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PI Controls Europe
INSTRUMENTATION SOLUTION PROVIDER

Ultraosonic level meter

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Product Introduction

CS71

Application:Industrial Level Measurement,especially for water treatment
Measuring Range: liquid:0.4-5m
Process Connection:M66*2/Flange
Energy Transducer Material:PTFE,PU/PC
Temperature:-40~ 70 Deg C
Process Pressure:-0.02~0.1Mpa
Precision:+/-0.5%(Full Range)
Ex-proof:Exia IIB T6 Ga
Signal output:4-20mA
4-20mA/HART
Power Supply: 24VDC(Two-wire)
24VDC/220VAC(Four-wire)

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CS72

Application:Industrial Level Measurement,especially for water treatment
Measuring Range: liquid:0.4-10m
Process Connection:M66*2/Flange
Energy Transducer Material:PTFE,PU/PC
Temperature:-40~ 70 Deg C
Process Pressure:-0.02~0.1Mpa
Precision:+/-0.5%(Full Range)
Ex-proof:Exia IIB T6 Ga
Signal output:4-20mA
4-20mA/HART
Power Supply: 24VDC(Two-wire)
24VDC/220VAC(Four-wire)

CS73

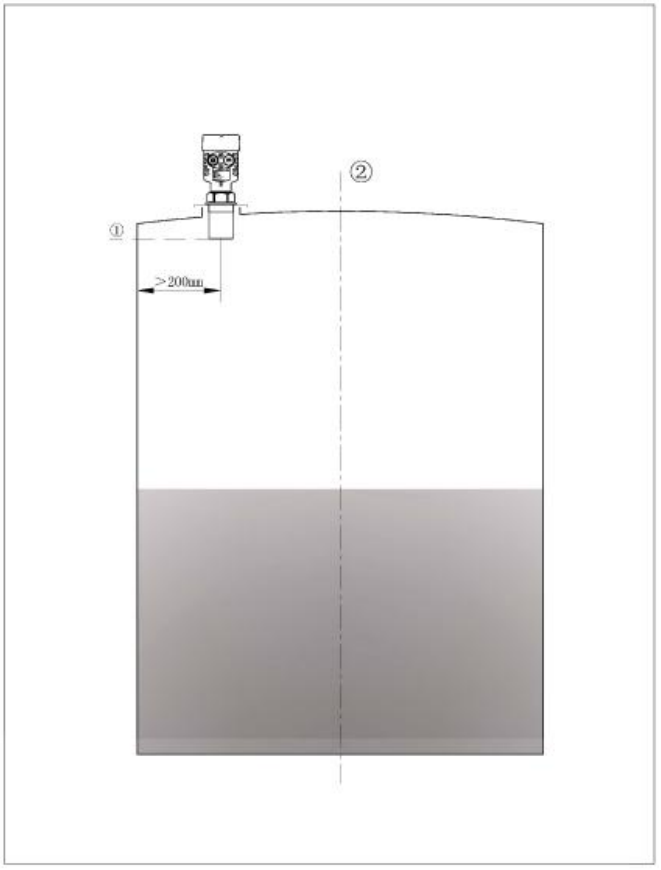
Application:Industrial Level Measurement,especially for water treatment
Measuring Range: liquid:0.5-15m
Process Connection:M95*2/Flange
Energy Transducer Material:PTFE,PU/PC
Temperature:-40~ 70 Deg C
Process Pressure:-0.02~0.1Mpa
Precision:+/-0.5%(Full Range)
Ex-proof:Exia IIB T6 Ga
Signal output:4-20mA
4-20mA/HART
Power Supply: 24VDC(Two-wire)
24VDC/220VAC(Four-wire)

