SPECIFICATION SHEET

TOADKK

CONDUCTIVITY DETECTOR WITH AMPLIFIER

AA-1 (for general use)
AA-2 (for ultra-pure water)

It is a conductivity (electrical conductivity) meter with a simple configuration (no indication) that integrates a 2-electrode detector and an amplifier (measurement circuit).

Outputs DC 4 to 20mA of measured value transmission signal.

Features

○Since it can be selected from 4 types of cell constants, it can be used for a wide range of measurement from ultrapure water to river water and factory effluent.
○Since the insulating sealing material for the inner and outer poles uses glass hermetic and fluoro-resin, it has high heat resistance and pressure resistance.
○There are many variations in the mounting method, such as screwing, insertion type of flange connection, and immersion type and running liquid type.

Standard Specifications

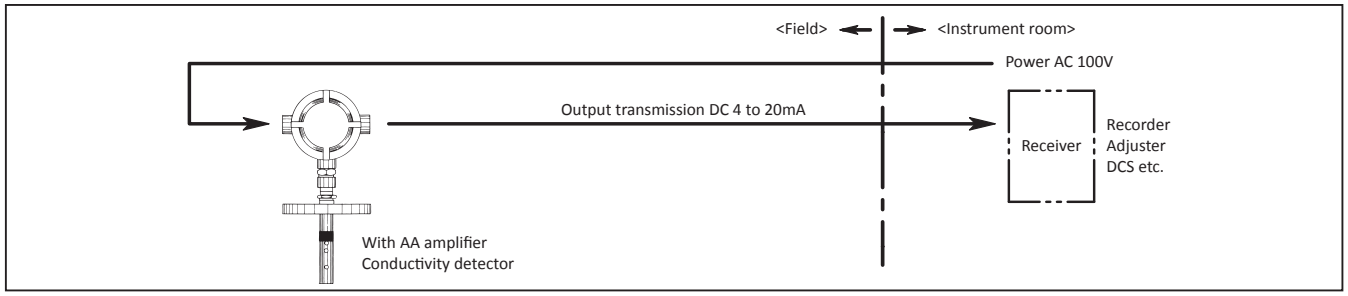
Product Name : Conductivity detector with amplifier
Model : AA-1 (For general use), AA-2 (Ultra-pure water)
Measurement Object : Electrical conductivity of ultra-pure water, pure water, industrial water, wastewater, etc.
Cell constant and measurement range: 25˚C conversion

	Applicable measurement range (μS/cm)*	Model
0.01/cm	0 to 0.2, 0 to 0.5, 0 to 1	AA-2
	0 to 2, 0 to 5, 0 to 10	AA-1
0.1/cm	0 to 20, 0 to 50, 0 to 100	
1.0/cm	0 to 200, 0 to 500, 0 to 1000	
10/cm	0 to 2000, 0 to 5000, 0 to 10000	

* SI it (S/m) is also available

Ambient temperature / humidity : −0 to 60˚C, 95%RH or less
Sample water condition :
Temperature range …0 to 85˚C (0 to 80˚C for PP case)
Pressure range …2.0MPa or less
(However, in the case of flange connection, up to the nominal pressure of the flange, in the case of polypropylene case 0.3MPa or less)
Flow velocity or rate …0.01 to 5m/s (0.5 to 10L/min rate with case)
Temperature compensation :
Temperature range …0 to 55, 25 to 85˚C (AA-1)
5 to 65˚C (AA-2)
Temperature characteristics …Electrical conductivity temperature characteristics of NaCl solution (AA-1)
Combined type (AA-2 type) of the electric conductivity temperature characteristics of ultrapure water and the electric conductivity temperature characteristics of NaCl solution
Accuracy …Within the temperature compensation range of ±3%FS
(With equivalent resistance)
Transmission output : Insulated type
Specify either DC 4 to 20mA (Load resistance 600Ω or less) or DC 1 to 5V (Load resistance 500kΩ or more)
Power consumption : 3VA
Power : AC 100V±10% 50/60Hz
Material : Electrode and main unit…SUS316
Electrode insulation…Glass (Hermetic seal)
PTFE case …SUS316 or PP
Amplifier case…Aluminum alloy casting
Weight : Approx. 2.5kg (In case of screw-in type)
Standard coating : Amplifier case…metallic silver

