AD-8922A Options

INSTRUCTION MANUAL

AD-8922A-01 BCD OUTPUT

AD-8922A-04 COMPARATOR OUTPUT

AD-8922A-05 CURRENT LOOP INPUT

AD-8922A-06 ANALOG OUTPUT

A&D Company, Ltd.

1WMPD4005726

The contents of this manual and the specifications of the instrument covered by this manual are subject to change for improvement without notice.

CONTENTS

1. INTRODUCTION

This manual describes options for the AD-8922A and how to get the most out of them in terms of performance. Read this manual thoroughly before using the options in order to ensure a sufficient understanding for proper use.

The AD-8922A has various options available as follows. For details on each option, refer to the relevant chapter.

- AD-8922A-01 BCD output
  Outputs the weighing data received from the weighing instrument using the RS-232C serial interface, in BCD format.

- AD-8922A-04 Comparator output
  Compares the weighing data received from the weighing instrument using the RS-232C serial interface with the upper or lower limit value and contact-outputs the results.
  When connected to the AD-4212C, both instruments can share power.
  Note: Power cannot be shared with the weighing instrument. Plug the AC adapters into both the weighing instrument and the AD-8922A.

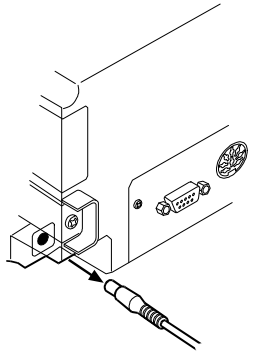
- AD-8922A-05 Current loop input
  Receives the current loop output from the weighing instrument and displays the weighing data.
  The weighing data received can be output using the RS-232C serial interface.

- AD-8922A-06 Analog output
  Converts the specified digits of the weighing data received from the weighing instrument, using the RS-232C serial interface, into voltage and outputs the value.
  Note: Power cannot be shared with the weighing instrument. Plug the AC adapters into both the weighing instrument and the AD-8922A.

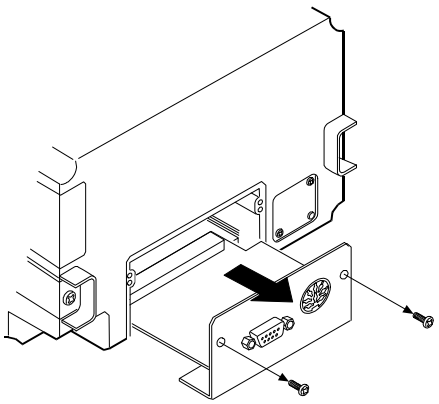
1.1. Installing the Option

Install the option as shown below. The installation procedure is the same for all the options.

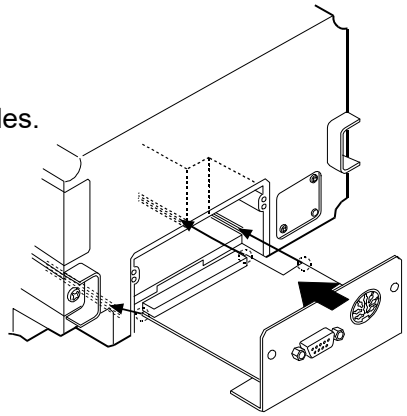
1. Disconnect the AC adapter.



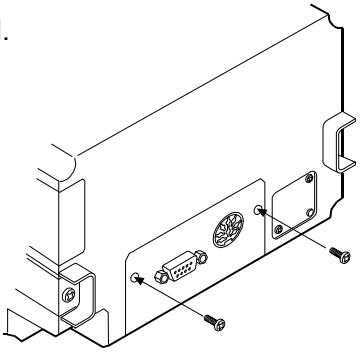
2. Remove the two screws and pull out the RS-232C board provided as standard as shown in the illustration.



3. Insert the option board, along the guides on the left and right sides.



4. Using the two screws removed in step 2, fasten the option board.



2. BCD OUTPUT (AD-8922A-01)

Outputs the weighing data received from the weighing instrument in BCD format, along with the polarity (+/-) and the data status (stable/unstable and over/under).

Using the STROBE signal, the data can be read easily. The AD-8922A-01 can set the input terminal function to either the BUSY or the RE-ZERO input function by selecting that function. When set to the RE-ZERO input function, the AD-8922A transmits the RE-ZERO command to the weighing instrument, setting the weighing value to zero. BUSY input enables the data to be held or prevents data refreshing during the reading operation.

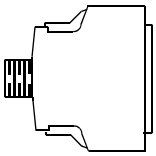
The logic of data, status and strobe can be switched in the function setting.

Note: When the AD-8922A-01 is installed, the RS-232C serial interface cannot be used.
When connected to the following instruments, power can be supplied to both instruments by connecting the AC adapter to either the weighing instrument or the AD-8922A.
Applicable to models AD-4212C, AD-4212D, AD-4212F, FZ, FX, GX-A, GF-A, GX-M, GF-M, GX-L, GF-L, HR-AZ, HR-A, MC-A and MC-M.
(Both instruments can have their AC adapter connected at the same time.)

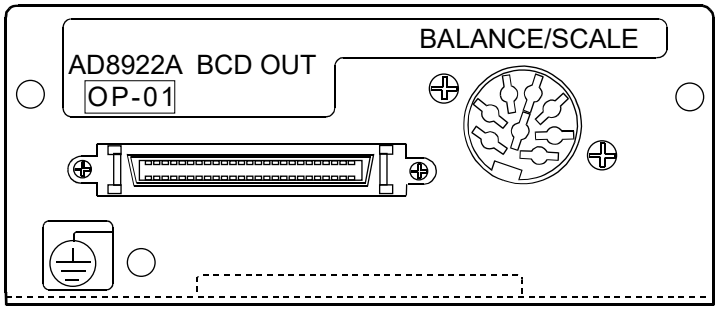
2.1. BCD Output Specifications

Accessories

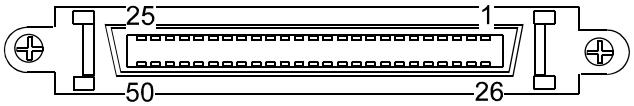
I/O plug applicable to the BCD output port	1 pc.
Instruction manual	1 copy



Panel view



BCD output port (BCD-OUT)



Half pitch 50 pin

Plug

Part name	Product number	Manufacturer
Over mold cover	DX30M-50-CV	Hirose Electric
Plug unit (Soldered type)	DX40M-50P	

Note: The products above are subject to be replaced with the equivalent.

