DATASHEET for the INMBSOCP***0100

OCPP to Modbus Server Gateway

Order Codes:

INMBSOCP0010100 (1 Charger)
INMBSOCP0200100 (20 Chargers)

Document version: 1.4

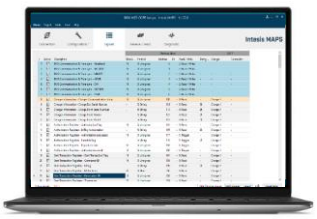
HOW IT WORKS

The Intesis ***INMBSOCP***0000*** gateway has been specially designed to work as a translator between Electrical Vehicle (EV) chargers talking OCPP protocol and Modbus TCP and/or Modbus RTU systems.

Intesis gateway can work in 2 modes: With the BMS acting as a Central System on the OCPP side, allowing both Modbus TCP and Modbus RTU client devices to read and write on all configured OCPP signals, or as a bridge between an OCPP central system and chargers, reading valuable information for any Modbus system.

The Modbus RTU client is connected to the serial port of the gateway, and in the case of a Modbus TCP client, this is connected to the Ethernet port. OCPP communication is done through the Ethernet port.

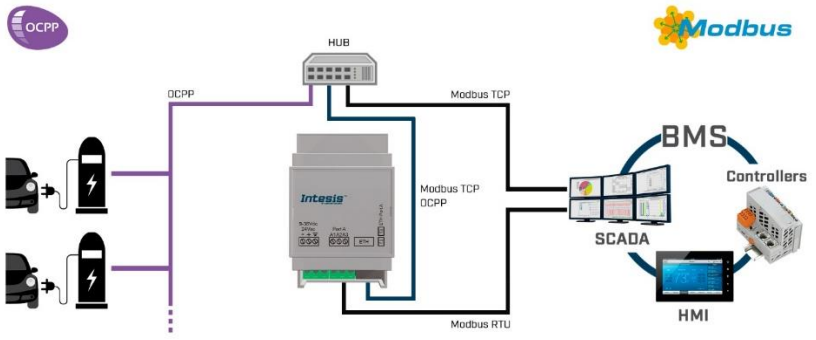
Configuration project is done through Intesis MAPS.

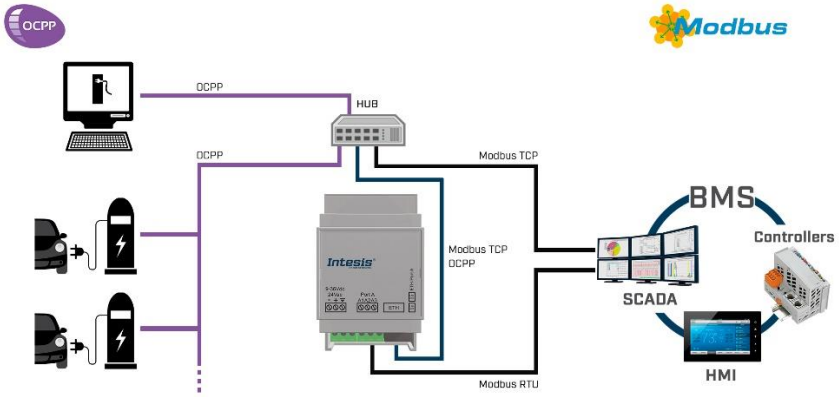


FEATURES

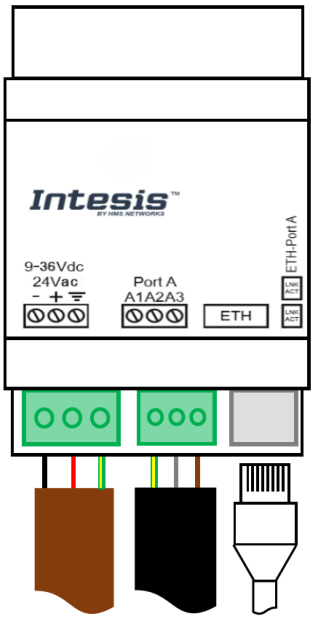
- Works as an OCPP central system or in combination with an OCPP central system
- Smart charging support for load balancing, use of charge profiles, and control of the charging data, both from the BMS and the OCPP control system
- Handles conversion between Modbus (RTU & TCP) and OCPP 1.6 JSON
- Manages Modbus TCP and Modbus RTU simultaneously
- Modbus diagnose signals available in both MAPS and as Modbus registers
- Configuration through IP
- Onboard LED indicators to provide easy-to-check communication status on both the Ethernet and serial ports
- Includes Intesis MAPS with automatic updates for both Intesis MAPS and Gateway's firmware
- UL certification

