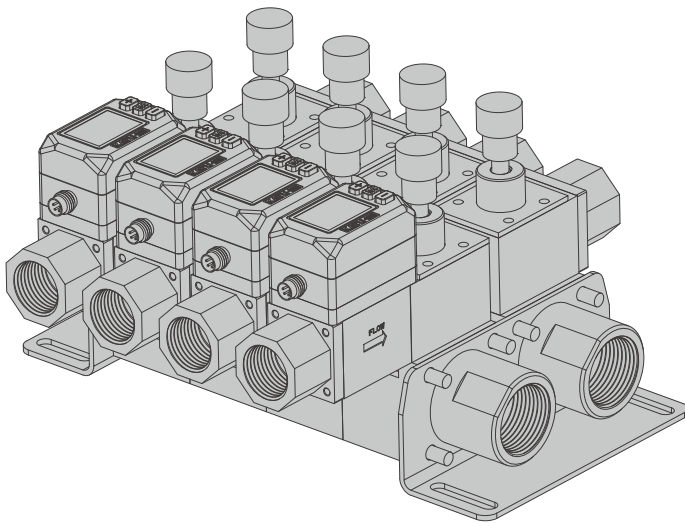




System: Container board type

Model	digit	Flow range		
		04	20	40
01	1	●	●	●
02	2	●	●	●
03	3	●	●	●
04	4	●	●	●
05	5	●	●	●
06	6	●	●	-
07	7	●	●	-
08	8	●	●	-
09	9	●	●	-
10	10	●	●	-

Main piping

Model number: B	Model number: D	Model number: U
U side: open	U side: Close	U side: open
D side: open	D side: open	D side: Close
open	Close	

Main pipe/accessory thread type

Screw thread	
Model	form
R	Rc
N	NPT
G	G
04/20 with main thread 3/4" 40 with main thread 1" ※According to IOS228	

Supply unit composition

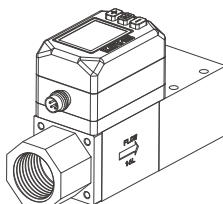
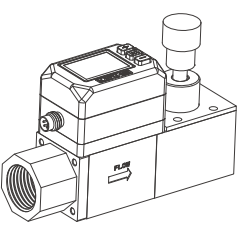
Model	-	s
Flow regulating valve	—	●

Type of flow sensor for the backwater unit

F	Y
Separate sensor section	Display monotype

※ The supply unit does not correspond to the flow sensor.
 ※ The flow control valve of this product is not suitable for frequent flow regulation and stop flow.

