



Magnetostrictive Liquid Level Sensors for Flooded Evaporator

Description

For central air environment, KangYu developed a special solution that successfully solved the problem of electromagnetic interference to achieve precision measurements for flooded evaporator refrigerant level, improving the entire unit of cooling efficiency.

Features

Characteristics1: Double-shield structure, effectively against electromagnetic interference.

The sensor uses double-shielded structure, which have passed the CE certification, complies with the following EMC standards.

EN61000-6-1: 2007

EN61000-6-3: 2007

EN61000-3-2: 2006

EN61000-3-3: 2008



Characteristics2: replace the sensor without removing the refrigerant, and reducing Repairs costs.

The sensor uses double tube design, also based on the bypass pipe is more narrow space, using core pulling structure (the pipe can be pulled together in the warehouse along with electronic sensors), when the sensor needs to be replaced, no refrigerant removed, and greatly reducing maintenance time and avoid refrigerant waste. So the customers do not need to send someone to the scene, its own end-users have to replace the sensor, greatly reducing maintenance costs.

Characteristics3: easy to install, saving installation costs.

Flooded evaporator air conditioning unit level measurement generally have a bypass pipe, liquid level sensor is mounted on the bypass pipe, Kang Yu-magnetic-foot 2-inch NPT thread design for thread (also according to customer requirements), directly onto the inner thread of the bypass pipe, without external flange and reduce customer's manufacturing costs.

In addition also the following features:

- ◆High accuracy to meet the high requirements metering of tank level measurement occasions;
- ◆Stable performance, without affect of temperature and pressure changes of gas and liquid inside the tank;
- ◆Various output options to meet a variety of collection system requirements;
- ◆Intrinsic Safety Certification:ExialIBT5,to adapt to a variety of safe applications;
- ◆Modbus, which can measure various parameters of liquid level, interface, temperature;
- ◆Various anti-corrosive structure, to meet a wide range of oil, chlorine and other corrosive measurement environment;
- ◆Easy installation, no maintenance.



Specifications:

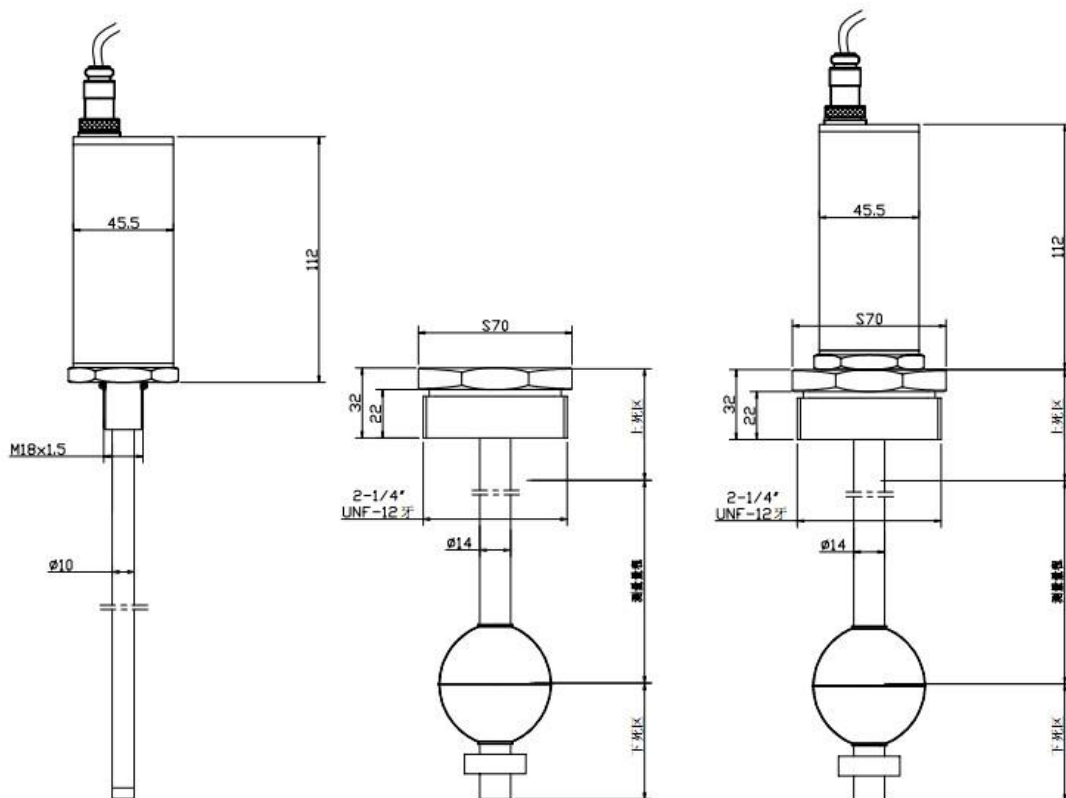
| | |
|-------------------------|--|
| Range | 200~1000mm |
| Operating voltage | +24VDC \pm 10% ; \pm 15VDC \pm 10% |
| Outputs | 4~20mADC |
| Non-linearity | $< \pm 0.05\%$ F.S. |
| Temperature coefficient | $< \pm 0.007\%$ F.S./ $^{\circ}$ C |
| Cable | integral connector |
| Operating temperature | -40~+85 $^{\circ}$ C |
| Storage temperature | -40~+100 $^{\circ}$ C |
| Sealing | IP65 |
| Pressure | 4Mpa (Max.) |
| Interface thread | G1" |

