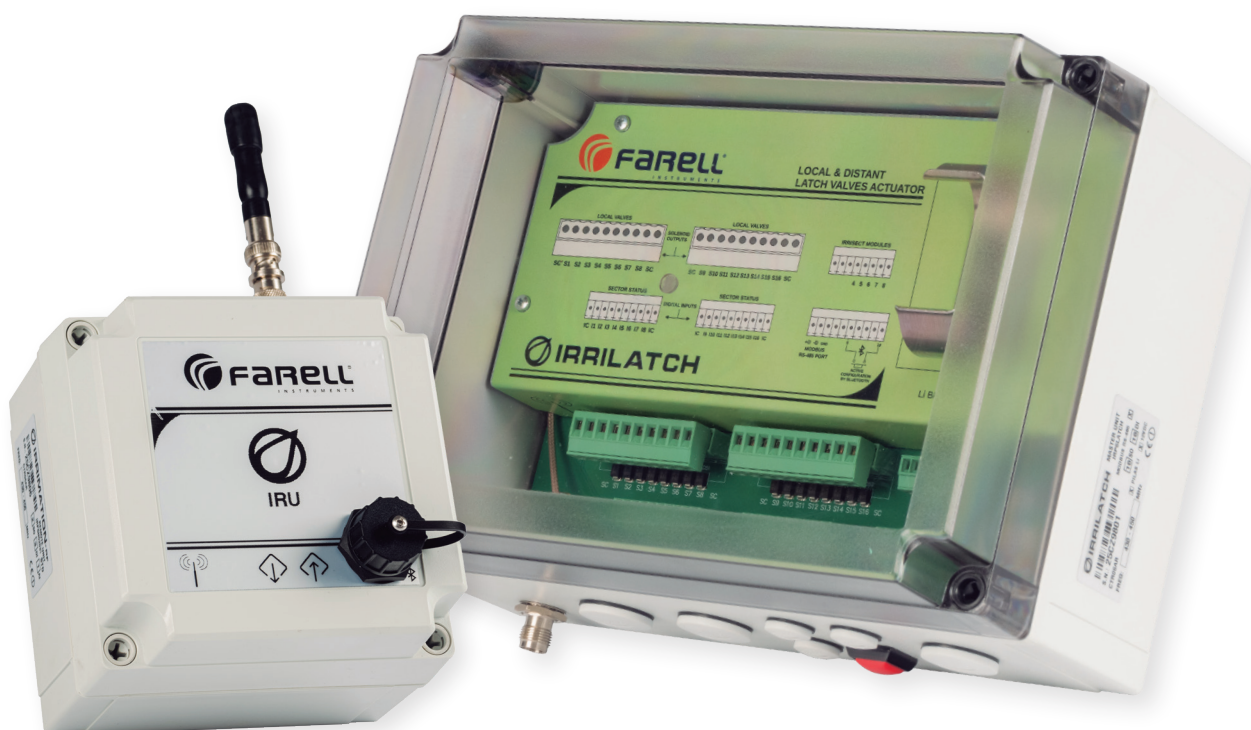


IRRILATCH

Actuator for local and remote LATCH type irrigation valves



Based on a central and remote unit, the IRRILATCH system allows control of local valves and at a distance up to 5 kilometers.

System designed to control the opening and closing of valves in irrigation installations. Governed by contact inputs or Modbus protocol (PLC, SCADA, etc.).

KEY CONCEPTS

Remote and distant valves

Master unit with local and remote valve control capacity, through long-distance radio links with remote IRU units.

Easy installation and configuration equipment

Easy installation without programming. Configuration via mobile application in Bluetooth.

Control interface

Unit that acts as a gateway between control orders (contacts or Modbus) and valves.

Global Synchro Narrow Band (GSNB Radio)

Long distance links with remote units in VHF and UHF bands, with license or free band.

Minimum consumption and maintenance

Battery powered master unit, 12 Vdc or 110-230 Vac. Battery-powered remote units (autonomy > 10 years).

Integration

Native Modbus protocol through RS-485/RS-232 port for integration with other systems.

