

SPECIFICATION SHEET



IMMERSION TYPE pH and ORP METER DETECTOR

HC-7 Series

An industrial immersion type pH/ORP detector used to measure pH/ORP in open channels and tanks. It incorporates electrodes into the electrode holder. A large amount of KCl internal solution can be stored in the electrode holder. Various types are available, including wetted materials and combined electrodes, for use in a wide range of applications, from wastewater treatment facilities to processes with severe measurement conditions. We also standardize pressurized detectors that maintain a stable reference potential for a long period of time, allowing more reliable measurement.

For flow type detectors, washed detectors, and tip replacement GSS type electrodes, refer to the respective specification sheets.



Fitting

Installation of loose flange

Standard Specification

● Common Specifications

Construction Structure : Rain proof construction (JIS C 0920)

Inner liquid volume : approx. 500mL (for 1.0m total length holder)

Sample water conditions : Pressure... atmospheric pressure
Flow rate... 2 m/s or less

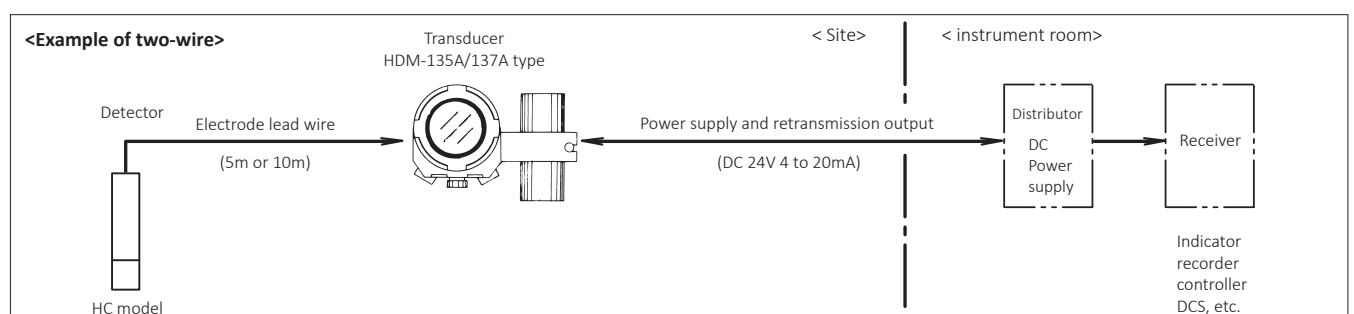
● Type name classification

	Non-pressurized type	Pressurized type	Feature, notes
Control and monitoring of effluent neutralization	HC-763	HC-753	This holder is made of translucent polypropylene with excellent heat and chemical resistance. Length can be manufactured in 0.5m increments up to 3.0m. Avoid installation in direct sunlight as much as possible, as this will affect the weather proofing life.
	HC-703C	HC-753C	Transparent clear PVC holder with less deflection. Length can be 0.5m or up to 4.0m. However, if more than 3m is required, drop-type HC-G95 is recommended.
Process online control	HC-703F	HC-753F	This holder is made of translucent PVDF (polyvinylidene fluoride resin) that is resistant to harsh conditions such as high temperature, chemicals and solvents, and direct sunlight. Length can be manufactured in 0.5m increments up to 4.0m.
	HC-703T	HC-753T	This holder is made of fluorocarbon resin (semi-transparent PFA) for organic solvent resistance. The sealant packing also uses perfluoro rubber with excellent solvent resistance. Length can be manufactured in 0.5m increments up to 3.0m.

(NOTE) Recommended condition for pressurized type

- 1 When the total length of the holder is 1m or less or the head pressure cannot be sufficiently obtained by immersing it deeper
- 2 When the sealed tank is installed and internal pressure is applied even slightly
- 3 When the sample water is heavily soiled and the liquid junction is easily clogged
- 4 When low ion water (conductivity is around 200 μ S/cm of tap water level) is measured

Composition diagram



● Individual Specifications

		General use		High temperature and chemical resistant use	Organic solvent resistant use
Model	Non-pressurized type	HC-763	HC-703C	HC-703F	HC-703T
	Pressurized type	HC-753	HC-753C	HC-753F	HC-753T
Material of wetted parts	Main body pipe	PP	PVC	PVDF	PFA
	Protector	PP	PP	PVDF	PFA
	Electrode packing	FKM	FKM	FKM	Perfluoro gum
Limit length		3.0m	4.0m	4.0m	3.0m
Heat resistance (Note 1)		80°C	60°C	95°C	80°C
Weight (Note 2)		1 kg	1 kg	1 kg	1.5kg

Detectors listed here can be combined with various types of cleaners.

Note 1 : Heat resistant temperature of wetted material itself. The operating temperature range is determined by the specifications of the combined electrodes.

Note 2 : Mass per 1m holder length with the internal solution of KCl filled.

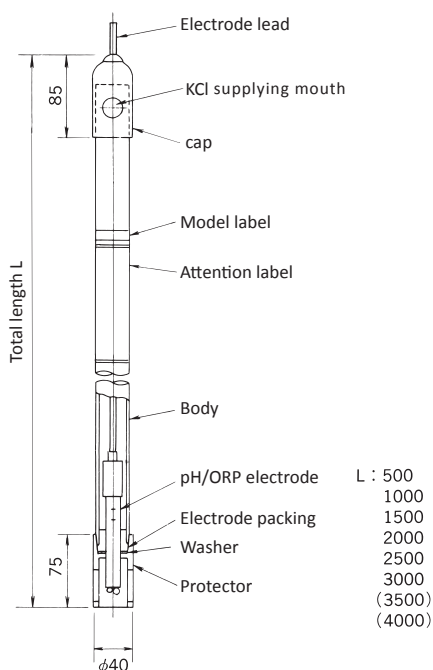
● Combined electrode

Electrode holder		pH electrode					ORP electrode	
		General use (-5 to 70°C)	For high temperature use (-5 to 95°C)	For hydrofluoric acid resistant use (-5 to 50°C)	acid resistant use (-5 to 70°C)	For high temperature and solvent resistant use (-5 to 95°C)	Platinum type (-5 to 70°C)	Platinum type with temperature sensor (-5 to 70°C)
Non-pressurized type	HC-763	5600	5601	5605	—	—	2600	2605
	HC-703C	5600	—	5605	—	—	2600	2605
	HC-703F	—	5601	—	5602	5603	2602	—
	HC-703T	—	—	—	5602	5603	2602	—
Pressurized type	HC-753	5610	5611	5615	—	—	2610	2615
	HC-753C	5610	—	5615	—	—	2610	2615
	HC-753F	—	5611	—	5612	5613	—	—
	HC-753T	—	—	—	5612	5613	—	—

