



Simplified Instruction Manual

Refer to the instruction manual on the A&D home page.

URL: <http://www.aandd.jp/>

1WMPD4003452

This Manual

- This manual describes how the product works and how to get the most out of it in terms of performance. Read this manual thoroughly before using the product and keep it at hand for future reference.
- Product specifications are subject to change without any obligation on the part of the manufacturer to notify of changes.
- This manual is subject to change without notice at any time to improve the product. No part of this manual may be photocopied, reproduced, or translated into another language without the prior written consent of the A&D Company, limited.

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1. Cautions

1.1. Installation and Precautions

- Before use, confirm the following articles for safe operation.
- Avoid vibration, shock, extremely high temperature and humidity, direct sunlight, dust, splashing water, air containing salt or corrosive gases, places where inflammable gases are present.
 - The operating temperature is -10°C to +50°C (14°F to 122°F).
 - Ground the module.
 - Keep cables away from power cables and other sources of electrical noise. Use a stable DC24 V power source that does not include step down voltage and noise.
 - Do not share the earth ground line and power line with other electrical power equipment.
 - When extending the load cell cable, separate it from the power cable and electrical cables with much noise.
 - Do not turn on the module until installation is complete. The module is not equipped with a switch to turn off.
 - After the installation is complete, take off the protective cover prior to turning on the AD-4430A.
 - Use a shielded load cell cable.
 - Do not connect more sensors than the allowable number noted in the specifications.

1.2. Cautions During Use

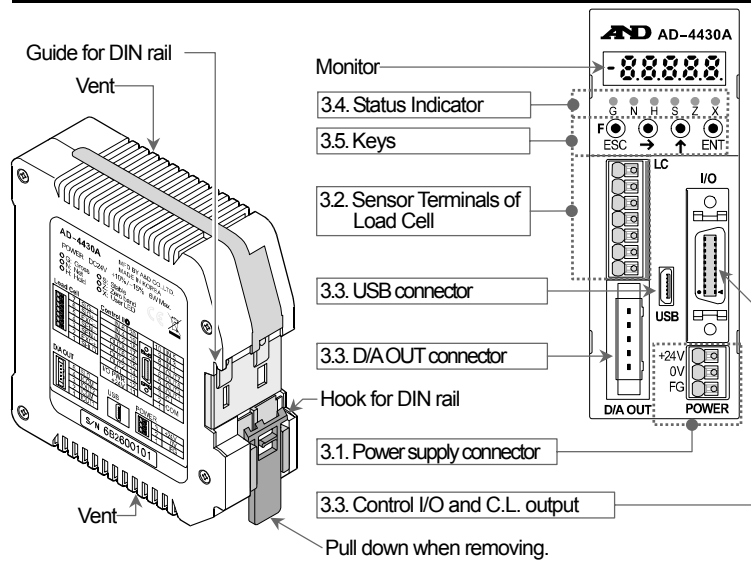
The AD-4430A is a precision instrument that measures micro-volt output from load cell. Prevent noise sources such as power lines, radios, electric welders or motors from affecting the instrument.

- Do not disassemble the AD-4430A.

2. General Specifications

Voltage requirement	DC 24 V +10%, -15%
Power requirement	6 W Max.
Load cell power supply	DC 5 V 350 Ω sensor. Up to 4 load cells can be connected.
Operating conditions	-10 °C to +50 °C, Max 85 %RH (no condensation)
External dimensions	35.3 × 110.0 × 101.3 mm (W×H×D)
Mass	Approximately 200 g
Monitor	The monitor displays measurement data and settings with 7 segments of 5 digits and negative sign. The decimal point is specified at the function table.
Accessory	RS-485 connector (manufactured by 3M) 35505-6200-A00 GF (1 piece)

3. Panels



3.1. Power Supply Connector

+24 V	DC +24 V terminal.	POWER 3 +24V
0 V	DC 0 V terminal.	2 0V
FG (SHLD/SLD)	Ground terminal.	1 FG

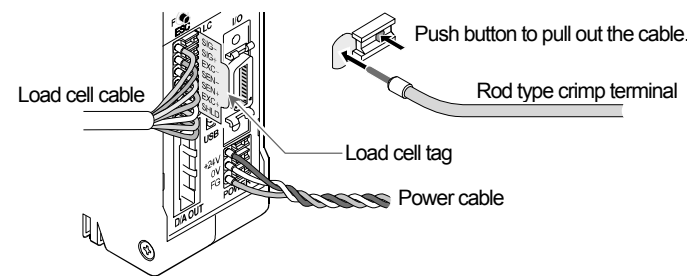
(Connector shield of all are connected inside with FG.)