APPLICATIONS

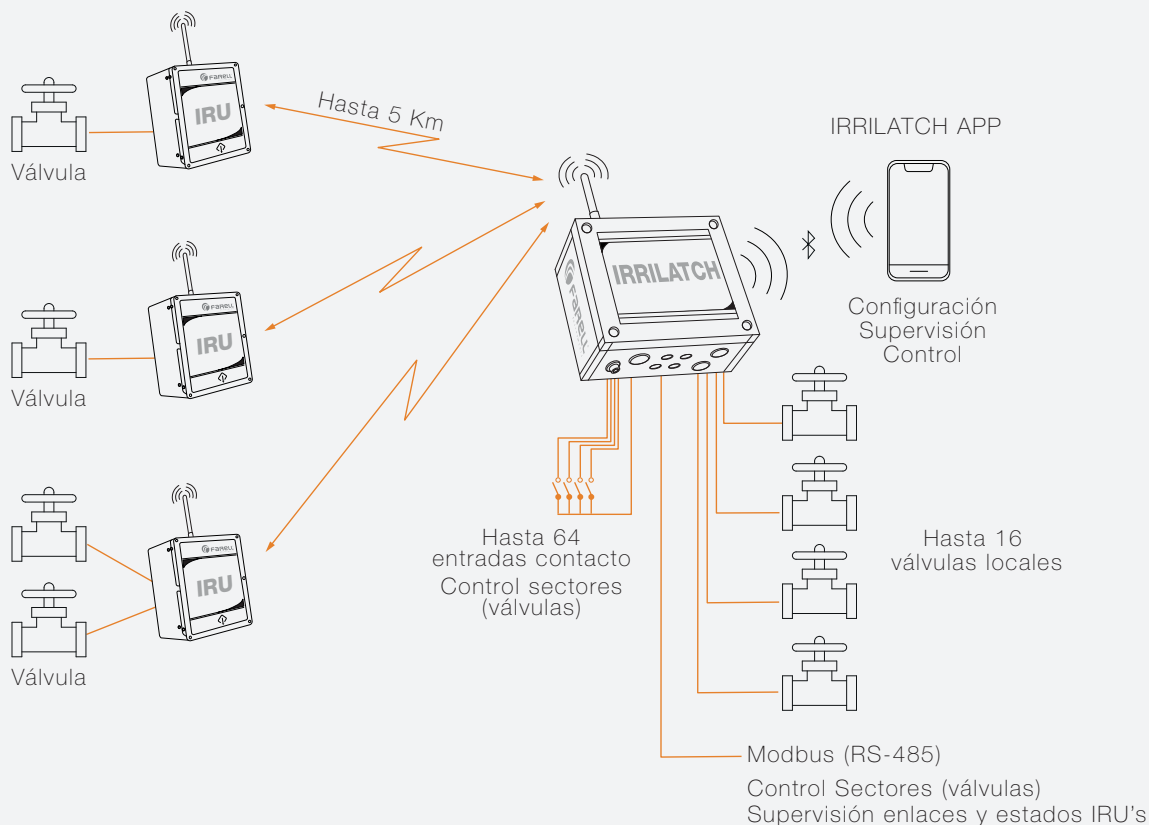
- Plot irrigation.
- Agricultural automations.
- Urban gardens and parks.
- Vertical gardens.
- Recreational irrigation (golf, theme parks, etc.).
- Inmotics integration of irrigation (buildings, hospitals, hotels, etc.).

CHARACTERISTICS

- Radio links up to 5km.
- GSNB, VHF and UHF bands, with or without license.
- IP-67 box.
- Control via Modbus port (RS-485 / RS-232).
- Control by contact inputs (up to 64).
- 16 local valve outlets.
- 2 valve outlets per remote unit (IRU).
- Compatible with 6V, 12V or 24V solenoids.
- Remote battery operated (autonomy > 10 years).
- System isolated from electric shocks and storms.
- Simple configuration by mobile application.
- Integrated operation supervision.
- Integrated supervision of radio communications.

CONTROL

- Controls the opening and closing of LATCH type irrigation valves (pulses).
- Through the status of inputs (contacts) or Modbus writing, the status of irrigation sectors is controlled (in irrigation or without irrigation) and their associated irrigation valves.
- The status of the irrigation sectors is communicated to the IRRILATCH unit through:
 - The status of digital inputs (contacts).
 - Modbus protocol (RS-485 port).
- Each irrigation sector can have one or more valves associated with it.
- Valves can be local connected by cable to the unit, or remote using remote IRU units linked by radio.



