Intrinsically Safe Explosion-Proof High-Precision Tuning Fork Scale

FZ60K0.1GEx
FZ100K1GEx
FZ200K1GEx

Installation Manual

IMPORTANT

- To ensure safe and proper use of the balance, please read this manual carefully.
- After reading this manual, store it in a safe place near the balance, so you can review it as needed.

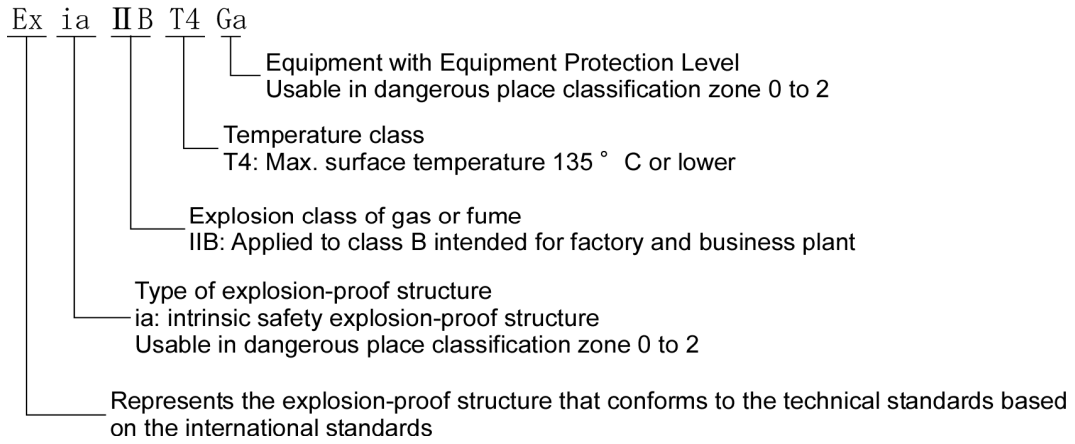
Preface

Thank you very much for having purchased a dust- and water-proof intrinsic safety explosion-proof structure electronic scale, FZ60K0.1GEx - 200K1GEx.
This document describes important items to use the device safely in the explosive atmosphere. Read this document carefully before use to correctly operate.

■About the certified explosion-proof structure

This scale is an explosion-proof electronic scale that has been certified as an intrinsic safety explosion-proof structure electric device to conform to the type test according to the "Constructional Requirements for electrical Equipment for Explosive Atmospheres" It has been confirmed that the device does not explode due to the generation of electric sparks or temperature rise of a component not only during normal operation but also during abnormal operation (failure period) even when used in the atmosphere of explosive gas.

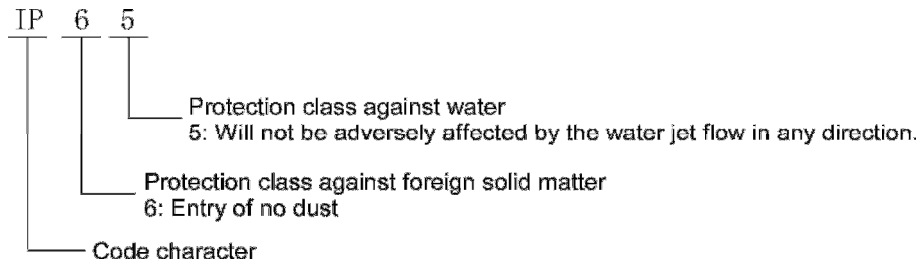
Explosion-proof structure that has been certified



■About the dust- and water-proof structure

This scale is an electric device equipped with a dust- and water-proof structure.

Protection class of a dust- and water-proof structure



IECEx CERTIFICATE/Korean Certificate Safety

1 Certificate No. IECEx DEK 15.0059X/16-KA4BO-0469X

2 Type of Protection ia

3 Marking Ex ia IIB T4 Ga/Ex ia IIB T4

4 STANDARDS IEC 60079-0:2011 Edition 6.0, IEC 60079-11:2011 Edition 6.0

5 POWER SUPPLY Maximum valies

Ui	Ii	Pi	Ci	Li
20[V]	139[mA]	0.46[W]	0.21[μF]	0[mH]

6 S/N XXYYYY where XX is last two digits of the year of manufacture.

7 Symbol ”X” The insulation between an intrinsically safe circuit and the frame of the (electrical) apparatus is not guaranteed. Avoid excess voltage. For the safety point of view, the circuit is considered to be connected to earth, See 1-5 Grounding.

EC-TYPE EXAMINATION CERTIFICATE

1 Certificate No. DEKRA 15ATEX0072X

2 Marking II 1G Ex ia IIB T4 Ga

3 STANDARDS EN 60079-0:2012+A11, EN 60079-11:2012

4 POWER SUPPLY Maximum valies

Ui	Ii	Pi	Ci	Li
20[V]	139[mA]	0.46[W]	0.21[μF]	0[mH]

5 Symbol ”X” The insulation between an intrinsically safe circuit and the frame of the (electrical) apparatus is not guaranteed. Avoid excess voltage. For the safety point of view, the circuit is considered to be connected to earth, See 1-5 Grounding.

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Important Notice

⚠ WARNING

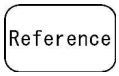
- It should be known that this product contains potential danger. And so please be sure to observe this document when installing, operating or servicing this product.
- SHINKO DENSHI CO., LTD. will not take any responsibility for any injury or damage caused by the non-observance of this document or misuse or unauthorized modification of this product.

- Potential dangers are increasing in the industrial equipment industries due to the advent of new materials and processing methods, and speeding up of machines. It is impossible to foresee all situations related to these dangers. In addition, there are so many “impossible” and “don’ts” and so writing all of them in the operation manual is impossible. Therefore, it is safe to think that what is not written in the operation manual “cannot be performed” unless the operation manual positively writes “it is possible.” When performing installation, operation, maintenance or inspection of this product, not only observe what is written or indicated in this document or on the product surface but also pay adequate consideration to safety measures.
-
- For any question or further information concerning this document, please contact the store where you purchased the product or with its model (type) name and serial number informed.
- Manufacturer: SHINKO DENSHI CO., LTD.
Adress: 3-9-11 Yushima, Bunkyo-ku, Tokyo 113-0034 JAPAN

How to use this document

■Symbols used in this document

Understand the meaning of the following symbols and observe the instructions of this document.

Symbols	Meaning
	Used for the situation that invites an imminent risk of death or severe injury unless avoided.
	Used for the situation that invites a risk of death or serious injury unless avoided.
	Used for the situation that damages device/equipment, or destructs, deletes or overtypes data unless avoided.
	Used for the situation in which special care should be taken or specific information is emphasized
	Used for reference information on operation
	Used for “Prohibition” items
	Used for “Mandatory” items requiring positive action
	Used for prohibition items to avoid “Electrical shock”.

■About this document

This document describes how to install the power supply box, indicator section and scale section of the FZ Series (hereinafter referred to as “this product” or “the product”).
For how to install the interface option of the power supply box, please refer to the each option’s manual.
For how to operate the product, please refer to the “FZ-Ex Series Operation Manual”

■About how to read this document

This document consists of the following contents:

1. Prior to use	Describes precautions, checking for articles contained in the box, the name and function of each section and the assembling and installation of the scale. Before installing and using the scale for the first time, be sure to read this document.
2. How to maintain	Describes how to maintain this product.
Appendix	Provides necessary data such as the specifications of this product.