Installation

Installation Position

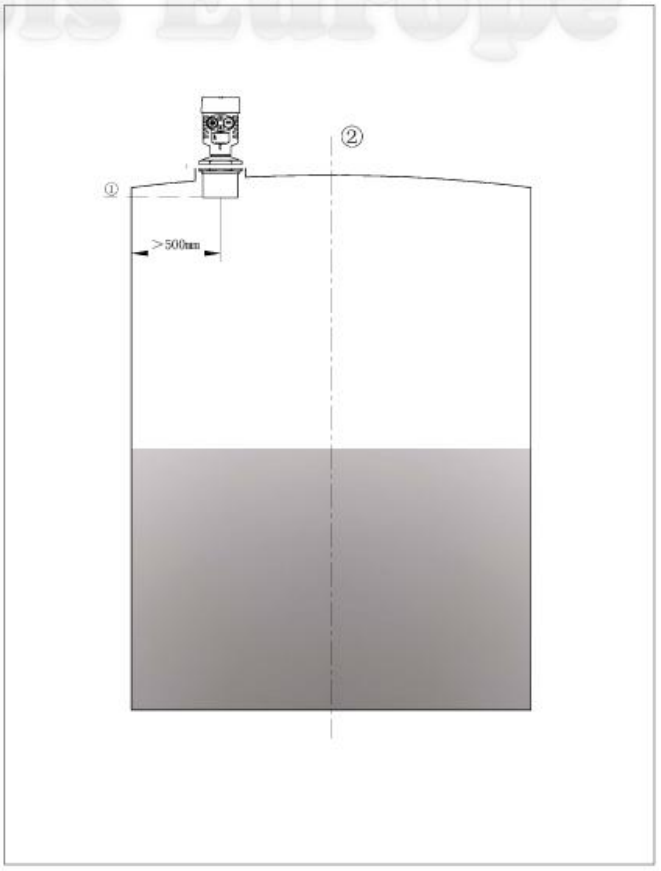
- CS71,CS72

When install CS71 and CS72,
pls make sure the distance between level meter and tank wall at least 200mm.Suggest distance is above 500mm.
1.Lower edge of the sensor
(sound wave emission surface)
2.Middle line of the tank



- CS73

When install CS73,pls make sure the distance between level meter and tank wall at least 500mm.
1.Lower edge of the sensor
(sound wave emission surface)
2.Middle line of the tank



Installation Requirement

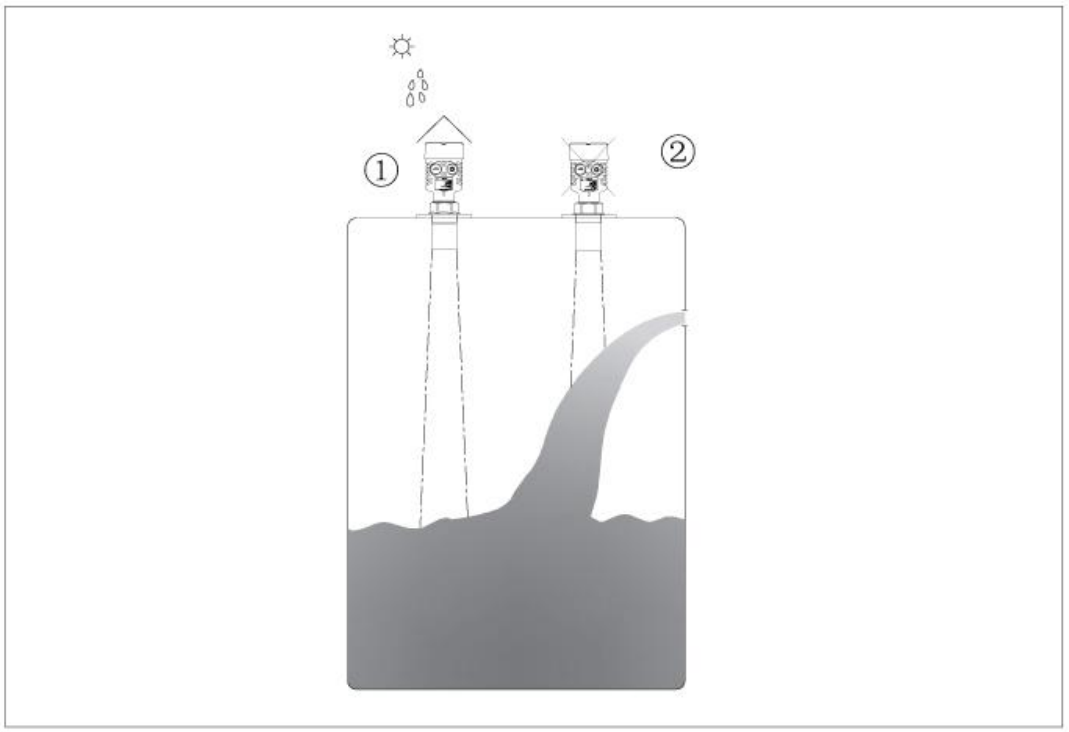
1.Level meter must be some distance from the tank wall(pls reference to Pic 2.1)
2.There's beam angle when Energy transducer radiate ultrasonic pulse.
3.From energy transducer lower edge to measured medium,pls avoid A.B obstacle in the radiation region of ultrasonic wave beam.(For example:human ladder;level switch etc)
4.Pls note ultrasonic beam angle can not intersect with feed stream.
5.Pls note the max material level can not enter into measuring blind area.
6.Pls try to make sure the energy transducer radiate direction vertical to the medium level.
7.If install in Ex-proof area,must abide by National Ex-proof dangerious area installtion stipulate.

Typical Installation Mistake

Pls note to install some measures to avoid sun shading or rain.

