



TS-SCPOE-xxAT-G

DATA SHEET

GigE PoE/Solar Charge Controller

Features

- Dual Input - Charges 12/24V Batteries from Solar Panel and/or 802.3at/bt PoE
- Supports up to 120W/240W Total Device Load
- 802.3at 35W PoE Output
- 10A Aux Output (VOUT = battery voltage)
- Compact and high temperature operation
- Low self consumption < 1.2W
- DIN Rail mount kit included

Applications

- Remote Power Systems; Surveillance, Sensors
- Wireless Stations ; AP / Client / Repeaters
- UPS Systems ; Lighting, Fences, Gates

Description

Tycon Solar® SCPOE PoE/Solar charge controllers are designed to keep critical systems running by charging batteries using two power sources: Power over Ethernet (PoE) and solar panels. This dual-input setup ensures reliability and uninterrupted operation. When sunlight is available, the controller prioritizes solar power to reduce reliance on grid electricity.

Key features:

- **Built-in PoE Injector:** Delivers a steady 56VDC, 35W output via a Gigabit 802.3at PoE connection.
- **Comprehensive Protections:** Guards against short circuits, reverse current, overvoltage, overcharging, and over-discharging (LVD).
- **Status Indicators:** Five LEDs show whether the power source is PoE or solar, if the battery is charging, if the load output is active, and if the battery is incorrectly connected.
- **Connections:**
 - Solar, battery, and auxiliary load connections use five screw terminals for wires up to 10AWG.
 - PoE input and output use two shielded RJ45 connectors.
- **Fuse Protection:** Includes a replaceable 12A fuse.
- **Power Capacity:**
 - TS-SCPOE-12AT-G: Supports up to 120W for connected devices.
 - TS-SCPOE-24AT-G: Supports up to 240W for connected devices.

This setup ensures efficient, reliable power management for demanding applications.



TS-SCPOE-12AT-G or TS-SCPOE-24AT-G
Charge Controller



Aux 10A Output
(VOUT = Battery Voltage)

Note: "FG" connection should be connected to Earth Ground for Lightning/Surge protection.

Specifications

| | TS-SCPOE-12AT-G | TS-SCPOE-24AT-G |
|--|---|---|
| Solar Input | 18-25VDC 120W Max | 33-40VDC 240W Max |
| PoE Input (802.3at/bt or Passive) | 36-57VDC 35W Gigabit (1.7A~2.0A Internal Regulated) | |
| POE IN Pinout | 12.36 or 45.78 | 2 Pair or 4 Pair |
| Battery Voltage | 12VDC | 24VDC |
| Battery Type | AGM/GEL Lead Acid or LiFePO4/LFP/Lithium with compatible BMS | |
| PoE Output | Gigabit 802.3at 56VDC 0.625A 35W | |
| POE OUT Pinout | 802.3at Mode A Pins 12.36 | |
| Aux Output (Battery Voltage) | 12VDC 10A Max | 24VDC 10A Max |
| Charging Voltage | 14.4VDC | 28.8VDC |
| Float Voltage | 13.8VDC | 26.8VDC |
| Low Voltage Detect (LVD) | Load Output Off: 11.0 +/-0.3V Load Output On: 12.0 +/-0.3V | Load Output Off: 20.0 +/-0.3V Load Output On: 24.0 +/-0.3V |
| Load-On Self Consumption | < 1W | <1.2W |
| Load-Off Self Consumption | 0.04W Typical | |
| Max Wire Size | 10 AWG | |
| Battery Fuse | 5mm x 20mm 12A 250V Slo-Blow | |
| Operating Temp | -40°C to 60°C (-40°F to 140°F) | |
| Operating Humidity | 5% - 90% Non-Condensing | |
| Dimensions | 159 x 118 x 40mm (6.3 x 4.6 x 1.6") | |
| Weight | 476 g (1.05 lb) | |
| Warranty | 3 Years | |

Front Panel Connections and Indicators

SOL – Solar / PV Connection

BAT – Battery Connection.

Note: There are 2 BAT- connections for convenience.



FUSE – 12A 5x20mm

POE OUT – 802.3at/at 35W PoE
POE IN – 802.3at/bt 35W 2/4Pair

POE – POE IN is Powered
SOL – SOL IN is Powered
CHA – Battery is Charging.
Flashing = Float
LOA – Load outputs are ON
REV – Battery Reverse Power

Note: Always connect BAT first and disconnect last.
The solar charger cannot be used without a BAT connection.

Typical Application



System Ordering:

TS-SCPOE-12AT-G 120W Solar; GigE 802.3at PoE in/out, 12VDC 10A Aux Out ; PoE/Solar 12V Charge Controller

TS-SCPOE-24AT-G 240W Solar; GigE 802.3at PoE in/out, 24VDC 10A Aux Out ; PoE/Solar 24V Charge Controller

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