

LYNKED

M-Bus Gateway



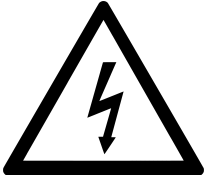
CG-100
Technical Manual

CONTENTS

Safety Information	02
Regulatory Information	02
Product Overview	03
Installation	04
Wiring Overview	07
Power & LED Indicators	08
Technical Specifications	10

1

SAFETY INFORMATION

 DANGER	 WARNING	 CAUTION
 Keep all devices and connected wiring away from moisture, liquids, and wet environments.	Installation, adjustment, and servicing of the unit are best performed by qualified electrical maintenance personnel. Disconnect all power sources before maintenance or adjustment of the unit.	Use only the accessories and attachments included with the unit. Do not use third-party or uncertified adapters. Unauthorized repair, modification, alteration, or operation outside the described steps are strictly prohibited and will void any applicable warranties and service agreements.

2

REGULATORY INFORMATION



Compliance

EMC:	CAN ICES-003(B) / NMB-003(B)
	FCC 47 CFR §15.107 and §15.109
Safety:	CSA C22.2 No. 62368-1
	UL 62368-1



Certifications

Contains IC:	20953-RPI4B
Contains FCC ID:	2ABCB-RPI4B
MET Listed:	 E115072

Federal Communications Commission (FCC) Notice: Changes or modifications not expressly approved by LYNKED Inc. could void the user's authority to operate this equipment.

3

PRODUCT OVERVIEW

3.1 Front-Access Cover

Open the front-access cover to expose the I/O connections.

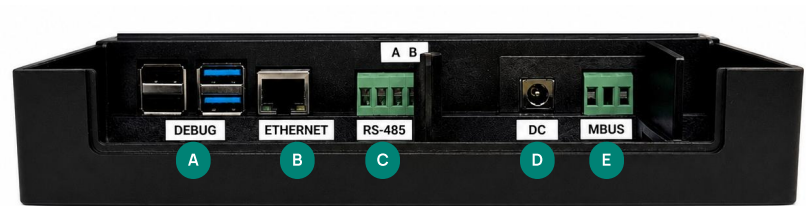


Figure 1. CG-100 I/O Connections

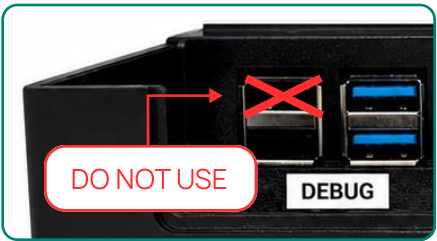


Figure 2. Port Not Intended For Use

Connector & Port Descriptions

Refer to **Figure 1** to locate and identify the ports described below.

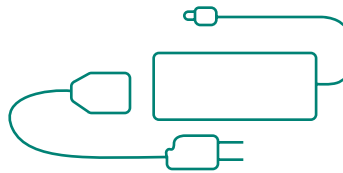
This USB connector is used for debug communication and add-on devices.

A	Debug	 Do not use the USB port shown in Figure 2 unless directed by LYNKED Support.
B	Ethernet	LAN interface for network communication
C	RS-485	The 4-pin connector supports both half-duplex and full-duplex communication. For half-duplex communication, use the two rightmost pins, labeled A (D+) and B (D-) . For full-duplex communication, the pins are assigned from left to right as RX+ , RX- , TX+ , and TX-
D	DC	24 VDC power input
E	MBUS	The 3-pin connector is used for M-Bus wiring. The left pin is the positive voltage terminal, the center pin is not used, and the right pin is the negative voltage terminal.

