

# General Specifications

Model SC72  
Personal Conductivity Meter

RoHS

Compact, Easy-to-Use, and Waterproof, the SC72 is designed specifically to meet the needs of both the field and the laboratory. This portable conductivity meter includes advanced features such as Data Memory, Alarm, and Self-Diagnostic functions.

Combined with a wide variety of electrodes, the SC72 offers the flexibility to meet the requirements of nearly any conductivity application.

## Features

- Waterproof (IP67), sealed case and connector cover to keep out moisture
- Autoranging allows 0 to 2000 mS/cm capability
- Large, easy-to-read display
- Automatic Temperature Compensation (NaCl curve or User-defined coefficient)
- Self-Diagnostics warn of fault conditions
- Auto power off extends battery life
- 300 Points of Data Memory (stores conductivity value, temperature, date, and time)
- Audio Alarm Function

## Specifications

### Measuring Ranges

Conductivity : 0 to 2000 mS/cm  
(dependent on sensor selected)

Resistivity : 0-40.0 M $\Omega$ .cm  
(high purity sensor only)

Temperature : 0 to 80°C

**Display** : Digital LCD

### Resolution

Conductivity : 0.001  $\mu$ S/cm (for 0 to 2  $\mu$ S/cm range)

Resistivity : 0.1 M $\Omega$ .cm

Temperature : 0.1°C

**Repeatability** :  $\pm$ 2%

**Process Temperature** : 0 to 80°C

**Ambient Temperature** : 0 to 50°C

**Power Supply** : Two AA size Alkaline Batteries

### How to order the SC72

Model Code	Description
SC72-00-E-AA	Hand-Held Conductivity Meter Without Sensor

### How to order separate conductivity sensors

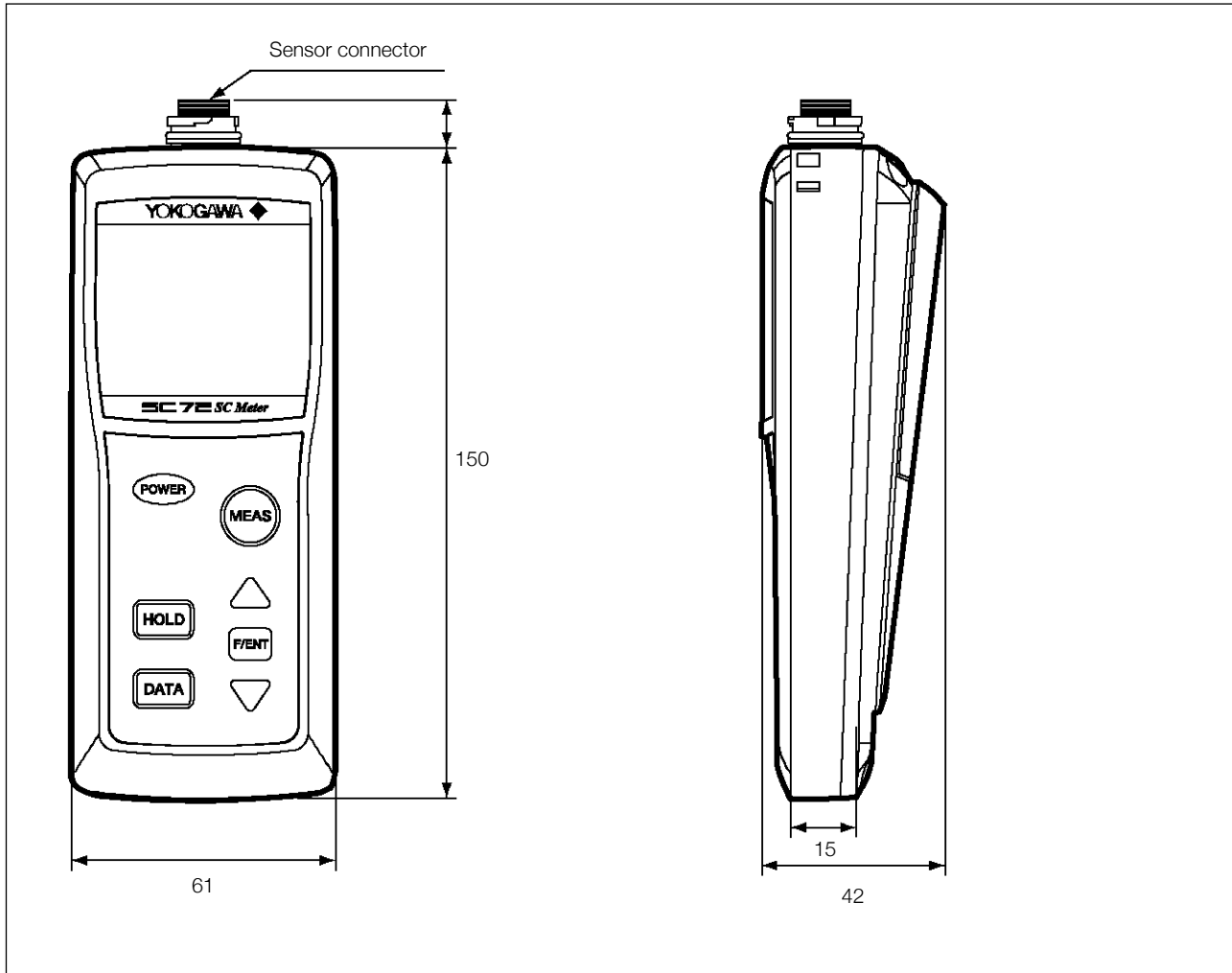
Part Number	Description
SC72SN-21-AA	General Purpose Sensor with 0.75m cable; Integral Temperature Sensor; 0-200mS/cm range
SC72SN-23-AA	General Purpose Sensor with 3.0m cable; Integral Temperature Sensor; 0-200mS/cm range
SC72SN-11-AA	Pure Water Sensor with 0.75m cable; Integral Temperature Sensor; 0-200 $\mu$ S/cm range
SC72SN-31-AA	Chemical Resistant Sensor with 0.75m cable; Integral Temperature Sensor; 0-200mS/cm range
SC72SN-41-AA	High Conductivity Sensor with 0.75m cable; Integral Temperature Sensor; 0-2000mS/cm range



