

ZL-636A-R Temperature Controller

V1.2

1 Introduction

ZL-636A-R is a thermostat with RS485 communication function, communication protocol is Modbus. It has an RTC clock for excellent time and day management. Front panel protection level is IP65. It is suitable for control of cold storage, seafood storage, water heater, and so on.

2 Main Function

- Cooling or heating working mode
- RTC(real time clock), support 8 times defrost time and weekdays energy saving settings
- Intelligent or timer defrost
- Fan control
- Temperature calibration
- High and low temperature alarming
- Temperature control output delay protection
- Sensor failure alarming
- Multifunctional digital input
- RS485 Modbus communication

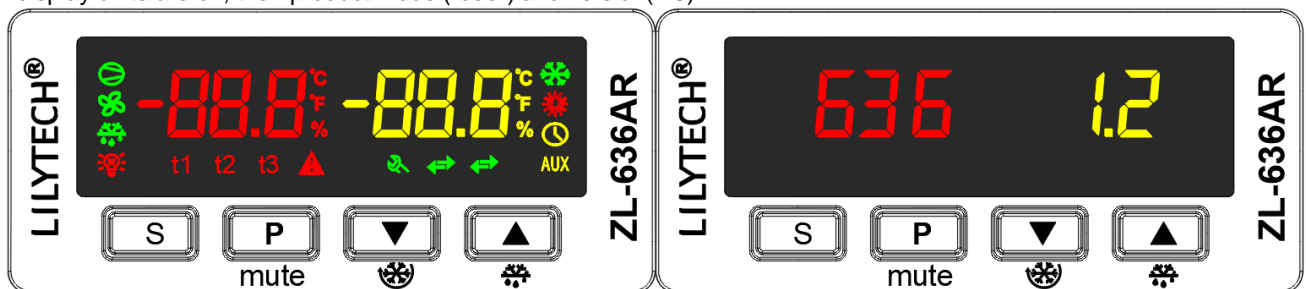
3 Key Specification

- Sensor cables' length: 2 meters
- Sensor type: NTC(R25℃=5K, B25/50℃=3470K)
- Setting range: -40.0 ~ 99.9℃
- Display range: -50.0 ~ 99.9℃
- Power supply: 185 ~ 245Vac, 50/60Hz
- Terminal wires: ≤ 2 * 1.5mm², or 1 * 2.5mm²
- Loads: 3A, 10A, 250Vac (resistive)
- Storage: -30 ~ 70℃, in dry air
- Working: -10 ~ 45℃, ≤ 85%RH without dew
- Case materials: PC + ABS, fireproof
- Protection level: IP65(front side only)
- Dimension: L78 x W34.5 x D71 (mm)
- Installation drilling: L71 x W29 (mm)

4 Operation

4.1 Display after Power Supplied

All display units are on, then product model("636") and version(1.3):



4.2 Display Icon

Icon	Function	On	Off	Blinking
	Temperature output	Energized	Deenergized	Delay protection
	Defrost	Defrosting	Not defrosting	Dripping water
	Work mode	Cooling mode	----	DI energy saving
		Heating mode		
	Lamp	Energized	Deenergized	----
	Setting	Under setting parameters	----	----
	Warning	Alarming	No warning	----
	Communication status	----	No communication	Communicating
t1	Display temperature	Room temperature display		
t2		Defrost sensor temperature display		

4.3 Display Code

Display code	Remark
E01	Room sensor failure (short or open)
E02	Pipe sensor failure (short or open)
Hi	Room temp. Is higher than the high limit
Lo	Room temp. Is lower than the low limit
EE	Memory error
tEr	RTC(real clock) failure

Display code	Remark
Err	Password error
dEF	Defrosting
dr	DI door open warning
Frd	Forced cooling or heating
UnL	Restore to factory password "111"

4.4 Set Setpoint

Keep [S] depressed for 3 seconds to enter into the setting setpoint status.
 Press [▲] or [▼] to set the value (keeping depressed can fast set).
 Press [S] to exit, and **save the setting**.
 The status will exit **without saving the setting** if there is no key operation within 30 seconds.

