General Specifications

ISC40☐J Inductive Conductivity Sensors
ISC40F☐J Holders and Adapters

GS 12D06B01-01E

■ GENERAL

The ISC40☐J sensors are designed for use with the FLXA™202/FLXA™21 2-wire Analyzer or FLXA™402 4-wire Converter. This combination exceeds all expectations for conductivity measurement in terms of reliability, accuracy, rangeability and price performance.

This innovative inductive conductivity sensor provides highly accurate measurements over a wide measuring range (1 µS/cm to 1999 mS/cm) and process temperature range (-10 to 130°C, -10 to 90°C for ISC40SJ-TW) without changing the cell constant and conducting recalibration.

The erosion/abrasion resistant PEEK (Poly Ether Ether Ketone), which also features excellent chemical resistance in all solutions except Fluoric Acid or Oxidizing Concentrated Acids.

The PEEK sensor is provided with a rugged Stainless Steel mounting thread/nut/ gasket combination for ultimate flexibility in installation using bulk head installation technique. There is also a wide range of holders and options available for reliable in-line or off-line installation with double O-ring seals for long service life of the sensor.

The ISC40☐J have a large bore for optimal resistance to fouling processes and when properly installed, the flow will keep the sensor clean, to help avoid measuring errors.

■ FEATURES

- Inductive Conductivity technique for elimination of fouling and polarization errors.
- Wide bore sensors for long term stability.
- Installation flexibility due to wide range of holders and due to the use of universal bulkhead construction.
- A single sensor can maintain the high resolution and accuracy, and measure the conductivity in an extremely brood range.
  Minimum span: 100 µS/cm
  Maximum span: 1999 mS/cm

■ APPLICATIONS

- All applications where severe electrode fouling prevents the use of contacting electrodes.
- All ranges except (ultra) pure water applications.
- All slurry applications where conventional systems suffer from plugging or erosion.
- All applications where the 6 decade rangeability is necessary for accurate process control.

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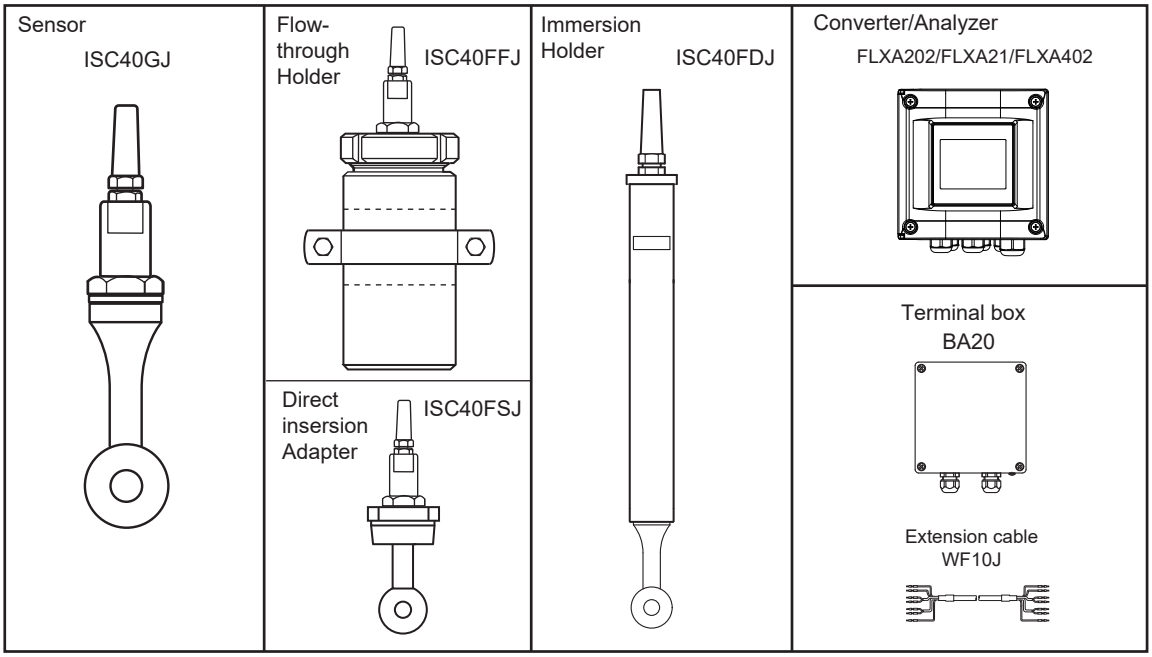
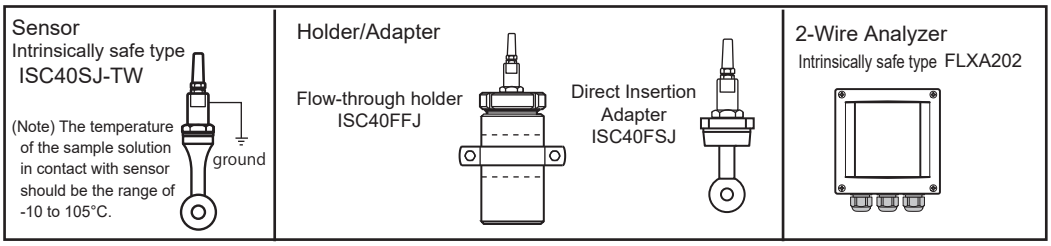
■ SYSTEM CONFIGURATION

Refer to GS 12A01A03-01EN for the FLXA202, GS 12A01A02-01E for the FLXA21, GS 12A01F01-01EN for the FLXA402.

Non-explosionproof System



Explosionproof System (FLXA202 + ISC40SJ-TW)



■ GENERAL SPECIFICATION

1. ISC40□J Inductive Conductivity Sensor

Compatibility:
ISC40GJ is compatible with FLXA202/ FLXA21 2-wire Analyzer, FLXA402 4-wire Converter.
ISC40SJ-TW is compatible with FLXA202 2-wire Analyzer.

Measuring range: 1 µS/cm to 1999 ms/cm
Output span: Minimum 100 µS/cm
Maximum 1999 mS/cm

Process temperature:
-10 to 130°C for continuous exposure.
Suitable for steam-sterilisable applications.

Process pressure:
Dependent on installation; but <2 MPa (300 psi).

Note: Process temperature and pressure depend on specification of holders and adapters.

Process flow: Maximum 5 m/s.

Wetted materials :
Sensor; PEEK (Poly Ether Ether Ketone).
O-ring; Fluoro-rubber (FKM) or ethylene propylene copolymer rubber.
Adapter (optional); Stainless steel (316 SS) or PVC or PVDF.

Non-wetted materials:
Sensor thread; Stainless steel (304 SS).
Retaining nut; Stainless steel (304 SS).
Cable; Weatherproof vinyl.

Process connection:
With retaining nut on G3/4 thread of sensor top (refer to section Drawings and Dimensions) for bulkhead mounting; optional process adapters or process fittings.

Process adapters:
JIS 10K 50 RF flange adapter
(Material: Stainless steel (316 SS))
JIS 10K 50 FF flange adapter
(Material: PVC or PVDF)
DIN PN16 DN50 flange adapter
ANSI Class 150 2 flange adapter
R2 screw-in adapter

Cable length: 5 m, 10 m, 15 m, 20 m
The length into extension cable is inside of 50 m.
Extension cble can not be used with ISC40SJ-TW.

Dimensions:
Refer to section Drawings and Dimensions.

Weight: Sensor: approximately 0.6 kg.

(Note) Do not submerge the sensor itself in process water, as the seems between the mold and the metal of the sensor are not waterproof. Since a temperature sensor is imbedded in the PEEK molded sensor, its response speed is not fast. Install another temperature sensor if necessary.

