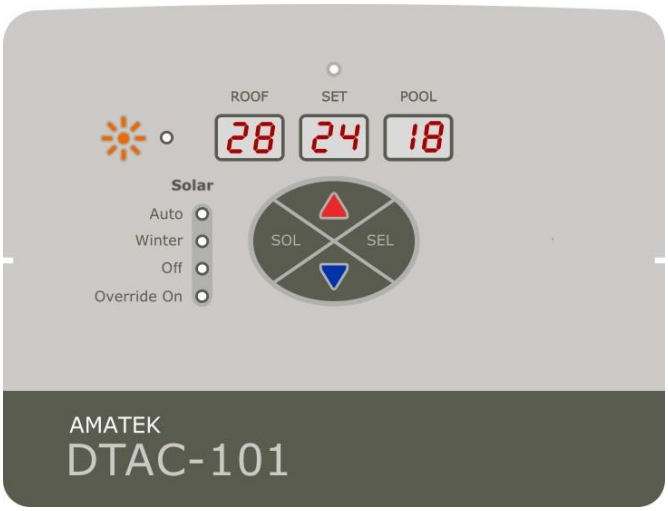
AMATEK·DESIGN	DTAC-101

INSTALLATION, USER AND REFERENCE MANUAL

Thank you for purchasing the DTAC-101 solar pool heating controller, the most advanced on the world market. DTAC-101 offers simple and intuitive user control for a solar pool heating system, ease of configuration and a mobile App.

The App can remotely control, monitor and report the status and performance of your solar pool heating system.

The DTAC system is backwards compatible with ASCON sensors, and DONTEK "Plus" sensors.



WARNING:

The DTAC product line is rated to supply a maximum combined power of 2.3kW under Approval Certificate NSW29186. If the product is connected to equipment with a load greater than 2.3kW then the DTAC may be damaged. The DTAC product must NOT be installed where sustained overload can occur and it is not warranted under such usage. For a load greater than 2.3kW then an AMATEK PS001A power separator must be used, which can take an additional 2.4kW load, or 4.7kW in total. See Section 8 below for a system load calculator.

It is recommended to install the product under cover, not in direct sunlight, and in accordance with AS/NZS 3000 and AS/NZS 3136.

UNIT UNIQUE ID (UUID)

Please retain this page for future reference

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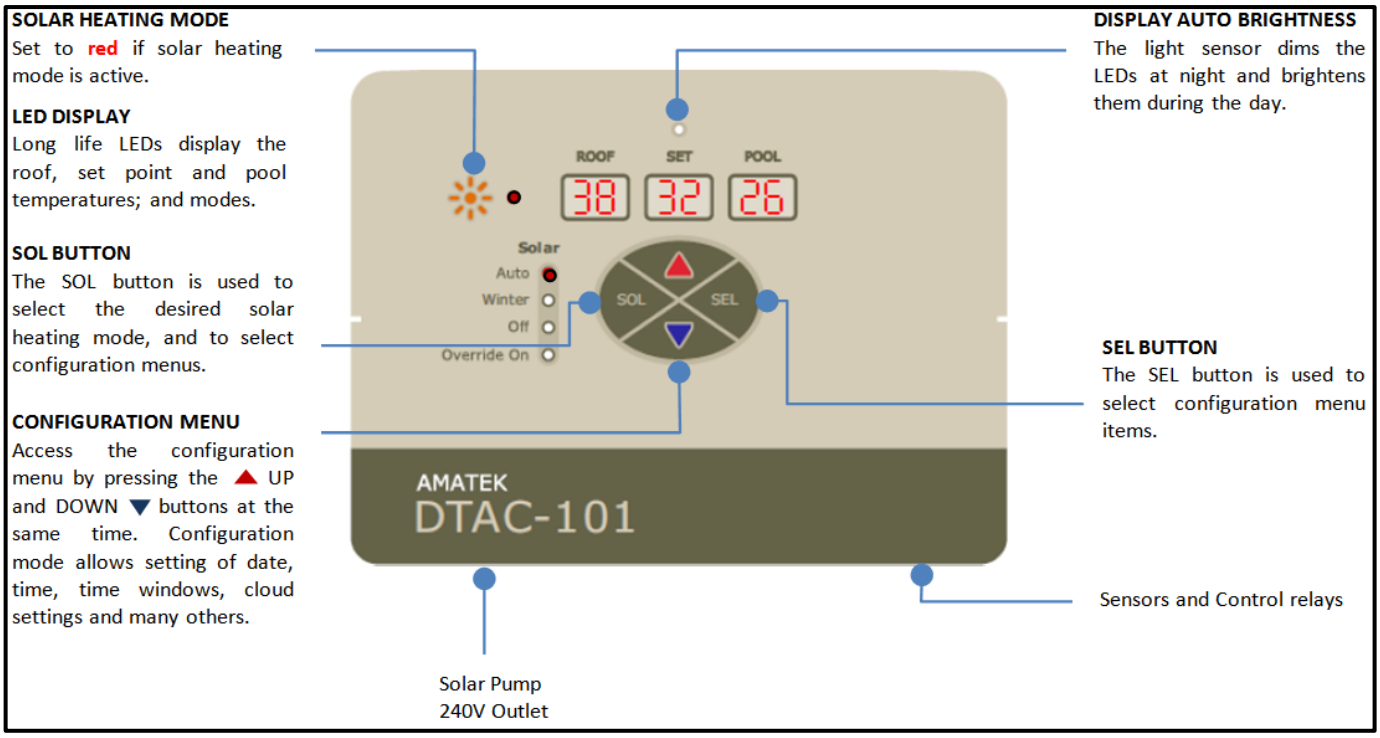
1 OPERATION SUMMARY

The DTAC-101 is designed as a single GPO, stand alone solar pool heating controller with a sophisticated IoT capability integrated into current technology mobile devices.

1.1 Control panel



1.2 Operational Summary

Solar Auto

When solar gain is available the pool is heated to the set point temperature during two configurable time windows. Auto Cooling mode is also available, configured by the App.

Solar Winter

Runs the solar pump every day for 6 minutes to maintain pump operation. Saves energy and wear and tear on the pump during winter when the pool is not in use.

Solar Off

Disables the solar pump and heating algorithm, until the next timer "on time" occurs.

Override On

Runs the solar pump until the end of the current or start of the next time window, at which DTAC reverts to the previous Solar control state.

Anti Freeze Mode

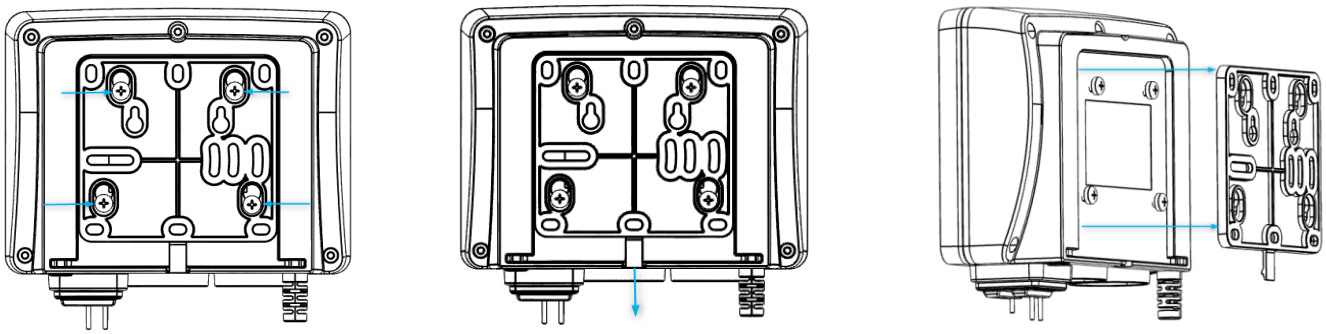
Runs the pumps when the roof temperature falls to the freeze threshold (settable between 0C-6C) for 3 minutes and thereafter until the roof temperature rises above that or the mode is turned off.

