

I、Working Principle

- Hydrogen-oxygen bonds in water molecules absorb near-infrared rays of specific wavelengths. At a specific wavelength, the reflected near-infrared energy is inversely proportional to the near-infrared energy absorbed by the water molecules in the material, so the moisture content of the measured material can be calculated according to the amount of energy loss.
- When a water molecule is excited by a specific energy band, it becomes a vibrational state. In the near-infrared part of the spectrum, which is particularly reactive to water molecules, it will be easier for the instrument to transmit, filter and receive energy.
- Near-infrared measurement technology is a non-destructive, non-contact real-time measurement technology.

II、Structural Features

- ✧ The single-sensor five-wavelength method is used for detection, and its stability is greatly improved compared with six-beam and eight-beam.
- ✧ The five-wavelength method has more measurement reference wavelengths, which can make the measurement stability and measurement accuracy better.
- ✧ The average test accuracy can reach about 0.1%-0.5% (depending on the material to be tested).
- ✧ Online dynamic real-time detection, the response time is only 8ms, realizing real-time control of product moisture content.
- ✧ Highly integrated electronic devices, circuit boards with SMT technology. The failure rate of the product is low, and the quality is stable and reliable.
- ✧ Filters are smaller than conventional designs and are less affected by bandwidth.
- ✧ The use of single lead sulfide sensor avoids the problem of different linearity of dual sensors.
- ✧ Dynamic real-time diagnosis system, no need for regular maintenance.
- ✧ Multiple output signal sources: RS485, 4-20mA analog signal and RS232.