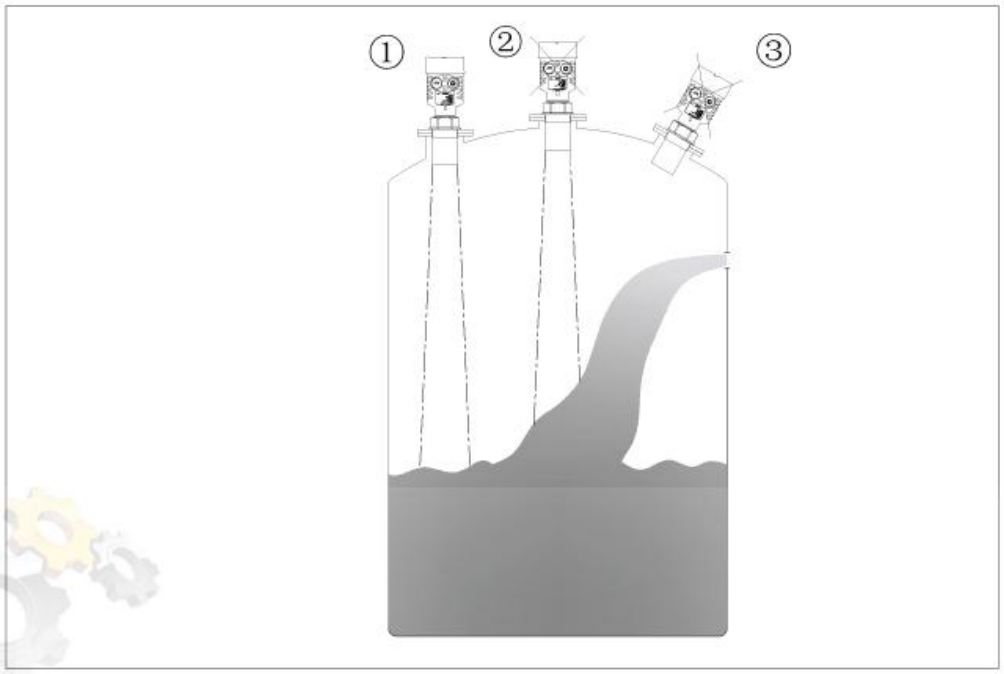
Pls do not install the meter on the top of entrance of material infunde.

1.Correct
2.Wrong



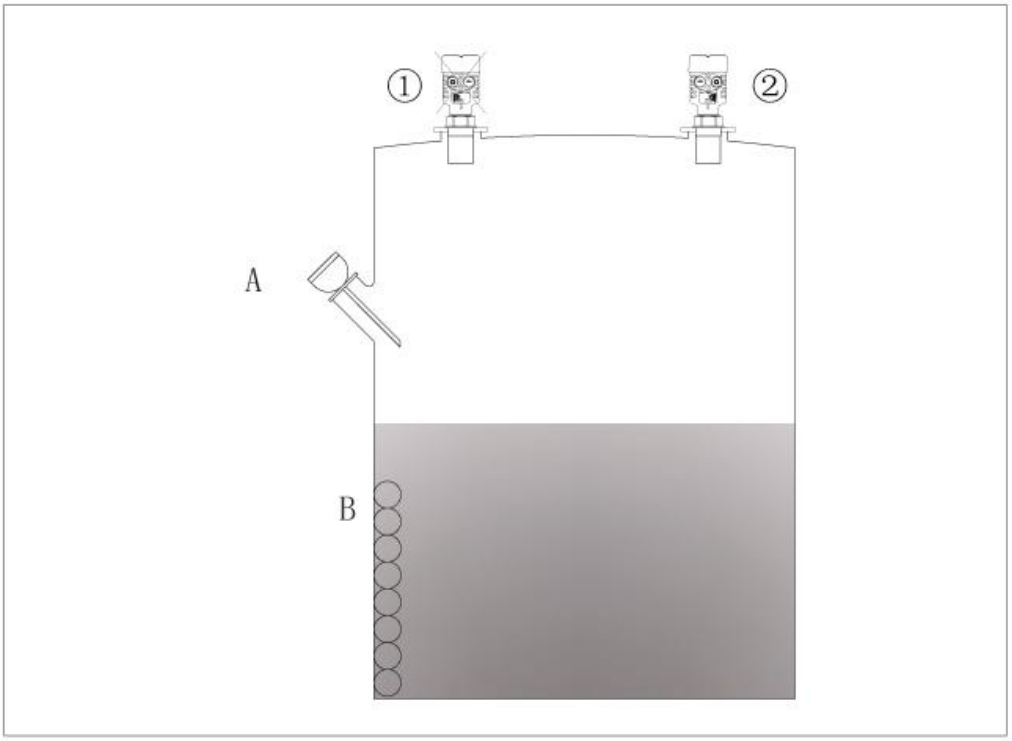
Energy transducer should be vertical to the measuring medium surface
Pls note meter can not be install in the middle of the tank(to avoid relection echo)

