



SOLEM

CONNECTED MUNICIPALITY

GREEN SPACES | SMART CITY

SOLEM.FR

DISCOVER THE APP TO CONTROL GREEN SPACES IRRIGATION

FREE MYSOLEM.COM PLATFORM &
MYSOLEM APP!

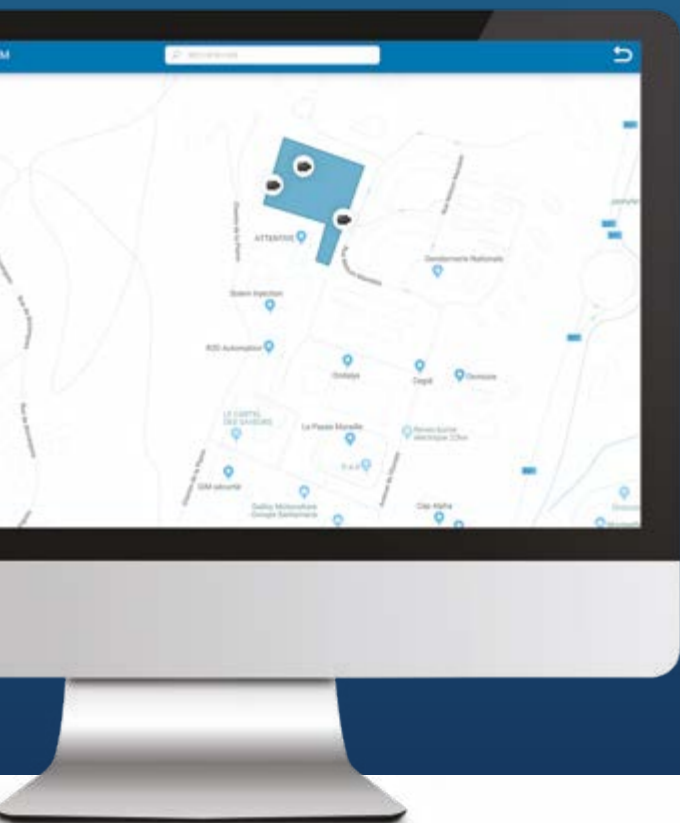
The MySOLEM app can be downloaded from the App Store or Google Play. The app is optimized for use with the Bluetooth® Smart V4 version available on most tablets and smartphones.



 PROFESSIONAL ACCOUNT

Our expert platform, designed for professionals

CANOPY / PRO ACCOUNT are professional features of the MySOLEM.com platform. Find functionalities such as group orders, site management, mapping by site, user management etc.



MYSOLEM



PROTECT YOUR MODULES FROM THEFT

ANTI-THEFT

SOLEM'S NEW EXCLUSIVE* ANTI-THEFT FEATURE

Limit the risks of theft !

- Deactivation of stolen products
- Available for all Bluetooth®, LoRa™ and Wi-Fi SOLEM products
- In one click on the MySOLEM app and platform



* on the irrigation market

FOR MY CITY

1 . GATEWAYS

p.09	Irrigation station	Connected irrigation station
p.11	LR-BST-REACT / 25	3G / 4G / LoRa™ gateway for controllers
p.12	LR-MB-30	LoRa™ / WI-FI gateway for controllers

2 . CONTROLLERS

p.14	WooBee	Large screen, battery powered & Bluetooth® irrigation controller
p.15	BL-IP	Battery powered Bluetooth® irrigation controller
p.16	LR-IP	Battery powered, Bluetooth® & LoRa™ irrigation controller
p.16	LR-IP-FL	Battery powered, Bluetooth® & LoRa™ irrigation controller & water consumption controller
p.17	LR-IS-FL	AC powered, Bluetooth® & LoRa™ irrigation controller & water consumption controller