Cable

Wire size	AWG #28
Core configuration	7/0.127
O.D. of insulator	0.58

Pin assignments and I/O logic

Output pin assignments			
Pin No.	Signal		
26	1	10^0	Data
27	2		
28	4		
29	8		
39	1	10^1	
40	2		
41	4		
42	8		
12	1	10^2	
13	2		
14	4		
15	8		
16	1	10^3	
17	2		
18	4		
19	8		
20	1	10^4	
21	2		
22	4		
23	8		
46	1	10^5	
47	2		
48	4		
49	8		
24	1	10^6	
25	2		
30	4		
31	8		
32	1	10^7	
33	2		
34	4		
35	8		
50	Polarity		Status
45	Stability		
44	Over		
43	Strobe		
1	Output signal GND		

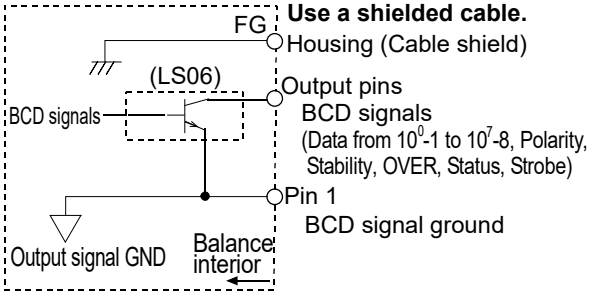
Input pin assignments	
Pin No	Signal
7	BUSY/RE-ZERO
3	Input signal GND

-The pins, which are not specified, have no connection.

Output logic

Output	Factory settings	
Data		ON
Polarity	Positive or zero	ON
Stability	Stabilization indicator ON	ON
Over	E, -E	ON

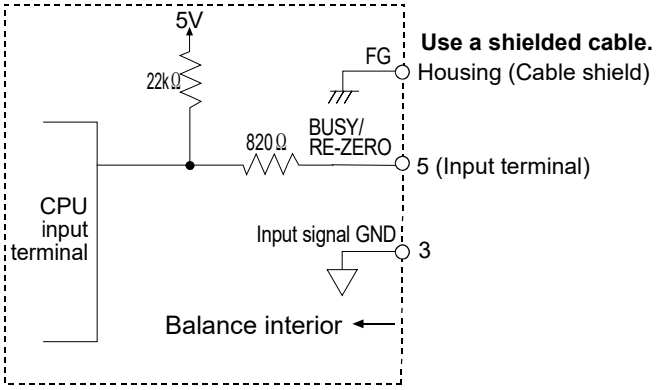
- All output, open collector; withstand voltage 25 V; no pull-up resistor; low-level output current 35 mA
- Output logic of data, status, and strobe can be switched individually in the function table bcd.



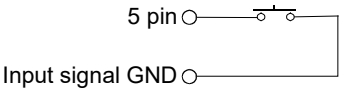
Input logic

Input	
BUSY	Data will be held during ON (when connected to input signal GND).
RE-ZERO	RE-ZERO will be performed with ON (when connected to input signal GND).

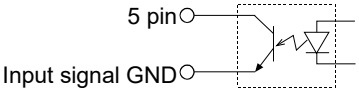
- All input, no voltage contact or open collector (connected to 5 V internally)
- BUSY and RE-ZERO use same input terminal, set it by the function.



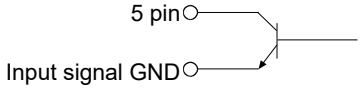
(1) When a switch is used



(2) When a photocoupler is used



(3) When a transistor is used



(Upon switch-ON, make the voltage between the input terminal and the input signal GND terminal 0.2V or less)

Output example

Display

BCD output

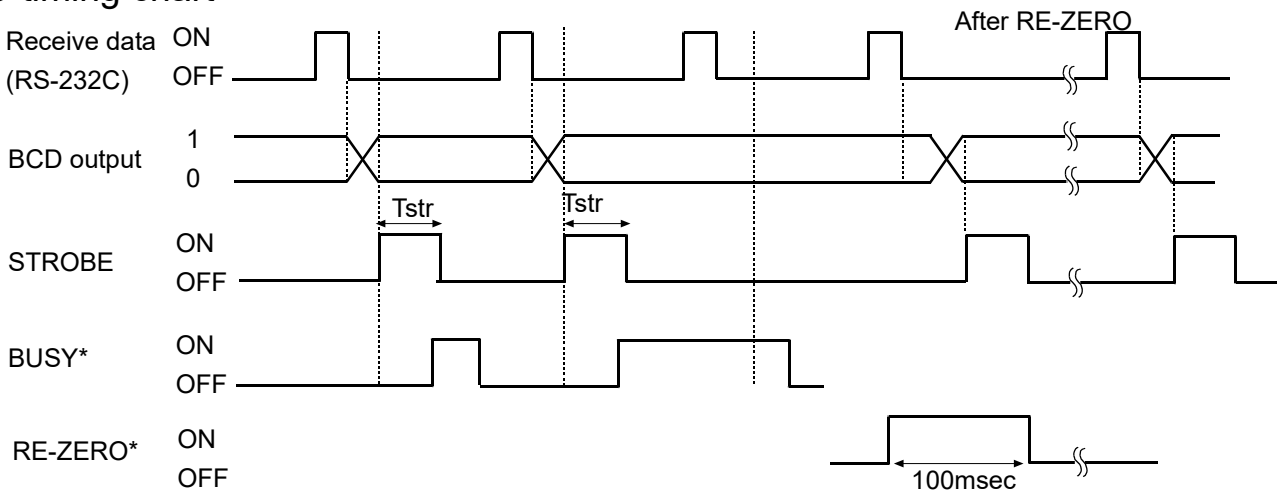
The example above is when the output logic has been set at the factory.

The decimal point information will not be output.

