



Explosion protection knowledge and guideline to select

Explosion protection weighing products

ABOUT LOCOSC

Adhering to the business philosophy of “Modular craft, Pipelining production, Integrated brand, Global service”, LOCOSC Precision is a group company responsible for the research and development, manufacturing, solutions, sales and after-sales services of weighing equipment. We are headquartered in Ningbo, and have branches in Shanghai, Guangzhou, Zhengzhou, Beijing, Chengdu, America. We have more than 500 employees and a factory area of 23,000 square meters. Thanks to a full range of products, advanced technology, reliable equipment, stable capacity and standardized management, we have successfully involved in petrochemical, metallurgical, chemical, port, building material, breeding, paper making, pharmaceutical, food, textile, and logistics industry. LOCOSC is a leader in the manufacturing and trading of weighing equipment.

Each product of LOCOSC has its uniqueness and has been awarded a number of certifications, such as **ISO9001, NTEP, OIML, CE.** We constantly summarize experience and learn from it, upgrade technology, optimize the system and gradually develop our bench scale, floor scale, axle scale, intelligent logistics management system, load cell, explosion-proof and waterproof weighing indicator, heavy duty crane scale. These products have been well sold all over China, and 60% of them are exported to North America, Europe, South America, Southeast Asia. Besides, LOCOSC is an experienced company for OEM service. We have cooperation with well-known enterprises both at home and abroad. We owe our achievement to your trust and the driving force for self-transcendence. We promise to improve performance and reduce cost with abundant energy and passion.

We work to improve the design, manufacture, sales and after-sales service of products, so as to save the cost of comprehensive investment and realize the maximization of customers’ benefits. We strive for “satisfy each customer” at all time.




中国国家强制性产品认证证书
防爆合格证
中华人民共和国
计量器具型式批准证书
宁波朗科精工技术有限公司
LOCOSC
宁波朗科精工技术有限公司
Locosc Ningbo Precision Technology Co., Ltd.

1998~2006

Sold imported weighing equipment and provided service

2007

Locosc Ningbo Precision Technology Co.,Ltd. was established

2008

Obtained CPA

2009

Passed national explosion protection certification from the Ex station

2010

Was awarded the certificate of the ISO 9001 quality management system

2011

Was awarded CE certificate of electronic weighing instruments

2012

Weighing indicators, Load cells, Bench scales, and Floor scales were OIML-certified by the Dutch NMI Laboratory

2014

Ningbo Osen Sensing Technology Co.,Ltd. was established



Load cell,Weighing indicator,Bench scale,Floor scale, certified by the NCWM through the NTEP in the United States.

Zhengzhou Locosc Precision Technology Co.,Ltd was established

COMPANY + HISTORY

LOCOSC NINGBO PRECISION TECHNOLOGY Co.,Ltd.

2020

- Obtained the National High-Tech Enterprise Certification

2021

- Obtained China Compulsory Certification (CCC).

2023

- Recognized as a 'Specialized, Sophisticated, Distinctive, and Innovative' (SSDI) SME

2024

- Passed the inspection of Program of the Enterprise Standards Leader
- Locosc (USA) Precision Technology Inc. was established

2025

- Weighing indicator and Bench scales passed Canadian Measurement certification.



OUR VISION : Lead Precision Weighing Technology

OUR MISSION : Integrate weighing throughout the enterprise's internal value chain

CORE VALUE :

1. Extreme Effort
2. Humility
3. Daily Reflection
4. Gratitude
5. Altruism
6. Emotional Mastery

Part1: Explosion protection knowledge

1. Introduction to explosion protection electronic weighing system

Explosion protection(Ex) electronic weighing instruments, based on general electronic weighing instruments ,take various technical measures such as voltage reducing, current limiting, isolating, hermetically sealing, and optical communicating, eliminate or block possible sources of explosion (electrical sparks, static sparks, high temperature...) in the electric circuits within the weighing instrument. Our company is the top designer and manufacturer of Ex weighing instruments in China. The products include Ex electronic balances, Ex weighing load cells, Ex junction boxes, intrinsically safe weighing indicators, Ex weighing indicators by enclosure, and safety barriers, Ex desk scales, Ex electronic bench scales, Ex electronic floor scales, Ex forklift scales, Ex electronic tank scales, Ex weighing modules, Ex crane scales ,and other Ex weighing products.

2. The concept of explosion protection

Basic conditions for explosion

1) Explosive substances: Substances which react with oxygen (air), including gases, liquids and solids.

◎ Gas: hydrogen, acetylene, methane, etc.;

◎ Liquid: alcohol, gasoline;

◎ Solid: dust, fiber dust, etc.

2) Air/oxygen

3) Ignition sources: including open flames, electric sparks, mechanical sparks, electrostatic sparks, high temperatures, chemical reactions, light energy, etc.

Necessary conditions for explosion protection:

Avoid the creation of explosive atmospheres:

◎ Prevent explosions that may be caused by explosive and flammable substances in chemical plants and oil refineries;

◎ Prevent explosive or flammable substances from escaping due to poor sealing of equipment and pipelines;

◎ Eliminate possible ignition sources: sparks ,triggered by the electric connection of the indicator and short-circuited electric apparatus , could cause explosions or combustion.

Classification of Explosive Substances

Explosive substances are classed into three categories:

Class I: mine methane;

Class II: Explosive gas mixture (including vapor, mist);

Class III: Explosive dust and fibers

Gas	Standard	Ignitibility
Methane	I	low
propane	IIA	↓
Ethylene	IIB	
Hydrogen, acetylene	IIC	high

Division of hazardous areas

Explosive gas atmosphere

According to the GB/T3836, similar to IEC60079,explosive gas atmosphere areas can be divided into three areas: Zone 0, Zone 1 and Zone 2. Their corresponding definitions are as follows:

◎ Zone 0: Under normal circumstances, flammable gases exist all the time or for a long time, and hazards exist for more than 1000 hours/year;

◎ Zone 1: Under normal circumstances, flammable gases exist intermittently,hazards exist for 10~1000 hours/year;

◎ Zone 2: Under normal circumstances, flammable gases do not exist, if exist occasionally, exist very short.in the case of accident, hazards exist for 1~10 hours/year.

Non-hazardous areas (less than 1 hour/year)

Explosive dust atmosphere

Explosive dust atmosphere areas can be divided into the three zones:zones 20, 21, and 22, according to the frequency and duration of the occurrence of combustible dust-air mixtures and the thickness of the dust layer.

◎ Zone 20: area where combustible dust occurs continuously or frequently during normal operation, the amount is sufficient to form combustible dust-air mixtures, and/or uncontrollable and extremely thick dust layers may form;

◎ Zone 21: area where, during normal operation, the amount of dust is sufficient to form a combustible dust-air mixture, but is not classified in Zone 20;

◎ Zone 22: area where, under abnormal conditions, combustible dust clouds occasionally appear and exist only for a short time, or combustible dust occasionally accumulates, or a dust layer could exist, and form a combustible dust-air mixture.

Hazard occurrence	China,IEC,EC		Ignitibility
	Gas	Dust	
Continuously	Zone 0	Zone 20	high
Intermittently	Zone 1	Zone 21	↓
Under abnormal circumstance	Zone 2	Zone 22	low

3. Weighing solutions for chemical, Pharmaceutical ,and energy Industries









Equipment grouping

	Group(Temperature class)					
temp / group	T1	T2	T3	T4	T5	T6
I	Methane	/	/	/	/	/
IIA	toluene,methyl ester, ethane, acetone, acrylic, benzene, styrene, carbon monoxide, ethyl acetate, acetic acid, chlorobenzene, methyl acetate, ammonia	propane, methanol ethanol, ethylbenzene, propanol, propylene, butanolbutane, butyl acetate, amyl acetate, cyclopentane	pentane, pentanol, hexane, hexanol, heptane, octane, cycloethanol, turpentine, naphtha, petroleum (including gasoline), fuel oil, pentanol tetrachloride	acetaldehyde, trimethylamine	/	ethyl nitrite
IIB	propylene, acrylonitrile, dimethyl ether, hydrogen cyanide, city gas	butadiene, ethylene oxide, ethylene, furan	dimethyl ether, acrolein, hydrogen sulfide	dibutyl ether, diethyl ether, ethyl methyl ether, tetrafluoroethylene	/	/
IIC	water gas, hydrogen	acetylene	/	/	carbon disulfide	ethyl nitrate

Group I: Electrical equipment for mines
Group II: Electrical equipment for explosive gas environments other than mines, including flameproof enclosure and intrinsically safe equipment, according to the characteristics of explosive gases, are divided into equipment IIA, 11B and IIC. The equipment IIB can be used under IIA conditions, the equipment IIC can be used under IIA, 11B conditions.

The relationship between type of protection and area

(generally,there is no additional hazard assessment)

Equipment protection level	Ga	Gb	Gc	Da	Db	Dc
Area	0	1	2	20	21	22

Ex Marking

Ex	ib	IIC	T4	Gb
Explosion-protected	Type of protection	Gas group	Temperature class	Equipment protection level

4.Ex electronic weighing system selection

Configuration specification for explosion-proof electronic weighing system

The common types of protection in weighing system are intrinsic safety, compound and protection by enclosure

Types of explosion protection weighing systems and their applications

1 Intrinsically safe electronic weighing system(Ex ib IIC T4 Gb) (Ex ib IIIC T135°C Db)



Application Description

NO.	Equipment	Model selection	Ex Marking	Design principle
1	Bearing device	LP72xx-Ex Ex weighing module series	Ex ia IIC T6 Ga Ex ib IIIC T85°C Db	Intrinsic safety design
		TCS-xB Ex bench scale series		
		SCS-xB Ex Floor scale series		
2	Junction box	LP731xB Ex Junction box series	Ex ia IIC T4/T6 Ga Ex ib IIIC T85°C /135°C Db	Intrinsic safety design
3	Indicator	XK3150-Ex intrinsically safe indicator	Ex ib IIC T4 Gb Ex ib IIIC T135°C Db	Intrinsic safety design
		XK3150B-Ex intrinsically safe indicator	Ex ib IIC T4 Gb	Intrinsic safety design
4	Power supply	LP7350-S12 intrinsically safe output power	[Ex ib Gb] IIC [Ex ib Db] IIIC	Associated apparatus design
		LP7350-S9 intrinsically safe output power	[Ex ib Gb] IIC	Associated apparatus design
	Safety barrier	Safety barrier	[Ex ia Ga] IIC	Associated apparatus design
5	Others	Computers, printers	/	/

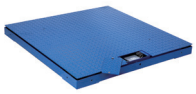
Class / Group	T1	T2	T3	T4	T5	T6
IIA	√	√	√	√		
IIB	√	√	√	√		
IIC	√	√	√	√		
IIIC	√	√	√	√		

❷ Compound intrinsically safe weighing system (Ex ia IIC T6 Ga) (Ex ib IIIC T85°C Db)

Hazardous area


Ex weighing module


Ex bench scale


Ex floor scale

1


Ex Junction box

2

Hazardous area Non-hazardous area


Intrincally safe barrier

3

Non-hazardous area


control indicator


truck scale indicator


weighing indicator

4



scoreboard


computer


printer

5

Application Description

N0.	Equipment	Model selection	Ex Marking	Design principle
1	Bearing device	LP7110- Ex load cell	Ex ia IIC T6 Ga Ex ib IIIC T85°C Db	Equipotential bonding terminal for carbon steel/stainless steel scale body; Intrinsic safety design
		TCS-xB Ex bench scale		
		SCS-xB Ex floor scale		
2	Junction box	LP731xB Ex junction box	Ex ia IIC T6 Ga Ex ib IIIC T85°C Db	Intrinsic safety design
3	Safety barrier	LP7351 Ex safety barrier	[Ex ia Ga] IIC [Ex ia Da] IIIC	Associated apparatus design
4	Indicator	LP7530 control indicator	/	/
		LP7581 truck scale indicator		/
		LP7510 weighing indicator		/
5	Others	scoreboard, computer, printer	/	/

Group \ Class	T1	T2	T3	T4	T5	T6
IIA	√	√	√	√	√	√
IIB	√	√	√	√	√	√
IIC	√	√	√	√	√	√
IIIC	√	√	√	√	√	√

❸ Ex weighing system by flameproof enclosure (Ex db ia IIB T6 Gb)

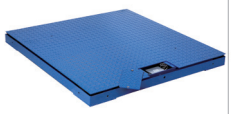
Hazardous area



Ex weighing module



Ex bench scale



Ex floor scale

1



Ex Junction box

2



Ex scoreboard by enclosure



Ex indicator by enclosure

3

Non-hazardous area



PLC



computer



printer

4

Application Description

N0.	Equipment	Model selection	Ex Marking	Design principle
1	Bearing device	LP72xx Ex weighing module	Ex ia IIC T6 Ga Ex ib IIIC T85°C Db	Equipotential bonding terminal for carbon steel/stainless steel scale body; Intrinsic safety design
		TCS-xB Ex bench scale		
		SCS-xB Ex floor scale		
2	Junction box	LP7310D Ex junction box by enclosure	Ex db IIB T6 Gb	Explosion protection by enclosure design
		LP731xB Ex junction box	Ex ia IIc T6 Gb	Intrinsic safety design
3	Indicator	XK3150-Exd Ex indicator by enclosure	Ex db[ia IIC Ga] IIB T6 Gb	Explosion protection by enclosure design
		LP7330B Ex scoreboard by enclosure	Ex d IIB T6 Gb	
4	Others	PLC and DCS control equipment	/	/
		computer, printer		/

Class / Group	T1	T2	T3	T4	T5	T6
IIA	√	√	√	√	√	√
IIB	√	√	√	√	√	√
IIC						

4 Ex weighing system by enclosures (Ex db ia IIC T6 Gb) (Ex ib tb IIIC T85°C Db)



Application Description

N0.	Equipment	Model selection	Ex Marking	Design principle
1	Bearing device	LP72xx Ex weighing modules	Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db	Equipotential bonding terminal for carbon steel/stainless steel scale body; Intrinsic safety design
		TCS-xB Ex bench scale		
		SCS-xB Ex floor scale		
2	Junction box	LP731x Ex junction box	Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db	Intrinsic safety design
3	Indicator	XK3150-Exd IIC Ex indicator by enclosure	Ex db[ia Ga] IIC T6 Gb Ex tb [ia Ga] IIIC T85℃ Db	Explosion protection by enclosure, safety barrier built-in
4	Others	PLC and DCS control equipment	/	/
		computers,printers		/

Class / Group	T1	T2	T3	T4	T5	T6
IIA	√	√	√	√	√	√
IIB	√	√	√	√	√	√
IIC	√	√	√	√	√	√
IIIC	√	√	√	√	√	√

Features

1. Ex electronic scales are applied to weighing in explosive hazardous locations. The whole equipment (including scale body, load cells, and indicator) can be placed in hazardous areas.
2. The low-power consumption design of the Ex scale: LCD/LED display, load cell, and multiple power supply.
3. Ex electronic scales with multiple functions, are operated easily,and applied widely .
4. With displaying the scale condition, self-inspection, zero position, taring, standstill, battery status, the Ex scales can self check automatically, check out and display the abnormal situation, remind the user to troubleshoot, and operate correctly.
5. Ex scales, with the indicator of aluminum die-cast or stainless steel welding structure, are hermetically sealed, dust-proof, water-proof, explosion protection, and have attractive appearance.