3 . DATA ACQUISITION

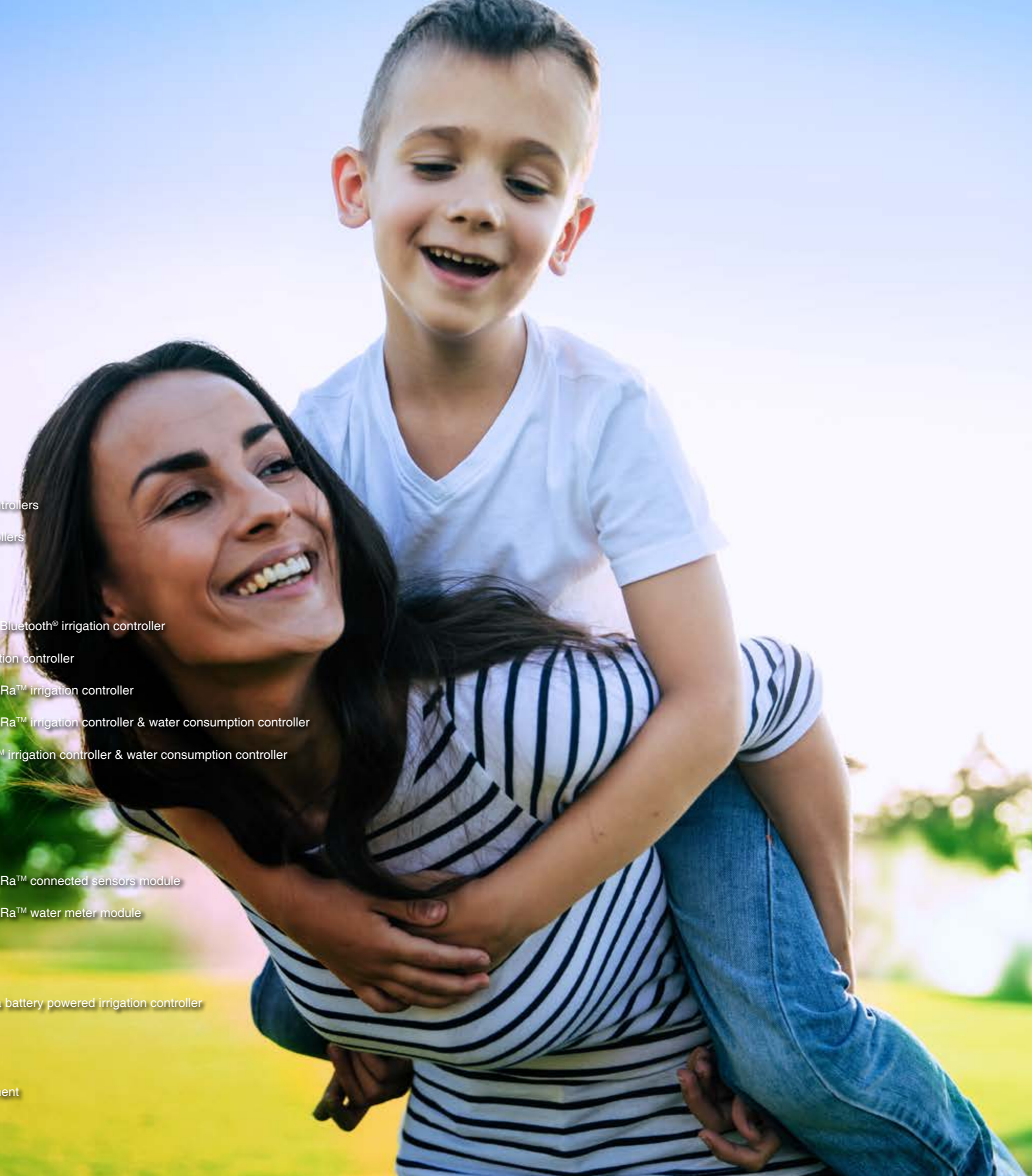
p.19	Sensors	Connected sensors
p.20	LR-MS	Battery powered, Bluetooth® & LoRa™ connected sensors module
p.21	LR-FL	Battery powered, Bluetooth® & LoRa™ water meter module

4 . RELAY

p.23	RELAY	Pump control relay managed by a battery powered irrigation controller
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5 . TRACK YOUR MACHINERY

p.25	TAGGY	GPS tracker for municipal equipment
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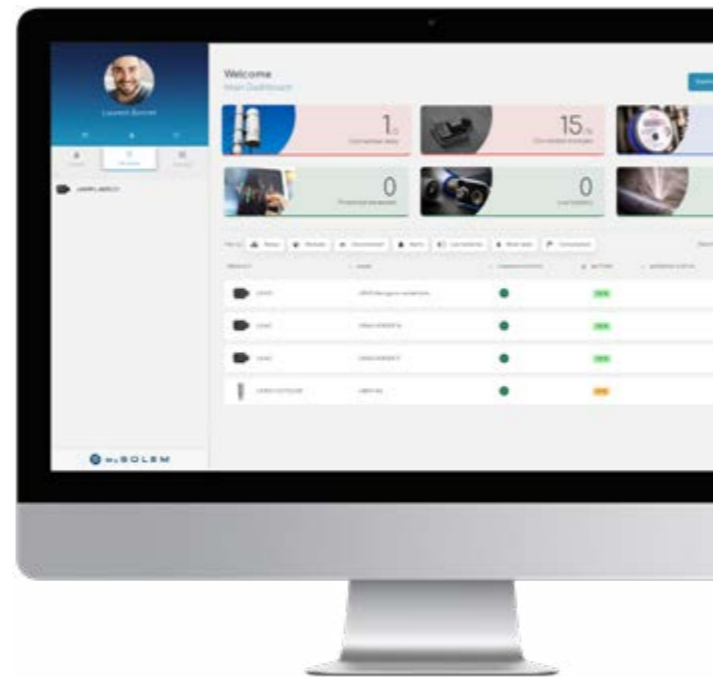




Irrigation and maintenance for connected cities

Switch to connected cities : for green spaces, stadiums and municipal golf courses.

Breathe life into your project and adapt your controllers and sensors to your specific needs. Manage all your green spaces easily using our MySOLEM platform.



PARKS
STADIUMS
MUNICIPAL GOLF COURSES

SIMPLICITY, PERFORMANCE, RELIABILITY

1 CONNECTED GATEWAY



LoRa



2 CONNECTED CONTROLLERS



3 CONNECTED SENSORS











PASSEZ À L'IRRIGATION CONNECTÉE EN 2H !