Output pin assignments			
Pin No.	Signal		Output
26	1	10^0	1
27	2		0
28	4		0
29	8		1
39	1	10^1	1
40	2		1
41	4		1
42	8		0
12	1	10^2	1
13	2		0
14	4		1
15	8		0
16	1	10^3	1
17	2		1
18	4		0
19	8		0
20	1	10^4	1
21	2		0
22	4		0
23	8		0
46	1	10^5	0
47	2		0
48	4		0
49	8		0
24	1	10^6	0
25	2		0
30	4		0
31	8		0
32	1	10^7	0
33	2		0
34	4		0
35	8		0
50	Polarity		1
45	Stability		1
44	Over		0

0: OFF
1: ON

I/O timing chart

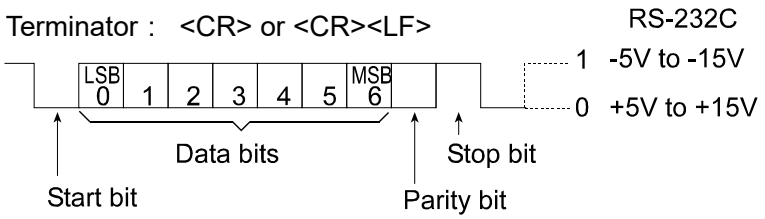


The factory setting of Tstr (Strobe pulse width) is approx. 10 ms. It can be changed to approx. 20 ms or approx. 50 ms in the function setting of "StrE".

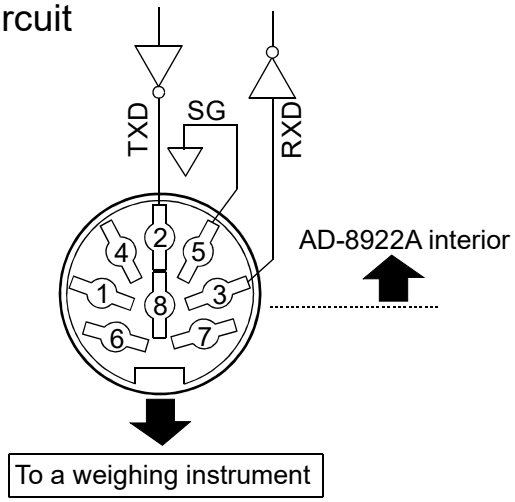
* - "BUSY/RE-ZERO input ON" is the condition that BUSY is connected to input signal GND (Pin 3).
  - The AD-8922A-01 can select either the BUSY input or the RE-ZERO input by setting the function. When keeping the on state for 100msec, the weighing instruments keep the re-zero state.

RS-232C (BALANCE/SCALE)

Transmission system : EIA RS-232C
Transmission form : Asynchronous, bi-directional, half duplex
Data format :
- Baud rate : 600, 1200, 2400, 4800, 9600, 19200bps
- Data bits : 7 or 8 bits
- Parity : Even, Odd (Data bits 7 bits)
  None (Data bits 8 bits)
- Stop bit : 1 or 2 bits
- Code : ASCII
- Terminator : <CR> or <CR><LF>



Circuit



DIN 8-pin
Pin assignment (BALANCE/SCALE)

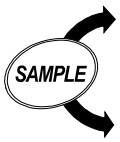
Pin No.	Signal name	Direction	Description
1	(Vs)	—	Internally used
2	TXD	Output	Transmit data
3	RXD	Input	Receive data
4	—	—	—
5	SG	—	Signal ground
6	(Va)	—	Internally used
7	—	—	—
8	—	—	—

When making the cable yourself, do not connect to the internally used terminals.

2.2. Setting of the Decimal Point Position

The AD-8922A can set the display digit and the BCD output digit by setting dPP of the function.
When setting the decimal point position, the BCD output digit does not change if changing the Readability by pressing the SAMPLE key.

Example 1) When not setting the decimal point position (dPP -) [Factory setting]

(Key operation)	Balance display	AD-8922A display	BCD output
	123.45 g	123.45 g	00012345
	123.456 g	123.456 g	00123456

* When changing the Readability by pressing the SAMPLE key, the BCD shifts the output left and adds the last digit.

Example 2) When setting the decimal point at the third digit position. (dPP 3)

(Key operation)	Balance display	AD-8922A display	BCD output
	123.45 g	123.45 g	00123450
	123.456 g	123.456 g	00123456

* When changing the Readability by pressing the SAMPLE key, the BCD output does not change the number of digits.

3. COMPARATOR OUTPUT (AD-8922A-04)

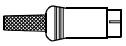
The weighing data is compared with the upper and lower limit values and the results of the comparison are contact-output in three levels of HI OK LO. The upper and lower limit values are set in the function setting.

Whether or not to sound the buzzer according to the results can be selected.

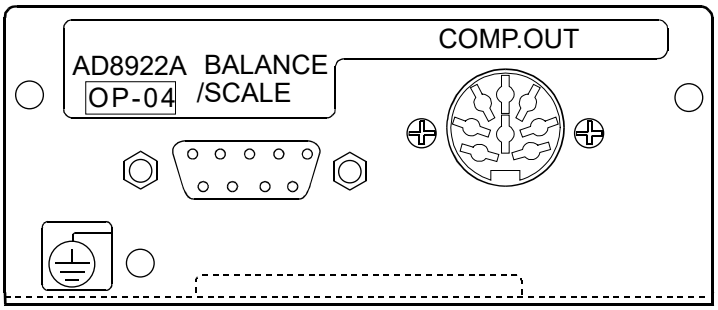
Note: When the AD-8922A-04 is installed, the pin assignment (DIN 8-pin), of the RS-232C serial interface, to connect an external device, will be changed.
Power cannot be shared with the weighing instrument. Plug the AC adapters into both the weighing instrument and the AD-8922A.

3.1. Comparator Output Specifications

Accessories

DIN connector (Plug) 1 pc. 
Instruction manual 1 copy

Panel view

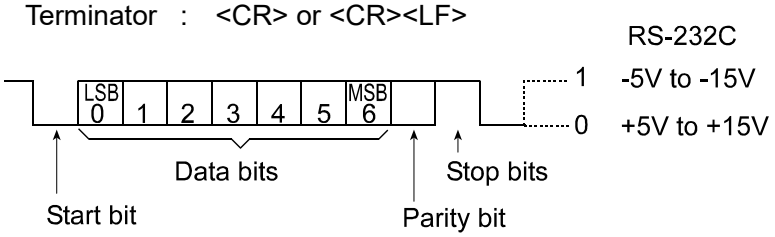


Comparator output (COMP.OUT)