Contents

（Memo）

1 Prior to use

1-1 Operating precautions

DANGER

	■ **No disassembling or modification** Unless specifically stated in this document, disassembling or modification of this product, mounting or removal of an undesignated component no longer maintains the function of the safety structure or explosion-proof structure, leading to a serious accident or bodily injury.
	■ **Install the power supply box in "non dangerous location".** Installing the power supply box in a dangerous place will cause trouble such as an explosion or a fire.
	■ **Connect the grounding terminal and cables properly.** Improper connection of the grounding terminal and cables will cause trouble such as an explosion or a fire.
	■ **Do not replace fuse, optional slots of the power supply box or access to the AC power terminal when the AC power cord is connected to the mains power.** That may cause an electric shock, short-circuiting or failure. Make sure disconnect from the AC mains or shut down the AC mains before accessing to those parts.
	■ **Do not wet the power supply box.** That may cause an electric shock, short-circuiting or failure.
	■ **Do not wet the power supply box.** That may cause an electric shock, short-circuiting or failure.
	■ **Do not open the AC connector cover unless the power supply box is installed as a built-in unit on a distribution board or other enclosure of which access is permitted to the trained and authorised persons only.** That may cause an electric shock, short-circuiting or failure.

⚠ WARNING

	■ **Do not move the device with a sample to be loaded on the scale.** That may cause the sample to fall from the weighing pan, leading to a bodily injury or destruction of the article.
	■ **Do not use the product on an unstable table or a place that is subject to vibration.** That may cause the article to fall from the weighing pan, leading to a bodily injury or destruction of the article. Besides inaccurate weighing may result.
	■ **Do not lift the scale holding its windshield.** That may cause the scale itself to fall, leading to a bodily injury or malfunction of the scale itself. Be sure to hold the main unit of the scale to move it.
	■ **Do not place an unstable sample on the weighing pan.** The sample may fall down and cause injury. Put an unstable article in a container (tare) before weighing it.
	■ **Do not use the product in an abnormal condition.** If it should happen that an abnormal event such as smoking or unusual odor occurs, ask the store where you purchased the product for repair. Keeping using the product may result in an electric shock or fire. In addition, do not ever try to repair it for yourself, or very dangerous situation is likely to occur.

⚠ CAUTION

⊘	■ **Avoid miswiring of the barrier.** Erroneous barrier wiring in the power supply box is likely to cause failure.
	■ **Do not give a shock to the scale.** It may cause breakage or failure. Place an article to be weighed softly.
	■ **Do not let an overload situation (o-Err indication) continue.** It may cause breakage or failure. Remove the article to be weighed immediately.
	■ **Do not use volatile solvent.** Use of volatile solvent is likely to deform the main unit. Dirt on the main unit should be removed with a piece of dry cloth or cloth wet with small amount of neutral detergent.

Note

⊘	■ **Do not use the product where wind from an HVAC equipment directly applies.** Accurate weighing may be impeded due to the fluctuation of surrounding temperature.
	■ **Do not use the product where there is direct sun.** Accurate weighing may be impeded due to the rise of internal temperature.
	■ **Do not use the product where floor is soft.** Accurate weighing may be impeded due to the tilting of the main unit when an object is placed on it.
	■ **Do not use the product where there is violent fluctuation of surrounding temperature or humidity.** Accurate weighing may possibly be impeded. Use within a temperature range of 5 to 40 °C and below a humidity of 85% RH.
	■ **Do not use the product on an unstable table or a place that is subject to vibration.** It may cause not only inaccurate weighing but also the article to fall from the weighing pan, leading to a bodily injury.
❗	■ **Be sure to make adjustment at the time of installation or changing a use place.** There occurs an error in measurement value. For the sake of accurate measurement, be sure to make adjustment.
	■ **Check for an error periodically.** Use environment and chronological change cause an error in measured value, leading to an inaccurate measurement.
	■ **Align the level of the scale without fail before use.** Weighing with a slanted scale causes an error, leading to an inaccurate measurement. Put the scale on a robust place.

1-2 For more accurate measurement

To make more accurate measurement, it is necessary to lessen error-causing factors in measurement to the extent possible. Error-causing factors include not only an instrument error and performance of the scale itself but also the nature and condition of a specimen, measuring environment (vibration, temperature, humidity, etc.) and the like. These factors will directly affect measurement result in the case of a scale with high resolution capability.

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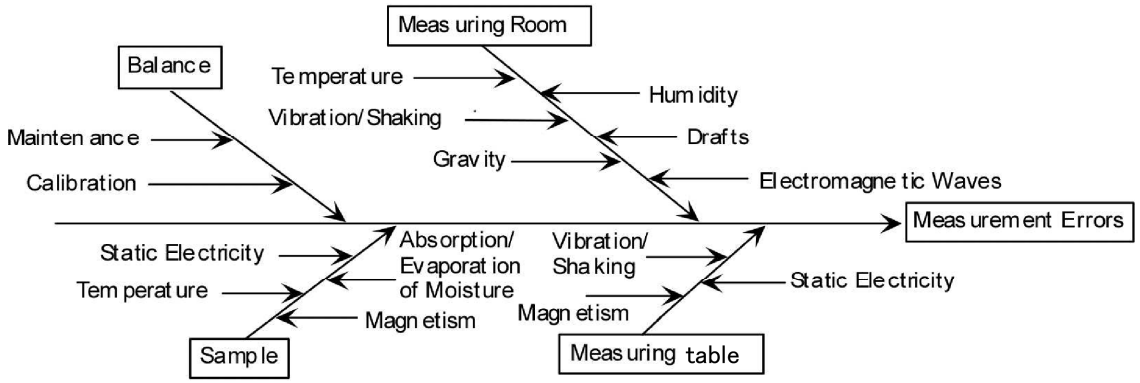


Measurement Errors

1-2-1 Precautions related to measuring environment

Temperature/humidity	→	Try to keep the room temperature constant to the extent possible in order to avoid condensation and indication drift due to change in temperature.
	→	Low humidity is likely to cause generation of static electricity, resulting in inaccurate measurement.
Vibration/shaking	→	It is preferable to locate a measuring room on the first floor or the basement. The higher the room is, the larger the vibration and shaking become. Therefore a highly located room is not suitable for measurement. Rooms near the railway or road side should also be avoided.
Air draft	→	Places directly exposed to air current from an air-conditioner or to direct sun generate abrupt temperature change and resultantly cause unstable weight indication, and therefore, should be avoided.
Gravity	→	The latitude and altitude of a measuring location differentiate the gravity that affects a specimen, giving a different weight indication to the same specimen.
Electromagnetic wave	→	At a location where a strong electromagnetic wave generating object is in the proximity of a scale, the scale is affected by the electromagnetic wave, making the scale unable to indicate accurate weight, and therefore, such a location should be avoided.