4.5 Set Parameters

Password:

Keep [P] depressed for 3 seconds, digits show "00".
 Press [▼] or [▲] to set the value to the password.
 press [S] to confirm.
 If password is correct, enter into the parameter setting status, else display "Err", and exit.

Parameter Set:

The display will show "U10" and the value of it.
 Press [P] or [S] to select parameter. Press [▲] or [▼] to set the value of the parameter.
 Keep [P] depressed for 3 seconds to exit, and **save the settings**.
 The status will exit **without saving the settings** if there is no key operation for 30 seconds.

Parameter Code Table:

Code	Function	Range	Remark	Factory set
U10	Temp. output stop protection time	0~100 min		3
U11	Temp. output run protection time	0~100 min		3
U12	Temp. output run frequency	0~8	Only for cooling mode. U12=0: disable	5
U20	Room sensor calibration	-9.9~9.9℃		0.0
U21	Pipe sensor calibration	-9.9~9.9℃		0.0
U22	Hysteresis	0.1~30.0℃	See paragraph for cooling and heating control	1.0
U23	Temp. reduction for energy saving	-20.0~20.0℃	Only effective when U63=1	2.0
U30	Defrost period	0~180 hour	U30=0: disable periodical defrost	6
U31	Defrost time	1~180 min		30
U32	Defrost finish temp.	0.5~50.0℃		12.0
U33	Dripping time	0~180 min		5
U34	Over temp. warning delay after defrost	0~180 hour	U34=0: disable	2
U35	Defrost after turned to online	0~1	U35=0: disable. U35=1: enable	0
U36	Delay to defrost after turned online	0~180 min	U36=0: disable	0
U38	Defrost type	0~1	U38=0: Electrical heater defrost. U38=1: Gas defrost	0
U39	Defrost finish sensor	0~1	U39=0: based on timer only. U39=1: based on pipe sensor	1
U40	Fan start temp.	-45.0~120.0℃	Only effective when U43=0	30.0
U41	Fan start delay	0~600 sec	Only effective when U43=0	0
U42	Fan stop delay	0~600 sec	Only effective when U43=0	0
U43	Fan control mode	0~4	U43=0: Controlled mode, see the paragraph U43=1: Stop in defrosting, see the paragraph U43=2: Stop in defrosting, else running U43=3: Run in defrosting, see the paragraph U43=4: Run in defrosting, else running	0
U44	Fan running time when compressor stops during cooling mode	0~60 min	Only effective when U43=1 or 3	0
U45	Fan stop time when compressor stops during cooling mode	0~60 min	Only effective when U43=1 or 3	0
U50	Deviation for high temp. warning	0.0~60.0℃	U50=0: disable	10.0
U51	Deviation for low temp. warning	0.0~60.0℃	U51=0: disable	6.0
U52	Over temp. warning delay	0~180 min		30
U53	Over temp. warning delay after power supplied	0~180 hour	U53=0: disable	2
U60	DI input set	0~2	U60=0: disable. U60=1: Normal open. U60=2: Normal close	0
U61	Warning delay time to DI door open	0~120 min		0
U62	Buzzer warning	0~1	U62=0: disable. U62=1: enable	0
U63	DI input function	0~2	U63=0: door switch U63=1: switch for energy saving U63=2: button for forced defrost	0