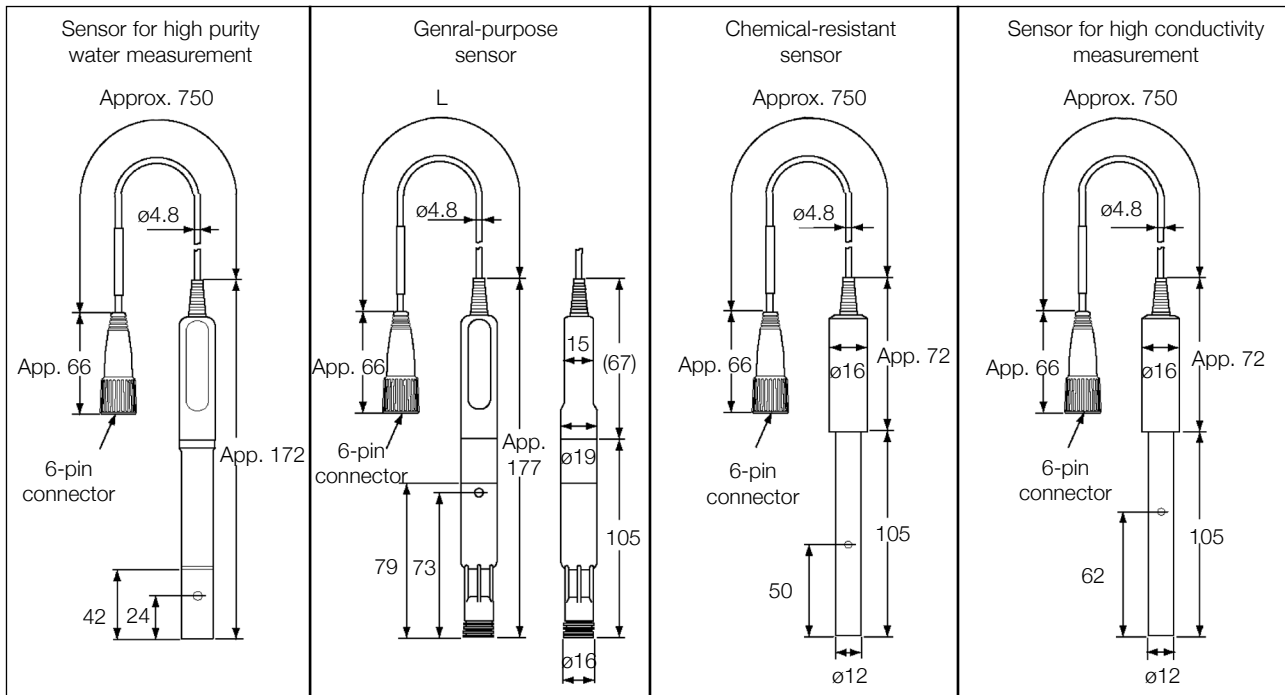
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GS 12D03D02-01E-E  
4th Edition

**Dimensions**



**Sensors of the SC72**



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## Model and Suffix Codes

### Personal Conductivity meter

Model	Suffix Code	Option Code	Description
SC72			Personal conductivity meter
Conductivity sensors	-00		Without sensor
	-11		With sensor for high purity water measurement (cable length: 75 cm)
	-21		With general-purpose sensor (cable length: 75 cm)
	-23		With general-purpose sensor (cable length: 3 m)
	-31		With chemical-resistant sensor (cable length: 75 cm)
	-41		With sensor for high conductivity measurement (cable length: 75 cm)
	-J		Japanese
	-E		English
	-AA		Always -AA

### Conductivity sensor for personal conductivity meter

Model	Suffix Code	Option Code	Description
SC72SN			Conductivity sensor for personal conductivity meter
Sensor	-11		For SC72: for high purity water measurement (cable length:75 cm)
	-19		For SC82: for high purity water measurement (cable length:75 cm)
	-21		For SC72: general-purpose type (cable length:75 cm)
	-23		For SC72: general-purpose type (cable length:3 m)
	-29		For SC82: general-purpose type (cable length:75 cm)
	-31		For SC72: chemical-resistant type (cable length:75 cm)
	-39		For SC82: chemical-resistant type (cable length:75 cm)
	-41		For SC72: for high conductivity measurement (cable length:75 cm)
	-49		For SC82: for high conductivity measurement (cable length:75 cm)
		-AA	

\*Combination of conductivity sensor for SC82 with SC72 meter will not be IP67 waterproof.

