

DRY CONTACTS

Report 0-1 states, control relays or equipment, measure machine operating time.



4 configurable inputs/outputs



ACT

Control equipment in response to a change in state.

Activate or restart equipment remotely at any time.



ALERT

Alert on events:

- report faults and level alerts,
- detect presence, action,
- control access, detect intrusion,
- alert if an event exceeds a certain duration.



MONITOR

- Count the number of state changes.
- Evaluate the time spent in a given state.

Additional features:



- Four configurable digital inputs/outputs:
 - Control an output based on the change in state of an input
 - Remote and in near-real time control of an output - LoRaWAN Class C
 - Track the time spent in a given state
- Data transmission modes: periodic and/or event-triggered
- Local and remote product configuration



Detect the opening of a door in a restricted area.



Count the time a fridge has been left open.



Automatically restart a machine following the triggering of an event.

TECHNICAL SPECIFICATIONS



LoRaWAN ARF8170ARA

Mechanical specifications

Weight	128g (battery included)
Dimensions	132 x 62 x 34 mm
Enclosure	IP68, EMERGE™ PC 8731HH grey resin (casing), EMERGE™ PC 8430-15 transparent resin (sole)
Mounting	DIN Rail, Tube, Wall, Collar
Cable length	70 cm + 10 cm of stripped wire

Operating conditions

Temperature	-25°C / +70°C
Humidity	0 to 85% RH (non-condensing)

Device Power Supply

Battery Type	Battery power: replaceable battery (4000 mAh) External power supply (not supplied): input range 4.5 - 6.5V - Max current 200mA USB power supply: supply voltage 5V nominal - Max current 200mA
Expected Battery Life	1 transmission/4 hours, 4 inputs in default «open» state and 100 events per day: SF7: > 15 years SF12: > 15 years
External power supply	Input range 4.5 - 6.5 V - Max current 110mA

Device configuration

Local device configuration	IoT Configurator
Remote device configuration	Downlink via the network or via the KARE platform
Configuration and firmware update from the air	KARE+ compatible
Security	PIN/PUK Code protection

Radio/Wireless

Supported regions	LoRaWAN EU863-870
LoRaWAN spec.	1.0.4
Wireless Security	AES-128 data encryption
Class	Class A and Class C (if external power supply connected)
Supported LoRaWAN features	OTAA, ABP, ADR, adaptive channel setup
Data time-stamping	EPOCH 2013 format (can be activated)
Joining phase	Customisable (number of attempts, time between attempts), remote join re-launch
Network quality test	Performed automatically when the product starts up (via LEDs)
RF transmit power	14 dBm

Regulations and certifications

Standard	Directive 2014/53/UE (RED)
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INPUTS		OUTPUTS	
Number	up to 4 by configuration	Number	up to 4 by configuration
Voltage	0 - 24 V	Charging voltage	0 - 24 V
Equivalent input resistance	500 kΩ	Recommended dissipation max current	100 mA
Input frequency	10 Hz	Output frequency	10 Hz

