

PTC-400S

SOLAR TRACK CIRCUIT UNIT

PIVOT
engineered to endure

STAND-ALONE POWER SYSTEM FOR REMOTE TRACK CIRCUIT OPERATION

The PTC-400S is a pole-mounted, solar-powered track circuit controller designed for remote operation where mains power is unavailable or unreliable. The unit provides a charging circuit for NiCd or VRLA cells and a variable current source to drive one or two track relays. The electronics enclosure is sloping roof enclosure with heat shields and insect-proof venting for operation in harsh environments. The system is typically supplied with a 4m galvanized steel pole and a 60W solar panel. A standard connection box for the track circuit is provided, attached by fixed gooseneck to the support pole.

The charging circuit is constant-voltage, current limited with thermal compensation to maximise cell life and reduce maintenance intervals. The variable current source provides adjustment using a rotary switch. Once the current is set, it remains constant, compensating against cell voltage variations and loop resistance changes due to temperature.

The unit also includes a cell voltmeter with operation switch and an LED to indicate charging.



FEATURES

- Complete remote track circuit power system
- Sloping roof enclosure with heat shields & insect proof vents
- 3-point locking
- Vandal-resistant mounting
- No exposed cables
- Regulated cell voltage
- Regulated track circuit current
- Replaceable enclosed controller module
- Disconnect box, mounting bracket is removable from pole for transportation
- Supplied: pole, enclosure, track circuit connection box, solar panel, bird spikes and mounting bracket

Options

80W solar panel
PTC-400SM replacement controller
VRLA charging

ORDERING DETAILS

10102 Solar Track Circuit Unit (PTC-400S)
10104 Control Module (PTC-400SM)

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Specifications

SOLAR INPUT

Input voltage range	9-36VDC
Input current	7A maximum
Solar panel rating	12V nominal, 60W to 80W
Input connectors	MC4

BATTERY

Cell type and voltage	NiCd, 1.45V @ 20°C
Number of cells	2 cells in series
Cell capacity	100-350ah

CHARGER

Temperature compensation	-6mV/°C above 25°C
Maximum charging current	20A
Over-temperature charging cutoff	60°C
Cell capacity	100-350ah

TRACK CIRCUIT CONTROLLER

Number of outputs	1 (may be used with 2 relays in parallel)
Track circuit current	80mA to 400mA in 12 steps
Maximum track-circuit voltage (no load)	2.5V
Maximum loop resistance	10 Ohms @ 120mA
Wiring connections	Standard connection box with M6 studs.

GENERAL

Thermal monitoring	Power converter (internal), enclosure temperature
Indicators	LED (green) indicating charger output.
Fault protection	32A battery fuse (internal)
Wiring connections	Standard connection box with M6 studs.

ENCLOSURE

Location Category	Outdoor
Enclosure rating	IP55
Enclosure Material	Stainless steel or Aluminum
Enclosure rating	IP55
Method of mounting	Pole-mounted on 4m steel pole with vandal-proof fasteners.
Enclosure weight (less cells)	16kg

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Control Module

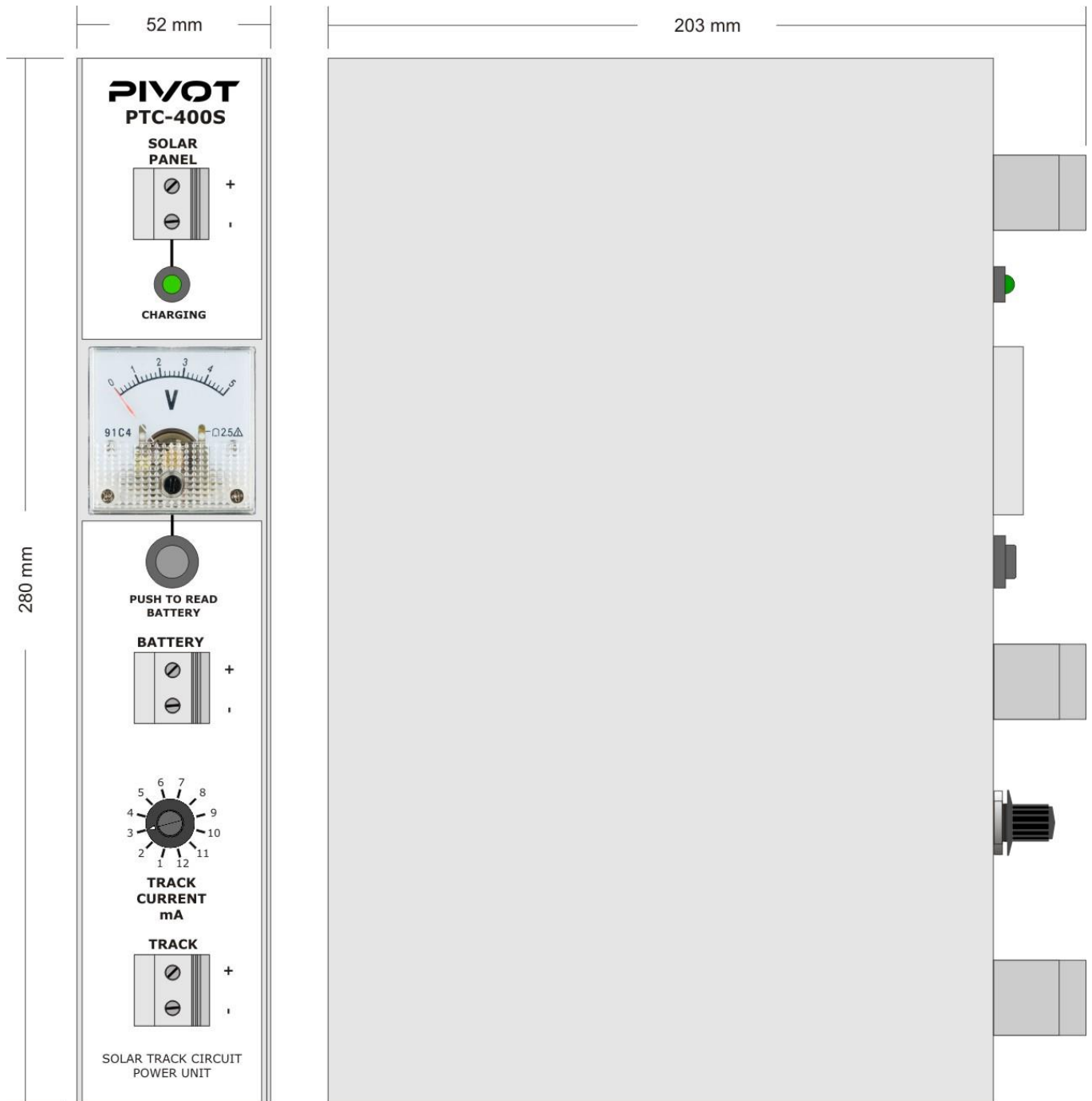


Figure 1 – PTC-400SM controller dimensions