

1. Operation instruction

1.1 Start-up and Shut-off

The unit can be started/stopped by 3 methods:

- 1) **ON/OFF key** (or **Start** and **Stop** keys) on the display;
- 2) Remote switch

[Remote switch type PL03-09] = Toggle switch: The unit is started up when the remote switch is closed and stopped when the remote switch is disconnected;

[Remote switch type PL03-09] = Pulse switch: Effective when the remote switch is closed -> disconnected (pulse width > 300 ms);

The unit is started up when the switch is stopped and stopped when the switch is in operation.

- 3) Timed start-up/shutdown: Start up or shut down based on the set time. See [Timing setting] in *User Operation Manual*.

The 3 methods have the same priority.

1.2 Failure reset description

4 ways to reset failure:

- 1) Power-on reset
 - Failure that only can be reset by powering on again after failure clearance.
 - Failure requiring power-on resetting: EEPROM data error.
- 2) Restricted automatic reset:
 - After the failure is cleared, the alarm is delayed **[Failure resetting time PL08-03]**, the same failure will not occur during this period, automatic reset;
 - Within the set time **[Allowed automatic reset time PL08-04]**, 2 automatic resets are allowed, manual reset is required when alarm number > 2; after manual reset, alarm number can be re-calculated.
 - Restricted failures: See the failure table
- 3) Automatic reset:
 - After the failure is cleared, the alarm is delayed **[Failure resetting time PL08-03]**, the same failure will not occur during this period, automatic reset;
 - There is no restriction on number of automatic resets;
 - Automatically reset failure: See the failure table.
- 4) Manual reset:
 - After the failure is cleared, the alarm can only be manually reset on the controller;
 - Failures of Category 1), 2) and 3) can also be manually reset.

1.3 Description of air supply fan model

1.3.1 Input and output correspond to each other

Control of air supply fan model is similar to that of water supply fan model, you can connect wires by referencing to electrical connection schematic of the water supply fan model, and replace the corresponding points according to the following table:

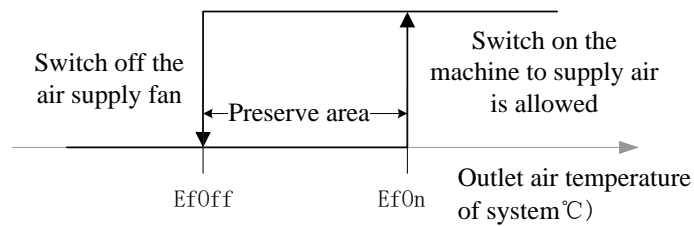
| Air-cooled water supply | Air-cooled air supply |
|---|---|
| Output-A/C water pump | Output-Air supply fan |
| Input-A/C pump overload | Input-Overloading of pressure fan |
| Input-Insufficient water flow of A/C | Input-Air supply pressure difference |
| Probe- Return water temperature of system | Probe- Return air temperature of system |
| Probe- Outlet water temperature of system | Probe- Outlet air temperature of system |

1.3.2 Anti-cold air function

Parameters used

- EfOff: [Temperature when turning off the air supply fan PL05-06] 18°C by default
- EfOn: [Temperature when turning on the air supply fan PL05-07] 30°C by default

In the heating mode, to prevent blowing cold air, output of the air supply fan is controlled by outlet air temperature of the system.



- During defrosting, the air supply fan does not operate according to the above anti-cold air requirement (since the auxiliary electric heater is switched on forcibly, the air supply fan must be kept turned on)

1.3.3 Air supply fan paused

Parameters used:

- [Air supply fan pause delay PL05-08] 0 min by default
During the air supply fan operation, when all compressors and refrigeration fans have been turned off, the air supply fan will be turned off after a delay; it will be restarted when there is any compressor to be turned on.
- For units equipped with electric heater, you also must wait until all electric heaters have been turned off for more than 60s;
- **Setting [Air supply fan pause delay]** to 0 indicates this function is not used, and the air supply fan operates all the time with the unit switched on.

2. Password management

Currently this controller has two kinds of passwords, which are independent from each other:

1) Password for service life: Used to enter into the service life setting;

Factory defaults: 66666666 (eight "6").

