

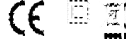
# MX32 Series

**DOTECH**  
SENSING & CONTROL

**DOTECH INC.**

6F, JOONGANG-ILBO B/D, 30, Dongsan-ro, Danwon-Gu,  
Ansan-Si, Gyeonggi-Do 425-852 Korea  
Tel : +82-31-495-3767, Fax : +82-31-495-3917


  
www.dotech21.com



**⚠️ Cautions**

1. This product may cause an electric shock in handling. Please do not attempt to open it with power turned on.
  2. This product should be installed in a place fixed secured by a rack or panel.
  3. This product can be used under the following environmental condition.
    - ① Indoor ② Pollution Degree 2 ③ At an altitude of 2000m or below
  4. Power input must be within the designated ranges.
  5. To turn on or turn off power supply for this product, please the circuit breaker or switch of a standard product of IEC 60947-1 or IEC 60947-3 product and install it within a close distance allowing convenient operation by user.
  6. Please be understood that if this product is dismantled or modified discretionary, after sales service will not be able to be provided.
  7. An output wire to be used for this product should be inflammable grade FV1 (V-1 grade or above), the thickness of the wire should be AWG No. 20 or above(0.50mm<sup>2</sup>).
  8. In order to prevent it from an inductive noise, please maintain the high-voltage wire and power wire separated.
  9. Please avoid installing the product in a place where a strong magnetism, noise, severe vibration and impact exist.
  10. When extending the sensor wire, use a shield wire and do not extend it unnecessary long.
  11. The sensor wire and signal wire should be away from the power and load wires using conduits separately installed.
  12. Please avoid using the product near a device generating strong high frequency noise (high-frequency welding machine, high-frequency sewing machine, high-frequency radiotelegraph, high capacity SCR controller)
  13. Product's damages other than those described in the guarantee conditions provided by the manufacturer shall not be responsible by us.
  14. If this unit is used to control machineries (Medical equipment, vehicle, train, airplane, combustion apparatus, entertainment, processing and transportation equipment, elevator and various safety device etc.) enabling to effect on human or property, it is required to install fail-safe device.
- ※ The aforementioned precautions must be observed, and if you fail to do so, it may cause a product's breakdown.  
 ※ The specifications, dimensions, and etc. are subject to change for enhancement without a prior notice.

**1. Overview**



※ Features

- Night setback, Automatic light control, Built-in reservation function (Run /Stop)
- Max. 5P temperatures sensor is available.
- Built-in 5P relays such as comp, fan, defrost, aux and etc.

: Basic Specifications

Items	Description						
Dimension	200(W)mm X 260(H)mm X 86(D)mm						
Power	100 – 240 Vac, 50 / 60 Hz						
Power Consumption	MAX 12 VA						
Display	FND, LED (One place of decimals)						
Connection	Screw Terminal, Wire range: 24~12 AWG						
Input	5P Temperature Sensor Input 3P Digital Input						
Output	5P Relay Output (Max.) <table border="1" style="width: 100%; margin-top: 5px;"> <tr> <td>10A</td> <td>250 Vac / 30 Vdc / 10 A</td> </tr> <tr> <td>16A</td> <td>250 Vac / 12 Vdc / 16 A</td> </tr> <tr> <td>30A</td> <td>250 Vac / 12 Vdc / 30 A</td> </tr> </table>	10A	250 Vac / 30 Vdc / 10 A	16A	250 Vac / 12 Vdc / 16 A	30A	250 Vac / 12 Vdc / 30 A
10A	250 Vac / 30 Vdc / 10 A						
16A	250 Vac / 12 Vdc / 16 A						
30A	250 Vac / 12 Vdc / 30 A						
Operation	Temp. – 10 ~ 50 °C, Humidity 90 %RH or less						
Storage	Temp. – 20 ~ 60 °C, Humidity 90 %RH or less						

※ Specifications of output are subject to change without prior notice.

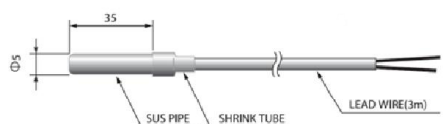
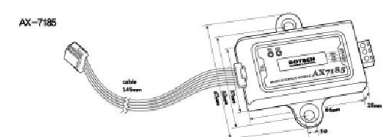
: Ordering Guide

MODEL	compressor(sol)	evaporator fans	defrost	aux1	aux2	room temperature	defrost temperature	digital input 3/ probe 3	digital input 2/ probe 4	digital input 1/ probe 5	buzzer	programming key	optional real time clock	optional RS485 board
MX32S-16P00	16A	-	-	-	-	●	●	●	●	●	●	●	-	○
MX32SD-30P00	30A	-	16A	-	-	●	●	●	●	●	●	●	-	○
MX32SA-16P00	16A	-	-	10A	16A	●	●	●	●	●	●	●	-	○
MX32SA-30P00	30A	-	-	10A	30A	●	●	●	●	●	●	●	-	○
MX32SR-16P00	16A	10A	16A	10A	16A	●	●	●	●	●	●	●	○	○
MX32SR-30P00	30A	10A	16A	10A	30A	●	●	●	●	●	●	●	○	○

