RETTAR

Microwave Level Switch

RETTAR

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About RETTAR

Industrial Measurement Innovator

Intelligent | Innovative | Excellent

Established **17** years ago, originating from Tsinghua University

60 R&D staff all come from well-known enterprises and top universities

Owned **100** products, with **185** property rights

Serving over **8000** customers in **20** countries worldwide

3 R&D centers and **3** factories, daily production reaches thousands of units

RETTAR 锐达集团

One-stop Smart Factory Solution Provider

RETTAR

Values

Assist in digital transformation, avoid security risks, reduce operating costs, improve product quality and production efficiency, and overcome operational pressure.

Platforms

Connect to the central control room

Mobile devices
APP / Applet

Intelligent applications

In and out monitor	Inventory and cost Control	Process fault monitor	Fully automated factory
Process quality control	Risk assessment and alarm	Prediction and suggestion	.....

Technologies

3D Modeling | AI | Digital Twin | Dynamic Tracing | AIoT | Big Data | Machine Learning

Outputs

4G/5G | WIFI | Optical fiber | Ethernet | RS485

Meters

RETTAR
3D Scanning Series

RETTAR high-precision radar level meter series

RETTAR Level Switch Series

RETTAR density meters/thermometer

.....

Milestones

2007
Obtained the first patent for radar measurement

2009
Launched guided-wave radar level meter

2011
Launched 26GHz radar level meter

2012
Launched dual core radar and hart manual operator

2016
Launched customized multi-point thermometers

2017
Obtained over 20 software copyrights

2018
Launched micro-wave level switch

2019
Launched 80GHz radar level meter & interface meter

2020
Launched 3D scanner series & 140GHz radar level meter

2023
Launched Na22 density meter & Portable Level Sensor

Core Advantages

01

Numerous categories Wide applications

Multiple product categories based on market demand, which are widely used in nearly 20 industrial fields such as petrochemical, metallurgical, chemical, building materials, and power.

02

Independent research Excellent technology

Continuously increasing R&D investment and talent cultivation efforts. Have independent innovation and R&D capabilities, with comprehensive technical indicators benchmarking against overseas product standards.

03

Skilled in solving difficult working conditions

can provide customized solutions tailored to the needs of customers in different industries, as well as generally difficult working conditions in the industry.

04

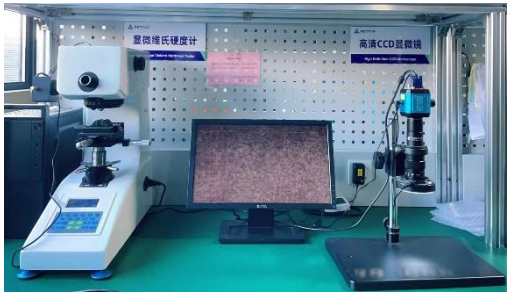
Customer oriented professional service

A professional after-sales service team, adhering to the customer-centric concept, quickly answers customer questions anytime and anywhere, and provides on-site guidance and operations.