The backwater unit is composed

model	-	s
Flow regulating valve	—	●
		

Supply/return unit piping calibers

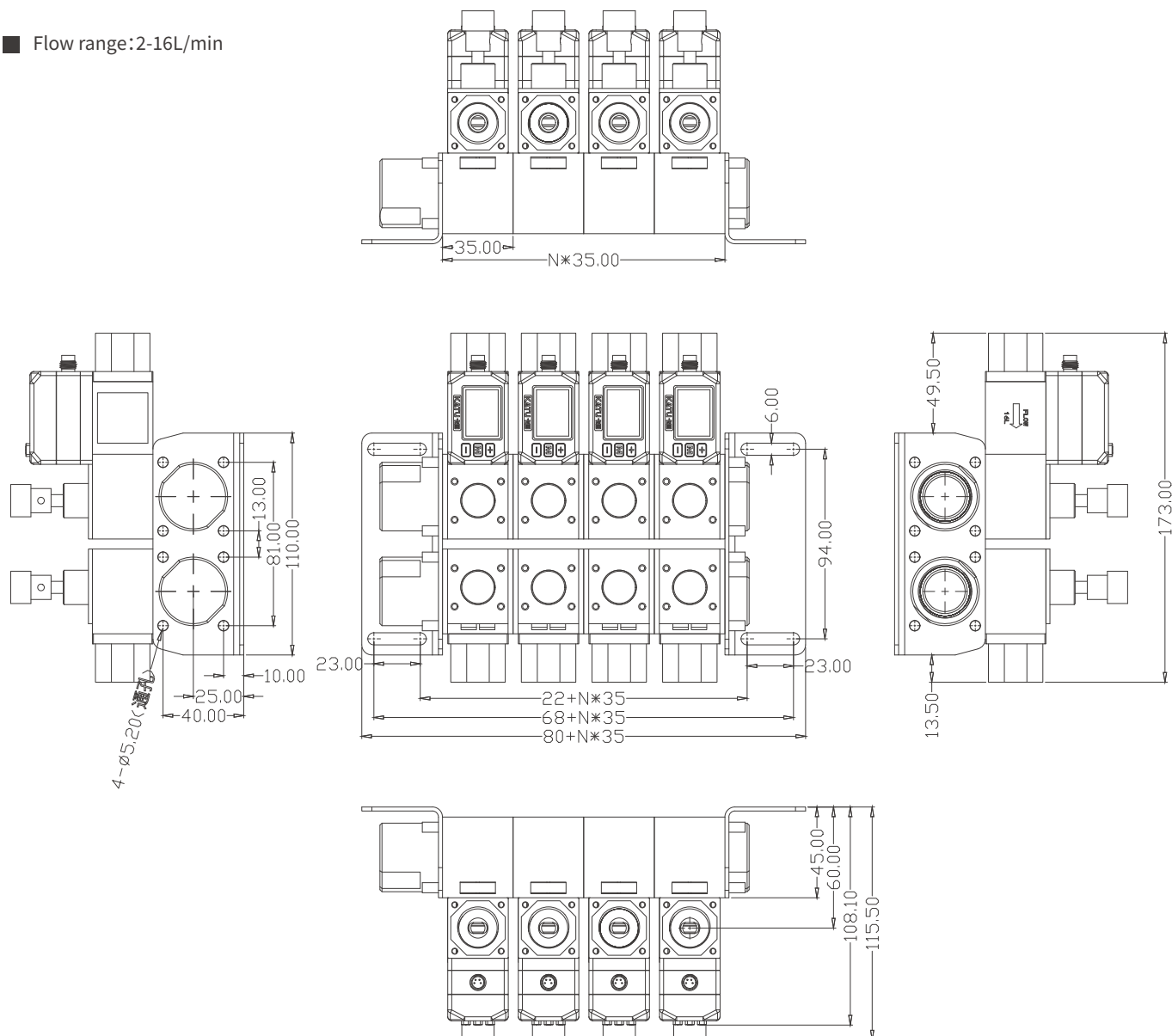
model	caliber	Rated flow range		
		04	20	40
38	3/8	●	●	—
12	1/2	●	●	●
34	3/4	—	—	●

Note 1) Customizable specifications

- ※ The return water unit can be equipped with a flow sensor. (The picture shows an example of a body type)
- ※ The flow control valve of this product is not suitable for frequent flow regulation and stop flow.

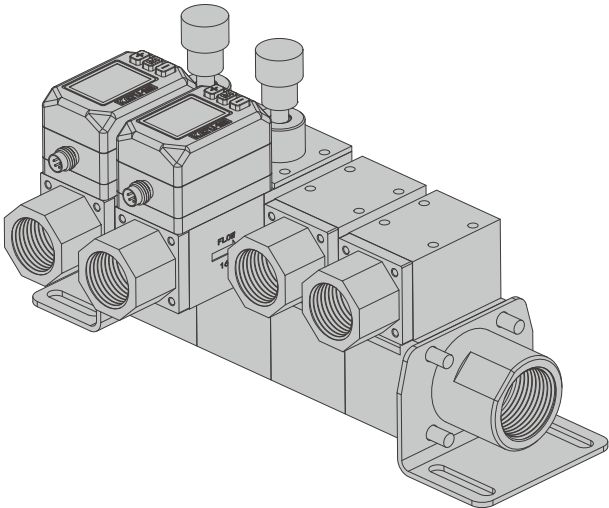
Dimension drawing (mm)

