
HDL®
KNX Dual Power Supply
• KNX VRV/VRF Gateway
• KNX IP Router & KNX Line Coupler & KNX USB Interface
HDL New Smart Control Solutions
Intelligent Connectivity, Elevated Experience

KNX Dual Power Supply Product Introduction

Product Introduction-KNX Dual Power Supply 640+640

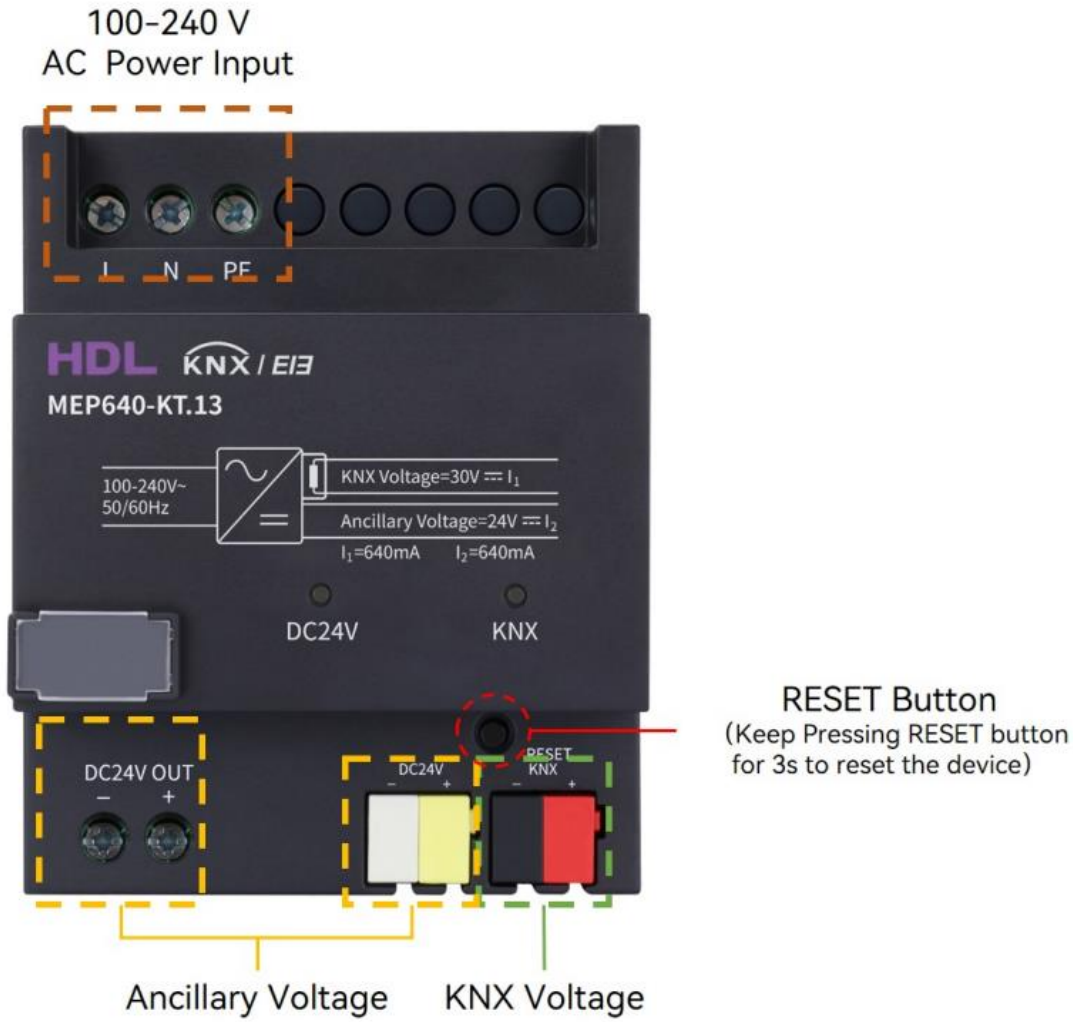
KNX Dual Power Supply 640+640

MEP640-KT.13

- Capacity 640mA
- Capacity 640mA
- Dual-channel independent design
- Dual-port output design
- Overload protection
- Short-circuit protection
- Overvoltage Protection
- Over-temperature Protection

Product Number	**312010459**
Model Number	**MEP640-KT.13**
Product Name	**KNX Dual Power Supply Module**
Input Voltage	**100-240V~50/60Hz**
KNX Output Voltage	**30V DC**
KNX Output Current	**640mA**
Auxiliary Output Voltage	**24V DC**
Auxiliary Output Current	**640mA**
Power Hold-up Time	**200ms 230VAC full load**
Protection Features	**Supports overload, overcurrent, overvoltage, and overtemperature protection**
Working Temperature	**-5℃ to +45℃**
Operating Humidity	**< 93% RH, non-condensing**
Dimension	**72mmx90mmx64mm**