2 INSTALLATION

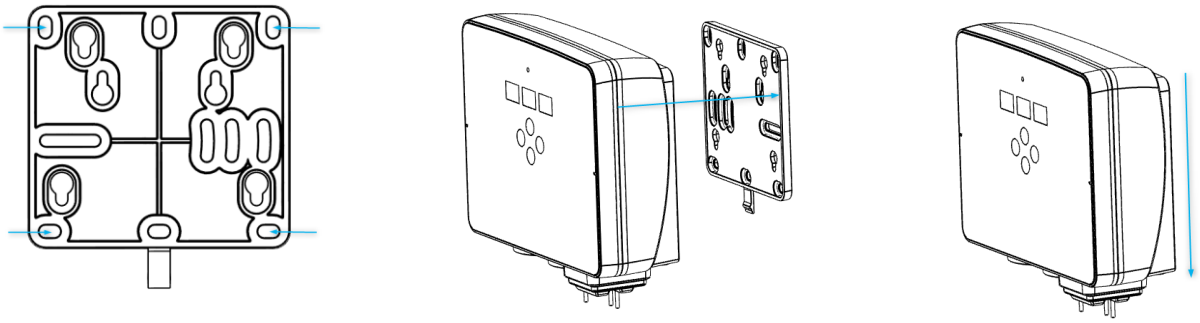
Prior to installing ensure that all the other solar heating equipment has been installed and ready including necessary pumps, pipes and filter.

2.1 Mounting

Mount the DTAC on a wall flat section of a wall using the mounting plate. The mount plate is secured by four screws at the rear of the housing which may be adjusted as necessary to allow the mounting plate freedom to slide. The mounting plate can be removed by pushing it's tongue away from the housing allowing the plate to slide out.



Ensure the tongue is facing down, mark four holes to mount the plate, and drill and screw to the wall. Ensure the plate is flat after tightening the screws so the DTAC may slide on and off easily. The mounting plate has multiple slots and holes allowing it to alternatively be mounted directly to screw holes from other legacy controllers.



Align the DTAC housing and the mounting plate, then push the housing down to lock the unit on to the wall.

2.2 Connecting cables and pumps

The DTAC-101 uses Phoenix plugs and sockets to allow wired roof and pool sensor connections:

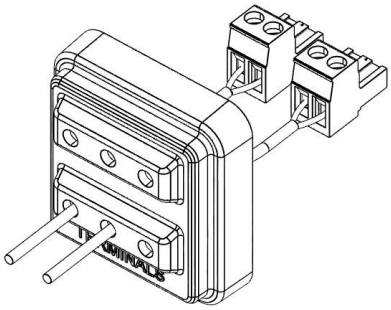
2.2.1 Sensing and Control

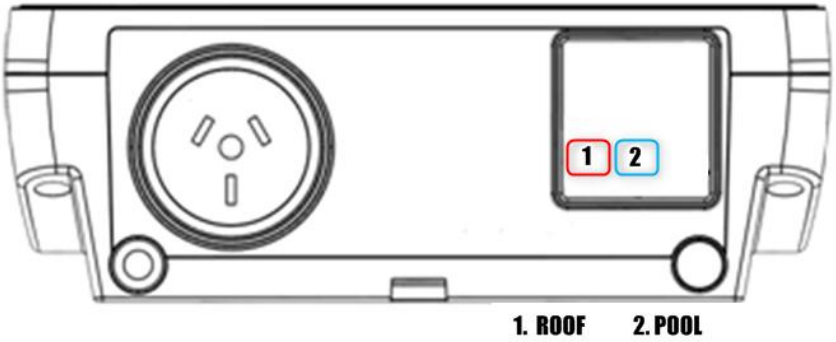
The silicone rubber terminal socket seal protects the wires and plugs from moisture and insects.

Note: Ensure the socket seal is installed correctly during installation and for the product lifetime.

To install the seal, drill the required holes in it so the sensor and control wires can pass through. Then remove the Phoenix plugs from the sensors, feed the wires through the holes, and reconnect them.

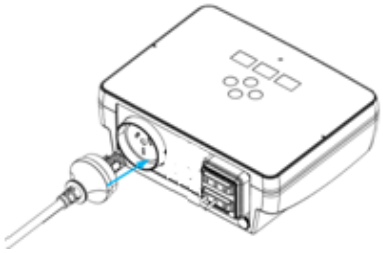
Then insert the Phoenix plugs to the correct Phoenix socket as marked above, while leaving enough cable to do so. Finally slide the seal down the wires, press onto the terminal flange and push home until it is firmly in place. You may need to pull the wires gently through the holes to contain them. If necessary use silicon glue to seal the holes.





2.2.2 Stand alone installation

Connect the solar pump plug to the solar pump socket.

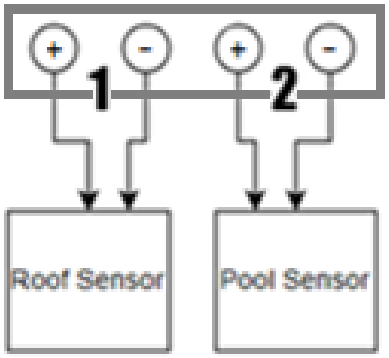


2.2.3 Phoenix Connector Pinout

The Phoenix connector pinout is detailed in the schematic.

1. **Roof sensors**
   - 1.1. DTAC — Unpolarised
   - 1.2. DONTEK — Ground/Shield to -ve terminal
   - 1.3. ASCON — Ground/Shield to -ve terminal

2. **Pool sensors**
   - 2.1. DTAC — Unpolarised
   - 2.2. DONTEK — Ground/Shield to -ve terminal
   - 2.3. ASCON — Ground/Shield to -ve terminal



3 MOBILE DEVICE APP

A mobile App is available for the DTAC on Android (version 7 and above) devices and iOS (version 15.5 and above) devices.

The App provides a sophisticated yet simple and intuitive remote interface to user control, monitoring, status and performance reporting, configuration and diagnostics of your solar pool heating system.

The DTAC App uses an AWS IoT backend, and is secured with a user account. Upon App installation a user must register to create an account, using a personal email address, an Apple ID account or a Google account..

Once registered, a DTAC unit may be activated on the AWS IoT server. Unit activation gives permission for the DTAC system to collect and store your email address, configuration data and log the pool temperature and control information so that you may display and use it.

3.1 App download

First download the App and install it on your mobile device:

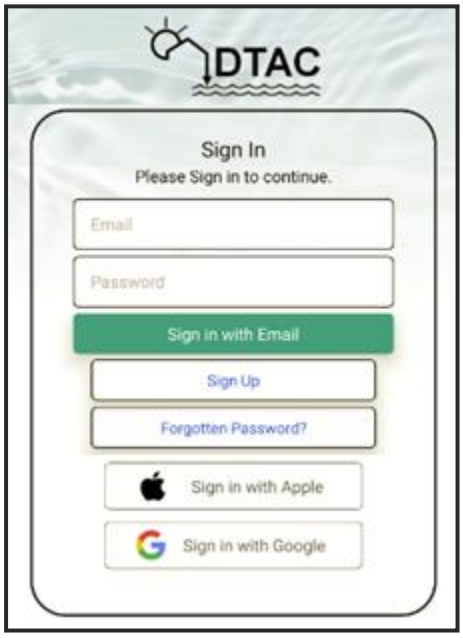
1. Scan the QR code on the unit or box sticker where it is written "Scan to get started." Or go to "www.amatek.com/dtac"
2. Click on "GET IT ON Google Play" if you are using an Android device, and then install it on your mobile device
3. Click on the "Download on App Store" button if you are using an iOS device and then install it on your mobile device

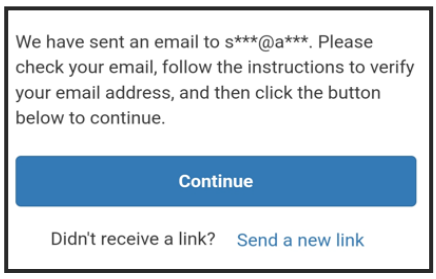
3.1.1 User Registration

Next register a user account. This can be done at the App startup or by pressing the "Register" button on the DTAC website www.amatek.com/dtac. Registration can be done in one of three ways by:

- Using a personal email address and password
- Using your existing Apple account
- Using your existing Google account

