


MBRG-300 Modbus Router/Gateway

Quick start reference guide

 This document is a reference guide only and must be used in conjunction with the MBRG-300 *User manual*.

SAFETY PRECAUTIONS

 **ELECTRICAL HAZARD**

- This equipment must be installed and serviced only by qualified personnel. Such work should be performed only after reading the MBRG-300 *User manual* in its entirety.
- Before performing visual inspections, tests, or maintenance on this equipment, disconnect all sources of electric power. Assume that all circuits are live until they have been completely de-energized, tested, and tagged.
- Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of backfeeding.
- Apply appropriate personal protective equipment and follow safe electrical practices.
- Turn off all power supplying the equipment in which the MBRG-300 is to be installed before installing, wiring or removing the MBRG-300.
- Always use a properly rated voltage sensing device to confirm that power is off.
- The successful operation of this equipment depends upon proper handling, installation, and operation. Neglecting fundamental installation requirements may lead to personal injury as well as damage to electrical equipment or other property.

Failure to follow these instructions could result in death or serious injury!

INTRODUCTION

Package Contents

- MBRG-300 unit
- Quick start reference guide
- 2-pin terminal block plug
- 6-pin terminal block plug

Documentation and Additional Resources

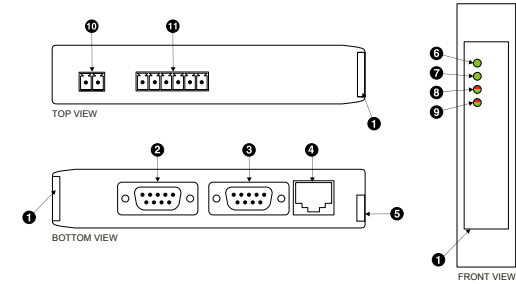
This Quick start reference guide must be used in conjunction with the MBRG-300 *User manual*.

The MBRG-300 *User manual* and supplemental software packages can be downloaded from the MBRG-300 web site:
<http://www.proconx.com/mbrg300>

Quick start checklist

- Obtain a copy of the MBRG-300 *User manual* and read it properly and in its entirety.
- Mount the unit.
- Connect the power. Do not connect yet serial ports.
- Configure the Ethernet communications settings with a web browser (using an Ethernet crossover cable) or with a terminal program like *HyperTerminal* (using a null modem cable)
- Configure the serial line communication settings.
- Configure the operational aspects of the device.
- Wire serial line interfaces.

DESCRIPTION



- 1 Clear front cover
- 2 Serial port 1 RS-232 connector
- 3 Serial port 2 RS-232 connector
- 4 Ethernet connector
- 5 DIN rail clip
- 6 Power LED
- 7 Ethernet link LED
- 8 Status 1 LED
- 9 Status 2 LED
- 10 Power terminals
- 11 Serial port 1 and 2 RS-485 or serial port 1 RS-422 terminals

IGMBRG300-1101

INSTALLATION

Regulatory notes

- 1. The MBRG-300 is suitable for use in non-hazardous locations only.
- 2. The MBRG-300 is not authorized for use in life support devices or systems.
- 3. Wiring and installation must be in accordance with applicable electrical codes in accordance with the authority having jurisdiction.
- 4. This is a Class A device and intended for commercial or industrial use. This equipment may cause radio interference if used in a residential area; in this case it is the operator's responsibility to take appropriate measures.
- 5. The precondition for compliance with EMC limit values is strict adherence to the guidelines specified in the MBRG-300 *User manual*. This applies in particular to the area of grounding and shielding of cables.

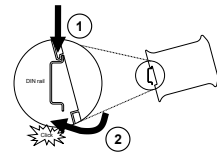
FCC Notice (USA only)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

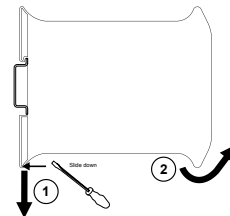
Industry Canada Notice (Canada only)

This Class A digital apparatus complies with Canadian ICES-003.

DIN rail mounting and removal




To mount the unit on a DIN rail, slot the top part of the MBRG-300 into the upper guide of the rail and lower the enclosure until the bottom of the red hook clicks into place.




To remove the MBRG-300 from the DIN rail, use a screw driver as a lever by inserting it in the small slot of the red hook and push the red hook downwards. Then remove the unit from the rail by raising the bottom front edge of the enclosure.


Mounting rules

-  No water splash and water drops
- No aggressive gas, steam or liquids
- Avoid dusty environments.
- Avoid shock or vibration
- Do not exceed the specified operational temperatures and humidity range.
- Mount inside an electrical switchboard or control cabinet.
- Make sure there is sufficient air ventilation and clearance to other devices mounted next to the unit.
- Observe applicable local regulations like EN60204 / VDE0113.

Before connecting anything


-  Before installing or removing the unit or any connector, ensure that the system power and external supplies have been turned off.
- Check the system supply voltage with a multimeter for correct voltage range and polarity.
- Connect the power supply cable and switch on the system power. Check if the Power LED is lit.
- Turn off system power.
- Connect all I/O cables.
- Once you are certain that all connections have been made properly, restore the power.

Power terminals pin assignment

 Before connecting power please follow the rules in the section called "SAFETY PRECAUTIONS" and the section called "Before connecting anything".



| | | |
|---|----|--|
| 1 | V+ | Positive voltage supply (10 - 30 V DC) |
| 2 | V- | Negative voltage supply, DC power return |

 Make sure that the polarity of the supply voltage is correct before connecting any device to the serial ports! A wrong polarity can cause high currents on the ground plane between the V- power supply pin and the serial port ground pins, which can cause damage to the device.

