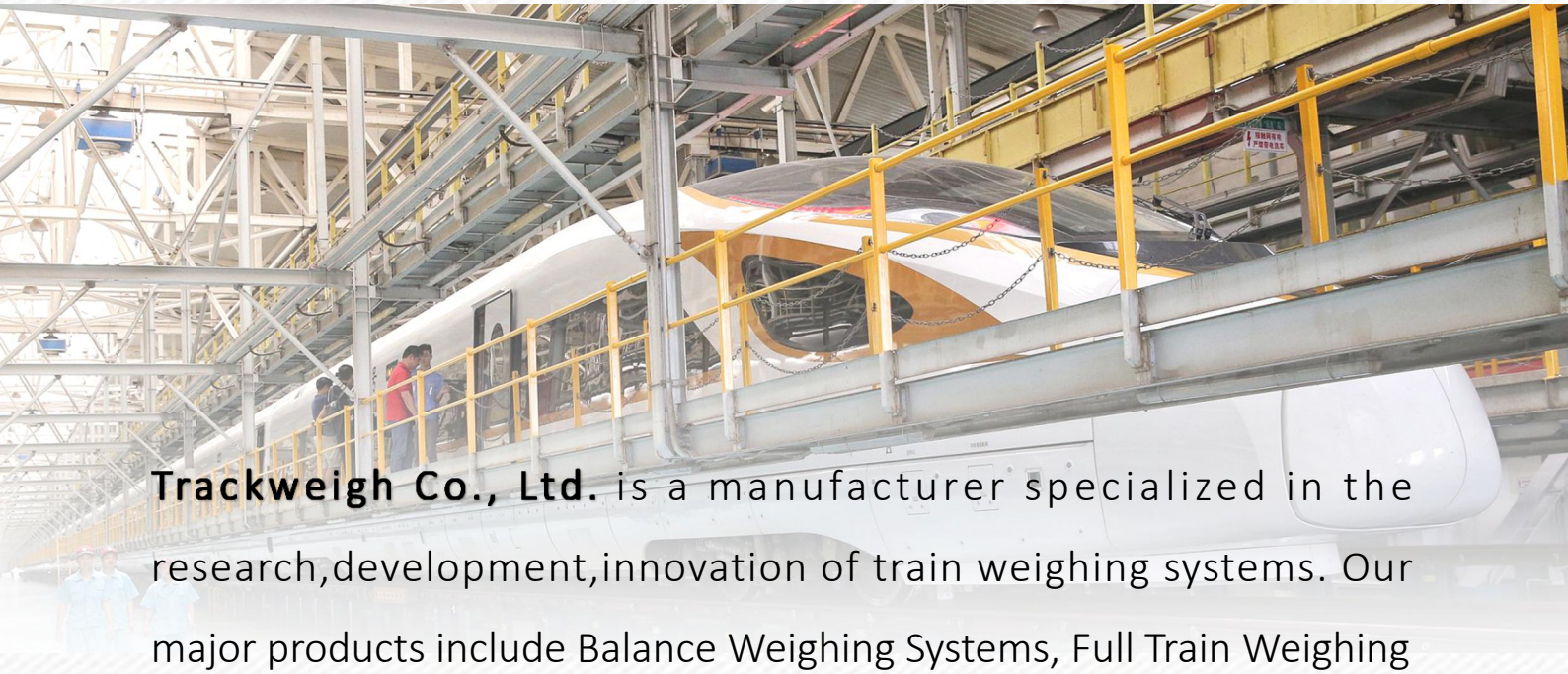
TRACK WEIGH



Trackweigh Co., Ltd. is a manufacturer specialized in the research,development,innovation of train weighing systems. Our major products include Balance Weighing Systems, Full Train Weighing System, Railcar Weighing System, Door Closing Force Measurement etc.

Our existing range of train weighing systems have been designed to meet all uses, including High Speed rail, Commuter rail, Freight, Metros and On Track Plant.

All of our products comply with international quality standards, and are greatly appreciated in a variety of different markets throughout the world.

The reliability of our products with advanced technology and around 20 years of train weighing industry experience have enabled Trackweigh to become the market leader at home & abroad.

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TRACK WEIGH

BALANCING SYSTEMS

Portable Train Weigher

PTW1

Overview

PTW1 is a portable and flexible train weighing system. It allows the weighing of individual wheels, axles, wagons and trains, and can be used with almost all commonly used rail profiles and track gauges.