Part2: Ex weighing products

XK3150-Ex
Intrinsically safe indicator

※ Technical parameters

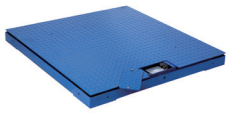


◎ 304 stainless steel housing
◎ Display: 6-digit 20mm LED display or 25mm LCD with backlight
◎ Accuracy class:Ⅲ, n=5000
◎ CPA certificate number: 2023F1069-33
◎ CCC certificate number:2021322309004274
◎ Ex certificate number: GYB23.1827X
◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
◎ Power: Intrinsically safe output power AC220V 50/60 Hz, DC12V
Intrinsically safe battery DC7.4V/4.0Ah
◎ Work environment: -10℃～+40℃, ≤85%RH
◎ Communication port: RS232、RS485、4~20mA、Modbus RTU、WIFI

Application

Hazardous area(zone 1/zone 21)


Ex Junction box


Ex floor scale


Intrinsically safe battery



Intrinsically safe indicator


Ex output power by enclosure

Non-hazardous area


Intrinsically safe output power

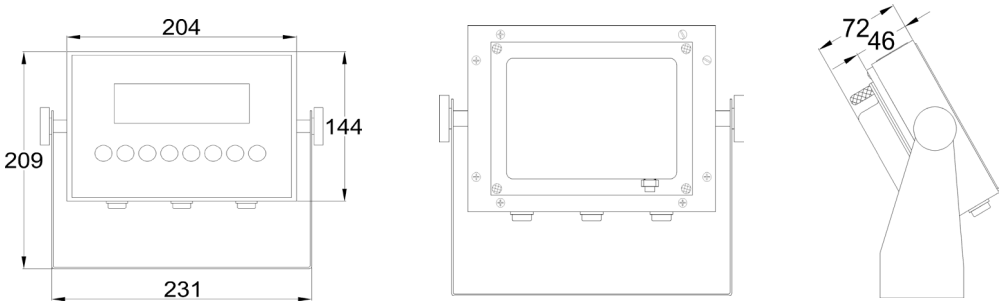

PLC


computer


printer

Dimensions

Unit(mm)



Application

◎ Explosion protection bench scales, explosion protection floor scales, explosion protection weighing modules, various types of explosion protection weighing systems.

XK3150B-Ex

Intrinsically safe indicator

※ Technical parameters



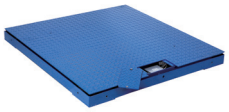
◎ 304 stainless steel housing
◎ Display: 6-digit 20mm LED display or 25mm LCD with backlight
◎ Accuracy class: (III) , n=5000
◎ CPA certificate number: 2023F1068-33
◎ CCC certificate number: 2021322309004300
◎ Ex certificate number: GYB23.1896X
◎ Ex Marking: Ex ib IIC T4 Gb
◎ Power: Intrinsically safe output power AC220V 50/60 Hz ,
Intrinsically safe battery DC7.4V/4.0Ah
◎ Work environment: -10℃～+40℃, ≤85%RH
◎ Communication port: RS232、RS485

Application

Hazardous area(zone 1)



Ex Junction box



Ex floor scale



Intrinsically safe battery



Intrinsically safe indicator

Non-hazardous area



Intrinsically safe output power



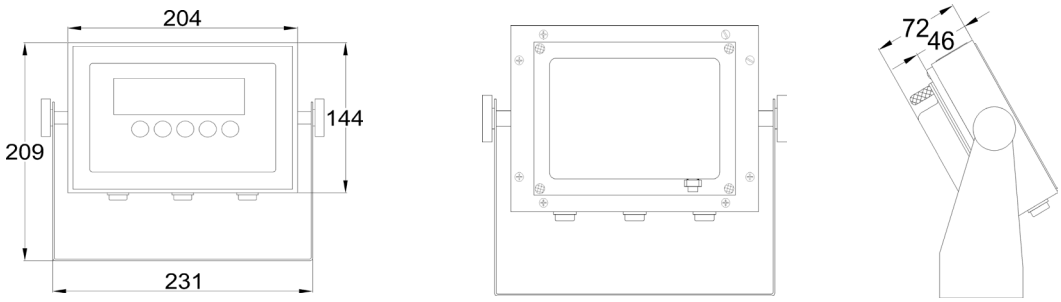
computer



printer

Dimensions

Unit(mm)



Applications

◎ Explosion protection bench scales, explosion protection floor scales, explosion protection weighing modules, various types of explosion protection weighing systems

XK3150-Ex-P

Intrinsically safe indicator

※ Technical parameters

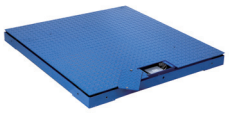
- ◎ 304 stainless steel housing
- ◎ Display: 6-digit 20mm LED display or 25mm LCD with backlight
- ◎ Accuracy class: (III)
- ◎ Ex certificate number: GYB20.2584X
- ◎ Ex Marking: Ex ic IIB T3/T4 Gc
- ◎ Power: Intrinsically safe output power AC220V 50/60 Hz,
  Intrinsically safe battery DC7.4V/4.0Ah
- ◎ Work environment: -10℃～+40℃, ≤85%RH
- ◎ Communication port: RS232、RS485



Application

Hazardous area(zone 2)


Ex Junction box


Ex floor scale


Intrinsically safe battery


Intrinsically safe indicator

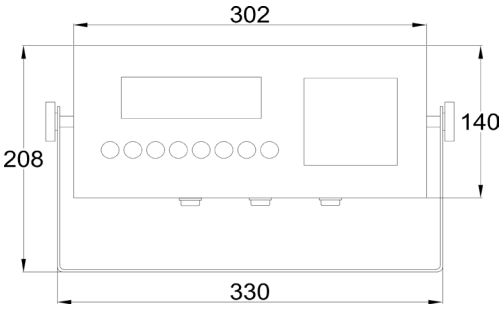
Non-hazardous area

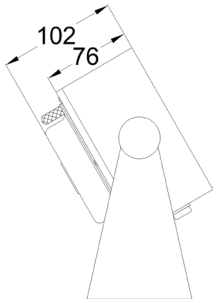

Intrinsically safe output power


computer

Dimensions

Unit(mm)





Applications

◎ Explosion protection bench scales, explosion protection floor scales, explosion protection weighing modules, various types of explosion protection weighing systems

LP7350-S12

Intrinsically safe output power

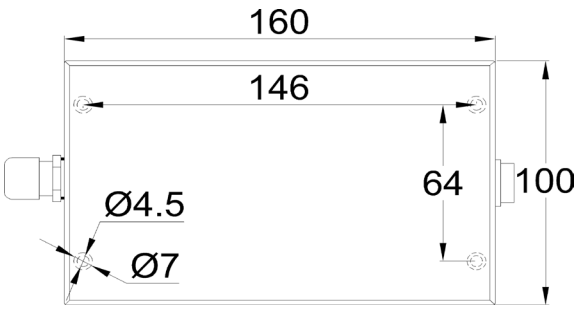
※ Technical parameters

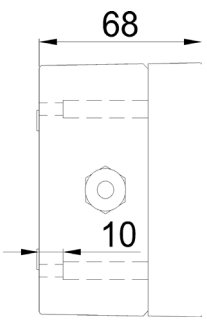
◎ Die-cast aluminum
◎ CCC certificate number: 2021322316004360
◎ Ex certificate number: GYB23.1770X
◎ Ex Marking: [Ex ib Gb] IIC [Ex ib Db] IIIC
◎ Input voltage: AC220V 50/60 Hz
Output voltage: DC12V
◎ Output power line: 15m
◎ Work environment: -10℃ ~+40℃ , ≤ 85%



Dimensions

Unit(mm)





LP7350-S9

Intrinsically safe output power

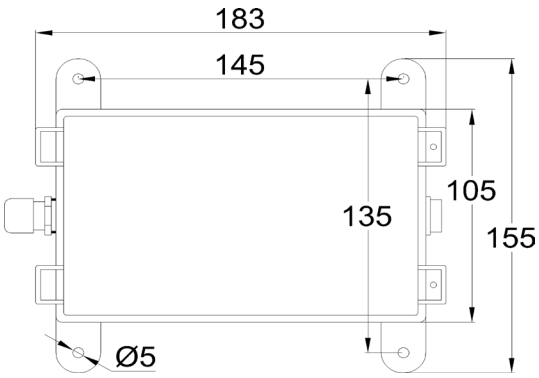
※ Technical parameters

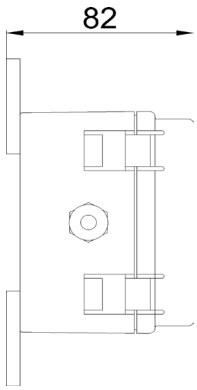
◎ CCC certificate number: 2021322316004280
◎ Ex certificate number: GYB23.1769X
◎ Ex Marking: [Ex ib Gb] IIC
◎ Input voltage: AC220V 50/60 Hz Output voltage: DC 9V
◎ Output power line: 15m
◎ Work environment: -10℃ ~+40℃ , ≤ 85%
◎ The intrinsically safe output power supply, being an intrinsically safe associated apparatus, shall be installed in a non-hazardous location.



Dimensions

Unit(mm)





DE002

Intrinsically safe battery

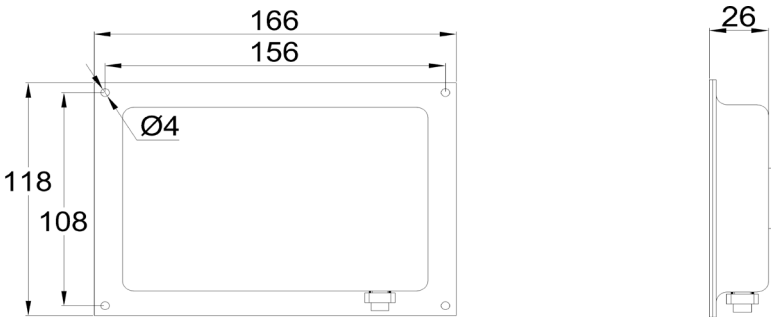


※ Technical parameters

- ◎ 304 stainless steel housing
- ◎ Output voltage: DC7.4V/4.0Ah
- ◎ Battery capacity: 4000mAh
- ◎ Charging time: < 8h

Dimensions

Unit(mm)



LP7350-H12

Ex output power by enclosure

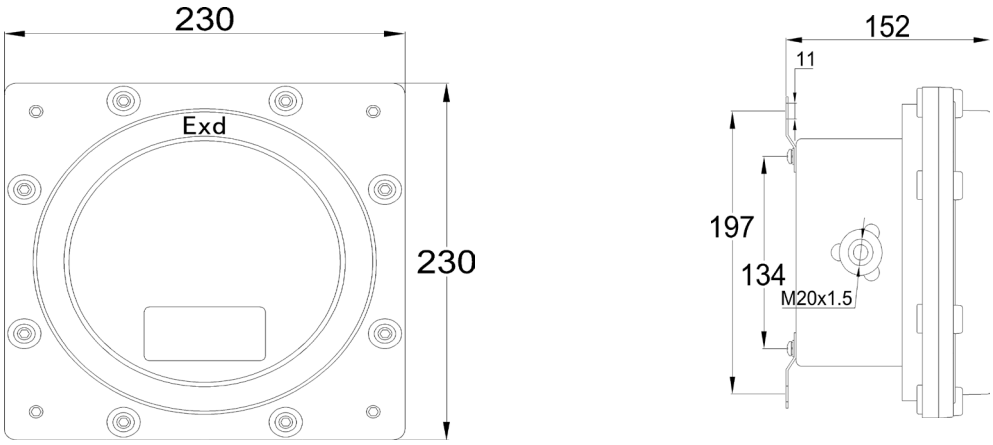


※ Technical parameters

- ◎ Die-cast aluminum
- ◎ Input voltage: AC220V 50Hz
- ◎ Output voltage: DC12V
- ◎ Ex Marking: [Ex ib Gb] IIC [Ex ib Db] IIIC
- ◎ Output power line: 15m
- ◎ Operating Area: hazardous area

Dimensions

Unit(mm)



Technical parameters

Type		XK3150-Ex	XK3150B-Ex	XK3150-Ex-P
Ex Marking		Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db	Ex ib IIC T4 Gb	Ex ic IIB T3/T4 Gc
Load cell interface		4-wire 6-wire (optional)	4-wire	4-wire
Drive ability		Up to six 350 Ω analog load cells	Up to four 350 Ω analog load cells	Up to four 350 Ω analog load cells
Calibration		Standard calibration	Standard calibration	Standard calibration
Minimum resolution		0.3μV/d	0.5uV/d	0.3μV/d
Excitation voltage		DC 5V	DC 5V	DC 5V
Numbers of scale division		1000 ≤ d ≤ 100000	1000 ≤ d ≤ 20000	1000 ≤ d ≤ 100000
Power supply		DE002-1 intrinsically safe battery DC7.4/4.0Ah LP7350-S12 intrinsically safe output power LP7350-H12 Ex output power by enclosure	DE002-1 intrinsically safe battery DC7.4/4.0Ah LP7350-S9 intrinsically safe output power	DE002-1 intrinsically safe battery DC7.4/4.0Ah LP7350-H12 Ex output power by enclosure
Communication port	RS232	2(optional)	1	1(optional)
	RS485	1(optional)	n/a	1(optional)
	Modbus-RTU	optional	n/a	optional
Analog output (optional)		4-20mA	n/a	4-20mA
		0-20mA	n/a	0-20mA
		0-5V	n/a	0-5V
I/O input interface		n/a	n/a	n/a
I/O output interface		4 optical couplers	n/a	n/a
Wireless module		optional	n/a	n/a
Time and date		available	n/a	available
Operating temperature		-10℃ ~ +40℃	-10℃ ~ +40℃	-10℃ ~ +40℃
Relative humidity		≤ 85%RH	≤ 85%RH	≤ 85%RH
Explosion protection instruction		Intrinsic safety For Zone1, zone2(gas) zone21, zone22(dust)	Intrinsic safety For Zone1, zone2	Intrinsic safety For zone2
Enclosure material		304 stainless steel	304 stainless steel	304 stainless steel
Weight check function		available	available	available
IO function		Upper and lower limit alarm	n/a	n/a