※ ○ = Optional

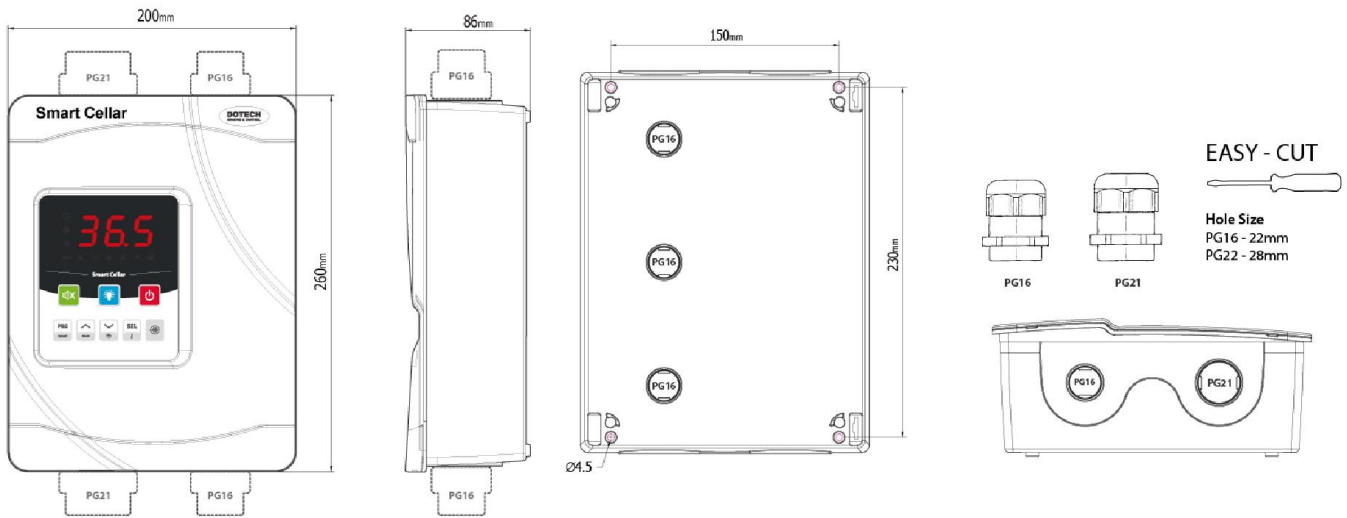
※ Temperature sensor should be purchased separately.

: Accessories

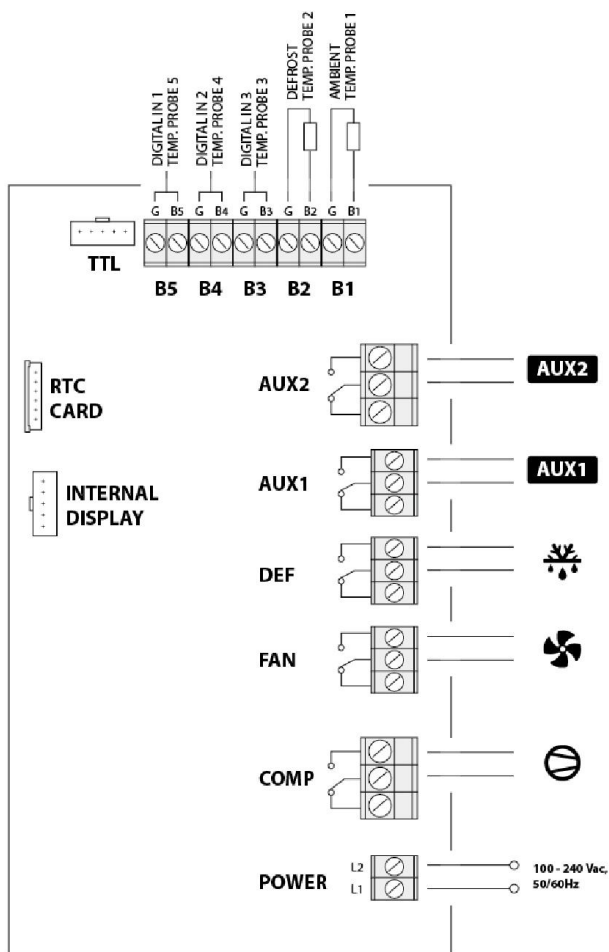
Model name	Description
DPR-TH01-ET*3M	NTC 5 KΩ / -50~105 °C / ±0.3 °C at 25 °C 
AX7185	TTL to RS485 communication module 

