

디지털 적산계

TG 4200 - Total Flow and Flow Rate Measuring Instrument

Features

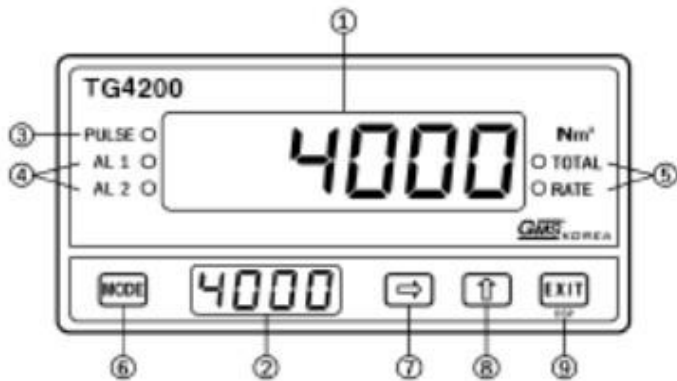
- 10 Digit total integrated & 4 Digit Flow rate display
- Multi-range input (pulse, volt, mA)
- High accuracy 16bit A/D converter
- Built-in Batch function
- RS-485 Communication interface
- 2 points alarm & rate alarm, Batch function and dead band set
- Isolation current output
- Pulse output : Open collect
- Sensor Power supply: 12 VDC (24 VDC as option)



Specifications

Measuring and display cycle	Rate value : 200ms(Volt, mA input)	Alarm(Optional)	Contact output type : Normalopen(standard)
	Total count : 1s(Volt, mA input)		Max switching power : 60W, 125VA
	Pulse input : on basis of frequency		Max switching voltage : DC 220V, AC 250V
Input resistance	Volt, mA input - 1000k Ω		Max switching current : DC 2A, AC
	Pulse input - 1 M Ω		Max Carrying current : DC 3A, AC
Built-in Sensor power	DC 12V(24V option)	Ambient temperature & Humidity	Operation : -10~50 $^{\circ}$ C, 10~90%
			Storage : -20~70 $^{\circ}$ C, 5~95%
Rate accuracy	Linearity : 0.05% FS	Power supply	Voltage : AC 85~265V(45~65Hz)
	Repeatability : 0.1% FS		DC 24V(option)
Totalized function	Data preservation : More than 10 years		Power consumption : Max 4VA
	Max count : 10 Digit		
Pulse output (STD)	Output : Isolation open collect	Communication Interface (option)	Type : RS-485
	Rated voltage : Max DC 50V/50mA		Speed : 4800, 9600, 19200bps
	Max frequency : 5Hz or Less		
Isolation current output		Etc	Weight : 500g
	Rate value(option)		Mounting : Panel mount [96(W) $\times$ 48(H) $\times$ 112(D)mm]
	Current : DC 4.00~20.00mA		

Parts Name



Major Functions

Pulse input

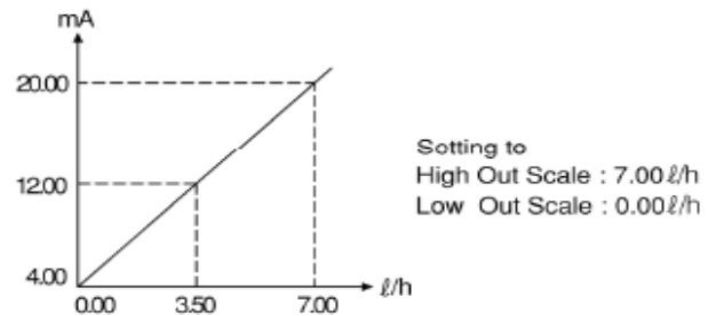
The function counts the input pulse and converts it to rate value. It calculates count factor, rate and time unit.

Ex) When max flow is 100 l/h and output pulse is 50Hz,
 Count factor = $50 \times 3600 / 100 = 180 \text{ pulse/l}$.
 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 4.00~20.00mA output
 value by output scale.

Ex) In case of display value 0.00~7.00 l/h, Output 4.00~20.00mA



Integrator function

mA, Volt, Input

Integrate the rate value after compensating the rate
 time unit and total factor.

Pulse, Input

Integrate after input pulse divided by count factor

Alarm & Batch function

Rate alarm : 2 point

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

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.

Input Type

Sensor Type	Range	Scale	Symbol
mA(V)	4~20mA(1~5V)	0000~9999	mA00
Pulse 1	0~10Hz	0000~9999	mA01
Pulse 2	0.1~100Hz	0000~9999	mA02
Pulse 3	10Hz~1kHz	0000~9999	mA03

Major Functions

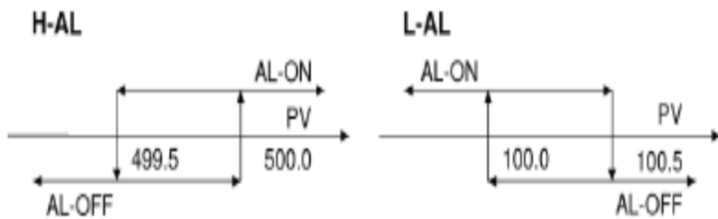
Rate scaling function (Volt, mA only)

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

Programmable Intergrating Totalizer

The high alarm(AL-1) is ON when the present value (PV) is 500.0 or more, and OFF when 499.5 or less.

