
FLOW CONTROL INDICATOR DG-100



Technical Manual

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Overview

Basic Feature

This product receives a pulse signal or coil type analog signal or analog(4~20mA) signal to display the flow rate, total flow amount, accumulate total flow amount.

Also, can receive input from the voltage pulse, current pulse, or O.C pulse.

The output function is equipped with Analog (4-20 mA) output, O.C pulse output, Relay output, RS485 and RS232C communication, which allow for free connection to external devices.

The relay signal output allows control of total flow amount and instantaneous flow rate according to the user's set range.

The user's convenience has been maximized by indicate / displaying the flow rate and total flow amount at the same time.

Product Specifications

General Specifications

Display	2 Line LCD Display
Input Power	AC 100~240V / DC12V
Output Power	DC12V
Operating Temperature	0 °C ~ 50 °C
Input Signal	V, O.C, PA Pulse, 4~20mA, Coil Sensor
External Communications	RS485, RS232C

Input Signal Specifications

Pulse Input	0.2Hz ~ 5kHz
Pulse Input Voltage	Voltage Pulse : 2 V ~ 24V Electric Current Pulse : 0mA ~ 25mA
4~20mA Input	0mA ~ 25mA
Meter Factor	0.0000001 ~ 99.9999999

Pulse Output Signal

Type	O.C Type Pulse
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Relay Output Signal

Maximum Power 250VAC, 30VDC

Current 5A (MAX)

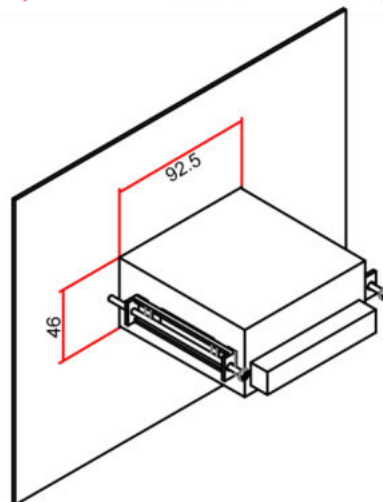
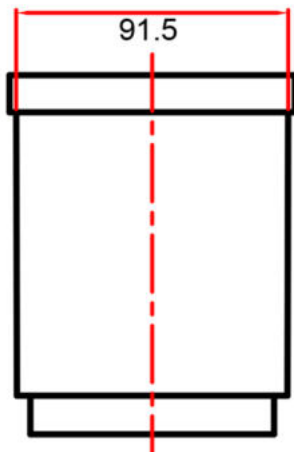
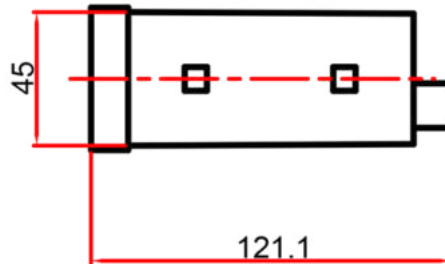
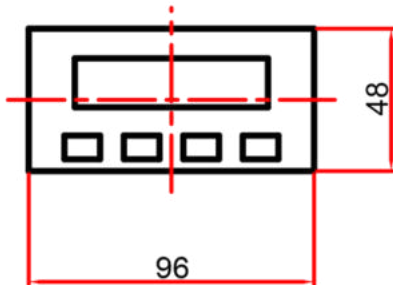
Use High, Low Signal

