



New

Maximum probe length: **8 m**

With **5** alarm outputs

GUIDED PULSE LEVEL MEASUREMENT

GW200 Series

Guided Pulse Level Measurement covering wide range applications including integration into equipment and use in process units of large facilities.

Compact designed housing

Probe Length: Max.8m
(Wire type Model)

Backlit 4-digit LCD display

Connect with a cable with M12 connector (8 pins)

Alarm outputs: Max. 5 points

Open collector outputs (for individual setting as either NPN or PNP).

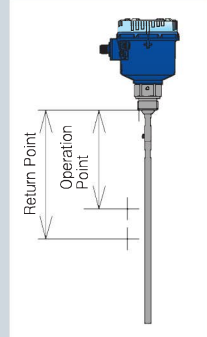
● Alarm Outputs

- ① **Level Alarm**
For individual setting either as ON mode or OFF mode.
- ② **Measurement Abnormal**
Alarming generated when the reflected echo from the liquid fluid surface was not with enough intensity for the measurement.
- ③ **Device Abnormal**
Alarming generated when the electronics does not operate normally with wire-break, component damage or some other reason.

Free combination of alarming functions.

Example:

1. All 5 points are set as Level Alarms.
2. 3 are for level alarms and the rest 2 are assigned (one each) for "measurement abnormal" and "device abnormal" respectively.



Quick Setting Mode

Device setting can be finished by key-in at 3 parameters "Probe Length", "Zero Point" and "Span Point". No need to prepare the fluid liquid to measure for this setting.

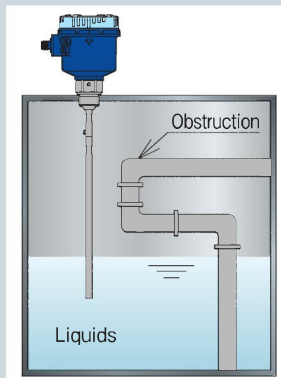
Device Mounting and Power-ON

Input (Key-in) at 3 parameters

Measurement start.

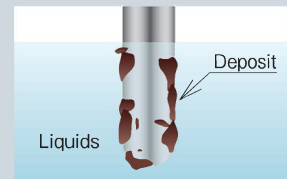
Cancellation of unnecessary waves

Executing this function after the sensor mounting allows the device to recognize and memorize unnecessary reflection echo from existing obstacles inside the tank, which will be removed then from the measurement targets, thus achieving a stable level measurement.



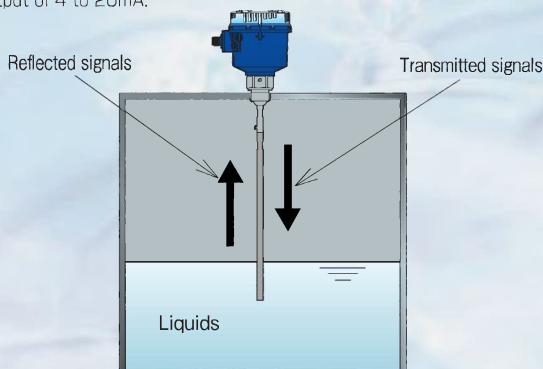
Resistance against build-ups

The probe assembly has no moving parts, so the material buildup and resultant adverse affection to measurement are minimized.



■ Principle of Operation

The sensor electronics transmits high frequency signals that travel down on the probe. The signals are reflected on the material surface, where the dielectric constant* changes, and then received by the sensor electronics. The sensor electronics measures the time taken from transmission to reception of the signals, and calculates the distance from the reference point to the material surface. The distance is then converted to analog output of 4 to 20mA.



■ Model Numbering

GW200

Process connection	
N	Threaded
F	Flange
S	Sanitary fitting
Z	Other connections

Probe and material	
R	Rod 316SS, PEEK, FKM
W	Wire 316SS, PEEK, FKM
P	Tubed rod PFA, PTFE
Z	Custom

Temperature / O-ring material	
A	Standard (100°C max.)/FKM
B	Standard (100°C max.)/not FKM
T	High temperature (150°C max.)/FKM
U	High temperature (150°C max.)/not FKM

Configuration	
0*	Without probe
1	With probe

* Available only for Probe type and material option "R" (rod).

