



FLOW METERS

PRODUCTS GUIDE

NITTO SEIKO

“High Performance” and “High Liability” are guaranteed for NITTO SEIKO’s wide-ranged line of products from flow meters to precision machine equipment to meet the needs from various industries.

Since 1949 when NITTO SEIKO started the manufacture and sales of water meters, it has fully availed itself of the accumulated precision processing technologies and supplied to industries various types of flow meters and many kinds of fluid measuring equipment. The brand "NITTO" has thus established a steady position in the instrument industry.

NITTO SEIKO now covers wide-ranged product models to meet every specification of every industry. The electronics technology which shows a remarkable progress in recent years has enabled the sophistication and systematization of fluid measuring equipment as well as surrounding equipment. NITTO SEIKO has been positively introducing such electronics technology to develop numerous unique products.

The lines of NITTO SEIKO's products are increasingly expanding, including not only the automated fluid measuring equipment but also the information processing equipments as POS system for automated LP gas station, computer for production report and further the inspection apparatus represented by MISTOL.

NITTO SEIKO will make its best effort to promote R&D for the equipment and systems which can elaborately meet the needs from various fields.

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Creation of New Applications for Micro Flow Measurement



Nico Flow (Micro Flow Meter)

Types **NH, NH-VV**

In the fields of heat control and engine performance control or chemical industry, food industry and medical supply industry, high precision measurement of micro flow and liquid feeding in preset quantity are required. The Nico Flow is a high precision micro flow meter which adopts the rotary piston suitable for the measurement of micro flow. Beside the Nico Flow (Type NH) for flow measurement of ordinary liquid, the PVC Nico Flow (Type NH-VV) for flow measurement of strongly corrosive liquid which uses hard vinyl chloride plastic at the wetted parts.

General Specifications (Type NH)

Figures in parenthesis are for special specification.

- Measured liquid:** Cold and hot water, Petroleum, Chemical liquids, Food liquids, etc.
- Size:** 1/4B, 1/2B for screw connection
15A, 20A for flange connection
- Liquid viscosity:** 0.4~100mPa·s (100mPa·s and over)
- Liquid temp.:** -5~120°C
- Liquid pressure:** 1.0MPa or less (21.0MPa or less)
- Accuracy:** Within $\pm 0.75\%$
- Material:** LS: SCS14, S2: SUS316, VV: PVC
- Flameproof enclosure type (ExdIIBT4X) is available.
 - As for the connection with the instrument, refer to the "System 2" on page 17.
 - Please give us inquiry on PVC Nico Flow (NH-VV).

Flow Range for NH type (L/h)

Viscosity (mPa·s)	0.4~	0.8~	1~	3~	10~100
Liquid Model	Gasoline	Water & equivalents	Kerosene	Light oil	A/B Heavy oil
NH10MO	3~ 15	3~ 15	3~ 15	1~ 15	0.5~ 15
NH10LO	7~ 50	7~ 50	7~ 50	2~ 50	1~ 50
NH10LM	12~ 100	12~ 100	8~ 100	5~ 100	2~ 100
NH10LL	15~ 200	15~ 200	10~ 200	8~ 200	4~ 200
NH10LG	40~ 600	30~ 600	20~ 600	15~ 600	10~ 600

Reliable Nico Flow Loaded with High-functional Electronic Counter



Nico Eye (Electronic Micro Flow Meter) Type **NE**

Electronic micro flow meter is a flow meter specially designed for small flow rate area, loaded with an electronic indicator - counter on the measuring unit of a rotary piston type positive displacement flow meter. It is loaded with "User setting function" which enables the user to change the setting easily in the field, and can be used for a wide variety of applications. This flow meter is available for measurement control of small flow rates such as process control of additive, control of mixed water, etc.

General Specifications

Figures in parenthesis are for special specification.

Measured liquid: Water, Petroleum, Chemical liquids, Food liquids, etc.

Size: 1/4B, 1/2B for screw connection
15A, 20A for flange connection

Liquid viscosity: 0.4~100mPa·s (100mPa·s and over)

Liquid temp.: -5~80°C

Liquid pressure: Material Symbol LS: 1.0MPa or less
Material Symbol S2: 6.3MPa or less

Accuracy: Within $\pm 0.75\%$

Material: LS: SCS14/SCS14
S2: SUS316/SUS316

Specification of Counting Unit

Counting unit	Pulse & alarm output type	Analogue output type
Flow rate calculation system	Periodical measured flow rate calculation	
Indicator	Numeric indication: 7-segment LCD, 5W x 10H 8-digits Mode indication, alarm indication: LCD 2H	
Indication items	Integrated flow rate, momentary flow rate (Switched by mode button) <ul style="list-style-type: none"> •Total integrated flow rate: 8-digits MODE1 •Momentary flow rate (/h): 6-digits MODE2 or (/min): 6-digits MODE3 •Integrated flow rate (resettable): 8-digits MODE4 •Momentary flow rate (%): 4-digits MODE5 	
Output signal	Pulse signal & alarm signal	4~20 mADC
Internal power	Lithium battery (built-in), service life approx. 3 years	
External power	12/24V DC	24V DC
Ambient temperature	-10~60°C	
Casing material	Aluminum die casting	
Construction	Non-explosion proof, JISC0920 water proof	

