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› Qubino Smart Meter 3 Phase (Model ZMNHXD1) Instruction Manual

Qubino ZMNHXD1

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1. INTRODUCTION

The Qubino Smart Meter 3 Phase (Model ZMNHXD1) is an advanced Z-Wave Plus device designed for precise energy consumption monitoring in three-phase electrical installations. This smart meter allows you to measure energy consumption for various appliances or the entire electrical network, providing valuable data for energy management and cost optimization. It features low power consumption and robust three-phase connectivity, making it an ideal component for smart home and building automation systems.



Image 1.1: The Qubino Smart Meter 3 Phase device, designed for DIN rail mounting.

2. SETUP AND INSTALLATION

Important Safety Information: Installation of the Qubino Smart Meter involves working with high voltage electricity. It must be performed by a qualified electrician in accordance with all local electrical codes and regulations. Always disconnect the main power supply before beginning any installation work.

2.1 Physical Installation

1. **Mounting:** Mount the Qubino Smart Meter onto a standard DIN rail within your electrical distribution board.
2. **Wiring:** Connect the three-phase power lines (L1, L2, L3) and the neutral line (N) to the corresponding terminals on the smart meter. Ensure all connections are secure and correctly phased. Refer to the wiring diagram provided with the product for precise terminal identification.
3. **Current Transformer (CT) Connection (if applicable):** If your model requires external current transformers, connect them according to the manufacturer's instructions.

