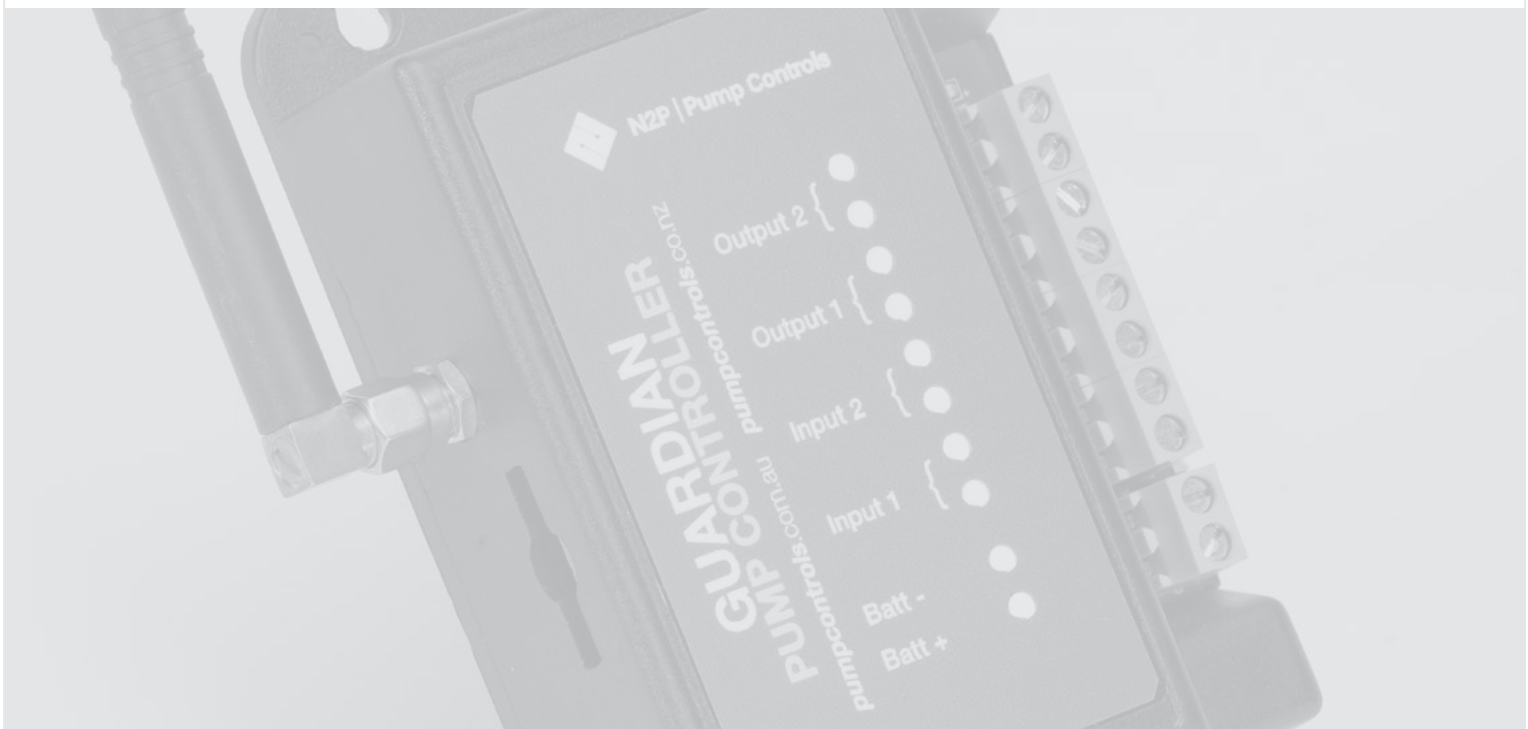




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Guardian Pump Controller

Installation and Instruction Guide



OVERVIEW:

The Guardian controller monitors battery voltage, input, and output status of up to 2 devices. Up to 10 mobile phone numbers can be programmed to receive status messages.