Flow Range (L/h)

Viscosity (mPa·s)	0.4~	0.8~	1~	3~	10~100
Liquid Model	Gasoline	Water & equivalents	Kerosene	Light oil	A/B Heavy oil
NE10LO	7~ 50	7~ 50	7~ 50	2~ 50	1~ 50
NE10LM	12~ 100	12~ 100	8~ 100	5~ 100	2~ 100
NE10LL	15~ 200	15~ 200	10~ 200	8~ 200	4~ 200
NE10LG	40~ 600	30~ 600	20~ 600	15~ 600	10~ 600

Simplicity in Design and Ease in Maintenance and Check



R (Small Size Rotary Flow Meter)

Types **A, Z, C, H**

This flow meter for small flow measurement is characterized in its structural simplicity. Material can be selected from various options. The pressure loss is extremely small and even high viscous liquid can be measured with ease. This small size rotary flow meter is now used for the measurement and control of liquid in every industry.

General Specifications

Figures in parenthesis are for special specification.

- Measured liquid:** Cold and hot water, Petroleum, Chemical liquids, Food liquids, etc.
- Size:** 20A, 25A
- Liquid viscosity:** 0.5~3,000mPa·s (0.2~30,000mPa·s)
- Liquid temp.:** Normal temp.~80°C (-20~200 °C)
- Liquid pressure:** 1.0MPa or less (2.0MPa or less)
- Accuracy:** Within ±0.5%
- Material:** FC200/CAC406, FC200/FC200
FC200/SCS14, SCS14/SCS14

- The size 20mm can not be manufactured for other flow meters than made of FC200/CAC406 (for oil) and SCS14/SCS14(Material approved of the use for high pressure gas).

Flow Range (L/h)

Size (mm)	Viscosity (mPa·s) Liquid Nominal symbol	0.5~	1~	2~	5~	10~	50~	100~
		Gasoline	Water (Normal temp.)	Kerosene	Light oil	A Heavy oil	B Heavy oil	C Heavy oil
20	20B	50~ 200	-	40~ 200	35~ 200	25~ 200	10~ 200	5~ 200
	20C	80~ 400	-	60~ 400	50~ 400	40~ 400	20~ 400	10~ 400
25	25C	250~ 800	200~ 800	160~ 800	100~ 800	80~ 800	30~ 800	15~ 800
	25A	300~1,600	300~1,600	160~1,600	130~1,600	100~1,600	40~1,600	20~1,600

Kind of Direct Totalizer



Pointer type



Pointer zero resettable type



Instantaneous flow rate indicator type (25A only)

Kind of Pulse Generator

- Unit pulse generator (C):** This pulse generator is to be connected with a totalizer, printer, preset counter, etc.
- Pulse generator for DA:** This generator, when combined with DA converter, can be connected with an indicator, recorder, controller, etc. for analogue signal, and with a totalizer, printer, preset counter, etc. for unit pulse signal.

- Flameproof enclosure type (d2G4) is available.
- As for the connection with the instrument, refer to the "System 1" on page 16.

Excellent in Durability and Wide in Application Field



RS (Rotary Flow Meter)

Types **A0, Z8, IO, CN**

The positive displacement flow meter has many advantages such as versatility in its application field, high accuracy in measurement with wide-ranged flow rate etc. and is now used widely in every industry. In the range of positive displacement flow meters, the rotary flow meter has a particularly simple structure, and ceramic is used as standard material for the bearings which come in contact with liquid. Besides, a special plastic excellent in resistance to chemicals, wear, heat and impact is employed for the rotor. A large-size legible register is used in the direct totalizer. This rotary flow meter is an easy-to-use durable liquid flow meter.

General Specifications

Figures in parenthesis are for special specification.

Measured liquid: Cold and hot water, Petroleum, Chemical liquids, Food liquids, etc.

Size: 25A, 40A, 50A, 80A, 100A

Liquid viscosity: 0.5~500mPa·s (0.2~30,000mPa·s)

Liquid temp.: Normal temp. ~80°C (-20~200 °C)

Liquid pressure: 1.0MPa or less (2.0MPa or less)

Accuracy: Within ±0.5%

Material: FC200/CAC406, FC200/FC200
FC200/SCS14, SCS14/SCS14

Kind of Direct Totalizer



Pointer type



Zero resettable register type



Instantaneous flow rate indicator type



Field counter type pneumatic batch counter

Kind of Pulse Generator

Unit pulse generator: This pulse generator is to be connected with a totalizer, printer, preset counter, etc.

Pulse generator for DA: This generator, when combined with DA converter, can be connected with an indicator, recorder, controller, etc. for analogue signal, and with a totalizer, printer, preset counter, etc. for unit pulse signal.

- Flameproof enclosure type (ExdIIBT4) is available.
- As for the connection with the instrument, refer to the "System 1" on page 16.

