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MOXA MGate 5135/5435 Series Modbus TCP Gateways Installation Guide

Contents

MOXA MGate 5135/5435 Series Modbus TCP Gateways

Overview

The MGate 5135/5435 is an industrial Ethernet gateway for Modbus RTU/ASCII/TCP and EtherNet/IP network communications.

Package Checklist

Before installing the MGate 5135/5435, verify that the package contains the following items:

- 1 MGate 5135 or MGate 5435 gateway
- Quick installation guide (printed)
- Warranty card

NOTE: Please notify your sales representative if any of the above items are missing or damaged.

Optional Accessories (can be purchased separately)

- Mini DB9F-to-TB: DB9 female to terminal block connector
- WK-25: Wall-mounting kit, 2 plates, 4 screws, 25 x 43 x 2 mm

Hardware Introduction

LED Indicators

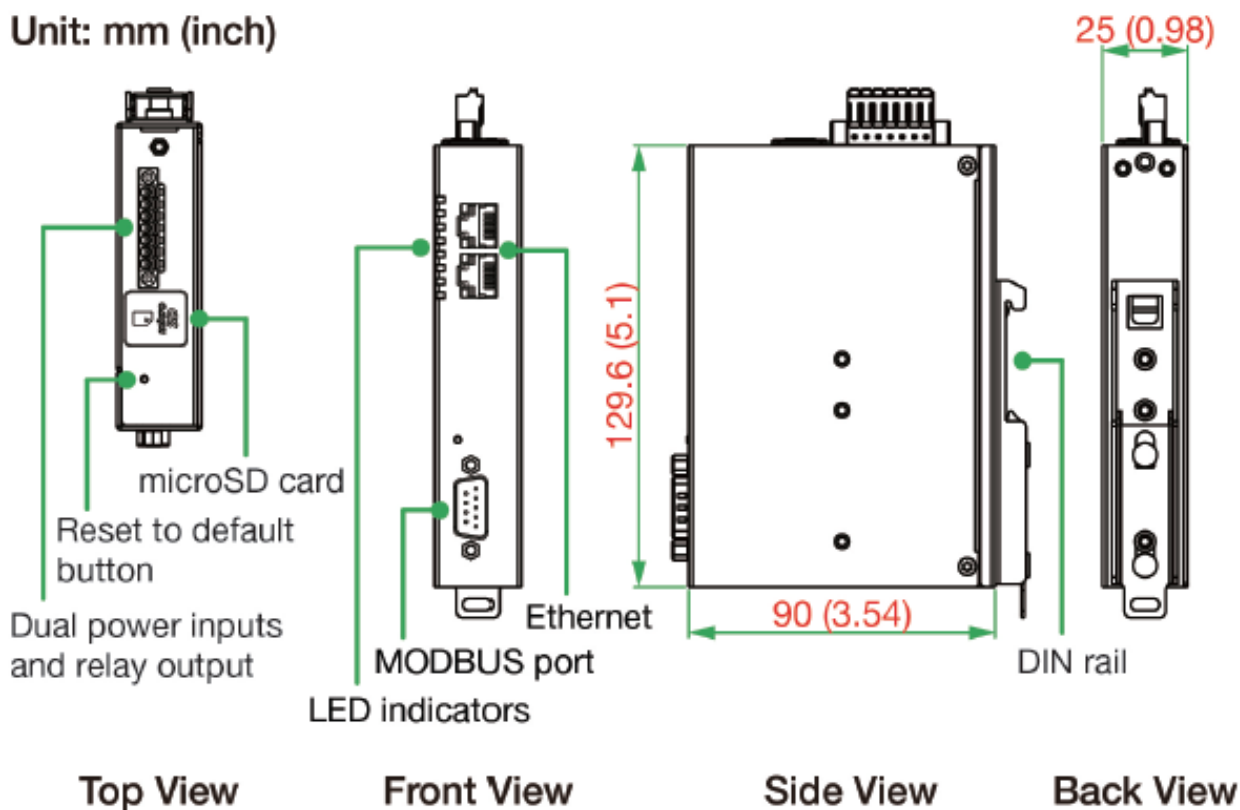| LED	Color	Description
PWR 1, PWR 2	Green	Power is on.
	Off	Power is off.
Ready	Off	Power is off.
	Green	Steady: Power is on, and the MGate is functioning normally.
		Blinking (1 sec.): The MGate has been located by the MGate Manager's Location function.
	Red	Steady: Power is on, and the MGate is booting up.
		Blinking (0.5 sec.): Indicates an IP conflict, or the DHCP or BOOTP server is not responding properly.
		Blinking (0.1 sec.): the microSD card failed.
	Off	No connection has been established.

