FEATURES

- 10Digit total integrating & 4Digit rate display.
- Multi-range input (Pulse, Volt, mA).
- High accuracy 16bit A/D converter
- Built-in Batch function
- RS-485 communication interface
- 2 points alarm & Rate alarm, Batch function and Dead band set.
- Isolation current output(4~20mADC) & Output scaling
- Pulse output function.(open collect) STD specification
- Sensor power source 12V(24V) STD specification

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SPECIFICATIONS

- **Measuring and display cycle** : Rate value -200ms (Volt, mA input)
  Total count-1s (Volt, mA input)
  Pluse input-on basis of frequency.
- **Input resistance** : Volt, mA input - 100kΩ
  Pluse input - 1kΩ
- **CMRR (Common Mode Rejection Ratio)** : 140dB or more
- **NMRR (Normal Mode Rejection Ratio)** : 60dB or more
- **Moving average filter**
- **Built-in Sensor power source** : DC12V (24V option)
- **Rate accuracy**
  - Linearity : 0.05%FS
  - Repeatability : 0.1%FS
  - Temperature drift : 0.02%FS/℃
  - Long term drift : 0.1% per 1000Hr
- **Totalized function**
  - Data preservation: Semi-permanent (More than 10 years)
  - Max count : 10digit (9999999999 count)
- **Pulse output (STD)**
  - Output : Isolation open collect.
  - Rated voltage : Max DC50V/50mA
  - Max frequency : 5Hz or Less
- **Isolation current output: Rate value (Option)**
  - Current : 4~20mADC
  - Maximum load resistance : 600Ω
  - Isolation resistance (Intput-Output) :100kΩ or more (500VDC)
- **Alarm (Option)**
  - Contact output type : Normal open (Normal close - Order made)
  - Max switching power : 60W 125VA
  - Max switching voltage : 220VDC, 250VAC
  - Max switching Current : 2A DC, AC
  - Max Carrying current : 3A DC, AC
- **Ambient temperature & Humidity**
  - Operation : -10℃~60℃, 10%~90%
  - Storage : -20℃~70℃, 5%~95%
- **Power supply**
  - Voltage : AC110/220V (50/60Hz) DC24V (Option)
  - Power consumption : 4VA Max
  - Isolation resistance : 100MΩ 500VDC (FG-Input, FG-Power, Power-Input, Input-Output)
- **Communication interface (Option)**
  - Type : RS-485
  - Speed : 4800, 9600, 19200bps
  - ID(address) setting : 0~15
- **Etc**
  - Weight : 500g
  - Mounting : Panel mount
  - Dimension : 96(W)×48(H)×112(D)mm

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INPUT TYPE

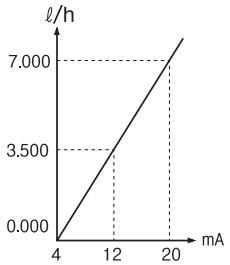
	Range	Scale (Rate)	Simbol
mA(Volt)	DC4~20mA (DC1-5V)	0000~9999	rnG0
Pulse 1	0.1~10Hz	0000~9999	rnG1
Pulse 2	1~10Hz	0000~9999	rnG2
Pulse 3	10~1KHz	0000~9999	rnG3

MAJOR FUNCTION

• Rate scaling function (Volt, mA only)

This Function changes and sets the display value according to scale and input range.

Ex) In case of input range 4.0~20.0mA and Level 0.000~7.000m



Setting to
Sensor type : mA
High Range : 20.00mA
Low Range : 4.00mA
High Scale : 7.000
Low Scale : 0.000

• Pulse input

The function counts the input pulse and converts it to rate value.

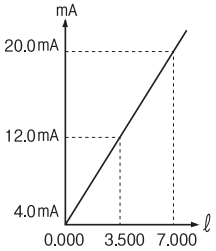
It calculates Count factor, Rate and Time unit.

Ex) When max flow is 100 ℓ /h and output pulse is 50 Hz, Count factor = 50*3600/100=180pulse/ ℓ . If setting the Rate time unit to "h", it integrates 100 ℓ per hour and indicates the Rate value to 100 when the maximum flow.

• Output scaling function

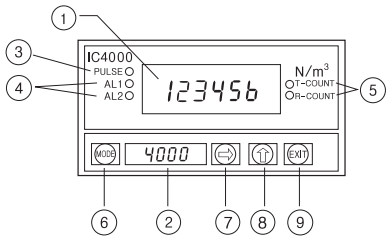
This function can change the 4~20mA output value by output scale.

Ex)Display value 0.000~7.000 ℓ /h, Output 4~20mA



Setting to
High Scale : 7.000
Low Scale : 0.000

PARTS NAME



① Display the total count
② Display the rate value (Pv)
③ Pulse output lamp
④ Alarm condition lamp
⑤ Total count or Reset count lamp
⑥ "MODE" key : storage the set data and change the operation menu
⑦ "⇨"Key : enter into the data setting mode and modify the changed location
⑧ "⇧" Key: change the data value
⑨ "EXIT" Key : out of mode

• Function (Volt, mA type only)

Lin — Pass the input as it is. Used for general input type and linearity input.

LinE — Like level measuring, when it does not display measuring under zero, it always can display zero by using limit function.