Irrigation station

Full autonomy with solar panels, manage your controllers and connect all your sensors !

The irrigation station is 100% autonomous, ready to use, and pre-programmed. To retrieve climate, soil moisture, tensiometry, and water consumption data to optimize the irrigation of your green spaces. In addition, you can control the municipal range modules (LR-IP, LR-IP-FL, LR-FL, LR-MS) connecting up to 144 EV 9V or 288 EV 24V.

Range	5x MORE*	Connection	3G 4G LoRa Bluetooth®
Compatibility	sensors    ...	Mounting	
Power		Control	  

..... 1 Temperature

..... 2 Rainfall


..... 3 Anemometer

..... 4 Hygrometry



Adjust your irrigation according to climate data and more

Retrieve data for climate, soil moisture, tensiometry, water consumption and optimize the irrigation of your green spaces. Receive alerts in real-time. Use bolts or pour concrete to install stand mounts.

 You can also extend the management of data (climate and more) by adding single sensors via your station.

* Variable range depending on the configuration of the installation

GATEWAY FOR CONTROLLERS



LR-BST-REACT

LoRa™/4G gateway to control long-range modules

The LR-BST-REACT is a highly responsive 4G gateway for data feedback, which is connected to the Internet via a SIM card. It communicates using long-range radio signals with 25 modules : LR-IP, LR-IP-FL, LR-IS-FL (irrigation), LR-FL (water meter) and LR-MS (sensors). It transfers programming, settings and manual commands entered within the MySOLEM platform to the various modules installed within an 800 meters (or 875 yds*) surface area. The LR-BST-REACT is ideal when Wi-Fi is not available (e.g. remote parks, stadiums) or there is no power supply. It is fully autonomous when connected to a solar panel and its internal battery ensures it operates without additional power for 5** days.

Range	5x MORE*	Connection	3G 4G LoRa Bluetooth®
Modules	up to 25	Mounting	
Power		Control	

5 times more reach !

The Radio LoRa™ technology in the LR-BST-REACT allows you to reach unparalleled distances with its associated modules on a scale of up to 5 times* further than any equivalent system on the market. It is therefore able to connect many more modules in a broader surface area.



+ LR-BST-25

The LR-BST-25 3G version of the SOLEM gateways still exists to optimize your budgets.



DIMENSIONS

Diameter : 4.52 in
Height : 12.08 in

INSTALLATION

Wall or pole mount
Itinerary on stand

OPERATION








Power: 24 VDC using solar panel or 230 VAC/24 VDC transformer
Operating temperatures : -20°C to 60°C
Backup battery Waterproof case

* Variable range depending on the configuration of the installation
** Duration dependent on operating conditions

LR-MB-30

LoRa™/Wi-Fi gateway for irrigation modules

The LR-MB-30 is a LoRa™ / Wi-Fi gateway which connects to an Internet router to manage up to 30 modules : LR-IP, LR-IP-FL, LR-IS-FL (irrigation), LR-FL (water meter), and LR-MS (sensors). It transfers programming, settings and manual controls entered within the MySOLEM platform to the various modules. The LR-MB-30 connects your modules wherever they are located within an 800 meters (875 yds*) radius, helping you manage your green spaces locally or remotely. In the event of an internet outage (e.g. change of router or construction), your installations remain connected to the LR-MB-30 via Bluetooth®. The LR-MB-30 gateway (LoRa™ / Wi-Fi) exists in 2 versions connecting 10 modules or 30 modules.

Range	5x MORE*	Connection	  
Modules	30	Control	  
Power	12V 		

Long-range

Do you have a big park and struggle to maintain it ? With the LR-MB-30, program the sensors and modules from your office for optimal maintenance of your green spaces.

Extension cable !

If you have poor radio reception as a result of the specific layout of your park the 5M or 10M extension cable helps you put the antenna of the LR-MB-30 on the roof of your city hall, to get perfect reception.



DIMENSIONS

Width : 3.14 in
Height : 3.23 in
Depth : ½ in

INSTALLATION

External transformer (230/12VDC)
Operating temperatures : 0°C to 50°C

FONCTIONNEMENT

Wi-Fi 802.11 b/g/n, WPA2-PSK, WPA, WEP
Bluetooth® Smart 4.0 Low Energy
Communication with radio LoRa™

* Variable range depending on the configuration of the installation

CONTROL YOUR IRRIGATION REMOTELY













WooBee

Large screen, battery-powered & Bluetooth® irrigation controller !

The WooBee is a waterproof, battery powered Bluetooth® irrigation controller, with a large screen for easy reading and programming via easy-to-use buttons. You can manage it by using the downloadable MySOLEM app on the App Store (iOS) or the Play Store (Android). Thanks to the water meter input it will allow you to act in the event of leakage, over-consumption or under-consumption of water.

Compatibility	9V solenoid valve 	Power	1x9V or 4xAAA  
Input	 or 	Connection	 Bluetooth®
Stations	1/2/4/6	Control	  

User friendly !

