

Electronic Counter

Type : KDC-811

Specification Sheet

Azbil Kimmon Co., Ltd.

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Document No.

KM-KDC-811-010

Rev

3

1. Outline

Electronic counter KDC-811 is a device for displaying integrated value when it receives pulse from gas or water meter.

Furthermore it can output pulse and 8 bit telegram to measure or display the value in other external device.

2. Specifications

Type	KDC-811
Number of Inputs	2 (Input1, Input2)
Input Mode	Choose from the followings at the time of shipment from factory or dedicated setting device. (Bold : Standard) ① Adding mode (Adding input 1 and input2) ***** Standard ② Deleting and Adding mode (Input1: Adding, Input 2 : Deleting)
Input signal	No-voltage contact, Open collector, Open drain
Input pulse width	Choose from the followings at the time of shipment from factory or dedicated setting device. (Bold : Standard) ① ON time: Over 80msec, OFF time: Over 80msec ② ON time: Over 200msec, OFF time: Over 200msec ***** Standard
Input frequency	1Hz Max ※1
Input detection	DC3V/300μA ON detection: Under 200Ω / Under 0.5V OFF detection: Over 200kΩ / Over 2.5V
Input pulse rate	Input pulse rate can be set from the following range by decimal points. In the case of decimal points 8: 1~99999 In the case of decimal points 7: 0.1~9999.9 In the case of decimal points 6: 0.01~999.99 In the case of decimal points 5: 0.001~99.999 In the case of decimal points 4: 0.0001~9.9999
Output signal	Pulse output: Open drain output ※No pulse output when deleting and adding mode. Allowable voltage DC24V max Allowable current DC10mA max
Output pulse rate	Output pulse rate can be set from the following range by decimal points unless output pulse rate is smaller than input pulse rate. In the case of decimal points 8: 1~99999 In the case of decimal points 7: 0.1~9999.9 In the case of decimal points 6: 0.01~999.99 In the case of decimal points 5: 0.001~99.999 In the case of decimal points 4: 0.0001~9.9999
Output pulse width	Choose from the followings at the time of shipment from factory or dedicated setting device. (Bold : Standard) ① Over 200msec ***** Standard ② Over 500msec
Communication	8 bit telegram communication

Digit of display	LCD 8 Digits (Not display the decimal, Display decimals by lower case) Alignment the decimal point position In the case of decimal points 8: ○○○○○○○○ In the case of decimal points 7: ○○○○○○○○. ○ In the case of decimal points 6: ○○○○○○. ○○ In the case of decimal points 5: ○○○○○. ○○○ In the case of decimal points 4: ○○○○. ○○○○
Display item	<ul style="list-style-type: none"> ▪ Total integrated value (without indicating the decimal point, with small digits as a value after the decimal point) ▪ m³ ▪ Input pulse ▪ Run out of battery ▪ Deleting and adding mode
Electric power source	Internal lithium battery 10 years (Battery cannot be replaced.)
Operating environment	−20°C ~ 60°C (No condensation)
Transmission distance	Max 200m (Between meter and electronic counter)
External dimensions	137.5 × 98 × 36.5mm (Ref. Outside drawings)
Case	Material ACS Plastic
Weight	Approximately 250g
Installation place	Outside (Drip-proof structure, equivalent to IP × 3) or Inside (Non-explosion proof place)
Others	<p>Setting by terminal block</p> <ul style="list-style-type: none"> ▪ Decimal Point ▪ Total integrated value ▪ Input pulse rate ▪ Output pulse rate <p>Setting contents at the time of shipment from factory or dedicated by setting device in addition to those mentioned above.</p> <ul style="list-style-type: none"> ▪ Input mode ▪ Input pulse width ▪ Output pulse width ▪ m³ display ▪ Zero suppress ▪ 8 bit telegraphic code ▪ Date and time <p>Reset integrated value</p> <ul style="list-style-type: none"> ▪ Reset integrated value by magnet (0 Reset)

※1: Maximum 7 Hz when input pulse rate is set at “①Over ON time 80msec”.

※2: Maximum 125 pulse rate are stored in buffer functions when input pulse rate is set at “①Over ON time 80msec” although the pulse output might not be synchronized depending on a pulse input frequency.

※3: It is only in the under conditions. There is no guarantee for operating 10 years.