3.2. Sensor Terminals of Load Cell

SIG-	The (-) input terminal of signal that is outputted from load cell.	Load Cell 7 SIG-
SIG+	The (+) input terminal of signal that is outputted from load cell.	6 SIG+
EXC-	The (-) output terminal for load cell excitation voltage (-).	5 EXC-
SEN-	The (-) input terminal for sensing input (-). (When performing the 4-wire connection, connect between EXC- and SEN-.)	4 SEN-
SEN+	The (+) input terminal for sensing input (+). (When performing the 4-wire connection, connect between EXC+ and SEN+.)	3 SEN+
EXC+	The (+) output terminal for load cell excitation voltage (+).	2 EXC+
SHLD	Connect shield of sensor cable.	1 SHLD

3.3. Control I/O, C.L. Output, D/A OUT and Micro-B USB

- Connections
When connecting and removing the cables, push the buttons with a driver etc. We recommend use of rod type crimp terminals for the tips of cables.



Control I/O	IN 6 20	10 IN 5
	IN 4 19	9 IN 3
	IN 2 18	8 IN 1
	OUT 8 17	7 OUT 7
	OUT 6 16	6 OUT 5
	OUT 4 15	5 OUT 3
	OUT 2 14	4 OUT 1
	C.L. 13	3 C.L.
I/O PWR +24V	12	2 COM
	11	1 COM

D/A OUT	5 SLD	USB
	4 ICOM	
	3 IOUT 2	
	2 ICOM	
	1 IOUT 1	

- Terminals of control I/O is isolated from load cell and power supply (POWER). Supply D.C. +24 V between PWR+24V terminal and COM terminal. (MDR connector with 20 pins, manufactured by 3M).
- C.L. (current loop) output circuit is isolated from other terminals. (MDR connector with 20 pins, manufactured by 3M).
- For analog output (D/A OUT), use analog 4-20mA output connector that is a power clamp connector (A type) manufactured by 3M.
- Use standard Micro - B USB connector for USB so that the function settings can be read and written.

3.4. Status Indicator

LED	Description
G	Gross : LED lights when indicating gross value.
N	Net : LED lights when indicating net value.
H	Hold : LED lights when the hold function operates.
S	Stable : LED lights when the current weighing value is stable.
Z	Zero : LED lights when the weighing value is center zero.
X	This LED works by selected function at F.nc 04.

3.5. Keys

Operation	Mode	Function
[F]	Weighing	The function key works by selected function at F.nc 02. In the factory setting, select total weight or net weight.
	Setting	The escape key
[→]	Weighing	"The zero key" to perform the zero operation.
	Setting	The key to move a digit.
[↑]	Weighing	"The tare key" that displays zero for net weighing.
	Setting	The key to select parameter or increase number.
[ENT]	Weighing	Press and hold the key to turn off the display in weighing mode.
	OFF	Press the key to turn on the display in standby.
	Setting	The enter key
[ESC]	Weighing	The function key
	Setting	The escape key
[ENT] + [F]	Weighing	Proceeds to the function mode from the weighing mode.
[→] + [ENT]	Setting	Proceeds to the check mode from the function mode.
[F] + [ENT]	OFF	Proceeds to the calibration from standby (at OFF mode).

3.6. Operation Mode

- Function mode (In weighing mode, [ENT] + [F])
The condition of the AD-4430A can be updated and be stored.
- Check mode (In function mode, [→] + [ENT])
The mode to check the AD-4430A.
- Calibration mode (When display is turned off, [F] + [ENT])
The mode to calibrate zero point and span of the AD-4430A by calibration weight or input value.

4. Calibration

The AD-4430A measures the voltage of the load cell and displays it. Calibration corrects the signal from the load cell to convert into mass correctly.

