



Generator Start Display



AT-GEN Generator Start Module

for the Apollo Solar
TSW2334 and TSW4048
Off-grid PV Inverters

Automatic Generator-Start

The Apollo Solar AT-GEN is a microcontroller- based, control and protection module for engines and generators featuring 4-digit display with 6 LED indicators that provide **Off, By-pass, Manual, Auto, Test, Troubleshooting, and Calibration** operating modes.

The AT-GEN shuts down the generator in the event of **Low Oil Pressure, High Temperature (Engine/Canopy or Oil), Over-Under Speed/Frequency, Over-Under Voltage, Low Fuel, Belt Failure**, plus **5 input-configurable alarms**.

The system user can configure **5 inputs and 4 outputs** using several options. The display indicates **measurements, hours count, and messages for alarms**.

Automatically starts a generator when battery charge drops to a predetermined set point

Key Features

- 160 programmable parameters and settings
- Events History records 100 events
- Monitors Oil, Engine, & Canopy Temperature
- Detects speed from Pick-up Generator or Belt-alternator
- 4 programmable Outputs with 31 options for each output
- 5 programmable Analog/Digital inputs with 15 options for each
- RS485 MODBUS protocol
- Generator True RMS Voltage [$V_{rms} = V_{amp} / 2^{(.5)}$] or true voltage of the sine wave



Front Panel Features

- 6 LEDs, 7 Pushbuttons, 4-digit Display
- Automatic control of the contactor of the Generator
- 7 Operating modes, Maintenance Timer
- Allows 4-character password protection
- 27 alarm messages and 15 ideograms
- Vac, Hz, Vdc, RPM indications
- BAR, Temperature, % Fuel, and H-meter
- All measurements can be calibrated in the field

Miscellaneous Features

- RS485 Port: MODBUS RTU compatible
- Low-power consumption: less than 2 w
- Popular Standard size DIN 96
- Dimensions: 96 x 96 x 40 mm
3.2 x 3.2 x 2 in
- Weight: 150 grams—5.3 oz.
- IP protection: IP54 (IP20 at rear)
- Connections: two-part, removable Plug & Socket

SPECIFICATIONS

Vdc Supply:	5.0Vdc up to 36Vdc / 2W max
Vac (Generator):	60Vac up to 600Vac
Frequency Range:	15Hz up to 90Hz
Vac (TRMS) accuracy:	+/- 1%
Analogue Resistive Senders:	0 up to 2000 Ohm
Static Outputs:	300mA / 100Vdc, short circuit protected
Warranty:	5 year Limited Warranty
Operating Temperature Range:	Indoor -30° up to +70°C
Programmable digital inputs trigger threshold	



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Specifications are subject to change without notice. June 2010