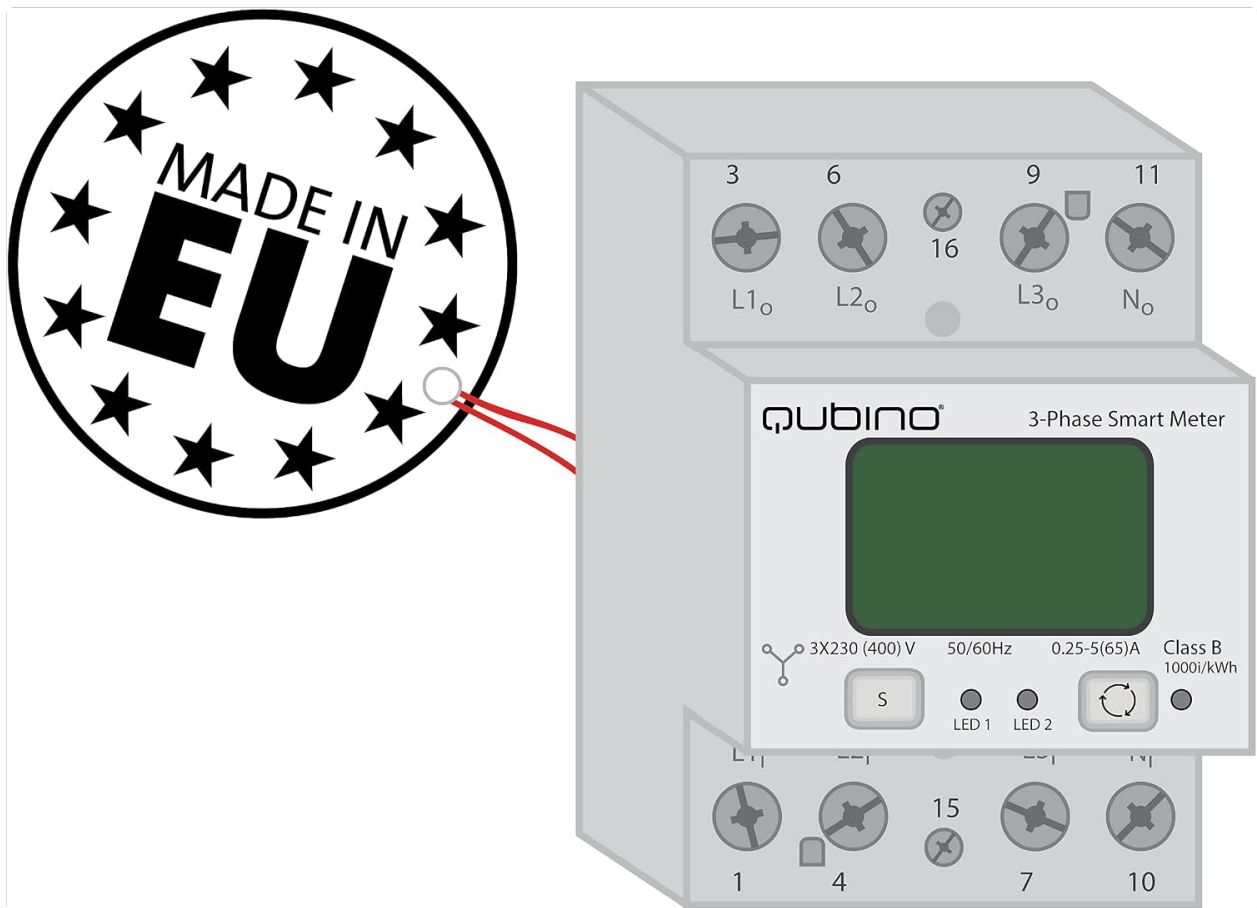


Image 2.1: A diagram illustrating the Qubino 3-Phase Smart Meter with its connection points (L1, L2, L3, N) and control buttons (S, LED1, LED2).

2.2 Z-Wave Network Inclusion

After physical installation and power restoration, the device needs to be included in your Z-Wave network.

1. **Prepare Z-Wave Controller:** Put your Z-Wave gateway/controller into inclusion (pairing) mode. Refer to your controller's manual for specific instructions.
2. **Initiate Inclusion on Smart Meter:** Press the 'S' button on the Qubino Smart Meter three times within 3 seconds. The LED indicator on the device will signal successful inclusion.
3. **Verify Inclusion:** Your Z-Wave controller should detect and add the smart meter. It may appear as multiple devices representing different measurement values (e.g., total consumption, individual phase consumption, voltage, current).

Note: Some users have reported that the device may take some time (up to 24 hours) to be successfully added to the network or for all parameters to become available. If initial inclusion fails, try repeating the process or ensuring the device is within range of your Z-Wave controller.

3. OPERATING THE SMART METER

Once successfully included in your Z-Wave network, the Qubino Smart Meter will begin transmitting energy data to your Z-Wave controller.

3.1 Energy Monitoring

The smart meter provides real-time and historical data for various electrical parameters, including:

- Total energy consumption (kWh)
- Instantaneous power (W) for each phase and total

- Voltage (V) for each phase
- Current (A) for each phase
- Power factor

Access this data through your Z-Wave gateway's interface or associated smart home application. This allows for detailed analysis of energy usage patterns.



Image 3.1: A smartphone displaying a 'Smart Home Warning!' indicating high energy consumption, demonstrating the meter's ability to send alerts and help manage energy usage.

3.2 Energy Management

By monitoring energy consumption, you can identify energy-intensive devices and optimize their usage. Many Z-Wave controllers allow you to set up automations based on energy readings, such as turning off devices when consumption exceeds a certain threshold or scheduling high-power appliances during off-peak hours.



Image 3.2: A couple viewing energy consumption data on a smartphone, illustrating the user-friendly interface for monitoring smart home energy usage.

4. MAINTENANCE

The Qubino Smart Meter is designed for long-term, maintenance-free operation. No user-serviceable parts are inside. For optimal performance, ensure the device is kept free from dust and moisture. Periodically, a qualified electrician may inspect the electrical connections to ensure they remain secure.

5. TROUBLESHOOTING

- **Device not including in Z-Wave network:**

- Ensure your Z-Wave controller is in inclusion mode.
- Press the 'S' button on the smart meter three times quickly.
- Try moving the smart meter closer to the Z-Wave controller during the inclusion process.
- Some users have experienced delays; allow up to 24 hours for the device to fully integrate and report all parameters.
- Perform an exclusion process first (if the device was previously included or is new but problematic) and

then retry inclusion.

- **Incorrect or no energy readings:**

- Verify all electrical connections (L1, L2, L3, N) are correctly wired and secure.
- Ensure the device is powered on.
- Check your Z-Wave controller's interface to confirm the device is communicating.

- **Device unresponsive:**

- Cycle power to the smart meter (turn off and on the circuit breaker).
- Check the Z-Wave network mesh for connectivity issues.

6. SPECIFICATIONS

Brand	Qubino
Model	ZMNHXD1
Dimensions (L x W x H)	5.4 x 8.4 x 6.5 cm
Weight	220 g
Input Voltage	230 V
AC Input Frequency	50-60 Hz
Rated Current	65 A
Operating Frequency	868.42 MHz (Z-Wave Plus)
Maximum Power Consumption	< 2 W
Certifications	CE, RoHS