Flow Range (L/h)

Size (mm)	Symbol of capacity	Viscosity (mPa·s) Liquid Operating condition	Water	Water	0.5~	2~	5~	10~	50~500
			(~60°C)	(60~120°C)	Gasoline	Kerosene	Light oil	A Heavy oil	B/C Heavy oil
025	B0	Continuous	500~ 2,500	650~ 2,000	650~ 3,000	500~ 3,000	350~ 3,500	200~ 3,500	170~ 3,500
		Intermittent	500~ 3,500	650~ 2,500	650~ 4,000	500~ 5,000	350~ 5,000	200~ 5,000	170~ 5,000
040	B0	Continuous	1,200~ 6,000	1,500~ 4,800	1,500~ 7,200	1,200~ 7,200	650~ 8,400	500~ 8,400	360~ 8,400
		Intermittent	1,200~ 8,500	1,500~ 6,000	1,500~10,000	1,200~12,000	650~12,000	500~12,000	360~12,000
050	B0	Continuous	2,400~12,000	3,000~ 9,600	3,000~15,000	2,400~15,000	1,200~17,000	1,000~17,000	750~17,000
		Intermittent	2,400~17,000	3,000~12,000	3,000~20,000	2,400~20,000	1,200~24,000	1,000~24,000	750~24,000
080	B0	Continuous	5,000~25,000	6,000~20,000	6,000~30,000	5,000~30,000	2,500~35,000	2,000~35,000	1,500~35,000
		Intermittent	5,000~35,000	6,000~25,000	6,000~40,000	5,000~50,000	2,500~50,000	2,000~50,000	1,500~50,000

Positive Displacement Flow Meters Provide Greater Precision and More Functionality



Super Rotary Flow Meter Type RQ

We have improved the simple and dependable design of the rotary piston type positive displacement flow meter by adding a microchip to perform the calculation functions. This result is greater precision, improved durability, and applicability to a wide range flow measurement jobs.

General Specifications

Figures in parenthesis are for special specification.

Measured liquid: Petroleum, Chemical liquids, Food liquids, etc.

Size: 25A, 40A, 50A, 80A, 100A

Liquid viscosity: 0.5~500mPa·s(0.3~30,000mPa·s)

Liquid temp.: Normal temp. ~80°C(-10~150°C)

Liquid pressure: 1.0MPa or less(2.0MPa or less)

Accuracy: Within ±0.2% (Within ±0.5%)

Material: FC200/CAC406, FC200/FC200
FC200/SCS14, SCS14/SCS14

Display: 7-segment LCD 10H 8-digits
Indication items: Non-resettable totalizing
 Instantaneous flow rate(/h)
 Instantaneous flow rate(/min)
 Resettable totalizing
 Instantaneous flow rate (%)
 Alarm for excessive flow rate
 Alarm for upper limit flow rate
 Lower limit flow rate
 Battery alarm
Analogue signal: 4~20mA DC
Pulse and alarm signal: Voltage non-contact or open collector pulse
 ● **Explosion proof type is available.**
Field counter type: Intrinsic safety type (ExiaIIBT4)
Output type: Flameproof enclosure type (ExdIIBT4X)

Flow Range (L/h)

Size (mm)	Viscosity (mPa·s) Liquid Symbol of capacity	0.5~	1	2~	5~	10~	50~500
		Gasoline	Water	Kerosene	Light oil	A Heavy oil	B/C Heavy oil
025	A0	700~ 1,200 (300~ 1,600)	650~ 1,100 (300~ 1,600)	600~ 1,200 (160~ 1,600)	400~ 1,400 (160~ 1,600)	300~ 1,400 (100~ 1,600)	200~ 1,400 (40~ 1,600)
	B0	1,100~ 3,500 (460~ 4,000)	840~ 3,500 (350~ 3,500)	800~ 4,000 (350~ 5,000)	420~ 5,000 (250~ 5,000)	250~ 5,000 (140~ 5,000)	210~ 5,000 (120~ 5,000)
040	A0	2,500~ 8,500 (1,100~10,000)	2,100~ 8,500 (840~ 8,500)	2,000~10,000 (840~12,000)	1,100~12,000 (460~12,000)	560~12,000 (350~12,000)	490~12,000 (250~12,000)
	B0	4,900~17,000	4,200~17,000	4,000~20,000	2,100~24,000	1,100~24,000	980~24,000
050	A0	(2,100~20,000)	(1,700~17,000)	(1,700~24,000)	(840~24,000)	(700~24,000)	(530~24,000)
	B0	11,000~35,000	8,400~35,000	8,000~40,000	3,500~50,000	2,500~50,000	2,100~50,000
100	A0	(4,200~40,000)	(3,500~35,000)	(3,500~50,000)	(1,800~50,000)	(1,400~50,000)	(1,100~50,000)

Note1. Flow range which are shown in parentheses at the table is for 0.5% of accuracy.

Note2. Operating condition: intermittent

Getting Easy Handling with New Function and Shape



Flow Eye (Electronic Positive Displacement Flow Meter)

Type FE

Flow Eye is a flow meter loading with an electronic indicator-counter on the measuring unit of a rotary piston type of simplest construction among positive displacement flow meters. It is loading with a “user setting function” which enables the user to change the setting easily in the field and can be used for a wide variety of applications.

General Specifications

Measured liquid: Chemical liquids, Food liquids, Petroleum, Water, etc.

