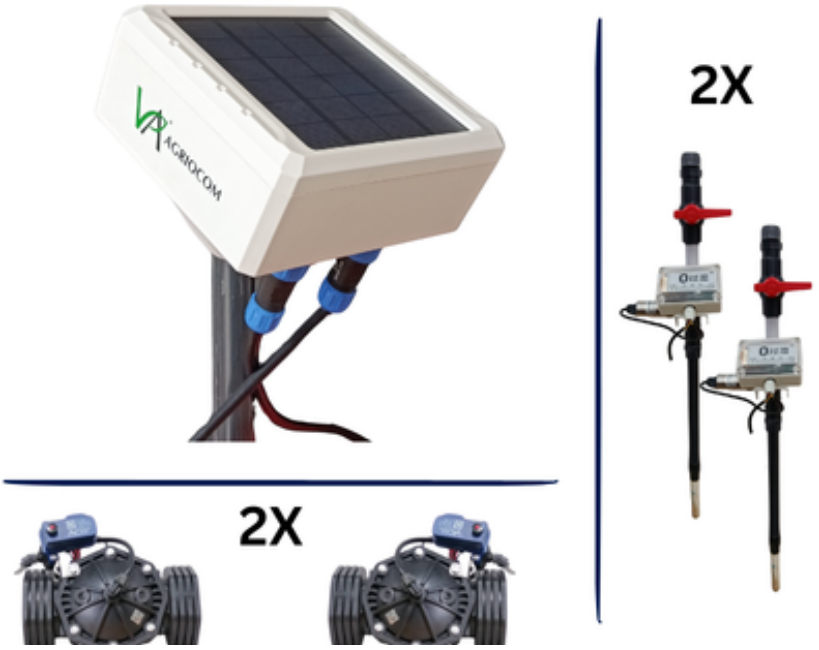
AgrioValve Super Manual

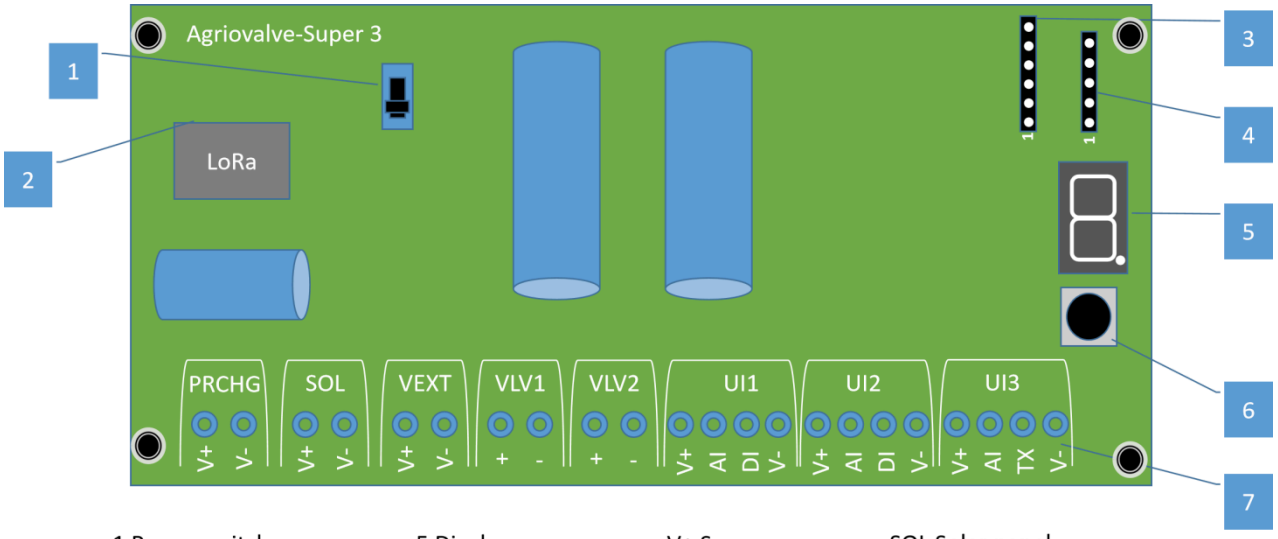
Agriovalve Super is a compact, wireless valve controller designed for outdoor agricultural irrigation systems. It is powered by an integrated solar panel and requires no battery or external power supply. The controller communicates wirelessly with the Agriocom irrigation platform and is intended for permanent field installation in demanding environmental conditions.