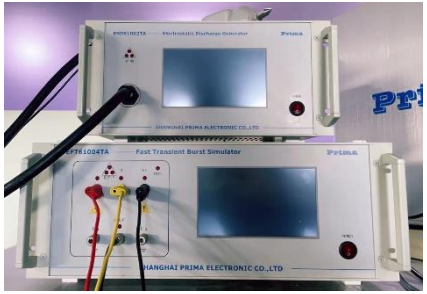
Quality control equipment

Multiple testing steps are required during the production process

Withstand Voltage Tester



Microscope Vickers hardness tester
&High definition CCD microscope

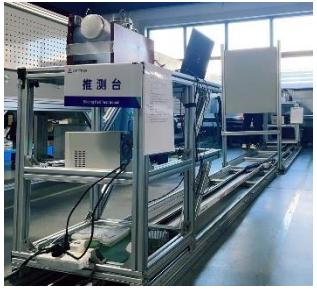


Electrostatic emitter
&Electrical Fast Transient

Thermal Shock Chamber

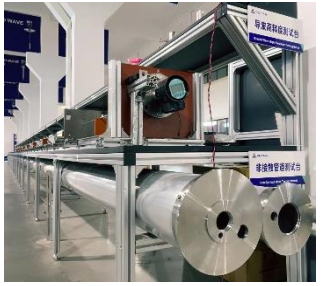
Vibration Test Bench

Non-Contact
High-Precision Testing Bench



Sliding Rail Test Bench

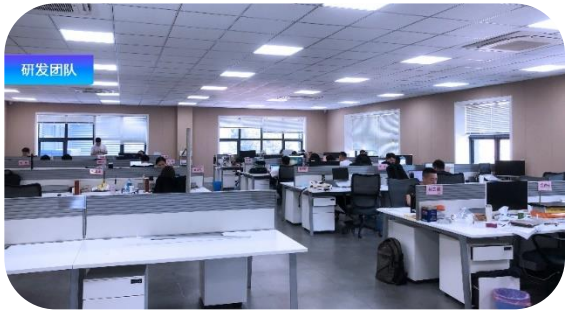
Non-Contact Reflective
Calibration Bench

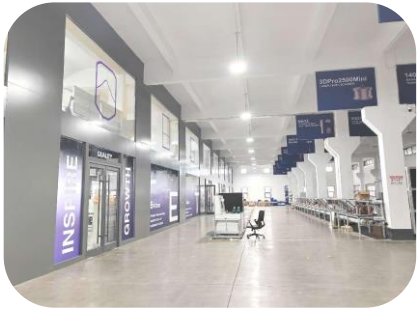


Guided Wave High-Precision
Testing Bench & Non-Contact
Hose Testing Bench

Factory site

Three factories covers 4500 ㎡/500 ㎡/ 500㎡. Total areas 5500 ㎡





Technical Abilities

A technology driven instrument enterprise with over 180 technical patents and software copyrights.

Certificates and Awards

ISO9001/14001/45001 & CE

HART FCG Member

TUV SIL

International explosion-proof certificates

Service Industries

Chemical Industry

Natural Gas

Pulp & Paper

Shipping

Petroleum

Food & Medicine

Thermal Power

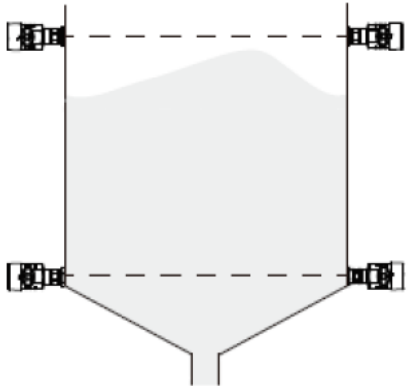
Metallurgy

Cement & Mines

Sewage Disposal

Product Introduction

Measuring Principle

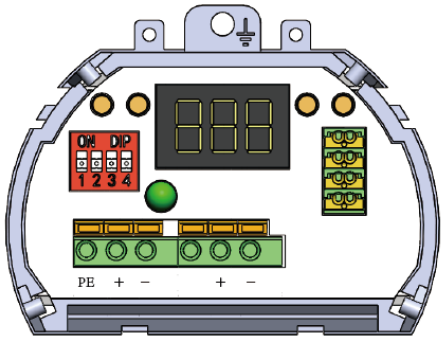


The CMS210 type microwave level switch is a level switch consisting of a emitting unit and a receiving unit installed face to face.
The emitting unit emits a continuous, low power microwave beam towards the receiving unit. If there is medium between emitting unit and receiving unit, the signal is damped. This change is detected by the build-in electronics module and converted into a switching command.

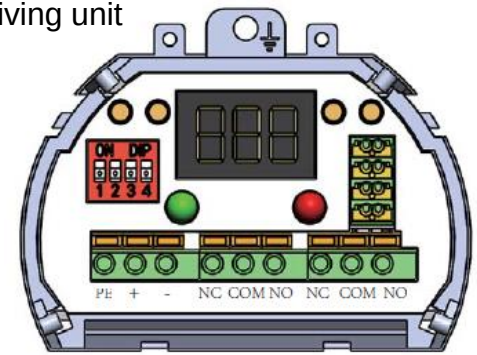
Product Features

Emitting unit

Bluetooth available



Receiving unit



Digital energy indication

Easy to check instrument performance
Easy to set threshold according to application.

Multi-band output

Each set of device can be set for different working frequency which effectively prevent interference caused by multiple installation of devices at close distance.