U64	Outputs status during DI door open (No delay to DI door open)	0~3	U64=0: their status keeping unchanged U64=1: fan stops U64=2: compressor deenergized U64=3: compressor and fan stop	3
U65	DI door open, outputs restart after U61 time (when U64=1/2/3)	0~1	U65=0: do not restart. U65=1: restart to control	1
U66	Lamp delay time to shut off	0~15		10
U70	Display during defrosting	0~3	U70=0: Room temperature U70=1: The room temperature before defrost U70=2: Setpoint U70=3: "DEF", showing defrosting now	1
U71	Time to keep the display during defrost, after defrost finished	0~255 min		30
U72	R4 function option	0~1	U72=0: 灯光控制; U72=1: 报警继电器	0
U90	Working mode	CO / HE	U90=CO: cooling. U90=HE: heating	CO
U91	On/offline status	On / OFF		On
U96	Controller ID code	0~31	For classification in net	0
U97	Baud rate	0~3	U97=0: 2400bps. U97=1: 4800bps. U97=2: 9600bps. U97=3: 19200bps	2
U98	Modbus slave address	1~200		1
U99	Password	000~999		111
tEn	Enable RTC	0~1	0: disable RTC	1
dAY	RTC weekday	1~7		1
H	RTC hour	00~23 hour		0
N	RTC minute	00~59 min		0
d1d	No. 1 defrost day	0~11		0
d1h	No. 1 defrost hour	00~23 hour		0
d1n	No. 1 defrost minute	00~59 min		0
d2d	No. 2 defrost day	0~11		0
d2h	No. 2 defrost hour	00~23 hour		0
d2n	No. 2 defrost minute	00~59 min		0
d3d	No. 3 defrost day	0~11		0
d3h	No. 3 defrost hour	00~23 hour		0
d3n	No. 3 defrost minute	00~59 min		0
d4d	No. 4 defrost day	0~11		0
d4h	No. 4 defrost hour	00~23 hour		0
d4n	No. 4 defrost minute	00~59 min		0
d5d	No. 5 defrost day	0~11		0
d5h	No. 5 defrost hour	00~23 hour		0
d5n	No. 5 defrost minute	00~59 min		0
d6d	No. 6 defrost day	0~11		0
d6h	No. 6 defrost hour	00~23 hour		0
d6n	No. 6 defrost minute	00~59 min		0
d7d	No. 7 defrost day	0~11		0
d7h	No. 7 defrost hour	00~23 hour		0
d7n	No. 7 defrost minute	00~59 min		0
d8d	No. 8 defrost day	0~11		0
d8h	No. 8 defrost hour	00~23 hour		0
d8n	No. 8 defrost minute	00~59 min		0
nOd	Start energy saving days	0~11		0
nOh	Start energy saving hour	00~23 hour		0
nOn	Start energy saving minute	00~59 min		0
nFd	Stop energy saving days	0~11		0
nFh	Stop energy saving hour	00~23 hour		0
nFn	Stop energy saving minute	00~59 min		0

4.6 Check Real Time

Only effective when tEn = 1 (RTC is enabled).

Keep [S] and [▼] depressed simultaneously for 1 second, the display shows the real time.

5 Control Function

5.1 Cooling Control

If $Troom \geq (Set-point + U22)$, and **Temp._output** has stopped for U10, **Temp._output** energized.

If $Troom \leq Set-point$, and **Temp._output** has run for U11, **Temp._output** de-energized.

Temp._output forced energized:

When not defrosting, keep [▼] depressed for 5 seconds can force **Temp._output** energized for 30 min.

During forced cooling, keep [▼] depressed for 5 seconds will stop forced cooling.

5.2 Heating Control

If $Troom \leq (Set-point - U22)$, and **Temp._output** has stopped for U10, **Temp._output** energized.

If $Troom \geq Set-point$, and **Temp._output** has run for U11, **Temp._output** de-energized.

Temp._output forced energized:

When not in setting status, and **Temp._output** de-energized, keep [▼] depressed for 5 seconds can force **Temp._output** energized.

During forced heating, keep [▼] depressed for 5 seconds will stop forced heating.

5.3 Temp._output delay protection

After power supplied, **Temp._output** could be energized after U10.

After **Temp._output** de-energized, it could be energized again after U10.

After **Temp._output** energized, it could be de-energized after U11.

5.4 Fan Control Mode

U43 = 0: Controlled Mode

When cooling, if $Tpipe < U40$, and **Temp._output** has run for U41, fan energized.

If $U41 = 0$, fan will be energized right after the **Temp._output** energized.

After **Temp._output** has de-energized for U42, fan de-energized.

If $U42 = 0$, fan will be de-energized right after the **Temp._output** de-energized.