Configuration



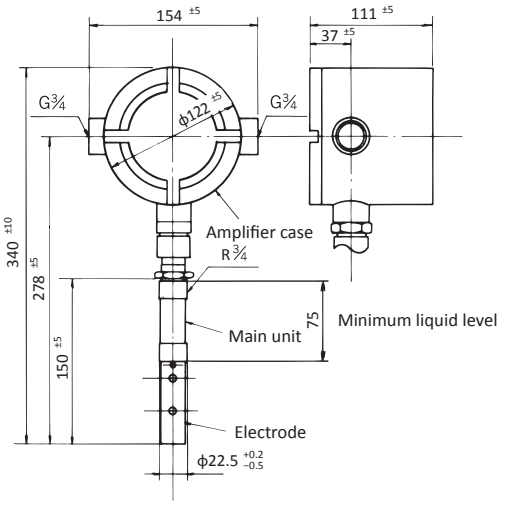
Dimensions

Unit : mm

Screw in type

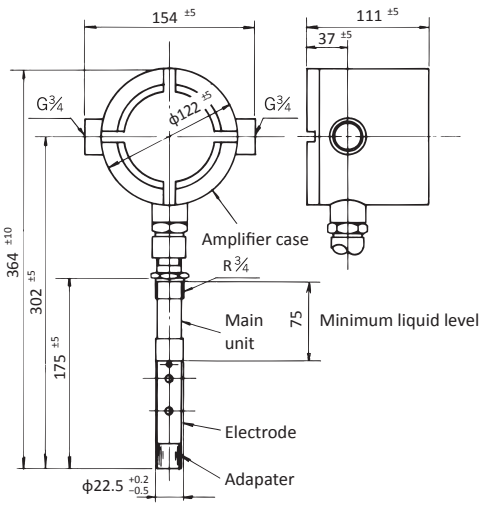
Cell constant: 0.01, 0.11/cm

AA-111
-112
-113
-211



Cell constant: 10/cm

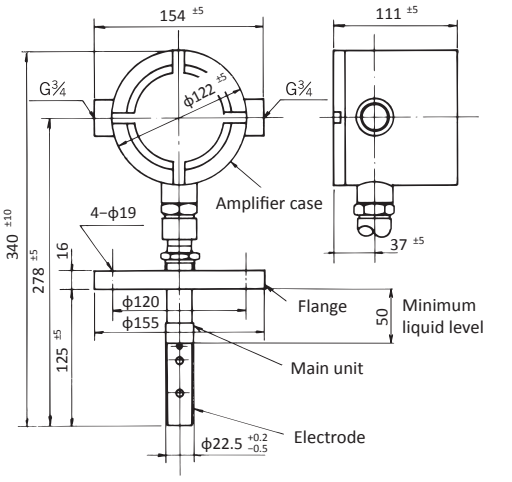
AA-114



Flange connection type

Cell constant: 0.01, 0.11/cm

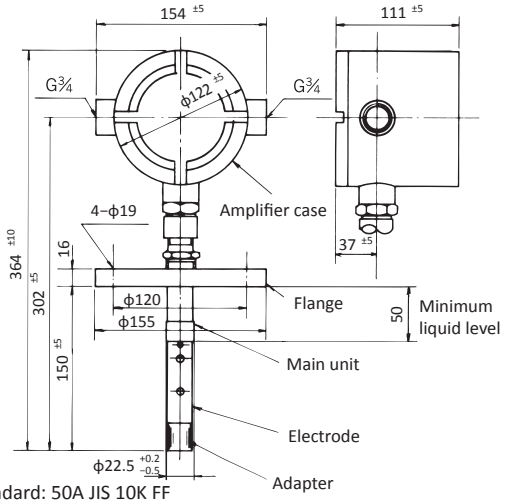
AA-121
-122
-123
-221



Flange Standard: 50A JIS 10K FF

Cell constant: 10/cm

AA-124

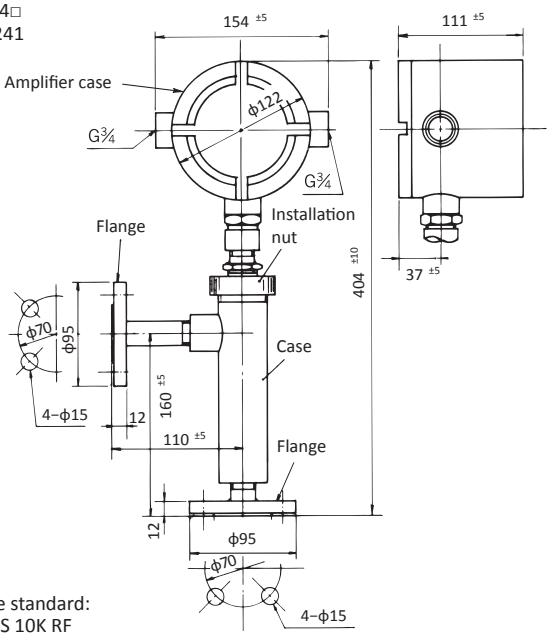


Flange standard: 50A JIS 10K FF

Flange Connection type with case

Case Material: SUS316

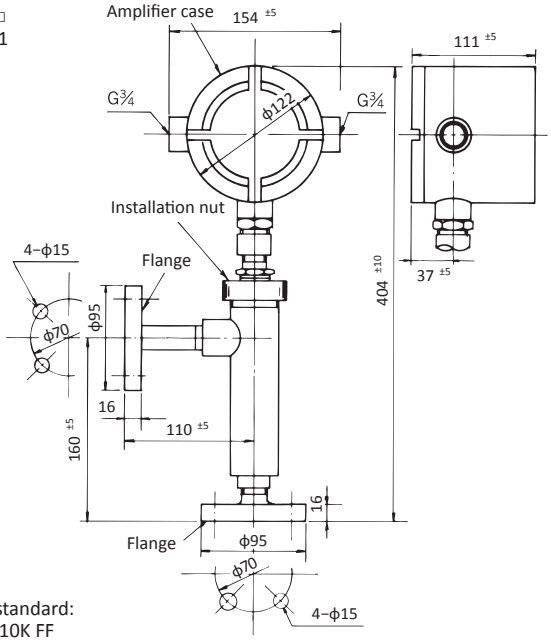
AA-14□
-241



Flange standard:
15A JIS 10K RF

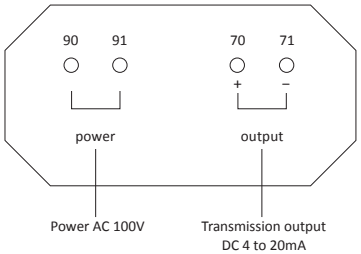
Case Material: Polypropylene

AA-16□
-261



Flange standard:
15A JIS 10K FF

Terminal connection

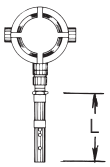


Product code

For general water / insertion type (screw-in type) AA-11□

AA1D-2-□□□□□□□□□□□□□

Power pressure				
1			AC 100V 50/60Hz	
2			AC 110V 50/60Hz	
3			AC 115V 50/60Hz	
5			AC 200V 50/60Hz	
6			AC 220V 50/60Hz	
Transmission output				
1			DC 4 to 20mA	
3			DC 1 to 5V	
Measurement Range *1				
B	AA-111		0 to 2 μS/cm at 25˚C	Cell constant 0.01/cm
C	AA-111		0 to 5 "	
D	AA-111		0 to 10 "	
E	AA-112		0 to 20 "	Cell constant 0.1/ cm
F	AA-112		0 to 50 "	
G	AA-112		0 to 100 "	
H	AA-113		0 to 200 "	Cell constant 1/cm
J	AA-113		0 to 500 "	
K	AA-113		0 to 1000 "	
L	AA-114		0 to 2000 "	Cell constant 10/cm
M	AA-114		0 to 5000 "	
N	AA-114		0 to 10000 "	
Temperature compensation range *1				
1			0 to 55˚C	
2			2 5 to 85˚C	
Main material of electrode				
A			SUS316 : Standard	
B			SUS316L (Including screw)	
Connection screw *2				
1			R3/4 : Standard	
2			R1	
3			NPT3/4	
4			M4 2 bag nut (For combined case)	



L Dimensions under the screw *2

	0.01/0.1/1	10 ← Cell constant
0	150mm	175mm : Standard
2	525mm	550mm
3	1,025mm	1,050mm
4	1,525mm	1,550mm
5	2,025mm	2,050mm

Y			Always Y
Y			Always Y
Cell constant			
1	AA-111		0.01/cm
2	AA-112		0.1/cm
3	AA-113		1/cm
4	AA-114		10/cm
Piping port adapter built-in			
0			None G3/4 : standard
1			G1/2 SUS304
2			NPT1/2 SUS304
3			NPT3/4 SUS304