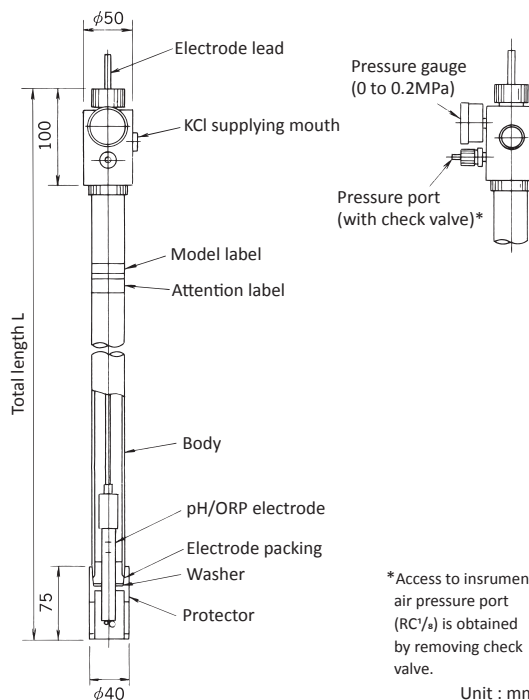
() indicates the working temperature range. Representative combination

● Structural drawing

<Non-pressurized type>



<Pressurized type>

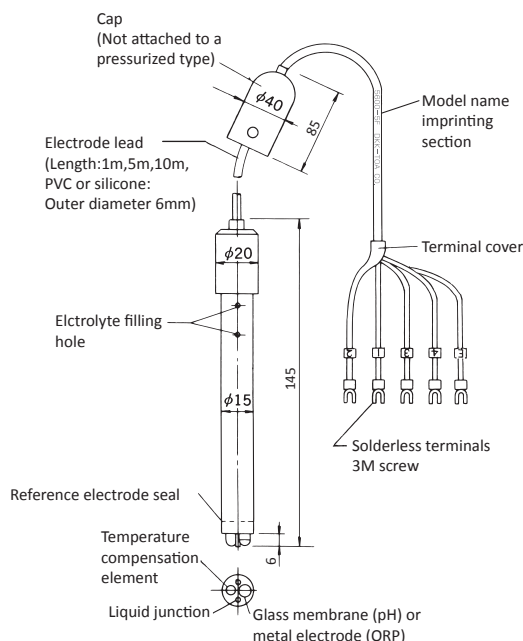


● KCl supplemented pH electrode

A newly developed glass membrane with excellent linearity over a wide range from pH0 to 14 is adopted, and this is the latest electrode with a structure (non-leak silver chloride inner electrode type) to suppress silver chloride efflux from the comparator electrode liquid junction. Stable continuous measurement is possible under various measurement conditions such as high temperature, dilute solution, and reducing solution. Electrodes made of fluoric acid-resistant glass membranes and perfluoro rubber for comparative electrode sealants with enhanced chemical resistance to organic solvents are also available as standard specifications.

In addition, the temperature compensation element (TC:10kΩ at 25°C) protrudes from the main body to further improve the temperature compensation response.

All of the internal solutions of the electrodes below are 3M potassium chloride (KCl)



Model	Electrolyte exudation method	Type of glass membrane	pH measurement range	Service temperature range	Seal material of reference electrode	Lead wire insulation	Applicable electrode holder
5600-□F	Non-pressurized type	Standard membrane	pH0 to 14	-5 to 70°C	FKM	Heat-resistant PVC	HC-763
5601-□F	Non-pressurized type	Standard membrane	pH0 to 14	-5 to 95°C	FKM	Silicon	HC-703F
5602-□F	Non-pressurized type	Standard membrane	pH0 to 14	-5 to 70°C	Perfluoro gum	Heat-resistant PVC	HC-703T
5603-□F	Non-pressurized type	Standard membrane	pH0 to 14	-5 to 95°C	Perfluoro gum	Silicon	HC-703T
5605-□F	Non-pressurized type	Hydrofluoric acid resistant membrane	pH2 to 11	-5 to 50°C	FKM	Heat-resistant PVC	HC-703C
5610-□F	Pressurized type	Standard membrane	pH0 to 14	-5 to 70°C	FKM	Heat-resistant PVC	HC-753
5611-□F	Pressurized type	Standard membrane	pH0 to 14	-5 to 95°C	FKM	Silicon	HC-753F
5612-□F	Pressurized type	Standard membrane	pH0 to 14	-5 to 70°C	Perfluoro gum	Heat-resistant PVC	HC-753T
5613-□F	Pressurized type	Standard membrane	pH0 to 14	-5 to 95°C	Perfluoro gum	Silicon	HC-753T
5615-□F	Pressurized type	Hydrofluoric acid resistant membrane	pH2 to 11	-5 to 50°C	FKM	Heat-resistant PVC	HC-753C

Electrode lead wire length (5 :5 m,10:10 m)

● KCl supplemented ORP electrode

The ORP electrode is primarily made of platinum (Pt) or gold (M). Platinum is used for ORP measurement control in general processes, and alloys are used for ORP measurement control in plating wastewater and sewage treatment process.

Since the measured values and response characteristics of platinum electrode (Pt) and alloy electrode (M) may be different depending on the

sample water, mixing Avoid use.

The temperature sensor (T) is built-in, and the temperature of the sample water and standard solution can be measured and displayed.

Since the comparator electrode (R) is the same as the pH electrode described above, all of the inner solution is 3M potassium chloride (KCl).

Model	Component electrodes	Electrolyte exudation method	Service temperature range	Seal material of reference electrode	Lead wire insulation	Applicable electrode holder
2600-□F	Pt+R+T	Non-pressurized type	-5 to 70°C	FKM	Heat-resistant PVC	HC-763
2601-□F	Pt+R+T	Non-pressurized type	-5 to 95°C	FKM	Silicon	HC-703F
2602-□F	Pt+R+T	Non-pressurized type	-5 to 70°C	Perfluoro gum	Heat-resistant PVC	HC-703T
2605-□F	M+R+T	Non-pressurized type	-5 to 70°C	FKM	Heat-resistant PVC	HC-763
2610-□F	Pt+R+T	Pressurized type	-5 to 70°C	FKM	Heat-resistant PVC	HC-753
2615-□F	M+R+T	Pressurized type	-5 to 70°C	FKM	Heat-resistant PVC	HC-753

Electrode lead wire length (5 :5 m,10:10 m)

Dimensions & Product code

HC-763 type (general purpose made of PP)

