AirIM-100S
AirIM-100L
AirIM-100L
AirIM-100NB

Technical parameters	AirIM-100S	AirIM-100L	AirIM-100NB
Power supply			
Battery power:	1x 3.6V LS 14500 Li-SOCl$_2$ AA		
Battery life by frequency *:			
1x 10 minutes	0.4 years	7.1 years	1.9 years
1x 60 minutes	2.1 years	10.6 years	3.2 years
1x 12 hours	8.5 years	11.7 years	3.6 years
1x 24 hours	9.9 years	11.8 years	3.6 years
External power supply:	5 – 12 V DC (on terminal)		
Supply voltage tolerance:	+10 %; -15%		
Standby consumption:	0.2 mW		
Transmitting power consumption:	250 mW	150 mW	850 mW
Setting			
Setting:	With a message from the server using setting pins, SET button, programming cable		
Alarm Detection:	message to the server		
Battery status view:	only when the battery is powered by a message on the server		
Control			
Control:	button SET		
	Magnetic contact		
	Tamper		
Analog inputs			
Thermal:	TC / TZ**		
Voltage:	AIN 0(1) - 10 V		
Current:	AIN 0(4) - 20 mA		
Battery measurement:	12 V/24 V		
Flooding:	Flood probe**		
Digital inputs			
Inputs:	IN1, IN2		
Supported sensors for energy	LS (LED sensor)**		
measurements:	MS, WS (magnetic sensor)**		
	SO (Contact, open collector)		
Detection of the magnet sensor			
Closed:	< 1.5 cm		
Open:	> 2 cm		
Reliability:	99.9 %		
Other supported sensors			
Flood probe:	FP-1**		
Tempe. and humidity measurement:	HTM2500LF**		
Temperature measurement range			
Thermo sensor TC:	0. .. 70 °C		
Thermo sensor TZ:	-40 .. 125 °C		
Sensor HTM2500LF:	-40 .. 85 °C		

* Values are calculated under ideal conditions and may vary depending on the type of sensor connected
** Not included in the package

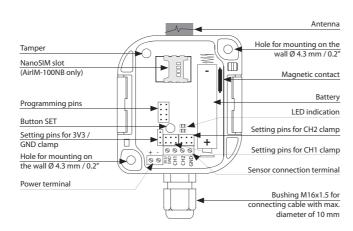- The Universal input is used to detect device statuses which ensure the smooth and trouble-free operation both in the residential and industrial sectors.
- The Universal input has a pulse, analog, binary input and terminals for connecting the temperature sensor.
- In conjunction with the sensor is used, for example, for monitoring the level, temperature, gas, water or electricity, flooding...
- It provides a quick solution to learn about the critical condition of your device which you can immediately respond to (e.g. service interference).
- Using the universal sensor will help you eliminate financial losses caused by device malfunctions, or report the need for action in advance.
- For each power meter it is necessary to have one Universal input AirIM-100.
- With the wireless solution and Sigfox / LoRa / NB-IoT communication, it can communicate instantly to your chosen location and be operated immediately.
- Data is sent to the server from which it can be subsequently displayed as a smartphone, application, or Cloud notification
- Anti-sabotage: If access to the device is unauthorized, a message is immediately sent to the server.
- Power supply: 5-12 V DC or 1x 3.6 V batteries SAFT.
- In the case of external power, the battery is automatically disconnected and serves as backup power.
- Protection degree IP65.

Device description

Tamper
NanoSIM slot (AirIM-100NB only)
Programming pins
Button SET
Setting pins for 3V3 / GND clamp
Hole for mounting on the wall Ø 4.3 mm / 0.2"
Power terminal

Antenna
Hole for mounting on the wall Ø 4.3 mm / 0.2"
Magnetic contact
Battery
LED indication
Setting pins for CH2 clamp
Setting pins for CH1 clamp
Sensor connection terminal
Bushing M16x1.5 for connecting cable with max. diameter of 10 mm

Communication			
Protocol:	Sigfox	LoRa	NB-IoT
Transmitter frequency:	RCZ1 868 MHz	868 MHz	LTE Cat NB1***
Range in open space:	Approx. 50 km^x	Approx. 10 km^x	Approx. 30 km^x
Transmission power (max.):	25 mW / 14 dBm	25 mW / 14 dBm	200 mW / 23 dBm
Other parameters			
Working temperature:	-30…+60℃ (Pay attention to the operating temperature of batteries)		
Storage temperature:	-30…+70℃		
Operating position:	any		
Mounting:	glue / screws		
Protection degree:	IP65		
Connecting External Power:	terminals, wires 0.5 - 1 mm^2		
Connection of the sensor:	terminals, wires 0.5 - 1 mm^2		
Cable gommet:	M16 x 1.5 for cable ø max. 10 mm		
Dimension:	182 x 62 x 34 mm	136 x 62 x 34 mm	136 x 62 x 34 mm
Weight:	108 g ^{xx}	102 g ^{xx}	108 g ^{xx}

*** Multiple frequency bands of B1 / B3 / B5 / B8 / B20 / B28
^{x} Depending on network coverage
^{xx} Without battery

Function

1. **S0** - pulse counting S0
   Recommended accessories: cable for S0 output

2. **Energy measurement** - pulse counting from active sensor LS, MS, WS
   Recommended accessories
   - LS (LED sensor): is particularly suitable for power meters that support LED pulse sensing
   - MS (magnetic sensor): is particularly suitable for gas meters that support magnetic sensing.
   - WS (magnetic sensor for water meter): it is particularly suitable for water meters that support magnetic sensing.

3. **Flood Detection** - Flood Sensor
   Recommended accessories: flood sensor FP-1

4. **Opening detection** - Window / Door Magnetic Sensor (integrated inside the unit)
   Recommended accessories: Magnet D / WD
   Note: The universal sensor has a magnet sensor located only on one side, so be careful about the correct position relative to the magnet.

5. **Analog measurement. Voltage 0 - 10 V**

6. **Analog measurement. Current 0 - 20 mA**

7. **Battery measurement 12/24 V** - voltage measurement 0 - 24V

8. **Temperature measurement**
   Recommended accessories: TC or TZ temperature sensor

9. **HTM2500LF** - Temperature and Humidity Sensor Measurement HTM2500LF
   Recommended accessories: HTM2500LF sensor

10. **Alarm function** - check the contact

Sigfox Ready Certification

Certificate ID for AirIM-100S Universal Sensor:
P_0094_56EE_01