Description form			
0			Standard
1			English

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

*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.

*2. If the L dimension under the screw exceeds 1025 (1050) mm, the extension will be thicker, so the screw size will be R1. (R 3/4 not possible)
If the L dimension is 525mm or more and the sample water flow velocity exceeds 0.1ms/(reference), a protective tube for reinforcing the detector is required.)

Note
1. The sample water temperature range is 0 to 85°C, and the maximum pressure is 2.0MPa.
2. If the measurement range is 0 to 2000 μS/cm or more (cell constant 10/cm) and high conductivity, a more stable electromagnetic induction conductivity meter is recommended.

For general water / insertion type (flange type) AA-12□

AA1D-2-□□□□□□□□□□□□□

Power-supply voltage

1	AC 100V 50/60Hz
2	AC 110V 50/60Hz
3	AC 115V 50/60Hz
5	AC 200V 50/60Hz
6	AC 220V 50/60Hz

Transmission output

1	DC 4 to 20mA
3	DC 1 to 5V

Measurement range *1

B	AA-121	0 to 2 μS/cm at 25˚C	Cell constant 0.01 /cm
C	AA-121	0 to 5 "	
D	AA-121	0 to 10 "	
E	AA-122	0 to 20 "	Cell constant 0.1/c m
F	AA-122	0 to 50 "	
G	AA-122	0 to 100 "	
H	AA-123	0 to 200 "	Cell constant 1/cm
J	AA-123	0 to 500 "	
K	AA-123	0 to 1000 "	
L	AA-124	0 to 2000 "	Cell constant 10/cm
M	AA-124	0 to 5000 "	
N	AA-124	0 to 10000 "	

Temperature compensation range *1

1	0 to 55˚C
2	25 to 85˚C

Main material of elctrode

A	SUS316 : Standard
B	SUS316L (Including flange)

Always Y

Y

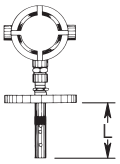
Always Y

Y

Flange connection standard

A	50 A JIS10K FF : Standard
C	2"A NSI 150LB RF

L Dimensions under the flange *2



	0.01/0.1/1	10 ← Cell constant
0	125mm	150mm : Standard
1	150mm	175mm
2	500mm	525mm
3	1,000mm	1,025mm
4	1,500mm	1,525mm
5	2,000mm	2,025mm

Cell constant

1	AA-121	0.01/cm
2	AA-122	0.1/cm
3	AA-123	1/cm
4	AA-124	10/cm

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

Built-in wiring port adapter

0	None G3/4 : Standard
1	G1/2 SUS304 NPT1/2
2	NPT1/2 SUS304
3	NPT3/4 SUS304

Description form

0	Standard
1	English

*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.

