

Integration Gateway

MORNINGSTAR

INTEGRATEDSERIES

WORLD'S LEADING SOLAR CONTROLLERS & INVERTERS

Quick Start Guide

Contact Information:  
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IMPORTANT SAFETY INFORMATION:

**WARNING: Shock Hazard**  
The Morningstar ReadyEdge must be installed by a qualified technician in accordance with the electrical regulations of the installation location.

**WARNING: Shock Hazard**  
Verify that all solar, load, and battery breakers and/or disconnects in the system remain open (disconnected) while installing ReadyEdge.

**CAUTION:**  
This guide must be used with the full product manual. Read the ReadyEdge product manual for all specifications, safety, regulatory and warranty information, and for all installation, configuration, and operational details.

**WARNING: Risk of Equipment Damage or Explosion**  
Never install the ReadyEdge in an enclosure with vented/flooded batteries. Battery fumes are flammable and may corrode/destroy the ReadyEdge circuits.

**CAUTION: Equipment Damage**  
Ensure sufficient ventilation - see orientation illustration on p. 1

MAJOR LED INDICATIONS	
Status LED (1st LED)	
Green - solid (heartbeat)	No local or remote faults
Green - flashing (3Hz)	Recovery Firmware Updates and Downgrade
Red - solid (heartbeat)	Active ReadyEdge fault
Red flashing (1/2Hz?)	Active remote fault (from connected Morningstar Device)
Bluetooth-OFF (2nd LED)	
Blue -solid	Bluetooth enabled
Unlit	OFF
Cloud Connectivity (3rd LED)	
Green-solid	Cloud Connected
Unlit	Not Connected
Read Only Mode (4th LED)*	
Green-solid	Read Only Mode Off
Red-flashing	Read Only Mode On

\*See Note on page 7 to turn this mode on and off.

Bluetooth On/Off

Reset

LED Indicators

Communication Ports

Ethernet	1 socket
Meterbus	2 sockets
MS-CAN	2 sockets
RS-485	1 socket

Sensing Ports

AC Detect	1
RTS	2
Tank Sensor	1
Vdc Sensor	3

- COMPATIBLE MORNINGSTAR DEVICES
- SunSaver MPPT
  - ProStar MPPT
  - TriStar MPPT
  - TriStar
  - ProStar
  - SureSine Classic
  - TriStar MPPT 600V

Communication Ports

POWER TERMINALS

DC (Battery) Power Input Voltage	8-72V
12V Output	12V@ 1 Amp

Sensor Ports

FULL MANUAL INSTRUCTIONS:

TOOLS REQUIRED:

SCAN

Digital Multimeter

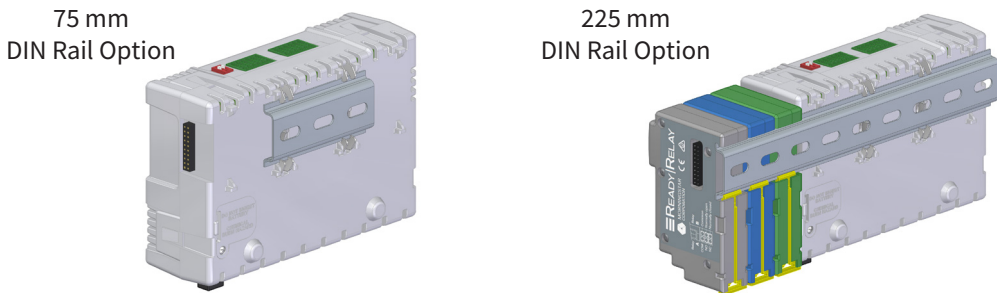
#1 #2 Phillips Screwdriver

3/32" (2.5 mm) Standard Screwdriver

1/8" (3 mm) Drill

Pencil

**A. MOUNTING:**  
**Do not expose to sun or water.**  
Choose an enclosed vertical mounting surface with no exposure to sun or water. A proper vertical mounting surface should have vertical clearance above and below to permit cable connections.  
The ReadyEdge mounts to standard 35mm DIN rails. If no rail is present in your system, use one of the included rails. A 75 mm long DIN rail permits mounting the ReadyEdge with no ReadyBlocks, while a 225 mm long DIN rail offers additional space for up to 3 ReadyBlocks (ReadyBlocks not included). Use the preferred DIN rail as a template to mark appropriate screw hole locations. Drill 1/8" pilot holes and attach with included #10 mounting screws.