## 2. Installation

### : Dimensions & Panel Cut (mm)



### : Wiring Diagram



### : Input Terminal

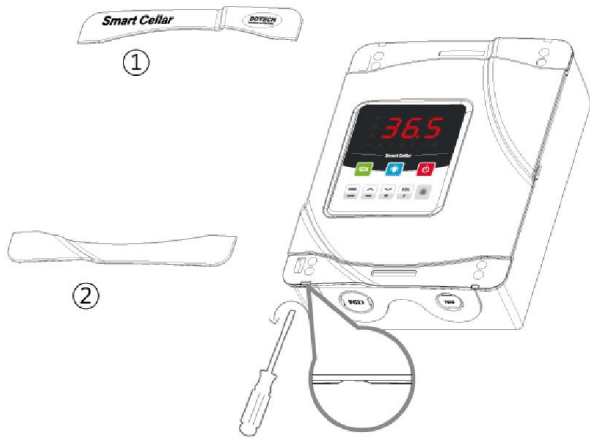
Terminal	Description
B1	Ambient temperature sensor input
B2	Defrost temperature sensor input
B3	Probe 3temp. sensor input or Digital input 3
B4	Probe 4temp. sensor input or Digital input 2
B5	Probe 5temp. sensor input or Digital input 1

### : Output Terminal

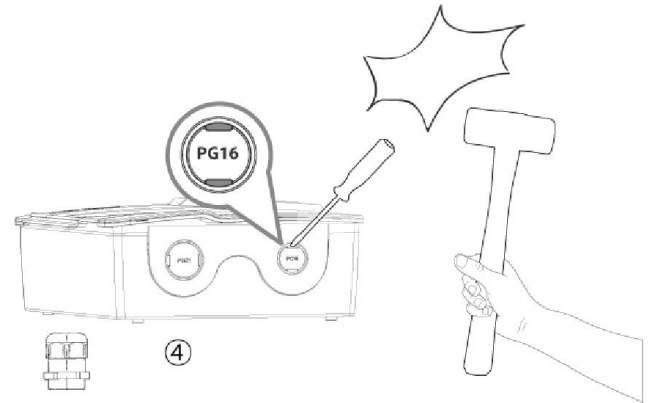
Terminal	Description	
POWER	L1	100–240Vac, 50 / 60 Hz Power input
	L2	
COMP	NO	When signal of Comp is activated (Close)
	C	Common Signal
	NC	When signal of Comp is activated (Open)
FAN	NO	When signal of Fan is activated (Close)
	C	Common Signal
	NC	When signal of Fan is activated (Open)
DEF	NO	When signal of Def is activated (Close)
	C	Common Signal
	NC	When signal of Def is activated (Open)
AUX1	NO	When signal of AUX1 is activated (Close)
	C	Common Signal
	NC	When signal of AUX1 is activated (Open)
AUX2	NO	When signal of AUX2 is activated (Close)
	C	Common Signal
	NC	When signal of AUX2 is activated (Open)

### : Optional Terminal

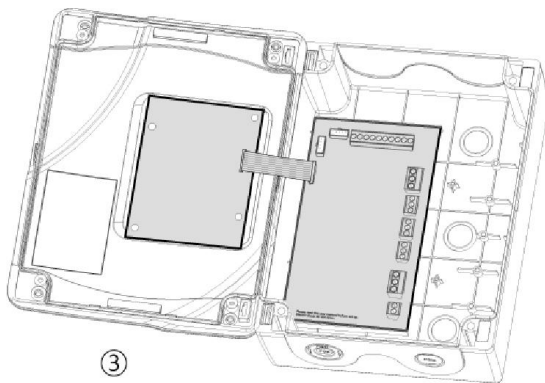
Name	Description
TTL	TTL to RS485 Modbus RTU signal output through connecting with AX7185
RTC CARD	Connect when using real time clock
INTERNAL DISPLAY	Connection terminal for internal display module



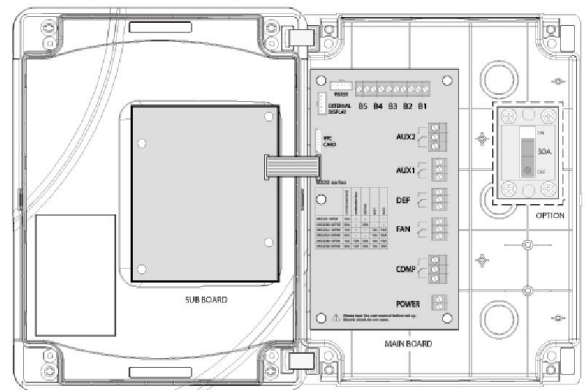
- Remove decoration ① and ② using a flat-head screwdriver.



- Drill cable grand hole to wire
- Fasten cable using cable grand (PG16) or (PG21).



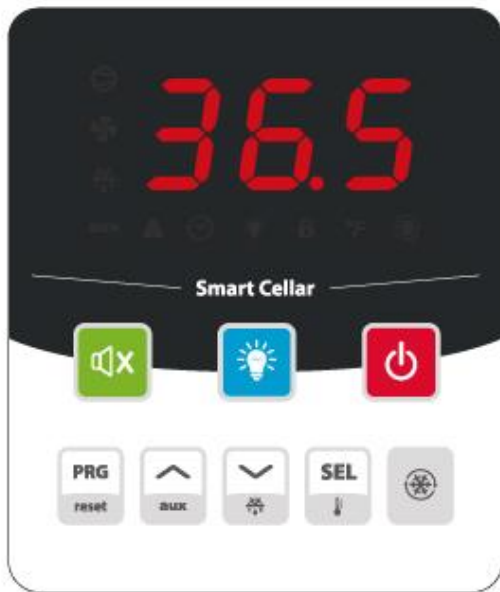
- Loosen a screw to open top plate.
- Check on 4 holes to mount panel.