The WooBee can be programmed either via the display, or using Bluetooth® on the MySOLEM app.

Versatile !

Program your irrigation by selecting a single program for all your stations or a different program for each station, via the free MySolem app.



DIMENSIONS
Width : 4.33 in
Height : 6.10 in
Depth : 2.55 in

INSTALLATION

On the yellow wire : connection rain gauge or water meter with pulse sensor (max. 10Hz)
Connection master valve
Connection 9V pulse solenoid
Distance max. WooBee and solenoid : 32.80 yds
Operating temperatures : -20°C to 60°C

OPERATION

100% waterproof LCD display (IP68)
9V 6AM6 or 6LR61 alkaline battery or 4 AAA LR03 batteries
Bluetooth® Smart 4.0 Low Energy
Permanent programming backup
Backup of the internal clock in case of power outage < 30 s

Control your water consumption !







By connecting a pulse water meter to the Sensor input and by entering all your thresholds (flows by station, daily volume) in the MySOLEM app, your irrigation will be stopped by the WooBee as soon as leakage, over-consumption or under-consumption occurs.



BL-IP

Battery powered Bluetooth® irrigation controller !

The BL-IP is a waterproof, battery powered Bluetooth® irrigation controller which is managed using a smartphone via the MySOLEM app. It is perfect for installations without a power supply and that are exposed to water, such as valve boxes. User account synchronization on the MySOLEM platform and app means that it is possible to program on a laptop using MySolem.com. As soon as the programming is set, the data is synchronized on the MySOLEM app. Then just go near the controller to send your program from your cellphone via Bluetooth®.

Compatibility	9V solenoid valve 	Connection	 Bluetooth®
Stations	1/2/4/6	Distance solenoid	30 m (32.80 yds)
Power	9V 	Control	  

The reference for **simplicity** and **durability** !

The BL-IP is fully waterproof and manufactured using extremely durable materials. It can withstand bad weather and the ravages of time. With a single battery, it can operate at full capacity for an entire season. Its low battery alerts keep you up to date on its operating condition. Giving you peace of mind.



DIMENSIONS
Width : 5.5 in
Height : 3.5 in
Depth : 2.16 in

INSTALLATION

Connection rain gauge
Connection master valve
Connection 9V pulse solenoid
Max. distance BL-IP and solenoid : 32.80 yds
Operating temperatures : 0°C to 50°C

OPERATION

100% waterproof (rated IP68)
9V 6AM6 or 6LR61 alkaline battery
Bluetooth® Smart 4.0 Low Energy
Permanent programming backup
Backup of the internal clock in case of power outage < 30 s










800m*



LR-IP

Battery powered LoRa™ irrigation controller !

The LR-IP is a battery powered irrigation controller using long-range LoRa™ radio technology and Bluetooth® technology. Used with a LR-MB gateway or a LR-BST gateway, it configured and programmed remotely via the MySOLEM platform and app. Bluetooth® makes connection quick and easy within 10 m (or 10.93 yds) of the controller. Start using Bluetooth® and then connect to the gateway. Since it is rated IP68, it can be placed in a valve box and submerged without any degradation. In addition, its innovative programming executes all programs, from the simplest to the most elaborate.

Compatibility	9V solenoid valve 	Range	800 m (875 yds)
Power	9V 	Connection	  Bluetooth®
Stations	1/2/4/6	Control	  










800m*



LR-IS-FL

AC powered LoRa™ irrigation controller !

The LR-IS-FL is the long-range LoRa™ & Bluetooth® irrigation controller that is AC powered. Used with a LR-MB-30 gateway or a LR-BST-REACT/25 gateway using LoRa™ technology, the LR-IS-FL can be remotely controlled using the MySOLEM app or platform. Connecting a water with pulse sensor on the sensor input monitors over-consumption, under-consumption or leakage.

Compatibility	24V solenoid valve 	Power	24 VAC 
Input stations	 or 	Connection	  Bluetooth®
Stations	2/4/6/9/12	Control	  



Save water !

Its intuitive and advanced programming, as well as a water budget that can be adjusted from 0 to 200%, and a connection to local weather forecasts based on the device's location, help you save water.



DIMENSIONS

Width : 5.51 in
Height : 3.54 in
Depth : 2.16 in

INSTALLATION

Connection rain gauge
Connection master valve
Connection 9V pulse solenoid
Max. distance LR-IP and solenoid : 32.80 yds
Operating temperatures : -20°C to 60°C

OPERATION

100% waterproof (rated IP68)
9V 6AM6 or 6LR61 alkaline battery
Bluetooth® Smart 4.0 Low Energy
Communication using LoRa™ radio signal
Backup of the internal clock in case of power outage < 30 s

Control your water consumption !

Are your parks and green spaces large, making their maintenance hard for you ? With the MySOLEM app, program your LR-IS-FL, manage your water consumption, add sensors (see LR-MS module) and optimize the time spent for the maintenance of your green spaces.



