5 DIGITAL MICRO-PROCESS PULSE INPUT FLOW METER (24x48mm) with 1 ALARM

KFS-R

■ FEATURES

- Accuracy: ±0.03% F.S.
- High brightness 0.4" LED display: 0~99999; decimal point selectable
- Flow unit selectable: Liter / Gal / C.C. / m^3
- Time unit selectable: sec / min / hour
- K factor programmable for pulse output per liter
- 1 alarm setting (Hi or Lo) programmable
- High stability, non-flammable case (PC), high safety
- CE approval

CE

■ ORDER INFORMATION : KFS - R - Code 1 - Code 2 - Code 3

Code 1	Input Signal	Code 1	Input Signal	Code 1	Input Signal
N5	NPN(5V)	VA	AC 2~60V	VE	DC 24Vp
N2	NPN(12V)	VB	AC 60~600V	CT	Contact
P5	PNP(5V)	VC	Pick-up 50mV~1.5V	O	Option
P2	PNP(12V)	VD	Pick-up 500mV~15V		

Code 2	Aux. Power
A	AC/DC 100~240V
D	AC/DC 22~60V

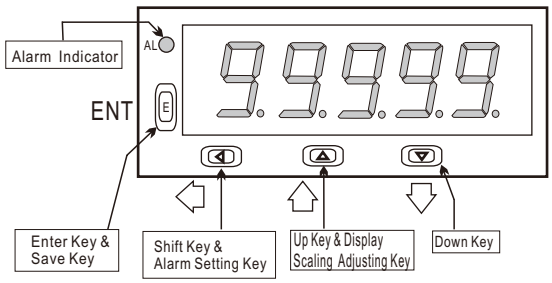
Code 3	Alarm Output
N	None
R1	1 Relay

**1: NPN(5V),PNP(5V) offers excitation power DC5V; NPN(12V),PNP(12V) offers excitation power DC12V for flow sensors using.
2: Please use PNP/NPN(5V/12V) or DC24Vp for DC pulse input.

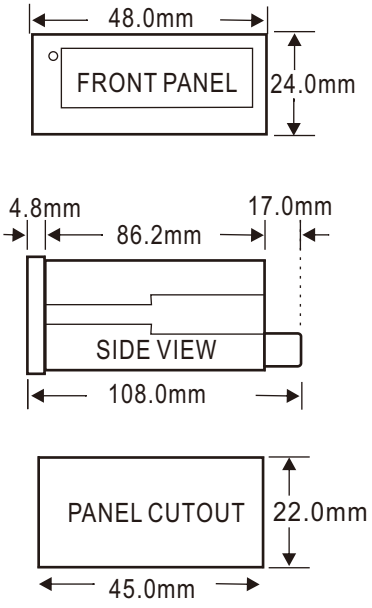
■ SPECIFICATION

♦ Accuracy:	±0.03% F.S.
♦ Display Screen:	High brightness red LED; 10.16mm(0.4")
♦ Max. Input Frequency:	10KHz (50% duty cycle)
♦ Sampling Time:	10 cycles / sec: >10Hz f cycles / sec: <10Hz
♦ Display Range:	0~99999
♦ Over Range Indication:	doFL / ioFL
♦ Parameters Setting:	Push buttons
♦ Back Up Memory:	EEPROM
♦ Diameter Setting Range:	0.0001~9.9999 (M)
♦ Alarm Action:	"≧(Hi) on" or "< (Lo) on"
♦ Alarm Run Delay Time:	0~99 sec
♦ Relay Contact:	AC 277V / 7A; DC 30V / 7A
♦ Temperature Coefficient:	100ppm / ℃ (0~60℃)
♦ Operating Temperature:	0~60℃
♦ Operating Humidity:	20~90% RH (non-condensing)
♦ Storage Temperature:	-10~70℃
♦ Storage Humidity:	20~90% RH (non-condensing)
♦ Power Supply:	AC/DC 100~240V; AC/DC 22~60V
♦ Power Consumption:	4.5VA
♦ Surge Test:	2KVac / 1min (Input / Power)