U43 = 1: Fan stops during defrosting. At other time, fan works as following:

In cooling mode, during **Temp._output** de-energized:

If $U44 \neq 0$ and $U45 \neq 0$: fan runs for U44, stops for U45, repeatedly, till **Temp._output** energized.

If $U44 \neq 0$ and $U45 = 0$: fan keeps running.

If $U44 = 0$: fan keeps stopping.

U43 = 2: Fan stops during defrosting. At other time, fan keeps running.

U43 = 3: Fan runs during defrosting. At other time, fan works as following:

In cooling mode, during **Temp._output** de-energized:

If $U44 \neq 0$ and $U45 \neq 0$: fan runs for U44, stops for U45, repeatedly, till **Temp._output** energized.

If $U44 \neq 0$ and $U45 = 0$: fan keeps running.

If $U44 = 0$: fan keeps stopping.

U43 = 4: Fan runs during defrosting. At other time, fan keeps running also.

5.5 Protecting Run When Room Sensor Fails (for Cooling Mode)

When room sensor fails, **Temp._output** will be energized and de-energized periodically.

For every 30 minutes, **Temp._output** will be energized for $Trun = U12 * 3$ minutes, de-energized for $(30 - Trun)$ minutes.

If $U12 = 0$, no protecting run.

5.6 Run When Pipe Sensor Fails

When pipe sensor fails, the intelligent defrost function will be canceled.

When pipe sensor fails, and the fan works in controlled mode ($U43 = 0$), fan will only work according to U41 and U42, skip the condition from U40.

5.7 Defrost(Only Effective in Cooling Mode)

Defrost Start:

1. If $tEn = 0$, and $U30 \neq 0$, after **Temp._output** has been energized for U30, and $Tpipe < U32$, defrost starts.

2. If $tEn = 1$, defrost according to the defrost time settings(d1d, d1h and d1n to d8d, d8h and d8n).

Defrost End: When $Tpipe > U32$, or the defrosting has lasted for U31, defrost ends.

Electrical Heater Defrost (U38 = 0): during defrost, **Temp._output** de-energized, **defrost output** energized.

Gas Defrost (U38 = 1): during defrost, **Temp._output** energized, **defrost output** energized.

Manually Forced Defrost:

During none-defrost status, keeping [▲] depressed for 7 seconds will start forced defrost.

During defrost status, keeping [▲] depressed for 7 seconds will stop defrost, and start dripping water process.

Dripping Water:

After defrost finishes, the device will be dripping for U33, then start cooling again.

Note: No dripping function, when the manual forced defrost finishes, or when the pipe sensor fails.

Check for Tpipe, Left Time of Defrosting, Left Time of Dripping Water:

When Troom displayed, press [▲] will show Tpipe.

Attention: when this key is depressed for 7 seconds, it will start forced defrost.

When defrosting, press [▼] will show the left time of defrost.

When dripping, press [▼] will show the left time of dripping.

Defrost time settings:

Weekday setting:

d1d...d8d = 0: no defrost set

d1d...d8d = 1...7: Monday...Sunday

d1d...d8d = 8: From Monday to Friday

d1d...d8d = 9: From Monday to Saturday

d1d...d8d = 10: Saturday and Sunday

d1d...d8d = 11: Every day

d1h...d8h: Defrost hour of the time: 0 – 23

d1n...d8n: Defrost minute of the time: 0 – 59

6 Energy Saving Time setting

Energy saving starts moments:

Weekday setting to start energy saving:

n0d = 0: no energy saving necessary all the time

n0d = 1...7: Monday...Sunday

n0d = 8: From Monday to Friday

n0d = 9: From Monday to Saturday

n0d = 10: Saturday and Sunday

n0d = 11: Every day

n0h: hour of the time: 0 ~ 23

n0n: minute of the time: 0 ~ 59

Energy saving stops moments:

Weekday setting to stop energy saving:

nFd = 0: no settings

nFd = 1...7: Monday...Sunday

nFd = 8: From Monday to Friday

nFd = 9: From Monday to Saturday

nFd = 10: Saturday and Sunday

nFd = 11: Every day

nFh: hour of the time: 0 ~ 23

nFn: minute of the time: 0 ~ 59

Example: If we hope to be energy saving(for cooling, real setpoint = setpoint + U23) at 22:31 to 8:32, then set:

n0d = 11, n0h = 22, n0n = 31

nFd = 11, nFh = 8, nFn = 32

7 Buzzer

Every key press, there will be a short beep. Every confirmation press, there will be a long beep. Every error operation, there will be three short beeps.