EtherNet/IP Adapter	Green	Steady: I/O data is being exchanged with all of the connections.
	Red	Steady: Rejects the connection due to incorrect configurations.
		Blinking (1 sec.): One or more connections timed out.
Modbus RTU/ASCII/TCP Client	Off	No communication with Modbus device.
	Green	Modbus communication in progress.
	Red	Blinking (1 sec.):Communication error. 1. The Modbus slave device returned an error (exception). 2. Received a frame error (parity error, checksum error). 3. Timeout (the slave device does not respond).

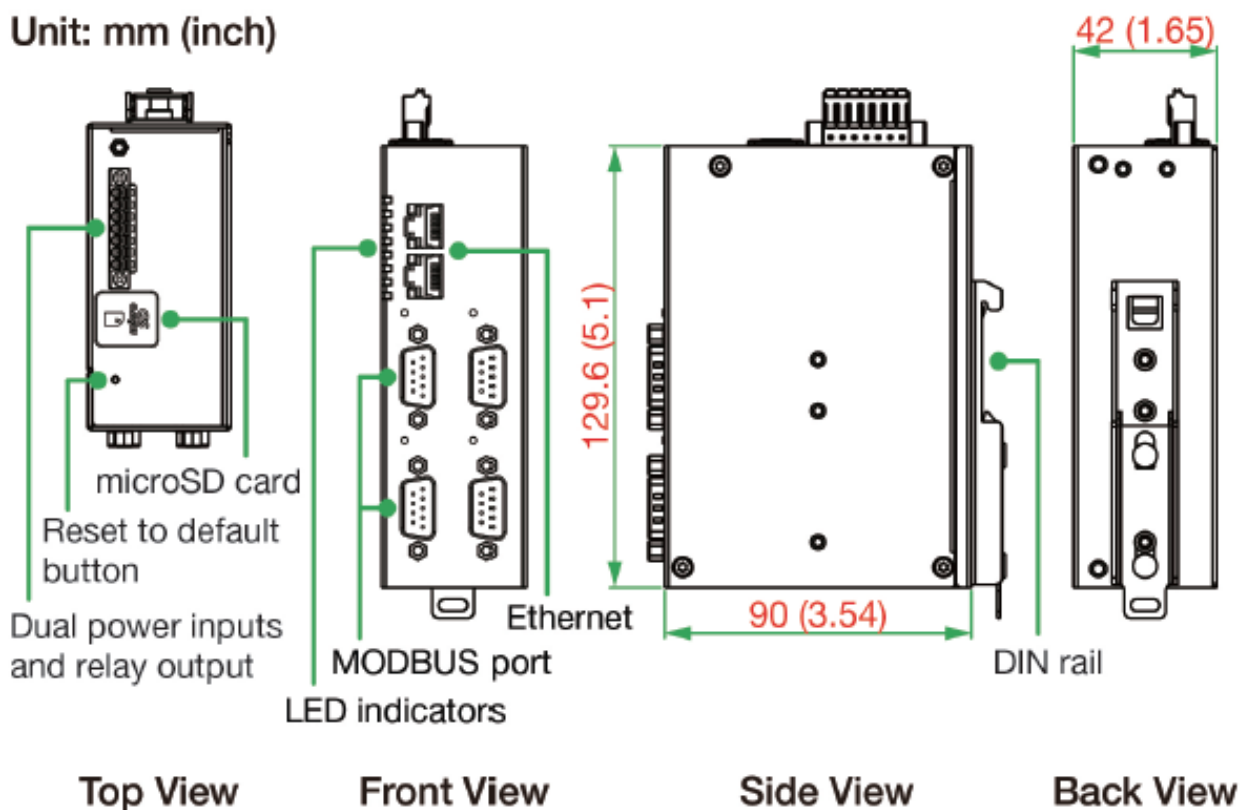| LED	Color	Description
		4. TCP connection failed (only for Modbus TCP).
ETH 1, ETH 2	Green	Steady ON: Ethernet link on at 100Mbps.
		Blinking: Data transmitting at 100Mbps.
	Amber	Steady ON: Ethernet link on at 10Mbps.
		Blinking: Data transmitting at 10Mbps.
	Off	Ethernet is not connected.