• Integrator function

(mA, Volt, input)

Integarate the Rate value after compensating the Rate time unit and Total factor.

(Pulse, input)

Integrate after input Pulse divided by count factor.

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• Alarm & Batch function

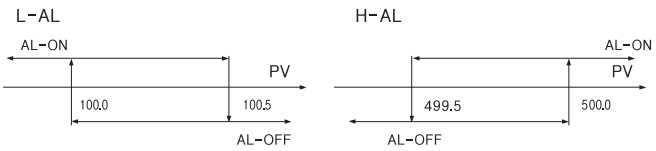
(Rate alarm : 2point)

This consists of two individual setting alarms(High and Low), and it can individually output Relay contact output as compared with Rate value.

Ex) AL-1:High alarm value 500.0 ℓ /h, AL-2:Low alarm value 100 ℓ /h alarm dead band setting 5

The High alarm(AL-1) is ON when the present value(PV) is 500 ℓ /h or more, and OFF when 495 ℓ /h or less.

The low alarm(AL-2) is OFF when the present value(PV) is 105 ℓ /h or more, and ON when 100 ℓ /h or less.



(Count alarm + Rate alarm)

Alarm 1 : Over alarm for Reset count value.

This alarm is operated when the Reset count over the Setting value.

Alarm 2 : Alarm for rate value.

This alarm is operated equally as Rate alarm.

(2Count alarm)

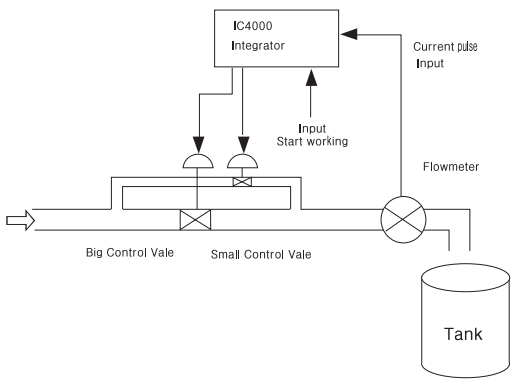
Both Alarm 1 and Alarm 2 are Over alarm for Reset count value and operated when Reset Count value is over the setting value. If resetting the Reset count, it will become the Alarm too.

(Batch [Dosage])

It is possible to work consecutively with this function when pulling the counted fixed volume into case.

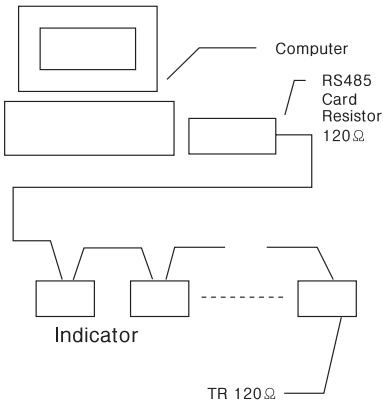
For precise control, it can decrease the value by two output contacts when the value reaches to the target flow.

After setting the Batch and Hystersis value and then inputting the Reset contact, the AL-1, AL-2 relay is OFF and reaching to Batch value the AL-1 relay is OFF.



• Communication interface

It is possible to communicate with computer and to monitor remote remote by using Rs485 communication



ORDERING CODE

IC4 [A] [B] [C] – [D] [E]

[A] TYPE
1. Counter
2. Totalizer

[B] ALARM RELAY
0. None
1. 2 Point Alarm relay

[C] Analog OUTPUT (only totalize)
0. None
1. Isolation current output 4~20mADC
2. Etc

[D] POWER
0. AC 110/220 Volt
1. DC 24 Volt
2. Etc

[E] Communication interface
0. None
1. RS-485
2. Etc

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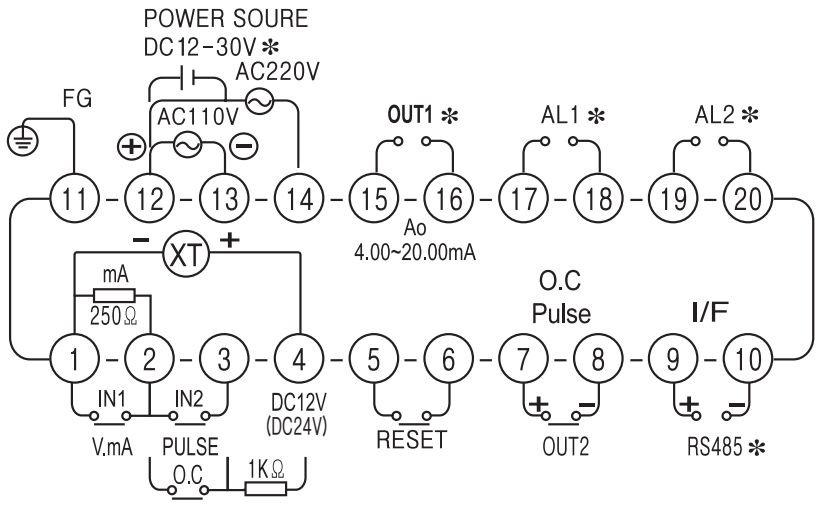
TERMINAL DIAGRAM



DIMENSION & PANEL CUT