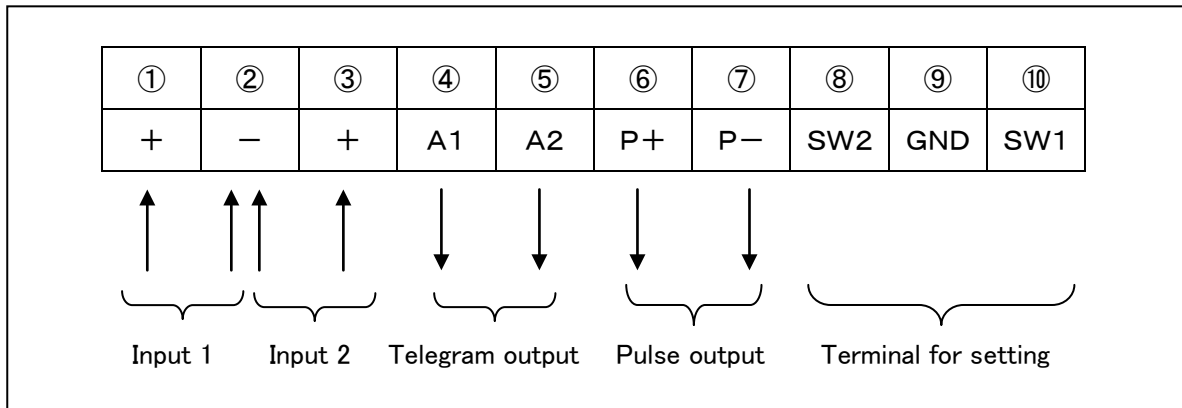
- Pulse input Each total Under 1,800 pulse/hour
- 8 bit telegraph communication 1 time/day

※4: It is only in the under conditions.

- Use the cable over 0.5mm²
- Maximum 20m when input pulse width is “①Over ON time 80msec”.

3. Terminal layout

3-1. Terminal layout



Caution) When input signal have a polar character, terminal block② is a common terminal of input 1 and 2.
 P+ is (+)side and P- is (-)side because pulse output have a polar character.

3-2. Connection line

•Connected 1 meter with two wire

(Example 1) GA type water meter (Using two wire)

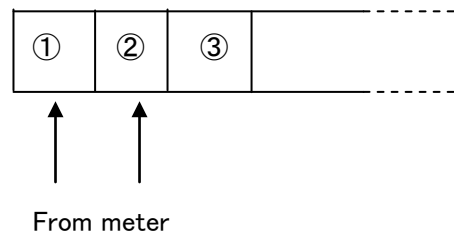
①Terminal ... White, ②Terminal ... Black

(Example 2) Electromagnetic water meter

①Terminal ... Red, ②Terminal ... Green

(Example 3)NDS type Gas meter (Using two wire)

①Terminal ... Red, ②Terminal ... Black



•Connected 2 meter with two wire

(Example 1) GA type water meter (Using two wire)

①Terminal ... White, ②Terminal ... Black

②Terminal ... Black, ③Terminal ... White

(Example 2) Electromagnetic water meter

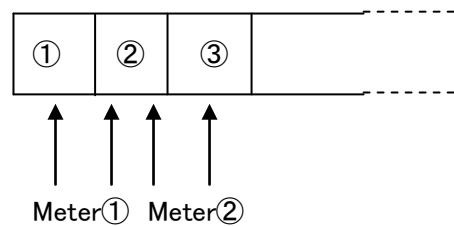
①Terminal ... Red, ②Terminal ... Green

②Terminal ... Green, ③Terminal ... Red

(Example 3)NDS type Gas meter (Using two wire)