4~20mA Output Signal

Type Source Type

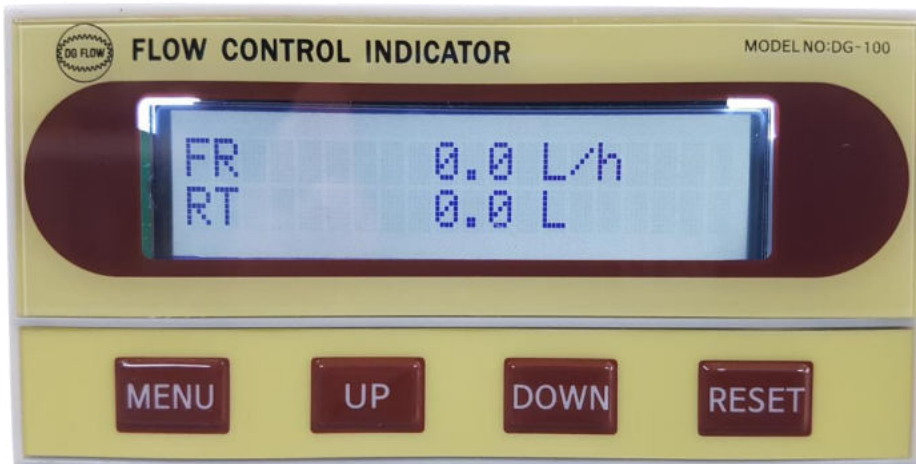
Output Limit 4 mA ~ 20mA

Dimensions



Technical Sheet

1) Front



Button

Function



Display – Rate, Total Value

MENU

Menu, Next

UP

Up

DOWN

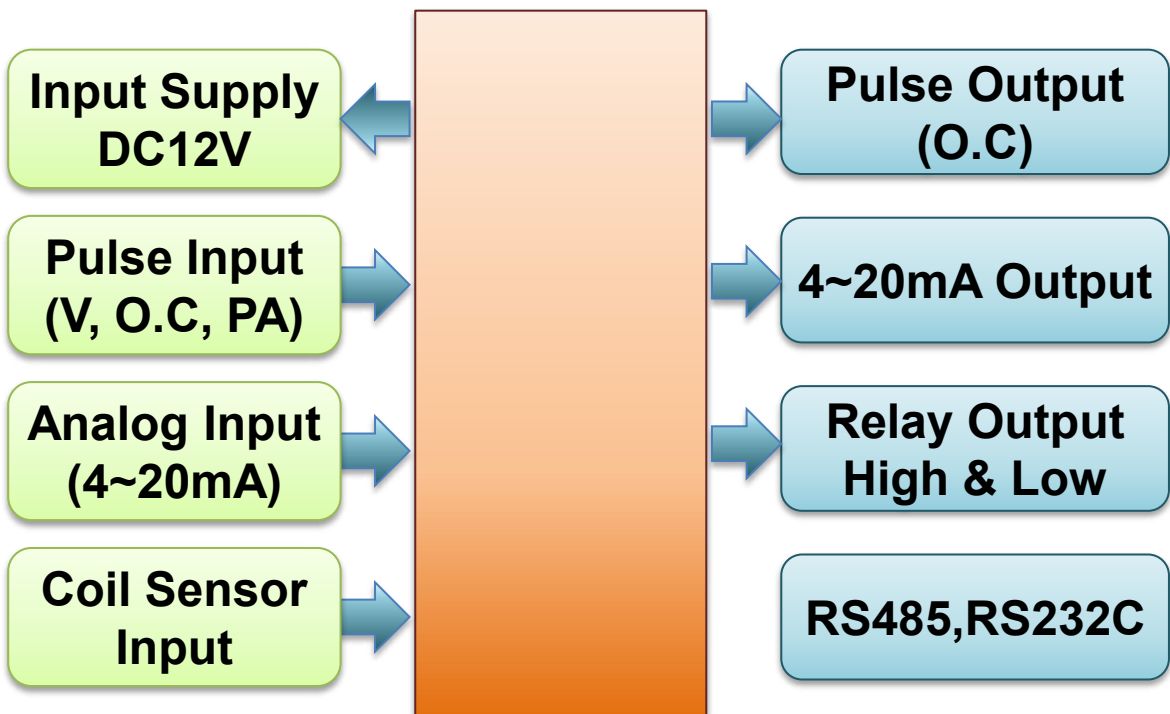
Down

RESET

Reset , Enter

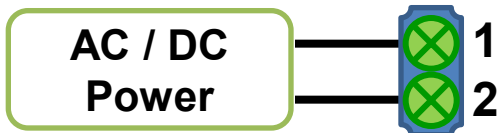
2) Software

2 Line LCD
(Flow Rate, Flow Total)

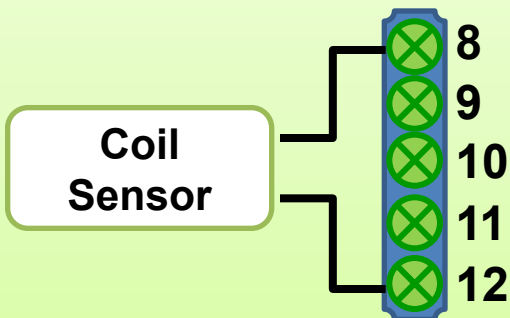
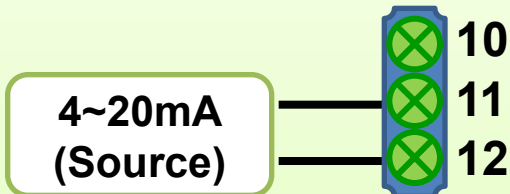


