

# MODBUS RTU GATEWAY

Providing Modbus RTU connection between LG Air conditioners and BMS.



PMBUS00A

## Features & Benefits

- Function
  - MODBUS RTU communication with MODBUS master controller
  - MODBUS RTU slave (RS485) / 9,600 bps
  - Applicable for MULTI V 5, MULTI V S, ERV, THERMA V
- Size (W x H x D) : 53.6 x 89.7 x 60.7
- Max. 16 IDUs with single module / Max. 64 IDUs with 4 modules
- Power : DC 12V

## Modbus Gateway Memory Map

Baud Rate : 9 600 bps, Stop Bit : 1 stop bit, Parity : None Parity

### Coil Register (0 x 01)

① No.	Data Bit			Function	Register
	Air Conditioner	ERV / DX ERV	HydroKit & THERMA V		
1	Operate (On/Off)	Operate (On/Off)	Operate (On/Off)	0: Stop / 1: Run	Register = N X 16 + ① (N = Indoor Unit Central Address)
2	Auto Swing	Aircon Operate (On/Off)	Hot Water Mode (On/Off)	0: Disable / 1: Enable	
3	Filter Alarm Release	Filter Alarm Release <sup>1)</sup>	Reserved	0: Normal / 1: Alarm Release	
4	Lock Remote Controller	Lock Remote Controller	Lock Remote Controller	0: UnLock / 1: Lock	
5	Lock Operate Mode	Lock Operate Mode <sup>1)</sup>	Reserved	0: UnLock / 1: Lock	
6	Lock Fan Speed	Lock Fan Speed <sup>1)</sup>	Reserved	0: UnLock / 1: Lock	
7	Lock Target Temp.	Lock Target Temp. <sup>1)</sup>	Reserved	0: UnLock / 1: Lock	
8	Lock IDU Address	Lock IDU Address <sup>1)</sup>	Reserved	0: UnLock / 1: Lock	
9	Reserved	Quick Ventilate	Reserved	0: Disable / 1: Enable	
10	Reserved	EnergySave	Reserved	0: Disable / 1: Enable	

\* Note 1) : This register value is applied 'DX Ventilator' ONLY.

### Discrete Register (0 x 02)

① No.	Data Bit			Function	Register
	Air Conditioner	ERV / DX ERV	HydroKit & THERMA V		
10001	Connected IDU	Connected IDU	Connected IDU	0: Disconnected / 1: Connected	Register = N X 16 + ① (N = Indoor Unit Central Address)
10002	Alarm	Alarm	Alarm	0: Normal / 1: Alarm	
10003	Filter Alarm	Filter Alarm <sup>1)</sup>	Hot Water Only <sup>2)</sup>	0: Normal / 1: Alarm Hydrokit - 0: Normal / 1: Hot Water Only	
10004	Reserved	Reserved	Target Temp Select	0: Air / 1: Water	
10005	Reserved	Reserved	Error Division <sup>2)</sup>	0: CH type error / 1: BC type error	

\* Note 1) : This register value is applied 'DX Ventilator' ONLY. \* Note 2) : This register value is applied 'Hydrokit' ONLY.

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### Holding Register (0 x 03)

① No.	Data Bit			Function	Register
	Air Conditioner	ERV / DX ERV	HydroKit & THERMA V		
40001	Operate Mode	Operate Mode	Connected IDU	0: Cooling, 1: Dehumidifying, 2: Fan, 3: Auto, 4: Heating Hydrokit (Middle Temp. DHW)/AWHP - 0: Cooling, 3: Auto, 4: Heating Hydrokit(High Temp. DHW) - 3: Auto, 4: Heating	Register = N X 20 + ① (N = Indoor Unit Central Address)
40002	Fan Speed	Fan Speed	Target Temp. DHW <sup>2)</sup>	1: Low, 2: Mid, 3: High, 4: Auto	
40003	Target Temp.	Target Temp. <sup>1)</sup>	Target Temp. <sup>2)</sup>	16.0 - 30.0 [°C] x 10	
40004	Target Temp. Limit (Upper)	Target Temp. Limit <sup>1)</sup> (Upper)	Reserved	16.0 - 30.0 [°C] x 10	
40005	Target Temp. Limit (Lower)	Target Temp. Limit <sup>1)</sup> (Lower)	Reserved	16.0 - 30.0 [°C] x 10	
40006	Reserved	Vent. Operate Mode	Reserved	0: HEX, 1: Auto, 2: Normal	

\* Note 1) : This register value is applied 'DX Ventilator' ONLY.

\* Note 2) : This value range can be between 0 - 127[°C]. And it would be limited by upper & lower value according to the setting of remote controller.

### Input Register (0 x 04)

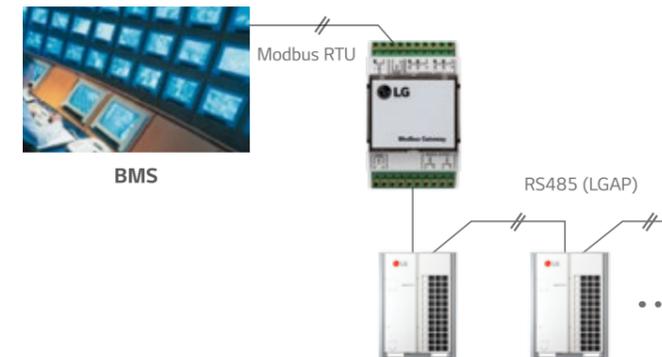
① No.	Data Bit			Function	Register
	Air Conditioner	ERV / DX ERV	HydroKit & THERMA V		
30001	Error Code	Error Code	Error Code	0 - 255 ※ Please refer to the product error table.	Register = N X 20 + ① (N = Indoor Unit Central Address)
30002	Room Temp.	RA Temp.	Room Temp.	-99.0 - 99.0 [°C] x 10	
30003	Pipe In Temp.	OA Temp. 1)	Water Inlet Temp.	-99.0 - 99.0 [°C] x 10	
30004	Pipe Out Temp.	SA Temp. 1)	Water Outlet Temp.	-99.0 - 99.0 [°C] x 10	
30005	Reserved	Pipe In Temp. 1)	Sanitary Tank Temp.	-99.0 - 99.0 [°C] x 10	
30006	Reserved	Pipe Out Temp. 1)	Solar Temp. 2)	-99.0 - 99.0 [°C] x 10	

\* Note 1) : This register value is applied 'DX Ventilator' ONLY.

\* Note 2) : This register value is applied 'AWHP' ONLY.

## Installation Scene

- Single module  
Max. 16 indoor units with a single module



- Multiple module  
Max. 64 indoor units with 4 modules in one Modbus communication line