2) Password for parameter setting: Used to enter into each parameter setting;

The password for parameter setting is divided into four levels, which are:

Maintenance-level password, factory defaults: 20040101

Engineering-level password, factory defaults: 8888

User-level password, factory defaults: 123456 (**user-level password is not required when DM602 is used**)

See [Parameter Setting Table](#) of the machine for parameters that can be operated by password of each level. The factory-level password has the highest priority and the user-level password has the lowest one, the priority is listed in order. Passwords of high priority can enter into operation interface of low priority and modify passwords of low priority.

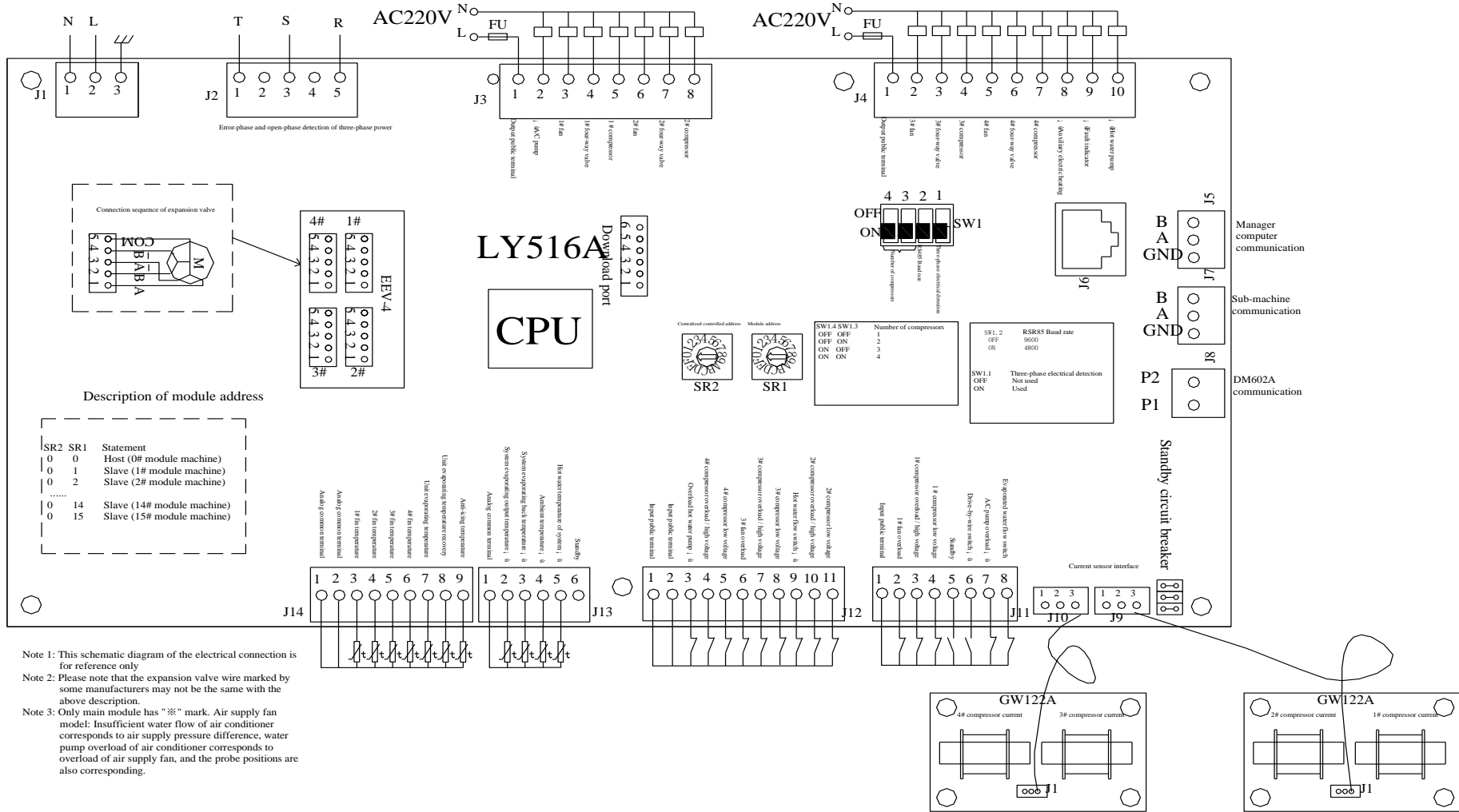
- Note:**
- (1) **The original password will not be modified or initialized by program redownloading or parameter initialization.**
 - (2) **The passwords can be reset but cannot be initialized.**
 - (3) **When setting a password, in the "Type in old password" step, password of current level or higher level can be entered.**

7. Parameter management

- 1) When parameter initialization is performed for the main module, the slave module will be initialized synchronously.
- 2) Parameters can be set separately for the slave module, but they are only effective when there is no power failure. When powered on again, parameters on the slave modules will be updated to be same as those on the main module.

