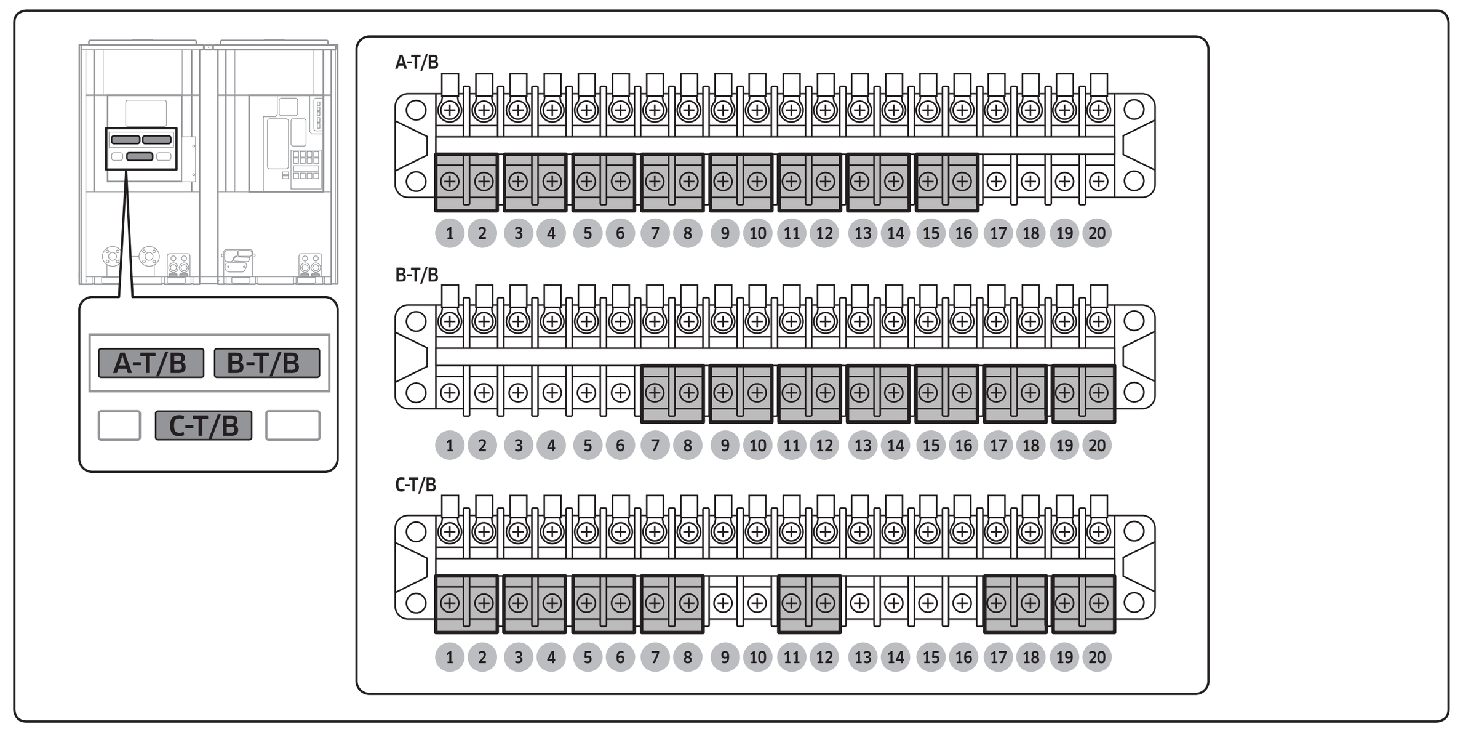
External contact wiring work

DB68-05937A-00



	No.	Name	Signal	Function	Contact Short	Contact Open	Signal recognition	Setting unit
A-T/B	1-2	Cooling/Heating display	Zero voltage contact	Display when operates in heating mode	Heat	Cool	-	-
	3-4	Operation display		Display when operates	Operate	Stop	-	-
	5-6	Warning display		Display when error occurs	Error occurred	No error	-	-
	7-8	Defrost operation display		Display when defrosting	Deforst ON	Defrost OFF	-	-
	9-10	Pump operation display		Display when pump operates	Pump ON	Pump OFF	-	-
	11-12	Comp operation display		Display when compressoroperates	Compressor ON	Compressor OFF	-	-
	13-14	Pump operation		Signal of pump operation	Pump signal ON	Pump signal OFF	-	-
	15-16	Freeze protection display		Display when freeze protection operates	Pump ON for freeze protection	Others	-	-
	17-18	Disuse	-	-	-	-		
	19-20	Disuse	-	-	-	-		
B-T/B	1-2	Disuse	-	-	-	-	-	-
	3-4	Disuse	-	-	-	-	-	-
	5-6	Disuse	-	-	-	-	-	-
	7-8	Pump interlock	Zero voltage contact	Signal about pump operation • Pump interlock error (E918) occurs if ON is not input when operating pump	Pump ON	Pump OFF	Usual input	Each unit
	9-10 11-12	Operation ON/OFF		Controlling operation ON/OFF			Usual/instant input	Main unit of group
	13-14	Operation mode		Selecting cool/heat mode	Heat	Cool	Usual input	Main unit of group
	15-16	Hot water (Cool storage) mode		Entering hot water (cool storage) mode by external control • Cool + ON: Cool storage • Heat + ON: Hot water	Cool storage/Hot water	Cool/Heat	Usual input	Main unit of group
	17-18	Hot water (Cool storage) control standard		Control depending on set temperature when ON Control depending on external hot water (cool storage) thermostat when OFF	Control by set temperature	Control by thermostat	Usual input	Main unit of group
	19-20	Hot water (Cool storage) thermostat signal		When thermostat is set as standard for hot water (cool storage) mode • Thermo ON when ON (Not over range of water outlet temperature) • Thermo OFF when OFF	Thermo ON	Thermo OFF	Usual input	Main unit of group
C-T/B	1-2	Quiet function	Zero voltage contact	Operate quiet function in level set by main option or module control	Quiet function	-	Usual input	Main unit of group
	3-4	Demand function		Operate demand function (current limet control) in level set by main opetion or module control	Demand function	-	Usual input	Main unit of group
	5-6	Forced fan function		Operate forced fan function	Forced fan function	-	Usual input	Main unit of group
	7-8	Unusual condition reset		Reset on error occurred status • Operates only when remote error reset input function is set to use	Reset error	-	Instant input	Main unit of module
	9-10	Disuse	-	No use (N/A)	-	-	-	-
	11-12	Water law	Zero voltage contact	Operate water law	Water law control	Water outlet set temperature control	Usual input	Main unit of group
	13-14	Disuse	-	No use (N/A)	-	-	-	-
	15-16	Disuse	-	No use (N/A)	-	-	-	-
C-T/B	17-18	Set temperature/room temperature sensor	Analog current	Recognize water outlet set temperature by external input (4 ~ 20 mA) Recognize value of room temperature sensor (4 ~ 20 mA) when standard for water law is room temperautre	-	-	Current input	Main unit of group
	19-20	External water outlet temperature	Analog current	Recognize external water outlet temperature by external temperature sensor (4 ~ 20 mA)	-	-	Current input	Main unit of group