ISC40SJ-TW Intrinsically safe type sensor

TIIS certification sensor shoule be used with ISC40SJ
Protection Concept and Adapter Group:
Ex ia IIC T4 Intrinsic safe rating:
Ui=11.94 V, Ii=61.5 mA, Pi=183.4 mW, Li=4.0 mH, Ci=100 µF
Ambient temperature: -20 to 60°C
The temperature of the sample solution in contact with sensor should be the range of -20 to 90°C.

2. ISC40FDJ Immersion Holder

Process temperature: Maximum 80°C.
Process pressure: Maximum 0.2 MPa at 20°C.
Maximum 0.1 MPa at 80°C.

Wetted materials:
Holder: C-PVC or Stainless steel (316 SS)
O-ring: Fluoro-rubber (FKM) or ethylene propylene copolymer rubber.
Flange (Optional): PP or Stainless steel (316 SS)
Gasket: Chloroprene or ethylene propylene copolymer rubber.

Process connection :
Fixing flange (Optional) :
DIN PN10 DN50 (ANSI 2 inch 150 lbs. with bolt holes):
Material PP
JIS 10K 50 RF:
Material Stainless steel (316 SS)
2-inch pipe
Mounting set (Optional) : Zinc-plated steel.

3. ISC40FFJ Flow Holder

Process temperature:
ISC40FFJ-SA, -SJ: Maximum 150°C.
ISC40FFJ-PA, -PJ: Maximum 100°C.
ISC40FFJ-FA, -FJ: Maximum 130°C.

Process pressure:
ISC40FFJ-SA, -SJ: Maximum 1.0 MPa at 150°C.
ISC40FFJ-PA, -PJ: Maximum 0.6 MPa at 20°C.
Maximum 0.1 MPa at 100°C.
ISC40FFJ-FA, -FJ: Maximum 1.0 MPa at 20°C.
Maximum 0.1 MPa at 130°C.

Wetted materials:
ISC40FFJ-S☐: Stainless steel (316 SS)
ISC40FFJ-P☐: Polypropylene
ISC40FFJ-F☐: PVDF
O-ring: Fluoro-rubber (FKM) or ethylene propylene copolymer rubber.

Non-wetted materials:
Nut: Stainless steel (304 SS)
Mounting set (Optional): Stainless steel (304 SS)
Flange adapters (Optional): Stainless steel (304 SS)

Process connection :
1/2NPT or Rc1/2
DIN PN10 DN25 flange adapters (Optional)
JIS 10K 25 RF flange adapters (Optional)

4. ISC40FSJ Direct Insertion Subassembly

Process temperature:
ISC40FSJ-STWJ: Maximum 110°C.
ISC40FSJ-SCWJ, -SCSJ: Maximum 150°C.
ISC40FSJ-PCSJ: Maximum 100°C.
ISC40FSJ-FCSJ: Maximum 130°C.

Proces pressure:
ISC40FSJ-STWJ: Maximum 1.0 MPa at 110°C.
ISC40FSJ-SCWJ, -SCSJ: Maximum 1.0 MPa at 150°C.
ISC40FSJ-PCSJ: Maximum 0.6 MPa at 20°C.
Maximum 0.1 MPa at 100°C.
ISC40FSJ-FCSJ: Maximum 1.0 MPa at 20°C.
Maximum 0.1 MPa at 130°C.

Materials:
Wetted materials:
ISC40FSJ-STWJ: Stainless steel (316L SS), silicon rubber.
ISC40FSJ-SCWJ, -SCSJ:
Stainless steel (316 SS), Fluoro-rubber or ethylene propylene copolymer rubber.
ISC40FSJ-PCSJ: Polypropylene, Fluoro-rubber or ethylene propylene copolymer rubber.
ISC40FSJ-FCSJ: PVDF, Fluoro-rubber or ethylene propylene copolymer rubber.

Non wetted materials:
ISC40FSJ-STWJ:
IDF clamp;SCS13.
ISC40FSJ-SCWJ, -SCSJ, -PCSJ, -FCSJ:
Nut: Stainless steel (304 SS).

Process connection:
ISC40FSJ-STWJ: IDF 3 inch tri-clamp.
ISC40FSJ-SCWJ: coupling.
ISC40FSJ-SCSJ-PCSJ-FCSJ: R2 screw-in coupling.

Dimensions: Refer to section Drawings and Dimensions.

5. BA20 Terminal Box

Use when FLXA202/FLXA21 analyzer or FLXA402/ISC450G converter is separated from ISC40☐J sensor and is set up.

Ambient temperature: -10 to 50°C
Construction: IP54 agreement
Case material: Article of cast metal of aluminum alloy
Cable inlet: 2 (Pg13.5)
Case color: Straight gray
Weight: Approx. 2 kg
Note: BA20 can not be used with ISC40SJ-TT.

6. WF10J Extension Cable

Number of mind Lines: 6
Finish outside diameter: 7.7 mm
Terminal processing: Special terminals
Material: Weatherproof vinyl.
Note: WF10J can not be used with ISC40SJ-TT.

■ MODEL AND SUFFIX CODES

1. Inductive Conductivity Sensors

Non-explosionproof type

[Style:S1]

Model	Suffix code	Option code	Description
ISC40GJ	·····	·····	General purpose inductive conductivity sensor
Construction	**-GG**	·····	Standard type
Temperature sensor	**-T1**	·····	Pt1000 (*1)
	-T3	·····	Thermistor
Cable length, cable end type	**-05**	·····	5 m (pin terminals) (*2)
	-10	·····	10 m (pin terminals) (*2)
	-15	·····	15 m (pin terminals) (*2)
	-20	·····	20 m (pin terminals) (*2)
	-X1	·····	5 m (M4 ring terminals) (*3)
	-X2	·····	10 m (M4 ring terminals) (*3)
	-X3	·····	15 m (M4 ring terminals) (*3)
	-X4	·····	20 m (M4 ring terminals) (*3)
	-Y1	·····	5 m (M3 ring terminals) (*4)
	-Y2	·····	10 m (M3 ring terminals) (*4)
	-Y3	·····	15 m (M3 ring terminals) (*4)
	-Y4	·····	20 m (M3 ring terminals) (*4)
Option Adapter		**/SFJ**	JIS 10K 50 RF Flange 316 SS
		/PFJ	JIS 10K 50 FF Flange PVC
		/FFJ5	JIS 10K 50 FF Flange PVDF
		/SFD	DIN PN16 DN50 Flange 316 SS
		/SFA	ANSI Class 150 2 Flange 316 SS
		/SSG	R2 screw-in adapter 316 SS
		/PSG	R2 screw-in adapter PVC
		/FSJ	R2 screw-in adapter PVDF
O-ring, gasket		**/EP**	Ethylene propylene rubber O-ring or gasket (*5)

*1: Choose thermistor (-T3) only, when connecting with ISC200G.
*2: Used for connection to FLXA402, FLXA202/FLXA21, ISC202G. When terminal box is used, select BA20.
*3: Used for connection to FLXA202/FLXA21. When terminal box is used,select BA20/XT.
*4: Used for connection to FLXA402, ISC450G, ISC202G/TB. When terminal box is used, select BA20/YT.
*5: For use in highly alkaline solutions, be sure to check the process conditions and contact us.

