

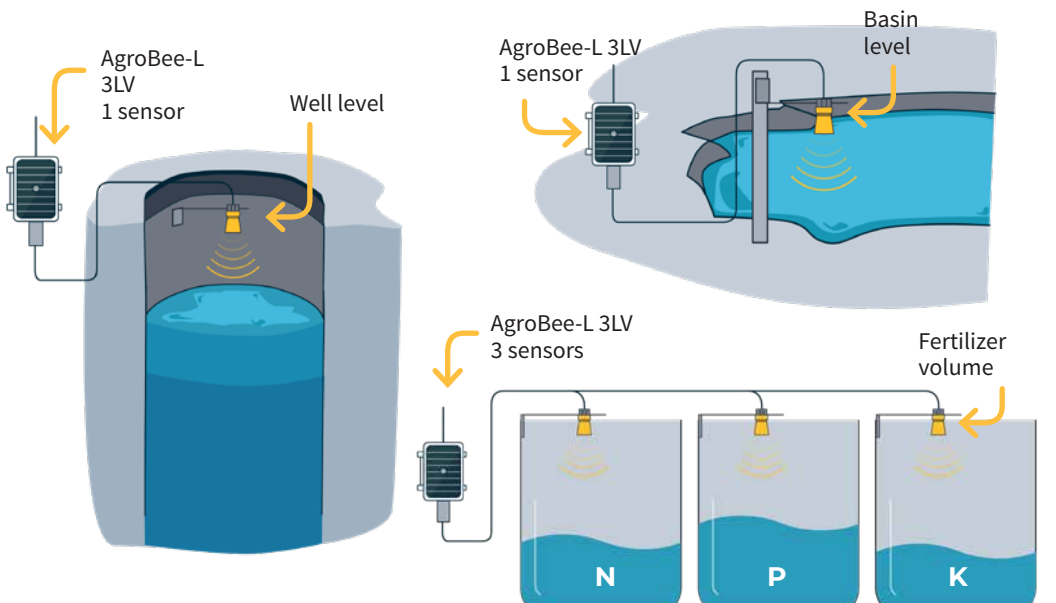
AgroBee-L Manual

AgroBee-L 3LV System

Very low consumption radio modules and integral components of the AgroBee-L system that provide measurements of distances, levels, and volumes by reading ultrasonic sensors, which are part of the controller.

The AgroBee-L 3LV model offers the following, according to the available format:

- 1 ultrasonic sensor:
 - sensor with TTL output for measurements up to 9 metres with 1mm precision
 - 1 counter or digital sensor or rain gauge input
- 2 ultrasonic sensors:
 - 2 sensors with TTL output for measurements up to 9 metres with 1mm precision
 - 1 counter or digital sensor or rain gauge input
- 3 ultrasonic sensors:
 - 3 sensors with TTL output for measurements up to 9 metres with 1mm precision
 - 1 counter or digital sensor or rain gauge input



This module is powered by a 1.05 W solar panel + supercapacitors, already incorporated into the controller (no need to replace batteries).

The number of sensors used by a module (from 1 to 3) can be configured with the Module Reader or from the controller to which the module is associated.

For each sensor, if you like, the following parameters can be entered in the controller, which will allow you to determine the level and volume from the distance measured by the sensor:

- Total height [m]: distance from the sensor at level 0.
Example: with the sensor located at the top of a tank to measure its water level, the total height will be the distance from the sensor to the bottom of the tank.
The tank level can be calculated from this information and the measurement from the sensor.
- Surface [m²]: regarding the tank, it would be the area of its section.
The volume of the tank can be calculated from this information, the total height, and the sensor's measurement.

These sensors' reading rates can be selected from 3 different values: 5, 10, or 20 minutes, with the default value being 5 minutes.

Material supplied along with the purchase of the AgroBee-L 3LV:

- Sensors (1, 2, or 3)
- 7 metres of cable
- Support for each sensor.