- Fix circuit breaker (250V/12A) as above picture.
- Connect wire correctly after checking terminal.
- Recommend users to isolate digital I/O signals.
- Separate as much as possible power line from communication line.

### 3. User Interface

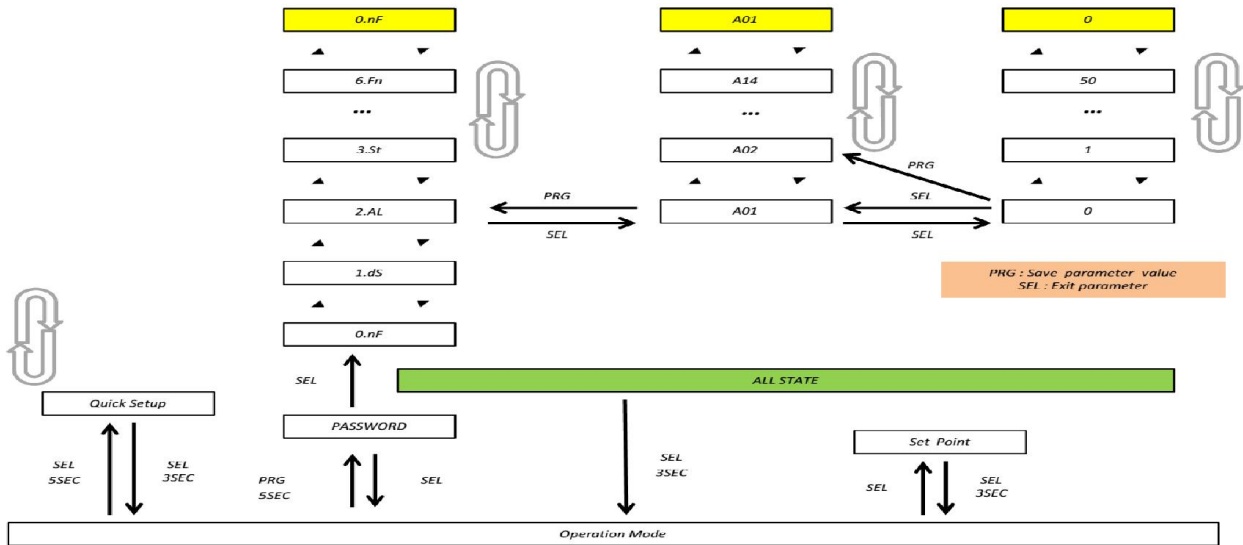
: Lamp & Operation Button



	Description
<b>LED</b>	
	On when compressor starts
	On when fan starts
	On when defrost output is in progress
	On when aux output is in progress
	On when trip occurs and flicker when alarm occurs
	On if RTC card is not built into controller
	On when light output is in progress
	When degrees Fahrenheit is selected as a unit of temperature
	On when forced cooling
<b>Button</b>	
	Mute of alarm sound
	Light ON / OFF
	Power ON / OFF
	Program setup, alarm reset and check on time of set temperature
	Upward button (Increase) Manual ON/OFF for auxiliary output if pressing for 3 seconds
	Downward button (Decrease) Manual ON/OFF for defrost output if pressing for 3 seconds
	Selection, storage and input of set point
	Compulsory cooling output
	Check temperature value when pressing simultaneously
	Check communication status when pressing simultaneously
	Initialization when pressing simultaneously

## 4. Parameters

: Parameter change



- Press SEL button in operation mode to change set point  
Press SEL button for 3 seconds to change quick setup  
Press PRG button for 3 seconds to change parameters  
※Password input is required to change parameters. (If password is not correct, it is impossible to change parameters.)
- Movement to next menu and storage of set value during parameter setup are performed by SEL button.
- Set value will be flickering in every 0.5 seconds and change set value using ▲key or ▼key
- Present temperature value will be displayed if pressing SEL button for 3 seconds after finished setup
- If there was no input for 3 minutes during setup, it will be returned to operation mode
- ※Some parameters are not subject to show in accordance with models.

: Quick Setup

Address	Description	Code	Unit	Step	Min	Max	Default
4 0056	Set point	RSP	°C	0.1	R03	R04	2.0
4 0057	Control deviation	RDF	K	0.1	0.1	99.9	2.0
4 0065	Defrost termination temp.	D04	°C	0.1	-50.0	158.0	15.0
4 0067	Defrost cycle	D06	Hour (Min.)	1	-199(※1)	192	4
4 0068	Max. defrost time	D07	Min. (Sec)	1	-199(※1)	240	30

If users set (※1) to minus (-), defrost cycle and max. defrost time will be changed in minutes and seconds respectively.

※ If defrost group (D01) is set to 0, D04 ~ D07 will not be shown.

