Cellink 4G User manual
04/11/2020

Contents

Manual updates

2/2/12	1.4 - first version
15/12/13	1.4.1 - add safety precautions
22/1/14	1.4.2 - add SIM card installation
06/06/1918	1.4.3 – update 3G picture
01/11/20	1.5 – update 4G

This manual may contain mistakes or printing errors.
We accept no liability for technical mistakes, printing errors or their consequences.
Control units are supplied with default settings. These setting are only general settings and should not be final settings.
Final settings must be done by the end user.
We accept no liability for any consequences that may occur because of these settings.

Safety precautions

The Cellink unit has been designed to work reliably for many years. It is possible to program incorrect parameters (such as an incorrect phone numbers), and problems may arise with your local cellular company (busy lines, bad connection etc).
This unit has been designed with all this in mind and we have incorporated several safety functions to try and help overcome some of these problems.

Agrologic Ltd is not responsible in any way, direct or indirectly, for any damage that may occur as a result of not receiving a SMS text message, any delay in sending or receiving a SMS text message, busy or malfunctioning cellular network, or system failure of the product produced by Agrologic.

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1. Precautions for programming numbers (page 15)

When programming a new phone number, two SMS text messages will be sent by the Cellink unit.

1.1 The first SMS message will be sent to the new programmed number informing them that their number has been programmed into the Cellink unit and will now receive alert SMS messages. If they do not receive this message recheck the programming.

1.2 The second SMS message will be returned to the phone that is being used to program the Cellink. This SMS message will contain all the numbers currently programmed in the Cellink. This is to help confirm that the new number has been programmed properly. If this message is not received recheck the programming.

2. Daily confirmation SMS message precaution (page 16).

2.1 Each day at a user's predefined time, the Cellink unit will send a daily test SMS message indicating that the unit is in working order and connected to the local cellular network. If this SMS message is not received, the users should check immediately the Cellink unit to see that it is in working order.

It is highly recommended not to disable this function.

If this message is cancelled, the users have no way of knowing if the Cellink unit is operating properly or not. The time that the message is sent is set by the user.
To cancel the daily message, program the message time to 00:00.

3. Reminder delay and ring (6.0 Reminder delay / Cycle delay on page17).

3.1 After the Cellink unit transmits an SMS message indicating an alarm, it will send a "reminder" to the set list of numbers receiving the messages. Normally this "reminder" is in the form of a ring (like when you receive a call) and not a text message. This function is used to double check that the users have received the text message.

The time span between the text message and the first ring (and all following ring reminders) is set by the user. To stop the reminder ring, one of the programmed numbers must either call or send a text message to the Cellink unit.
By stopping the reminder ring, you have not cancelled the alarm. No further alarms will be received from the input that is the alarm state until the problem has been taken care of. Once the input returns to its normal state, be sure to check that the "End of alarm" message has been received.

It is highly recommended not to disable reminder ring function.

4. SIM card.

4.1 Cancel the PIN codes.

4.2 Cancel the Voice mail.

4.3 Please use a SIM card that has both SMS messaging and call functions.

The Reminder ring function makes use of the call ability. Please check that this option has not been canceled.

4.4 Use of prepaid SIM cards is not recommended.
The Cellink unit sends the daily message to all programmed numbers, thus slowly using up the prepaid service even if no alarm SMS messages are sent. Once the card has used all the paid services the Cellink will no longer send SMS messages.

5. Power failure.

The system contains a rechargeable battery for message sending in case of a power failure.
We strongly recommend that once a week you check the battery by unplugging the device from the electricity. Wait until you receive both the power failure message and the reminder ring. If you do not receive both, the battery must be replaced immediately. See Battery Alert messages on page 25.

6. Input checks.

Check all inputs at least once a month to see that you receive the alarm text message and the end of alarm text message. To check the input, you must create a situation that will cause the input to change from its normal state to an alarm state. Once you have received the SMS message and the reminder ring, return the input to its normal state and wait to receive the end of alarm message.

Insert SIM Card

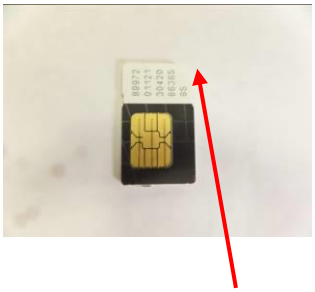


Photo 1 - SIM card
Diagonally cut corner

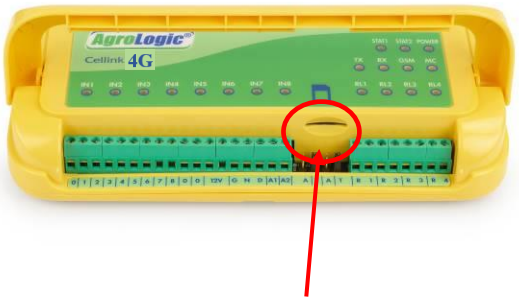
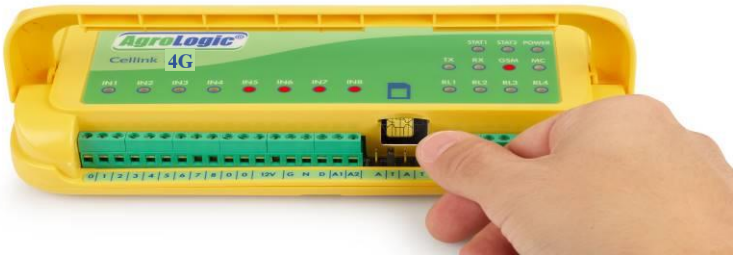


