

# GSS/PSS/ASS Series

"Salve on running costs Exchangeable tip type Industrial pH/ORP electrode

**DKK-TOA** CORPORATION

# The exchangeable electrode tip improves maintenance efficiency.

# Easy maintenance

This electrode tip can be exchanged, thus eliminating the need to remove the electrode leads from the converter.

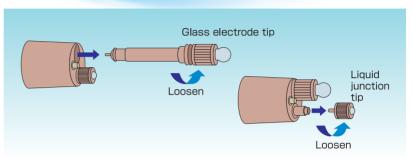
For KCI non-refilling type detectors, there is no need to replenish inner solution for a long period.

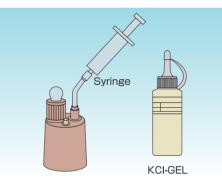
# Save on running costs

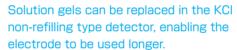
Various types of electrode tips and liquid junction tips can be exchanged individually.

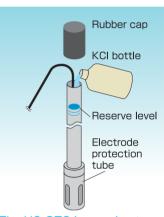
# ■Robust structure

The electrode body is made from polyphenylene sulfide resin (Ryton), which provides excellent heat resistance, chemical resistance, and pressure resistance.









The HC-G70 immersion-type holder can contain a large volume of KCl solution.

#### Exchangeable tip type electrode

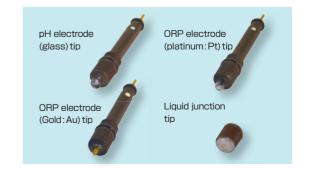
Type		Usage		Model	Sample water conditions			
					Measurement range	Temperature*1	Pressure*2	Electrical conductivity
рН	KCI non-refilling type	Waste water treatment	For general use	GSS-304B	0 to 14pH	−5 to 80°C	0 to 0.5MPa	Not less than 1000µS/cm
			For strong alkali	GSS-304A				
			For hydrofluoric acid resistance	GSS-304F	2 to 12pH	−5 to 50°C		
	KCI refilling type	Process	For general use	GSS-314B	0 to 14pH	-5 to 100℃	0 to 0.3MPa	Not less than 100µS/cm
			For strong alkali	GSS-314A				
			For hydrofluoric acid resistance	GSS-314F	2 to 12pH	−5 to 50°C		
ORP	KCI non-refilling type	For general use (Pt)		PSS-304B	±2000mV	-5 to 80℃	0 to 0.5MPa	Not less than
		For sewage/human waste (Au)		ASS-304B				$1000\mu$ S/cm
	KCI refilling type	For general use (Pt)		PSS-314B		-5 to 100℃	0 to 0.3MPa	Not less than
		For sewage/human waste (Au)		ASS-314B				$100\mu S/cm$

\*1 No freezing \*2 Depends on combined electrode

#### **Spares**

Product Name	Usage	Model	
	For general use	HGS-300*3	
pH electrode (glass) tip	For strong alkali	HGS-300A	
	For hydrofluoric acid resistance	HGS-300F	
ORP electrode (Pt) tip	For general use	HP-300	
ORP electrode (Au) tip	For sewage/ human waste	HA-300	
Liquid junction tip	For general use	JC-300	
Liquid juriction tip	For low electrical conductivity	JC-300K*4	
Internal liquid of comparison electrode RE-4 KCI 500 mL	KCI refilling type	143F234	
Saturated KCl gel 100mL	KCI non-refilling type	KCL-GEL	

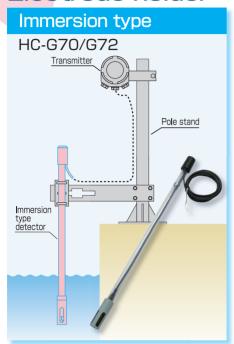
<sup>\*3</sup> Measurement Law Model Approval Number:S009