XK3150-Exd

Ex indicator by flameproof enclosure



※ Technical parameters

- ◎ Die-cast aluminum
- ◎ Display: 6-digit 20mm LED display
- ◎ Accuracy class: (III), n=5000
- ◎ CPA certificate number: 2024F747-33
- ◎ CCC certificate number: 2021322309004272
- ◎ Ex certificate number: GYB22.2579X
- ◎ Ex Marking: Ex db【ia IIC Ga】IIB T6 Gb
- ◎ Power: AC220V/(DC24V optional)
- ◎ Work environment: -10℃～+40℃, ≤85%RH
- ◎ Communication port: RS232、RS485

Application

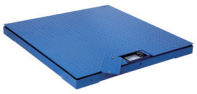
Hazardous area



Ex weighing module



Ex bench scale



Ex floor scale

1



Ex junction box
by enclosure

2



Ex scoreboard
by enclosure



Ex indicator
by enclosure

3

Non-hazardous area



PLC



computer

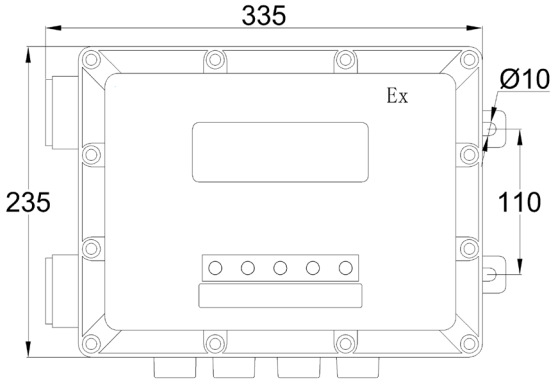


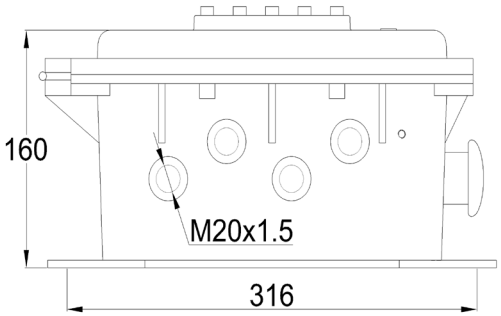
printer

4

Dimensions

Unit(mm)

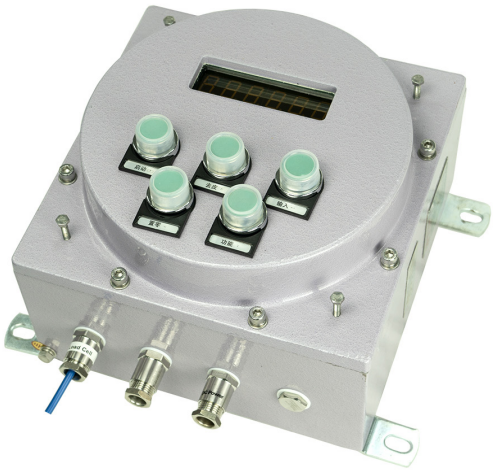




XK3150-Exd IIC

Ex indicator by enclosure

※ Technical parameters



- ◎ Die-cast aluminum
- ◎ Display: 6-digit 20mm LED display
- ◎ Accuracy class: (III)
- ◎ CCC certificate number: 2023322309005667
- ◎ Ex certificate number: GYB23.2162X
- ◎ Ex Marking: Ex db[ia Ga] IIC T6 Gb Ex tb [ia Da] IIIC T85℃ Db
- ◎ Power: AC220V/(DC24V optional)
- ◎ Work environment: -10℃～+40℃，≤85%RH
- ◎ Communication port: RS232、RS485

Application

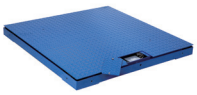
Hazardous area



Ex weighing module



Ex bench scale



Ex floor scale

1

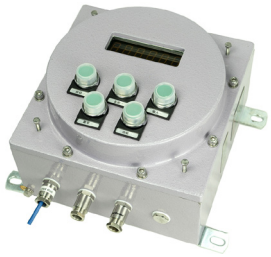


Ex junction box
by enclosure

2



Ex scoreboard
by enclosure



Ex indicator
by enclosure

3

Non-hazardous area



PLC



computer

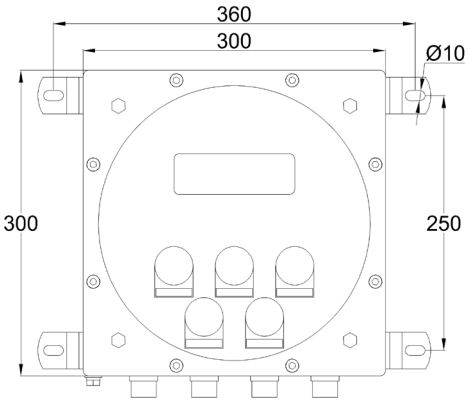


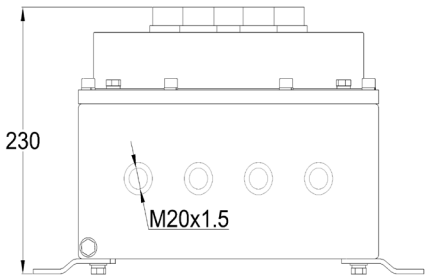
printer

4

Dimensions

Unit(mm)





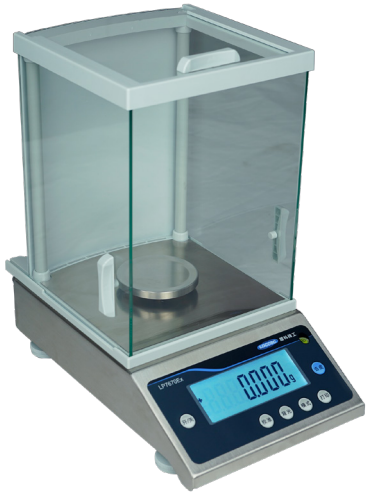
※ Technical parameters

Type		XK3150-Exd	XK3150-Exd IIC
Ex Marking		Ex db[ia IIC Ga] IIB T6 Gb	Ex db[ia Ga] IIC T6 Gb Ex tb [ia Da] IIIC T85°C Db
Load cell interface		4-wire	4-wire
Drive ability		Up to four 350 Ω analog load cells	Up to four 350 Ω analog load cells
Calibration		Standard calibration sensitivity input calibration	Standard calibration sensitivity input calibration
Minimum resolution		0.3μV/d	0.3μV/d
Excitation voltage		DC 5V	DC 5V
Numbers of scale division		1000 ≤ d ≤ 20000	1000 ≤ d ≤ 20000
Power supply		AC 220V50/60Hz DC 24V(optional)	AC 220V50/60Hz DC 24V(optional)
	RS232	optional	optional
	RS485	optional	optional
	Modbus-RTU	optional	optional
	Modbus-TCP	optional	optional
	TCP/IP	Socket(optional)	Socket(optional)
	Profibus-DP	optional	optional
	ProfiNet	optional	optional
Analog output (optional)		4-20mA	4-20mA
		0-20mA	0-20mA
		0-5V	0-5V
I/O	input interface	4 optical couplers	4 optical couplers
	output interface	4 relays	4 relays
Wireless module		n/a	n/a
Time and date		optional	optional
Data save		available	available
Data query		available	available
Operating temperature		-10℃ ~ +40℃	-10℃ ~ +40℃
Relative humidity		≤ 85%RH	≤ 85%RH
Ex protection instruction		Explosion protection by enclosure For zone1,zone 2	Explosion protection by enclosure For Zone1,zone2,zone21,zone22
Enclosure material		die-cast aluminum	die-cast aluminum
Weight checking		available	available
IO function		feeding amount measurement, discharging amount measurement, upper and lower limit alarm, preset value output	feeding amount measurement, discharging amount measurement,, upper and lower limit alarm, preset value output

Intrinsically safe explosion protection electronic weighing system

LP7670x-Ex

Ex electronic balance



※ Technical parameters

◎ Accuracy class: (II)
◎ Display: 7-digit 27mm backlight LCD
◎ Weighing unit: g
◎ Ex certificate number: GYB23.2338X
◎ Ex Marking: Ex ib IIC T4 Gb
◎ Power: DE002-2 intrinsically safe battery DC7.4V/4.0A
or intrinsically safe output power
◎ Operating temperature: +15℃ ~ +30℃
◎ Non-condensing humidity: 40%RH ~ 85%RH
◎ Caution : charge the battery in the non-hazardous area



Structural features

◎ 304 stainless steel housing, Strong anti-interference ability
◎ Polished and straight line brushed surface, neat appearance
◎ 304stainless steel tray
◎ Use High precision load cells

Product functions

◎ Unit switch
◎ Count
◎ Percentage display
◎ Error display
◎ Communication ports:RS232、RS485、MODBUS RTU
◎ One key calibration



Types and specifications

Item No.	Countertop size(mm)	Capacity	Interval	Size(mm)	Weight(kg)	Ctn size(mm)
LP7670J-Ex-(100 ~ 300)	ϕ80	100 ~ 300g	0.001g	202*337*355	5	345*260*335
LP7670T-Ex-(0.5 ~ 5)	ϕ160	0.5 ~ 5kg	0.01g	202*320*107	3.5	325*225*153
LP7670T-Ex-(10~15)	200*200	10 ~ 15kg	0.1g	202*320*107	3.5	325*225*153

Note: The LP7670J with a glass windshield, the LP7670T with a tray.

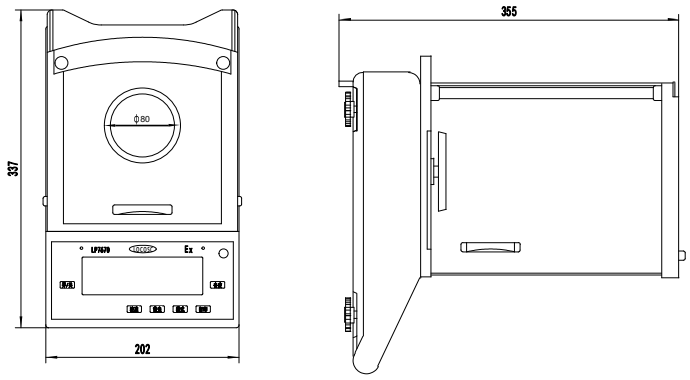
Applications

◎ Flammable and explosive location, such as chemical, pharmaceutical, gunpowder, food processing industry, etc.

Dimensions

Unit(mm)

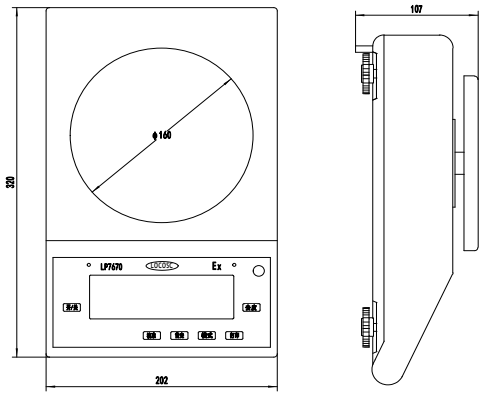
LP7670J



Parameters

Capacity g	100	200	300
Maximum capacity	≤ 300g		
Minimum capacity	0.02g		
Division d	0.001g		
Certificated interval e	0.01g		
Size mm	202*337*355		
Stability time	≤ 5 seconds		

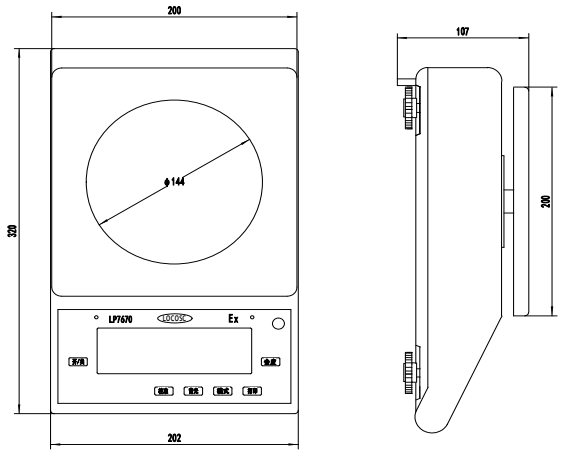
LP7670T(circle tray)



Parameters

Capacity kg	0.5	1	2	3	5
Maximum capacity	≤ 5kg				
Minimum capacity	0.5g				
Division d	0.01g				
Certificated interval e	0.1g				
Size mm	202*320*107				
Stability time	≤ 5 seconds				

LP7670T(square tray)



Parameters

Capacity kg	10	15
Maximum capacity	≤ 15kg	
Minimum capacity	5g	
Division d	0.1g	
Certificated interval e	1g	
Size mm	202*320*107	
Stability time	≤ 5 seconds	

Intrinsically safe explosion protection electronic weighing system

LP7671x-Ex

Ex electronic balance



※ Technical parameters

◎ Accuracy class: Ⅱ
◎ Display : 6-digit 17mm backlight LCD
◎ Weighing unit: g
◎ Ex certificate number: GYB21.3668X
◎ Ex Marking: Ex ib IIC T4 Gb
◎ Power supply: DE002- 2 intrinsically safe battery DC7.4V/4.0Ah, or intrinsically safe output power
◎ Operating temperature: +10℃～ +35℃
◎ Humidity: 40%RH ～ 85%RH(no condensation)
◎ **Caution: charge the battery in the safe area, for 5 hours**



Structural features

◎ Gold-plated ceramic variable capacitance load cell
◎ Ultra clear LCD display with backlight
◎ High precision load cells
◎ Anti-interference, anti-static, corrosion resistance
◎ Transparent glass windshield

Product functions

◎ Unit switch, count, tare, zero
◎ Percentage display
◎ Automatic calibration
◎ Error display
◎ Communication ports: RS232
◎ Automatic fault check, overload protection



Types and specifications

Item No.	Countertop size(mm)	Capacity	Interval	Size(mm)	Weight(kg)	Ctn size(mm)
LP7671A-Ex-（120 ～ 520）	ϕ115	120 ～ 520g	0.001g	230*310*330	5	345*260*335
LP7671B-Ex-（1200 ～ 5200）	ϕ160	1200 ～ 5200g	0.01g	230*310*90	5	345*260*335
LP7671C-Ex-（8 ～ 30）	310*370	8 ～ 30kg	0.1g	310*370*140	30	345*260*335

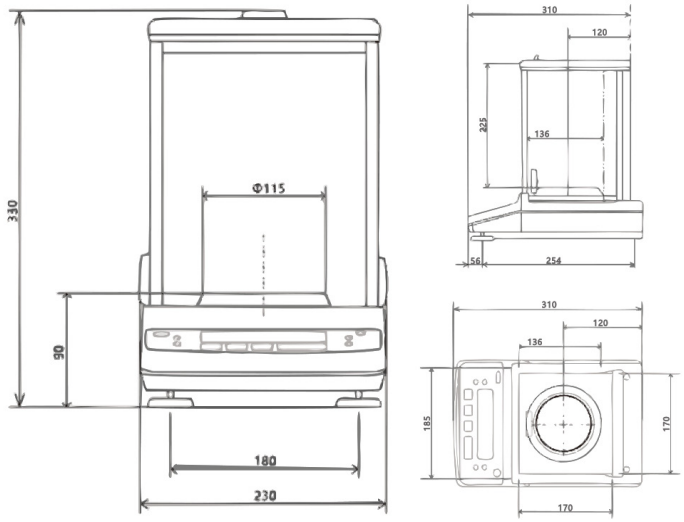
Applications

◎ Flammable and explosive location, such as chemical, pharmaceutical, gunpowder, food processing industry, etc.