Technical characteristics

Power supply		
Power supply:	3LV: Solar: 5V / 1,05W → 3,3V	Panel plus high capacity supercapacitors
Energy consumption: 3LV	Average consumption: 0.90 mW	

Outputs		Inputs	
Number	3	Maximum distance between sensor and AgroBee-L: 50m	
Type	5 Vdc (Sensor power supply) Maximum current: 50 mA	Number	1
		Type	For potential-free contacts
		Number	3
		Type	Digital (TTL)

Environment		Box dimensions 3LV	
Temperature	-10 °C a +60 °C	Height	150 mm
Moisture	< 95 %	Width	100 mm
Altitude	2000 m	Depth	70 mm
Pollution	Grade II	Weight (approx.)	0,4 Kg



This symbol indicates that electrical and electronic controller must not be disposed of along with household waste at the end of its useful life. The product must be taken to the corresponding collection point for the recycling and proper treatment of electrical and electronic controller in accordance with national legislation.

Declaration of conformity

This system conforms with the regulations and other regulatory documents in the following list:



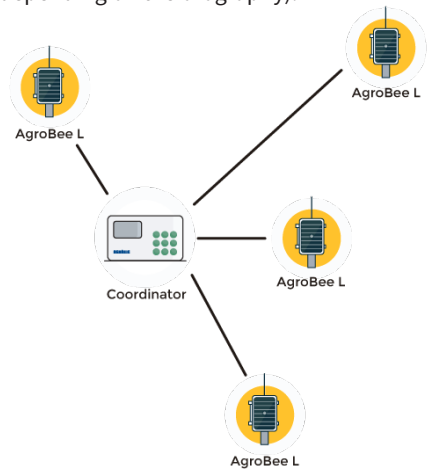
Electrical	Low voltage directive 2014/35/EU	UNE-EN 62368-1:2014+AC:2015+AC1:2015+AC2:2015+AC:2017-03+A11:2017 <i>Audio and video equipment, information and communication technology. Part1: Security requirements.</i>
EMC	Directive 2014/53/EU	ETSI EN 301 489-1 Ver. 2.1.1.1 – <i>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU.</i> ETSI EN 301 489-3 Ver. 2.1.1.1 – <i>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU.</i>

AgroBee-L System Operation

The AgroBee-L radio modules are used for the activation of valves and other irrigation elements, as well as the reading of sensors and meters. It is very low consumption and follows the LoRa radio modulation, which operates in the 868MHz, 433 MHz and 915 MHz, free bands, obtaining radio coverage of up to 2500 m between two points (depending on the orography).

Currently, they can be incorporated into the Agrónic 2500, Agrónic 5500 and Agrónic Bit Con fertirrigation controllers.

The AgroBee-L system consists of a coordinator device (located in the Agrónic 2500, Agrónic 5500 or Agrónic Bit Con controllers) and by field elements with different functions, depending on the model in question. This system does not include the use of repeater elements, so all modules must connect directly with their coordinator. The field modules manage their consumption by activating the communication in the precise time of the exchange; the rest of the time, they are asleep or attending to irrigation control.



Its low consumption allows it to operate with a solar panel integrated into the module and supercapacitors or battery (depending on the model). The solar panel stores the energy in the supercapacitors/battery, offering a long operational life. It is only necessary to replace batteries in models that include batteries instead of supercapacitors.

The maximum number of modules that an Agrónic controller can manage is 20 units in standard mode, which can be configured as modules of any of the available types. There is also a priority mode, which makes it possible for the modules to communicate more often: in this case, the number of modules (10) is halved.

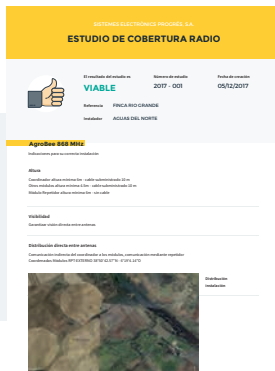
To use AgroBee-L modules, it is necessary to assign their outputs to the sectors or generals of the controller in question, and their inputs to the digital, analog, or counters sensors.