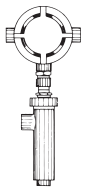
*2. If the L dimension is 500mm or more and the sample water flow velocity exceeds 0.1m/s (reference), a protective tube for reinforcing the detector is required.

Note

1. The sample water temperature range is 0 to 85°C, and the maximum pressure is up to the nominal pressure of the flange (1.0MPa).
2. If the measurement range is 0 to 2000μS/cm or more (cell constant 10/cm) and the conductivity is high, a more stable electromagnetic induction conductivity meter is recommended.

For general water / flow-through type (SUS screw case) AA-13□

AA1F-2-□□□□□□□□□□□□□



Power-supply voltage
- 1 … AC 100V 50/60Hz
- 2 … AC 110V 50/60Hz
- 3 … AC 115V 50/60Hz
- 5 … AC 200V 50/60Hz
- 6 … AC 220V 50/60Hz

Transmission output
- 1 … DC 4 to 20mA
- 3 … DC 1 to 5V

Measurement range *1
- B … AA-131 … 0 to 2 µS/cm at 25˚C
- C … AA-131 … 0 to 5 " } Cell constant 0.01/cm
- D … AA-131 … 0 to 10 "
- E … AA-132 … 0 to 20 "
- F … AA-132 … 0 to 50 " } Cell constant 0.1/c m
- G … AA-132 … 0 to 100 "
- H … AA-133 … 0 to 200 "
- J … AA-133 … 0 to 500 " } Cell constant 1/cm
- K … AA-133 … 0 to 1000 "
- L … AA-134 … 0 to 2000 "
- M … AA-134 … 0 to 5000 " } Cell constant 10/cm
- N … AA-134 … 0 to 10000 "

Temperature compensation range *1
- 1 … 0 to 55˚C
- 2 … 25 to 85˚C

Main material of electrrode
- A … SUS316 : Standard
- B … SUS316L

Screw connection standard for SUS316 case *2
- 1 … Rc1/2 : standard
- 2 … Rc1/4 : standard
- 3 … NPT1/2
- 4 … NPT1/4

Y … Always Y

Y … Always Y

Y … Always Y

Cell constant

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

- 1 … AA-131 … 0.01/cm
- 2 … AA-132 … 0.1/cm
- 3 … AA-133 … 1/cm
- 4 … AA-134 … 10/cm

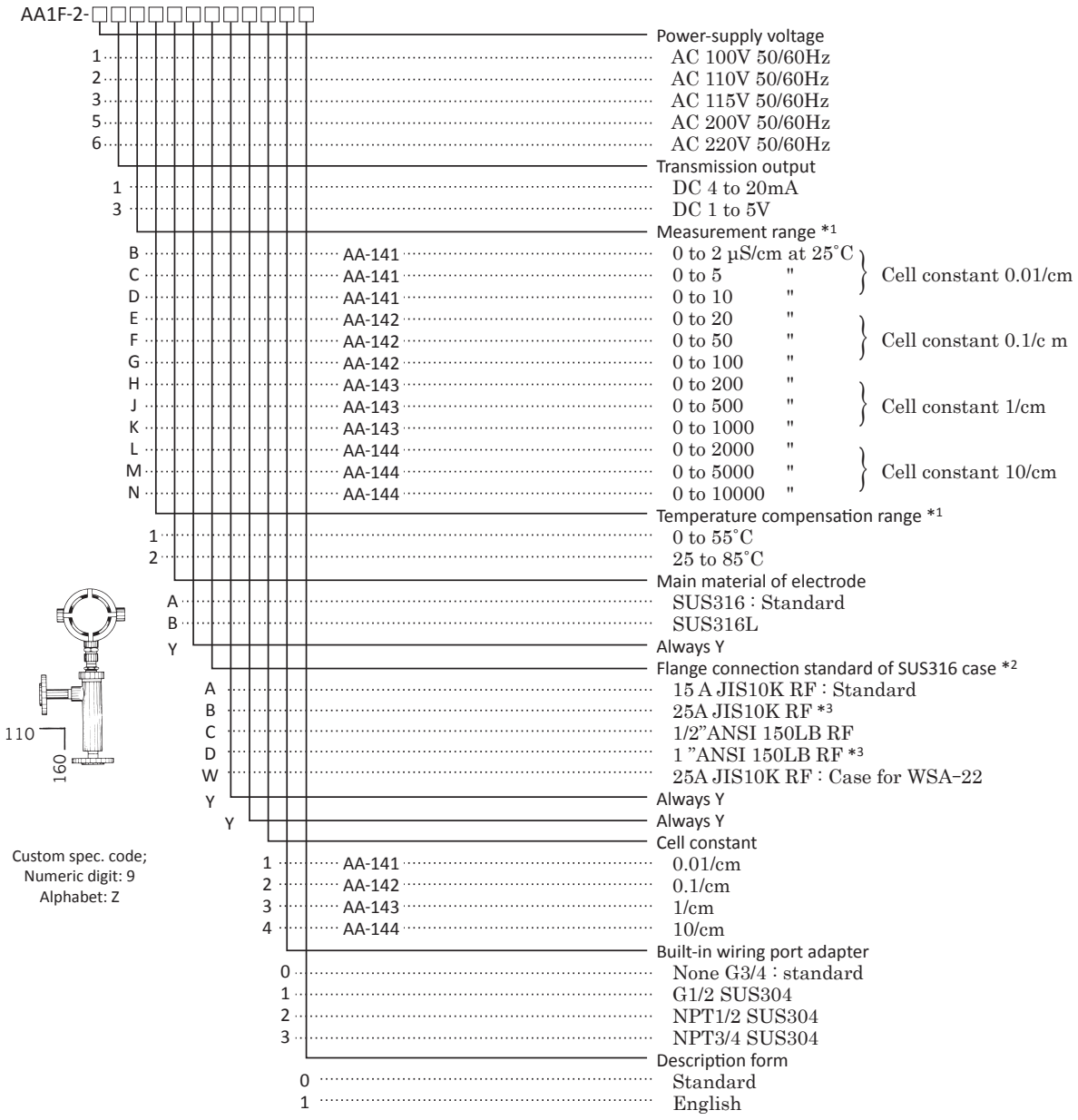
Built-in wiring port adapter
- 0 … None G3/4 : standard
- 1 … G1/2 SUS304
- 2 … NPT1/2 SUS304
- 3 … NPT3/4 SUS304