Installation check card

Installation date	YY / MM / DD		Trial operation date	(YY) (MM) (DD)

Installation company	Name		Installer	Name	
	Contact			Contact	
				Installer CODE	
Quality guidance	Name		Quality instructor	Name	
	Contact			Contact	
Model			Purpose		☐ Room temp. ☐ Low temp. ☐ How water ☐ Others
Serial number			Cooling	Rated capacity	kW
Remarks				Chiller water condition	Outlet: ℃ Inlet: ℃ Chilled water storage: l/min Pump pressure: kPa
				Outdoor temp. condition	℃ DB ℃ WB
Water pipe equipment installation			Heating	Rated capacity	kW
Installation date	YY / MM / DD			Heating water condition	Outlet: ℃ Inlet: ℃ Chilled water storage: l/min Pump pressure: kPa
Trial operation date	YY / MM / DD				
Water pipe installation company	Name			Outdoor temp. condition	℃ DB ℃ WB
Contact	Contact		Pump included/excluded		☐ excluded ☐ included
Brine spec.	Type		Pump type		Primary (Cooler) ☐ Fixed ☐ Inverter Secondary (Load) ☐ Fixed ☐ Inverter
	Concentration				

- ▶ Samsung's product is irrelevant to any installation or performance problem of the water pipes and boiler.
- ▶ This installation specifications of the Samsung products will be managed as a reference for follow-up management.

Installation manager self-maintenance list

	Parts	Description	Standard	Results
Preparation	Cabinet panel board	Is power withdrawn by auxiliary circuit breaker?	Must use auxiliary circuit breaker	
	Power	Is outdoor cable conncected in order of RST power?	Visual check	
		Is power cable fastened with rated torque value by solderless ring terminal?	Ring terminal and tighteing torque (by visual check)	
	Communication	Is module control connected to F3/F4 of hydro PBA?		
	Cooler	Is service area around the product appropriate?	Check standard in installation manual	
		Is installation location	Check standard in installation manual	
		Are supporting base and vibration-isolation pad applied properly according to installation manual?	Visual check	
		Are drain valves installed?	Visual check	
		Is option switch setting for each type of heat source water appropriate? (heat source water / brine)	Visual check	
	Water supply system	Is there no leakage on water pipe?	Visual check	
		Are temperautre gauges and pressure gauges installed on water pipe inlet/outlet?	Visual check (4)	
		Air valves and flexible joints installed on water pipe inlet/outlet?	Visual check (4)	
		Check cleaning of foreign materials inside the water supply system and welding slugs	Check if flushing is done/Water quality check	
		Is strainer cleaned on water pipe inlet?	Cleaning	
		Are air vent valves and drain valves installed for drainage?	Visual check	
		Is there countermeasure for balancing supplying flow rate?	Visual check for reverse return pipe or rated flow rate valve components	
		Is expansion tank installed?	Visual check	
		Is water supplied according to standard of supply water quality?	Check water quality	
Trial operation	Cooler	Is temperature of inlet/outlet appropriate?	Check temperature gauge (according to installation manual)	( ) ℃
		Is flow rate within the range of max./min. supplying flow rate?	Check standard in installation manual	( ) LPM
		Is pressure difference between inlet/outlet on water pipe pressure sensor?	Check standard in installation manual	( ) kPa