Dimensions:

Unit(mm)

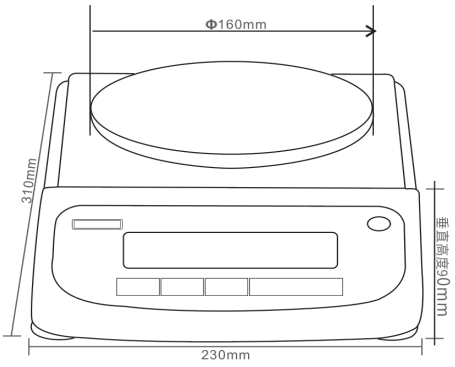
LP7671A



Parameters

Capacity g	120	220	320	420	520
Readability g	0.001				
Repeatability g	≤ 0.001				
Linearity g	≤ 0.001				
Operating temperature(℃)	10~35				
Operating humidity(RH)	10%~70%				
Tray size mm	115				
Scale size mm	230*310*330				
Power	intrinsically safe battery 7.4v/4Ah intrinsically safe output power DC9V				

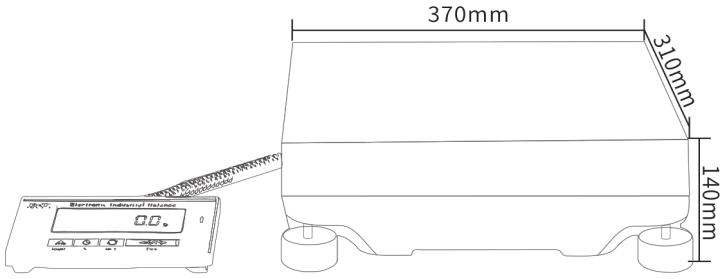
LP7671B



Parameters

Capacity g	1200	2200	3200	4200	5200
Readability g	0.01				
Repeatability g	≤ 0.01				
Linearity g	≤ 0.01				
Operating temperature(℃)	10~35				
Operating humidity(RH)	10%~70%				
Tray size mm	160				
Scale size mm	230*310*90				
Power	intrinsically safe battery 7.4v/4Ah intrinsically safe output power DC9V				

LP7671C



Parameters

Capacity kg	8	12	16	20	30
Readability g	0.1				
Repeatability g	≤ ±0.2				
Linearity g	≤ ±0.2				
Operating temperature(℃)	10~35				
Operating humidity(RH)	10%~70%				
Tray size mm	370*310				
Scale size mm	370*310*140				
Power	intrinsically safe battery 7.4v/4Ah intrinsically safe output power DC9V				

LP7615-Ex

Ex electronic scale



※ Technical parameters

- ◎ Accuracy class: (III)
- ◎ Display: 6-digit 20mm LED or 25mm LCD with backlight
- ◎ Resolution: display 50,000, internal code 2,000,000
- ◎ Weighing unit: g/kg
- ◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
- ◎ Power: intrinsically safe battery DC7.4V/4.0Ah
- ◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH

◎ Caution: charge the battery in the safe area, for 8 hours

Functions

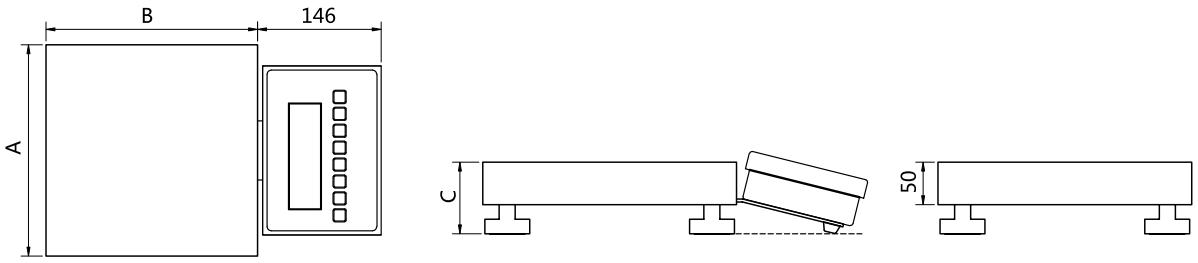
- ◎ Zero, tare, accumulate, print
- ◎ Count, check, hold, sort
- ◎ Scoreboard port: RS232(option)
- ◎ Communication port: RS232/RS485(ModbusRTU)(option)
- ◎ Analog output: 0-20mA/4-20mA

Features

- ◎ 3mm/5mm 304 stainless steel, laser cut
- ◎ Polished and straight lin brushed surface
- ◎ 304 stainless steel cover
- ◎ High precision load cell

Dimensions

Unit(mm)



Types and specifications

Item No.	Size(mm)	Capacity	A	B	C	Weight(kg)	Ctn size(mm)
LP7615-Ex-(3-30)	250x250	3 ~ 30kg	250	250	84.5	13	625*455*170
LP7615-Ex-(3-30)	300x300	3 ~ 30kg	300	300	84.5	15	625*455*170

Applications

◎ Flammable and explosive location, such as chemical, pharmaceutical, gunpowder, food processing industry, etc.

LP7681-Ex

Ex electronic scale



※ Technical parameters

- ◎ Accuracy class: (III)
- ◎ Display: 6-digit 20mm LED or 25mm LCD with backlight
- ◎ Resolution: display 50,000, internal code 2,000,000
- ◎ Weighing unit: g/kg
- ◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
- ◎ Power: intrinsically safe battery DC7.4V/4.0Ah
- ◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH
- ◎ Caution: charge the battery in the safe area, for 8 hours

Functions

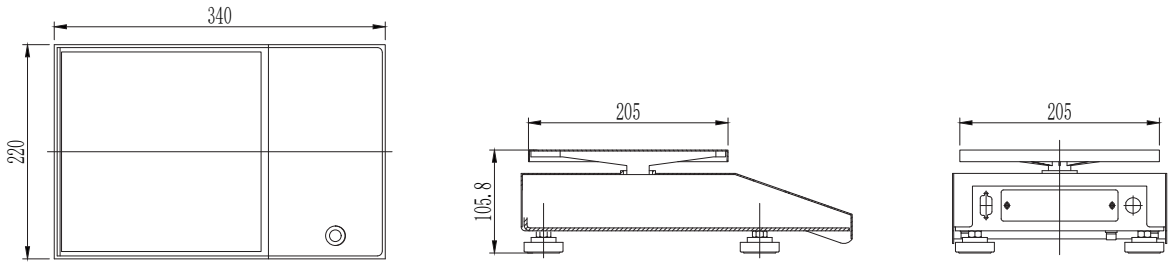
- ◎ Zero, tare, accumulate, print
- ◎ Count, check, hold, sort
- ◎ Scoreboard port: RS232(option)
- ◎ Communication port: RS232/RS485(ModbusRTU)(option)
- ◎ Analog output: 0-20mA/4-20mA

Features

- ◎ 3mm/5mm 304 stainless steel, laser cut
- ◎ Polished and straight lin brushed surface
- ◎ 304 stainless steel cover
- ◎ High precision load cell

Dimensions

Unit(mm)



Item No.	Material	Capacity	Display division value	Weight(kg)	Ctn size(mm)
LP7681-Ex	304 Stainless Steel	1kg	0.1g	5.2	390*260*140
		2kg	0.2g		
		3kg	0.2g		
		5kg	0.5g		
		6kg	0.5g		
		10kg	1g		

LP761X-Ex series

Ex electronic bench scale



※ Technical parameters

◎ Accuracy class: (III)
◎ Display: 6-digit 20mm LED or25mm LCD with backlight
◎ Resolution: display 30,000,internal code 2,000,000
◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
◎ Power: intrinsically safe output power: output DC12V
intrinsically safe battery DC7.4/4.0Ah
◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH

Structural features

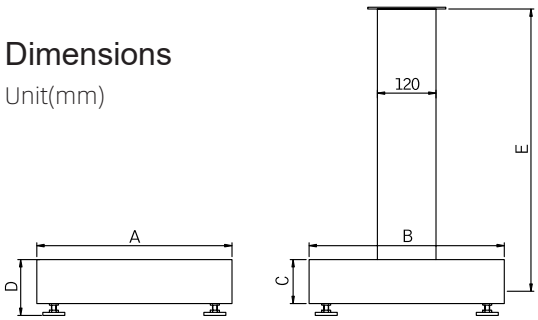
◎ 5mm steel plate is stamped one time without welding
◎ Carbon steel surface is bead blasted, powder coated
◎ Stainless steel surface is polished and straight line brushed
◎ 304 stainless steel cover
◎ 304 stainless steel rectangular pole, indicator of adjustable angle

Product functions

◎ Zero, tare, accumulate, print
◎ Count, check, hold, sort
◎ Scoreboard port: RS232(optional)
◎ Communication port: RS232/RS485(ModbusRTU)(optional)
◎ Analog output: 0-20mA/4-20mA(optional)

Dimensions

Unit(mm)



Item No.	Size(mm)	Capacity	A	B	C	D	E	Weight(kg)	Ctn size(mm)
LP7610-Ex-(3-30)	250x250	3 ~ 30kg	250	250	65	118	300	13	625x455x170
LP7610-Ex-(30-150)	300x400	30 ~ 150kg	300	400	65	118	400	15	625x555x170
	400x500	30 ~ 150kg	400	500	65	118	600	23	720x540x170
LP7611-Ex-(30-300)	500x600	30 ~ 300kg	500	600	90	140	700	27	775x765x210
	600x800		600	800	90	150	800	47	1090x775x210
LP7611-Ex-(300-600)	500x600	300 ~ 600kg	500	600	90	140	700	33	775x765x210
	600x800		600	800	110	150	800	49	1090x775x210
LP7611-Ex-(600-1000)	600x800	600 ~ 1000kg	600	800	110	170	800	57	1090x775x210

Applications

◎ Flammable and explosive location, such as chemical, pharmaceutical, gunpowder, food processing industry, etc.

LP7611J-Ex

Ex electronic bench scale



※ Technical parameters

◎ Accuracy class: (III)
◎ Display: 6-digit 20mm LED or25mm LCD with backlight
◎ Resolution: display 15,000, internal code 1,000,000
◎ Ex Marking: Ex ib IIC T4 Gb
◎ Power: intrinsically safe output powerAC100 ~ 250V,DC9V
intrinsically safe battery DC7.4/4.0Ah
◎ Operation environment: -10° C ~ +40° C,
≤ 85%RH(No condensation)

Structural features

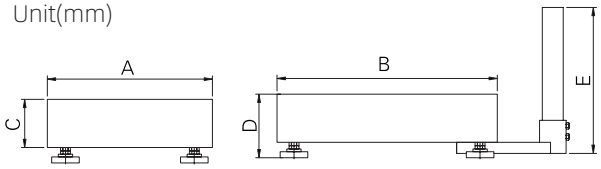
◎ The square tube is welded with special fixture
◎ Carbon steel structure, with surface bead blasted and powder coated
◎ 430 stainless steel cover(optional: 304 stainless steel cover)
◎ 201 stainless steel round pole, indicator of adjustable angle

Product functions

◎ Zero, tare, accumulate, print
◎ Count, hold, sort, check
◎ Scoreboard port: RS232(optional)
◎ Communication port: RS232
◎ Baud rate: 1200/2400/4800/9600

Dimensions

Unit(mm)



Types and specifications

Item No.	Size(mm)	Capacity	A	B	C	D	E	Weight(kg)	Ctn size(mm)
LP7611J-Ex-(30-150)	300x400	30~150kg	300	400	65	118	500	14	625*555*170
	400x500		400	500	65	118	600	17	720*540*170
LP7611J-Ex-(30-300)	450x600	30~300kg	500	600	90	140	700	24	775*765*210
	500x600		600	800	90	150	800	27	775*765*210
LP7611-Ex-(300-600)	500x600	300~600kg	500	600	90	140	700	33	775*765*210
	600x800		600	800	110	150	800	49	1090*775*210
LP7611-Ex-(600-1000)	600x800	600~1000kg	600	800	110	170	800	59	1090*775*210

Applications

◎ Flammable and explosive location, such as chemical, pharmaceutical, gunpowder, food processing industry, etc.

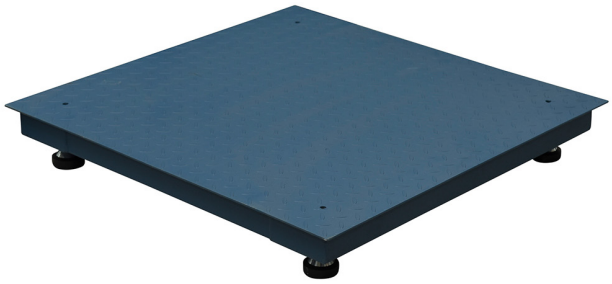
LP762X-Ex

Ex electronic floor scale



※ Technical parameters

◎ Accuracy class: (III)
◎ Display: 6-digit 20mm LED or 25mm LCD with backlight
◎ Resolution : display 30,000, internal code 2,000,000
◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
◎ Power: intrinsically safe output power AC100 ~ 250V,DC12V
intrinsically safe battery DC7.4/4.0Ah
◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH(No condensation)

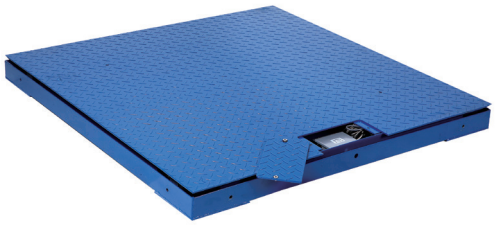


Product functions

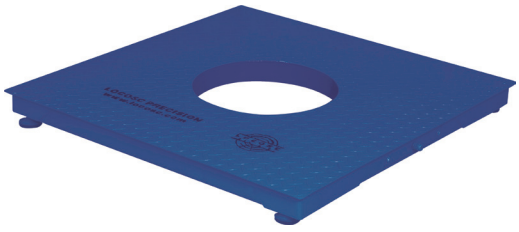
◎ Zero, tare, accumulate, print
◎ Hold, check, sort, count
◎ Scoreboard port: RS232(optional)
◎ Communication port: RS232/RS485(Modbus-RTU)(optional)
◎ Analog output: 0 ~ 20mA/4 ~ 20mA/4 ~ 5V(optional)

Structural features

◎ U-shape steel welded structure, high strength
◎ Material: carbon steel or stainless steel, chequered steel or flat panel
◎ Carbon steel structure: bead blasted, powder coated, or galvanized
◎ Stainless steel structure, polished and straight line brushed
◎ Four high precision shear beam load cells
◎ 304 stainless housing indicator of adjustable angle









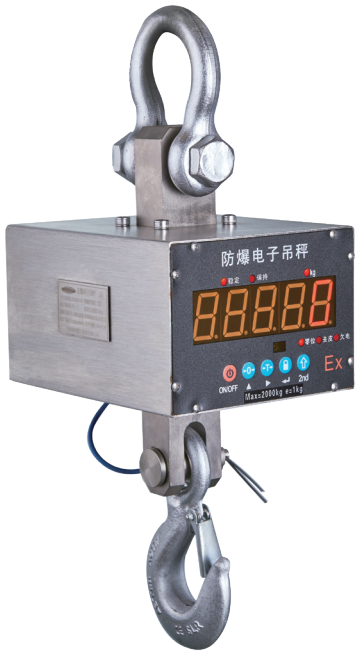
Applications

◎ Flammable and explosive location, such as chemical, pharmaceutical, gunpowder, food processing industry, etc.