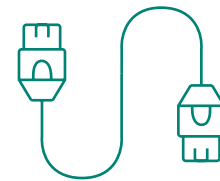
3.2 What's in the Box



1 x LYNKED
M-Bus Gateway (CG-100)



1 x DC Power Supply



1 x Ethernet Cable

4

INSTALLATION

1

Check Package Contents

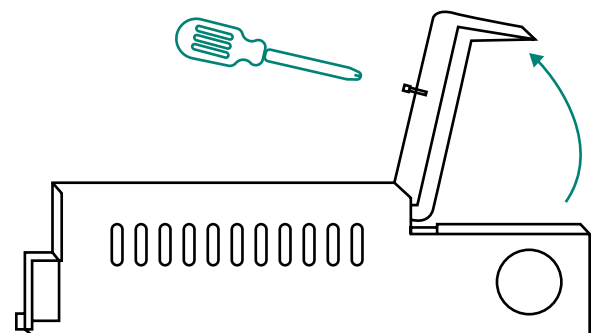
Open the box and verify that all items listed in **Section 3.2** are present. If any items are missing or damaged, contact LYNKED Support immediately.



2

Open Front-Access Cover

In preparation for installation and wiring, loosen the screw on the CG-100 front-access cover, then tilt the cover back to expose the I/O connections.



3 Select Installation Location

Choose a location that can withstand the specified operating temperature (see **Section 7**). Allow adequate clearance for ventilation and cable routing. Install the CG-100 in a safe location, such as a locked electrical, mechanical, or communications room or closet. Avoid unsecured areas such as hallways, stairwells, or shared amenity spaces.

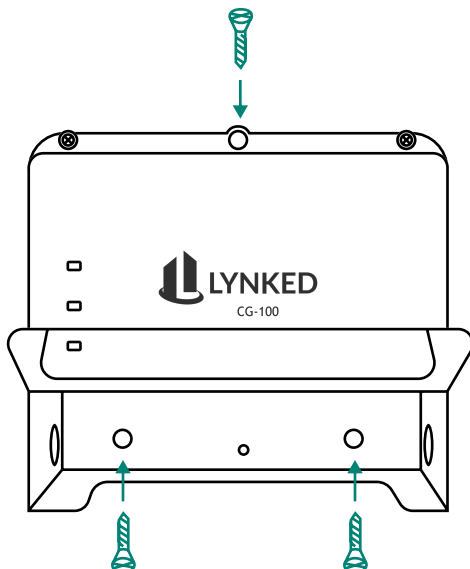
For Outdoor Installations:



Outdoor installation of the CG-100 is not recommended for general use. However, it may be performed in specific cases where the gateway is appropriately protected. If installed outdoors, use a NEMA-rated enclosure suitable for the local climate and environmental conditions. See **Section 7** for operating environment requirements. For information on NEMA enclosure ratings, refer to the [NEMA Rating Guide](#).

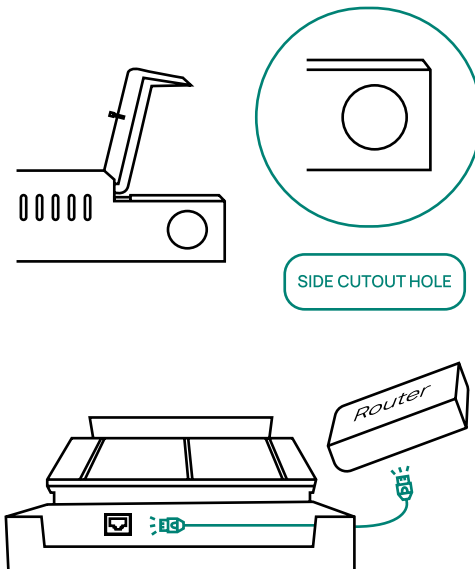
4 Optional Mount the CG-100

If mounting the CG-100 is required for your installation, secure it to a suitable mounting surface using three appropriate screws depending on the surface material.



5 Connect the Ethernet Cable

Connect an Ethernet cable to the router. Route the other end through the side cutout hole and connect it to the Ethernet port on the CG-100.



6

Connect M-Bus Devices

For multiple devices, connect M-Bus devices by wiring them together on a single bus (see **Figure 3**). Refer to the manufacturer's instructions for your M-Bus devices and connect the wiring to the MBUS connector on the CG-100. Route all M-Bus device wiring through the CG-100 side cutout hole. With all devices de-energized, connect the wires to the CG-100. See **Section 3.1** for connector pin-out information and **Section 5** for the wiring overview.