Explosionproof type

[Style:S2]

Model	Suffix code	Option code	Description
ISC40SJ	·····	·····	Intrinsic safe inductive conductivity sensor
Construction	**-GG**	·····	TIIS certification type (for ISC200S)
	-TT	·····	TIIS certification type (for ISC202SJ)
	-TW	·····	TIIS certification type (for FLXA202/ FLXA21) (*5)
Temperature sensor	**-T1**	·····	Pt1000 (*1)
	-T3	·····	Thermistor
Cable length, cable end type	**-05**	·····	5 m (pin terminals) (*3)
	-10	·····	10 m (pin terminals) (*3)
	-15	·····	15 m (pin terminals) (*3)
	-20	·····	20 m (pin terminals) (*3)
	-X1	·····	5 m (M4 ring terminals) (*4)
	-X2	·····	10 m (M4 ring terminals) (*4)
	-X3	·····	15 m (M4 ring terminals) (*4)
	-X4	·····	20 m (M4 ring terminals) (*4)
Option Adapter		**/SFJ**	JIS 10K 50 RF Flange 316 SS
		/PFJ	JIS 10K 50 FF Flange PVC
		/FFJ5	JIS 10K 50 FF Flange PVDF
		/SFD	DIN PN16 DN50 Flange 316 SS
		/SFA	ANSI Class 150 2 Flange 316 SS
		/SSG	R2 screw-in adapter 316 SS
		/PSG	R2 screw-in adapter PVC
		/FSJ	R2 screw-in adapter PVDF
O-ring, gasket		**/EP**	Ethylene propylene rubber O-ring or gasket (*2)

*1: Choose thermistor (-T3) only, when connecting with ISC200S.
*2: For use in highly alkaline solutions, be sure to check the process conditions and contact us.
*3: Used for connection to only ISC202S (-GG), ISC202SJ (-TT).
*4: Used for connection to only FLXA202/FLXA21 (-TW).
*5: A dedicated thread for ground terminal is supplied as accessory.
Note: "TIIS Certification" is a certified explosion approval from the Technology Institution of Industrial Safety.

2. Immersion Holder

Model	Suffix code	Option code	Description
ISC40FDJ	·····	·····	Immersion holder
Material	**-V**	·····	Immersion probe C-PVC
	-S	·····	Immersion probe 316 SS
Pipe length	**-10**	·····	1.0 m
	-15	·····	1.5 m
	-20	·····	2.0 m
Option Flange		**/FA**	DIN PN10 DN50 Flange PP (Can be selected for -V) (ANSI Class 150 2 with Bolt-holes)
		/FBJ	JIS 10K 50 RF Flange 316 SS
Mounting hardware		**/MS1**	Mounting hardware for immersion type: 1 set
		/MS2	Mounting hardware for immersion type: 2 set
O-ring		**/EP**	Ethylene propylene rubber (*1)

Note: ISC40FDJ is not used for ISC40SJ-TW.
*1: For use in highly alkaline solutions, be sure to check the process conditions and contact us.

3. Flow-through Holder

Model	Suffix code	Option code	Description
ISC40FFJ	·····	·····	Flow-through holder
Material	**-PJ**	·····	Rc1/2 Polypropylene (PP)
	-PA	·····	1/2NPT female Polypropylene (PP)
	-SJ	·····	Rc1/2 316 SS
	-SA	·····	1/2NPT female 316 SS
	-FJ	·····	Rc1/2 PVDF
	-FA	·····	1/2NPT female PVDF
Option Mounting hardware		**/MS**	Wall/pipe mounting hardware for Stainless steel holder
		/MP	Wall/pipe mounting hardware for PP or PVDF holder
Flange		**/FSJ2**	JIS 10K 25 RF Flange 316 SS (for -SJ) (*1)
		/FS2	DIN PN10 DN25 Flange316 SS (for -SA) (*1)
		/FPJ2	JIS 10K 25 RF Flange PP (for -PJ) (*1)
		/FP2	DIN PN10 DN25 Flange PP (for -PA) (*1)
		/FFJ2	JIS 10K 25 RF Flange PVDF (for -FJ) (*1)
		/FF2	DIN PN10 DN25 Flange PVDF (for -FA) (*1)
O-ring		**/EP**	Ethylene propylene rubber (*2)
Polishing		**/POL**	Polished surface (*3)

*1: All flanges are adjustable. Each material in the above description represents the one of wetted part of the adjustable flange which itself is made of 304 SS.
*2: For use in highly alkaline solutions, be sure to check the process conditions and contact us.
*3: Option in case of 316 SS material.

4. Direct Insertion Adapter

Model	Suffix code	Option code	Description
ISC40FSJ	·····	·····	Direct insertion adapter
Process connection	**-PCSJ**	·····	R2 screw-in coupling PP
	-SCWJ	·····	Coupling welded 316 SS
	-SCSJ	·····	R2 screw-in coupling 316 SS
	-STWJ	·····	IDF 3 inch clamp 316 SS
	-FCSJ	·····	LR2 screw-in coupling PVDF
Option		**/EP**	Ethylene propylene rubber (*1)

*1: For use in highly alkaline solutions, be sure to check the process conditions and contact us.

5. Terminal Box

Model	Suffix code	Option code	Description
BA20	·····	·····	Terminal box
Option		**/XT**	M4 screw terminals (*1)
		/YT	M3 screw terminals (*2)

Note: Pin terminals is supplied when option code is'nt specified. BA20 can not be used with ISC40SJ-TT.
*1: Use to connect with FLXA202/FLXA21.
*2: Use to connect with FLXA402, ISC450G, ISC202G/TB.

6. Extension Cable

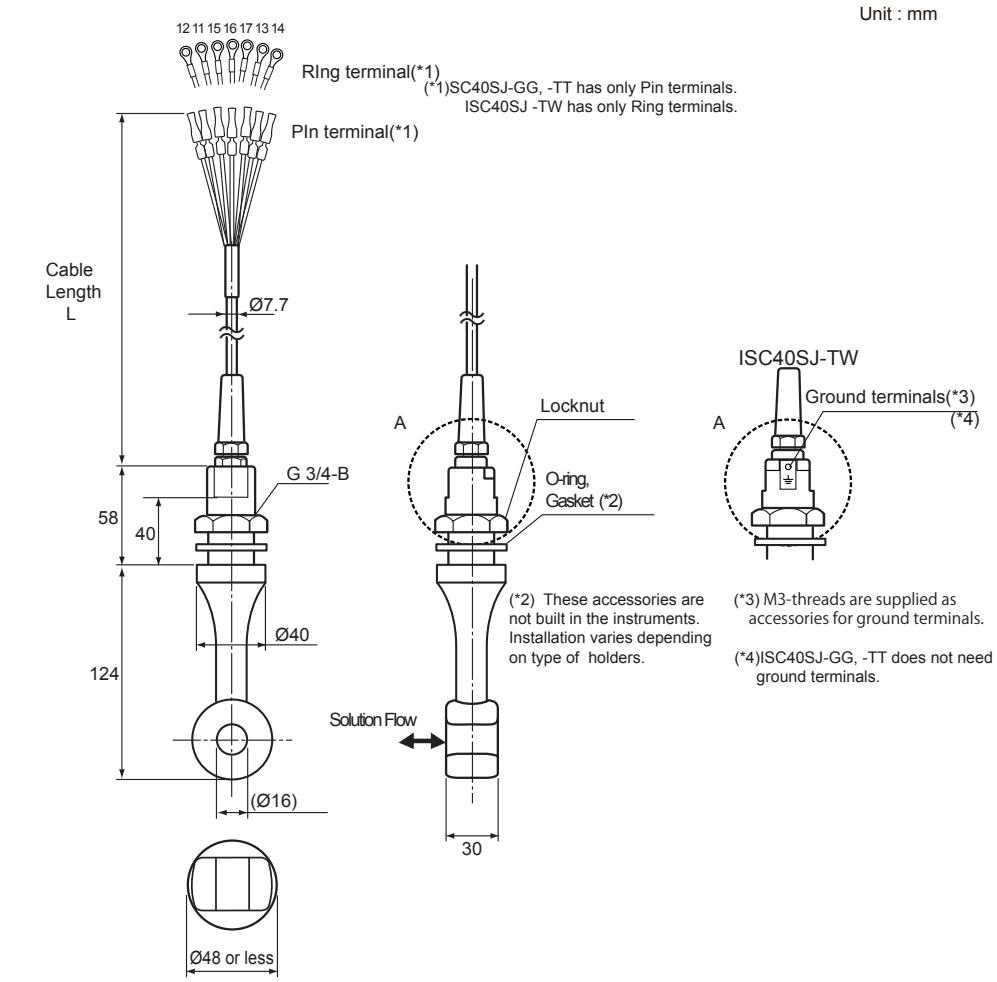
Model	Suffix code	Option code	Description
WF10J	·····	·····	Extension cable
Cable end	**-F**	·····	Pin terminals
	-X	·····	M4 ring terminals *1
	-Y	·····	M3 ring terminals *2
Cable length	**-05**	·····	5 m
	-10	·····	10 m
	-20	·····	20 m
	-30	·····	30 m
	-40	·····	40 m