INTEGRATION EXAMPLES





CONNECTIONS



Power Supply **Modbus RTU** **Ethernet OCPP Modbus TCP**

PROTOCOLS

The Open Charge Alliance (OCA) is a global consortium of public and private electric vehicle infrastructure leaders that have come together to promote open standards through the adoption of the Open Charge Point Protocol (OCPP) and the Open Smart Charging Protocol (OSCP).

For further information, please visit https://www.openchargealliance.org/

Modbus Protocol is a de facto standard, truly open and the most widely used network protocol in the industrial manufacturing environment. Modbus is used in multiple applications to monitor and program devices; to communicate between intelligent devices and sensors and instruments; to monitor field devices using PCs and HMIs.

But Modbus is not only an industrial protocol. Building, infrastructure, transportation and energy applications also make use of its benefits.

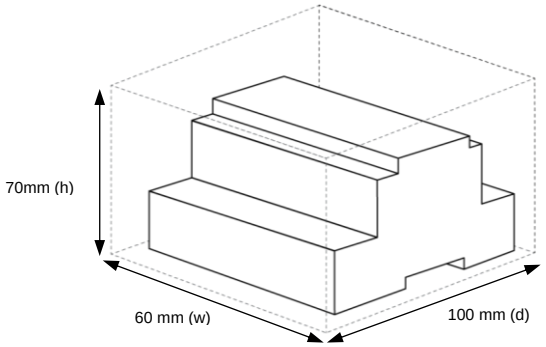
For further information visit www.modbus.org

COMMUNICATION

	Modbus		OCPP
	RTU	TCP	
Connection	EIA485 (3 wire isolated) EIA232 (DB9 connector)	10BASE-T 100BASE-TX	10BASE-T 100BASE-TX
Date rate	2.4, 4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbps	10 Mbps 100 Mbps	10 Mbps 100 Mbps
Data Types & Functions supported	1-Read Digital Outputs 2-Read Digital Inputs 3-Read Holding Registers 4-Read Analog Registers 5-Write Single Digital Output 6-Write Single Analog Register 15-Write Multiple Digital Output 16-Write Multiple Holding Registers		OCPP operations supported: • Authorize • RemoteStart/Stop Transaction • Start/StopTransaction • Local list management • Reservations • Smart Charging Operations • HeartBeat • MeterValues

ELECTRICAL & MECHANICAL FEATURES

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 93x53x58 mm Recommended space for installation (dxwxh): 100x60x70mm Color: Light Grey. RAL 7035
Mounting	Wall. DIN rail EN60715 TH35.
Terminal Wiring (for power supply and low-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5mm²… 2.5mm² 2 cores: 0.5mm²… 1.5mm² 3 cores: not permitted
Power	1 x Plug-in screw terminal block (3 poles) Positive, Negative, Earth 9-36 VDC / 24 VAC / 50-60 Hz / 0.140 A / 1.7 W
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity
Ethernet Port	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity 1 x Serial EIA485 (Plug-in screw terminal block 3 poles) A, B, SGND (Reference ground or shield) 1500VDC isolation from other ports
Switch A (SWA)	1 x DIP-Switch for PORT A configuration: Position 1: **ON:** 120 Ω termination active **Off:** 120 Ω termination inactive (default) Position 2-3: **ON:** Polarization active (default) **Off:** Polarization inactive
Operation Temperature Operational Humidity	0°C to +60°C 5 to 95%, no condensation
Protection	IP20 (IEC60529)



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