1.Correct
2.Wrong
3.Wrong



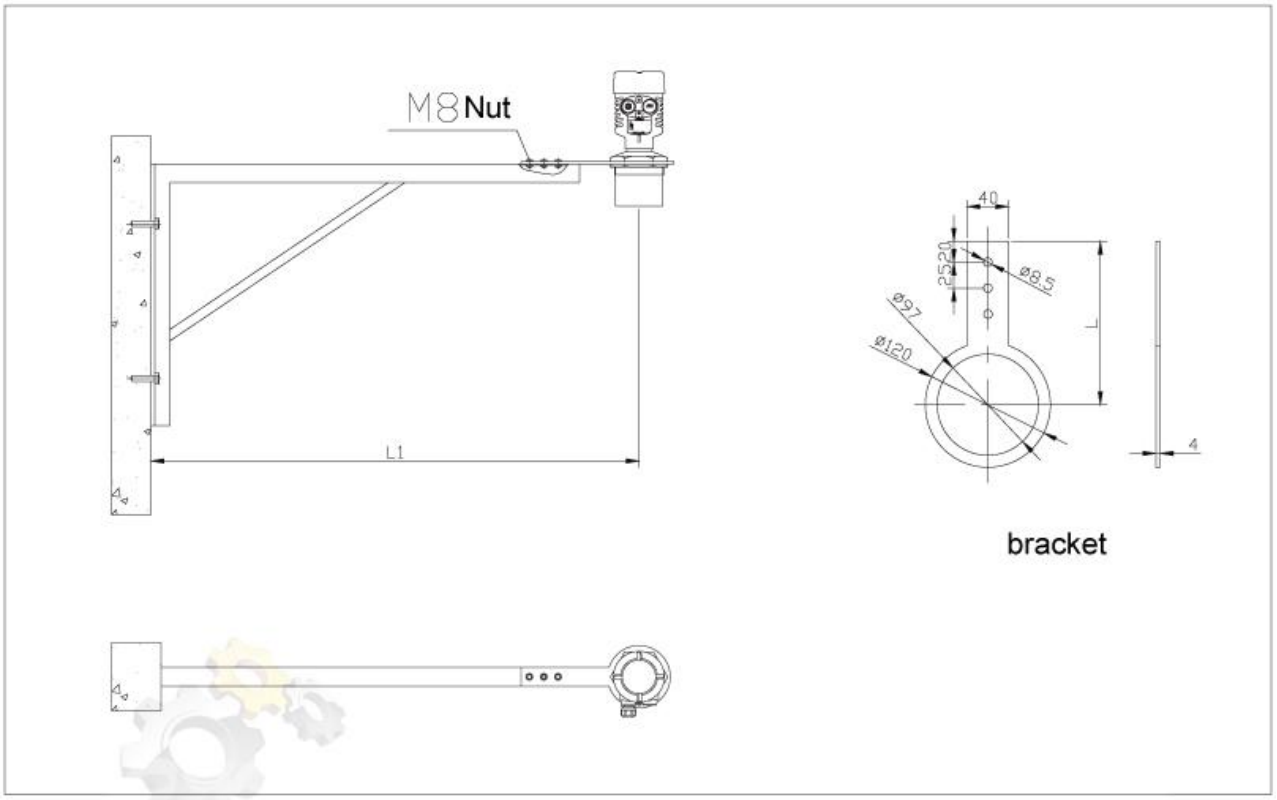
Meter Installation should be avoide A.B obstacle