: Status Parameter ( 0.nF )

Address	Description	Code	Unit	Step	Min.	Max.	Default
4 0001	Virtual set point	N00	°C	0.1	-50.0	158.0	
4 0002	Room temperature. sensor (B1)	N01	°C	0.1	-50.0	158.0	
4 0003	Defrost temperature sensor (B2)	N0 2	°C	0.1	-50.0	158.0	
4 0004	Aux. temperature sensor(B3)	N0 3	°C	0.1	-50.0	158.0	
4 0005	Aux. temperature sensor (B4)	N0 4	°C	0.1	-50.0	158.0	
4 0006	Aux. temperature sensor (B5)	N0 5	°C	0.1	-50.0	158.0	
4 0009	Total compressor running hours	N08	Hour	1	0	9999	
4 0010	Total compressor running times	N09	Hour	1	0	9999	
4 0011	Total defrost running hours	N10	Hour	1	0	9999	
4 0012	Total defrost running times	N11	-	1	0	9999	

: Display Parameter Setup ( 1.dS )

Address	Description	Code	Unit	Step	Min	Max	Default
4 0016	Probe Sensibility	/00	-	1	0	200	100
4 0017	Display temp. selection (※1)	/01					1
4 0018	Alarm display	/02					1
4 0019	Decimal point display setup	/03					0 (0.1)
4 0020	Defrost display	/04					0
4 0021	Password	/05	-	1	0	999	99
4 0022	Locking	/06					0
4 0023	Room temp. sensor (B1) offset	/07	°C	0.1	-19.9	+19.9	0.0
4 0024	Defrost temp. sensor(B2) offset	/08	°C	0.1	-19.9	+19.9	0.0
4 0025	Probe temp. sensor(B3) offset	/09	°C	0.1	-19.9	+19.9	0.0
4 0026	Aux1 Output selection (※2)	/10	-	1	0	11	0
4 0027	Aux2 Output selection (※2)	/11	-	1	0	11	3
4 0028	Light ON/OFF selection (※3)	/12	-	1	0	3	0
4 0029	Probe (B4) offset	/13	°C	0.1	-19.9	19.9	0.0
4 0030	Probe (B5) offset	/14	°C	0.1	-19.9	19.9	0.0

(※1) Setup of display temperature

Virtual temp. = (Probe temp. \* R07%) + (Room temp. \* (100-R07) %)

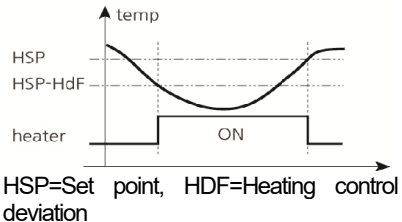
e.g) if room temp. 25°C, Probe temperature 30°C and R07 = 30%

Reflection rate of probe temperature 28°C \* 30% = 7.5°C

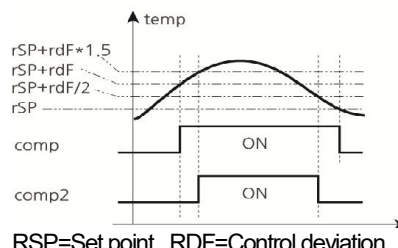
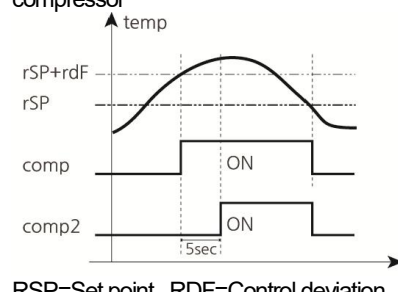
Reflection rate of room temperature 30°C \* 70% = 21°C

Virtual temperature = 7.5°C + 21°C = 28.5°C(※2) AUX output

Settings	Function	Description
0	Alarm status	On= Alarm
1	Defrost control	On= Defrost
2	Heating control	On= Heating
3	Lighting control	On= Light On
4	Drain control	On= Drain
5	External buzzer	Turn alternately on/off in one second = Alarm
6	Fan control	On= Fan On
7	Alarm status	Off= Alarm
8	DIG IN1 Status	On= Close
9	DIG IN2 Status	On= Close



Settings	Function	Description
10	Comp delay	On after 5 seconds from output of compressor
11	Comp 2 step	Comp 2 step control



(※3) Light ON/OFF

Settings	Function	Description
0	Button operation only	Turn light ON/OFF if pressing button for one second
1	Door switch interlock	Turn light on when door opened Turn light off after 3 seconds when door closed
2	Curtain switch interlock	Turn light on when curtain opened Turn light off after 3 seconds when curtain closed
3	Night time operation interlock	ON, in the day time / OFF in the night time

