# ACP Lonworks

### PLNWKB000

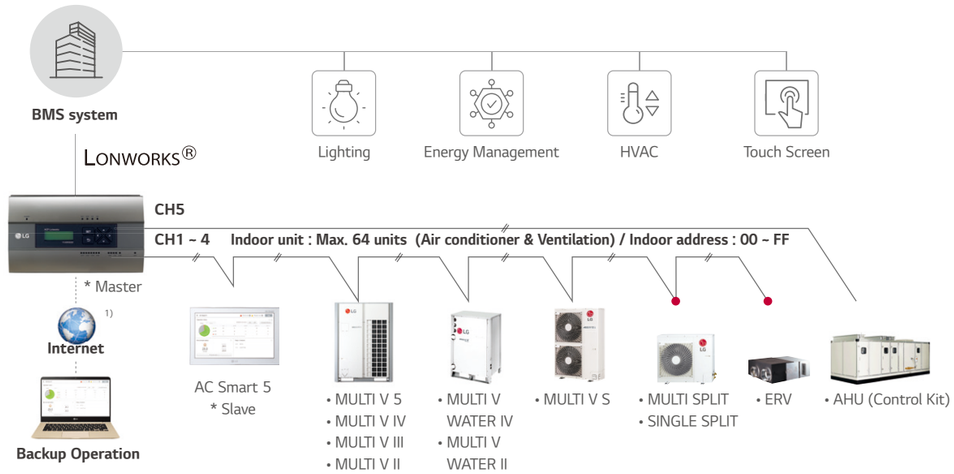
Lonworks easily link LG Air conditioners and other existing building systems.
By including ACP control function, the controlling continues even when error occurs with BMS.


### Features & Benefits

- Connect to use LonWorks protocol and LG Air conditioner protocol.
- Process ability (Max. connection) : Indoor unit 64EA, AHU Control Kit : Max. 16EA
- Self installation verification using internet (Web Server Included)
  - Diagnosis of communication status on LG Air conditioner network
- It offers a variety of functions as ACP which allows the customer to efficiently control various types of equipment from the customer's own Integration.

| CONTROL | MONITORING |
|---|---|
| On / Off Command | On / Off |
| Operation Mode Setting | Operation Mode |
| Lock | Lock |
| Temperature | Temperature |
| Fan Level | Fan Level |
| Fan Direction Auto | Fan Direction Auto |
| Mode Lock | Mode Lock |
| Fan Level Lock | Fan Level Lock |
| Temperature Lock | Temperature Lock |
| Temperature Lower Limit | Temperature Lower Limit |
| Temperature Higher Limit | Temperature Higher Limit |
| Peak Convert Cycle | Peak Convert Cycle |
| Peak Setting | Peak Setting |
| Temperature Unit | Temperature Unit |
| Total Temperature Lock | - |
| Total On / Off | - |
| Total Temperature | - |
| - | Product Type |
| - | Product Address |
| - | Current Temperature |
| - | Alarm |
| - | Power |
| - | Error Code |
| - | Peak Current Operating Percent |
| - | Total Accumulate Power |

※ ○ : Applied, - : Not Applied




1) Assignment of public IP address is required to access central controller through internet.

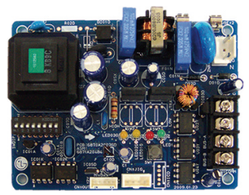
● Appropriate PI485 should be used according to PDB (Product Data Book).

# PI485

PI485 converts LG Air conditioners protocol to the RS485 protocol for the central controller.

### PMNFP14A1

Easy to manage up to 64 indoor units.