The low alarm(AL-2) is OFF when the present value (PV) is 100.5 or more, and ON when 100.0 or less.



Count alarm + Rate alarm

Alarm 1 : Over alarm for 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.

2 Count alarm

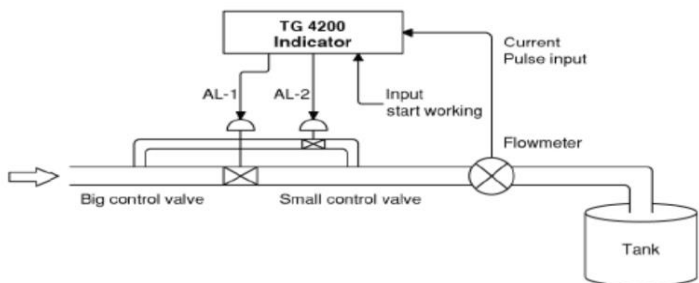
Both Alarm 1 and Alarm 2 are over alarm for reset count value and operated when reset count value is over the setting value. If resetting the reset count, it will become the alarm too.

Batch[Dosage]

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

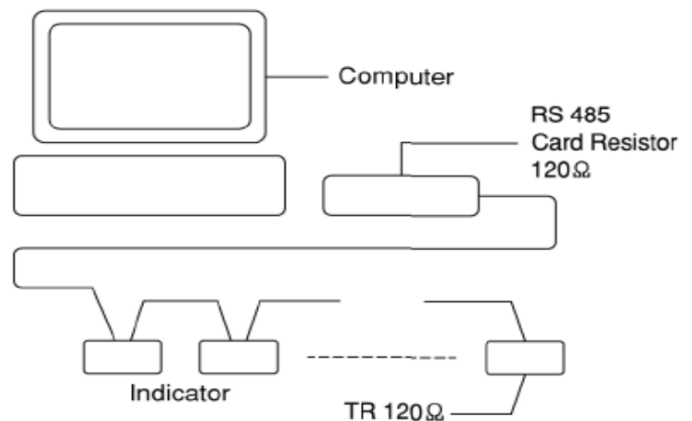
For precise control, it can decrease the value reaches to the target flow.

After setting the batch and hysteresis 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

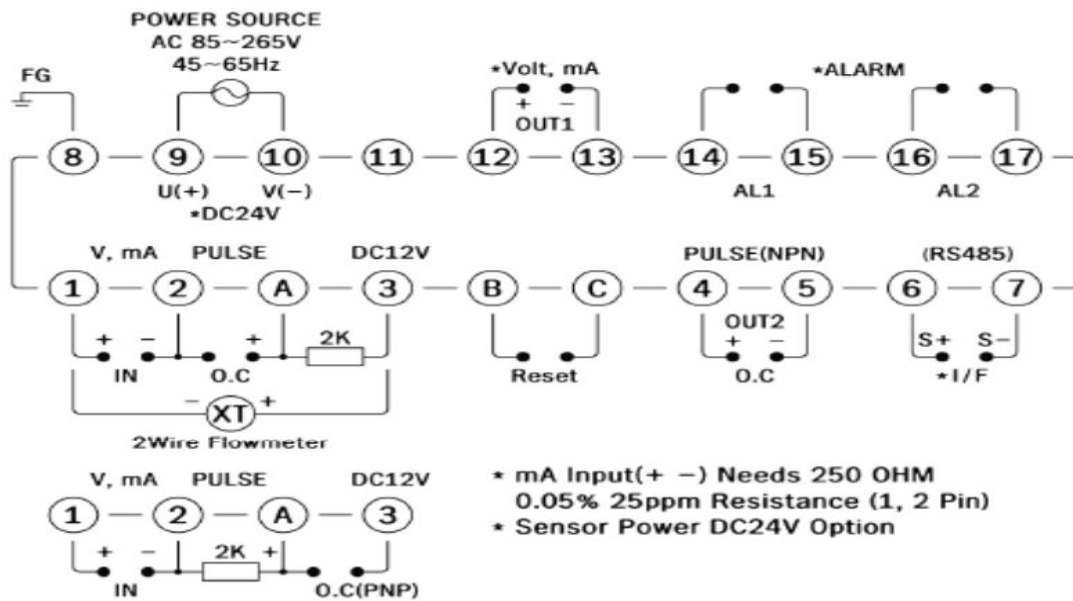
It is possible to communicate with computer and to monitor remote by using RS-485 communication interface.



Ordering Code

Model	Type	Alarm	Output	Power	Interface	Description
TG 4XXX-XX	1					Counter
						Totalizer
	2	0				None
		1				2 Point alarm relay
			0			None
			1			Analog 4 ~ 20mA
			2			etc
				0		AC 85~265V (45~65Hz)
				1		DC 24V
				2		etc
					0	None
					1	RS-485 (BPS 4800)
					2	etc

Electrical Connection



Dimension & Panel CUT

