AD-8129TH Thermal Printer





1WMPD4005388

This Manual and Marks Herein

Note Describes "when it is easy to mishandle" and "general advice when using this product".

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Contents

1.	Intro	pduction	4
	1-1.	Features	4
2.	Proc	duct Structure (Part Names), Package Contents	5
	2-1.	Part names	6
3.	Prep	parations	7
	3-1. 3-2.	Connecting the AC adapter Opening and closing the printer cover	
	3-3.	Installing the printer paper	9
	3-4. 3-5.	Test printing Connecting to the weighing device	
		ting	
	4-1.	Printing out data from the weighing device	
	4-1. 4-2.	Paper feed	
	4-3.	Precautions	. 11
5.	Bas	ic Operations of the Keys	12
6.	Stat	istical Calculation Functions	13
	6-1.	Printing example and printing contents of statistical calculation	13
7.	Bas	ic Settings	14
	7-1.	Time settings	14
	7-2.	Date settings	
	7-3. 7-4.	Printing mode settings ID code setting	
8.		ction Settings	
	8-1.	Function settings display and operation keys	16
	8-2.	Items list	
	8-3. 8-4.	Initializing the function settings Descriptions for the printing mode	
	8-5.	Chart printing mode	
	8-6.	Descriptions for the external input connector	23
9.	Pas	sword Lock Function	24
	9-1.	Enabling the password lock function	
	9-2.	Where the password is entered	
		rface Specifications	
		RS-232C	
11	. Maii	ntenance	
	11-1.	Care and cleaning	
	11-2. 11-3.	Checking the printer performance Troubleshooting	
	11 - 4.	When problems cannot be resolved	
	11-5.	Asking for repair	35
12	. Spe	cifications	36
		External dimensions	
	12-2.	Sold separately	37

1. Introduction

This manual describes how the AD-8129TH Thermal Printer work and how to get the most out of them in terms of performance.

Read this manual thoroughly before using the printer and keep it at hand for future reference.

1-1. Features

- □ This device is a printer used to connect to a weighing device such as A&D's electronic balance, scale, counting scale, moisture analyzer, vibro viscometer or weighing indicator and print out data transmitted from the weighing device.
- □ With thermal printing, the printed contents can be clearly and easily viewed, and the print density can also be changed.
- □ Light weight and compact size of the printer enables it to be set up in various locations and be easily transported.
- □ The printer is equipped with the RS-232C or current loop interface for data input, so it allows easy connections between the printer and a weighing device such as an electronic balance.
- Dust-free paper sold separately is available for using the printer in cleanrooms (AX-PP183-S).
- Built-in clock function of the printer enables printing out of the date and time.
- D Printing at a regular interval is possible. (Interval printing)
- □ Statistical calculation results of the weighing data, including standard deviation, can be printed out.
- □ Time series variation of the weighing data in chart form can be printed out.
- D The liquid crystal display provides easy conditions confirmation and settings of the printer.
- By pressing the key switch of the printer, a re-zero command to zero the display and request commands for the weighing data can be transmitted to a weighing device, enabling the weighting data to be printed out without touching the highly sensitive weighing device.

2. Product Structure (Part Names), Package Contents



Thermal printer paper for printers (1 pcs)

* Attached to the main body







Power cable AX-KO1885 (Approx. 2 m)

Affix the AC adapter label to the cable of the provided AC adapter.

- * Using the wrong AC adapter with the AD-8129TH may prevent the AD-8129TH or weighing devices from operating properly.
- * Confirm that the adapter type is correct for the local voltage and power receptacle type.

RS-232C cable D-sub9 pin – 9 pin (AX-KO2741-100)







Sold separately

- □ Thermal printer paper for printers (5 pcs) AX-PP147-S
- $\hfill\square$ Dust-free thermal printer paper for printers (10 pcs) \hfill AX-PP183-S

2-1. Part names



3. Preparations

3-1. Connecting the AC adapter

Instructions

- 1. Confirm that the power switch is turned to off.
- 2. Connect the power cable and AC adapter.
- 3. Connect the DC plug of the AC adapter to the power connecter of the printer.
- 4. Connect the AC plug to the outlet.



3-2. Opening and closing the printer cover

When installing and removing the printer paper, open the printer cover to allow these operations to be performed.

Instructions

- 1. Press the button on the right side of the printer cover.
- 2. Lift the printer cover upwards.





3-3. Installing the printer paper

Instructions

- 1. Place the printer paper so that its leading edge protrudes from the printing unit.
- 2. Close the printer cover.
- 3. Turn the power switch on.
- 4. Press the $\begin{vmatrix} 100 \\ 8 \\ FEED \end{vmatrix}$ key to feed the printer paper 5 or 6 cm out of the printing unit.



*Thermal printer paper for printers(5 pcs)AX-PP147-SDust-free thermal printer paper for printers(10 pcs)AX-PP183-S

3-4. Test printing

To start test printing, turn the power on while pressing and holding the



key, and then press and hold the

Printout example

₩XY 9▼ TEST

key (for approx. 4 seconds).

By performing test printing, the status of the function settings can be confirmed.

* To stop printing, turn the power off.



* PRINTER SETUP]* VERSION :V1.05(2024/06/17) USER MODEL : AND PRINT MODE : EXT_KEY PRINT FORMAT : WEIGHT PRINT FORMAT2 : +/- PRINT US PRINT : NOT PRINT DATE FORMAT : Y/M/D LINE FEED : 1 LINE USER CODE : 00000001 TOTAL MODE : TIME PRINT CODE PRINT : PRINT CODE DIRECTION: L <-- R NO_PRINT : PRINT BACK FEED : YES PRINT DENSITY : 70% INTERFACE : SERIAL(RS-232C) CURRENT LOOP PROTOCOL : 2400bps, E, 7, 1 CURRENT TIME/DATE : 2024/11/01 12:34:56

3-5. Connecting to the weighing device

Use the RS-232C or current loop cable to connect the printer to the weighing device. The factory default communication settings are baud rate: 2400 bps, data length: 7 bits, parity: EVEN,

stop bit: 1 bit. This is in accordance with the factory default settings for most of A&D's weighing devices.



Weighing device rear side

 If the weighing device has a connector other than D-sub 9 pin, an RS-232C cable (sold separately) is required.

* If connecting to the current loop output of a weighing device, a current loop cable (sold separately) is required.

