ARTESYN POWERPRO DONGLE

MODBUS RTU TO MODBUS TCP Ethernet Adapter

Advanced Energy Artesyn PowerPro Dongle (Modbus RTU to Modbus TCP) provides a simple way to connect Artesyn power supplies to Ethernet-based networks. It supports NeoPower, LCM10K, LCM4000HV, iTS units, enabling monitoring, configuration, and real-time control over LAN or internet connections. Its compact design includes DIP-switch address selection and integrates directly with supported power supplies without requiring hardware modifications. This allows designers to quickly add Modbus TCP connectivity and improve system visibility across industrial and medical applications.

CONTENTS

SPECIAL FEATURES

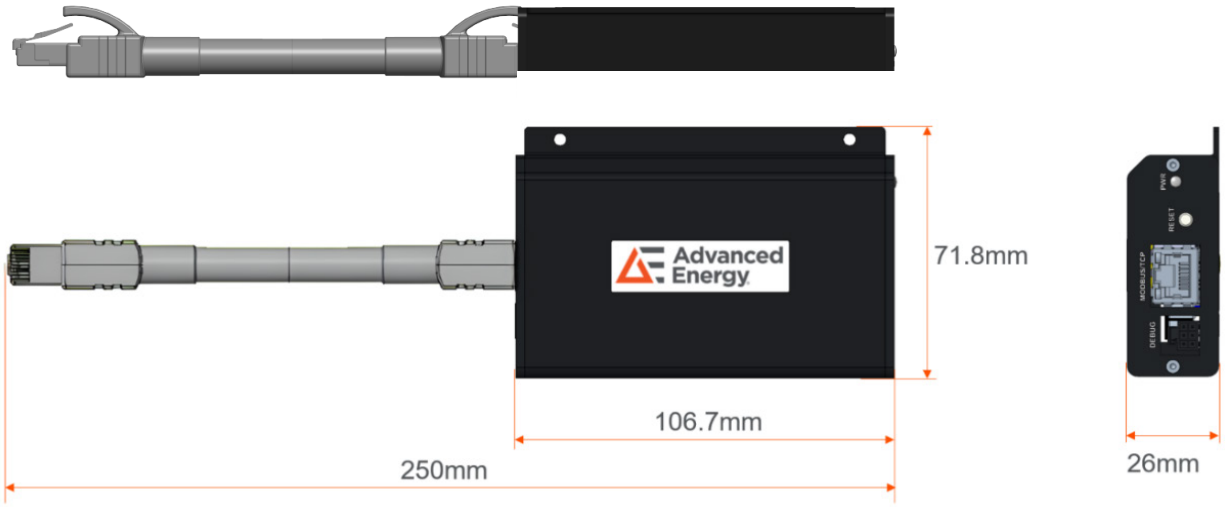
- Compatible with NeoPower™, Evergreen™ FCM, and other Artesyn AC-DC power supply families
- No base model modifications required
- Web-based configuration interface

POWERPRO DONGLE

ORDERING PART NUMBER

Ordering Part Number	Description
83-200-002	Dongle that converts Modbus RTU to the Modbus TCP

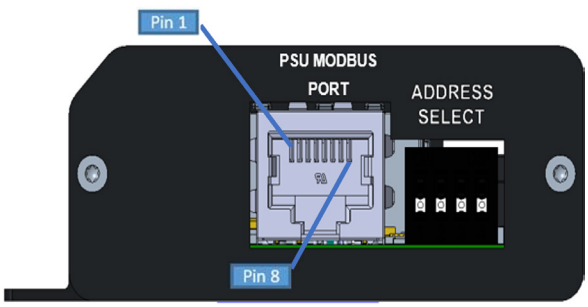
MECHANICAL DRAWINGS



Note: The dongle come with a RJ45 to RJ45 cable plug connected to the power supply.

CONNECTORS AND PIN DEFINITIONS

Back End Side



Back End Connector	Description
PSU MODBUS PORT	RJ45 port to the power supply
ADDRESS SELECT	DIP switch to set IP addressing mode (DHCP/Static)

CONNECTORS AND PIN DEFINITIONS (CON'T)

PSU MODBUS PORT Connector Pin Definition

Pin	Description	Pin	Description
1	RS485 A	5	Reserve
2	RS485 B	6	Communication Return
3	Reserve	7	+5V Logic Supply
4	Communication Return	8	+5V Logic Supply Return

The dongle can be powered by the 5V supply from the PSU Modbus connector.

Addressing Switch

The dongle includes a hardware option to switch between **Static** and **DHCP addressing**. To change the addressing mode, use DIP switch position 1.

