HORIBA AdvancedTechno

For Semiconductor Cleaning Processes

Carbon Sensor Conductivity Meter Low-concentration type

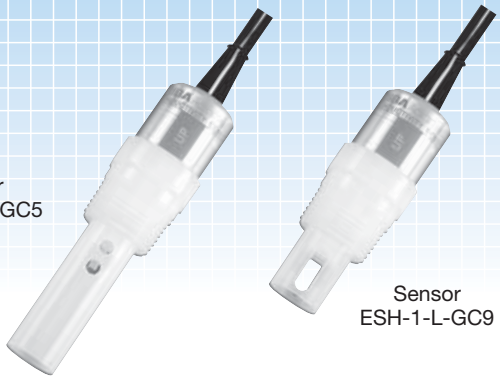
HE-480C-GC

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-GC 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.

Features a carbon sensor with outstanding resistance to chemicals



Sensor
ESH-01-L-GC5

Sensor
ESH-1-L-GC9

Indication Converter
HE-480C-GC

Features

●Superior chemical resistance and pressure performance

By employing special electrodes with high pressure and high chemical resistance, the HE-480C-GC 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-GC, 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-GC 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-GC allows the simultaneous confirmation of measured values when settings and values are called up.

●Selectable temperature compensation function

The HE-480C-GC 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.

●RoHS compliant

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

Measuring range

Temperature compensated conductivity range

Sensor		ESH-01-L-GC5 (Cell constant : 0.1/cm)		ESH-1-L-GC9 (Cell constant : 1/cm)		Accuracy
Conductivity	(µS/cm)	0.00 to 20.00	0.0 to 200.0	0.0 to 200.0	0 to 2000	*1
	(mS/m)	0.000 to 2.000	0.00 to 20.00	0.00 to 20.00	0.0 to 200.0	
TDS	(mg/L)	0.0 to 20.0	0 to 200	0 to 200	0 to 2000	*3

Non-compensated or compensated within 30 degree C

Sensor		ESH-01-L-GC5 (Cell constant : 0.1/cm)		ESH-1-L-GC9 (Cell constant : 1/cm)		Accuracy
Conductivity	(µS/cm)	0.00 to 20.00	0.0 to 200.0	0.0 to 200.0	0 to 2000	*1
		20.00 to 70.00	200.0 to 999.9	200.0 to 700.0	2000 to 9999	*2
	(mS/m)	0.000 to 2.000	0.00 to 20.00	0.00 to 20.00	0.0 to 200.0	*1
		2.000 to 7.000	20.00 to 99.99	20.00 to 70.00	200.0 to 999.9	*2

Specifications (Converter)

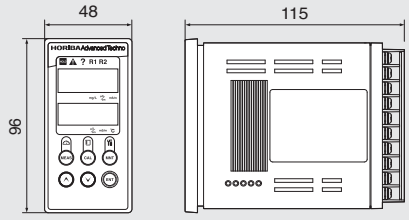
Model	HE-480C-GC	
Measurement method	2-electrode method	
Sensor input	1-channel	
Temperature sensor specifications	Platinum resistance 1000Ω/0°C	
Repeatability	*1 Within ±0.5% of the full scale *2 Within ±1.0% of the full scale *3 Within ±1.5% of the full scale	(in equivalent input)
Linearity	*1 Within ±0.5% of the full scale *2 Within ±1.0% of the full scale *3 Within ±1.5% of the full scale	(in equivalent input)
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.)	
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	

(Sensor)

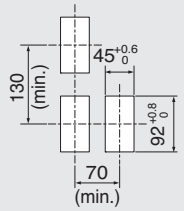
Model		ESH-01-L-GC5-Y-10M	ESH-1-L-GC9-Y-10M
Cell constant		0.1/cm approx.	1/cm approx.
Liquid end materials	Electrode	GC (Glass corbon)	
	Body	PFA	
	Seal	Kalrez®	
Sample condiction		Temperature : 0 to 80°C, Pressure: 0 to 0.5MPa	
Cable length		10m, Y terminal (Standard)	
Installation		Threaded diameter: R(PT)3/4	
Combined holder		Flow type EFA-30 series	

External dimensions Unit : mm (in)

