# HRRD730X Radar Level Transmitter

## Overview

**The radar level transmitter antenna emits and narrows the microwave pulse. This pulse propagates in space at the speed of light. When it encounters the surface of the measured medium, part of its energy is reflected back and received by the same antenna. The time interval between the transmitted pulse and the received pulse is proportional to the distance from the antenna to the surface of the measured medium. Due to the extremely high propagation speed of electromagnetic waves, the time interval between the transmitted pulse and the received pulse is very small (on the order of nanoseconds). It is difficult to confirm. The 90X series 26G radar level gauge uses a special demodulation technology to accurately identify the transmitted pulse and The time interval of the pulse is received to further calculate the distance of the antenna from the surface of the measured medium.**

**NYRD-806** **NYRD-808**

## Features:

**The radar level gauge recommended by the water industry uses a transmission frequency of 26 GHz and thus has:**

- **Small beam angle, concentrated energy, stronger anti-interference ability, greatly improving measurement accuracy and reliability.**
- **Small antenna size, easy to install and add dust cover and other antenna protection devices.**
- **/Light weight is about 1KG, easy to install.**
- **Measurement range up to 70 meters, covering water level measurement of large reservoirs.**
- **Multiple output circuit interfaces cooperate with the acquisition system.**
- **Using pulse working mode, the radar level gauge has very low transmission power and no harm to human body and environment.**

## Specification

| | | | |
|---|---|---|---|
| Housing | | | |
| **Seal between the outer casing and the outer cover** | | | |
| **Silicone Rubber** | | | |
| **Shell window** | | | |
| **Polycarbonate** | | | |
| **Ground terminal** | | | |
| **stainless steel** | | | |
| **Supply voltage** | | | |
| **Four-wire system** | Standard type | (6～26) V DC | |
| | Power consumption | max 12mA | |
| | Allow ripple | - <100Hz | Uss<lV |
| | | - (100～100K) Hz | Uss<l0mV |
| **Cable parameter** | | | |
| **Cable entry/plug** | **M20xl.5 cable entry** | | |
| **Terminals** | **Wire cross section** 1.0mm² | | |
| Output parameters | | | |
| output signal | RS485 | | |
| communication protocol | Modbus | | |
| Resolution | 1. 6u A | | |
| Fault signal | Current output is unchanged；20. 5mA | | |
| | 22mA； | | |
| | 3.9mA | | |
| duration | (0～50)s，adjustable | | |
| Blind zone | 天Antenna end | | |
| Max. Measurement **distance** | **NYRD-806** | 30m | |
| | **NYRD-808** | 70m | |
| Microwave frequency | 26GHz | | |
| Communication Interface | /Modbus communication protocol | | |

| | |
|---|---|
| Measurement interval | About 1 second (depending on parameter settings) |
| Adjust the time | About 1 second (depending on parameter settings) |
| display resolution | 1mm |
| Working storage and transportation temperature | (-40～100) ℃ |
| Process temperature (temperature of the antenna section) | (-40～250)℃ |
| Pressure | Max. 4MPa |
| Shock tolerance | Mechanical vibration l0m/s² , (10～150)Hz |

# Electrical connections

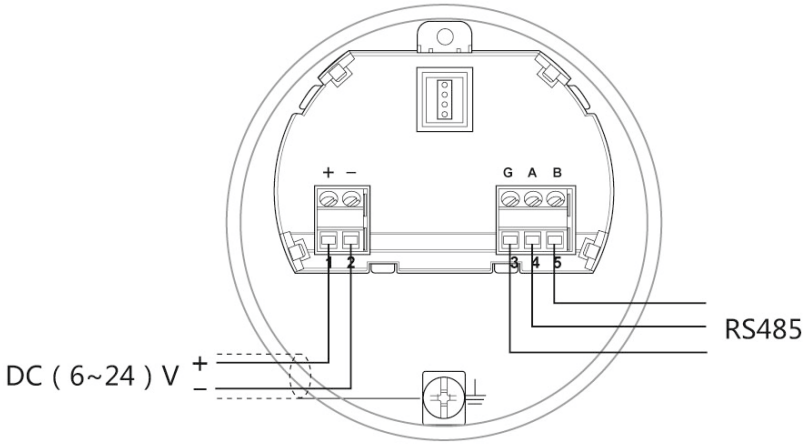
## Supply voltage

RS485/Modbus

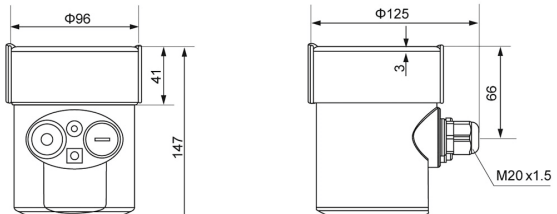
A separate shielded cable is used for each of the power supply and Modbus signal lines. See the technical data for the specific supply voltage range.

