VALVE Link

All your process control needs

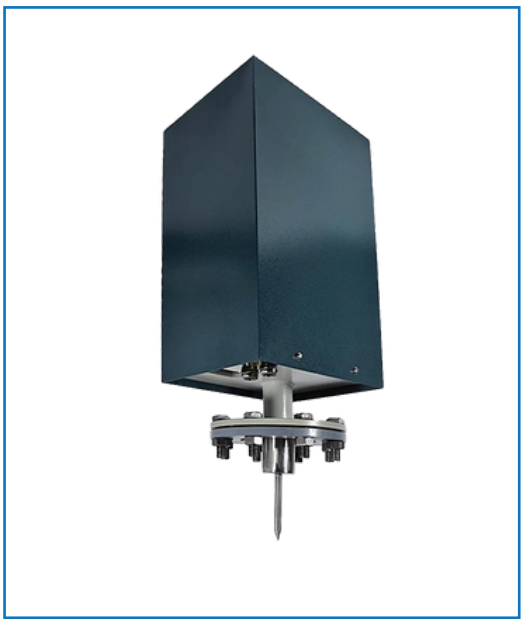
ISEN

Weight Type Level Meter

1.Material level meter

ISEN-ZC10/20

Weight Type Level Meter

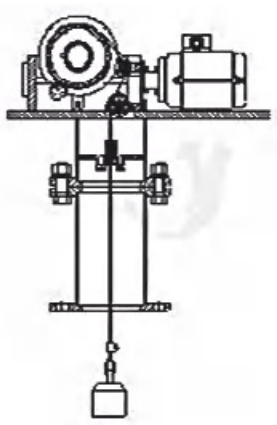


The weight level meter can be used to measure powder, granular and block solid materials. The material level in the silo allows users to reliably grasp the material level in the silo. The material level meter is composed of a sensor and a control display instrument. The design of the sensor absorbs It combines the advantages of similar products at home and abroad. Its unique structure and transmission method make it Many common problems of other types of weight level meters have been solved. Overcome the difficulties and ensure reliable operation, low maintenance and wide application. The control display uses a 16-bit single-chip microcomputer, and the entire sensor is controlled by the program. Detects the action of the process and detects its signal, performs calculations, and displays it on the panel. The display window shows the material level digitally and has a corresponding 4-20mA analog current signal Output, measurement can be performed automatically at a fixed time or manually

Features

1. Unique structure and transmission mode;
2. It overcomes the problems that often occur in many other types of weight-type level meters;
3. Automatic timing measurement function. The timing interval is adjustable, used in the automatic control system, and can be detected by computer remote control;
4. Automatic mode and manual mode are optional;
5. Reliable operation, easy detection, low maintenance and wide application;
6. Direct digital display of material level or material weight, clear and intuitive;
7. Upper limit, upper upper limit, lower limit, lower lower limit or alarm output;
8. Fault detection classification display and alarm output;
9. With RS485 serial communication interface, multiple level meters can share one bus to communicate with the host computer;
10. On-site manual lifting hammer for easy maintenance;
11. Realize the centralized display, storage and printing functions of material level data.

How it works

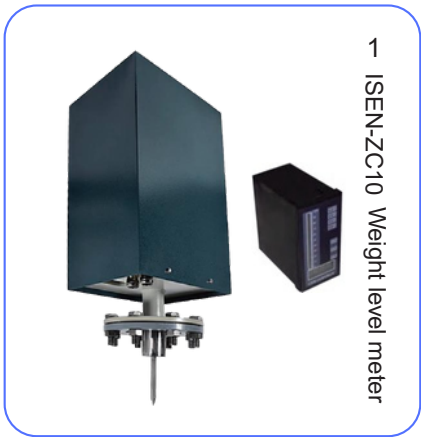


The detection process of the material level sensor installed on the top of the silo is controlled by the signal sent by the control display instrument. It is composed of a reversible motor, a sensitive lever, etc. When the sensor receives the detection command: the motor rotates forward, and after deceleration, it drives the winding drum to rotate, so that the wire rope is lowered, driving the heavy hammer When the weight is lowered to the material surface, it is lifted up by the material surface and loses weight, the wire rope becomes loose, and the sensitive lever moves to make the micro switch When the control display receives the signal, it immediately issues a motor reverse command, and the weight rises and returns until the winding drum hits the top. The switch is turned on, the motor stops, and the weight returns to its original position on the top of the bin, completing a detection process. During this process, the control and display instrument calculates the distance between the weight from the bottom of the bin to the material surface by detecting the number of revolutions of the winding drum. The panel displays digitally and outputs a 4~20mA current signal at the rear panel terminal