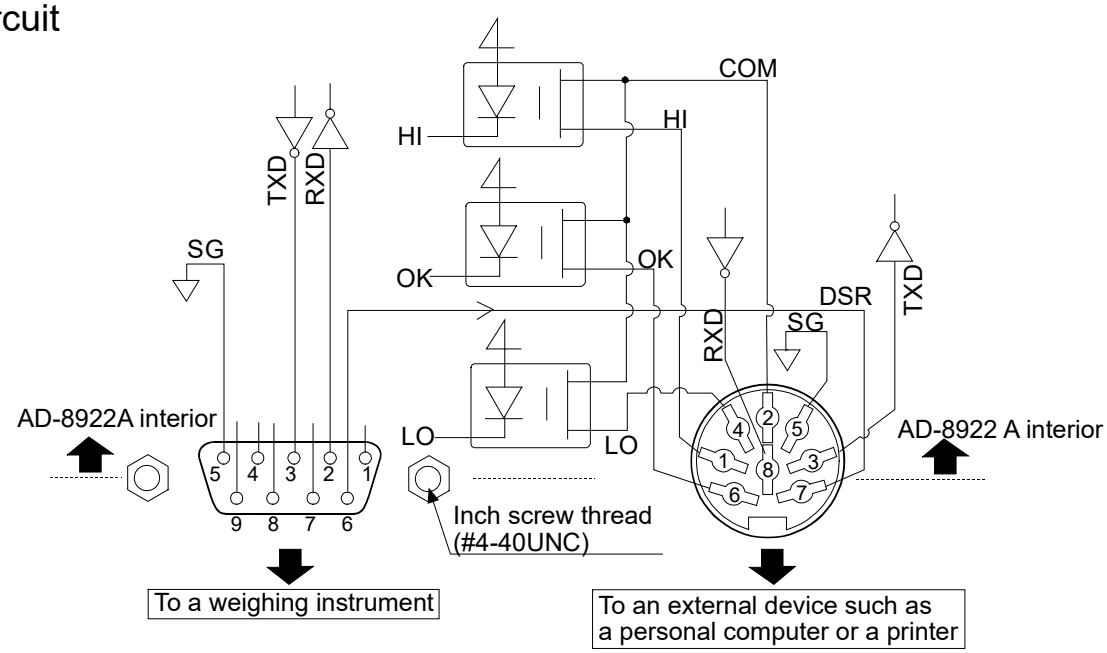
Maximum contact voltage : 100 VDC
Maximum contact current : 100 mA DC
Maximum contact resistance : 20 Ω
Comparator output judgement conditions (when upper limit value ≥ lower limit value):
Weighing data > upper limit value : Activates the HI comparator output.
Upper limit value ≥ weighing data ≥ lower limit value : Activates the OK comparator output.
Weighing data < lower limit value : Activates the LO comparator output.
Reference value setting : Input the upper and lower limit values digitally.
Contact output : Select whether or not to compare, using "CP" of the function setting.
Buzzer : Select whether or not to sound the buzzer, using "bEP" of the function setting.

RS-232C

Transmission system : EIA RS-232C
Transmission form : Asynchronous, bi-directional, half duplex
Data format : Baud rate : 600, 1200, 2400, 4800, 9600, 19200 bps
Data bits : 7 bits or 8 bits
Parity bit : EVEN, ODD (Data bits 7 bits)
NONE (Data bits 8 bits)
Stop bits : 1 bit or 2 bits
Code : ASCII
Terminator : <CR> or <CR><LF>



Circuit



Connection to the weighing instrument

D-Sub 9-pin (BALANCE/SCALE)

Pin No.	Signal name	Direction	Description
1	—	—	N.C.
2	RXD	Input	Receive data
3	TXD	Output	Transmit data
4	—	—	N.C.
5	SG	—	Signal ground
6	DSR	Input	Data set ready
7	RTS	Output	Request to send
8	—	—	N.C.
9	—	—	N.C.

(AD-8922A is a DTE. Connects to a DCE such as a weighing instrument using a straight through cable.)

Connection to an external device

DIN 8-pin (COMP.OUT)

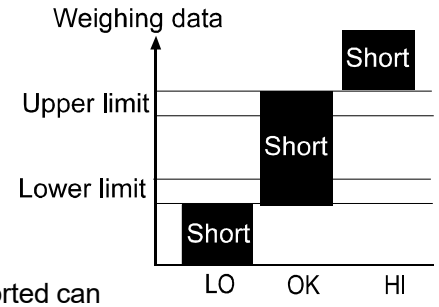
Pin No.	Signal name	Description
1	HI	HI contact-output
2	COM	COM contact-output
3	TXD	Transmit data (RS-232C output)
4	LO	LO contact-output
5	SG	Signal ground
6	OK	OK contact-output
7	DSR	Data set ready (RS-232C output)
8	RXD	Receive data (RS-232C output)

3.2. Using the Comparator Output

To use the comparator output, perform the following four steps.

1. Connect the peripheral to the AD-8922A-04 DIN connector.
2. Set the “Comparator (CP Fnc)” of the AD-8922A function setting. For details, refer to ‘FUNCTION SETTINGS’ in the AD-8922A instruction manual.”
3. Set the upper and lower limit values. For details, see “3.3. Setting the Upper and Lower Limit Values”.
4. When the weighing data is received, the comparison results will be output.
5. When the weighing data is equal to or less than the upper limit value, and equal to or greater than the lower limit value, the OK comparator will be output.

Comparator output	LO	OK	HI
Weighing data > upper limit	Open	Open	Short
Upper limit ≥ weighing data ≥ lower limit	Open	Short	Open
Weighing data < lower limit	Short	Open	Open



Whether or not to sound the buzzer when the contact output is shorted can be set in the “Buzzer mode (bEP) of the “Comparator (CP Fnc)”.

Note: When setting the upper and lower limit values, make sure that the upper limit value is greater than the lower limit value.

Function setting

The function setting "CP Func" is available only when the AD-8922A-04 is installed.

Class	Item	Parameter	Description	
CP Func Comparator	CP Comparator mode	▪ 0	No comparison	
		1	Comparison, excluding "near zero" when the value is stable or overloaded	
		2	Comparison, including "near zero" when the value is stable or overloaded	
		3	Continuous comparison, excluding "near zero"	
		4	Continuous comparison, including "near zero"	
		5	Contact output provides the second header information of the received data. Applicable to models AD-4212A, GP, GX-K, GF-K, GX-M, GF-M, GX-L, and GF-L.	
	bEP_ LO buzzer	▪ 0	OFF	Selects whether or not to sound the buzzer when LO.
		1	ON	
	bEP- OK buzzer	▪ 0	OFF	Selects whether or not to sound the buzzer when OK.
		1	ON	
	bEP¯ HI buzzer	▪ 0	OFF	Selects whether or not to sound the buzzer when HI.
		1	ON	

▪ Factory setting

Note: “Near zero” indicates the amount of ten digits (Digit = the smallest displayable weighing value).