DIMENSIONS

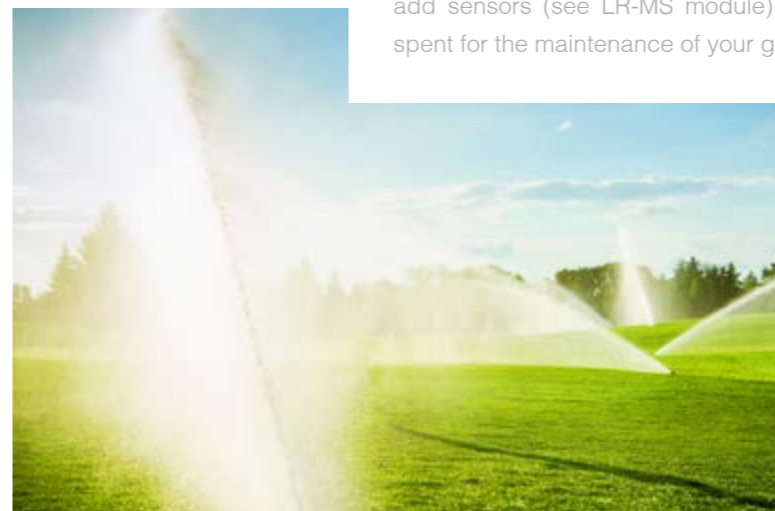
Width : 4.33 – 6.30 in
Height : 5.70 in
Depth : 1.41 – 1.65 in

INSTALLATION

On sensor input : connection rain gauge* or water meter with pulse sensor (max.499Hz)
External transformer 230V/24VAC
Electrical connection terminal
Connection master valve
Connection 24V solenoid
Operating temperatures : 0°C to 50°C
Possible programming: start time, programs

FONCTIONNEMENT

Power : 230 V-50 Hz / 24 V-50 Hz
Max. consumption : 0.75 A (18VA)
Surge protection at 4kV
Bluetooth® Smart 4.0 Low Energy
Communication using LoRa™ radio signal
Permanent programming backup
Backup of the internal clock in case of AC power outage during more than 10h





+ LR-IP-FL !

Add a water meter with its pulse output connected to the sensor input of the new LR-IP-FL module, and increase your water savings by receiving alerts in the event of over-consumption, under-consumption or leakage.

*Range up to 800 meters (or 875 yards). Variable range depending on the configuration of the installation

*Range up to 800 meters (or 875 yards). Variable range depending on the configuration of the installation

CONNECT ALL YOUR SENSORS

Connected sensors

Discover our connected sensors to customize how you monitor your green spaces

- Track temperature and its daily evolution on the MySOLEM platform and act according to thresholds.
- Control soil moisture : a resistor device with multiple sensors sends you an alert as soon as the VWC (volumetric water content) is exceeded or insufficient.
- Accurate rainfall : the tilt switch sensor will give you an accurate rainfall reading and help you save water.
- Manage your crops according to winds : adjust irrigation as soon as the anemometer detects strong winds.
- Track your water consumption and your flow rate: receive information concerning consumption, leakage, under-consumption, etc...



OPTIMIZE THE IRRIGATION OF YOUR GREEN SPACES

Tensiometry

WATERMARK humidity tensiometer

Moisture

VEGETRONIX VH400 / SMT50 / DECAAGON EC-5 & EC-10 humidity sensor

Rainfall

LEXTRONIC LEXCA009 rain gauge

Anemometry

IED ELECTRONICS ANEMO4403 anemometer

Flow metering

Pulse water meter

Temperature

PT100 temperature

800m*



LR-MS

Battery powered LoRa™ connected sensors module !

The LR-MS is a data acquisition module that uses various sensors. It allows for example to know in real time the external temperature, thanks to a dedicated PT100 input, the humidity in the soil and the risk of severe weather. It is fully configurable with 3 non-dedicated inputs (e.g. to connect a water meter, a rain sensor and a humidity sensor). The data collected optimizes the management of your irrigation network and reduce the costs of its operation.

Compatibility	sensors	Connection	
Input	1/4	Distance to sensor	30 m (32.80 yds)
Power	9V	Control	

Ideal for professional irrigation

- Anticipate the risk of frost or strong winds.
- Limit your water consumption according to rainfall.
- Optimize your irrigation with precision humidity.



DIMENSIONS

Width : 5.51 in
Height : 3.54 in
Depth : 2.16 in

INSTALLATION

Max. distance LR-MS and sensor : 32.80 yds
Compatible with pulse water meters (max. 499Hz)
Operating temperatures : 0°C to 50°C

OPERATION

100% waterproof (classified IP68)
9V 6AM6 or 6LR61 alkaline battery
Bluetooth® Smart 4.0 Low Energy
Communication using LoRa™ radio signal
Backup of the internal clock in case of power outage < 30 s

*Range up to 800 meters (or 875 yards). Variable range depending on the configuration of the installation

800m*



LR-FL

The battery powered LoRa™ water meter !

The LR-FL connects to a water meter or a flow meter. It collects water volume data for parks, stadiums, green spaces or a group of areas receiving water. Once combined with a LR-MB-30 (Wi-Fi) gateway or a LR-BST-REACT/25 (3G/4G) gateway, the MySOLEM.com platform analyzes this data to deduce the volume of water over a specific period and to warn the user of an excess volume of water consumed or in the event of non-irrigation.