Application Areas

The weight hammer type material level meter is commonly used in ash storage, coal bunker, slag bunker, mud pool, etc. in power plants. It can measure feed, chemicals, plastic particles, cement, stone, PVC powder, aggregate, liquid, coal,Limestone, ground plastic, sand, powder, grain, oil, etc. The weight level meter can also be used to measure special liquids such as mud, slurry, asphalt, etc. It can be used in storage silos, tanks, buckets, etc. It can be used in various containers to measure the level of materials, thereby achieving accurate material management and production control.

Product range



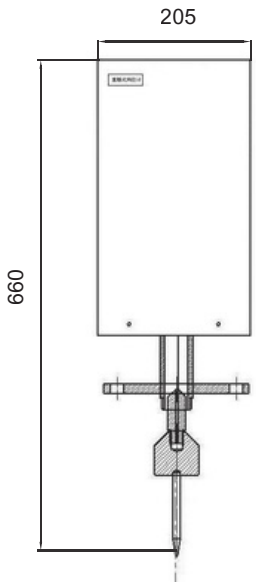
1 ISEN-ZC10 Weight level meter

2 ISEN-ZC20 Intelligent LCD display hammer

Technical parameters and dimensions

1. Sensor

Measuring range	0~40m (special specifications can be negotiated)
Measurement accuracy	±3cm
Repeatability	±1%
Resolution	±3cm
Detection speed	0.15m/s
Measuring tape	Φ 2 stainless steel wire rope
Weight of hammer	5Kg

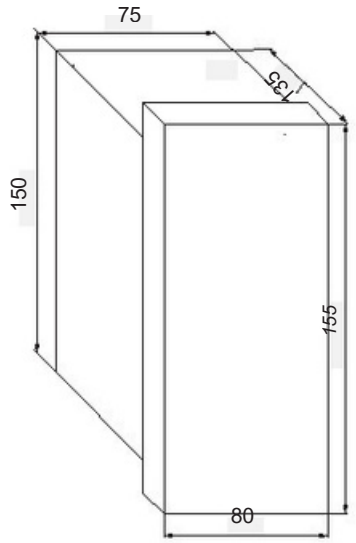


2. Control and display instrumen

Supply voltage	220VAC±10% 50Hz±1Hz
Power consumption	5W when stationary 55W when moving
Primary and secondary table ambient temperature	-30℃~+60℃ Measuring temperature:600℃
Digital Display	0.00~40..00（m）
Current output	4~20mA
Output signal accuracy	±0.1%
Scheduled time	1~6999 minutes (or as required by the user)
Maximum distance from sensor	0.5Km

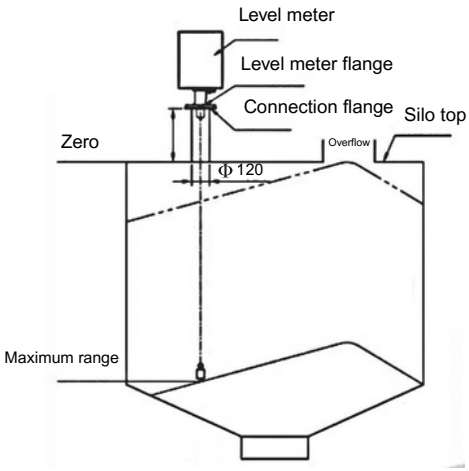
Technical parameters and dimensions (continued)

Weight	5Kg
Dimensions	Height 155×Width 80×Length 135
Opening size	Height (150+1) × Width (75+1)



Product demonstration picture

- Material level display
- Test and see
- Easy installation
- Reliable and durable
- Fault alarm
- 4-20mA signal output