3.3. Setting the Upper and Lower Limit Values

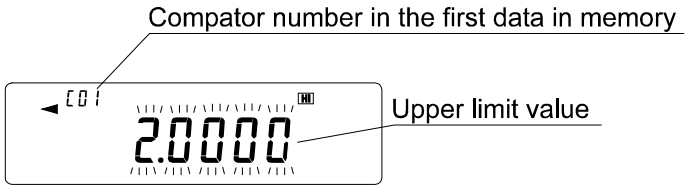
- Up to 10 set of upper and lower limit values can be stored.
- Using the stored upper and lower limit values, comparison can be performed easily. To recall the stored values, press and hold the [ON:OFF] key and press the [MODE] key.

Storing the upper and lower limit values

To store new upper and lower limit values, recall the stored data ("C01" to "C10") and change them.

1. While pressing and holding the [ON:OFF] key, press the [RE-ZERO] key to enter the confirmation mode. The upper limit value data (Comparator number and the upper limit mass (blinking)) of the comparator number that was selected last.

   Displaying example



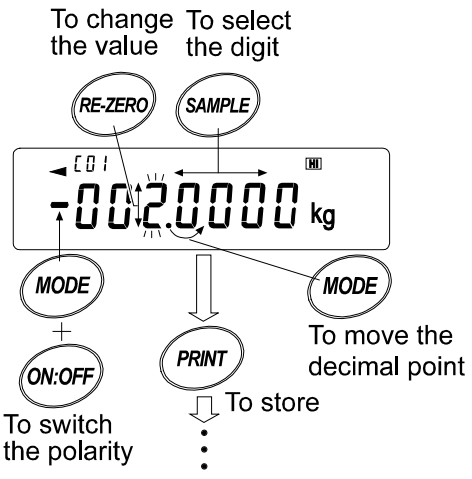
2. Select the comparator number using the following keys.
   [RE-ZERO] key To increase the comparator number by 1.
   [MODE] key To decrease the comparator number by 1.
   Each time the key is pressed, the upper limit value and the lower limit value of the comparator number selected is displayed alternately. (C01 [HI] ⇔ C01 [LO] ⇔ C02 [HI] ⇔ C02 [LO] ⇔…)

3. Press the [SAMPLE] key to go to the storing mode to change the stored values.

Digital input mode

[SAMPLE] key	To select the digit to change the value.
[RE-ZERO] key	To change the value of the digit selected.
[MODE] key	To move the decimal point position to the right by 1 digit.
[ON:OFF] key (press and hold)	[MODE] key To switch the polarity.
[PRINT] key	To store the new setting and return to step 2.
[CAL] key	To cancel the new setting and return to step 2.

Example to store the upper limit value ([HI]) for C01



4. Press the [CAL] key to return to the weighing data display.

Recalling the upper and lower limit values

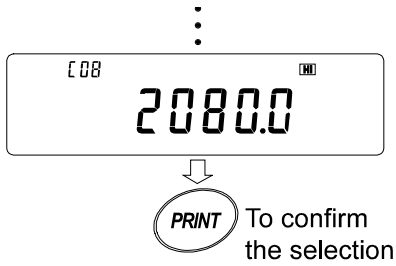
The procedure below describes an easy way to recall the upper and lower limit values to be used for weighing.

1. While pressing and holding the [ON:OFF] key, press the [MODE] key to enter the selection mode.

2. The upper limit value last selected with its comparator number appears.

3. Select the comparator number using the following keys.
   [RE-ZERO] key To increase the comparator number by 1.
   [MODE] key To decrease the comparator number by 1.
   Each time the key is pressed, the upper limit value and the lower limit value of the comparator number selected is displayed alternately. (C01 [HI] ⇔ C01 [LO] ⇔ C02 [HI] ⇔ C02 [LO] ⇔…)
   Only the stored comparator numbers are displayed.

4. Press the [PRINT] key to confirm the selection and return to the weighing data display with the selected upper and lower limit values ready for use (In the example shown below, the values of "C08".)



Note: When no operation is performed in step 4 (after a few seconds of inactivity), the AD-8922A selects the value currently displayed and returns to the weighing data display automatically.
To cancel the operation, press the [CAL] key.

4. CURRENT LOOP INPUT (AD-8922A-05)

Can receive the current loop output from the weighing instrument. The data received can be output to an external device such as a personal computer and a printer, using the RS-232C serial interface. The weighing instrument cannot be operated using the AD-8922A keys.

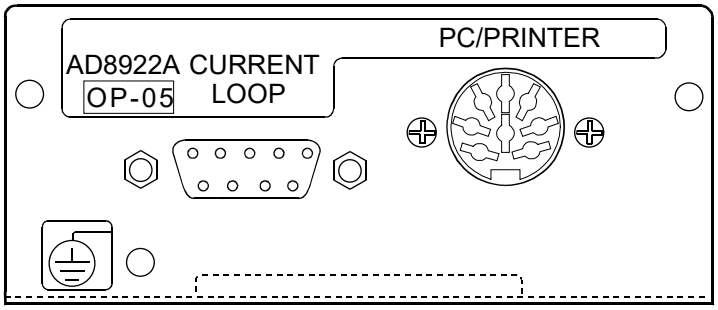
Note: When AD-8922A-05 is installed, the pin assignment (DIN 8-pin) of the RS-232C serial interface, to connect an external device, will be changed.