HC763-4-	□□□□□	Holder length L* ¹
1	.....	0.5m
2	.....	1.0m
3	.....	1.5m
4	.....	2.0m
5	.....	2.5m
6	.....	3.0m (max.)
		Incorporated electrode
0	.....	Not required
A	.....	pH Ambient temperature 5600
B	.....	pH High temperature 5601
E	.....	pH HF resistance 5605
3	.....	ORP (Pt) General use 2600★
4	.....	ORPs (M) Sewage (urine) 2605★
8	.....	Custom spec. * ²
		Length of the electrode lead wire
0	.....	electrode integration is not required
K	.....	5m (holder length 2m or less)
M	.....	10m
		Holder guide assay* ³
A	.....	None
G	.....	Included SUS 316 (5983120 K)
		Protective tube shape
1	.....	φ40 for ordinary use (common for UHC/JHC clean)
2	.....	φ50 for RHC washer
3	.....	φ50 for BHC/BJHC washer
		Description form
0	.....	Standard
1	.....	English
		Examination of individual units
0	.....	None
1	.....	Present (inspection mark affixed)
2	.....	Present (inspection mark and approval certification affixed)

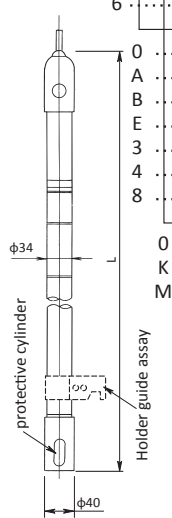


Diagram labels: protective cylinder, holder guide assay, φ34, φ40.

Custom spec. code; Numeric digit: 9 Alphabet: Z

★ Examination unavailable

- *1. In principle, lengths other than this pick cannot be made. Moreover, since the PP holder has a large deflection, maximum length is up to 3 m.
- *2. When incorporating the old type 6462 or 5700, please inform us of the electrode model as "Other designation".
- *3. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

- This is a dip-type holder made of PP (polypropylene) for open tank, which incorporates pH or ORP electrodes and is filled with internal liquid (KCl). If the holder length is 3m and the product is to be exported, the internal liquid cannot be filled, so it will be attached (included).
- The PP holder itself has a heat-resistant temperature of 80°C, but an electrode for normal temperature use (e.g., 5600 or 2600) is incorporated at 70°C.
- When a holder mounting device is required, please order one of the following separately.
Fixtures: ZC-2 molds (holder length up to 1.5m), or ZC-1 mold and support metal fitting ZN-7 type
Loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 2.0m)
- When placed outdoors under direct sunlight, transparent PVC HC-703C model is recommended as it has excellent weatherproofing properties compared to PP
We also recommend the drop-in HC-G95 type of tip-replaceable electrodes with superior maintenance operability for demands with a length of 2.5m or more.

HC-703C type (PVC-made general purpose)

HC703C-2-	□□□□□	Holder length L* ¹
1	.....	0.5m
2	.....	1.0m
3	.....	1.5m
4	.....	2.0m
5	.....	2.5m
6	.....	3.0m
7	.....	3.5m
8	.....	4.0m (max.)
		Incorporated electrode
0	.....	Not required
A	.....	pH Ambient temperature 5600
E	.....	pH HF resistance 5605
3	.....	ORP (Pt) General use 2600★
4	.....	ORPs (M) Sewage (urine) 2605★
8	.....	Custom spec. * ²
		Length of the electrode lead wire
0	.....	electrode integration is not required
K	.....	5m (holder length 2m or less)
M	.....	10m
		Holder guide assay* ³
A	.....	None
G	.....	Included SUS 316(5983120 K)
		Protective tube shape
1	.....	φ40 for ordinary use (common for UHC/JHC clean)
2	.....	φ50 for RHC washer
3	.....	φ50 for BHC/BJHC washer
4	.....	φ40 made of PVC for ordinary use (common for UHC/JHC clean)* ⁴
		Description form
0	.....	Standard
1	.....	English
		Examination of individual units
0	.....	None
1	.....	Present (inspection mark affixed)
2	.....	Present (inspection mark and approval certification affixed)

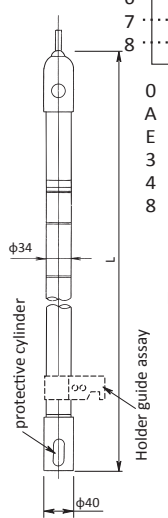


Diagram labels: protective cylinder, holder guide assay, φ34, φ40.

Custom spec. code; Numeric digit: 9 Alphabet: Z

★ Examination unavailable

- *1. In principle, lengths other than this pick cannot be made.
- *2. When incorporating the old type 6462 or 5700, please inform us of the electrode model as "Other designation".
- *3. Select "Included" when combining with various washers and ZN-7 type support fittings.
- *4. The standard protective cylinder is a molded product made of PP, but PVC protective cylinder (such as sodium hypochlorite resistant) can be used with processed products.

Note

- This is an immersion holder made of PVC (vinyl chloride) for an open tank, which incorporates a pH or ORP electrode and is filled with internal liquid (KCl). If the holder length is 3m or more and the product is used for export, the internal liquid cannot be filled, so it will be attached (included).
- Heat resistance temperature is 60°C, but clear transparent PVC pipe has strong waist (Low deflection) allows up to 4.0m in length.
It is also weatherproof and can be used for long periods of time in direct sunlight in outdoor installations. The protective cylinder at the tip is made of PP.
- When a holder mounting device is required, please order one of the following separately.
Fixtures: ZC-2 molds (holder length up to 2.0m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 3.0m)
- Heat-resistant PVCs cannot be made, so select HC-763 or HC-703F molds for requirements with heat resistance of 60°C or higher.
We also recommend the drop-in HC-G95 type of tip-replaceable electrodes with superior maintenance operability for demands with a length of 2.5m or more.

HC-703F type
(for heat and chemical resistance made of PVDF)

HC703F-3-□□□□□ Holder length L*1

1	0.5m
2	1.0m
3	1.5m
4	2.0m
5	2.5m
6	3.0m
7	3.5m
8	4.0m (max.)

Incorporated electrode

0	Not required
B	pH High temperature 5601
C	pH Chemical resistance 5602★
D	pH High temperature and chemical resistance 5603★
4	ORP (Pt) High temperature 2601★
5	ORP (Pt) Chemical resistance 2602★
8	Custom spec.*2

Length of the electrode lead wire

0	electrode integration is not required
K	5m (holder length 2m or less)
M	10m

Holder guide assay*3

A	None
G	With SUS316 (for φ32)

Description form

0	Standard
1	English

Examination of individual unit

0	None
1	Present (inspection mark affixed)
2	Present (inspection mark and approval certification affixed)

Custom spec. code;
Numeric digit: 9
Alphabet: Z

★ Examination unavailable

- *1. In principle, lengths other than this pick cannot be made.
- *2. When incorporating the old type 6462 or 5700, please inform us of the electrode model as "Other designation".
- *3. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

1. This is an immersion type holder made of PVDF (polyvinylidene fluoride) for open tank, which incorporates pH-or ORP-electrodes and is filled with internal liquid (KCl). If the holder length is 3m or more and the product is used for export, the internal liquid cannot be filled, so it will be attached (included).
2. Since PVDF is a fluoropolymer, it has a high heat resistance of 100°C and is highly resistant to chemicals and organic solvents. Therefore, it is a holder that can safely deal with sample water contaminated with chemicals and organic solvents at high temperatures in various processes online. This semi-transparent PVDF pipe has a strong waist (low deflection), so it can be manufactured up to 4.1m in length. Electrode packing is fluoro rubber (FKM).
3. When a holder mounting device is required, please order one of the following separately.
Fixtures: ZC-2 molds (holder length up to 2.0m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 3.0m)
For loose flanges, use the product cord and specify Combination Holder: PVDF Holder.

