诺盈佳业
NUOYING

Floating ball level controller

Instrument Manual







China · Shaanxi

Floating ball level controller

Working principle

This series of instruments is designed based on buoyancy and magnetic principle.When the liquid or phase interface changes, the float with the magnetic steel is lowered and moved up and down along the guide tube.The dry spring tube in the guide tube ACTS under the magnetic effect of the maglev, and outputs the resistance signal or switch signal corresponding to the liquid level.

The main structure of the base type meter is composed of stainless steel guide pipe, float, flange or thread connecting piece and junction box, core board and other parts.Anti-corrosion (F1) instruments are products made of PVC plastic as the main body (contact with the medium).Anti-corrosion (F2) instrument is made of ABS plastic.Anti-corrosion type (F3) instrument body and float are all stainless steel materials sprayed teflon.Anti-corrosion type (F4) instrument body is made of stainless steel material surface spray teflon, float material is ptfe.Outer diameter from 90.

Design Features

- ◎ Customized design, multi-point control, wide application range;
- ◎ Simple structure, convenient installation and low maintenance cost;
- ◎ Stable and reliable performance, strong anti-lightning and anti-interference ability;

Technical parameter

Ambient temperature	Liquid level measurement, etc.
Product model	NYCFQ-UK
Float material	F4、PP、304、PTFE（optional）
Rod length	200～6000mm(可定制)
Ambient temperature	-20～+70℃
Medium temperature	-20～+125℃
Process pressure	-0.1～2.0MPa
Process connection	flange，thread （selection）
Medium viscosity	≤0.05Pa·S）
Medium density	0. 5～2. 0g/cm³
Signal output	4-20mA、SPDT
Protection class	IP 65、IP 67、IP 68(optional)
Explosion-proof grade	Exd Ⅱ CT6 Gb (see the certificate)

※Note：The product can be customized according to the specific requirements of users.

Mounting Requirement

◎ The installation position of the instrument shall be in the lower level of the liquid level. Otherwise, the anti-wave plate is recommended.

◎ Low instrument installation note pipe run and the plumb line of less than 3 °Angle.

◎ The low-density instrument shall be installed in the manhole to install the float to the instrument guide tube.

◎ The outer connection of the high temperature gauge is required to use the AF150 high temperature wire.

◎ The instrument should be installed in a cleaner place. When used in sewage, to avoid floating objects, ferromagnetic impurities, sediment and other material card dead float.

◎ A filter should be set around the instrument.

◎ To avoid the wobble caused by the floating surface of the tested liquid, the device sets the positioning hole in the lead vertical position of the instrument.

● Install adjustment and use

If there is no quality problem, the product can be removed,carefully read the instructions and connect the electrical test. Use hand to push float, simulate liquid level change. Observe the change of digital display, current output signal or switch signal, and should have normal reaction and action.

Low when the series of instrument is installed on the pressure vessel with container together in accordance with the relevant provisions of the 1.25 times the working pressure of the water pressure test and 1.05 times the working pressure of air tightness test, confirmed no leakage and damage can be put into use.

The control scheme of the floating ball liquid level in the NY-QUK series is shown in figure 1.

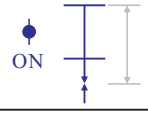
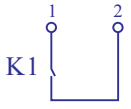
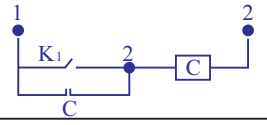
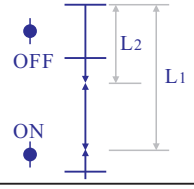
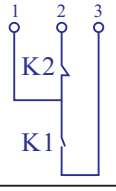
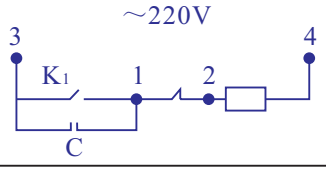
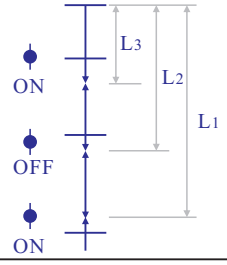
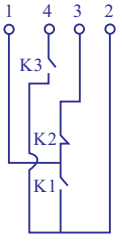
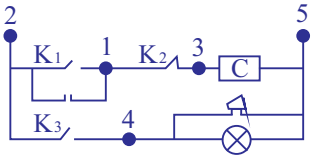
function	code	With the sample	Wiring sample	Control chart
Upper limit alarm	KA			
Feed water control	KB			
Feed water control + upper limit alarm	KC			

Figure 1: NY-FQUK series floating ball level switch control scheme

● Maintenance and maintenance

◎ In addition to daily surface maintenance, it is not required to maintain the instrument properly installed in a good working environment.

◎ Check the sealing ring of the instrument regularly and find that the aging and crack should be replaced in time.

◎ When troubleshooting equipment, it should clean up the defiler of instrument float and guide tube in time so as not to obstruct the free movement of float.

Common failures and troubleshooting methods

Number	Fault feature	Possible parts	Causes	Check the method	Elimination method
1	Switch control sometime s is not	1 Amphenol connector	Bad connection	Open cover to check	Rewiring
		2 Cross-band veneer	Dry reed pipes break	Take out the core board	Check, replace

Transport and storage

Low factory sent to the user's product has good internal and external packaging, can adapt to the normal transportation, when the user during the secondary transportation or when unpacking the case again, should keep the complete original packaging, shipment handle with care and not upside down, and to prevent rain, insolate the impact of the crack and strong vibration, when the product when not in use for a long time should be the original packaging on storage temperature is 25 ~ 55 ℃, humidity is not more than 90%, and no corrosive and harmful gas environment.

Application

NYCFQ-UK floating ball liquid level controller is widely used in oil, chemical, light industry, municipal, environmental protection and other industries, and can alarm and control the liquid level or phase interface in various openings or pressure vessels.

NYCFQ-UK series explosion-proof floating ball liquid level gauge and switch are suitable for explosive gas, combustible steam and air mixing to form explosive gas mixture. Instrument of explosive-proof grade for d Ⅱ BT4.

This series of instruments is not applicable to the environment with strong vibration and solid suspension impurities, ferromagnetic impurities and viscous media.

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