The AgroBee-L system has the following features, among others:

- Operation in 868 MHz, 433 MHz and 915 MHz free bands.
- Availability of 13 communication channels plus 18 transmission modes, which allow for the operation of more than one network in the same area working on the same channel.
- Availability of network code, which allows for filtering the information of several networks configured with the same parameters.
- Self-adjustable communication rate according to the chosen transmission mode and the timing mode:
 - Timing in standard mode (60 –200”). Up to 20 modules.
 - Timing in priority mode (30 –100”). Up to 10 modules.
- Distances of up to 2500 metres between any module and its coordinator (depending on the orography).
- Manual actions, consultations, and configuration of the network number, channel, transmission mode, and communication timing (standard/priority):
 - In-situ: Through the Module Reader
 - From a distance: Through the Agrónic
- Battery/charge level reading and solar panel (if any).
- Reading SNR level (signal-to-noise ratio) reception in the module and coordinator (in [%]).
- Reading the status of the last 16 communications and remaining time indicator until the next communication.

Installation

For the supply of radio controller, it is essential to have a coverage study. This study verifies the viability of the system according to the profile of the terrain, the location of the points to be controlled, and the distance between them. The study is delivered along with the controller offer.

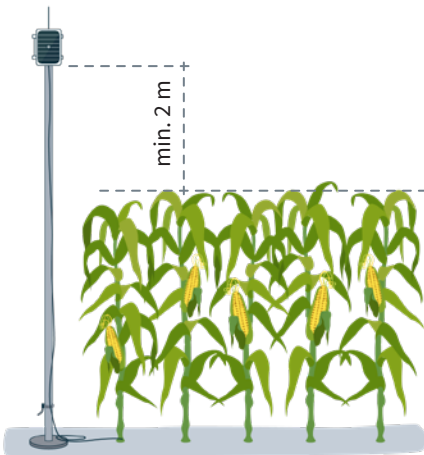
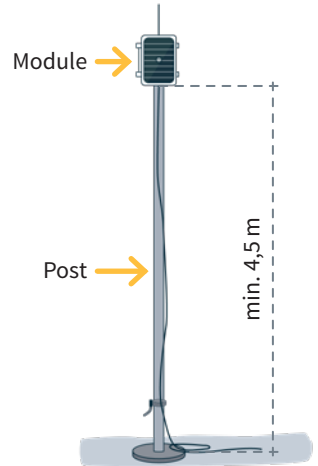


INSTALLATION OF MODULES

The AgroBee-L modules have the antenna integrated into the module, so they are installed on top of a post.

For good radio communication, it is very important to place the modules in areas free of vegetation, walls, and metal structures.

The minimum recommended height to place the module is 4.5 metres from the ground. If there are tall crops (corn, trees, ...) this minimum height of the module must be increased by 2 metres above the height of the crop. In all cases, it must always have direct visibility with the controller's antenna that sends the information (coordinator located in Agrónic). The 7 metres of cable supplied already include these assembly recommendations.



To increase the coverage, and if necessary, the best system is made by raising the module as high as the length of the cable allows.

The modules with solar panels must be placed orienting the panel to the South (Northern hemisphere) or North (Southern hemisphere) to obtain the best solar coverage.

To keep it watertight, it is necessary to always leave the lid closed.

The modules can be fixed on a 35 to 45mm post by means of the support and flange, incorporated (Stainless steel worm-drive clamp size 32-50 mm DIN3017) in such a way that the cable output passes through the inside of the post.



Flange



Folding posts

It is recommended to install it on folding or extendible posts for easy access to the module.

INSTALLING ULTRASOUND SENSORS

Ultrasound sensors should always be installed at a distance greater than 50 cm from the nearest surface to be measured. The sensor must be placed at least 50 cm above the maximum level at which the tank can be.

