QTRD 30 Series
Guide Wave Radar Level Meter

Catalogue

Product Overview

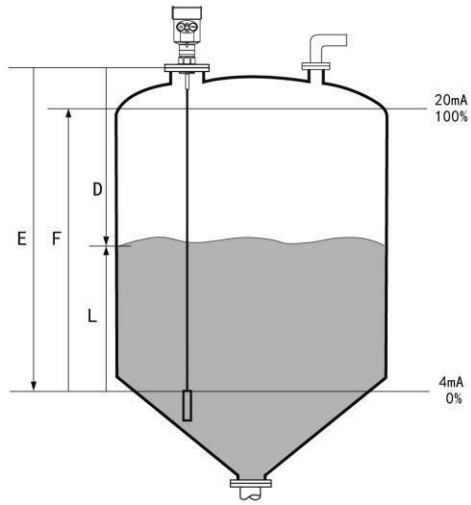
Reflected pulse signal along the cable or rod probe type transmit to the instrument electronic circuit parts, the microprocessor processes the signal, identify the microwave pulse echo generated in the material surface. Correct identification of the echo signal are completed the implementation by the pulse software：D, the distance from the material surface and the pulse travel time T is proportional:

D=C×T/2

Where C is the speed of light

Because the empty distance E is known, the level L is:

L=E-D



By entering the empty height of E (= zero), full tank height F (= hundred) and the application to set some parameters, application parameters will automatically adapt the instrument to measure the environment, corresponding to the 4 -20mA output.

Measuring range

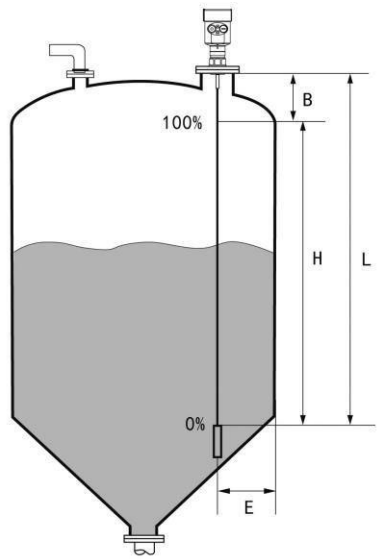
Explanation

H--- Measuring range

L---Empty distance

B---The top of the blind

E---The minimum distance from the probe to the tank wall



--Blind spot is the minimum distance between the top of the highest material surface materials and measurement reference point.

--The bottom of the blind refers to a distance near the very bottom of the cable can not be accurately measured.

--Between the top and bottom of the blind is blind effective measure distances.

Note：

In oQTRDer to ensure the accuracy of level measurement, the material should be located between the top and bottom

Product Introduction

QTRD31

Suitable for Medium	Liquid, solid powder
Application	Liquid and solid powder measure,complicated process conditions
Explosion-proof Grade	Exib IIC T6 Gb/Exd IIC T6 Gb
Measuring Range	30 meters
Frequency	500MHz-1.8GHz
Antenna	Single cable or single rod antenna
Process Te	（-40～250）℃
Measurement Precision	±10mm
Process Pressure	(-0.1～4)MPa
The signal Output	(4 ~ 20) mA/HART
The Scene Display	Four LCD/can be programmed
Power source	Two wire(DC24V) Four wire(DC24V/AC220V)
Shell	Aluminum
Connection	Flange(optional)/Thread

QTRD32

Suitable for Medium	Liquid, especially corrosive liquids
Application	Acids, bases or other corrosive media
Explosion-proof Grade	Exib IIC T6 Gb/Exd IIC T6 Gb
Measuring Range	1~3 meters
Frequency	500MHz-1.8GHz
Antenna	Full PTFE sealing cable type or rod antenna
Process Temperature:	（-40～200）℃
Measurement Precision	±10mm
Process Pressure	(-0.1～4)MPa
The signal Output	(4 ~ 20) mA/HART
The Scene Display	Four LCD/can be programmed
Power source	Two wire(DC24V) Four wire(DC24V/AC220V)
Shell	Aluminum
Connection	Flange(optional)/Thread

