In development

Self-Powered Liquid Detection Sensor

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Factory equipment to Medical machines: Reliability Matters in Battery-Free Liquid Detection

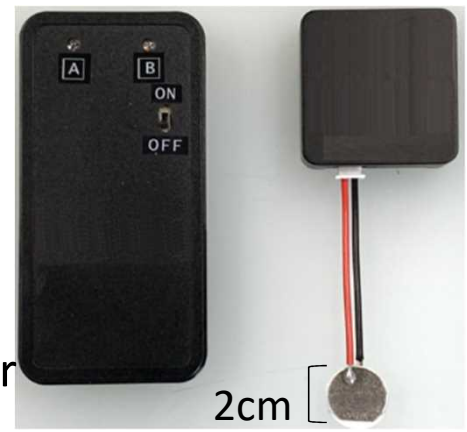
- No power source or power cable required
- A few drops of water can generate power

Applications

- Medical Application
- Analysis Equipment
- Industrial Use
- Nursing-care Field

Sensor image

Standard size

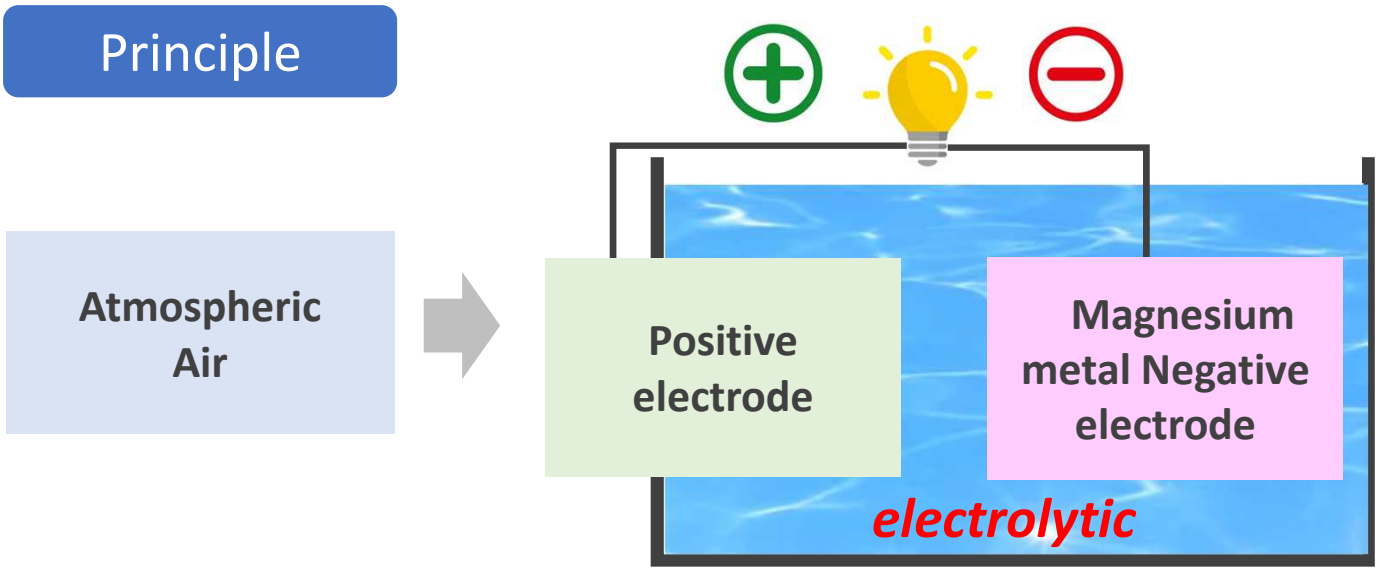


Receiver

Transmitter

sensor

Principle



- Medical Use - Concept

Blood Leakage or Medicine Leakage on Medical site
Considerations for Diapers nursing Babies or Adults

- Non-Medical Use -

Water Leak Detection that could be serious incidents for buildings, pipes, or all kinds of machineries or equipment.

■ ■ Electrochemical reactions ■ ■

【Anode】
$Mg \rightarrow Mg^{2+} + 2e^-$
【Cathode】
$1/2O_2 + H_2O + 2e^- \rightarrow 2OH$

【Overall reaction】
$Mg + 1/2O_2 + H_2O \rightarrow Mg(OH)_2\downarrow$

The sensor produces electricity through an electrochemical reaction with magnesium, using the target liquid as the electrolyte.

< Contact >

FUJIKURA COMPOSITES

TOC East 10F, 3-5-7 Ariake, Koto-ku, Tokyo, Japan 1350063
E-mail: seigyo.toiawase.en@fc.fujikura.co.jp

Web: https://www.fujikura-control.com/english
Founded: 1901
Sales: $281 million US dollar (2023 March, consolidated)
ISO certified: 9001, 14001, 13485