It is a load cell based system, which fits to the inner sides of rail. When the wheel flange rolls up the ramp, the wheel's tyre is raised, so the wheel-rail contact force is tested on the wheel flange.

This means that faults related to the running surface are ruled out from the outset, such as faulty grip due to conical wheels and effects caused by the linear expansion of the rail. This is beneficial for trains that undergo pre and post modifications at locomotive workshops and train maintenance depots.

TRACK WEIGH

Portable Train Weigher

PTW1

Benefits

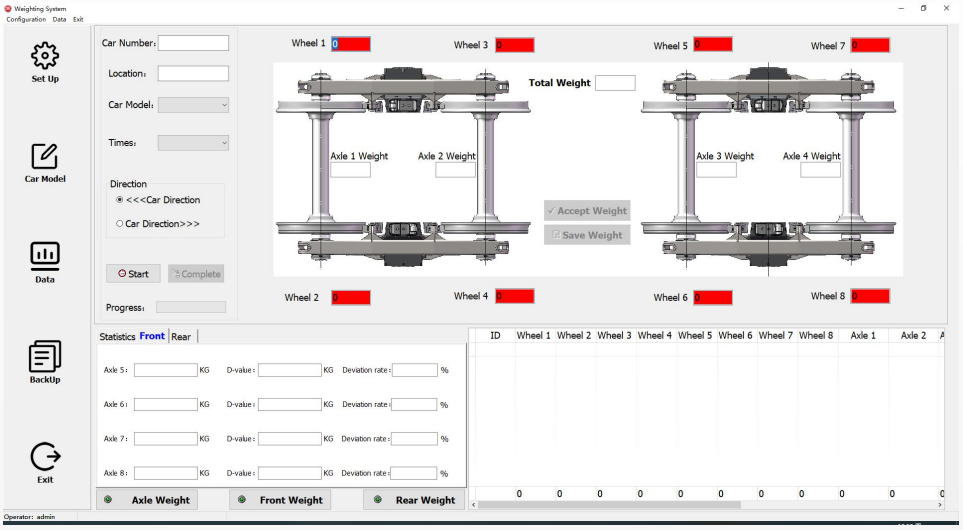
- No track downtime during installation
- No costly civil works required
- No test train required for calibration
- Portable, quick and easy to install (around 15 minutes).
- excellent accuracy and flexibility

Functions and Features

- Available for all standard gauges, no matter narrow or wide
- Can be quickly adapted to different installation locations, as well as axle and bogie center distances.
- Can be expanded as required. As its modular structure, once a fault happens, the blocks can be easily exchanged.
- Wired or wireless both available.

TRACK WEIGH

Portable Train Weigher
PTW1



Specification

Model	PTW1
Measuring distance	380mm (customized available)
Capacity	15t/wheel, 30t/axle
Division	2kg
Accuracy	0.1% F·S for static weighing; 1~3% for dynamic weighing
Protection Class	IP67
Temperature	-40°C~+55°C
Mounting	Rail shoes to fit rail type
Number of Bases	1~4 units for 2~8 wheels (more units can be customized as required)
Supply voltage	12V DC,230V/50Hz AC other supply voltages on request
Interfaces	USB, LAN, WLAN

TRACK WEIGH

Portable Train Weigher

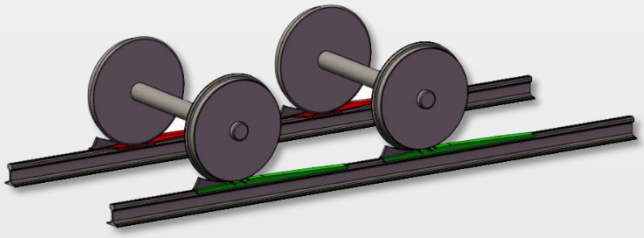
PTW2

Overview

PTW2 is a high performance train weighing system, quick and easy to operate, capable of performing measurements with huge precision and accuracy.