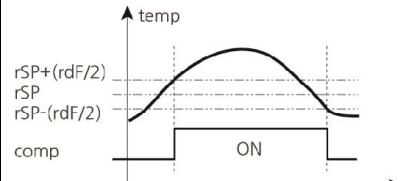
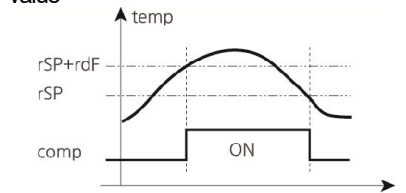
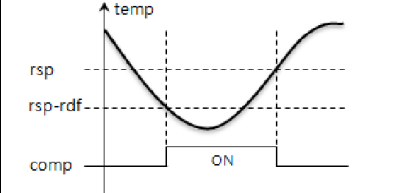




: Settings Parameter Setup (3.St)

Address	Description	Code	Unit	Step	Minimum	Maximum	Default
4 0046	Unit of temp. display	R00	0= Celsius degree (°C) 1= Fahrenheit (°F)				0 (°C)
4 0047	Temp. control mode (※1)	R0 1	-	1	0	3	1
4 0048	Number of sensor (※2)	R02	-	1	1	3	2
4 0049	Min. set point range	R03	°C	1	-50	R04	-30.0
4 0050	Max. set point range	R04	°C	1	R03	158	30.0
4 0051	Injection time (※3)	R05	Min.	1	0	240	0
4 0052	Daytime / nighttime mode	R06	0= Nonuse of nighttime operation 1= Use of nighttime operation (DIG. IN, A12=5, ON: Nighttime operation mode) 2= Use of nighttime operation (Turn ON/OFF by contact of ID5)				0
4 0053	Aux. sensor rate of virtual control temp.	R07	%	0.1	0	100	0
4 0054	Delta value of night time operation (※4)	R08	K	0.1	-50.0	50.0	2.0
4 0055	Control deviation for night time operation	R09	K	0.1	0.1	20.0	3.0
4 0056	Set point	RSP	°C	0.1	R03	R04	2.0
4 0057	Control deviation	RDF	K	0.1	0.1	99.9	2.0
4 0058	Set point for heating operation	HSP	°C	0.1	-50.0	158.0	2.0
4 0059	Control deviation for heating operation	HDF	K	0.1	0.1	99.9	2.0
4 0060	Communication ID	ID	-	1	1	256	1

(※1) Temperature control mode

Settings	Function	Operation condition	Settings	Function	Operation condition
0	Compulsory cooling	Always on regardless of temperature	2	Cooling control (Modulating control)	Run : Set value + (Deviation/2) / Stop : Set value - (Deviation/2) 
1	Cooling control (Dead-band control)	Run : Set value + deviation / Stop : Set value 	3	Heating control (Dead-band control)	Run : Set value - deviation / Stop : Set value 

(※2) Setup for number of sensors

Settings	B1 (AMB.T)	B2 (DEF.T)	B3 (AUX.T)
3 EA	Use	Use	Use
2 EA	Use (Both ambient and defrost sensor when B2 sensor is faulty)	Use (Both defrost and ambient sensor when B1 sensor is faulty)	Nonuse
1 EA	Use (Both ambient and defrost sensor)	Nonuse	Nonuse

(※3) Injection time

- If cooling continues throughout this time, cooling stops as time as pump down and LO alarm occurs.

(※4) Delta value of night time operation

- Delta value of temperature control which is applicable to nighttime operation (SP = RSP+ R08)



**: Defrost Parameter Setup (4.dF)**

Address	Description	Code	Unit	Step	Minimum	Maximum	Default
4 0061	Defrost Termination (※1)	D00	-	1	1	4	2
4 0062	Defrost Group	D01	0=No defrost function 1=Self (Defrost start by defrost cycle [D06] or defrost temperature 2=Defrost start by start signal input (A12=1)				1
4 0063	Pump Down Time (※2)	D02	Min.	1	0	240	0
4 0064	Drain Time (※3)	D03	Min.	1	0	240	0
4 0065	Defrost Termination Temp.	D04	°C	0.1	-50.0	158.0	15.0
4 0066	Defrost Schedule type	D05	0= Defrost start by defrost cycle [D06] 1= Defrost start by time (with RTC function) 2= Defrost start by evaporating temperature				0
4 0067	Defrost cycle	D06	Hour (Min)	1	-199 (※4)	192	4
4 0068	Max. defrost time	D07	Min. (Sec)	1	-199 (※4)	240	30
4 0069	Min. defrost time	D08	Min. (Sec)	1	-199 (※4)	240	0
4 0070	Temperature display after defrost, drain (Display 'LT')	D09	Min.	1	0	30	7
4 0071	Hot gas defrost	D10	0=Nonuse		1=Hot gas defrost		0
4 0072	Temperature deviation of defrost start by evaporating temperature (※5)	D11	K	0.1	-99.9	99.9	-20.0
4 0073	Defrost start delay time by evaporating temp.	D12	Min	1	0	30	1
4 0074	Deviation of compressor off by evaporating temperature (※6)	D13	K	1	-99.9	0.0	0.0
4 0075	Deviation of compressor on by evaporating temperature	D14	K	0.1	0	100	10.0