## Specifications of Personal Conductivity Meter

Measurement		Conductivity of solution
Unit		S/cm or S/m
Measurement range	Conductivity Resistivity Temperature	0 to 2 $\mu$ S/cm through 0 to 2 S/cm (depends on sensor to be used) x0 to 40.0 $M\Omega$ -cm (Only with sensor SC72SN-11-AA) 0 to 80°C
Resolution	Conductivity Resistivity Temperature	0.05% of full scale *2 0.1 $M\Omega$ -cm 0.1°C
Repeatability	Conductivity	$\pm$ 2% ( $\pm$ 5% when general-purpose type sensor is used in the range of 0 to 2 mS/cm)
Display		Digital LCD
Indication		Conductivity or resistivity, solution temperature and temperature coefficient (simultaneously), various messages
Range switching		Automatic/manual
Temperature compensation		Temperature coefficient (0 to 9.99%/°C) or NaCl coefficient, reference temperature at 25°C
Ambient temperature		0 to 50°C
Construction		IP67 (JIS C0920)
Weight		Approx. 220 g (without sensor)
Power source		2 size AA dry cell batteries
Battery life		Approx. 200 hours*3, Auto Power Off function
Functions		Data memory (300 points), alarm clock

\*1: Resistivity can be measured for reference. In that case repeatability is determined by conductivity.

\*2: When measuring range is set to full scale.

\*3: When alkaline dry cell batteries are used.

## Standard Accessories for Personal Conductivity Meter

AA size dry cell batteries (2 pcs), User's Manual, Quick Manual, non-slip pads (2 pcs), hand strap, cotton swabs Instrument Card

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### Specifications of Sensor for Personal Conductivity Meter

Sensor	Model	Measurement range*1	Cell Constant	Wetted Material
For low conductivity measurement*2	SC72SN-11(0.75m)	0 to 2 $\mu$ S/cm, 0 to 20 $\mu$ S/cm, 0 to 200 $\mu$ S/cm, 0 to 40M $\Omega$ -cm	0.05cm-1	SUS316 (electrode element), fluoro rubber (O-ring), polypropylene resin (insulated area), PVC (cable)
General-purpose type	SC72SN-21(0.75m)	0 to 20 $\mu$ S/cm, 0 to 200 $\mu$ S/cm, 0 to 2mS/cm, 0 to 20mS/cm,	5cm-1	Titanium (sensor), fluoro rubber (O-ring), PVC (cable), polyphenylene sulfite resin, polypropylene resin (insulated area, clear cover)
Chemical-resistant type	SC72SN-23 (3m) SC72SN-31(0.75m)	0 to 200mS/cm		
For high conductivity measurement	SC72SN-41(0.75m)	0 to 2mS/cm, 0 to 20mS/cm, 0 to 200m/cm, 0 to 2S/cm	50cm-1	Glass, platinum black (electrode element), PVC (cable)

\*1: Fixed range. For automatic range, range is automatically variable.

\*2: Resistivity can be measured for reference. In that case repeatability is determined by conductivity.

### Options (Available Separately)

For pH and conductivity meters in common	Hard case	B9108NK
	Soft case	B9108XA
For conductivity meter	Standard solution (0.1 mol /l NaCl, 250 ml)	K9221ZA

### Spare parts

O-ring and gasket set	K9654AY	Gaskets for battery box (2 pcs) and O-rings for connector (2 pcs)
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**YOKOGAWA HEADQUARTERS**  
9-32, Nakacho 2-chome,  
Musashinoshi  
Tokyo 180  
Japan  
Tel. (81)-422-52-5535  
Fax (81)-422-55-1202  
E-mail: webinfo@mls.yokogawa.co.jp  
www.yokogawa.com

**YOKOGAWA EUROPE B.V.**  
Euroweg 2  
3825 HD AMERSFOORT  
The Netherlands  
Tel. +31-88-4641 000  
Fax +31-88-4641 111  
E-mail: info@nl.yokogawa.com  
www.yokogawa.com/eu

**YOKOGAWA CORPORATION OF AMERICA**  
2 Dart Road  
Newnan GA 30265  
United States  
Tel. (1)-770-253-7000  
Fax (1)-770-251-2088  
E-mail: info@yca.com  
www.yokogawa.com/us

**YOKOGAWA ELECTRIC ASIA Pte. Ltd.**  
5 Bedok South Road  
Singapore 469270  
Singapore  
Tel. (65)-241-9933  
Fax (65)-241-2606  
E-mail: webinfo@yas.com.sg  
www.yokogawa.com/sg

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