Size: 20A, 25A, 40A

Liquid viscosity: 0.5~10,000mPa·s

Liquid temp.: -10~80°C

Liquid pressure: 1.0MPa or less

Accuracy: Within ±0.5%

Material: Body:SCS14
Rotor:PPS plastic
Eccentric bearing:Carbon

Specification of Counting Unit

Counting unit	Pulse & alarm output type	Analogue output type	Batch type
Flow rate calculation system	Periodical measured flow rate calculation		
Indicator	Numeric indication: 7-segment LCD, 5W x 10H 8-digits Mode indication, alarm indication: LCD 2H		
Indication items	Integrated flow rate, momentary flow rate (Switched by mode button) •Total integrated flow rate: 8-digits MODE1 •Momentary flow rate (/h): 6-digits MODE2 or (/min): 6-digits MODE3 •Integrated flow rate (resettable): 8-digits MODE4 •Momentary flow rate (%): 4-digits MODE5		
Output signal	Pulse signal & alarm signal	4~20 mADC	Pulse signal , alarm signal & batching signal
Internal power	Lithium battery (built-in), service life approx. 3 years		
External power	12/24V DC	24V DC	100~240VAC or 24VDC
Ambient temperature	-10~60°C		
Casing material	Aluminum die casting		
Construction	Non-explosion proof, JISCO920 water proof		Non-explosion proof, Non-water proof

Flow Range (L/h)

Viscosity (mPa·s) Nominal symbol	water	0.5~	1~	4~	10~	50~	100~	500~	1,000~	5,000~10,000
20A	100~ 700	130~ 850	100~ 850	70~ 1,000	40~ 1,000	25~ 1,000	15~ 1,000	15~ 800	15~ 600	15~ 300
25A	300~2,100	380~2,500	300~2,500	200~3,000	120~3,000	75~3,000	45~3,000	45~2,400	45~1,800	45~ 900
40A	650~4,500	850~5,500	650~5,500	450~6,500	260~6,500	160~6,500	100~6,500	100~5,200	100~3,900	100~ 2,000

Flow Meter for Oil Loaded with High-functional Electronic Counter



Oil Eye (Electronic Flow Meter for Oil) Type OE

Electronic flow meter for oil is a flow meter for oil & non-corrosive liquid realized by loading an electronic indicator-counter on the measuring unit of a rotary piston type positive displacement flow meter. It is loading with a “user setting function” which enables the user to change the setting easily in the field, and can be used for a wide variety of applications. The flow meter is available for measurement and control of feed oil to boilers, non-corrosive medium and high-viscosity liquid, etc.

General Specifications

Figures in parenthesis are for special specification.

Measured liquid: Kerosene, Light oil, A/ B/ C Heavy oil, Non-corrosive medium and high viscosity liquid

Size: 15A, 20A, 25A, 40A

Liquid viscosity: 2~1,000mPa·s

Liquid temp.: 0~80°C (~120°C)

Liquid pressure: 1.0MPa or less

Accuracy: Within ±0.5%

Material: Body: FC200
Rotor: AC2A
Eccentric bearing: C3604BD

Specification of Counting Unit

Counting unit	Pulse & alarm output type	Analogue output type	Batch type
Flow rate calculation system	Periodical measured flow rate calculation		
Indicator	Numeric indication: 7-segment LCD, 5W x 10H 8-digits Mode indication, alarm indication: LCD 2H		
Indication items	Integrated flow rate, momentary flow rate (Switched by mode button) •Total integrated flow rate: 8-digits MODE1 •Momentary flow rate (/h): 6-digits MODE2 or (/min): 6-digits MODE3 •Integrated flow rate (resettable): 8-digits MODE4 •Momentary flow rate (%): 4-digits MODE5		
Output signal	Pulse signal & alarm signal	4~20 mADC	Pulse signal , alarm signal & batching signal
Internal power	Lithium battery (built-in), service life approx. 3 years		
External power	12/24V DC	24V DC	100~240VAC or 24VDC
Ambient temperature	-10~60°C		
Casing material	Aluminum die casting		
Construction	Non-explosion proof, JISC0920 water proof		Non-explosion proof, Non-water proof

Flow Range (L/h)

Viscosity (mPa·s) Nominal symbol	2~	10~	50~	100~	500~
	200	200	200	200	160
15L,20S	40~ 200	30~ 200	20~ 200	10~ 200	10~ 160
20M	60~ 400	40~ 400	25~ 400	15~ 400	15~ 320
20L	100~1,000	50~1,000	40~1,000	20~1,000	20~ 800
25L	250~2,500	100~2,500	60~2,500	40~2,500	40~2,000
40L	600~6,000	250~6,000	150~6,000	100~6,000	100~4,800

Compact and Low-cost Flow Meter Exclusive for Oil

Small in Size, Light in Weight and Outstanding Easiness in Operation



RE10LF

BR

Micro Oil Meter

Type **RE10LF**

Liquid crystal counter is adopted in the display section. This oil flow meter designed compact is a quite new type flow meter exclusive for the measurement of oils. It has a flow range as wide as 1:125 (for heavy oil). The minimum flow rate of 2 L/h (for heavy oil) makes this meter super-sensitive.