DVM CHILLER condition check card

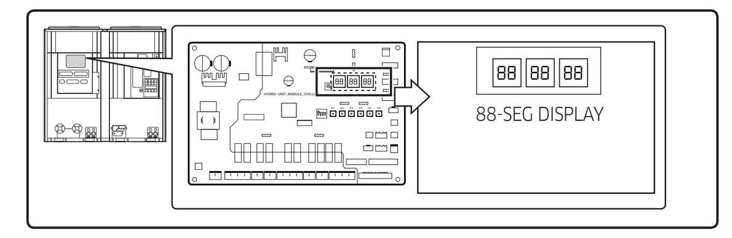
Installation date		(YY) (MM) (DD)
Outdoor unit model		
Outdoor unit serial number		
Outdoor unit circuit breaker		
Circuit breaker capacity [A]		
Power cable [mm^2]		
Remarks		
Trial operation date		(YY) (MM) (DD)
Installer	Name	
	Contact	
	Installer CODE	
Installation company	Name	
	Contact	
Quality instructor	Name	
	Contact	
Product outline	Name	
	Site	
	Route	
	Period	

Spec.		Purpose		☐ General ☐ Yearly ☐ Process ☐ Others
	A	Cooling	Rated capacity	kW
			Chilled water condition	Outlet: ℃ Inlet: ℃ Chilled water storage: l/min Pump pressure: kPa
			Outdoor temperature condition	℃ DB ℃ WB
		Heating	Rated capacity	kW
			Heating water condition	Outlet: ℃ Inlet: ℃ Chilled water storage: l/min Pump pressure: kPa
			Outdoor temperature condition	℃ DB ℃ WB
	B	Power		☐ 50 Hz ☐ 60 Hz ☐ 3 Phase 200 V ☐ Others (Phase V)
		Pump type		☐ Individual (included/excluded) ☐ Assembled
		Special condition		☐ Public building ☐ Chloride corrosion ☐ Sea water ☐ Brine ☐ Split division
		Electrical parts list		☐ Max. capacity limit ☐ Pump capacity (kW) ☐ Assembling active filter(5 kVA) ☐ Power cable kit ☐ Fin protection ☐ Others( )
		Piping type		☐ 1 pump (Pump on heat source: Fixed. Variable.) ☐ 2 pump (Pump on heat source: Fixed. Variable)
		Number of control unit		☐ Classifying maker (module control) ☐ Classifying electrical parts maker ( )

Error Code

Error display

▶ Segment will display error code (4 digit).