Description form
- 0 … Standard
- 1 … English

*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. If the case material is SUS316L, specify this pilk with a special "9".

Note
1. The sample water temperature range is 0 to 85°C, and the maximum pressure is 2.0MPa.
2. If the measurement range is 0 to 2000µS/cm or more (cell constant 10/cm) and the conductivity is high, a more stable electromagnetic induction conductivity meter is recommended.

For general water/flow-through type (Case with SUS flange) AA-14□

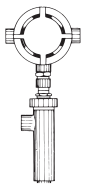


*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. If the case material is also SUS316L, specify a special Z and specify it together with the flange standard.
*3. Even if the flange size is 25A (1 "), the pipe size (sample water inlet/outlet pipe diameter) is 15A (1/2").

Note
1. The sample water temperature range is 0 to 85°C, and the maximum pressure is 1.0MPa.
2. If the measurement range is 0 to 2000µS/cm or more (cell constant 10/cm) and the conductivity is high, a more stable electromagnetic induction conductivity meter is recommended.

For general water / Flow-through type (PP screw case) AA-15□

AA1F-2-□□□□□□□□□□□□□



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

Power- supply voltage
- 1 — AC 100V 50/60Hz
- 2 — AC 110V 50/60Hz
- 3 — AC 115V 50/60Hz
- 5 — AC 200V 50/60Hz
- 6 — AC 220V 50/60Hz

Transmission output
- 1 — DC 4 to 20mA
- 3 — DC 1 to 5V

Measurement range *1

B	AA-151	0 to 2 µS/cm at 25˚C	Cell constant 0.01/cm
C	AA-151	0 to 5 "	
D	AA-151	0 to 10 "	
E	AA-152	0 to 20 "	Cell constant 0.1/ cm
F	AA-152	0 to 50 "	
G	AA-152	0 to 100 "	
H	AA-153	0 to 200 "	Cell constant 1/cm
J	AA-153	0 to 500 "	
K	AA-153	0 to 1000 "	
L	AA-154	0 to 2000 "	Cell constant 10/cm
M	AA-154	0 to 5000 "	
N	AA-154	0 to 10000 "	

Temperature compensation range *1
- 1 — 0 to 55˚C
- 2 — 25 to 85˚C

Main material of electrode
- A — SUS316 : standard
- B — SUS316L

Always Y
- Y

Always Y
- Y

Screw connection standard for polypropylene case
- 1 — Rc1/2 : Standard

Always Y
- Y

Cell constant
- 1 — AA-151 — 0.01/cm
- 2 — AA-152 — 0.1/cm
- 3 — AA-153 — 1/cm
- 4 — AA-154 — 10/cm

Built-in wiring port adapter
- 0 — None G3/4 : Standard
- 1 — G1/2 SUS304
- 2 — NPT1/2 SUS304
- 3 — NPT3/4 SUS304

Description form
- 0 — Standard
- 1 — English

*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.

Note
1. The sample water temperature range is 0 to 80°C, and the maximum pressure is 0.3MPa.
2. If the measurement range is 0 to 2000µS/cm or more (cell constant 10/cm) and the conductivity is high, a more stable electromagnetic induction conductivity meter is recommended.

For general water / Flow-through type (Case with PP flange) AA-16□

AA1F-□□□□□□□□□□□□

Power-supply voltage
- 1 … AC 100V 50/60Hz
- 2 … AC 110V 50/60Hz
- 3 … AC 115V 50/60Hz
- 5 … AC 200V 50/60Hz
- 6 … AC 220V 50/60Hz

Transmission output
- 1 … DC 4 to 20mA
- 3 … DC 1 to 5V

Measurement range *1

B	AA-161	0 to 2 µS/cm at 25˚C	Cell constant 0.01/cm
C	AA-161	0 to 5 "	
D	AA-161	0 to 10 "	
E	AA-162	0 to 20 "	Cell constant 0.1/cm
F	AA-162	0 to 50 "	
G	AA-162	0 to 100 "	
H	AA-163	0 to 200 "	Cell constant 1/cm
J	AA-163	0 to 500 "	
K	AA-163	0 to 1000 "	
L	AA-164	0 to 2000 "	Cell constant 10/cm
M	AA-164	0 to 5000 "	
N	AA-164	0 to 10000 "	

