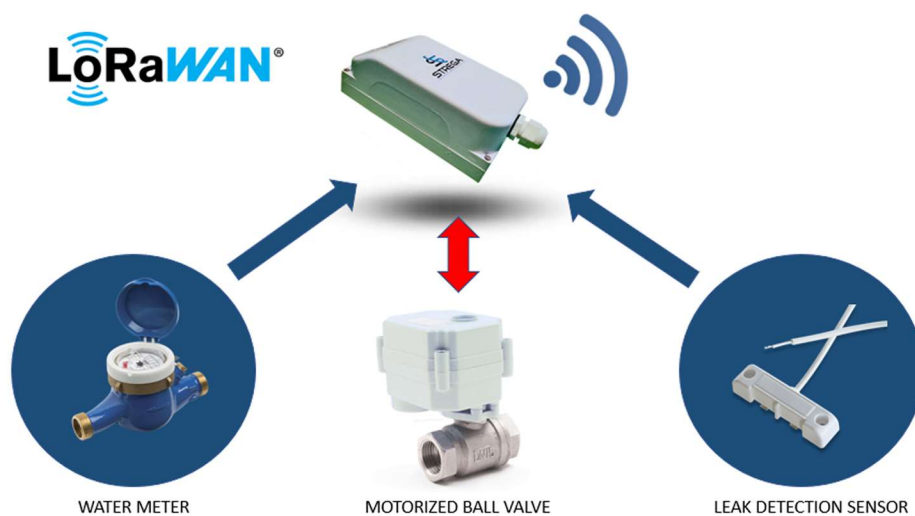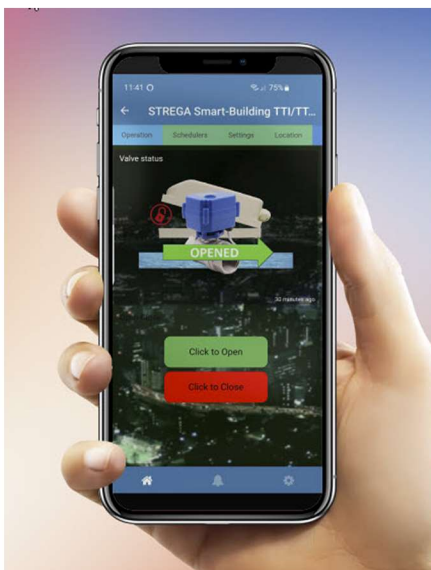# **Extreme** range **LoRaWAN®** **Motorized** Shut-off Valve

- ◉ LoRaWAN wireless motorized shut-off valve
- ◉ Extreme range signal propagation
- ◉ Battery operated with ultra-low consumption – 10-15 years autonomy - or externally powered
- ◉ Smart operations: programmable scheduling, water meter pulse counting, automatic shut-off in case of leak detection, prepaid water
- ◉ Lorawan Class A and Class C
- ◉ Partial aperture (ex: 25%, 30%, 50%, 75%,...)
- ◉ Pipe size from DN10 to DN50 (3/8" to 2")
- ◉ Fraud resistant with tamper
- ◉ Industrial grade (stainless steel, IP67, fluid up to 100°C/212°F,...)
- ◉ License free operation on EU868, US915, AU915 and AS923
- ◉ IoT ready (compliant with all Internet of Things platforms)
- ◉ Exceptional signal penetration through obstacles
- ◉ Web and Mobile Android and iOS App

LoRaWAN®

WATER METER   MOTORIZED BALL VALVE   LEAK DETECTION SENSOR

The **STREGA time-controlled motorized shut-off valve** is a battery-operated wireless valve with embedded **LoRaWAN®** technology. With its ultra-low-power consumption, the Smart-Valve can be triggered for remote OPEN/CLOSE operations. The valve is working on batteries during 10+ years (Class A) or limitless on external power supply (Class C). Automatic smart operations can be programmed on any IO status change. It communicates on extreme long distances with exceptional deep indoor signal penetration.