When the device has failure, or external alarm input (DI digital input):

If U62 = 0, no buzzing warning.

If U62 = 1, there will be continuous buzzing for warning. Press [P] can stop warning, if warning condition disappears.

8 Over Temperature Warning

Relative set value:

When Troom ≥ (Setpoint + U50), there will be warning if the following condition meets:

U50 > 0 (when U50 ≠ 0):

If power is supplied, and U53 has passed.

If defrost has just finished, and U34 has passed.

The Troom keeps too high for U52.

When $Troom \leq (\text{Setpoint} - U51)$, there will be warning if the following condition meets:

$U51 > 0$ (when $U51 \neq 0$):

If power is supplied, and U53 has passed.

If defrost has just finished, and U34 has passed.

The Troom keeps too low for U52.

Absolute set value (Can only be set by Modbus):

When $Troom \geq U50$, there will be warning if the following condition meets:

When $U50 \neq 150$:

If power is supplied, and U53 has passed.

If defrost has just finished, and U34 has passed.

The Troom keeps too high for U52.

When $Troom \leq U51$, there will be warning if the following condition meets:

When $U51 \neq -50$:

If power is supplied, and U53 has passed.

If defrost has just finished, and U34 has passed.

The Troom keeps too low for U52.

9 Energy Saving Mode

When $U63 = 1$, and DI input is effective, the controller enters into Energy Saving Mode.

During energy saving mode, the actual setpoint will be $\text{setpoint} + U23$ in cooling mode.

For example, if $\text{setpoint} = 2.0$, $U23 = +2.0$, $U63 = 1$, DI is effective, then the actual setpoint will be 4.0°C in cooling mode.

10 External Input DI

If $U61 = 0$, DI is disabled.

If $U61 = 1$, NO(Normal Open), the connected switch or button will be effective when closed(short).

If $U61 = 2$, NC(Normal Close), the connected switch or button will be effective when open(not short).

When $U63 = 0$, it is the signal as door open/close. When door is open, warning.

When $U63 = 1$, it is the signal for energy saving mode.

When $U63 = 2$, it is the signal for forced defrost.

11 Sensor Calibration

The room sensor and pipe sensor can be calibrated by U20 and U21.

12 Restore To Factory Default Settings

Keep [P] and [▲] depressed simultaneously for 5 sec, there will be a short beep, and "UnL" displays.

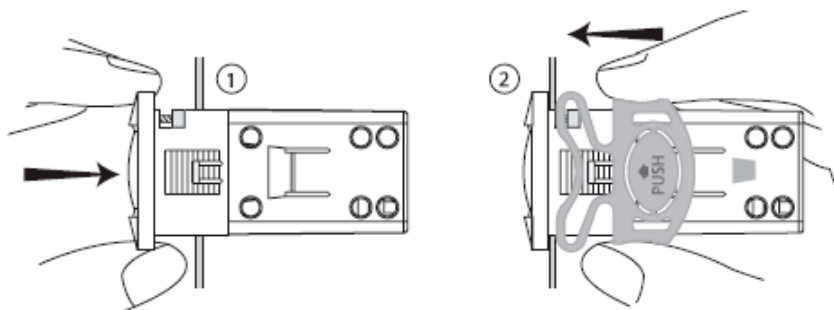
Press [▼] twice, there will be a beep, all setting will be restored to factory default settings, including the password to "111".

13 Installation

Installation

1st: Insert into drilling hole

2nd: Clamp



Warning!