**(※1) Defrost termination**

Setting	Defrost termination
1	End by defrost time
2	End by temp. of defrost end and max. defrost time whichever comes first
3	End by meeting all conditions such as temp. of defrost end and max. defrost time
4	End by temp. of defrost end and max. defrost time whichever comes first (But, in case of ending defrost twice in succession by defrost time, 'EDT' alarm will be occurred)

**(※2) Pump down time**

- Defrost starts after pump down refrigerant of cooler plumbing before defrost output

**(※3) Drain time**

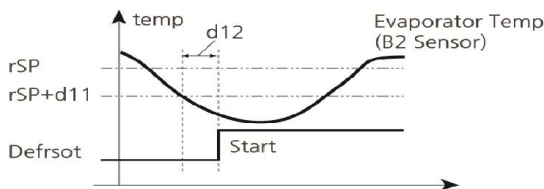
- Water drainage time after defrost (Output of solenoid is off during this time)

(※4) If setting it to minus ('-'), defrost cycle will be changed in minutes and max. & min. defrost time will be changed in seconds

(※5) Temperature deviation of defrost start by evaporating temperature

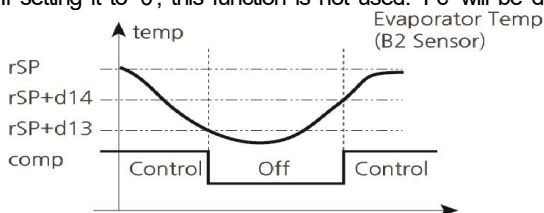
- Defrost schedule type [D05]= 2 (Defrost start by evaporating temperature)

- Defrost starts if defrost temp. B2) <= set point – temp. deviation of defrost start



**(※6) Deviation of comp. off by evaporating temperature**

- If setting it to '0', this function is not used. 'Fc' will be displayed once this function is operated.



**: Time Parameter Setup (5.tn)**

Address	Description	Code	Unit	Step	Min	Max	Default
4 0076	Present Time - Hour set (Manual)	H00	Hour	1	0	23	Present hour
4 0077	Present Time - Min. set (Manual)	H01	Minute	1	0	59	Present minute
4 0078	Start time of nighttime operation	H02	Hour / Min.	0.1	0	23.5	00.0
4 0079	Stop time of nighttime operation	H03	Hour / Min.	0.1	0	23.5	8.0
4 0081	1st Defrost Time	h01	Hour / Min.	0.1	0	23.5	NO (-1)
4 0082	2nd Defrost Time	h02	Hour / Min.	0.1	0	23.5	NO (-1)
4 0083	3th Defrost Time	h03	Hour / Min.	0.1	0	23.5	NO (-1)
4 0084	4th Defrost Time	h04	Hour / Min.	0.1	0	23.5	NO (-1)
4 0085	5th Defrost Time	h05	Hour / Min.	0.1	0	23.5	NO (-1)
4 0086	6th Defrost Time	h06	Hour / Min.	0.1	0	23.5	NO (-1)
4 0087	7th Defrost Time	h07	Hour / Min.	0.1	0	23.5	NO (-1)
4 0088	8th Defrost Time	h08	Hour / Min.	0.1	0	23.5	NO (-1)
4 0089	Start time of reservation operation	hON	Hour / Min.	0.1	0	23.5	00.0
4 0090	Stop time of reservation operation	hOF	Hour / Min.	0.1	0	23.5	00.0

**※ Display around the clock and input method are as follows.**

- Both start time and end time for reservation operation are "00.0, reservation function is not used.
- 10 (Ten) digit number = Hour / Number of decimal digit = Minute  
 e.g) 9.2 = 9:20 a.m. / 14.3 = 14:30 p.m. / 00.0 = midnight / NO = No defrost (Input in communication is '-1')

**: Fan (Comp) Parameter Setup (6.Fn)**

Address	Description	Code	Unit	Step	Min	Max	Default
4 0091	Fan operation at cleaning mode	F00	0= Stop		1= Run		0
4 0092	Fan operation at cooling stop	F01	0= Stop 1= Run		2= Stop after fan stop delay time [F02]		1
4 0093	Fan stop delay time (※1)	F02	Sec	1	0	600	0
4 0094	Fan running mode at defrost	F03	0= Stop(Defrost by heat source)		1= Run(Natural defrost)		0
4 0095	Fan running mode after defrost	F04	0= Immediately run 1= Operating after defrost end and fan run delay time [F05] 2= Operating when fan run temp. reaches [F06] after defrost				0
4 0096	Fan operation delay after defrost	F05	Sec	1	0	600	0
4 0097	Fan operation temp after defrost	F06	°C	1	-50.0	158.0	0.0
4 0098	Door Alarm delay time	F07	Min.	1	0	240	10
4 0099	DIG IN delay alarm	F08	Sec	1	0	600	60
4 0100	Min. stop duration time of compressor	C01	Min.	1	0	900	0
4 0101	Min. run duration time of compressor	C02	Min.	1	0	900	0
4 0102	Obligatory stop duration time of compressor (When compulsory cooling)	C03	Min.	1	0	60	3
4 0103	Obligatory run duration time of compressor (When compulsory cooling) (※2)	C04	Min.	1	0	60	10
4 0104	Compressor's run delay time after power up	C05	Mi	1	0	60	0
4 0105	Parameter change by communication	RAC	0= Prohibition of changing		1= Changeable		1