QTRD33

Suitable for Medium	Solid powder
Application	Cement silo powder measure; Ash powder measure
Explosion-proof Grade	Exib IIC T6 Gb/Exd IIC T6 Gb
Measuring Range	30 meters
Frequency	500MHz-1.8GHz
Antenna	Double cable type
Process Temperature:	（-40～150）℃
Measurement Precision	±10mm
Process Pressure	(-0.1～4)MPa
The signal Output	(4 ~ 20) mA/HART
The Scene Display	Four LCD/can be programmed
Power source	Two wire(DC24V) Four wire(DC24V/AC220V)
Shell	Aluminum
Connection	Flange(optional)/Thread

QTRD34

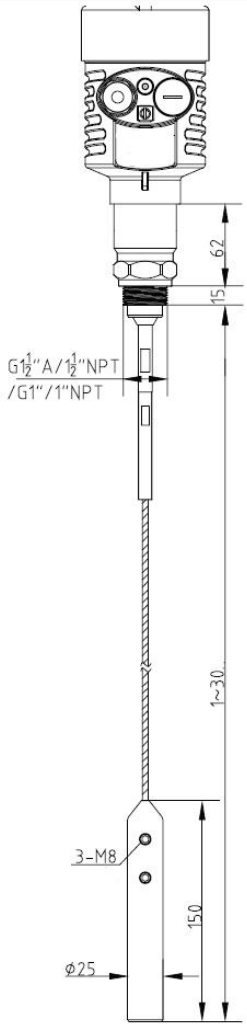
Suitable for Medium	Liquids,particularly low dielectric constant liquid
Application	Measuring deionized water,deoxygenated water and other liquids
Explosion-proof Grade	Exib IIC T6 Gb/Exd IIC T6 Gb
Measuring Range	6 meters
Frequency	500MHz-1.8GHz
Antenna	Coaxial tube type antenna
Process Temperature:	（-40～250）℃
Measurement Precision	±5mm
Process Pressure	(-0.1～4)MPa
The signal Output	(4 ~ 20) mA/HART
The Scene Display	Four LCD/can be programmed
Power source	Two wire(DC24V) Four wire(DC24V/AC220V)
Shell	Aluminum
Connection	Flange(optional)/Thread

QTRD35

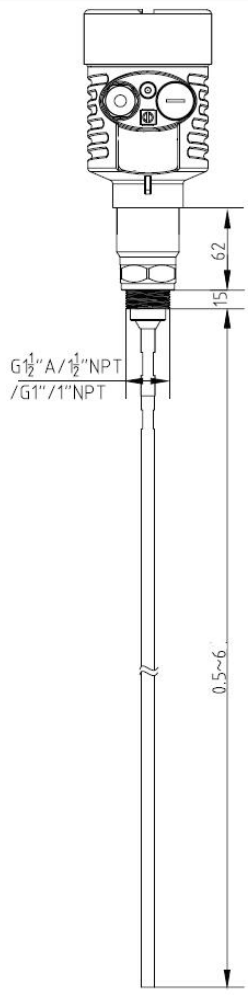
Suitable for Medium	Liquids, especially high temperature and pressure environment of liquid
Application	Sealed cans,greater pressure liquid measurement
Explosion-proof Grade	Exib IIC T6 Gb/Exd IIC T6 Gb
Measuring Range	15 meters
Frequency	500MHz-1.8GHz
Antenna	Single cable or single rod antenna
Process Temperature:	（-40～400）℃
Measurement Precision	±10mm
Process Pressure	(-0.1～40)MPa
The signal Output	(4 ~ 20) mA/HART
The Scene Display	Four LCD/can be programmed
Power source	Two wire(DC24V) Four wire(DC24V/AC220V)
Shell	Aluminum
Connection	Flange(optional)/Thread

Drawing

QTRD31



QTRD32



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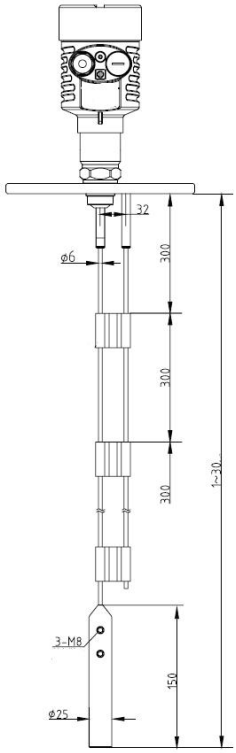