①Terminal ... Red, ②Terminal ... Black

②Terminal ... Black, ③Terminal ... Red

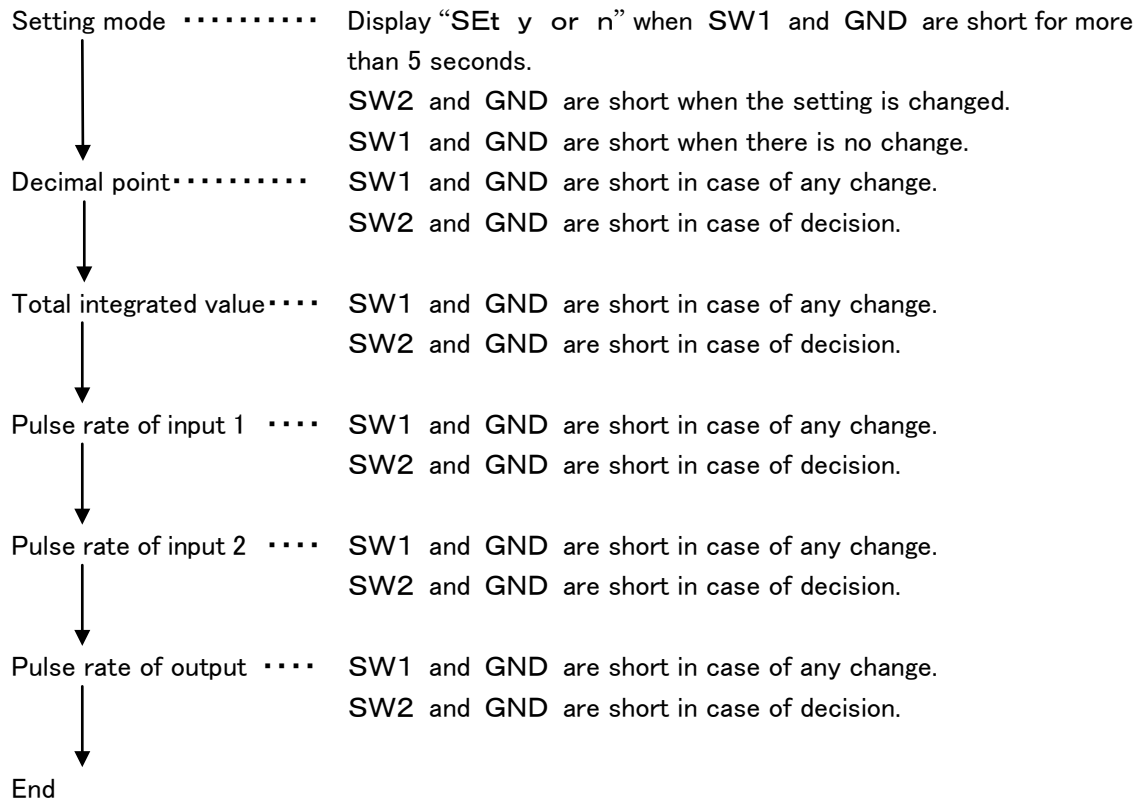


4. Setting

4-1. Setting method

Various settings of electronic counter are configured by the electronic counter itself (note that items which can be set are limited) or the dedicated setting device (Windows software).

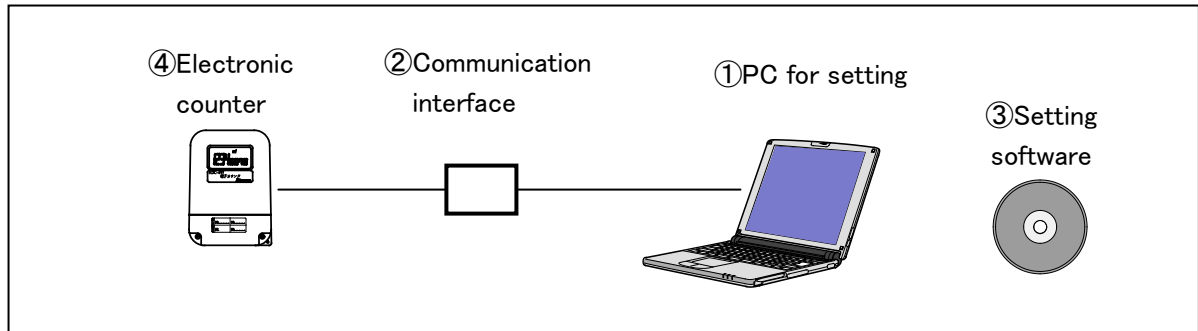
Please set in the following procedure when it is set by electronic counter itself.



Dedicated setting device consists of PC, communication interface and setting communication soft.

• Configuration

※Setting soft and communication interface are options.



• Necessary equipment

- ① PC: COM port[※] and AT compatible machine with CD drive (DOS/V)
 - C P U ... Not less than Pentium III
 - O S ... Microsoft Windows 2000/XP
 - Memory ... Not less than 128MByte
 - H D ... Amount of space more than 100MByte
- ② Communication interface
- ③ Communication soft for setting electronic counter
- ④ Electronic counter itself

※It is possible to connect by setting serial conversion connector if PC is not equipped with COM port.

(Note that it does not guarantee the performance because it is possible that system environment will effect on it.)

4-2. Setting items

①Settable items by electronic counter and setting device

Setting item	Settings	Default value
Decimal point	4~8	8
Total integrated value	8 digit accuracy (No decimal point display, Figure after decimal point is lower case letter.) Alignment the decimal point position. Decimal points 8: 00000000~99999999 Decimal points 7: 0000000. 0~9999999. 9 Decimal points 6: 000000. 00~999999. 99 Decimal points 5: 000000. 000~99999. 999 Decimal points 4: 00000. 0000~9999. 9999	00000000
Pulse rate of input1	5 digit accuracy (No decimal point display, Figure after decimal point is lower case letter.) Alignment the decimal point position Decimal points 8: 00001~99999 Decimal points 7: 0000. 1~9999. 9 Decimal points 6: 000. 01~999. 99 Decimal points 5: 00. 001~99. 999 Decimal points 4: 0. 0001~9. 9999	00001
Pulse rate input2	5 digit accuracy (No decimal point display, Figure after decimal point is lower case letter.) Alignment the decimal point position Decimal points 8: 00001~99999 Decimal points 7: 0000. 1~9999. 9 Decimal points 6: 000. 01~999. 99 Decimal points 5: 00. 001~99. 999 Decimal points 4: 0. 0001~9. 9999	00001
Pulse rate of output	5 digit accuracy (No decimal point display, Figure after decimal point is lower case letter.) Alignment the decimal point position Decimal points 8: 00001~99999 Decimal points 7: 0000. 1~9999. 9 Decimal points 6: 000. 01~999. 99 Decimal points 5: 00. 001~99. 999 Decimal points 4: 0. 0001~9. 9999	00001