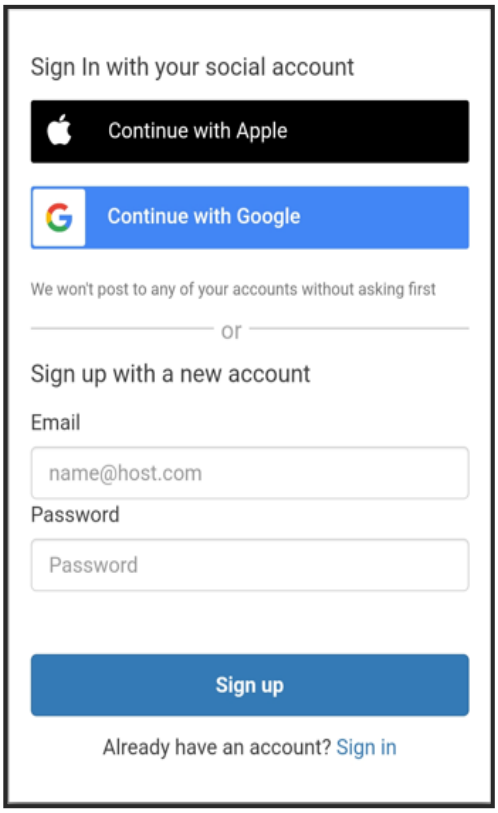
After accepting your user details the system will notify you that a verification email has been sent to your registered email address. The user account will be created after you complete the verification process. Failing to verify will result in a system error on that email address that needs





Amatek support to resolve.

3.1.2 User Sign In



You must Sign In to your account to operate your DTAC remotely. Each account can register one DTAC unit per account. There can be more than one user linked to the same DTAC unit.

There are three Sign In methods,

- "Continue with Apple",
- "Continue with Google" and
- "Already have an account? Sign In" for an email address based account.

Note that the three Sign In methods may not link you to the same DTAC account, so Sign In using the same method that you used to register your account.

3.1.3 Forgotten password

If you registered using an email address and have forgotten your Sign In password, click on the "Forgotten Password" button then enter your registered email address. If the email address is correct, you should receive an email with a link for which you can follow the instructions to reset your password.

If you forgot your social account password you must reset it with Apple or Google.

3.2 App Overview

Five visualisation screens are accessible from the toolbar at the bottom of the App.

1. Control - A mimic panel for the front screen of the DTAC unit
2. Timing - Allows setting of start/stop times, system time and timezone
3. Statistics - Provides graphing of the measured temperatures and control states
4. Settings - Provides a facility to read and set system parameters
5. Activate - Enables activation and linking to a mobile device with the DTAC App

3.3 Activation

After Signing In for the first time you need to activate your DTAC unit which will then allow it to be remotely controlled by your mobile device. You must first complete the account creation, verification and "Sign In" steps detailed in Sections 3.1.1 and 3.1.2.

There are two activation options,

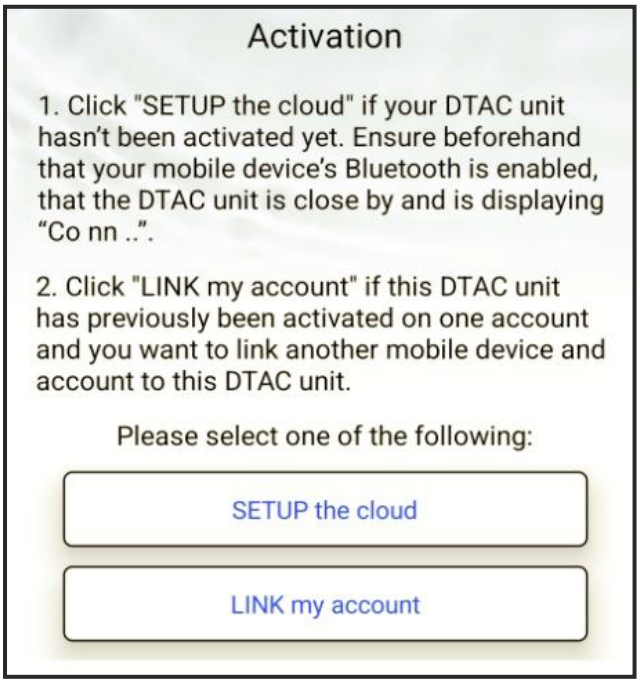
1. If your DTAC unit hasn't been activated yet.

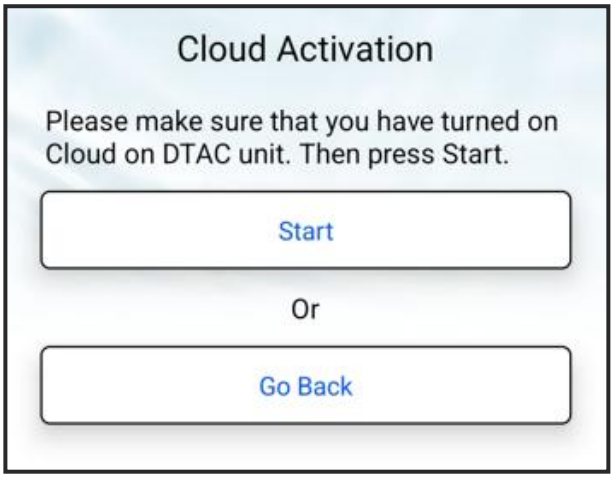
2. If your DTAC unit has previously been activated on one account and you want to link another mobile device and account to this DTAC unit. This allows several family members to share the control, temperature reporting and graph visualisation.

3.3.1 Cloud Activation

Firstly power up the DTAC unit using any available power point, and follow the procedure detailed in Section 4.2.1Cloud/Wi-Fi Setup.

For first time use, the Activation screen below will be displayed. Click SETUP the cloud and then click on the Start button on the next screen.





All available Wi-Fi access points are then listed on the bottom half of the page. Choose your Wi-Fi access point, enter the password and click "CONNECT". Upon successful activation the "UNIT IS ACTIVATED" status message is displayed on the screen. Ensure you accept and enable Bluetooth and location permissions if requested.

Once unit activation is completed the DTAC control menu is also available via a web interface (https://www.amatek.com/dtac).

3.3.2 Link Accounts

Once a DTAC unit is activated and linked to the first user account then another user account can be linked to it. This is useful for families with multiple mobile devices who want to each member be able to read the pool temperature.

After completing all the steps in the sections above when you get to the Activation screen, click on the "LINK my Account" button. You will be redirected to a page to link the account using a QR code or using the 16 digit UUID.

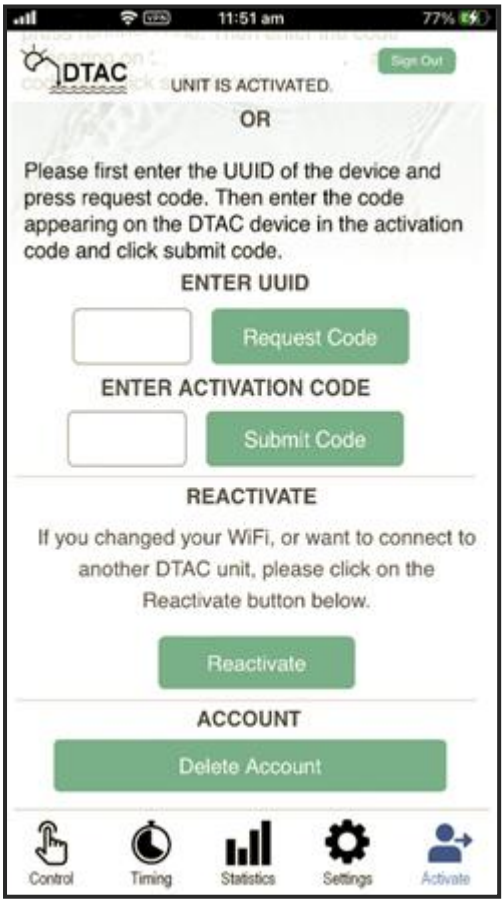
3.3.3 QR Code Link Activation

There are two parts to QR code activation. The first is displaying the QR code of the mobile device that has aready been activated or linked. The second is to scan that QR code by the mobile device that is to be linked to the DTAC unit.