Note: The F.S. is short for Full Scale.

Application Overview:

KYDM Magnetostrictive liquid level transducer provides high accurate measurement of liquids level sensor designed for huge tank or vessels. It can be tailored to special length and mounting requirements for flooded evaporator.

Dimension



Ordering Information

| Option and Explain | | Category | |
|--------------------|--|---------------------|------------------------|
| KYDM-F | KYDM Magnetostrictive linear level transducer | | |
| | P Common | Safety category | electrical performance |
| | G Flame-proof | | |
| | B Intrinsic safety | | |
| | 1 24VDC(±10%) | Input voltage | |
| | 2 15VDC(±10%) | | |
| | 3 ±15VDC(±10%) | | |
| | 4 Special (12VDC-24VDC) | | |
| | V_____ [1][2]output [3]Magnet [4]Direction (Voltage output) 01=0---10v 05=0---5v 1=Single 0=Positive ⁽¹⁾ 55=-5---+5v 11=-10---+10v 2=Double 1=Opposite ⁽²⁾ | Output | |
| | A_____ [1][2]output [3]Magnet [4]Direction (Current output) 42=4---20mA 1=Single 0=Positive ⁽¹⁾ 2=Double 1=Opposite ⁽²⁾ | | |
| | M_____ [1]Baud rate [2]Magnet [3]Temp point [4]Temp position (Modbus RTU output) 9=9600bps 1=Single 0=Null W=Null S=Standard 4=4800bps 2=Double 1-5 point P=Average X=Special | | |
| | G Hard tube | structural features | |
| | F Anticorrosive | | |
| | R Flexible | | |
| | A A type of electronic housing* | | |
| | B B type of electronic housing* | | |
| | X Special | | |
| | _____M (MM) Metric Unit-Range | Measuring Length | |
| | 1 Metric screw thread M18*1.5 | Connection | physical Structure |
| | 2 Metric screw thread M20*1.5 | | |
| | 3 Inch screw thread 3/4-16UNF | | |
| | X Special | | |
| | 0 Null | | |
| | C Cable | outlet | |
| | J Connection Terminator | | |
| | H Connector | | |
| | N High temperature cable | | |
| | 0 Cable on top | | |
| | 1 Cable on side | | |
| | — 0~9(Cable length) | | |
| | A Mounting Kit FK-1 | Mounting Kit | Attachment |
| | B Mounting Kit FK-2 | | |
| | C Mounting Kit FK-3 | | |
| | W Null | | |
| | _____ [1]Level float [2]interface float [3] interface float | Float Type | |