CONTROLLER SPECS:

Supply Voltage: 12 to 30 Volts DC

Max Current: 800mA

Quiescent Current: 20 mA

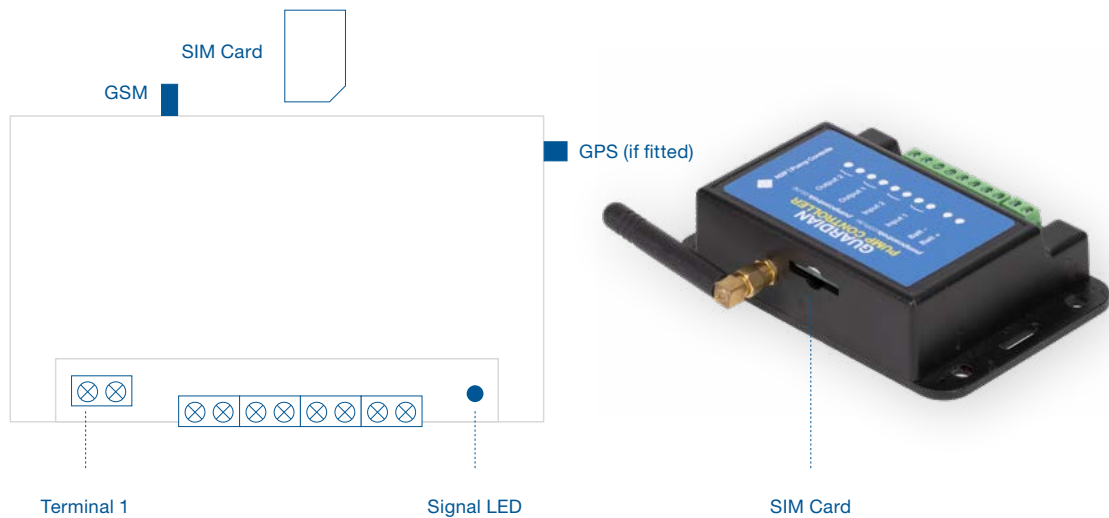
Relay Outputs: 3A resistive @ 125VAC

Refer to attached wiring and circuit diagram when installing the controller.



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1. SYSTEM DIAGRAM



LED Signal :

Flash every second = cellular network not found (out of coverage range)

Flash every 3 seconds = cellular network found (all OK)

Installation Instructions

1. Before setting up the Guardian for the first time, check that your SIM card:
 - is not locked
 - does not have a PIN
 - has been activated by a network provider
2. Insert SIM card into back slot (see diagram on page 3) and power up the unit. Wait a few minutes, as the Guardian will set auto-band and other country-specific details.
3. Wait for LED to flash once every 3 seconds before sending any commands.

IMPORTANT!

For all text commands, spelling and spaces **must be input exactly as shown.**

If anyone other than a programmed user sends a text message or the command sent is not an exact match, the system will generate an error message.



Inputting Phone Numbers

All mobile phone numbers must be entered in the international number format, e.g., +642121234567 or +6140812345678. Do not use the preceding 0.

Set Initial User (first time only)

Command: Set User

The unit will pick up the user's number from the incoming text.

If initial user setup is successful, the system will issue a confirmation message.

NOTE: The initial user may be the installer who set the system up. To remove the installer's number and add users, see "Remove Administrator" on page 4.

2. COMMANDS

Add User

Command: Add User +[number]

NOTE: Before adding a user for the first time, you must set your initial user. See page 4 for instructions.

All digits must be numbers, other than the leading +. If the number doesn't fit the required format or you don't use a +, you will receive an error message.

If the user's number is already on the list, the Guardian will let you know.

Remove User

Command: Remove User +[number]

NOTE: You cannot delete the only user.

If the number you enter is not on the list, the Guardian will let you know.

Add Administrator

Command: Add Admin +[number]

Once the administrator has been added, the Guardian will accept commands from this

number only. Other users may receive texts but cannot issue commands.

If the admin has already been set, the Guardian will let you know.

Remove Administrator

Command: Remove Admin

This removes the administrator from the user list completely. It does NOT downgrade the admin to a normal user unless this is the only number in the system. If so, the system will generate the reply:

This number has been changed from administrator to a user

Get List of All Users

Command: User List

This will list the mobile number of each programmed user. If there are too many user numbers to display in one text, a second text will be sent showing the remaining numbers.



