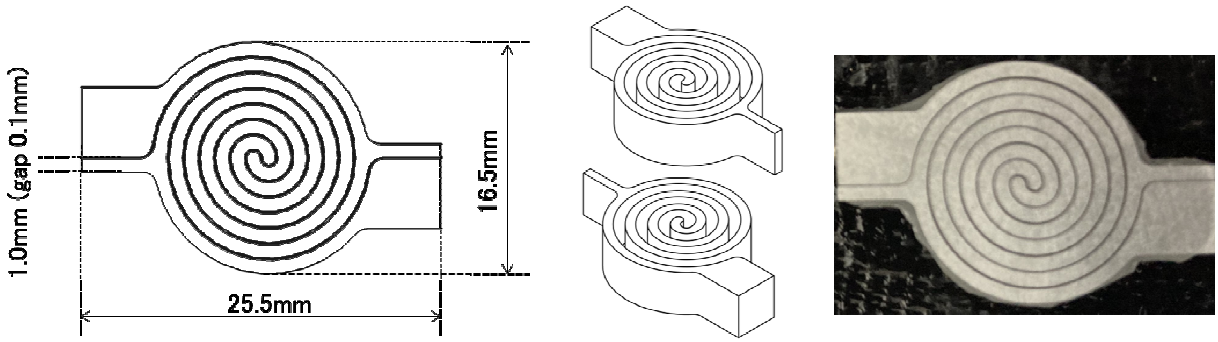
ICM(Intelligent Corrosion Monitor) Sensor specifications

【Overview】

It is a sensor with an optimized shape for AC impedance measurement of corrosion behavior such as corrosion of metals and deterioration of coating film, and continuous monitoring of current of galvanic corrosion with high accuracy.

Atmospheric corrosion monitoring using sensors with two electrodes, such as plate-shaped, concentric circles, and comb-shaped electrodes, is commonly performed. Since the width, spacing, and facing length of the two electrodes greatly affect measurement accuracy, machining and accuracy have become issues. In order to overcome these issues, a spiral-shaped electrode is used.

【ICM Sensor Structure/Appearance】



It has a flange structure that suppresses movement in the rotational direction of the spiral shape, with an electrode width of 1 mm, and the distance between electrodes is 0.1 mm. This shape eliminates the directional dependence of the mounting angle and averages the corrosion behavior. The gap between the electrodes is filled with epoxy resin, and the metal surface is treated in advance to suppress the occurrence of crevice corrosion.

【Specifications】

Materials	Carbon steel, Stainless steel, Aluminum alloy, Magnesium alloy, etc. ※Can be made from supplied materials (consultation required)
Electrode surface area	$1cm^2 \times 2$ items
Electrode Thickness	1mm～5mm ※Size changeable (consultation required)
Lead Wire	Bonded to the side or bottom of the electrode flange
Compatible Devices	・ Corrosion monitor SICM-714B, SICM-718B, etc. (Impedance measurement) ・ ACM logger SACM-312B/314B, SACM-30F, etc. (Galvanic current measurement)

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