

ModGate 113, 213, 413, 813

Speed/Type	100Mbps/10Mbps Auto-detecting
Connector	RJ45 (8P8C) 8 pin
LEDs	Power, WLAN, Ready, Ethernet Link / Speed

■ Serial Interface

No. of Ports/Type	1, 2, 4 & 8 × RS232/422/485 selected by software
Connector	DB-9 male
Protection	16kV ESD surge protection
Operating Modes	RS232 RS422 full duplex (120Ω on/off) RS485 4 wire, full duplex (120Ω on/off) RS485 2 wire, half duplex (120Ω on/off)
Configuration	Software sets operating mode and RS422/485 termination No High/Low biasing resistors needed
Signals	RS232: TxD,RxD, RTS,CTS, DTR,DSR, DCD, RI, GND RS422: Tx+/-, Rx+/-, GND RS485 4 wire: Tx+/-, Rx+/-, GND RS485 2 wire: Data+/-, GND
RS485 Data Direction control	ARTc (Automatic Receive Transmit control)
Data bits	7, 8
Stop bits	1, 2
Parity	None, Even, Odd
Baudrate	ModBus: up to 115.2 kbps RS232: 200 bps to 921.6/1000 kbps (physical) RS422/485: 200 bps to 3.7Mbps (physical)
LEDs	TxD/RxD for each port

■ Software

Installation	DIP switches set the device to DHCP or a defined fixed IP Address to be contacted via WEB Browser
Operating mode	Promiscuous Mode Messages received from the network are sent to the serial port, messages from the serial port are sent to the connected network host. (Circuit Switching) Direct Mapping Mode Received messages are scanned for their target address. This address is found in the mapping table, the message is sent to the defined connection. (Packet Switching)
Network Protocols	Modbus/TCP, TCP/IP, DHCP, ICMP, HTTP, DNS, UDP, UPnP/SSDP
Serial Protocols	Modbus/RTU and Modbus/ASCII
Modbus Master Multiplexing	An extension to the standard. Slaves on serial lines may answer requests from multiple masters. The masters connect to ModGate Plus by Modbus/TCP.
Configuration	Configuration over WEB Browser
Detection	Announces presence in the network via Universal Plug and Play (UPNP) protocol
DNS	Domain Name Server support
Firmware	Firmware update over WEB Browser

Security	Webinterface is password protected. The password can be changed in the Webinterface.
USB 2.0	for logging/debugging

■ Wireless interface (option)

Standards	2.4GHz Radio, supports IEEE Std. 802.11b/g/n
WLAN Modes	Access Point (AP) or Client (Station)
TX Power	802.11b: Typ. 15.5dBm ±1.5 dBm @ 1Mbps (DSSS) Typ. 15.5dBm ±1.5 dBm @ 11Mbps (OFDM) 802.11g: Typ. 15.6dBm ±1.5 dBm @ 6Mbps (CCK) Typ. 13.5dBm ±1.5 dBm @ 54Mbps (OFDM) 802.11n: Typ. 13.4dBm ±1.5 dBm @ 6.5Mbps (OFDM) Typ. 13.3dBm ±1.5 dBm @ 150 Mbps(OFDM)
RX Sensitivity	802.11b: -95.6dBm @ 1Mbps, -88dBm @ 11Mbps 802.11g: -91.3dBm @ 6Mbps, -74.2dBm @ 54 Mbps 802.11n: -88.8dBm @ 6.5Mbps (20 MHz), -72dBm @ 72.2Mbps (20 MHz)
Transmission Rate	802.11b: 11Mbps 802.11g: 6 to 54Mbps 802.11n: 6.5 to 150Mbps
Transmission Distance	Up to 100m in open areas
Wireless security	WEP WPA WPA2 WPA2-Enterprise (IEEE 802.1X/RADIUS)
Antenna Connector	RP (Reverse-Polarity) SMA

■ Power Requirements

Input Voltage	9 - 54V DC
Power Consumption	1 & 2 ports 0.25A @ 12V, 2.7W max 4 & 8 ports 0.4A 12V 5W max
Connector	3-pin Terminal Block

■ Housing and Mounting

Case	0.8mm sheet metal
Weight	1 & 2 ports w/o box 0.25kg; w/h box 0.35kg 4 & 8 ports w/o box 0.9kg; w/h box 1.35kg
Dimensions	1 & 2 ports: 115×73×25 mm ³ (W×L×H) 4 & 8 ports 196×147×44 mm ³ (W×L×H)
Packaged	1 & 2 ports 150×107×48 mm ³ 4 & 8 ports 310×192×60 mm ³
Mounting	1 & 2 ports DIN-Rail (optional), Wall mount (optional) 4 & 8 ports DIN-Rail included, Wall mount included

■ Environmental Data

Operating Temp	-20°C - 65°C
Storage Temp	-20°C - 85°C

Ambient Humidity 5-95% non condensing

■ Standards

Declarations

CE, FCC

EMI

EN 55022 Class B
EN 61000-3-2: Limits of harmonic current emissions
EN 61000-3-3: Limitation of voltage changes
47 CFR FCC Part 15 Subpart B

EMS (EN 55024)

EN 61000-4-3: Radiated RFI
EN 61000-4-4: Electrical Fast Transient
EN 61000-4-5: Surge
EN 61000-4-6: Induced RFI
EN 61000-4-8: Power Frequency Magnetic Field
EN 61000-4-11: Power supply dips

ESD

EN 61000-4-2 4kV contact 8kV air for
Serial Port
USB
Ethernet
DC Power connector

[>Back to top](#)

■ MTBF (Mean Time Between Failures)

MTBF

41.5 Years @ 25°C
13.5 Years @ 45°C

Standard

Telcordia (Bellcore) Standard; RelCalc. 5.0 BELL-7

[>Back to top](#)

■ Warranty

Warranty Period

2 years



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