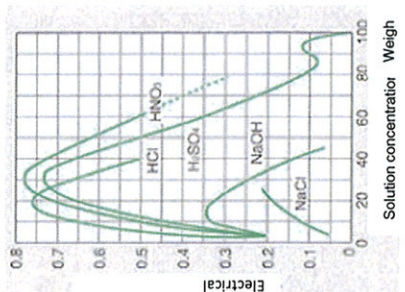


Table1: Comparative chart of measurement range of the sensor used in each conductivity meter

Classification/ Type	Cell constant (m <sup>-1</sup> )	Material of Sensing station	Measurement range (mS/cm)	0.1mS/m	1mS/m	10mS/m	100mS/m	1S/m	10S/m	100S/m	1000S/m	Usage environment
				(0.001m/cm)	(0.01mS/cm)	(0.1mS/cm)	(1mS/cm)	(10mS/cm)	(140mS/cm)	(780mS/cm)	(1S/cm)	
AC 2 electrodes class/type	10		0.0001~10									Mainly used for laboratories. A glass tube is adopted, as it is not eroded by strong acid and strong alkali in high concentration, which could be wetted material of electrodes and so on. Its great advantage is that it has very high chemical-resistance, which makes any measurement possible through wide range with high accuracy.
	100	platinized platinum	0.001~100									
	1000	platinized platinum	0.01~1000									
	5000	platinized platinum	0.01~5000									
AC 2 electrodes class/type	10	SUS, titanium, graphite, etc.	0.001~0.01									Mainly used for measurement of environmental water. They have lower measurement accuracy and corrosion resistance than platinized platinum electrodes, with very narrow range for measurement. Their electrodes are large, and not suitable for laboratories.
	100	SUS, titanium, graphite, etc.	0.01~0.1									
	1000	SUS, titanium, graphite, etc.	0.1~1									
	5000	SUS, titanium, graphite, etc.	0.5~5									
AC 4 electrodes class/type	100~1000	SUS, titanium, etc.	1~1000 <sup>*1</sup>									Mainly used for measurement of environmental water. They have lower measurement accuracy and corrosion resistance than platinized platinum electrodes. Their electrodes are large, and not suitable for laboratories.
	100~1000	SUS, titanium, etc.	1~1000 <sup>*1</sup>									
electromagnetic induction class/type	100~1000	Magnet coil	20~200000									Mainly used for management of chemicals of high concentration more than 10%. The electrode size is very large. Principally used for process management, and they are not available in the market as a sensor for laboratories.



Relationship between solution concentration and

Value of electrical conductivity in 25°C of NaCl solution (IEC 60746-

%	mg./kg.	Electrical μS/cm
0.001	10	21.4
0.003	30	64.0
0.005	50	106
0.01	100	210
0.03	300	617
0.05	500	1.03
0.1	1000	1.99
0.3	3000	5.69
0.5	5000	9.48
1	10000	17.6
3	30000	48.6
5	50000	81.0
10	100000	140