Annex1. Electric connection Diagram

X1.LY516A.TY.B03M. Electrical Connection Diagram. Module - four compressors



Annex2. List of state numbers

Information on each module can be queried on DM602A state query interface of the line controller, including temperature and current.

Txxx indicates state number, which corresponds to information on individual module, see the following table for specific meaning:

| System status (Toxx) | | Compressor state (Tnxx) n=1,2,3,4 | | Module status (T9xx) | |
|----------------------|---------------------------------------|--------------------------------------|---|----------------------|-------------------------------------|
| T000 | Ambient temperature | Tn00 | Opening of the electronic expansion valve | T900 | Unit evaporating outlet temperature |
| T001 | System evaporating output temperature | Tn01 | Current of the compressor | T912 | Anti-icing temperature |
| T002 | System evaporating return temperature | Tn05 | Fin temperature | T913 | Unit evaporating return temperature |
| T003 | Hot water temperature of system | | | | |
| | | | | | |

Annex3. Parameters setting

All the parameters of the unit have been set before delivery and modification is not necessary except that specially needed, avoiding the improper operation of the unit. Please confirm that the parameters are suitable for your machine before first start!

Annex3.1 Machine parameter setting table

- B-type parameters, consisting of 16 digits from 00 to 15, they are shown as PLXX-XX.YY (YY=00...15) in related description, each digit of the parameter can be independently set to 0/1;

Non-B-type parameters, shown as PLXX-XX in related description, and parameter is determined by [Setting range];

- N-type parameters cannot be modified when the unit is in operation;
- 1, 2, 3 and 4 indicate parameter operation authorization (4 levels of user, engineering, maintenance and factory), the number increases with level. Operator with high levels can operate low-level parameters.

| Setting items | Setting scope | Default values | Unit | Type | Remarks |
|---------------|---------------|----------------|------|------|---------|
|---------------|---------------|----------------|------|------|---------|

| PL01 User parameter 1 | | | | | | |
|------------------------------|--|-----------|----|----|-----|--|
| 01 | Unit operation mode | 1...3 | 2 | | 1/N | 1= Heating mode 2= Cooling mode 3 = Automatic mode Single heat model only supports heating, and single cold model only supports refrigeration |
| 02 | Set value of refrigeration temperature | min...max | 12 | °C | 1 | min=[Minimum refrigeration PL04-07] max=[Maximum refrigeration PL04-06] |
| 03 | Set value of heating temperature | min...max | 40 | °C | 1 | min=[Minimum heating PL04-09] max=[Maximum heating PL04-08] |

| PL02 User parameter 2 | | | | | | |
|------------------------------|------------------------------|---------------------|-------|---|-----|--|
| 01 | Use setting of module | | | | 2/B | 0 = Disabled 1 = Enabled [PL02-01.00] ... [PL02-01.15] Use setting of corresponding modules 0#...15# |
| | 01.00 | Setting of module 0 | 0...1 | 1 | | |
| | ... | | 0...1 | 1 | | |

| | | | | | | | |
|----|-------------------|----------------------|--------|---|--|-----|---|
| | 01.15 | Setting of module 15 | 0...1 | 1 | | | |
| 02 | Number of modules | | 1...16 | 1 | | 2/N | Quantity of modules that can be controlled by the unit, corresponding addresses (SR1) are set to 0...F respectively, 0# indicates main module |