HC-703T type
(for organic solvents made of PFAs)

HC703T-2-□□□□□ Holder length L*1

1	0.5m
2	1.0m
3	1.5m
4	2.0m
5	2.5m
6	3.0m(max.)

Incorporated electrode

0	Not required
C	pH Chemical resistance 5602
D	pH High temperature and chemical resistance 5603
5	ORP (Pt) Chemical resistance 2602
8	Custom spec.*2

Length of the electrode lead wire

0	electrode integration is not required
K	5m (holder length 2m or less)
M	10m

Holder guide assay*3

A	None
G	Included SUS 316 (5983120 K)

Description form

0	Standard
1	English

Custom spec. code;
Numeric digit: 9
Alphabet: Z

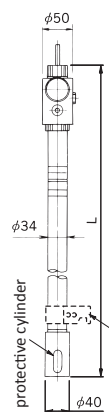
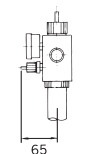
- *1. In principle, lengths other than this pick cannot be made. In addition, the PFA holder has a large deflection, so it can be up to 3m in length.
- *2. When incorporating the old type 5702, please inform us of the electrode model as "Other designation".
- *3. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

1. This is an immersion type holder made of PFA (fluorine resin) for an open tank, which incorporates a pH or ORP electrode and is filled with internal liquid (KCl). If the holder length is 3m or more and the product is used for export, the internal liquid cannot be filled, so it will be attached (included).
2. PFA is a fluorine-based resin, so it has a high heat resistance of 80 °C and is highly resistant to most organic solvents and chemicals. Therefore, it can be safely applied to sample water contaminated with chemicals and organic solvents at high temperatures in various processes online. The electrode packing also uses perfluoro rubber, which is excellent in heat resistance, chemical resistance, and organic solvent resistance.
3. When a holder mounting device is required, please order one of the following separately.
Fixtures: ZC-2 molds (holder length up to 1.5m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 2.0m)
4. The built-in electrode of this holder is not subject to the weighing method assay, so there is no [individual test] pill in the product code.

HC-753 type (made of pressurized PP)

HC753-3-	□□□□□□	Holder length L* ¹
1	.....	0.5m
2	.....	1.0m
3	.....	1.5m
4	.....	2.0m
5	.....	2.5m
6	.....	3.0m (max.)
		Internal solution pressurizing system * ²
A	.....	Instrument air: Port Rc $\frac{1}{8}$
B	.....	Manual pressurization pump type: With check valve at pressurization port
		Incorporated electrode
0	.....	Not required
F	.....	pH Ambient temperature 5610
G	.....	pH High temperature 5611 ★
K	.....	pH HF resistance 5615
3	.....	ORP (Pt) General use 2610 ★
4	.....	ORP (M) Sewage (urine) 2615 ★
8	.....	Custom spec.* ³
		Length of the electrode lead wire
0	.....	When built-in electrode is not required
K	.....	5m (holder length 2m or less)
M	.....	10m
		Holder guide assay* ⁴
A	.....	None
G	.....	Included SUS 316 (5983120 K)
		Protective tube shape
1	.....	For general use ϕ 40 (common for UHC/JHC washer)
2	.....	For RHC washer ϕ 50
		Description form
0	.....	Standard
1	.....	English
		Examination of individual units
0	.....	None
1	.....	Present (inspection mark affixed)
2	.....	Present (inspection mark and approval certification affixed)



Custom spec. code;
Numeric digit: 9
Alphabet: Z

★ Examination
unavailable

*1. In principle, lengths other than this pick cannot be made.

Moreover, since the PP holder has a large deflection, maximum length is up to 3 m.

*2. When pressurizing with instrumentation air, it is recommended to combine the air setting PAS-10 type separately.

A manual pressurization pump must be ordered separately. (Code No.125 B 971)

*3. When incorporating the old type 6395 or 5710, please inform us of the electrode model as "Other designation".

*4. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

1. This is an immersion holder made of pressurized PP (polypropylene) for the open tank. The pH electrode or ORP electrode and internal solution (KCl) are supplied.

2. The internal liquid (KCl) pressurized system allows stable measurement for long periods of time even under harsh measurement conditions such as wastewater, sewage and urine treatment plants.

The pressure gauge is from 0 to 0.2MPaFS, and the pressure to be set is from 0.05 to 0.1MPa.

3. The PP holder itself has a heat-resistant temperature of 80°C, but an electrode for normal temperature use (e.g., 5610 or 2610) is incorporated at 70°C.

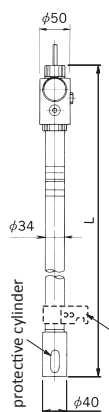
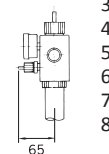
4. When a holder mounting device is required, please order one of the following separately.

Fixtures: ZC-2 molds (holder length up to 1.5m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 2.0m)

5. When placed outdoors under direct sunlight, transparent PVC HC-753C model is recommended as it has excellent weatherproofing properties compared to PP

HC-753C type (Made of pressurized transparent PVC)

HC753C-2-	□□□□□□	Holder length L* ¹
1	.....	0.5m
2	.....	1.0m
3	.....	1.5m
4	.....	2.0m
5	.....	2.5m
6	.....	3.0m
7	.....	3.5m
8	.....	4.0m(max.)
		Internal solution pressurizing system * ²
A	.....	Instrument air: Port Rc $\frac{1}{8}$
B	.....	Manual pressurization pump type: With check valve at pressurization port
		Incorporated electrode
0	.....	Not required
F	.....	pH Ambient temperature 5610
K	.....	pH HF resistance 5615
3	.....	ORP (Pt) General use 2610 ★
4	.....	ORP (M) Sewage (urine) 2615 ★
8	.....	Custom spec.* ³
		Length of the electrode lead wire
0	.....	When built-in electrode is not required
K	.....	5m (holder length 2m or less)
M	.....	10m
		Holder guide assay* ⁴
A	.....	None
G	.....	Included SUS 316 (5983120 K)
		Description form
0	.....	Standard
1	.....	English
		Examination of individual units
0	.....	None
1	.....	Present (inspection mark affixed)
2	.....	Present (inspection mark and approval certification affixed)



Custom spec. code;
Numeric digit: 9
Alphabet: Z

★ Examination
unavailable

*1. In principle, lengths other than this pick cannot be made.