General Specifications

- Measured liquid:** Kerosene, Light oil, A/B/C Heavy oil
- Size:** 3/8B
- Liquid temp.:** Body & counter-incorporated type
-10~55°C
Body & counter-separate type
-10~120°C
- Liquid pressure:** 0.7MPa or less
- Accuracy:** Within $\pm 1.0\%$
- Material:** ADC + surface treatment
- Flow range:** Kerosene, Light oil: 10~250 L/h
A/B/C Heavy oil: 2~250 L/h

Oil Meter

Type **BR**

A high performance oil meter which realizes smallness in size, lightness in weight and easiness in operation is used for the measurement of fuel oil (for small boiler, burner, central heating) in heat piping industry.

General Specifications

- Measured liquid:** Kerosene, Light oil, A/B/C Heavy oil
(Two types of oils can be measured by one meter.)
- Size:** 15A, 20A, 25A
- Liquid temp.:** Normal temp.~80°C
- Liquid pressure:** 1.0MPa or less
- Accuracy:** Within $\pm 0.5\%$
- Material:** FC200
- Pulse generator:** Reed switch (Option):1L/P

Flow Range (L/h)

Liquid Model	Kerosene, Light oil	A/B/C Heavy oil
BR13-3	30~ 200	10~ 200
BR20-2	100~1,000	30~1,000
BR25-2	250~2,500	150~2,500

Stable Performance Exerted for Large Flows



SS (Slide Vane Flow Meter) Types **A0, Z8, IO, CN**

This flow meter is a large capacity flow meter whose measuring section employs an outer-cam type slide vane. It solves problems of noise, vibration and pulsation often seen in large size flow meter, and exerts a stable performance. It is used widely in the fields of petrochemical refinement, chemicals, foods, power generation and shipbuilding.

General Specifications

Figures in parenthesis are for special specification.

- Measured liquid:** Cold and hot water, Petroleum, Chemical liquids, etc.
- Size:** 80A, 100A, 150A
- Liquid viscosity:** 0.4~500mPa·s
- Liquid temp.:** Normal temp. ~80°C (~120 °C)
- Liquid pressure:** 1.0MPa or less (2.0MPa or less)
- Accuracy:** Within ±0.5% (within ±0.2%)
- Material:** FC200/FC200
SCS13/SCS13

Kind of Direct Totalizer



Pointer type



Zero resettable register type



Instantaneous flow rate indicator type



Field counter type pneumatic batch counter

Kind of Pulse Generator

Unit pulse generator: This pulse generator is to be connected with a totalizer, printer, preset counter, etc.

Pulse generator for DA: This generator, when combined with DA converter, can be connected with an indicator, recorder, controller, etc. for analogue signal, and with a totalizer, printer, preset counter, etc. for unit pulse signal.

- Flameproof enclosure type (ExdIIBT4) is available.
- As for the connection with the instrument, refer to the "System 1" on page 16.

Flow Range (m³/h)

Size (mm)	Symbol of capacity	Viscosity (mPa·s) Liquid Operating condition	Flow Range (m³/h)					
			Water (~60°C)	0.4~ Gasoline	2~ Kerosene	5~ Light oil	10~ A Heavy oil	50~500 B/C Heavy oil
080	B0	Continuous	10~ 60	12~ 60	10~ 80	8~ 80	5~ 80	3~ 60
	A0	Intermittent	10~ 80	12~ 80	10~100	8~100	5~100	3~ 80
100	B0	Continuous	20~120	24~120	20~160	16~160	10~160	6~120
	A0	Intermittent	20~160	24~160	20~200	20~200	10~200	6~150

Excellent Durability and Easiness of Maintenance Proven by Numerous Results



K (Turbine Flow Meter)

Types **A, Z, I, C, H**

This flow meter is an axial-flow fan wheel type flow meter excellent in durability and easiness of maintenance proven by numerous results. It is widely used for the water controls in every industry, such as water control of water supply sources, various plants, air conditioning in the building, etc.

General Specifications

Figures in parenthesis are for special specification.

Measured liquid: Cold and hot water, Sea water
Size: 50A, 80A, 100A, 125A, 150A
 200A, 250A, 300A, 350A, 400A
Liquid temp.: Normal temp. ~80°C (0~150 °C)
Liquid pressure: 1.0MPa or less (2.0MPa or less)
Accuracy: Within $\pm 2.0\%$
Material: FC200/CAC406
 FC200/SCS13
 SCS13/SCS13

Kind of Direct Totalizer



Pointer type



Pointer zero
resettable type



Instantaneous
flow rate indicator type

Kind of Pulse Generator

Unit pulse generator (C): This pulse generator is to be connected with a totalizer, printer, preset counter etc.

Pulse generator for DA: This generator, when combined with DA converter, can be connected with an indicator, recorder, controller, etc. for analogue signal, and with a totalizer, printer, preset counter, etc. for unit pulse signal.

- Flameproof enclosure type (d2G4) is available.
- As for the connection with the instrument, refer to the "System 1" on page 16.

Flow Range (m³/h)

Size (mm)	Flow range
50	4~ 25
80	8~ 50
100	10~ 80
125	15~120
150	20~150

Size (mm)	Flow range
200	30~ 250
250	40~ 300
300	60~ 450
350	100~ 650
400	150~1,000

Loaded with Electronic Counter Enhancing Workability in the Field



Aqua Eye (Electronic Flow Meter for Water Supply)

Type **AE**

Electronic flow meter for water supply is a flow meter for water realized by loading an electronic indicator-counter on the measuring unit of an impeller type flow meter for water. It is equipped with a “user setting function” which enables the user to change the setting easily in the field, and can be used for a wide variety of applications. This flow meter is available for measurement and control of cold water and hot water such as cooling/heating water, feed water to boilers, service water for various plants, etc.