Photo 2 - SIM card slot

1. Hold the SIM card as shown in photo3. Make sure the diagonally cut corner of the SIM card is to your right.

Photo 3



2. Carefully insert the SIM card into the SIM card slot. See photo 4.
   Insert the SIM all the way into the SIM slot until you hear a click. See photo 5

Photo 4

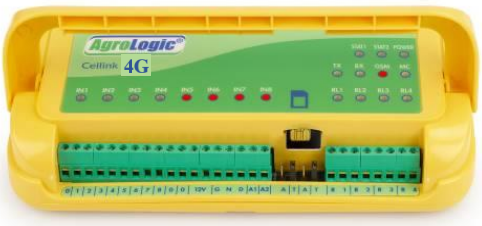
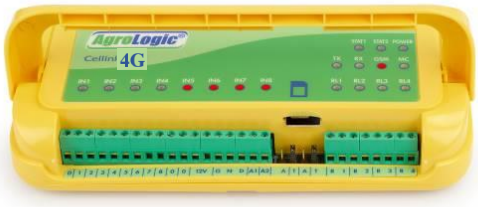
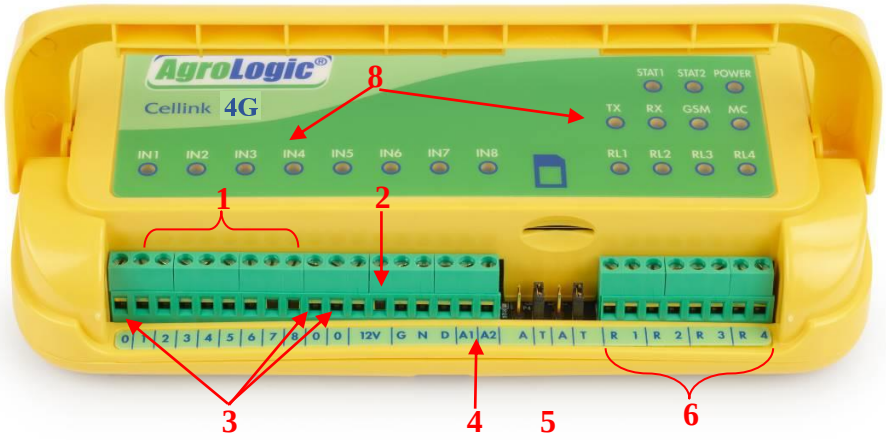