OCS-Ex

Ex electronic crane scale

Ex electronic crane scale uses low power consumption technology, combines the display control and weighing system, with advantages of small volume, light weight, movable, safe and reliable.







※ Technical parameters

◎ Accuracy class: (III)
◎ Display: 5-digit 38mm LED or40mm LCD with backlight
◎ Ex Marking: Ex ib IIC T4 Gb
◎ Power: intrinsically safe battery DC7.4/4.0Ah
battery endurance 80-150 hours
◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH(No condensation)

Product functions

◎ Zero, tare, accumulate, save, preset tare
◎ Hold: peak hold, data hold, automatically hold
◎ Locked weight
◎ Save 10 weighing values,reserve the value even if the scale is off
◎ Power saving, idle mode and turn off automatically
◎ Low voltage indicating and turn off automatically
◎ Infrared remote control
◎ Communication port: RS232/RS485/ZigbBee(optional)

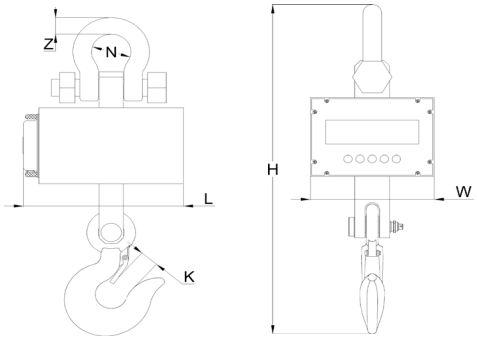
Structural features

◎ Integrated pull type load cell design, ensure weighing accuracy and structure strength
◎ 304 stainless steel housing, ensure structure strength
◎ Hermetically sealed, moisture-proof
◎ Reinforced alloy steel swivel hook, ensure overload performance and safety performance

Types and specifications

Item No.	Capacity	Division(kg)	Weight(kg)	Ctn size(mm)
OCS-F(1/2)-(1-3)-Ex	1 ~ 3t	0.2/0.5/1	15	540*340*270
OCS-F(1/2)-5-Ex	5t	2/1	20	560*340*280
OCS-F(1/2)-10-Ex	10t	5/2	25	560*340*280
OCS-F(1/2)-15-Ex	15t	10/5	32	760*500*240
OCS-F(1/2)-20-Ex	20t	10/5	38	500*500*430

Dimensions



Unit(mm)

Capacity	L	W	H	N	Z	K
OCS-F(1/2)-(1-3)-Ex	264	205	600	70	28	34
OCS-F(1/2)-5-Ex	264	205	640	70	28	40
OCS-F(1/2)-10-Ex	264	205	740	90	38	50
OCS-F(1/2)-15-Ex	264	205	900	95	40	75
OCS-F(1/2)-20-Ex	264	205	1000	120	48	85

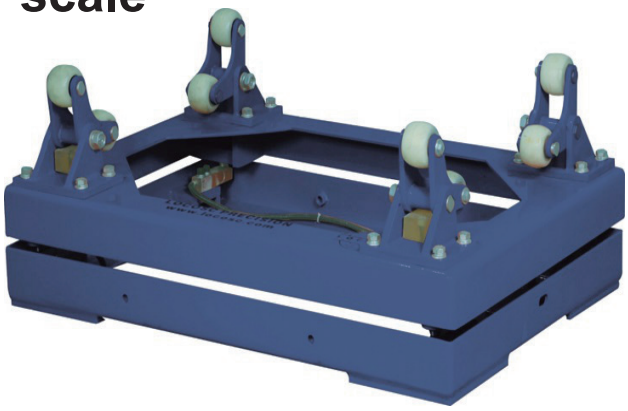
Applications

◎ Overhead suspension weighing of materials in explosive and hazardous environments such as water treatment, coatings, paints, pharmaceuticals, ammonia, chlorine, acetylene, petrochemicals, and military industries.

LP7623-Ex

Ex proof electronic cylinder scale

Ex proof electronic cylinder scales are widely used in industries such as chemical engineering, where explosive gas environments exist. This weighing system consists of a double-layer scale body, Ex proof weighing sensors, an Ex proof junction box, and an Ex proof weighing instrument. It features easy operation, fast weighing, stability, and reliability.





※ Technical parameters

◎ Accuracy class: (III)
◎ Display: 6-digit 20mm LED or 25mm LCD with backlight
◎ Resolution: display 30,000, internal code 2,000,000
◎ Ex Marking: Ex ib IIC T4 Gb
Ex ib IIIC T135℃ Db
◎ Power: intrinsically safe output power AC100 ~ 250V, DC12V
intrinsically safe battery DC7.4/4.0Ah
◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH

Structural features

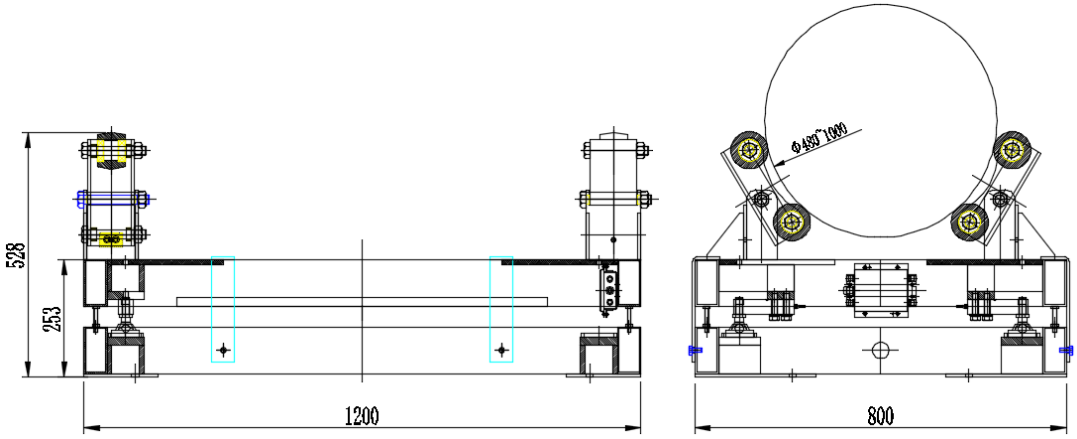
◎ Robust 2 layer frame, strong resistance to impact, and long term stability
◎ Special buffer device to protect the load cells
◎ Polyurethane roller device, tailor to different diameters
◎ Carbon steel platform, bead blasted and powder coated
◎ Stainless steel platform, polished and straight line brushed surface
◎ 4 alloy steel or stainless steel load cells
◎ 304 stainless steel water pan(optional)

Product functions

◎ Zero, tare, accumulate, print, count, check, hold, sort
◎ Scoreboard port: RS232(optional)
◎ Communication port: RS232/RS485 (Modbus-RTU)(optional)
◎ Analog output: 0-20mA/4-20mA/0-5V(optional)

Dimensions

Unit(mm)



Applications

◎ Cylinder weighing in explosive and hazardous environments such as petrochemicals, coatings, paints, and chlorine.

LP7625-Ex

Ex electronic crane scale

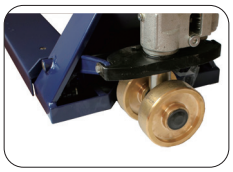
LP7625-Ex explosion protection electronic crane scale is widely used in the chemical industry and other sectors operating in explosive gas atmospheres. This weighing system consists of a pallet truck body, explosion protection load cells, an explosion protection junction box, and an explosion protection weighing indicator. It features mobility, ease of operation, quick weighing, and stable, reliable performance.



※ Technical parameters

◎ Accuracy class: 0.1%
◎ Display: 6-digit 20mm LED or 25mm LCD with backlight
◎ Resolution: display 30,000, internal code 2,000,000
◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
◎ Power: intrinsically safe battery DC7.4/4.0Ah
◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH(No condensation)





Optional copper wheels

Structural features

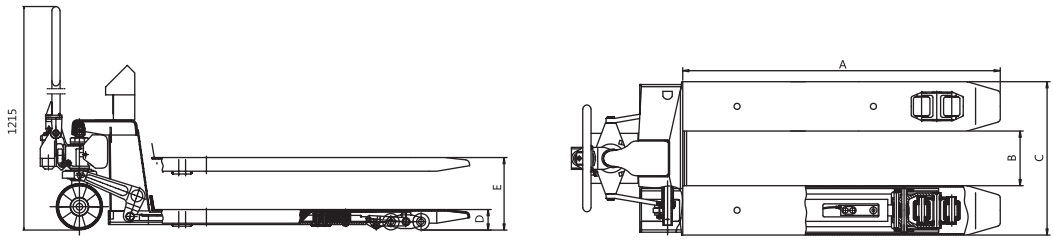
◎ Pallet truck structure,suitable for pallet weighing
◎ Special copper rollers and hydraulic lifting, easy to move and lift
◎ Carbon frame, bead blasted, powder coated, anti-corrosion
◎ 4 Ex shear beam alloy load cells
◎ The 304 stainless steel junction box

Product functions

◎ Zero, tare, accumulate, print, count, check, sort hold
◎ Scoreboard port: RS232(optional)
◎ Communication port: RS232/RS485 (Modbus-RTU)(optional)
◎ Analog output: 0-20mA/4-20mA(optional)

Dimensions

Unit(mm)



Types and specifications

Item No.	Capacity	A	B	C	D	E	Weight(kg)	Ctn Size(mm)
LP7625-Ex-1150x550-(1 ~ 3)	1 ~ 3t	1150	195	555	85	200	118	1950x590x590
LP7625-Ex-1220x690-(1 ~ 3)	1 ~ 3t	1220	330	690	85	200	127	2000x720x590

Applications

◎ Mobile weighing of materials in explosive and hazardous environments such as food and pharmaceutical industries, chemical industry, coatings, paints, and pharmaceutical manufacturing.

LP7625T-Ex

Ex electronic reversible bucket scale



LP7625T-Ex explosion protection electronic reversible bucket scale using hydraulic lifting, with electronic weighing function, can weigh 350kg at most. With U-shape, the bucket scale can be lifted by 0.6-1.1m, is suitable for loading and unloading, batching, pouring, transporting liquids, such as paint, dye, edible oil, and petroleum, etc.

※ Technical parameters

◎ Accuracy class: 0.1%
◎ Display: 6-digit 20mm LED or25mm LCD with backlight
◎ Resolution: display 30,000,internal code 2,000,000
◎ Ex Marking: Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db
◎ Power: intrinsically safe battery DC7.4/4.0Ah
◎ Operation environment: -10° C ~ +40° C, ≤ 85%RH(No condensation)



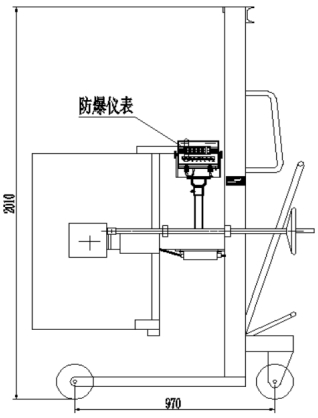
*Copper rollers optional

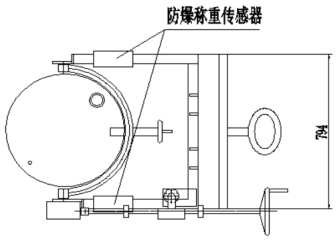
Product functions

◎ Zero, tare, accumulate, print
◎ Count, hold, check, sort
◎ Scoreboard port: RS232(optional)
◎ Communication port: RS232/RS485 (Modbus-RTU)(optional)
◎ Analog output: 0-20mA/4-20mA/0-5V(optional)

Dimensions

Unit(mm)



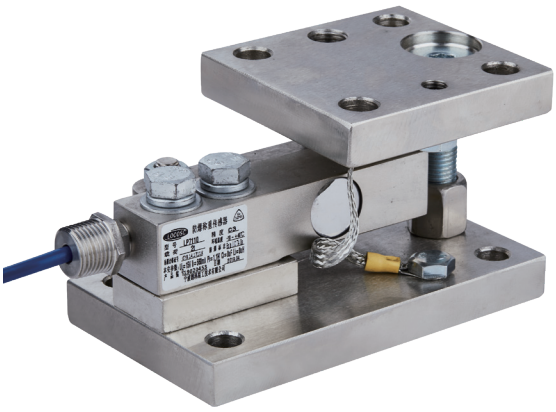


Specifications		
Capacity	kg	350
Lift height	mm	1500
Inverted angle	°	> 180
Ctn size	mm	1500X920X2200
Weight	kg	175

Applications

◎ Discharging or batching weighing in explosive and hazardous environments such as petrochemicals, food, oils and fats, Inks, and oil depots.