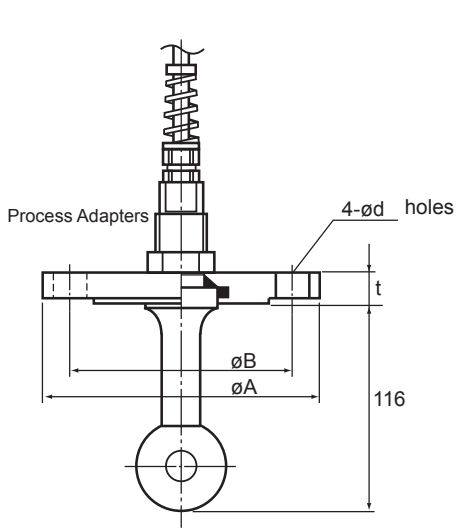
*1: Used for connection to FLXA202/FLXA21.
*2: Used for connection to FLXA402, ISC450G, ISC202G/TB.
Note: The maximum extension cable length is 50 m including sensor cable length. WF10J can not be used with either ISC40SJ-TT or ISC40SJ-TW.

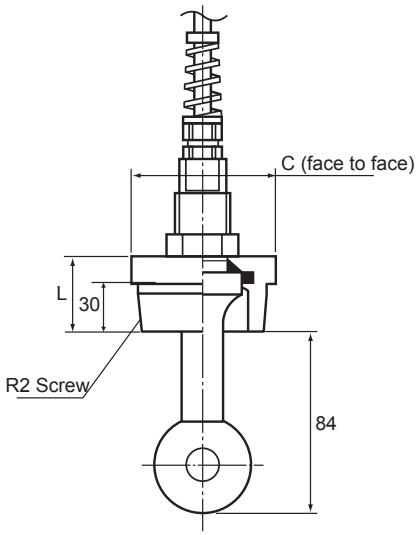
■ DIMENSIONS

1. ISC40□J Inductive Conductivity Sensor

Unit : mm







Option Code	A	B	d	t	Material	Flange Rating	Weight (kg)
/SFJ	155	120	19	16	SUS316	JIS 10K 50 RF	Approx.1.9
/PFJ	155	120	19	20	PVC	JIS 10K 50 FF	Approx.0.5
/FFJ5	155	120	19	20	PVDF	JIS 10K 50 FF	Approx.0.6
/SFD	165	125	18	18	SUS316	DIN PN16 DN50	Approx.2.7
/SFA	152.4	120.6	19	19	SUS316	ANSI Class 150 2	Approx.3.0

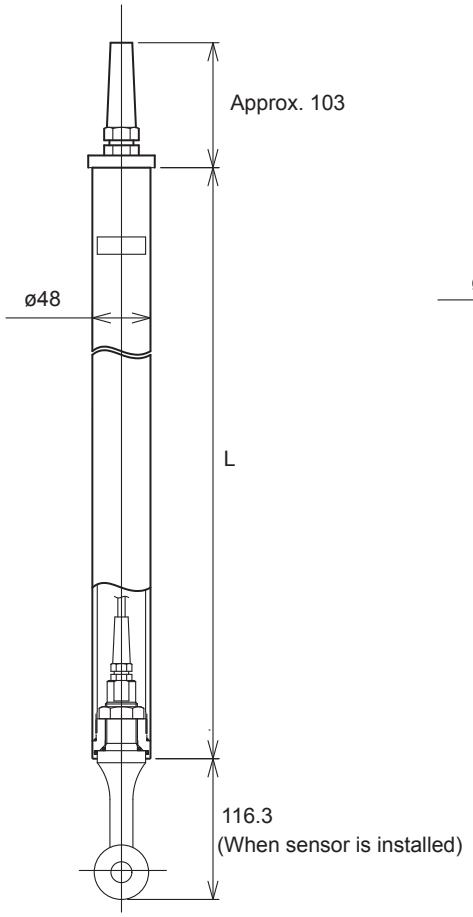
Flange adapter

Option Code	C	L	Material	Weight (kg)
/SSG	60	46	SUS316	Approx. 0.4
/PSG	70	48	PVC	Approx. 0.15
/FSJ	70	48	PVDF	Approx. 0.15

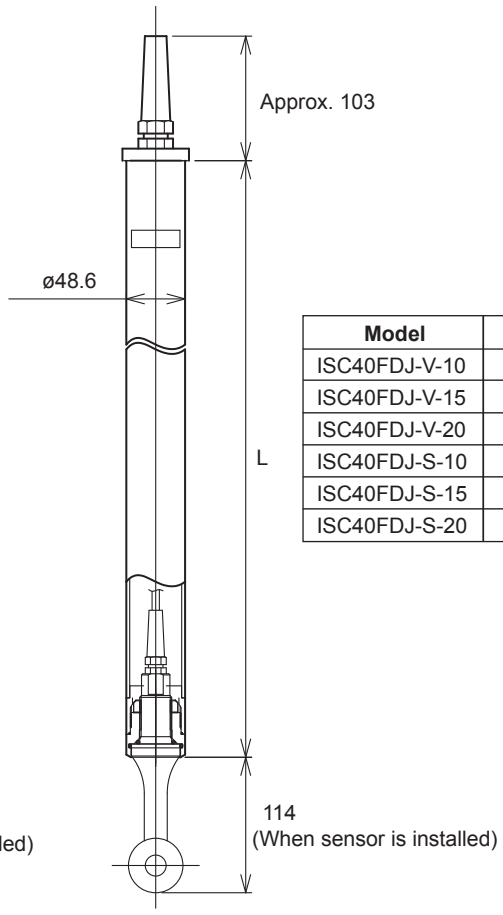
Thread adapter

2. ISC40FDJ Immersion Holder

Unit : mm

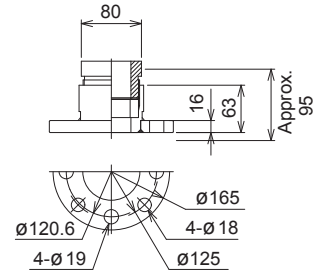


ISC40FDJ-V
Material : C-PVC

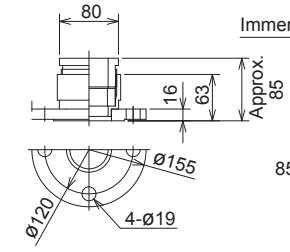


ISC40FDJ-S
Material : Stainless steel (316 SS)

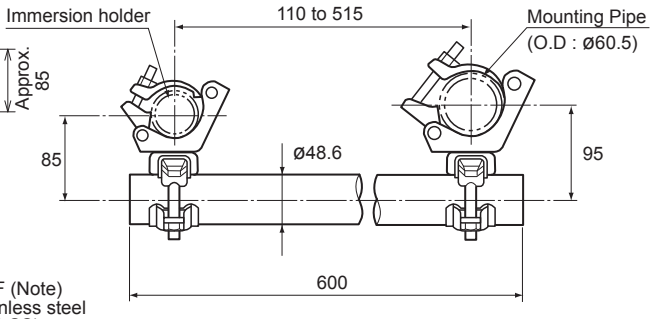
Model	L	Weight (kg)
ISC40FDJ-V-10	1000	Approx. 0.9
ISC40FDJ-V-15	1500	Approx. 1.3
ISC40FDJ-V-20	2000	Approx. 1.7
ISC40FDJ-S-10	1000	Approx. 3.6
ISC40FDJ-S-15	1500	Approx. 5.2
ISC40FDJ-S-20	2000	Approx. 6.8



Option Code : /FA
DIN PN10 DN50 (Note)
(ANSI Class 150 2)
Material : PP



Option Code : /FBJ
JIS 10K 50 RF (Note)
Material : Stainless steel
(316 SS)



Note: Only mating dimensions are according to flange standards.