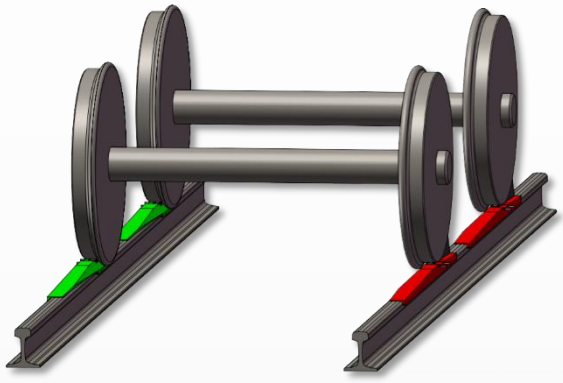
As we known, the right distribution of the forces on each wheel is a key-factor to ensure the dynamic stability of any rolling stock, and avoid abnormal wear in wheel/rail interaction, and to detect potential unbalancing issue, so PTW2 is not only a weighing equipment, but also a safety equipment using in railway industry.

Benefits



- No track downtime during installation
- No costly civil works required
- No test train required for calibration
- Portable, quick and easy to install (around 15 minutes).
- excellent accuracy and flexibility

Portable Train Weigher
PTW2



Functions and Features

• Reducing derailments risk by calculating the distribution of wheel-rail contact forces

• Predictive maintenance, adjusting and equalizing the wheel-rail contact forces to ensure the rolling stock's balance.

• Verifying the distribution after installation of new equipment on the rolling stocks

•Workshop or on-site maintenance

• Available for all standard gauges, no matter narrow or wide

• Can be quickly adapted to different installation locations, as well as axle and bogie center distances.

• Modular, can be expanded as required

Specification

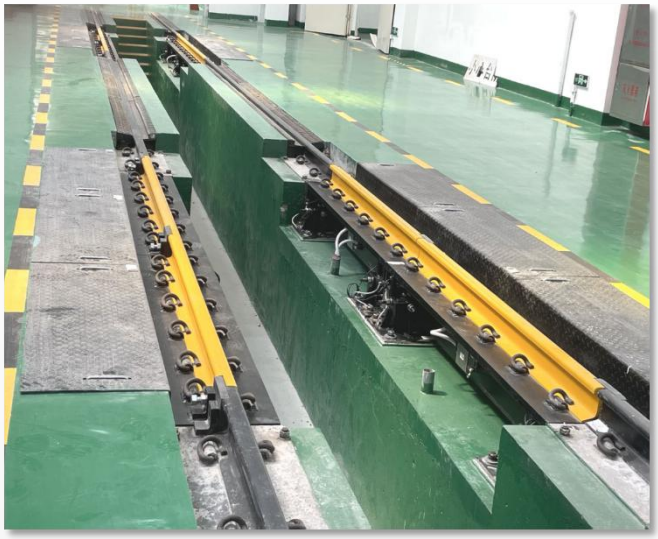
Model	PTW2
Capacity	15t/wheel, 30t/axle
Division	2kg
Accuracy	1% F·S for static weighing
Protection Class	IP67
Temperature	-40°C~+55°C
Rail type	All rail type
Supply voltage	12V DC,230V/50Hz AC other supply voltages on request
Interfaces	USB, LAN, WLAN

Fixed Type Train Weigher
FTW

Overview

FTW weighing system is a special weighing equipment designed for the safe operation of rail transit vehicles. It is mainly used for the wheel load measure and full train measure of all kinds of locomotives and vehicles which are newly manufactured, operated and repaired, providing reference for the debugging of vehicle balance system. It is applied to locomotive, vehicle factory, railway rolling stock and large power locomotive maintenance base, high-speed car maintenance and urban rail scale crossing manufacturing and maintenance base.