Display	Description
101	Communication error between hydro controller and inverter controller (If not received for 3 minutes from outdoor unit)
108	Error due to repeated setting address
109	Communication error of hydro controller address not complete
122	Error on hydro Evap in Sensor (Open/Short)
123	Error on hydro Evap out Sensor (Open/Short)
128	Error on hydro Evap in Sensor (Detached)
129	Error on hydro Evap out sensor (Detached)
144	Error on hydro pipe temperature 2 sensor
145	Error on hydro EVA OUT 2 sensor
151	Hydro EEV open error (2nd detection)
152	Error due to closed EEV of hydro (2nd detection)
153	Error on hydro floating switch (2nd detection)
162	Inverter controller EEPROM error
163	Hydro controller EEPROM option setting error
198	Error due to disconnected thermal fuse (Temperature of terminal block increases.)
201	Communication error between hydro controller and outdoor unit
202	Communication error between hydro controller and inverter controller (When there is no response from indoor units after tracking is completed)
203	Communication error of Main and sub MICOM of inverter controller
205	Communication error of inverter controller main PBA - sub PBA (Sub PBA communication all not received)
206	Communication error of inverter controller main PBA - sub PBA (S PBA communication partially not received) Specification of PBA display for actual communication error C001: Hub PCB communication error C002: Fan PCB communication error C003: INV1 communication error C004: INV2 communication error
221	Error on outdoor temperature sensor (Short or Open)
231	Error on COND outlet sensor (Short or Open)
241	COND outlet sensor is detached
251	Error on discharge temperature of COMP1 (Short or Open)
257	Error on discharge temperature of COMP2 (Short or Open)
262	Discharge temperature sensor of COMP1 is detached
263	Discharge temperature sensor of COMP2 is detached
266	Top1 temperature sensor is detached
267	Top2 temperature sensor is detached
269	Suction temperature sensor is detached
270	Suction 2 temperature sensor is detached
276	Error on Top 1 temperature sensor (Short or Open)
277	Error on Top 2 temperature sensor (Short or Open)
291	Error on high pressure sensor (Short or Open)
296	Error on low pressure sensor (Short or Open)
308	Error on Suction sensor (Short or Open)
311	Error on double layer pipe sensor (Short or Open)
321	EVI inlet temperature
322	EVI outlet temperature
323	Error on Suction 2 sensor (Short or Open)
326	Error on Total suction sensor (Short or Open)
346	Operation failure of Fan2
347	Unconnected error of Fan2
348	Lock error on Fan2
353	Overheated motor of Fan2
355	Error due to overheated IPM of Fan2
361	INV2 Comp starting error
364	INV2 DC Peak error
365	INV2 Comp Vlimit error
366	INV2 DC-Link voltage under/over error
367	INV2 Comp Rotation error
368	Error due to full current of INV2
369	INV2 DC Link sensor error
371	INV2 DataFlash error
374	INV2 IPM Heat Sink error
378	Error due to overcurrent of Fan2
383	Error due to special overcurrent of Fan2
385	INV2 input current error
386	Error due to over voltage/low voltage of Fan2
387	Hall IC error of Fan2
389	Outdoor fan2 overload stop
391	Fan2 Date Flash error
393	Fan2 DC output sensor error
396	Fan2 DC Link voltage sensor error
399	Heat sink temperature sensor error of Fan2
400	INV2 IPM OverHeat error
407	COMP down due to high pressure
410	COMP down due to low pressure
416	COMP down due to discharge temperature
425	Phase reversal or phase failure
428	COMP down due to compressor not controlled
438	EVI EEV open error
439	Error due to refrigerant leakage (Examine when system off)
440	Restriction of heating operation by outdoor temperature
441	Restriction of cooling operation by outdoor temperature
442	Restriction of heating charging operation by outdoor temperature
443	Operation prohibited due to low pressure
445	Error due to self-diagnosis of CCH
446	Operation failure of Fan1
447	Unconnected error of Fan1
448	Lock error on Fan1
452	Instant blackout error
453	Overheated motor of Fan1
455	Error due to overheated IPM of Fan1
461	INV1 Comp starting error
462	Compressor stop due to full current control or error due to low current on CT2
464	INV1 DC Peak error
465	INV1 Comp Vlimit error
466	INV1 DC-Link voltage under/over error
467	INV1 Comp Rotation error
468	Error due to full current of INV1
469	INV1 DC Link sensor error
471	INV1 Date Flash error
474	INV1 IPM Heat Sink error
478	Error due to overcurrent of Fan1
483	Error due to special overcurrent of Fan1
485	INV1 input current error
486	Error due to over voltage/low voltage of Fan1
487	Hall IC error of Fan1
489	Outdoor fan1 overload stop
491	Fan1 DataFlash error
493	Fan1 DC output sensor error
496	Fan1 DC Link voltage sensor error
499	Heat sink temperature sensor error of Fan1
500	INV1 IPM OverHeat error
560	Switch option setting error
901	Hydro inlet temperature sensor (Tw1) Short/Open
902	Hydro outlet temperature sensor (Tw2) Short/Open
907	Frozen damage error
908	Error when freeze prevention Comp Off
909	Error when freeze prevention Comp Off 3 times
910	Error on hydro outlet temperature (Tw2) sensor (Detached)
911	Flow switch option error
913	Flow switch error (E911) occurs 6 times and reoccurs
918	Error on pump magnetic switch malfunction
971	External sensor (WaterOut Setting Device/ WaterLaw Room Temp sensor) is open/Short
972	Water inlet side pressure sensor is open/short
973	Water outlet side pressure sensor is open/short
974	External WaterOut sensor is open/short

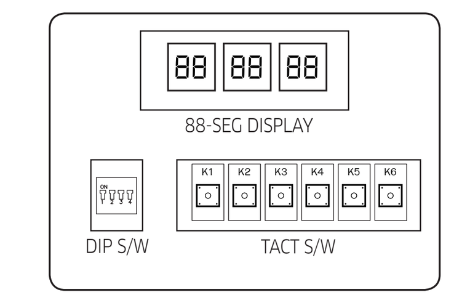
Setting hydro unit option and key function

Setting hydro unit option and key function

View mode display

- ▶ Press and hold K3 and K4 for 3 seconds to enter the view mode.
- ▶ Press K3 to change view mode in order of the table.
- ▶ Press K4 to change view mode in reverse order of the table.

▶ **Cancelling view mode display**
- Press and hold K3 for 3 seconds.