General Specifications

Figures in parenthesis are for special specification.

- Measured liquid:** Cold and hot water
(Inquire in the case of a liquid containing acid or alkali contents)
- Size:** 25A, 40A, 50A
- Liquid viscosity:** 1mPa·s or equivalent
- Liquid temp.:** 0~80°C (~110°C)
- Liquid pressure:** 1.0MPa or less (2.0MPa or less)
- Accuracy:** Within ±1.0%
- Material:** FB : FCD450/SCS13 ^{※1}
F7 : FCD450/SCS13 ^{※2}
S7 : SCS13/SCS13

Note : Range of products of size 50B is only FB and F7.

※1 Material of size 50B is CAC406.

※2 Material of size 50B is SUS304.

Specification of Counting Unit

Counting unit	Pulse & alarm output type	Analogue output type	Batch type
Flow rate calculation system	Periodical measured flow rate calculation		
Indicator	Numeric indication: 7-segment LCD, 5W x 10H 8-digits Mode indication, alarm indication: LCD 2H		
Indication items	Integrated flow rate, momentary flow rate (Switched by mode button) ·Total integrated flow rate: 8-digits MODE1 ·Momentary flow rate (/h): 6-digits MODE2 or (/min): 6-digits MODE3 ·Integrated flow rate (resettable): 8-digits MODE4 ·Momentary flow rate (%): 4-digits MODE5		
Output signal	Pulse signal & alarm signal	4~20 mADC	Pulse signal , alarm signal & batching signal
Internal power	Lithium battery (built-in), service life approx. 3 years		
External power	12/24V DC	24V DC	100~240VAC or 24VDC
Ambient temperature	-10~60°C		
Casing material	Aluminum die casting		
Construction	Non-explosion proof, JISC0920 water proof		Non-explosion proof, Non-water proof

Flow Range (m³/h)

Nominal symbol	Flow range
25A	0.5~ 2.5
25B	1.0~ 5.0
40A	1.5~ 7.0
40B	3.0~15.0
50A	3.0~15.0
50B	6.0~25.0

Widely Used for Cold, Hot and High-temperature Water



Water Supply Flow Meter

Types **B-F, B-FZ, B-FC, B-FH**

This flow meter has realized high accuracy and lightness in weight required for the measurement and control of cold, hot and high-temperature water used as industrial water for air conditioning, water supply to boiler, chemical plant, water treatment plant. It is a tangential fan wheel type flow meter being used in many fields of application.

General Specifications

Figures in parenthesis are for special specification.

- Measured liquid:** Cold and hot water,
High temperature water
- Size:** 20A, 25A, 40A, 50A
- Liquid temp.:** Normal temp. ~110°C (110~200 °C)
- Liquid pressure:** 1.0MPa or less (2.0MPa or less)
- Accuracy:** Within ±1.0%
- Material:** FB: FCD450/SCS13 ^{※1}
F7: FCD450/SCS13 ^{※2}
S7: SCS13/SCS13

Note: Range of products of size 50B is only FB and F7.

※1 Material of size 50B is CAC406.

※2 Material of size 50B is SUS304.

Kind of Direct Totalizer



Pointer type



Pointer zero resettable type

Kind of Pulse Generator

Unit pulse generator (C): This pulse generator is to be connected with a totalizer, printer, preset counter, etc.

Pulse generator for DA: This generator, when combined with DA converter, can be connected with an indicator, recorder, controller, etc. for analogue signal, and with a totalizer, printer, preset counter, etc. for unit pulse signal.

- Flameproof enclosure type (d2G4) is available.
- As for the connection with the instrument, refer to the "System 1" on page 16.

Flow Range (m³/h)

Nominal symbol	Normal temp.~110°C	110 ~ 200°C
20A	0.3~ 1.5	0.3~ 0.9
25A	0.5~ 2.5	0.5~ 1.5
25B	1.0~ 5.0	1.0~ 3.0
40A	1.5~ 7.0	1.5~ 4.5
40B	3.0~ 15.0	3.0~ 9.0
50A	3.0~ 15.0	3.0~ 9.0
50B	6.0~ 25.0	6.0~ 18.0

Excellent in Corrosion Resistance and High Accuracy Flow Meter

Simple Structure and Excellent Reliability



CT4

QS

Acid-proof Turbine Flow Meter

Type **CT**

It has the wetted parts of which are constructed with extremely corrosion-resistant materials of fluoro-plastic and ceramics. This is high-accuracy turbine flow meter for measuring strong corrosive liquid.

General Specifications

- Measured liquid:** Strong corrosive liquid like acid and alkali, Pure water.
Size: 20A, 25A, 40A, 50A
Liquid temp.: 0~80°C
Liquid pressure: 0.7MPa or less
Accuracy: Within $\pm 0.5\%$
Material: Fluoro-plastic
 ● Flameproof enclosure type (ExdIIBT4) is available.