With the mobile device to be linked, click on the "Scan QR Code" button, and the windows below will pop up on your screen. Allow camera permissions and then scan the QR code that is displaying on the mobile device to be linked to.

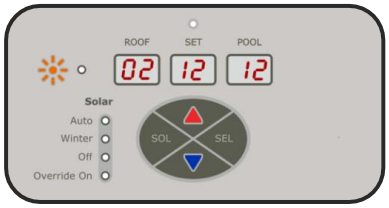
The second mobile device will then be activated and linked to the DTAC unit of the first device and both mobile devices will be able to use the App for monitoring and control.

3.3.4 UUID Link Activation



You can find the UUID of the unit on the first page of your quickstart manual, on the back of the unit or on the packing box.

To activate using a UUID, enter the UUID of the unit and click on the "Request Code" button. You must be close by the DTAC to read the 6 digit activation code displayed on its front panel. Enter the activation code and click "Submit Code". Upon successful verification, the unit will be activated for this user account



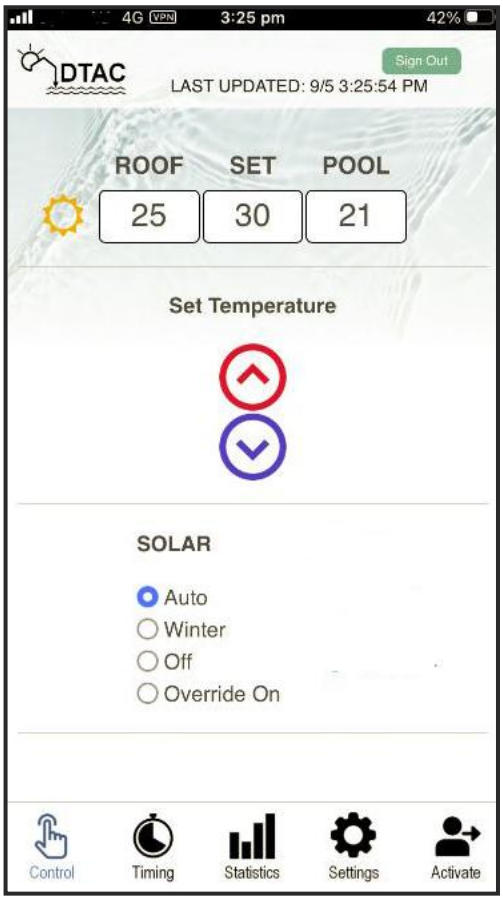
3.3.5 Re-Activate

To re-activate the DTAC if you have changed your WiFi or want to connect to another DTAC unit, then click on the "Reactivate" button. Note: This is only applicable to the mobile App.

3.3.6 Delete Account

Click "Delete Account" if you want to delete this user account from the DTAC IoT server.

3.4 Control



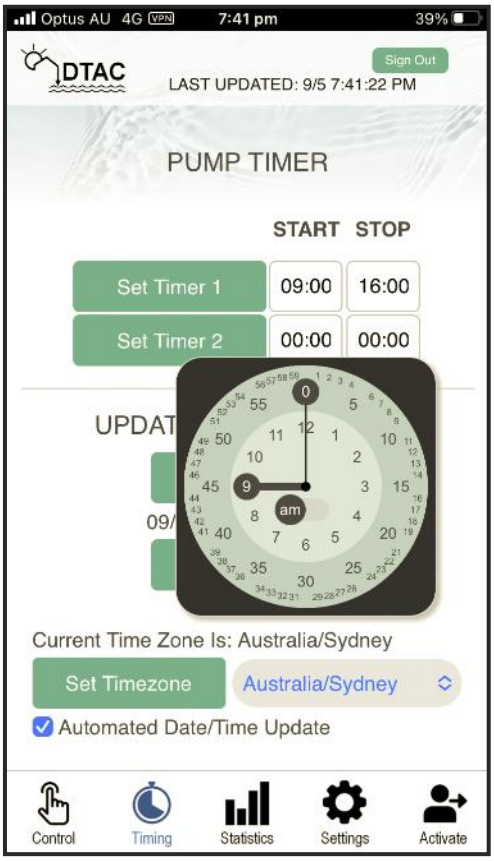
Click on the toolbar's "Control" Icon to open the DTAC control panel. If the mobile/web App is connected to the unit then live ROOF and POOL temperatures should be displayed. SET the desired temperature of the pool by clicking on the UP or DOWN buttons.

To change the solar pump mode click on "Auto", "Winter", "Off" or "Override On" under the "SOLAR" heading.

- "Auto" automatically runs the solar pump during the time window when there is solar gain. A round yellow sun icon will be shown to the left of the roof temperature when solar gain is available
- "Winter" will run the solar pump once per day for 6 minutes
- "Off" will turn the solar pump off until another mode is selected
- "Override On" will continue running the solar pump until the end of the current or beginning of the next next time window

All the setting changes will have show green tick symbol (✓) when the setting has succeeded, otherwise a red cross (✘) will appear to indicate that the setting has not succeeded.

The ↺ symbol indicates that the page is communicating over the Internet and is loading data.



3.5 Pump Timer and DTAC Time Settings

On the bottom panel of the App, click on "Timing" to open the timer settings for the pumps and to configure the system time for DTAC.

3.5.1 Pump Timer

To "Set Timer 1", click the digits under "START" and a moveable clock will appear. Drag the long hand of the clock to set the minutes of the timer; drag the short hand to set the hours of the timer. To switch from AM to PM, slide the AM to PM and vice versa. To accept changes, click away from the clock face. Once Time 1 Start and Time 1 Stop values are set, click "Set Timer 1" to set the timer.

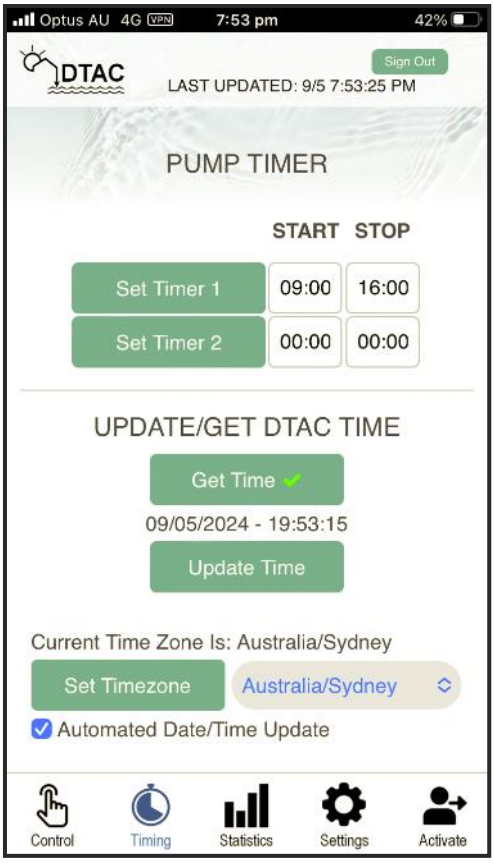
To "Set Timer 2" stop, click the digits under "STOP" and a moveable clock will appear. Drag the long hand of the clock to set the minutes of the timer; the short hand will set the hours of the timer. To switch from AM to PM, slide the AM to PM, vice versa. To accept changes, click away from the clock. Once Time 2 Start and Time 2 Stop values are set, click "Set Timer 2" to set the timer.

To reject changes, refresh the App page by clicking the Timing Icon in the toolbar, or by clicking refresh on your web browser.

3.5.2 Time Window Note

Note: Setting both time windows to 00:00 and 00:00 shall effectively turn off the controller.

3.5.3 Update/Get DTAC Time



To get the time from the DTAC, click the "Get Time" button. The current DTAC date and time will be displayed under the "Get Time" button.

To update the DTAC time and timezone to Internet time and timezone, click the "Update Time" button.

