Red Circle Solar
4/3 Techno Park Drive
Williamstown VIC 3016
ABN: 24 160 417 943
(03) 9397 3993
info@redcirclesolar.com.au

NOVUS N321S Digital differential controller 240V

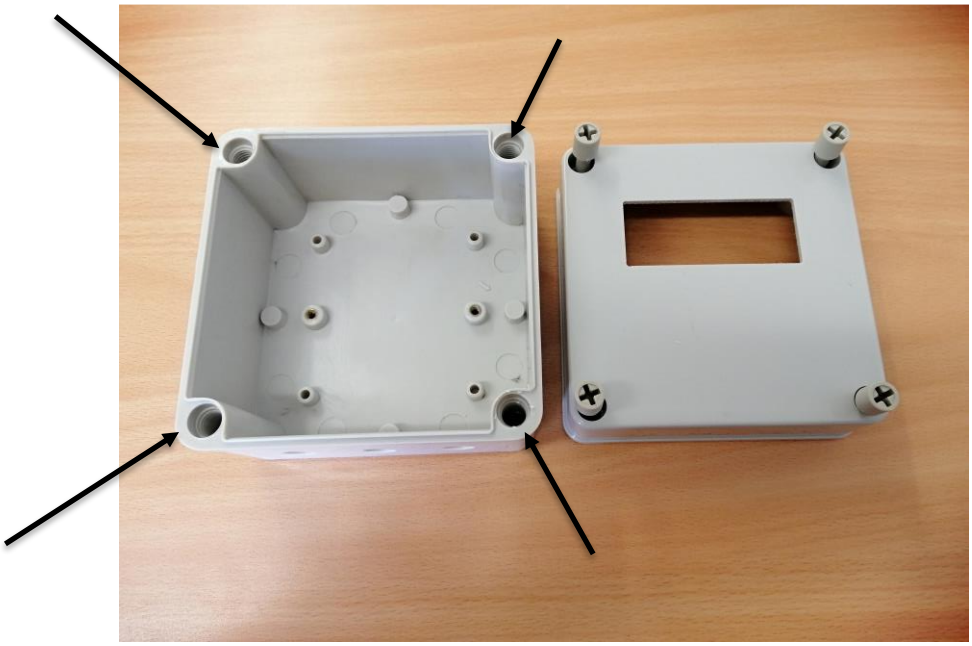
Parts included:

Waterproof enclosure
2 x NTC 10K Sensor cables x 2. (1 x 4mtr for the ***(T2)*****TANK**. +1 x 25Mtr for the ***(T1)*** **SOLAR Collector**)
1 x Digital Novus controller.
Male and female leads (240V only)

Installation:

DO NOT HAVE POWER CONNECTED WHEN MOUNTING THE CONTROLLER or at any time if the cover has been removed.

- Remove the front cover and fix with appropriate screws drilled through the cavity behind the cover screws. (as shown below)



Red Circle Solar
4/3 Techno Park Drive
Williamstown VIC 3016
ABN: 24 160 417 943
(03) 9397 3993
info@redcirclesolar.com.au

- Attach front cover of controller.
- Install **TANK** (**T2**) sensor in the bottom port of the storage tank (or where applicable to the application)
- Install **SOLAR Collector** (**T1**) sensor into the port provided on the solar manifold on the HOT outlet end of the manifold. Once installed in the manifold, use a small amount of silicon to seal the sensor port so the sensor does not register air temperature and can not fall out. Secure cable to pipework using cable ties or similar.
- Turn on controller.
- Plug pump into controller

How the controller works/testing

The Novus temperature differential controller provides power to a pump (or similar) when the pre-programed temperature differences at 2 set points are met. It also has many other functions that are explained below. This controller has been programed to suit domestic solar hot water applications. The main settings are:

(dON) Pump on = When the solar collector is 8 Deg C or more than the tank.
(dOF) Pump off = When the solar collector is 4 Deg C or less than the tank.
(ICE) Pump will turn on when the collector temperature is below 2 Deg C and will pump warm water from the storage tank up to the collector to protect from damage from frost. The pump will turn off when the collector reaches 5 Deg C.
(HT1) This is the maximum temperature (120 Deg C) the collector sensor can register. The pump will not turn on if above this temperature.
(HT2) This is the maximum temperature the tank will be heated to. Set to 75 Deg C. Heating a storage tank above this temperature can damage or shorten the life of the storage tank.

To access the Novus settings>
Hold down the P bottom for until the dON displays. Release the P bottom. You can now adjust these settings using the up and down bottoms. To access the dOF setting, press the P botton.
All settings should not be changed unless by an experienced technician.
All other settings can be accessed as per the Novus manual. Manual can be found inside the enclosure.

Wiring Diagram. T1= solar collector. T2= Tank