Photo 5



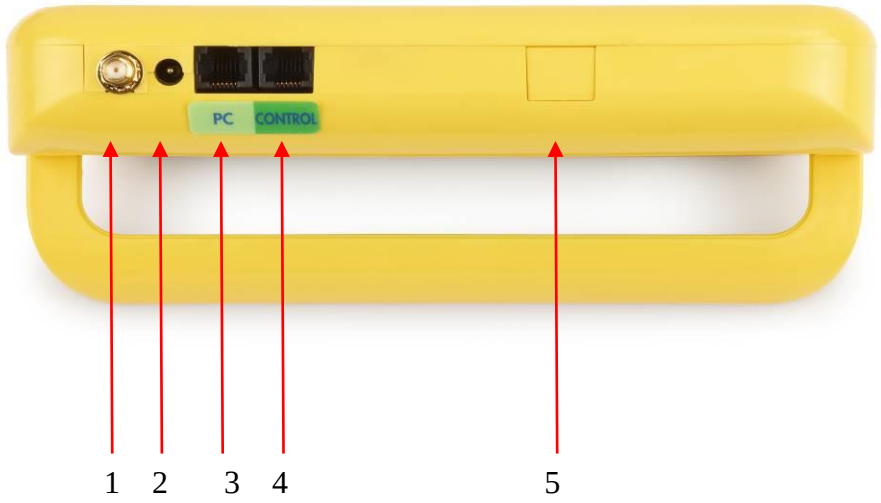
Cellink description

Front



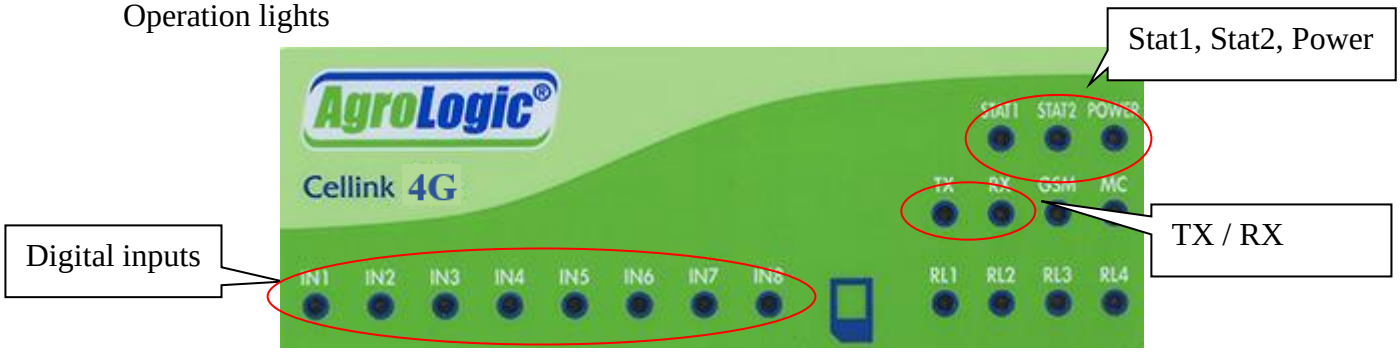
#	Description
1	8 dry contact digital inputs, each input has two programmable SMS messages
2	12VDC power output
3	Three ground connections
4	Two analog temperature inputs
5	SIM card holder
6	Four output relays for general use
7	Cellink operating lights

Back



#	Description
1	Antenna connector (use only the supplied antenna)
2	12VDC power input (use only the supplied transformer)
3	RS485 communication output connector (to USB AG box)
4	RS485 communication input connector (from Cellink control output)
5	Ethernet connector (not in all models)

Operation lights



Digital inputs

Operation lights	Description
IN1 –IN8	Each digital input has an operation light. When there is an alarm at one of the inputs the corresponding light will blink (approximately 4 times per second).

Power

Operation lights	Description
Power	Is on when the Cellink is plugged into an external power source.

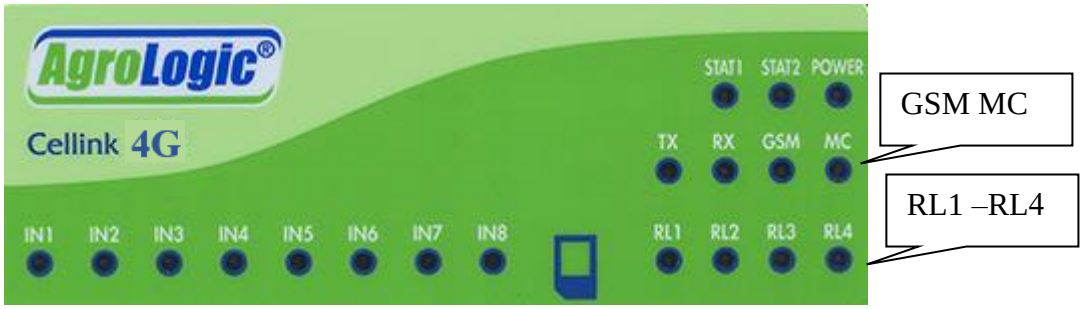
The Cellink unit has a rechargeable battery for use when the external power is out. Operation lights STAT1 and STAT2 are used to show different states of the battery.

Description	STAT1 On	STAT2 On
Battery Fast charge in process	✓	✓
Regular battery charge in process	✓	
Battery charge finished		✓
Battery charge faulty		
No battery	Blinking	✓

The Cellink unit checks the battery once a day. If the battery does not pass the test an SMS alarm message will be sent out.
Depending on how many SMS message are sent, the battery normally should last between 2-6 hours.
We strongly recommend that once a week you check the battery.

RS485 communication protocol

Operation lights	Description
TX	Blinks when Cellink is sending data
RX	Blinks when Cellink is receiving data



Operation lights	Description
GSM	1. Blinking on and off every ½ second: This pattern means that the Sim card is faulty, missing or that there is no reception. 2. Blinking 1/3 second on, 3 seconds off: This pattern means that the reception is good and the Sim card has been logged into the local GSM mobile service
MC	Normal pattern, slow blink. When the Cellink is sending or receiving a SMS message the light will remain either on or off.

Internal relays

Operation lights	Description
RL1 – RL4	Light on when relay is closed.

Quick setup guide

* Please note the usage of spaces in programming messages.
* The use of small or capital letters is not important.

1. Adjust internal clock

SMS message	Result
!**CSIM NUMBER** 14 (see page 11)	This message will set the internal clock and once every 14 days the Cellink will automatically resend the message.