Flow Range (L/h)

Model	Flow range
CT4-20A	350 ~ 3,500
CT4-25A	700 ~ 7,000
CT4-40A	2,000 ~ 12,000
CT4-50A	4,000 ~ 25,000

FLOP (Vortex Type Flow Sensor)

Types **QS, QT**

Vortex type flow sensor FLOP is a flow sensor based on the principle of Karman's vortex. Realized with a simple construction without any moving part or liquid stay portion, this flow sensor is capable of high-accuracy flow rate measurement and has excellent durability. By adopting linear type PPS plastic for the wetted part, this sensor can be used not only for cold water and hot water but also for ultrapure water and various kinds of chemical products.

General Specifications

- Measured liquid:** Various kind of liquid (1mPa·s or equivalent)
Size: 05, 15, 20, 25, 40
Liquid temp.: Normal temp.~90°C
Liquid pressure: 1.0MPa or less
Accuracy: Within $\pm 2.0\%$ FS
Indication function: Total, instantaneous flow rate
 ● Analogue signal output type (4~20mA DC) is also available.

Flow Range (L/min)

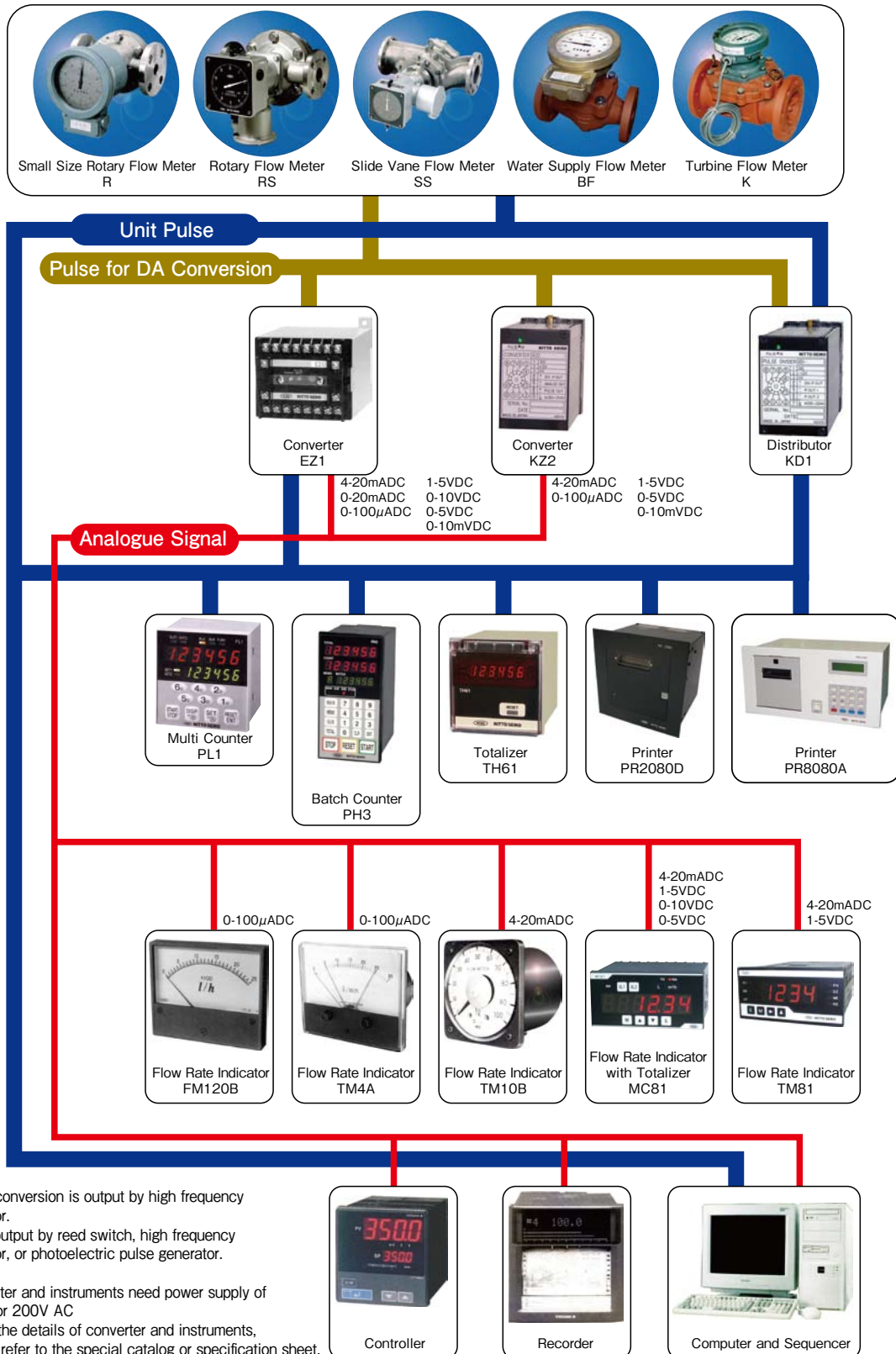
Size(mm)	Flow range
05	0.5~ 5
10	4~ 25
15	8~ 50
20	12~ 80
25	20~130
40	60~350

NITTO SEIKO's Liquid Control System Has Realized the Sophistication and Rationalization of the Flow Control , Such as Remote-Controlled Measurement.