IMPORTANT

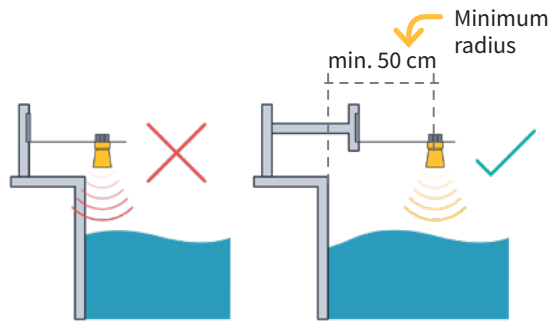
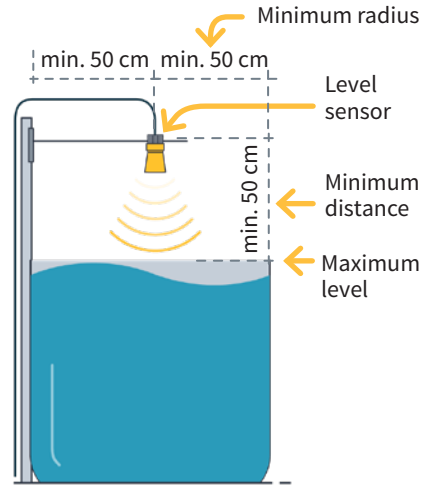
Do not manipulate or try to disconnect the cable connected to the sensor as this could be damaged and stop working.

The sensor must be well-fixed in its location by means of the mount provided. It is important that it be well-secured and not move at all, since this would alter the result of the measurements.

There must be no object between the sensor and the surface to be measured.

Since these sensors use sound to operate, they **DO NOT WORK IN VACUUM CONDITIONS**, since there is no air for sounds to propagate.

Do not place the sensor next to a wall or any other surface that is parallel to the sensor's central axis. The minimum distance that a sensor must be with respect to any surface parallel to its axis is defined by the supplied mount.

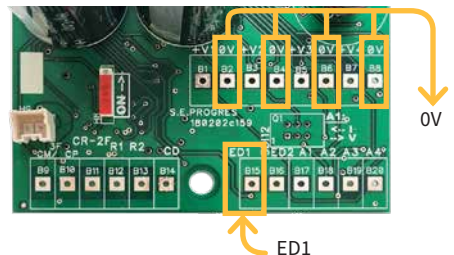


Inputs and Outputs

DIGITAL INPUTS (DIGITAL SENSOR)

There is 1 digital input in an AgroBee-L 3LV module, which can function either as a digital input or counter/rain gauge input. When the input is connected to a counter, the minimum time between pulses must be 0.1 seconds and an anti-bounce filter may be enabled in order to avoid accumulating undesired pulses. Maximum allowed distance between AgroBee-L module and a digital sensor or meter is 50m.

This input must be connected by using a 2-wire hose installed through the cable gland that is available in the module wall. One of the wires must be connected to the ED1 position that is labeled on the circuit, and the other one must be connected to any of the positions labeled as 0V.



DIGITAL-TTL INPUTS (ULTRASOUND SENSORS)

This model has 3 inputs for reading a maximum of 3 ultrasonic sensors. The module can support 1, 2, or 3 sensors:

- 1 sensor with TTL output for measurements up to 9 metres with 1mm precision
- 2 sensors with TTL output for measurements up to 9 metres with 1mm precision
- 3 sensors with TTL output for measurements up to 9 metres with 1mm precision

For this module, no action must be taken to connect the inputs, since 3LV model is already supplied with 1, 2, or 3 connected sensors, according to the selected option.

Each of the sensors come identified by the following markers: 1, 2, and 3, respectively.

CONNECTED SENSOR

Sensors (1, 2, or 3, according to the selected model) are supplied with a 7 metre hose that is already connected to the AgroBee-L 3LV, so it is not necessary to make any additional connection. A mount for each sensor is also supplied to facilitate their installation.

Settings






For any AgroBee-L module to enter the correct operating mode, you must have an Agrónic controller (Agrónic 2500, Agrónic 5500 and Agrónic Bit Con) with the AgroBee-L option installed, which includes the internal coordinator and an antenna with 10 metres of cable. This can be verified by doing the following in the controller:

Consult → Communication → AgroBee-L → Status: Correct



In the same way, a module must be configured to communicate with the Agrónic with which you want to associate it. To do this (if the module is not already configured at the factory) you must use the Module Reader (or Agronic Radio Reader, LAR) consisting of a screen and four keys, that is connected to the AgroBee-L module through the only connector visible on the inside.