■ Flow range: 2-16L/min



Selection list

FTS-B	01	B	R	-	F	04	-	38	-	-	expatiate
FTS-B											FTS-B integrated flow and temperature sensor
	01										System bits: 1 bit
	02										System bits: 2 bits
	03										System bits: 3 bits
	04										System bits: 4 bits
	05										System bits: 5 bits
	06										System bits: 6 bits
	07										System bits: 7 bits
	08										System bits: 8 bits
	09										System bits: 9 bits
	10										System bits: 10 bits
		B									Main piping: U side open, D side open
		D									Main piping: U side is closed, D side is opened
		U									Main piping: U side open, D side closed
			R								Thread: Rc thread
			N								Thread: NPT thread
			G								Thread: G thread
				-							Supply unit composition: without flow control valve
				S							Supply unit composition: with flow control valve
					F						Sensor type: Separate type
					Y						Sensor type: Display type
						04					Flow range: 0.5-4L/min
						20					Flow range: 2-16L/min
						40					Flow range: 5-40L/min
							-				Composition of return water unit: without flow regulating valve
							S				Composition of return water unit: with flow control valve
								38			Supply/return unit piping diameter: 3/8 thread
								12			Supply/return unit piping diameter: 1/2 thread
								34			Supply/return unit piping diameter: 3/4 thread
									-		No temperature measurement function
									T		With temperature measurement function
No display										-	Output signal: Analog (4-20mA) Factory default
										V	Output signal: Analog (1-5V)
										S	Output signal: IO-Link/ pulse frequency (Factory default pulse frequency; Support IO-Link command wake up function)
										R	Output signal: RS485 signal
Tape display										A2	Output signal: two analog channels (4-20mA)
										V2	Output signal: two analog channels (1-5V)
										SA	Output signal: one switch output/pulse frequency /IO-Link+ analog (4-20mA)
										SV	Output signal: one switch output/pulse frequency /IO-Link+ analog (1-5V)
										S2	Output signal: two switch output/pulse frequency /IO-Link
										RL	Output signal: RS485 signal



System: One type (straight through type)

model	digit	Flow range		
		04	20	40
01	1	●	●	●
02	2	●	●	●
03	3	●	●	●
04	4	●	●	●
05	5	●	●	●

Main piping

Model: D	Model: U
U side: open Supply unit Backwater unit D side: open	U side: open Backwater unit Supply unit D side: open
Open	

Main pipe/accessory thread type

 Main piping attachments	
Screw thread	
model	form
R	Rc
N	NPT
G	G
04/20 with main thread 3/4" 40 with main thread 1" ※According to IOS228	

Supply unit composition

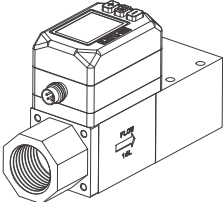
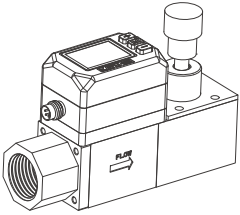
model	-	s
Flow regulating valve	—	●

Type of flow sensor for the backwater unit

F	Y
Separate sensor section	Display monotype

- ※ The supply unit does not correspond to the flow sensor.
- ※ The flow control valve of this product is not suitable for frequent regulation