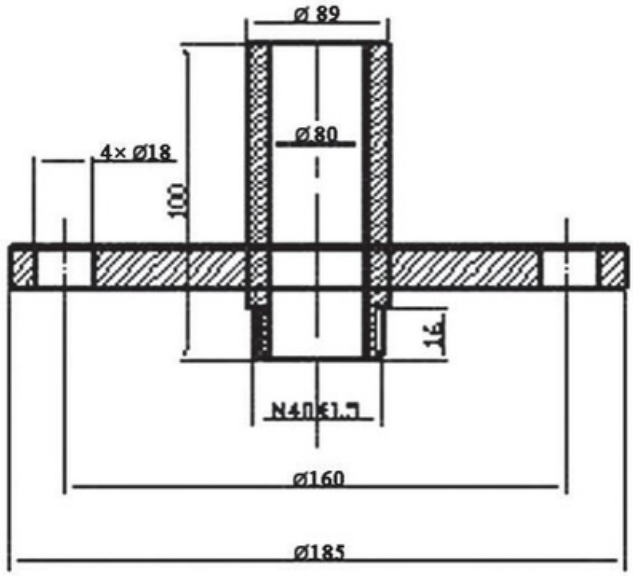
Installation and wiring

1. Installation of primary meter

(1) Select a suitable location on the silo roof to install the level meter:

The measurement point should be selected away from the feed inlet and discharge inlet, and should be selected as close as possible. During loading and unloading, the position is approximately measured at the same height. On the dome-shaped cement and fly ash silos, the The ash pipe is not in a straight line, and the distance from the center of the silo top is 2/3 of the radius as the installation location.

In the pulverized coal silo of the power plant, in order to better compare with the original hand-cranked hammer data , you should choose a position that is closer to the original hand-cranked probe hammer. It is required that there are no iron frames or other debris under the measuring point to avoid hindering the measurement.



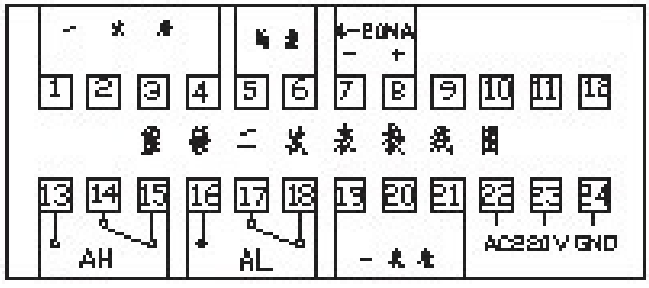
(2) Use a level to measure the flange welded steel plate and steel pipe

2. Installation of secondary meter

After the secondary meter is installed, it must be fixed with a meter card

3. Connection of primary and secondary meters (special attention) First, carefully calibrate the wires.

Connect the wires as shown in the diagram. The connecting cable (0.75mm) must be two wires. One 3-core (common, used for the 21.20.19 terminals of the primary and secondary meters) and one 4-core (must be a shielded cable, one end must be grounded and the other end suspended, used for the 1.2.3.4 terminals of the primary and secondary meters). The terminal number of the primary meter must strictly correspond to the terminal number of the secondary meter, and there must be no mistakes.Otherwise, the meter will not work properly.



Selection Table

Model	Product Name
ISEN-ZC10/20	Weight type level meter

Code	Range
1	0~10m
2	0~20m
3	0~30m
4	0~40m
X	Special specifications can be customized

Code	Process connection
F1	DN80 flange
F2	DN100 flange

Code	Measuring tape
1	304 stainless steel belt
2	304 stainless steel wire rope

Code	Instrument installation method
P	Disk mounted
B	Wall-mounted

Code	Output method
1	4~20mA

Code	Operating temperature
T	-30~60℃（normal temperature)

Code	Pressure range
P	Normal pressure

Code	Shell material
L	Cast aluminum housing

Code	Display mode
0	Ordinary with display
1	Intelligent LCD with display

Selection example

Example: ISEN-ZC20-2F11P1TPL1, intelligent LCD display weight type material level meter, range 0~20m, DN80 flange connection, measuring tape 304 stainless steel tape, instrument installation method panel mounted, output 4~20mA, normal temperature, normal pressure, cast aluminum shell, intelligent LCD tape display

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