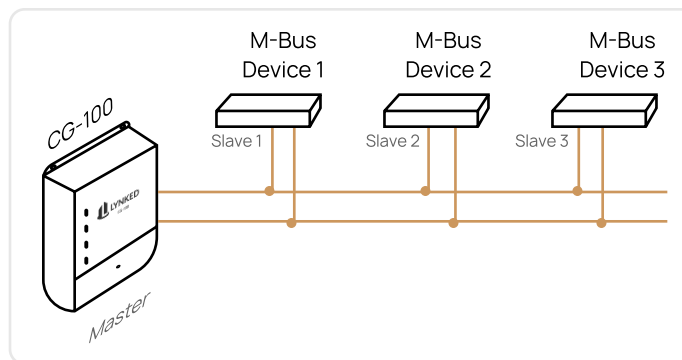


Figure 3. Bus Topology

For RS-485 Non-Approved Devices:

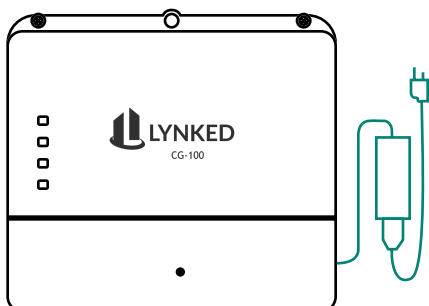


Do not connect non-approved devices to the RS-485 port without contacting LYNKED Inc. to verify compatibility and obtain any required licensing.

7

Connect the Power Supply

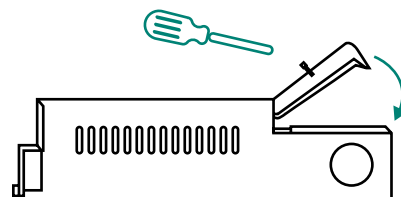
Route the power supply connector through the side cutout hole, then connect it to the CG-100.



8

Close the Front-Access Cover

Ensure all wiring is securely connected before closing the cover to avoid having to unscrew and reopen it. Close the cover and tighten the top screw.

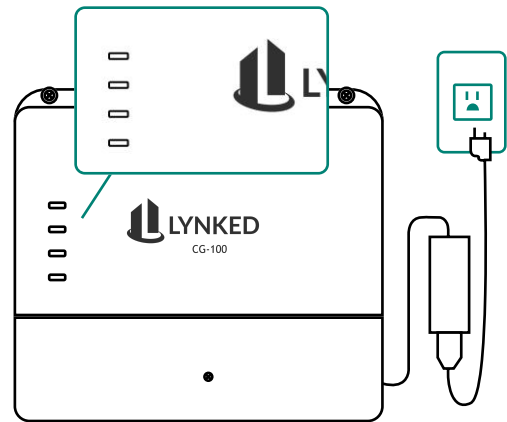


9

Turn On the Unit

Ensure the power supply is plugged into a 120 VAC outlet. The CG-100 will power on, light up automatically and will take ~2 minutes to complete boot-up.

See **Section 6** for a full description of LED indicators and basic troubleshooting.



5

WIRING OVERVIEW

M-Bus Power

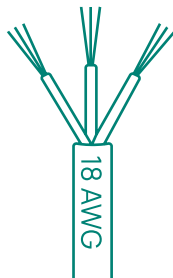
The CG-100 directly powers compatible M-Bus devices. Refer to the manufacturer's instructions for your M-Bus devices and review device-specific wiring requirements.

Bus Topology

Connect all M-Bus devices on a single bus (see **Figure 3**). See **Section 3.1** for the M-Bus connector pin-out information.

M-Bus Wiring

Use 18 AWG wire for all M-Bus connections. Strip the wire ends to 6–8 mm before inserting them into the screw terminals.