A wireless module reader is also available that allows you to perform functions without the need for a cable. Consult the wireless AgroBee Reader manual to learn about the steps to link it to the controller.

Press the  key to enter the main menu. Use the  and  keys to change the options within the menu. Use the  key to enter the selected menu option. Use the  key to return to the previous hierarchy's menu.

You will see the following options in the main menu:

- Consult controller
- Consult communications
- Consult digital and analog inputs
- Communication parameters
- Input-Output parameters
- Various parameters

NOTE

Once the AgroBee-L module is linked with an Agrónic, all the consultations and parameters are accessible through the Agrónic.

CONTROLLER QUERY OF AN AGROBEE-L MODULE

General query menu of the module, where the following parameters are displayed:

- Module and serial number:
 - Module: It refers to the module number (1 to 20) according to the established communication parameters. There can only be one same module number for each Agrónic.
 - Serial number: Information regarding the controller. It comes from the factory.
- Battery voltage and solar panel:
 - Vbat: Battery voltage:
 - Panel+Supercapacitors: Maximum value: 3.4V; Minimum value: 2.2V
 - Panel+Battery: Maximum value: 4.2V; Minimum value 3.4V
 - Vsol: Voltage of the solar panel

These same data can be viewed in the Agrónic by accessing “Consult - Communications - AgroBee,” as you will see in the next section.

CONSULT COMMUNICATIONS IN AN AGROBEE-L MODULE

Communication consultation menu of the module, where the following parameters are displayed:

- Transceiver: Type of emitter installed in the module. It tells you if the module works at 868MHz/433MHz or 915MHz
 - RN2483 (868MHz/433MHz)
 - RN2903 (915MHz)

- Band and transmission mode:
 - Band: 868MHz, 433MHz, 915MHz
 - Transmission Mode: 1 to 18 (mode 5 will be set by default)
- Consult parameters of the communication type:
 - Channel: 1 to 13
 - Network code: It is usually the associated Agrónic serial number
 - BW: Bandwidth of the radio modulation (125KHz, 250KHz, 500KHz). It is set according to the transmission mode chosen in the communication parameters.
 - Radio modulation factor: SF7, SF8,..., SF12. It is set according to the transmission mode chosen in the communication parameters.
 - Communication status:
 - Status message:
 - Correct Communication
 - Network error
 - Communication error
 - Model error
 - Does not communicate
 - Signal-Noise ratio of the last received message: Reliable communication if >40%.
 - Time until next radio emission: time in [s]
 - Status of the last 16 communications (the previous communications appear on the right side of the screen):
 - 1: It indicates that the emission has been made and the correct information received in the last communication
 - 0: Indicates that the radio emission has been made, but the correct data has not been received or no data has been received

Part of this information is available through the Agrónic by accessing “Consultation | Communications | AgroBee”, where you can also see the query regarding the controller and the parameters of the communication.

CONSULT COMMUNICATIONS
 AgroBee-L 868
 Status: Correct
 Timing: 60”
 Channel: 01 TX Mode: 05
 Network code: 00001

CONSULT COMMUNICATIONS
 M01 (ns. 236) V1.00
 Status: Correct (40”)
 Level: 80% / 82%
 Vbat: 04.0 V Vsol: 05.8 V
 1111111111111111

Menu to check the status of digital inputs, counters, and 3LV inputs.

The information shown on the different screens is as follows:

- Consult digital inputs: For each of the digital inputs available to the module in question, its status is shown either as '0' (open contact) or '1' (closed contact).
- See accumulated counter sensors: The total number of pulses detected will be displayed for each digital input configured as a counter sensor. If this entry is not configured as a counter, the text 'N-A' (Not-Activated) will appear.
- See instant flow rate (time between pulses): The time in [ms] between the last 2 pulses detected will be displayed for each digital input that is configured as a counter sensor. If this entry is not configured as a counter, the text 'N-A' (Not-Activated) will appear.
- Consult digital ultrasonic sensors: For each of the available digital inputs, the value read is directly displayed and expressed in [mm]. If the sensor in question is not active, the text 'N-A' (Not-Activated) will appear.
- Check the supply voltage of the analog sensors: The value of the supply voltage sent to the active analog sensors is displayed in [mV].

