http: //www.fine-tek.com
PC-06, 2006.09.22

FineTek PC-6340 SERIES

PROGRAMMABLE FLOW METER USER'S MANUAL

Content of the packaging

- Noumenon
- User' s manual
- A screwdriver
- Bracket (2pcs)
- Communications Parameter table (option)

Thank you for please read the User' s manual first before buying Fine-Tek products and using And is familiar with product performance and every function, please keep the user' s manual so that consult in future

Warning!

1. Really lock the end Terminals screw, if the screw has not been locked but lost by causing the fire or mechanical breakdown.
2. Please don't be using this product and having places where we can fire gas, cause the risk of exploding by the fact that it may.
3. The life-span of the relay must depend on the user's usage, the use of the relay must be in specified load and life-span of electric apparatus that it labels, if the use of the relay exceeds its life-span, the danger that may melt or cause the fire in the contact of the relay.
4. Don't disassemble, repair or revise the products without authorization, this measure may cause the short circuit of the electric apparatus, trouble or fire.
5. Don't drop inside products by chip or chip of wire metal, will cause the short circuit and account or fire.

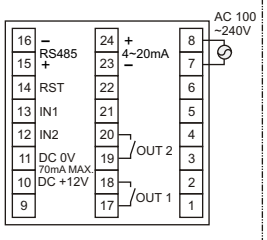
Caution!

Please strictly observe the following instructions, it can guarantee this safe operation in anticipated cases of controller:

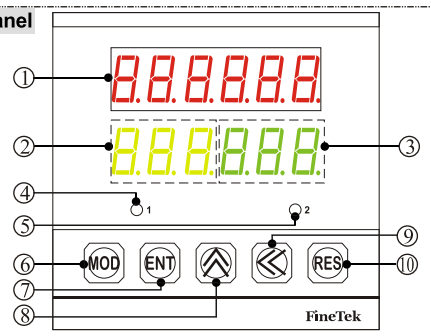
- Use the product within the ratings specified for submerging in water and exposure to oil.
- Do not use the product in locations subject to vibrations or shocks. Using the product in such locations over a long period may result in damage due to stress.
- Do not use the product in locations subject to dust, corrosive gasses, or direct sunlight.
- Separate the input signal devices, input signal cables, and the product from the source of noise or high-tension cables producing noise.
- Separate the product from the source of static electricity when using the product in an environment where a large amount of static electricity is produced (e.g., Forming compounds, powders, of fluid materials being transported by pipe).
- Organic solvents (such as pain thinner), as well as very acidic or basic solutions might damage the outer casing of the Counter.
- Store at the specified temperature. If the Counter has been stored at a temperature of less than -10 C, allow the Counter to stand at room temperature for at least 3 hours before use.
- It is 12VDC 70mA, to supply with the specified value of sensor, please don't exceed its specified load current .

TERMINAL ARRANGEMENT

★ Please inspect the specification of the power.
★ Don't connect the end Terminals not used.
★ Propose that the signal line uses AWG 18~24 to enclose the isolate wire, the main power cable and relay export the contact and use AWG 25~30.



Front Panel



① Total Current value, the indication of function key
Red 7 segment LED display
② Show 4~20mA, pre-set value, each status of function
Green 7 segment LED display
③ Flow Rate value, Pre-set value, each status of function
Green 7 segment LED display
④ Control output 1 indicator (red LED).
⑤ Control output 2 indicator (red LED).
⑥ "MOD" key: used to switch mode and setting items.
⑦ "ENT" key: confirmation.
⑧ Up key: addition and mode change.
⑨ Shift key: position shift.
⑩ "RES" key: counter value and output reset.