LOCAL VALVE CONTROL OUTPUTS

- Up to 16 outputs for local valve control connected by cable.
- Outputs for two-wire latch type solenoid. Configurable pulse voltage.
- Accepts all types of latch solenoid valves, both direct and piloted.

CONTROL OUTPUTS OF DISTANT VALVES

- For remote valve control using IRU remote units.
- Long distance radio links (from 0.5 to 5 km depending on band).
- VHF, UHF, 800 MHz and 900 MHz bands (free or authorized).
- The IRU remote units are powered by a Li battery with an autonomy of more than 10 years.
- Up to 64 IRU remote units associated with one IRRILATCH unit.
- 2 valve outputs per remote IRU (same type as local outputs).

UNIT POWER

Two models (IRRILATCH)

- Li or 12 Vdc battery model (incorporates both possibilities).
- Alkaline or 12 Vdc battery model (includes both possibilities).
- At 230 Vac: Any model using an external 230 Vac / 12 Vdc module.

Remote Unit (IRU)

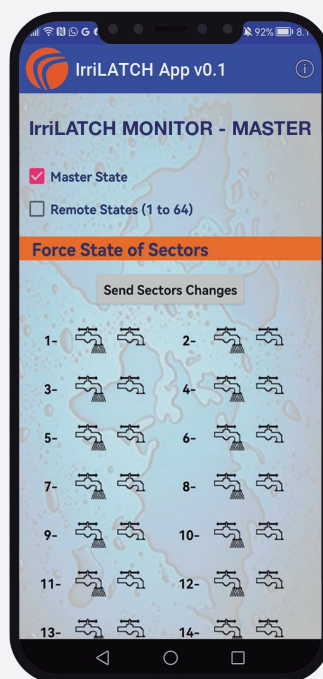
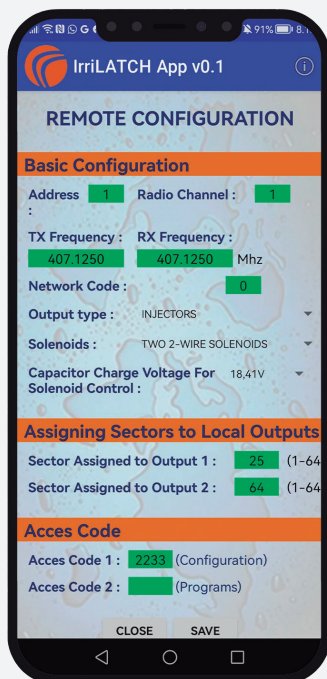
- By lithium battery (autonomy > 10 years).

MODBUS PORT

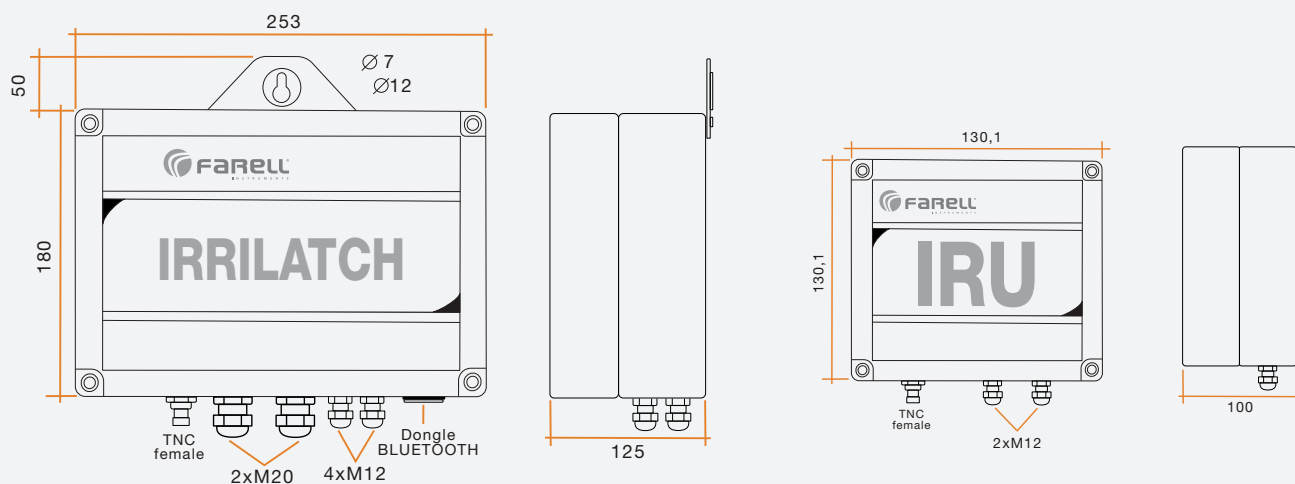
- RS-485 port with Modbus RTU protocol.
- The Modbus port option requires 12 Vdc or 230 Vac power.
- Allows direct commands to open/close valves, supervise power supplies, temperatures, status of the links and batteries of the remote IRU units, etc.