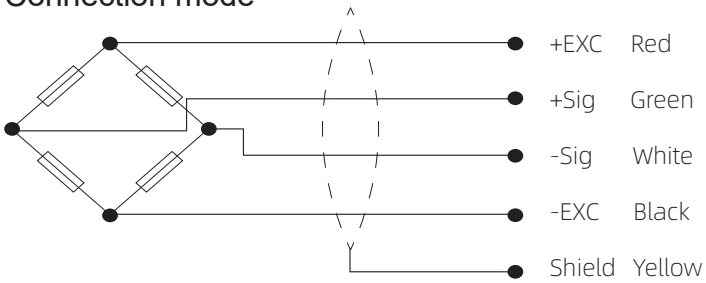
LP7210
Ex weighing module



※ Technical parameters

◎ Rated capacity: 0.25, 0.5, 1, 2, 3, 5t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7110A、LP7110C
◎ Ex Marking: Ex ia IIC T6 Ga　Ex ib IIIC T85℃ Db
◎ Ex certificate number : GYB24.2334X
◎ Ex joint(optional)

Connection mode



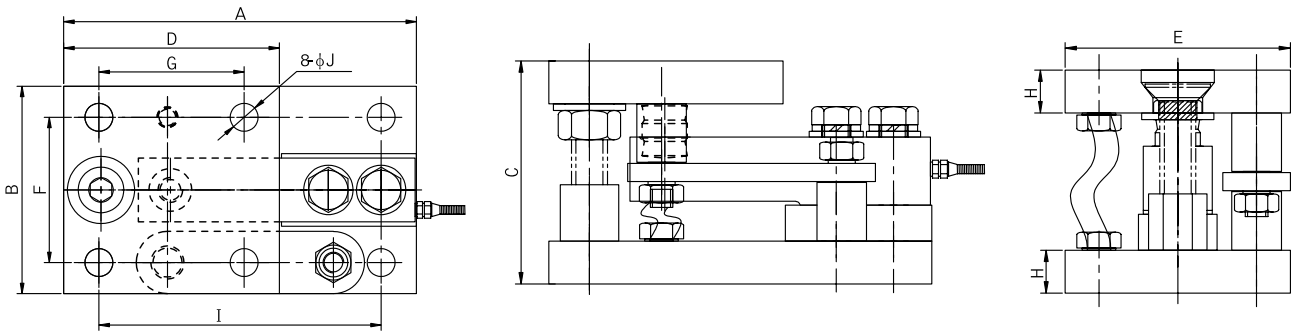
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

Unit(mm)



Dimension / Capacity	A	B	C	D	E	F	G	H	I	J
0.25~2.5t	170	100	99	104	100	70	70	19	136	14
3~5t	220	120	129.8	135	120	84	84	23	175	14

LP7210AD

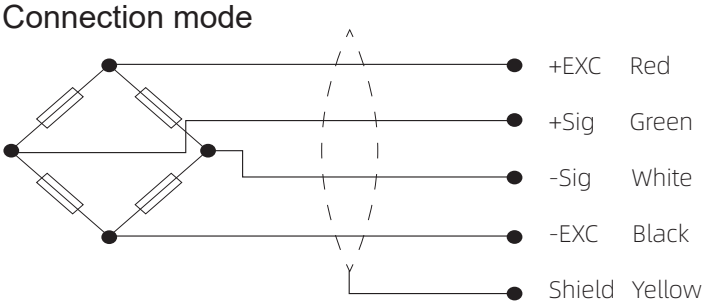
Ex weighing module



※ Technical parameters

◎ Rated capacity: 0.25, 0.5. 1, 2, 3, 5, 7.5t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7110A
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85° C Db
◎ Ex certificate number : GYB24.2334X
◎ Ex joint(optional)

Connection mode



Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

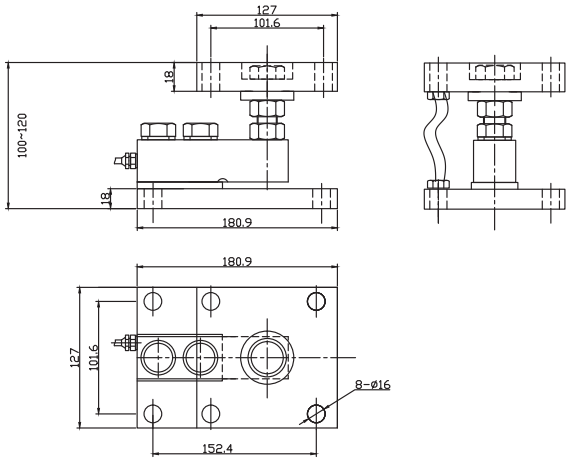
Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

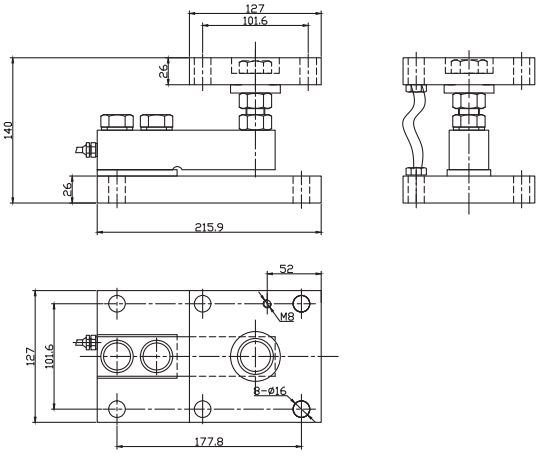
Dimensions

Unit(mm)

0.5~2.5t



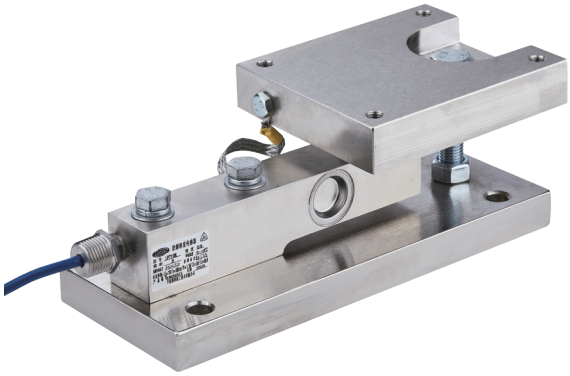
3~5t



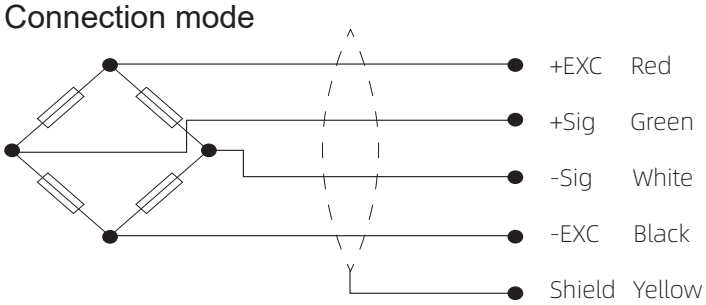
LP7211
Ex weighing module

※ Technical parameters

◎ Rated capacity: 0.5,1,2,3,5,7.5,10t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7110L
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)



Connection mode



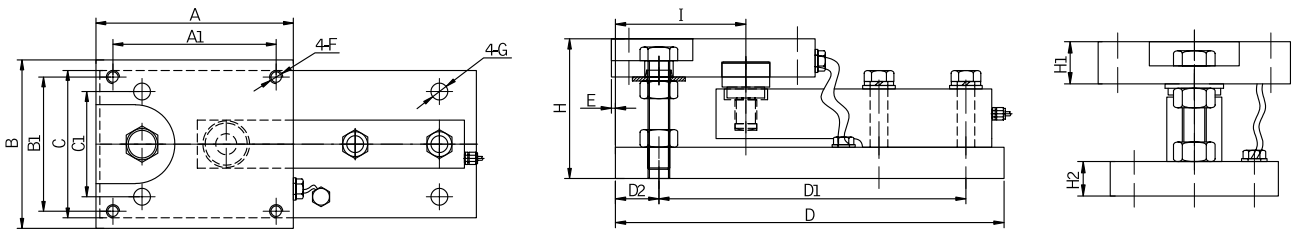
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

Unit(mm)



Capacity \ Dimension	A	A1	B	B1	C	C1	D	D1	D2	E	F	G	H	H1	H2	I
0.5 ~ 3t	150	124	128	102	112	80	286	226	32	3	M10	ϕ13	102	28	23	96
5 ~ 7.5t	178	146	152	120	152	102	318	257	32	3	M16	ϕ17	130	38	29	99
10t	184	152	154	122	154	106	360	295	32	3	M20	ϕ21	168	45	45	105

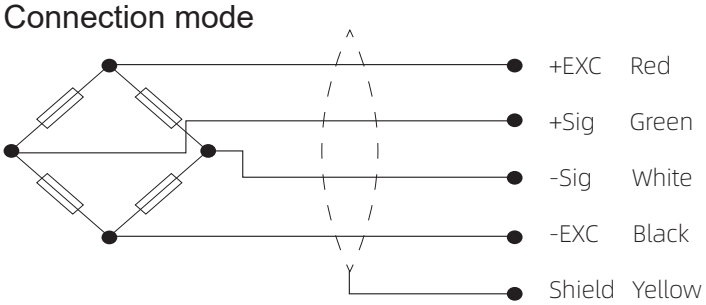
LP7211D
Ex weighing module

※ Technical parameters

◎ Rated capacity: 0.5,1,2,3,5,7.5,10t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7110L
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number : GYB24.2334X
◎ Ex joint(optional)



Connection mode



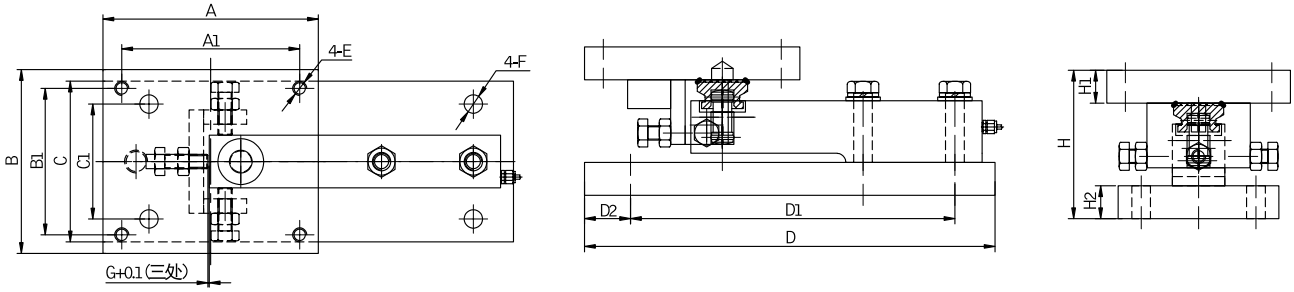
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device,reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

Unit(mm)

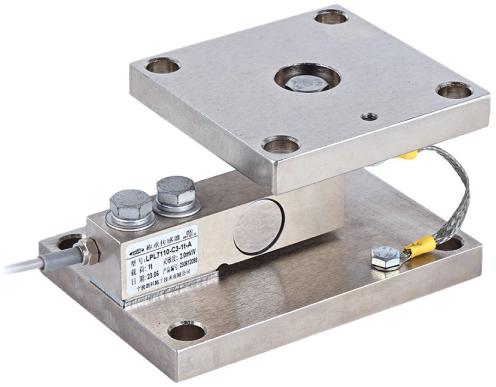


Dimension / Capacity	A	A1	B	B1	C	C1	D	D1	D2	E	F	G	H	H1	H2
0.5 ~ 3t	150	124	128	102	112	80	286	226	32	M10	ϕ13	1.6	107	23	23
5 ~ 7.5t	178	146	150	120	152	102	318	257	29	M16	ϕ17	1.6	147	33	30
10t	184	152	154	122	154	106	360	295	32.5	M20	ϕ21	3	218	45	45

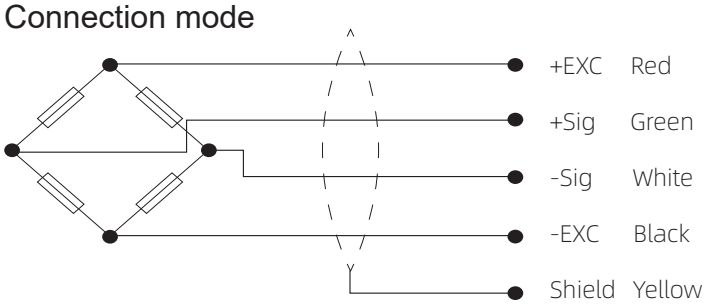
LP7212
Ex weighing module

※ Technical parameters

◎ Rated capacity: 0.25,0.5,1,2,3,5t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7110C
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)



Connection mode



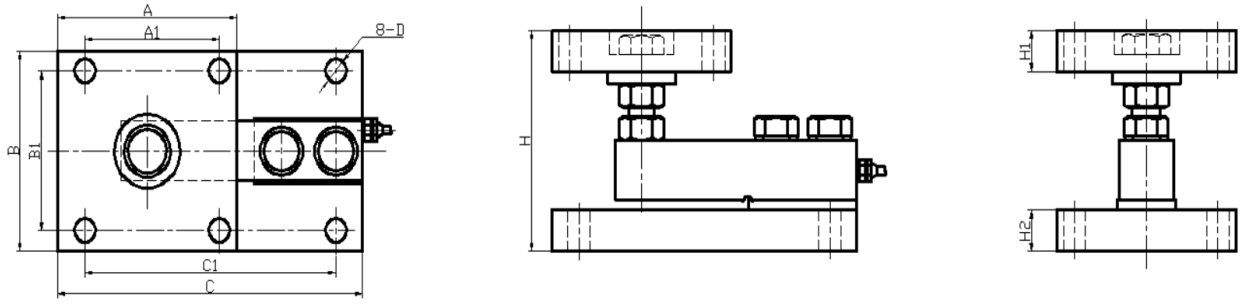
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Adopts bolted connection for permanent, mounting, ensuring outstanding safety performance
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

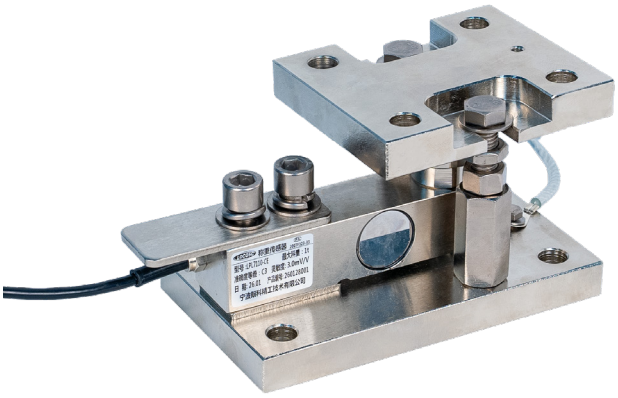
Unit(mm)



Capacity \ Dimension	A	A1	B	B1	C	C1	D	H	H1	H2
0.25 ~ 2t	127	101.6	127	101.6	180.9	152.4	ϕ16	100-120	18	18
3 ~ 5t	127	101.6	127	101.6	215.9	177.8	ϕ16	140	26	26