3) Connector Terminal

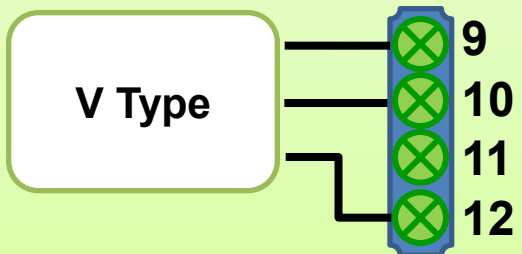
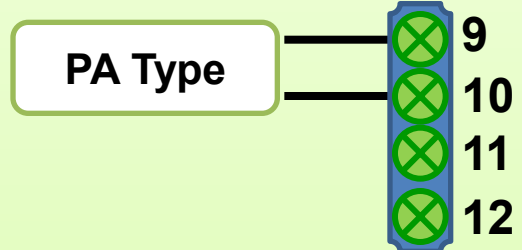
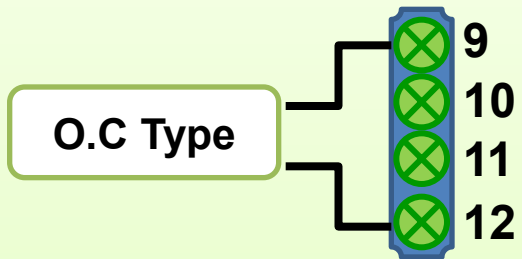
POWER AC220V		OUTPUT Com L H			COMM. A+,RXD B-,TXD		COIL SENSOR INPUT	PULSE INPUT	DC+ DC12V	4~20mA INPUT	GND GND	PULSE OUTPUT	GND GND	4~20mA OUTPUT + -	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



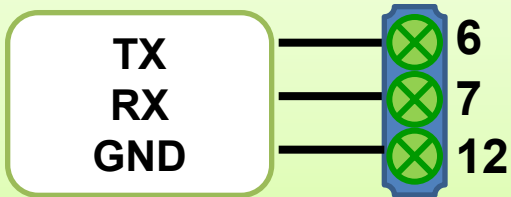
Analog Input Type



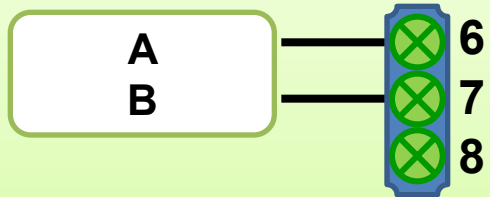
Pulse Input Type



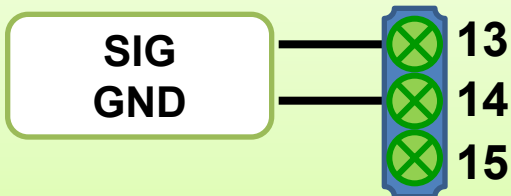
RS232 Connector
(SW1, J8-232)



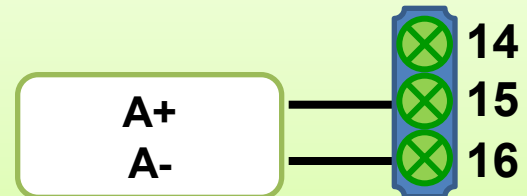
RS485 Connector
(SW1, J8-485)



O.C Pulse Output Connector



4~20mA Output Connector



Operating & Setting

1) Operating

FR 1234567.8 L/h
RT 1234567.8 L

FR 1234567.8 L/h
AT 1234567.8 L

FR 1234567.8 m³/h
RT 1234567.8 m³

FR 1234567.8 m³/h
AT 1234567.8 m³

Rate & Reset Total

Rate & Accumulate Total

MENU

Press 'MENU' button 5 seconds.

RESET

Press 'RESET' : Total flow zero setting.

2) Setting Manual

MENU

Press 'MENU' button 6 seconds.

MENU

'MENU' button to next screen.