2. Program digital input messages

SMS message	Result
!DS1 message text	First message for digital input 1
!DE1 message text	Second message for digital input 1
Use same format for all inputs that are used (see page 11)	

3. Define digital input status

SMS message	Result
!IOOOOOOOOINNV (see page 12)	All inputs set to NO / End of alarm message per input / Flash mode off / Internal relay 1 NO / Reminder set to regular ring mode
If the input in its normal state is NC then replace the **O** with **C**	

4. Program number list to receive SMS messages

SMS message	Result
!P1X (see page 15) (automatic programming)	This SMS message will automatically enter the mobile phone that sent the message as the first mobile phone in the list.
!P2 SIM number (see page 15) (manual programming)	This SMS message will place the used mobile number as the second number in the list.

5. Program numbers that receive SMS messages

SMS message	Result
!N12 (see page 15)	This SMS message will program the Cellink to send SMS messages only to the first 2 numbers in the list.

Quick information guide

SMS message	Result
?	Returns all numbers programmed in list and which ones receive the SMS messages. Version number
?I	Returns input setup
?C	Returns current time setting
?S	Returns system state
?DS1	Returns digital input 1 programmed start alarm message
?DE1	Returns digital input 1 programmed end alarm message
!GS	Displays signal strength using the units led's
!GX	Cancels signal strength display
?A	Returns analog 1 &2 sensor settings
?AN1	Returns analog 1 sensor settings
?AN2	Returns analog 2 sensor settings

Programming the Cellink unit

* Please pay attention to the placement of spaces in SMS programming messages!

1.0 Set internal clock

When first connecting the Cellink unit it is necessary to set the internal clock.
This is done by sending a SMS text message containing **!C** and the mobile phone number for the Cellink unit (this will be the same number that you send the SMS message to).
In order for the unit to self adjust the internal clock automatically, add an extra number which represents how often the unit will self adjust itself. This number is the number of days between adjustments.

SMS message	Result
!C0541234567 14	This message will set the internal clock and once every 14 days the Cellink will automatically resend the message.
?C	Returns current time and current state for inputs.
?S	Returns current time and current state for inputs

2.0 Digital inputs

2.1 Digital input message programming.

Each time the state of one of the digital inputs changes, the Cellink will send a programmed SMS message to the programmed GSM numbers.

It is possible to program each separate input with two individual messages using a GSM mobile phone or with the help of a PC program that can be used with a cellular modem.
Always start a SMS programming message with an **!** (explanation mark).

Example:

SMS message	Result
!DS1 message text	First message for digital input 1
!DE1 message text	Second message for digital input 1
!DS2 message text	First message for digital input 2
!DE2 message text	Second message for digital input 2

Example:

SMS message	Result
!DS1 Alarm in house	First status change at input 1 sends message "Alarm in house".
!DE1 End of alarm in house	Input 1 returns to normal state, message sent is "End of alarm in house".

Use the above format to program all 8 inputs.

Recall input text

SMS message	Result
?DS1	Returns the first message for digital input 1.
?DE1	Returns the second message for digital input 1.

2.1.1 Defining the 8 digital input statuses

Each input can be defined as normally open (NO), normally closed (NC), latch (L) or disabled (X).

All digital inputs are by default set as normally open.

All inputs are programmed using one SMS message.

Use the following format to program the inputs:
1. Start the SMS message with **!I**, where **I** stands for Input.
2. Next, enter for each of the eight digital inputs the capital letter **O (**normally open**)**, **C (**normally closed**) P (**pulse**)** or **X (**disabled**).**
The pulse mode is used when the digital input is connected to an output that uses short pulse such as is used in motion detection sensors. For more information on the Pulse mode see Hold time (page14).

After the last input there are four additional letters.
The first letter following the digital inputs defines the end of alarm message mode.
One of 3 letters can be used.
I= If **I** is used there will be an end of alarm message per input.
Y= If **Y** is used there will be a general end of alarm message for all inputs.
N= If **N** is used there will be no end of alarm message.
Default letter is **I**.

The second letter after digital inputs defines how the SMS message is received at the mobile phone.
One of 2 letters can be used.
F= If **F** (flash) is used the SMS message received will flash onto the mobile phone screen automatically.
N= If **N** is used the SMS message will be received normally (not Flash).
Default letter is **N.**
* Not all mobile phones support Flash mode.

The third letter after digital inputs defines how internal relay 1 is set.
One of 3 letters can be used.
A= If **A** is used, relay 1 will be closed (NC) and will open if one of the digital inputs is activated.
P= If **P** is used then relay 1 will be set to pulse mode. In this mode it is possible to send a SMS message which will close relay 1 for one second and then reopen it (see Internal relays).
N= If **N** is used the relay 1 will be open (NO) and can be closed and opened by sending a SMS message (see Internal relays).
Default letter is N

The fourth letter after digital inputs defines the Reminder mode (see Reminder).
One of 2 letters can be used.
V= If **V** is used, the reminder mode will activate a ring as is used for normal telephone calls.
N= If **N** is used, the reminder mode will work using an incoming data ring.
Default letter is **V**
* **N**ot all phones support incoming data.