4. Printing

4-1. Printing out data from the weighing device

Instructions

- Turn the printer power on. The factory default printing mode is "External key printing mode (E⊠T. KEY)".
- 2. Connect the printer to the weighing device using a RS-232C or current loop cable.
- Transmit data to the printer from the weighing device.
 (e.g.) Press the PRINT key on the weighing device.
 Refer to the instruction manual of the weighing device for the data output methods, output format and RS-232C communication settings.
- 4. Press and hold the $\begin{bmatrix} N \\ FEED \end{bmatrix}$ key to feed the printer paper until the printed results can be viewed, and then cut off the printer paper.
- * Some weighing devices have functions such as outputting by pressing the **PRINT** key or automatically outputting after stabilizing the weighing.

4-2. Paper feed

8

Instructions

1. Press the

key to allow paper feed while the button is pressed.

4-3. Precautions

- □ Storage of thermal paper
 - Store the thermal paper in a cool, dry, dark place.
 - Do not rub the thermal paper with a hard object.
 - Do not place the thermal paper near organic solvents.
 - Do not allow the product to come into contact with PVC film, erasers, or adhesive tape to touch the thermal paper for extended periods of time.
 - Do not stack the thermal paper with whiteprints or wet copies immediately after copying.
- Do not drop foreign matter into the printer. Doing so may cause mechanical damage to the printer.
- □ When operating the printer, install the printer in a stable location. Installing the printer in an uneven or unstable location may result in movement of the printer caused by vibration due to printing out, leading to a serious accident.
- Depending on a material (PVC, etc.) of the installation table, rubber may transfer to it from the printer.
 Do not set the printer on a table or sheet made of vinyl.
- When cleaning the main unit, do not use organic solvents such as alcohol, thinner, or benzine.
 Otherwise, that may cause damage to the printer as its main body is made of plastic.

5. Basic Operations of the Keys

There are two actions possible when pressing a key.

*

- 1. Press the key and release after the buzzer sounds
- 2. Press and hold the key (for approx. 2 seconds) and release after the buzzer sounds twice





Keys	When the key is pressed (Until the buzzer sounds one time)	When the key is pressed and held for approx. 2 seconds (Until the buzzer sounds twice)
1 TIME	Prints out the current time.	Puts the printer in the time settings mode.
ABC 2 DATE	Prints out the current date.	Puts the printer in the date settings mode.
DEF 3 MODE	Accesses the printing mode settings.	
GHI 4 CODE	Prints out the ID code.	Puts the printer in the ID code settings mode.
JKL 5 S-TOTAL	Prints out the total.	
G-TOTAL	Prints out the statistical calculation results.	
PRS 7 DEL	Deletes one instance of the data to be used in statistical calculation.	Deletes all of the data to be used in statistical calculation.
B FEED	Feeds the paper one line.	Feeds paper while the key is pressed.
WXY 9▼ TEST	Test prints when the power is turned on while pressing this key with the power turned off.	
ESC	Cancels changes at each setting. Advances to the next setting item when configuring the function settings.	Transmits a re-zero command. * The commands can be selected at the function settings.
	Prints out weighing values in the manual printing mode. Prints out received weighing values after transmitting weighing value request commands ("Q" command) to the device at the external key printing mode and dump printing mode. *	
ENT	Confirms the setting changes. Stops or restarts the chart printing while printing a chart.	Toggles between the external key printing mode and dump printing mode. Completes the chart printing while printing a chart.

* When connecting using the current loop, the commands cannot be transmitted.

Statistical Calculation Functions 6.

In addition to printing out weighing values, the printer can also perform statistical calculation of the weighing values printed out. The printer always performs calculation processing while operating, so you can print out calculation results at the touch of a key whenever needed.

Printing example and printing contents of statistical calculation 6-1

When printing out the weighing values, the weighing umber is 1. printed out.

If unit and kind of data entered in the printer differ from those of the data entered first, the printer prints out the values without calculating.

If accidentally printing out the weighing values, press the 2.



key.

key. "****< *** DELETE >****" is displayed and the printer does not calculate prior data.

When printing out total calculation results, press the 3.

Date and time, ID code, data count (N) and total (TOTAL) are printed out. To delete all the data used with the statistical calculation, press and

hold the

key for approx. 2 seconds.

When printing out all of the calculation results, press the 6▲ 4 key.

Date and time, ID code, data count (N), total (TOTAL), averaging value (AVE), maximum value (MAX), minimum value (MIN), maximum value - minimum value (R), standard deviation (STDEV), coefficient variation (CV) and minimum weighing value (MINI WT) are printed out.

Standard deviation (STDEV) Coefficient variation (CV) = × 100(%) Averaging value (AVE)

Minimum weighing value (MINI WT) = standard deviation (STDEV) × 2000

- Calculation of the minimum weighing value conforms to USP Chapter 41. This calculation is applied only when weighing using a weight.
- Data count (N) to be calculated is a maximum of 999.
- 5. After printing out all of the calculation results, data to be used at statistical calculation can all be deleted. (Or press and hold the

key for approx. 2 seconds to make the same operation.)



I CD display



: To delete all of the data.

: To not delete the data.

L	LOD display						
CL DA	EAR TA?						

тD	CODI	: :	LAB-1234	
NO.	. 1	WT	1000.12	g
NO.	. 2	WT	1000.20	g
NO.	. 3	WT	1000.16	g
N0.	4	WT	1000.21	g
	***:	*< 00	4 DELETE >**	< * *
NO.	4	WT	1000.25	g
N0.	. 5	WT	1000.13	g
	24/1	1/01 DDE	UB TOTAL >*≯ 15:31:50 LAB-1234	ነጥጥ
		N	5 5000.86	
				g

Printout example

.

.....

****< GRAND	TOTAL >**	**
2024/11/01	15:32:07	
ID CODE	LAB-1234	
Ν	5	
TOTAL	5000.86	g
$AVE(\overline{x})$	1000.17	g
MAX	1000.25	g
MIN	1000.12	g
RANGE(R)	0.13	g
$STDEV(\sigma)$	0.054	g
CV	0.01	%
MINI WT	108.00	g

7. Basic Settings

The basic settings allow easy key operations to perform minimum required settings such as clock and printing mode. The setting values are always backed up using the built-in battery, so those values are maintained in the memory even when the power is turned to OFF or the AC adapter is disconnected.

Note If an alarm such as one long beep followed by three short beeps sounds when the power is turned to ON, the printer is prevented from printing properly and configuring settings for date and time due to an error in the built-in lithium battery. In this case, the printer requires repair.

7-1. Time settings



7-3. Printing mode settings



7-4. ID code setting



* Direction in which the ID code is set can be changed using the function settings.

8. Function Settings

The function settings are available for changes to communications and functions of the printer.

These parameters are maintained in non-volatile memory, even if the AC adapter is removed.

This function table menu consists of two layers. The first layer is the "Class" and the second layer is the

ENT

SAVE

key

"Item". Each item has one setting value registered. A setting value confirmed by pressing the

after selecting the item becomes effective.

The updated settings will be reflected in the printer's operation after the power is turned off and on again.

Settings example and menu structure



 Settings become effective by turning the power off and on again.

8-1. Function settings display and operation keys

Display and operation keys	Descriptions
*	Currently enabled setting values are indicated by the " st " mark being lit.
$ \begin{array}{c} \overbrace{1}^{OZ} \\ 1 \\ TIME \end{array} \begin{array}{c} \mathbb{A}^{BC} \\ \mathbb{A}^{DEF} \\ DATE \end{array} \begin{array}{c} \mathbb{D}^{EF} \\ \mathbb{A} \\ MODE \end{array} \begin{array}{c} \mathbb{G}^{HI} \\ \mathbb{4} \\ CODE \end{array} \end{array} $	Accesses menu for the item selected when "ITEM SEL" is displayed.
MNO G-TOTAL 9▼ TEST	Changes settings values.
ENT	Changes current item and advances to next item.
ESC	Advances to next item without changing current item.

8-2. Items list

1=SERIAL BAUDRATE Baud rate 1200 1200 bps	Class	Items	Setting values	Details and u	sage
1=SERIAL Serial interface *1 BAUDRATIE Baud rate 4808 4800 bps 1 1=SERIAL Serial interface *1 PARITY Parity NONE Not used 1 Parity NONE Not used 1 1 MORD LEN 8 bit 8 bit 1 1 MORD LEN 8 bit 8 bit 1 1 Stop BIT -15TOP 1 bit 1 1 1 Stop BIT -15TOP 2 bit 1 <td< td=""><td></td><td></td><td>1288</td><td>1200 bps</td><td></td></td<>			1288	1200 bps	
$3=MODE \\ Function settings $ Baud rate $ \begin{array}{ c c c c c } \hline Baud rate \\ \hline Baud rate \\ \hline Baud rate \\ \hline Baud rate \\ \hline Construction settings \\ \hline Construction setting \\ \hline$			2 400	2400 bps	
1=SERIAL Serial interface *1 PARITY 19200 19200 bps 19201 *1 PARITY NONE Not used 1 Parity ODD Odd 1 *1 PARITY ODD Odd 1 *1 PARITY Bit 8 bit 8 bit 1 Data length -7 bit 7 bit 1 1 STOP BIT SISTOP 1 bit 1 Stop bit 2STOP 2 bit 1 2=UENDER PRN MODE PRN MODE PRN MODE PRN MODE PRN MODE PRN MODE MANUAL MANUAL Manual printing mode *4 Adverting mode *4 PRN MODE PRN MODE PRN MODE PRN PRN PRN FOR. Printing mode *4 DUMP Dump printing mode *4 Adverting mode *4 PRN FOR. PRN FOR. TIME/UG Date and time + weighing PRN FOR. Printing data TM1/UG Date and time + weighing Values TIME/UG Date and time + weighing and time only at first operation. US PRN US PRN HOT PRN PRIN FOR PRIN Prints out when the weighing values are at "+*" and			4800	4800 bps	
1=SERIAL PARITY HONE Not used Image: Constraint of the second sec		Baud rate	9600	9600 bps	
Serial interface PARITY NUME Not used *1 Parity ODD Odd image: constraint of the second se			19288	19200 bps	
*1 Parity ODD Odd (International Content of the second se			NONE	Not used	
Juncy EUEN Even WORD LEN 8 bit 8 bit 0 Data length -7 bit 7 bit 0 STOP BIT 513 OP 1 bit 0 Stop bit 2STOP 2 bit 0 2=UENDER -AND A&D standard format *3 Data format *2 -AND A&D standard format *3 2=UENDER -AND A&D standard format *3 Data format *2 -AND A&D standard format *3 2=UENDER -AND A&D standard format *3 Data format *2 -AND A&D standard format *3 2=UENDER PRN MODE -EXT.KEY External key printing mode *4 PRN MODE -EXT.KEY Manual printing mode *4 DUMP Dump printing mode *4 PRN FOR. -EXT.KEY Dump printing mode *4 TIMER Interval printing mode *4 10 TIMER Intervalig thit ing mode *4 10			ODD	Odd	
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3=MODE PRN FOR. Printing data •WEIGHT Weighing values only TIME/UG Date and time + weighing values Prints out date and time + weighing values Prints out date and time only at first operation. Prints operation. Function settings PRN FOR2 + PRN Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". US PRN US PRN • • Not printed out Image: the time out weighing values are at "+" and "-". DATE FOR PRINT Printed out Image: the time out weighing values are at "+" and "-". • DATE FOR PATE FOR Image: the time out weighing values are at "+" and "-". • • DATE FOR PATE FOR M/D/Y mm/dd/yyyy Image: the time out weighing values are at "+" and "-".			TIMER	Interval printing mode	*4
3=MODE PRN FOR. Printing data Prints Out Art Weighing values only Prints out date and time + weighing values Function settings Printing data TM1/UG Date and time + weighing values Prints out date and time only at first operation. Function settings PRN FOR2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Prints out when the weighing values are at "+" and "-". US PRN INOT PRN Not printed out Interview out DATE FOR PRINT Printed out Interview out DATE FOR INOT PRN Not printed out Interview out DATE FOR INOT PRN Not printed out Interview out DATE FOR INOT PRN Not printed out Interview out DATE FOR INOT PRN Not printed out Interview out DATE FOR INOT PRN Not printed out Interview out			DUMP	Dump printing mode	
3=MODE PRN FOR. TIME/UG Date and time + weighing values Prints out date and time only at first operation. Function settings PRN FOR2 TM1/UG Date and time + weighing values Prints out date and time only at first operation. PRN FOR2 PRN FOR2 + PRN Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". PRN FOR2 + PRN Prints out when the weighing values are at "+" and "-". Prints out when the weighing values are at "+" and "-". US PRN NOT PRN Not printed out Image: PRINT DATE FOR PRINT Printed out Image: PRINT DATE form M/D/Y mm/dd/yyyy Image: PRINT			CHART	Chart printing mode	*4
3=MODE PRN FOR. Printing data TM1/UG Date and time + weighing values Prints out date and time only at first operation. Function settings PRN FOR2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". PRN FOR2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Prints out when the weighing values are at "+" and "-". US PRN INOT PRN Not printed out Image: Printed out DATE FOR Printed out Image: Printed out Image: Printed out DATE FOR Printed out Image: Printed out Image: Printed out			• WEIGHT	Weighing values only	
3=MODE Printing data TM1/UG Date and time + weighing values Prints out date and time only at first operation. Function settings PRN_FOR2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Printing data 2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". US PRN NOT PRN Not printed out Image: Weighing values are at "+" and "-". DATE FOR PRINT Printed out Image: Weighing values are at "+" and "-". DATE FOR PRINT Printed out Image: Weighing values are at "+" and "-". DATE FOR PRINT Printed out Image: Weighing values are at "+" and "-".				Date and time + weighing	
3=MODE Function settings TM1/UG Date and time + weigning values and time only at first operation. PRN FOR2 Printing data 2 + PRN Prints out when the weighing values are at "+". - Printing data 2 + PRN Prints out when the weighing values are at "+" and "-". - US PRN Unstable data = - Printed out - DATE FOR Date form = - yyyy/mm/dd -		PRN FOR.	I THE < MB		
S=PIODE Imit2/MG values and time only at first operation. Function settings PRN FOR2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". Printing data 2 Prints out when the weighing values are at "+". Prints out when the weighing values are at "+". US PRN Imit2/MG Prints out when the weighing values are at "+". US PRN Imit2/MG Prints out when the weighing values are at "+" and "-". US PRN Imit2/MG Prints out when the weighing values are at "+" and "-". US PRN Imit2/MG Imit2/MG DATE FOR PRINT Printed out DATE FOR M/D/Y mm/dd/yyyy		Printing data		Data and times to wainking	Prints out date
Function settings first operation. Prints out when the + PRN FOR2 + Printing data 2 + Prints out when the **". Prints out when the **". Prints out when the **". US PRN **". US PRN **". Unstable data PRINT Printed out **". DATE FOR **". Date form M/D/Y	3=MODE		TM1/WG		and time only at
PRN FOR2+PRNweighing values are at "+".Printing data 2Prints out when the "+" and "-".US PRN Unstable data••PRINT Printed out•DATE FOR Date form•V/M/D•M/D/Ymm/dd/yyyy	Function settings			values	first operation.
PRN_FOR2 "+". Printing data 2 Prints out when the •+/- PRN weighing values are at "+" and "-". US_PRN •NOT_PRN Unstable data PRINT Printed out DATE_FOR Date form				Prints out when the	
Printing data 2 Prints out when the weighing values are at "+" and "-". US PRN • MOT PRN Not printed out Unstable data PRINT Printed out DATE FOR • Y/M/D yyyy/mm/dd Date form M/D/Y mm/dd/yyyy			+ PRN	weighing values are at	
• + /- PRN weighing values are at "+" and "-". US PRN • NOT PRN Not printed out Unstable data PRINT Printed out DATE FOR • Y/M/D yyyy/mm/dd Date form M/D/Y mm/dd/yyyy		PRN FOR2		" + ".	
US PRN •NOT PRN Not printed out Unstable data PRINT Printed out DATE FOR •Y/M/D yyyy/mm/dd Date form M/D/Y mm/dd/yyyy		Printing data 2		Prints out when the	
US PRN Not printed out Unstable data PRINT Printed out DATE FOR Y/M/D yyyy/mm/dd Date form M/D/Y mm/dd/yyyy			■+/- PRN	weighing values are at	
Unstable data PRINT Printed out DATE FOR • Y/M/D yyyy/mm/dd Date form M/D/Y mm/dd/yyyy				"+" and "-".	
DATE FOR Date form		US PRN	NOT PRN	Not printed out	
DHIE FUR MZDZY mm/dd/yyyy		Unstable data	PRINT	Printed out	
Date form		DATE EDD	■ YZMZD	yyyy/mm/dd	
Dzie ionn Dzie z dd/mm/yyyy			MZDZY	mm/dd/yyyy	
			DZMZY	dd/mm/yyyy	

indicates factory settings.

*1 Initial setting values of the serial interface are adjusted to those of A&D weighing devices.

*2 Please also set the output format of the scale to the A&D standard format.

*3 We do not support operations of product formats other than A&D standard format.

*4 The output mode of the weighing device must be set to stream output.

Items	Setting values	Details and usage		
	• 1 TNE	Feeds one line after		
		printing.		
	2 I THE	Feeds two lines		
	dan dan di 1 Than			
	К ГТЫБ			
		1 0		
	4 I TNE			
Feed	5 I THE			
	·····			
	6 LINE			
	7 LINE			
	8 LINE	-		
TOTAL MD Calculation printing	TZD YES			
	TZD NO			
	NUI MEN	Not printed out	When printing out	
	PRINT	Drivete el exist	No.1 data and	
D printing		Printed out	statistical calculation	
CONC NTO		To left from right	calculation	
		-	Number to be	
NO. PRN Weighing number printing	indi ERM		applied to	
	PRINT	Printed out	statistical	
	■ (*** (* <u>)</u> (*) (calculation	
REZERO		P command		
Re-zero Command	- ochy K			
*5	SEND Z	Z command		
	Calculation printing CODE PRN ID printing CODE DIR ID setting direction NO. PRN Weighing number printing REZERO Re-zero Command	Feed5 LINE6 LINE6 LINE7 LINE7 LINE8 LINE17 LINE8 LINE10 PRINT10 PRINT10 PRINT10 PRINT10 PRN10 PRN10 PRN10 PRN10 PRN10 PRN10 PRN11 PRN12 PRN13 PRN14 PRN15 PRN15 PRN 2	FEED CNT-1 LINEprinting.Feeds two lines after printing.Feeds two lines after printing.3 LINEFeeds three lines after printing.4 LINEFeeds four lines after printing.5 LINEFeeds five lines after printing.6 LINEFeeds six lines after printing.7 LINEFeeds six lines after printing.7 LINEFeeds six lines after printing.7 LINEFeeds eight lines after printing.0 CODE DIR ID printingNOT PRNNOT PRNNot printed outNOT PRNNot printed outREZERO Re-zero CommandSEND RR command	

indicates factory settings.

*5 Set the command so as to match figures for the weighing device connected.

Class	Items	Setting values	Details a	ind usage
		■ NONE	Has no function.	
		PRINT	Printed out	Printing mode is "MANUAL".
		FEED	Paper feed	*6
	EXT IN1 External input 1	G TOTAL	Calculation results printing	
		S TOTAL	Total printing	
		RZZ CMD	Re-zero command	
		Q CMD	Weighing value request command	
		■ NONE	Has no function.	
3≕MODE Function settings		PRINT	Printed out	Printing mode is "MANUAL".
		FEED	Paper feed	*6
	EXT IN2 External input 2	G TOTAL	Calculation results	
			printing	
		S TOTAL	Total printing	
		R/Z CMD	Re-zero command	
		Q CMD	Weighing value	
			request command	
	BACK FD	■YES	Enables backfeed	
	Backfeed *7	NO	Disables backfeed	
	DENSITY Print Density	50%~100%	Print density input	Factory settings: 70%
4=INITAL	PRN FZA		Resets the printer's	
Initialization	Initialization	-	function settings to	
milianzation	milialization		factory settings.	
		■NOT USE	Disables password	When the password
		-nui uoc	function	function is enabled,,
5=P1.1	LOCK			the password must
Password lock function	Password lock function		Enables password	be entered in order
		USE	Enables password function	to change the date,
				time or function
				settings.

indicates factory settings.

*6 By pressing the external input switch one time, paper feed is started. By pressing the external input switch once again, paper feed is stopped.

*7 This function loads the paper into the printer, prints, and then advances the paper to a position where the printed text is easy to see.

8-3. Initializing the function settings

When resetting the function settings values of the printer to factory settings, perform

"Initializing (4=1日訂百匹)" in "8-2. Items list".



key: Initializes function settings to factory settings.

key: Cancels initialization

(The function settings are not initialized.)

LCD display



8-4. Descriptions for the printing mode

Printing method of the printer varies depending on "Printing mode (PRN MODE)" in "8-2. Items list".

External key printing mode (EXT . KEY)

Printing is done using weighing device's keys without making printer key operations.

Set data output settings of the weighing device to output using the keys.

It is also possible to print out data by pressing the

key to transmit a weighing value

request command ("Q" command) to the weighing device side.

But when connecting using current loop, the commands cannot be transmitted.

Manual printing mode (MANUAL)

Printing can be done by pressing the $\begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$ key.

Set data output settings of the weighing device to stream output (Always outputting).

Auto printing mode (AUTO)

Printing is done automatically when data transmitted from the weighing device has changes of +10 d or more to zero and is stable.

One d is the minimum display of the weighing device.

Set data output settings of the weighing device to stream output (Always outputting).

Interval printing mode (TIMER)

Printing is done at each time that was set by this mode. To set the interval time, set minutes and seconds (mm:dd) after confirming settings of the printing mode to "TIMER". To suspend the printing, press the



key. To restart the printing, press the

ENT key.

Set data output settings of the weighing device to stream output (Always outputting).

Dump printing mode (D니MP)

Data transmitted from the weighing device is printed out without changes. Use these settings for GLP outputs, etc. of the weighing device.

Set data output settings of the weighing device to output using the keys.

It is also possible to print by pressing the $\begin{bmatrix} \square^{+-} \\ O \\ PRINT \end{bmatrix}$ key to transmit a weighing value request command ("Q"

command). But when connecting using current loop, the commands cannot be transmitted.

Character code table (ASCII) that is available for printing in DUMP printing mode

	0	1	2	3	4	5	6	7
0			SP	0	@	Ρ	"	р
1			!	1	А	Q	а	q
2			"	2	В	R	b	r
3			#	3	С	S	С	S
4			\$	4	D	Т	d	t
5			%	5	Е	U	е	u
6			&	6	F	۷	f	v
7			,	7	G	W	g	w
8			(8	Н	Х	h	х
9)	9	Ι	Y	i	У
Α			*	:	J	Ζ	j	z
В			+	;	K	Γ	k	{
С			,	<	L	~	l	
D			-	=	М]	m	}
Е				>	Ν	^	n	~
F			/	?	0		0	

ASCI code available for printing: 20h to 7Eh Spaces cannot be printed.

SP indicates a space.

Chart printing mode (CHART)

Amount of changes of the weighing values is printed out as scatter plot. Changes of the weighing values in real time can be confirmed visually.

At the chart printing mode, set digits (2 digits) for chart printing, minutes and seconds of the interval time (mm:ss) and the printing count after confirming settings of the printing mode to "CHART".

Set data output settings of the weighing device to stream output (Always outputting).

Refer to "8-5. Chart printing mode" for details.

8-5. Chart printing mode

- 1. Set the printing mode to " $\mathbb{CH}\mathbb{ART}$ and press the
- 2. Turn the power off and on.
- 3. Press the $\begin{bmatrix} MNO \\ GTOTAL \end{bmatrix}$ or $\begin{bmatrix} MNO \\ 9 \\ TEST \end{bmatrix}$ key to select a digit to be transformed in chat and press the $\begin{bmatrix} ENT \\ SAVE \end{bmatrix}$ key to confirm.
- 4. Enter the interval time by using the numerical keypad and press the $\begin{bmatrix} ENT \\ SAVE \end{bmatrix}$ key to confirm.
- 5. Enter the chart printing number by using the numerical keypad and

press the $\begin{vmatrix} ENT \\ SAVE \end{vmatrix}$ key to confirm.

Chart printing starts.

Chart printing example



ENT

SAVE

key to confirm.

6. When the ENT key is pressed and held or the chart print count reaches the number of times that was set beforehand, the chart printing is completed. To stop the chart printing, press the

key. To restart the printing, press the $\begin{bmatrix} E \\ SAVE \end{bmatrix}$

- 7. To repeat the operations from "Step 3" after finishing chart printing, press the $\begin{bmatrix} ENT \\ SAVE \end{bmatrix}$ key.
 - *1 Settings range of the interval time is 00 : 05 (5 seconds) to 59 : 59 (59 minutes 59 seconds).
 - *2 Settings range of the chart print count is 010 (10 times) to 990 (990 times).



PRN MODE

key.

8-6. Descriptions for the external input connector

By using the external input connectors, operations such as printing, paper feed or re-zero on a weighing device away from the printer can be performed. The printer has two external inputs. Those operations can be set by "External input 1 (EXT IN1)" and "External input 2 (EXT IN2)" of "Function settings (3=MODE)" in "8-2. Items list".

Combination example



Using the external input connector (Example using a foot switch)

- 1. Insert either pin terminal into the "GND" of the external input connector. *1 , *2
- 2. Insert the other pin terminal into the "EX1" or "EX2" of the external input connector. *2
- 3. When removing the pin terminal from the external input connector, pull out the conducting wire while pressing the releasing button. *2
- *1 If the pin terminal cannot be secured properly by inserting, insert the pin terminal while pressing the releasing button.
- *2 If the releasing button can not easily be pressed, depress the releasing button using a screwdriver.



9. Password Lock Function

This function is used to set a password to allow only an administrator who knows the password to change the date or time setting and function settings. The operator can change the ID number even while the password lock function is in use.



9-2. Where the password is entered

When the password is enabled (LIBE *), the password must be entered by using the setting operations described below.



Interface Specifications 10.

10-1. RS-232C

The printer is a DTE device. Connect a weighing device (DCE) to the printer using a straight through cable.

Transmission system	C	
Transmission form	: Asynchrono	ous, bi-directional, half duplex
Data format	: Baud rate	: 1200、2400*、4800、9600、19200 bps
	Terminator	: <cr><lf></lf></cr>
	Data length	: 7 * or 8 bits
	Parity	: EVEN*、ODD(Data length 7 bits)
		NONE (Data length 8 bits)
	Stop bit	: 1 bit

* Indicates factory settings. (This is in accordance with the factory default settings for most of A&D's weighing devices.)

D-Sub 9-pi	n assignment					
Pin No.	Signal name	Direction	Description			
1	RXD		Current loop receiving data			
2	RXD	Input	Receive data			
3	TXD	Output	Transmit data			
4	Llood internally	Unavailable for connection		Output	Unavailable for connection	
4	4 Used internally O		(5V output)			
5	SG	Output	Signal ground	12345		
6			No connection	$ Q \setminus 0 \circ 0 \circ 0 / Q $		
7	—		No connection	6789		
8	—	—	No connection	#4-40UNC		
9			No connection			

RS-232C connection



11. Maintenance

11-1. Care and cleaning

- Do not use organic solvents or chemical cloth to clean the printer.
- □ Clean the printer with a lint free cloth that is moistened with a mild detergent.
- Do not disassemble the printer.
- □ Use the original packing material for transportation.

11-2. Checking the printer performance

If the printer seems to have a problem, check the items described below. If improper performance persists after checking, contact the local A&D dealer for repair.

Checking the power supply

□ Is an appropriate AC adapter connected?

Checking the data transmission

- Is the printer connected to the weighing device using an RS-232C straight through cable or current loop cable?
- □ Are the RS-232C settings (baud rate, data length and parity) of the printer the same with those of the weighing device?

Checking the printer paper

- □ Are you using thermal paper for the printer?
 - * Plain paper for the AD-8127 multi-function printer cannot be used.

Sold separately

- Thermal printer paper for printers : AX-PP147-S
- Dust-free thermal printer paper for printers : AX-PP183-S

11-3. Troubleshooting

No.	Phenomenon		Possible cause, remedy
11-3-1	The Weighing	The results are printed as dots.	An improper AC adapter may be used with the printer. Confirm that the adapter type is correct for the local voltage and power receptacle type. Refer to "2-1. Part names" in "2. Product Structure (Part Names), Package Contents" in this document.
11-3-2	values cannot be printed. Nothing is printed on the printer paper		If you are using printer paper other than the thermal paper provided, the printer paper may not be thermal paper. Please check the model number of the printer paper. Model number : Thermal paper for printers AX-PP147-S Dust-free thermal paper for printers AX-PP183-S

No.	Phenomenon Possible cause, remedy		Possible cause, remedy
			The printer cannot receive weighing values because the printer is
			set to "Manual printing mode" [3=MODE PRN MODE / MANUAL] in the function settings.
			 * Manual printing mode is used to print weighing values each
			time the $\begin{bmatrix} \Box^{+-} \\ PRINT \end{bmatrix}$ key on the printer is pressed while the
			weighing values are being continuously transmitted from the
			weighing device to the printer.
			1. To print weighing values using keys on the weighing device
			Initialize the settings for the printer. Refer to "8-3. Initializing the function settings" in "8. Function
			Settings" in this document.
			2. To print weighing values using keys on the printer
			Perform by one of the methods below. 2-1 Transmitting the weighing value request command from the
			printer to the weighing device.
			* These operations are available only for weighing device that
			can output weighing values using the "Q" command.
			 Settings for the weighing device Data output format: "A&D standard format"
			2) Settings for the printer
			- Printing mode: "External key printing mode" [3=100E
			PRN_MODE / EXT.KEY] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in
			this document.
	The	Printer display	3) Printing the weighing value
11-3-3	The Weighing values cannot be printed.	:be	- By pressing the $\begin{bmatrix} \Box^{+-} \\ O \\ PRINT \end{bmatrix}$ key on the printer, the weighing value
			request command ("Q" command) is transmitted from the
			printer to the weighing device, and then the printer prints the
			weighing values received from the weighing device.
			2-2 Printing weighing values each time the $\begin{bmatrix} \mathbf{O}_{PRINT}^{+-} \\ \mathbf{O}_{PRINT} \end{bmatrix}$ key on the printer is
			pressed while the weighing values are being continuously
			transmitted from the weighing device to the printer
			 Settings for the weighing device Data output mode: "Stream mode" (outputting the weighing
			values continuously)
			 Data output format: "A&D standard format"
			2) Settings for the printer
			- Printing mode: "Manual printing mode" [3=MODE PRN_MODE / MANUAL]
			Refer to "7-3. Printing mode settings" in "7. Basic Settings" in
			this document.
			3) Printing the weighing value
			- Press the OPRINT key on the printer to print the newest
			weighing values.
			* When output of weighing values from the weighing device stops in cases such as when the display is turned off or when re-zeroing, the printer displays the error shown at the left.
	1	Printer display	There is no printer paper or the printer cover is open. Refer to "3-3.
11-3-4		PAPER ER	Installing the printer paper of the printer cover is open. Refer to 5-5.
			- · · · · ·

No.	Ph	enomenon	Possible cause, remedy
			The printer cannot receive weighing values because it is set to
			"Auto printing mode" [3=MODE PRN_MODE / AUTO] in
			the function settings.
			* Auto printing mode of the printer is used to automatically print
			weighing values only when the printer detects a change in a
			weighing value while weighing values are being continuously
			transmitted from the weighing device to the printer.
			1. To print weighing values using keys on the weighing device
			Initialize the settings for the printer.
			Refer to "8-3. Initializing the function settings" in "8. Function
			Settings" in this document.
			2. To automatically print weighing values due to a change in the
			weighing value.
			Perform by one of the methods below.
			2-1 Printing using the auto printing function of the weighing device
			Many models of weighing device are equipped with functions
			(auto printing function) that can automatically output weighing
			values after the weighing value changes or stabilizes. The
			weighing values can be printed automatically with the printer
11-3-5	The Weighing values cannot be		by using this function.
		Printer display	1) Settings for the weighing device
			- Data output mode: "Auto printing"
			 Data output format: "A&D standard format"
	printed.		2) Settings for the printer
	printou.		- Printing mode: "External key printing mode" [3=MODE PRN_MODE / EXT.KEY]
			Refer to "7-3. Printing mode settings" in "7. Basic Settings" in
			this document.
			3) Printing the weighing value
			- When outputting the weighing values to the printer by placing
			and removing a sample as instructed in the instruction manual
			of the weighing device, the printer prints the weighing values.
			2-2 Printing using auto printing mode of the printer
			 Settings for the weighing device Data output mode: "Stream mode" (outputting the weighing
			values continuously)
			- Data output format: "A&D standard format"
			2) Settings for the printer
			- Printing mode: "Auto printing mode" [3=MODE PRN_MODE / AUTO]
			Refer to "7-3. Printing mode settings" in "7. Basic Settings" in
			this document.
			3) Printing the weighing value
			- When the weighing value has a change of more than 10 d
			from zero and is stable, the printer prints the weighing values.

No.	Ph	enomenon	Possible cause, remedy
			Digits to be charted are selected because the printer is set to chart printing mode [3=MODE PRN MODE / CHART].
11-3-6	The Weighing	Printer display TARGET 76543210	 To print weighing values using keys on the weighing device Initialize the settings for the printer. Refer to "8-3. Initializing the function settings" in "8. Function Settings" in this document. To perform chart printing (printing of changes in the weighing value in real time as a scatter diagram) Settings for the weighing device Data output mode: "Stream mode" (outputting the weighing values continuously) Data output format: "A&D standard format" Settings for the printer Printing mode: "Chart printing mode" [3=MODE PRN MODE / CHART] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. Refer to "8-5. Chart printing mode" in "8. Function Settings" to set chart printing mode.
11-3-7	values cannot be printed.	Printer display TIME SET M:: S00:: 00	 Interval time is set because the printer is set to interval printing mode [3=MODE PRN_MODE / TIMER] or chart printing mode 3=MODE PRN_MODE / CHART]. 1. To print weighing values using keys on the weighing device Initialize the settings for the printer. Refer to "8-3. Initializing the function settings" in "8. Function Settings" in this document. 2. To perform interval printing or chart printing with the printer. 1) Settings for the weighing device - Data output mode: "Stream mode" (outputting the weighing values continuously) - Data output format: "A&D standard format" 2) Settings for the printer - Printing mode: "Interval printing mode" [3=MODE PRN_MODE / TIMER] or "Chart printing mode" [3=MODE PRN_MODE / CHART]. Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. Refer to "8-4. Descriptions for the printing mode" and "8-5. Chart printing mode" in "8. Function Settings" for detailed settings procedure.

No.	Phe	enomenon	Possible cause, remedy	
			This issue often appears when the printer is used with the HV-C-K	
11-3-8		Printing cannot be done after tare (HV-C-K series)	series. Settings for the printer - Printing mode: "Dump printing mode" [3=MODE PRN MODE / DUMP] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document.	
11-3-9	The Weighing values cannot be printed.	Others	 An improper connection cable is used between the weighing device and printer. When connecting the weighing device and printer using an RS-232C cable, a straight through cable must be used. When connecting using DIN cable (rounded connector), make sure that a cable for RS-232C connection is used without using a cable for current loop connection. Refer to "2. Product Structure (Part Names), Package Contents" and "12-2. Sold separately" in "12. Specifications" in this document. The output format of the weighing device is not correct. See if printing can be done by the settings below. If printing can be done properly, the communication settings between the weighing device and printer match. Settings for the weighing device = Data output format: "A&D standard format" Settings for the printer Printing mode: "Dump printing mode" [3=MODE PRH MODE / DUMP] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. The communication settings between the weighing device and printer do not match. Confirm the communication settings (baud rate, data bit rate and parity bit) for the weighing device and printer. Refer to the instruction manual for the weighing device for its communication settings. Factory settings for most weighing devices are the same as for the printer. There are cases when it is possible to print by initializing the weighing device and printer Refer to "8-3. Initializing the function settings" in "8. Function Settings" in this document. Settings for the printer Confirm settings of the serial interface [1=SERIAL]. Refer to "8. Function Settings" in this document. 	
11-3-10	The weighing values are continuously printed without end.		 Data output mode for the weighing device is set to stream mode (outputting the weighing values continuously) 1. To print weighing values using keys on the weighing device 1) Settings for the weighing device Data output mode: select other than stream mode. 2. To print weighing values using keys on the printer 1) Settings for the printer Printing mode: Set to manual printing mode [3=MODE PRN MODE / MANUAL]. Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. 	

11-4. When problems cannot be resolved

No.	Phenomenon, desired action		Remedy	
11-4-1	The printed results cannot be seen.		 Press and hold the ^{TUV} <u>8</u> FEED key to feed paper until the printed results can be seen. 2. Paper can also be fed automatically after the weighing values are printed. Settings for the printer: Select the paper feed amount by "FEED" [3=MODE BACK FD / YES]. Refer to "8-2. Items list ("BACK FD" item)" in "8. Function Settings" in this document. 	
11-4-2	About the weighing number weighing before the weighing value		 Whether or not to print the weighing number before the weighing value can be selected. 1) Settings for the printer Weighing number printing: Printed out/Not printed out [3=MODE NO. PRN NOT PRN / PRINT] Refer to "8-2. Items list ("NO. PRN" item)" in "8. Function Settings" in this document. 2) Settings for the weighing device Data output format: "A&D standard format" 	
11-4-3		To reset the printer	Statistical calculation data can be deleted by pressing the ENT key	
11-4-4		To delete all data to be used for statistical calculation	after pressing and holding the $\boxed{\overset{PRS}{\overbrace{DEL}}}$ key (for approx. 2 seconds). Refer to "6-1. Printing example and printing contents of statistical calculation" in "6. Statistical Calculation Functions" in this document. * If statistical calculation data is deleted, the weighing number for that data will be also reset. (printed from "No.1" next time)	
11-4-5	About statistical calculation	To perform statistical calculation	 1) Settings for the weighing device Data output format: "A&D standard format" * When the weighing values are outputted from the weighing device, do not add information (date / time, ID number, etc.) other than the weighing value to the weighing values. 2) Settings for the printer Printing mode: "External key printing mode" [3=MODE PRN MODE / EXT.KEY] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. * Data used for statistical calculation is maintained in non-volatile memory of the printer even when turning the power of the printer off. To reset the weighing number, please delete the statistical calculation data. Refer to "6-1. Printing example and printing contents of statistical calculation" in "6. Statistical Calculation Functions" in this document. 	

No.	Phenomenon, desired action		Remedy	
11-4-6	To print a maintenance record according to GLP/GMP		 1) Settings for the weighing device Set for the weighing device to "Perform the GLP output". 2) Settings for the printer Printing mode: Dump printing mode [3=MODE PRN MODE / DUMP] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. * When printing maintenance records according to GLP/GMP, the printing mode for the printer must be set to "Dump printing mode" [3=MODE PRN MODE / DUMP]. * When performing statistical calculation, the printer is operated using "External key printing mode" [3=MODE PRN MODE / EXT . KEY]. Therefore, to print maintenance records according to GLP/GMP, it is necessary to change the mode to "Dump printing mode" temporarily. * When switching printing mode, please note that the printer deletes all date to be used with statistical calculation. (We recommend taking actions such as printing results for statistical calculation beforehand.) * Press and hold the ENT SAVE key to switch between "External printing mode" and "Dump printing mode" Refer to the item for the ENT SAVE key in "5. Basic Operations of the Keys" in this document. 3) Printing the maintenance records When outputting data for maintenance records such as data for calibration (sensitivity adjustment) of the printer by operating the weighing device, the printer prints the data transmitted to it. * Return the printing mode for the printer to "External key printing mode" if necessary. 	
11-4-7		To print the date / time	Press the $\begin{pmatrix} \uparrow QZ \\ \uparrow I \\ TIME \end{pmatrix}$ key to print the time. Press the $\begin{bmatrix} ABC \\ 2 \\ DATE \end{bmatrix}$ key to print the date. * The printer uses the built-in clock for printing date / time. * By using the password lock function of the printer, setting the date / time can be limited to only by an administrator. Refer to "9. Password Lock Function" in this document.	
11-4-8	About date / time	To automatically print the date / time when printing the weighing values	 1) Settings for the weighing device Data output format: "A&D standard format" 2) Settings for the printer Printing mode: "External key printing mode" [3=MODE PRM MODE / EXT.KEY] Refer to "7-3. Printing mode settings" in "7. Basic Settings" in this document. Printing data: Date + weighing value [3=MODE PRN FOR. / TIME/WG] Refer to "8-2. Items list ("PRN FOR." item)" in "8. Function Settings" in this document. * The printer uses the built-in clock for printing date / time. * By using the password lock function of the printer, setting the date / time can be limited to only by an administrator. Refer to "9. Password Lock Function" in this document. 	

No.	Phenomenon, desired action		Remedy	
11-4-9	About date / time		 Press and hold the ¹⁰²/_{TIME} key to enter time setting mode. Press and hold the ^{ABC}/_{DATE} key to enter date setting mode. Enter values using the numerical keypad in each setting mode to set date or time. Press the ^{ENT}/_{SAVE} key while ^{TIME SET}/_{SEUE?E} is displayed to store date or time. * By using the password lock function of the printer, setting the date / time can be limited to only by an administrator. 	
11-4-10	-	To not print date / time in Statistical calculation results	Refer to "9. Password Lock Function" in this document. Set the printer as follows. - Calculation printing: Do not add date and time in the calculation printing [3=MODE TOTAL MD / TZD NO] Refer to "8-2. Items list ("TOTAL MD" item)" in "8. Function Settings" in this document.	
11-4-11	Printing	To automatically print weighing values by placing the sample without pressing the key.	Refer to "11-3-5 "2. To automatically print weighing values due to a change in the weighing value." in "11-3. Troubleshooting" in this table.	
11-4-12	the weighing values	To print weighing values using keys on the printer	Refer to "11-3-3 "2. To print weighing values using keys on the printer" in "11-3. Troubleshooting" in this table.	
11-4-13		To print the unstable weighing values where the stable mark is not lit	Set the printer as follows. - Unstable data: Printed [3=MODE US PRN / PRINT] Refer to "8-2. Items list ("US PRN)" in "8. Function Settings" in this document.	
11-4-14	About ID code	To not print ID code	Set the printer as follows. 1) Settings for the printer - ID printing: Not printed out [3=MODE CODE PRN / NOT PRN] Refer to "8-2. Items list ("CODE PRN" item)" in "8. Function Settings" in this document.	
11-4-15		How to use ID code	By having the printer record information (product name, lot number, and measurer, etc) related to the weighing results in advance, that data can be printed whenever needed. * Press the $\begin{bmatrix} GHI \\ 4\\ CODE \end{bmatrix}$ key to print the ID code.	

No.	Phenomenon, desired action	Remedy
11-4-16	Confirming the software version	 Confirm the software version by following the procedure below. 1) Turn the power of the printer off by using the power switch on the right side of the printer. 2) When the power of the printer is turned on again, the printer's display shows the software version temporarily. U1.05 24/06/17 (software version display) The example above shows software version "V1.05(24/06/17)".

11-5. Asking for repair

If improper performance persists after checking, contact the local A&D dealer for repair. The printer is a precision instrument. Use the original packing material for transportation.

12. Specifications

		
Printing method	Thermal type	
Character specifications	13 dots × 28 dots	
Character specifications	1.5(W) × 2.6(H) mm	
Number of characters printed	24 characters per line	
Operating temperature range	0 °C to 40 °C	
Operating humidity range	20 % to 85 %RH (No condensation)	
Storage temperature range	−10 °C to 50 °C	
Storage humidity range	10 % to 90 %RH (No condensation)	
Interface	RS-232C, current loop	
	Supplied to the AC adapter	
Power supply & AC adapter type	Confirm that the adapter type is correct for the local voltage and	
	power receptacle type.	
External dimensions	174(W) × 141(D) × 87(H) mm	
Weight	Approx. 500 g	
Accessories	Thermal printer paper for printers (1 pcs), AC adapter, AC adapter	
Accessories	labels, simplified instruction manual、RS-232C cable, power cable	

12-1. External dimensions





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12-2. Sold separately

 Thermal paper for printers (5 pcs) This is thermal paper of 57.5 mm width × Approx. 30 m length 	AX-PP147-S gth.				
 Dust-free thermal paper for printers (10 pcs) AX-PP183-S This is dust-free thermal paper that is available for use in cleanrooms. 57 mm width × Approx. 25 m length 					
RS-232C cable (D-sub9 pin – 9 pin, 1 m)	AX-KO2741-100				
RS-232C cable (D-sub9 pin – 9 pin, 2 m)	AX-KO2466-200				
RS-232C cable (D-sub25 pin – 9 pin, 0.9 m)	AX-KO2116-090				
RS-232C cable (D-sub25 pin – 9 pin, 2 m)	AX-KO1710-200				
RS-232C cable (DIN – 9 pin, 2 m)	AX-KO1786-200				
Current loop cable (DIN – 9 pin,1 m)	AX-KO5291-100				

Foot switch

AX-SW138

□ By connecting the foot switch to the external input connector, functions assigned to the "External input 1 (EXT IN1IN1)" and "External input 2 (EXT IN2IN2)" of "Function settings (3=MODE)" can be performed.

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