PL03 System set parameter

| | | | | | | | |
|----|---|--|--------|---|------|-----|---|
| 01 | Machine type | | 0...1 | 0 | | N | 0 = Air-cooled water supply 1 = Air-cooled air supply |
| 02 | Factory mode | | 0...2 | 2 | | N | 0 = Single heat 1 = Single cool 2 = Heat pump |
| 03 | Standby | | | | | | |
| 04 | Control object | | 0...1 | 1 | | 2/N | 0 = Outlet water 1 = Return water Control point for temperature adjustment |
| 05 | Standby | | | | | | |
| 06 | Fan mode | | 0...2 | 0 | | N | 0 = Mode 1 1 = Mode 2 2 = Mode 3 |
| 07 | Standby | | | | | | |
| 08 | Preheating time | | 0...24 | 0 | Hour | 3 | When the unit is powered on, it cannot be started up until warm up completes; Setting to 0 indicates warm-up function is not used. |
| 09 | Type of remote switch | | 0...1 | 0 | | 2 | 0 = Toggle switch 1 = Pulse switch |
| 10 | The setting used will be memorized in case of power failure | | 0...1 | 0 | | 2 | 0 = Disabled 1 = Enabled If the unit is started when power fails, it is started automatically when powered on again. |
| 11 | The setting used will be automatically enabled when powered on. | | 0...1 | 0 | | 2 | 0 = Disabled 1 = Enabled When powered on, the unit is started up automatically. |

| | | | | | | |
|----|---|--------|---|--|-----|--|
| 12 | Use setting for water flow switch of the module | 0...1 | 1 | | 3/N | 0 = Disabled 1 = Enabled When it is set to be Enabled, insufficient water flow failure of the module will be detected only when there is any compressor started in the module. |
| 13 | Unit start & stop control | 0...4 | 0 | | 2/N | See Start & Stop Control of the Unit |
| 14 | Condenser type I | 0...3 | 1 | | N | 0 = Independent 1 = Shared by 2 |
| 15 | Condenser type II | 0...3 | 2 | | N | 2 = Shared by 3 3 = Shared by 4. |
| 16 | Condenser type III | 0...3 | 1 | | N | See Condenser Type |
| 17 | Number of heat recovery modules | 0...16 | 0 | | 3 | "0" indicates inapplicable to heat recovery |

| PL04 Energy control parameter | | | | | | | |
|-------------------------------|--|--------------|----|----|---|--|--|
| 01 | Temperature control period | 10...255 | 60 | s | 3 | See description of [Energy adjustment] | |
| 02 | Air-conditioner loading deviation | 0...10 | 2 | °C | 3 | | |
| 03 | Air-conditioner unloading deviation | 0...10 | 2 | °C | 3 | | |
| 04 | Ambient temperature of automatic heating | 10...20 | 15 | °C | 3 | Ambient temperature ≤ 15 °C, the unit operates in heating mode | Valid when [Unit operation mode PL01-01]=[Automatic mode], see description of [Automatic mode] |
| 05 | Ambient temperature of automatic refrigeration | 18...35 | 25 | °C | 3 | Ambient temperature ≥ 25 °C, the unit operates in refrigeration mode | |
| 06 | Refrigeration upper limit | 10...60 | 25 | °C | 3 | Upper limit of setting range for [refrigeration temperature set value PL01-02] | |
| 07 | Refrigeration lower limit | -30...10 | 9 | °C | 3 | Lower limit of setting range for [refrigeration temperature set value PL01-02] | |
| 08 | Heating upper limit | 10...10 0 | 55 | °C | 3 | Upper limit of setting range for [heating temperature set value PL01-03] | |
| 09 | Heating lower limit | 10...60 | 30 | °C | 3 | Lower limit of setting range for [heating temperature set value PL01-03] | |

| | | | | | | |
|----|--|--------------|----|----|---|---|
| 10 | Low-temperature environment value 1 | -20...6 0 | 5 | °C | 3 | Used during heating, please see Heating Control Temperature Limit . |
| 11 | Low-temperature environment value 2 | -20...6 0 | 0 | °C | 3 | |
| 12 | Low-temperature environment value 3 | -20...6 0 | -5 | °C | 3 | |
| 13 | Maximum control temperature of low-temperature environment 1 | 20...60 | 41 | °C | 3 | |
| 14 | Maximum control temperature of low-temperature environment 2 | 20...60 | 37 | °C | 3 | |
| 15 | Maximum control temperature of low-temperature environment 3 | 20...60 | 35 | °C | 3 | |