- ➔ **Extreme range:** ultra-long range propagation of the signal with deep indoor penetration
- ➔ **Automatic scheduling:** time-controlled OPEN/CLOSE sequences
- ➔ **Smart operations: water meter** pulse counting up to 10 Hz, automatic shut-off on IO change, anti-sediment flush, prepaid water support
- ➔ **Industrial grade:** IP67, cold and hot fluids
- ➔ **Low consumption:** ultra-low power with 10+ years autonomy
- ➔ **Digital and analog sensors:** 1 x digital input, 1 x 0-10VDC analog measurement, temperature and hygrometry sensor, leak detection, open/close limit switches
- ➔ **Tampering:** any misuse is immediately reported
- ➔ **Mobile Control:** operate your shut-off valve directly from your smartphone or tablet

Operate your valve securely from your smartphone or tablet

Specifications   MOTORIZED VALVE

Features	Specifications
Product ID	Time-controlled wireless MOTORIZED shut-off valve
Radio technology	LPWAN LoRaWAN 1.02 Class A and Class C - star-of-stars topology
Working t°	-20°C...+70°C / -4°F...160°F
Body and ball	Stainless steel
Technology	Motorized ball valve
Maximum fluid pressure	10 Bar/145 Psi
Pipe Section	DN10, DN15, DN20, DN25, DN32, DN40, DN50 (3/8", 1/2", 3/4", 1", 1"1/4, 1"1/2, 2")
Maximum fluid t°	-20°C..+100°C/-4°F..212°F
Fluid support	Liquids, compressed air, oil-free or dry neutral gases
Tamper	Enclosure opening is immediately reported in UPLINK
Extra sensors	Temperature and hygrometry 1 x Digital Input (dry contact) 1 x fully opened limit switch 1 x fully closed limit switch 1 x Analog Input (0-10VDC) 1 leak detection sensor (wired)
IP protection	IP67
Valve positions	Programmable apperture from 0 to 100%
Position feed-back	Limit switches feed-back for fully opened and fully closed
Manual override	Press buttons for local OPEN/CLOSE or by magnet
Power supply Class "A"	One or two (replaceable) Lithium batteries type-D
Valve threads	BSPP or NPT
Certifications	CE, UL, FCC, NSF61-FDA, RCM, etc.
Product reference	SVM-DNXX-YYY-ZZZ (XX=pipe size, YYY=EU868/AS923/US915), ZZZ=BSP or NPT

Features	Specifications
Max. valves per project	Not limited: each valve has a unique IEEE identification number
Range	15+km/10mi. LOS (line of sight) 2+km/1.5mi. in urban environment 22+ floors in a building
Security	128-bit AES encryption key
Max. valves per gateway	128-1000 depending on duty cycle
Smart operations	Programmable schedules (max. 4 per day), closing on DI/AI/leak, pulse counting, automatic, prepaid water algorithm, anti-sedimentation, etc.
Water meter pulse counting	Up to 10Hz - Counter value can be retrieved on demand or on periodical UL
Frequency	License free EU868, US915, AU915, AS923
Antenna	Internal with +2.1 dB Gain
Maximum output power	+14dBm (+20dBm for US915)
Data rate	290 bps – 50 Kbps
Data Read	OPEN/CLOSE status – battery level, enclosure tampering, DI/AI, temperature, hygrometry, radio signal health, counter value, limit switches, etc.
Data Write	OPEN/CLOSE command, partial opening, Transmit frequency, periodic flush, Schedulers, Magnet enable, Time synchronization, counter set, etc.
Board protection	Supplied with conformal coating or (optional) epoxy potting
Form factor	Segregated (cabling through sealing gland)
Power supply Class "C"	External from 9VDC to 60VDC
Mobile App	Free of charge mobile Application for Android and iOS
Payload format	Ready-to-use JSCRIPT Decoder/Encoder and CODECS
LNS interoperability	ChirpStack, Kerlink-Wanesy, Loriot, Meshed, TTN, The Things Industries, The Things Stack, Tektelic-NS, Orange, Objenious, NNNCo, Actility ThingPark, Senet, Digita, Helium, etc.

* battery life depends on Rx/Tx frequency and number of Open/Close operations

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