Number of press	KEY operation	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	Remarks
1 time	Water In	0	1	-	0	5	0	ex) -5 ℃
2 times	Water Out	0	2	-	1	1	0	ex) -11 ℃
3 times	Outdoor temperature	0	3	-	1	1	2	ex) -11.2 ℃
4 times	High pressure	0	4		2	9	3	ex) 29.3 kgf/cm^{2}G
5 times	Low pressure	0	5		0	7	5	ex) 7.5 kgf/cm^{2}G
6 times	Comp 1 current frequency	0	6		1	1	0	ex) 110 Hz
7 times	Comp 2 current frequency	0	7		1	1	3	ex) 113 Hz
8 times	Discharge 1 temperature	0	8		1	0	1	ex) 101.8 ℃ → 101 (Drop)
9 times	Discharge 2 temperature	0	9		1	0	1	ex) 101.8 ℃ → 101 (Drop)
10 times	Top 1 temperature	1	0		1	0	1	ex) 101.8 ℃ → 101 (Drop)
11 times	Top 2 temperature	1	1		1	0	1	ex) 101.8 ℃ → 101 (Drop)
12 times	Total suction temperature	1	2	-	1	1	2	ex) -11.2 ℃
13 times	Suction 1 temperature	1	3	-	1	1	2	ex) -11.2 ℃
14 times	Suction 2 temperature	1	4	-	1	1	2	ex) -11.2 ℃
15 times	COND Out temperature	1	5	-	1	1	2	ex) -11.2 ℃
16 times	Liquid Temperature	1	6		3	5	0	ex) 35 ℃
17 times	EVA In 1 temperature	1	7		3	5	0	ex) 35 ℃
18 times	EVA Out 1 temperature	1	8		5	0	0	ex) 50 ℃
19 times	EVA In 2 temperature	1	9		3	5	0	ex) 35 ℃
20 times	EVA Out 2 temperature	2	0		3	5	0	ex) 50 ℃
21 times	EVI In temperature	2	1		3	5	0	ex) 35 ℃
22 times	EVI Out temperature	2	2		3	5	0	ex) 35 ℃
23 times	IPM 1 temperature	2	3		8	0	0	ex) 80 ℃
24 times	IPM 2 temperature	2	4		8	0	0	ex) 80 ℃
25 times	CT 1	2	5		1	1	0	ex) 11 A
26 times	CT 2	2	6		1	1	0	ex) 11 A
27 times	Operation mode	2	7			Blank/S	C/H	S: Thermal/Cool storage / C: Cooling, H: Heating
28 times	Set temperature	2	8	-	0	5	0	ex) -5 ℃
29 times	Pump output	2	9		0	n/F	Blank/F	On/Off
30 times	Fan Step	3	0		0	2	4	ex) 24 step
31 times	Hydro EEV 1	3	1		1	0	0	ex) 1007 step → 100 (Drop "/10")
32 times	Hydro EEV 2	3	2		1	0	0	ex) 1007 step → 100 (Drop "/10")
33 times	Main EEV 1	3	3		1	0	0	ex) 1007 step → 100 (Drop "/10")
34 times	Main EEV 2	3	4		1	0	0	ex) 1007 step → 100 (Drop "/10")
35 times	EVI EEV	3	5		4	7	3	ex) 473 step
36 times	PHE inlet pressure	3	6		0	1	2	ex) 1.2 kgf/cm^{2}G
37 times	PHE outlet pressure	3	7		0	0	4	ex) 0.4 kgf/cm^{2}G
38 times	Capacity (Cooling)	3	8		0	7	0	ex) 70 kW
39 times	(Exterior) Room temperature	3	9		2	5	5	ex) 25.5 ℃
40 times	(Exterior) Water outlet temperature	4	0	-	1	1	0	ex) -11 ℃
41 times	Pressure difference calibration	4	1	-	0	0	2	ex) -0.2 kg/cm^2

How to set hydro controller option

	Option No.		Option value			
	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Operation On/Off input method	0	1	-	-	-	0
Temperature setting input method	0	2	-	-	-	0

1 Turn on the product.

Setting hydro unit option and key function (Continued)

2 Press and hold the K2 to enter the option setting.

▶ In option setting, other key input (forced fan, temperature setting, etc.) is not received.

3 Press K1 shortly to display the number for selected option.

4 Press K2 shortly to display the number for set value of the selected option.

5 Finish the option setting.

▶ Press K2 long to finish the setting with all option values determined and saved.

▶ Press K1 long to finish the setting with all option values cancelled and keep the values as before entering the setting.

• In option setting, press K4 long to initialize all option values.

