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World's Leading Solar Controllers & Inverters
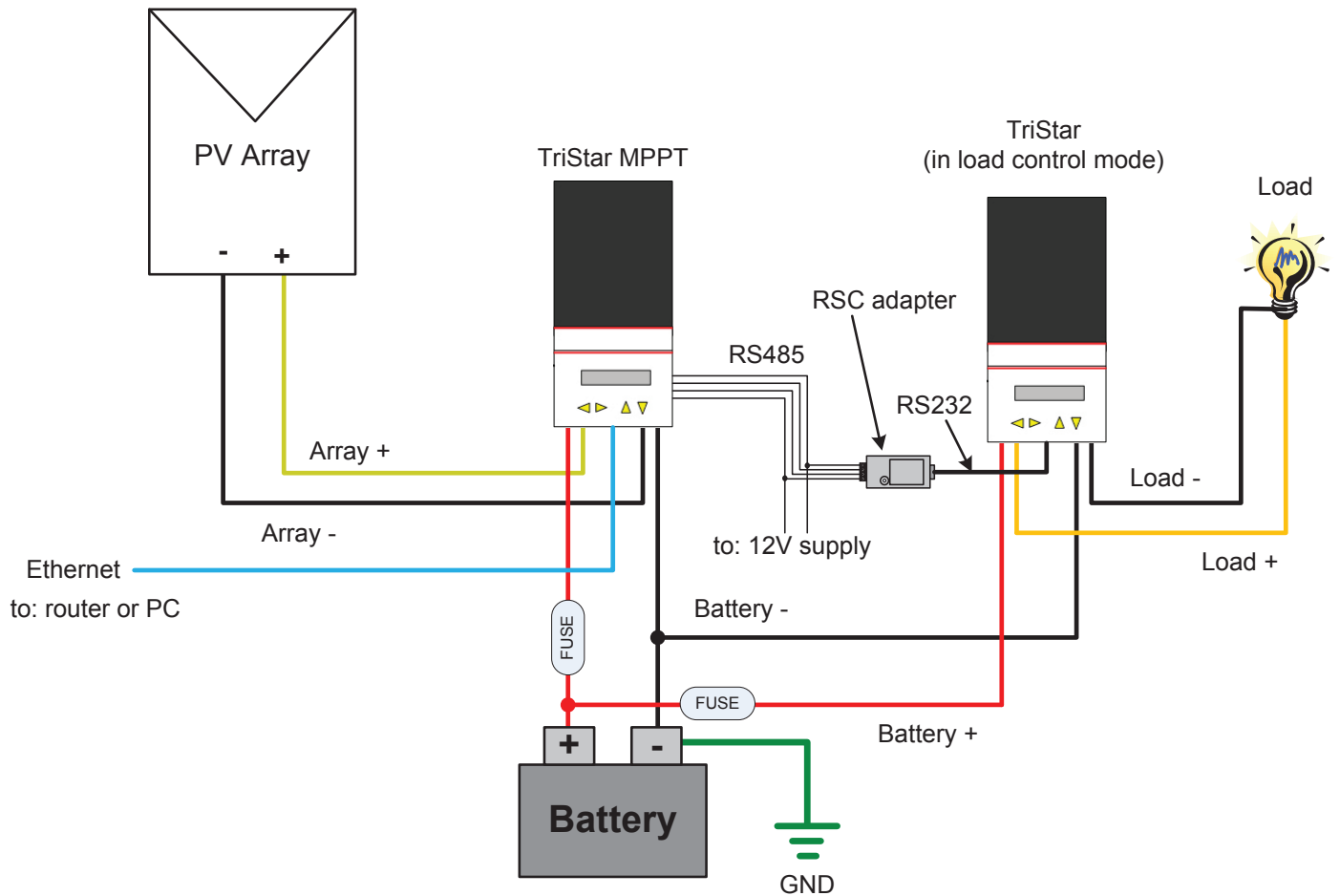
Technical Documentation

DIAGRAM: TSMPPT 60/TS

TSMPPT 60 Charge + TS Load w/Ethernet Communications

v01

Abstract:

This diagram shows an example system including a TriStar MPPT 60 performing charging functionality and a TriStar performing Load Control functionality. An EIA-485 network is used to enable Ethernet communications with the TriStar Load Controller.

PV Array

TriStar MPPT

TriStar
(in load control mode)

Load

- +

RSC adapter

RS485

RS232

Array +

Array -

Load -

Ethernet
to: router or PC

to: 12V supply

Load +

FUSE

Battery -

FUSE

Battery +

+ -

Battery

GND

IMPORTANT: This is not intended to be a complete system diagram; fusing, disconnects, and grounding should comply with local electric codes.

Notes:

- 485 Bridging must be enabled in the TriStar MPPT (this can be done with the MSView software).

- The RSC-1 adapter establishes an EIA-485 network connection between the TSMPPT and TS controllers.

- The TSMPPT and TS controllers must be programmed with a unique MODBUS address (this can be done with the MSView software).

- When properly configured (using the above notes), the TSMPPT Ethernet connection bridges communication to the TS controller so that a single Ethernet connection can be used to talk to both units simultaneously.

- For more detailed networking and communications information, please consult the Morningstar Communications Document and respective product manuals (TriStar MPPT, TriStar, RSC-1).