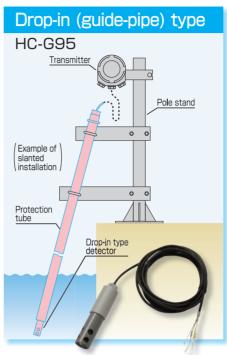


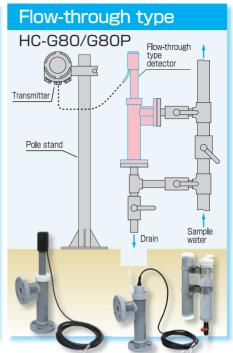
<sup>\*4</sup> Not possible for KCI non-refelling type

# Various electrode holders and cleaners are available for wide range of applications

# Electrode holder







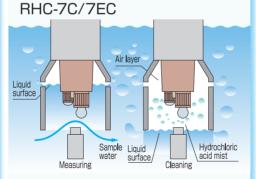
# Cleaner

#### Ultrasonic cleaning method

Cavitation Oscillator

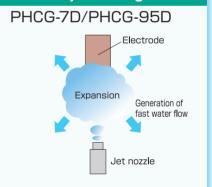
Continuous ultrasonic irradiation at approx. 80kHz to the sensing part of electrode brings a cavitation effect that helps to prevent dirt from attaching to the electrode.

### Chemical cleaning method



A large volume of air and chemicals (generally 5% hydrochloric acid) emitted from the jet nozzle at a constant cycle dissolves and chemically removes crystalline contamination that builds up on the sensing part of the electrode.

## Pulse air jet cleaning method



Compressed air injected from a jet nozzle, expands in water and causes fast water flow.Dirt and contamination are removed from the sensing part of the electrode by this fast water flow.

#### Electrode holder and cleaner

Type	Model	Materials	Remarks	
Immersion-type holder (resin)	HC-G70	Transparent PVC, or PP	Length: 3 m max.	
Immersion-type holder (stainless-steel)	HC-G72	SUS316	Length: 3 m max.; KCI non-refilling type only	
Drop-in (guide-pipe) type detector	HC-G95	PVC, SUS304	For deep structures of 2 m or more; KCI non-refilling type only	
Flow-through type holder (non-pressurized)	HC-G80	PVC or PP	KCI non-refilling type only(also for stainless steel)	
Flow-through type holder (Pressurized)	HC-G80P	PVC or PP	KCl refilling and pressurized type(also for stainless steel)	
Immersion-type holder with ultrasonic cleaning	UHC-G7D	PVC, SUS316	Length : 3 m max.	
Immersion-type holder with chemical cleaning	RHC-7C	PVC, SUS316	Length : 3 m max.	
Immersion-type holder with chemical cleaning (HBM type)	RHC-7EC	PVC, SUS316	Length: 3 m max.	
Immersion-type holder with pulse air jet cleaning	PHCG-7D	PVC, SUS316	Length: 3 m max.	
Drop-in type detector with pulse air jet cleaning	PHCG-95D	PVC, SUS304/316	For deep structures of 2 m or more; KCl non-refilling type only	

# A pH detector for pure water measurement that uses a tip-replaceable electrode is available.

PH detector for pure water (boiler water) measurement

**HC-G65** 



- The pH of pure water is measured by the trace flow cell method.
- The combination pH electrode is a tip exchange type (KCI refill type) GSS-314P type.

Boiler sampling device built-in dedicated model BPC-G65 is also available.

Tip exchangeable type electrode **GSS-314P** 

# Selection for combination of pH/ORP transmitter

# Field installation type

Simple function, easy operation

Free power supply

HDM-135A(pH)/137A(ORP) Two wire, 24V DC

HDM-136A(pH)/138A(ORP) Four wire, 100V to 120V AC or 200V to 240V AC

Highly expandable intelligent type

HBM-160B(pH)/162B(ORP) Four wire, 100V to 240V AC Free power supply

Display with LED backlight With 2 alarm outputs





# Panel installation type

#### Compact DIN96 size

HBM-100B(pH)/102B(ORP)

100V to 240V AC Free power supply

Display with LED backlight With 2 alarm outputs





# **DKK-TOA** CORPORATION



Please read the operation manual carefully before using producuts.

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