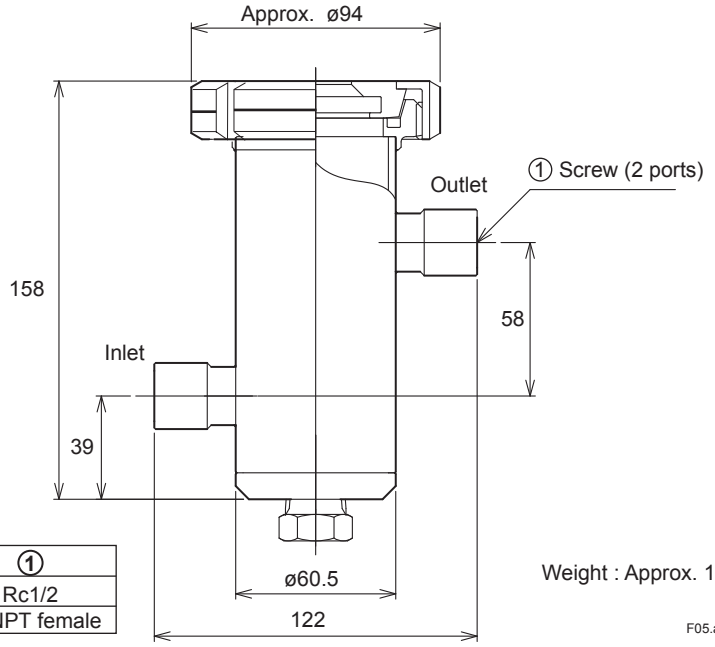
Flange (Option)

Immersion holder mounting hardware : /MS1 or /MS2 option

3. ISC40FFJ Flow Holder

Unit : mm

Material : Stainless steel (ISC40FFJ-S□)

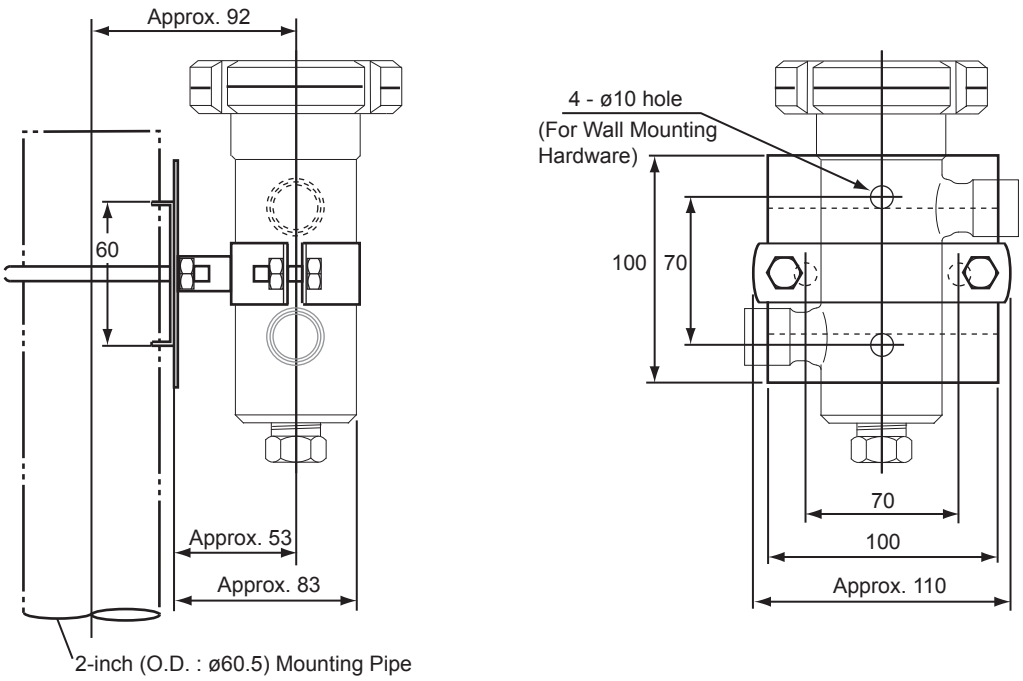


Model code	①
ISC40FFJ - SJ	Rc1/2
ISC40FFJ - SA	1/2NPT female

Weight : Approx. 1.7 kg

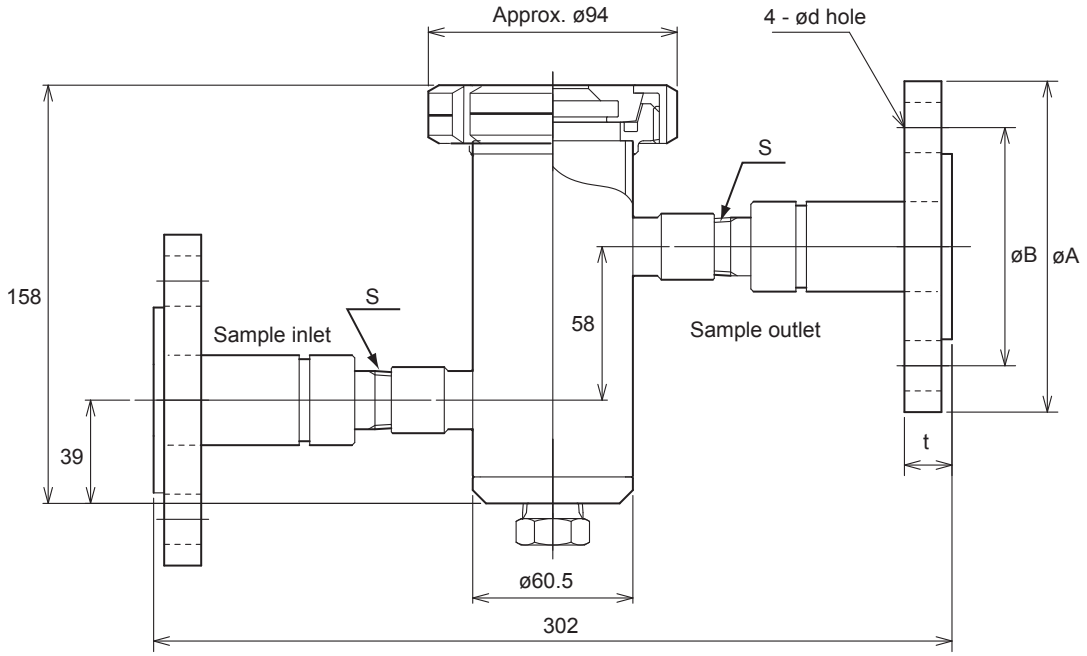
Mounting hardware when /MS option specified

Weight : Approx. 0.5 kg



Unit : mm

Material : Stainless steel, with Flange (ISC40FFJ-S☐/FS2, /FSJ2)



Model code	Flange standard	A	B	d	t	S	Weight (kg)
ISC40FFJ - SJ / FSJ2	JIS 10K 25 RF	125	90	19	Approx. 18	R 1/2	Approx. 4.7
ISC40FFJ - SA / FS2	DIN PN10 DN25	115	85	14	Approx. 19	1/2 NPT	Approx. 4.7