1-2-2 Precautions related to measuring table

Vibration/shaking	→	Vibrations during measurement destabilizes the indication of measurement value, leading to inability to make accurate measurement. And so use of a measurement table that is robust and hardly affected by vibration is required (a vibration-proof structured table or concrete or stone-made table is suitable). In addition, placing a sheet of soft cloth or paper under the scale causes shaking or makes keeping horizontal attitude difficult, and therefore should be avoided.
	→	The measurement table should be installed in a position free from vibration to the extent possible. A corner rather than the center of a room is less affected by vibration and therefore more suitable for installation of the scale.
Magnetism/Static electricity	→	Use of the scale on the table that is subject to magnetism or static electricity should be avoided.

1-2-3 Precautions related to a specimen

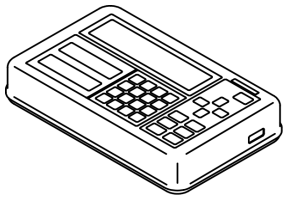
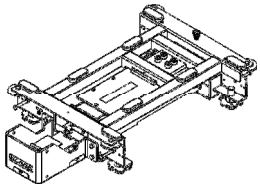
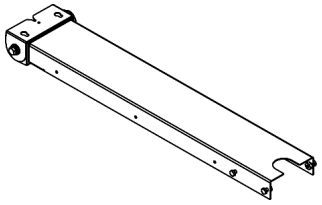
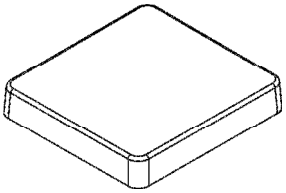
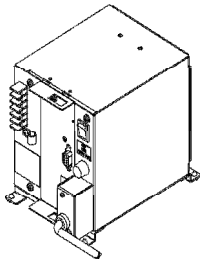
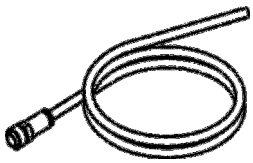
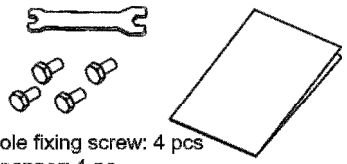
Static electricity	→	In general, synthetic resin- and glass-made specimens are high in electric insulation, and so easily charged electrically. Weighing an electrically charged specimen makes the indication value unstable, reducing the reproducibility of the test result. Therefore, neutralize an electrically charged specimen before measurement.
Magnetism	→	Specimens affected by magnetism show different weight in a different position of the weighing pan, reducing the reproducibility. When weighing a magnetized specimen, either eliminate the magnetism from the specimen or place a setting plate on the weighing pan to distance the specimen from the weighing mechanism of the scale so that the mechanism may not be affected by the magnetism.
Moisture absorption/Evaporation	→	Measuring a moist or evaporating (vaporizing) specimen increases or decreases the indication value of the scale continuously. When this is the case, put the specimen in a container equipped with a small mouth and closely seal the mouth before measurement.
Specimen temperature	→	Difference in temperature between the specimen and the windshield interior generates convection flow within the windshield, causing a measurement error. When the specimen temperature is excessively high or low, allow the specimen temperature to stabilize at the room temperature before measurement. Also, to prevent the convection flow from arising within the windshield, make the windshield interior temperature equal to the room temperature before measurement.
	→	Measurer's body temperature also affects measurement result. Handle a specimen with tweezers instead of directly holding it with fingers and refrain from putting your hands directly in the windshield during measuring operation.

1-2-4 Precautions related to the main unit of a scale

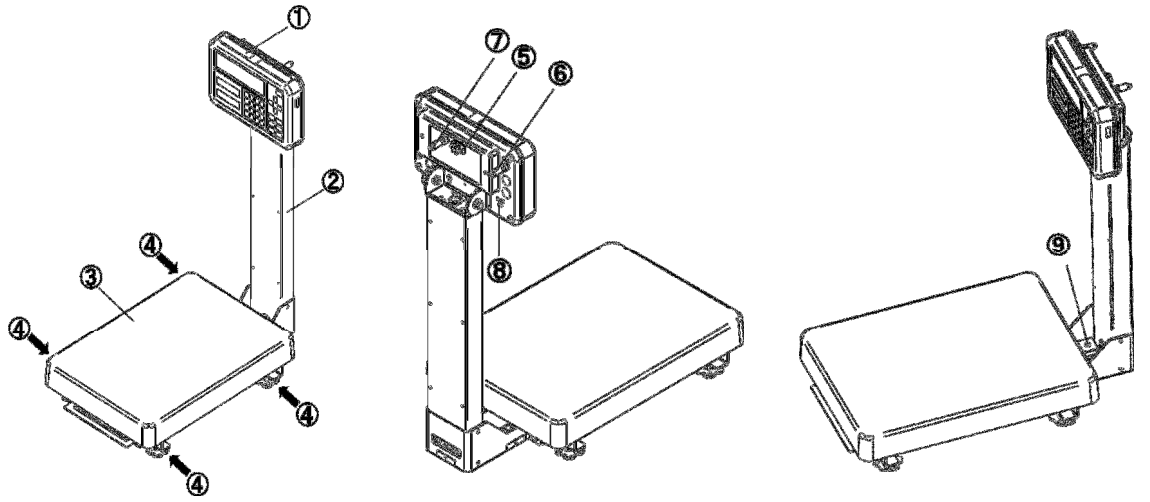
Operating precautions	→	For more stable measurement, it is recommended to energize the scale for longer than 30 minutes and load the scale a few times with a weight equivalent to the weighing capacity before measurement.
Adjustment	→	Calibrate the scale periodically with an external adjustment weight. For the sake of precise calibration, use an external adjustment weight weighing nearly equal to the weighing capacity of the scale.
	→	Energize the scale for longer than 30 minutes and load the scale a few times with a weight equivalent to the weighing capacity before measurement
	→	Adjustment is also needed in the following cases: When using the scale for the first time, When using the scale after a long period of non-use, When changing a place of installation, and When there was a large change in temperature, humidity or atmospheric pressure.
Maintenance	→	Attachment of dirt such as powder or liquid to the weighing pan or pan base will cause measurement error or unstable weight indication. For that reason, frequent cleaning of the scale is required. In cleaning the scale, take care for the dust or liquid not to enter into the scale (mechanism).

1-3 Check for the articles contained in the box

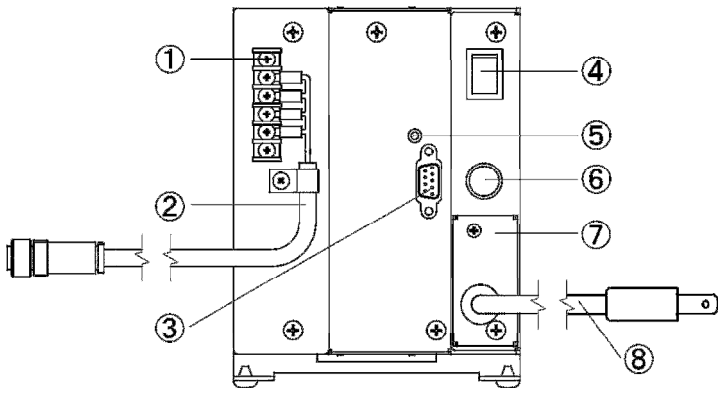
The package box contains the following;
If anything missing or broken should be found, please inform the store where you purchased the product.