| PL05 Evaporator/valve parameter setting | | | | | | |
|--|------------------------------|------------|-----|---|---|--|
| 01 | Four-way valve type | 0...1 | 0 | | | 0 = Closed during heating 1 = Closed during refrigeration |
| 02 | Four-way valve opening delay | -100...100 | -3 | s | 3 | E.g. Value = 10 (n > 0, positive): Open the four-way valve first, and then switch on the compressor after a delay of 10 s. Value = -10 (n < 0, negative): Switch on the compressor first, and then open the four-way valve after a delay of 10s. |
| 03 | Four-way valve closing delay | -100...100 | -10 | s | 3 | E.g. Value = 10 (n > 0, positive): close the four-way valve first, and then switch off the compressor after a delay of 10s. Value = -10 (n < 0, negative): Switch off the compressor first, and then close the four-way valve after a delay of 10s. |

| | | | | | | |
|----|---|---------|----|-----|---|---|
| 04 | Water pump opening delay | 0...240 | 30 | s | 3 | E.g. Value = 30: Switch on water pump of the air conditioner, and then enter into temperature adjustment after a delay of 30s. "Air supply fan opening delay" for air supply fan model |
| 05 | Water pump closing delay | 0...240 | 30 | s | 3 | E.g. Value = 30, all compressors have been switched off during shut down, and then switch off water pump of the air conditioner after a delay of 30s "Air supply fan closing delay" for air supply fan model |
| 06 | Temperature when switching off the air supply fan | 10...60 | 18 | °C | 3 | See description of [Anti-cold air function] |
| 07 | Temperature when switching on the air supply fan | 10...60 | 30 | °C | 3 | |
| 08 | Air supply fan pause delay | 0...30 | 0 | min | 3 | See description of [Air supply fan pause]; Setting to 0 indicates this function is not used. |

PL06 Fan parameter setting

| | | | | | | |
|----|----------------------------------|------------|-----|---|---|--|
| 01 | Refrigeration fan opening delay | -100...100 | 10 | s | 3 | E.g. Value = 10 (n > 0, positive): Refrigeration, switch on fan first, and then switch on the compressor after a delay of 10s; Value = -10 (n < 0, negative): Refrigeration, switch on the compressor first, and then switch on the fan after a delay of 10s; |
| 02 | Refrigeration fan closing delay: | -100...100 | -10 | s | 3 | E.g. Value = 10 (n > 0, positive): Refrigeration, switch off fan first, and then switch off the compressor after a delay of 10s; Value = -10 (n < 0, negative): Refrigeration, switch off the compressor first, and then switch off the fan after a delay of 10s; |
| 03 | Heating fan opening delay | -100...100 | 10 | s | 3 | E.g. Value = 10 (n > 0, positive): Heating, switch on the fan first, and then switch on the compressor after a delay of 10s; Value = -10 (n < 0, negative): Heating, switch on the compressor first, and then switch on the fan after a delay of 10s; |

| | | | | | | |
|----|--|------------|-----|----|---|--|
| 04 | Heating fan closing delay | -100...100 | -10 | s | 3 | E.g. Value = 10 (n > 0, positive): Heating, switch off fan first, and then switch off the compressor after a delay of 10s; Value = -10 (n < 0, negative): Heating, switch off the compressor first, and then switch off the fan after a delay of 10s; |
| 05 | Ambient temperature of refrigeration with high air | 10...40 | 20 | °C | 3 | See Fan Control |
| 06 | Ambient temperature of heating with high air | 0...30 | 15 | °C | 3 | |

PL07 Compressor parameter setting

| | | | | | | |
|----|---|---------|-----|-----|---|---|
| 01 | Frequent compressor start prevention | 0...800 | 180 | s | | |
| 02 | Minimum compressor operation time | 0...800 | 180 | s | 3 | |
| 03 | Standby | | | | | |
| 04 | Full open temperature difference of compressor during first startup | 2...10 | 6 | °C | 3 | See description of [Energy adjustment] |
| 05 | Downtime during continuous operation | 0...120 | 0 | min | | E.g. Value = 30, when the compressor has operated continuously for 30 min, force the compressor to shut down, and start it again after [PL07-01 Frequent compressor start prevention]; Setting to 0 indicates this function is not used. |