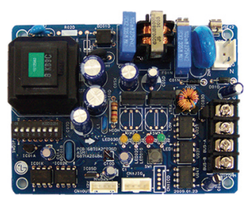


- Power : Single phase AC 220V 50 / 60Hz

**• 1 for Each Outdoor Unit**

- Multi V MINI (ARUN40GS2A / ARUV40GS2A Only needs PI485)
- Single Split
- Multi Split

### PP485A00T



- Power : Single phase AC 220V 50 / 60 Hz

**• 1 for Each Indoor Unit**

- Therma V

### PHNFP14A0

- Power : Connected with the Indoor Units

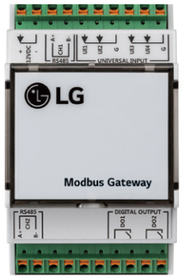
**• 1 for Each Indoor Unit**

- Indoor Unit (ERV)

# MODBUS RTU Gateway

## PMBUSB00A

Providing Modbus RTU connection between LG Air conditioners and BMS.



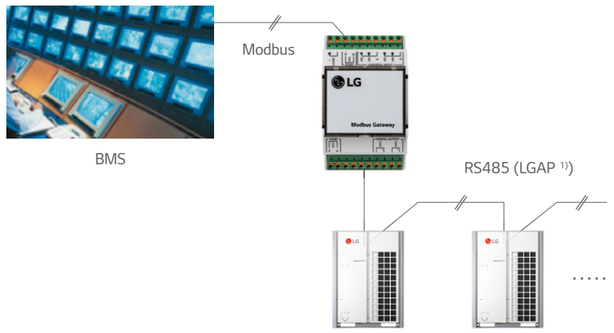

### Features & Benefits

• Function
- Modbus RTU communication with Modbus master controller
- Modbus RTU slave (RS485) / 9,600 bps
- Applicable for MULTI V 5, ERV, Heating
- Size (W x H x D, mm) : 53.6 x 89.7 x 60.7
- Max. 16 IDUs with single module / Max. 64 IDUs with 4 modules
- Power : DC 12V (250mA)
- No slave allowed in LGAP

### Installation Scene

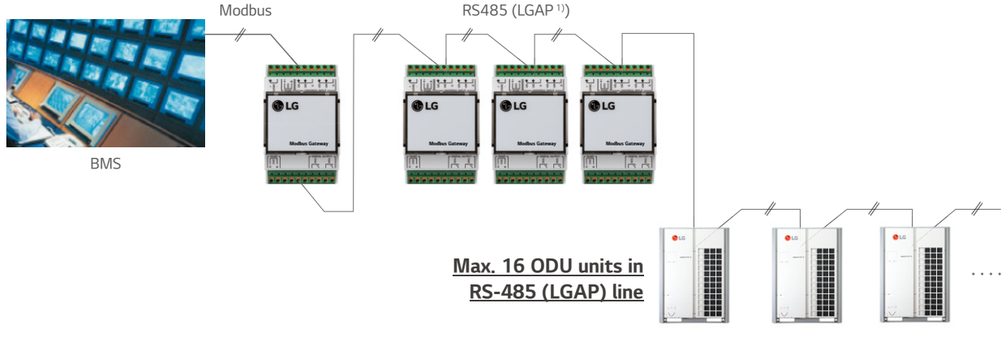
**Single Module**

Max. 16 indoor units with a single module




**Multiple Module**

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




1) LGAP is LG Protocol
Max. 16 ODU units in RS-485

### Modbus Gateway Memory Map

Baud Rate : 9,600 bps, Stop Bit : 1 stop bit, Parity : None Parity, Byte size : 8 bits

**Coil Register (0 x 01)**

| NO. | DATA BIT | | | FUNCTION | REGISTER |
|---|---|---|---|---|---|
| | AIR CONDITIONER | ERV / DX ERV | HYDRO KIT & 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 1) | 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 1) | Reserved | 0 : UnLock / 1 : Lock | |
| 6 | Lock Fan Speed | Lock Fan Speed 1) | Reserved | 0 : UnLock / 1 : Lock | |
| 7 | Lock Target Temp. | Lock Target Temp. 1) | Reserved | 0 : UnLock / 1 : Lock | |
| 8 | Lock IDU Address | Lock IDU Address 1) | Reserved | 0 : UnLock / 1 : Lock | |
| 9 | Reserved | Quick Ventilate | Reserved | 0 : Disable / 1 : Enable | |
| 10 | Reserved | Energy Save | Reserved | 0 : Disable / 1 : Enable | |