Ethernet Connection

Connect the CG-100 to an active router using the provided Ethernet cable. Ensure the router is powered and configured to provide an IP address.



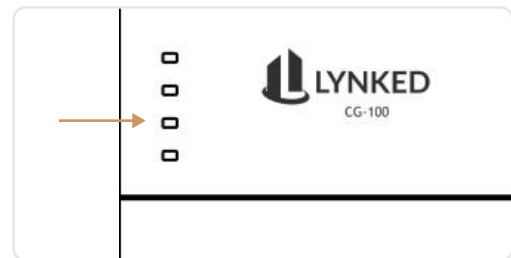
6 POWER & LED INDICATORS

6.1 Power-Up Sequence

Ensure all wiring is properly connected and that the power supply is connected to the CG-100, before applying power.

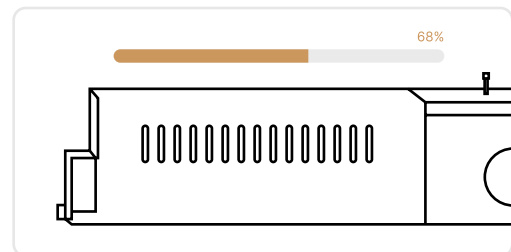
1 Power Indicator

 White Solid LED



2 Boot-Up

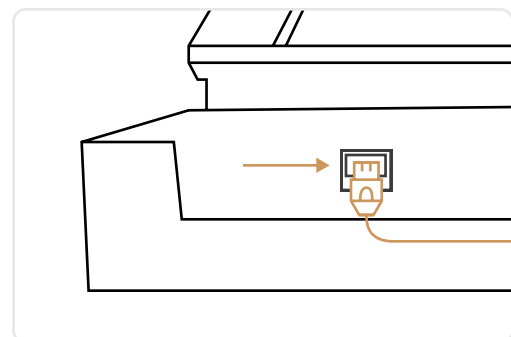
 ~ 2 minutes



3 RJ-45 Indicator

 Amber Solid LED
Physically Connected

 Green Blinking LED
Network Activity



6.2 Basic Troubleshooting

Power LED is OFF

- ✓ Confirm the power supply is securely plugged into the CG-100 and the outlet.
- ✓ Confirm the outlet is live or connect to a known-working outlet.
- ✓ Inspect the power supply for any signs of damage.

No Ethernet Activity

- ✓ Check that the Ethernet cable is securely plugged in at both ends.
- ✓ Confirm the router or switch port is active.
- ✓ Check that the router is configured to assign IP addresses using DHCP.
- ✓ Try a different Ethernet cable or port.

No M-Bus Activity

- ✓ Check that the M-Bus terminal wiring uses 18 AWG wire.
- ✓ Verify the wiring topology is configured correctly.
- ✓ Check that the M-Bus devices are powered on.



NEED HELP? For technical support, contact support@lynked.io or visit www.lynked.io



7

TECHNICAL SPECIFICATIONS

Connectivity

Interface	Specification
LAN / Ethernet	1000 Mbps, auto-polarity correction
M-Bus Port	EN 13757-2, screw-type terminal, up to 250 devices
RS-485 Port	Supports half/full-duplex communication
Default Protocols	Modbus, M-Bus, TCP/IP

Power

Parameter	Specification
Input Voltage	24 VDC
Input Current	2 A (max)

Processing & Memory

Parameter	Specification
Processor	Quad core ARM-Cortex-A72 1.5 GHz
Operating System	Linux
RAM	1 GB SRAM
Flash Storage	64 GB
Interval Recording	Hourly (configurable)

Mechanical

Parameter	Specification
Dimensions (mm)	195 x 184 x 48.5 mm (L x W x H)
Weight	510 g

Operating Environment

Parameter	Rating	Notes
Operating Temperature	0 °C to 60 °C	Performance may be affected outside this range
Humidity	0% to 95%	Non-condensing
Altitude	Up to 2000m	Above sea level
Pollution Degree	Degree 2	For environments with non-conductive contamination and occasional condensation