LP7212Q

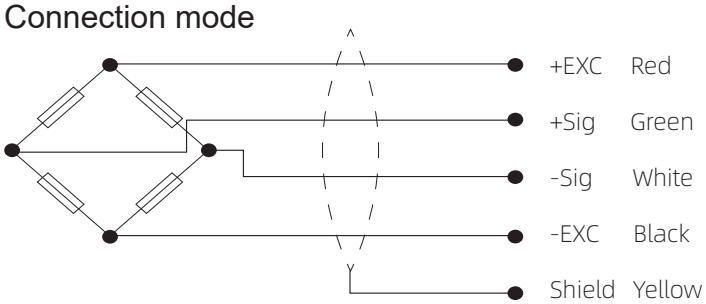
Ex weighing module



※ Technical parameters

◎ Rated capacity: 0.25,0.5,1,2,3,5t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7110CE
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)

Connection mode



Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

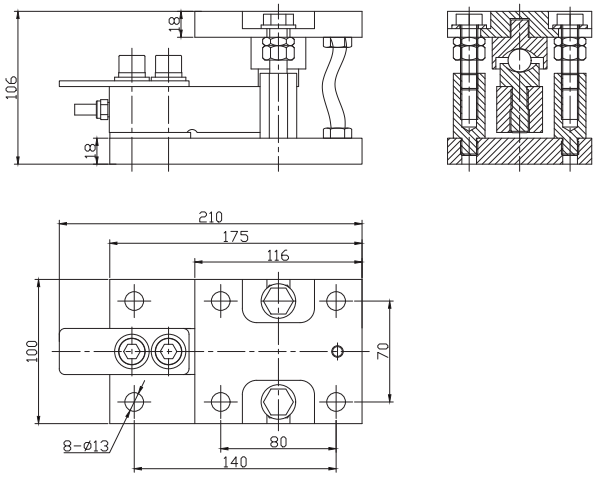
Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

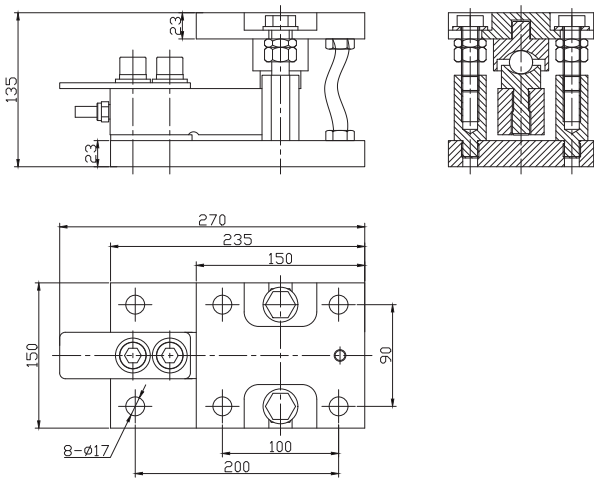
Dimensions

Unit(mm)

LP7212Q-0.25~2.5t

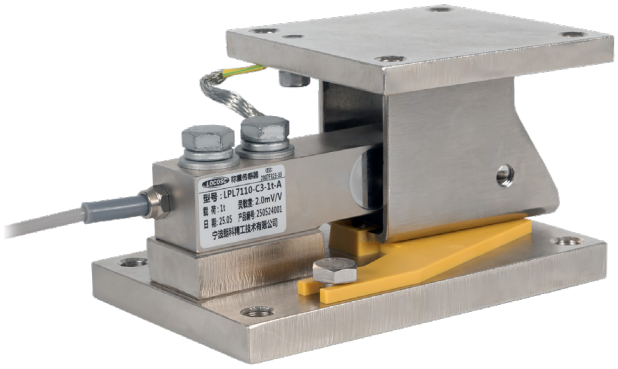


LP7212Q-3~5t



LP7213

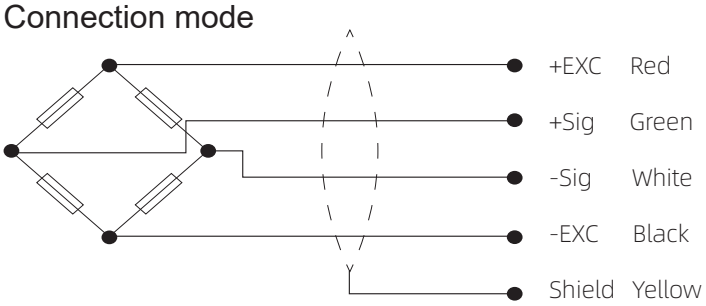
Ex weighing module



※ Technical parameters

- ◎ Rated capacity: 0.25,0.5,1,2,2.5,3,5t
- ◎ Accuracy class: OIML C3
- ◎ Load cell model: LP7110A
- ◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
- ◎ Ex certificate number: GYB24.2334X
- ◎ Ex joint(optional)

Connection mode



Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

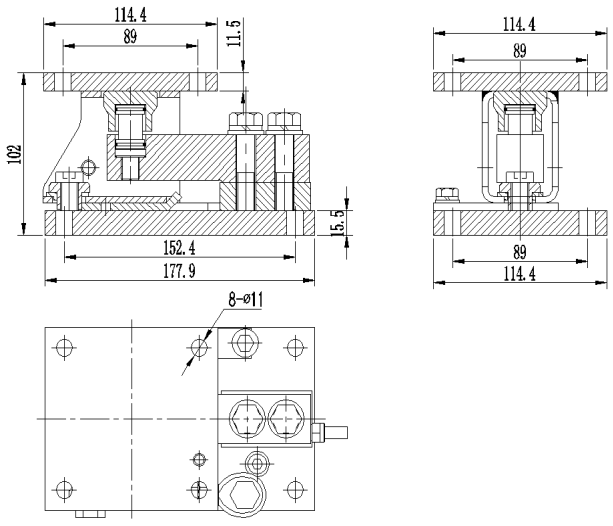
Structure features

- ◎ The accuracy class of load cells: C3
- ◎ Structure compact and stable for long term
- ◎ Overload protection and support bolt
- ◎ Swinging support device, reset automatically
- ◎ Mount material: nickel plated carbon steel or stainless steel
- ◎ Spherical plain bearings (optional)

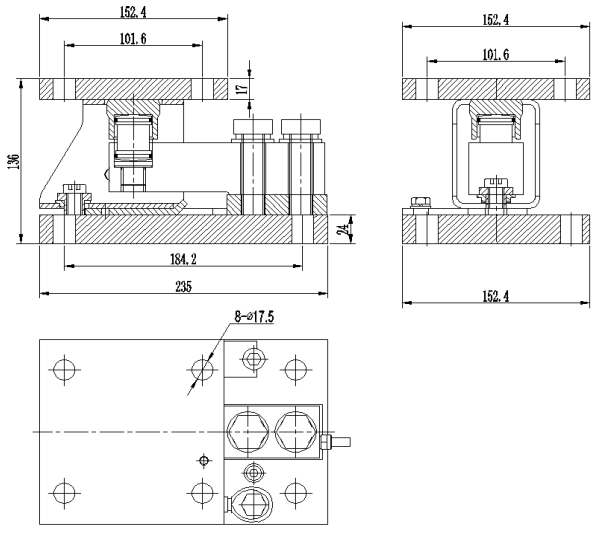
Dimensions

Unit(mm)

LP7213-0.25~2.5t



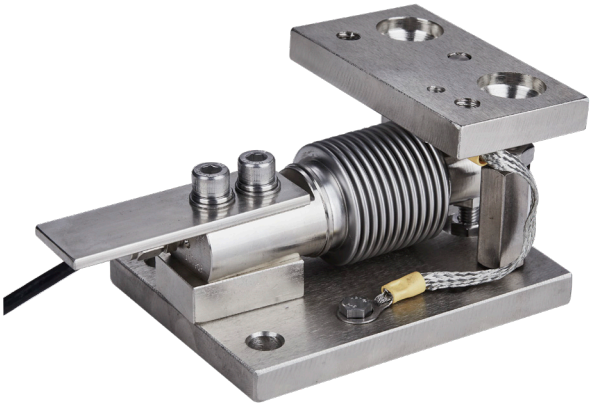
LP7213-3~5t



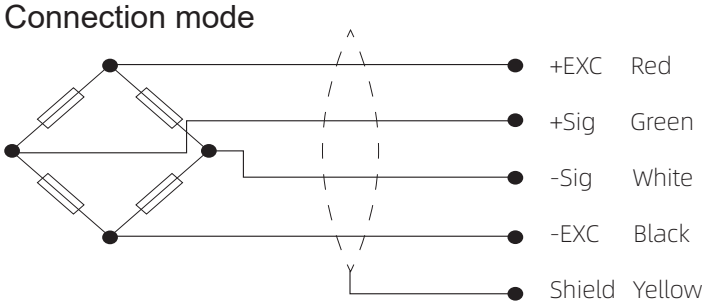
LP7220
Ex weighing module

※ Technical parameters

◎ Rated capacity: 5, 10, 15, 20, 30, 50, 75, 100, 150
200, 250, 300, 500kg
◎ Accuracy class: OIML C3
◎ Load cell model: LP7120
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)



Connection mode



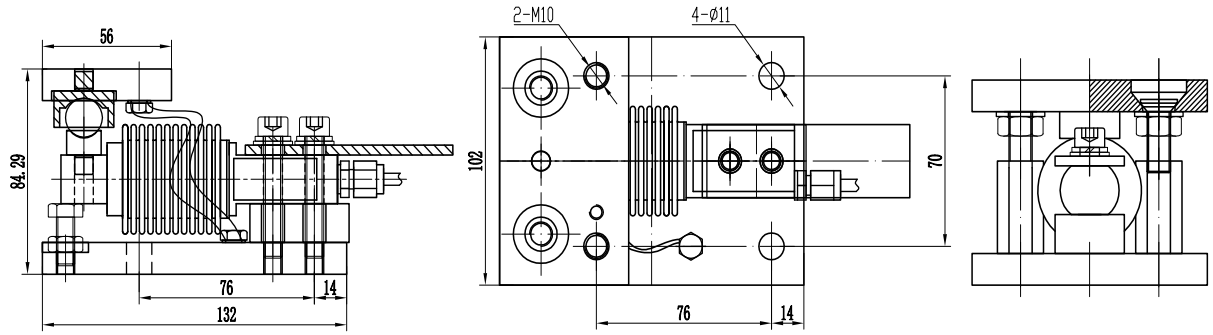
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

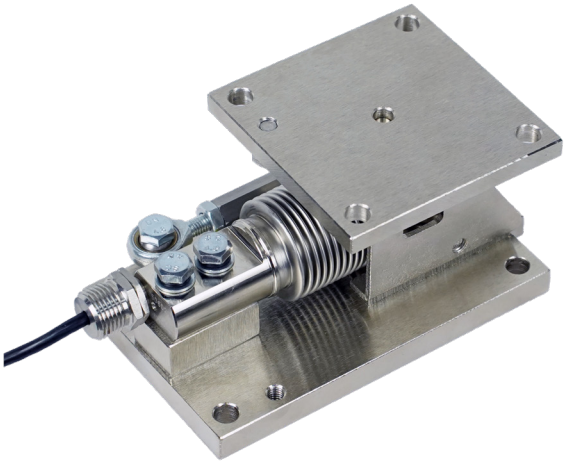
◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device,reset automatically
◎ Mount material: nickel plated carbon steel
or stainless steel

Dimensions

Unit(mm)



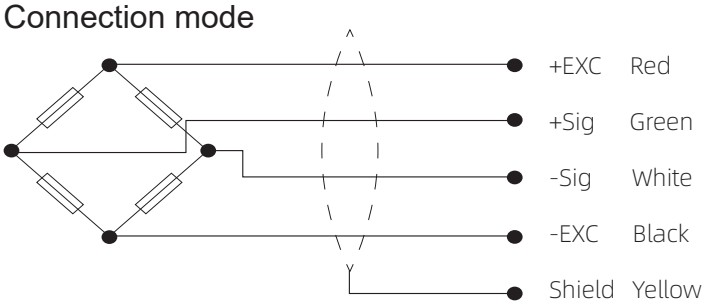
LP7221
Ex weighing module



※ Technical parameters

◎ Rated capacity: 5, 10, 15, 20, 30, 50, 75, 100, 150
200, 250, 300, 500kg
◎ Accuracy class: OIML C3
◎ Load cell model: LP7120
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)

Connection mode



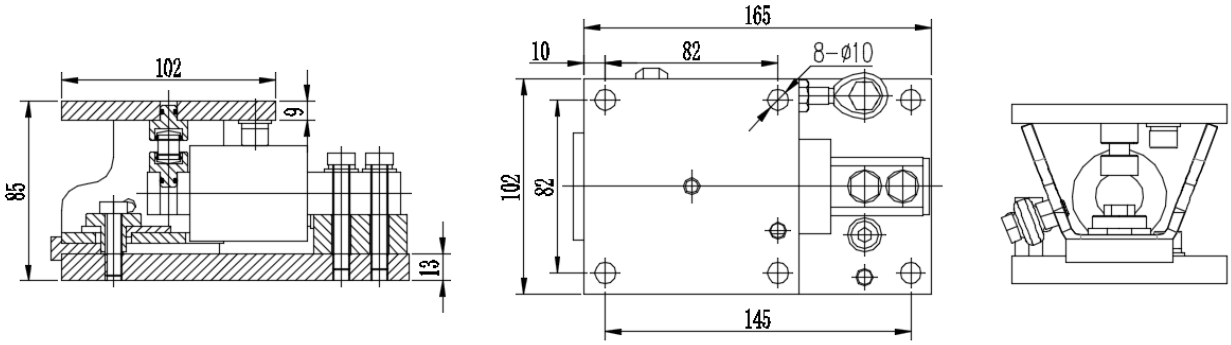
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel
◎ Spherical plain bearings (optional)

Dimensions

Unit(mm)

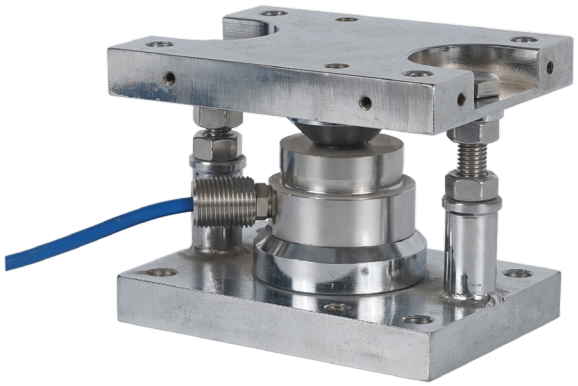


LP7230B

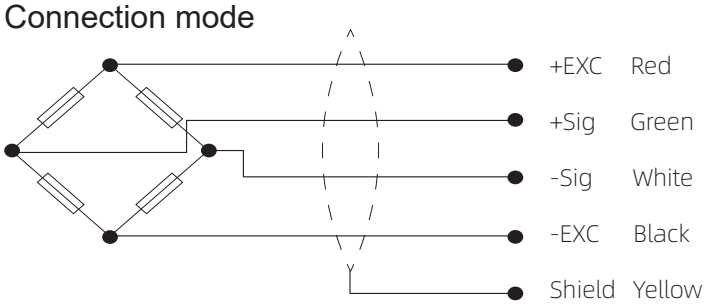
Ex column weighing module

※ Technical parameters

◎ Rated capacity: 10,20,30,40,50t
◎ Accuracy class: C3 or D1
◎ Load cell model: LP7130
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)



