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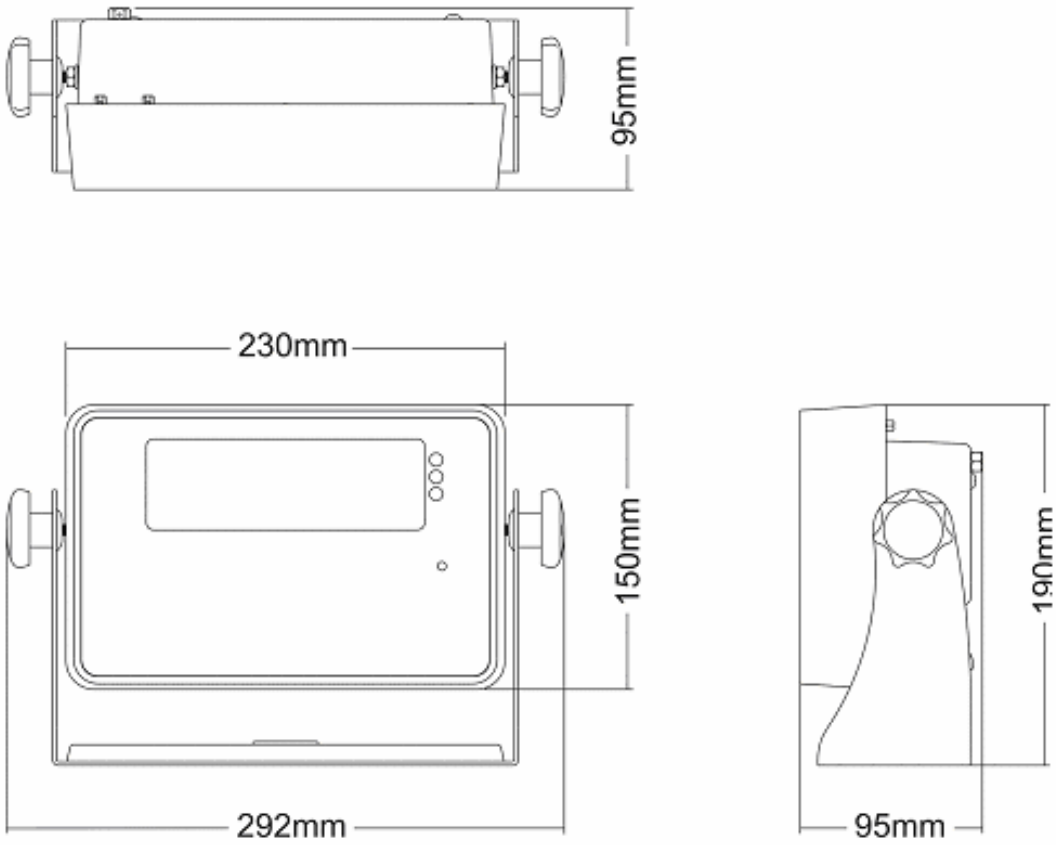
1-1. Dimension



1-2. Cross-reference List of Characters

0	1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z				

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1-3. Product Specification Sheet

Case Shell Material		ABS plastics	S/S stainless steel
Waterproof Grade		N/A	IP67
Dimension		230 * 150 * 90 mm	
Display		6-digit 30mm high & 3-digit 10mm high LCD (including EL backlight)	
Unit Selection		Kg or g, lb, Taiwan jin, liang, HK jin, liang, pcs, %	
Power Supply		Adaptor 9V/1A, Battery 6V/3Ah	
Operating Environment		-5 ~ 40□	
Storage Environment		-20 ~ 60□	
Certification		OIML (incl. CE)	
Weight (incl. battery)		Approx. 2.5kg	Approx. 2.8 kg
Options	**Display-LCD**	S/S flat backboard (excl. battery)	
	Display-LED	6-digit 20mm high & 3-digit 9mm high - 7-Segment display	
		Power Supply Adaptor 9V/1A (battery 6V/3Ah also available for choice)	

Model		**Basic Model**	**Advanced Model**
Analogue/ Digital Converter	**Conversion Mode**	Δ - Σ	
	Internal Resolution Range	About 1,000,000 counts	About 5,000,000 counts
	External Resolution Precision	3,000d(OIML)	6,000d(OIML)
		Max. 30,000d(non-OIML)	Max. 60,000d(non-OIML)
	Conversion Rate	10 times/sec.	
System Linearity Error		Within 0.01% of Full Load	
Temperature Factors	**Zero Drift**	±10 ppm/□	±6 ppm/□
	Linear Drift	±3 ppm/□	±1.5 ppm/□
Weight Sensor	**Circuit Voltage**	5VDC ± 6%, 120mA (max. 8 * 350Ω)	
	Applicable Range	-2 ~ 18mV	-10 ~ 40mV
	Input Sensitivity	2uV/d (OIML)	1uV/d (OIML)
		Over 0.2uV/d (non-OIML)	Over 0.1uV/d (non-OIML)

Calibration		**Options**		
Unit Selection	**Kg, g, lb**	**Model**	**Code**	**Spec.**
Weight Calibration Setting Point	**Single-point or three-point**	**Basic/advanced model**	**OP1**	**RELAY**
Sensed Weight	**Selectable from 1, 2, 5**		**OP2**	**RS232 (RTC)**
		Advanced model	**OP3**	**RS232-2port (RTC)**
			OP4	**Dual channel**

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2-1 General Parameter Setting

(1) How to enter and change general parameter setting

Step I: Power on while holding down FUNC GROSS/NET key or hold down FUNC GROSS/NET key for about 3 seconds while power is on with zero load.

Step II: Select parameter functions by pressing M+ or M- S.NO key, and select parameter setting by pressing UNIT LO▼ or PRINT HI▲ key.

Step III: After setting is completed, press FUNC GROSS/NET key to return to weighing mode.

(2) General parameter function descriptions

Item	Function	Display	Description
PO	**Automatic Power-off** Overview: The scale will be powered off automatically after elapse of the set time when powered on but not in use.	PU: oFF	Automatic power-off function off
		PU: 5	Automatic power-off after 5 minutes
		PU: 10	Automatic power-off after 10 minutes
		PU: 30	Automatic power-off after 30 minutes
		□ PU: 60	Automatic power-off after 60 minutes
		PU: 90	Automatic power-off after 90 minutes
P1	**Beep** Overview: Select beep (warning) mode of buzzer.	□ bP: in	The internal buzzer makes the beep sound when the calibration value is within the range.
		bP: out	The internal buzzer makes the beep sound when the calibration value is out of the range.
		bP: Ein	The external buzzer makes the beep sound when the calibration value is within the range.
		bP: Eout	The external buzzer makes the beep sound when the calibration value is out of the range.
P2	**Holding the Weight Value** Overview: The weight value can be held.	□ Hd: oFF	Weight value holding function off
		Hd: on	Press PRINT HI▲ key to hold the weight value, press ZERO ESC key to cancel.

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P3	**Printer Selection** Overview: Use in connection with a printer.	□ no-UPE	Printing function not used
		norMAL	Normal external printer option
		SH-24	Special option for SH-24 printer (pin type can print out “jin”)
		bP-443 d	Special option for BP-443 and 643 (self-adhesive type can print out bar code)
		EZ-2P	Special option for EZ-2P printer (self-adhesive type can print out bar code)
P4	**RS-232 Transmission Rate** Overview: Baud rate setting.	2400	
		4800	
		□ 9600	
		19200	
P5	**RS-232 Transmission Format** Overview: Transmission format setting in connection with external equipment like printer.	□ n81	Parity N: None E: Even O: Odd Data Bit 7: 7bit 8: 8bit Stop Bit 1: 1bit
		o81	
		E81	
		n71	
		o71	
		E71	
P6	**Backlight Selection** Overview: Backlight function setting.	bL:oFF	Backlight function off
		bL:on	Backlight on
		□ bL:SAvE	Backlight on when weight value is stable, after 5 seconds, it will come off automatically.
		bL:AUto	When weight is 20 times over sensed weight, backlight is on.

Note: Items marked with an asterisk (□) stand for factory settings.

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2-2 Advanced Parameter Setting

(1) How to enter and change advanced parameter setting

Step I: When power is on: hold down FUNC GROSS NET key for about 3 seconds to enter into [General Parameter], then press TARE → key for about 3 seconds.

Step II: When power is off: press FUNC GROSS NET key to power on and enter into [General Parameter], then press TARE → key for about 3 seconds.

Step III: Select parameter functions by pressing M+ or M- S.NO key, and select parameter setting by pressing 單位切換 下限 or 列印 上限 key.

Step IV: Press FUNC GROSS NET key twice to save the parameter setting, and return to weighing mode. If you don't want to save the parameter setting, press ZERO ESC key.

(2) Advanced parameter function descriptions

Item	Function	Display	Description
A00	**Initial Zero Point Range** Overview: The calibrated zero point value shall serve as the benchmark, and the zero point range shall be calculated in percentage of max. Weighing value.	□ onr: 10 %	Normal power on to use is allowed within ±10% (OIML)
		onr: 20 %	Normal power on to use is allowed within ±20%
		onr: 30 %	Normal power on to use is allowed within ±30%
		onr: 40 %	Normal power on to use is allowed within ±40%
		onr: 50 %	Normal power on to use is allowed within ±50%
A01	**Range of Use of Zero Key** Overview: The zero key range can be improved.	□ kyr: 2 %	The Zero key can be used for deduction within ±2%, 3%, 4%… 20% (e.g. ±2% of 300kg= ±6kg)
		kyr: 3~20%	
A02	**Return to Zero Symbol-Display Range**	□ zd: 0	Display of zero point symbol when variation is ±0e (OIML)

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	Overview: To set the conditions for appearance of zero point symbol.	Pd: 1 ~5	Appearance of zero point symbol when variation is ±1e, 2e…±5e
A03	**Zero Point-Tracking Range** Overview: To reduce zero drift problems caused by environment and other factors.	St: 0	Off
		□ St: 1	1e/s…5e, however, when precision setting is lower than 6100/1 (OIML), it will be adjusted automatically into 0.5e/s.
		St: 2~5	
A04	**Power Down Mode** Overview: standby function setting.	□ LP: oFF	Off
		LP: 1 ~10	Take effect in 1~10 minutes. (Press any key to restore)
A05	**Hysteresis Selection** Overview: To reduce critical drift problem. However, it is not always better to set high values. Test of effect must be carried out with respect to each segment.	HY: 0	OFF (without hysteresis effect)
		HY: 1 ~5	
		□ HY: 6	
		HY: 7~9	
A06	**Shockproof Factor** Overview: To reduce interference caused by bad operating environment.	u 1: 0 or 1	0 (no shockproof effect), 1(worst effect)
		□ u 1: 2	
		u 1: 3~9	
A07	**Min. Weighing Capacity** Overview: Min. printing range up to 1e. (Originally it requires 20e and above)	n 1: 1 ~19	1e~19e
		□ n 1: 20	20e (OIML)
		n 1: 21	21e
A08	**Filtering Factor** Overview: To improve unstable condition of the scale; in principle, the higher setting the better effect.	F 1: 0	OFF (no filtering effect)
		F 1: 1 ~6	1(worst), 2, 3… 9(best).
		□ F 1: 7	
		F 1: 8~9	
A09	**Stable Symbol Display Range** Overview: To set the	StbL: 0.2 or 0.5	Display when variation is within 0.2e or 0.5e
		StbL: 1	Display when variation is within 1e

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	conditions for appearance of stable symbol.	□ StbL: 2~8	Display when variation is within 2e~8e
A10	**RS232-Receiving Port Selection** Overview: To select one-way or two-way transmission.	□ rh: oFF	One-way transmission (output)
		rh: on	Two-way transmission (output/input)
A11	**Initiation Delay** Overview: RS232 sends out signal several seconds after stable appearance of stable symbol.	dy: 0	Initiation Delay function off.
		□ dy: 0.5	Signal sent out in 0.5sec.
		dy: 1 ~4	Signal output in 1sec., 2 sec…4 sec.
A12	**Weight Memory** Overview: To record the last weighing value.	□ nU: oFF	Weight memory function off.
		nU: on	On (The function is applicable for production line)
A13	**Min. Internal Use Limit** Overview: To limit sensor use rate.	dL: oFF	No limit
		□ dL: on	L/C use rate at least over 60%
A14	**Calibration Mode-Weight Display** Overview: No need to restart the machine after calibration.	□ Cd: oFF	Weight display function not in use.
		Cd: on	In use.
A15	**Enlargement Ratio Selection** Overview: To adjust ratio of internal value to external value.	Gn: 10	
		Gn: 50	
A16	**Starting Year Setting** Overview: Since RTC calculation time is around 15 years, this setting may avoid occurrence of problems similar to Y2K.	Yr: oFF	Starting time is year 2000 but without RTC detection function
		□ Yr: 2004	The starting time calculation is based on a scale of 4 years; you may select between 2008~2100.
		Yr: 2008~2100	

Note: Items marked with an asterisk (□) stand for factory settings.

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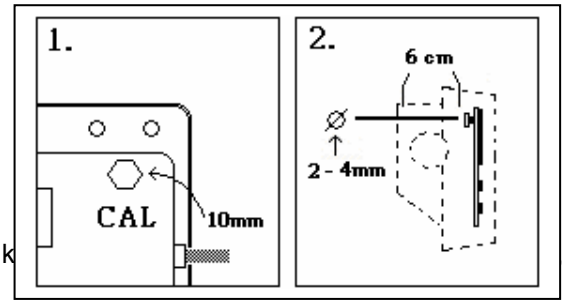
2-3 Weighing Capacity, Sensed Weight Setting and Weight Calibration

Step I (Enter into calibration mode)

Sealed Type

(As shown in the right figure) release the screw at the left back, power on while holding down the [CAL] key at the back by use of a tool until CAP is shown on the lower left screen, i.e. the scale has entered into the calibration mode.



Non- Sealed Type: Turn on the scale by holding down MR EN/DIS k i.e. the scale has entered into the calibration mode.

Note: If the calibration unit, capacity, and resolution have been set, you may skip Steps II~IV and press MR EN/DIS key to enter into Step V to perform zero point calibration.

Step II (Select Calibration Unit)

You may select calibration unit (kg, g, lb) by use of UNIT LOY key.

Step III (Capacity Setting)

Press TARE → key and the flickering digit will shift to the right; press M+, M- S.NO key to set any value between 1-9; after setting, press MR EN/DIS key to enter into the next step.

Step IV (Resolution Setting)

Press TARE → key and the flickering digit will shift to the right; press M+, M- S.NO key to set any value between 1-9; after setting, press MR EN/DIS key to save and show the offset-value; press the weighing pan gently, if the value changes, it's normal.

Note: If you don't want to perform calibration, just power off and the setting are completed.

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Step V (Zero Point Calibration)

Press MR EN/DIS key to perform zero point calibration; when CAL on the lower left stops flickering, zero point calibration is completed with CAL **kg shown.

Note: If the show value is very unstable, press TARE → key to enter into stb adjustment function, use PRINT HI▲ key to extend the range of stb (it is recommended to adjust one segment each time), after confirmation, press TARE → key to save setting and the zero point calibration will be performed automatically.

Step VI (Single-point Calibration) Note: If to perform three-point calibration, skip this step.

Press TARE → key and the flickering digit will shift to the right; press M+, M- S.NO to adjust the value; input the weight value to be calibrated, and put the correct weight onto the weighing pan, then press MR EN/DIS key to save and confirm, once PASS is shown, take away the weight on the weighing pan and restart the machine for normal use.

Step VII (Three-point Calibration)

Press PRINT HI▲ key for 3 seconds until C-1 is shown at the lower left corner.

First Point C-1: Press TARE → key and the flickering digit will shift to the right; press M+, M- S.NO key to set values; input the weight value to be calibrated, and put the correct weight onto the weighing pan, press MR EN/DIS key to confirm and perform calibration.

Second Point C-2: Put the weight to be calibrated onto the weighing pan, the weight value will be shown automatically on the screen; press MR EN/DIS key to confirm and perform calibration.

Third Point C-3: Put the weight to be calibrated onto the weighing pan, the weight value will be shown automatically on the screen; press MR EN/DIS key to confirm and perform calibration. Once PASS is shown, take away the weight on the weighing pan and restart the machine for normal use.

Recalibration: If any error occurs during calibration, press FUNC GROSS NET key to return to zero point calibration mode and perform calibration according to the calibration procedures.

Note: The weight value in three-point calibration shall comply with C-1 < C-2 < C-3.

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Chapter III Various Assemblies and Relevant Illustrations

3-1 Back Cover Assembly and Disassembly

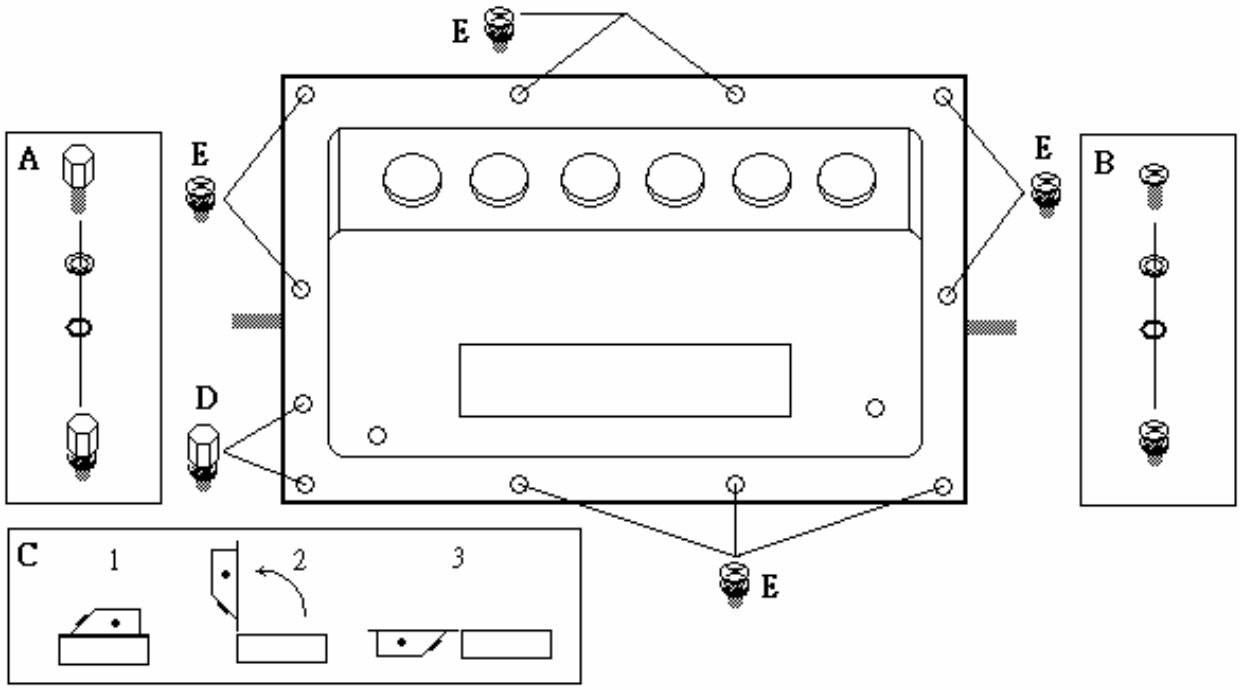
Disassembly Steps:

1. Put the display head as shown in figure below, loosen the waterproof connector first to avoid damage of contacts on the board, unscrew the fastening screws (position "E" as shown in figure below) by use of a cross head screwdriver, and unscrew the two Allen screws (position "D" as shown in figure below) by use of a 5mm Allen wrench or socket wrench.
2. As per the steps shown in Fig. C, remove the back cover and place it properly.

Assembly Steps:

1. Screw in the fastening screws by use of a cross head screwdriver, and screw in the two Allen screws by use of a 5mm Allen wrench or socket wrench.
2. Special attention must be paid to check if every screw for display head of waterproof series is locked tight. The screw-in torque shall be 5~7kg, and the screws at the four corners must be fastened at last (no limitation for fastening order of others).

Note: As shown in Fig. A &B below, all screws of waterproof series have a stainless steel gasket and a rubber gasket, which must be secured properly to avoid leakage.



(Take the waterproof model with built-in battery as the example)

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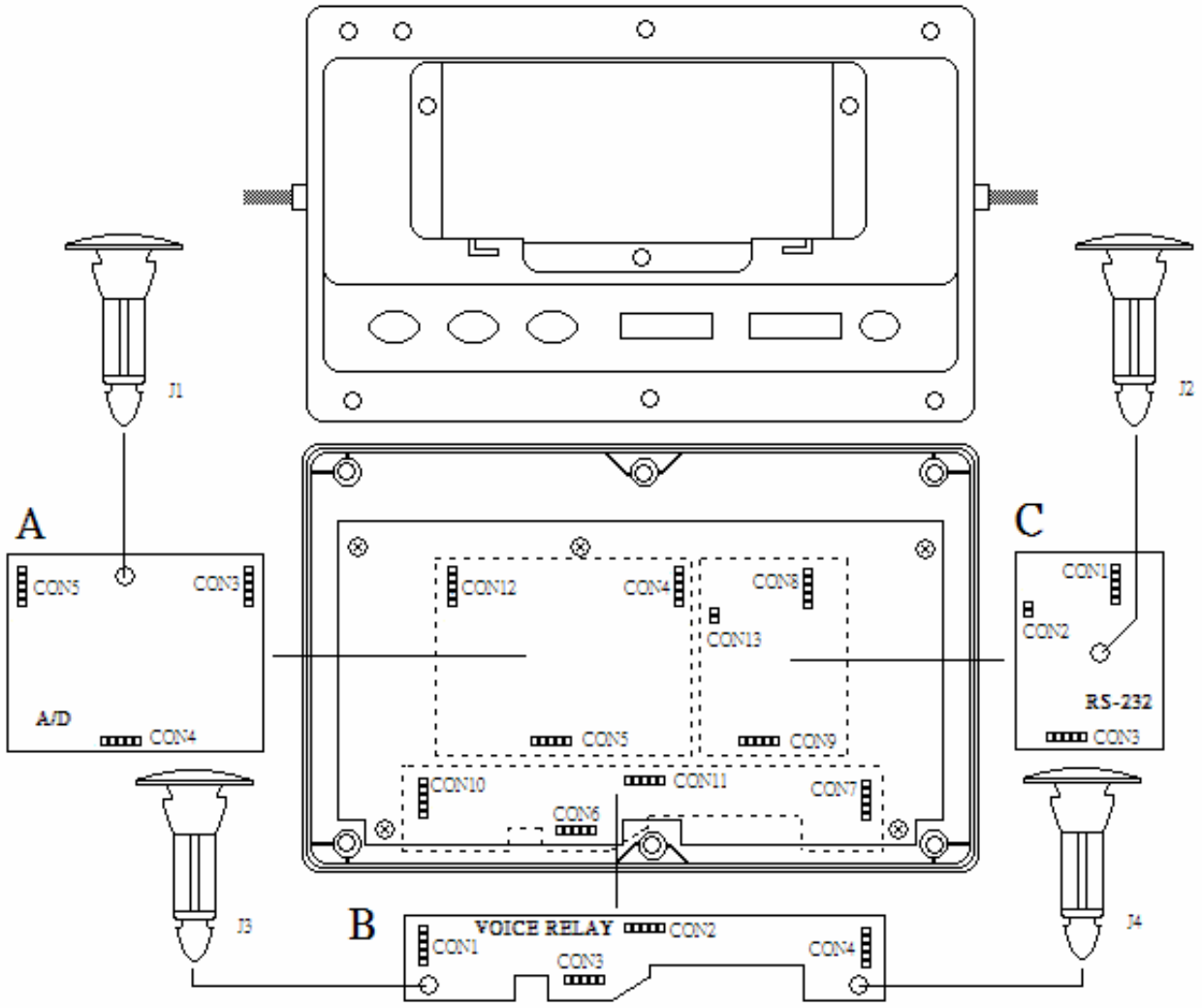
3-2 Installation of Additional Board

1. First, please open the back cover as per the “Back Cover Assembly and Disassembly” methods.
2. As shown in figure below, mount the additional board onto the main board, and check if every contact is inserted into the terminal block pin.
   (No. A is A/D board module; No. B is solenoid switch and voice function board module; No. C is RS232 module)
3. After the boards are assembled, insert the fastening stud (J1~J4 as shown in figure below) into the fixing holes as shown in figure below.
4. After the above steps are completed, wire with reference to the “Wiring Cross-reference Chart”.

Note: The main board and A/D board are standard equipment (A/D board with dual load cells is optional), all other components are optional.



(Take the general model with built-in battery as the example)

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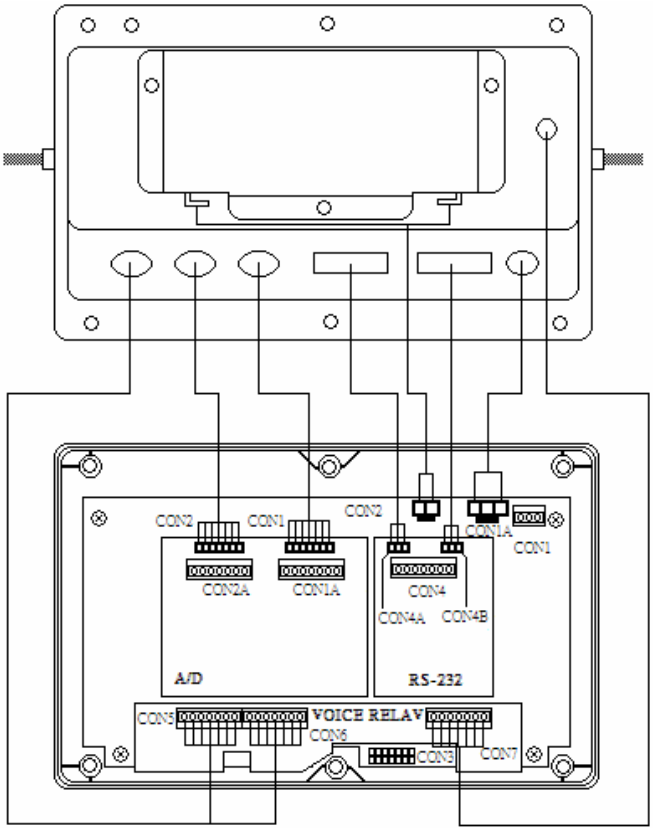
3-3 Wiring Cross-reference Chart



Board Type	Contact No.	Purpose	Remarks (Back cover through contact)
Main Board	CON1A	ADAPTOR input contact	DC socket
	CON2	Battery input contact	
	CON3	For CPU program writing (no need to remove CPU)	
A/D Board	CON1	L/C contact (group I)	5pin metal connector (foreign 7pin)
	CON2	L/C contact (group II) (optional)	5pin metal connector (foreign 7pin)
RS-232	CON4A	RS-232 group I	9pin male socket
	CON4B	RS-232 group II (optional)	9pin male socket
VOICE RELAY	CON5	Solenoid switch contact (optional)	
	CON6	Solenoid switch contact (optional)	
	CON7	Voice function contact (optional)	

Note: CON1 of main board and CON1A, CON2A of A/D board as well as CON4 of RS232 board are contacts of waterproof series.
The external connection method of waterproof scale series is as follows: signal line goes into the display head through the waterproof connection, then use a smaller-sized flat-head screwdriver to lock the signal line directly onto the relevant contact.

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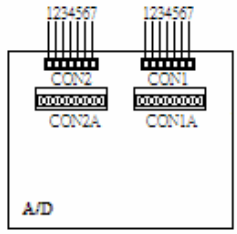
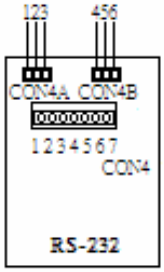
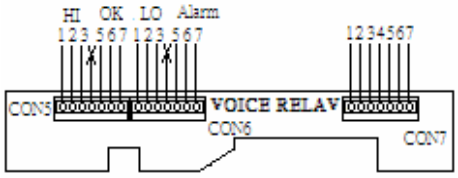
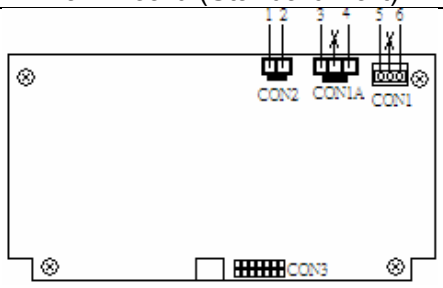
3-4 Illustration of Contacts of Additional Board

A/D Board (Dual type is optional)	Contact Code	Function	Remarks
	1(GND)	Grounding	
	2(S-), 3(S+)	L/C signal input	
	4(ES-), 5(E-)	Output to L/C	4 is for offset, connected with 5
	6(ES+), 7(E+)	Output to L/C	6 is for offset, connected with 7
	1. CON1 and CON1A (for waterproof type) are the same and connected. 2. CON2 and CON2A (for waterproof type) are the same and connected. 3. CON1 is standard contact, while CON2 is optional contact.		

RS-232 Board (Optional)	Contact Code	Contact Code (waterproof)	Function
	CON4 A1, B4	CON4 1, 5	Grounding (GND)
	CON4 A2, B5	CON4 2, 6	Output (TX1□2)
	CON4 A3, B6	CON4 3, 7	Input (RX1□2)
	1. The two groups of contacts, i.e. CON4A and CON4B are connected with CON4 (for waterproof type), however, the 4th contact of CON4 is not connected. 2. CON4A is standard contact, while CON4B is optional contact.		

Solenoid Switch and Voice Function Board (Optional)	Contact Code	Function
	1, 5 (incl. CON5, CON6)	Normally open contact
	2, 6 (incl. CON5, CON6)	Normally closed contact
	3, 7 (incl. CON5, CON6)	Common contact
	5 (NO), 7(COM) (CON7)	Voice signal output
	1, 2, 3, 4, 6 (CON7)	Reserved contact
	This board functional group is divided into solenoid switch module, voice module, solenoid switch plus voice module.	

Main Board (Standard Part)	Contact Code	Function	Remarks
	1	Negative pole of battery	DC 6 V
	2	Positive pole of battery	
	3, 5	Negative pole of transformer	DC 9~12 V
	4, 6	Positive pole of transformer	
	CON3	Program input connection	For program update
	No.5 & 6(CON1) contacts are for waterproof series.		

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Chapter IV Troubleshooting

4-1 Preliminary Examination

1. Is the electric scale placed on a stable surface?
2. Is the bubble dot of level gauge centrally located?
3. Is the scale located near air conditioner or other air conditioning facility?
4. Is the wind in the operating environment too strong?
5. Is the temperature difference in the operating environment too big?
6. Is there magnetic field interference around the operating environment and the equipment?

4-2 Error Message and Troubleshooting

Problem	Possible Cause	Basic Inspection and Troubleshooting
E0 noEE No set data	Memory IC defect (24C02).	Replace memory IC (24C02) and refer to "Parameter Function Setting" to reset internal data.
	CPU lead welding defect.	Re-weld the contact of program IC (pos. no. U8) on the main board by use of soldering iron.
	Display panel defect.	Please replace display panel directly.
E1 CAL-d No calibration data	Calibration setting error.	Please recalibrate with reference to "Model Selection and Calibration Method".
E2 ZHi Initial Zero Point Too High	The protection screw of the structure is not removed or there is interference of overload protection screw.	Please check and make appropriate adjustment.
E3 ZLo Initial Zero Point Too Low	When power on, the object is not completely removed from the weighing pan, or there is interference of unknown object.	Please check around the weighing pan of the structure.
	Offset value differs from factory setting due to effect of transportation or other factors.	Please perform three-segment calibration according to "Weighing Capacity, Sensed Weight and Weight Calibration" so as to re-record the new initial zero point value.
E4 UnStA Internal Value Unstable	Interference of external environment.	Eliminate possible environment problem with reference to "Troubleshooting- Preliminary Examination".
	L/C defect.	Handle with reference to "L/C-related Technology", or directly replace L/C to see if it is defective.
	A/D board	Use volatile cleaning agent to clean A/D board, and re-weld U2 (A/D IC). If the problem still exists, replace the board.
E10 CLK-b RS232 (RTC) Low Battery	Battery problem.	Please check if RTC battery is low, or there is bad contact.
	Board problem.	Please check if RS232 board and main board have bad connection. If not, replace the board.
E11 diFF	In accumulation mode, data of different units can't be saved, ex. Kg and pcs; only one fixed unit can be used at one time.	Please press M- S.NO key twice to clear all accumulation data, press ZERO ESC to return to normal weighing mode.

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E12 ou - XX	The accumulation group number has exceeded the max. Preset value.	Please press M- S.NO key to clear all unnecessary accumulation data, or press ZERO ESC to return to normal weighing mode.
E5 LC-oF	Sensor specification goes beyond the handling range of ADC.	Please select a suitable sensor.
	Sensor may have been damaged.	Handle with reference to "L/C-related Technology", or directly replace L/C to see if it is defective.
	Wrong calibration data setting	Please perform three-segment calibration according to "Weighing Capacity, Sensed Weight and Weight Calibration" so as to re-record the new initial zero point value.
	Wrong setting of relevant parameters.	Please set max. And min. weighing capacity according to "Weighing Capacity, Sensed Weight and Weight Calibration" and performs three-segment calibration after setting is completed.
E6 noLC	Bad contact of metal connector.	Please use phytocide (e.g. WD-40) to clean male and female sockets of metal connector.
	L/C line damaged or broken.	Please check if any external force, insect or rat damages L/C line.
	L/C problem	Handle with reference to "L/C-related Technology", or directly replace L/C to see if it is defective.
E13 LoHi	Wrong HI LO value setting	Please modify setting according to operation manual; note that only when HI value is higher than LO value can this function be used normally.
-----	Exceeding max. Weighing capacity. (Max. weighing capacity =set max. capacity +9e)	This message is to protect L/C; when this warning message appears, please remove object from weighing pan quickly.
E20 **XXXXX**	When precision setting exceeds 1/60000 of max. Value, this message will appear.	Please reset according to "Weighing Capacity, Sensed Weight and Weight Calibration".
E21 **XX**	Based on OIML standard, this appears when the basic model's e resolution ratio is <100, or when the advanced model's e resolution ratio is <150.	Please reset according to "Weighing Capacity, Sensed Weight and Weight Calibration". Remarks: e resolution ratio <100 means that, when the external value change is 1e, the internal value change is less than 100e. (The standard is >100e)
Poor LCD Display (with broken or missing strokes)	LCD defect.	After confirming that there is no broken board lines or short circuit of connection between LCD and other conducting objects, please directly replace LCD.
	CPU welding joint defect.	Re-weld the contact of program IC (pos. no. U8) on the main board by use of soldering iron.
	Display panel defect.	Please directly replace display panel.
Power-on Failure	Battery defect.	Please remove battery and power on by use of charging transformer to see if the failure is due to battery defect.

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	Key defect.	Please directly establish short circuit connection between the two end contacts of power switch on the display panel to see if the power switch key is normal.
	Charging transformer problem.	Please try a normal charging transformer to see if the scale can be powered on, or measure if there is DC9V output by use of an avometer.
	Display panel defect.	Please check if the fuse on the board is disconnected, if not, please re-weld program IC (pos.: U8); if the problem still exists, replace the board.
Charging Failure or Service Life Shortened	Battery defect.	The battery voltage must be over 6V. Please charge the battery when voltage is under 6V. If the battery can't be fully charged or runs out shortly after being fully charged, please replace battery.
	No DC power input.	Please try a normal charging transformer to see if the scale can be powered on, or measure if there is DC9V output by use of an avometer.
	Display panel defect.	Please directly replace display panel.
Linear Defect or Incorrect Weighing	Wrong internal setting.	Please refer to "Various Parameters Setting" and re-enter the correct setting values.
	Three-point calibration error.	Please set max. And min. weighing capacity according to "Weighing Capacity, Sensed Weight and Weight Calibration" and performs three-segment calibration after setting is completed.
	Interference of unknown object.	Please conduct visual inspection of the exterior and interior of the scale to see if there is something interfering with L/C structure and the weighing pan.
	L/C defect.	Directly replace L/C to see if it is defective.
	A/D board defect.	Please replace A/D board directly.
Calibration Failure	Wrong internal setting.	Please reset with reference to "Various Parameters Setting".
	Interference of unknown object.	Please conduct visual inspection of the exterior and interior of the scale to see if there is something interfering with L/C structure and the weighing pan.
	L/C defect.	Directly replace L/C to see if it is defective.
	A/D board or display panel defect.	Please replace A/D board or display panel directly.
Zero Point Unstable	Interference of external environment.	Eliminate possible environment problem with reference to "Troubleshooting- Preliminary Examination".
	Three-point calibration value error.	Please recalibrate with reference to "Model Selection and Calibration Method".
	Interference of unknown object.	Please conduct visual inspection of the exterior and interior of the scale to see if there is something interfering with L/C structure and the weighing pan.
	L/C defect.	Directly replace L/C to see if it is defective.

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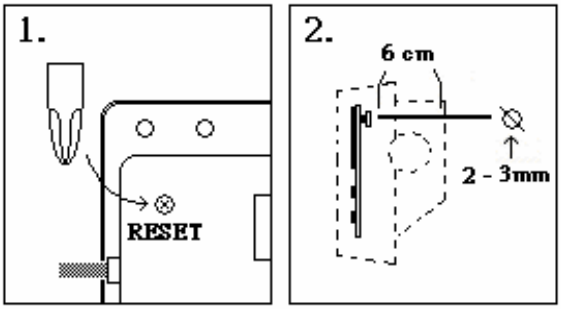
	A/D board defect.	A/D board is prone to interference, esp. A/D IC; please clean the board by use of stain removal oil. If the problem still exists, replace A/D board.
Handling of Special Cases such as Machine Down, Failure to Power On/Off as Usual	As shown in Fig.1 on the right, remove the rear screw of the display head by use of a cross head screwdriver. As shown in Fig.2 on the right, gently press RESET key inside the display head by use of a bar strip and the scale will be restarted automatically.	
How to "Clear Memory"	Press PRINT HI▲ key to power on, the display window will show id, then press PRINT HI▲, UNIT LO▼, M+ and M- S.NO in turn, finally, hold down ZERO ESC key (for about 2 seconds), the window will show EE_CLr, press ON OFF key to restart the scale and the memory will be cleared. **Note:** After clearing memory, you must at least perform model setting and linear calibration; otherwise, you cannot use the scale.	

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4-3 Summary Table of Error Message

Including the full range of China-made models and Taiwan-made JIK, JC (W) A, JP (W) G, and the new versions SNUG, NWTC, JKD and JKH.

Error Message		Possible Cause	Error Message		Possible Cause
1	E0no EE EnoEE Err4 or ErrE	□Memory IC defect. □CPU lead welding defect. □No internal setting/calibration data.	9	E12 ou-XX ouEr	□The accumulation group number has exceeded the max. Preset value.
2	E1 CAL-d E CALF	□ Calibration setting error.	10	E20 **XXXX** Err 7	□This message appears when precision setting exceeds the standard, e.g. the original max. Precision setting value is 1/30000, but the input setting value exceeds this precision setting.
3	PHi or PHo ± Err2 oUt P	□Initial zero point value over standard. □Weighing pan is not clear, or there is interference of unknown object. □Interference of transportation or overload protection screw.	11	E21 **XX**	□Based on OIML standard, this appears when the basic model's e resolution ratio is <100, or when the advanced model's e resolution ratio is <150.
4	E4 UnStA UnSt	□Zero point can't be detected due to environment interference □ □L/C defect. □Board defect.	12	----- Err5 EEEEE	□ Exceeding max. Weighing capacity. (Full load weight +9e)
5	E5 LC-oF ± Err3 HHHH or LLLL	□L/C specification goes beyond the handling range of ADC. □L/C may have been damaged. □Calibration data setting error.	13	Err6 ErrC	□ Weight value being used not conforming to calibration value requirement when performing calibration.
6	E6 no LC	□No L/C signal or L/C not connected. □L/C line damaged or broken. □Bad contact of metal connector. (Platform scale)	14	Err8	□ Unit being used conflicts with initial unit setting, e.g. when setting all units usable when power on at OFF.
7	E10 CLK-b CLK-b	□RTC battery defect or battery not installed. □RTC board defect. □RTC time not set.	15	Err	□ Beyond the display range of LCD window.
8	E11 di FF	□ In accumulation mode, only one fixed unit can be used at one time, or in the case of dual weighing pans, accumulation is to be performed in another group when one group has accumulation function already.	17		

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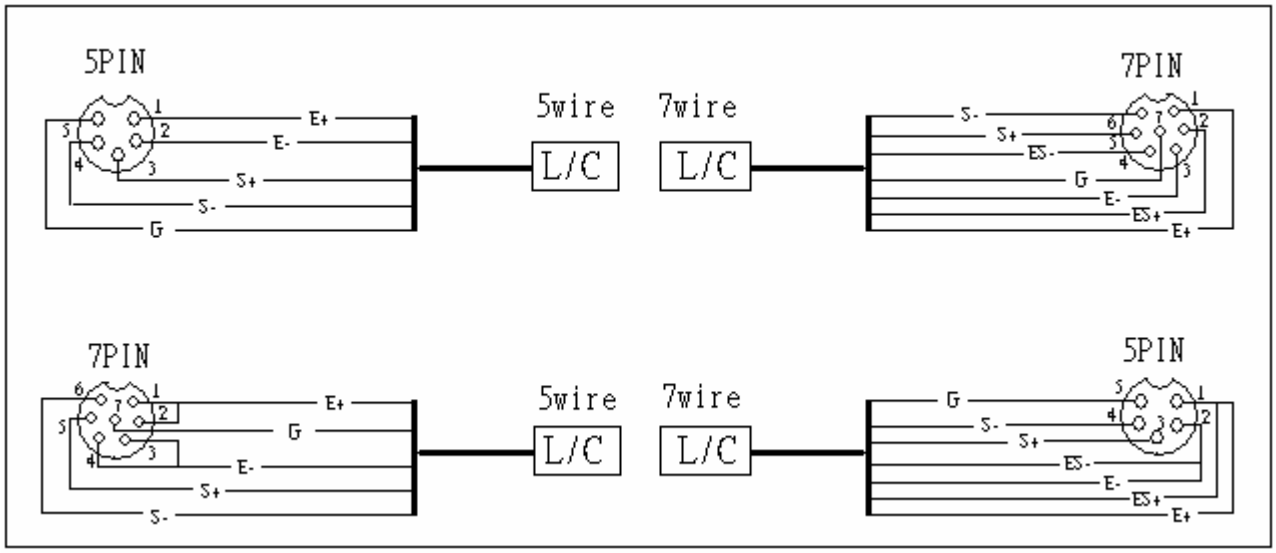
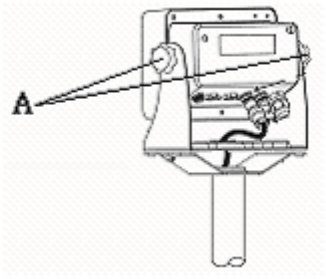
Chapter V Structural Part of Platform Scale

5-1 Connection of Metal Connectors



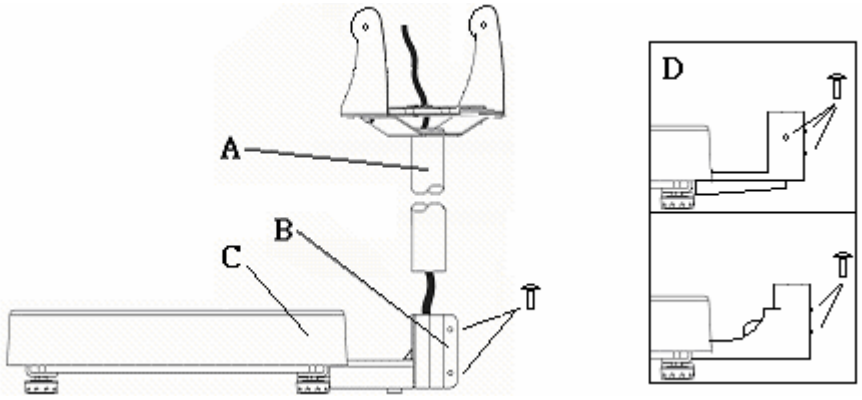
5-2 L/C Replacement Process

1. Please remove L/C or additional function connection lines by use of a smaller-sized flat head screwdriver with reference to “Various Assemblies and Relevant Illustrations-Back Cover Assembly and Disassembly and Wiring Cross-reference Chart” (for non-waterproof type, directly remove the metal connector and other external connectors), then take out the fixing knob (Fig. I “A”) in order to remove the display head.



(Fig. I)

2. Unscrew the retaining screws of erecting pole (Fig. II “B or D”), then remove the erecting pole (Fig. II “A”) and weighing pan (Fig. II “C”).



(Fig. II)

3. Exploded Drawing of Structure (Reference Drawing)□

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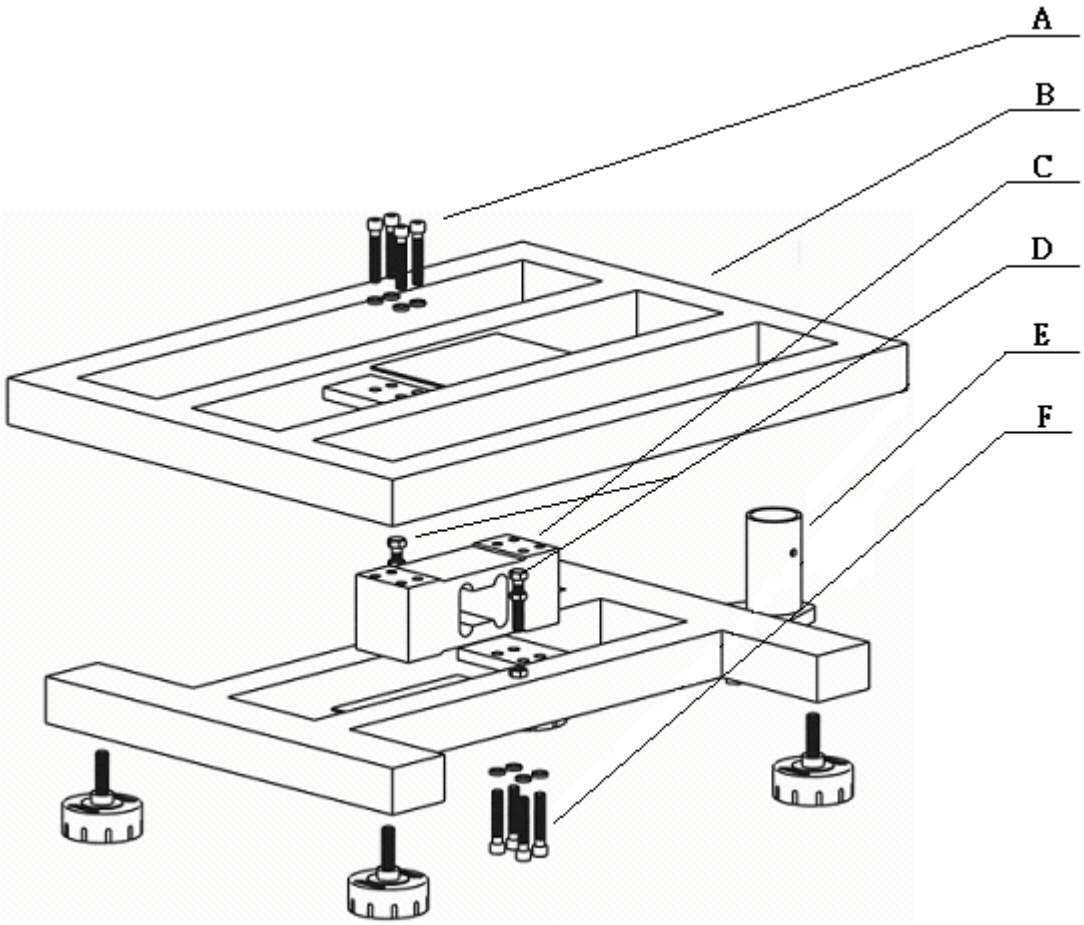

(Fig. III)

4. Please unscrew the four Allen screws (Fig. III “A”) on L/C by use of an Allen wrench, then remove the upper bracket (Fig. III “B”).
5. Please put the whole structure upside down, and unscrew the four Allen screws (Fig. III “F”) on L/C by use of an Allen wrench, then remove the lower bracket (Fig. III “B”).
6. After steps 4 & 5 are completed, remove L/C (Fig. III “C”), and replace it with a new L/C, then assemble the upper and lower brackets as well as display head following steps 5-1.
7. Please perform recalibration according to “Weighing Capacity, Sensed Weight Setting and Weight Calibration”.
8. Please make adjustment to the four corners according to “L/C-related Technology-Scale Grinding”.
9. Perform three-segment calibration once again, and the L/C replacement is completed.

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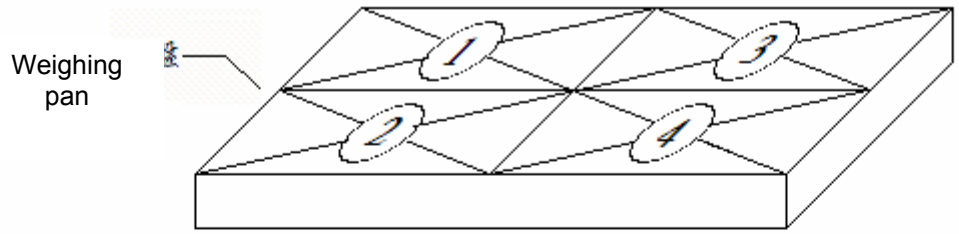
5-3 L/C-related Technology

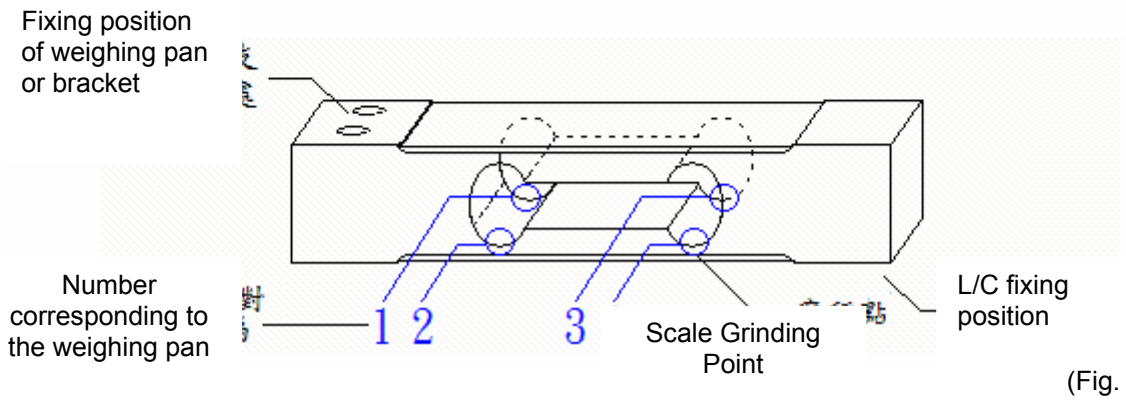
LOAD CELL Defect Judgment:

1. Static Measurement: Measure the numerical values of resistance of L/C E+ to S+ and S- (or E- to S+ and S-) by use of an avometer at ohm step to see of they is the same. Generally speaking, if the error is over 0.5Ω, offset is required; if the error is too big (over 2Ω), it is recommended to replace L/C.
2. Dynamic Measurement: Correctly connect L/C with main board, measure the voltage of S+ to ground and that of S- to ground by use of a digital ammeter at DCV step (better over 4.5 digits) to see if they are equal (better with 0 error); if not equal, L/C offset is required.

Scale Grinding: (Please refer to Fig. I)

1. First perform weight calibration.
2. Measure the four "four-corner testing points" of the weighing pan under 1/3 of full load weight, and check the show value.
3. Use a file to grind the L/C "Scale Grinding Point" corresponding to the min. weighing capacity point of the four corners 1-4 (when grinding for the first time, please test force by means of trial grinding with small strength so as to avoid damage to L/C); after grinding, press ZERO key to measure the four corners again.
4. Repeat steps 2~3 until the error of the four corners of the weighing pan with the center as the benchmark is within ±1 bounce, then recalibrate weight.
5. If it is still oversize after scale grinding, it means malfunction of the L/C.
6. Pay attentions to L/C specification when grinding; the lighter full load weight, the weaker grinding force.





(Fig. I)

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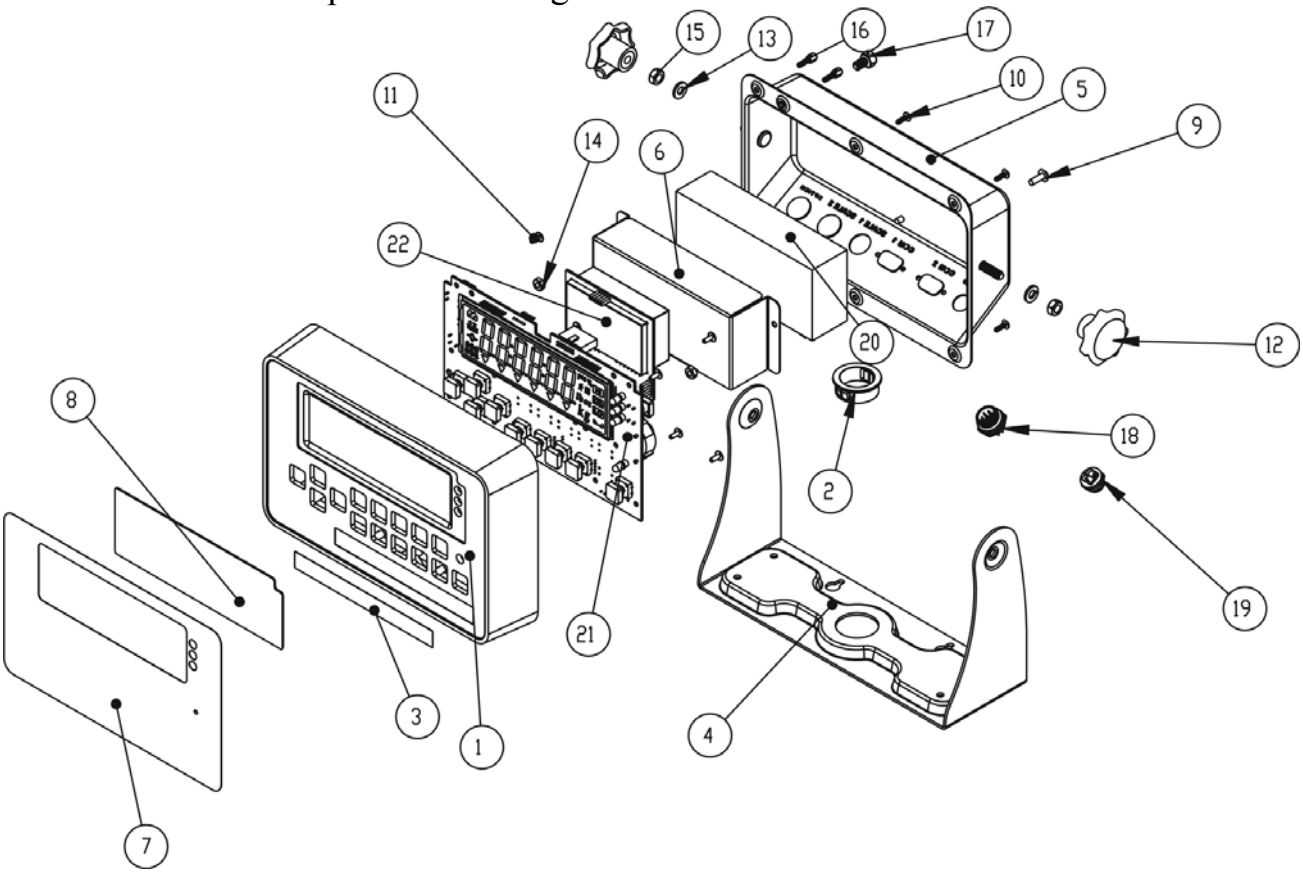
Chapter VI Exploded Drawing and Cross-reference List of Parts

6-1 JIK- 6CAB Exploded Drawing and Cross-reference List of Parts



JIK- 6CAB

	Material No.	*Description*	Qty.	*Item*	Material No.	*Description*	Qty.
1	02-0000-2400	Plastic Upper Cover (A.B.S)	1	15	31-0100-0002	Nut (M6)	2
2	02-0107-0010	Snap Bushing	1	16	31-0404-0000	Seal Screw M3	2
3	03-0902-2420	JBJP Label	1	17	31-0404-0010	Seal Screw M6	1
4	11-0001-2400	Supporter (JIK)	1	18	60-0402-0100	Metal Connector (5pin,male)	1
5	11-0101-2400	Indicator Bottom (6H)	1	19	61-0402-0710	DC power Assembled Cable	1
6	11-0604-2400	Iron Sheet	1	20	61-0202-0100	Rechargeable Battery,6V/3Ah	1
7	20-0924-0100	JIK-6CA Panel Sheet (EN)	1	21	80-0024-0100	Assembled PCB (JIK-DPC(A)01)	1
8	20-0924-5000	PC Sheet (JIK_LCD)	1	22	80-0024-2100	Assembled PCB (JIK-AD(A)01)	1
9	30-0300-0005	Button Head Screw (M4*12mm)	1				
10	30-0300-0300	Button Head Screw (M3*10L)	5				
11	30-0602-0001	Self-tapping Screw (M3*8mm)	5				
12	30-1000-0000	Hand Knobs M6	2				
13	31-0001-0000	Spring Washer (M6)	2				
14	31-0100-0001	Nut (M4)	3				

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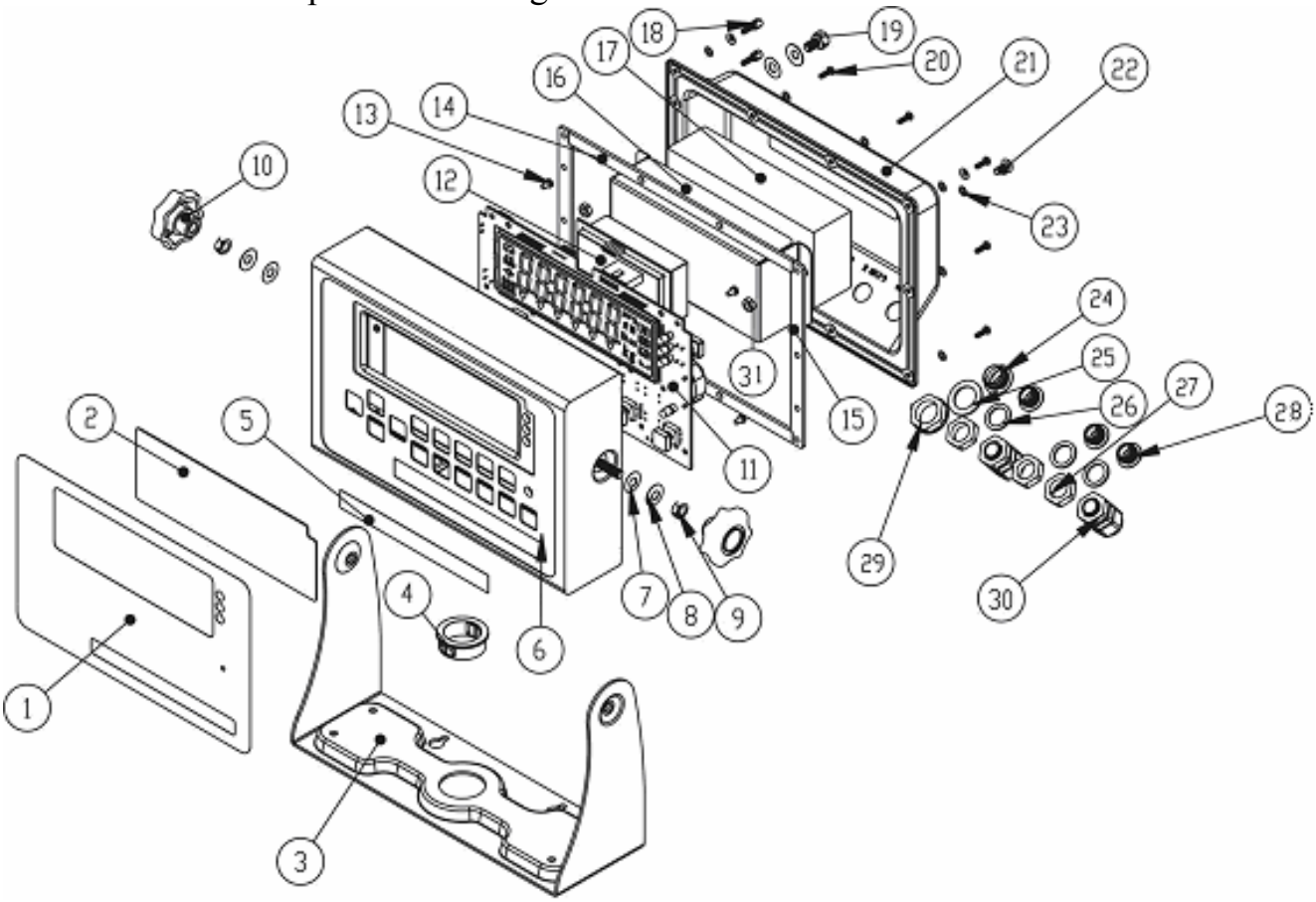
6-2 JIK-6CSB Exploded Drawing and Cross-reference List of Parts



JIK- 6CSB

Item	Material No.	*Description*	Qty.	*Item*	Material No.	*Description*	Qty.
1	20-0924-1100	JIK-6CS Panel Sheet (EN)	1	17	61-0202-0100	Rechargeable Battery,6V/3Ah	1
2	20-0924-5000	PC Sheet (JIK_LCD)	1	18	31-0404-0000	Seal Screw M3	2
3	12-1000-2400	SS Supporter (JIK)	1	19	31-0404-0010	Seal Screw M6	1
4	02-0107-0010	Snap Bushing	1	20	30-0250-0300	SS Round Head Screw (M3*10L)	9
5	03-0902-2425	JBJS Label	1	21	12-0200-2421	JIK SS Indicator Bottom (6H)	1
6	12-0200-2400	JIK SS Indicator Uppercase	1	22	30-0310-0400	SS Button Head Screw (M4*10L)	1
7	01-0005-0100	Oil ring (DI5*DO8)	3	23	01-0005-0000	Oil ring (DI2*DO5)	12
8	31-0002-0100	Washer (ψ6/ψ12)	3	24	02-0101-0100	Nylon Screw Plug (M16*1.5)	1
9	31-0110-0060	SS Hut (M6)	2	25	01-0001-0100	Rubber Washer (M16)	1
10	30-1000-0100	SS Hand Knobs M6	2	26	01-0001-0200	Rubber Washer (1/4”)	3
11	80-0024-0000	Assembled PCB (JIK_DP(B)01)	1	27	31-0102-1000	Nylon Lock Nut (1/4”)	3
12	80-0024-2000	Assembled PCB (JIK_AD(B)01)	1	28	02-0101-1100	Nylon Screw Plug (1/4”)	3
13	30-0200-0000	Round Head Screw (3*5mm)	7	29	31-0102-2000	Nylon Lock Nut (M16*1.5)	1
14	01-0400-0100	Waterproof Belt (Silicon)	2	30	60-0700-0100	Water-resist Connector	2
15	01-0400-0110	Waterproof Belt (Silicon)	2	31	31-0100-0001	Nut (M4)	
16	11-0604-2400	Iron Sheet	1	32			

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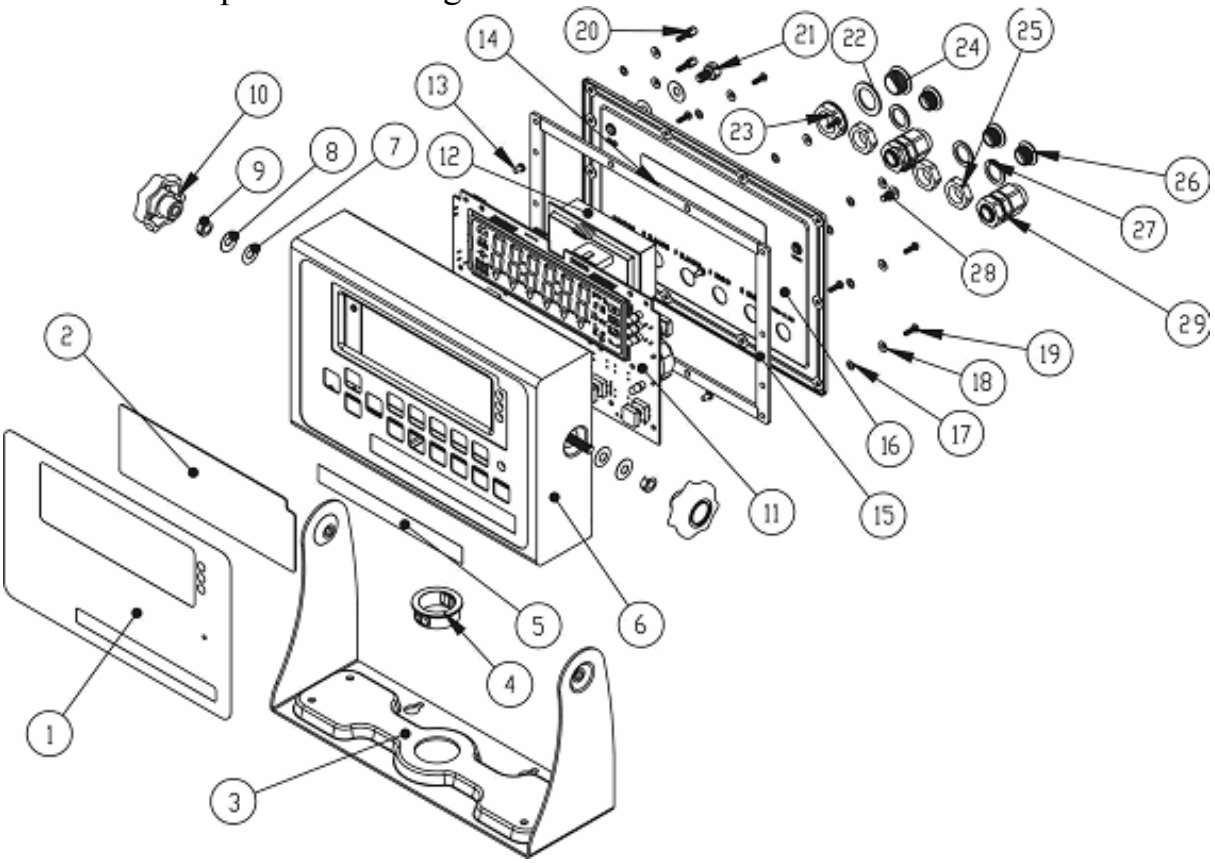
6-3 JIK-6CSN Exploded Drawing and Cross-reference List of Parts



JIK- 6CSN							
Item	**Material No.**	*Description*	**Qty.**	**Item**	**Material No.**	*Description*	**Qty.**
1	20-0924-1100	JIK-6CS Panel Sheet (EN)	1	16	11-0604-2400	Iron Sheet	1
2	20-0924-5000	PC Sheet (JIK_LCD)	1	17	01-0005-0000	Oil ring (DI2*DO5)	12
3	12-1000-2400	SS Supporter (JIK)	1	18	31-0002-0010	SS Washer (ψ3/ψ8)	11
4	02-0107-0010	Snap Bushing	1	19	30-0250-0300	SS Round Head Screw (M3*10L)	9
5	03-0902-2425	JBJS Label	1	20	31-0404-0000	Seal Screw M3	2
6	12-0200-2400	JIK SS Indicator Uppercase	1	21	31-0404-0010	Seal Screw M6	1
7	01-0005-0100	Oil ring (DI5*/DO8)	3	22	01-0001-0100	Rubber Washer (M16)	1
8	31-0002-0100	Washer (ψ6/ψ12)	3	23	31-0102-2000	Nylon Lock Nut (M16*1.5)	1
9	31-0110-0060	SS Hut (M6)	1	24	02-0101-0100	Nylon Screw Plug (M16*1.5)	1
10	30-1000-0100	SS Hand Knobs M6	2	25	02-0101-1100	Nylon Screw Plug (1/4”)	3
11	80-0024-0100	Assembled PCB (JIK_DPC(A)01)	1	26	01-0001-0200	Rubber Washer (1/4”)	3
12	80-0024-2100	Assembled PCB (JIK_AD(A)01)	1	27	31-0102-1000	Nylon Lock Nut (1/4”)	3
13	30-0200-0000	Round Head Screw (3*5mm)	5	28	30-0310-0400	SS Button Head Screw (M4*10L)	1
14	01-0400-0100	Waterproof Belt (Silicon)	2	29	60-0700-0100	Water-resist Connector	2
15	01-0400-0110	Waterproof Belt (Silicon)	2				

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