*2. When pressurizing with instrumentation air, it is recommended to combine the air setting PAS-10 type separately.

A manual pressurization pump must be ordered separately. (Code No.125 B 971)

*3. When incorporating the old type 6395 or 5710, please inform us of the electrode model as "Other designation".

*4. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

1. Immersion type holder made of pressurized PVC (vinyl chloride) for open tank. The pH electrode or ORP electrode and internal solution (KCl) are supplied.

2. Heat resistance temperature is 60°C, but clear transparent PVC pipe has strong waist (Low deflection) allows up to 4.0m in length.

It is also weatherproof and can be used for long periods of time in direct sunlight in outdoor installations. The protective cylinder at the tip is made of PP.

3. The internal liquid (KCl) pressurized system allows stable measurement for long periods of time even under harsh measurement conditions such as wastewater, sewage and urine treatment plants.

The pressure gauge is from 0 to 0.2MPaFS, and the pressure to be set is from 0.05 to 0.1MPa.

4. When a holder mounting device is required, please order one of the following separately.

Fixtures: ZC-2 molds (holder length up to 2.0m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 3.0m)

HC-753F type
(for heat and chemical resistance made of pressurized PVDF)

HC753F-2-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Holder length L*1
	1	2	3	4	0.5m
	5	6	7	8	1.0m
					1.5m
					2.0m
					2.5m
					3.0m
					3.5m
					4.0m(max.)
					Internal solution pressurizing system *2
		A			Instrument air: Port Rc $\frac{1}{8}$
		B			Manual pressurization pump type: With check valve at pressurization port
					Incorporated electrode
					0 Not required
					G pH High temperature 5611
					H pH Chemical resistance 5612
					J pH High temperature and chemical resistance 5613
					8 Custom spec.*3
					Length of the electrode lead wire
					0 When built-in electrode is not required
					K 5m (holder length 2m or less)
					M 10m
					Holder guide assay*4
					A None
					G With SUS316 (for $\phi 32$)
					Description form
					0 Standard
					1 English

Custom spec. code; A None
 Numeric digit: 9 G With SUS316 (for $\phi 32$)
 Alphabet: Z Description form
 0 Standard
 1 English

- *1. In principle, lengths other than this pick cannot be made.
 *2. When pressurizing with instrumentation air, it is recommended to combine the air setting PAS-10 type separately.
 A manual pressurization pump must be ordered separately. (Code No.125 B 971)
 *3. When incorporating the old type 6395 or 5710, please inform us of the electrode model as "Other designation".
 *4. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

- Immersion type holder made of pressurized PVDF (polyvinylidene fluoride) for open tank.
 The pH electrode and internal solution (KCl) are supplied.
- Since PVDF is a fluoropolymer, it has a high heat resistance of 100°C and is highly resistant to chemicals and organic solvents.
 Therefore, it is a holder that can safely deal with sample water contaminated with chemicals and organic solvents at high temperatures in various processes online.
 This translucent PVDF pipe has strong waist (less deflection), so it can be made up to a maximum of 4.0m.
 Electrode packing is fluoro rubber (FKM).
- The internal liquid (KCl) pressurized system allows stable measurement for long periods of time even under harsh measurement conditions such as wastewater, sewage and urine treatment plants.
 The pressure gauge is from 0 to 0.2MPaFS, and the pressure to be set is from 0.05 to 0.1MPa.
- When a holder mounting device is required, please order one of the following separately.
 Fixtures: ZC-2 molds (holder length up to 2.0m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 3.0m)
- The built-in electrode of this holder is not subject to the weighing method assay, so there is no [individual test] pill in the product code.

HC-753T type
(for organic solvents made of pressurized PFAs)

HC753T-2-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Holder length L*1
	1	2	3	4	0.5m
	5	6			1.0m
					1.5m
					2.0m
					2.5m
					3.0m (max.)
					Internal solution pressurizing system *2
			A		Instrument air: Connection Rc $\frac{1}{8}$
			B		Manual pressurization pump type: With check valve at pressurization port
					Incorporated electrode
					0 Not required
					H pH Chemical resistance 5612
					J pH High temperature and chemical resistance 5613
					8 Custom spec.*3
					Length of the electrode lead wire
					0 When built-in electrode is not required
					K 5m (holder length 2m or less)
					M 10m
					Holder guide assay*4
					A None
					G Included SUS 316 (5983120 K)
					Description
					0 Standard
					1 English

Custom spec. code; 0 Standard
 Numeric digit: 9 1 English
 Alphabet: Z

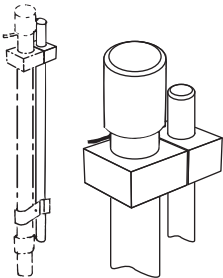
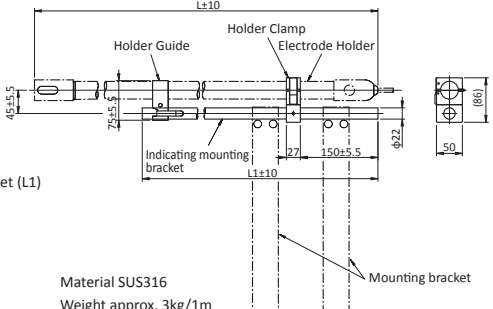
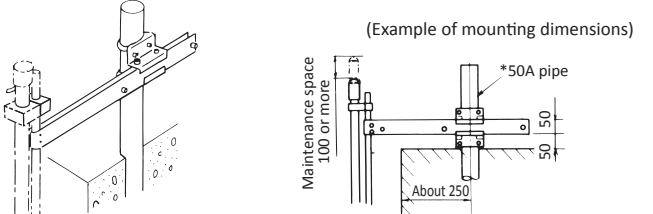
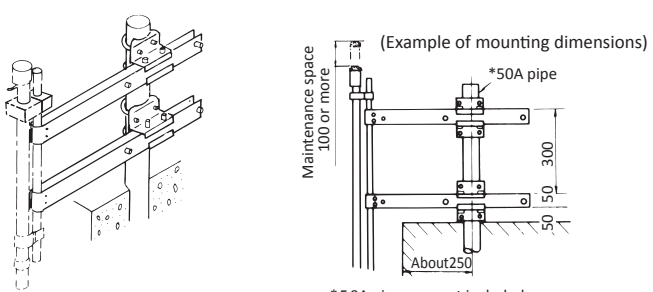
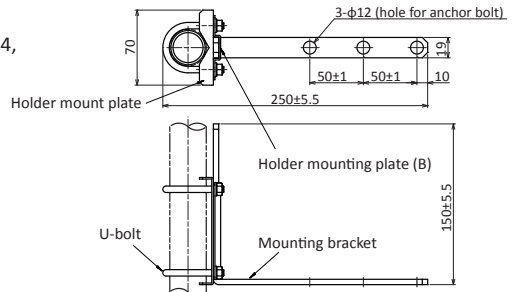
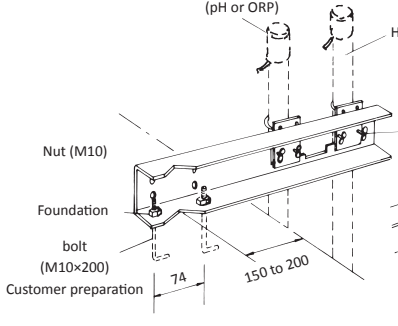
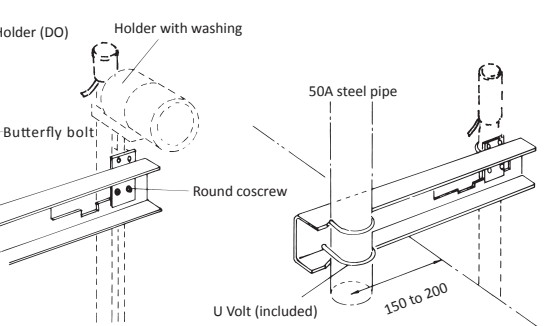
- *1. In principle, lengths other than this pick cannot be made.
 *2. When pressurizing with instrumentation air, it is recommended to combine the air setting PAS-10 type separately.
 A manual pressurization pump must be ordered separately. (Code No.125 B 971)
 *3. When incorporating the old type 6395 or 5710, please inform us of the electrode model as "Other designation".
 *4. Select "Included" when combining with various washers and ZN-7 type support fittings.

