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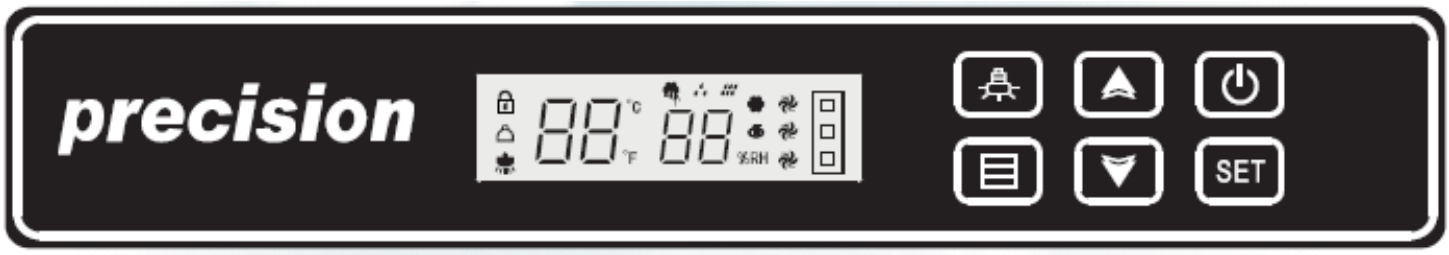
refrigeration



JC-W120

Intelligent Thermostat Instructions
Meat-Ager Cabinet

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Intelligent thermostat for meat-ager cabinet: JC-120

Contents:

1. General Information

1.1 Please read before using this manual

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.

1.2 Safety Precautions

- Check the supply voltage is correct before connecting the instrument.
- Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation.
- Warning: disconnect all electrical connections before any kind of maintenance.
- Fit the probe where it is not accessible by the End User. The instrument must not be opened.
- If failure or faulty operation, send the instrument back to our company with detailed description of the fault.
- Consider the maximum current which can be applied to each relay (see Technical Data).
- Ensure that the wires for probes, loads and power supply are separated and far enough from each other, without crossing or intertwining.
- In case of application in industrial environments, the use for mains filters (our mod. Ft1) in parallel with inductive loads could be useful.
- Probe should be mounted upward with lamp, to avoid danger from liquid leakage. Probe should be put far away from air hole.

2. Product Description

2.1 Main Features

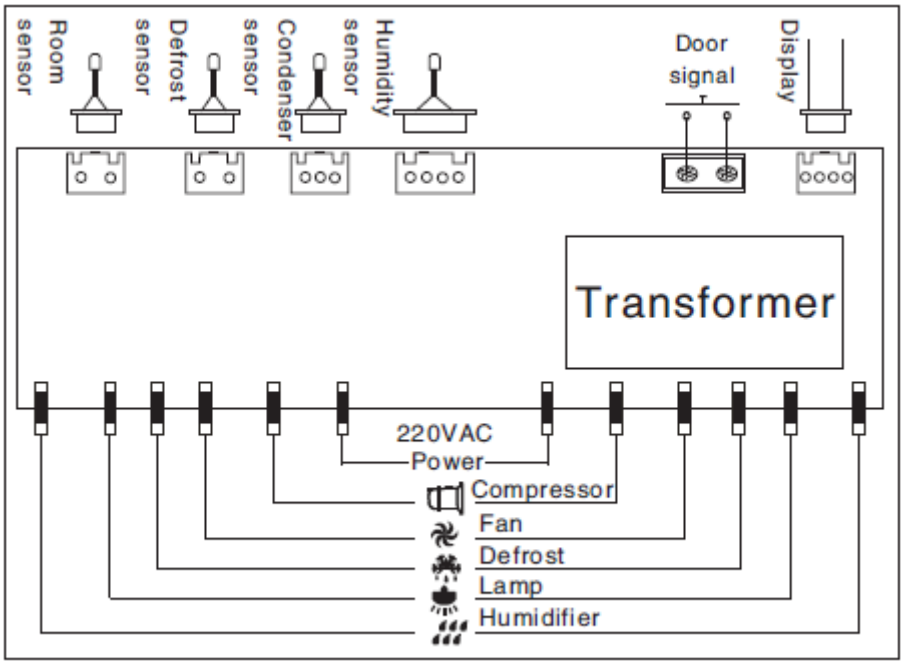
Temperature display / Humidity display / Temperature control / Humidity control / Defrost by stop / Lamp / Fan / Door signal detect / Detection on condenser temperature over limit / Testing self