Restrict Access

Command: User Lookup ON

Command: User Lookup OFF

(System default = ON)

If User lookup is ON, the Guardian will respond only to numbers that have been programmed using the Add user command above.

If User lookup is OFF, the Guardian will respond to any number that sends the correct command.

Text All Programmed Users

Command: Text All ON

Command: Text All OFF

(System default = ON)

If Text all is ON, the Guardian will text all programmed users the reply to the command.

If Text all is OFF, the Guardian will text only the number that initiated the command.

NOTE: This command does not affect inputs.

Get List of Inputs

Command: Input Status

The above command will generate the reply:

Currently, [Input1] is [ON/OFF],
[Input2] is [ON/OFF]

Get List of Outputs

Command: Output Status

The above command will generate the reply:

Currently, [Output1] is [ON/OFF],
[Output2] is [ON/OFF]

(Re)name Inputs and Outputs

This command is used to change input and output names.

System default names are:

- Input1, Input2
- Output1, Output2

The input or output name you choose may be up to 20 characters and contain a hyphen (-) but NO spaces or underscores, e.g., Pond-pump.

NOTE: The product does not support special characters.

Command: Change [input/output name] to [new input/output name]

Examples:

- Change Input1 to Alarm
- Change Output1 to Pump

Once the input or output name has been changed, it must always be referred to by its new name (e.g., Alarm). When replying to commands or status inquiries, the Guardian will respond using the new name.

The system will let you know if:

- The input/output you are trying to rename is not currently on the list
- The message format is not understood
- The new name chosen does not meet the naming requirements

Otherwise, you will receive a confirmation message that the input or output name has been changed.



AV Acknowledge Alarms – Set Input Tickoff ON or OFF

If input tickoff is ON and [input name] is on, the Guardian will send a reminder text every 5 minutes (up to 100 times) until the command Tick [input name] OFF is sent.

To turn this feature ON:

Command: Make [input name] Tickoff ON

To turn the feature OFF:

Command: Make [input name] Tickoff OFF

To dismiss text alerts that [input name] is ON:

Command: Tick [input name] OFF

Program Input ON Message

Inputs can be programmed with a reply message. If this feature is programmed, when the input turns ON, you will receive the programmed message. When the input turns OFF, no message will be sent unless an Input OFF message has been added.

The programmed message can be up to 6 words (10-character max per word)

Examples:

- Input1 = Sewage pump 1 fault
- Input2 = SW Pump station high

To program the ON message for Input1:

Command: Message1 Sewage Pump 1 Fault

If successful, the system will reply:

The Input1 ON reply message has been set to: Sewage pump 1 fault

To program the ON message for Input2:

Command: Message2 SW Pump Station High

If successful, the system will reply:

The Input2 ON reply message has been set to: SW Pump station high

Program Input OFF Message

If this feature is programmed, when the input turns OFF, you will receive the programmed message.

The programmed message can be up to 6 words (10-character max per word)

Examples:

- Input1 = The paddock pump is off
- Input2 = The gate is now closed

To program the OFF message for Input1:

Command: Offmessage1 The paddock Pump is OFF

If successful, the system will reply:

The Input1 OFF reply message has been set to: The paddock pump is OFF

To program the OFF message for Input2:

Command: Offmessage2 The Gate is Now Closed

If successful, the system will reply:

The Input2 OFF reply message has been set to: The gate is now closed

Turn Output ON or OFF

Command: Turn [output name] ON

Command: Turn [output name] OFF

Example: Turn Generator ON

If successful, the system will reply:

[Output name] has been turned ON/OFF

If the item named is not an output or the command format is incorrect, the Guardian will let you know.



3. TROUBLESHOOTING

Behaviour	Cause	Identified Solutions
LED not flashing	No power	Check power supply
LED flashing fast: 1 flash per second – no slow flashing	The Guardian cannot find the cellular network.	<ol style="list-style-type: none">1. Replace aerial with high-gain aerial2. Move unit to different location3. Install SIM card4. Remove SIM card PIN5. Unlock SIM card
LED flashing slow: 1 flash every 3 seconds but no texts sent or received	The Guardian can find the cellular network but the signal strength is low.	<ol style="list-style-type: none">1. Replace aerial with high-gain aerial2. Move unit to different location3. Register SIM card with network provider4. Ensure credit on SIM card