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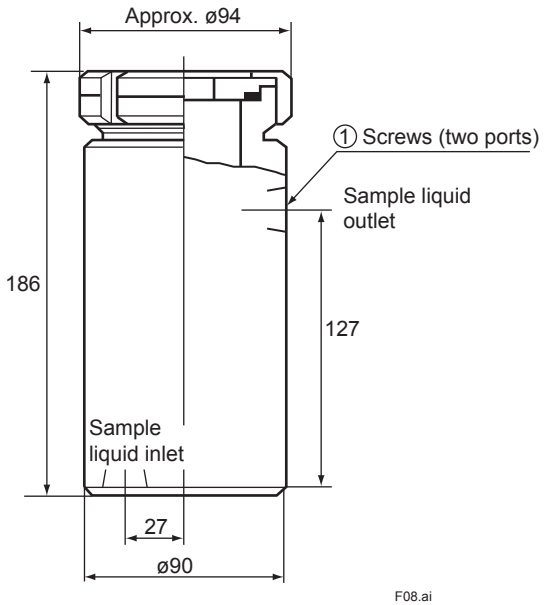
Material : PP or PVDF (ISC40FFJ-P☐, ISC40FFJ-F☐)



Model code	①	Weight (kg)
ISC40FFJ - PJ ISC40FFJ - FJ	Rc1/2	Approx. 0.9 Approx. 1.4
ISC40FFJ - PA ISC40FFJ - FA	1/2NPT female	Approx. 0.9 Approx. 1.4

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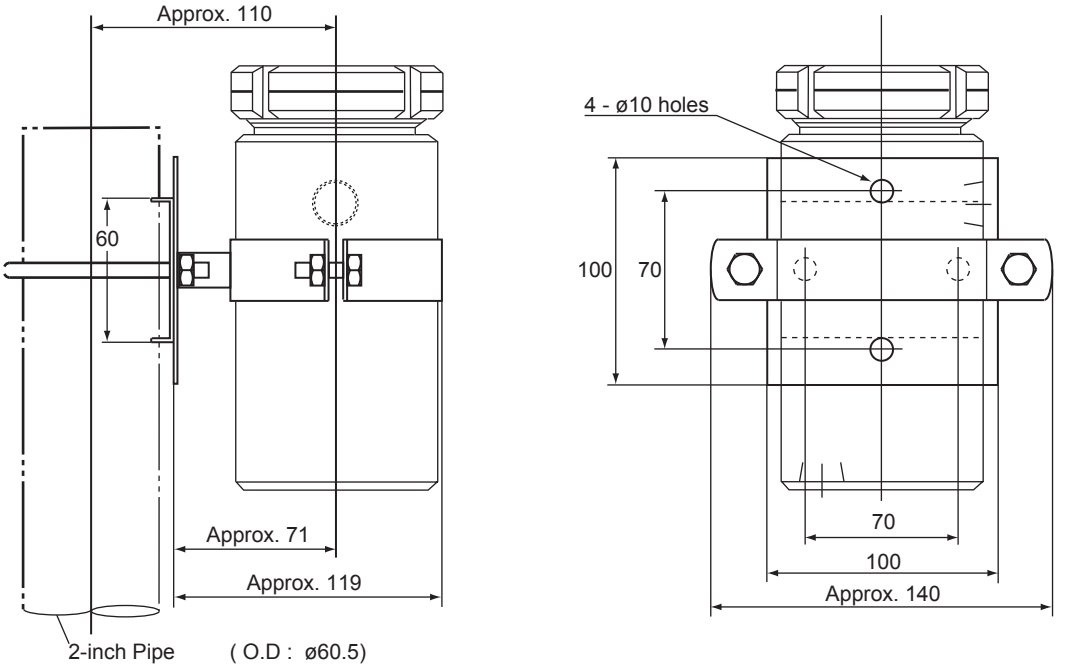
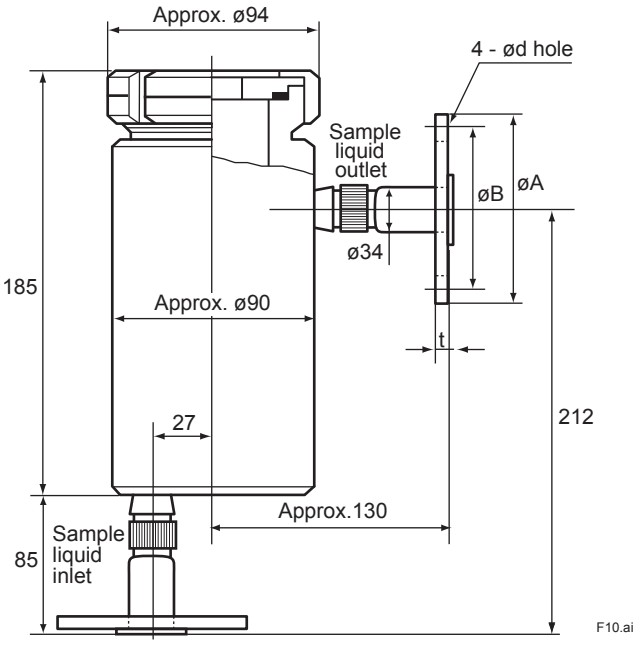
Mounting hardware when /MP option specified

Unit : mm

☐ Option code : / MP Mounting Bracket Weight : Approx. 0.5 kg



Material : PP or PVDF, with Flange (ISC40FFJ-P☐ /FP2, /FPJ2 or ISC40FFJ-F☐/FF2, /FFJ2)



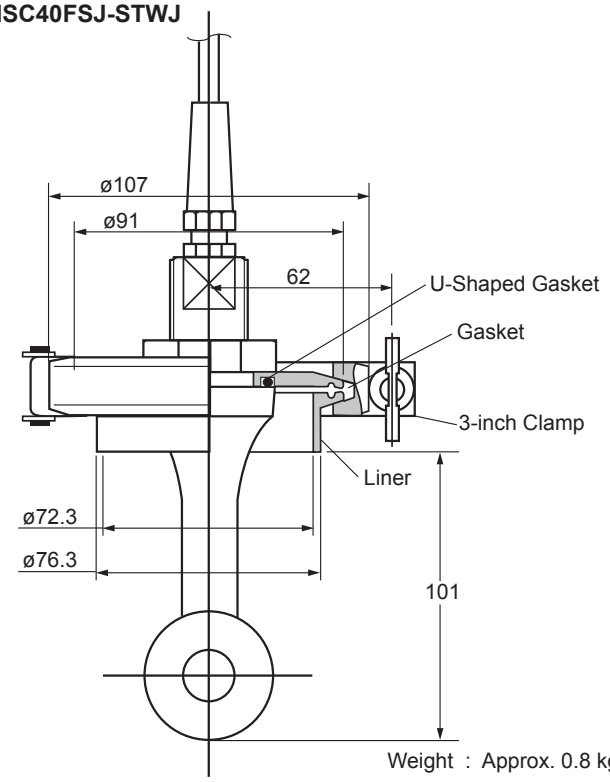
ISC40FFJ - PA, - PJ, -FA, -FJ / FP2, / FPJ2, / FF2, / FFJ2 (with flange)

Model code	Flange standard	A	B	d	t	Weight (kg)
ISC40FFJ - PJ / FPJ2	JIS 10K 25 RF	125	90	19	Approx. 20	Approx. 3.2 kg
ISC40FFJ - FJ / FFJ2						Approx. 3.9 kg
ISC40FFJ - PA / FP2	DIN PN10 DN25	115	85	14	Approx. 19	Approx. 3.2 kg
ISC40FFJ - FA / FF2						Approx. 3.9 kg

