ISO-14001
ISO-9001

SPECIFICATION SHEET

ELECTRIC CONDUCTIVITY METER

Models: **CM-30G/40G/60G/20J**

These instruments are members of the G-series family. They feature GMP/GLP compliance and have been designed for ease-of-use. The instruments feature a large LCD display with backlight, which provides excellent legibility and gives easy access to analyzer functions such as validation and calibration.

FEATURES

GMP/GLP Compliance

The following advanced features are provided for routine maintenance (measurement management):

- Cell constant record preparation (previous 10 sets of cell constant data can be stored), · year/month/day · cell type · cell lot no. · cell constant data.
- Sensor replacement/alarm function. Diagnostic messages are displayed indicating cell replacement required, maintenance inspection required.

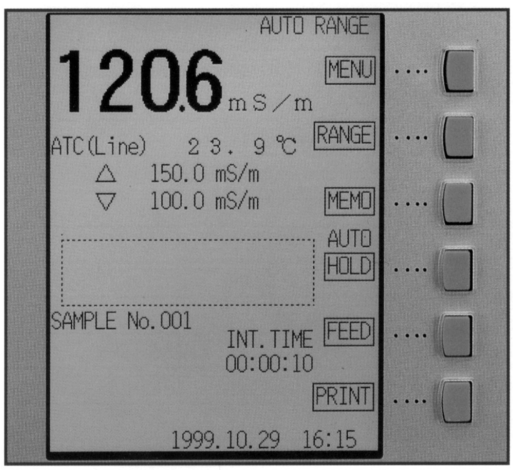
- **Easy to use menu-driven operation with 6 mode keys**
  Operation and Calibration can be carried out using 6 "soft" selection keys according to menus indicated on the display. Error messages and operation information are also displayed.

- **Large display with base-light**
  The instrument features a large (320 x 240 pixel) LCD display with backlight. This provides excellent legibility and contributes to the ease of operation.

- **Easy electrode connection**
  A simple multi-pin connector plug allows electrodes to be easily connected and disconnected.

- **Part of G-series family**
  Other G-series instruments include the Model IM-55G ion meter and Models HM-30G/50G/60G pH meters.

- **Graphical display**
  Variation of measured value can be displayed as a graph (time vs cond. on the LCD display).



- **Built in printer (CM-60G)**
  Hard-copy data output is available from the built in thermal printer.

- **RS232 output**
  RS232 data output is provided as a standard feature.

- **Data storage function**
  Data from up to 100 previous measurements can be stored in the memory allowing access to previous measurement results.

- **System expandability (CM-40G/60G)**
  The instrument can be expanded by adding optional modules such as turn tables (12, 18 or 36 samples) and electrode selector (max 5 channels).

- **Multiple measurement units**
  Conductivity (s/m, s/cm), Resistivity (Ω·m, Ω·cm). Temperature and Concentration (%) can be measured.

- **Automatic Cell Constant determination**
  Cell constant is automatically set by just immersing the cell into the standard solution (at constant temperature) and carrying out the measurement.

- **Temperature compensation can be adjusted to meet sample conditions**
  Non-linear temperature compensation is available (40G/60G) as well as linear compensation (%/°C) enabling the instrument to provide more accurate temperature compensation.

- **Automatic Temperature Coefficient Calculation (40G/60G)**
  Temperature coefficient can be calculated automatically by measuring 2~10 conductivity and temperature values of the same sample.

- **Accurate measurement in pure water region (60G)**
  Accurate measurement is available even for pure water region due to conductivity cell and temperature compensation profiles for pure water measurement.

SPECIFICATIONS

Model		CM-30G	CM-40G	CM-60G	CM-20J
Measuring item		Conductivity / resistivity/concentration, Temp.			Conductivity
Indicator		Graphic LCD with back light			LCD
Displaying range		Conductivity 0 to 200.0uS/m 0 to 2.000mS/m 0 to 20.00mS/m 0 to 200.0mS/m 0 to 2.000S/m 0 to 20.00S/m 0 to 200.0S/m	Resistivity 0 to 2.000 Ω·m 0 to 20.00 Ω·m 0 to 200.0 Ω·m 0 to 2.000k Ω·m 0 to 20.00kΩ·m 0 to200.0k Ω·m 0 to2.000M Ω·m	Concentration 0 to 2.000% 0 to 20.00% 0 to 200.0% (Auto range only) Temp. 0 to 100.0°C	Conductivity 0 to 2.000mS/m 0 to 20.00mS/m 0 to 200.0mS/m 0 to 2.000S/m 0 to 20.00S/m
		Unit selection: SI unit (S/m, Ω·m) or conventional unit (S/cm, Ω·cm)			
Repeat-ability	Conductivity/ resistivity/ concentration	±0.5% FS			±0.5% FS conductivity only
	Temp.	0.1°C ± 1 digit			------
Range setting		Auto/manual (conductivity/resistivity) Auto (conc.)			manual
Concentration conver sion calibration		2 to 10 points			------
Temperature Compensation	Temp. comp. range	Auto/manual 0 to 100°C			0 to 60°C manual
	Reference temp.	0 to 100°C			25°C fixed
	Temp. coefficient (linear)	0 to 10.00%/°C			2%/°C fixed
	Ditto (Curve)	-------	2 to 10 points		-----
Output	Cond. /resist./ conc.	0 to 1V FS			0-1V cond. only
	Temp.	0 to 1V(0 to 100°C)			-----
	Range	100mV/1 range			-----
	Upper/lower alarm	-------	open collector		-----
Data storage function		100 points			-----
Measuring frequency		80Hz or 3kHz, automatic selection			
Power source		AC line by AC adapter			AC line/battery
Power consumption		approx.13VA		approx.15VA	approx.3VA
Dimensions		approx. 182(w) x60(h)x257(d)mm		approx.182(w)x60(h)x 318(d)mm	approx.148(w)x 75(h)x221(d)mm
Weight		approx.0.9kgs.	approx.0.9kgs	approx.1kg	approx.0.7kg
Operating temp. range		0 to 40°C			