Temperature compensation range *1
- 1 … 0 to 55˚C
- 2 … 25 to 85˚C

Main material of electrode
- A … SUS316 : Standard
- B … SUS316L

- Y … Always Y
- Y … Always Y
- Y … Always Y

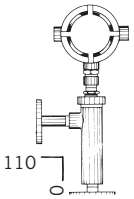
Screw connection standard for polypropylene case *2
- A … 15A JIS10K FF : Standard
- B … 25A JIS10K FF

Cell constant

1	AA-161	0.01/cm
2	AA-162	0.1/cm
3	AA-163	1/cm
4	AA-164	10/cm

Built-in wiring port adapter
- 0 … None G3/4 : Standard
- 1 … G1/2 SUS304
- 2 … NPT1/2 SUS304
- 3 … NPT3/4 SUS304

Description form
- 0 … Standard
- 1 … English



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

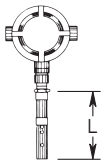
*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. Even if the flange size is 25A (1 "), the pipe size (sample water inlet / outlet pipe diameter) is 15A (1/2").
In addition, the dimension between the flange faces is 110 (W) x 170 (H).

Note
1. The sample water temperature range is 0 to 80°C, and the maximum pressure is 0.3MPa.
2. If the measurement range is 0 to 2000µS/cm or more (cell constant 10/cm) and the conductivity is high, a more stable electromagnetic induction conductivity meter is recommended.

For ultra-pure water / Insertion type (Screw-in type) AA-211

AA2D-□□□□□□□□□□□□

- Power-supply voltage
  - 1 ····· AC 100V 50/60Hz
  - 2 ····· AC 110V 50/60Hz
  - 3 ····· AC 115V 50/60Hz
  - 5 ····· AC 200V 50/60Hz
  - 6 ····· AC 220V 50/60Hz
- Transmission output
  - 1 ····· DC 4 to 20mA
  - 3 ····· DC 1 to 5V
- Measurement range *1
  - A ····· 0 to 0.2 µS/cm at 25˚C
  - B ····· 0 to 0.5 "
  - C ····· 0 to 1.0 "
- Temperature compensation range *1
  - 1 ····· 5 to 65˚C
- Main material of electrode
  - A ····· SUS316 : Standard
  - B ····· SUS316L (Including screw)
- Connection screw standard
  - 1 ····· R3/4 : Standard
  - 2 ····· R1
  - 3 ····· NPT3/4
  - 4 ····· M42 bag nut (For combined case)
- L dimension under screw *2
  - 0 ····· 150mm : Standard
- Y ····· Always Y
- Y ····· Always Y
- Built-in wiring port adapter
  - 0 ····· None G3/4 : standard
  - 1 ····· G1/2 SUS304
  - 2 ····· NPT1/2 SUS304
  - 3 ····· NPT3/4 SUS304
- Description form
  - 0 ····· Standard
  - 1 ····· English



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

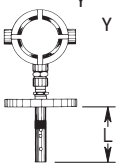
*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. The longest L dimension under screw is 500mm (special specification). For thank-you notes, please contact our Overseas Sales Department for manufacturability.

Note
1. Temperature range for sample water is 0 to 85°C, maximum pressure is 2.0MPa. (If the temperature exceeds 85°C, special specifications are available.)
2. Cell constant is 0.01/cm as it is ultra-pure water.

For ultra-pure water / Insertion type (Flange type) AA-221

AA2D-□□□□□□□□□□□□

- Power-supply voltage
  - 1 ····· AC 100V 50/60Hz
  - 2 ····· AC 110V 50/60Hz
  - 3 ····· AC 115V 50/60Hz
  - 5 ····· AC 200V 50/60Hz
  - 6 ····· AC 220V 50/60Hz
- Transmission output
  - 1 ····· DC 4 to 20mA
  - 3 ····· DC 1 to 5V
- Measurement range *1
  - A ····· 0 to 0.2 µS/cm at 25˚C
  - B ····· 0 to 0.5 "
  - C ····· 0 to 1.0 "
- Temperature compensation range *1
  - 1 ····· 5 to 65˚C
- Main material of electrode
  - A ····· SUS316 : Standard
  - B ····· SUS316L
- Y ····· Always Y
- Y ····· Always Y
- Connection screw standard
  - A ····· 50A JIS10K FF : standard
  - C ····· 2 " ANSI 150LB RF
- L dimension under flange *2
  - 0 ····· 125mm : standard
  - 1 ····· 150mm : Flow-through type WSH cell compatible
- Built-in wiring port adapter
  - 0 ····· None G3/4 : standard
  - 1 ····· G1/2 SUS304
  - 2 ····· NPT1/2 SUS304
  - 3 ····· NPT3/4 SUS304
- Description form
  - 0 ····· Standard
  - 1 ····· English



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

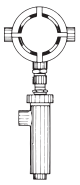
*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. The longest L dimension under flange is 500mm (special specification). If you need the length more than 500mm, please contact our Overseas Sales Department for manufacturability.

