2. Specifications

2.1 Standard Specifications

Cable with pin terminals (applicable to FLXA202, FLXA21, FLXA402)

Cable with M3 ring terminals (applicable to FLXA402, SC450G)

Cable with M4 ring terminals (applicable to FLXA202, FLXA21)

Variopin connector (applicable to SA11)

Object of measurement: Conductivity of solutions
Measuring principle: Two-electrode system
Cell constant: $0.02\ cm^{-1}$, $0.1\ cm^{-1}$

Measuring range:

For a cell constant: $0.02\ cm^{-1}$: 0-0.5 µS/cm to 0-200 µS/cm

For a cell constant: $0.1\ cm^{-1}$: 0-5 µS/cm to 1 mS/cm

Temperature Range: For electrode, 0 to 110°C
For holder, see Figure 1

Sterilization for electrode: 135°C (275°F), within 30 minutes in Steam Sterilization

Pressure range : For electrode, 0 to 1 MPa
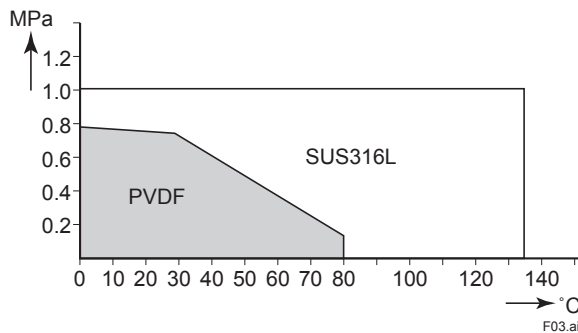For holder, see Figure 1

Figure 2.1 **The range of tolerance of holders (option: /PS, /PF, /RS, /RF, /SA1, /SA2, /SB1, /SB2, /SC1) for temperature and pressure**

Sample solution condition:

Although flow rate is not limited in measurement, air bubbles should not be mixed in the sample solutions to obtain correct measured values.

Temperature sensor: Pt1000

Materials

Body & Electrode: Stainless steel (316L SS) (for all Fitting-type) or Titanium (only for adapter mounting type-AD), Fluoro rubber (FKM) O-ring, EPDM O-ring (for -SA with Variopin)

Mounting adapter: Polyvinylidene difluoride (for /PF and /RF) or Stainless steel (316 SS), Stainless steel (316L SS)

Weight:

Sensors:

Adapter mounting type   (SC4AJ-S-AD-09-002-03): approx. 0.3 kg

Adapter mounting type   (SC4AJ-S-AD-15-002-03): approx. 0.4 kg

Welding socket type   (SC4AJ-S-SA-NN-002-03): approx. 0.5 kg

1 or 1.5 inch welding clamp type   (SC4AJ-S-SB-NN-002-03): approx. 0.4 kg

2 inch welding clamp type   (SC4AJ-S-SC-NN-002-03): approx. 0.5 kg

Note: There are weight differences among SC4AJ sensors. In order to know the more accurate weight of each type of sensors, please calculate it from following information. The cable weighs 0.07 kg/m. The SC4AJ with 0.02 cm^{-1} cell constant is 0.02 kg heavier than the SC4AJ with 0.1 cm^{-1} cell constant. 314L SS electrode is 0.04 kg heavier than Titanium electrode.

Adapters:

3/4NPT stainless steel adapter (/PS):   approx. 0.1 kg

R3/4 stainless steel adapter (/RS):   approx. 0.1 kg

3/4NPT PVDF adapter (/PF):   approx. 0.04 kg

R3/4 PVDF adapter (/RF):   approx. 0.04 kg

Straight welding socket (/SA1):   approx. 0.3 kg

Angle welding socket 15 (/SA2):   approx. 0.3 kg

Welding clamp 1 inch (/SB1):   approx. 0.3 kg

Welding clamp 1.5 inch (/SB2):   approx. 0.3 kg

Welding clamp 2 inch (/SC1): approx. 0.4 kg**NOTE**

Do not submerge the sensor itself in process water, as the seams between the mold and the metal of the sensor are not waterproof.