Product Introduction-KNX Dual Power Supply



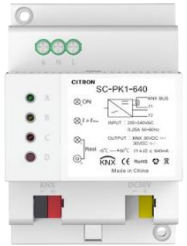
Product Highlight

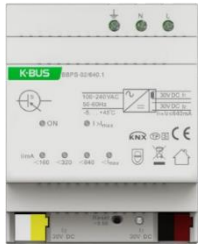
Independent output design with higher load capacity

Unlike typical dual shared-output designs on the market, our KNX and DC outputs are independently designed. Each output can operate at full load without interference, ensuring higher load capacity and greater system stability.

Market dual shared-output design:

I1+I2≤640mA





HDL dual independent output design:

I1≤640mA

Product Highlight flexibility in applications

24V auxiliary power dual-output port design for greater

- **Standard KNX auxiliary power interface:** provides power for KNX devices that require auxiliary supply within the system.
- **General terminal interface:** provides power for external devices such as third-party video intercom panels and security sensors.

Dual-port design

Product Highlight – Multi-level Protection Design

Overload Protection

KNX Output: At 205–235% load, the output enters **constant-current limiting protection mode** and automatically recovers once the fault is removed.
Auxiliary Output: At 205–235% load, the output enters **hiccup protection mode** and automatically recovers once the fault is removed.

Short Circuit Protection

KNX Output: Constant-current limiting protection with automatic recovery after removal of the abnormal load condition.
Auxiliary Output: Hiccup protection with automatic recovery after removal of the abnormal load condition.

Overvoltage Protection

KNX Output: Output shutdown with automatic recovery after fault removal; protection threshold ≤ 37 V.
Auxiliary Output: Output shutdown with automatic recovery after fault removal; protection threshold ≤ 36 V.

Overtemperature Protection

Enters **hiccup protection mode** and automatically recovers when the temperature decreases.

New vs. Previous Product Comparison

HDL®

Comparison Criteria	 new **MEP640-KT.13** Dual 640+640	 **M/P960.1** 960mA Power Supply Module	 **...** Dual 1280+1280
KNX Output	640mA	960mA	1280mA
Auxiliary Output	640mA	Null	1280mA
Price	Same price	Same price	...
Dimensions	4P	8P	8P
Protection Features	Overload, Short Circuit, **Overvoltage**, and **Overtemperature** Protection	Overload and Short Circuit Protection	...
Product Certifications	CE / RoHS / KNX / SAA / Third-party inspection reports	CE / RoHS / KNX / SAA / Third-party inspection reports	...

KNX Power Supply Selection Guide

Based on the project product configuration, calculate the total KNX bus power consumption and auxiliary power consumption on a single bus.

Product	**KNX Consumption**	**Auxiliary power consumption**	**Project Configuration (Units)** – Single Bus	**Notes**
KNX Gateway	20mA/30V DC	200mA/24V DC	1	
Tile 2.1 Button Panel + 2CH Relay Power Interface	10mA/30V DC	43mA/24V DC	Multiple	8-button as an example
Tile 2.1 Thermostat	10mA/30V DC	45mA/24V DC	Multiple	
Granite 4-inch Display Panel	12mA/30V DC	108mA/24V DC	Multiple	
Granite 4.3-inch Display Panel	15mA/30V DC	110mA/24V DC	Multiple	
Source Mini + KNX Power Interface			1	
Source 7 + KNX Power Interface			1	
Source 10 + KNX Power Interface			1	
Airkit2 Pro Air Quality Sensor	10mA/30V DC	50mA/24V DC	1~2	
4CH10A Flush-mounted Switching Actuator	5mA/30V DC	100mA/24V DC	Multiple	
17CH/19CH Mix Module	14mA/30V DC	97mA/30V DC	Multiple	
2CH1A Flush-mounted Switching Actuator	9mA/30V DC	100mA/24V DC	Multiple	
48CH Dry contact module	10mA/30V DC	3mA/24V DC	1	

HDL KNX VRV/VRF
Air Conditioner Gateway Solutions

Smart Monitoring and Precision Control of VRF Systems for
Seamless Building Automation Integration

KNX VRV/VRF
Indoor Unit Gateway

Model Number: MHVACSGW-KT.13

Indoor Unit Gateway Product Overview

Smart 1-to-1 Connection

Integrates VRF into KNX. One gateway per indoor unit enables intelligent monitoring and control.
Powered directly by the indoor unit, eliminating the need for external power supply and greatly simplifying installation.