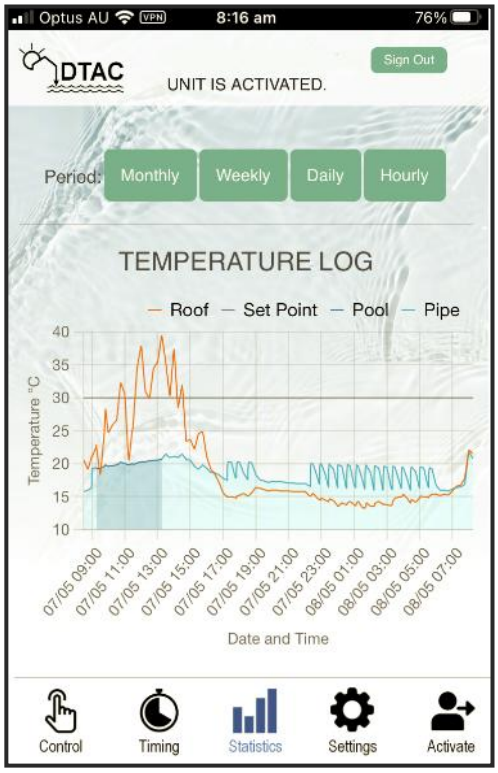
To update the Time Zone of the DTAC based on the source of cloud server of the App, click the drop down menu of the country/city, then click the "Set Timezone" to confirm.

The DTAC can automatically update its date and time to Internet date and time. Automated updating of the date and time can be enabled by checking the "Automated Date/Time Update" tick box. It can be disabled by unchecking this checkbox.

3.6 Statistics

Click on the toolbar's "Statistics" Icon to open the DTAC statistics and the graphs of the TEMPERATURE LOG and the EVENT LOG will be displayed. This may take a few seconds as there can be a lot of data to load.

The DTAC unit samples the temperatures and states of your system and logs this information to your account on the AWS database. The Statistics page defaults to show logs of the last 24 hours, however you can change this view this by clicking on the Daily, Weekly, Monthly and Hourly buttons.



3.6.1 Temperature Log

The TEMPERATURE LOG shows a time graph of the roof, set point, pool, and pipe where the pool sensor is located.

The data sets can be interactively removed or added by clicking on the data set's legend, for example clicking on the word "Roof" will toggle the view of that dataset.

The red line is a log of the roof temperature, the grey line the set point, the darker blue line the pool temperature and the light blue line the inlet pipe temperature.

The blue shaded area under the blue line is the temperature of the pool water measured within the time window that the pump is running. When the pump stops, the water in the inlet pipe tends towards the ambient air temperature as no water flowing.

This graph shows freeze control activated during the night, and a mild increase in pool temperature during a late autumn day, where the ambient air temperature is around 15C.

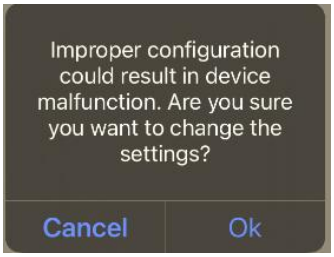
3.6.2 Event Log

The EVENT LOG shows a time graph of the pump states.

The data sets can be interactively removed or added by clicking on the data set's legend.

The the red line shows the the solar pump. This graph shows the solar pump did not run during the time window, and freeze control activated during the night.

3.7 Settings



Click on the toolbar's "Settings" Icon to change parameters.

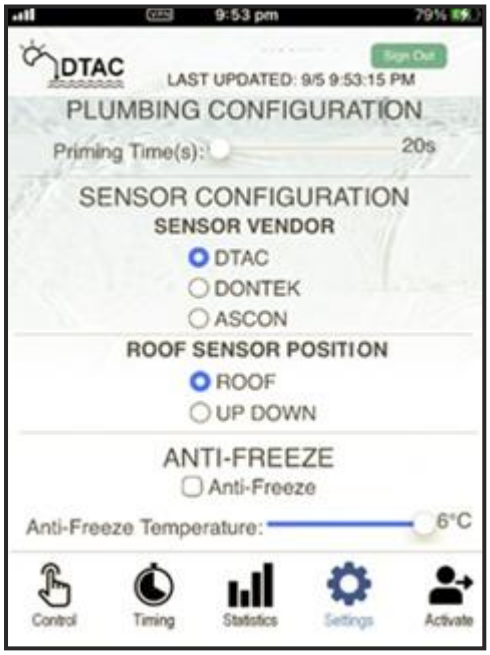
You will see this message reminding you to take care when changing parameters, especially the plumbing configuration.

3.7.1 Hysteresis and Solar Gain

The hysteresis value is the threshold above which the system will stop heating, and below which the system will heat. It can be set between 1C and 9C by dragging on or clicking its scroll bar.

The solar gain is the temperature difference between the roof and the pool at which the system will start to heat. It can be set between 1C and 20C by dragging on or clicking its scroll bar.

3.7.2 Plumbing Configuration



The plumbing configuration is set to "Standalone" by default.

"Priming Time(s)" sets the delay to read the pool temperature, between 10 seconds and 600 seconds, done by dragging on or clicking its scroll bar.

3.7.3 Sensor Configuration and Position

DTAC is the default, however click either "DTAC", "DONTEK" or "ASCON" to change the sensor type

The Roof Sensor Position setting can be configured by clicking "ROOF" or "UP/DOWN" to suit the installation.

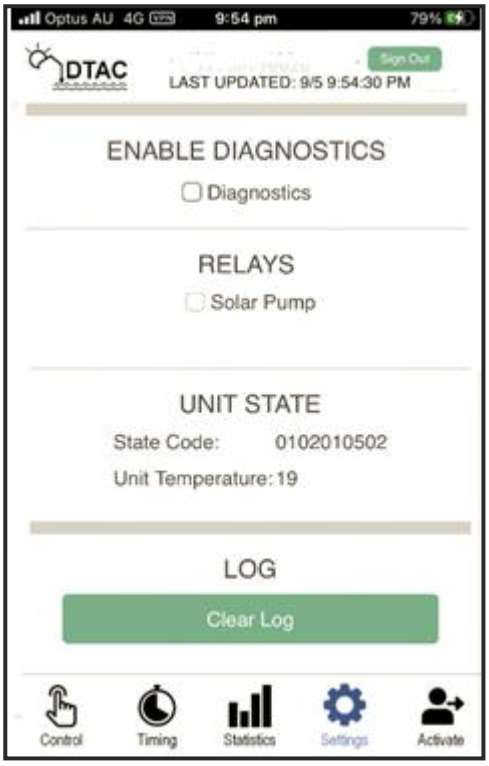
3.7.4 Anti Freeze

Anti Freeze may avoid water freezing in pipes by pumping if the roof falls below the Anti Freeze Temperature. It runs for 3 minutes every 30 minutes until the roof temperature rises above the Anti Freeze Temperature, or is disabled. You can configure Anti Freeze to trigger from 0C to 6C.

3.7.5 Heater Configuration

To toggle between enabling or disabling heater, click the "Heater Enable/Disable" tick box if it is available. For enable, the tick box will be ticked, for disable; the tick box will not be ticked.

3.7.6 Diagnostics



This can used to enable and disable the relays that control the pumps, valve and heater. When Diagnostics is enabled, the relay control will override the system.

During operation, the states of the relays are updated in real time so you can see remotely which relays have been operated.

3.7.7 Unit State and Temperature

Another diagnostic feature for debugging the current state of the system, and monitoring the internal temperature of the unit.

3.7.8 Clear Log

The "Clear Log" button is used to clear all the data logs that are stored in the cloud and will zero any graphs before that time. **Caution: This is a one-time operation and data once cleared cannot be restored back.**

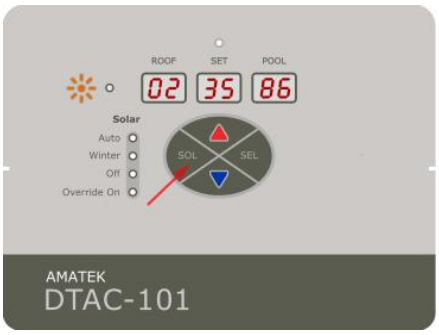
4 FRONT PANEL OPERATION

The DTAC products can be operated from both the front panel and from a mobile App.