Examples:

Setup	Result
!IOOOOOOOOYNAV	All inputs set to NO / General end of alarm message / Flash mode off / Relay 1 set as NC / Reminder set to regular ring mode
!ICCCCCCCCNFPN	All inputs set to NC / End of alarm message off / Flash mode on / Relay 1 set to pulse mode / Reminder set to data ring
!XCOCOCOCIFNV	Input 1 disabled / Inputs 2,4,6,8 set to NC / Inputs 3,5,7 set to NO / End of alarm message per input / Flash mode on / Internal relay 1 NO / Reminder set to regular ring mode
!IOOOOOOOOINNV	All inputs set to NO / End of alarm message per input / Flash mode off / Internal relay 1 NO / Reminder set to regular ring mode
?I	Returns the setup of the digital inputs.
Default setting is !IOOOOOOOOINNV	

2.2 Hold time

Hold time is used when one of the digital inputs is connected to an output that uses very short pulse (instead of NC or NO).

SMS message	Result
!Y20	The digital input that has been setup as L (instead of NC, NC or X) will have a end of alarm delay of 20 seconds. If the input receives a short pulse, the Cellink will send out the SMS alarm message for that input (after the set delay time (page 16) and then wait 20 seconds. If no pulse has been received after 20 the Cellink will send out the end of alarm message.

3.0 Mobile number receive list.

Up to 9 mobile numbers can receive SMS messages from the Cellink.

Each input can send messages to different numbers.

3.1 Automatic programming.

SMS message	Result
!P1X	This SMS message will automatically enter the mobile phone that sent the message as the first mobile phone in the list.
!P2X	This SMS message will automatically enter the mobile phone that sent the message as the second mobile phone in the list.

3.2 Manual programming.

SMS message	Result
!P3 054123123	This SMS message will place the used mobile number as the third number in the list.
?	Returns the list of mobile numbers and which numbers in the list will receive the SMS message

3.3 Deleting a number from the phone list.

SMS message	Result
!P2D	This SMS message will delete the second mobile number in the list.

3.4 Numbers in list that receive SMS messages

Which numbers in the numbers list will receive the SMS messages must be programmed.

SMS message	Result
!N1234	This SMS message will program the Cellink to send SMS messages only to the first 4 numbers in the list.
?	Returns the list of mobile numbers and which numbers in the list will receive the SMS message
Default setting is **N1**	

3.5 Individual numbers for each input

Each digital input can be programmed to send SMS messages to different numbers out of the list.

SMS message	Result
!DS1:1 Alarm in house 1.	Only the first number in the list will receive messages from input 1. The message will be Alarm in house 1.
!DS2:23 Alarm in house 2.	Only the second and third numbers in the list will receive messages from input 2. The message will be Alarm in house 2.

4.0 Message delay time

A time delay can be set to delay the sending of the first SMS message when there is a state change of one of the inputs. This delay is common for all inputs.

SMS message	Result
!DT0130	When there is a change in the state on one of the inputs, there will be delay of 1:30 before an SMS message is sent out.
!DT0130H	If the letter **H** is included at the end of the SMS message then the time period will be in hours and seconds.
Default setting is **0002** (two seconds).	

5.0 Daily SMS self check

Each day at a predefined time the Cellink unit will transmit a daily test SMS message indicating that the Cellink unit is in working order.

SMS message	Result
!T0800	This SMS message will program the Cellink to send the daily check message at 8:00 am.
!T0000	Daily check message cancelled.
Default setting is **1200**	

6.0 Reminder delay / Cycle delay

After a SMS message has been sent, a "reminder" can be sent to the list of numbers receiving the messages.
There are two types of reminder alarms.

6.1 Ring reminder.

The unit can be programmed to ring up the users that have received an SMS alarm message after a preset time.
The time format is in minutes only.

SMS message	Result
!ZT2	2 minutes after the SMS message has been sent the Cellink will ring up all numbers that received the SMS.
!ZT0	Ring reminder is deactivated.
Default setting is **2** (two minutes).	

The Ring reminder will continue every 2 minutes until:
- Alarm is cancelled.
- One of the numbers receiving the ring reminder returns an SMS message to the Cellink unit.
- One of the numbers receiving the ring reminder calls back the Cellink.

6.2 Cycle message reminder.
The unit can be programmed to resend the original SMS message after a set time period.
The time format in hours and minutes.

SMS message	Result
!RT0005	5 minutes after the SMS message has been sent the Cellink will send out again the SMS message to all numbers. This cycle will continue until the Cycle message is cancelled.
!RT0000	Cycle message reminder is deactivated.
Default setting is **0000**	

The Cycle message reminder will continue every 2 minutes until Alarm is cancelled.

