CHAPTER 2

SPECIFICATIONS

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Specifications

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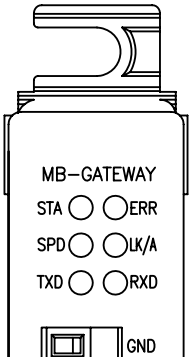
Ethernet Interface	Port	RJ-45
	Speed	10/100 Mbps
	Protection	Built-in 1.5 KV magnetic isolation
	Protocol Supported	Modbus TCP/IP Server (Slave)
	Clients (Masters) Supported	12 simultaneous Modbus TCP connections
	Cable Type	Autodetects Ethernet cable types (MDI/MDX)
Serial Interface	Port	6-position terminal strip (Phoenix #1863194) provided
	Supported Signal Lines	RS-422 (5-wire) Signals: TX+, TX-, RX-, RX+, GND RS-485 (3-wire) Signals: Data+, Data -, GND
	Supported Baud Rates	300*, 600*, 1200*, 2400, 4800, 9600, 14.4k, 19.2k, 38.4k, 57.6k, 115.2k **** Cannot be set with DIP switches.*** ***Must be set via web browser configuration.***
	Parity	Odd, Even, None
	Data Bits	8
	Stop Bits	1, 2
	Protocol Supported	Modbus RTU Client (Master)
	Servers (Slaves) Supported	128
	Termination	Permanently installed 120ΩΩ resistor between Data+ and Data -
Power Consumption		2W Use Class 2 power supply Use conductors rated 60/75 °C 3-position terminal strip (Phoenix #1863165) provided
Wire Range		16 - 28 AWG Solid or Stranded Conductor (1.5 mm^2)
Wire Strip Length		0.24 - 0.27 in (6 - 7 mm)
Screw Torque		1.7 lb-in (0.2 Nm)
Operating Temperature Range		0 to 60 °C (32 to 140 °F)
Storage Temperature Range		-20 to 70 °C (-4 to 158 °F)
Humidity		5 to 95% RH (non-condensing)
Environmental Air		For use in Pollution Degree 2 Environment. No corrosive gases
Vibration		MIL STD 810C 514.2
Shock		MIL STD 810C 516.2
Weight		0.2 lbs (0.09 kg)

LED Indicators



STA

The STA or STATUS LED is steady ON when the MB-GATEWAY has passed power-up diagnostics and is ready for use.

SPD

The SPD or SPEED LED is used to represent the Ethernet speed. The LED will be ON when the Ethernet speed is 100Mbps and OFF when the speed is 10Mbps.

TXD

The TXD or TRANSMIT DATA LED flashes to indicate that the MB-GATEWAY is sending data through the serial port.

ERR

If the MB-GATEWAY's ERR (ERROR) indicator is:

- ON - a critical error has occurred. The error may be in the card itself, or the result of a network problem. The ERROR indication can be caused by a faulty ground, an electrical spike or other types of electrical disturbances. Cycle power to the system to attempt clearing the error.
- Flashing once per second - a firmware update is in progress.
- Flashing randomly - a Modbus/RTU error. This could be a timeout or an actual error response. Check the Gateway Device Status page on the MB-GATEWAY configuration web page to see the quantity of Request Errors and the description of the Last Request Error.

A CRC error for an Automatic Reads table entry will flash the ERRor LED and set the Last Request Error to: MODBUS_ERROR_MEMORY_PARITY_ERROR.

For a direct request from a Modbus TCP server, a Modbus RTU parity error will return the error MODBUS_ERROR_MEMORY_PARITY_ERROR to the Modbus TCP server.

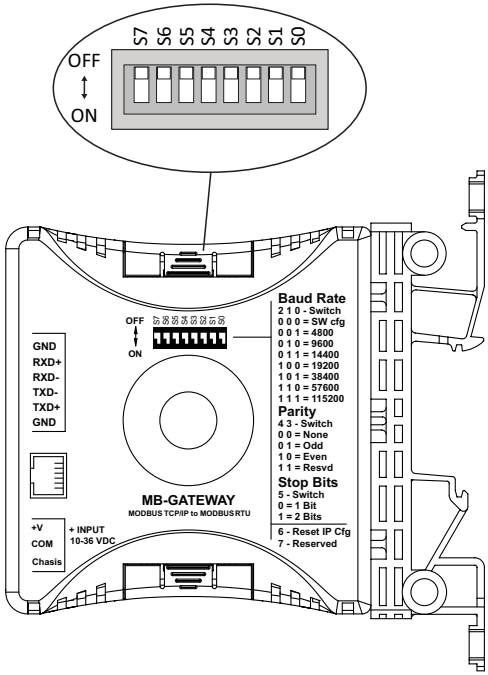
LK/A

The LK/A or LINK GOOD/ACTIVITY LED flashes to indicate that the card sees data traveling on the Ethernet network. If any network device is sending or receiving data, the LK/A LED will be flashing. During heavy communication loads, this indicator will be steady ON. If the LED is OFF, then a problem with the Ethernet connection has been detected.

RXD

The RXD or RECEIVE DATA LED flashes to indicate that the MB-GATEWAY is receiving data through the serial port.

Dip Switch Information



S7	S6	S5	S4	S3	S2	S1	S0	Switch setting	
					0	0	0	Software Config	Baud Rate
					0	0	1	4800	
					0	1	0	9600	
					0	1	1	14400	
					1	0	0	19200	
					1	0	1	38400	
					1	1	0	57600	
					1	1	1	115200	
			0	0				None	Parity
			0	1				Odd	
			1	0				Even	
			1	1				Reserved	
		0						1 Bit	Stop Bits
		1						2 Bits	
	1							*	Reset IP
Reserved								S7 reserved	

* Setting S6 to on will, on power cycle, set the IP address, subnet mask and gateway address in the MB-GATEWAY to 0.0.0.0

Dimensional Drawing

Inches [mm]