1.Wrong
2.Correct



- Bracket Type Installation

Used for CS73



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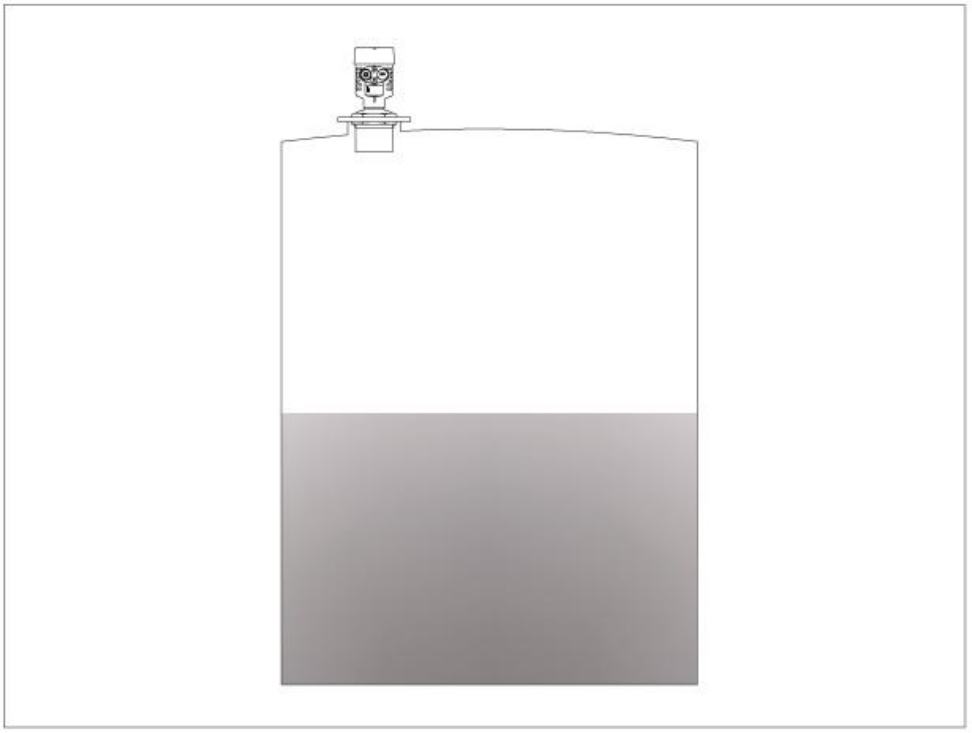
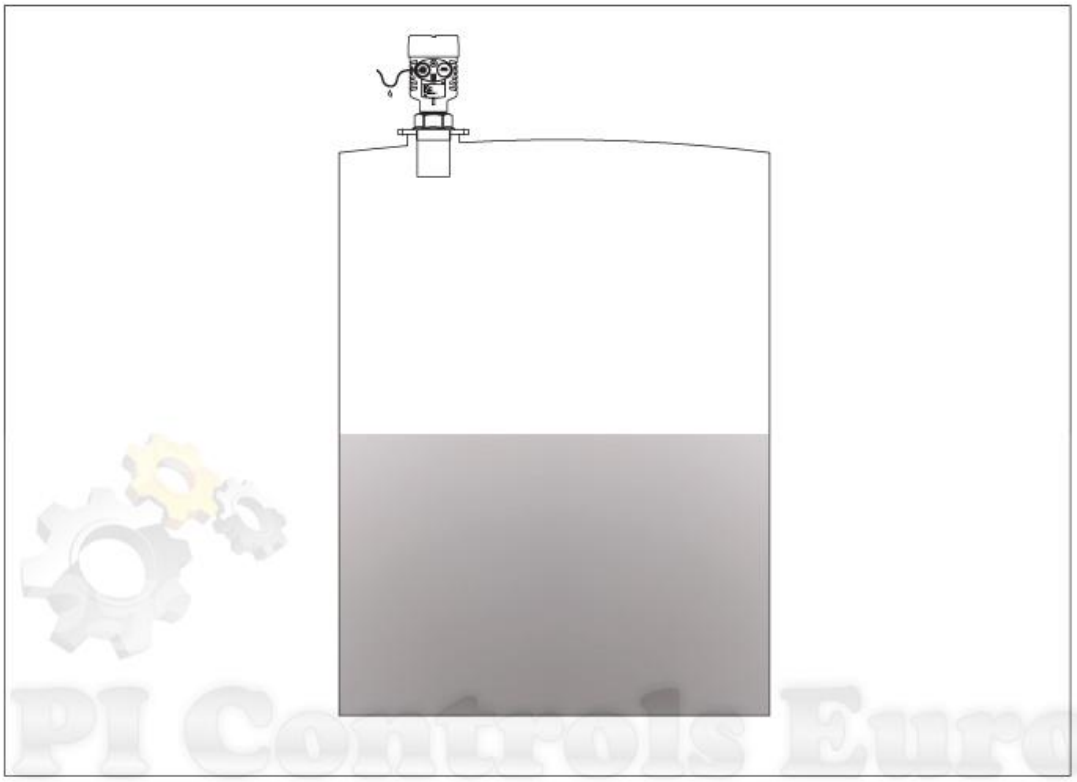
- Flange Type Installation

Used for CS73



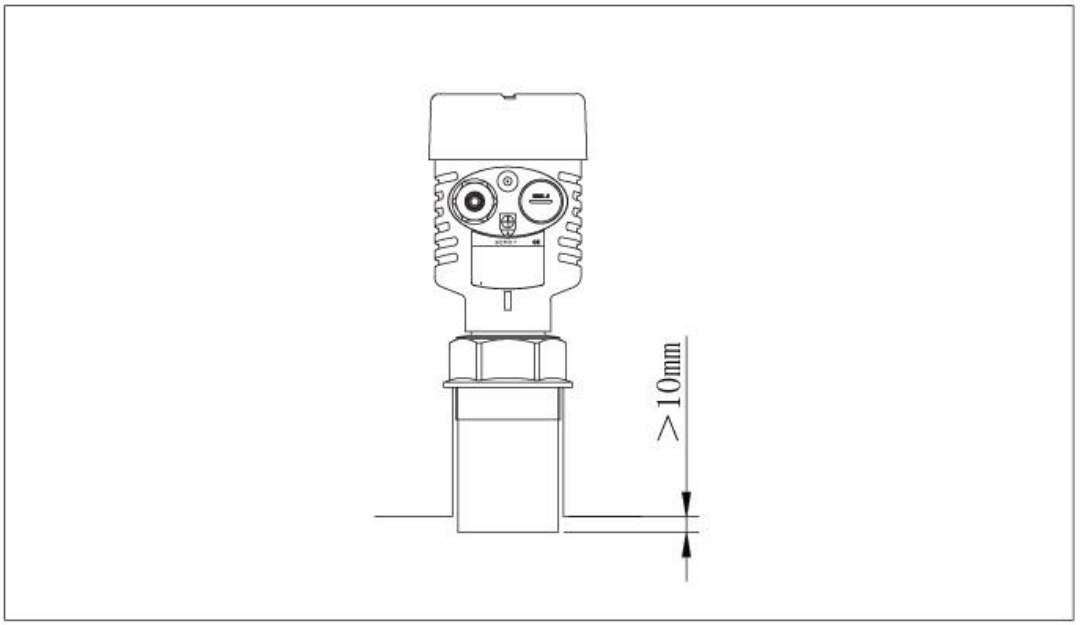
Moistureproof

If install outside or in moist environment,pls tighten seal gland of the cable.
Also pls make the cable as "U" at the cable entrance.Pls check below:



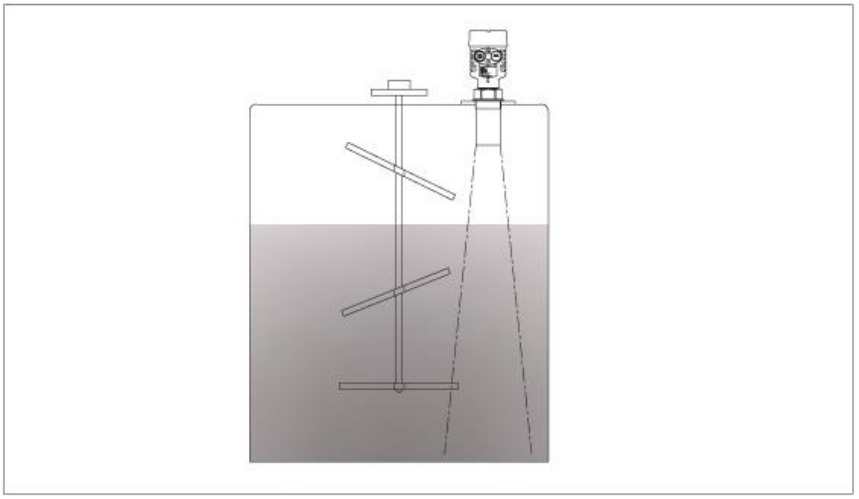
Tank nozzles

Length of tank nozzle:pls make sure the sensor extend the nozzle at least 10mm.



Mixing

If there's mixing in the tank,pls install meter far away from the mixer.
Pls use guide wave tube installation type if there's some foam or wave.



Airflow

If there's strong airflow in the tank, for example:installation outside,and wind is very strong or there's air vortex,we suggest to installation the sensor inside of the guiding wave tube or use pulse radar level meter or guided wave radar level meter.

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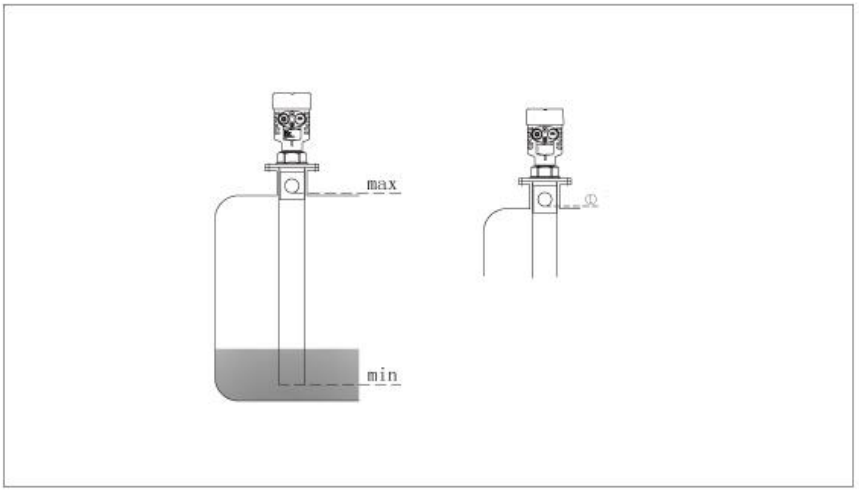
Guided Wave Tube Installation

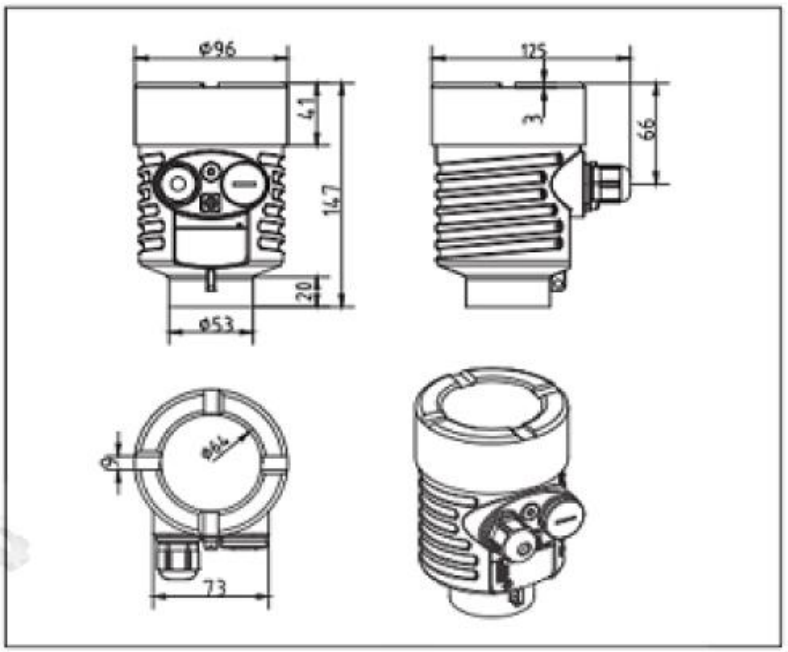
Through the air holes diameter(5-10mm)can use guided wavetube installation.
To avoid the effect by the obstacle,foam or air vortex in the tank.