Fixed Type Train Weigher
FTW



Functions and Features

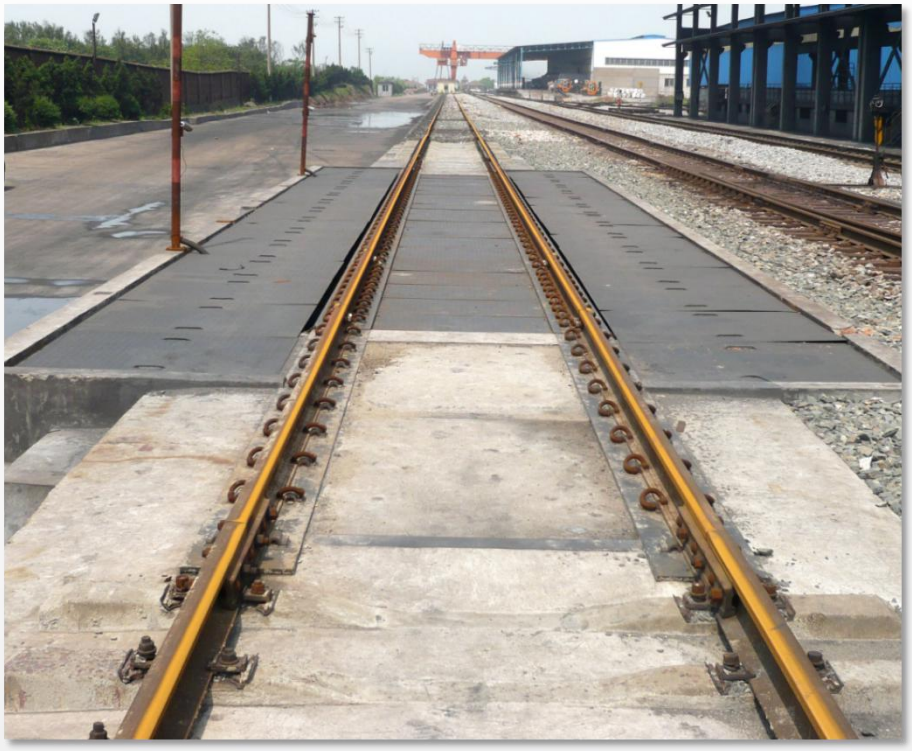
- Innovative weighing platform structure, easy to install
- Real-time monitoring of running status, failure alarm, more convenient maintenance
- Suitable for standard gauge or variable gauge
- Static weighing of each wheel weight
- Axle load, bogie weight, vehicle weight calculation and display
- Wheel weight difference, axle weight difference, bogie deviation calculation and display
- Report statistics, data query and printout available

Specification

Model	FTW
Scale Platform Qty	2 /4 /8 /10 /12 /14
Capacity (each wheel)	10t / 15t / 20t
Accuracy	Ⅲ
Rail Gauge	Customized as required
Rail Type	Customized as required
Working temperature	-40°C~+55°C

FULL TRAIN WEIGHING SYSTEMS

Static train weighing systems
RS-1



Overview

RS-1 railroad weighing system is a modular I-beam deck scale for static, pit type weighing application of whole train. The scale is mainly used in railway transportation departments, large mining enterprises (such as steel mills, copper mines, power plant, refining, petroleum etc.), harbor wharf, coal industry, large grain depot etc., for measuring and trade settlement on shipping goods such as coal, refined oil, ore, building materials, grain and other bulk goods.

Static train weighing systems

RS-1

Functions and Features

- Reliable design, high strength weighbridge
- Modular combination
- Economically shipped anywhere
- Corrosion resistant components
- Intelligent pre-diagnosis
- lightning prevention and cheating prevention
- Less working downtime, long service life

Specification

Model	RS-1
Max. Capacity	100t / 150t
Scale Platform length	13 /13.5 /14 /14.5 /17.5 etc
Division	20kg
Accuracy	Ⅲ
Rail Gauge	Customized as required
Rail Type	Customized as required
Working temperature	-40°C~+55°C

Static train weighing systems

RS-2

Overview

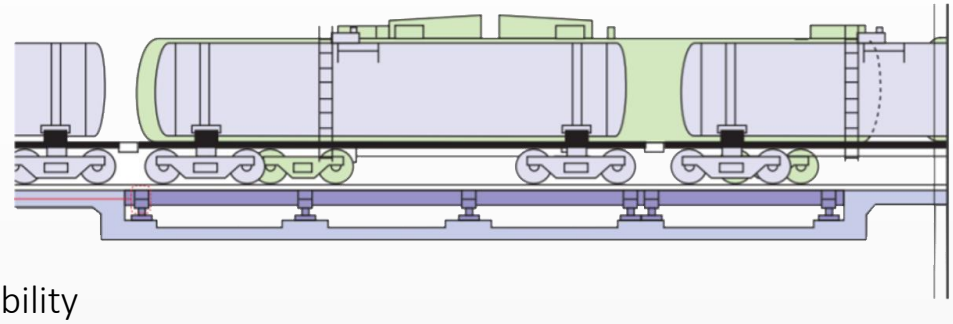
RS-2 is a modular, high-performance railroad weighing system designed and manufactured with advanced technology according to the mixing of long and short wagons in refining, petroleum and grain industries etc.