The backwater unit is composed

model	-	s
Flow regulating valve	—	●
		

Supply/return unit piping calibers

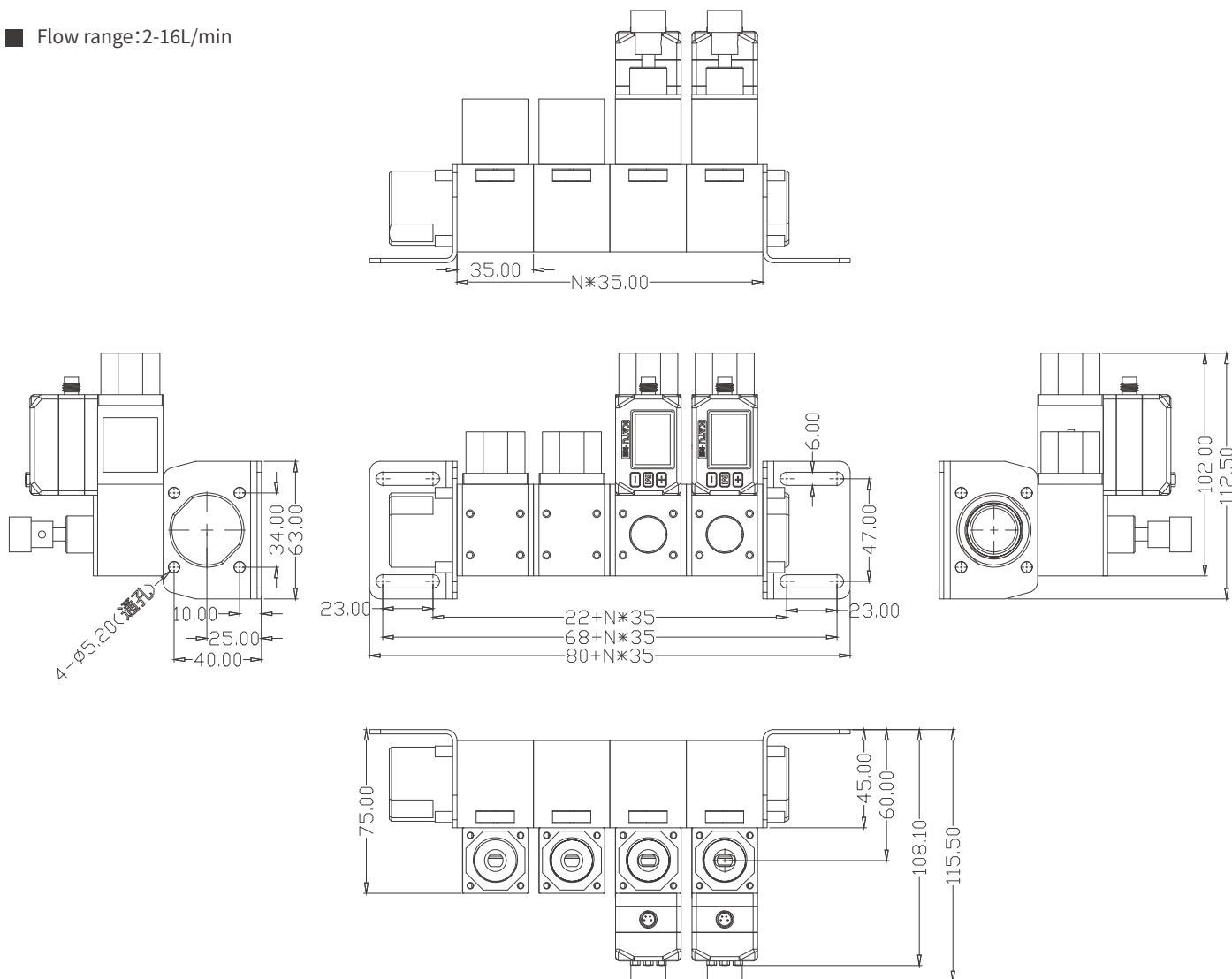
model	caliber	Rated flow range		
		04	20	40
38	3/8	●	●	—
12	1/2	●	●	●
34	3/4	—	—	●

Note 1) Customizable specifications

- ※ The return water unit can be equipped with a flow sensor. (The picture shows an example of a body type)
- ※ The flow control valve of this product is not suitable for frequent flow regulation and stop flow.

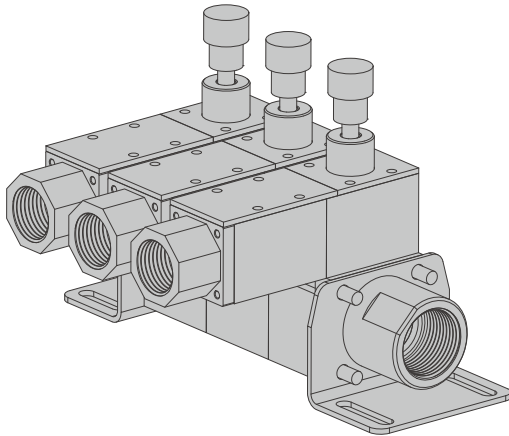
Dimension drawing (mm)

■ Flow range: 2-16L/min



Selection list

FTS-C	01	B	R	-	F	04	-	38	-	-	expatiate
FTS-C											FTS-C integrated flow and temperature sensor
	01										System bits: 1 bit
	02										System bits: 2 bits
	03										System bits: 3 bits
	04										System bits: 4 bits
	05										System bits: 5 bits
		D									Main piping: U side open, D side open
		U									Main piping: U side open, D side open
			R								Thread: Rc thread
			N								Thread: NPT thread
			G								Thread: G thread
				-							Supply unit composition: without flow control valve
				S							Supply unit composition: with flow control valve
					F						Sensor type: Separate type
					Y						Sensor type: Display type
						04					Flow range: 0.5-4L/min
						20					Flow range: 2-16L/min
						40					Flow range: 5-40L/min
							-				Composition of return water unit: without flow regulating valve
							S				Composition of return water unit: with flow control valve
								38			Supply/return unit piping diameter: 3/8 thread
								12			Supply/return unit piping diameter: 1/2 thread
								34			Supply/return unit piping diameter: 3/4 thread
									-		No temperature measurement function
									T		With temperature measurement function
No display										-	Output signal: Analog (4-20mA) Factory default
										V	Output signal: Analog (1-5V)
										S	Output signal: IO-Link/ pulse frequency (Factory default pulse frequency; Support IO-Link command wake up function)
										R	Output signal: RS485 signal
Tape display										A2	Output signal: two analog channels (4-20mA)
										V2	Output signal: two analog channels (1-5V)
										SA	Output signal: one switch output/pulse frequency /IO-Link+ analog (4-20mA)
										SV	Output signal: one switch output/pulse frequency /IO-Link+ analog (1-5V)
										S2	Output signal: two switch output/pulse frequency /IO-Link
										RL	Output signal: RS485 signal