(※1) Fan stop delay time  
 - Stop delay time, fan operation when cooling stops [F01]= 2

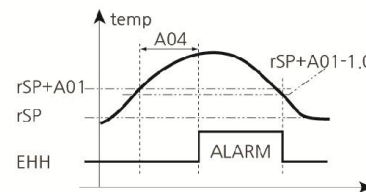
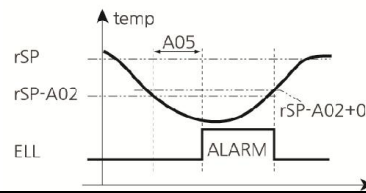
(※2) Obligatory run duration time of compressor (When compulsory cooling)  
 - Compressor will run and stop in obligatory run duration time[C04] and obligatory run duration time [C03]of compressor

**: Status Message**

Code	Description	Code	Description
DPD	During standby of pump down before defrost	FC	Compressor off by evaporating temperature

DDR	During delay of drain time after defrost	SOF	Stop status of compulsory compressor output
DFF	Defrost temp. is higher than defrost end temp when compulsory defrost	FOF	Stop status of compulsory fan output
DF	During defrost operation	CC	When compulsory cooling operation
LT	Delay of temperature display after defrost	CLN	When operating cleaning mode
LO	When injection cooling operation		

: Trip / Alarm Message

No	Description	Code	DIG.IN	Conditions for occurrence	Ways to clear	Operating at detection
1	System fault	5 Y 5	-	It will be happened when data of EEPROM are damaged by noise or inductive load.	Use it after initialization of parameters (Settlement for causes of noise is needed)	Immediately stop
2	Hi temp. alarm	E H H	-	If present temperature is higher than set point [RSP] + high temperature alarm [A01] and lasting during high temperature alarm delay time [A04]. ※ High temperature alarm is detected after high temp. alarm delay time after defrost [A03].	Clear alarm if present temperature is less than set point [RSP] + high temperature alarm [A01] - 1.0°C 	Alarm
3	Low temp. alarm	E L L	-	If present temperature is higher than set point [RSP] + s low temperature alarm [A02] and lasting during low temperature alarm delay time [A05].	Clear alarm if present temperature is less than set point [RSP] + low temperature alarm [A02] + 1.0°C 	Alarm
4	B1 temp. sensor fault	E B 1	-	If B1 sensor disconnected or short circuited	When B1 sensor is normal	Alarm
5	B2 temp. sensor fault	E B 2	-	If B2 sensor disconnected or short circuited	When B2 sensor is normal	Alarm
6	B3 temp. sensor fault	E B 3	-	If B3 sensor disconnected or short circuited	When B3 sensor is normal	Alarm
7	Defrost end alarm	E D T	-	in case of ending defrost twice in succession by defrost time		Alarm
8	Probe fault Emergency cooling operation	A E C	-	Repeat the operation (run / stop) which was saved at normal condition when all probes are faulty	When B1 sensor is normal (Manual reset)	Alarm
9	Malfunction of RTC	ECL	-	RTC is stopped (Only for model which is equipped with RTC function)	Please request service. RTC function will not be operated.	Alarm
10	Interlock alarm	ALT	2	DIG.IN is opened	DIG.IN is closed	Immediately stop
11	Fan fault alarm	A F N	3	DIG.IN is opened	DIG.IN is closed	Immediately stop
12	DIG IN. delay alarm	AAL	4	DIG.IN is opened and lasting during DIG IN. delay alarm F08)	DIG.IN is closed	Immediately stop
13	DIG IN. delay alarm	EAL	4	DIG.IN is closed	Clear alarm when digital input is closed	Alarm
14	Door open alarm	E D O	6	DIG.IN is opened and lasting during door alarm delay time	DIG.IN is closed	Alarm
15	Stop status	STP	7	DIG.IN is opened	When digital input is closed	Immediately stop
16	Door open alarm	E D O	9	DIG.IN is opened and lasting during door alarm delay time ※ Comp. & Fan are stopped at	DIG.IN is closed	Alarm

				alarm		
17	Door open alarm	E D O	10	DIG.IN is opened and lasting during door alarm delay time ※ Fan is stopped at alarm	DIG.IN is closed	Alarm

※ In case of occurring error, error message will be flickering in every 0.5 seconds as above

※ Hi and low temperature alarm will not be detected during Temp. alarm delay time after power up [A06]

#### : Specifications of communication

Item	Description
Transmission connection line	Multiple line
Communications method	RS485 (2-wire, half-duplex)
Baud-rate	BPS default 9600 BPS
Parity, Data, Stop bit	None, 8 Data, 1 Stop
Protocol Type	Modbus RTU MODE
Function Code	Read HOLD REGISTERS (0x03) / Preset Single Register (0x06)
Maximum Read Word	32 Word
Media Type	BELDEN 9841 / 9842, LG LIREV-AMESB
Poll interval	100msec