



MGate MB3480 Quick Installation Guide

Fourth Edition, June 2008

1. Overview

The MGate MB3480 is a 4-port Modbus gateway that converts between Modbus TCP and Modbus RTU/ASCII protocols. It can be used to allow Ethernet masters to control serial slaves, or to allow serial masters to control Ethernet slaves. Up to 16 TCP masters and 124 serial slaves can be connected simultaneously.

2. Package Checklist

Before installing the MGate MB3480 Modbus gateway, verify that the package contains the following items:

- 1 MGate MB3480 Modbus gateway
- Document & Software CD
- MGate MB3480 Quick Installation Guide
- Product Warranty Statement

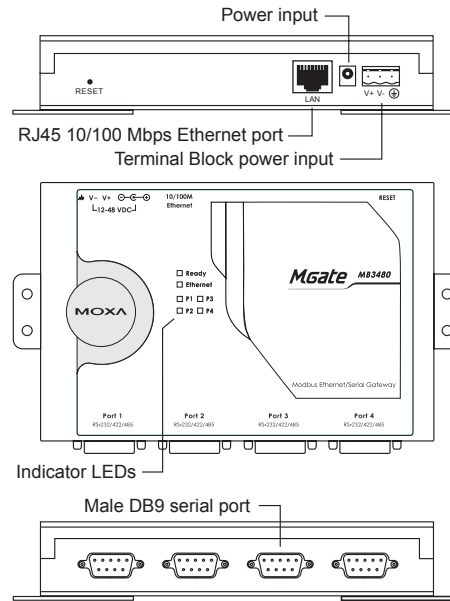
Optional Accessories

- DK-35A: DIN-rail mounting kit (35 mm)

Notify your sales representative if any of the above items is missing or damaged.

3. Hardware Introduction

As shown in the following figures, the MGate MB3480 has 4 DB9 male ports for transmitting serial data.



Reset Button—The reset button is used to load factory defaults. Hold the reset button down for five seconds using a pointed object such as a straightened paper clip. Release the reset button when the Ready LED stops blinking.

LED Indicators—Six LED indicators are located on the top panel:

| Name | Color | Function |
|--|--------|---|
| Ready | Red | On: Power is on and the unit is booting up |
| | | Blinking: IP conflict exists, or DHCP or BOOTP server did not respond properly. |
| | Green | On: Power is on and the unit is functioning normally |
| Blinking: Unit has found by the Location command in MGate Manager. | | |
| | Off | Power is off or power error condition exists |
| Link | Orange | 10 Mbps Ethernet connection |
| | Green | 100 Mbps Ethernet connection |
| | Off | Ethernet cable is disconnected or has a short |
| P1, P2, P3, P4 | Orange | Unit is receiving data from device |
| | Green | Unit is transmitting data to device |
| | Off | No data is being exchanged with device |

4. Hardware Installation Procedure

STEP 1: After unpacking the unit, connect the power supply or power adaptor to the unit.

STEP 2: Use a standard straight-through Ethernet cable to connect the unit to a network hub or switch. Use a cross-over Ethernet cable if you are connecting the gateway directly to a PC.

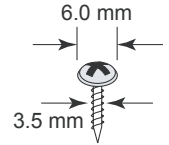
STEP 3: Connect your device to the desired port on the unit.

STEP 4: Place or mount the unit. The unit may be placed on a horizontal surface such as a desktop, mounted on a DIN-rail, or mounted on the wall.

Wall or Cabinet Mounting

Two metal plates are provided for mounting the unit on a wall or inside a cabinet. Attach the plates to the unit's rear panel with screws. With the plates attached, use screws to mount the unit on a wall.

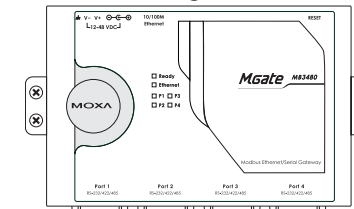
For each screw, the head should be 6.0 mm or less in diameter, and the shaft should be 3.5 mm or less in diameter.