PL08 Protection parameter setting

| | | | | | | |
|----|---|--------|----|-----|---|--|
| 01 | General failure delay | 0...30 | 3 | s | 3 | |
| 02 | Insufficient water flow detection delay | 0...30 | 15 | s | 3 | |
| 03 | Failure reset time | 0...30 | 3 | min | 3 | E.g. Value = 5, automatically reset 5 min after the failure signal cleared |

| | | | | | | |
|----|--|----------|-----|-----|---|---|
| 04 | Allowed automatic reset time | 0...360 | 120 | min | 3 | |
| 05 | Low pressure failure detection delay | 10...240 | 60 | s | 3 | E.g. Value = 120: Low compressor pressure is allowed to be detected when the compressor has operated for 120 s |
| 06 | Low pressure detection recovery after exiting defrost process | 0...255 | 60 | s | 3 | E.g. Value = 60, low compressor pressure detection is recovered 60 s after the compressor exiting the defrost process |
| 07 | Refrigeration low pressure jitter elimination delay | 1...10 | 5 | s | 3 | |
| 08 | Heating low pressure jitter elimination delay | 3...90 | 30 | s | 3 | |
| 09 | Temperature difference when exiting temperature protection | 1...30 | 5 | °C | 3 | |
| 10 | Too low output temperature at refrigeration air conditioner side | -20...30 | 4 | °C | 3 | |
| 11 | Too high outlet temperature at heating air conditioner side | 0...100 | 55 | °C | 3 | |
| 12 | Fin overheating protection | 0...100 | 65 | °C | 3 | |
| 13 | Temperature difference when exiting fin temperature protection | 1...30 | 10 | °C | 3 | |
| 14 | Rated current of compressor | 0...25 | 22 | A | 3 | Safe current for compressor operation, taken as (maximum overcurrent 1/2) |

| | | | | | | |
|----|---------------------------------|----------|----|----|---|---|
| 15 | Compressor current is too low | 0...15 | 3 | A | 3 | Too low current protection value for compressor operation |
| 16 | Current detection delay | 0...180 | 10 | s | 3 | E.g. Value=30: Current alarm detection is allowed only after the compressor has operated for 30s |
| 17 | Current use setting | 0...2 | 1 | | 3 | 0: Only current value displayed, current alarm protection not determined 1: Current value displayed, and current alarm protection determined 2: Current value not displayed, current alarm protection unavailable |
| 18 | Anti-ice protection temperature | -20...30 | -5 | °C | 3 | |

| PL09 Defrost parameter setting | | See description of [Defrost logic]" | | | | |
|---------------------------------------|--|-------------------------------------|-----|-----|---|---|
| 01 | Percentage of compressors under defrosting | 1...100 | 50 | % | 3 | <p>Multiply total number of compressors that can be operated in all modules by percentage of compressors under defrosting to obtain maximum number of compressors under defrosting</p> <p>If the calculated number of compressors under defrosting is not an integer, add it up to give an integer.</p> <p>E.g. Total number of compressors that can be operated in all modules is 32, the percentage of compressors under defrosting is set to be 60%, and calculation shows that 19.2 compressors can enter into the defrost process simultaneously, so 20 compressors should be allowed to enter into the defrost process simultaneously, see Manual Defrosting for details.</p> |
| 02 | Minimum operation of compressor for first defrosting | 0...255 | 7 | min | 3 | |
| 03 | Ambient temperature for defrosting 1 | -10...15 | 5 | °C | 3 | |
| 04 | Ambient temperature for defrosting 2 | -10...10 | -5 | °C | 3 | |
| 05 | Defrosting interval 1 | 0...255 | 40 | min | 3 | |
| 06 | Defrosting interval 2 | 0...255 | 35 | min | 3 | |
| 07 | Defrosting interval 3 | 0...255 | 30 | min | 3 | |
| 08 | Defrosting time | 90...1200 | 480 | s | 3 | |
| 09 | Allowed ambient temperature for defrosting | 0...30 | 15 | °C | 3 | |
| 10 | Allowed fin temperature for defrosting | -10...10 | -2 | °C | 3 | |