Dimensions

MGate 5135

Unit: mm (inch)

25 (0.98)

129.6 (5.1)

90 (3.54)

microSD card
Reset to default
button
Dual power inputs
and relay output

Ethernet
MODBUS port
LED indicators

DIN rail

Top View   **Front View**   **Side View**   **Back View**

MGate 5435

Unit: mm (inch)

42 (1.65)

129.6 (5.1)

90 (3.54)

microSD card
Reset to default
button
Dual power inputs
and relay output

Ethernet
MODBUS port
LED indicators

DIN rail

Top View   **Front View**   **Side View**   **Back View**

Reset Button

Restore the MGate to factory default settings by using a pointed object (such as a straightened paper clip) to hold the reset button down until the Ready LED stops blinking (approx. five seconds).

Hardware Installation Procedure

1. Connect the power adapter. Connect the 12 to 48 VDC power line or DIN-rail power supply to the terminal block of the MGate 5135/5435 device.
2. Use a Modbus serial cable to connect the MGate to a Modbus slave device.
3. Use an Ethernet cable to connect the MGate to the EtherNet/IP controller.
4. We designed the MGate 5135/5435 to attach to a DIN rail or mounted on a wall. For DIN-rail mounting, push down the spring and properly attach it to the DIN rail until it "snaps" into place. For wall mounting, install the wall-mount kit (optional) first and then screw the device onto the wall.

**The following figure illustrates the two mounting options:**
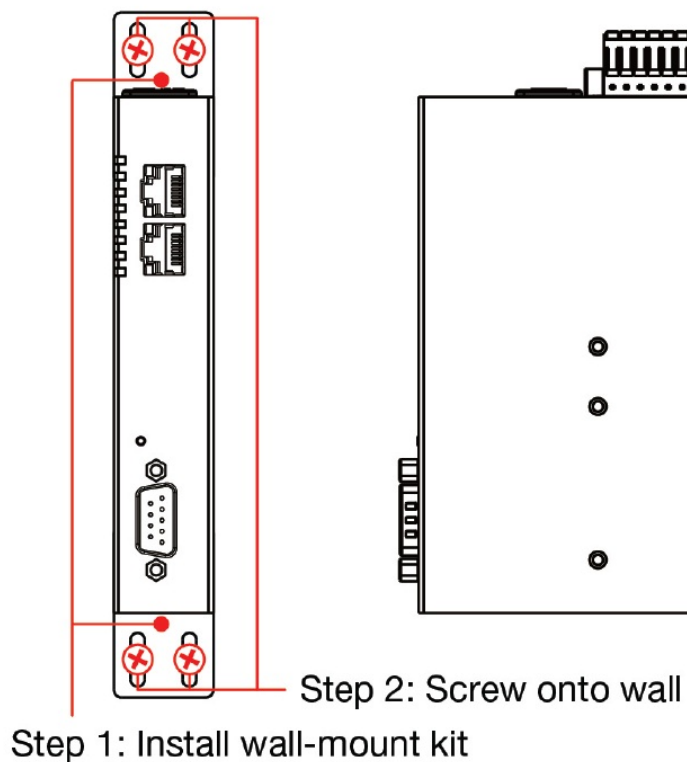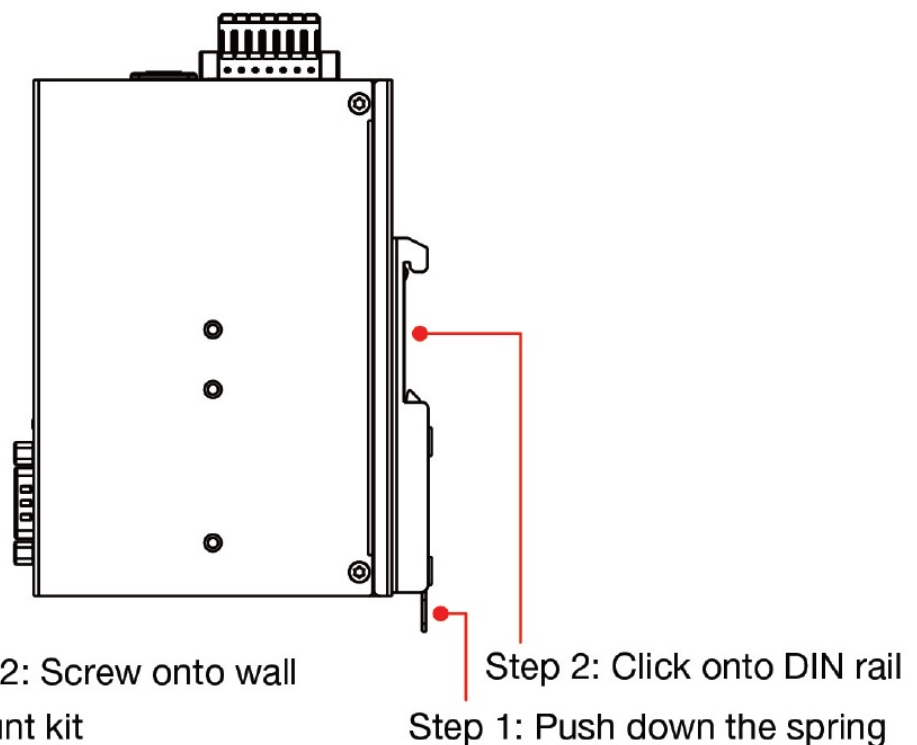
Wall- or Cabinet-mounting