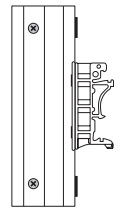
DIN-rail Mounting

DIN-rail attachments can be purchased separately to mount the MGate MB3480 on a DIN-rail. When mounting the unit on a DIN-rail, make sure that it is oriented with the metal springs on top.

Wall Mounting



DIN-rail Mounting

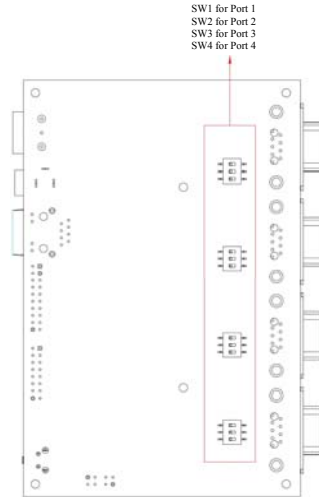


Termination Resistor and Adjustable Pull High/Low Resistors

For some RS-485 environments, you may need to add termination resistors to prevent the reflection of serial signals. When using termination resistors, it is important to set the pull high/low resistors correctly so that the electrical signal is not corrupted. For each serial port, DIP switches are used for termination resistor and pull high/low resistor settings. To enable the 120 Ω termination resistor, set switch 3 on the assigned DIP switch to ON; set it to OFF (the default setting) to disable the termination resistor. To set the pull high/low resistors to 150 KΩ (the default setting), set switches 1 and 2 on the assigned DIP switch to the OFF position; set them both to ON for 1 KΩ.

P/N: 1802034800011

MGate MB3480 DIP Switches



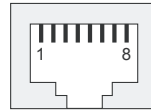
5. Software Installation Information

To install **MGate Manager**, insert the **MGate Document & Software CD** into your PC's CD-ROM drive. Locate and run the setup program, which will be named **MGM_Setup_[Version]_Build_[DateTime].exe** (e.g., **MGM_Setup_Ver1.1.0_Build_07041910.exe**) and follow the on-screen instructions.

For more information about MGate Manager, please refer to the MGate MB3000 User's Manual.

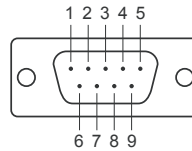
6. Pin Assignments

Ethernet Port (RJ45)



| Pin | Signals |
|-----|---------|
| 1 | Tx+ |
| 2 | Tx- |
| 3 | Rx+ |
| 6 | Rx- |

Serial Port (Male DB9)



| Pin | RS-232 | RS-422/485 (4W) | RS-485 (2W) |
|-----|--------|-----------------|-------------|
| 1 | DCD | TxD-(A) | --- |
| 2 | RxD | TxD+(B) | --- |
| 3 | TxD | RxD+(B) | Data+(B) |
| 4 | DTR | RxD-(A) | Data-(A) |
| 5 | GND | GND | GND |
| 6 | DSR | --- | --- |
| 7 | RTS | --- | --- |
| 8 | CTS | --- | --- |
| 9 | --- | --- | --- |

7. Environmental Specifications

Power Requirements

| | |
|------------------------|--|
| Power Input | 12 to 48 VDC |
| Power Consumption | 460 mA@12 VDC, 170 mA@48 VDC |
| Operating Temperature | 0 to 55°C (32 to 131°F) |
| Operating Humidity | 5 to 95% RH |
| Dimensions (W x D x H) | 158 x 33 x 103 mm 6.22 x 1.3 x 40.6 in |
| Surge Protection | 15 KV ESD for serial port |
| Magnetic Isolation | 15 KV for Ethernet |
| Power Line Protection | 4 KV burst (EFT), EN61000-4-4 2 KV surge, EN61000-4-5 |
| Regulatory Approvals | FCC Class A, CE Class A, UL, CUL, TUV |

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