From the Agrónic, press the '1' key in the module's consultation screen on the Agrónic to view the analog/digital inputs.

Nomenclature used in these queries:

- **EA** analog input values in mV an in 4-20mA format. 4mA=800mV and 20mA=4000mV. The number next to EA indicates the sensor number.
- **ED** status of digital inputs. With a '1' indicating that the contact is closed and a '0,' that it is open.
- **Vsen** value of the voltage in mV supplied to the sensors.
- **Error** sensor reading status. With a '1' indicating that there has been an error in the sensor reading: there is a figure for each of the sensors => The figure to the far right corresponds with sensor 1; the one to the far left corresponds with sensor 3.

AgroBee-L 02 3LV

EA1: 963

EA2: 1263

EA3: 1106







Vsen: 5125

Error: 000 ED: 1

COMMUNICATION PARAMETERS OF AN AGROBEE-L MODULE

The following parameters are in the Communication Parameters menu of the Module Reader, which allow you to establish the communication of a certain AgroBee-L module with a controller:

- **Module** Module number in the network. It is used to distinguish all modules that may be associated with an Agrónic. The module number cannot be repeated in the same Agrónic:
 - 1 to 20 (timing in normal mode)
 - 1 to 10 (timing in priority mode)
- **Band** Frequency Band:
 - 868MHz or 915MHz (default value, depending on the model)
 - 433MHz (only available in models that also support 868MHz band)
- **Channel** Frequency channel number:
 - 1 to 13 (independent from the band used)
- **TX Mode** Transmission method. Set the radio's transmission and reception parameters.
 - 1 to 18 (mode 5 set by default):
 - Mode 1: The shortest coverage length permitting the lowest lag time
 - Mode 18: The greatest coverage length, but with the most lag time
- **Timing** 2 timing modes:
 - Normal mode (recommended): It is automatically set according to the chosen transmission mode, but always includes the communication of up to 20 modules. Value between 60" and 200".
 - Priority mode: It is automatically set according to the chosen transmission mode and includes the communication of up to 10 modules. Value between 30" and 100".
- **Network code** It differentiates the information from several controllers with the same communication parameters (band, channel, and transmission mode). The Agrónic serial number is assigned by default.

To modify any of the sub-menu's fields, press . The screen will display that you are in edit mode. Use the  and  keys to set the desired value. Confirm with  or dismiss with . Press  to exit the menu and access the previous hierarchy's menu, which will change the parameters and let them take effect.







For an AgroBee-L module to establish communication with a certain Agrónic, you must set, through the reader, the parameters that have just been described, according to those established in the Agrónic in question. In the Agrónic, you can modify these parameters in 'Parameters | Installer | Communications | AgroBee | Coordinator':

AgroBee-L
Channel: 01
Network code: 00001
Timing: standard
Band: 868MHz
TX Mode: 05

INPUT-OUTPUT PARAMETERS OF AN AGROBEE-L MODULE

In the Input-Output Parameters menu of the Module Reader, you can set the parameters of the AgroBee-L module's different inputs and outputs, available through the following sub-menu:

- **Digital Inputs** Configuration of digital sensors or counters.
 - Configuration of functions of each of the available digital inputs:
 - Digital input
 - Counter
 - Anti-bounce filter: only applicable when digital input is setup as counter. A filter time between 0.0" and 10.0" can be fixed, and it represents the minimum time that a contact must be closed to count a new pulse. Same time is considered for all the inputs of the module. This filter time can only be setup by using the Module Reader (it cannot be setup from the programmer to which this module is linked).
- **Sensors** Configuration of ultrasonic sensors. You will have the following options:
 - Sensor 1: Active / Non-Active Input
 - Sensor 2: Active / Non-Active Input
 - Sensor 3: Active / Non-Active Input
 - Reading rate: 5min (default), 10min, 20min

To modify any of the parameter's fields, press . The screen will display that you are in edit mode. Use the  and  keys to set the desired value. Confirm with  or dismiss with . Press  to exit the menu and access the previous hierarchy's menu, which will change the parameters and let them take effect.

