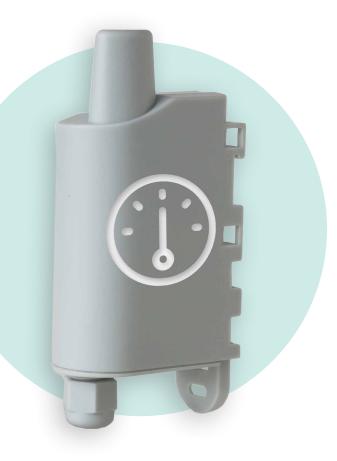
PULSE



Make all your meters or pulse output equipment communicating.





Monitor values from water, gas and electricity meters

- Periodic transmission of the index
- Periodic monitoring of the tamper and leakage



ALERT

Alert when a flow rate threshold is exceeded

- Detection of possible leaks
- · Fraud detection



Additional features:

- · Autonomy optimization: historization
- · Accessibility of the data: redundancy
- Error or Default management: Hardware error, configuration inconsistancy and low battery alert





TECHNICAL SPECIFICATIONS





LoRaWAN US915 ARF8230BA | LoRaWAN AS923 ARF8230JA | Sigfox RC4 ARF8230KA

Weight 70 g (battery included) Dimensions 105 x 50 x 27 mm Enclosure IP67, EMERGE™ PC 8731HH grey resin (casing), EMERGE™ PC 8430-15 transparent resin (sole) Fixations DIN Rail, Tube, Wall, Collar Operating conditions Temperature -25°C / +70°C Humidity 0 to 85% RH (non-condensing) Device Power Supply Battery Type 1 connectorized battery pack Device configuration Local device configuration IoT Configurator Remote device configuration Downlink through network or through KARE platform Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup RF transmit power LoRaWAN MS902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Loral ABP Loral Lora	Mechanical specifications	
Enclosure IP67, EMERGE™ PC 8731HH grey resin (casing), EMERGE™ PC 8430-15 transparent resin (sole)	<u> </u>	70 g (battery included)
Fixations DIN Rail, Tube, Wall, Collar Operating conditions Temperature -25°C / +70°C Humidity 0 to 85% RH (non-condensing) Device Power Supply Battery Type 1 connectorized battery pack Device configuration Local device configuration IoT Configurator Remote device configuration Downlink through network or through KARE platform Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN US902-928: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 Standard US: FCC- Title 47 CFR Part 15	Dimensions	105 x 50 x 27 mm
Temperature -25°C / +70°C Humidity 0 to 85% RH (non-condensing) Device Power Supply Battery Type 1 connectorized battery pack Device configuration Local device configuration	Enclosure	IP67, EMERGE™ PC 8731HH grey resin (casing), EMERGE™ PC 8430-15 transparent resin (sole)
Temperature -25°C / +70°C Humidity 0 to 85% RH (non-condensing) Device Power Supply Battery Type 1 connectorized battery pack Device configuration Local device configuration IoT Configurator Remote device configuration Downlink through network or through KARE platform Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN (@SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Fixations	DIN Rail, Tube, Wall, Collar
Humidity 0 to 85% RH (non-condensing) Device Power Supply Battery Type 1 connectorized battery pack Device configuration Local device configuration IoT Configurator Remote device configuration Downlink through network or through KARE platform Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN US902-928: +18 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Operating conditions	
Battery Type 1 connectorized battery pack Device configuration Local device configuration	Temperature	-25°C / +70°C
Battery Type 1 connectorized battery pack Device configuration Local device configuration IoT Configurator Remote device configuration Downlink through network or through KARE platform Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup RF transmit power LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN (0SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1[safety] / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Humidity	0 to 85% RH (non-condensing)
Device configuration Local device configuration Remote device configuration Downlink through network or through KARE platform Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Device Power Supply	
Local device configuration Remote device configuration Downlink through network or through KARE platform PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN US902-928: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Battery Type	1 connectorized battery pack
Remote device configuration Downlink through network or through KARE platform PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN (QSF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Device configuration	
Security PIN/PUK Code protection Radio/Wireless Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1[safety] / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Local device configuration	IoT Configurator
Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN US902-928: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Remote device configuration	Downlink through network or through KARE platform
Supported regions LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4 Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Class A Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Security	PIN/PUK Code protection
Wireless Security AES-128 data encryption (LoRaWAN only) LoRaWAN Class Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1[safety] / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Radio/Wireless	
LoRaWAN Class Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm Sensitivity -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1[safety] / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Supported regions	LoRaWAN US902-928 / LoRaWAN AS923 / Sigfox RC4
Supported LoRaWAN features OTAA, ABP, ADR, adaptive channel setup LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1[safety] / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Wireless Security	AES-128 data encryption (LoRaWAN only)
LoRaWAN US902-928: +18 dBm LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1[safety] / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	LoRaWAN Class	Class A
RF transmit power LoRaWAN AS923: +16 dBm Sigfox RC4: +23 dBm -136 dBm LoRaWAN @SF12 -122dBm Sigfox Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 US: FCC- Title 47 CFR Part 15	Supported LoRaWAN features	OTAA, ABP, ADR, adaptive channel setup
Regulations and certifications AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 Standard US: FCC- Title 47 CFR Part 15	RF transmit power	LoRaWAN AS923: +16 dBm
AUS/NZ: IEC 62368-1(safety) / AS/NZS 4268:2012 Standard US: FCC- Title 47 CFR Part 15	Sensitivity	
Standard US: FCC- Title 47 CFR Part 15	Regulations and certifications	
CANADA. 1133-247 1350e 2	Standard	

Impulse input	
Number of channels	1 or 2 channels configurable (eg: 1 counter with 5 wires or 2 counters with 3 wires)
Equivalent input pull-up	180 kΩ (water), 47 kΩ (gas)
Input frequency	<100 Hz