7.0 On/Off time

It is possible to program the Cellink unit to be active only between certain hours of the day.

SMS message	Result
!ST0600	Cellink is active from 06:00
!ET2000	Cellink is inactive from 20:00
Default setting is 1200 to 1200	

*During the hours that the Cellink is off the only SMS message that will be sent is the daily SMS message check.

8.0 System enable/disable

It is possible to completely disable the system.

SMS message	Result
!!OFF	Cellink is off. The digital input lights will flash from 1-8 in an organ manner.
!!ON	The Cellink is on

*When the system is disabled the only SMS message that will be sent is the Daily SMS message check.

9.0 Lock code

It is possible to lock the Cellink in order to prevent unwanted changes being made to the unit. The code is made up of a combination of four digits.
To unlock the unit, send the code at the beginning of the message.
The GSM8 will remain unlocked for 10 minutes.

SMS message	Result
!K1234	The GSM8 unit now has a code (1234) that has to be entered in order to make any changes.
1234!DT0130	The Cellink has been unlocked and the delay time has been changed to one minute thirty seconds.
If the lock code is set as !K0001 then the GSM8 will remain unlocked.	
Default is no code	

10.0 Lock Network

It is possible to lock the Cellink onto the local cellular network and prevent roaming.

SMS message	Result
!HOME	This message locks the Cellink onto the local network and prevents roaming.
!HOMEX	Default setting. Allows roaming

11. Analog inputs

The Cellink has two inputs for analog sensors.
Connect sensor 1 to A1, GND and if necessary, to 12V.
Connect sensor 2 to A2 and GND and if necessary, to 12V.
For temperature sensors (Agrologic) polarity is not important.

11.1 Activate/deactivate the analog inputs for Agrologic temperature sensors

SMS message	Result
!#ON1	Activates analog input 1 for temperature sensor; temperature readout i in Celsius.
!#ON2	Activates analog input 2, for temperature sensor; temperature readout in Celsius.
!#ON1F	Activates analog input 1, for temperature sensor; temperature readout in Fahrenheit.
!#ON2F	Activates analog input 2, for temperature sensor; temperature readout in Fahrenheit.
!#OFF1	Deactivates analog input 1.
!#OFF2	Deactivates analog input 2.

11.2 Each input has three values that need to be set;

- High temperature set point
- Low temperature set point
- Hysteresis

SMS message	Result
!AN1 H30.0	Sensor 1 high temperature set point, 30°
!AN1 L20.0	Sensor 1 low temperature set point, 20°
!AN2 H25.5	Sensor 2 high temperature set point, 25°
!AN2 L-10.0	Sensor 1 low temperature set point, minus 10°
!AN1 S0.3	Sensor 1 Hysteresis, 0.3
!AN2 S0.5	Sensor 2 Hysteresis, 0.5
!AN1 H30.0 L20.0 S0.4	Sensor 1 high temperature at 30°, Low temperature at 20° and Hysteresis at 0.4°
!AN2 H25.0 L15.0 S0.4	Sensor 2 high temperature at 25°, Low temperature at 15° and Hysteresis at 0.4°
Default Hysteresis is 0.2°	

11.3 Activate/deactivate the analog inputs for sensors with Voltage output.

These values must be programmed.

- Minimum output volts (multiplied by 100)
- Maximum output volts (multiplied by 100)
- Minimum readout
- Maximum readout
- Decimal point placement
- Value name

SMS message	Result
!#ON1A 0 1000 0 100 0 Humidity	Analog input 1 is programmed for a Humidity sensor with a output voltage ranging from 0-10V. The readout received will be a range from 0 to 100 percent. An output of 1 volt will readout as 1 An output of 10 volts will readout as 100
!#ON2A 100 500 234 5590 2 PH	Analog input 2 is programmed for PH sensor with a output voltage ranging from 1-5V. The readout received will be a range from 2.34 to 55.90 percent. An output of 1 volt will readout as 2.34 An output of 10 volts will readout as 55.90

11.4 Defining analog sensor alarm messages

SMS message	Result
!AL1 Low temperature in room 1 ?AL1 will return programmed message	"Low temperature in room 1" will be received if the temperature drops below the set point for low alarm sensor 1
!AL2 Low temperature in room 2 ?AL2 will return programmed message	"Low temperature in room 2" will be received if the temperature drops below the set point for low alarm sensor 2
!ALE1 End Low temperature in room 1 ?ALE1 will return programmed message	End Low temperature in room 1" will be received whe the temperature in room 1 rises back above the low temperature alarm setting for sensor 1.
!ALE2 End Low temperature room 2 ?ALE2 will return programmed message	"End Low temperature in room 2" will be received when the temperature in room 2 rises back above the low temperature alarm setting for sensor 2.
!AH1 Room 1 to hot ?AH1 will return programmed message	"Room 1 to hot" will be received when the temperatur in room 1 rises above the high temperature alarm setting for sensor 1.
!AH2 Room 2 to hot ?AH2 will return programmed message	"Room 2 to hot" will be received when the temperatur in room 2 rises above the high temperature alarm setting for sensor 2.

