CLEAN-Boost™

Batteryless Water Leak Sensor*

ABLIC
MinebeaMitsumi Group



Wireless. Batteryless. Revolutionary leak detection.

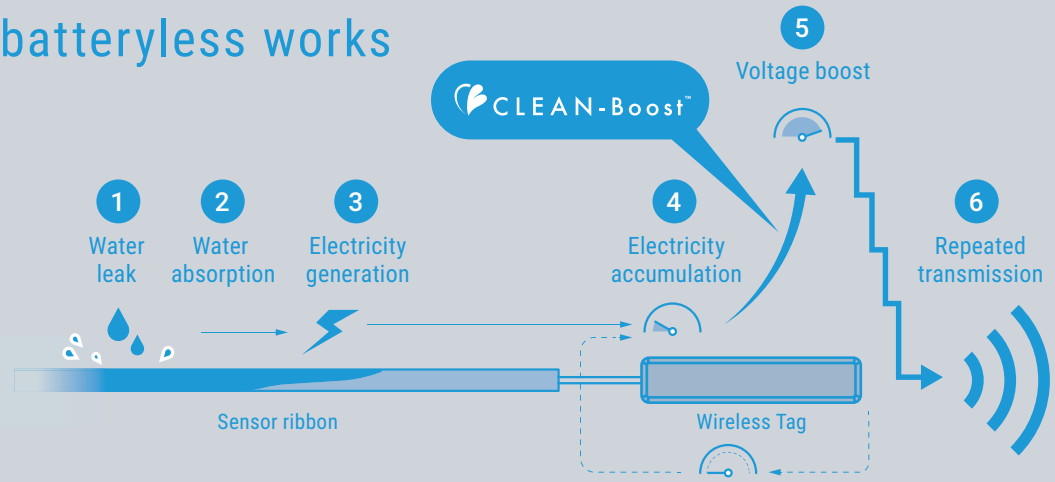
Sensor Ribbon
S-CBSSAAAC-001/002/003

Wireless Tag
S-CBTGAABI

Batteryless thanks to CLEAN-Boost™ technology**

CLEAN-Boost™ technology uses microwatt energy sources to autonomously generate electricity from leaking water and transmit water leak signals wirelessly. Batteryless operation provides flexible layout for installation.

How batteryless works



Water absorbed into the sensor ribbon and the metal electrode woven into the sensor ribbon react to generate a tiny amount of electricity. The wireless tag uses CLEAN-Boost™ technology to accumulate and boost tiny amounts of electricity and drive a Bluetooth® Low Energy (BLE) module to notify water leaks via wireless transmission. As long as the sensor ribbon is wet, it will continue accumulation, boosting and transmission.

High sensitivity

Detects water leaks as tiny as 150 microliters of water (a few drops). No leak, however small, is missed.
(Transmit signal time: Less than 5 minutes for tap water)



