

BRAVO ULTRA 30

PWM SOLAR CHARGE CONTROLLER

30A



Advanced Charging Technology

PWM charging with high-efficiency MOSFET switching.

6-Stage Smart Charging: Diagnose (Lithium), Soft Start, Bulk, Absorption, Equalization (Flooded/Calcium), Float.

Supports LiFePO₄, LTO, Gel, AGM, Flooded (WET), and Calcium batteries.

Automatic lithium activation when protected by BMS.

Automatic memory retention for battery type settings.

Smart charge control with optimized charging time management.

Optional Battery Temperature Sensor (BTS) port with full temperature-compensation support.

Comprehensive Protection & Safety

Reverse polarity, over-voltage, short circuit, and thermal protection.

No-sparks design for safer installation.

Easy Installation—Supports both surface and flush mounting.

Intelligent Display & Monitoring

Digital LCD display for real-time charging parameters and battery configuration.

Display can also function as a standalone voltmeter or thermometer.

LED indicators for battery condition and charging status.

Monitored parameters include battery voltage, charging current, charged capacity (Ah), and battery temperature (with sensor).

Durability & System Design

Common-negative grounding for simplified integration.

High efficiency with ultra-low power consumption.

IP22 with conformal-coated PCB for moisture protection.

The thinnest and compact design, corrosion-resistant terminals and connectors.

SPECIFICATIONS

ELECTRICAL PARAMETERS

Model	RS-PWM30F-NG
Product Name	BRAVO ULTRA 30
Nominal System Voltage	12V
Max PV Input Current	30A
Max PV Input Power	500W
Recommended PV Input Voltage	15-25VDC
Max PV Open-Circuit Voltage	30VDC
Standby Current (Night)	≤5mA

CHARGING CHARACTERISTICS

Charging Algorithms	6-Stage PWM
Absorption Voltage @77°F	14.1-14.9V (battery-type dependent)
Float Voltage @77°F	13.4-13.6V
Equalization (Flooded/Calcium only)	15.5V
Battery Types	LFP, LTO, Gel, AGM, Flooded (WET), Calcium
Temperature Compensation	-3mV/°C/2V
Built-in Protections	Over-Voltage, Reverse Polarity, Short Circuit, Thermal

ENVIRONMENTAL & MECHANICAL

Terminals	M4, max #8 AWG
IP Rating	IP22
Operating Temperature	-31°F to 122°F
Dimensions	4.7 × 5.4 × 1.3 in
Net Weight	0.7 lbs
Certification	UL 1741, CE