Note
1. Temperature range for sample water is 0 to 85°C, maximum pressure is up to nominal pressure of the flange (1.0MPa)
2. Cell constant is 0.01/cm as it is ultra-pure water.
3. The flange is not welded, but screw (R 3/4) connection.

For ultra-pure water / Flow-through type (SUS screw case) AA-231

AA2F-2-□□□□□□□□□□□□

- Power-supply voltage
  - 1 ····· AC 100V 50/60Hz
  - 2 ····· AC 110V 50/60Hz
  - 3 ····· AC 115V 50/60Hz
  - 5 ····· AC 200V 50/60Hz
  - 6 ····· AC 220V 50/60Hz
- Transmission output
  - 1 ····· DC 4 to 20mA
  - 3 ····· DC 1 to 5V
- Measurement range *1
  - A ····· 0 to 0.2 µS/cm at 25˚C
  - B ····· 0 to 0.5 "
  - C ····· 0 to 1.0 "
- Temperature compensation range *1
  - 1 ····· 5 to 65˚C
- Main material of electrode
  - A ····· SUS316 : standard
  - B ····· SUS316L
- Screw connection standard of SUS 316 case *2
  - 1 ····· Rc1/2 : Standard
  - 2 ····· Rc1/4
  - 3 ····· NPT1/2
  - 4 ····· NPT1/4
- Y ····· Always Y
- Y ····· Always Y
- Y ····· Always Y
- Built-in wiring port adapter
  - 0 ····· None G3/4 : standard
  - 1 ····· G1/2 SUS304
  - 2 ····· NPT1/2 SUS304
  - 3 ····· NPT3/4 SUS304
- Description form
  - A ····· Standard
  - B ····· English



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

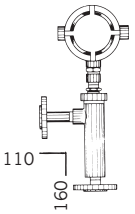
*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. If the case material is also SUS316L, set it to special "9" and specify it together with the screw standard.

Note
1. Temperature range of sample water is 0 to 85˚C, maximum pressure is 1.0MPa.
2. Cell constant is 0.01/cm as it is ultra-pure water.

For ultra-pure water / Flow-through type (Case with SUS flange) AA-241

AA2F-2-□□□□□□□□□□□□

- Power-supply voltage
  - 1 ····· AC 100V 50/60Hz
  - 2 ····· AC 110V 50/60Hz
  - 3 ····· AC 115V 50/60Hz
  - 5 ····· AC 200V 50/60Hz
  - 6 ····· AC 220V 50/60Hz
- Transmission output
  - 1 ····· DC 4 to 20mA
  - 3 ····· DC 1 to 5V
- Measurement range *1
  - A ····· 0 to 0.2 µS/cm at 25˚C
  - B ····· 0 to 0.5 "
  - C ····· 0 to 1.0 "
- Temperature compensation range *1
  - 1 ····· 5 to 65˚C
- Main material of electrode
  - A ····· SUS316 : standard
  - B ····· SUS316L
- Y ····· Always Y
- Flange connection standard of SUS316 case *2
  - A ····· 15A JIS10K RF : Standard
  - B ····· 25A JIS10K RF *3
  - C ····· 1/2"ANSI 150LB RF
  - D ····· 1"ANSI 150LB RF *3
  - W ····· 25A JIS10K RF : Case for WSH-22
- Y ····· Always Y
- Y ····· Always Y
- Built-in wiring port adapter
  - 0 ····· None G3/4 : Standard
  - 1 ····· G1/2 SUS304
  - 2 ····· NPT1/2 SUS304
  - 3 ····· NPT3/4 SUS304
- Description form
  - A ····· Standard
  - B ····· English



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

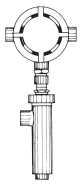
*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. If the case material is also SUS316L, specify it as a special "Z" along with the flange standard.
*3. Even if the flange size is 25A (1"), the pipe size (sample water inlet/outlet pipe diameter) is 15A (1/2").

Note
1. Temperature range of sample water is 0 to 85˚C, maximum pressure is 1.0MPa.
2. Cell constant is 0.01/cm as it is ultra-pure water

For ultra-pure water / Flow-through type (PP screw case) AA-251

AA2F-□□□□□□□□□□□□

- Power-supply voltage
  - 1 ····· AC 100V 50/60Hz
  - 2 ····· AC 110V 50/60Hz
  - 3 ····· AC 115V 50/60Hz
  - 5 ····· AC 200V 50/60Hz
  - 6 ····· AC 220V 50/60Hz
- Transmission output
  - 1 ····· DC 4 to 20mA
  - 3 ····· DC 1 to 5V
- Measurement range *1
  - A ····· 0 to 0.2 µS/cm at 25˚C
  - B ····· 0 to 0.5 "
  - C ····· 0 to 1.0 "
- Temperature compensation range *1
  - 1 ····· 5 to 65˚C
- Main material of electrode
  - A ····· SUS316 : standard
  - B ····· SUS316L
- Always Y
- Always Y
- Connection standard of PP case screw
  - 1 ····· Rc1/2 : Standard
- Always Y
- Built-in wiring port adapter
  - 0 ····· None G3/4 : standard
  - 1 ····· G1/2 SUS304
  - 2 ····· NPT1/2 SUS304
  - 3 ····· NPT3/4 SUS304
- Description form
  - A ····· Standard
  - B ····· English



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

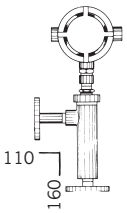
*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.