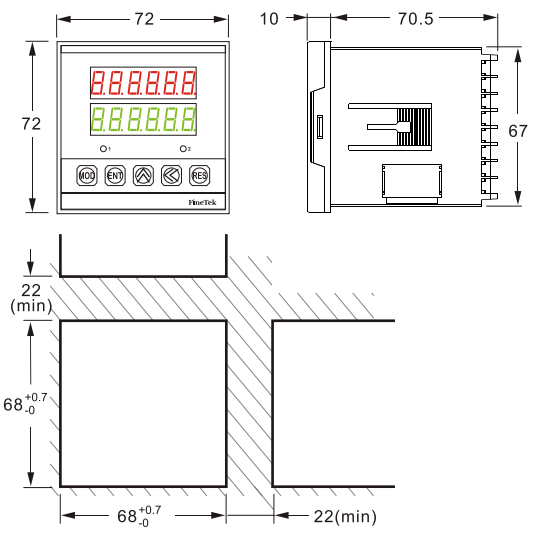
Input Modes

Function	Diagrams	Description
UP	(1) (2) 0 1 2 3 4 5 6	(1) IN1 input (Increment) (2) Display
dn	(1) (2) n n-1 n-2 n-3 n-4 n-5 n-6	(1) IN1 input (Decrement) (2) Display
UPdn	(1) (2) (3) 0 1 2 1 0 0 1 (4) n n-1 n-2 n-1 n n n-1	(1) Input IN1, count in the direction of the cycle (2) Input IN2, count in the opposite direction from the cycle (3) Display (0→P) 2-channel up/down counter (4) Display (P→0) 2-channel up/down counter
UPUP	(1) (2) (3) 0 1 2 3 4 6 7 (4) n n-1 n-2 n-3 n-4 n-6 n-7	(1) Input IN1, count in the direction of the cycle (2) Input IN2, count in the direction of the cycle (3) Display (0→P) 2-channel up/down counter (4) Display (P→0) 2-channel up/down counter

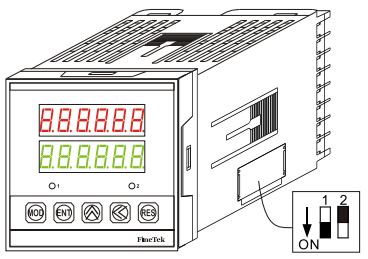
SPECIFICATIONS

Power Supply	100~240VAC 50/60Hz (85%~110% of rated supply voltage range)
Power Supply for sensor	DC12V, 70mA
Power Consumption	Max. 7W
Operating Temperature	0 ~ 55℃
Storage Temperature	-10 ~ 70℃ (20 ~ 85%RH)
Altitude	Max. 2000m
Weight	235 g
Storage environment	Over-voltage category II, pollution degree II (IEC61010-1)
Relay Output	SPST-NOx2, 3A at 250VAC/30VDC
Electrical life	100,000 times
Mechanical life	10000,000 times
Counting Speed	5K cps(with Solid-state input only) ; 30 cps(with contact input)
Memory backup	EEPROM
Communication Interface	RS485 Transmission (option)
Protection	IP65

DIMENSION / PANEL CUTOUT unit: (mm)



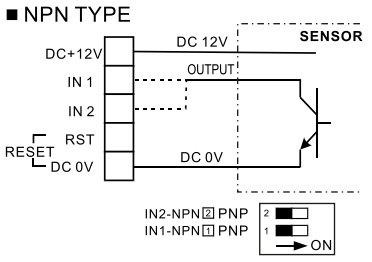
Sensor Connection / Dip Switch Settings



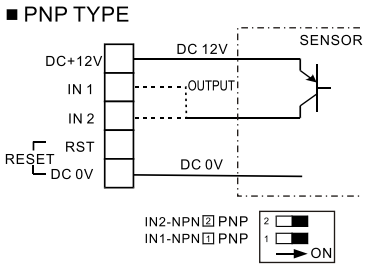
PS: Black rectangle shows the setting of DIP switch

Transistor Input Type

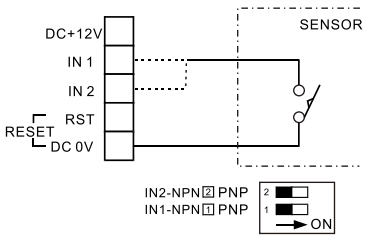
■ NPN TYPE



■ PNP TYPE



Contact Input Type



Program Setting Flowchart

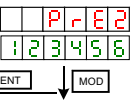
Parameter setting — **Step 1: Initial picture**

Speed value
set rotational speed value 2

ENT / MOD — ct

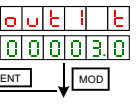
Step 2:

Set value1: (Flow rate set value, unit: liter)
output 1 active if the flow rate is higher than the preset value
The set value 1 corresponds to 4~20mA