No.	Option item	Option value	Factory default	Option	Definition	Setting unit	Module control setting option Note1)
1	Operation On/Off input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
2	Temperature setting input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
3	Operation mode (Cool/Heat, normal/hot water) input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
4	Demand control input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
5	Demand level	0 ~ 11	3	0	Default (100 %)	Main unit of module	0
				1	95 %		
				2	90 %		
				3	85 %		
				4	80 %		
				5	75 %		
				6	70 %		
				7	65 %		
				8	60 %		
				9	55 %		
				10	50 %		
				11	Not applied (No limit)		
6	Quiet function input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
7	Forced fan function input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
8	Water law input method	0-1	0	0	Module control/DMS	Main unit of group Note2)	
				1	External contact		
9	Pump operation when thermo off	0-1	0	0	Pump OFF when thermo OFF and operation pattern is not standard control	Main unit of module	
				1	Pump ON always when thermo OFF		
10	Remote error reset input	0-1	0	0	Disuse	Main unit of module	
				1	Use		
11	Setting unit address	0 ~ 15	(Not set)		Setting unit address	Each unit	
12	Quiet function level	0 ~ 3	1	0	Default (100 %)	Main unit of module	0
				1	Level1		
				2	Level2		
				3	Level3		
13	Confirm delay for unsecured flow rate when operating	10 ~ 240	30		Delay for inspecting no input for pump interlock and unsecured flow rate (by seconds)	Main unit of module	
14	Using exterior water outlet temperature sensor	0/1	0	0	Disuse	Main unit of group Note2)	
				1	Use		
15	Water law control standard	0/1	0	0	Outdoor temperature	Main unit of group Note2)	0
				1	Room temperature (external room temperature sensor installation necessary)		
16	AirCool1 (For water law)	0 ~ 20	10		Standard 1 outdoor temperature for cooling	Main unit of group Note2)	0
17	AirCool2 (For water law)	30 ~ 40	35		Standard 2 outdoor temperature for cooling		
18	RoomCool1 (For water law)	15 ~ 24	20		Standard 1 room temperature for cooling		
19	RoomCool2 (For water law)	25 ~ 35	30		Standard 2 room temperature for cooling		
20	Tcool1 (For water law)	-10 ~ 25	15		Standard 1 set temperature for cooling		
21	Tcool2 (For water law)	-10 ~ 25	7		Standard 2 set temperature for cooling		
22	AirHeat1 (For water law)	-20 ~ 5	-10		Standard 1 outdoor temperature for heating		
23	AirHeat2 (For water law)	10 ~ 20	15		Standard 2 outdoor temperature for heating		
24	RoomHeat1 (For water law)	15 ~ 24	20		Standard 1 room temperature for heating		
25	RoomHeat2 (For water law)	25 ~ 35	30		Standard 2 room temperature for heating		
26	Theat1 (For water law)	35 ~ 55	45		Standard 1 set temperature for heating		
27	Theat2 (For water law)	35 ~ 55	35		Standard 2 set temperature for heating		
28	Operation ON/OFF by external contact	0/1	0	0	Recognize usual signal	Main unit of group Note2)	
				1	Recognize instant signal		
29 ~ 33	Function expansion available						
34	Using low temperature function	0/1	0	0	Disuse	Each unit	
				1	Use		
35 ~ 37	Function expansion available						

Note1) For options that can be selected by module control and main option, the option value selected for last time will be saved.

Note2) Main unit of module when group is not available

Function description

No.	Description
1	Select operation On/Off input method of module/group
2	Select temperature setting input method of module/group
3	Select operation mode (Cool/Heat, Hot water/Cool storage) input method of module/group
4	Select demand control input method of module/group
5	Select demand level Current will be limited below the set level when "Perform" command is transmitted.
6	Select quiet function input method of module
7	Select forced fan function input method of module Forced fan: Removes accumulated snow by operating the fan of stopped unit in low frequency Snow accumulation prevention, which operates occasionally when outdoor temperature is below zero, is basic function.
8	Select water law input method of module/group
9	Select pump operation status when thermo OFF
10	Select to use error clear function by external contact
11	Setting CHILLER unit address: identical with channel address used by DMS
12	Select quiet function level Quiet function will start in set level when "Perform" command is transmitted. Level comparison: Level3 > Level2 > Level1
13	Confirm delay for unsecured flow rate when operating: Delay for inspecting no input for pump interlock and unsecured flow rate Compressor will not operate until water flow is detected.
14	Set when controlling water outlet temperature by installing extra water temperature gauge on water pipe header or tank External water outlet temperature sensor should be installed on main unit of group (or module when group is not available). Standard for water outlet temperature depends on external water outlet temperature sensor except when operation pattern is standard control.
15	Setting water law standard To set room temperature as stnadard, external room temperature sensor should be installed. Room temperature sensor should be installed on main unit of group (or module when group is not available).
16 ~ 27	Water law control constant: Refer to water law operation graph.
28	Recognition of external control operation ON/OFF 0 (recognizing usual signal): Constantly inspects ON/OFF status of contact and set operation ON/OFF 1 (recognizing instant signal): Set operation ON/OFF when contact ON/OFF signal is input (when external contact is consisted of button click)
34	Select to use low temperature function The function will operate when set simultaneously with product option of module control (Seg23 of installation option 02 = 'E') Low temperature function: Expands water outlet usage range in Cool/Cool stoarge mode (5 ~ 25 ℃ → -10 ~ 25 ℃) When using low temperature function, use brine and maintain the concentration under freezing point.

MICOM version display

- ▶ Press and hold K3 and K5 for 3 seconds to enter the view mode.
- ▶ Press K3 to change view mode in order of the table.

▶ **Cancelling view mode display**
- Press and hold K3 for 3 seconds.