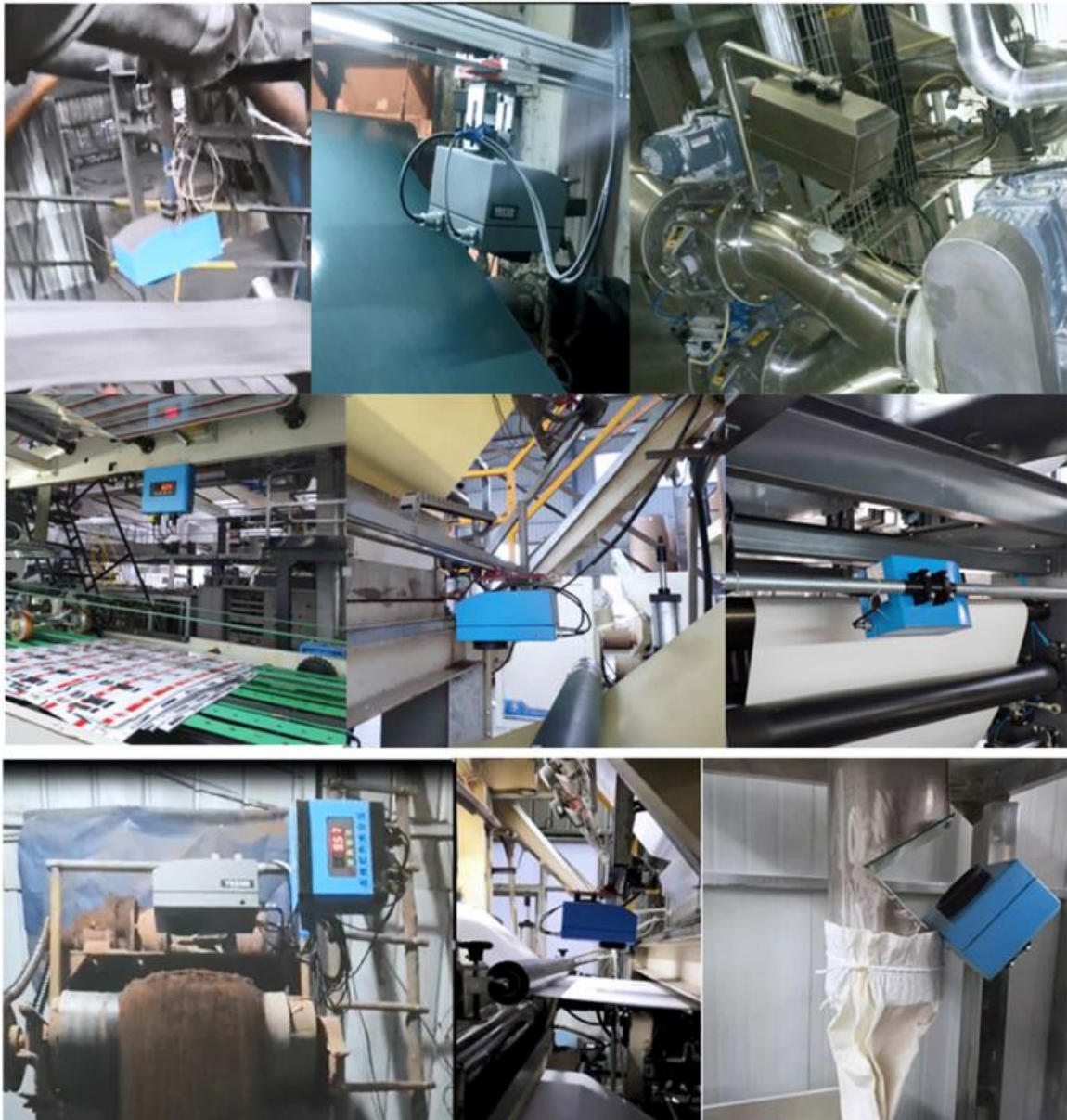
III、Features

- ✧ Non-contact, using infrared technology to measure moisture in slow reflection mode.
- ✧ Multi-channel settings, the same instrument can meet the needs of measuring different types of materials. The QL series moisture meter has 10 channels, numbered from 1-10. Each channel number represents a set of the above-mentioned channel parameters. Change the channel number to select a different The channel parameters to meet the needs of the same instrument to measure different types of materials.
- ✧ It is not affected by external light changes, and has automatic temperature compensation. It is basically not affected by external temperature changes and has good long-term stability.
- ✧ The installation is simple, the operation is convenient and quick, and the normal production will not be affected during the installation and commissioning. The QL-300 online moisture analyzer adopts pre-calibration, and the calibration can be completed only by correcting the intercept (zero position) on site.

IV、 Application Field

Iron and steel industry	sintering mixture, pellet raw material, before and after drying, pelletizing, etc.
Non-ferrous metals	bauxite, copper concentrate, mineral sand, nickel ore, gold, silver, lead-zinc concentrate, alumina and non-ferrous smelting, etc.
Tobacco industry	cigarette packs, tobacco stems, tobacco leaves, shredded tobacco, rebaking, tobacco sticks, etc.
Grain industry, food processing, ceramic industry, glass industry, cement industry, pharmaceutical industry, chemical industry, wood industry, paper industry, etc.	