GW200 series provides customers with selection of a suitable type from variation portfolio

Rod type

Wire type

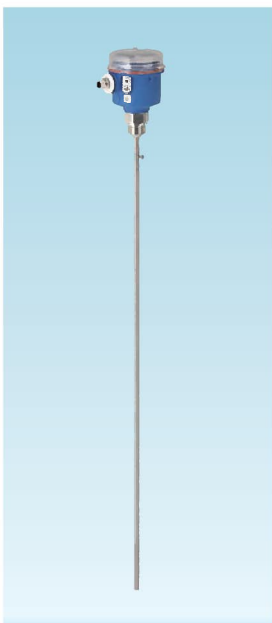
PFA tubing type

Standard models and Heat Proof models (150°C Max.) are prepared. Available items are Rod type, Wire type suitable for limited space at tank top area and PFA tubing type to cope with highly corrosive chemicals like hydrochloric acid and nitric acid. Each type also can be supplied with Ferrule fittings.

Please do not hesitate to contact us about the type available for your application.

Rod type

Suitable for standard applications



GW200□RA
(Rod type standard model)
For applications where Heat Proof is required: GW200□RT
The lock screws can fix each 1000mm rod firm as the connector to prevent the loosening with vibration. Rod length is basically flexibly made by cutting it.

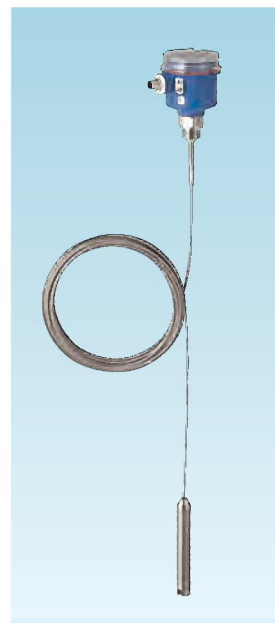
Probe Length: 4000mm Max.
Pressure Resistance: 3.0MPa Max.

Machine Tools.
Coolant Liquid Measurement



Wire type

Suitable for tank top mounting where mounting height is limited



GW200□WA
(Wire type standard model)
For applications where Heat Proof is required: GW200□WT
Wire type is ideal when the mounting space at the top of the liquid tank is just limited. The wire can flexibly be cut to the required measurement range.

Probe length: 8000mm Max.
Pressure Resistance: 3.0MPa Max.

For various tanks at Water Treatment facility or for level monitoring at a Pit



PFA tubing type

Compatible with highly corrosive chemicals



GW200□PA
(Tubing type standard model)
For applications where Heat Proof is required: GW200□PT
PFA tubing type is ideal for highly corrosive chemicals such as hydrochloric acid and nitric acid.

Probe length: 4000mm Max.
Pressure Resistance: 200kPa Max.

Level monitoring at Plating chemical tank



Other typical applications



Level Monitoring at Food processing or storage tanks



Level Monitoring at a few different tanks in Membrane Filtering Facilities

Rod type

MODEL		GW200NRA1	GW200FRA1	GW200SRA1
OVERVIEW		G $\frac{3}{4}$ thread mounting	JIS5K50A flange mounting	ISO 2S Ferrule mounting
OUTLINE			<p>Flange size : JIS 5K 50A</p>	<p>Fitting size : equivalent to ISO 2S</p>
MEASURED MATERIAL		Liquids		
OPERATING CHARACTERISTICS	Linearity ^{**1}	±3 mm (L≤2000mm), ±10 mm (L>2000mm)		
	Analog output accuracy ^{**1}	±0.5 % of span		
	Temperature characteristics	±0.02 % of span/°C		
	Dielectric constant	$\epsilon_r \geq 1.8$		
	Probe length	300 to 4000 mm		
Blanking ^{**2}		upper : 25 mm min. / lower : 10 mm min.		
ELECTRICAL CHARACTERISTICS	Power supply	24 V DC ±10 %		
	Power consumption	1.0 W max. (excluding open collector output)		
	Output signal	4 to 20 mA DC, 3 wire		
	Alarm output	Open collector NPN/PNP(selectable), 5 points, 26.4 V, 50 mA DC Voltage drop : 2V max. for NPN, 2.5V max. for PNP Each point configured independently for OFF, setpoint, measurement error, or device error		
	Load resistance	500 Ω max. at 24V DC		
	Measurement cycle	approx. 0.3 s		
Resolution		1 mm		
MECHANICAL CHARACTERISTICS	Pressure (static)	- 0.1 to + 3 MPa (excluding process connection)		
	Lateral load	1.5 N·m		
	Tensile load	4 kN		
WORKING TEMPERATURE	Housing	- 20 to + 60 °C (no condensation)		
	Wetted parts	- 20 to + 100 °C (no freezing)		
RELATIVE HUMIDITY		85 % max.		
PROTECTION CLASS	Housing	IP 65 / 67		
	Wetted parts	IP 68 (4.5 MPa for 10 minutes)		
MATERIAL	Non-wetted	Housing Glass reinforced PBT (with anti-static agent), Stainless Steel, PC (clear), VMQ, CR, PBT, EPDM, Brass (C3604BD, nickel plated)		
	Wetted	Process connection	316SS	316SS, 316LSS
		Rod	316SS	
		Screw	316LSS	
		Insulator	PEEK	
O-ring	FKM			
Gasket	NBR ^{**5}			
OTHERS	Process connection ^{**3**4}	G $\frac{3}{4}$	JIS5K50A	ISO 2S or equivalent
	Rod diameter	8 mm		
	Housing rotation	300°		
	Cable	0.25 mm ² × 8C (M12 A-code female connector)		
MASS (approx.)	Housing, process connection	0.6 kg	2.0 kg	0.9 kg
	Probe	0.5 kg/m		