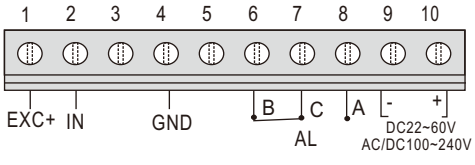
■ FRONT PANEL & KEY FUNCTIONS



■ DIMENSION

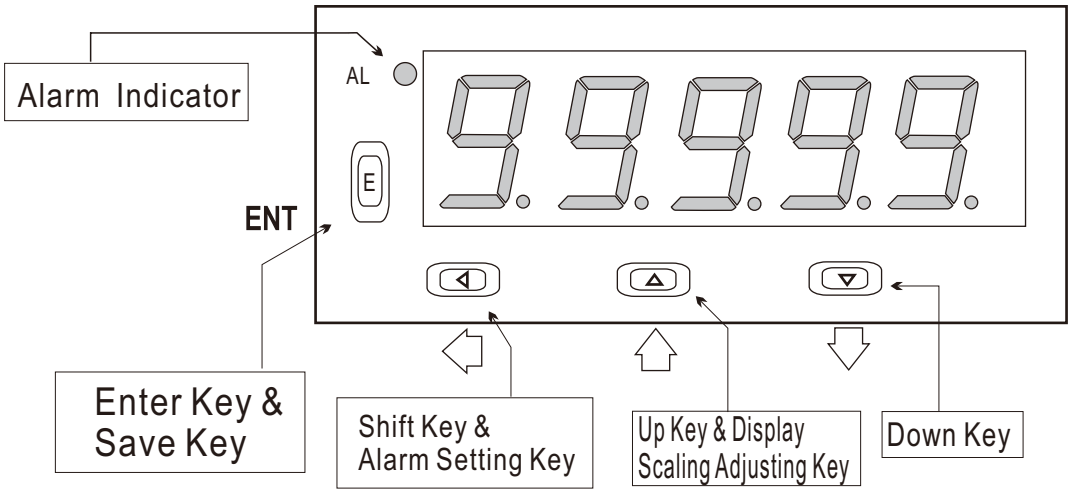


■ WIRING CONNECTION



✻ Please understand key indicators & functions at the first operation.

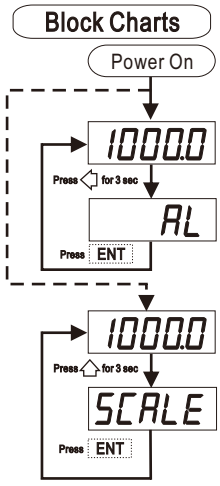
FRONT PANEL & KEY FUNCTIONS



Key Name	Symbol	Descriptions
Enter Key & Save Key	ENT	1. In the measuring status, press this key can enter to parameter pages. 2. In the parameter setting, press this key can save the value & go to next parameter.
Shift Key & Alarm Setting Key	◁	1. In the measuring status, press this key for 3 sec can enter to alarm setting page. (The selecting digit will be flashed) 2. In the parameter setting , press this key can move the cursor left.
Up Key & Display Scaling Adjusting Key	△	1.In the measuring status, press this key for 3 sec can enter to display scaling adjustment. 2. In the parameter setting, press this key can increase the digits.
Down Key	▽	1. In the parameter setting , press this key can decrease the digits.

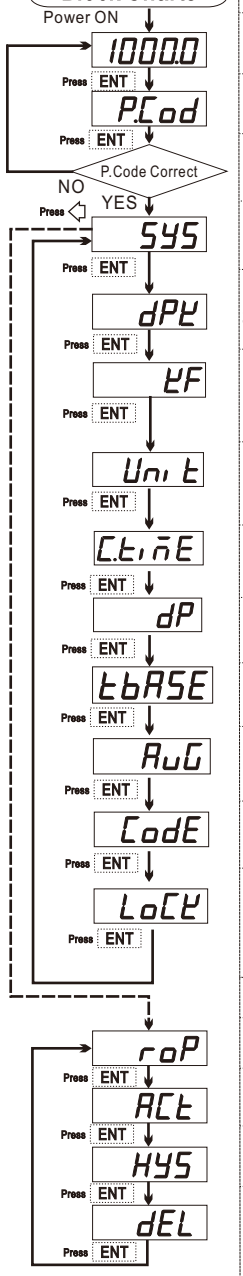
**1. The following block charts are parameters codes, parameter codes & parameters will alternate flashing if the parameters can be modified.
2. To modify the parameters, please press◁△▽, and press **ENT** to save the parameters after the modification.
3. Please don't forget the new pass code after modification.
4. In any pages, press△ &▽, or don't press any keys for 2 minutes that will back to measuring status.

GENERAL MODE OPERATING PROCEDURES



Display	Descriptions	Default
	Alarm Setpoint	
Measuring Status	Present value for measurement.	
Alarm Setpoint (AL)	Press◁△▽ to modify alarm setpoint.	00000
	Scaling Adjustment	
Measuring Status	Present value for measurement.	
Scale Coefficient Adjustment (SCALE)	Press◁△▽ to modify scale coefficient 2 (0.0001 ~9.9999).	10000