	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	Remarks	Data Source
Address setting mode	0	1	0	1	1	2		Hydro controller
Main MICOM version	M	n	1	5	1	1	ex) ver 151101 → 1511	Inverter controller
Hub MICOM version	H	b	1	3	0	2	ex) ver 130228 → 1302	Inverter controller
Inverter 1 version	I	1	1	3	0	2	ex) ver 130228 → 1302	Inverter controller
Inverter 2 version	I	2	1	3	0	2	ex) ver 130228 → 1302	Inverter controller
Fan 1 version	F	1	1	3	0	2	ex) ver 130228 → 1302	Inverter controller
Fan 2 version	F	2	1	3	0	2	ex) ver 130228 → 1302	Inverter controller
EEP version	E	P	1	5	1	1	ex) ver 151101 → 1511	Inverter controller
Hydro version	H	d	1	5	1	1	ex) ver 151101 → 1511	Hydro controller

Setting inverter controller option

Basic segment display

Step	Display contents	Display			
		SEG1	SEG2	SEG3	SEG4
At initial power supply	Checking segment display	8	8	8	8
While setting communication between indoor and outdoor unit (Addressing)	Number of connected indoor units	A	d	Number of communicated units (Refer to "View Mode" for communication address)	
After communication setting (usual occasion)	Transmit/Reception address	I/U: A	I/U: 0	Reception address (in decimal number)	

Installing and setting the option with tact switch and functions

1 Press and hold K2 for 3 seconds. (Only available when the operation is stopped)

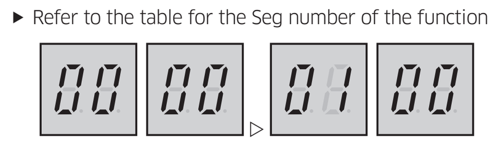
▶ The display will show the following.

▶ If you have set the Emergency operation for compressor malfunction, 1 or 2 will be displayed on Seg 4.

- Seg 1 and Seg 2 will display the number for selected option.
- Seg 3 and Seg 4 will display the number for set value of the selected option.

2 If you have entered option setting, you can shortly press the K1 switch to change the value of the Seg 1 and Seg 2 to select desired option.

▶ Refer to the table for the Seg number of the function for each option.



3 If you have selected desired option, you can shortly press the K2 switch to change the value of the Seg 3 and Seg 4 to change the functional setting for the selected option.

▶ Refer to the table for the Seg number of the function for each option.

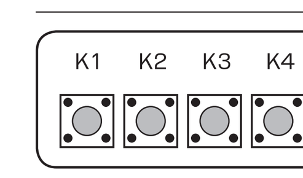
4 After selecting the function for options, press and hold the K2 switch for 2 seconds. Entire 7-segment will blink to begin tracking mode and value of the option will be be saved. If you do not end the setting mode properly, option will not be saved.

Option item	Input unit	SEG1	SEG2	SEG3	SEG4	Function of the option	Remarks
Emergency operation for compressor malfunction	Individual	0	0	0	0	Disabled	E560 will occur when all the compressors are set as malfunction state.
				0	1	Set compressor 1 as malfunction state	
				0	2	Set compressor 2 as malfunction state	
Oil collection interval	Main	0	4	0	0	Factory default	
				0	1	Shorten the interval by 1/2	
Temperature to trigger defrost operation	Main	0	5	0	0	Factory default	
				0	1	Apply setting when the product is being installed in humid area such as near river or lake	
Outdoor unit fan speed correction	Individual	0	6	0	0	Factory default	
				0	1	Increase fan speed	Increase the outdoor unit fan speed to maximum value
Snow accumulation prevention function Note1)	Main	1	4	0	0	Enabled (Factory default)	During snow accumulation, the fan may spin even when the unit is not in operation
				0	1	Disabled	
Maximum cooling capacity restriction Note2)	Main	1	8	0	0	Enabled	
				0	1	Disabled	

Note1) Snow accumulation prevention function: Operates fan periodically to prevent show compiling on the fan while the product is stopped

Note2) Maximum cooling capacity restriction: Limits operation capacity of compressor according to indoor load

Setting key operation and checking the view mode with tact switch



K1 (Number of press)	KEY operation	Display on 7-Segment
1 time	Refrigerant charging in Heating mode	“K” “1” “BLANK“ “BLANK“
2 times	Trial operation in Heating mode	“K” “2” “BLANK“ “BLANK“
3 times	Refrigerant discharging in Heating mode	“K” “3” “BLANK ” “1“
4 times	Disuse	“K” “3” “BLANK ” “2“
5 times	Disuse	“K” “3” “BLANK ” “3“
6 times	Disuse	“K” “3” “BLANK ” “4“
7 times	Vacuum	“K” “4” “BLANK ” “1“
8 times	Disuse	“K” “4” “BLANK ” “2“
9 times	Disuse	“K” “4” “BLANK ” “3“
10 times	Disuse	“K” “4” “BLANK ” “4“
11 times	Disuse	“K” “4” “BLANK ” “A“
12 times	End KEY operation	-

K2 (Number of press)	KEY operation	Display on 7-Segment
1 time	Refrigerant charging in Cooling mode	“K” “5” “BLANK“ “BLANK“
2 times	Trial operation in Cooling mode	“K” “6” “BLANK“ “BLANK“
3 times	Pump down all units in Cooling mode	“K” “7” “BLANK“ “BLANK“
4 times	Auto trial operation	“K” “8” “BLANK“ “BLANK“
5 times	Checking the amount of refrigerant	“K” “9” X X (Display of last two digits may differ depending on the progress)
6 times	Discharge mode of DC link voltage	“K” “A” “BLANK“ “BLANK“
7 times	Forced defrost operation	“K” “B” “BLANK“ “BLANK“
8 times	Forced oil collection	“K” “C” “BLANK“ “BLANK“
9 times	Inverter compressor 1 check	“K” “D” “BLANK“ “BLANK“
10 times	Inverter compressor 2 check	“K” “E” “BLANK“ “BLANK“
11 times	Fan 1 check	“K” “F” “BLANK“ “BLANK“
12 times	Fan 2 check	“K” “G” “BLANK“ “BLANK“
13 times	End KEY operation	-