- Specify "decimal point position (ζ-F 02)", "minimum division (ζ-F 03)" and "weighing capacity (ζ-F 04)" in function mode.
- Calibrate (adjust) "input voltage at zero (ζ-F 13)", "span calibration input voltage (ζ-F 18)" and "weight against span calibration input voltage (ζ-F 13)" using the "span calibration using mass (ζ-F 54)" in calibration mode. These items can be also inputted using "digital span" in function mode.
- Perform stable measurement in the calibration to prevent measurement error.
- During a stable measurement, the S LED lights.
- The flashing decimal point means "no weighing value" in calibration mode.
- When [ζ Er] and a number are displayed, an error has occurred. Refer to "Calibration Errors" for details.
- Before the calibration, turn on the AD-4430A more than 10 minutes so as to avoid temperature drift (change).

4.1. Span Calibration using Mass (ζ-F 54)

- Preset a unit, decimal point, minimum division and weighing capacity in function mode. The span calibration is performed using mass of the weighing capacity.
- Step 1 When turning off the display using pressing and holding the [ENT] key, press the [F] key and the [ENT] key ([F] + [ENT] key). Then [ζ R.] of calibration mode is displayed.
- Step 2 Press the [ENT] key to enter calibration mode. [ζ-F 54] is displayed. When returning to weighing mode, press the [ESC] key.

4.1.1. Zero Calibration

- Step 3 Press the [ENT] key to display [ζ R.]. When skipping zero calibration, press the [↑] key and proceed to step 5.
- Step 4 Confirm that the [S] LED is lit and press the [ENT] key. Then [.....] is displayed for 2 seconds. When canceling span calibration and returning to weighing mode, press the [ESC] key twice.

4.1.2. Span Calibration

- Step 5 When [ζ-F 54] is displayed, press the [ENT] key. The current calibration weight value is displayed. A figure flashes. Specify a new value using the [→] and [↑] keys. When canceling span calibration and returning to weighing mode, press the [ESC] key twice.
- Step 6 Place the mass on the weighing pan. Confirm that the [S] LED is lit and press the [ENT] key. Then [.....] is displayed for 2 seconds.
- Step 7 When [ζ-F 54] is displayed, remove the mass from the weighing pan. When repeating span calibration, press the [↑] key.
- Step 8 Press the [ESC] key. Then [ζ-F 54] is displayed and calibration data is stored in the nonvolatile memory (FRAM) of the AD-4430A.
- Step 9 Press the [ESC] key to return to weighing mode.

4.2. Digital Linearization (ζ-F 55)

- Digital linearization is the non-linearity compensation function that can rectify or reduce linearity deviation between zero point and weighing capacity.
- Up to four points can be specified except zero. (Refer to ζ-F 04)
 - Relationship of points : Zero = inr 0 < inr 1 < inr 2 < inr 3 < inr 4
 - The high-order correction curve is used so that zero point and individual points are arranged in a straight line.
 - Digital linearization includes span calibration.

- Step 1 When turning off the display using pressing and holding the [ENT] key, press the [F] key and the [ENT] key ([F] + [ENT] key). Then [ζ R.] of calibration mode is displayed. Press the [ENT] key to display [ζ-F 55].
- Step 2 Press the [↑] key to select [ζ-F 55] and press the [ENT] key to enter digital linearization.
- Step 3 [ζ R.] of the zero point is displayed.
- Step 4 While [S] LED is displayed, press the [ENT] key to store the weighing value. Then [.....] is displayed for 2 seconds.
- Step 5 When displaying [ζ R.], press the [ENT] key to select a weight value. Specify it using the [→] and [↑] key.
- Step 6 Place the weight on the pan. While [S] LED is displayed, press the [ENT] key to store the weighing value. Then [.....] is displayed for 2 seconds.
- Step 7 [ζ R.] is displayed. Repeat the same operation as Step 5 and Step 6 at the second point.
- Step 8 [ζ R.] is displayed. Repeat the same operation as Step 5 and Step 6 at the third point.
- Step 9 [ζ R.] is displayed. Repeat the same operation as Step 5 and Step 6 at the fourth point.
- Step 10 [ζ-F 55] is displayed. Press the [ESC] key to store new parameters into nonvolatile memory (FRAM) and display [ζ-F 55].
- Step 11 Press the [ESC] key to return to weighing mode. Remove all of weight from the pan.