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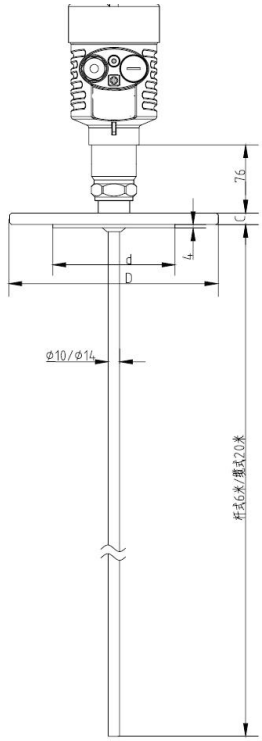

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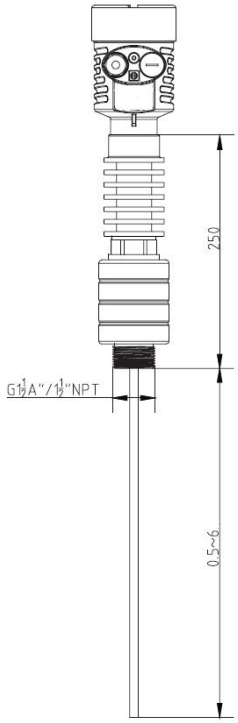

Production Model Selection

QTRD 31

Maximum Range / Type of detecting component
30000mm/ Single cable type or 6000mm / single rod type
Explosion Proof Approval
P StandaQTRD (Without Approval) I Intrinsically Safe（Exia IIC T6 Ga） G Intrinsically Safe + Explosion proof（Exd〔ia〕IIC T6 Gb）
Type of detecting component /Material
A cable Φ8mm / Stainless Steel 304 B cable Φ4mm / Stainless Steel 316L C rod Φ10mm / Stainless Steel 304 D rod Φ10mm / Stainless Steel 316L
Process Connection /Material
G Thread G1½″ A N Thread 1½″ NPT C Flange DN50 PN16C / Stainless Steel D Flange DN80 PN16C / Stainless Steel E Flange DN100 PN16C / Stainless Steel F Flange DN150 PN16C / Stainless Steel H Flange DN200 PN16C / Stainless Steel I Flange 2″ 150LBS ANSI Convex / Stainless Steel 316L J Flange 3″ 150LBS ANSI Convex / Stainless Steel 316L K Flange 4″ 150LBS ANSI Convex / Stainless Steel 316L L Flange 6″ 150LBS ANSI Convex / Stainless Steel 316L M Flange 8″ 150LBS ANSI Convex / Stainless Steel 316 L
Seal / Process Temperature
1. Normal (-40～130)℃ 2. High Temperature (-40～250)℃
Shell / Protection Class
L Aluminum /IP67 Q Plastic /IP65
Cable Entry
M M 20 x 1.5 N ½″ NPT
Display
V With X Without
Programming
V With X Without

QTRD 32

Maximum Range / Type of detecting component
20000mm / Full PTFE sealing cable type or 6000mm / Full PTFE sealing rod type
Explosion Proof Approval
P StandaQTRD (Without Approval) I Intrinsically Safe（Exia IIC T6 Ga） G Intrinsically Safe + Explosion proof（Exd（ia）IIC T6 Gb）
Type of detecting component /Material
A cable Φ4mm / PTFE C rod Φ10mm / PTFE
Process Connection /Material
G Thread G1½″ A N Thread 1½″ NPT C Flange DN50 PN16C / Stainless Steel /PTFE D Flange DN80 PN16C / Stainless Steel /PTFE E Flange DN100 PN16C / Stainless Steel /PTFE F Flange DN150 PN16C / Stainless Steel /PTFE H Flange DN200 PN16C / Stainless Steel /PTFE I Flange 2″ 150LBS ANSI Convex / Stainless Steel 316L/PTFE J Flange 3″ 150LBS ANSI Convex / Stainless Steel 316L /PTFE K Flange 4″ 150LBS ANSI Convex / Stainless Steel 316L/PTFE L Flange 6″ 150LBS ANSI Convex / Stainless Steel 316L/PTFE M Flange 8″ 150LBS ANSI Convex / Stainless Steel 316 L /PTFE
Seal / Process Temperature
1. Normal (-40～130)℃ 2. High Temperature (-40～200)℃
Shell / Protection Class
L Aluminum /IP67 Q Plastic /IP65
Cable Entry
M M 20 x 1.5 N ½″ NPT
Display
V With X Without
Programming
V With X Without