We provide two metal plates 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. The heads of the screws should be 5 to 7 mm in diameter, the shafts should be 3 to 4 mm in diameter, and the length of the screws should be over 10.5 mm.
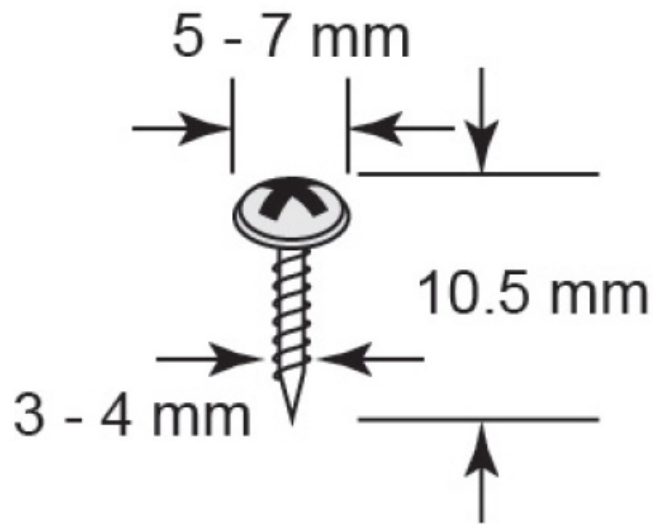
Software Installation Information

Please download the User Manual and Device Search Utility (DSU) from Moxa's website: **www.moxa.com** Refer to the User's Manual for additional details on using the DSU. The MGate 5135/5435 also supports login via a web browser. Default IP address: 192.168.127.254 Create your administration account and password when you log in the first time.
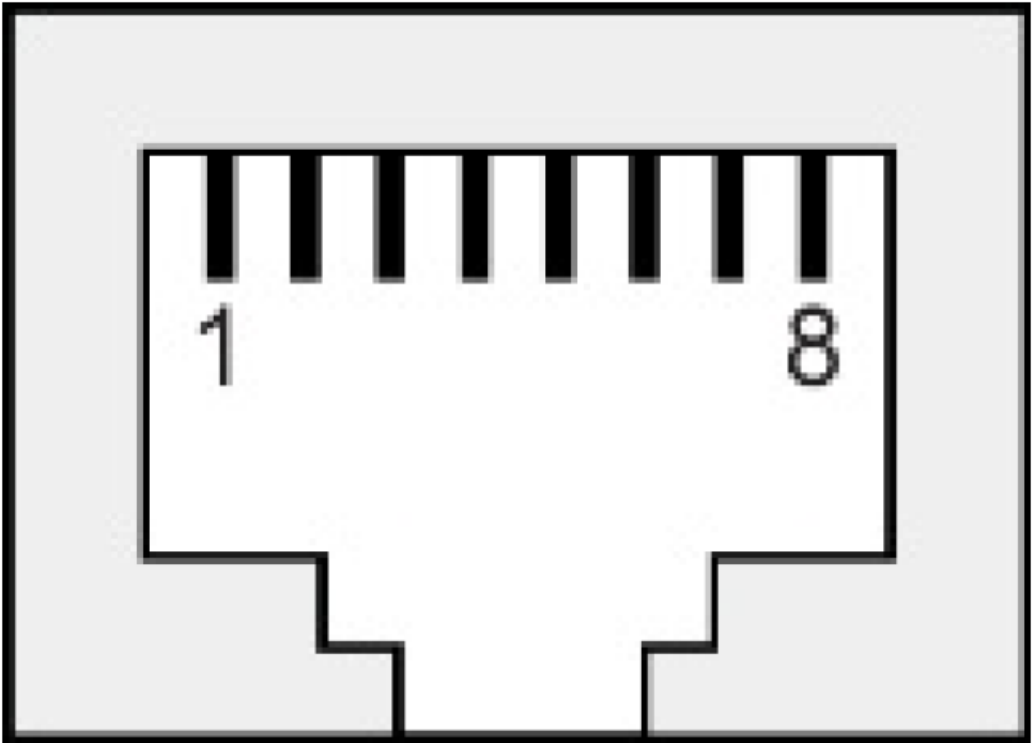
Pin Assignments