The emitting unit self-checking

Detect the working status of the instrument in real time to prevent false alarms caused by the reduction of the energy value of the emitting unit.

Support parallel connection

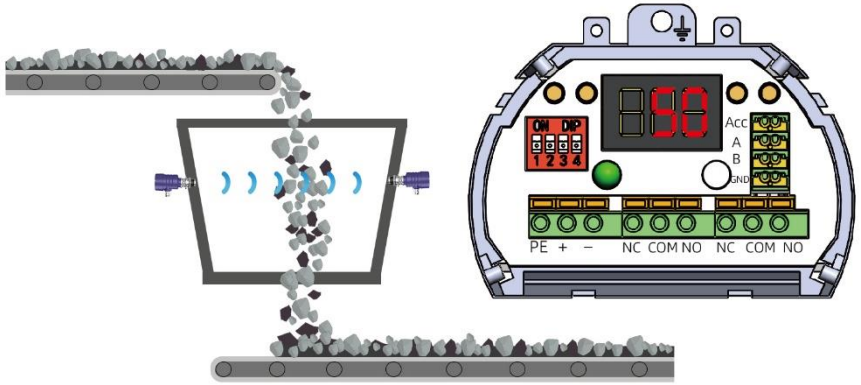
The emitting unit and receiving unit only need one power supply which is convenient for field wiring

With Functional safety option

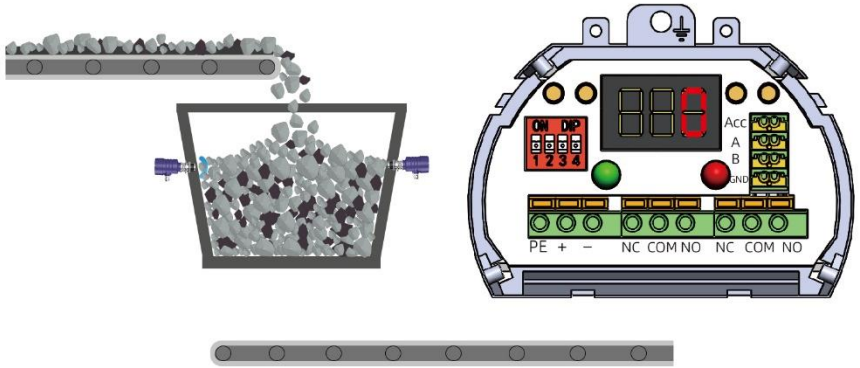
The functional safety function ensure instrument reliability and stability

Product Features

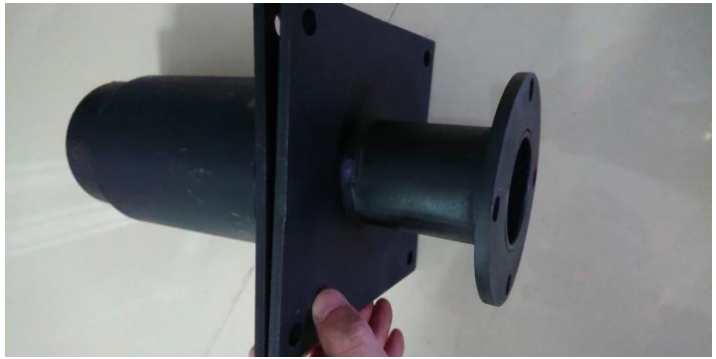
Chute unblocked
Red light off
Received energy value 50