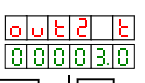


"Shift" key set position shift number,
"Up" key set number value

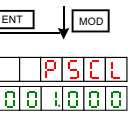
Set value2: (Total flow set value, unit: liter)
When total flow reaches preset value, relay 2 actions



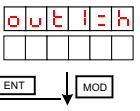
"Shift" key set position shift number,
"Up" key set number value



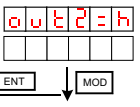
Output 1 Activated time, the decimal point is fixed on the first, the unit is second.
"Shift" key set position shift number,
"UP" key set number value



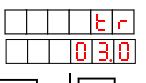
Output 2 Activated time, the decimal point is fixed on the first, the unit is second.
"Shift" key set position shift number,
"UP" key set number value



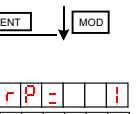
Prescale value setting
the decimal point is fixed on the third
unit:ml/pulse
"shift"key set position shift number
"up"key set number value



out1=h: output 1 need manual reset movements to stop
out1=A: output 1 automatic reset for movement time will depend on out1 t time set .
Pressing "Up" key change this two kinds.

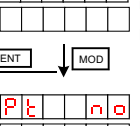


out2=h: output 2 need manual reset movements to stop
out2=A: output 2 automatic reset for movement time will depend on out1 t time set .
Pressing "UP" key change this two kinds.

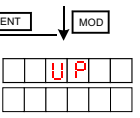


Tr: setting the measurement update time
The measurement begins on a rising edge of the signal to be measured.
.
"Shift" key set position shift number,
"Up" key set number value

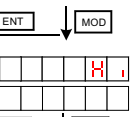
"Shift" key set position shift number,
"UP" key set number value



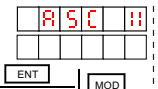
rP=1 (Rotational speed per second)
rP=60 (Rotational speed per minute)
R3600 (Rotational speed per hour)
Pressing "Up" key change this three kinds.



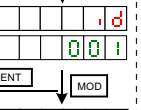
Pt no: no protection
Pt ode: "MOD" key protection.
PtrSt: "Reset" key protection.
PtYES: "MOD" and "RES" key protected.
Pressing "Up" key change this four kinds.
UP (up count of Input Int1),
UPdn (up count of Input Int1, down count of Input Int2),
UPUP (up count of Input Int1 and Int2),



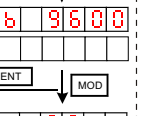
Pressing "Up" key change this five kinds.
Lo: input frequency limited to 30Hz
Hi: input frequency limited to 5KHz.
Pressing "Up" key change this two kinds.



The dotted line show that option RS485
Communication method:
RTU and ASCII two kinds.
Pressing "Up" key change this two kinds.



ID number, setting the range 1~255.



Communication speed:
1200bps, 2400bps, 4800bps,
9600bps, 11520bps, 14400bps,
19200bps, 28800bps, 57600bps.

bit format:
ASCII: C8n1, C8n2, C8o1, C8E1,
C7n2, C7o1, C7E1, C7o2,
C7E2, C9n1
RTU: C8n1 C8n2, C8o1, C8E1

Step 2

The button protecting SET

The button is protected SETTING MOD , RES key protection , MOD +RES key and protected and not protected four kinds.

Protected	*Pt no*	*Pt odE*	*Pt rSt*	*Pt YES*
MOD key	×	○	×	○
RES key	×	×	○	○

- After Setting as "*Ptode*" or "*PtYES*" and push "ENT" key, require a group of passwords

Pt odE
Pt rSt
Pt YES
Pt no

- Pressing "MOD" key, must be Password enter the function, but there is a code suggestion you, (the password that plain code will be input for you adds 1234, forget password is it subtract plain code 1234 the password set for before you to need only), show as follows:

桓達科技股份有限公司
台北縣土城市自強街16號
FINETEK CO., LTD.
No.16, Tzuchiang Street, Tucheng Industrial Park,
Taipei Hsien, Taiwan
TEL : 886-2-22696789
FAX : 886-2-22686682
E-mail: info@fine-tek.com
http://www.fine-tek.com/
Made in Taiwan