STANDARD ACCESSORIES

Model	CM-30G	CM-40G	CM-60G	CM-20J
Conductivity cell	CT-57101B			C-50101B
Cell holder	1 pc.			
Cell stand	1 pc.			
Support pole	1 pc.			
Stopper for cell holder	1 pc.			
Cell holder attachment	1 pc.(type G)			1 pc.(type J)
Polyethylene beaker	1 pc.(150ml)			
Mercury thermometer	------			1 pc.
Power cord	1 pc.			
AC adapter	1 pc.			-----
Grounding lead wire	1 pc.			
Printer paper	-------		2 rolls	-----
Instruction manual	1 copy			

CONDUCTIVITY CELL

Cell type	Application	Measuring range	Temp. range	Applicable model
CT-57101B	Dip type Standard	100uS/m to 10S/m (1uS/cm to 100mS/cm)	0 to 100°C	CM-G
CT-57101C	Dip type Low conductivity	5uS/m to 1S/m (0.05uS/cm to 10mS/cm)	0 to 100°C	ditto
CT-57101A	Dip type High conductivity	1mS/m to 100S/m (10uS/cm to 1S/cm)	0 to 100°C	ditto
CT-87101B	Flow-through, Standard	100uS/m to 10S/m (1uS/cm to 100mS/cm)	0 to 100°C	ditto
CT-27111D*	Flow-through, for pure water	5uS/m to 20mS/m (0.05uS/cm to 200uS/cm)	0 to 80°C	ditto
CT-87101C	Flow through, low conduct.	5uS/m to 1S/m (0.05uS/cm to 10mS/cm)	0 to 100°C	ditto
CT-87102A	Flow through, high conduct.	10mS/m to 100S/m (100uS/cm to 1S/cm)	0 to 100°C	ditto
C-00205B	Flow through, high conduct.	1mS/m to 10S/m (10uS/cm to 100mS/cm)	------	ditto
C-50101B	Dip type, standard	100uS/m to 10S/m(1uS/cm to 100mS/cm)	------	CM-20J
C-50101C	Dip type Low conductivity	5uS/m to 1S/m (0.05uS/cm to 10mS/cm)	------	ditto
C-50101A	Dip type High conductivity	1mS/m to 100S/m(10uS/cm to 1S/cm)	------	ditto

* Separately sold flow cell is required. (CEF-22A (PP) or CEF-23A (SUS)

FUNCTIONS

Model		CM-30G	CM-40G	CM-60G	CM-20J
Concentration conversion function		X	O	O	X
Output	Conduct./resistivity/conc.	O	O	O	△ 2
	Temp.	O	O	O	X
	Range	O	O	O	X
	Upper /lower limit	X	O	O	X
Reference temp. setting function		O	O	O	X
Temp. compensation for pure water		X	O	O	X
Temp. coefficient calculation function		X	O	O	X
Clock function		O	O	O	X
Data storage function		O	O	O	X
Hold function		O	O	O	X
Printer (built-in)		X	△1	O	X
Interval function		X	O	O	X
Average value calculation function		X	O	O	X
RS-232C		O	O	O	X
Turn-table connecting function		X	O	O	X
Cell selector connectable		X	O	O	X
Unit change -over function		O	O	O	O
Dialog function		O	O	O	X

△1 interface for printer built-in
△2 conductivity only

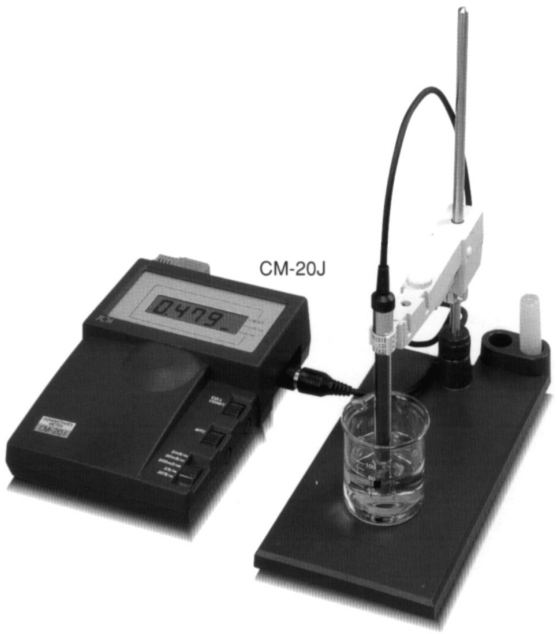
OPTIONS FOR CM-40G/60G

- Exclusive external printer EPS-G 60mm width compact size printer allows long-term storage of normal chart paper.
- Turn-table permits automatic measurement of multi-samples
- Cell selector ES-1GC Max.5 pcs. of conductivity cell can be connected to it.

Compact size/practice use

Digital electric conductivity meter model CM-20J:
- O AC/DC 2-way power source
- O Small size, lightweight
- O Low cost
- O New/conventional units displayed

Other G-series family instruments (GMP/GLP compliance)
pH/conductivity meter model WM-50EG: Please ask for detailed brochure.



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⚠ **CAUTION** Do not operate products before consulting instruction manual.