**SETUP
MODEL**

Manufactured date, Version

**SETUP
DISPLAY**

Unit, Decimal Point, Unit Time Setting

**SETUP
INPUT**

Meter Factor, Span, Cutoff Setting

**SETUP
OUTPUT**

Pulse Out, Relay, Communicate Setting

**SETUP
TEST**

Pulse Input, Analog Input Test

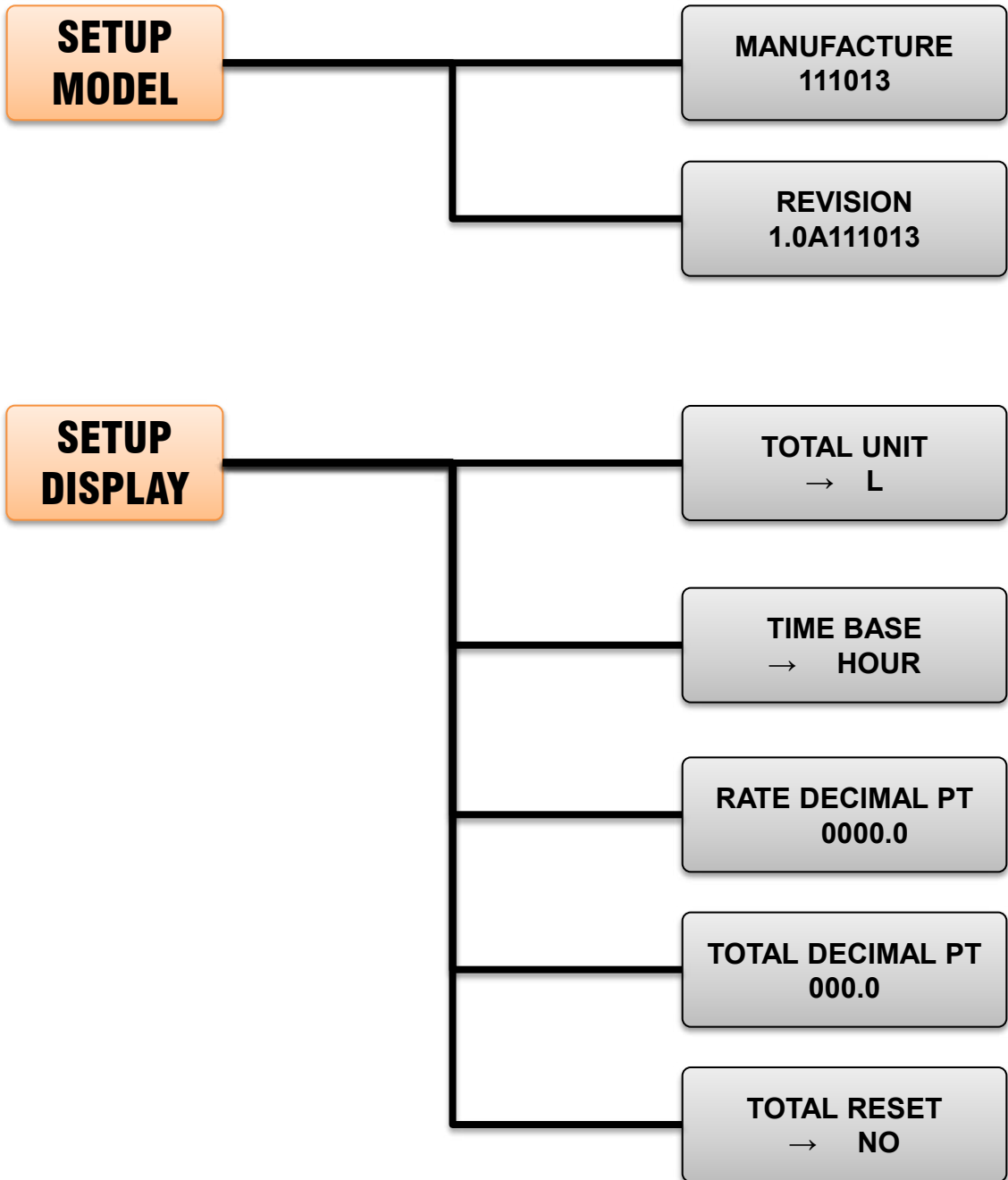
**SETUP
END**

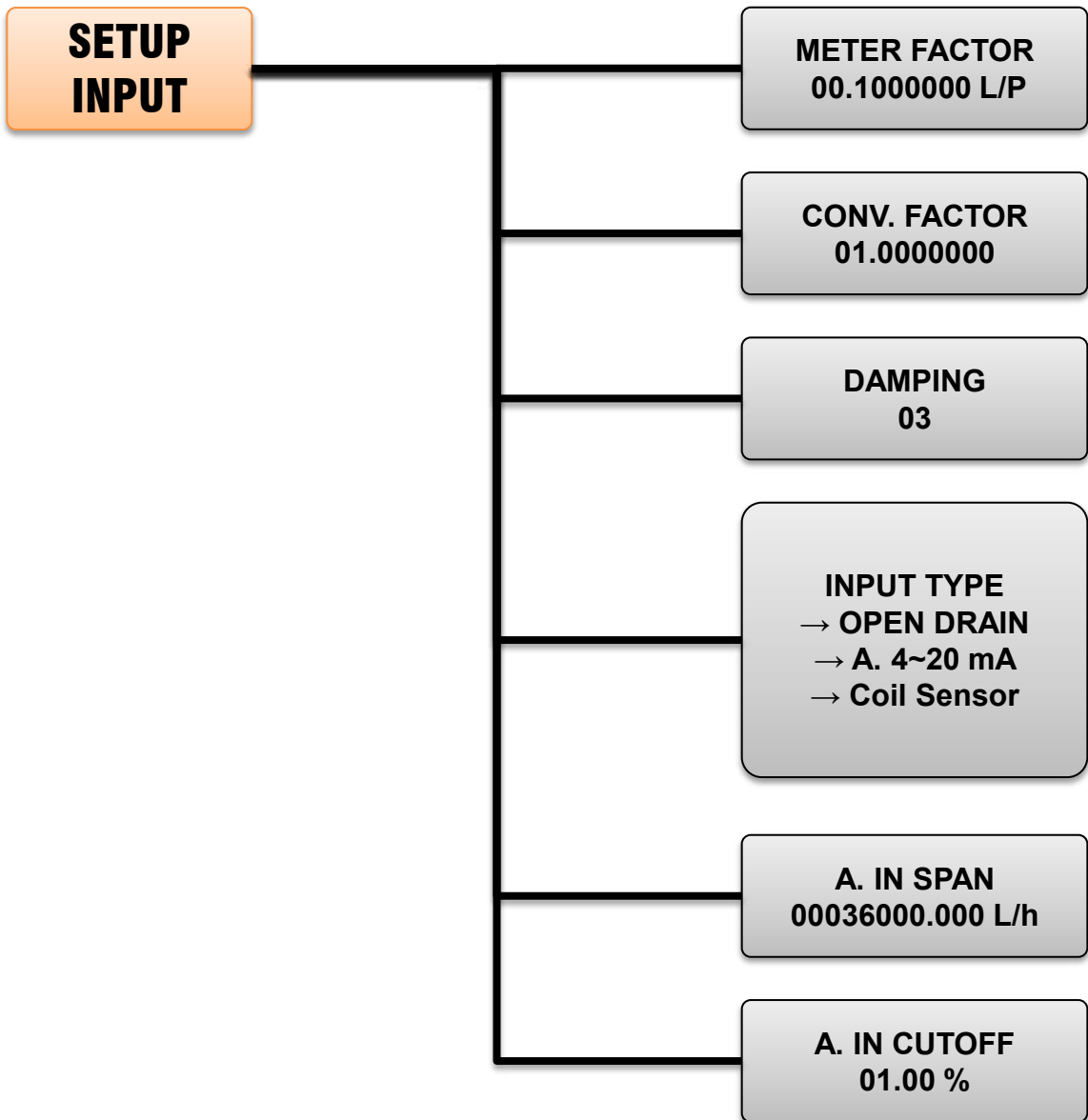
Out

RESET

Next Point.