- **Low Power Design:** Only 0.5W operating power.
- **High Performance:** Real-time AC status synchronization.
- **Compact Size:** 53 × 53 × 17.9 mm

Technical Specifications and Interfaces (MHVACSGW-KT.13)

Power Supply and Power Consumption

Directly powered by the indoor unit, no additional power wiring required. Ultra-low **0.5W** standby consumption, meeting green building energy efficiency standards.

Communication Interface

Supports P1P2/XY/A1B1 communication terminals, compatible with leading brands including Daikin, Hitachi, Toshiba, Mitsubishi Electric, Haier, etc.

Notes

Brand	Wiring Method		Wiring Polarity	Cable	Coexistence with Original Remote Controller
	Gateway Wiring Port	AC Unit Wiring Port			
Daikin VRF System (2-core)	P1, P2	P1, P2	No	2-core	Supported
Daikin Ducted Unit MX (4-core)	X, Y, A1, B1	S21	Yes	4-core	Not supported
Daikin Fresh Air Unit (2-core)	P1, P2	P1, P2	No	2-core	Supported
Hitachi VRF/Ducted Unit (2-core)	P1, P2	A, B	No	2-core	Supported
Hitachi Ducted Unit (4-core)	X, Y, A1, B1	CN2	Yes	4-core	Not supported
Hisense VRF System (2-core)	P1, P2	A, B	No	2-core	Supported
Haier Ducted Unit (WiFi 4-core)	X, Y, A1, B1	Wi-Fi Terminal	No	4-core	Supported

And more... refer to the datasheet

If **"Coexistence with Original Remote Controller"** is shown as Not supported in the table, **the original remote controller must be removed** before using this product. If it is shown as Supported, set the air conditioner to **"Slave"** on the air conditioner settings page in the Bluetooth debugging mini-program before use

KNX VRV/VRF Outdoor Unit Gateway

Model Number: MHVACMGW-KT.13

Centralized Management Center

Multi-Indoor Unit Integrated Control

KNX VRV/VRF Outdoor Unit Gateway (Model: MHVACMGW-KT.13), connects multi-split air conditioners to a smart home central control system or BMS system for intelligent monitoring and control.

Via outdoor unit communication interfaces (e.g., Daikin F1/F2, Mitsubishi Electric M1/M2), enabling centralized control of the outdoor unit and all connected indoor units. Supports up to 64 indoor units.

- Integrated LCD Display
- Bluetooth + WeChat Mini Program configuration supported

Technical Specifications and Interfaces (MHVACMGW-KT.13)

DIN Rail Installation

108mm standard width, suitable for DIN rail installation in distribution boxes. Powered by 12V DC, offering stable and reliable performance, ideal for large-scale projects.

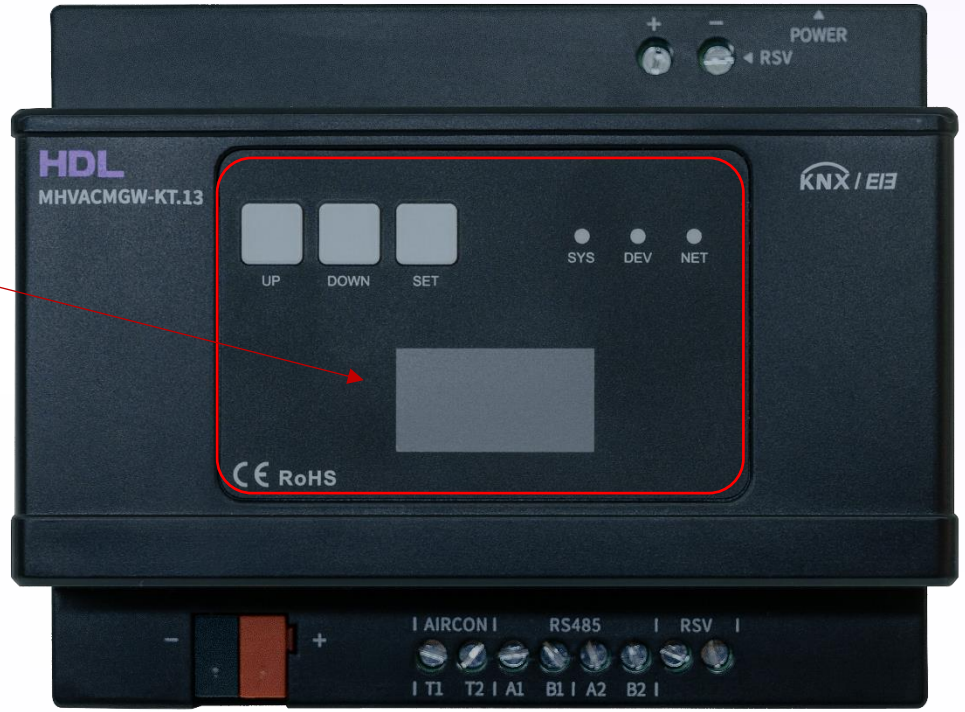
Underfloor Heating & Fresh Air Coordination

With two RS485 interfaces(A1B1/A2B2), supporting simultaneous connection of underfloor heating and fresh air systems for intelligent, full-scenario HVAC integration.