System: Separation type (supply type)

model	digit	Flow range		
		04	20	40
01	1	●	●	●
02	2	●	●	●
03	3	●	●	●
04	4	●	●	●
05	5	●	●	●
06	6	●	●	-
07	7	●	●	-
08	8	●	●	-
09	9	●	●	-
10	1 0	●	●	-

Main piping

model: B	model: D	model: U
U side: open	U side: close	U side: open
D side: open	D side: open	D side: close
open	close	

Main pipe/accessory thread type

Screw thread	
model	form
R	Rc
N	NPT
G	G
04/20 with main thread 3/4" 40 with main thread 1" ※According to IOS228	

Supply unit composition

model	-	S
Flow regulating valve	—	●

Supply unit piping caliber

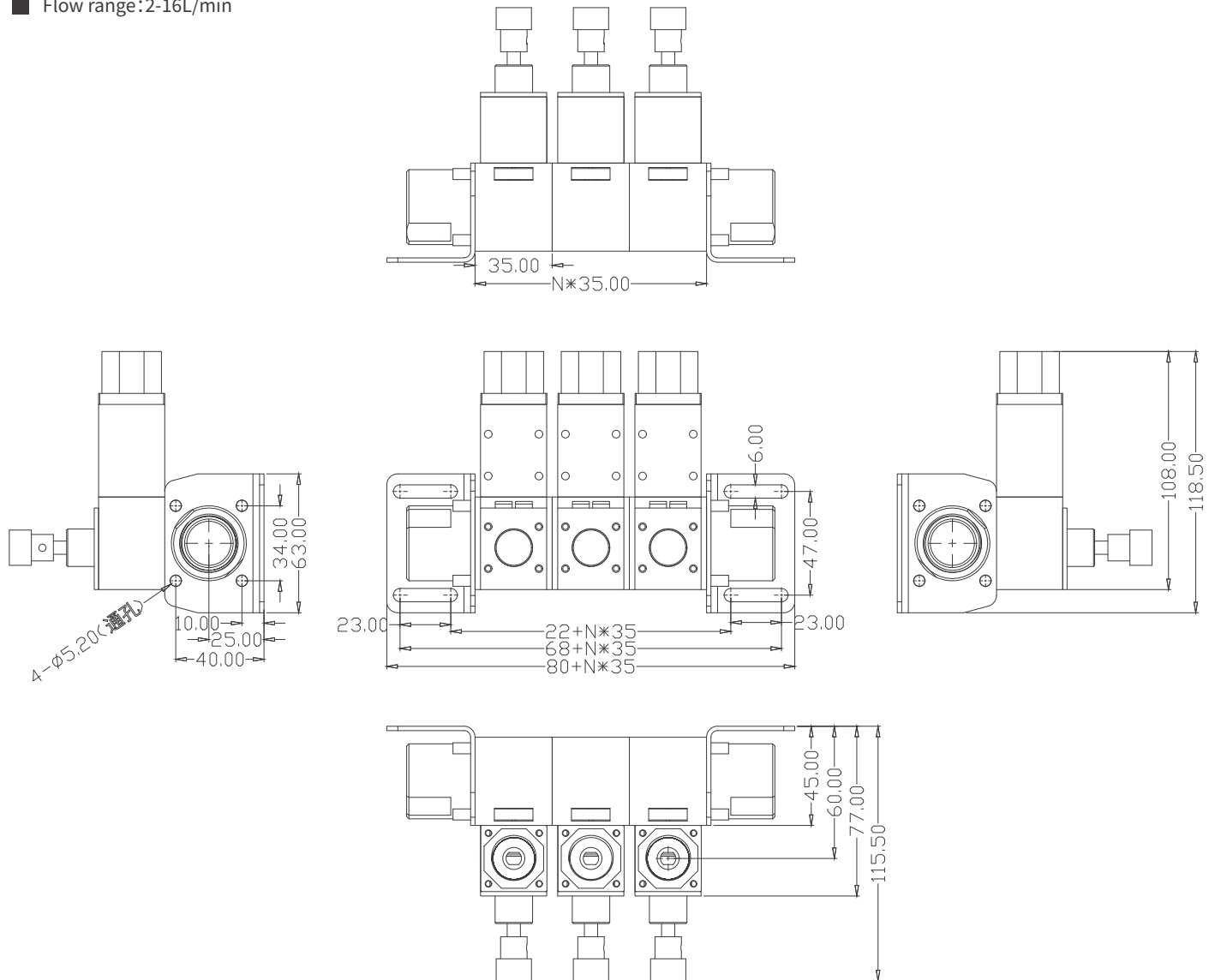
model	caliber	Rated flow range		
		04	20	40
38	3/8	●	●	—
12	1/2	●	●	●
34	3/4	—	—	●