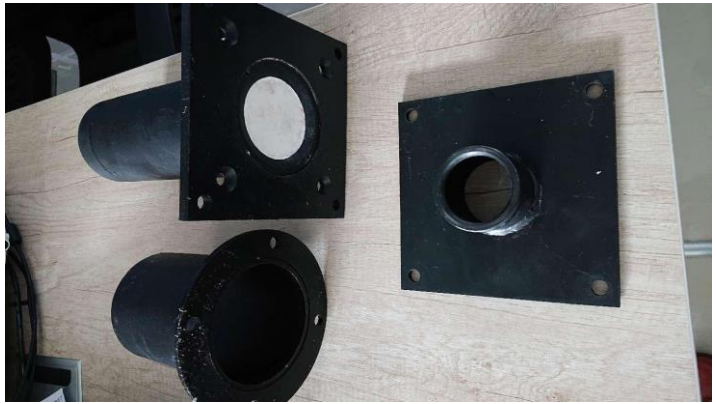


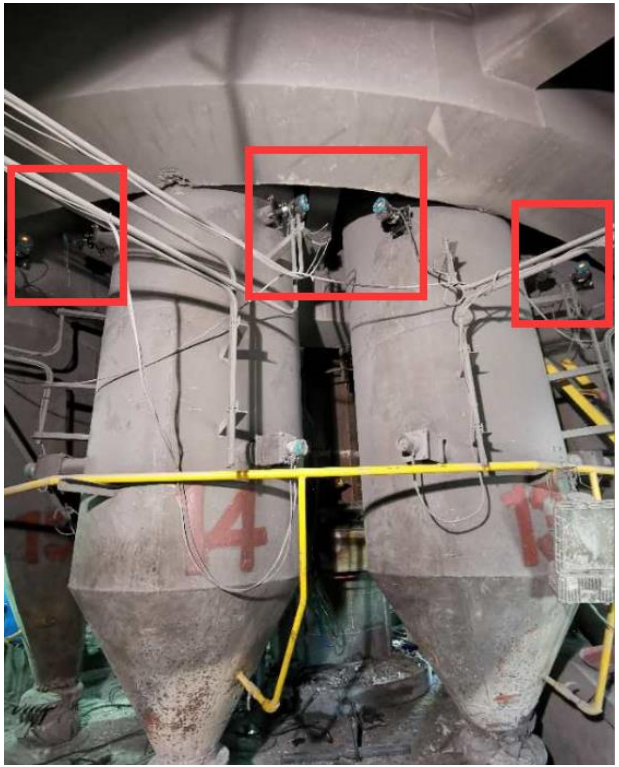
Chute blocked
Red light on
Received energy value 0



Adapter for high temperature

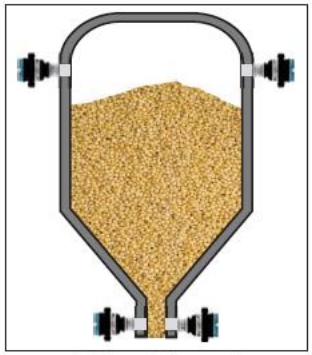




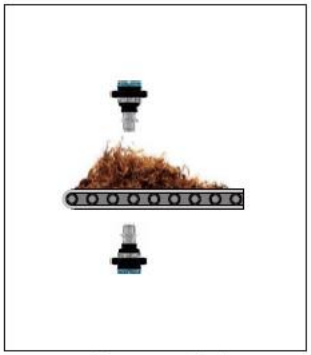


Applications

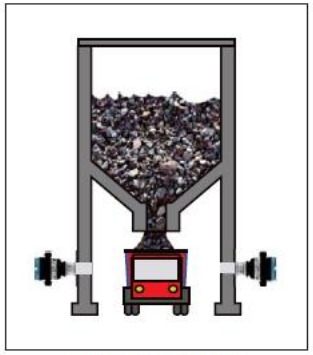
- Chute blockage detection
- High and low level detection
- Conveyer belt detection
- Track/car overload detection
- Crane anti-collision detection