■Converter HE-480C-GC

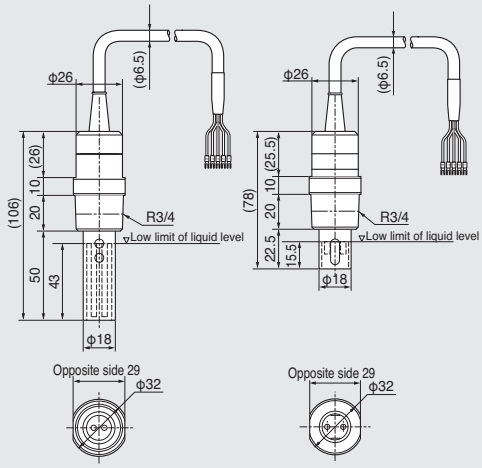


Panel Cut Size



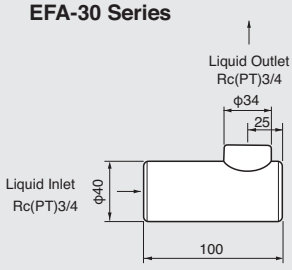
■Sensor

ESH-01-L-GC5-Y-10M **ESH-1-L-GC9-Y-10M**



■Flow Type Holder

EFA-30 Series



Model	Material
EFA-30P	PVDF
EFA-30F	PFA

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

HORIBA Advanced Techno, Co., Ltd.

http://www.horiba-adt.jp/index_e.htm

●HORIBA Advanced Techno, Co., Ltd.
Head Office
31 Miyanonishicho, Kisshoin
Minami-ku, Kyoto, Japan
Phone: 81-75-321-7184
Fax: 81-75-321-7291

Tokyo Sales Office
Arute-Bldg. HigashiKanda.
4th Fl, 1-7-8 Higashi-Kanda
Chiyoda-ku, Tokyo, Japan
Phone: 81-3-3851-3150
Fax: 81-3-3851-3140

●HORIBA KOREA Ltd.
112-6 Sogong-Dong
Choong-ku, Seoul, Korea
Phone: 82-2-753-7911
Fax: 82-2-756-4972

●HORIBA TRADING (SHANGHAI) Co., Ltd.
Shanghai Office
Room 1701, United Plaza,
1468 Nanjing Rd. West,
Shanghai 200040, China
Phone: 21-6289-6060
Fax: 21-6289-5553

Beijing Office
Room 1801, Capital Tower,
Beijing, Tower 1 No. 6Jin,
Jianguomenwai Ave.,
Chaoyang District, Beijing,
100022 China
Phone: 10-8567-9966
Fax: 10-8567-9066

●HORIBA Ltd.
Taiwan Representative Office
3F NO.18 Lane 676, Chung
Hua Rd, Chupei City,
Hsinchu Hsien, 302, Taiwan
Phone: 886-3-656-1012
Fax: 886-3-656-8231

●HORIBA INSTRUMENTS Pte. Ltd.
SINGAPORE
10 Ubi Crescent
#05-11/12 Ubi Techpark
Singapore 408564
Phone: 65-745-8300
Fax: 65-745-8155

●HORIBA / STEC INCORPORATED
Santa Clara Head Office
3265 Scott Boulevard
Santa Clara,
CA 95054, U.S.A.
Phone: 1-408-730-4772
Fax: 1-408-730-8975

Austine Office
9701 Dessau Road
Suite 605, Austin,
TX 78754, U.S.A.
Phone: 1-512-836-9560
Fax: 1-512-836-8054

●HORIBA INSTRUMENTS LIMITED
Kyoto Close
Summerhouse Road
Moulton Park, Northampton
NN3 6FL, England
Phone: 44-1604-542600
Fax: 44-1604-542696
e-mail: hil.semicon@horiba.co.jp

●HORIBA EUROPE GmbH
Head Office
Hans-Mess-Str.6
D-61440 Oberursel/Ts.
Germany
Phone: 49-6172-1396-0
Fax: 49-6172-137385

HORIBA FRANCE
Rue L. et A. Lumiere
Technoparc
F-01630 St-Genis-Pouilly
France
Phone: 33-4-50-42-27-63
Fax: 33-4-50-42-07-74

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