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

**Discrete Register (0 x 02)**

| NO. | DATA BIT | | | FUNCTION | REGISTER |
|---|---|---|---|---|---|
| | AIR CONDITIONER | ERV / DX ERV | HYDRO KIT & THERMA V | | |
| 1 | Connected IDU | Connected IDU | Connected IDU | 0 : Disconnected / 1 : Connected | Register = N X 16 + ① (N = Indoor Unit Central Address) |
| 2 | Alarm | Alarm | Alarm | 0 : Normal / 1 : Alarm | |
| 3 | Filter Alarm | Filter Alarm 1) | Hot Water Only 2) | • 0 : Normal / 1 : Alarm Hydro Kit<br>• 0 : Normal / 1 : Hot Water Only | |
| 4 | Reserved | Reserved | Target Temp. Select | 0 : Air / 1 : Water | |
| 5 | Reserved | Reserved | Error Division 2) | 0 : CH type error / 1 : BC type error | |

1) : This register value is applied 'DX Ventilator' ONLY.
2) : This register value is applied 'Hydro Kit' ONLY.

**Holding Register (0 x 03)**

| NO. | DATA BIT | | | FUNCTION | REGISTER |
|---|---|---|---|---|---|
| | AIR CONDITIONER | ERV / DX ERV | HYDRO KIT & THERMA V | | |
| 1 | Operate Mode | Operate Mode | Operate Mode | • 0 : Cooling, 1 : Dehumidifying, 2 : Fan, 3 : Auto, 4 : Heating Hydro Kit (Middle Temp. DHW) / AWHP<br>• 0 : Cooling, 3 : Auto, 4 : Heating Hydro Kit (High Temp. DHW) | Register = N X 20 + ① (N = Indoor Unit Central Address) |
| 2 | Fan Speed | Fan Speed | Target Temp. DHW 2) | 1 : Low, 2 : Mid, 3 : High, 4 : Auto | |
| 3 | Target Temp. | Target Temp. 1) | Target Temp. 2) | 16.0 ~ 30.0 [°C] x 10 | |
| 4 | Target Temp. Limit (Upper) | Target Temp. Limit 1) (Upper) | Reserved | 16.0 ~ 30.0 [°C] x 10 | |
| 5 | Target Temp. Limit (Lower) | Target Temp. Limit 1) (Lower) | Reserved | 16.0 ~ 30.0 [°C] x 10 | |
| 6 | Reserved | Vent. Operate Mode | Reserved | 0 : HEX, 1 : Auto, 2 : Normal | |

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

| NO. | DATA BIT | | | FUNCTION | REGISTER |
|---|---|---|---|---|---|
| | AIR CONDITIONER | ERV / DX ERV | HYDRO KIT & THERMA V | | |
| 1 | Error Code | Error Code | Error Code | 0 ~ 255<br>※ Please refer to the product error table. | Register = N X 20 + ① (N = Indoor Unit Central Address) |
| 2 | Room Temp. | RA Temp. | Room Temp. | -99.0 ~ 99.0 [°C] x 10 | |
| 3 | Pipe In Temp. | OA Temp. 1) | Water Inlet Temp. | -99.0 ~ 99.0 [°C] x 10 | |
| 4 | Pipe Out Temp. | SA Temp. 1) | Water Outlet Temp. | -99.0 ~ 99.0 [°C] x 10 | |
| 5 | Reserved | Pipe In Temp. 1) | Sanitary Tank Temp. | -99.0 ~ 99.0 [°C] x 10 | |
| 6 | Reserved | Pipe Out Temp. 1) | Solar Temp. 2) | -99.0 ~ 99.0 [°C] x 10 | |

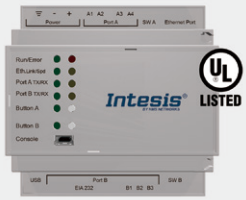
1) : This register value is applied 'DX Ventilator' ONLY.
2) : This register value is applied 'AWHP' ONLY.

# KNX Gateway

Technical and service support must come from Intesis directly.
LG Electronics Inc. warrants and assumes no liability for this product.
- This is the landing page of INTESIS MAPS: https://www.intesis.com/products/intesis-maps-home.