KYDM-F G 1 M910W G B 0100M 1 J 1 3 W 100

(1) 0 point near the end *Refer to appendix
 (2) 0 point near the top

KYDM-FG1M910WGB0100M1J03W100 mean a sensor with:
 Flame-proof ;Input Voltage:24VDC; Modbus output: 9600bps,1 magnet,No temperature point;Hard tube;B type of electronic housing;
 rang:100mm;connection:Metric screw thread M18*1.5;outlet:Connection Terminator ,Cable on side,Cable length:3m;
 Mounting Kit:null;Float Type:level float



Application Picture



【GW】: 1.5kg

【NW】: 1.3kg

Xinhui KangYu Control Systems Engineering, Inc.

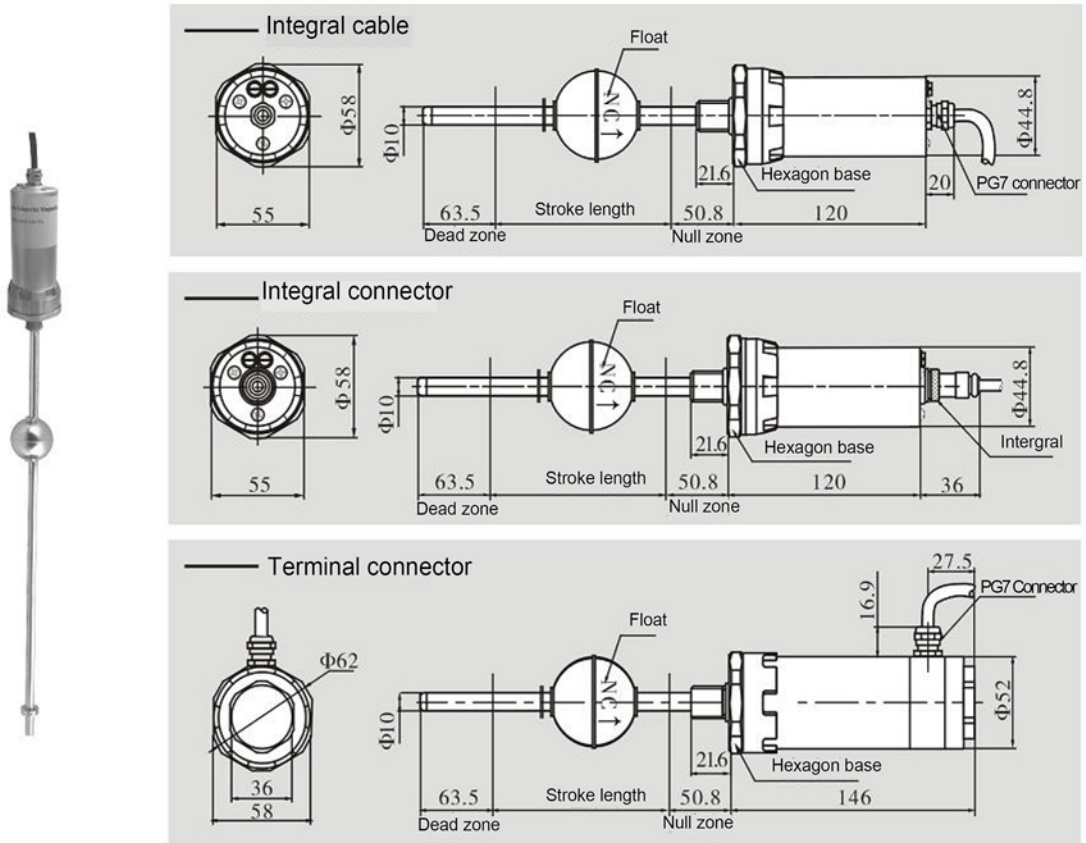
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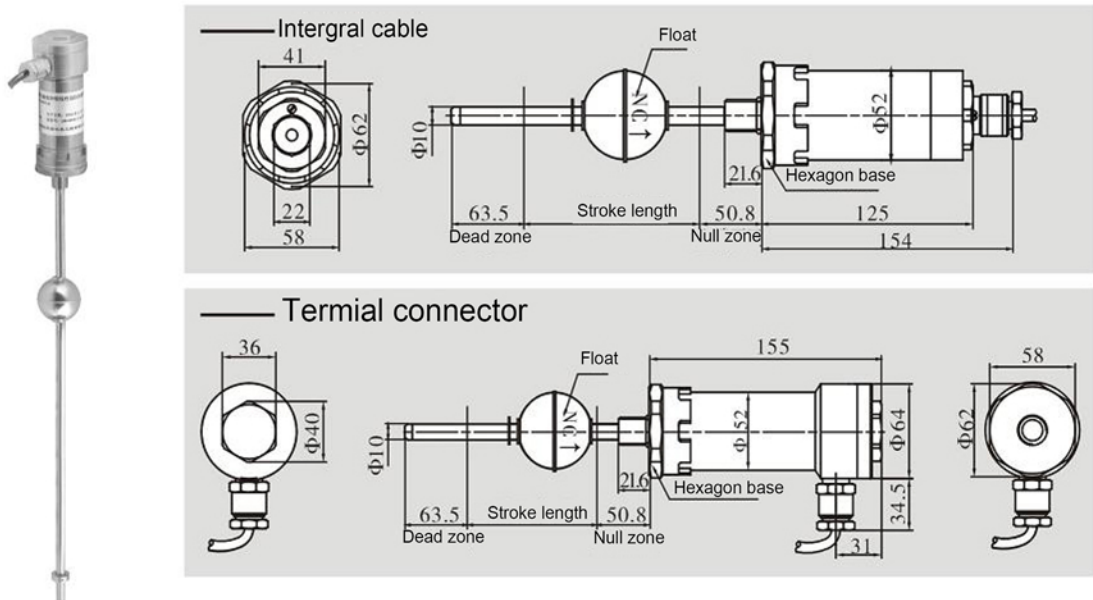