Note 1) Customizable specifications

- ※ The supply unit does not correspond to the flow sensor.
- ※ The flow control valve of this product is not suitable for frequent flow regulation and stop flow.

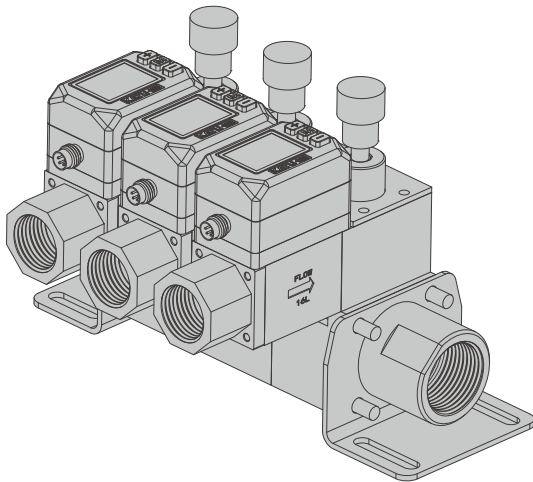
Dimension drawing (mm)

■ Flow range: 2-16L/min



Selection list

FTS-S	01	B	R	-	04	38	expatiate
FTS-S							FTS-S integrated flow and temperature sensor
	01						System bits: 1 bit
	02						System bits: 2 bits
	03						System bits: 3 bits
	04						System bits: 4 bits
	05						System bits: 5 bits
	06						System bits: 6 bits
	07						System bits: 7 bits
	08						System bits: 8 bits
	09						System bits: 9 bits
	10						System bits: 10 bits
		B					Main piping: U side open, D side open
		D					Main piping: U side is closed, D side is opened
		U					Main piping: U side open, D side closed
			R				Thread: Rc thread
			N				Thread: NPT thread
			G				Thread: G thread
				-			Supply unit composition: without flow control valve
				S			Supply unit composition: with flow control valve
					04		Flow range: 0.5-4L/min
					20		Flow range: 2-16L/min
					40		Flow range: 5-40L/min
						38	Supply/return unit piping diameter: 3/8 thread
						12	Supply/return unit piping diameter: 1/2 thread
						34	Supply/return unit piping diameter: 3/4 thread



System: Separation type (return water type)

model	digit	Flow range		
		04	20	40
01	1	●	●	●
02	2	●	●	●
03	3	●	●	●
04	4	●	●	●
05	5	●	●	●
06	6	●	●	-
07	7	●	●	-
08	8	●	●	-
09	9	●	●	-
10	10	●	●	-

Main piping

model: B	model: D	model: U
U side: open	U side: close	U side: open
D side: open	D side: open	D side: close
open	close	

Main pipe/accessory thread type

Screw thread	
model	form
R	Rc
N	NPT
G	G
04/20 with main thread 3/4" 40 with main thread 1" ※According to IOS228	

The backwater unit is composed

model	-	S
Flow regulating valve	—	●

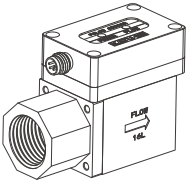
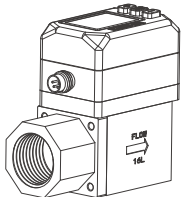
Pipe diameter of return water unit

model	caliber	Rated flow range		
		04	20	40
38	3/8	●	●	—
12	1/2	●	●	●
34	3/4	—	—	●