On-site Installation Pictures

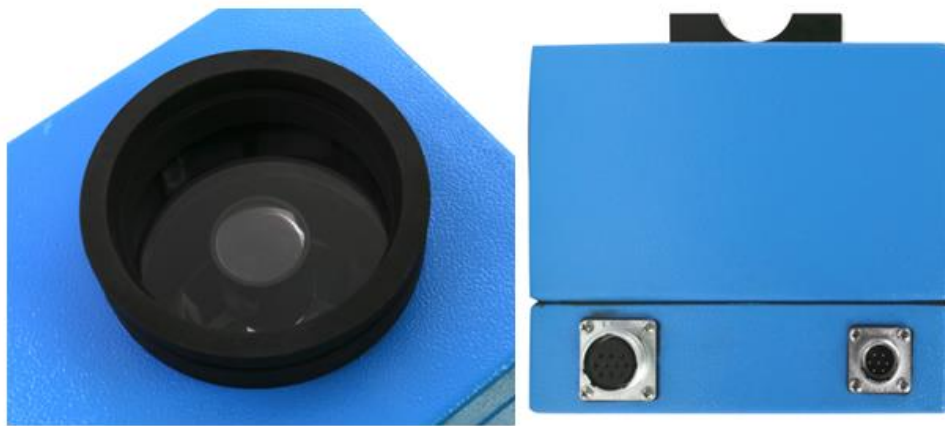


V、 Technical Parameters

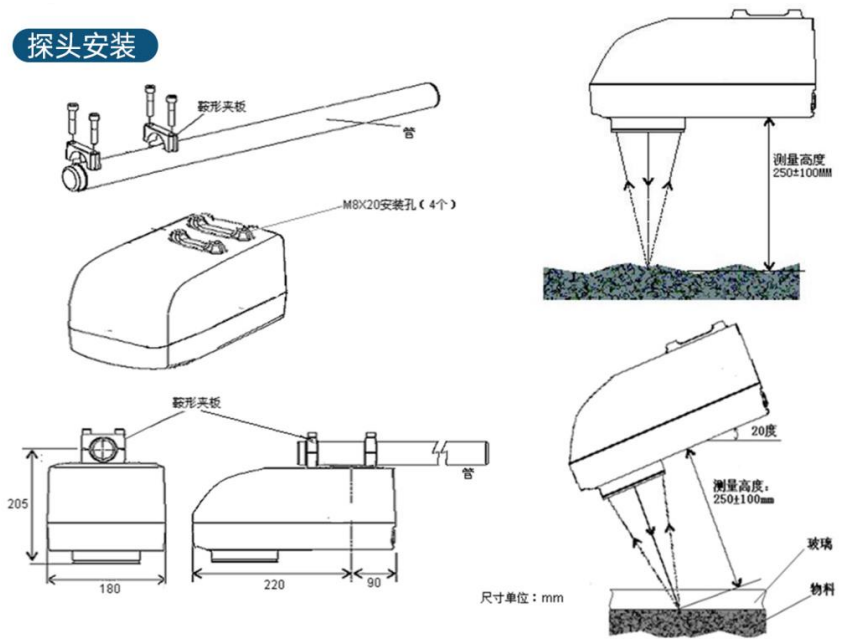
Model	QL-300
Suitable for Measuring Materials	White, yellow and other bright color products
Probe Glass	High Bay Quartz Glass
Measuring Range	0 ~ 50%(Material water absorption saturation is the maximum measurement range)
Measurement Accuracy	± (0.1%-0.5%)
Resolution	0.0001
Spot Diameter	60mm
Measuring Speed	0.125s
Detector	Add filter package to avoid external light interference
Calibration Adjustment	Quick calibration, pre-calibration, no need for daily calibration
Filter Time	Linear or exponential (0.1-180 seconds)
Signal Output	RS232, RS485, 4-20mA analog signal (choose 2 from 3)
Protocol	Choose free protocol or MUDBUS-RTU protocol
Number of Channels	10
Operating Temperature	-10°C~50°C
Working Distance	150mm~350mm
Voltage	AC 220V 50Hz
Weight	Probe: 6kg; Monitor: 7kg;

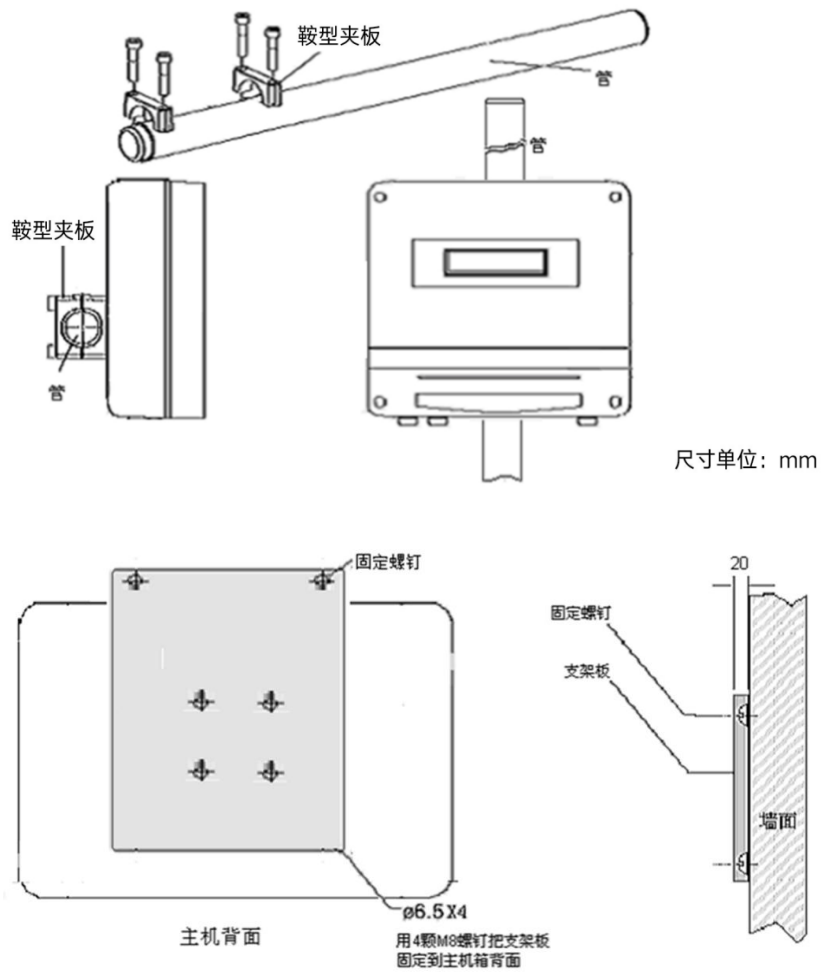
VI、 Product Picture





VII、 Product Dimensions and Installation Diagram





VIII、 Packing List

No	Name	Unit	QTN
1	Probe	set	1
1	Monitor	set	1
1	10-core shielded cable	pcs	1
1	3-core cable (with 7-core aviation plug)	pcs	1
1	Host power supply 3-core cable	pcs	1
1	5 pin plug	pcs	1
1	2 pin plug	pcs	1