Part name	Q'ty	Part name	Q'ty
① Indicator 	1	② Scale 	1
③ Pole 	1	④ Weighing pan 	1
⑤ Power supply box, AC power cord 	1	⑥ DC Power supply cable 	1
⑦ Accessories  Pole fixing screw: 4 pcs Spanner: 1 pc. Manual: 2 pcs			

1-4 Name and function of each section



①	Indicator	②	Pole
③	Scale	④	Adjustor
⑤	Intrinsic safety grounding terminal E (IS)	⑥	Scale cable
⑦	DC Power supply cable	⑧	Enclosure grounding terminal
⑨	Level		



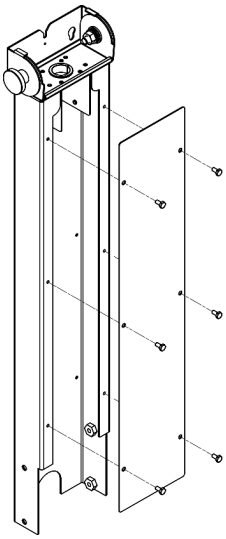
①	DC power supply cable connecting terminal block	②	Scale cable
③	RS232C connector (D-sub 9 pin male)	④	Power switch
⑤	Communication confirmation LED	⑥	Fuse holder (Fuse built-in)
⑦	AC connector cover	⑧	AC power cord

1-5 Assembling and installation of the scale

1-5-1 How to mount the pole and the indicator

Note When not using the pole, proceed to step 5.

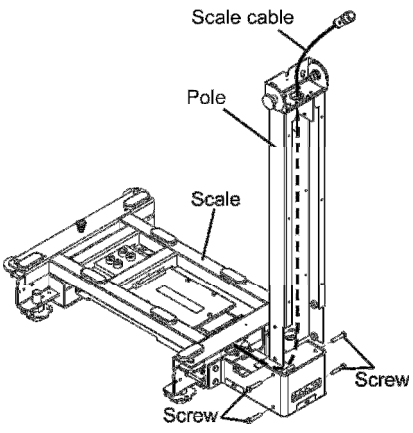
1 Remove the pole cover.



(1)
Remove six screws from the pole with a spanner which comes with the scale.

(2)
Remove the pole cover.

2 Mount the pole on the scale.

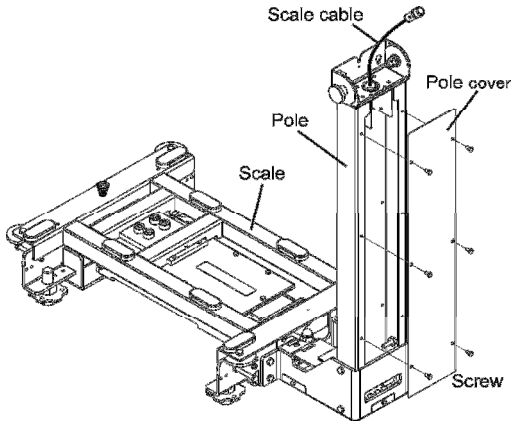


(1)
Put the scale cable that comes out of the scale through the pole.

(2)
Fix the pole and the scale with the attached screws temporarily.

(3)
Tighten the screws to fix the pole securely with the spanner which comes with the scale.

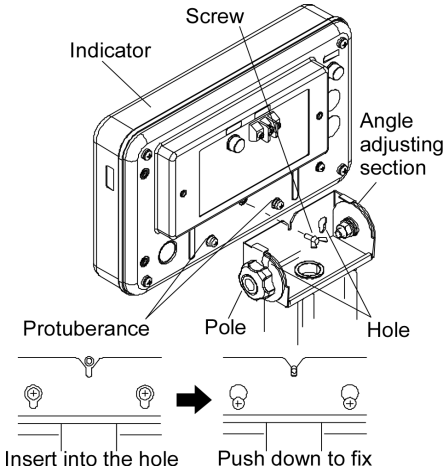
3 Mount the pole cover.



(1)
Mount the pole cover with the removed six screws temporarily.

(2)
Tighten the screws with the spanner which comes with the scale to fix the pole cover.

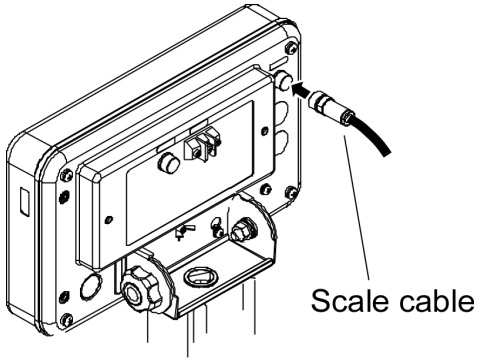
4 Mount the indicator on the pole.



(1)
Put two protuberances located in the lower portion of the back of the indicator into the holes of the angle adjusting section, and then push down the indicator.

(2)
Fix the indicator with screws.

5 Connect the scale cables to the indicator.



(1)
Tighten the connector screw to fix.

Reference

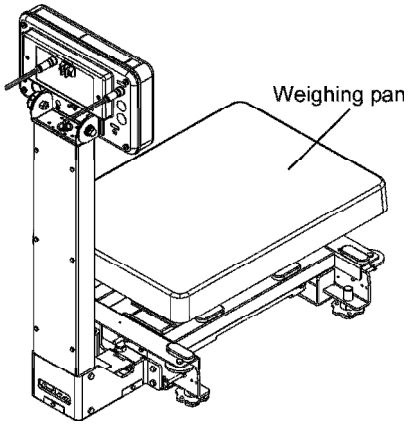
When not using the pole, connect the scale cable directly to the indicator.

CAUTION

Tighten the cable securely for protection against dust and water.

1-5-2 Mounting of the weighing pan

1 Mount the weighing pan.



(1)
Place the weighing pan.