The standard scale platform and short scale platform are installed on the same concrete foundation, and the weighing rails are connected with rail device, which can ensure the accuracy of measurement in long-term use. The application of double-platform not only reduces the equipment investment, reduces the occupation of the line, and also expands the scope of use, and make management more convenient.

The system is mainly used for trade settlement of LPG tank truck freight, fixed value loading weighing, goods in and out weighing, technological process batching weighing, suitable for petrochemical, railway, port, metallurgy and other industries of conventional railway vehicles and over-long vehicle cargo weighing.

Static train weighing systems

RS-2



Functions and Features

- High accuracy, long time durability
- A standard platform and a short platform combination, one scale dual use function
- One indicator can be used for the static weighing for both standard vehicles and long vehicles.
- I-beam deck, modular structure, high strength and easy to installation and maintenance
- Deep pit and shallow pit, two kinds of foundation optional

Specification

Model	RS-2 （Double-Platform）
Max. Capacity	100t
Scale Platform length	13m+4.5m, customized as required
Division	Standard scale 20kg Combination scale 50kg
Accuracy	Ⅲ
Rail Gauge	Customized as required
Rail Type	Customized as required
Working temperature	-40°C~+55°C

In-motion train weighing systems

WIM

Overview

The WIM--Weigh In Motion System can provide the wagon weight in real time, which is capable of train weighing up to 80km/h. It is ideal solution for mine, industrial plants, cement plant, power stations, steel mills etc.

Due to continuous rail structure , no rail cutting, welding required, when the vehicles pass without any impact, greatly improve the weighing speed and accuracy. And when don't need to measure, the speed is not limited.

In-motion train weighing systems

WIM

Functions and Features

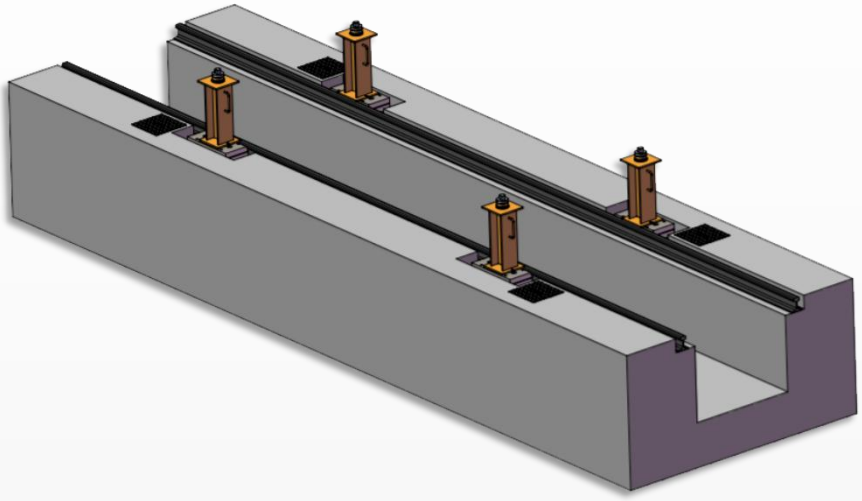
- No rail cutting, welding required
- Safe and reliable operation
- High stiffness and stability
- Load cell based system
- Concrete foundation or civil works necessary or not dependent on site conditions.
- Available for weight data storage, printout and access by internet.

Specification

Model	WIM
Capacity	100t each wagon
Division	20kg
Accuracy	±0.5%
Protection Class	IP67
Temperature	-40°C~+55°C
Supply voltage	12V DC,30V/50Hz AC other supply voltages on request
Interfaces	USB, LAN, WLAN

RAILCAR WEIGHING SYSTEMS

CMS



Overview

CMS is a mobile corner force measuring system for the quality assurance of rolling stock, which measures vehicle bodies according to the four points' method on a straightening stand. It records the four points forces and height tolerance, calculates the nominal forces via the position of the vehicle's center of gravity, in order to provide the torsion free position of rail vehicles by adjusting the thickness of the shims, and permanently maintain the vehicle on the torsion free position.

CMS is very flexible and high-precision, which can be used in the rail car manufacturing shop, final assembly, retrofitting, repairs and the condition analysis of accident vehicles.