Note 1) Customizable specifications

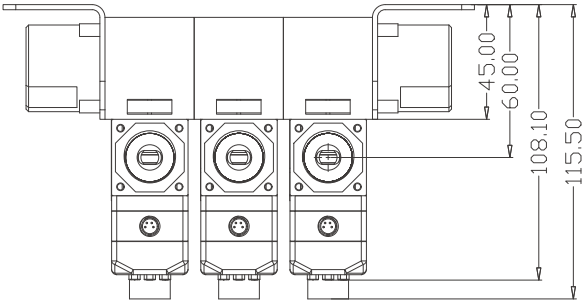
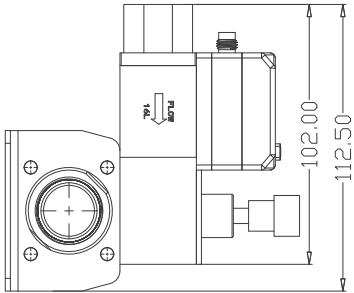
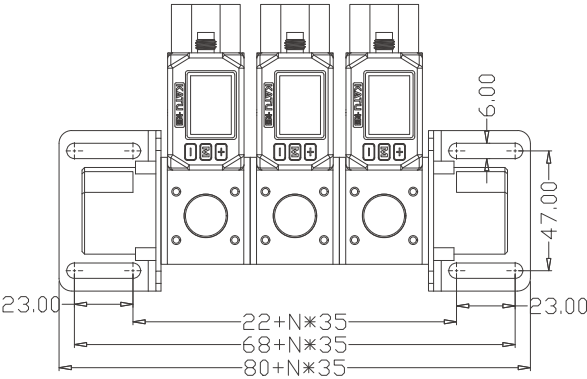
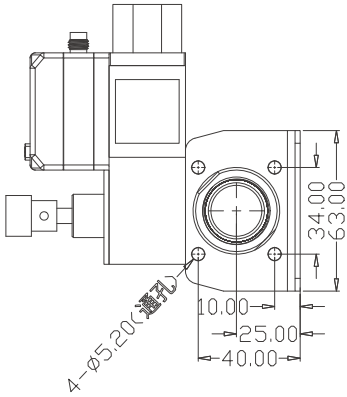
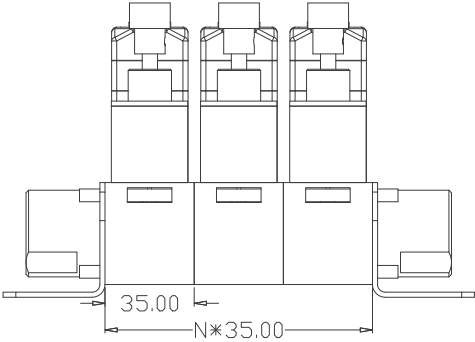
※ The return water unit can be equipped with a flow sensor. (The picture shows an example of a body type)
 ※ The flow control valve of this product is not suitable for frequent flow regulation and stop flow.

Flow sensor type

F	Y
Separate sensor section	Display monotype
	

Dimension drawing (mm)