!AHE1 End high temperature room 1 ?AHE1 will return programmed message	"End high temperature room 1" will be received when the temperature drops back below the high temperatur alarm setting for sensor 1
!AHE2 End high temperature room 2 ?AHE2 will return programmed message	"End high temperature room 2" will be received when the temperature drops back below the high temperatur alarm setting for sensor 2

SMS message	Result
?AN1	Returns the current temperature for analog sensor 1
?AN2	Returns the current temperature for analog sensor 2
?A	Returns both analog 1 and 2 sensor readings

12.0 Internal relays

The Cellink has four built in relays.
Specifications:
3.0A – 250VAC
3.0A – 30VDC

Each of the four relays can be operated by sending an SMS message.

SMS message	Result
R1T (Use the same format but replace the relay number for relays 2,3 and 4)	Opens relay 1
R1A (Use the same format but replace the relay number for relays 2,3 and 4)	Closes relay 1
R1P (Use the same format but replace the relay number for relays 2,3 and 4)	Closes relay 1 for one second then reopens the relay.
R1P10 (Use the same format but replace the relay number for relays 2,3 and 4)	Closes relay 1 for ten second. Replace the 10 with any time needed (seconds only).
R1R (Use the same format but replace the relay number for relays 2,3 and 4)	Opens relay for 1 second, then closes the relay (uses for "reset" mode). For this mode the relay must be NC.
R1R10 (Use the same format but replace the relay number for relays 2,3 and 4)	Opens relay for 10 seconds, then closes relay (used for "reset" mode). For this mode the relay must be NC.
?R1 (Use the same format but replace the relay number for relays 2,3 and 4)	Will return current relay state (open or closed).

13.0 Additional default messages

The Cellink unit contains an additional 19 SMS messages that are predefined and can be changed to fit your needs. These SMS messages are only informative messages.

*From version 3.6 onward, you must use the letter W after ! to change these messages.

Message number - Default message	Usage	Example of how to Change text
?ST	Returns cellular signal strength	
!W2 – No more alarms.	Message used when inputs use one common message for end of alarm.	!W2 All alarms are clear
!W3 – System is locked	Message used when system is locked with a 4 digit code.	!W3 Please enter code before message
!W6 - This Phone Gets SMS Messages!	Message sent to phone that has been added to the number list to receive SMS alert messages.	!W6 Your phone is now in the alert phone list.
!W7 – Daily ok message	SMS message indicating that the Cellink unit is in working order.	!W7 Have a nice day!
!W10 - Cellink OK but not Active!	System is off but active. Will send daily SMS message	!W10 The alarm unit is not active but is ok
!W14 – Relay 1 open	Message received when relay 1 has been manually opened.	!W14 Motor 1 is off
!W15 – Relay 1 closed	Message received when relay 1 has been manually closed.	!W15 Motor 1 is on
!W18 – Relay 2 open	Message received when relay 2 has been manually opened.	!W18 Motor 2 is off
!W 19 – Relay 2 closed	Message received when relay 2 has been manually closed.	!W19 Motor 2 is on

Message number - Default message	Usage	Example of how to Change
!W22 - Relay 3 open	Message received when relay 3 has been manually opened.	!W22 Motor 3 is off
!W23 - Relay 3 closed	Message received when relay 3 has been manually closed.	!W23 Motor 3 is on
!W26 - Relay 4 open	Message received when relay 4 has been manually opened.	!W26 Motor 4 is off
!W27 - Relay 4 closed	Message received when relay 4 has been manually closed.	!W27 Motor 4 is on
!W30 - Relay 1 pulsed	Message received when relay 1 has been manually pulsed.	!W30 Light 1 has been pulsed.
!W31 - Relay 2 pulsed	Message received when relay 2 has been manually pulsed.	!W31 Light 2 has been pulsed.
!W34 - Relay 3 pulsed	Message received when relay 3 has been manually pulsed.	!W34 Light 3 has been pulsed.
!W35 - Relay 4 pulsed	Message received when relay 4 has been manually pulsed.	!W35 Light 4 has been pulsed.
!W36 – Power fail	Message received if the Cellink has no electricity and is running off the internal battery	!W36 The alarm unit has no electricity

14.0 Battery alert messages

The Cellink alarm unit contains its own backup battery. Listed below are default battery messages used by the unit.

Message	Solution
Battery Failure	The internal charging mechanism is unable to charge the battery. Battery needs to be replaced.
End Battery Fail	The internal charging mechanisms succeed in charging the battery.
!BDIS	This will disable the battery alarm
!BEN	This will enable the battery alarm (default)
Too Hot to Charge Battery	The Cellink internal temperature is too high and the charging mechanism is unable to charge the battery. The charging mechanism will try to charge the battery at a later time.
End Too Hot To Charge Battery	The Cellink internal temperature has dropped and the battery charging process has started.