2.2 Technical Data

Range of temperature display: -9~99°C
Range of set temperature: -9~45°C
Range of set humidity: 20~95% RH
Resolution: +/-1
Temperature accuracy: +/-0.5
Humidity accuracy: +/-2%
Set temperature default: 1°C
Room sensor: NTC, 2pcs (Temp. control Detection on cond. temperature over limit Defrost sensor optional)
Humidity sensor: 1pc (Capacitor. module)
Relay for compressor: 30A/250VAC, 50/60HZ
Relay for fan: 5A/250VAC, 50/60HZ
Relay for humidity: 5A/250VAC, 50/60HZ
Relay for lamp: 10A/250VAC, 50/60HZ
Mounting hole dimension: 250mm x 38mm
Panel dimension: 300mm x 50mm

3. Installation & Mounting

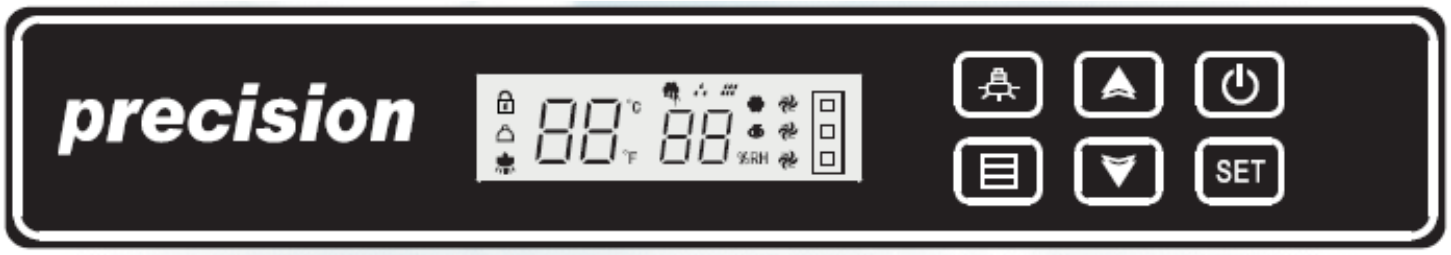
3.1 Electrical Connection



control wire diagram

4. The Interface

4.1 Display



LED	Display status	Details	LED	Display status	Details
	ON	Compressor enabled		ON	The control fault
	ON	Defrost enabled		ON	Humidity enabled
	ON	Fan enabled	°C	ON	Temperature unit
	ON	Lamp enabled	°F	ON	Temperature unit
	ON	Keyboard locked	%RH	ON	Humidity unit

4.2 Keyboard

- Display: The screen display temperature and humidity, 99 is the top number displayed on the screen, if value is >/=100, first 1 will not display on screen, at same time alarm indicator / lock indicator / lamp indicator all flash.
- Turn ON/OFF the controller: When the controller is ON, push key and hold for 3 seconds, the controller is turned OFF, the screen display "- -". When the controller is OFF, push key and release at once, the controller is turned ON, the screen will display temperature and humidity detected.
- Keyboard unlock: Keyboard will be locked if no action in 60 seconds. Push SET and keys at the same time and hold for 3 seconds to unlock the keyboard.
- Choose the floor: Push key and release at once to display UP floor temperature or DOWN floor temperature (not for JC-W120).
- Defrost by force: Push and keys at the same time and hold for 6 seconds, to start or stop the defrost.
- Lamp: Push key and release at once to turn ON/OFF (when the door is open, lamp cannot be turned off manually).
- Check evaporator/condenser probe temperature: Push key and hold for 6 seconds, the display will show evaporator probe temperature, push key again, the display will show condenser probe temperature.
- Adjust set temperature: Push and immediately release the SET key, the display will show the set point value. Push or keys to change set value.
- Adjust set humidity: Push SET key twice, the display will show the set point value. Push or keys to change set value.