1-5-3 Installation of the power supply box

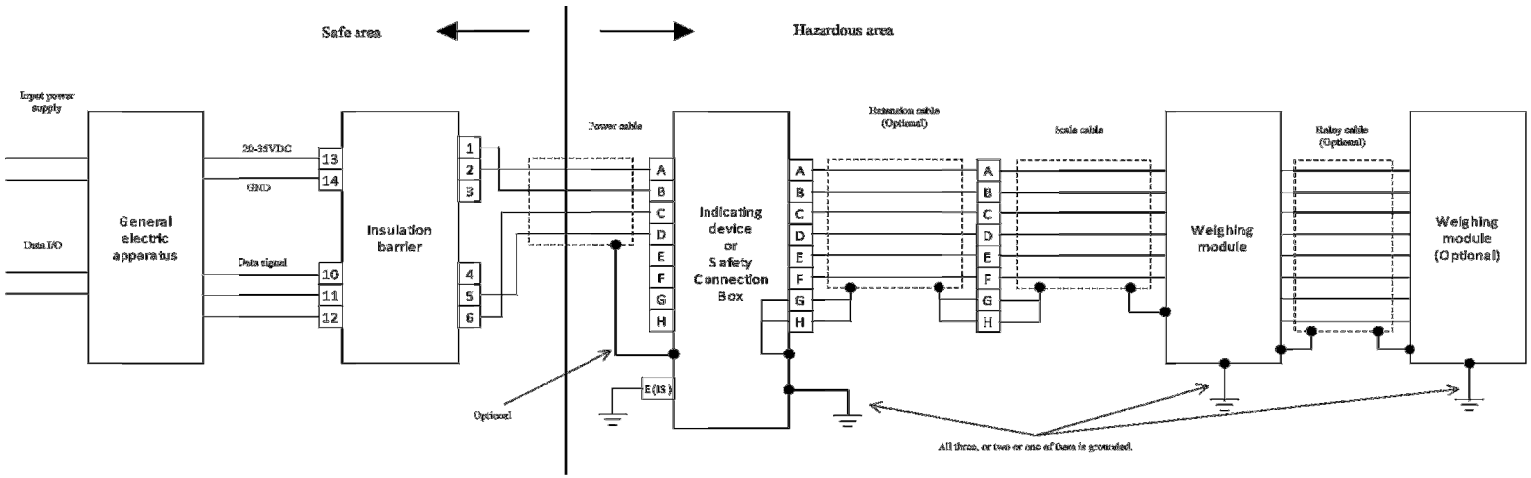
1 Installing condition

This product is a scale that can secure safety when in use even in an atmosphere of explosive gas. However, wrong installation and handling give rise to a serious danger.

⚠ CAUTION

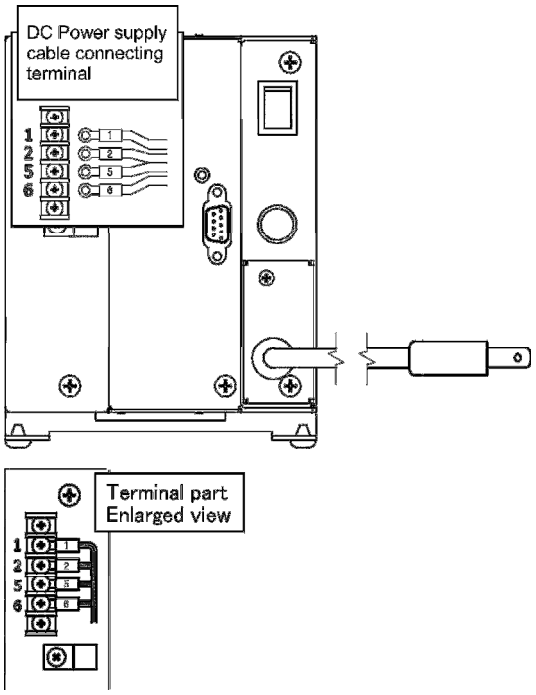
- DC Power supply cables run between dangerous section and non-dangerous section. Be sure to conduct the specified gas flow prevention construction for the DC power supply cable pull-in section.
- Do not ever install the power supply box and the barrier in the dangerous section.
- A 5m long DC power supply cable is included as a standard accessory.
  The DC power supply cable can be elongated in 5 m units on an option basis till 95m at a maximum.
- Separate the scale cable adequately from other wiring cables such as motor power cables. Otherwise, the intrinsic safety performance may possibly be impaired due to the electrostatic induction and electromagnetic induction. Perform the wiring with sufficient clearance dimension provided.

■System construction diagram



1. Insulation barrier, Indicating device or Safety Connection Box, and Weighing Modules are consisted as shown in the figure.
2. The Insulation barrier should have type approval and satisfy the following conditions.
   (1) Safety parameter: Uo ≤ 20V, Io ≤ 139mA, Po ≤ 0.46W, Co ≥ 1.41 μF, Lo ≥ 1.77mH
   (2) Protection level, and Electrical Equipment Group: Level "ia", Group "IIB" or "IIC"
3. Condition of the Power Cable
   Cw ≤ Co - Ci = 1.41 - 0.21 = 1.20 μF, Lw ≤ Lo - Li = 1.77 - 0 = 1.77mH
4. Conditions of the General Electric Apparatus
   An input power supply and the from the air voltage such as the voltage of the machinery inside shall not beyond AC250V, 50/60Hz, DC250V at normal time and the abnormality either.
5. The intrinsically safe apparatus, related equipments and connecting wires should be located appropriately so as not to impair the explosion proofness by induced voltage or current.

2 Connect the DC power supply cable.



DANGER

Before beginning this operation, make sure to unplug the AC plug or shutdown the AC mains.

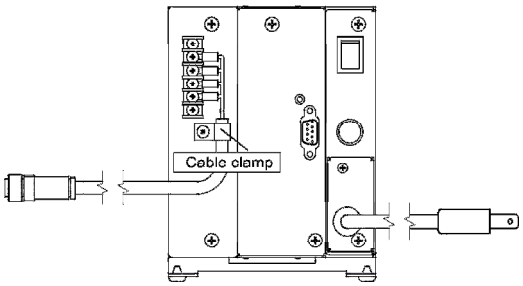
(1)
Remove the screws with a Phillips-head screw driver.

(2)
Connect the DC power supply cable.

Power supply box marking	DC Power supply cable no.
1	1
2	2
5	5
6	6

(3)
Tighten the screws to fix it.

Fix the DC power supply cable.



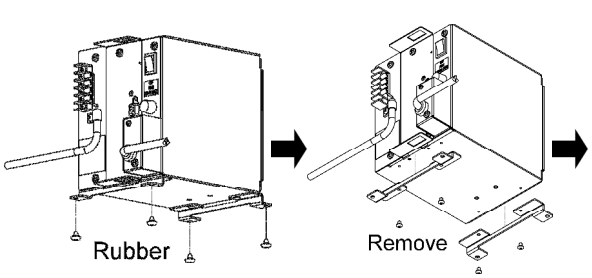
(4)
Fix the DC power supply cable on the cable clamp located under the DC power supply cable connecting terminal block.

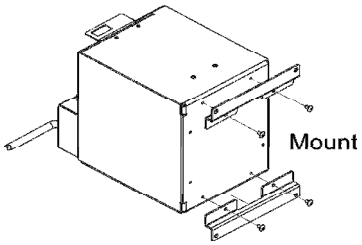
3 Install as a field wiring terminal box.

DANGER

- The power supply box also can be installed/accessed in following way only when it is installed as a built-in unit on a distribution board or other enclosure of which access is permitted to the trained and authorised persons only.
- Before beginning this operation, make sure to unplug the AC plug or shutdown the AC mains.
- Do not ever install the power supply box by this procedure if it is not protected nor accessibility is not limited.
- Be sure not to mistake the connection of AC N, L and ground.
- Secure insulation to the each line of the AC power cord to avoid short sircuit or electric shock.
- Use the AC power cord of proper ratings.
- Do not occlude the breaker of the distribution board so as not to be disable to access to shut off the power.
- Do not occulude the AC plug of the AC power cord so as not to be disable to access to shut off the power.

Fix the power supply box on the board.