*1 Reference conditions

- Environmental: +25 °C, 60 %RH
- Application: metal tank (84.9mm I.D.), between 60mm below the reference point to 10 mm above probe end, water (ϵ_r = approx. 80)

*2 With water (ϵ_r = approx. 80). The lower the dielectric constant of the material, the longer the blanking will be.
- With Kerosene (ϵ_r = 1.8) upper blanking 50 mm min., lower blanking 30 mm min..

*3 When installing the threaded or flanged version on a non-metallic tank with no or smaller than ϕ 200 mm metallic connection, use a metal plate/flange ϕ 200 mm or larger. Make sure the threaded connection is directly connected to the metal plate.

*4 Use a metal clamp to secure the sanitary fitting to the metal piping.

*5 No. 6500 from VALQUA, LTD..

MODEL		GW200NRT1	GW200FRT1	GW200SRT1
OVERVIEW		Heat proof up to 150°C G¾ thread mounting	Heat proof up to 150°C JIS5K50A flange mounting	Heat proof up to 150°C ISO 2S Ferrule mounting
OUTLINE				
MEASURED MATERIAL		Liquids		
OPERATING CHARACTERISTICS	Linearity ^{※1}	±3 mm (L≤2000mm), ±10 mm (L>2000mm)		
	Analog output accuracy ^{※1}	±0.5 % of span		
	Temperature characteristics	±0.02 % of span/°C		
	Dielectric constant	$\epsilon_r \geq 1.8$		
	Probe length	300 to 4000 mm		
	Blanking ^{※2}	upper : 25 mm min. / lower : 10 mm min.		
ELECTRICAL CHARACTERISTICS	Power supply	24 V DC ±10 %		
	Power consumption	1.0 W max. (excluding open collector output)		
	Output signal	4 to 20 mA DC, 3 wire		
	Alarm output	Open collector NPN/PNP (selectable), 5 points, 26.4 V, 50 mA DC Voltage drop : 2V max. for NPN, 2.5V max. for PNP Each point configured independently for OFF, setpoint, measurement error, or device error		
	Load resistance	500 Ω max. at 24V DC		
	Measurement cycle	approx. 0.3 s		
	Resolution	1 mm		
MECHANICAL CHARACTERISTICS	Pressure (static)	- 0.1 to + 1 MPa (excluding process connection, Fig.1)		
	Lateral load	1.5 N·m		
	Tensile load	4 kN		
WORKING TEMPERATURE	Housing	- 20 to + 60 °C (no condensation)		
	Wetted parts	- 20 to + 150 °C (no freezing)		
RELATIVE HUMIDITY		85 % max.		
PROTECTION CLASS	Housing	IP 65 / 67		
	Wetted parts	IP 68 (4.5 MPa for 10 minutes)		
MATERIAL	Non-wetted	Housing	Glass reinforced PBT (with anti-static agent), Stainless Steel, PC (clear), VMQ, CR, PBT, EPDM, Brass (C3604BD, nickel plated)	
		Process connection	316SS	316SS, 316LSS
	Wetted	Rod	316SS	
		Screw	316LSS	
		Insulator	PEEK	
		O-ring	FKM	
Gasket	NBR ^{※5}			
OTHERS	Process connection ^{※3※4}	G ¾	JIS5K50A	ISO 2S or equivalent
	Rod diameter	8 mm		
	Housing rotation	300°		
	Cable	0.25 mm² × 8C (M12 A-code female connector)		
MASS (approx.)	Housing, process connection	0.9 kg	2.3 kg	1.2 kg
	Probe	0.5 kg/m		

