



Description

The DIFT2 is a differential thermostat (solar controller) designed specifically for the domestic solar hot water market. It continuously monitors the temperature difference between a tank sensor and a panels sensor, and switches an external AC hot water circulation pump to facilitate optimal overall system energy efficiency.

Boil Protection

Water circulation is cut out at a tank temperature of 75°C to protect the tank from boiling and minimize the risk of scalding.

Freeze Protection

Water circulation is initiated when panel temperature drops below 4.5°C and stops when panel temperature reaches at least 7°C, to ensure water does not freeze in the pipes. For closed loop systems, freeze protection can be disabled (factory setting).

Status and Fault Indicators

The two status lights visible on the top lid provide information regarding faults and normal operation of the controller. The following table summarizes the status and fault indications.

Technical Specifications

Red Light	Green Light	Indication
Off	Off	Standby mode – pump off
Off	On	Normal operation
On	Off	Optimal temperature reached – boil protection
On	On	Freeze protection active
Flashing, slow		Panel sensor disconnected
Flashing, fast		Panel sensor shorted
	Flashing, slow	Tank sensor disconnected
	Flashing, fast	Tank sensor shorted

"Faulty Panel Sensor" Operation (Factory Setting)

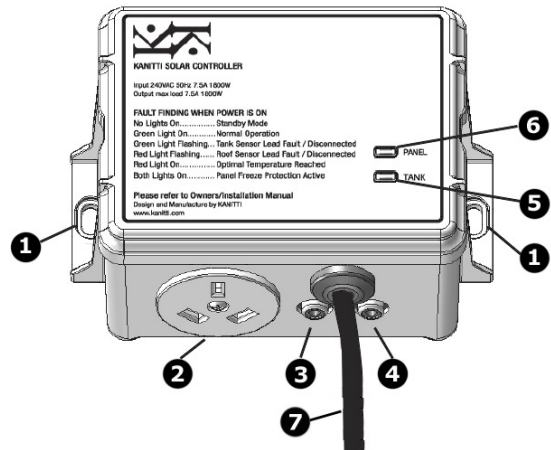
In case the panel sensor is faulty (disconnected or shorted), the controller will activate the circulation pump for a period of about 40 seconds every 40 minutes, as a precaution to avoid potential panel freeze damage. This operation will continue until the panel sensor fault is resolved. This option is factory-selectable. Please contact Kanitti for further details.

Installation Guidelines

To increase service life, it is recommended to use suppressors (RC filters) in parallel with the AC pump, or to use a water pump with built-in suppressors.

- Power supply: 220VAC +/- 10%, 50Hz
- Load: up to 1800W (7.5A)
- Power consumption: <0.75 VA (< 6.6KW/h per year)
- Dimensions (W x H x L): 130x65x90.5 mm
- Material: flame retardant, UV-stabilized polycarbonate
- Color: Cool Grey 2C
- Pump "ON" differential: 4°C
- Pump "OFF" differential: 1°C
- Operating Temperature: -10° - 65° C
- Operating Humidity: 10%-90% non-condensing
- Panel Sensor: DR brass, 250°-rated sensor thermowell element, 3/4" NPT thread, Teflon leads, heat-shrink applied
- Tank Sensor: 25x3.1mm mylar tube, 105°-rated sensor element, UL3266 leads
- Connectors: All RCA connectors are gold plated
- Certifications: SAA (Electrical Safety), RoHS

DIFT2 Rev B – Outline



Part	Identification
1	Mounting Lugs
2	Pump Power Socket
3	Panel Sensor Connector
4	Tank Sensor Connector
5	Tank (Green) Lamp
6	Panel (Red) Lamp
7	Controller Power Lead



DIFT2 User Manual

Rev B



Contact

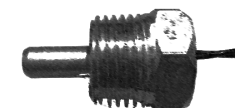
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Accessories

Tank Sensor – Mylar tube, 900mm wires, RCA male connector



Panel Sensor – DR (Dezincification Resistant) Brass Thermowell, 200mm Teflon leads, RCA female connector



RCA-RCA wire for connecting the panel sensor, mounted on the solar collectors, to the solar controller
standard length: 18 meters
gold-plated male RCA connectors