Compatibility	water meter	Connection	
Input	1	Control	
Power	9V		

Save water

The LR-FL alerts you in the event of a water leak. Irrigate smartly, save your water and be kind to our planet !



DIMENSIONS

Width : 5.51 in
Height : 3.54 in
Depth : 2.16 in

INSTALLATION

Max. distance LR-FL and sensor : 32.80 yds
Compatible with pulse water meters (max. 499Hz)
Operating temperatures : 0°C to 50°C

OPERATION

100% waterproof (classified IP68)
9V 6AM6 or 6LR61 alkaline battery
Bluetooth® Smart 4.0 Low Energy
Communication using LoRa™ radio signal
Backup of the internal clock in case of power outage < 30 s


*Range up to 800 meters (or 875 yards). Variable range depending on the configuration of the installation



RELAY

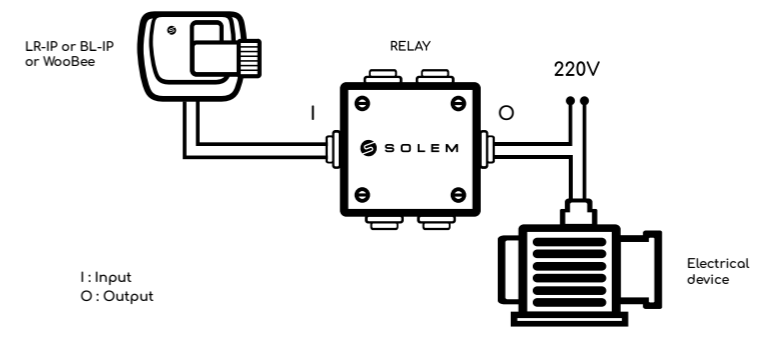
Pump control box for battery powered controllers

RELAY controls any type of electrical device (pump) from a 9V battery powered LR-IP, LR-IP-FL or BL-IP controller. The irrigation command sent from the controller activates the opening or closing of the command relay.

Compatibility	Any type of device (up to 230V-16A)	Wire connection max.	For input and for output 
Input	(LR-IP/LR-IP-FL) 1	Distance to wire max.	For input 30 m (32.80 yds)

Control remotely !

Controlled remotely via a LR-IP or a LR-IP-FL (used with a LR-MB-30 or a LR-BST-REACT/25 access point).



DIMENSIONS
Width : 3.93 in
Height : 3.93 in
Depth : 1.96 in

INSTALLATION
Internal 230VAC/16A relay
Max. distance input control relay : 32.80 yds
Operating temperatures : 0°C to 50°C

FONCTIONNEMENT
On relay : 9V pulse input
Electrical output : (dry contact operation)



TRACK
YOUR EQUIPMENTS
AND MACHINERY



TAGGY

The GPS tracker for your machinery

TAGGY is a GPS tracker that allows you to locate your green spaces maintenance tools, machinery and equipment. It is useful in the event of theft and allows you to track your assets online via MySOLEM.

Waterproof and resilient	100%	Sigfox network	
Autonomy	10 YEARS	Management	
Quick setup	1 MIN		

Track, secure and optimize your equipment

Geolocate and track your equipment directly online and be aware of the movements and operations of your assets.



INSTALLATION 1 MIN
FOLLOW-UP PERIOD 10 YEARS

All our **TAGGY** products are compatible with **MySOLEM**, the platform for manage connected irrigation.

SPECIFICATIONS
Customized configurable tags
Activation by motion detection
iOS, Android application
Secure data management and access



Create your CANOPY

The CANOPY system manages your city's connected spaces (machinery, gardens...). Design the solution that meets your needs and budget by selecting your controllers, software, gateways and sensors in the entire SOLEM catalog.

- Visualize your irrigation sites
- Control and modify your irrigation online
- Optimize the work of your maintenance teams
- Geolocate your equipment