The three LED displays show the ROOF, SET and POOL temperatures. SET displays the desired temperature when heating.

There are four "buttons" on the front panel, UP, DOWN, SOL and SEL. In normal use the SOL button controls the solar pump and mode.

4.1 Solar Control

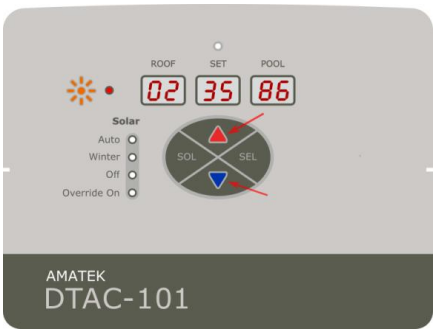


Pressing the SOL button will cycle the Solar control through "Auto", "Winter" and "Off" modes

Pressing and holding the SOL button enables "Override On" mode. "Override On" will continue until the end of the current or beginning of the next time window.

When the solar control is in Auto, Winter or Override On, the UP and DOWN buttons increase or decrease the temperature set point.

4.2 Configuration Menus



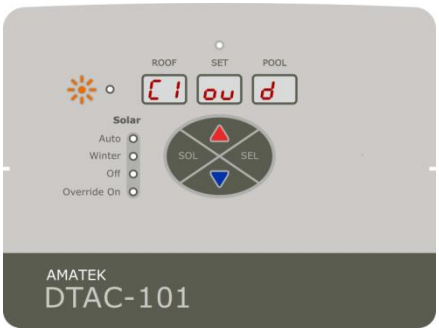
Configuration menus may be entered and exited by holding UP and DOWN at the same time.

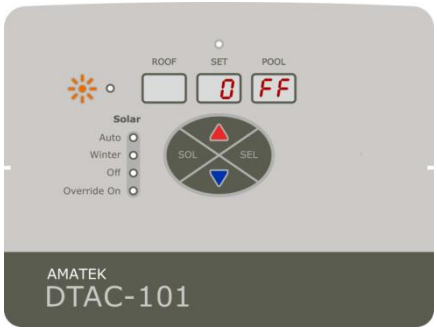
Pressing the SOL button moves to the next menu item. Pressing the SEL button enters the current menu item and pressing the press SOL button then exits that menu item. If no buttons are pressed after one minute the configuration menus are exited.

4.2.1 Cloud/Wi-Fi Setup

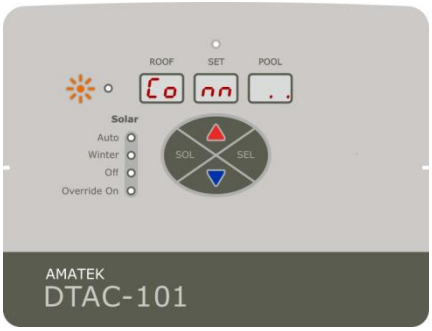
The cloud menu allows Wi-Fi access to the AWS cloud server which supports the DTAC mobile App. To access to the Cloud menu from the operational panel, press and hold the "UP" and "DOWN" buttons together. Ensure the Bluetooth is enabled on the mobile device being used for activation.

- When "C1 ou d " is displayed, press SEL to enter the menu
- The current cloud status will be shown as either or "On" or "OFF"
- Then press UP/DOWN to change the Cloud status, and as the Cloud status cycles the indicator will blink
- Press SEL to enable the cloud / Wi-Fi connection
- While DTAC is setting up connection with the Cloud "Co nn" with dots animation will then be displayed



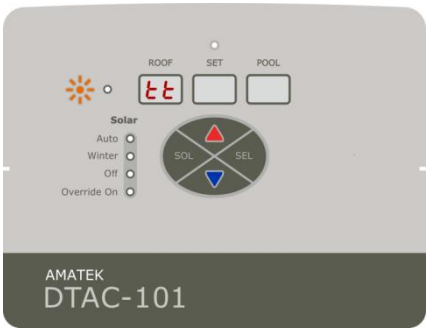


- Use the mobile App to enter the Wi-Fi passcode and wait for a few seconds
- If the Cloud is successfully connected, the display will show "5U CC E5"
- After showing the Cloud connection result, the software exits the Cloud menu
- To exit the configuration menu hold UP and DOWN or press SOL



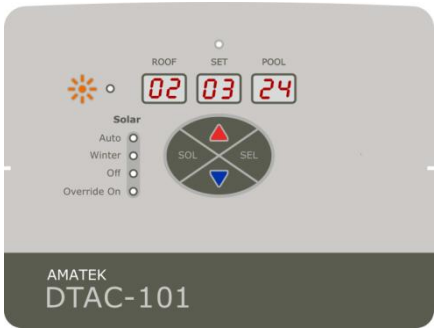
4.2.2 Set Time

- When "tt" is displayed, press the SEL button to enter the time menu
- The time will then be displayed in HH:MM:SS format and the selected digit will blink
- Press UP or DOWN to modify the blinking digit
- Press SEL to go to the next digit
- After all the 6 digits are configured, press SEL to save the newly set time and exit or SOL to exit without saving



4.2.3 Set Date

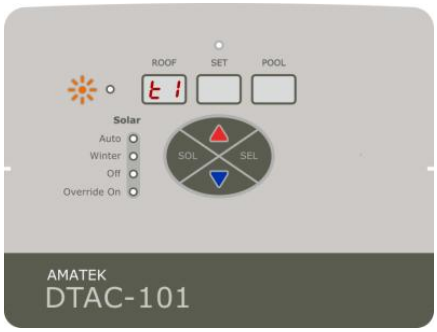
- When "dA tE" is displayed, press SEL to enter the date menu
- The system date will be displayed in YY:MM:DD format and the selected digit will blink
- Press UP or DOWN to modify the blinking digit
- Press SEL to go to the next digit
- After all the 6 digits are configured, press SEL to save the newly set time and exit or SOL to exit without saving

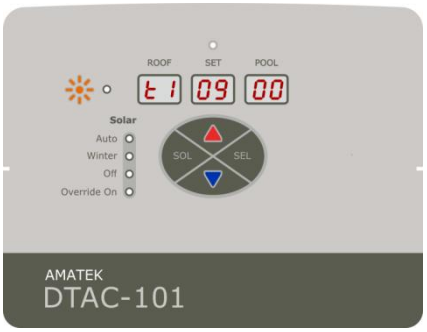


4.2.4 Time Window 1

Time Window 1 allows user to set the first time window for the pumps to turn ON and OFF.

- When "t1" is displayed, press SEL to enter the menu
- The start time will be displayed in HH:MM format, and the selected digit will blink
- Press UP or DOWN to modify the digit
- Press SEL to go to the next digit
- Continue to press SEL until E1 and end time is displayed in the HH:MM format
- Repeat the above steps to configure the end time
- After the last digit is configured, press SEL to save and exit the "Time Window 1" setting or SOL to exit without saving

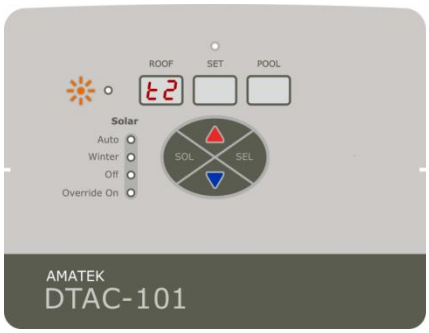


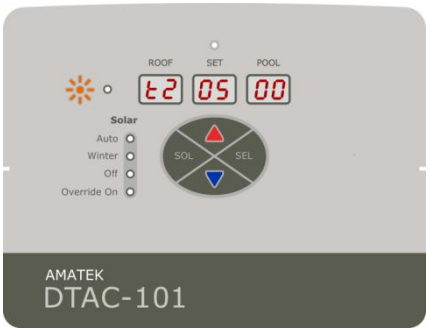


4.2.5 Time Window 2

Time Window 2 allows user to set second time window for the pumps to turn ON & OFF.

- When "t2" is displayed, press SEL to enter the menu
- Follow the same procedure as listed above for Time Window 1





4.2.6 Time Window Note

Note: Setting both time windows to 00:00 and 00:00 shall effectively turn off the controller.