4.1. Current Loop Input Specifications

Accessories

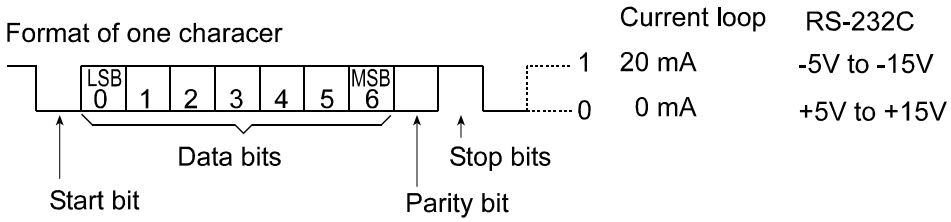
Cable to connect to a weighing instrument (AX-KO1786-200, approx. 2-m length)
DIN 7-pin to D-Sub 9-pin
Instruction manual 1 copy

Panel view



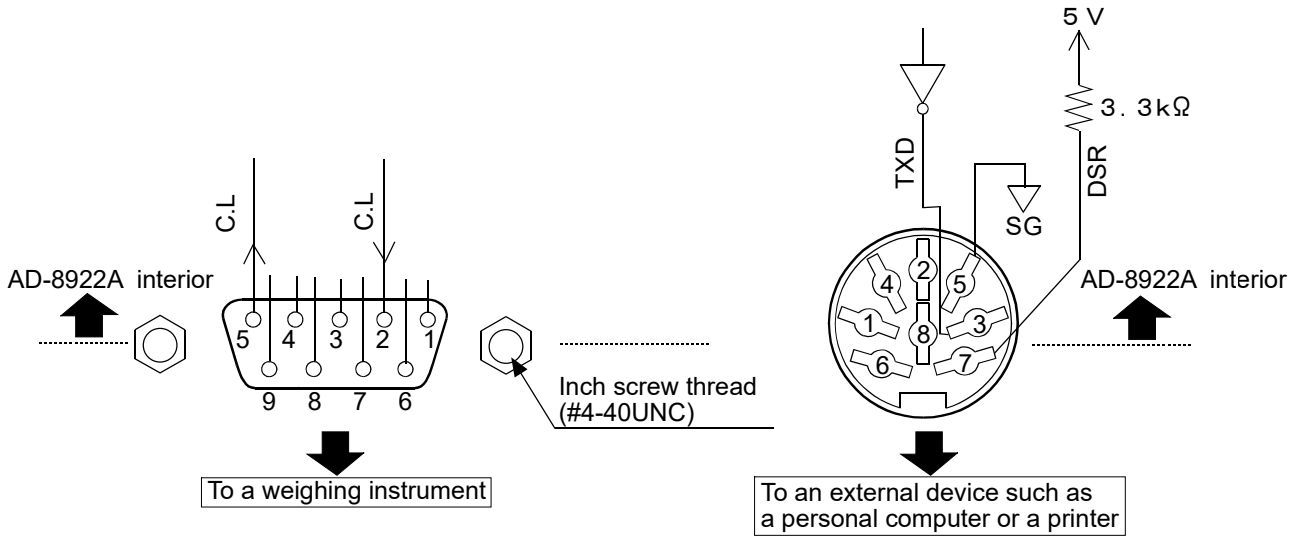
Current loop input / PC/PRINTER output

Transmission system : Input : 20 mA current loop (Active) D-Sub 9-pin (Current loop)
Output : EIA RS-232C DIN 8-pin (PC/PRINTER)
Transmission form : Asynchronous, uni-directional
Data format : Baud rate : 600, 1200, 2400, 4800, 9600, 19200 bps
Data bits : 7 bits or 8 bits
Parity bit : EVEN, ODD (Data bits: 7 bits)
NONE (Data bits 8 bits)
Stop bits : 1 bit or 2 bits
Code : ASCII



Note: When a baud rate of 4800 bps or higher is used, communication may not be performed properly.

Circuit



Connection to the weighing instrument

D-Sub 9-pin (Current loop)

Pin No.	Signal name	Description
1	—	N.C.
2	C.L	Current loop
3	—	N.C.
4	—	N.C.
5	C.L	Current loop
6	—	N.C.
7	—	N.C.
8	—	N.C.
9	—	N.C.

Connection to an external device

DIN 8-pin (PC/PRINTER)

Pin No.	Signal name	Description
1	—	N.C.
2	—	N.C.
3	TXD	Transmit data (RS-232C output)
4	—	N.C.
5	SG	Signal ground
6	—	N.C.
7	DSR	Data set ready (RS-232C output)
8	—	N.C.

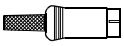
5. ANALOG OUTPUT (AD-8922A-06)

Converts the specified digits of the weighing data received from the weighing instrument to voltage and outputs. The output voltage can be selected from "0 to 1 V" and "0.2 to 1 V".

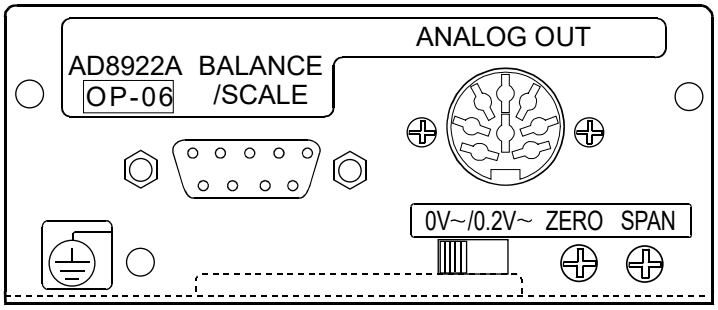
Note: When the AD-8922A-06 is installed, the pin assignment (DIN 8-pin), of the RS-232C serial interface, to connect an external device, will be changed.
Power cannot be shared with the weighing instrument. Plug the AC adapters into both the weighing instrument and the AD-8922A.