IMPORTANT

The detailed input/output parameters can also be entered in the Agrónic. In this case, the module will receive the parameters upon communicating with it. If not, and these parameters have been changed through the Module Reader in the same module, the Agrónic will receive and update said parameters.

To modify these parameters from the Agrónic, you must access "Parameters – Installer – Communications – AgroBee – Module." Specify the module number in the Agrónic network in question, after which you will see the following screens to modify the detailed parameters (see the Agrónic manual in question for more details).

```
AgroBee-L 01
Timing: 05'
S1:[yes][no] S2:[yes][no] S3:[yes][no]
```

Afterwards, on the following screens, you can enter the total height and surface area for each sensor:

- **Total height** Value, in metres, of the distance between the sensor and the farthest limit of measurement. In the case of a tank in which you want to measure the level or volume of the liquid inside, the total height will be the distance between the sensor (located above the tank) and the bottom of the tank.
- **Surface** Value, in square metres, of the active surface. For a tank, the surface area will be the area of one of the sections of it.

These parameters are not used directly by the 3LV module. It is the Agrónic which, based on these parameters and the reading provided by 3LV module, calculates the water height and remaining volume.

AgroBee-L 01 Sensor 1 Total height: 00.000 m Surface area: 0000.000 m2	AgroBee-L 01 Sensor 2 Total height: 00.000 m Surface area: 0000.000 m2	AgroBee-L 01 Sensor 3 Total height: 00.000 m Surface area: 0000.000 m2
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FORMATS OF THE 3LV MODULE SENSORS:

The AgroBee-L 3LV module comes with 1, 2, or 3 physical ultrasonic sensors. Now, through the “total height” and “surface” data that are entered for each of them, it is possible to define up to 3 analog sensors for each physical sensor in the Agrónic to which a specific 3LV module is associated.

The notation of the inputs and outputs of the different Progrés controllers follows a standard format. For example, the coding of the analog inputs corresponding to a 3LV module in an Agrónic 2500 is as follows (see section “Parameters - Analog sensors” in the User Manual with the additional A-2500 / R-1751 option):

<i>3LV analog input notation</i>	
Input Codes	Parameter
30101	Direct measurement of sensor 1
30102	Height of water sensor 1(1): Total height of Sensor 1(2) – Direct measurement of sensor 1
30103	Volume associated with sensor 1: Surface area sensor 1(2) * Height of water sensor 1
30104	Direct measurement of sensor 2
30105	Height of water sensor 2(1): Total height of Sensor 2(2) – Direct measurement of sensor 2
30106	Volume associated with sensor 2: Surface area sensor 2(2) * Height of water sensor 2
30107	Direct measurement of sensor 3
30108	Height of water sensor 3(1): Total height of Sensor 3(2) – Direct measurement of sensor 3
30109	Volume associated with sensor 3: Surface area sensor 3(2) * Height of water sensor 3

(1): For a tank, it refers to the distance from the base of the tank to the surface of the water.
 (2): Parameter entered in the module’s configuration.

As you can see, the numbers of entries are encoded in five digits: the most significant indicates the device: in this case, AgroBee-L; the next two digits are used to identify the different AgroBee-L modules of an Agrónic; and the last ones are the entry number. In the previous table, all the sensors refer to the AgroBee 1 module. For example, if you would like to activate the volume sensor associated with the physical sensor 3 of the AgroBee-L 11 module, the coding of said input would be: 31109.

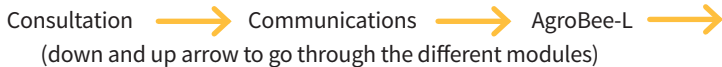
VARIOUS PARAMETERS OF AN AGROBEE-L MODULE

In the Various Parameters menu of the Module Reader, you can select the language among Spanish, Catalan, English, French, Italian, and Portuguese.