3) Menu Map

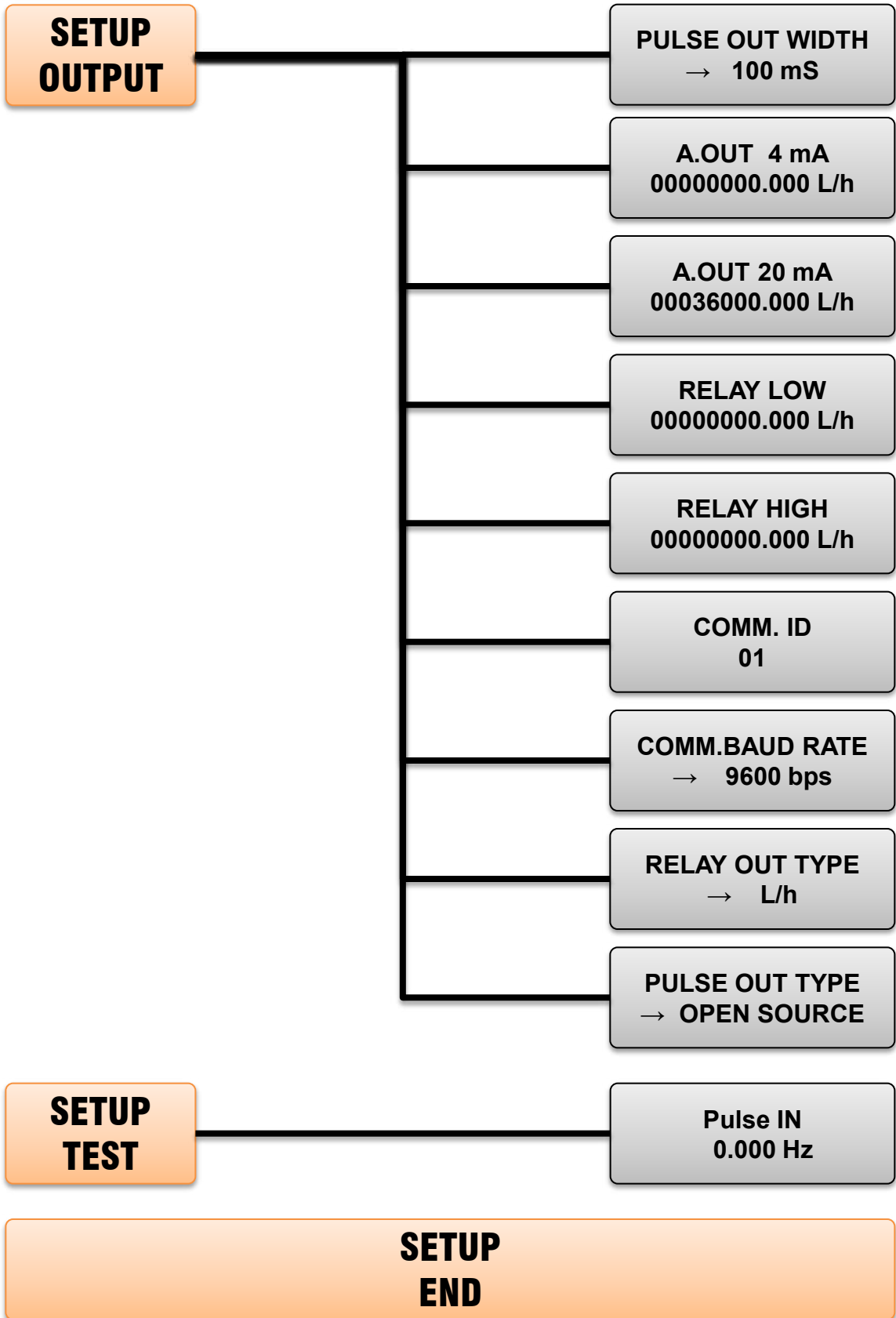




※ After reset the Meter Factor Value, follow the below steps and restart the device.

1. Push the “RESET” button . (in front of goods)
2. TOTAL RESET (refer to “SETUP DISPLAY” of Page 12)

Flow Control Indicator DG-100



4) Setting Range

Item	Select
Unit	L, m ³ , None, gal
Time Base	Sec, Min, Hour, Day
Meter Factor	0.0000001 ~ 99.9999999
Analog Span	0.001 ~ 99999999.999
Analog Cutoff	00.00 ~ 99.99 %
Conversion Factor	0.0000001 ~ 99.9999999
Pulse Output Width	0.1, 1, 10, 50, 100 mS
Damping	01 ~ 99
Communication ID	01 ~ 99
Baud Rate	2400, 4800, 9600, 19200, 115200
Relay Low, High	0.0 – Relay Function Off

5) Communication Protocol

Item	Select
ID Request	HOST : ID + CR
	SLAVE : XX + CR + LF
Flow Rate Request	HOST : R? + CR
	SLAVE : XX X.X + CR+LF
Flow Rate Request	ID, Rate Order
	HOST : T? + CR
Flow Rate Request	SLAVE : XX X.X X.X + CR+LF
	ID, Resettable Total, Acc Total
Total Flow Initialization	HOST : TR + CR
Choice Hardware&Cancel	HOST : IDXX + CR
	XX value = ID : OK XX value ≠ ID : Cancel

※ Note

1. CR = 0X0D, LF = 0X0A
2. RS485, RS232C selection is selected by the slide switch SW1 of the inner substrate.