An operating software is available for process control, evaluation and archiving, which help to adjust the torsion free position automatically. All relevant data and measurement results are stored in a database.

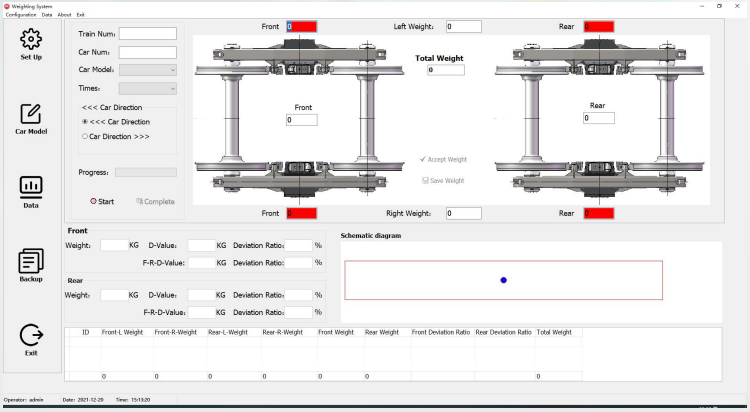
CMS

Benefits

• Portable, easy to install and maintain with few minutes.

• excellent accuracy and flexibility

• modular structure, easily exchanged.



Functions and Features

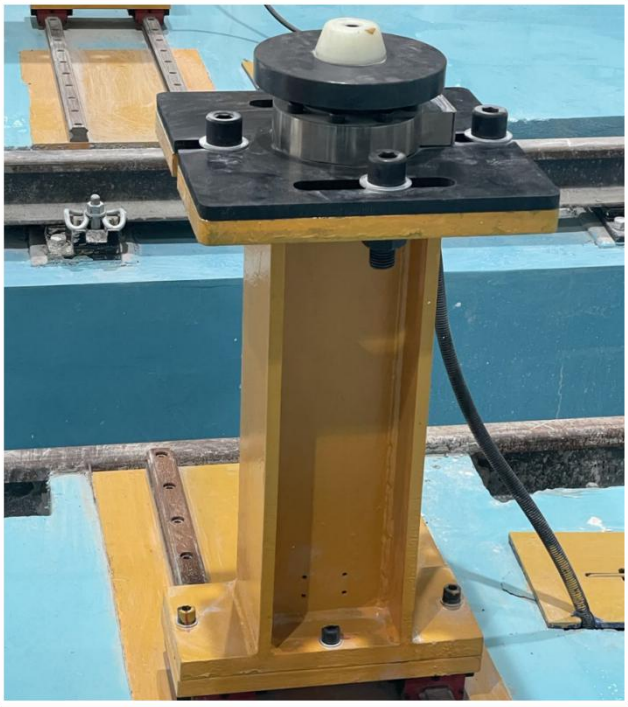
• Designed for production, maintenance and repair of rail vehicles without bogie.

• Check corner force measurement, center of gravity in torsion free position.

• All types of rail car suitable

• Easily moveable by hand under the lifted finished car body.

CMS



Specification

Model	CMS
Supported car bodies	all type of rail car bodies
Max. weight of car bodies	60t
Capacity	15t
Division	2kg
Accuracy	0.1%
Protection Class	IP67
Temperature	-40°C~+55°C
Supply voltage	12V DC,230V/50Hz AC other supply voltages on request
Interfaces	USB, LAN, WLAN

DOOR CLOSING FORCE MEASUREMENT

DPT

Overview

DPT closing force measuring system is an excellent tool for measuring and evaluating the side door closing force of passenger car body on rail vehicles such as light rail/tram, metro, suburban, trunk rail and high speed rail.

It conforms to the test requirements of the door clamping force of the relevant industry regulations. Through resistance strain type force sensor, electric door force gets display and measurement, to meet the highest measurement accuracy and operating standards.

The weighing cell housing is made of high-strength aluminum alloy with a black anodized surface, which is light, resistant to environmental factors and has maximum impact resistance. The interior of load cell is built with high-quality, durable controls, 500% overload capacity and impact resistance.