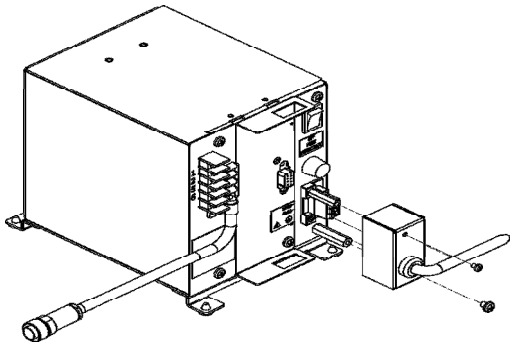




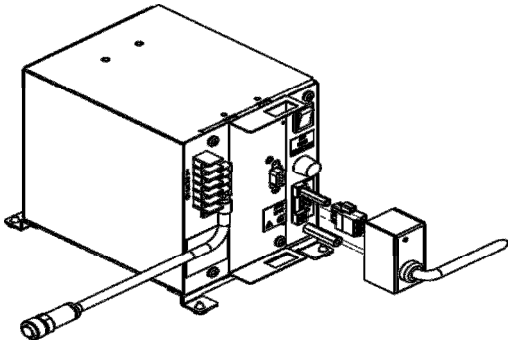
(1)
To fix the power supply box on the board, replace 4 rubber feet of the mounting leg with M4 screws or bolts.

(2)
You can also change the mounting direction by shifting the mounting leg as shown in left.

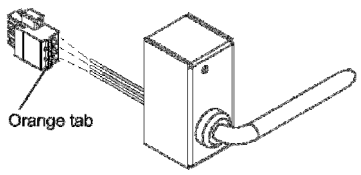
Remove the AC connector cover and replace the AC power cord as needed.



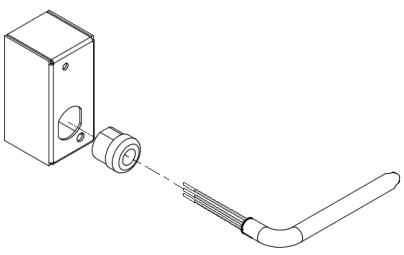
(1)
Remove two screws of AC connector cover and lift the cover up.



(2)
Loosen the 2 screws fixing the connector by flat-blade screwdriver and pull the connector.

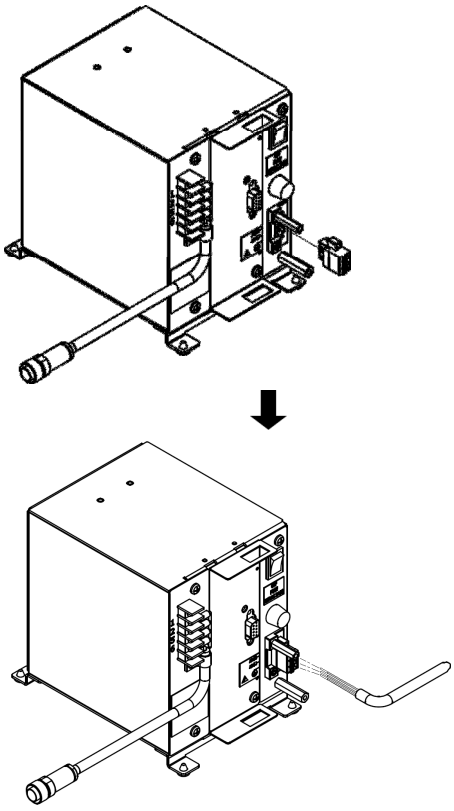


(3)
Pull the cable out from the connector while pushing the orange tab by flat-blade screwdriver.



(4)
To reuse the AC power cord, remove the cable bush on the AC connector cover by a plier and pull the cable out form the cover.

Fix the AC power cord.



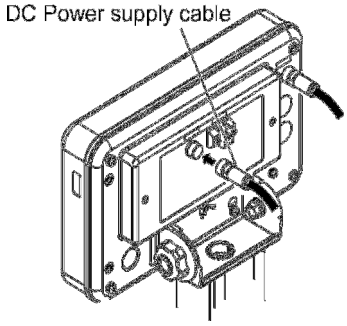
(1)
Mount the connector on the Power supply box by tightening the 2 screws.

(2)
Insert AC power cord all the way seated while pushing the orange tab of the connector by flat-blade screwdriver.
When the cable end is treated with rod terminals, it can be inserted without pushing the tab.
About the cable end treatment to insert to the connector, please refer to the following website of the connector or our local dealer.

Note

Manufacturer: PHOENIX CONTACT
Model number:
MSTB 2,5/ 3-STF - 1786844

4 Connect the DC power supply cable to the indicator.



(1)
Connect the DC power supply cable to the port at the back of the indicator and tighten the connector screw to fix the DC power supply cable.

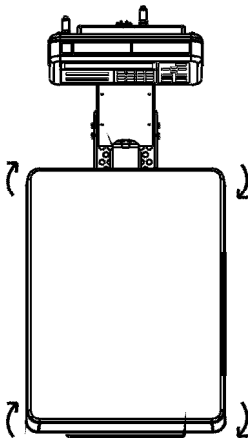
CAUTION

Tighten the cable securely for protection against dust and water.

5 Connect the AC power cord to the AC mains.

1-5-4 Leveling

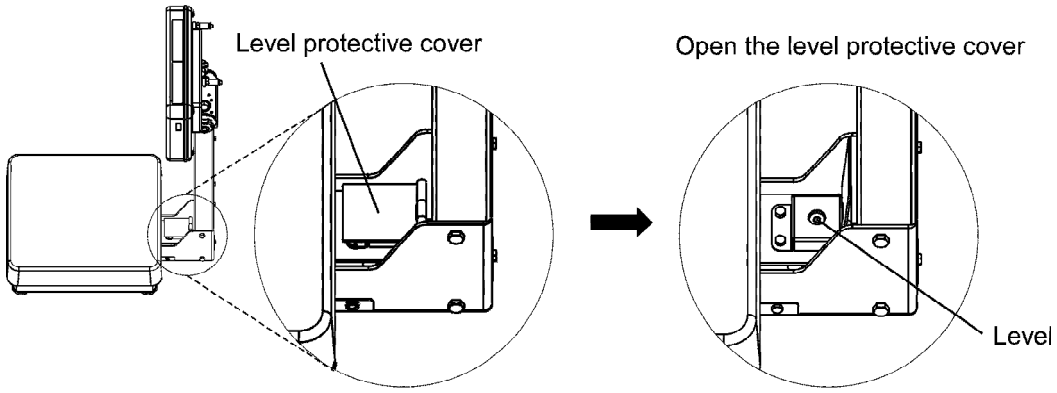
1 Release the transportation lock of the adjuster.



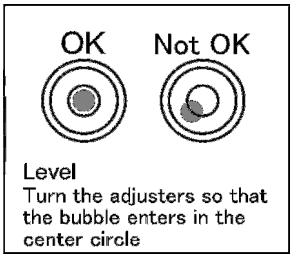
(1)
At the time of shipment, the adjusters provided at the four corners of the bottom are locked. Turn them in the direction shown in the figure on the left to loosen them.

2 Open the level protective cover.

(1)
Open the level protective cover.Check the position of the level.