Note

- This is an immersion type holder made of pressurized PFA (fluorine resin) for the open tank. The pH electrode and internal solution (KCl) are supplied.
- PFA is a fluorine-based resin, so it has a high heat resistance of 80 °C and is highly resistant to most organic solvents and chemicals.
 Therefore, it can be safely applied to sample water contaminated with chemicals and organic solvents at high temperatures in various processes online. The electrode packing also uses perfluoro rubber, which is excellent in heat resistance, chemical resistance, and organic solvent resistance.
- The internal liquid (KCl) pressurized system allows stable measurement for long periods of time even under harsh measurement conditions such as wastewater, sewage and urine treatment plants.
 The pressure gauge is from 0 to 0.2MPaFS, and the pressure to be set is from 0.05 to 0.1MPa.
- The heat-resistant temperature of the PFA holder itself is 80°C. However, when an electrode type 5612 pH electrode for normal temperature is incorporated, the temperature is 70°C.
- When a holder mounting device is required, please order one of the following separately.
 Fixtures: ZC-2 molds (holder length up to 1.5m), or ZC-1 mold and support metal fitting ZN-7 type loose flange: ZFL-11 type or ZFL-2 type (Holder length up to 2.0m)
- The built-in electrode of this holder is not subject to the weighing method assay, so there is no [individual test] pill in the product code.

Related Equipment

Immersion type holder mounting bracket

Model	Application	Installation example	
ZN-7 (Support)	Without cleaning, A,B, Used in combination with C-type bracket (This is done. Branch The holder can be detached in one way. Possession Can be done in a batch. Gold Tooling Length L is the hook on the surface of the water) So that the holder length Let it be shorter than its bulk.		 <p>Length of support bracket (L1) 500(L:1000) 1000(L:1500, 2000) 1500(L:2000, 2500) 2000(L:2500, 3000) 2500(L:3000, 3500) 3000(L:3500, 4000)</p> <p>Material SUS316 Weight approx. 3kg/1m</p>
ZC-1 Type B	For fixing pole (50A) Used in combination with ZN-7 type without clean holder. Full length: 600 mm Material: SPCC	Holder length up to 1.5m can be mounted.	 <p>(Example of mounting dimensions)</p> <p>*50A pipes are not included.</p>
ZC-1 Type C	One set of two for fixing poles (50A) Used in combination with ZN-7 type when the holder is not clean. Full length: 600 mm Material: SPCC	Holder length 2.0 to 4.0m can be mounted.	 <p>(Example of mounting dimensions)</p> <p>*50A pipes are not included.</p>
ZCD-2	Simple mounting bracket for the holder alone. Anchor bolt (M10) fixed. Full length: 250mm Material: SUS304	Example detector of installed Compatible holder: $\phi 32$ to 34 , length 500 to 1500	
ZC-2	Can be fixed with anchor bolts or fixed with 50A poles. Two holders, such as pH and DO, can be attached. The holder is a one-touch removable type. Bracket length: 500mm Material: SUS 304 Combination holder length is 2m or less. A holder with cleaning can also be installed.	 <p><Installation with anchor bolts></p>	 <p><Mounting on a Pole Stand></p>

Immersion Type Holder Mounting Flange

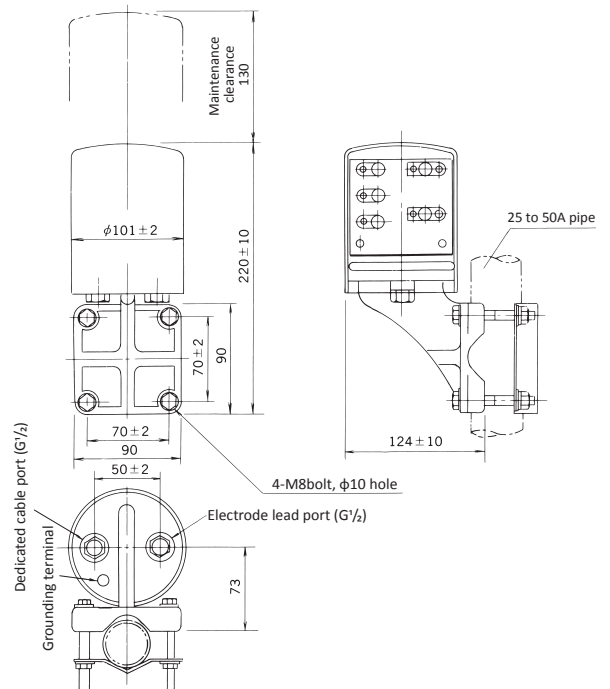
	Model	Application	Material	Flange standard*	Construction, Example of installation
Loose Flange	ZFL-11	For mounting KCl supply electrode holder	PVC or PP	50A JIS 10K FF	
	ZFL-2		SUS316	50A JIS 10K RF	

*Nominal diameters up to 200A and specifications for JIS 5K,ANSI,JPI are also available.

Junction Box

Used in combination with a dedicated cable when the transmitter and detector are installed apart (mainly panel-mounted transducers) and cannot be wired to the transducer through the electrode lead wires.