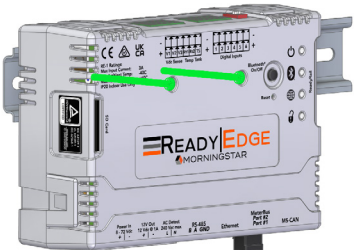
[www.morningstarcorp.com](http://www.morningstarcorp.com)

When mounting or dismounting the ReadyEdge on the DIN Rail, ensure both M3 X 50 mm securing screws are uninstalled to allow the free movement of the securing clamps.



ReadyEdge DIN Rail Installation

Insert screws and tighten using a Phillips #1 screwdriver to a max torque of 2 lb-in (0.23 N-m).



ReadyEdge Screw Placement

3 x Vdc Sense

2 x RTS Sense

1 x Tank Sense

6 x Digital Inputs

DIP Switch 1 and 2

8-72 VDC

12V Programmable power supply for generator start or driving relay coils.

AC Detect for generator start feedback

ProStar

TriStar

Ethernet Cable

Communication Cables

WIRE SIZING

All wire size range: #16-24 AWG (0.25 - 1.0 mm<sup>2</sup>)

ReadyEdge

B. WIRE TO LOCAL NETWORK

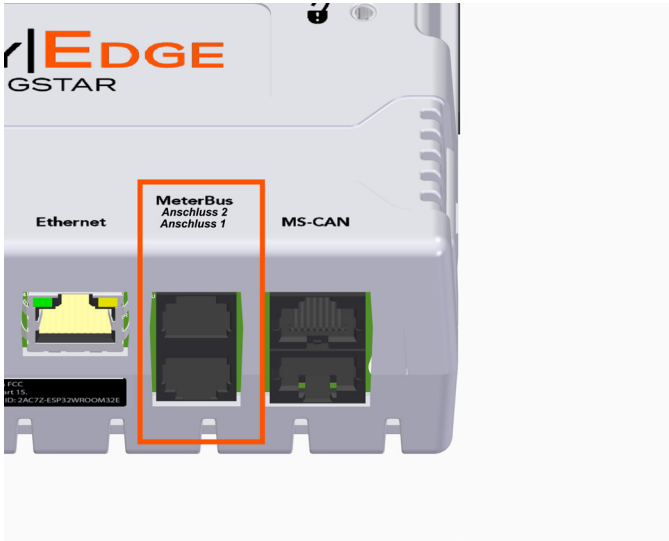
- Connect the ReadyEdge Ethernet port to your router or switch using the included (or user-supplied) Ethernet cable.
- By default, the ReadyEdge is configured for DHCP and will automatically attempt to obtain an IP address from your network once the device is connected to power.

C. CONNECT MORNINGSTAR DEVICE(S)

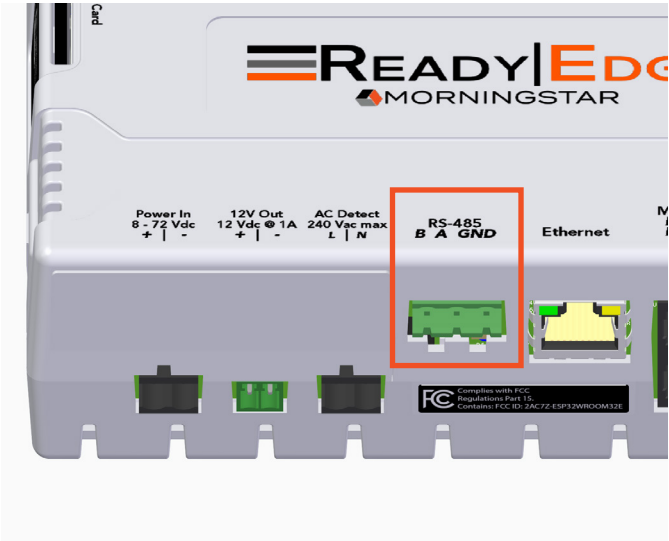
- Connect a single compatible Morningstar device to each of the RJ-11 MeterBus port(s).
- Ensure all Morningstar devices are configured to communicate using MODBUS. (Some Morningstar devices require a DIP switch change for MODBUS, see the Contoller Connection Example.)



Note: More than one device can be connected to either the MeterBus or the RS-485 ports with additional configuration. For detailed information, please refer to the ReadyEdge manual.



MeterBus Port



RS-485 Port

CONTROLLER CONNECTION EXAMPLE

- Two ProStar MPPT devices are connected to the ReadyEdge using Meterbus Port #1 and Port #2 :
- Configure each PS-MPPT for MODBUS by setting each controller’s DIP Switch #8 to ON.
  - Connect one PS-MPPT to MeterBus Port #1 using an RJ-11 cable (included with the ReadyEdge).
  - Connect the other PS-MPPT to MeterBus Port #2 using an RJ-11 cable (included with the ReadyEdge).
  - Refer to the ProStar MPPT manual for proper wiring of the controllers’ power (and other) connections.