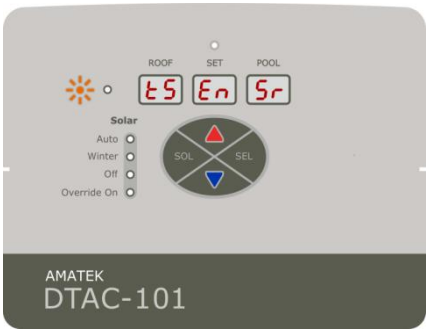
4.2.7 Temperature Sensor Selection

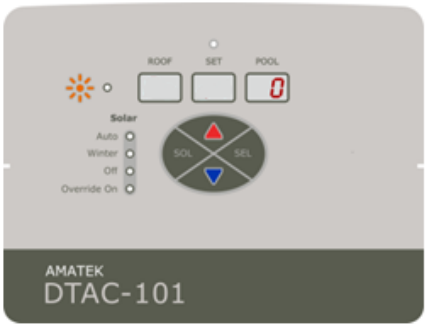
The temperature sensor menu allows one of three sensor types to be selected:

- 0 for a DTAC sensor
- 1 for a Dontek analogue sensor
- 2 for an Ascon sensor
- 3 for a DTAC wireless sensor (Reserved for a future release so do not select)

Pool and roof sensor types can not be individually selected, but are selected in pairs

- When "t5 En 5r" is displayed, press SEL to enter the menu
- Press UP or DOWN to choose the sensor type
- Press SEL to confirm, exit and save the selected sensor type or SOL to exit without saving





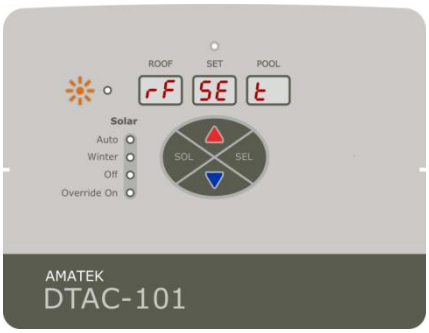
4.2.8 Roof Sensor Position

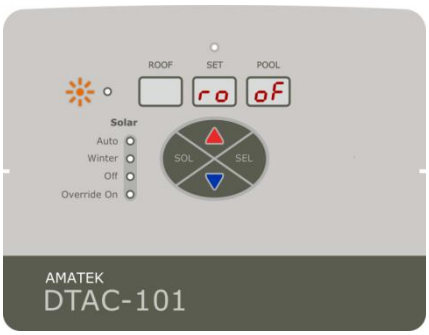
The roof sensor may be configured in one of two modes, with the DTAC start up default being Roof

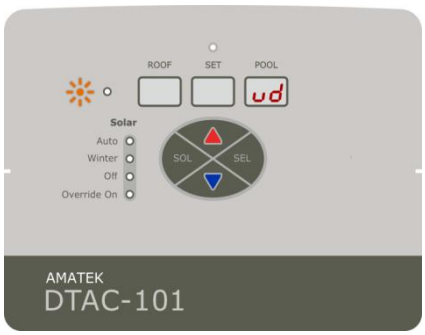
- Up / Down (ud on the display)
- Roof (rooF on the display)

When in Up / Down mode there is a pump priming period applied. When in roof mode, no priming period is applied for sensing roof temperatures.

- When "rF 5E t " is displayed, press SEL to enter the menu
- Press the UP/DOWN button to change to roof mode and "rooF" will start blinking
- Press the UP/DOWN button again to change to Up/Down mode and "ud" will start blinking
- Press SEL to save the selection and exit or press SOL to exit without saving

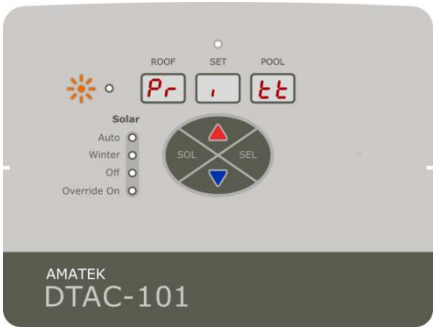


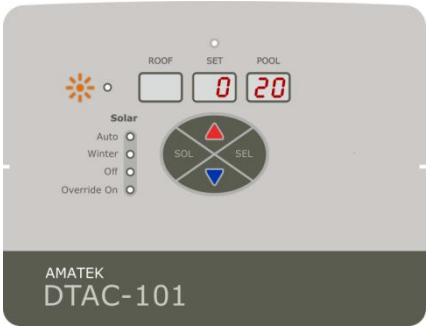




4.2.9 Priming Time

- When "Pri tt" is displayed, press SEL to enter the menu and the selected digits will blink
- Press UP or DOWN to modify those digits, and press SEL for the next digits
- Press SEL to save the configuration and exit or press SOL to exit without saving





4.2.10 Hysteresis

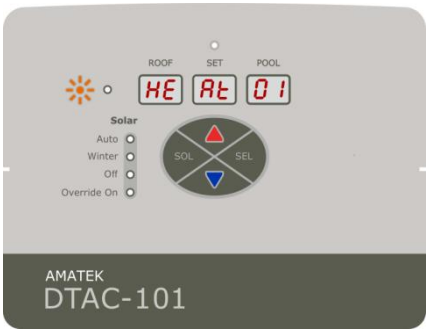
The hysteresis menu allows the selection of the differential, being the temperature difference limit that must be measured before the system changes state to heat or stop heating. The larger the difference, the less "hunting" the system will do to maintain temperature.

- When "HY 5t Er" is displayed, press SEL to enter the menu
- The hysteresis values range from 1C to 9C. The default value is 1C
- Press UP / DOWN to change the hysteresis value
- Press SEL to save the hysteresis value and exit or press SOL to exit without saving

4.2.11 Solar Gain

Solar heating gain is the difference between the measured roof and pool temperatures. When the solar heating gain is equal to or greater than the solar gain setting, the solar pump will operate. Solar gain can be set from 1C to 20C. The default solar heating gain is 1C**.**

- When "50 LA rG " is displayed, press SEL to enter the menu
- Press SEL to go into the solar gain menu and the solar heating gain will be displayed
- Press UP / DOWN to change the value
- Press SEL to save the solar gain value and exit or press SOL to exit without saving

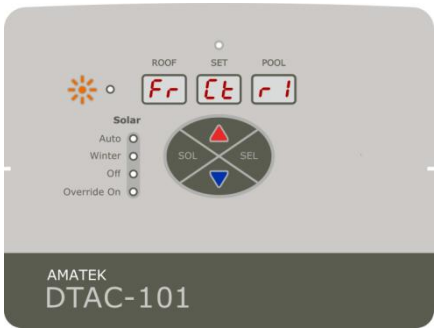


4.2.12 Freeze Control

If a system measures a roof temperature below the freeze control threshold, then it will run the solar pump for 3 minutes, and then wait another 30 minutes to check again. This will continue until the roof temperature rises above the freeze control threshold.

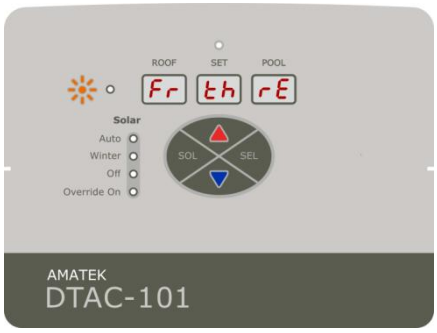
Note Well: Freeze Control will only operate when the Solar mode is set to Auto or Winter. If the Solar mode is off, then freeze control will not operate.

- When "Fr Ct r1" is displayed, press SEL to enter the menu
- The default freezing control state is "Off"
- Press UP or DOWN to change the freezing control state to "On" or "Off"
- The text "0n" or "0 FF" will start blinking if selected
- Press SEL to save the freezing control state and exit or press SOL to exit without saving



4.2.13 FreezeThreshold

- When "Fr th rE" is displayed, press SEL to enter the menu
- The default freezing threshold is 6 degree Celcius
- The freezing threshold range is from 0 degree to 6 degree.
- Press UP/DOWN to change the value.
- Press SEL to save the freeze threshold and exit or press SOL to exit without saving.