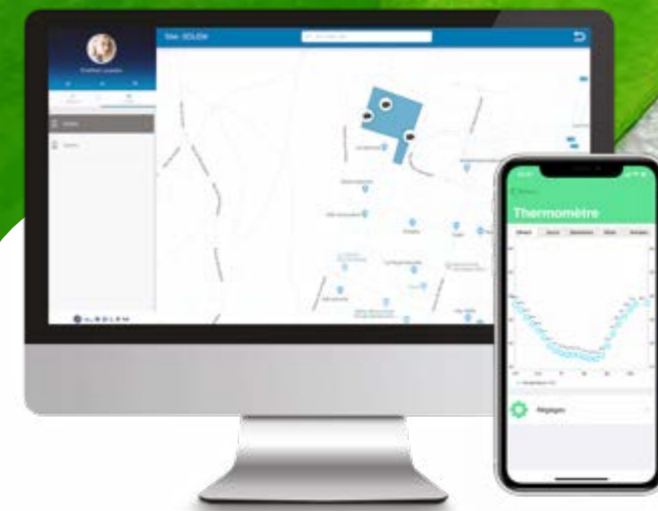
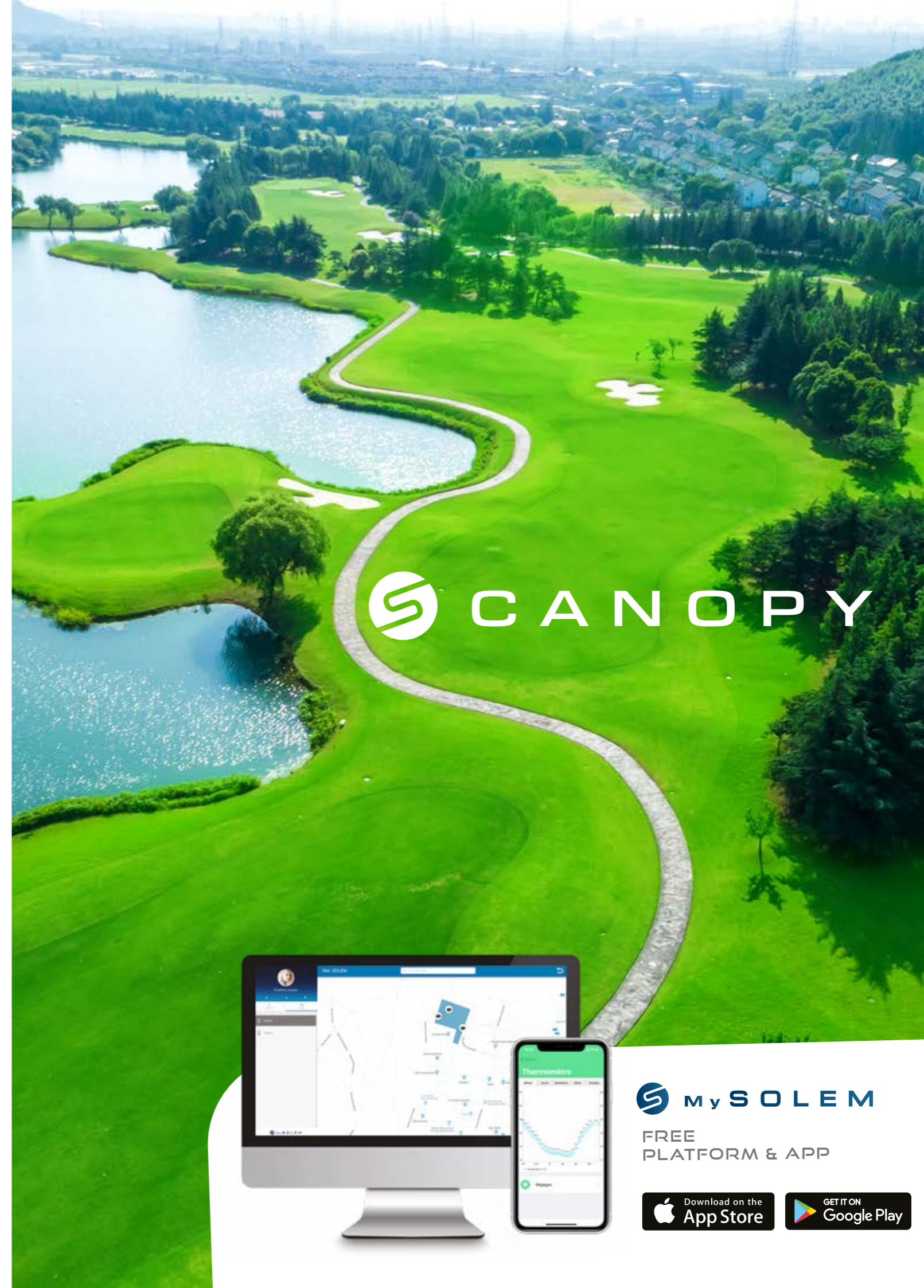


A simple interface

MySOLEM CANOPY is an extension of the MySOLEM.com platform. Manage the urban network deployed online, consult all the data gathered by your sensors, geolocate them on a map, manage areas of the city, monitor over-consumption of water and consult the operating conditions of your devices, etc.

Geolocate your equipment

All SOLEM products used for your installation, and all those subsequently installed, are geolocated through the CANOPY system.
















MySOLEM

FREE PLATFORM & APP



OUR PRODUCT RANGE



	Application				Communication					Power			Inputs/Outputs/ Number of stations	
	Internet gateway	Irrigation	Water meter	Sensors	Bluetooth®	Wi-Fi	LoRa™	Sigfox	3G/4G	ANTI-THEFT	9V battery	230V AC power		Solar power
Local, battery-powered or AC powered														
	WooBee	•	•		•					•	•			1-2-4-6 stations
	BL-IP	•			•					•	•			1-2-4-6 stations
Remote access, long range, battery-powered or AC powered														
	IRRIGATION STATION	•		•	•		•		•	•			•	25 modules
	LR-BST-REACT/25	•			•		•		•	•		•	•	25 modules
	LR-MB-30	•			•	•	•			•		•		30 modules
	LR-IP		•		•		•			•	•			1-2-4-6 stations
	LR-IP-FL		•	•	•		•			•	•			1-2-4-6 stations
	LR-IS-FL		•	•	•		•			•		•		2-4-6-9-12 stations
	LR-MS			•	•		•			•	•			1 temperature-dedicated input + 3 sensor or meter inputs
	LR-FL			•	•		•			•	•			1 water meter input
	RELAY		•											1 input / output
	TAGGY							•						/