Avoid install controller in the following environment:

- More wet than 90%RH, or possibly dew.
- Vibrating, or be shocked.
- Possibly sprayed.
- Under erosive air.
- possible explosive air.

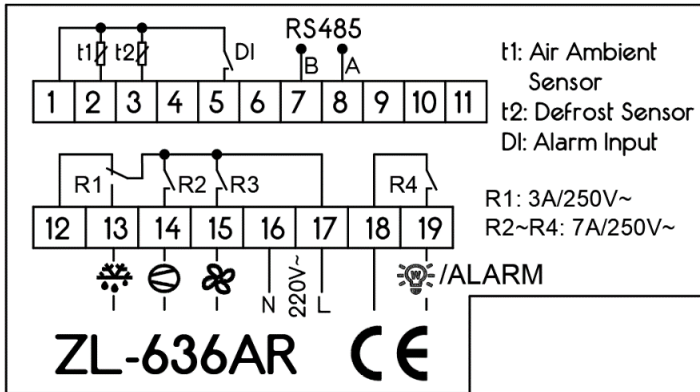


14 Electrical Wiring

Warning!

- Wiring work should be manipulated by certified technicians.
- Supplied power should within specification requirement.
- Sensor and input signal bundles should not be laid together with power supply bundles, in same pipe.
- Sensor's bundle is better as short as possible. Not wind the redundant length bundle to electrical noise equipment.
- Do not touch inside components.
- Equip safety devices for equipment protection and human safety. Before supply power, check wiring again.

Electrical Wiring



15 Communication

The controller has RS485 interface, based on Modbus-Rtu protocol:

Communication: serial half duplex.

Baud rate: 2400bps, 4800bps, 9600bps(default) or 19200bps.

Data bit: 8 bits (LSB 1st).

Parity: none.

Start bit: 1 bit.

Stop bit: 1 bit.

16 MODBUS-RTU command function table

Coils:

Address	Name	RW	Range	Function code	Remark
Failure and Alarm					
6600	Room temperature sensor failure	R	0 ~ 1	0x01	0: not fail, 1: fail
6601	Pipe sensor failure	R	0 ~ 1	0x01	0: not fail, 1: fail
6602	High temperature alarm	R	0 ~ 1	0x01	0: not fail, 1: fail
6603	Low temperature alarm	R	0 ~ 1	0x01	0: not fail, 1: fail
6604	External input alarm	R	0 ~ 1	0x01	0: not fail, 1: fail
Relay output					
6605	Compressor relay	R	0 ~ 1	0x01	0: off, 1: on
6606	Fan relay	R	0 ~ 1	0x01	0: off, 1: on
6607	Defrost relay	R	0 ~ 1	0x01	0: off, 1: on
6608	Multifunction relay(lamp/alarm)	R	0 ~ 1	0x01	0: off, 1: on
6609	DI status	R	0 ~ 1	0x01	0: closed, 1: open
Miscellaneous					
6611	Energy saving status launched by timer	R	0 ~ 1	0x01	0: off, 1: on
6612	Remote forced defrost	RW	0 ~ 1	0x01/0x05	0: off, 1: on
6613	Online/offline	RW	0 ~ 1	0x01/0x05	0: off, 1: on
6614	Defrost status	R	0 ~ 1	0x01	0: not defrost now, 1: defrosting
6615	DI door open warning	R	0 ~ 1	0x01	1: door is open
6616	DI energy saving status launched by DI	R	0 ~ 1	0x01	1: energy saving
6617	DI forced defrost status	R	0 ~ 1	0x01	1: forced defrost
6618	Reset all kinds of warning remotely	W	0xFF00	0x05	0xFF00: clear all warning
6619	RTC failure	R	0 ~ 1	0x01	0: not fail, 1: fail

Registers:

Add.	Name	RW	Range	Remark	Remark	Function Code
Analog input						
3300	Room temperature	R	-50.0~130.0°C		real value ×10	0x03
3301	Pipe temperature	R	-50.0~130.0°C		real value ×10	0x03
Parameter						
3303	Setpoint	RW	-40.0~120.0°C		real value ×10	0x03/0x06/0x10
3304	Hysteresis U22	RW	0.1~30.0°C		real value ×10	0x03/0x06/0x10
3305	Temp. output stop protection time U10	RW	0~100 min			0x03/0x06/0x10
3306	Temp. output run protection time U11	RW	0~100 min			0x03/0x06/0x10
3307	Temp. output run frequency U12	RW	0~8			0x03/0x06/0x10
3308	Room sensor calibration U20	RW	-9.9~9.9°C		real value ×10	0x03/0x06/0x10
3309	Pipe sensor calibration U21	RW	-9.9~9.9°C		real value ×10	0x03/0x06/0x10
3311	Display during defrosting U70	RW	0~3	See U70		0x03/0x06/0x10
3312	Time to keep the display during defrost, after defrost is finished U71	RW	0~255 min			0x03/0x06/0x10
3313	Defrost period U30	RW	0~180 hour	See U30		0x03/0x06/0x10
3314	Defrost time U31	RW	1~180 min			0x03/0x06/0x10
3315	Defrost finish temp. U32	RW	0.5~50.0°C			0x03/0x06/0x10
3316	Dripping time U33	RW	0~180 min			0x03/0x06/0x10
3317	Over temp. warning delay after defrost U34	RW	0~180 hour			0x03/0x06/0x10
3318	Defrost after turned to online U35	RW	0~1	See U35		0x03/0x06/0x10
3319	Delay to defrost after turned online U36	RW	0~180 min			0x03/0x06/0x10
3320	Defrost mode	RW	0~1	0: auto, 1: manual		0x03/0x06/0x10
3321	Fan start temp. U40	RW	-45.0~120.0°C		real value ×10	0x03/0x06/0x10
3322	Fan start delay U41	RW	0~600 sec			0x03/0x06/0x10
3323	Fan stop delay U42	RW	0~600 sec			0x03/0x06/0x10
3324	Fan control mode U43	RW	0~4	See U43		0x03/0x06/0x10
3325	Fan running time when compressor stops during cooling mode U44	RW	0~60 min			0x03/0x06/0x10
3326	Fan stop time when compressor stops during cooling mode U45	RW	0~60 min			0x03/0x06/0x10
3327	Defrost finish sensor U39	RW	0~1	See U39		0x03/0x06/0x10
3330	Deviation for high temp. warning U50	RW	-0.0~60.0°C -50.0~150.0°C	When reg 3339 = 0 When reg 3339 = 1	real value ×10	0x03/0x06/0x10
3331	Deviation for low temp. warning U51	RW	-0.0~60.0°C -50.0~150.0°C	When reg 3339 = 0 When reg 3339 = 1	real value ×10	0x03/0x06/0x10
3332	Over temp. warning delay U52	RW	0~180 min			0x03/0x06/0x10
3333	Over temp. warning delay after power supplied U53	RW	0~180 hour			0x03/0x06/0x10
3334	Defrost type U38	RW	0~1	See U38		0x03/0x06/0x10
3335	DI input set U60	RW	0~2	See U60		0x03/0x06/0x10
3336	Warning delay time to DI door open U61	RW	0~120 min			0x03/0x06/0x10
3337	Buzzer warning U62	RW	0~1	See U62		0x03/0x06/0x10
3338	Remote forced temp. output on	RW	0x0000/0xFF00	0x0000: normal control 0xFF00: forced heating/cooling		0x03/0x06/0x10
3339	Over temp. setting(U50, U51) type	RW	0~1	U50 and U51 value 0: relative value. 1: absolute value		0x03/0x06/0x10
3341	Setpoint max value	RW	-40.0~120.0°C			0x03/0x06/0x10
3342	Setpoint min value	RW	-40.0~120.0°C			0x03/0x06/0x10
3343	Work mode U90	RW	0~1	0/1: cooling/heating		0x03/0x06/0x10
3344	Remote forced defrost	RW	0x0000/0xFF00	0xFF00: write to force defrost		0x01/0x05/0x06/0x10
3345	Online/offline U91	RW	0x0000~0xFF00			0x01/0x05/0x06/0x10
3346	Restore to factory settings	RW	0~1	1: Restore the settings		0x06/0x10
3347	Password U99	RW	0~999			0x03/0x06/0x10
3348	Temp. reduction for energy saving U23	RW	-20.0~20.0°C		real value ×10	0x03/0x06/0x10
3349	DI input function U63	RW	0~2	See U63		0x03/0x06/0x10
3350	Outputs status during DI door open (No delay to DI door open) U64	RW	0~3	See U64		0x03/0x06/0x10
3351	DI door open, outputs restart after U61 time (when U64=1/2/3) U65	RW	0~1	See U65		0x03/0x06/0x10
3352	R4 function option U72	RW	0~1	See U72		0x03/0x06/0x10
RTC and timer setting						
5500	Enable RTC tEn	RW	0~1	0: Disable, 1: enable		0x03/0x06/0x10