5.1. Analog Output Specifications

Accessories

DIN connector (Plug)	1 pc.	
Screwdriver	1 pc.	
Instruction manual	1 copy	

Panel view

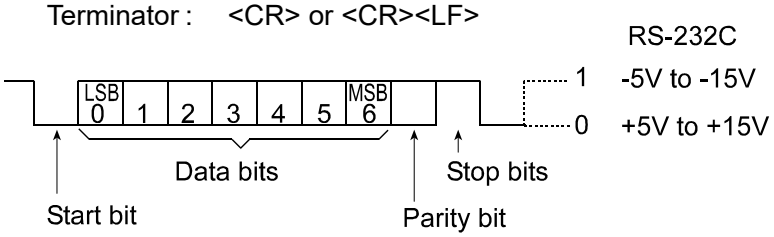


Analog output

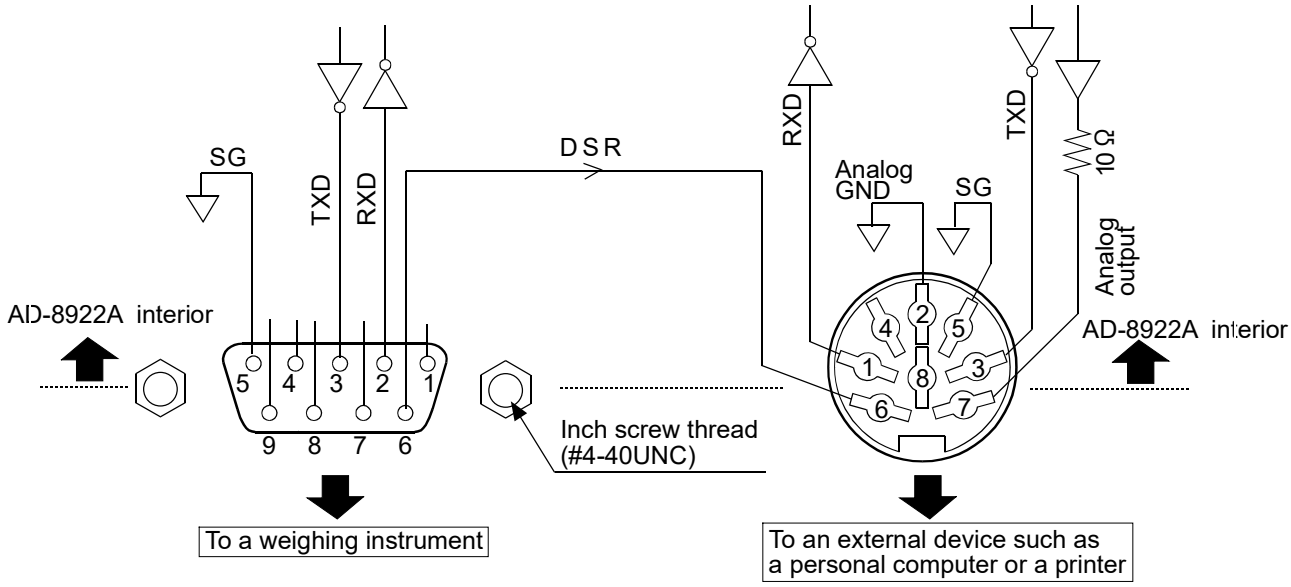
Output impedance	100 Ω or less
Linearity	0.3% or less
Output range	0 V-1 V (With the slide switch set to “0V～”)
	0.2 V-1 V (With the slide switch set to “0.2V～”)

RS-232C

Transmission system	:	EIA RS-232C		
Transmission form	:	Asynchronous, bi-directional, half duplex		
Data format	:	Baud rate	:	600, 1200, 2400, 4800, 9600, 19200 bps
		Data bits	:	7 bits or 8 bits
		Parity bit	:	EVEN, ODD (Data bits 7 bits)
				NONE (Data bits 8 bits)
		Stop bits	:	1 bit or 2 bits
		Code	:	ASCII
		Terminator	:	<CR> or <CR><LF>



Circuit



Connection to the weighing instrument

D-Sub 9-pin (BALANCE/SCALE)

Pin No.	Signal name	Direction	Description
1	—	—	N.C.
2	RXD	Input	Receive data
3	TXD	Output	Transmit data
4	—	—	N.C.
5	SG	—	Signal ground
6	DSR	Input	Data set ready
7	—	—	N.C.
8	—	—	N.C.
9	—	—	N.C.

(AD-8922A is a DTE. Connects to a DCE such as a weighing instrument using a straight through cable.)

Connection to an external device

DIN 8-pin (ANALOG.OUT)

Pin No.	Signal name	Direction	Description
1	—	—	N.C.
2	AG	—	Analog ground
3	TXD	Output	Transmit data
4	—	—	N.C.
5	SG	—	Signal ground
6	DSR	Output	Data set ready
7	AOUT	Output	Analog output
8	RXD	Input	Receive data

5.2. Function setting

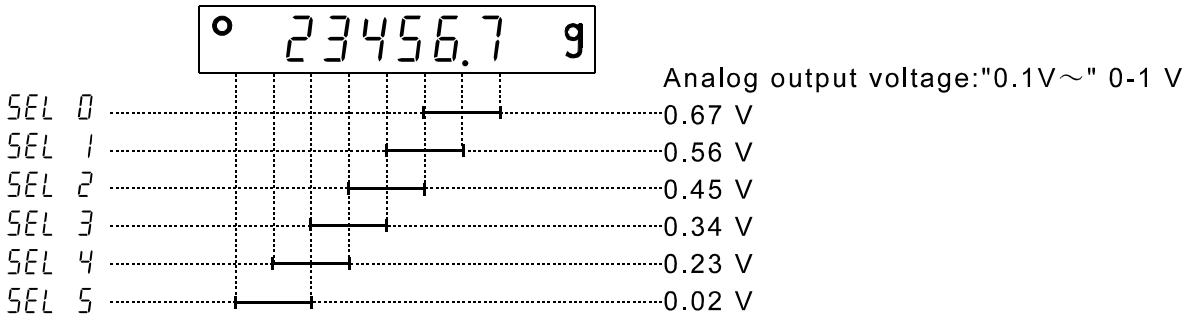
The function setting "Aout" is available only when the AD-8922A-06 is installed.

Class	Item	Parameter	Description	
Aout Analog output	An Analog output mode	▪ 0	2-digit output	Converts the consecutive 2 digits, with the digit selected in SEL as the least, to voltage and outputs.
		1	3-digit output	Converts the consecutive 3 digits, with the digit selected in SEL as the least, to voltage and outputs.
	SEL Analog output digit selection	▪ 0	Selects the first digit as the least.	
		1	Selects the second digit as the least.	
		2	Selects the third digit as the least.	
		3	Selects the fourth digit as the least.	
		4	Selects the fifth digit as the least.	
		5	Selects the sixth digit as the least.	

▪ Factory setting

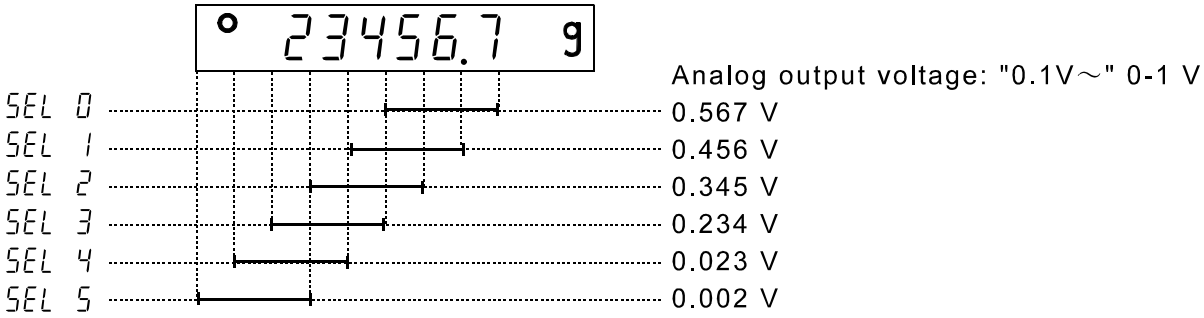
Setting example

When An 0 is set:



Note The invisible high-order digits are regarded as zero.