PROGRAMMING MODE OPERATING PROCEDURES

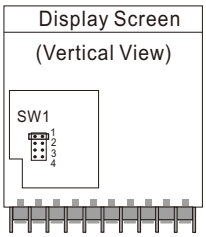


Display	Descriptions	Default
Measuring Status	Present value for measurement.	
Pass Code (P.Cod)	Press ◁ △ ▽ to enter pass code.	00000
	Pass code is correct that will enter to parameter groups. Pass code is wrong that will back to measuring status.	
System Setting Page (SYS)	Press ◁ to select system setting group (SYS) or alarm setting group (roP)	
K Factor Decimal Point Setting (dPK)	Press ◁ △ ▽ to select K factor decimal point (0, 1, 2, 3, 4) EX: if the value shows "0.00" that means the decimal point is 2 digits.	0
K Factor Setting (tYPE)	Press △ ▽ to modify K factor (0~99999).	1000
Flow Unit Setting (Unit)	Press △ ▽ to modify the unit (Liter, Gal, C.C., m^3).	LitEr
Time Parameter Setting (C.tiME)	Press △ ▽ to modify time parameter (sec / min / hour).	SEC
Decimal Point Setting (dP)	Press ◁ △ ▽ to select decimal point (0, 1, 2, 3, 4). EX: if the value shows "0.00" that means the decimal point is 2 digits.	Customers specify
Sampling Time Base (tbASE)	Press ◁ △ ▽ to modify sampling time base (0.1~999.9 sec).	0000.1
Display Average Setting (AvG)	Press ◁ △ ▽ to modify display average (1~99). PS: Please use this function for stable display value when input signal is unstable.	00005
Pass Code Setting (CodE)	Press ◁ △ ▽ to modify pass code (0~19999). PS: Please don't forget the new pass code after modification.	00000
Key Lock Setting (LoCK)	Press △ ▽ to lock the keys, using key lock function only can view the parameters, but cannot modify any values.PS: no (unlock) ,YES ("ENT" unlock , others lock).	no
	Alarm Setting Group Procedures	
Alarm Setting Page (roP)	**The following steps are not available for alarm output.**	
Alarm Action Setting (ACt)	Press △ ▽ to modify alarm value that is ≧(Hi) or <(Lo) for alarm action.	Hi
Alarm Hysteresis Setting (HYS)	Press ◁ △ ▽ to modify the value, when alarm runs lower or higher display value (depends on alarm action) Alarm setpoint ± this value(0~999) will turn off the alarm.	00000
Alarm Run Delay Setting (dEL)	Press ◁ △ ▽ to modify the value, when the display value reach the alarm value that need to wait for this time (0~99 sec) for alarm action.	00000

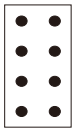
Error Code of Self-Diagnosis

Display	Descriptions	Remark
iaFL	Input signal is over input range (0~100KHz).	**Please check the wiring connection is correct first, if the problem still exist, please return the meter to the factory.
daFL	Input signal is over display range (99999).	
E-00	EEPROM reading/writing suffers the interference (about 1 million times).	

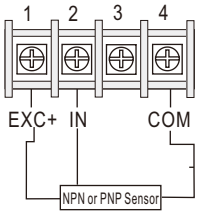
Input Signal Modification



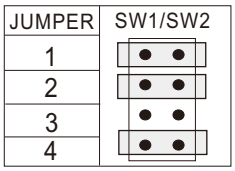
**To Select the pin to modify the input signal for different sensors.
PS: In dual input type, excitation power must be the same.

SW1/SW2	JUMPER	DEFINITION
	1	Open: 12V; Close: 5V
	2	Open: 10KHz; Close: 400Hz
	3	Open: NPN; Close: PNP
	4	Open: PNP; Close: NPN

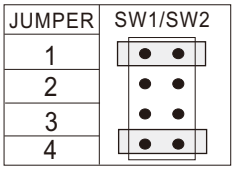
**Connection:



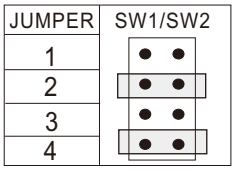
NPN (5V): 0~400 Hz



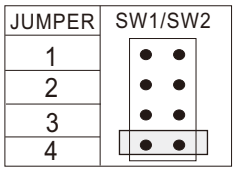
NPN (5V): 0~10 KHz



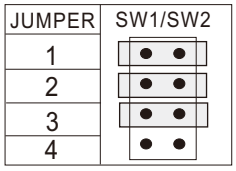
NPN (12V): 0~400 Hz



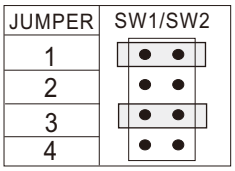
NPN (12V): 0~10 KHz



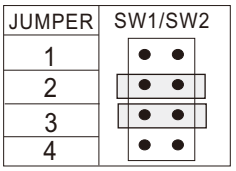
PNP (5V): 0~400 Hz



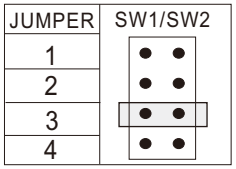
PNP (5V): 0~10 KHz



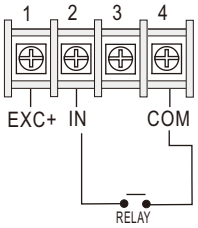
PNP (12V): 0~400 Hz



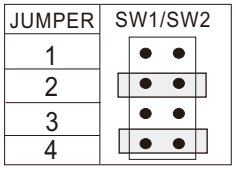
PNP (12V): 0~10 KHz



**Connection:



Relay Contact: NPN 0~400 Hz



**For relay input type, please select NPN 0~ 400 Hz.