②Settable items by dedicated setting device

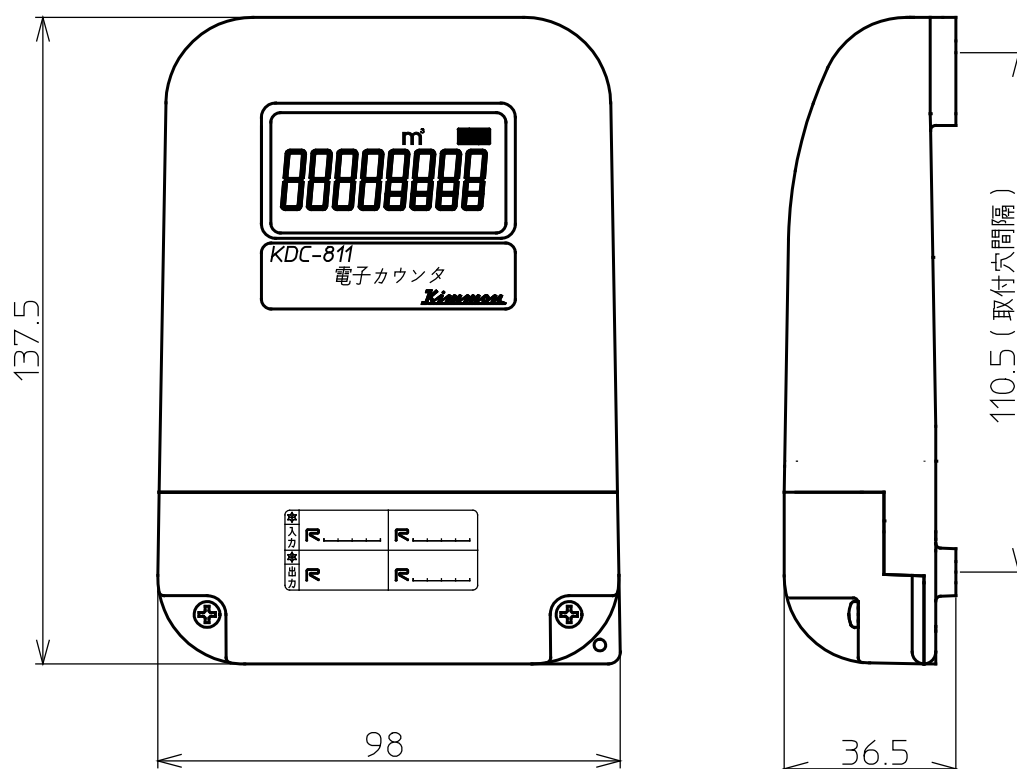
Setting item	Settings	Default value
Date and time	From 2000/01/01 00:00 to 2099/12/31/ 23:59	Current date and time
ID	0000000000000000~9999999999999999	00000000000000
Zero Suppress	Yes or No	No
Input pulse width	80msec、200msec	200msec
Output pulse width	200msec、500msec	200msec
Entity code	W9、M1、W1、W2、H1、C1、T1、G2、G3、G5	G2
m ³ Display	Yes or No	Yes
Input mode	Add mode (Add input 1 and input 2), Subtract mode (Input 2 is subtraction)	Add

4-3. Clearing integrated value

Clear (Reset to 0) integrated value of electronic counter.

- It becomes reset mode when magnet is touched on the reset switch of counter for more than 5 seconds. (As regards reset switch, please refer to “Instruction manual 2. Name of parts”. Reset switch is invisible from outside.)
- Liquid display will be shown “CLEAR” on the counter and integrated value will be reset to 0.
- Please do not touch with the magnet while at the reset mode because integrated value will be reset automatically.
- Only integrated value will be reset.

5. External view



6. Term of warranty

The warranty term of our product is one year after shipment. Products will be repaired free of charge if there is a failure due to the problem about manufacturing occurring within the warranty period with normal use.

7. Disclaimer

- We shall not be liable for failure that arose from fire, earthquake, actions taken by third party, accidents arising from an intentional act or the gross negligence, misuse, and damage caused by the operation under the abnormal conditions.
- We shall not be liable for damage caused by second incident due to the failure of supplies.
- We shall not be liable for damage caused by usage which is not explained in the instruction manual.
- We shall not be liable for damage caused by malfunction due to the connection of software and our uninvolved equipments.

※ Please note that specifications are subject to change without notice.