Autonomous Smoke Sensor
with LoRa WAN connectivity

Introducing the Autonomous Smoke Sensor, which uses optical detection method to detect smoke and LoRa WAN protocol to deliver alarms and messages.

When the concentration of smoke rises above a pre-defined threshold, a loud audible alarm is raised locally and a LoRa WAN message is sent to the network server. Similarly, when the concentration of smoke drops below the threshold, the siren is silenced and another message (alarm-restore) is sent to inform the system that danger has subsided. Additionally, for device health supervision, the sensor sends heart beat messages at user-configurable intervals, which also contain information about the battery status.

The sensor is powered from a single 9V alkaline battery, which lasts up to 3 years (subject to interval of heart beat message delivery configured by the user).

Smoke detection section:
detection method:	optical
conforms to:	EN14604:2005
siren intensity:	>85dB

Radio section:
band:	868 MHz
protocol:	LoRa WAN
network enrollment :	OTAA
spreading factor:	7 - 12 (dynamic)

Other characteristics:
operating temp.:	-25°C to 55°C
dimensions:	Ø 112 x 57 mm