● QTRD33

Maximum Range / Type of detecting component
30000mm / Double cable type
Explosion Proof Approval
P StandaQTRD (Without Approval) I Intrinsically Safe（Exia IIC T6 Ga） G Intrinsically Safe + Explosion proof（Exd（ia）IIC T6 Gb）
Type of detecting component /Material
A cable Φ6mm / Stainless Steel 304 B cable Φ6mm / Stainless Steel 316L
Process Connection /Material
G Thread G1½″ A N Thread 1½″ NPT C Flange DN50 PN16C / Stainless Steel D Flange DN80 PN16C / Stainless Steel E Flange DN100 PN16C / Stainless Steel F Flange DN150 PN16C / Stainless Steel H Flange DN200 PN16C / Stainless Steel I Flange 2″ 150LBS ANSI Convex / Stainless Steel 316L J Flange 3″ 150LBS ANSI Convex / Stainless Steel 316L K Flange 4″ 150LBS ANSI Convex / Stainless Steel 316L L Flange 6″ 150LBS ANSI Convex /不 Stainless Steel 316L M Flange 8″ 150LBS ANSI Convex / Stainless Steel 316 L
Seal / Process Temperature
Normal (-40～150)℃
Shell / Protection Class
L Aluminum /IP67 Q Plastic /IP65
Cable Entry
M M 20 x 1.5 N ½″ NPT
Display
V With X Without
Programming
V With X Without

● QTRD34

Maximum Range / Type of detecting component
6000mm / Coaxial tube type antenna
Explosion Proof Approval
P StandaQTRD (Without Approval) I Intrinsically Safe（Exia IIC T6 Ga） G Intrinsically Safe + Explosion proof（Exd（ia）IIC T6 Gb）
Type of detecting component /Material
A Coaxial tube Φ25mm / Stainless Steel 304 B Coaxial tube Φ25mm / Stainless Steel 316L
Process Connection /Material
G Thread G½″ A N Thread 1½″ NPT C Flange DN50 PN16C / Stainless Steel D Flange DN80 PN16C / Stainless Steel E Flange DN100 PN16C / Stainless Steel F Flange DN150 PN16C / Stainless Steel H Flange 2″ 150LBS ANSI Convex / Stainless Steel 316L I Flange 3″ 150LBS ANSI Convex / Stainless Steel 316L J Flange 4″ 150LBS ANSI Convex / Stainless Steel 316L K Flange 6″ 150LBS ANSI Convex / Stainless Steel 316L L Special Design
Seal / Process Temperature
1. Normal (-40～130)℃ 2. High Temperature (-40～250)℃
Shell / Protection Class
L Aluminum /IP67 Q Plastic /IP65
Cable Entry
M M 20x1.5 N ½″ NPT
Display
V With X Without
Programming
V With X Without

● QTRD35

Maximum Range / Type of detecting component
15000mm / Single cable type or 6000mm/ single rod type
Explosion Proof Approval
P StandaQTRD (Without Approval) I Intrinsically Safe（Exia IIC T6 Ga） G Intrinsically Safe + Explosion proof（Exd（ia）IIC T6 Gb）
Type of detecting component /Material
A cable Φ8mm / Stainless Steel 304 B cable Φ8mm / Stainless Steel 316L C rod Φ10mm / Stainless Steel 304 D rod Φ10mm / Stainless Steel 316L
Process Connection /Material
G Thread G1½″ A N Thread 1½″ NPT C Flange DN50 PN16C / Stainless Steel D Flange DN80 PN16C / Stainless Steel E Flange DN100 PN16C / Stainless Steel F Flange DN150 PN16C / Stainless Steel H Flange DN200 PN16C / Stainless Steel I Flange 2″ 150LBS ANSI Convex / Stainless Steel 316L J Flange 3″ 150LBS ANSI Convex / Stainless Steel 316L K Flange 4″ 150LBS ANSI Convex / Stainless Steel 316L L Flange 6″ 150LBS ANSI Convex / Stainless Steel 316L M Flange 8″ 150LBS ANSI Convex / Stainless Steel 316L
Seal / Process Temperature
1. Normal (-200～400)℃
Shell / Protection Class
L Aluminum /IP67 Q Plastic /IP65
Cable Entry
M M 20 x 1.5 N ½″ NPT
Display
V With X Without
Programming
V With X Without