| | | | | | | |
|----|---|---------|----|-----|---|---|
| 11 | Allowed difference between ambient temperature and fin temperature for defrosting 1 | 0...20 | 5 | °C | 3 | Used when ambient temperature ≥ 0 |
| 12 | Allowed difference between ambient temperature and fin temperature for defrosting 2 | 0...20 | 5 | °C | 3 | Used when ambient temperature < 0 |
| 13 | Fin temperature when exiting the defrost process | 0...30 | 12 | °C | 3 | |
| 14 | Outlet water temperature when exiting the defrost process | 0...60 | 4 | °C | 3 | |
| 15 | Low-pressure defrost detecting delay | 3...30 | 5 | min | 3 | E.g. Value =5, when the low-voltage switch is effective and the compressor has been operated for more than 5 min, defrost can be determined |
| 16 | Low-pressure defrost interval | 5...60 | 15 | min | 3 | |
| 17 | Fin temperature during low-pressure defrost | -20...0 | -8 | °C | 3 | |
| 18 | Fan delay during low-pressure defrost | 0...255 | 10 | s | 3 | |
| 19 | Use setting for low-pressure defrost | 0...1 | 0 | | 3 | 0 = Disabled 1 = Enabled |
| 20 | Selection of compressor frost-deposit timing | 0...1 | 1 | | 3 | 0 = Frost-deposit time of compressor 1 = Compressor operation time |

| | | | | | | |
|----|--|--------|---|-----|---|--|
| 21 | Switch-on time of compressor during defrosting | 0...60 | 5 | min | 3 | |
| 22 | Deviation of exiting defrost process | 0...10 | 3 | °C | 3 | |

| PL10 Anti-freezing parameter setting | | | | | | |
|--------------------------------------|---|----------|----|-----|---|--|
| 01 | Anti-freezing interval 1 | 0...100 | 30 | min | 3 | |
| 02 | Anti-freezing interval 2 | 0...100 | 30 | min | 3 | |
| 03 | Anti-freezing temperature of water pump | -10...20 | 6 | °C | 3 | |
| 04 | Anti-freezing temperature of electric heater | -10...20 | 4 | °C | 3 | |
| 05 | Anti-freezing temperature of compressor | -10...20 | 3 | °C | 3 | |
| 06 | Temperature of electric heater when exiting freezing protection | 5...20 | 8 | °C | 3 | |
| 07 | Compressor temperature when exiting anti-freezing | 5...40 | 15 | °C | 3 | |
| 08 | Ambient temperature of Anti-freezing interval | -10...20 | 0 | °C | 3 | Select different Anti-freezing intervals based on this temperature, see Anti-freezing logic for details |
| 09 | Ambient temperature when entering into anti-freezing process | -10...20 | 2 | °C | 3 | Restriction on ambient temperature when entering into and exiting the anti-freezing process, see Anti-freezing logic for details |
| 10 | Ambient temperature difference when exiting anti-freezing process | 0...10 | 1 | °C | 3 | |
| 11 | Anti-freezing function setting | 0...1 | 1 | | 3 | 0 = Disabled 1 = Enabled |

| PL11: Parameter setting of electric heater | | | | | | |
|---|---|--------|----|----|---|--|
| 01 | Ambient temperature when the electric heater is switched on | 0...20 | 15 | °C | 3 | |

| PL12: Electronic expansion valve control | | | | | | |
|---|---|-----------|-----|------|-----|--|
| 01 | Electronic expansion valve use setting | 0...1 | 1 | | N | 0 = Disabled 1 = Enabled |
| 02 | Excitation mode | 0...1 | 0 | | N | 0 = Four-phase and eight-step 1 = Four-phase and four-step |
| 03 | Excitation frequency | 0...6 | 0 | | | 0=31PPS 1=62PPS 2=83PPS 3=100PPS 4=125PPS 5=166PPS 6=250PPS Maximum steps during operation per second |
| 04 | Total steps of expansion valve | 20...9000 | 480 | Step | N | Maximum steps of EEV, please set based on the valve actually used |
| 05 | Zero opening of expansion valve when powered on | 100...200 | 120 | % | 3/N | E.g. Value = 120: Zero steps after powered on = [PL12-04 Total steps of motor]*120% |
| 06 | Minimum opening of expansion valve | 0...100 | 10 | % | 3 | E.g. Value = 10: Minimum opening of motor ← [PL12-04 Total steps of motor]*10% |
| 07 | Standby opening | 0...100 | 60 | % | 3 | E.g. Value = 60: Steps of motor during standby = [PL12-04 Total steps of motor]*60% |
| 08 | Refrigeration opening 1 | 0...100 | 58 | % | | See Electronic Expansion Valve Control . |
| 09 | Refrigeration opening 2 | 0...100 | 42 | % | | |
| 10 | Refrigeration opening 3 | 0...100 | 42 | % | | |
| 11 | Heating opening 1 | 0...100 | 52 | % | | |
| 12 | Heating opening 2 | 0...100 | 31 | % | | |
| 13 | Defrosting opening | 0...100 | 31 | % | | |