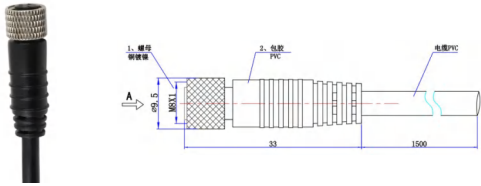
■ Flow range: 2-16L/min



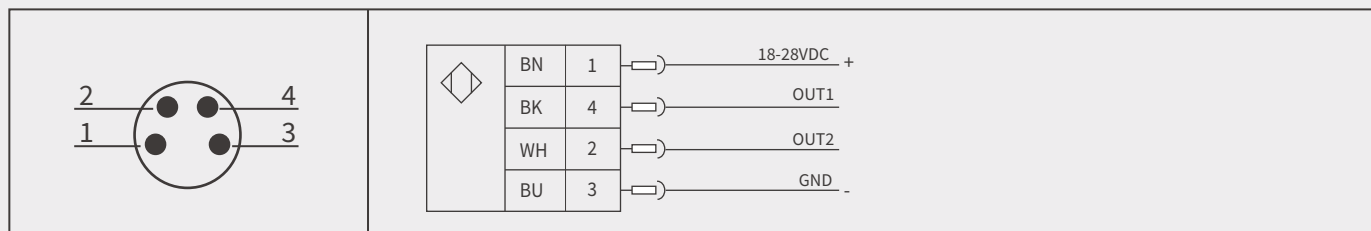
Selection list

FTS-R	01	B	R	F	04	-	38	-	-	expatiate
FTS-R										FTS-R integrated flow and temperature sensor
	01									System bits: 1 bit
	02									System bits: 2 bits
	03									System bits: 3 bits
	04									System bits: 4 bits
	05									System bits: 5 bits
	06									System bits: 6 bits
	07									System bits: 7 bits
	08									System bits: 8 bits
	09									System bits: 9 bits
	10									System bits: 10 bits
		B								Main piping: U side open, D side open
		D								Main piping: U side is closed, D side is opened
		U								Main piping: U side open, D side closed
			R							Thread: Rc thread
			N							Thread: NPT thread
			G							Thread: G thread
				F						Sensor type: Separate type
				Y						Sensor type: Display type
					04					Flow range: 0.5-4L/min
					20					Flow range: 2-16L/min
					40					Flow range: 5-40L/min
						-				Composition of return water unit: without flow regulating valve
						S				Composition of return water unit: with flow control valve
							38			Supply/return unit piping diameter: 3/8 thread
							12			Supply/return unit piping diameter: 1/2 thread
							34			Supply/return unit piping diameter: 3/4 thread
								-		No temperature measurement function
								T		With temperature measurement function
No display										- Output signal: Analog (4-20mA) Factory default
										V Output signal: Analog (1-5V)
										S Output signal: IO-Link/ pulse frequency (Factory default pulse frequency; Support IO-Link command wake up function)
										R Output signal: RS485 signal
Tape display										A2 Output signal: two analog channels (4-20mA)
										V2 Output signal: two analog channels (1-5V)
										SA Output signal: one switch output/pulse frequency /IO-Link+ analog (4-20mA)
										SV Output signal: one switch output/pulse frequency /IO-Link+ analog (1-5V)
										S2 Output signal: two switch output/pulse frequency /IO-Link
										RL Output signal: RS485 signal

Optional accessories - electrical accessories

name	Contour drawing/dimension drawing (Unit :mm)	material	Model number
M8-4Pin (2m cable)		PVC	M84PC02G
M8-4Pin (5m cable)			M84PC05G
M8-4Pin (10m cable)			M84PC010G

Wiring diagram



A2: Two analog (4-20mA)

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow: 4-20mA (factory default) Temperature: 4-20mA	WH	2 (OUT2)	Temperature: 4-20mA (factory default) FlowTemperature: 4-20mA

V2: Two analog (1-5V)

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow: 1-5V(factory default) Temperature: 1-5V	WH	2 (OUT2)	Temperature: 1-5V (factory default) FlowTemperature: 1-5V

SA: one switch output/pulse frequency /IO-Link+ analog (4-20mA) - with temperature

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow switch: PNP(factory default) Flow switch: NPN Temperature switch: PNP Temperature switch: NPN Original frequency Linear frequency (full scale 100Hz) IO-Link	WH	2 (OUT2)	Flow: 4-20mA (factory default) Temperature: 4-20mA

SA: one switch output/pulse frequency /IO-Link+ analog (4-20mA) - without temperature

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow switch: PNP (factory default) Flow switch: NPN Original frequency Linear frequency (full scale 100Hz) IO-Link	WH	2 (OUT2)	Flow: 4-20mA (factory default)

SV: one switch output/pulse frequency /IO-Link+ analog (1-5V) - with temperature

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow switch: PNP(factory default) Flow switch: NPN Temperature switch: PNP Temperature switch: NPN Original frequency Linear frequency (full scale 100Hz) IO-Link	WH	2 (OUT2)	Flow: 1-5v (factory default) Temperature: 1-5v

SV: one switch output/pulse frequency /IO-Link+ analog (1-5V) - without temperature

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow switch: PNP (factory default) Flow switch: NPN Original frequency Linear frequency (full scale 100Hz) IO-Link	WH	2 (OUT2)	Flow: 1-5v(factory default)

S2: two switch output/pulse frequency /IO-Link - with temperature

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow switch: PNP (factory default) Flow switch: NPN Temperature switch: PNP Temperature switch: NPN Original frequency Linear frequency (full scale 100Hz) IO-Link	WH	2 (OUT2)	Flow switch: PNP (factory default) Flow switch: NPN Temperature switch: PNP Temperature switch: NPN

S2: two switch output/pulse frequency /IO-Link - without temperature

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	Flow switch: PNP (factory default) Flow switch: NPN Original frequency Linear frequency (full scale 100Hz) IO-Link	WH	2 (OUT2)	Flow switch: PNP (factory default) Flow switch: NPN

RS485 communication

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	RS485(A)	WH	2 (OUT2)	RS485(B)