D. OPTIONAL DEVICE CONNECTIONS

CONNECT DIGITAL INPUTS OR ANALOG MEASUREMENT INPUTS

Refer to the ReadyEdge manual for information on using the Digital Inputs or Analog Measurement Inputs, if desired.

CONNECT READYBLOCKS

Instructions for connecting ReadyBlocks are on page 8 of this guide.

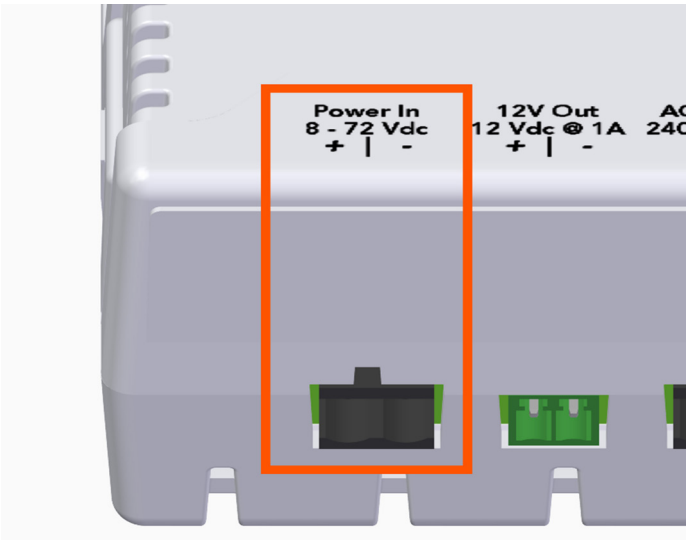
Refer to the ReadyEdge manual for further information on connecting and configuring any ReadyBlocks, if desired.



ReadyEdge with three ReadyBlocks Installed

E. APPLY DEVICE POWER

- The ReadyEdge is pre-configured and ready to start-up out-of-the-box.
- Connect the ring-terminal ends of the included input cable to the battery bank. The red wire is (+), the black wire is (-).
- Plug in the pre-made input cable, included with the ReadyEdge, into the port labeled “Power In, 8-72 vdc (+/-)”.
- After the device boots, verify a solid green status LED (with heartbeat), indicating there are no ReadyEdge or connected device faults. If you do not have a solid green status led, please refer to the ReadyEdge manual for troubleshooting options.



Power In Port

F. CONNECT DEVICE TO LIVEVIEW

After power-up, it can take several minutes for the ReadyEdge to connect to the network.

Open a web browser on a PC or mobile device. Enter the LiveView web address in the address bar of the web browser. The LiveView web address can be found on the serial label on the side of the ReadyEdge and will have a format like: <http://reXXXXXXXX>, where XXXXXXXX is the ReadyEdge Serial Number.

After Device is connected, the top LED light should be solid green (See the LED Indication Table on page 2).



Note: The ReadyEdge is shipped with Read Only Mode off, indicated by a green light on the 4th LED. This must remain off to configure the ReadyEdge in LiveView. Read Only Mode is controlled by DIP Switch 1.

SUPPORTED READYRAIL ACCESSORIES:

See product manuals at [www.morningstarcorp.com/support/library/](http://www.morningstarcorp.com/support/library/)

ReadyRelay (RB-Relay-1)

The ReadyRelay is an expansion block that adds AC and DC-rated relay dry contact hardware functionality and firmware control and logic to the Morningstar ReadyEdge.

ReadyShunt (RB-Shunt-1)

The ReadyShunt is an expansion block designed to display measured branch circuit currents and Amp-hours. When used in the battery circuit, the ReadyShunt acts as a battery meter providing state-of-charge (SOC) %, battery charging current limiting and other functionality.

ReadyBMS (RB-BMS-1)

The ReadyBMS provides simple visibility of battery performance, hands-free settings and optimized battery control. Through the ReadyBMS, the ReadyEdge will report any data variable contained in the battery BMS.

READYBLOCK INSTALLATION

The ReadyEdge can accommodate up to six ReadyBlocks.

Install ReadyRail accessories by fitting the ReadyBlock to the DIN Rail and sliding it to the left to securly join the Block pins to the ReadyEdge. Install additional ReadyBlocks in the same manner as the first ReadyBlock. There can be only one BMS Block. Refer to the ReadyEdge and ReadyBlock manuals for wiring and communication cable installation.

For Licensing Information, access: <http://reXXXXXXXX/licensing>, where XXXXXXXX is the ReadyEdge Serial Number.