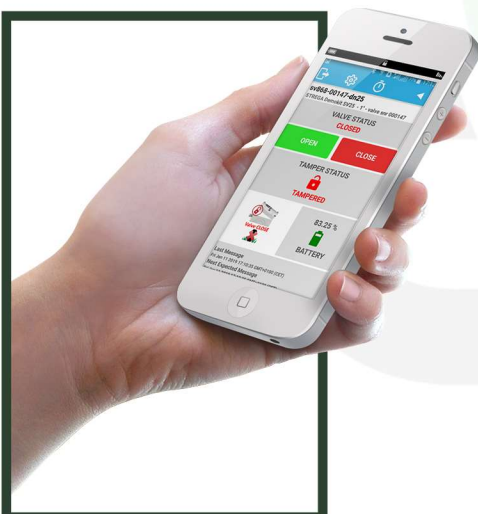# STREGA
WIRELESS SMART-EMITTER

FULL EDITION

LoRaWAN© Time-controlled Emitter
for irrigation valve

- Extreme range propagation even buried below ground surface
- Battery operated - 7+ years of autonomy or external power
- Smart operations: pulse counting, automatic shut-off on moisture detection, time-controlled Open/Close, etc.
- LoRaWAN Class A and Class C
- Fraud resistant with tamper
- Soil moisture sensor input, 2 x dry contacts with pulse, 1 x 0-10VDC measurement
- License free operation on EU868, US915 and AS923
- IoT ready (compliant with all Internet of Things platforms)
- Exceptional signal penetration through obstacles
- Provided with free of charge Android and iOS App

STREGA LoRaWAN Time-controlled Emitter remotely actuates an irrigation valve thanks to its embedded **LoRaWAN©** technology. With its ultra-low-power consumption, the Smart-Emitter can trigger Open or Close operations of any irrigation valve equipped with a DC latching solenoid. Watering schedules can be programmed directly at the zone level, avoiding the necessity to use an irrigation controller. The STREGA emitter is working on batteries providing 7+ years of autonomy or endlessly if powered externally. The device communicate through extreme long distances with exceptional obstacles penetration.

Operate your valves securely from your smartphone or tablet

- **Extreme range:** ultra-long range propagation of the signal with deep obstacles penetration (15km+ / 10+mi. LOS)
- **Compatible with standard irrigation valve suppliers:** connects directly to any DC latching solenoids (TORO, RainBird, Hunter, Irritrol, Bermad, Galcon, Weathermatic, Signature,etc.)
- **Watering schedulers:** preloaded watering schemes
- **Pulse counting:** up to 10 Hz
- **Class C support:** immediate Open/Close with no latency
- **Industrial grade:** IP67 waterproof up to 70°C/160°F operation
- **Low consumption:** ultra-low power with 7+ years autonomy
- **Tampering:** any misuse is immediately reported
- **Mobile Control:** operate your valve from your smartphone or tablet

Specifications

FULL EDITION

STREGA
WIRELESS SMART-EMITTER

Features	Specifications
Product ID	Time-controlled wireless emitter for irrigation valve - "FULL Edition"
Radio technology	LPWAN LoRaWAN 1.0.2 Class A and C– star-of-stars topology
Working t°	-20°C...+70°C / -4°F...160°F
Valve brand support	TORO, Hunter, RainBird, Bermad, Signature, Irritrol, K-Rain,....
Solenoid	2 wires DC latching solenoids – 9-12VDC with min. 10 Ohm coil resistance
Manual override	Press buttons for local Open/Close or by approaching a magnet on a dedicated spot
Extra sensors	Temperature/hygrometry, 2 x dry contacts with pulse counting, 0-10VDC input, 1 x soil humidity sensor, etc.
Duty Cycle	100% continuous rating
Tamper	Enclosure opening is immediately reported in Uplink
Humidity	Supplied with conformal coating (or optional epoxy potting)
IP protection	IP67
Power supply	Lithium battery type-D and/or external 9-60VDC
Network and Network Server interoperability	Orange, Objenious, ChirpStack, Loriot, Kerlink-Wanesy, Comcast MachineQ, Meshed, TTN, NNNCo, Actility ThingPark, Senet, Helium, CityKinect, Digita, ...
Product reference	SEF-YYY (YYY: for regional frequencies EU868, US915, AS923)

Features	Specifications
Smart Operation	Time-controlled scheduling (max. 4 per day), automatic shut-off on DI, moisture, Incrementing/decrementing counter, etc.
Range	15+km/10+mi. LOS (line of sight) - 2+km/1.5mi. in urban environment
Security	128-bit AES encryption key
Max. emitters per concentrator	128-1000 depending on duty cycles
Max. emitters per project	not limited (each emitter has a unique ID key)
Frequency	License free EU868, US915, AS923
Cable health monitoring	Detection of faulty solenoid or wire disconnection
Maximum output power	+14dBm (+20dBm for US915)
Data rate	290 bps – 50 Kbps
Data Read (UL)	Open/Close status, battery level, temperature, enclosure tampering alarm, Digital Input status, Analog value (ex: pressure), counter value, etc.
Data Write (DL)	Open/Close command, transmit frequency, automatic scheduling, time synchronization, counter setpoint, radio tuning, etc.
Solenoid connection	Via sealing gland
Mobile App	Free of charge mobile application for Android and iOS
Antenna	+2.1dB gain - embedded