

## RF Split Type IT Prepayment Gas Meter

LAISON Split Type RF STS Prepayment gas Meter System (Hereafter referred as RF STS gas Meter) consists of smart gas meter and separate keypad, which is defined as Customer Interface Unit (CIU).

By adopting Radio Frequency Communication Technology, Smart gas Meter could communicate with CIU conveniently to realize remote meter recharge, parameter inquiry etc. functions; which provides comprehensive, reliable, advanced smart prepayment solutions to gas utilities & authorities.

Moreover, Automatic Meter Reading with/without valve control (AMR/AMI) function is also available, which could realize remote meter data collection & monitor; It is compatible with all kinds of Laison gas meter, which comply with OIMLR49, ISO4064. and conforms to STS standard protocol.



## 1. Meter Recharge

- 1) Get a 20-digits token after purchasing gas.
- 2) Hold any number key on CIU for at least 2 seconds to wake it up, Please do not release it until the LCD shows "LaisonTech System Initial..."
- 3) Input the 20-digits token successively on CIU; In the meantime, LCD will display the numbers being input and on the right corner, it indicates current number of digits.

## 2. Meter's Parameter Setting

### 2.1 Alarm Value

Insufficient gas Warning Function is optional in RF STS gas Meter.

By inputting corresponding token, alarm value can be set.

When remaining gas in meter reaches this value, buzzer will beep and LCD show UN01 to remind customers to recharge meter in time; Valve can be opened again by inputting inquiry token "12 + Enter Key" or 20-digits Clear Event Token provided by Authority Operator,

### 2.2 Overdraft Value

Overdraft function is optional in RF STS gas Meter.

By inputting corresponding token, Overdraft value can be set.

When remaining gas in meter becomes 0, customers could open valve to enter into overdraft function by inputting inquiry token "12 + Enter Key" or 20-digits Clear Event Token provided by Authority Operator

### 2.3 Clear Event State

In order to prevent external tamper to meter, Meter's valve will be closed automatically when following events happen

- 1) Meter's cover open illegally
- 2) Magnetic Interference
- 3) Insufficient battery voltage
- 4) Meter Restart

Customers could open valve again if remaining gas in meter > 0 by inputting inquiry token "12 + Enter Key" or 20-digits Clear Event Token provided by Authority Operator;

### 2.4 Meter Reset

All the customer information in meter including Purchased Volume, Consumed Volume, Meter Event Records etc. will be cleared if 20 digits Meter Reset Token is input; By which operation, it will make meter back to Factory Mode.

Also, it will reset the Encryption key of meter, which means the tokens produced before are no longer valid.

### 2.5 Parameter Inquiry

Customers could input a 2 digits inquiry token to check detail information in meter.

The inquiry operation is similar to recharge which just needs to input 2-digits rather than 20-digits token.

# JOYQ-3 STS Keypad Prepaid Gas Meter



## JOYQ-3 STS KEYPAD PREPAID GAS METER

JOYQ-3 STS Keypad Prepaid Gas Meter is a unique residential gas meter designed to accurately measure volumes of natural gas, town gas, liquefied petroleum gas etc. Its stringent components meets highest demand in global market. Its credit is recharged via a 20-digit token generated by self-developed vending management system. The core concept of engineering aims at more effective control in gas use via motorized valves and fulfill the objective on cost budget by residents themselves.

### FEATURES:

- Proprietary encryption
- Easy to install and low installation cost
- Keypad with text feedback
- Low credit warning
- Low battery detection and warning
- Advanced tamper detection

### POWER SUPPLY

- 3.6V Lithium Battery of 6 years' lifespan

### AVERAGE STATIC ELECTRIC CURRENT CONSUMPTION

- Less than 20 $\mu$ A

### PROTECTION

- Theft Protection
- Cover open detection and magnetic interference
- Low Battery Alarm
- Anti Gas Hoarding
- Valve Leakage Disposal

### DISCONNECTION DEVICE

- Motor Valve

### DISPLAY

- Current balance, last charged credits, short codes ---supported for more displays.

## MEASUREMENT ACCURACY

- Class B

## SURROUNDING TEMPERATURE

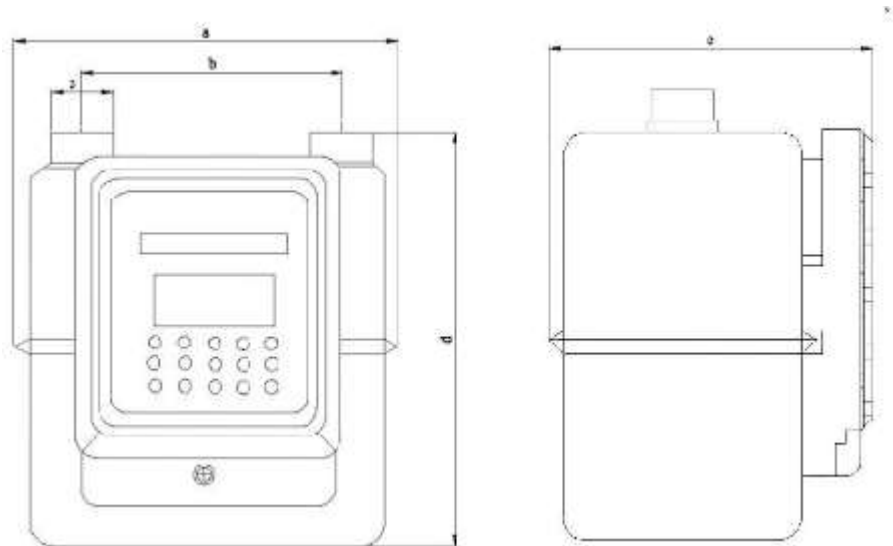
- -10°C.....50°C

## MATERIAL OF METER BODY

- Superb Steel with special surface treatment

## STANDARD COMPLIANT

- OIML R31:1995
- IEC62055-41



| Model No.              | JOYQ-3-1.6   | JOYQ-3-2.5 | JOYQ-3-4 |
|------------------------|--|------------|----------|
| Nominal Flow Rate m³/h | 1.6  | 2.5        | 4        |
| Maximum Flow Rate m³/h | 2.5  | 4          | 6        |
| Minimum Flow Rate m³/h | 0.016  | 0.025      | 0.040    |
| Working Pressure kPa   | 20   |            |          |
| Basic Error %          | Qmin≤Q≤0.1Qmax: ±3; 0.1Qmin≤Q≤0.1Qmax: ±1.5            |            |          |
| Leak-Provenance kPa    | No leakage below 15kPa                                 |            |          |
| Pressure Loss Pa       | ≤250   |            |          |
| Maximum Reading m³     | 99999.999(mechanical part), 9999999.9(electronic part) |            |          |
| Minimum Reading m³     | 0.001(Register)/0.01(LCD)                              |            |          |
| Working Temperature    | -10°C...+50°C  |            |          |

| SPECIFICATION & DIMENSIONS |       |       |       |
|----------------------------|-------|-------|-------|
| Item (mm)                  | G 1.6 | G 2.5 | G 4   |
| d                          | 168   | 200   | 200   |
| b                          | 130   | 130   | 130   |
| c                          | M30   | M30   | M30   |
| d                          | 215   | 230   | 230   |
| e                          | 115   | 170.5 | 170.5 |
| Weight (kg)                | 1.6   | 2.3   | 2.3   |