Lexicon : BL : Bluetooth®
LR : LoRa™
IP : Battery
IS : AC power
OL : Lighting
FL : Flow meter
MB : Mini tag
MS : Sensors module
NR : Tap connector

⁽¹⁾ Variable range based on the configuration of the installation



ARE YOU INTERESTED?

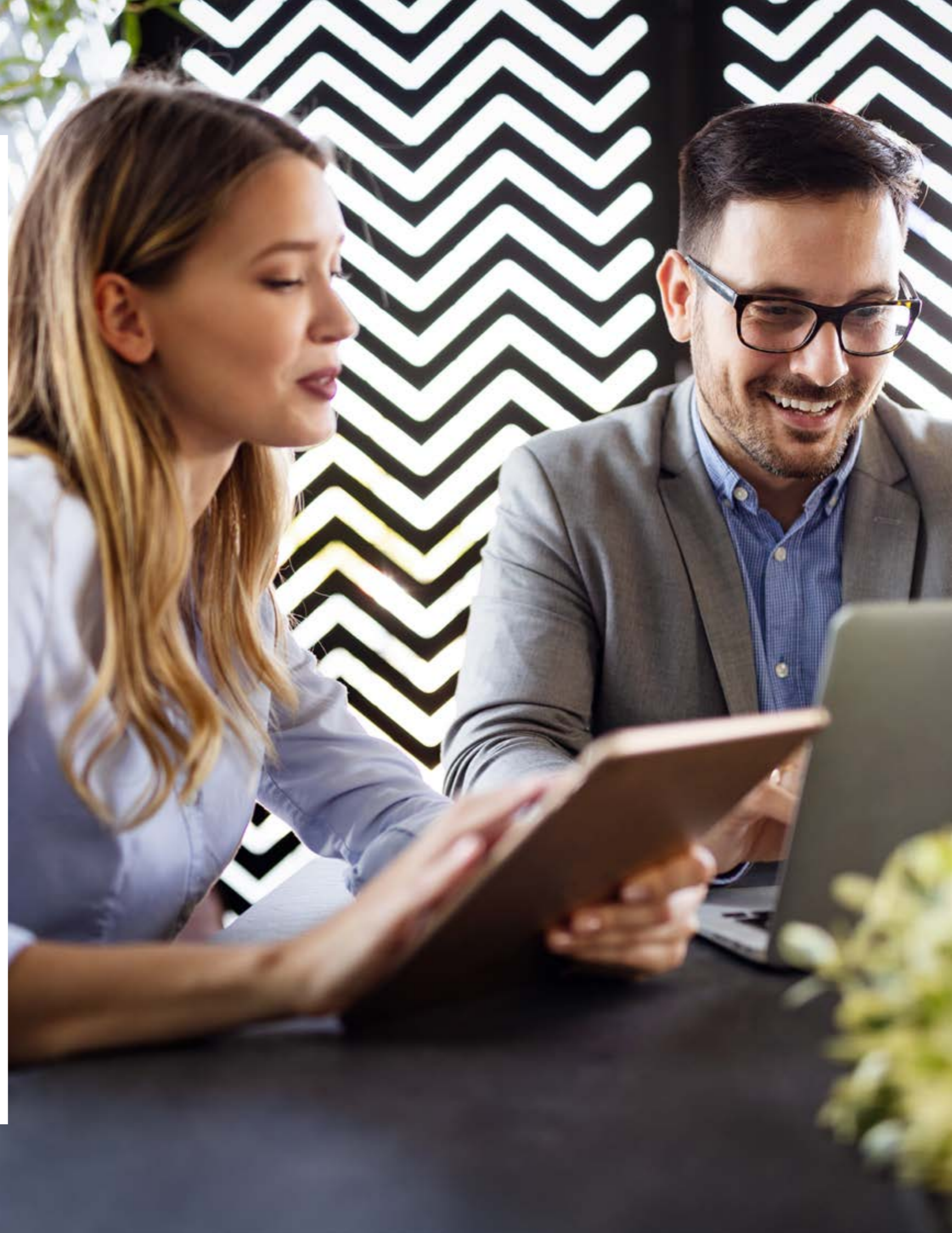
To know more about our different product ranges, don't hesitate to contact us.

Our teams are standing by and they will be happy to assist you.

irrigation@solem.fr | + 33 (0)4 67 59 24 25



ISO 9001 certification, version 2015, for the design, industrialization, manufacturing, sale and customer care of connected electronic products.





SOLEM

SOLEM is also an expert
in connected solutions for :



AGRICULTURE



RESIDENTIAL

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SOLEM.FR

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