Technical Specifications and Interfaces (MHVACMGW-KT.13)

Dual-language Interface

LCD display supports English interface for intuitive monitoring of AC brand, unit quantity, and communication status. Manual button configuration is supported.



Indoor Unit Gateway vs Outdoor Unit Gateway

Features / Specifications	Indoor Unit Gateway	Outdoor Unit Gateway
Connection Method	Point-to-Point (1 per indoor unit)	Centralized (Outdoor Unit Communication Bus)
Power Requirements	Powered by AC unit (0.5W)	External DC 12V power supply (≤ 2.0W)
Installation	Desktop placement	35mm DIN rail installation
Setup Method	Bluetooth & Mini Program Debugging	

Wide Compatibility with Air Conditioning Brands

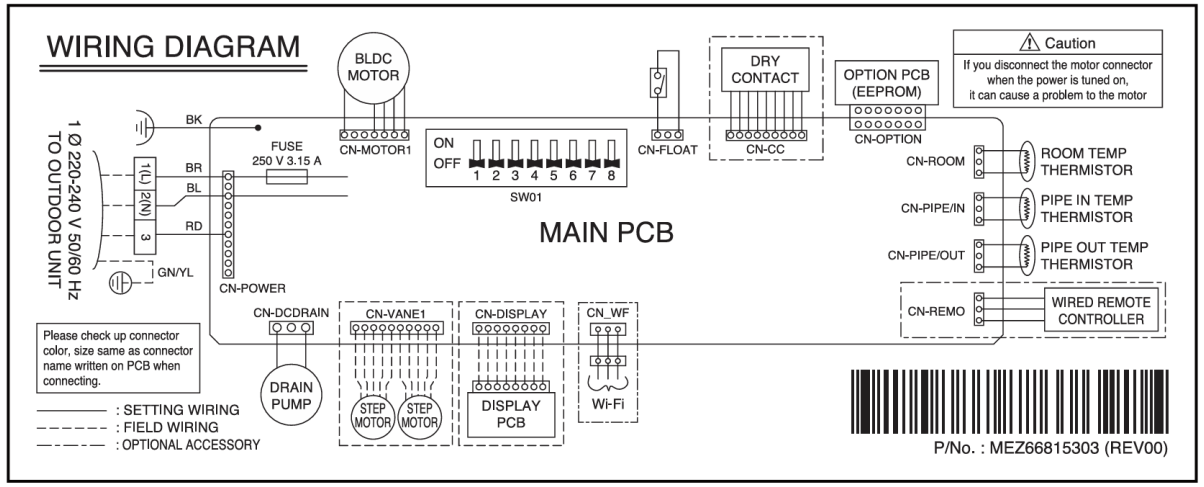
Core Brand Support

- Daikin
- Gree/Midea
- Hitachi
- Haier/Hisense
- Toshiba
- York
- Mitsubishi
- LG
- Panasonic
- Samsung

- **Multi-Brand Integration:** Supports Carrier, TCL, AUX, and more.

5. Wiring Diagrams

■ **AMNW18GTTA0**



**Provide the wiring diagram of your air conditioning system so we can confirm whether the AC gateway/module supports full control of the unit.

Wireless Setup and Configuration

Bluetooth & Mini Program Debugging

Scan the QR code in the manual using WeChat to open the “Bluetooth Configuration” Mini Program and begin commissioning.

- Online Firmware Upgrade and Brand Switching
- AC Address and Operating Mode testing
- Real-time Fault Code Monitoring

Module Upgrade/ System Hardware Iteration

IP Router

Old M/IPRT.1 → New **MGWIPRT-KS.13**

- Native support **for KNX Secure**
- Greatly reduced size

Better value, **lower cost** than the previous generation

USB Interface

Old M/USB.1 → New **MGWUSB-KT.13**

- Native support **for KNX Secure**
- Greatly reduced size

Better value, **lower cost** than the previous generation

Line Coupler

Old M/LCR.1 → New **MGWLCR-KS.13**

- Native support **for KNX Secure**
- Greatly reduced size

Better value, **lower cost** than the previous generation