- ▶ To use key operating function for service and maintenance when installing module/group, set as main control or cancel in module/group.
- ▶ During Discharging mode, voltage of Inv1 and Inv2 will be displayed alternately.
- ▶ Even when the power is off, it is dangerous when you come in contact with inverter PCB, fan PCB since high pressure DC voltage is charged to those parts.
- ▶ When replacing or repairing the PCB, cut-off the power and wait until the DC voltage is discharged before replacing/repairing them.
  - Wait for more than 15 minutes to allow those parts to be fully discharged.
- ▶ When there is error, Discharge mode of DC link voltage may not have been effective. Especially when E464 and E364 error is displayed, power element might be damaged so do not use the Discharge mode of DC link voltage.

K3 (Number of press)	KEY operation	Display on 7-Segment
1 time	Intialize (Reset) operation	Same as initial state

K4 (Number of press)	Display contents	Display	
		SEG1	SEG2, 3, 4
1 time	Capacity depending on horsepower	1	AG042K∗∗∗ → 0, 1, 5 AG056K∗∗∗ → 0, 2, 0 AG070K∗∗∗ → 0, 2, 5
2 times	Order frequency (Compressor 1)	2	120 Hz → 1, 2, 0
3 times	Order frequency (Compressor 2)	3	120 Hz → 1, 2, 0
4 times	High pressure (MPa)	4	1.52 MPa → 1, 5, 2
5 times	Low pressure (MPa)	5	0.43 MPa → 0, 4, 3
6 times	Discharge temperature (Compressor 1)	6	87 ℃→ 0, 8, 7
7 times	Discharge temperature (Compressor 2)	7	87 ℃ → 0, 8, 7
8 times	IPM temperature (Compressor 1)	8	87 ℃ → 0, 8, 7
9 times	IPM temperature (Compressor 2)	9	87 ℃ → 0, 8, 7
10 times	CT sensor value (Compressor 1)	A	2 A → 0, 2, 0
11 times	CT sensor value (Compressor 2)	B	2 A → 0, 2, 0
12 times	Suction 1 temperature	C	-42 ℃ → 0, 4, 2
13 times	COND Out temperature	D	-42 ℃ → -, 4, 2
14 times	Temperature of liquid pipe	E	-42 ℃ → -, 4, 2
15 times	TOP temperature (Compressor 1)	F	-42 ℃ → -, 4, 2
16 times	TOP temperature (Compressor 2)	G	-42 ℃ → -, 4, 2
17 times	Outdoor temperature	H	-42 ℃ → -, 4, 2
18 times	EVI inlet temperature	I	-42 ℃ → -, 4, 2

K4 (Number of press)	Display contents	Display	
		SEG1	SEG2, 3, 4
19 times	EVI outlet temperature	J	-42 ℃ → -, 4, 2
20 times	Main EEV 1 step	K	2000 steps → 2, 0, 0
21 times	Main EEV 2 step	L	2000 steps → 2, 0, 0
22 times	EVI EEV step	M	300 steps → 3, 0, 0
23 times	H/R EEV step	N	300 steps → 3, 0, 0
24 times	Fan step (SSR or BLDC)	O	13 steps → 0, 1, 3
25 times	Current frequency (Compressor 1)	P	120 Hz → 1, 2, 0
26 times	Current frequency (Compressor 2)	Q	120 Hz → 1, 2, 0
27 times	Suction 2 temperature	R	-42 ℃ → -, 4, 2
28 times	Master indoor unit address	S	Master indoor unit not selected → BLANK, N, D If indoor unit No.1 is selected as the master unit → 0, 0, 1
29 times	Snow accumulation sensor voltage	T	1.80 V → 1, 8, 0
30 times	Total suction temperature	U	-42 ℃ → -, 4, 2

K4 (Number of press) (Press and hold the K4 for 3 seconds to enter the setting)	Display contents	Display	
		Page1	Page2
1 time	Main version	MAIN	Version (ex.: 1412)
2 times	Hub version	HUB	Version (ex.: 1412)
3 times	Inverter compressor 1 check	INV1	Version (ex.: 1412)
4 times	Inverter compressor 2 check	INV2	Version (ex.: 1412)
5 times	Fan 1 check	FAN1	Version (ex.: 1412)
6 times	Fan 2 check	FAN2	Version (ex.: 1412)
7 times	EEP version	EEP	Version (ex.: 1412)
8 times	Automatically assigned address of the units	AUTO	Seg1: I/U: A / Seg2: I/U: 0 / Seg3, 4: Address (ex.: 07)
9 times	Manually assigned address of the units	MANU	Seg1: I/U: A / Seg2: I/U: 0 / Seg3, 4: Address (ex.: 15)