4.3. Calibration Errors (ζ Er)

Display	Cause	Treatment
ζ Er 1	The display resolution (maximum capacity / minimum division) exceeds the specified value.	Make the minimum division greater or make the weighing capacity smaller. The specified value depends on specifications of the weighing system.
ζ Er 2	Voltage at zero calibration exceeds in the positive direction.	Check the load cell rating and connection. When nothing is wrong with the rating and connection, adjust the load cell output. When the load cell or A/D converter may be the cause of error, confirm this by using the check mode.
ζ Er 3	Voltage at zero calibration exceeds in the negative direction.	Check the load cell rating and connection. When nothing is wrong with the rating and connection, adjust the load cell output. When the load cell or A/D converter may be the cause of error, confirm this by using the check mode.
ζ Er 4	The value of the calibration weight exceeds the maximum capacity.	Use an appropriate calibration weight and calibrate again.
ζ Er 5	The value of the calibration weight is less than the minimum division.	Use a load cell with higher sensitivity or make the minimum division greater.
ζ Er 6	The load cell sensitivity is not sufficient.	Use a load cell with higher sensitivity or make the minimum division greater.
ζ Er 7	Voltage at span calibration is less than voltage at zero point.	Check the load cell connection.
ζ Er 8	The load cell output voltage is too high when the mass of maximum capacity is weighed.	Use a load cell with a greater rating or make the weighing capacity smaller.

5. Function Mode

The function mode stores parameters to control the weighing module. The parameters are stored even without power supplied.

5.1. Summary

- Ⓜ-Fnc Calibration function
- Ⓜ-Fnc Linearity adjustment function
- Fnc F Basics function
- Ⓜd F Hold function
- Fr F Flow rate function
- Ⓜ F Control I/O function
- Ⓜ F Current loop output function
- Ⓜ F Analog 4-20mA output function

※ When only a numerical value is displayed, the decimal point flashes to distinguish that from a weighing value.

5.2. Operations and Types

5.2.1. Select Modes Under Function Mode

- ENT + F Proceeds to function mode from the weighing mode.
- ↑ Selects a type of select mode (3 upper figures).
- ENT Enters a selected mode.
- ↑ Selects an item under the selected mode (2 lower figures).
- ENT Enters the item.
- ESC Stores parameters and returns to weighing mode.

5.2.2. Change Value

- Moves selected digit.
- ↑ Changes numerical value.
- ENT Activates (store) value and returns to select mode.
- ESC Deactivates value and returns to select mode.

5.3. Function Table

- ※1 Decimal point depends on Ⓜ-F02.
- ※2 When "span calibration using mass (Ⓜ-F54)" is performed by the input voltage from the load cell in the calibration mode, "input voltage at zero (Ⓜ-F17)", "span calibration input voltage (Ⓜ-F18)" and "weight against span calibration input voltage (Ⓜ-F19)" change.
- ※3 If pressing the → key while displaying Fnc05 or Fnc06, the current weighing value can be monitored. Press the → key again to return function mode.

5.3.1. Calibration Function (Ⓜ-Fnc)

Item & Function	Descriptions, Range & Factory settings
Ⓜ-F01 Unit	0: No used 1: g 2: kg 3: t 4: N 5: kN
Ⓜ-F02 Decimal point position	Decimal point (D.P.) position. 0: 0 1: 0.0 2: 0.00 3: 0.000 4: 0.0000
Ⓜ-F03 Minimum division	Minimum division of value. (A scale / digit) 1: 1 2: 2 3: 5 4: 10 5: 20 6: 50
Ⓜ-F04 Weighing capacity	Measurement can be displayed up to +8 digits (8 scales) from capacity. ※1 1 to 70000 to 99999
Ⓜ-F05 Zero range	The range that the → key (zero key) works. Deviation from the calibrated zero point [%]. 0 to 2 to 100
Ⓜ-F06 Zero tracking time	Used with Ⓜ-F07 for zero tracking. Scale: 0.1 sec. 0.0 to 5.0
Ⓜ-F07 Zero tracking band	Used with Ⓜ-F06 for zero tracking. Scale: 0.1 digit 0.0 to 9.9
Ⓜ-F08 Stability detection time	Used with Ⓜ-F09 for stability detection. Scale: 0.1 sec. 0.0 to 1.0 to 9.9
Ⓜ-F09 Stability detection width	Used with Ⓜ-F08 for stability detection. Scale: 1 digit 0 to 2 to 100
Ⓜ-F10 Tare and zero at unstable weight value	Tare and zero operation when unstable 0: Disables both functions. 1: Enables both functions.
Ⓜ-F11 Tare when the gross weight is negative	Tare when the gross weight is negative. 0: Disables tare. 1: Enables tare.
Ⓜ-F12 Output when out of range and unstable	0: Disables output. 1: Enables output.
Ⓜ-F13 Exceeding negative gross weight	To judge when the negative gross weight is exceeded. 1: Gross weight < -99999 3: Gross weight < -19 digits 2: Gross weight < -Capacity
Ⓜ-F14 Exceeding negative net weight	To judge when the negative net weight is exceeded. 1: Net weight < -99999 2: Net weight < -Capacity
Ⓜ-F15 Clear the zero value	Select whether or not to clear the zero value. 0: Disable 1: Enable
Ⓜ-F16 Zero setting when power is turned on	Select whether or not to perform zero setting when power is turned on. 0: Disable 1: Enable