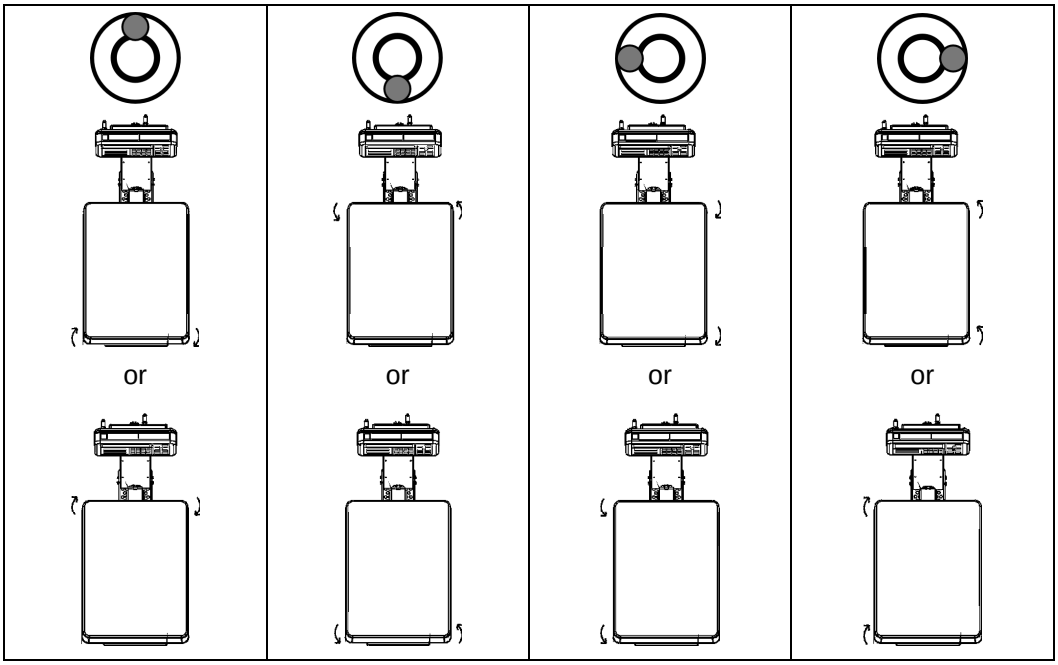


3 Level the scale.



(1)
While watching the level, turn the adjusters provided on the bottom to level the main unit.
(2)
Bring the bubble enters in the center circle as shown in the figure on the left.
(3)
When having leveled the main unit, slightly push the four corners of the scale to make sure that there is no rattle.

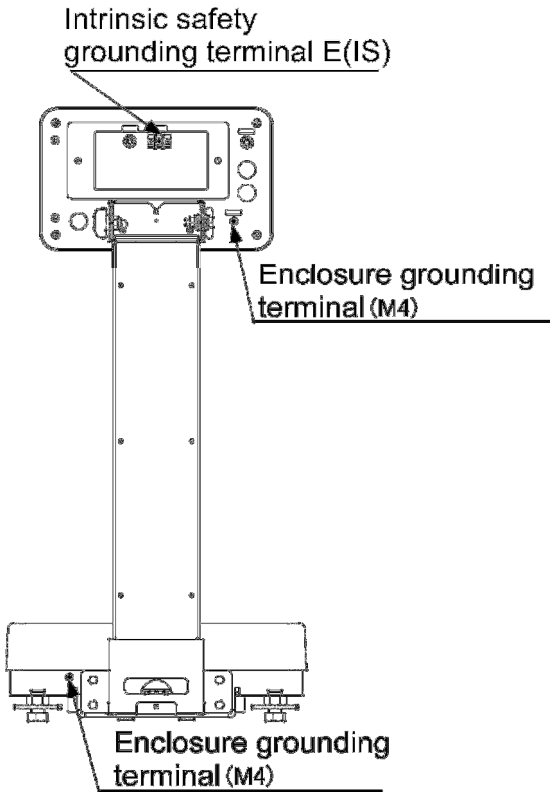
Turn the adjusters as shown below depending on the position of the bubble in the level.



4 Close the level protective cover.

1-5-5 Grounding

1 Connect a grounding terminal.



In this product the internal circuit is electrically connected with the enclosure.

CAUTION

For the purpose of safe use be sure to observe the following grounding conditions in grounding this product.

(1)
Ground the Intrinsic safety grounding terminal E(IS)

(2)
Ground the Enclosure grounding terminal(s) for the enclosure(s).

CAUTION

- Be sure to use a screw attached to the terminal.
- Be sure to ground at least one of the Enclosure grounding terminal.

2 How to maintain

Keep the following in mind in maintaining this product.

2-1 Maintenance method

Wipe dirt with dry and soft cloth off the main unit and the indicator section.

2-2 Maintenance method in the case of heavy soil

In the case of heavy soil, remove the weighing pan and/or the indicator section and clean it with a piece of cloth slightly wet with neutral detergent or solvent. In the case of being extremely dirtied, wash the dirt off and then wipe it adequately with dry cloth.
To remove the indicator section from the weighing section, refer to “Assembling and installation of the scale.”

⚠ CAUTION

- Removing a part other than the one referred to in this document will impair the function of the main unit, leading to a failure. Please note that we will not take any responsibility for the consequence resulting from such removal.
- When washing with water, take care not to submerge the weighing section and indicator section.

Appendix

Appendix 1 Specification

1-1 Basic specification

Model name	Max (g)	e (g)	d (g)	Weighing pan size (mm)	Connectable weight indicator section	Power source
FZ60K0.1GEx	60000	1	0.1	380 x 530	i02 i03	Dedicated power supply box input rating : 100 – 240VAC, 50/60Hz, 0.3A Output : 8 – 12 V DC
FZ100K1GEx	100000	10	1			
FZ200K1GEx	200000	10	1			

1-2 Common specification

Weighing system	Tuning fork vibration type	
Protection class	IP65	
Main unit weight (NET)	Weighing section FZ60K0.1GEx - 200K1GEx	Approx 20 kg
	Indicator section i02	Approx 1.7 kg
	i03	Approx 1.8 kg
	Power supply box S	Approx 2.6 kg
	Power supply box M	Approx 2.9 kg
Package weight (GROSS)	FZ60K0.1GEx - 200K1GEx	Approx 28 kg
	Power supply box S	Approx 3.6 kg
	Power supply box M	Approx 3.9 kg
Standard cable length	AC power cord EU / UL	3 m / 5 m
	DC Power supply cable	5 m
	Scale cable	1 m
Operating temperature and humidity	Temperature: Scale section and Indicator section : 5 °C to +40 °C Power Supply Box: 0°C to +40 °C Humidity: 85% RH or lower (no condensation nor frost)	
Altitude	2,000m or less above sea level	
Overvoltage category	II	
Pollution degree	Indicator and scale : 3 Power Supply Box : 2	
Location of use	Indoor use only	
Option	FJ pole stand FJ table stand Extension DC power supply cable (in 5m units, max. 95m) Power supply box M	
Interface Option	Additional RS232C (Simplex Output) RS422A I/O Contact Relay I/O	

1-3 The combination of the interface option

■Power supply box S (Standard)

Slot No.	RS232C	Additional RS232C	RS422A	Contact Relay
Slot 1	x(standard)	-	-	-
Slot 2	-	x(optional)	x(optional)	x(optional)