Modbus Serial Port (Male DB9)

Pin	RS-232	RS-422/ RS-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	–	–	–

*Signal ground Ethernet Port (RJ45)

Pin	Signal
1	Tx+
2	Tx-
3	Rx+
6	Rx-

Power Input and Relay Output Pinouts
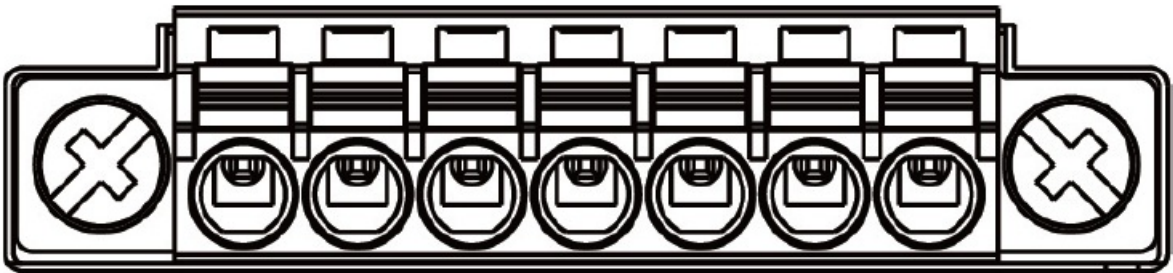
V2+	V2-				V1+	V1-
DC	DC				DC	DC
Power Input 2	Power Input 2	N.O.	Common	N.C.	Power Input 1	Power Input 1

Specifications

Power Parameters	
Power Input	12 to 48 VDC
Power Consumption	MGate 5135 Series: 455 mA max. MGate 5435 Series: 455 mA max.

Relays	
Contact Current Rating	Resistive load: 2 A @ 30 VDC

Environmental Limits	
Operating Temperature	Standard models: -10 to 60°C (14 to 140°F) Wide temp. models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% RH

Physical Characteristics	
Dimensions	MGate 5135 Series: 25 x 90 x 129.6 mm (0.98 x 3.54 x 5.1 in) MGate 5435 Series: 42 x 90 x 129.6 mm (1.65 x 3.54 x 5.1 in)

Weight	MGate 5135 Series: 294 g (0.65 lb) MGate 5435 Series: 403 g (0.89 lb)

Reliability	
Alert Tools	Built-in buzzer and RTC
MTBF	MGate 5135 Series: 1,240,821 hrs. MGate 5435 Series: 689,989 hrs.

ATTENTION

- Power terminal plug wiring size is 28-14 AWG, tighten to 1.7 in-lbs, wire Min. 80°C, Use copper conductors only.
- This device is an open-type equipment and intended to be installed in a suitable enclosure.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- When installing, the assembler is responsible for the safety of the system in which the equipment is incorporated.

NOTE

- This device is intended for use indoors and at altitudes up to 2,000 meters.
- Pollution degree 2.
- Clean the device with a soft cloth, dry or with water.
- The power input specification complies with the requirements of SELV (Safety Extra Low Voltage), and the power supply should comply with UL 61010-1 and UL 61010-2-201.

For any repair or maintenance needs, please contact us. Moxa Inc. No. 1111, Heping Rd., Bade Dist., Taoyuan City 334004, Taiwan +886-03-2737575

Documents / Resources

MOXA MGate 5135/5435 Series Modbus TCP Gateways [pdf] Installation Guide
MGate 5135 Series, MGate 5435 Series, Modbus TCP Gateways, MGate 5135 5435 Series Modbus TCP Gateways, MGate 5135 Series Modbus TCP Gateways, MGate 5435 Series Modbus TCP Gateways

References

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