4. ISC40FSJ Direct Insertion Subassembly

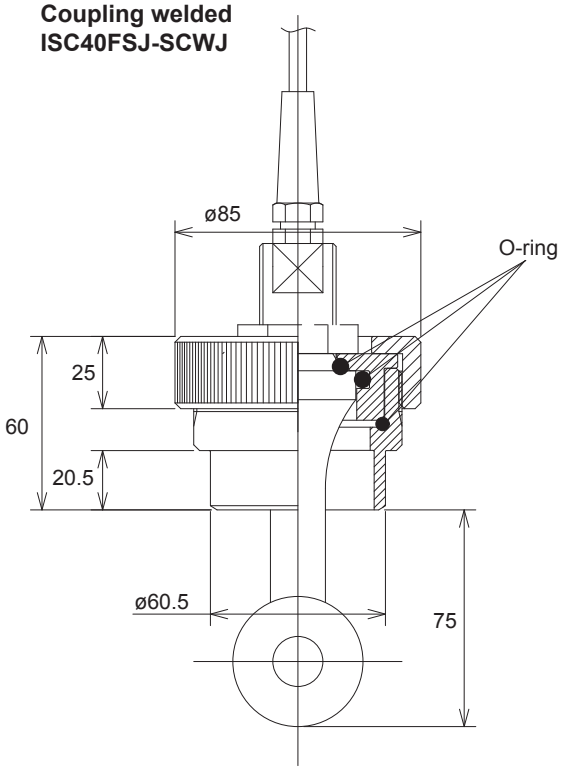
Unit : mm

IDF Clamp
ISC40FSJ-STWJ



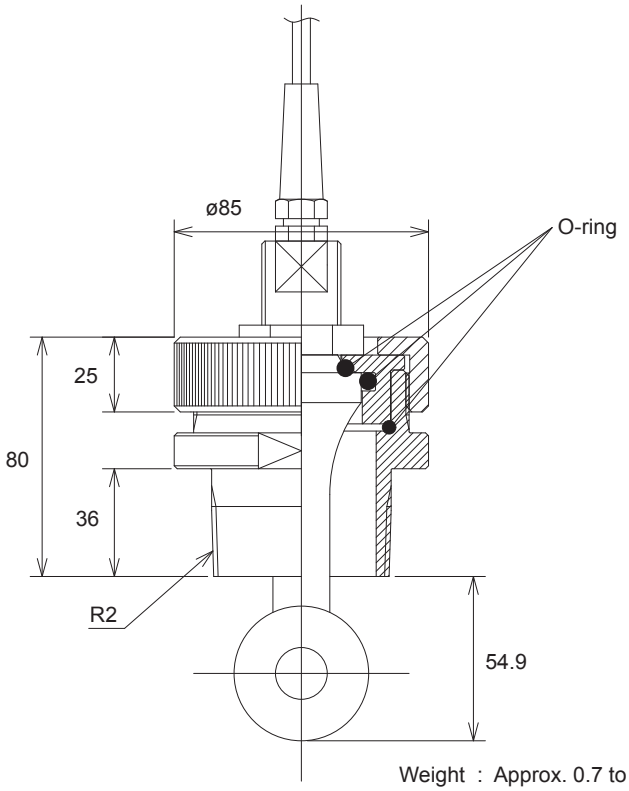
Weight : Approx. 0.8 kg

Coupling welded
ISC40FSJ-SCWJ



Weight : Approx. 1.2 kg

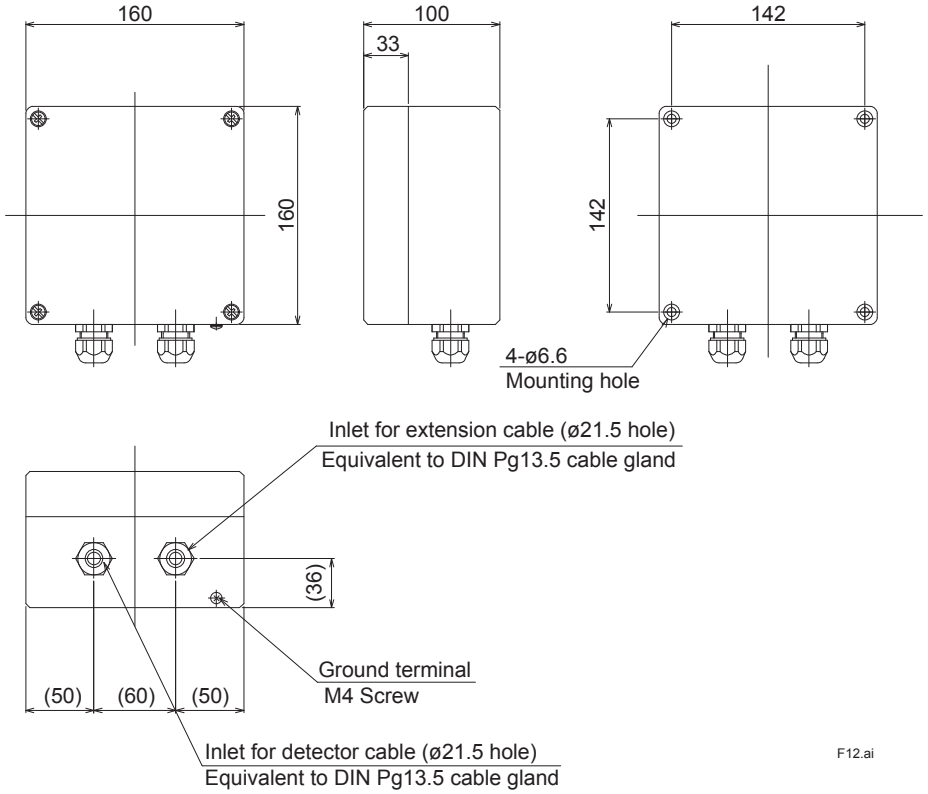
Screw-in socket
ISC40FSJ-SCSJ, ISC40FSJ-PCSJ, ISC40FSJ-FCSJ



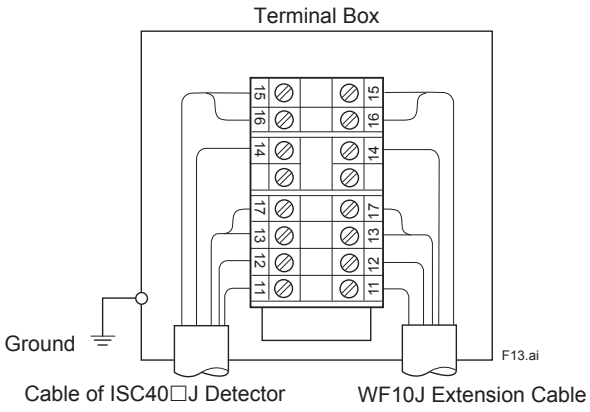
Weight : Approx. 0.7 to 1.4 kg

5. BA20 Terminal Box

Unit : mm

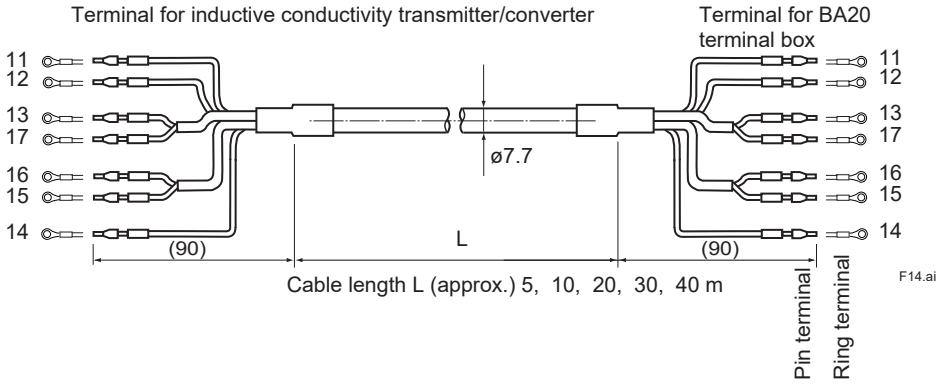


Wiring



6. WF10J Extension Cable

Unit : mm



■ TABLE OF CORROSION-RESISTANT MATERIALS

This chemical resistance table is based on reference data provided by manufacturers and shows the chemical resistance of materials to individual chemical. If a sample contains multiple chemicals, the resistance characteristics may differ from the table specifications. Since sample conditions in an actual application are influenced by various factors, the sensor may not be applicable to some applications. The data should be used for reference only.

