interval:10 sec ~ 24 hr
- Memory capacity:16000 points (MAX)
- Alarm:upper and lower limit, buzzer alarm
- Power supply:3.0V lithium battery CR2450, replaceable
- Sensor:Default internal temperature sensor;
external temp sensor optional
- Data management software:support WIN and Mac

RC-61

Temperature &Humidity
Data Logger

**Technical Parameters**

- Temperature measuring range:-40~+85°C (-40~+185°F)
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Humidity measuring range:10%~99%
- Humidity accuracy: $\pm 3\%$ RH (25°C, 20%~90%RH),
 $\pm 5\%$ RH (other)
- Resolution:0.1°C (temperature), 0.1%RH (humidity)
- Record interval:10 sec ~ 24 hr
- Memory capacity:16000 points (MAX)
- Alarm:upper and lower limit
- Power supply:3.6V lithium battery, replaceable
- Sensor:external temperature and humidity sensor
- Data management software:support WIN and Mac

RC-51H

USB Multi-use Temperature and
Humidity Data Logger

**Technical Parameters**

- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Humidity measuring range:10%~95%
- Humidity accuracy: $\pm 3\%$ RH (25°C, 20%~90%RH),
 $\pm 5\%$ RH (other)
- Resolution:0.1°C (temperature), 0.1%RH (humidity)
- Record interval:10 sec ~ 24 hr
- Memory capacity:32000 points (MAX)
- Alarm:Three upper limits and two lower limits
- Power supply:3.6V lithium battery (2 years), replaceable
- Sensor:internal temperature and humidity sensor
- Data management software:support WIN and Mac

DR-210A**Technical Parameters**

- Temperature measuring range:-50.0°C~+120.0°C
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}$ for the range -30~+20°C;
 $\pm 1^{\circ}\text{C}$ for -40°C < the temp < 30 and +20°C < the temp < +70°C;
 $\pm 2^{\circ}\text{C}$ for other range
(If sensor wire is longer than 50meter,accuracy devition 1%)
- Humidity measuring range:0%~95%
- Humidity accuracy: $\pm 3\%$ RH (typical case)
- Resolution:0.1°C (temperature), 0.1%RH (humidity)
- Record interval:1:min~ 24 hr.
- Memory capacity:13000 points (MAX)
- Alarm:beeper and alarm relay
- Sensor:two channel temperature or humidity sensor SM
- Data interface:USB, RS-485
- Standby battery:3.6V 2200mAh Ni-MH Battery

TI-21

Electronic indicator

**Technical Parameters**

- Temperature measuring range:-30~70°C (-22°F~+158°F)
- Temperature accuracy: $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ (-20°C~+40°C);
 $\pm 1^{\circ}\text{C}/1.8^{\circ}\text{F}$ (other)
- Resolution:0.1°C
- Record interval:1 ~ 10min
- Memory capacity:16000 points (MAX)
- Alarm:upper and lower limit, LED alarm
- Power supply:3.0V CR2032 lithium battery (2 years)
- IP rating:IP67
- Start mode:Break tap

RC-5

RC-5+

Multi-use USB Temperature Data Logger



RC-5



RC-5+



External sensor

ECM-400

Parallel Unit Controller



Product descriptions

This parallel unit controller is a universal controller that applicable for piston (scroll) compressor 2 to 4 parallel units. It can control the main liquid solenoid valve; it includes a communication interface, which can realize remote monitoring when connected with the platform through the things-networking module; it also consists of a cooling water temperature sensor (water pump anti-freezing).

Features

- ◆ The compressor dead zone control and management through the inlet pressure control;
- ◆ Real-time compressor detection with various warning alarm signals is more convenient for after-sales services;
- ◆ Multiple cooling modes: water cooling, air cooling and evaporating cooling that satisfy various requirements during system operations;
- ◆ The 7-inch industrial touch screen displays the real-time working conditions and present a friendly human-computer interface.

Technical Parameters

Function	Model
Trip code	RC-5 RC-5+
Auto generation of PDF report	7 characters
Read temporary PDF report	●
Password protection for PDF report	●
Cyclic record	●
Start mode	Via button Via button, immediate start, timing start
Stop mode (settable)	Via button, stop when memory full, via software Via button, stop when memory full, via software
Multiple start/stop	●
Temperature sensor	Internal Internal /Optional external probe
Alarm types	Single, cumulative
Time zone	UTC, 24 time system
LCD active time	15s 15s
Start delay	0~6h 0~6h
Memory capacity	32000 points 32000 points
Log interval	10s~24h 10s~12h
45°C temperature calibration	● ●
Alarm settings	Upper & lower limit Multi-alarms (3 upper limits & 2 lower limits at maximum)
Alarm delay	0~10h
Package	Blister Box

Technical Parameters

- ◆ Inlet pressure: -1.0 to 16.0 bar (4 to 20mA current signal)
- ◆ Discharge pressure: -1.0 to 40.0 bar (4 to 20mA current signal)
- ◆ Discharge temperature: -40.0 to 110.0 °C
- ◆ Oil-way temperature: -40.0 to 110.0 °C