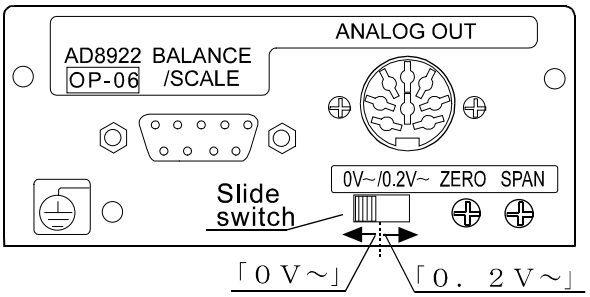
When An 1 is set:



5.3. Switching Output Voltage

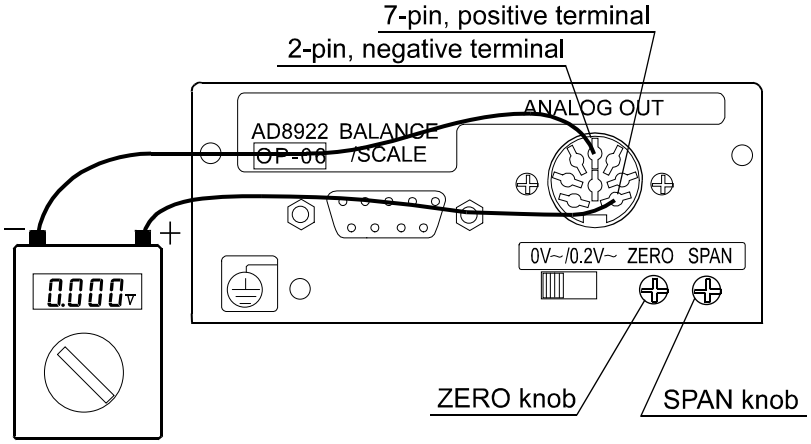
The output voltage can be switched using the slide switch on the option panel. “0V～” has been set at factory before shipment.

“0V～” (0-1 V):
At zero = 0.000 V At full scale = 1.000 V
“0.2～” (0.2-1 V):
At zero = 0.200 V At full scale = 1.000 V



5.4. Output Voltage Fine Adjustment

The output voltage has been adjusted at the factory before shipment.
Using the ZERO and SPAN fine-adjustment knobs and a voltmeter, output voltage can be fine adjusted.



Fine-adjustment procedure

1. While pressing and holding the [ON:OFF] key, press the [RE-ZERO] key. At this time, the output voltage will be at zero.

2. Turn the ZERO knob so that the voltmeter indicates 0.000 V when the slide switch is set to “0V～”; 0.200 V when the slide switch is set to “0.2V～”.

3. Press the [RE-ZERO] key. At this time, a voltage of 1 V is generated. Turn the SPAN knob so that the voltmeter indicates 1.000 V.

4. Press the [RE-ZERO] key again to return to step 2. Repeat steps 2 and 3 until the correct output voltage is obtained.

5. Press the [CAL] key to return to the weighing data display.

Display for setting the output to 0 V (0.2V)

Display for setting the output to 1 V.

5.5. Fixed Output Voltage

The output voltage is fixed under the following conditions:

1. While the weighing data is not displayed : 0 V (or 0.2 V)
   (e.g., the bar display, function setting operation)

2. When "-E" (Weighing pan error) is being displayed : 0 V (or 0.2 V)

3. When "E" (Overload error) is being displayed : 1 V

6. ACCESSORIES (CABLE LIST)

1. Cable to connect the AD-8922A, AD-8922A-01, AD-8922A-04, or AD-8922A-06 and the weighing instrument

Table 8 Applicable weighing instruments and what is required

Weighing instrument	What is required to connect to a weighing instrument		
	Option for the instrument	Communications cable (2-m length)	
		To connect one of the following: • AD-8922A standard • AD-8922A-04 or AD-8922A-06	To connect AD-8922A-01
AD-4212C, AD-4212D	None (D-Sub 9-pin)	None (Cable provided for AD-4212C is usable) *1	AX-KO3705-500 (5 m)
AD-4212F	None (D-Sub 9-pin)	AX-KO7796-XXX *2	AX-KO3705-500 (5 m)
GX, GF, GX-K, GF-K, GP, GR, AD-4212A, AD-4212B, MC	None (D-Sub 25-pin)	AX-KO1710-200	AX-KO577A-200
GX-A, GF-A, MC-A GX-M, GF-M, MC-M GX-L, GF-L, EK-i, EW-i, EK-L, FC-i, FC-Si, GH, HR-i, FZ, FX, BM, HR-A, HR-AZ	None (D-Sub 9-pin)	AX-KO2741-180	AX-KO1786-200
EJ, HV-C, HV-CP, HW-C, HW-CP	OP-03 (D-Sub 9-pin)	AX-KO2741-180	AX-KO1786-200
HV-G, HV-WP, HW-G, HW-WP	None (DIN 8-pin)	AX-KO1786-200	AX-KO507-W200
FG-L, FG-M	OP-23 (DIN 8-pin)	AX-KO1786-200	AX-KO507-W200

***1: When connecting to the AD-4212C, use the AX-KO3590-1000 (10 m) cable or AX-KO7796-1000 (10 m) cable, provided as standard for the AD-4212C.**
When connecting to the AD-4212D, use the AX-KO3590-200 (2 m) cable or AX-KO7796-200 (2 m) cable, provided as standard for the AD-4212D.
If the applicable model is a UL certified product, choose the cable from the option below; AX-KO7796-200 (2 m)、AX-KO7796-500 (5 m)、AX-KO7796-1000 (10 m)

***2: For "XXX", choose from 200 (2 m), 500 (5 m), or 1000 (10 m).**

2. Cable to connect the AD-8922A-05 and the weighing instrument: AX-KO1786-200 (AD-8922A-05 accessory)

3. Cable to connect the AD-8922A or AD-8922A-05 and an external device
   When connecting to a personal computer: AX-KO1786-200
   When connecting to the compact thermal printer AD-8129TH: AX-KO1786-200

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