



Ethernet Meterbus Converter™ EMC-1

FOR IP-BASED NETWORKING AND INTERNET
CONNECTIVITY

- IP Based MODBUS Connectivity
- Remote Monitoring
- Custom Programming
- Cloud Hosted Data Service

The Ethernet MeterBus Converter (model: EMC-1) provides IP-Based MODBUS Connectivity for remote monitoring, custom programming, and cloud-hosted data service and is a gateway to Envision, a cloud-based site manager.

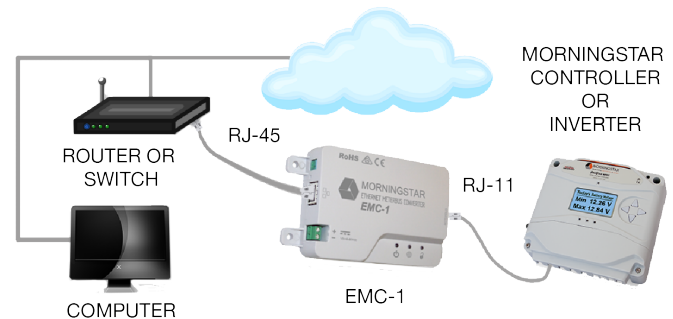
Connects any Morningstar product equipped with a MeterBus port (RJ-11) to the internet and an IP-based network. Compatible products include:

- MPPT controllers: TriStar MPPT, ProStar MPPT, and SunSaver MPPT
- PWM controllers: TriStar, ProStar (Gen3) and SunSaver Duo
- Inverters: SureSine

The EMC-1 is powered by connecting it to the Morningstar product's MeterBus port and the DC input for 12, 24, or 48V systems. The EMC-1 converts this connection into a fully enabled Ethernet port allowing data transfer to the internet. Once connected, the MeterBus port enables transmission of serial data to the EMC-1. This enables remote monitoring, configuration, and control, using any type of IP-based network connection. This way, many new, powerful integration options for Morningstar products can be activated and used in remote power systems.

KEY FEATURES AND BENEFITS

- Connects to any meterbus enabled controller to provide enhanced data and network features
- Adds IP based MODBUS connectivity for remote communication and control
- Live View displays system status and log data directly from the EMC in an easy-to-view webpage
- Powered via meterbus port on controller, PoE or DC Input for 12, 24 or 48V systems



Live View

MORNINGSTAR World's Leading Solar Controllers & Inverters		Prostar MPPT	
Array			
Array Voltage	30.09V		
Sweep Vmp	29.81V		
Sweep Voc	36.58V		
Sweep Pmax	487 W		
Battery			
Charge State	MPPT		
Battery V	13.95V		
Target V	14.40V		
Charge Current	34.90A		
Load			
Load State	ON		
Load Voltage	13.34V		
Load Current	9.80A		
Errors			
None			

Technical Specifications

Mechanical

- Dimensions
15.3 x 8.60 x 3.0 cm
6.04 x 3.37 x 1.2 in
- Weight
0.13 kg / 0.28 lbs

Electrical

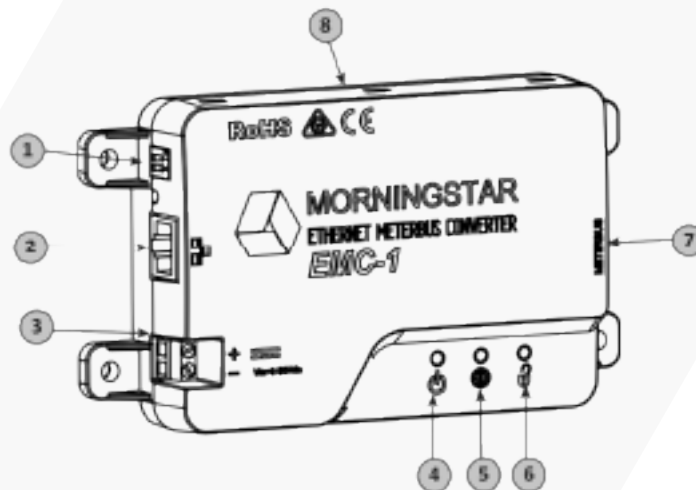
- DC Input Supply Voltage Range
8-80 Vdc
- Maximum Self-consumption
2 Watts

Environmental

- Operating Temperature Range
-40°C to +60°C
- Storage Temperature Range
-55°C to +80°C
- Humidity
100% non-condensing

Data & Communications

- Communication Ports
MeterBus (RJ-11)
Ethernet (RJ-45)
MODBUS Serial
MODBUS TCP/IP
10/100Base-T
- COM Protocols
- Ethernet speed



1. Dip Switches

DIP 1 enables Ethernet write commands
DIP 2 enables cloud data service (future use)

2. Ethernet Port (RJ-45)

Used to connect the EMC-1 to LAN / Internet

3. Power Input

8-80 Vdc power input

4. Status LED

Green and red lights indicate unit status

5. Web Monitoring Service LED

Green and red LEDs indicate Web Service status (future use)

6. Ethernet Write LED

Green light indicates Ethernet write command capability

7. Meterbus (RJ-11 port)

Used to connect the EMC-1 to Morningstar Device

8. DIN rail mounts (bottom of unit)

35mm standard size



Warranty

Five year warranty period.

Contact Morningstar or your authorized distributor for complete terms.