

PH 4G TRANSMITTER / DATA SHEET

SS307-02-4G

Industrial pH 4G Transmitter

A compact 4G pH transmitter for remote water-quality monitoring, automatic or manual temperature compensation and configurable cloud or customer-server upload.

Overview

- SS307-02-4G combines a pH/temperature acquisition circuit with 4G wireless data transmission.
- The transmitter supports local, cloud and customer-server destinations with a configurable upload interval.
- It is suited to industrial wastewater, domestic wastewater, agriculture, aquaculture and other weakly acidic or weakly alkaline liquids.



pH Range 0–14.00 pH	4G Upload Configurable	Supply DC 10–30 V	Temperature 0–80 °C
Key Advantages • 4G upload to a local platform, cloud platform or customer server. • Automatic or manual temperature compensation. • Wide-voltage DC 10–30 V input and low-power operation. • Acquisition every 2 s; default upload interval 60 s; 4G traffic typically below 25 MB/month.		Application Scenarios • Industrial and domestic wastewater. • Agriculture and aquaculture water. • Process-water and environmental monitoring. • Weakly acidic or weakly alkaline, non-corrosive liquids. • Remote sites where wired access is inconvenient.	

MEASUREMENT & CONNECTIVITY

Measurement and 4G Data Path

END-TO-END DATA FLOW

The selected pH electrode and optional temperature element connect to the transmitter. The transmitter samples the signal, applies the selected temperature-compensation mode and sends the measured values through the 4G network to a local platform, cloud platform or customer server.

Function	Default / available setting
Acquisition interval	2 s
4G upload interval	60 s default; configurable from 1 to 65535 s
First-upload delay	Configurable; default 0 s
Destination	Local platform, cloud platform or customer server
Target address / port	Configurable; platform examples use port 2404 or 8020
Configuration	Bluetooth configuration app; device scan name uses 4GMOD plus address
Default operation password	12345678; maximum eight characters

MEASUREMENT PRINCIPLE

pH and Temperature Measurement

ELECTROCHEMICAL MEASUREMENT

The pH electrode produces a potential related to hydrogen-ion activity. The transmitter converts this signal to a pH value and can use the installed temperature element for automatic compensation. In manual mode, the configured temperature is used; the default manual value is 25 °C.

SYSTEM DATA

Technical Specifications

Item	Specification
Model	SS307-02-4G
Power Supply	DC 10–30 V wide-voltage input
Power Consumption	0.8 W typical
pH Measurement Range	0–14.00 pH
pH Resolution	0.01 pH
pH Measurement Error	±0.15 pH
pH Repeatability	±0.02 pH
Temperature Range	0–80 °C; flat desulfurization electrode: 0–60 °C
Temperature Resolution / Error	0.1 °C / ±0.5 °C
Temperature Compensation	Automatic or manual; manual default 25 °C
Transmitter Environment	–40–60 °C; 0–95% RH, non-condensing
Electrode Pressure	0.6 MPa
Electrode Cable	5 m default; 10/15/20 m customizable
Acquisition / Upload	2 s acquisition; 1–65535 s upload interval; 60 s default
4G Traffic	Typically below 25 MB/month at the default interval
Enclosure	Wall-mount enclosure; maximum 117 × 87 × 43 mm

PRODUCT SELECTION

Configuration Options

Option	Description
SS307-02-4G	Industrial pH transmitter with 4G remote data upload
Electrode	Composite, flat desulfurization, PTFE, plating/double salt bridge, glass or antimony; choose chemical compatibility
Temperature	With or without temperature compensation, according to the selected electrode
Display	Optional OLED display; blank option has no local display
Data destination	Local platform, cloud platform or customer server
Mounting	Wall mount, submerged installation or pipeline installation according to the electrode and process

SELECTION NOTE

Choose the electrode material, temperature option, display option and data destination together. Confirm the liquid chemistry, temperature, pressure, cable length and connection dimensions before ordering.

INSTALLATION & OPERATION

Installation, Wiring and Operation

Connection	Function / guidance
PH–	pH electrode negative; connect the black electrode wire
PH+	pH electrode positive; connect the transparent electrode wire
PT– / PT+	Temperature element; two temperature wires may be connected in either order when fitted
Power	Use a DC 10–30 V supply or the supplied adapter within its rated range

Connection	Function / guidance
Connector protection	Lock the connector before operation; do not immerse an unlocked connector