Switch State	DIP ADDR[0] value Position 1
ON	DHCP IP Addressing
OFF	Static IP Addressing

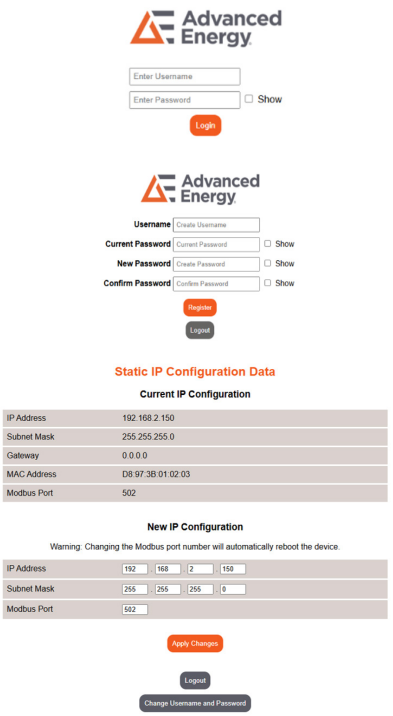
When the dongle is received from shipment, the DIP switch positions are set to 'OFF,' indicating that the dongle uses a static IP address. The default IP address, 192.168.2.150, is provided on the label attached to the dongle.

Accessing the Web GUI

While in the static IP addressing state, users can manually change the IP address using Web GUI. To access the Web GUI, follow the instructions below:

1. Open a web browser and enter the dongle's IP address (default: 192.168.2.150).
2. Log in using the default credentials:
   Username: admin
   Password: admin
3. On the first login, you will be required to change the username and password. Create a new username and password, then click Register. This prompt will not appear if the username and password have already been changed.
4. After successfully logging in, the Static IP Configuration window will appear. To change the IP address, enter the required IP address in the New IP Configuration section, use the correct Subnet Mask and ensure the Modbus Port is set to 502 (the default port for Modbus TCP). Then click Apply Changes.

When using DHCP, there is no need for the user to change the IP address manually. The DHCP server will automatically assign an IP address.



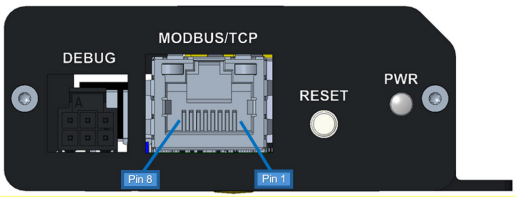
LAN Reset

LAN reset function restores default IP address (192.168.2.150) and Web GUI credentials. This feature can be triggered in two ways:

- Through the RS232 Debug port.
- By holding the front panel reset button for more than 5 seconds while the dongle is powered.

CONNECTORS AND PIN DEFINITIONS (CON'T)

Front End Side



Front End Connector	Description
MODBUS/TCP	RJ45 ports for MODBUS TCP protocol
DEBUG	Dongle bootload and FRU writing (RS232 signal) ModBus daisychain (RS485 signal)

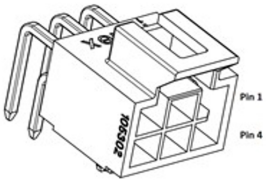
MODBUS TCP Connector Pin Definition

Pin	Signal	Description
1	TX+	Transmit Data +
2	TX-	Transmit Data -
3	RX+	Receive Data +
4	NC	No Connection
5	NC	No Connection
6	RX-	Receive Data -
7	NC	No Connection
8	NC	No Connection

Debug Connector Pin Definition

The dongle debug connector provides dongle bootload and FRU writing capability through RS232 signal* and passthrough ModBus daisychain capability through RS485 signal.

Pin	Signal	Description
1	RS232 TX	Dongle FW bootloading / FRU Write
2	GND	Ground
3	RS485A	Modbus passthrough from PSU
4	RS232 RX	Dongle FW Bootloading / FRU Write
5	GND	Ground
6	RS485B	Modbus passthrough from PSU



* RS232 serial configuration: Data Rate=9600, Data Bits=8, Parity=none, Stop Bits=1.

POWER LED Indicator

Color	Description
Solid Blue	Indicates dongle power on
Solid Amber	Indicates a dongle fault has occured
Off	Indicates dongle power off

ENVIRONMENT SPECIFICATIONS

Environment Specifications	
Operational Temperature	-40°C to 70°C
Storage Temperature	-40°C to 85°C
Humidity	Operating, non-condensing 10% to 95% RH
EMC (Tested with compatible PSU model)	EN55035, CISPR 35: Emissions and immunity requirements FCC Part 15, EN55032, CISPR 32: Conducted emission FCC Part 15, EN55032, CISPR 32: Radiated emission
Shock and Vibration	TBD

REGULATORY REQUIREMENTS

Standard	Description
Safety Approvals	CE (LVD+ROHS), EN 62368-1 Listed BSMI
ROHS	RoHS 6 compliant

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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For international contact information,
visit advancedenergy.com.

powersales@aei.com (Sales Support)
productsupport.ep@aei.com (Technical Support)
+1 888 412 7832