CONFIGURATION AND MONITORING

- Through IRRILATCH App for mobile device (Android OS) and local Bluetooth connection.
- The configuration is maintained even without power.



DIMENSIONS (mm)



LOCAL AND REMOTE BI-STABLE VALVES (LATCH) ACTUATOR UNIT

STATUS CONTROL OF VALVES	Through input status	16 inputs on the unit itself
		Up to 64 inputs via external IRRICONTACT Vcc modules
	Via Modbus protocol (Option)	RS-232 and RS-485 port (Modbus TCP-IP port via RJ45 optional) Allows control of valves, status readings, power supplies, radio links, etc.
VALVES	Local or distant	Up to 64 irrigation sectors associable to one or more valves
	For latch type valves (bistable)	2 wires
	Operated by pulse discharge	Capacitator 4700 uF
	Configurable pulse voltage	9V; 12 V; 15 V; 18 V
	Duration time	Configurable pulse
	Pulse current	Up to 8 A
	Protected outputs	Against short circuit
	Up to 16 local valves	Connected by cable
	Up to 64 radio-linked IRU remote units	2 valve outlets per IRU
COUNTER INPUT (OPTION)	Digital input	Operated by mechanical or electronic contact
	Duration	Minimum duration 70 mS. Up to 8 pulses/second. Configurable weight
	Generate totalizer	8 digits
	Flow measurement	Generates instantaneous flow measurement with a resolution of 0.1 m³/h
	Automatic closing	Performs automatic closing of valves due to leak detection
POWER	Option 1	Li or 12 Vdc battery model (includes both possibilities)
	Option 2	Alkaline or 12 Vdc battery model (includes both possibilities)
	Option 3	At 230 Vac: Any model using external 230 Vac / 12 Vdc module
RADIO LINK WITH IRU REMOTE UNITS: GLOBAL NARROW BAND (OPTION)	Via integrated professional radio modem	Available in VHF and UHF bands, free or licensed use. Supports up to 64 IRU units
	Power	27 dBm (0,5 W) or 33 dBm (2 W)
	Distances with IRU units	Up to 5 km or 10 km. Don't need visual range
PHYSICAL CHARACTERISTICS	Dimensions	80 x 252 x 102 mm (H x W x D)
	Material	IP-67 polycarbonate box for wall mounting or mounting panel. Includes hanger

IRU (REMOTE UNIT)

VALVES	IRU	For remote valve control
RADIO LINK	IRRILATCH unit	Don't need visual range
VALVE OUTPUTS	IRU	Up to 2 valve outputs per IRU. Same characteristics as IRRILATCH outputs
POWER		Using a Li battery with more than 10 years of autonomy
COMMUNICATION	Bidirectional	With the IRRILATCH unit
RESPONSE TIME		Less than 30 seconds
PHYSICAL CHARACTERISTICS	Material	IP-67 polycarbonate box for wall mounting or mounting panel. Includes hanger
	Measures	130 x 130 x 100 mm (H x W x D)
CONFIGURATION AND TEST	Through APP	Very simple and clear with IRRILATCH for mobile phone with Bluetooth link