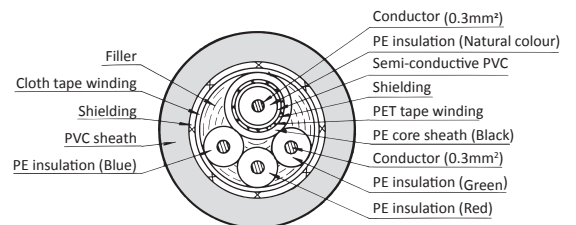
- Model : FC-4
- Construction : Field installation, spray proof (JIS C 0920)
- Mounting : 25 to 50A Pipe, wall or panelmount
- Material : ABS resin
- Finish : Matted chromium plating, metallic silver
- Weight : Approx. 0.9kg
- Applicable extension cable : EC-10



Extension Cable

The dedicated cable is a special cable dedicated to pH/ORP meter and is used between the transducer and the connector box. Maximum length is up to 100m and intermediate relaying is not possible.

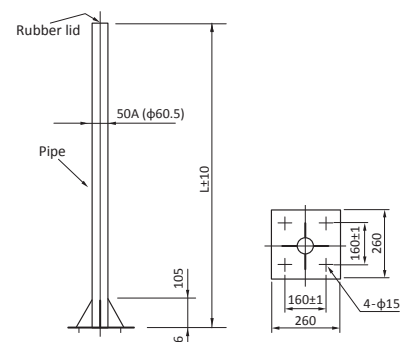
- Model : EC-10
- Overall diameter : 8mm
- Insulation : Polyethylene and PVC
- Sheath : PVC
- Insulation resistance : At least $10^5 M\Omega/100m$ between core conductors
- Standard length : 5m, 10 to 100m
- Weight : Approx. 0.5kg/5m



Pole Stand ZB-1

This pole stand is used to mount the immersion type detector beside the bath together with the transducer.

- Model : ZB-1
- Material : 50A steel pipe (SGPs) or SUS304
- Color : Metallic silver
- Length : No paint for SUS304
: 1.0m or 1.6m



pH and ORP meter calibration (check) kit

The pHmeter calibration kit consists of a pH7 reference solution for two-point calibration and a pH4 or pH9 reference solution and beaker. Select pH4 standard solution kit for standard measurement and pH9 standard solution kit for alkaline measurement.

The ORP check kit consists of an ORP standard solution and a beaker.

Use	Key	Code No.	Product name
pH standard	N	6581420K	pH calibration 4-7 kit (NN)
pH Alkali	P	6581430K	pH calibration 7-9 kit (PN)
ORP	Q	6581440K	ORP check kit (QN)

Detailed list for kit

● pH calibration 4-7 kit (NN) (Code No. 6581420K)	Code No.	Amount
Polyethylene beaker (500mL)	(136C035)	3
pH 4 powder for standard solution (500mL with container)	(143F307)	1
pH 7 powder for standard solution (500mL with container)	(143F308)	1
pH 4 powder for standard solution (for 500mL, 5 packs/set)	(143F060)	1
pH 7 powder for standard solution (for 500mL, 5 packs/set)	(143F061)	1
● pH calibration 7-9 kit (PN) (Code No. 6581430K)	Code No.	Amount
Polyethylene beaker (500mL)	(136C035)	3
pH 7 powder for standard solution (500mL with container)	(143F308)	1
pH 9 powder for standard solution (500mL with container)	(143F309)	1
pH 7 powder for standard solution (for 500mL, 5 packs/set)	(143F061)	1
pH 9 powder for standard solution (for 500mL, 5 packs/set)	(143F062)	1
● ORP check kit (QN) (Code No. 6581440K)	Code No.	Amount
Polyethylene beaker (500mL)	(136C035)	1
ORP powder for standard solution (500mL with container)	(143F310)	1
ORP powder for standard solution (for 500mL, 5 packs/set)	(143F089)	1

pH Standard Solutions

There are various pH standard solutions (500mL) and powdered reagents (for 500mL). The second type of pH standard solution is a pH standard solution (Kanto Chemical Co., Ltd.) that has traceability to the national standard, and it passes the inspection by a public agency.

○ pH Standard Solutions

Name	pH value (25°C)	Accuracy	Capacity	Parts code
Oxalate pH standard solution	1.68	±0.02	500mL	143F194
0.01M oxalate pH standard solution	2.15	±0.02	500mL	143F091
Phthalate pH standard solution	4.01	±0.02	500mL	143F191
Phosphate pH standard equimolal solution	6.86	±0.02	500mL	143F192
Tetraborate pH standard solution	9.18	±0.02	500mL	143F193
Carbonate pH standard solution	10.02	±0.02	500mL	143F195

○ Powder Reagent for pH Standard Solution

Name	pH value (25°C)	Capacity	Parts code
Powder reagent for oxalate pH standard solution	1.68	For 500 mL (5 packs)	143F065
Powder reagent for 0.01M oxalate pH standard solution	2.15	For 500 mL (5 packs)	143F090
Powder reagent for Phthalate pH standard solution	4.01	For 500 mL (5 packs)	143F060
Powder reagent for phosphate Salt pH standard solution	6.86	For 500 mL (5 packs)	143F061
Powder reagent for tetraborate ph standard solution	9.18	For 500 mL (5 packs)	143F062
Powder reagent for pH carbonate standard solution	10.02	For 500 mL (5 packs)	143F066

○ Class 2 pH Standard Solution

Name	pH value at 25°C, and criteria	Capacity	Parts code
Phthalate pH standard solution, class 2	4.01±0.015	500mL	143F501
Phosphate pH standard solution, class 2	6.86±0.015	500mL	143F502
Tetraborate pH standard solution, class 2	9.18±0.015	500mL	143F503

ORP Standard Solutions

The ORP standard solution is used by saturating quinhydrone with phthalate pH standard solution when used

Name	Capacity	Parts code
ORP standard solution (pH4.01 solution plus quinhydrone)	500 mL	143F196
Powder reagent for ORP standard solution (pH4.01 powder plus quinhydrone)	For 500 mL (5 sets)	143F089
Quinhydrone powder reagent for ORP standard solution (quinhydrone only)	For 500 mL (5 packs)	143F059

Electrolyte for Electrode

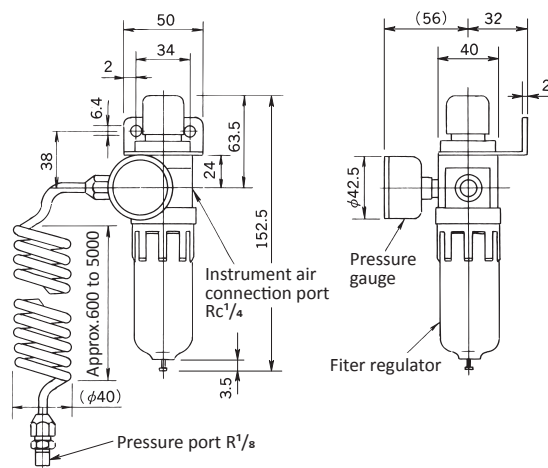
This is an internal solution for KCl supply electrodes. The solution comes in a polyethylene bottle with a nozzle.