## INKNXLGE016O0036 / INKNXLGE064O0036

Specially designed to allow monitoring and bidirectional control of all the parameters and functionality of LG air conditioners from KNX protocol.




### Key features

- 2 model types
- Up to 64 connectable indoor units
- Direct connection to KNX TP1 bus
- Independent management of communications
- Power supply : 9 to 36V DC or 24V AC (not included)
- KNX Power consumption : 5mA
- Standard DIN-Rail 6 modules enclosure
- LG Slave Central controller (for example, AC Smart) and PDI can be operated with KNX gateway

### Key benefits

- Easy & quick installation : user comfort
- Flexible integration (Intesis MAPS & KNX) Export Group Address by “csv” file to ETS5/6
- Compatibility with all LG products (Air-Conditioning, ERV, Hydrokits and AWHP)
- Ergonomic & friendly user interface (using the supplied software Intesis MAPS)
- One single tool for settings, commissioning, SW update and troubleshooting

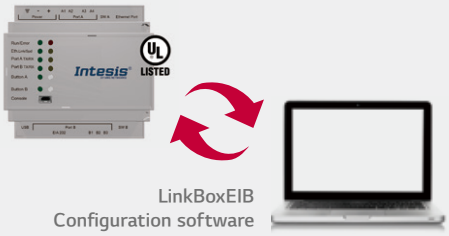
### Key messages

- Manage your building with an advanced building automation solution
- Energy savings
- Power consumption measurement using additional LG PDI device
- Bidirectional communication between LG & KNX
- Your system diagnostics accessible through LG Error codes

| MODEL NAME | MAX. CONNECTION INDOOR UNITS |
|---|---|
| INKNXLGE016O0036 | 16 |
| INKNXLGE064O0036 | 64 |

## Link BoxEIB Configuration Software for IntesisBox® KNX Serious

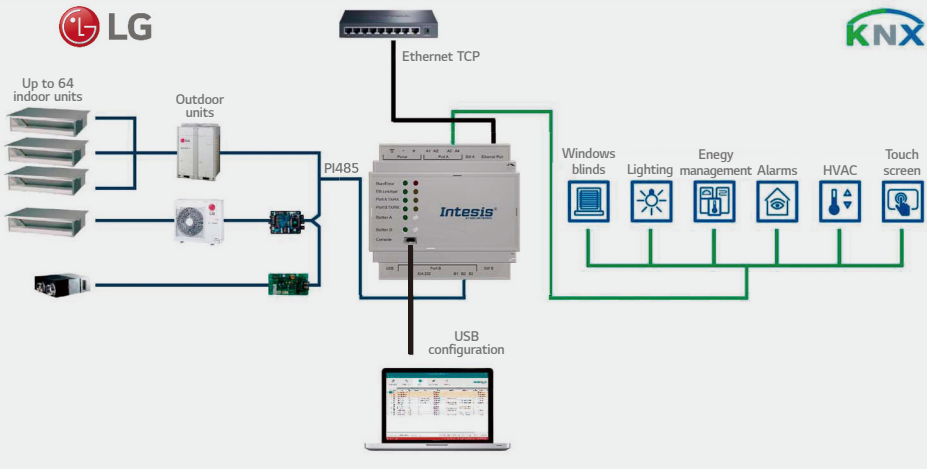
Easy to use tool for the configuration of intesisBox, in a fast and effective way.
It offers the maximum integration possibilities with a minimal knowledge required on the system to be integrated.




LinkBoxEIB
Configuration software

- Only needed during configuration.
- One single tool for the configuration of the whole range of IntesisBox KNX series gateways.
- Supplied with IntesisBox with no additional cost.
- Configuration examples for all systems that can be integrated.
- Mapping table editable using excel, allowing a simple and fast association of KNX Group Addresses, exported from ETS, to IntesisBox’s datapoints.
- Includes powerful and useful features for configuration, setup and troubleshooting.

## Installation Scene




Integration of LG VRF systems into KNX control systems