| | | | | | | |
|----|---|---------|----|----|--|--|
| 14 | Transition temperature 1 of refrigeration opening | 0...20 | 39 | °C | | |
| 15 | Transition temperature 2 of refrigeration opening | 0...20 | 25 | °C | | |
| 16 | Transition temperature 1 of heating opening | 0...20 | 15 | °C | | |
| 17 | Transition temperature 2 of heating opening | 0...20 | 5 | °C | | |
| 18 | Heating opening 3 | 0...100 | 26 | % | | |

Normally-open & normally-closed setting of PL13 switch

| | | | | | | |
|-----------|--------------------------|---------------------------------------|-------|---|-----|---|
| 01 | Setting of unit 1 | | | | 3/B | 0 = Normally open 1 = Normally closed [PL14-01.00] ... [PL14-01.15] Setting of the corresponding 16 switches |
| | 01.00 | Insufficient A/C water flow | 0...1 | 1 | | |
| | 01.01 | A/C water pump overload ※ | 0...1 | 1 | | |
| | 01.02 | Standby | | 0 | | |
| | 01.03 | Standby | 0...1 | 0 | | |
| | 01.04 | 1 # compressor low voltage | | 1 | | |
| | 01.05 | 1# compressor overload / high voltage | 0...1 | 1 | | |
| | 01.06 | 1# fan overload | 0...1 | 1 | | |
| | 01.07 | 2# compressor low voltage | 0...1 | 1 | | |
| | 01.08 | 2# compressor overload / high voltage | 0...1 | 1 | | |
| | 01.09 | Hot water flow switch | 0...1 | 1 | | |
| | 01.10 | 3# compressor low voltage | 0...1 | 1 | | |
| | 01.11 | 3# compressor overload / high voltage | 0...1 | 1 | | |
| | 01.12 | 3# fan overload | 0...1 | 1 | | |
| | 01.13 | 4# compressor low voltage | 0...1 | 1 | | |
| | 01.14 | 4# compressor overload / high voltage | 0...1 | 1 | | |
| 01.15 | Overload hot water pump | 0...1 | 1 | | | |

PL14 Temperature corrected value

| | | | | | | |
|----|--|--------------|-----|----|---|--|
| 01 | Water output temperature of the system | -10.0...10.0 | 0.0 | °C | 2 | |
| 02 | Return water temperature of system | -10.0...10.0 | 0.0 | °C | 2 | |
| 03 | Ambient temperature | -10.0...10.0 | 0.0 | °C | 2 | |

PL15 Temperature probe use setting

| | | | | | | |
|----|----------------------------------|-------|---|--|-----|-----------------------------|
| 01 | Outlet water temperature probe 1 | 0...1 | 1 | | 2/N | 0 = Disabled 1 = Enabled |
| 02 | Standby | 0...1 | 1 | | 2/N | |
| 03 | Standby | 0...1 | 1 | | 2/N | |
| 04 | Standby | 0...1 | 1 | | 2/N | |
| 05 | 1# fin temperature probe | 0...1 | 1 | | 2/N | |
| 06 | 2# fin temperature probe | 0...1 | 1 | | 2/N | |
| 07 | 3# fin temperature probe | 0...1 | 1 | | 2/N | |
| 08 | 4# fin temperature probe | 0...1 | 1 | | 2/N | |
| 09 | Anti-icing temperature | 0...1 | 0 | | 2/N | |
| 10 | Return water temperature of unit | 0...1 | 0 | | 2/N | |