Note:if material viscosity is big can not use guided wave tube measurement.

Dimension (mm)

Housing Material:Aluminum



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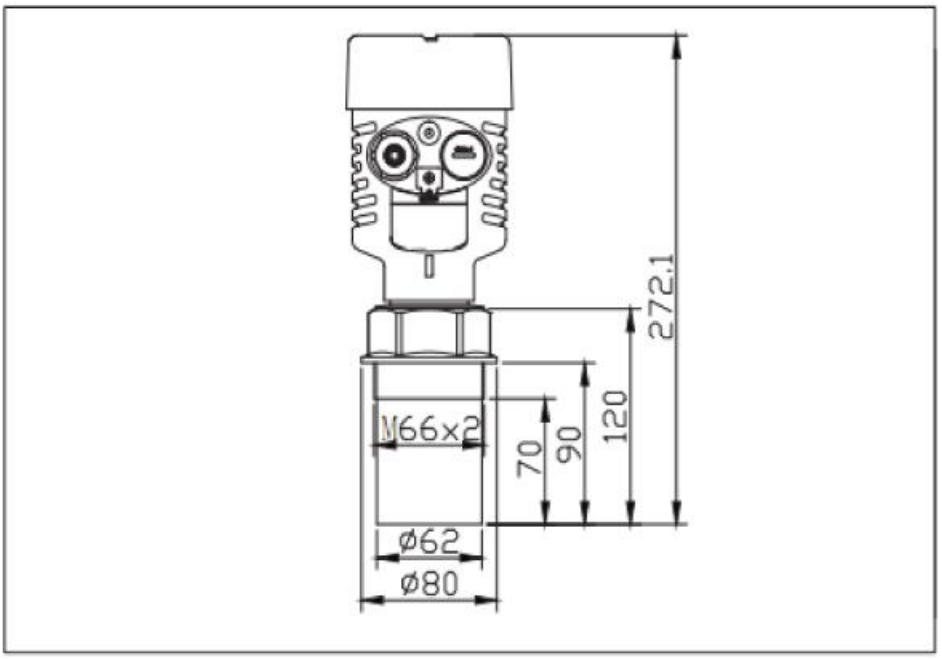
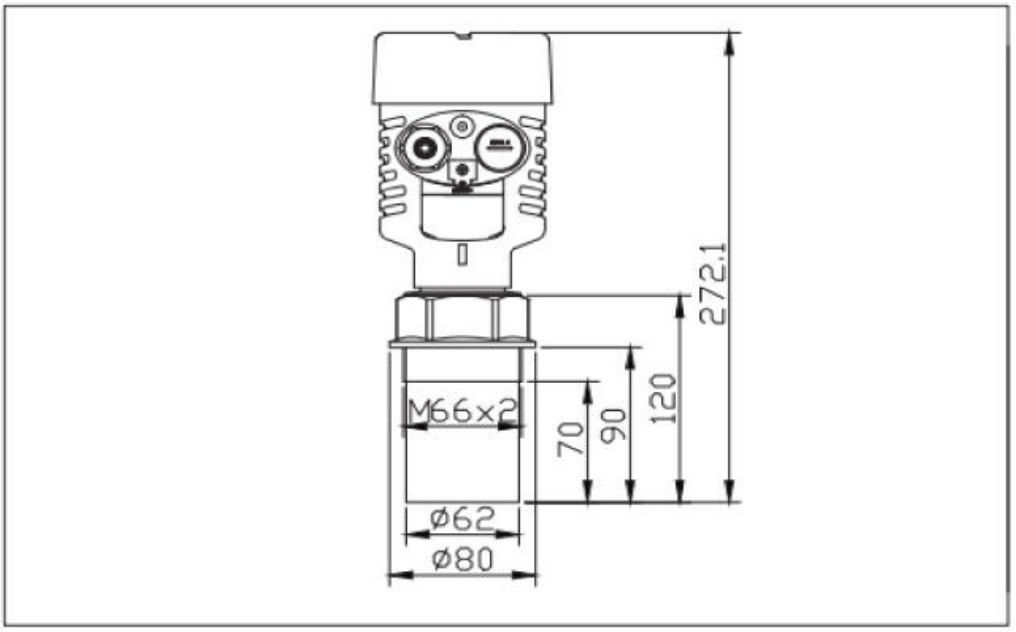