Ⓜ-F17 Input voltage at zero	Input voltage from a load cell at zero. ※2 Scale: 0.0001 mV/V -7.0000 to 0.0000 to 7.0000
Ⓜ-F18 Span input voltage	Input voltage from a load cell at span. ※2 Scale: 0.0001 mV/V 0.0100 to 3.2000 to 9.9999
Ⓜ-F19 Weight against span input voltage	The calibration weight value corresponding to the input voltage at Ⓜ-F18. ※1 ※2 1 to 32000 to 99999
Ⓜ-F20 Gravity acceleration of the calibration place	Gravity acceleration of the place where the scale is calibrated. Scale: 0.0001 m/s ² 9.7500 to 9.8000 to 9.8500
Ⓜ-F21 Gravity acceleration of use place	Gravity acceleration of the place where the scale is being used. Scale: 0.0001 m/s ² 9.7500 to 9.8000 to 9.8500
Ⓜ-F22 Suppression of the hold function	0: Permission. 1: Prohibition.
Ⓜ-F23 ~ 32	Reserved internally

5.3.2. Linearity Adjustment Function (Ⓜ-Fnc)

Item & Function	Descriptions, Range & Factory settings
Ⓜ-F24 Number of input points	Number of adjustment point. If 0, 1 or 2 is selected, this linearization is not used. 0 to 5
Ⓜ-F25 Linear-zero	Input voltage for linear-zero input. Scale: 0.0001 mV/V -7.0000 to 0.0000 to 7.0000
Ⓜ-F26 Setting value for linear 1	The setting value of weights for linear 1 input. ※1 0 to 99999
Ⓜ-F27 Span at linear 1	The span voltage between linear-zero and linear 1 input. Scale: 0.0001 mV/V 0.0000 to 9.9999
Ⓜ-F28 Setting value for linear 2	The setting value of weights for linear 2 input. ※1 0 to 99999
Ⓜ-F29 Span at linear 2	The span voltage between linear-zero and linear 2 input. Scale: 0.0001 mV/V 0.0000 to 9.9999
Ⓜ-F30 Setting value for linear 3	The setting value of weights for linear 3 input. ※1 0 to 99999
Ⓜ-F31 Span at linear 3	The span voltage between linear-zero and linear 3 input. Scale: 0.0001 mV/V 0.0000 to 9.9999
Ⓜ-F32 Setting value for linear 4	The setting value of weights for linear 4 input. ※1 0 to 99999
Ⓜ-F33 Span at linear 4	The span voltage between linear-zero and linear 4 input. Scale: 0.0001 mV/V 0.0000 to 9.9999