5 UNIT SPECIFICATIONS

5.1 Approvals and Ratings

Approval Certificate	NSW29186
Input	230VAC, 50Hz, 10A, 2.3kW
Max Total Output Load	9.9A 2.28kW
Insulation	Double insulated water circuit
IP rating	IP33 (Keep out of direct sun and rain)
Temperature	0C - 40C
Altitude	3,000m

5.2 Sensor Compatibility List

ASCON
MS3D Roof Sensor for Pool Pool / Spa Heating Controller
MS3D Pool / Cold Sensor for Pool / Spa Heating Controller
Dontek (M denotes meters)
TS02P (2.5M) [2.5M Shielded Cable - “Plus” Series suit AS5 AS2+ AS3+]
TS01P (20M) [Heavy Duty Poly Propylene - "Plus" Series suit AS5 AS2+ AS3+]
TS01SP (20M) [Shielded Cable - "Plus" Series suit AS5 AS2+ AS3+]
TS08P (50M) [50M Heavy Duty Poly Propylene - "Plus" Series suit AS5 AS2+ AS3+]
TS23P (100M) [Heavy Duty Poly Propylene - "Plus" Series suit AS5 AS2+ AS3+]

5.3 Power Relay Ratings

Contact Material	AgSnO2 AgCdO
Contact Rating(Resistive)	20A,25A/250VAC; 25A/277VAC
Motor Load:	2HP 240VAC Max
Switching Power	6925VA Max
Switching Voltage	277VAC Max.
Switching Current:	25A

5.4 Material Specifications

Housing	ASA UL940/V0
Silicon Seal	Silicon UL94/V0
Sensor Cable	Silicone.

6 WARRANTY AND LIABILITY

6.1 Warranty on Hardware

(1) Subject to the following clause (1) **SUPPLIER** warrants that the goods delivered by **SUPPLIER** shall be free from defects in material and workmanship.

(2) **SUPPLIER** shall be released from obligations in the event that the goods are subject to misuse, neglect, accident, improper installation or any unusual or unrecommended physical, environmental or electrical stress (including improper voltage or power surge) by **BUYER** or if repairs or modifications are made by persons other than **SUPPLIER's** own or authorised service personnel (unless such repairs by others are made within the consent of **SUPPLIER** which consent will not be unreasonably withheld in the case where such persons are reputable and adequately and properly trained)**.**

(3) Limited three year warranty, first year full warranty, second and third year back to base warranty.

(4) Amatek Design reserves the right to investigate, determine the cause of failure and replace or refund at its sole discretion.

6.2 Limited Software Warranty

(1) **SUPPLIER** does not warrant that software or firmware supplied under this Agreement:

(a) will operate error free;

(b) will operate uninterrupted while in use;

(c) will meet the customers requirements other than those set out in specifications accepted by **SUPPLIER**; or;

(d) will provide any function not designated in such specifications.

(2) **SUPPLIER** agrees to use its best endeavours to rectify or replace the software or firmware at its option and at its own expense when such defect has been detected by Buyer and notified to **SUPPLIER** in writing within 90 days of the software or firmware satisfactorily completing the relevant tests specified or prescribed by Buyer, provided the details of such tests have been advised by Buyer to **SUPPLIER** prior to delivery of the software to Buyer.

(3) If testing of delivered software has not occurred within 30 days of the date of delivery the software is deemed to be accepted by Buyer.

(4) If investigation of a problem reported vide clause (2) establishes that the cause of the report is not **SUPPLIER** software, **BUYER** agrees to pay on Invoice the charges for the effort expended by **SUPPLIER** in researching the reported problem.

(5) Subject to clauses (1) and (2) **BUYER** acknowledges that the goods including related software and firmware provided to **BUYER's** specification are of a design capacity, manufacture and performance as selected by **BUYER**.

(6) All conditions, warranties and representations on the part of **SUPPLIER** in relation to the goods or the software, whether expressed or implied, statutory or otherwise, whether collateral or antecedent hereto including but not limited to any warranty or condition of fitness for a particular purposes are hereby expressly excluded, provided that nothing herein contained purports to exclude, restrict or modify the operation or effect of any terms compulsory implied in this Agreement by virtue of any legislation.

(7) Subject to clause (6) **SUPPLIER** shall not be liable to any person for any special, general or consequential damages, including but not limited to loss or profits from any cause whatsoever arising out of or in any way connected with **SUPPLIER's** obligations under this Agreement

(8) **SUPPLIER's** liability under this Agreement shall be limited, at the option of **SUPPLIER** where goods or software are supplied to the replacement cost of the goods or software, the repair for the goods or software, or payment of the replacement cost of the goods or software.

(9) **SUPPLIER** further warrants that this Agreement does not in any way infringe upon any registered trademark, trade name or patent or upon the right entitlement or interest of any firm, person or corporation not a party to this Agreement pursuant to the Copyright Act or otherwise.

7 DTAC MODEL CROSS REFERENCE

#	Model	Feature							
		Solar Pump Relay	Main Pump Relay	Wireless Remote Support	Valve Relay	Heater Relay	VSD	Chlorinator Input	Energy Monitor
1	DTAC-101	✓		✓					
2	DTAC-101S	✓		✓			✓		
3	DTAC-102	✓	✓	✓	✓				
4	DTAC-102H	✓	✓	✓	✓	✓			
5	DTAC-102C	✓	✓	✓	✓			✓	
6	DTAC-102HC	✓	✓	✓	✓	✓		✓	
7	DTAC-102S	✓	✓	✓	✓		✓		
8	DTAC-102HS	✓	✓	✓	✓	✓	✓		
9	DTAC-102CS	✓	✓	✓	✓		✓	✓	
10	DTAC-102HCS	✓	✓	✓	✓	✓	✓	✓	
11	DTAC-101E	✓		✓	✓				✓
12	DTAC-101SE	✓		✓	✓		✓		✓
13	DTAC-102E	✓	✓	✓	✓				✓
14	DTAC-102HE	✓	✓	✓	✓	✓			✓
15	DTAC-102CE	✓	✓	✓	✓			✓	✓
16	DTAC-102HCE	✓	✓	✓	✓	✓		✓	✓
17	DTAC-102SE	✓	✓	✓	✓		✓		✓
18	DTAC-102HSE	✓	✓	✓	✓	✓	✓		✓
19	DTAC-102CSE	✓	✓	✓	✓		✓	✓	✓
20	DTAC-102HCSE	✓	✓	✓	✓	✓	✓	✓	✓
21	DTAC-101X	✓							
22	DTAC-102X	✓	✓		✓				
23	DTAC-102HX	✓	✓		✓	✓			

8 SYSTEM LOAD CALCULATOR

Use this calculator to record the system power. If the total power is greater than 2300W, then an AMATEK PS001A power separator MUST be used. Failure to do so shall void the DTAC warranty.

ACCEPTABLE SYSTEM LOAD EXAMPLE

ITEM	MODEL NUMBER	MAX (W)	POWER SOURCE
SOLAR PUMP	ONGA P100	700W	DTAC SOLAR
TOTAL DTAC POWER		**1,850W**	

UNACCEPTABLE SYSTEM LOAD EXAMPLE

ITEM	MODEL NUMBER	MAX (W)	POWER SOURCE
SOLAR PUMP	DXD 340A 4HP Circulation Pump	2,800W	DTAC SOLAR
TOTAL DTAC POWER		**2,800W**	

CALCULATE YOUR SYSTEM POWER BEFORE INSTALLATION.
TOTAL PS001A POWER IS TO BE < 2,400W
TOTAL DTAC POWER IS TO BE < 2,300W

ITEM	MODEL NUMBER	MAX (W)	POWER SOURCE
SOLAR PUMP			DTAC SOLAR
TOTAL DTAC POWER			

PREPARED: PS	**DATE:** 5/11/23	**PROJECT**: DTAC-101
APPROVED: SB	**DATE:** 15/5/24	**DOC NUMBER:** A100J101F080D010R004
STATUS	**RELEASE**	

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