CS72



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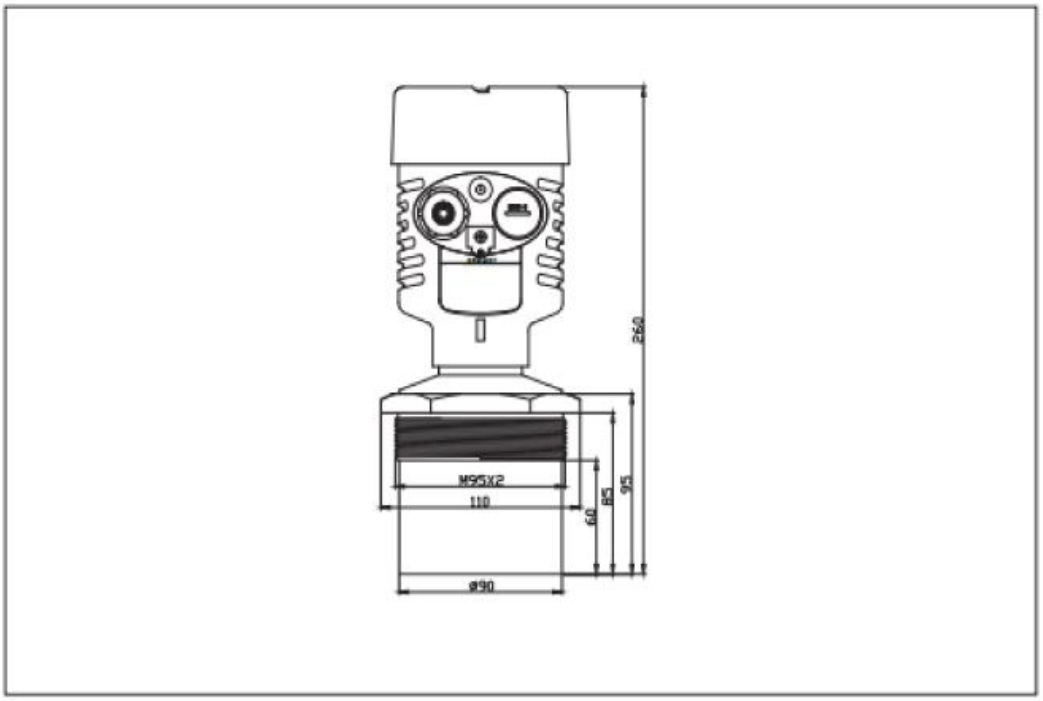
CS73



Model Selection

CS71(5m)

License
P Standard (Non Ex-proof Type) I Intrinsically safe (Exia IIB T6 Ga)
Energy Transducer/Process Temperature/Protecion Grade
A PU/PC/(-40 ~ 70)℃/IP66 B PTFE/(-40 ~ 70)℃/IP67
Process Connection/Material
G Thread D Flange DN80 PN16/PP E Flange DN100 PN16/PP F Flange DN150 PN16/PP
Electronic Unit
2 4 ~ 20mA/24V DC Two Wire 3 4 ~ 20mA/24V DC /HART Two Wire 4 4 ~ 20mA/24V DC/ HART Four Wire 5 4 ~ 20mA/220V AC/ HART Four Wire
Shell / Protection Grade
L Aluminum / IP67
Cable Line
M M20*1.5 N ½" NPT
Programmer/Display
A With Display

CS72(10m)

License
P Standard (Non Ex-proof Type) I Intrinsically safe (Exia IIB T6 Ga)
Energy Transducer/Process Temperature/Protecion Grade
A PU/PC/(-40 ~ 70)℃/IP66 B PTFE/(-40 ~ 70)℃/IP67
Process Connection/Material
G Thread D Flange DN80 PN16/PP E Flange DN100 PN16/PP F Flange DN150 PN16/PP
Electronic Unit
2 4 ~ 20mA/24V DC Two Wire 3 4 ~ 20mA/24V DC /HART Two Wire 4 4 ~ 20mA/24V DC/ HART Four Wire 5 4 ~ 20mA/220V AC/ HART Four Wire
Shell / Protection Grade
L Aluminum / IP67
Cable Line
M M20*1.5 N ½" NPT
Programmer/Display
A With Display

CS73(15m)

License
P Standard (Non Ex-proof Type) I Intrinsically safe (Exia IIB T6 Ga)
Energy Transducer/Process Temperature/Protecion Grade
A PU/PC/(-40 ~ 70)℃/IP66 B PTFE/(-40 ~ 70)℃/IP67
Process Connection/Material
G Thread E Flange DN100 PN16/PP F Flange DN150 PN16/PP
Electronic Unit
2 4 ~ 20mA/24V DC Two Wire 3 4 ~ 20mA/24V DC /HART Two Wire 4 4 ~ 20mA/24V DC/ HART Four Wire 5 4 ~ 20mA/220V AC/ HART Four Wire
Shell / Protection Grade
L Aluminum / IP67
Cable Line
M M20*1.5 N ½" NPT
Programmer/Display
A With Display

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