5.3.3. Basics Function (Fnc F)

Item & Function	Descriptions, Range & Factory settings
Fnc01 Key switch disable	Each digit corresponds to a key switch. Only available in weighing mode. 4 fig. 3 fig. 2 fig. 1 fig. 0: Permission 1: Prohibition ESC → ↑ ENT 0000 to 1111
Fnc02 F key function	0: None 7: Zero clear 1: Manual print command 8: Reserved internally 2: Hold 9: Reserved internally 3: Operation switch 1 10: Reserved internally 4: Operation switch 2 11: Reserved internally 5: Display exchange 12: mV/V monitor 6: Tare clear 13: Digital filter 2 14: Display output data selected in Ⓜ-F13 15: Display output data selected in Ⓜ-F14
Fnc03 Display refresh rate	1: 20 times/sec. 2: 10 times/sec. 3: 5 times/sec.
Fnc04 X display	0: None 1: Zero tracking in progress 2: Alarm 3: Display operation switch status as on or off 4: Near-zero 5: HI output 6: OK output 7: LO output
Fnc05 Digital filter 1	Selects a cutoff frequency. ※3 0: None 6: 20.0 Hz 12: 2.8 Hz 1: 100.0 Hz 7: 14.0 Hz 13: 2.0 Hz 2: 70.0 Hz 8: 10.0 Hz 14: 1.4 Hz 3: 56.0 Hz 9: 7.0 Hz 15: 1.0 Hz 4: 40.0 Hz 10: 5.6 Hz 16: 0.7 Hz 5: 28.0 Hz 11: 4.0 Hz
Fnc06 Digital Filter 2	Selects a cutoff frequency. 0: None 6: 20.0 Hz 12: 2.8 Hz 18: 0.40 Hz 1: 100.0 Hz 7: 14.0 Hz 13: 2.0 Hz 19: 0.28 Hz 2: 70.0 Hz 8: 10.0 Hz 14: 1.4 Hz 20: 0.20 Hz 3: 56.0 Hz 9: 7.0 Hz 15: 1.0 Hz 21: 0.14 Hz 4: 40.0 Hz 10: 5.6 Hz 16: 0.7 Hz 22: 0.10 Hz 5: 28.0 Hz 11: 4.0 Hz 17: 0.56 Hz 23: 0.07 Hz
Fnc07 Hold function	1: Normal hold 2: Peak hold 3: Averaging hold

Fnc08 Near-zero	※1 -99999 to 10 to 99999
Fnc09 Comparison mass at near-zero	1: Gross weight 2: Net weight
Fnc10 Upper limit value	※1 -99999 to 10 to 99999
Fnc11 Lower limit value	※1 -99999 to -10 to 99999
Fnc12 Comparison mass of upper and lower limit	1: Gross weight 2: Net weight

5.3.4. Hold Function (Ⓜd F)

Item & Function	Descriptions, Range & Factory settings
Ⓜd01 Average time	Time to calculate the average. 0.00 is not averaged. Scale: 0.01 sec. 0.00 to 9.99
Ⓜd02 Start wait time	Waiting time to commence a holding or averaging. Scale: 0.01 sec. 0.00 to 9.99
Ⓜd03 Condition of automatic start	The condition to commence a holding or averaging. 0: Not used 2: Above the near-zero 1: Above the near-zero, and stable
Ⓜd04 Release using control input	Release when control input of the hold terminal is falling. 0: Do not release 1: Release
Ⓜd05 Release time	Release after a set amount of time has passed. 0.00 is not averaged. Scale: 0.01 sec. 0.00 to 9.99
Ⓜd06 Release using fluctuation range	Release when fluctuation from the holding value exceeds a set value. ※1 0: Continue 0 to 99999
Ⓜd07 Release at near-zero	Release when the weighing value is in the near-zero range. 0: Do not release 1: Release

5.3.5. Flow Rate Function (Fr F)

Item & Function	Descriptions, Range & Factory settings
Fr01 Filter of flow rate 1	1: Digital filter 1
Fr02 Filter of flow rate 2	12: Digital filter 2
Fr03 Damping time of flow rate 1	Suppress shaking of flow rate. The higher value setting, the less shaking. Scale: 1 sec. 1 to 5 to 1000
Fr04 Damping time of flow rate 2	