Connection mode



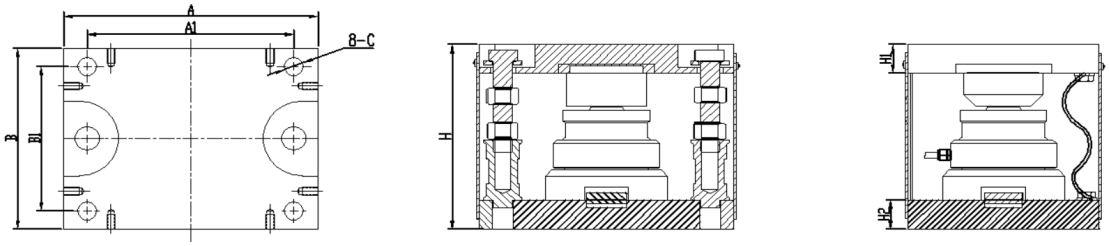
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

Unit(mm)



Capacity \ Dimension	A	A1	B	B1	C	H	H1	H2
1 ~ 4.7t	150	120	110	80	ϕ11	115	19	19
10~22t	160	130	120	96	ϕ13	130	19	19
33t	200	160	130	110	ϕ17	160	28	28
47t	245	190	165	120	ϕ21	190	28	28
68t	245	190	165	120	ϕ21	200	28	28
100t	260	200	180	130	ϕ25	230	32	32
150t	260	200	180	130	ϕ25	240	32	32
220t	360	290	280	220	ϕ32	330	40	40

LP7231

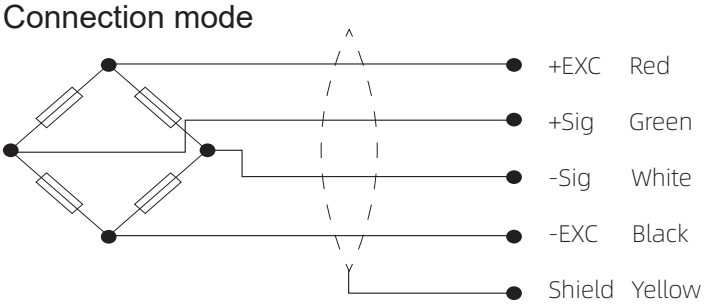
Ex column weighing module

※ Technical parameters

◎ Rated capacity: 10,20,30,40,50t
◎ Accuracy class: C3 或 D1
◎ Load cell model: LP7131
◎ Ex Marking: Ex ia IIC T6 Ga　Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)



Connection mode



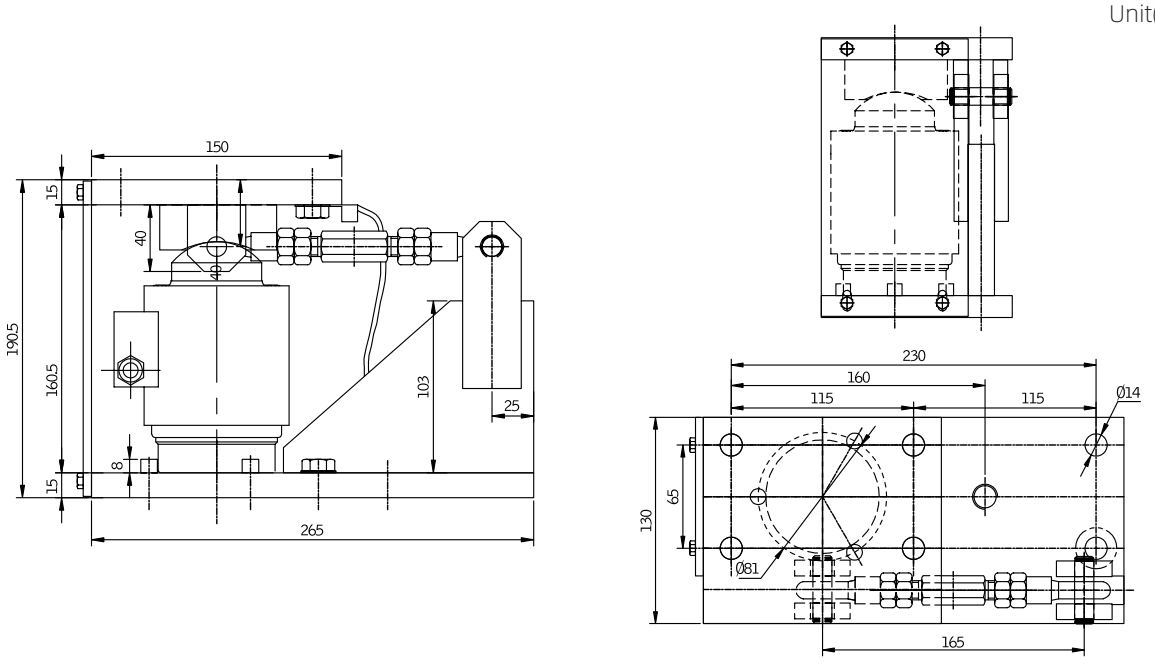
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

Unit(mm)

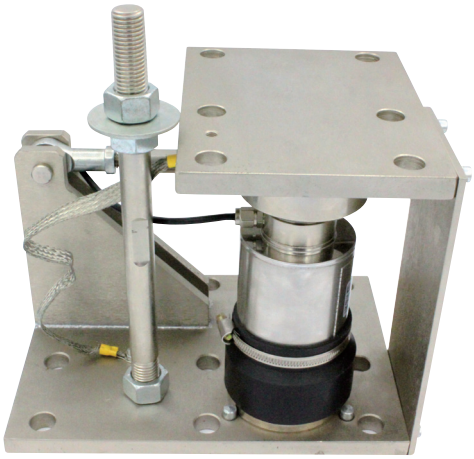


LP7234

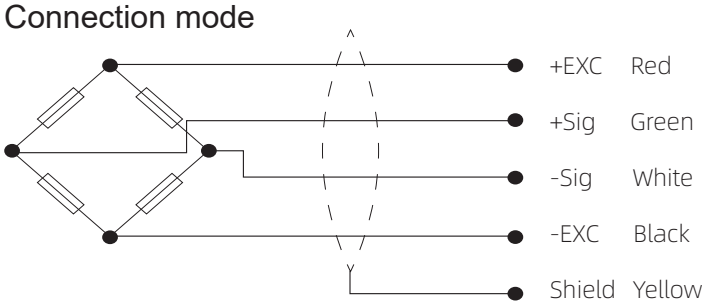
Ex column weighing module

※ Technical parameters

◎ Rated capacity: 10,20,30,40,50t
◎ Accuracy class: OIML C3
◎ Load cell model: LP7134
◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Ex joint(optional)



Connection mode



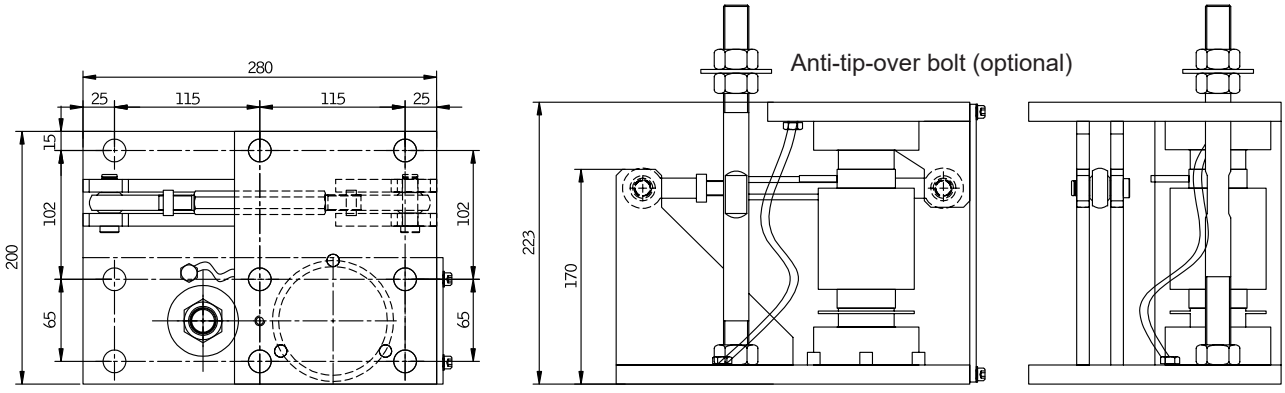
Wire color	red	green	white	black	yellow
Wire function	Exc+	Sig+	Sig-	Exc-	Shield

Structure features

◎ The accuracy class of load cells: C3
◎ Structure compact and stable for long term
◎ Overload protection and support bolt
◎ Swinging support device, reset automatically
◎ Mount material: nickel plated carbon steel or stainless steel

Dimensions

Unit(mm)



LP71abc

Ex load cell series



Structure features

◎ Alloy steel, aluminum alloy, stainless steel
◎ High precision
◎ Potting seal, laser welding, water-proof, oil-proof, protected against general corrosive gases and media
◎ Easy and flexible to install
◎ Operation environment: -10℃～ +40℃
◎ Ex Marking: Ex ia IIC T6 Ga　Ex ib IIIC T85℃ Db
◎ Ex certificate number: GYB24.2334X
◎ Intrinsic safety electrical parameters: maximum input voltage 15 Ui (V), maximum input current 560 li (mA), maximum input power 1.1 Pi (W)

Introduction



LP716X Single Point Load Cell

◎ Application for small range/sizes bench scales
◎ Rated capacity：3kg~1000kg



LP711X Shear Beam Load Cell

◎ Application for floor scales，weighing module
◎ Rated capacity：250kg~10t



LP713X Column Load Cell

◎ Application for high-capacity weighing equipment
◎ Rated capacity：1t~470t



LP715X Dual Shear Beam Load Cell

◎ Application for truck scales、high-capacity weighing scale
◎ Rated capacity：10-50t

Applications

◎ Explosion protection electronic bench scale, explosion protection electronic floor scale, explosion protection weighing module, various types of explosion protection electronic weighing systems.

LP731aB-Sb-c

Ex junction box series



Structure features

- ◎ 304 stainless steel housing
- ◎ Assemble and adjust easily, high reliable
- ◎ Hermetically sealed, waterproof and oilproof
- ◎ Circuit symmetry design, signal modulation
- ◎ Operation environment: -10° C ~ +40° C
- ◎ CCC certificate number: 2021322303004273
- ◎ Ex certificate number: GYB23.1768X
- ◎ Ex Marking: Ex ia IIC T6 Ga Ex ib IIIC T85°C Db
- ◎ G1/2 fitting optional

Model selection directions

Item No.	Number of load cells	Ctn size(mm)	Mount size(mm)
LP7310B-S2-4	4	192*136*46	162*36（Φ6）
LP7310B-S2-6	6	206*160*53	137*138（Φ6）
LP7310B-S2-8	8	318*160*60	250*62（Φ6）
LP7310B-S2-10	10	318*160*60	250*62（Φ6）

LP7330B

Ex scoreboard by enclosure



Structure features

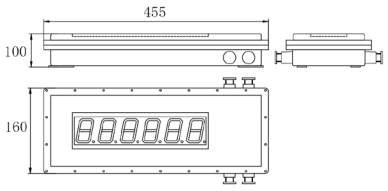
- ◎ Die steel housing
- ◎ Easy to assemble and commission, boasting high reliability
- ◎ Fully sealed, water-proof, oil-proof
- ◎ Operation environment: -10℃ ~ +40℃
- ◎ Ex Marking: Ex db IIB T6 Gb

Technical parameters

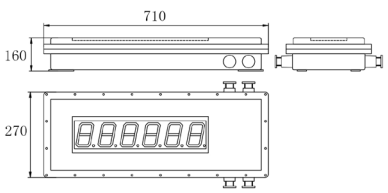
- ◎ Display: 6-digit 3-inch or 5-inch high-brightness LED
- ◎ Communication port: RS232 output
- ◎ Power: AC 220V 50/60Hz

Dimensions

Unit(mm)



3-inch



5-inch

Applications

◎ Explosion protection electronic bench scale, explosion protection electronic floor scale, explosion protection weighing module, various types of explosion protection electronic weighing systems.

Product list

Type	Model	Ex Marking	gas			dust		
			Zone 0	Zone 1	Zone 2	Zone 21	Zone 21	Zone 22
Load cell	LP71xx	Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db	√	√	√		√	√
Weighing module	LP72xx	Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db	√	√	√		√	√
Junction box	LP731x	Ex ia IIC T4/T6 Ga Ex ib IIIC T85℃ /T135℃ Db	√	√	√		√	√
Intrinsically safe output power	LP7350-S12	[Ex ib Gb] IIC [Ex ib Db] IIIC						
Intrinsically safe output power	LP7350-S9	[Ex ib Gb] IIC						
Weighing indicator	XK3150-Ex	Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db		√	√		√	√
	XK3150-Ex-P	Ex ic IIB T3/T4 Gc			√			
	XK3150B-Ex	Ex ib IIC T4 Gb		√	√			
	XK3150-Exd	Ex db[ia IIC Ga] IIB T6 Gb		√	√			
	XK3150-Exd IIC	Ex db [ia Ga] IIC T6 Gb Ex tb [ia Da] IIIC T85℃ Db		√	√		√	√
Balance	LP7670Ex	Ex ib IIC T4 Gb		√	√			
	LP7671Ex	Ex ib IIC T4 Gb		√	√			
Crane scale	OCS-Ex	Ex ib IIC T3 Gb		√	√			
Bench scale	aCS-bB	Ex db ia IIB T6 Gb Ex ia IIC T6 Ga Ex ib IIIC T85℃ Db Ex ib IIC T4 Gb Ex ib IIIC T135℃ Db Ex db ia IIC T6 Gb Ex ib tb IIIC T85℃ Db		√	√		√	√
Floor scale				√	√		√	√
Pallet truck scale				√	√		√	√
Hopper scale				√	√		√	√

朗 科 精 工

宁波朗科精工技术有限公司
LOCOSC NINGBO PRECISION TECHNOLOGY CO.,LTD.

地址：宁波市江北区甬江工业区振甬路137号
邮编：315021
电话：0574-8763 0101 （总）
服务热线：4006788987
传真：0574-8763 0707
邮箱：admin@locosc.com

www.locosc.cn



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