5501	RTC weekday dAY	RW	1~7			0x03/0x06/0x10
5502	RTC hour H	RW	0~23			0x03/0x06/0x10
5503	RTC minute N	RW	0~59			0x03/0x06/0x10
5504	RTC second	RW	0~59			0x03/0x06/0x10
5505	No. 1 defrost day d1d	RW	0~11			0x03/0x06/0x10
5506	No. 1 defrost hour d1h	RW	0~23			0x03/0x06/0x10
5507	No. 1 defrost minute d1n	RW	0~59			0x03/0x06/0x10
5508	No. 2 defrost day d2d	RW	0~11			0x03/0x06/0x10
5509	No. 2 defrost hour d2h	RW	0~23			0x03/0x06/0x10
5510	No. 2 defrost minute d2n	RW	0~59			0x03/0x06/0x10
5511	No. 3 defrost day d3d	RW	0~11			0x03/0x06/0x10
5512	No. 3 defrost hour d3h	RW	0~23			0x03/0x06/0x10
5513	No. 3 defrost minute d3n	RW	0~59			0x03/0x06/0x10
5514	No. 4 defrost day d4d	RW	0~11			0x03/0x06/0x10
5515	No. 4 defrost hour d4h	RW	0~23			0x03/0x06/0x10
5516	No. 4 defrost minute d4n	RW	0~59			0x03/0x06/0x10
5517	No. 5 defrost day d5d	RW	0~11			0x03/0x06/0x10
5518	No. 5 defrost hour d5h	RW	0~23			0x03/0x06/0x10
5519	No. 5 defrost minute d5n	RW	0~59			0x03/0x06/0x10
5520	No. 6 defrost day d6d	RW	0~11			0x03/0x06/0x10
5521	No. 6 defrost hour d6h	RW	0~23			0x03/0x06/0x10
5522	No. 6 defrost minute d6n	RW	0~59			0x03/0x06/0x10
5523	No. 7 defrost day d7d	RW	0~11			0x03/0x06/0x10
5524	No. 7 defrost hour d7h	RW	0~23			0x03/0x06/0x10
5525	No. 7 defrost minute d7n	RW	0~59			0x03/0x06/0x10
5526	No. 8 defrost day d8d	RW	0~11			0x03/0x06/0x10
5527	No. 8 defrost hour d8h	RW	0~23			0x03/0x06/0x10
5528	No. 8 defrost minute d8n	RW	0~59			0x03/0x06/0x10
5529	Start energy saving days nOd	RW	0~11			0x03/0x06/0x10
5530	Start energy saving hour nOh	RW	0~23			0x03/0x06/0x10
5531	Start energy saving minute nOn	RW	0~59			0x03/0x06/0x10
5532	Stop energy saving days nFd	RW	0~11			0x03/0x06/0x10
5533	Stop energy saving hour nFh	RW	0~23			0x03/0x06/0x10
5534	Stop energy saving minute nFn	RW	0~59			0x03/0x06/0x10
5535	Lamp delay time to shut off U66	RW	0~15			0x03/0x06/0x10