## Connection method

RS485/Modbus wiring diagram is as follows,




**Outline Construction:**



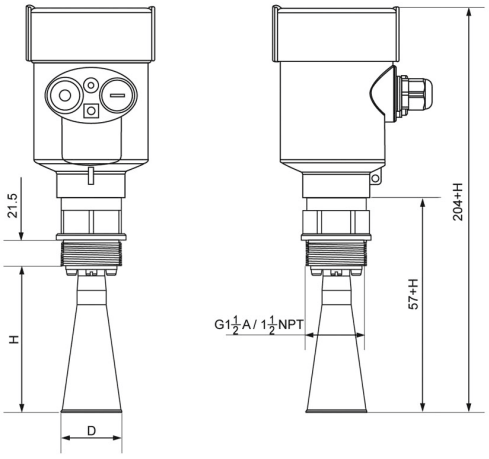
Unit: mm

Housing size:

physical dimension:

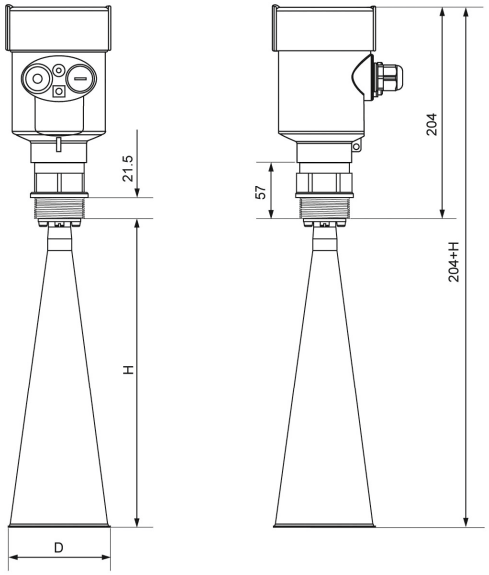
**NYRD-806**

| 法兰 | 喇叭口直径D | 喇叭高度H |
|---|---|---|
| DN50 | Φ46 | 140 |
| DN80 | Φ76 | 227 |
| DN100 | Φ96 | 288 |

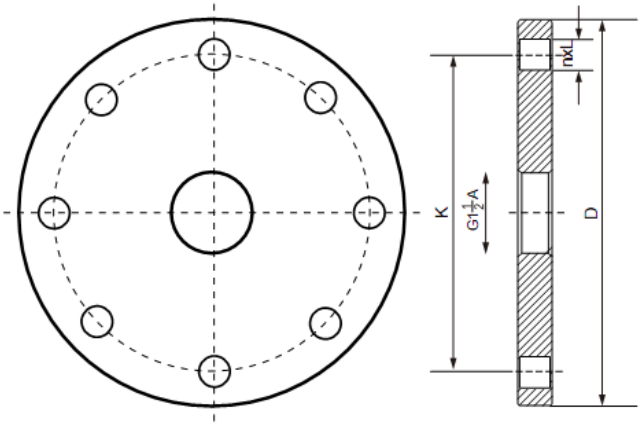



**NYRD-808**

| 法兰 | 喇叭口直径D | 喇叭高度H |
|---|---|---|
| DN80 | Φ76 | 227 |
| DN100 | Φ96 | 288 |
| DN125 | Φ121 | 620 |




Flange selection:




| 规格 | 外径 D | 中心孔距 K | 孔数n | 孔径L |
|---|---|---|---|---|
| DN50 | Φ165 | Φ125 | 4 | 18 |
| DN80 | Φ200 | Φ160 | 8 | 18 |
| DN100 | Φ220 | Φ180 | 8 | 18 |
| DN125 | Φ250 | Φ210 | 8 | 18 |
| DN150 | Φ285 | Φ240 | 8 | 22 |
| DN200 | Φ340 | Φ295 | 12 | 22 |
| DN250 | Φ405 | Φ355 | 12 | 26 |

# Instrument order table

## Model：NYRD-806

**License**

Standard type (non-explosion proof)

**Process connection/material**

G thread G1 1/2′′ A / stainless steel 304

N vertical bracket

M gantry bracket

Y special customization

**Antenna type / material**

A horn antenna Φ76mm/stainless steel 304

B horn antenna Φ96mm/stainless steel 304

Y special customization

**Seal / process temperature**

V ordinary seal / (-40~150) ° C

**Electronic unit**

V RS485/Modbus/ four-wire system

**Housing protection**

L aluminum / IP67

G Plastic / IP65

**Cable entry**

M M20 x l. 5

N ½″ NPT

**Live display/programming**

A with

X without

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| N | ½″ NPT | |
| **Live display/programming** | | |
| | A | A with |
| | X | X without |