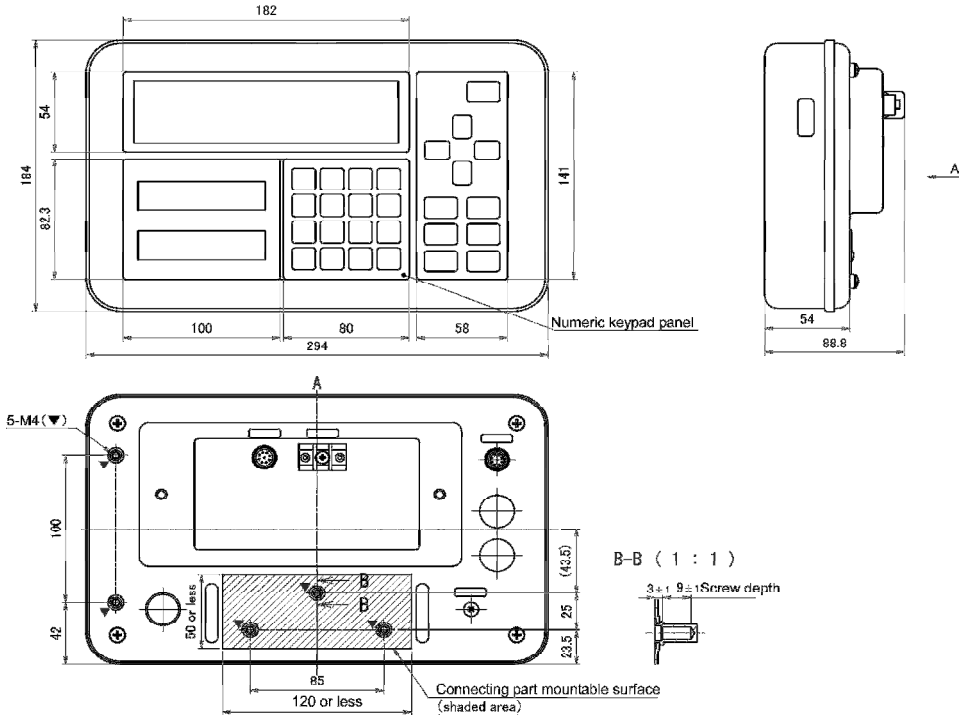
■Power supply box M (Option)

Slot No.	RS232C	Additional RS232C	RS422A	Contact Relay
Slot 1	x(standard)	-	-	-
Slot 2	-	x(optional)	x(optional)	-
Slot 3	-	-	-	x(optional)

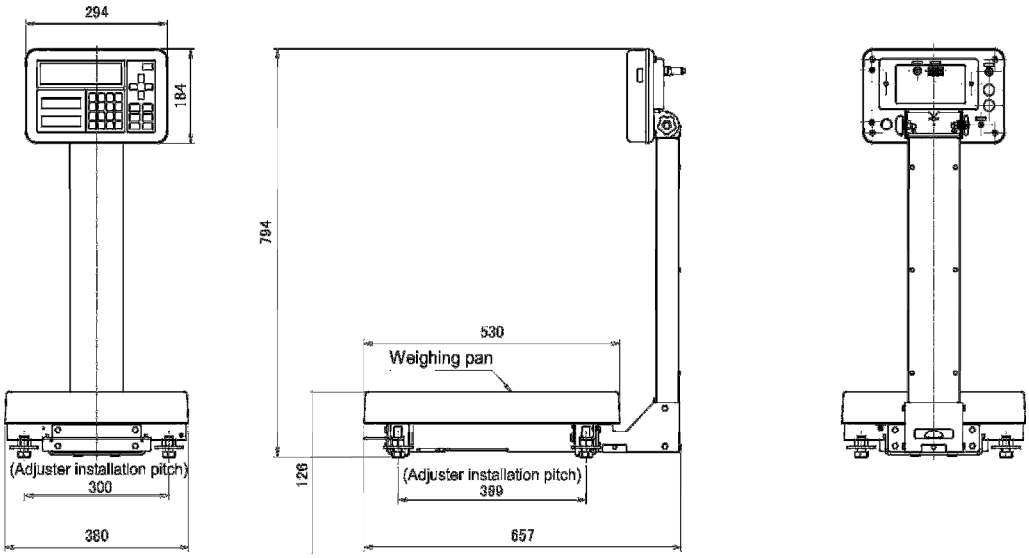
Refer to the manual of each interface option.

1-3 Outline drawing

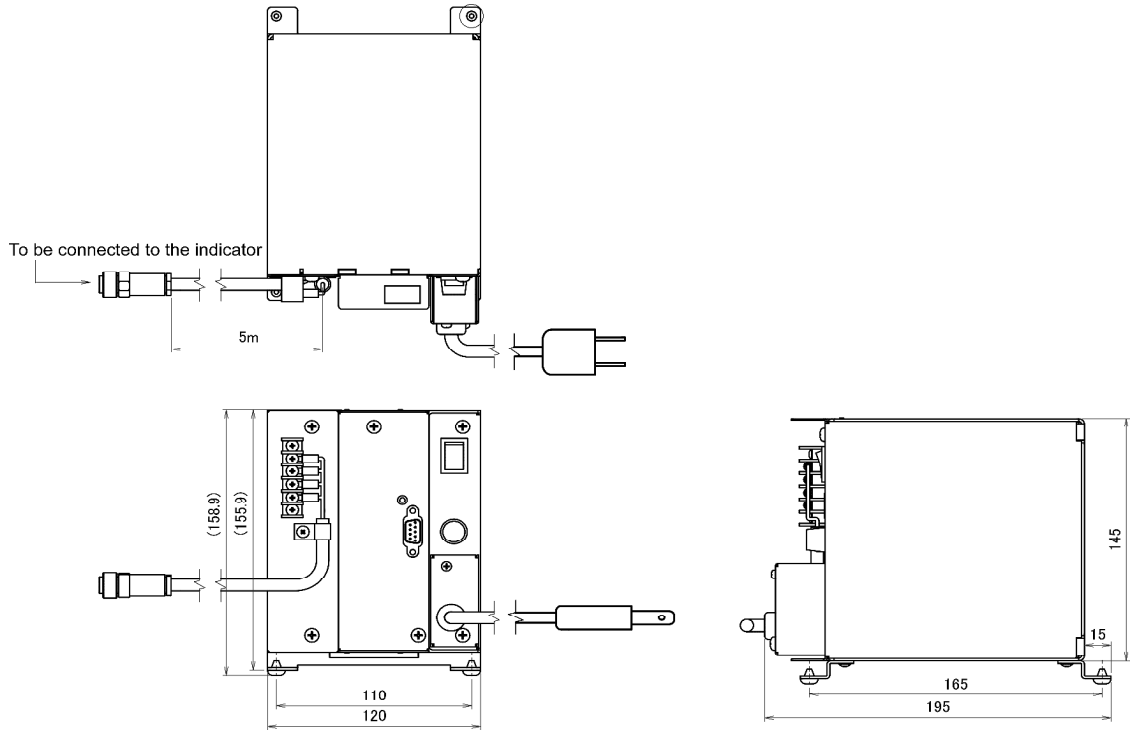
■Indicator section



■FZ60K0.1GEx -200K1GEx



■Power supply box S（Standard)



■Power supply box M（Option）