NITTO SEIKO's flow meters, when equipped with pulse generators or combined with various converters or instruments, can be easily modified into remote-controlled flow measurement systems. As show in the chart, the system can be upgraded in various ways depending on the kind of pulse generator. Select the most suitable system according to the application and purpose of use.

NITTO SEIKO's remote-controlled flow measurement systems will promote the sophistication and rationalization of flow control work.

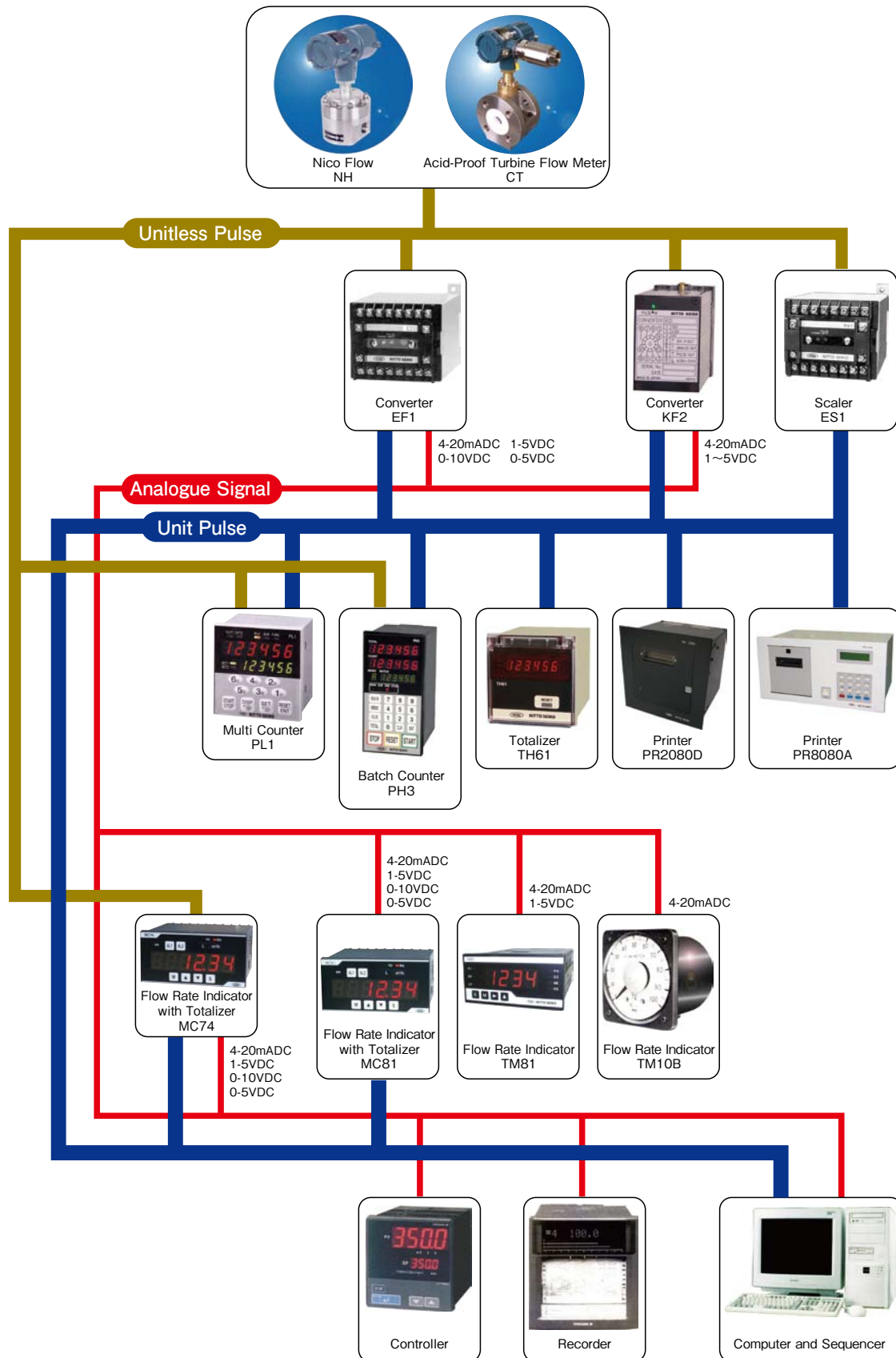
System 1



- Pulse for DA conversion is output by high frequency pulse generator.
- Unit pulse is output by reed switch, high frequency pulse generator, or photoelectric pulse generator.

- Note 1. Converter and instruments need power supply of 100V or 200V AC
 2. As for the details of converter and instruments, please refer to the special catalog or specification sheet.

System 2



- Note 1. Converter and instruments need power supply of 100V or 200V AC.
 2. As for the details of converter and instruments, please refer to the special catalog or specification sheet.

Design and specification are subject to change without notice.

For more information contact



NITTO SEIKO CO.,LTD.

Overseas Department
20 Umegahata, Inokura-Cho, Ayabe-City, Kyoto
623-0054 JAPAN
TEL :+81 (773) 43-0290
FAX:+81 (773) 42-5571
E-mail:sales@nittoseiko.co.jp
<http://www.nittoseiko.co.jp>