In addition to controlling two latching solenoid valves, the device supports connection of up to four external sensors, including temperature and humidity, rain gauge, solar radiation, wind speed and direction, tensiometer, and soil moisture and temperature sensors. The controller also features a built-in air pressure sensor. With these capabilities, Agriovalve Super can function not only as a valve controller but also as a compact weather or soil monitoring station or a combination of both.

This manual describes the installation, wiring, and basic operation of the device.

AgrioValve SUPER





1 Power switch
2 LoRa module
3 Programming cable
4 USB cable

5 Display
6 Test button
7 Cable connectors

V+ Sensor power
AI Analog input
DI Digital input
V- Ground
TX One wire input

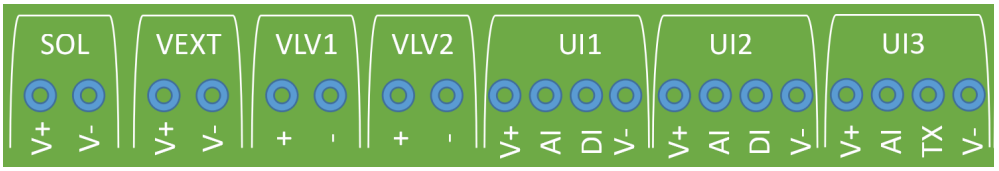
SOL Solar panel
VEXT External power 5-12V
VLV1 Valve 1
VLV2 Valve 2
PRCHG external charger

1. Technical parameters

Model	**ACSV12**
Valves	
Number of valves	2
Type of valves	Latching valve 9 ~ 18V DC
Sensor inputs	
Sensors power	5V / 100mA max
Analog inputs	3
Digital inputs total	3 2 can be used for counters like water, rain, wind 1 can be used for 1-Wire (RHT sensor)
Communication	
Communication standard	LoRa EU433 MHz / CN470 MHz / US915
Communication interval	10-30 min
Communication distance	5 ~ 10 km *
Power supply options	
Power supply 1	Solar panel / no battery
External power supply	For areas without sun light
Environmental	
Temperature range	-30℃ to +45℃ / −31 °F to 113 °F
Protection class	IP-65

* Communication distance depends on the environment and may be shorter than declared.

2. Sensor inputs



UI #	Input label	Functions	Supported sensors	Default Sensor
UI1	AI	Analog	Any analog sensor	Analog
	DI	Counter	Rain gauge normally open	Counter normally open
			Wind speed normally open	
			water counter normally open	
UI2	AI	Analog	Any analog sensor	Analog
	DI	Counter	Rain gauge normally open	
			Wind speed normally open	
			water counter normally open	
UI3	AI	Analog	Any analog sensor	Analog
	TX	One-wire	AM2303 RHT sensor	AM2303 RHT sensor

Notes

1. V+ is voltage from the battery. It is applied only during measurements. Excitation time (time between applying V+ and taking measurement) is configurable
2. V- is ground
3. If both sensors, analog and digital are connected to a single UIx, V+ and V- can be shared.

In the above table, column default sensor shows what kind of sensor can be connected to a particular channel by default configuration. This can be changed from the web interface. Customers can select any sensor listed in the column supported sensors. Please note, if you change the type of sensor for an input, old data may be not visible on the web application because the new sensor will use the same logical channel as the old one in the database.

Examples of sensor set

1. Tensiometer station

Connector	Sensor
Built-in	Air pressure
UI1.AI	Tensiometer 20cm
UI2.AI	Tensiometer 40cm

2. Weather station

Connector	Sensor
Built-in	Air pressure
UI3.TX	Air temperature & humidity
UI1.DI	Rain gauge
UI1.AI	Solar radiation
UI2.DI	Wind speed

3. Installation.

1. Fix AgrioValve on a pole and orient so that the solar panel is faced south

2. Connect one or 2 valves

AgrioValve	Valve
Valve 1 + (red)	Valve 1 + (red)
Valve 1 - (black)	Valve 1 - (black)
Valve 2 + (red)	Valve 2 + (red)
Valve 2 - (black)	Valve 2 - (black)

3. If there are any other sensors supplied with the agriovalve, check for the extra user manual that comes with the sensors in order to connect them

4. Check that AgrioValve is online and follow the cloud application to add it to an irrigation plot. Refer to https://commander.agriocom.com/ for more info or reach to support@agriocom.com for more information

AgrioValve does not require any maintenance

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