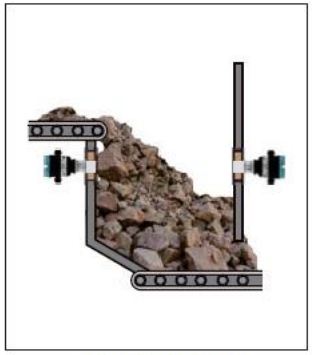
Bulk solid vessels



Conveyor belt



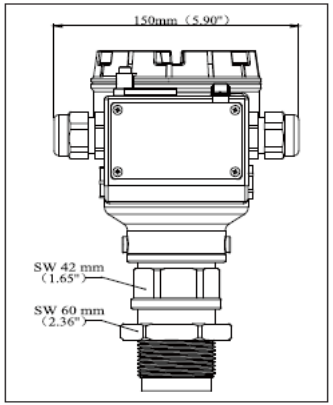
Object detection

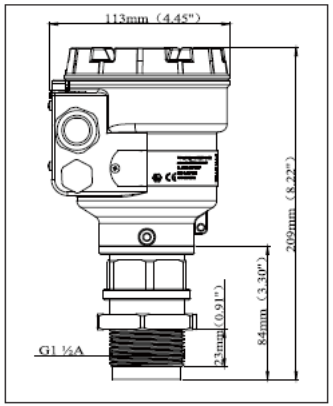


Limit detection

Parameters

Model	CMS210
Application	Powder, granule,bulk solid,floccule
Measuring range	0-200m (optional antenna)
Power supply	AC 100~240V±10% , 50/60Hz or DC 11V~32V
Frequency	24-26GHz
Beam angle	±30°
Delay	0-99S adjustable
Power	<3W
Channel no.	8
Frequency accuracy	±50KHz
Output	DPDT
Contact rating	250VAC 2A
Process fitting	Thread or flange
Sealing	FKM (Viton)
Antenna material	PTFE
Process temperature	-40~120℃(up to 500℃ with adapter)
Process pressure	-1~4bar (up to 40bar with adapter)
Ambient temperature	-40~70℃
Protection	IP67
Cable entry	2xM20*1.5(diameter 9~13mm)2xM16*1.5 (diameter6~9mm)
Ex certificate	Ex dⅡC T6 Gb , Ex tD A21 IP67 T80℃
Dimension	130*240*265mm
Weight	5Kg





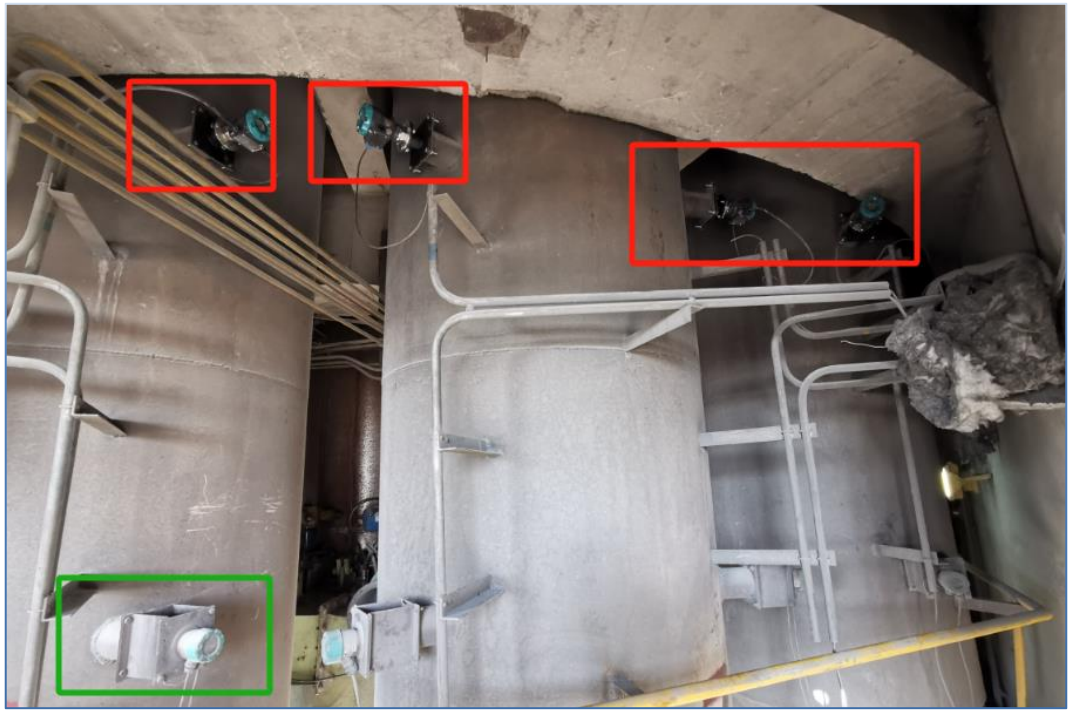
Product Patent

No.	Name	Type
1	A material detection device	Invention
2	Transmitter of electromagnetic wave material level switch and electromagnetic wave material level switch	Invention
3	An electromagnetic wave material level switch	Invention
4	Processing method of electromagnetic wave material level switch and electromagnetic wave material level switch	Invention

Application Cases

Installation cases

Carbide-Replacing HAWK. (CMS210 in red box and HAWK Gen 3 in green box)



Installation cases

Bioenergy

Installation cases

Acetylene

RETTAR

THANKS

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