

For Semiconductor Cleaning Processes

## Conductivity Meter Low Concentration Type

### HE-480C



CE marking compliant

## Perfect for Chemical Solution Measurement and Recycle of Pure Water in Semiconductor Wet Processes

Along with the evolution of devices, the types of chemical solutions used in the wet process of semiconductor manufacturing are tending to increase more and more. The HE-480C uses chemical-resistant electrodes and is thus perfect for measuring conductivity of these chemicals, for the control of concentration and dilution during various processes, and for monitoring the recycling of ultra-pure water, etc.



ESH-01-L-GC5



HE-480C

### Features

#### ● Superior chemical resistance and pressure performance

By employing special electrodes with high pressure and high chemical resistance, the HE-480C is perfect for measuring conductivity values in DIW Rinse after chemical processing and for measurement in circulation lines.

#### ● Free form metal contamination

With the HE-480C, there is no more worry of the metal contamination that was unavoidable with conventional metal electrodes. The carbon surface of its sensor is specially processed so that particle elution is extremely minuscule.

#### ● Temperature measurement, simultaneous display function

The HE-480C is equipped with a function for inputting the deviation of the platinum temperature resistor (Pt1000Ω), and offers both temperature measurement and display.

#### ● Simultaneous display of measured and set parameter values

The HE-480C allows the simultaneous confirmation of measured values when settings and values are called up.

#### ● Selectable temperature compensation function

The HE-480C offers selection of the desired setting between the temperature characteristics for "Ultra-Pure Water" (standard temperature 25°C) and "NaCl", the "standard temperature" and the "temperature compensation coefficient", allowing the implementation of temperature compensation that is most appropriate to the measured liquid.

 The HE-480C is also an environmentally-friendly product that uses lead-free solder for mounting chips on the PCB.

## Specifications (Converter)

Model	HE-480C		
Measurement method	2-electrode method		
Sensor input	1-channel		
Cell constant	Approx. 0.1/cm		
Temperature sensor specifications	Platinum resistance 1000Ω/0°C		
Measuring range	Cell constant	0.1/cm (ESH-01 series)	
	Measurement unit	μS/cm	0 to 20.0    0 to 200.0
		mS/m	0 to 2.000    0 to 20.00
	TDS conversion	mg/L	0 to 20.0    0 to 200
Temperature : 0°C to 100°C (Select your desired decimal point from 0, 1, and 2 digits)			
Repeatability	Conductivity display	Within ±0.5% of the full scale (in equivalent input)	
	TDS Conversion display	Within ±1.5% of the full scale	
Linearity	Conductivity display	Within ±0.5% of the full scale (in equivalent input)	
	TDS Conversion display	Within ±1.5% of the full scale	
Transmission output	4 to 20mA DC : input/output isolated type    Maximum load resistance : 900Ω Transmission output range : Freely selectable within the measurement range		
Contact output	Outputs : 2 points Alarm contact output (R1,R2) Contact type : relay contact, SPDT Contact rating : 240V AC 3A and 30V DC, 3A (resistance load) Contact function : selectable from upper/lower limit operation (ON/OFF control), alarm, and maintenance.		
Calibration function	Conductivity : Based on the specified compensation coefficient for the cell constant (parameter input) Temperature : Calibrated by comparing with the reference thermometer TDS : Conversion using a user-defined coefficient value(0.30 to 1.00)		
Transmission output hold feature	Selectable from the Previous value hold and the Optional value hold. (However, only the previous value hold is available in the maintenance mode.)		
Self-diagnosis function	·Sensor diagnosis (Short-circuit and disconnection of the temperature sensor) ·Out of the measurement range    ·A/D converter scale over    ·Converter error		
Temperature compensation	·Based on the temperature characteristics of extra deionized water (reference temperature : 25°C) ·Based on the reference temperature and user-defined temperature coefficient (reference temperature : 5°C to 95°C) ·Based on the temperature characteristics of NaCl		
Temperature compensation range	0°C to 100°C		
Ambient environment	Temperature : -5°C to 45°C, Relative humidity: 20% to 85% (without dew condensation)		
Power supply	100V to 240V AC ±10%, 50/60Hz, 10VA (max.) or 24V DC ±10%, 5W (max.) (specified when ordering)		
Protective structure	Panel: IP65, Rear case : IP20, Terminal: IP00 (Indoor-use panel installation type)		
Mass	Approx. 400g		
Conforming standards	CE Marking, FCC Part15		
Compatible sensor	ESH-series conductivity GC sensor, cell constant : 0.1/cm		

## (Sensor)

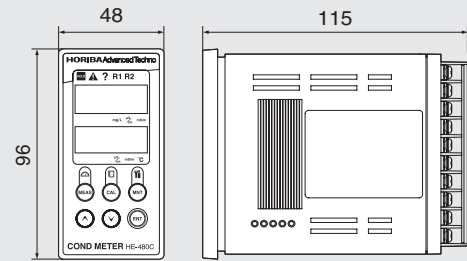
Model	ESH-01-L-GC5	ESH-01-L-GC6
Cell constant	0.1/cm approx.	
Liquid temperature range	0 to 80°C	
Liquid pressure range	0 to 0.5MPa	
Liquid end materials	Electrode	Special carbon
	Body	PFA    PP
Seal	Kalrez	
Cable length	10m (Standard) , 30m (Max.)	
Installation	Threaded diameter: R(PT)3/4	
Combined holder	Flow type EFA-30 series	

## (Flow type holder)

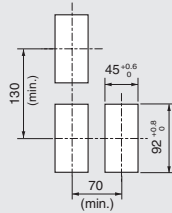
Model	EFA-30P	EFA-30F
Liquid end materials	PVDF	PFA
Liquid temperature range	0 to 100°C	
Liquid pressure range	0 to 0.1MPa	
Liquid flow rate	0 to 10L/min	
Connected pipe diameter	Inlet: Rc(PT)3/4,	Outlet: Rc(PT)3/4

## External dimensions Unit : mm (in)

### ■ Converter HE-480C

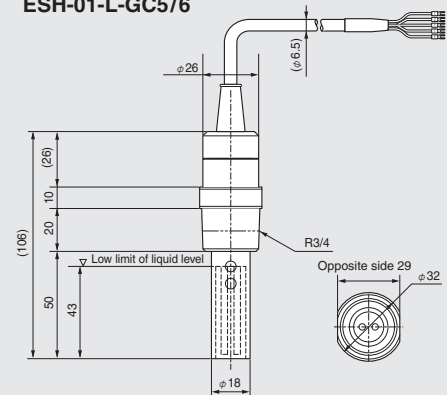


### Panel Cut Size



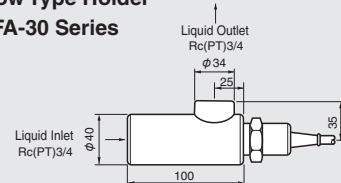
### ■ Sensor

#### ESH-01-L-GC5/6



### ■ Flow Type Holder

#### EFA-30 Series



Please read the operation manual before using this product to assure safe and proper handling of the product.

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