2.2 Model and Suffix Codes

Model	Suffix Code				Option Code	Description
SC4AJ	....				....	Conductivity sensor
Material	-T				....	Titanium (Only for -AD)
	-S				....	316L SS
Fitting type	-AD				....	Adapter mounting type
	-SA				....	Welding socket type (*1)
	-SB				....	1 or 1.5 inch welding clamp type (*2)
	-SC				....	2 inch welding clamp type (*2)
Sensor length		-09			....	9 cm (Code for -AD)
		-15			....	15 cm (Code for -AD)
		-NN			....	fixed length (Code for -SA, -SB, -SC)
Cell constant			-002		....	0.02 cm^{-1}
			-010		....	0.1 cm^{-1}
Cable length				-03	....	3 m (pin terminals)
				-05	....	5 m (pin terminals)
				-10	....	10 m (pin terminals)
				-15	....	15 m (pin terminals)
				-20	....	20 m (pin terminals)
				-X1	....	3 m (M4 ring terminals) (*4)
				-X2	....	5 m (M4 ring terminals) (*4)
				-X3	....	10 m (M4 ring terminals) (*4)
				-X4	....	15 m (M4 ring terminals) (*4)
				-X5	....	20 m (M4 ring terminals) (*4)
				-Y1	....	3 m (M3 ring terminals) (*5)
				-Y2	....	5 m (M3 ring terminals) (*5)
				-Y3	....	10 m (M3 ring terminals) (*5)
				-Y4	....	15 m (M3 ring terminals) (*5)
				-Y5	....	20 m (M3 ring terminals) (*5)
				-VS	....	Variopin connector (*6)
Temperature sensor				-T1	....	Pt1000
Option	For AD only	/PS				3/4NPT adapter 316 SS
		/PF				3/4NPT adapter PVDF
		/RS				R3/4 adapter 316 SS
		/RF				R3/4 adapter PVDF
	For SA only	/SA1				Straight welding socket 316L SS
		/SA2				Angled welding socket 15° 316L SS
	For SB only	/SB1				Welding clamp 1 inch 316L SS
		/SB2				Welding clamp 1.5 inch 316L SS
	For SC only	/SC1				Welding clamp 2 inch 316L SS
	Oil prohibit	/DG1				Oil-prohibited use (*3)

*1:   When you select Fitting type -SA, place an order on the SC4AJ with Option code /SA1 or /SA2.
*2:   When you select Fitting type -SB, place an order on the SC4AJ with Option code /SB1 or /SB2 (including seal ring),
       When you select Fitting type -SC, place an order on the SC4AJ with Option code /SC1 (including seal ring).
*3:   Washing treatment of wet part with alcohol.
*4:   Used for connection to FLXA202, FLXA21.
*5:   Used for connection to FLXA402, SC450G.
*6:   Used for connection with SA11. Sensor length -09 is not selectable.

2.3   Converter and analyzer suitable for SC4AJ

FLXA202/FLXA21:   2-Wire Analyzer

FLXA402:   4-Wire Converter

SC450G: conductivity converter

Type of terminals / Converter	Pin	Ring M4	Ring M3
SC450G	(*1)	N.A.	Yes
FLXA402 (:2)	Yes	N.A	Yes
FLXA202/FLXA21	Yes	Yes	N.A.

*1:   Both pin and M3 ring can be used, but M3 ring are recommended.
*2:   FLXA402 when connected to a SA11 can be connected with sensors equipped with Variopin connector. (SC4A..-VS, SC42-□V, SX42..□V, SC4AJ..-VS, SC8SG..-VS)

SA11 Smart Adapter can connect to Variopin connecter.

2.4   Spare parts

The following spare parts are necessary in maintaining SC4AJ or changing the installed place.

Previously procure the parts related to each conductivity sensor type.

Parts No.	Description
K9670MA	O-ring for -SA (excluding -VS)
K9675VY	O-ring set for -SA (for -VS)
K9670MK	Seal rings for /SB1 or /SB2
K9670MP	Seal rings for /SC1
K9670MT	3/4 NPT Stainless steel adapter for -AD
K9670MU	3/4 NPT PVDF Adapter for -AD
K9670MV	R3/4 Stainless steel adapter for -AD
K9670MW	R3/4 PVDF Adapter for -AD
K9670MD	Angled welding socket and mounting nut for -SA
K9670ME	Staight welding socket for -SA
K9670MB	Angled welding socket for -SA
K9670MC	Straight welding socket for -SA
K9670ML	Welding clamp 1 or 1.5 inch for -SB
K9670MQ	Welding clamp 2 inch for -SC