15.0 Communication interface

If the AB communication connections in the Cellink are connected to the AB communication connections in the Agrologic climate control units, then it is possible to receive and change certain parameters in the units.
Let's assume that a controller in house 1 (ImageII or Vision control unit) is connected to digital number 1 input of the Cellink and the controller in house 2 is connected to digital number 2 input.
In order to be able to use the special communication interface, we must enter a special format when programming digital inputs 1 & 2.
Digital input 1; **!DS1%T901 Alarm in house 1**.
Digital input 2; **!DS2%T902 Alarm house 2**.
!DS1 sets the digital input number, **%T901** format connects the Cellink to the contro1 unit (ImageII or Vision).
The factory default message that will be received when there is an alarm in the control unit will contain the following information.
House # (house number = input number)
Aver. Temp.=23.0 (this is the average temperature in house).
Alarm=1 (This is the type number alarm in the house).
Alarm.Dis=6 (Displays the disabled alarms).
Req.Temp.=24.0 (Displays the required temperature for the house).
Alarm.Low=2.0 (Displays the low alarm set point).
Alarm.High=3.0 (Displays the high alarm set point).

If there is a power failure, the SMS message that will be received is "Alarm house 1".

?DS1 - requesting information
When this message is sent the Cellink will return the current status of the house 1
The Cellink will return a SMS text message with the real-time parameters from house number 1.

Communication interface codes for Agrologic control units;

ImageII & Vision; %T901 – where 1 is the control unit net name.

Temptron 607, 610 & 616; %PP01 – where 01 is the control unit net name.

FD1001; %F001 – where 01 is the control unit net name.

FD2002; %F201 – where 01 is the control unit net name.

FD4004; %F401 – where 01 is the control unit net name.

FD5005; %F501 – where 01 is the control unit net name.

CS205; %C2011 – where 01 is the control unit net name and 1 is the plate number.

CS850; %C8011 – where 01 is the control unit net name and 1 is the plate number.

By using your GSM phone you can change parameters.
A few default parameters letters have been created to help you send the messages.
Alarm Disabled = **D**
Alarm Disabled2 = **E**
Required Temperature = **R**
Low Alarm = **L**
High Alarm = **H**
In order to change these parameters a SMS message must be sent using a special format.
Example:
V1[controller number][parameter letter][new value]
To change the required temperature in house 1 to 25.0°, the SMS message to be sent is: **V1R250**

If the Cellink is locked then the SMS message sent should be: **1234!V1R250**
(if the lock code is 1234)

It is possible to retrieve and change any value in the controller.
In order to change other values in the unit you must know their value number.
Once you know the values number it is possible to retrieve it and change it by using the following format.
W= Any value
To retrieve the value 4096 from unit 1 send : **V1?4096**

To change the value 4096 in unit 1 send: **V1W4096 235**
This will change the value 4096 in unit 1 to 23.5

It is possible to reprogram the Cellink to return other values as required.
The format for this is:
!FA (message): &(controller value).
Example: If you would like to receive the average house temperature and the current alarm type each time there is an alarm, the message used to program this would be:
!FA average temperature: &7218 alarm type: &3154
This will reprogram the Cellink to return the average temperature and the alarm type for the controller with the alarm.
By sending the message ?DS1, the Cellink will return the above information from control unit 1. To receive the information from control unit 2, send ?DS2 and so on.
It is possible to program four more messages that extract different values from the control unit. By using B, C, D and E (in place of A) in the programming message.
Example: To receive the humidity level and water message use the following format:
!FB humidity: &3142 water: &1302
To receive these values from unit 1 send the message ?DS1B and the unit will return the humidity and water values.

16.0 WRZ500 setup

In order to use the WRZ500 wireless transceivers, the Cellink must be programmed to work together with them.
Programming the digital inputs is also different when the WRZ500 unit is connected.

15.1 Program mode on/off for WRZ500 unit

SMS message	Result
ZON	Programs the Cellink unit to work with the WRZ500 unit.
ZOFF	Turns off the program mode for the WRZ500 and the Cellink unit.

15.2 Digital input message programming.

SMS message	Result
!ZS1 Alarm room 1	First status change at input 1 sends message "Alarm in room 1".
!ZE1 End of alarm room 1	Input 1 returns to normal state, message sent is "End of alarm in room 1".
?ZS1	Returns the first message for digital input 1.
?ZE1	Returns the second message for digital input 1.
Use this format to program all connected WRZ500 units.	

To program the WRZ500 wireless transceivers to communicate with the ImageII & Vision control units for transferring real-time information, use the following message:
!ZS1 %T901
This will program the WRZ500 wireless transceiver for control unit 1 (net name 1) to enable communication between the two.