

SolarHotty Specification

Enclosure Ingress rating	IP50
Enclosure	Enamel plated mild steel
Suitability	Installation in a roof or protected electrical environment
Humidity	10-90% RH (no dew condensation)
Temperature	-20 °C to +55 °C
Standard	IEC 60669-2-1:2009
Power supply	200-240V 1ph 50/60Hz; up to 4kW geyser feed through; 11VA burden
Solar PV supply (PV IN)	<ul style="list-style-type: none">  PV panel string not exceeding a total of 2000W  same specification for each panel in the string  PV panels in a series-only connection  PV string Maximum PV Voltage and Maximum PV Current must not exceed the specifications below
Maximum PV Voltage	240V (i.e. total series connected open-circuit PV panel voltage)
Maximum PV Current	9 A (i.e. total connected short-circuit PV panel current)
System protection	<ul style="list-style-type: none">  PV DC supply short-circuit protection  PV DC reverse polarity protection
Green LED (POWER SOURCE)	<ul style="list-style-type: none">  Fast-flashing (100ms on / 100ms off) : performing self tests  Slow-flashing (500ms on / 500ms off) : supplying AC to the geyser element  On : supplying PV DC to the geyser element
Red LED (FAULT)	<ul style="list-style-type: none">  Flashing (500ms on / 500ms off) : PV panels connected in reverse polarity  On : Fault – either element short circuit or other fault  Off : No detectable fault



The New Paradigm in Solar Water Heating



ENERGY PIVOT (PTY) Ltd

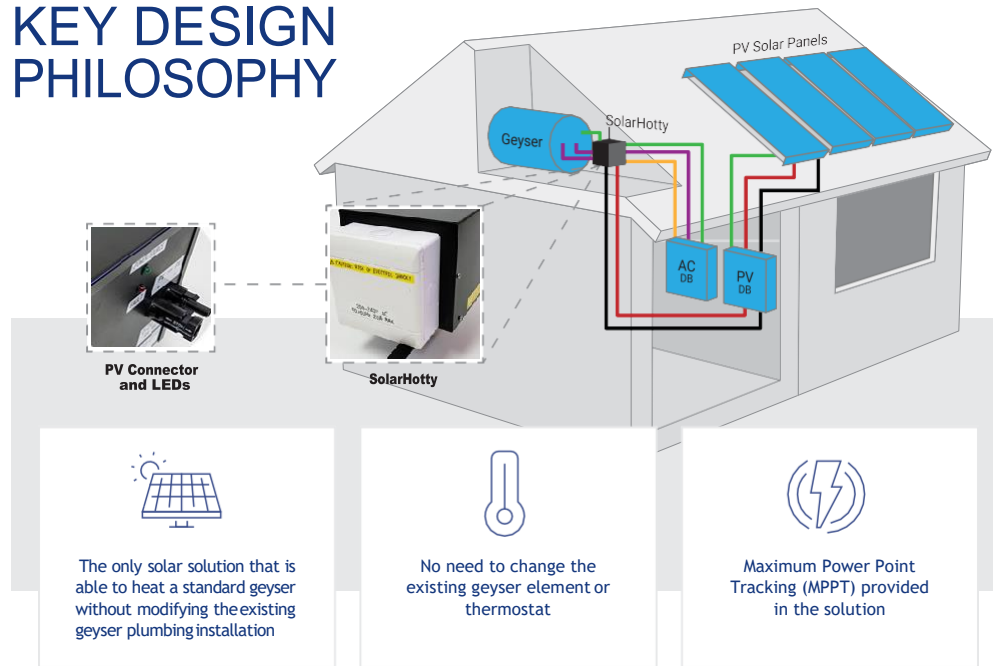
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Distributor & Installer

**ENERGY PIVOT (PTY) Ltd
APROVED DISTRIBUTOR FOR**

**Western Cape, Eastern Cape, Gauteng,
North West, KwaZulu Natal,
Mpumalanga & Limpopo**

KEY DESIGN PHILOSOPHY



SolarHotty Break Even Analysis - At High Usage Tariff



SolarHotty Features

- > 200-240V 50/60Hz Mains AC Supply
- > Works on standard geyser AC thermostat
- > PV supply from one or more series-connected solar panels (refer specification)
- > Rugged steel housing
- > LED indicators for fault indication and PV supply indication
- > Easy mounting to roof beam provided by pre-drilled bracket
- > Continual monitoring of health and integrity with fail-safe operation
- > No battery or inverter needed
- > Automatic switching between AC and PV DC sources
- > Automatic switching between AC and PV power using inbuilt MPPT
- > PV DC supply short-circuit protection against geyser element load failure
- > Protection against PV panel reverse-polarity
- > Zero configuration installation

A Qualified Solution

Tellumat has been designing and manufacturing electronic products for the Military and Industrial sectors for the past 40 years. The electrical wiring interface to the geyser is the only change you will need to make to the existing installation

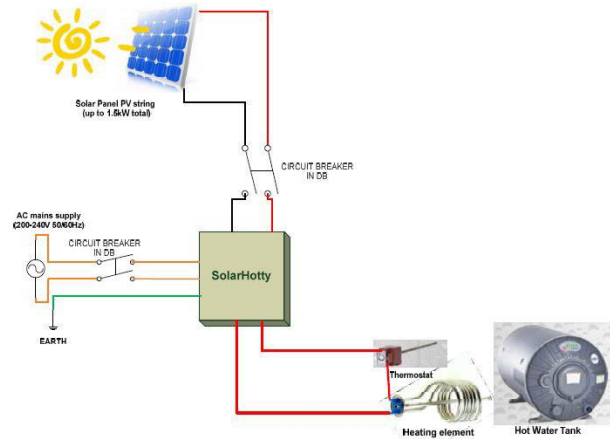
- > Tellumat is the design authority of the SolarHotty
 - > Tellumat manufactures and supplies the SolarHotty
 - > Tellumat is ISO 9001:2015 certified
- > Customers can be safe in the knowledge that the product has been manufactured by a world class manufacturer to stringent

Recommended Solar Panel PV Configurations

Typical Geyser Volume	AC Heating Element	PV Panel Configuration	PV String Configurations	Maximum available PV power
100L	2 kW (26 Ohm)	4 x 315W PV; in series string	—■—■—■—■—	1260W
100L	2 kW (26 Ohm)	5 x 315W PV; in series string	—■—■—■—■—■—	1545W
150L	3 kW (17 Ohm)	3 x 345W PV; in series string	—■—■—■—	1035W
150L	3 kW (17 Ohm)	4 x 315W PV; in series string	—■—■—■—■—	1260W
200L	4 kW (13 Ohm)	3 x 315W PV; in series string	—■—■—■—	945W

A Patented Solution

Converts photovoltaic (PV) solar power into electrical energy that is compatible with powering an existing standard AC geyser installation. SolarHotty has a patented innovation to allow the standard AC thermostat to utilize the supplied voltage (AC or DC) [Patent pending: 2017/00889 and GB1610106.5]



A Certified Solution

The SolarHotty product has been certified to:

- > SANS/IEC 60669—1:2007
- > SANS/IEC 60669—2-1:2009 — Electronic Switches for household fixed-electrical installations
- > Certification of Compliance with SANS 10400 XA2 in accordance with SANS 10252-1

All wiring and fitment standards as per national standards

- > Electrical: SANS 10142—1:2017 Edition 2: Part 1
- > Solar panels: SANS 10142—1:2017 Edition 2: Part 1
- > SANS/IEC 60364—7—712: Edition 2, 2017-04: Part 7—712