High versatility

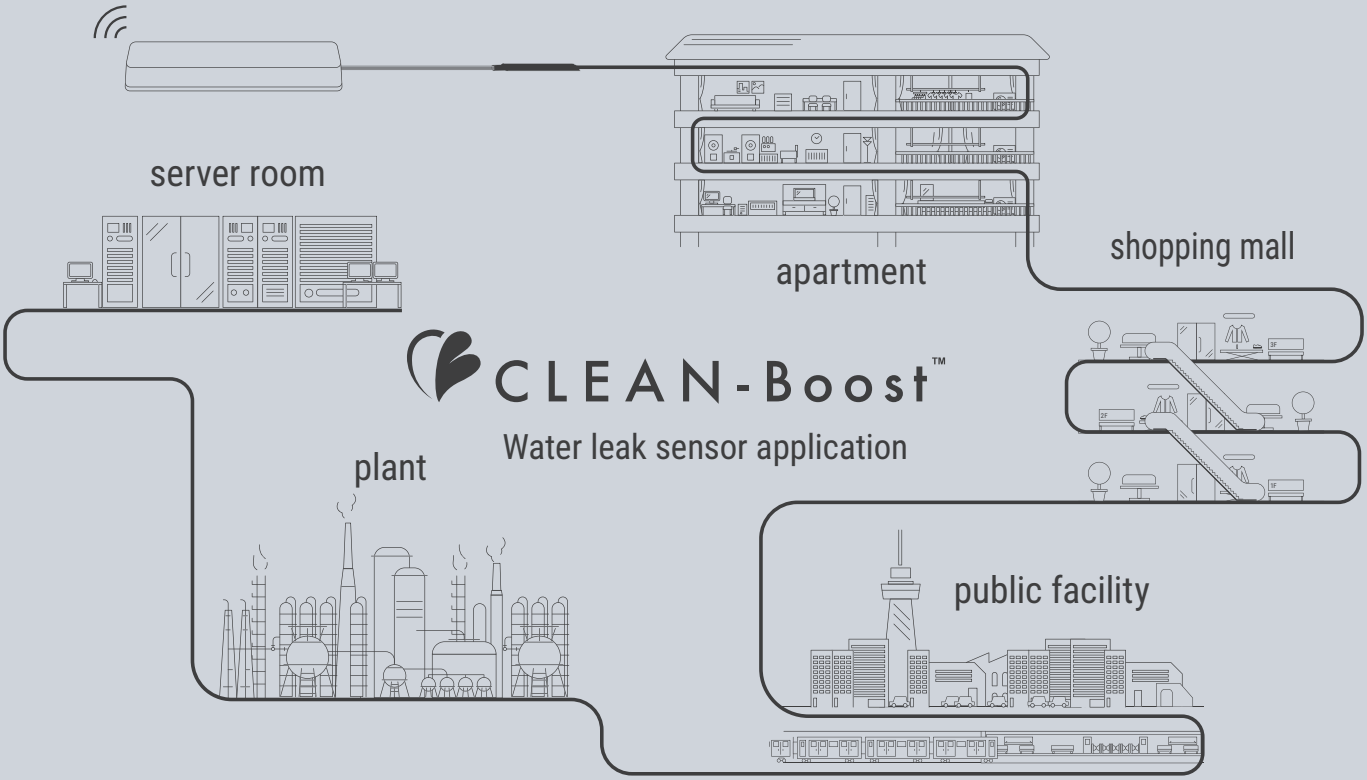
The wireless tag ID signal transmitted in the event of a water leak uses the versatile Bluetooth® Low Energy 5.0 beacon signal. A variety of reception methods are available. LoRa® model is currently under development.

*The batteryless water leak sensor is a joint development product with Taisei Corporation.
**The Accumulation and Boosting voltage circuit is a joint development between ABLIC Inc. and Ritsumeikan University.
Bluetooth® is a registered trademark of Bluetooth SIG, Inc.
LoRa® is a trademark of Semtech Corporation.

ABLIC Inc. is a group company of MinebeaMitsumi Inc.

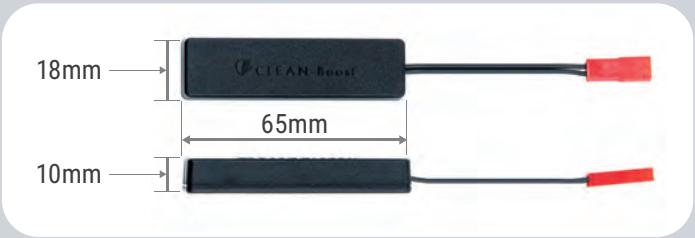
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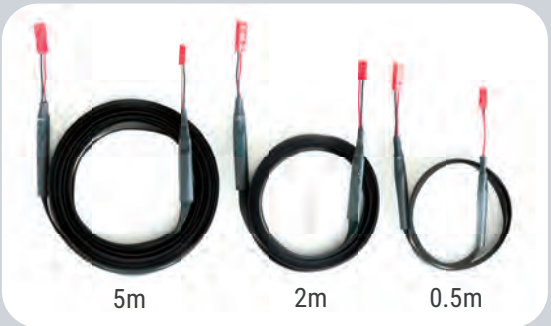
Specifications

Wireless Tag	S-CBTGAABI
Dimensions	134x10x18 mm (main body: 65x10x18 mm)
Operation temperature	-10 to 85℃ (storage: -25 to 85℃)
Operation humidity	95%RH max.
Wireless standards	Bluetooth 5.0 Low Energy
Frequency	2402 to 2480MHz
Output power	8dBm typ.
Output range	100 to 200m (line-of-sight distance)
method	Beacon Mode



The wireless tag ID is unique. Creating a table that pairs installation location with the ID will enable identification of a water leak from the ID signal.

Sensor Ribbon	S-CBSSAAAC-001,002,003
Dimensions	700×13×8mm (0.5m)
	2200×13×8mm (2.0m)
	5200×13×8mm (5.0m)
Operation temperature	0 to 85℃ (storage: -25 to 85℃)
Operation humidity	95%RH max. (70℃ max)
Drip amount	150µl min. (@Ta=25℃, 40%)
Detection temperature	5 to 85℃
Detection time	300s max. (conductivity: 200µS/cm)
Total length	15m max. @70℃, 95%RH



The Products and product specifications described in this document are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements.
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