DPT

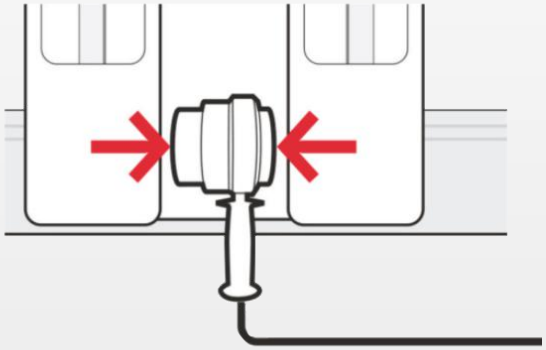
Functions and Features

• High measuring accuracy, with an error of less than 0.2% in the measuring range of 50 to 300N

• Portable design, dynamic measurement, carried out quickly and easily

• Drastically reduce the measurement process and the effort required for documentation.

• Color touch screen display operation, simple and intuitive, easy to master



Specification

Model	DPT
Capacity	50N~300N
Accuracy	0.1%
Stiffness	10±0.5N/mm
Temperature	-40°C~+55°C
Relative Humidity	< 95% (no condensation)
Supply voltage	12V DC,230V/50Hz AC other supply voltages on request

TRACK WEIGH

LOAD CELL

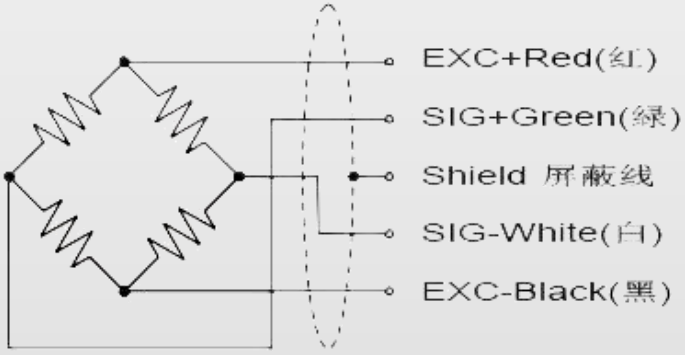
W188

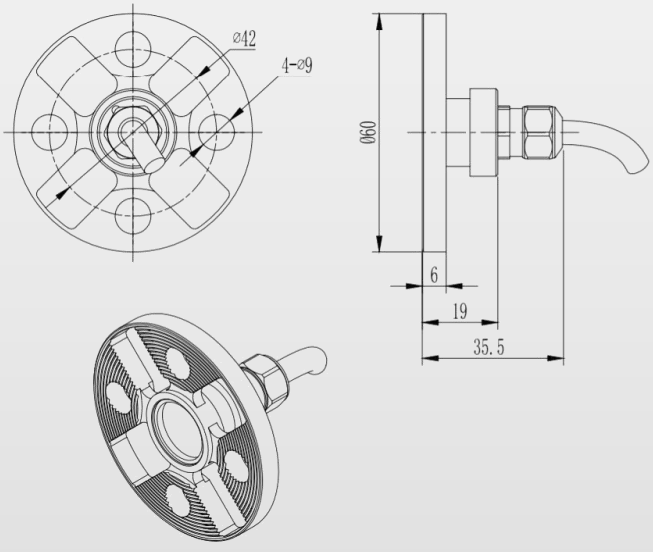
Features

High accuracy with strong ability of anti-side force

Easy to install,without drilling holes on the rails.

Wiring





W188

Specification

Model	W188
Capacity (N)	8t
Materail	17-4PH stainless steel
Output Sensitivity	0.4 mV / V
Zero Balance	±0.6 mV / V
Non-linearity	0.3% F.S.
Hysteresis Error	0.3% F.S.
Repetition	0.2% F.S.
Creep (30 min)	0.1% F.S.
Temp. Effect on sensitivity (TKc)	0.05% F.S. / 10 °C
Temp. Effect on zero balance (TKo)	0.05% F.S. / 10 °C
Input Resistance	350 ± 10 Ω
Output Resistance	350 ± 10 Ω
Insulating Resistance	≥5000 MΩ / 100VDC
Excitation Voltage	10 V
Max. Excitation Voltage	15 V
Compensation Range	-20 ~ 65 °C
Service Temperature Range	-40°C ~+55 °C
Limit load (EL)	150% F.S.
Breaking load (Ed)	200% F.S.
Cable Size	φ5 × 20cm+12m (Orange cable)
Material (Measuring element)	0.8 kg
Protection Class	IP66