5. Fault Codes

Code	Details	Status
Er	Room sensor fault	Alarm, refrigeration stops
Eh	Humidity sensor fault	Alarm, dehumidifier
EE	Evap. sensor fault	Alarm
EC	Cond. sensor fault	Alarm
ES	Storage fault	Display 5s in first 10s after power on
do	Door open	Alarm, fan stops
H1	Alarm cabinet temperature too high	Alarm
H2	Alarm cabinet temperature too low	Alarm, refrigeration stops
H4	Alarm at condenser temp. too high	Alarm, refrigeration stops
CF	Communication fault	All outputs stop

6. Parameter List

Code	Details	Range	Default
SET1	Set temperature	E1~E2	1°C
SET2	Set humidity	20~95% RH	60
PA	Menu password	0~99	0
E1	Lower set point limit	-9°C~SET1	2°C
E2	Higher set point limit	SET1~45°C	20°C
E3	Temperature hysteresis	1~10	3°C
E4	Humidity hysteresis	5~30	5

E5	Comp. start delay time after boot-strap	0~10min	3
E6	Offset on room sensor Err.	-9~9	0
E7	Offset on humidity sensor Err.	-9~9	0
E8	Comp. run time when room sensor Err.	00~90min	6
E9	Comp. stop time when room sensor Err.	00~90min	3
PE	Current defrost probe	0= Without 1= With	1
PC	Current condenser probe	0= Without 1= With	0
Pd	Present door signal	0= Without 1= With	0
LP	Lamp status after door close	0= Without 1= With	0
Ft	Compressor start delay time when defrost by hot gas	00~20min	0
F1	Defrost duration	1~30min	20
F2	Defrost interval time	0~24H (0 means no defrost)	4
F3	Temperature to start defrosting (only when evaporator probe </=F3, defrost could start)	0~45°C	0°C
F4	Defrost termination temperature	0~45°C	8°C
F5	Temperature display during defrost	0= Actual temperature 1= Last value before defrosting 2= dE	1
F6	Draining time	00~30min	2
P1	Fan operating mode	0= Parallel with comp. (except defrost) 1= Continuous running (except defrost) 2= Parallel with comp. (start when defrost) 3= Continuous running (start when defrost)	1
P2	Fan start mode after defrosting	00= Restart delay 01= Restart by evap temp.	0
P3	Fan start delay time after defrosting (P2=00)	00~60min	0
P4	Fan start temperature after	00~45°C	0°C
P5	Fan stop temperature (when evaporator probe temperature higher than P5, fan stop)	00~45°C	45°C
P6	Fan stop delay time	0~300s	0
P7	Fan start delay time	0~300s	0
H1	Alarm at room temp. too high	H2~45°C	15°C
H2	Alarm at room temp. too low	-9°C~H1	-5°C
H3	Alarm at condenser temp. too high	0~99°C	°C
H4	First alarm delay time for cabinet temp. after boot-strap	00~90min (only for boot-strap)	90
H5	Alarm delay time for cabinet temperature over limit	00~90min	20
H6	Alarm delay time for cond. sensor temp. too high	0~90min	0
do	Alarm delay time	0~10min	0
C1	Temperature unit	00=°C	0
C2	Humidity lower display limit	1~C3	60
C3	Humidity higher display limit	C2~99	85
C4	Humidity output duration (0= keep output)	0~99s	0
C5	Humidity output time	0~99s	99
C6	Humidity probe sensitivity	0~10 (1 indicates sensitivity is the lowest, 10 indicates sensitivity is the highest. The sensitivity is set to 0)	3
L1	Power memory about the controller ON/OFF	00= No memory 01= Memory	1
L2	Power memory about the lamp ON/OFF	00= No memory 01= Memory	0
L3	Lamp duration after start by manual (0= no time limit)	0~999min	0
L5	Display brightness when no action on keyboard	1~99%	30%
CA	Change menu password	0~99	0

Notes: