



**Defender[®] 6000 Indicators
Instruction Manual**

**Defender[®] 6000 Waagen
Bedienungsanleitung**

**Indicadores Defender[®] 6000
Manual de instrucciones**

**Manuel d'instructions sur les
indicateurs de Defender[®] 6000**

**Indicatori[®] Defender 6000
Manuale di istruzioni**

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1. INTRODUCTION

This manual contains installation, operation and maintenance instructions for i-DT61PW and i-DT61XWE indicators. Please read it completely before installation and operation.

1.1. Safety Precautions

Definition of Signal Warnings and Symbols

Safety notes are marked with signal words and warning symbols. These show safety issues and warnings. Ignoring the safety notes may lead to personal injury, damage to the instrument, malfunctions and false results.

WARNING	For a hazardous situation with medium risk, possibly resulting in severe injuries or death if not avoided.
CAUTION	For a hazardous situation with low risk, resulting in damage to the device or the property or in loss of data, or minor or medium injuries if not avoided.
ATTENTION	For important information about the product. May lead to equipment damage if not avoided.
NOTE	For useful information about the product.

Warning Symbols



General hazard



Explosion hazard



Electrical shock hazard

Safety Precautions



CAUTION: Read all safety warnings before installing, making connections, or servicing this equipment. Failure to comply with these warnings could result in personal injury and/or property damage. Retain all instructions for future reference.

- Before connecting power, verify that the AC adapter's input voltage range and plug type are compatible with the local AC mains power supply.
- Do not position the equipment such that it is difficult to reach the power connection.
- Only connect the power cord to a compatible grounded electrical outlet.
- Make sure that the power cord does not pose a potential obstacle or tripping hazard.
- Operate the equipment only under ambient conditions specified in these instructions.
- The equipment is for indoor use only.
- Do not operate the equipment in hazardous or unstable environments.
- Do not place the equipment upside down on the platform.
- Use only approved accessories and peripherals.
- Disconnect the equipment from the power supply when cleaning.
- Service should only be performed by authorized personnel.



WARNING: Never work in an environment subject to explosion hazards! The housing of the instrument is not gas tight. (Explosion hazard due to spark formation, corrosion caused by the ingress of gases).



WARNING: Electrical shock hazards exist within the housing. The housing should only be opened by authorized and qualified personnel. Remove all power connections to the unit before opening.

1.2. Intended Use

This instrument is intended for use in light industry. It must only be used for measuring the parameters described in these operating instructions. Any other type of use and operation beyond the limits of technical specifications, without written consent from OHAUS, is considered as not intended. This instrument complies with current industry standards and the recognized safety regulations; however, it can constitute a hazard in use. If the instrument is not used according to these operating instructions, the intended protection provided by the instrument may be impaired.

1.3. Overview of Parts and Controls

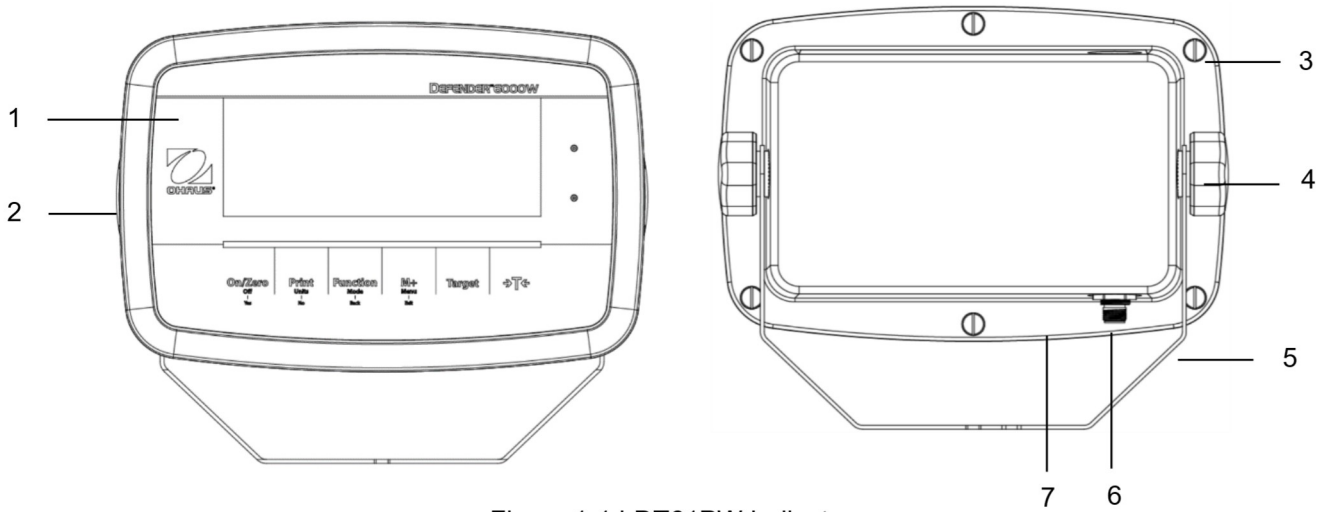


Figure 1-1 i-DT61PW Indicator

Item	Description
1	Control Panel
2	Front Housing
3	Screws (6)
4	Adjusting Knobs (2)
5	Mounting Bracket
6	Load Cell Connector
7	Rear Housing

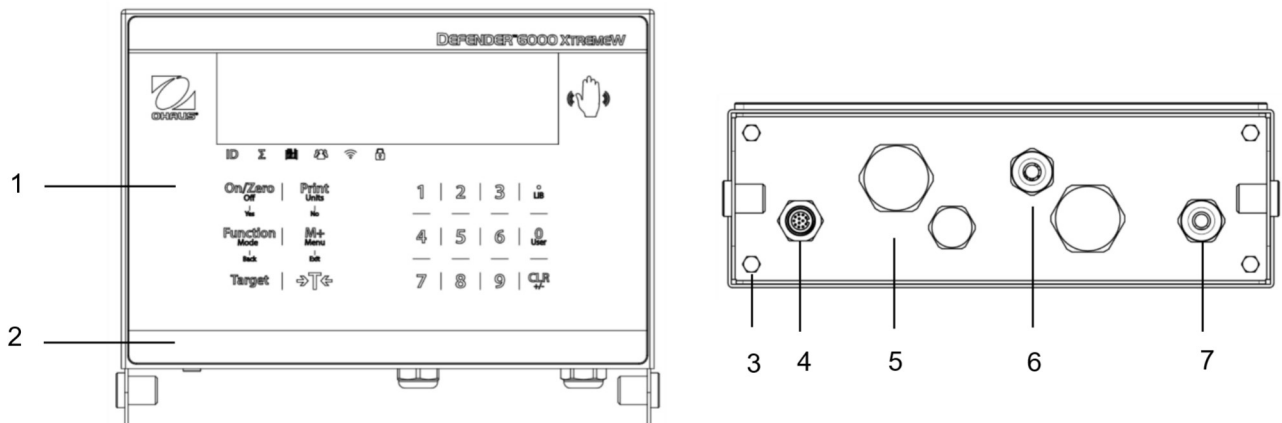
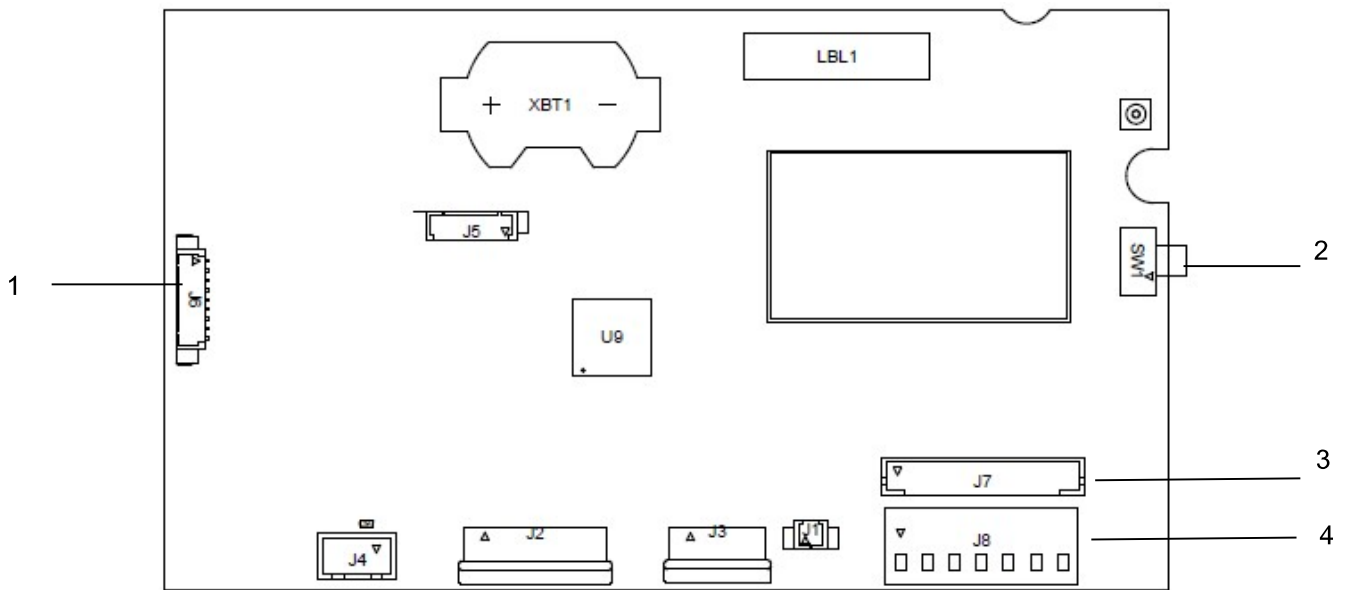


Figure 1-2 i-DT61XWE Indicator

Item	Description
1	Control Panel
2	Front Housing
3	Screws (4)
4	Load Cell Connector
5	Bottom Housing
6	Strain Relief for Option
7	Power cord

1.4. Mainboard



.Figure 1-3 i-DT61PW Mainboard

Item	Description
1	IR Communication connector (J6)
2	Security Switch (SW1)
3	Load Cell connector (J7)
4	Load Cell Terminal Block (J8)

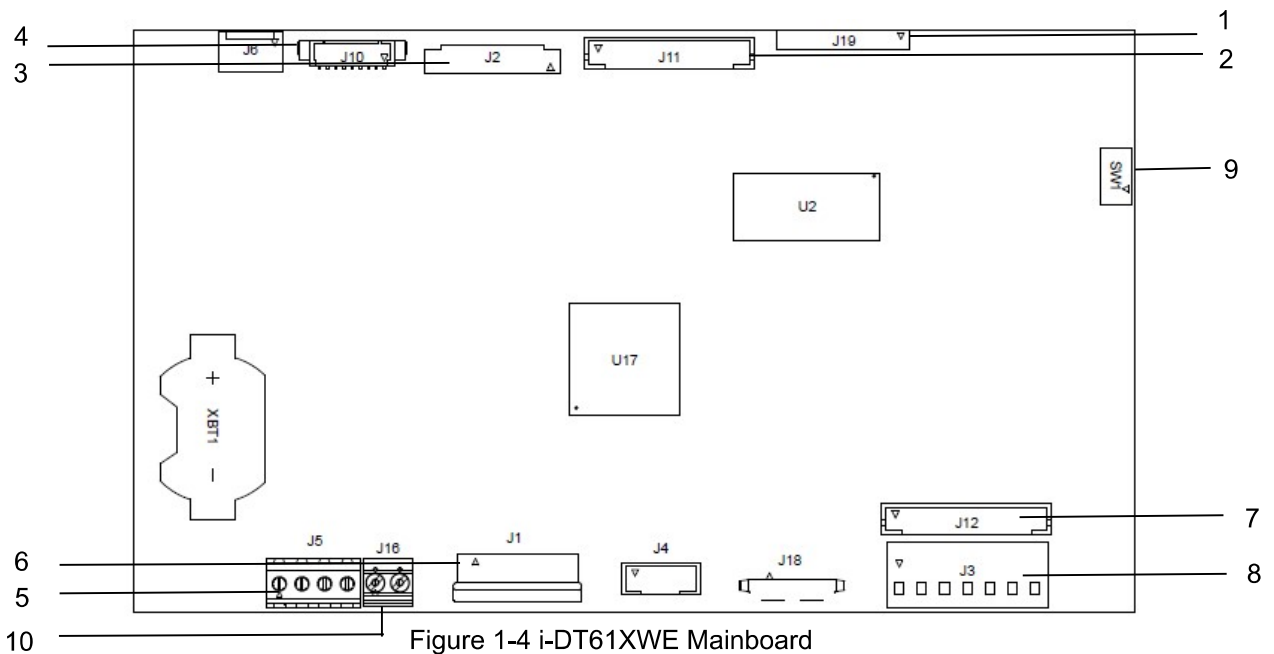


Figure 1-4 i-DT61XWE Mainboard

Item	Description	Item	Description
1	Alibi Memory Board connector (J19)	6	Keyboard connector (J1)
2	Discrete I/O/Analog/RS232-RS485-USB Device connector (J11)	7	Load Cell connector (J12)
3	Display Board connector (J2)	8	Load Cell Terminal Block (J3)
4	Ethernet connector (J10)	9	Security Switch connector (SW1)
5	RS232 connector (J5)	10	Discrete Input0 (J16)

1.5. Control Functions



i-DT61PW Control Panel



i-DT61XWE Control Panel

Button	On/Zero Off Yes	Print Units No	Function Mode Back	M+ Menu Exit	Target	→T←
Primary Function (Short Press)	On/Zero If the terminal is Off, press to power on; If the terminal is On, press to set the zero point.	Print Sends the current value to the selected COM ports if AUTOPRINT is disabled.	Function Initiates an application mode.	M+ Accumulates the weight or displays the accumulated information with no load on the pan.	Target Sets under/over limit value for Check.	Tare Enters/clears a tare value; When the accumulation data is displayed, press to clear them.
Secondary Function (Long Press)	Off If the terminal is On, press to power off.	Units Changes the weighing unit.	Mode Allows changing the application mode.	Menu Enters the user menu.	Target Shows under/over limit value for Check.	Tare Displays the tare weight.
Menu Function (Short Press)	Yes Accepts the current setting on the display.	No Advances to the next menu or menu item. Rejects the current setting on the display and advances to the next available one.	Back Moves back to the previous menu item.	Exit Exits the user menu. Aborts the calibration in progress.		

Notes:

- Short Press: press less than 1 second.
- Long Press: press and hold for more than 2 seconds.

Numeric keyboard (i-DT61XWE)

Primary Function (Short Press)	1-9 Enters numeric values.	. Enters decimal point (.).	0 Enters numeric values 0.	CLR Clears the entered value. Clears an existing APW. When the accumulation data is displayed, press to clear them.
Secondary Function (Long Press)		LIB Searches library items with numeric keys.	User Searches users with numeric keys.	+/- Switches between positive and negative values.

Note: for i-DT61XWE model, press the and button together for three seconds can lock all buttons. Perform the same procedure again to unlock all buttons. When all buttons are locked, the icon will be lighted.

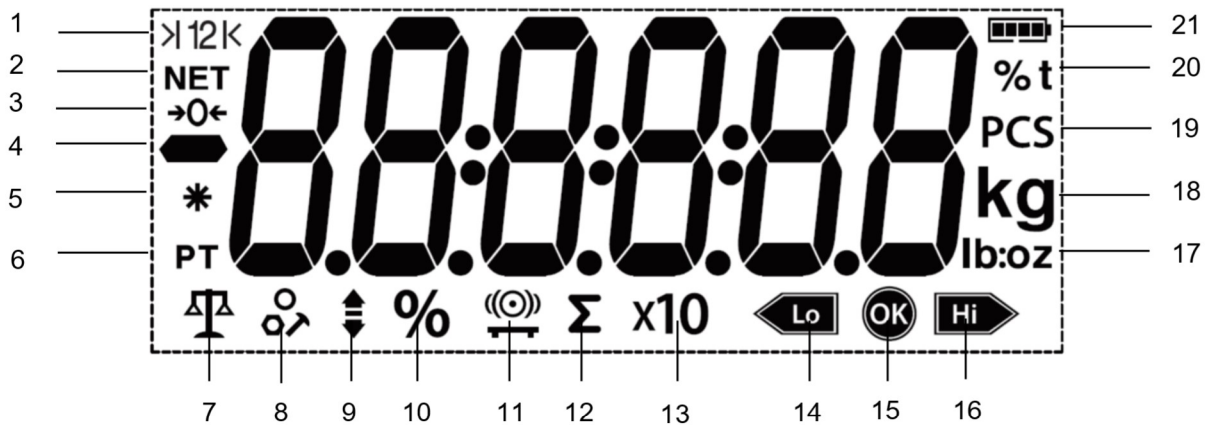


Figure 1-5 i-DT61PW Display

Item	Description	Item	Description
1	Range symbol (not used)	12	Accumulation symbol
2	NET symbol	13	Resolution extension symbol (not used)
3	Center of Zero symbol	14	Check weighing lower symbol
4	Negative symbol	15	Acceptable symbol
5	Stable weight symbol	16	Check weighing higher symbol
6	Preset Tare, Tare symbols	17	Pound, Ounce, Pound:Ounce symbols
7	Weighing mode symbol	18	Kilogram, gram symbols
8	Counting mode symbol	19	Pieces symbol
9	Check weighing mode symbol	20	Percent symbol, tonne symbol (not used)
10	Percentage weighing mode symbol	21	Battery symbol
11	Dynamic weighing mode symbol		



Figure 1-6 i-DT61XWE Display

Item	Description	Item	Description
1	NET symbol	11	Wi-Fi symbol
2	Center of Zero symbol	12	Lock symbol
3	Negative symbol	13	Dynamic (tilde) symbol
4	Stable weight symbol	14	Battery symbol (not use)
5	Preset Tare, Tare symbols	15	Pound, Ounce, Pound:Ounce symbols
6	Pointer symbols	16	Percent symbol
7	ID symbol	17	Kilogram, gram symbols
8	Accumulation symbol	18	Pieces symbol, tonne symbol (not used)
9	Library symbol	19	Scale symbol (not used)
10	User symbol		

2. INSTALLATION

2.1 Unpacking

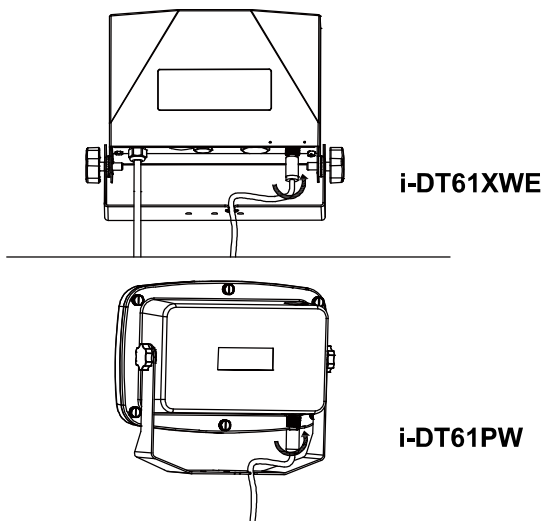
Unpack the following items:

- i-DT61PW or i-DT61XWE indicator
- 6 cells of D size dry batteries (i-DT61PW only)
- Mounting bracket
- Knobs (2)
- Quick installation guide
- Instruction manual

2.2 External Connections

2.2.1 Scale Base with EasyConnect™ Connector

To connect the OHAUS scale base with EasyConnect™ connector to the terminal, plug the base's connector onto the external load cell connector located at the bottom of the terminal. Then rotate the base connector's locking ring clockwise. Check the following illustration for details.



2.2.2 Power input to i-DT61PW

Use 6 cells of D size dry batteries. During battery operation, the battery symbol indicates the battery status.



Battery 5%~25% remaining



Battery 25%~50% remaining



Battery 50%~75% remaining



Battery 75%~100% remaining

2.2.3 AC Power to i-DT61XWE

Connect the AC plug to an electrical outlet.

2.3 Internal Connections

Some connections require the housing to be opened.

2.3.1 Opening the Housing



CAUTION: ELECTRICAL SHOCK HAZARD. REMOVE ALL POWER CONNECTIONS TO THE INDICATOR BEFORE SERVICING OR MAKING INTERNAL CONNECTIONS. THE HOUSING SHOULD ONLY BE OPENED BY AUTHORIZED AND QUALIFIED PERSONNEL, SUCH AS AN ELECTRICAL TECHNICIAN.

i-DT61PW

1. Remove the six Phillips head screws from the rear housing.
2. Remove the front housing. Be careful not to disturb the internal connections.

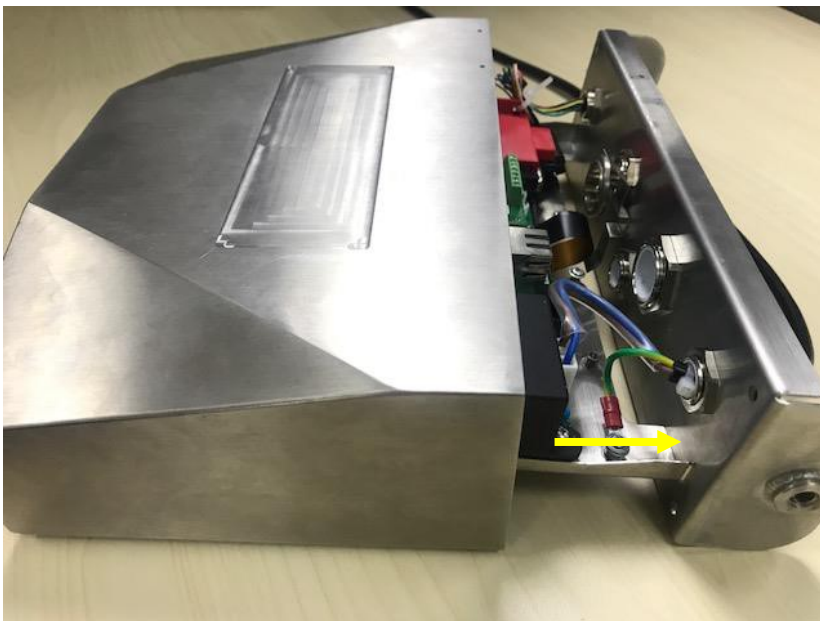
3. Once all connections are made, re-attach the front housing.

i-DT61XWE

1. Remove the four hex head screws from the bottom housing.



2. Open the housing by carefully pulling the bottom housing backward.



3. Once all connections are made, re-attach the bottom housing.

Note: The screws should be tightened to 2.5 N•m (20-25 in-lb) torque to ensure a watertight seal.

2.3.2 Scale Base without EasyConnect™ Connector

For connecting bases (which do not have the EasyConnect™ connector) to an i-DT61PW or an i-DT61XWE, a load cell cable gland kit (P/N 30379716) is available as an accessory.

Removing the pre-installed Load Cell connector and wiring harness.

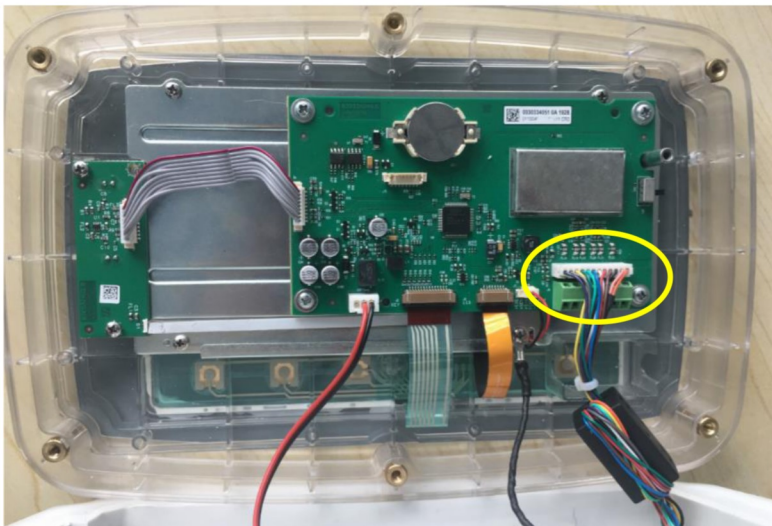
Before making the connections, remove the pre-installed load cell connector and wiring harness by following the following steps.

i-DT61PW

1. Remove the 6 Phillips head screws, and open the rear housing by carefully pulling the front housing forward.
2. Unplug the white load cell connectors from the main housing (two circles).



3. Open the front housing by removing the 12 Phillips head screws.
4. Unplug the white load cell connectors from the main PCBA board.

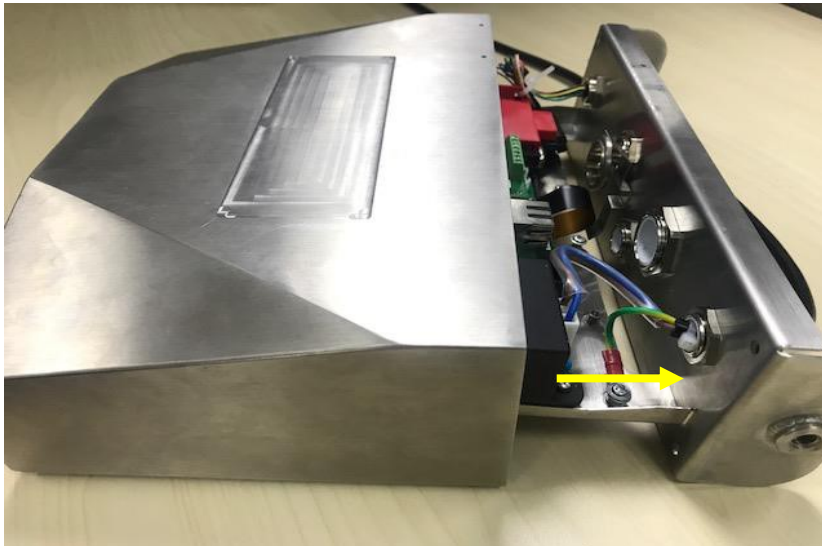


i-DT61XWE

1. Place the terminal down, and unscrew the screws marked in the following graphic.



2. Pull out the bottom of the terminal.



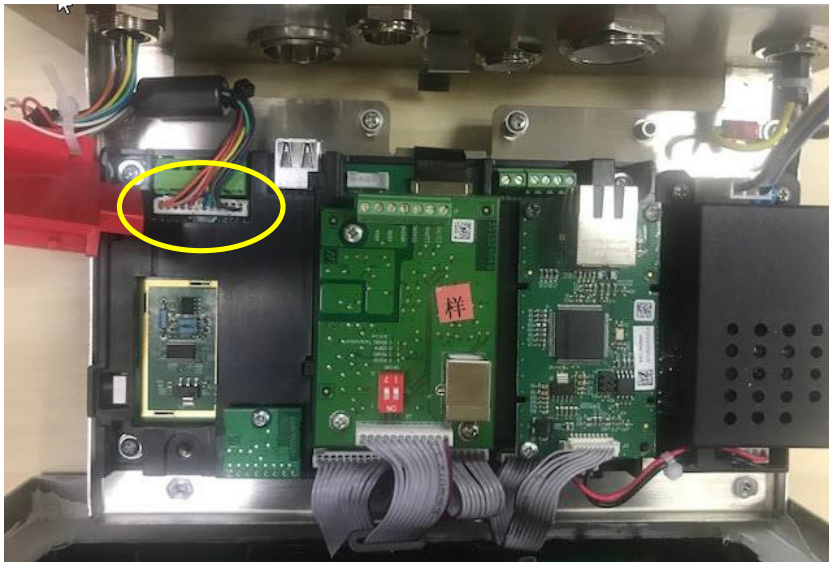
3. Use a screw driver to unscrew the sealing cover.



4. Pull the protruding part of the sealing cover a little forward to release it.



5. Remove the sealing cover and then unplug the white load cell connectors.



Installing Load Cell Cable and Connectors

In order to meet certain electrical noise emission limits and to protect i-DT61PW and i-DT61XWE from external influences, it is necessary to install a ferrite core on the load cell cable connected to the terminal. The ferrite core is included with the terminal.

To install the ferrite, simply route the cable through the center of the core and then take one wrap around the outside of the core and route the cable through the center again. Either the complete cable or the individual wires can be wrapped through the ferrite. This should be done as close to the enclosure as possible. See Figure 2-1.



Figure 2-1