Name	Object electrode	Capacity	Parts code
3M KCl solution	Non-leak silver chloride internal polar electrode	500mL	143A252
Powder reagent for 3M KCl solution	Non-leak silver chloride internal polar electrode	1 package for 500 mL	143A253

Air Set PAS-10

This is an air set for pressurizing the pressurized immersion type holder with instrumentation air.

A spiral tube convenient for attaching and detaching the holder is connected to the pressure regulator with filter of secondary 0 to 0.3MPa setting.



Manual pressure pump

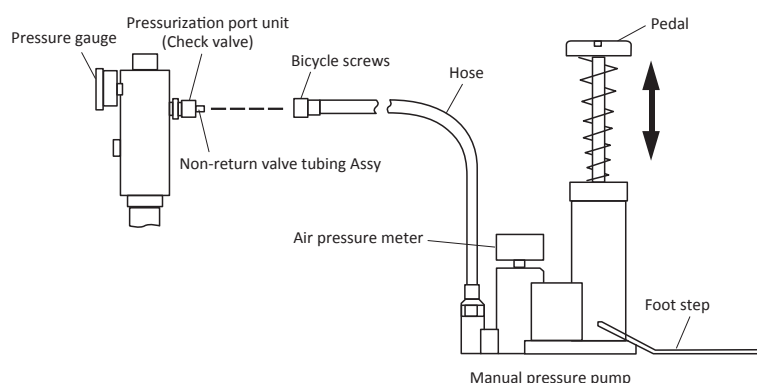
Pressurization port unit if there is no equipment for instrumentation air

(Check valve) and manual pressurization pump are available. In this case, periodic pressurize operation is required.

Pressurized port unit: Code No. 4351110U

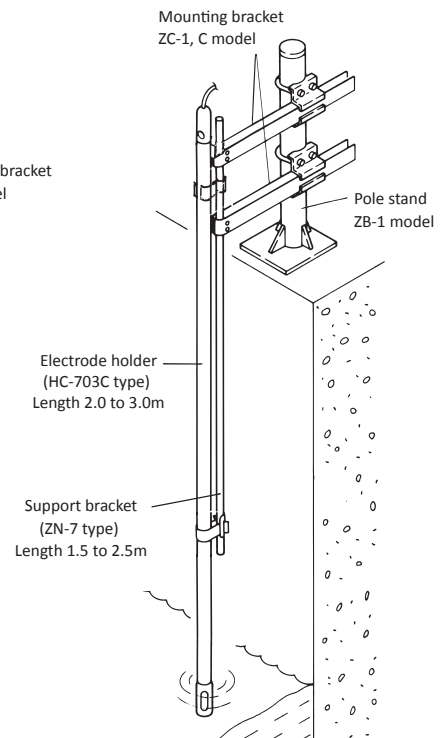
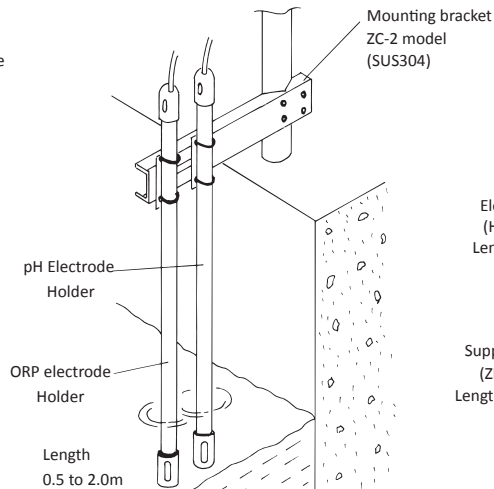
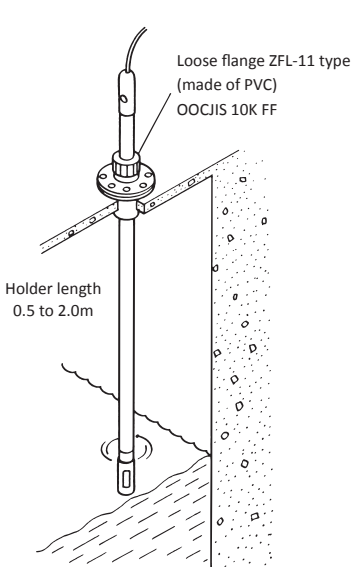
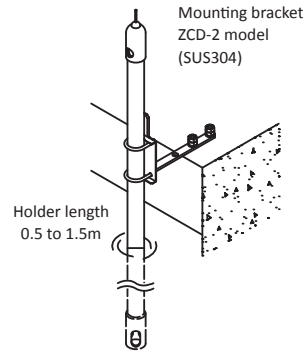
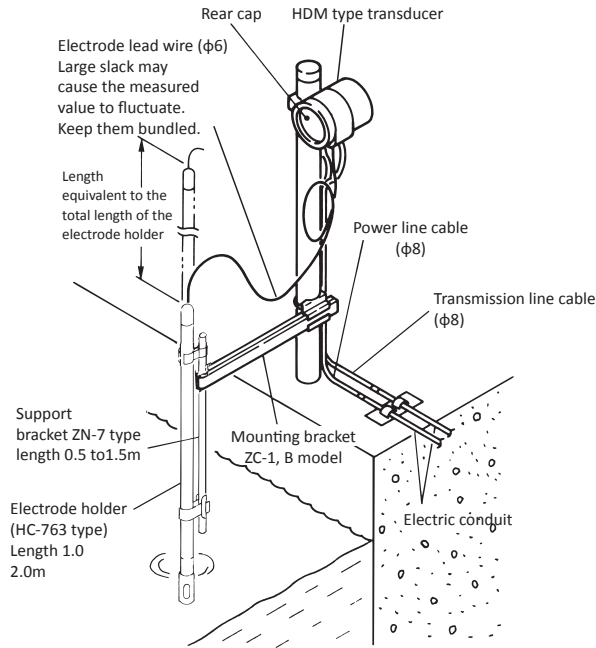
Check valve tube Assy: Code No. 5970030K

Manual pressurization pump: Code No. 125B971



Typical Installation of Immersion Type Sensor

<Standard installation diagram of the immersion type pH/ORP measuring system>



DKK-TOA CORPORATION

Overseas Sales Division:
DKK-TOA Corporation
29-10, 1-Chome, Takadanobaba, Shinjuku-ku,
Tokyo 169-8648 Japan
Tel : +81-3-3202-0225 Fax : +81-3-3202-5685
E-mail : intsales@dkktoa.com



CAUTION

Please read the operation manual carefully before using products.