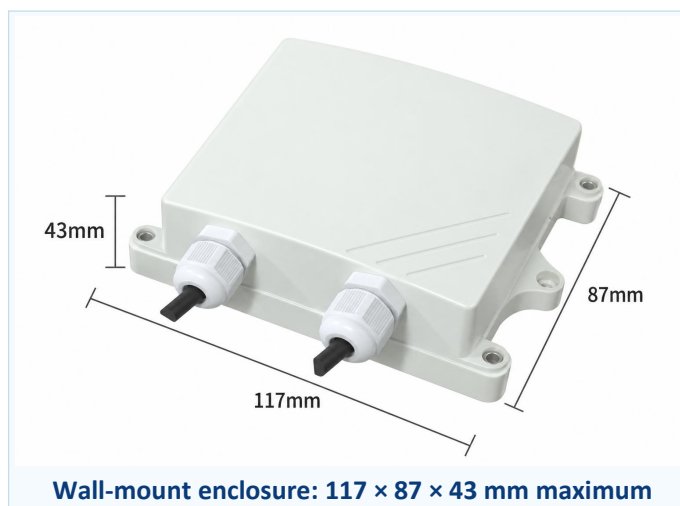
- Mount the transmitter on the wall or in the selected installation position; keep the enclosure and cable gland above standing water.
- After power-on, allow about 1–3 minutes for the transmitter to initialize, then check the local receiver or platform data.
- Use the Bluetooth configuration app to scan for the device, connect with the operation password and set the target address, target port, upload interval and first-upload delay.
- Rinse the electrode with pure water before and after measurement. Store the electrode in soaking solution and calibrate before use or at least every 3 months for long-term operation.
- Avoid strong acid, strong alkali, oxidizing or reducing liquids outside the selected electrode's compatibility range; protect the sensing element from impact and scratching.

SERVICE & WARRANTY

The transmitter is covered by a 24-month warranty under normal use and includes lifetime service support. The pH electrode is a consumable component; its service life is typically 6–12 months and it is not covered by the transmitter warranty.

MECHANICAL DATA

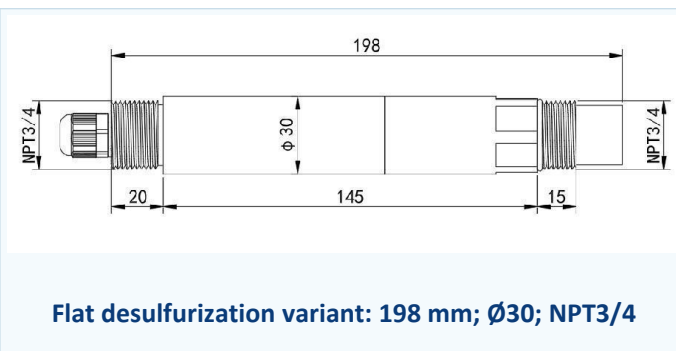
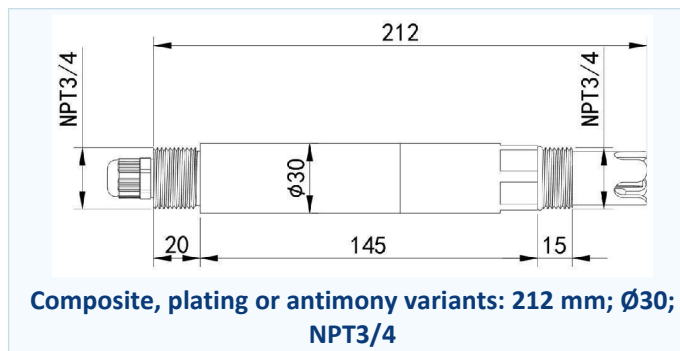
Transmitter Enclosure and Electrode Dimensions

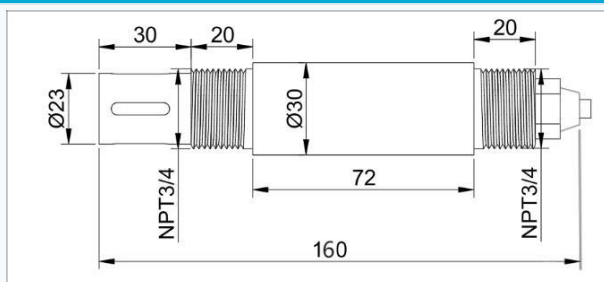


Mechanical notes

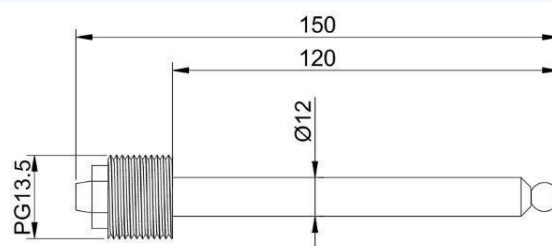
- NPT3/4 connection for most industrial electrode variants.
- PG13.5 connection for the glass variant.
- Keep cable connectors and the transmitter cable gland dry and locked.
- For submerged or pipeline installation, position the sensing end in the representative flow and avoid bubbles.

Representative electrode dimensions are shown below in millimetres. The final selected electrode determines the applicable drawing.





PTFE variant: 160 mm; Ø30; NPT3/4



Glass variant: 150 mm; Ø12; PG13.5

CONTACT / SUPPORT

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