5.3.6. Control I/O Function (Ⓜ F)

Item & Function	Descriptions, Range & Factory settings
Ⓜ01 IN1	0: Not used 22: Zero clear 0 to 7 to 30
Ⓜ02 IN2	1 to 6: Reserved internally 23: Tare clear 0 to 8 to 30
Ⓜ03 IN3	7: Zero 24: Operation same as a F key 0 to 30
Ⓜ04 IN4	8: Tare 25: Prohibit update of flow rate 1 0 to 30
Ⓜ05 IN5	9: Hold 26: Prohibit update of flow rate 2 0 to 30
Ⓜ06 IN6	10: Gross/Netexchange 27: Initialize flow rate 1 0 to 30
Ⓜ07 OUT1	11: Diagnose 28: Initialize flow rate 2 ※ Select flow rate 1 or 2 0 to 30
Ⓜ08 OUT2	12: Print command 29: Specify flow rate in Ⓜ-F13 0 to 30
Ⓜ09 OUT3	13 to 21: Reserved internally 30: Specify flow rate in Ⓜ-F14 0 to 30
Ⓜ10 OUT4	0: Not used 1 to 8: Reserved internally 0 to 9 to 36
Ⓜ11 OUT5	9: Stability 30: In weighing (ON) 0 to 36
Ⓜ12 OUT6	10: Over capacity 31: In weighing (1Hz) 0 to 36
Ⓜ13 OUT7	11: Net display 32: In weighing (50Hz) 0 to 36
Ⓜ14 OUT8	12: During tare 33: Alarm 0 to 36
Ⓜ15 OUT9	13: Hold 34: Output operation switch is on or off 0 to 36
Ⓜ16 OUT10	14: Hold busy 35: Approximate flow rate value of flow rate 1 0 to 36
Ⓜ17 OUT11	15: HI output 36: Approximate flow rate value of flow rate 2 0 to 36
Ⓜ18 OUT12	16: OK output
Ⓜ19 OUT13	17: LO output
Ⓜ20 OUT14	18: Near-zero
Ⓜ21 OUT15	19 to 29: Reserved internally
Ⓜ22 OUT16	1: Inverting output 2: Non inverting output
Ⓜ23 OUT17	
Ⓜ24 OUT18	
Ⓜ25 OUT19	
Ⓜ26 OUT20	
Ⓜ27 OUT21	
Ⓜ28 OUT22	

5.3.7. Current loop Output Function (Ⓜ F)

Item & Function	Descriptions, Range & Factory settings
Ⓜ01 Serial data	1: Displayed weighing value 3: Net 5: Gross / Net / Tare 2: Gross 4: Tare
Ⓜ02 Communication mode	1: Stream 3: Manual print 2: Automatic print
Ⓜ03 Baud rate	1: 600 bps 2: 2400 bps

5.3.8. Analog 4-20mA Output Function (Ⓜ F)

Item & Function	Descriptions, Range & Factory settings
Ⓜ01 Output data	1: Displayed weighing value (Digital filter 1) 2: Gross (Digital filter 1) 3: Net (Digital filter 1) 4: Displayed weighing value (Digital filter 2) 5: Gross (Digital filter 2) 6: Net (Digital filter 2) 7: Flow rate 1 8: Flow rate 2 9: Flow rate 1 or Flow rate 2 (Select in control input)
Ⓜ02 Mass/flow rate at 4mA output	Select mass/flow rate by setting output data (Ⓜ-F1) Decimal point position linkage: Mass Ⓜ-F02 Flow rate Ⓜ-F5 (setting magnification of flow rate) + Ⓜ-F02 -99999 to 0 to 99999
Ⓜ03 Mass/flow rate at 20mA output	Select mass/flow rate by set output data (Ⓜ-F1) Decimal point position linkage: Mass Ⓜ-F02 Flow rate Ⓜ-F5 (setting magnification of flow rate) + Ⓜ-F02 -99999 to 70000 to 99999
Ⓜ04 Flow rate unit	1: Seconds 2: Minutes 3: Hours
Ⓜ05 Flow rate setting magnification (times)	1: 1 2: 10 3: 100 4: 1000 5: 10000
Ⓜ06 Output data	1: Displayed weighing value (Digital filter 1) 2: Gross (Digital filter 1) 3: Net (Digital filter 1) 4: Displayed weighing value (Digital filter 2) 5: Gross (Digital filter 2) 6: Net (Digital filter 2) 7: Flow rate 1 8: Flow rate 2 9: Flow rate 1 or Flow rate 2 (assign to input terminals)
Ⓜ07 Mass/flow rate at 4mA output	Select mass/flow rate by set output data (Ⓜ-F1) Decimal point position linkage: Mass Ⓜ-F02 Flow rate Ⓜ-F5 (setting magnification of flow rate) + Ⓜ-F02 -99999 to 0 to 99999
Ⓜ08 Mass/flow rate at 20mA output	Select mass/flow rate by set output data (Ⓜ-F1) Decimal point position linkage: Mass Ⓜ-F02 Flow rate Ⓜ-F5 (setting magnification of flow rate) + Ⓜ-F02 -99999 to 70000 to 99999
Ⓜ09 Flow rate unit	1: Seconds 2: Minutes 3: Hours
Ⓜ10 Flow rate setting magnification (times)	1: 1 2: 10 3: 100 4: 1000 5: 10000