A type electronic housing

Common



Flame-proof



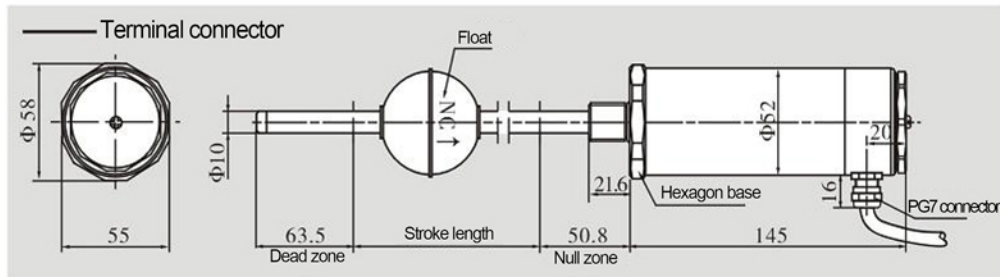
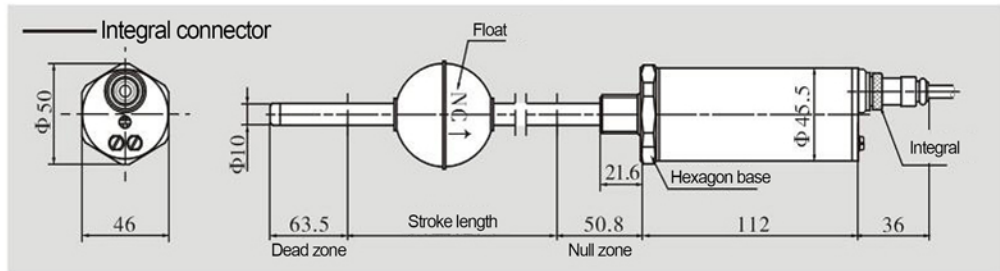
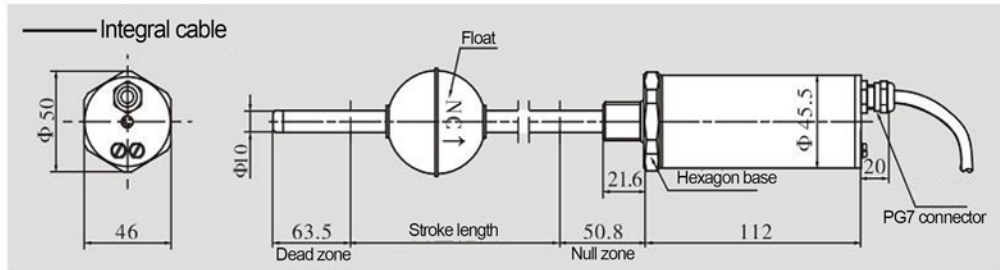
Note:

1. Sensor rod 10mm diameter for stroke length within 3 meter, 13mm for over 3 meters, 14mm for sensors with temperature measurement.
2. Electronic housing material: Aluminum for common type with integral cable and integral connector, stainless steel for terminal connector and flame-proof type.
3. Recommend A type electronic housing for over 3 meter stroke length.

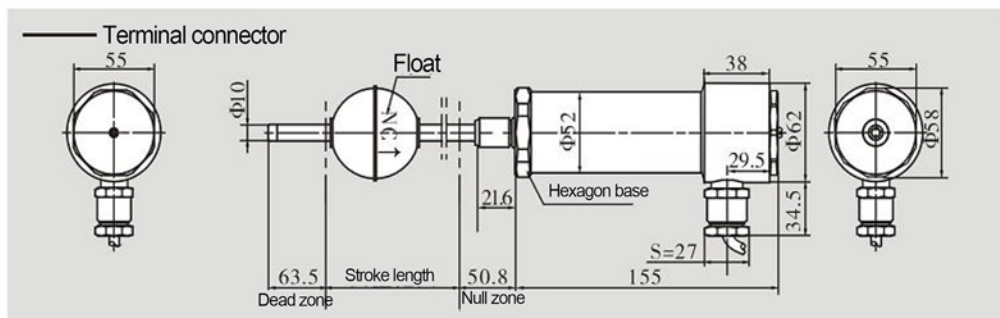
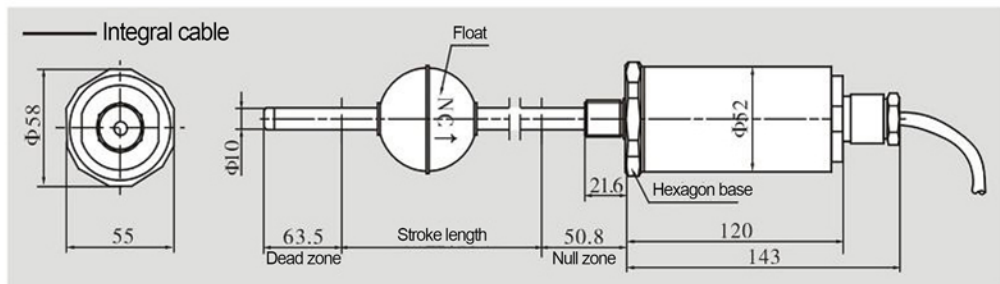


B type electronic housing

Common



Flame-proof



Note:

1. Sensor rod 10mm diameter for stroke length within 3 meter, 13mm for over 3 meters, 14mm for sensors with temperature measurement.
2. Electronic housing material: stainless steel.
3. Recommend B type electronic housing for harsh environment.