

**PSPC**  
 Compliant in Accordance with  
 NACE SP0508-2010  
 Item No.21134  
 ISO8502-9  
 Equivalent

# SSM-21P

## Surface Salinity Meter



Simple method for checking the surface salinity of ships and other steel structures before painting.

The surfaces of all steel structures need to be carefully cleaned before painting. One of the key indexes used to determine whether a structure is ready to be painted is the salinity concentration of the steel surface. The careful monitoring of the salinity concentration is an important part of corrosion prevention. The SSM-21P is an instrument designed to perform simple and direct measurements of the surface salinity of steel structures such as ships, bridges, and large storage tanks. The SSM-21P not only helps to improve the reliability of cleanliness test, but also enhances the overall efficiency of the work in the field.

# SSM-21P Surface Salinity Meter

## Features

- The surface salinity can be read directly in four different formats:
  - Soluble salt concentration (PSPC-compliant)
  - Soluble salt concentration (using the conversion formula specified in ISO8502-9)
  - Sodium chloride concentration
  - Solution conductivity
- Simple measurement  
The SSM-21P makes it easy to obtain the surface salinity concentration value. All that needs to be done is setting the measurement cell on to the steel surface and then inject pure water into the cell. This eliminates the cumbersome work involved in collecting the salts on the steel surface by wiping and extracting them in a solution.
- Magnetic base to hold the measurement cell in place  
The use of a magnetic base ensures there are no sticky residues left on steel surfaces, such as the residue left by conventional procedures like the Bresle method.  
\*The object to be measured must be of flat, magnetic steel plate.
- Light, compact, and portable body and measurement cell  
The optional carrying case and measurement kit provide added portability, making it easier for users to perform in-situ measurements.

## Specifications

### Main body

Model	SSM-21P		
Measurement method	Solution conductivity		
Measurement modes	1) Soluble salt concentration (PSPC-compliant) 2) Soluble salt concentration (using the conversion formula specified in ISO8502-9) 3) Sodium chloride (NaCl) 4) Solution conductivity		
Measurement range	Soluble salt concentration	0 to 199.9 mg/m <sup>2</sup>	
	Sodium chloride concentration	0 to 1999 mg/m <sup>2</sup> (auto ranging)	
	Solution conductivity	0 to 199.9 μS/cm, 0 to 1999 μS/cm (auto ranging)	
	Temperature	0 to 50°C (Display range: 0 to 99.9°C)	
Temperature compensation range	ATC (automatic temperature compensation) : 0 to 50°C Reference temperature: 25°C		
Temperature coefficient	2.0% per degree Celsius (°C) (fixed)		
Data storage	300 data points (time, measurement value, temperature)		
Measurement time setting	1 min, 3 min, 0 min (continuous)		
Cell constant	Automatic loading from the measurement cell (manual input available)		
Measurement temperature range	0 to 40°C		
Power supply	Two AA Alkali batteries		
Dimensions	Approx. 187.5 (L) × 37.5 (H) × 75 (W) mm		
Weight (main body)	Approx. 310 grams (including batteries)		

### Measurement cell

Model	ELC-006	Stirring function	Direct motor drive
Material	SUS-316	Cable length	1 m
Surface area	1250 mm <sup>2</sup>	Stirrer power supply	1 × 9V battery (6F22 battery)
Pure water volume	10 ml	Weight	Approx. 680 g (including battery)

### Standard accessories

Measurement cell ELC-006	100 ml C-solution for checking the conductivity cell
Injection syringe (with tube)	Strap
Two AA alkali batteries (for testing)	Dedicated driver
6F22 battery (for testing)	Instruction manual

### Optional peripheral equipment

Item	Model/Code No.
External printer (100V AC, connection cable included)	7158410K
Data acquisition software	G-LOG2
RS-232 cable (2 m)	7156370K
Storage case (with shoulder belt)	ODAO0001
Measurement kit (washing bottle, poly beaker, pure water bottle)	7148480K

## Measurement Method and Procedure

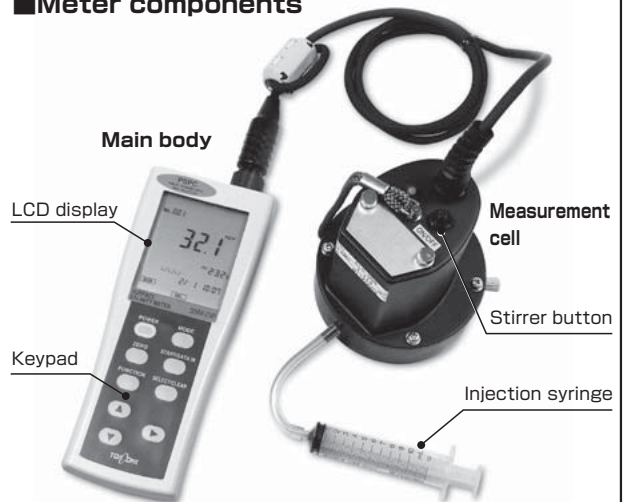
### Method

The measurement cell is firmly attached to the steel surface, and a fixed volume of pure water is injected into the measurement cell. The salts present on the steel surface are dissolved into the pure water and the conductivity of the resulting solution is measured. The conductivity measurement value is converted into a soluble salt concentration value or a sodium chloride concentration value, and then the surface salinity is displayed on the meter.

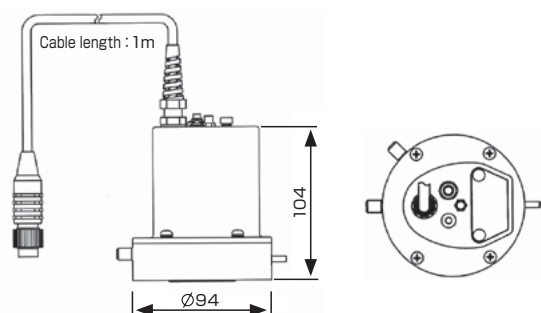
### Procedure

- 1) Attach the measurement cell to the steel surface.
- 2) Use an injection syringe to inject 10 ml of pure water.
- 3) Press the Start key on the main body, and then press the solution stirrer button on the measurement cell.
- 4) When the measurement is finished, the measurement result is displayed on the meter and saved in the data log.
- 5) Stop the stirrer.

### Meter components



### Measurement Cell Dimensions (Unit: mm)



**DKK-TOA CORPORATION**

**CAUTION**

Do not operate products before consulting instruction manual.

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Information and specifications are for a typical system and are subject to change without notice.

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