From this menu, you can also completely erase the module's data, restoring it to factory settings, maintaining the serial number and the model.

Battery levels and radio signal/quality

You have already seen how to consult the different parameters of an AgroBee-L module through the Module Reader. In the Agronic to which the AgroBee-L module is associated, it also shows the battery information and radio link performance of said module.



The information provided is:

- Module number, serial number, and firmware version
- Signal level received by the Agrónic and the module. It is displayed in % and indicates the level of the signal-to-noise ratio.
- Advisable/recommended value > 40%
- Vbat: Battery level in mV:
 - Module with panel + supercapacitors: VBat max = 3.4 V; VBat min = 2.2 V.
- VSol: Voltage level delivered by the solar panel.

Estimated battery life

Battery life with standard communication rate mode 5: 60 seconds

Type	3LV
Panel + Supercapacitors ⁽¹⁾	< 3 days

(1): The duration of the battery with its maximum charge and without recharging. This case can occur when the solar panel does not recharge the battery (with clouds or fog).

Battery life is approximate since there are several factors that can affect consumption. Frequent reading of digital sensors (when counters are configured) shortens the duration. Likewise, if a priority mode rate is set, the battery life will decrease.

Conversely, for the 3LV model, if a higher sensor reading rate is selected, the battery life will increase.

Battery replacement you do not need to replace any battery in any case, since the power supply of the modules is based on a system of supercapacitors.

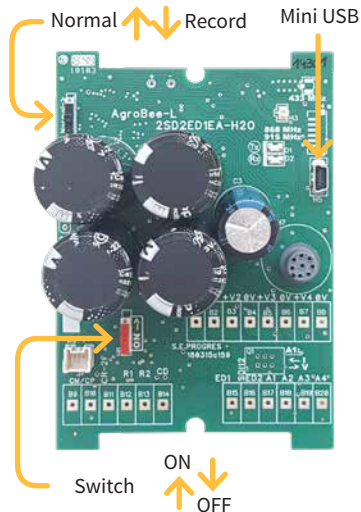
TURNING OFF THE CONTROLLER

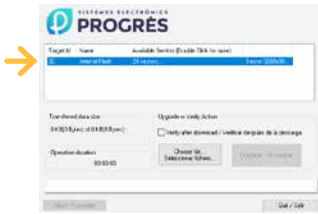
If a module does not find the Agronic with which it communicates, said module will follow its own course, and will send data every certain time, according to the established timing. However, in order to avoid possible collisions and/or interferences, the module will slightly offset the pre-established communication time. The consumption of an AgroBee-L module is practically unchanged due to the fact that it is not connected to any Agronic.

Updating the AgroBee-L module software

Whenever there is a new software version for an AgroBee-L module, the user can update it. To do this, you must perform the following steps:

- Have a computer with an Internet connection and a USB to miniUSB cable.
- Download the program “AgronicUpg” + “drivers” + update file (dfu) by typing this address bit.ly/actualizaragronic into the computer’s browser.
- Select and download the AgroBee-L folder.
- Go to the module and turn it off using the switch.
- Place the other switch inside the module in the recording position (by default, it is in the ‘Normal’ position).
- Connect the USB to the computer and the miniUSB to the module.
- Start up the module using the ON/OFF switch.





- On the computer, run the program “AgronicUpg”. If you do not see the “Internal Flash” line on the screen as seen in the image, you must install the drivers. If you already have the drivers installed, skip to the next step.
- To install the drivers, go to the files you have downloaded and select the folder that corresponds to your Windows version. Run the file “dpinst_” and

follow the steps. If you use Windows XP, call Progrés to help you with the installation.

- Press the “Choose file” button and select the file “xxx.dfu”. Once loaded, press the “Update” button and wait for the process to finish.
- Once the process is finished, the module is updated.
- To finish, turn off the module, disconnect the miniUSB cable, and place the second switch in the ‘Normal’ position.
- Finally, the module can be started up again.

Sistemes Electrònics Progrés, S.A.