Chemical Resistance Table for ISC40

		Holder Material												Sealing Material						Sensor Body	
		PVDF			316 SS			PP			PVC			FPM			EPDM			PEEK	
Reagent	Temp °C / conc.	20	60	100	20	60	100	20	60	100	20	60	100	20	60	100	20	60	100	20	100
Sulfuric acid	10%	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×	less than 40%	△ ×
	50%	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×		
	98%	◎	○	×	○	○	×	×	×	×	○	×	×	×	×	×	×	×	×	40% or more	× ×
Fuming sulfuric acid	(98%)	×	×	×	○	○	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Hydrochloric acid	15%	◎	◎	◎	×	×	×	◎	◎	×	◎	◎	×	◎	◎	△	◎	◎	×	◎	◎
	38%	◎	◎	○	×	×	×	◎	◎	×	○	×	×	○	×	×	△	×	×	◎	×
Nitric acid	30%	◎	◎	◎	◎	◎	×	◎	○	×	◎	×	×	◎	○	△	○	×	×	10%	◎ ◎
	50%	◎	◎	○	◎	○	×	◎	△	×	◎	×	×	◎	△	×	×	×	×	30%	◎ ×
	98%	◎	×	×	×	×	×	×	×	×	×	×	×	△	×	×	×	×	×	50%	× ×
Phosphoric acid	10%	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎
	50%	◎	◎	◎	◎	◎	×	◎	◎	×	◎	×	×	◎	◎	×	◎	◎	◎	◎	◎
	98%	◎	◎	◎	◎	◎	×	◎	○	×	○	×	×	◎	◎	×	◎	◎	◎	◎	◎
Hydrofluoric acid	40%	◎	◎	◎	×	×	×	◎	○	×	○	×	×	◎	◎	○	◎	△	×	×	×
	50%	◎	◎	◎	×	×	×	◎	○	×	○	×	×	◎	◎	○	◎	△	×	×	×
Acetic acid	20%	◎	◎	○	◎	×	×	◎	○	×	○	△	×	○	△	×	◎	○	×	10%	◎ ◎
	80%	◎	△	×	◎	△	×	○	×	×	○	△	×	○	×	×	×	×	×		
Glacial acetic acid	96%	◎	○	△	×	×	×	○	×	×	×	×	×	○	×	×	×	×	×	◎	◎
Formic acid	90%	◎	◎	○	×	×	×	◎	×	×	◎	×	×	×	×	×	◎	◎	○	◎	◎
Citric acid	10%	◎	◎	◎	◎	◎	×	◎	○	×	◎	○	×	◎	◎	◎	◎	◎	○	◎	◎
Calcium hydroxide	Saturated	◎	◎	◎	×	×	×	◎	◎	○	◎	◎	×	◎	◎	◎	◎	◎	×	◎	×
Potassium hydroxide	25%	◎	○	×	◎	◎	○	◎	◎	×	◎	◎	×	×	×	×	◎	◎	×	10%	◎ ×
																				70%	◎ ×
Sodium hydroxide	50%	◎	×	×	◎	◎	◎	◎	◎	×	◎	◎	×	×	×	×	◎	◎	×	◎	◎
Ammonia water	10%	◎	◎	◎	○	×	×	◎	◎	×	◎	◎	×	○	×	×	◎	◎	◎	◎	◎
Ammonium chloride	Saturated	◎	◎	◎	◎	×	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	○	10%	◎ ◎
Zinc chloride	Saturated	◎	◎	×	○	○	×	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎
Iron (II) chloride	20%	◎	◎	◎	×	×	×	◎	◎	×	◎	○	×	◎	◎	○	◎	◎	○	△	△
Sodium carbonate	Saturated	◎	◎	◎	◎	○	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×	◎	◎
Potassium chloride	30%	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×	◎	◎
Sodium sulfate	Saturated	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×	◎	◎
Calcium chloride	Saturated	◎	◎	◎	×	×	×	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×	◎	◎
Sodium chloride	Saturated	◎	◎	◎	×	×	×	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎	×	◎	◎
Sodium nitrate	Saturated	◎	◎	◎	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	◎	◎	◎	×	◎	◎
Aluminum chloride	Saturated	◎	○	×	×	×	×	◎	◎	×	◎	○	×	◎	◎	◎	◎	◎	○	◎	◎
Hydrogen peroxide	30%	◎	◎	◎	×	×	×	◎	○	×	◎	△	×	◎	○	×	◎	×	×	◎	◎
Sodium hypochlorite (*1)	13%	◎	○	×	△	×	×	○	×	×	◎	◎	×	◎	×	×	×	×	×	◎	◎
Potassium dichromate	Saturated	◎	◎	◎	◎	◎	◎	◎	◎	×	◎	△	×	◎	◎	◎	◎	◎	×	×	×
Ethanol	100%	◎	◎	×	○	○	×	◎	○	×	◎	○	×	◎	◎	×	◎	◎	×	◎	◎
Cyclohexane	100%	◎	◎	×	×	×	×	△	×	×	×	×	×	◎	×	×	×	×	×	◎	×
Toluene	100%	◎	○	×	×	×	×	◎	×	×	×	×	×	○	×	×	×	×	×	◎	×
Water	100%	◎	◎	◎	◎	◎	◎	◎	◎	×	◎	◎	×	◎	◎	×	◎	×	○	◎	◎

◎ Very suitable
○ Suitable
△ Slightly unsuitable
× Unusable

*1: Unusable with any material when this coexists with an acidic solution or oxides.

CAUTION

Select the material of wetted parts with careful consideration of process characteristics. Inappropriate selection may cause leakage of process fluids, which greatly affects facilities. Considerable care must be taken particularly in the case of strongly corrosive process fluid such as hydrochloric acid, sulfuric acid, hydrogen sulfide, and sodium hypochlorite. If you have any questions about the wetted part construction of the product, be sure to contact Yokogawa.

Inductive Conductivity Sensors and Holders System Inquiry Specifications

Make inquiries by filling in related boxes with checks (✓) and writing in the underlined parts.

1. General Items

Name of your company: _____
Person in charge: _____ Belongs to:_____ (Phone No._____)
Name of plant: _____
Measuring point: _____
Purpose of use: ☐ Indication ☐ Record ☐ Alarm ☐ Control
Power supply to Distributor: _____ V AC

2. Measuring conditions

(1) Liquid temperature: _____ to_____ , normal_____ [°C]
(2) Liquid pressure: _____ to_____ , normal_____ [kPa {kgf/cm^{2}G}]
(3) Flow rate: _____ to_____ , normal_____ [L/min]
(4) Flow speed: _____ to_____ , normal_____ [m/s]
(5) Slurry of fouling components: ☐ No ☐ Yes
(6) Name of measured liquid:_____
(7) Components of measured liquid:_____
(8) Others: _____

3. Installing Location

(1) Ambient temperature: _____
(2) Installing location: ☐ Outdoors ☐ Indoors _____
(3) Others: _____

4. Specification Requirements

(1) Measuring range: ☐_____
(2) System configuration selection: ☐ Sensor ☐ Holder ☐ Terminal box ☐ Extension cable
(3) Sensor mounting: ☐ Immersion ☐ Flow-through ☐ Direct insertion
(4) Sensor cable length: ☐ 5 m ☐ 10 m ☐ 15 m ☐ 20 m
(5) Extension cable length: ☐ 5 m ☐ 10 m ☐ 20 m ☐ 30 m ☐ 40 m
(6) Others: _____