Note
1. Temperature range of sample water is 0 to 80˚C, maximum pressure is 0.3MPa
2. Cell constant is 0.01/cm as it is ultra-pure water

For ultra-pure water / Flow-through type (Case with PP flange) AA-261

AA2F-□□□□□□□□□□□

- Power-supply voltage
  - 1 ····· AC 100V 50/60Hz
  - 2 ····· AC 110V 50/60Hz
  - 3 ····· AC 115V 50/60Hz
  - 5 ····· AC 200V 50/60Hz
  - 6 ····· AC 220V 50/60Hz
- Transmission output
  - 1 ····· DC 4 to 20mA
  - 3 ····· DC 1 to 5V
- Measurement range *1
  - A ····· 0 to 0.2 µS/cm at 25˚C
  - B ····· 0 to 0.5 "
  - C ····· 0 to 1.0 "
- Temperature compensation range *1
  - 1 ····· 5 to 65˚C
- Main material of electrode
  - A ····· SUS316 : Standard
  - B ····· SUS316L
- Always Y
- Always Y
- Always Y
- Flange connection standard of PP case
  - A ····· 15A JIS10K FF : Standard
  - B ····· 25A JIS10K FF *2
- Built-in wiring port adapter
  - 0 ····· None G3/4 : standard
  - 1 ····· G1/2 SUS304
  - 2 ····· NPT1/2 SUS304
  - 3 ····· NPT3/4 SUS304
- Description form
  - A ····· Standard
  - B ····· English



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

*1. For special specifications of measurement range and temperature compensation range, please contact our Overseas Sales Department for manufacturability.
*2. Even if the flange size is 25A, the pipe size (sample water inlet / outlet pipe diameter) is 15A.

Note
1. Temperature range of sample water is 0 to 80˚C, maximum pressure is 0.3MPa
2. Cell constant is 0.01/cm as it is ultra-pure water.

Installation condition

Please note the following points when installing the conductivity meter detector with amplifier.

1. Install in a location that is not exposed to direct sunlight and has little local temperature change.
2. Install it in a place where there is no violent vibration and maintenance work is easy.
3. Install it in a place where there is no corrosive gas and it is not exposed to chemicals.
4. Install the electrode so that it is at least the minimum liquid level (see the external dimensions on page 2). Also, if air bubbles are mixed in, the instructions may fluctuate, so avoid mixing as much as possible.
5. Installation procedure of pipe insertion type
   For screw-in or flange-connected pipe insertion type, it is recommended to install on the top of the horizontal pipe. (Fig. A)
   When mounted on the side of a vertical pipe, the detector is in a horizontal horizontal position. (Fig. B)
   There is no problem with the horizontal and horizontal posture for the types with cell constants of 0.01/cm and 0.1/cm.
   Install the cell constants 1.0/cm and 10/cm diagonally with a horizontal angle of 45 degrees or more. (Fig. C)
   Since it is difficult for air bubbles to escape inside the electrode, it is installed diagonally to make it easier for air bubbles to escape. (Instructions change when air bubbles bite)
6. How to install the flow type with case
   Install a bypass valve on the bypass pipe and a stop valve on the IN / OUT. (Fig. D)
   The stop valve can be closed and the detector can be removed for maintenance even while the plant is in operation.
   For an ultra-pure water detector (AA-2 type), make this bypass pipe as short as possible.

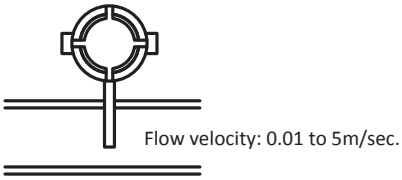


Figure A Horizontal piping / vertical mounting

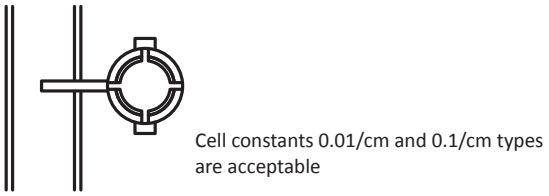


Figure B Vertical piping / horizontal mounting

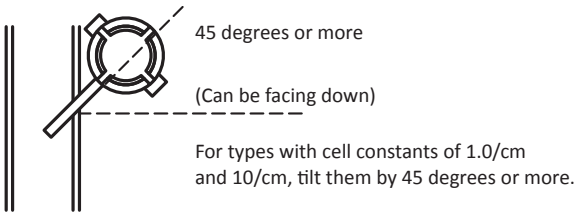


Figure C Vertical piping / diagonal installation

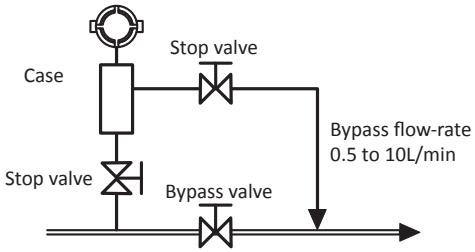


Figure D Flow through type bypass pipe installation

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CAUTION Please read the operation manual carefully before using producuts.