※1 Reference conditions

- Environmental: +25 °C, 60 %RH
- Application: metal tank (84.9mm I.D.), between 60mm below the reference point to 10 mm above probe end, water ($\epsilon_r = \text{approx. } 80$)

※2 With water ($\epsilon_r = \text{approx. } 80$). The lower the dielectric constant of the material, the longer the blanking will be.

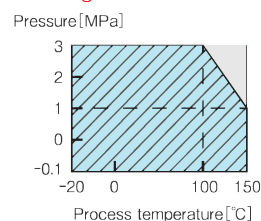
- With Kerosene ($\epsilon_r = 1.8$) upper blanking 50 mm min., lower blanking 30 mm min..

※3 When installing the threaded or flanged version on a non-metallic tank with no or smaller than φ200 mm metallic connection, use a metal plate/flange φ200 mm or larger. Make sure the threaded connection is directly connected to the metal plate.

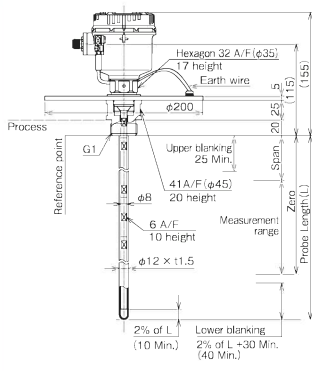
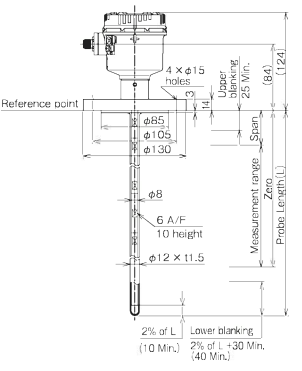
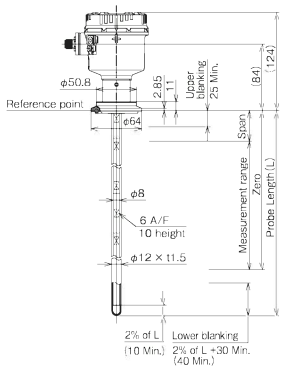
※4 Use a metal clamp to secure the sanitary fitting to the metal piping.

※5 No. 6500 from VALQUA, LTD..

Fig.1

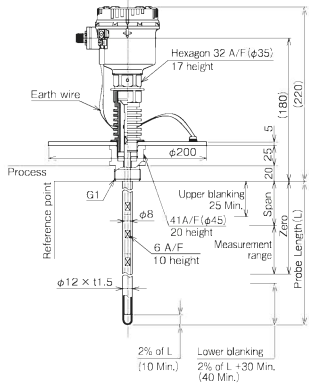
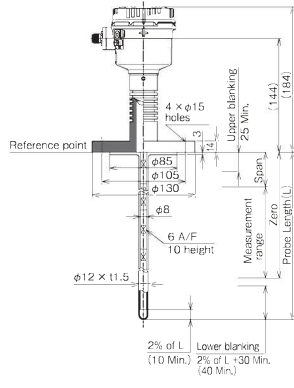
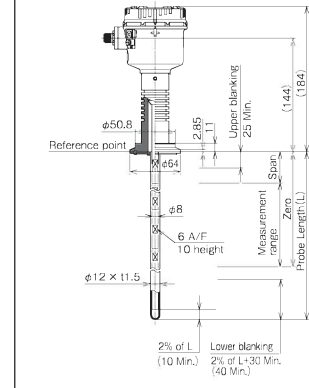


Tubing type

MODEL	GW200NPA1	GW200FPA1	GW200SPA1	
OVERVIEW	Tubing type with Plug for G1 thread mounting	Tubing with Flare for JIS5K50A flange mounting	Tubing type with Gasket for ISO 2S Ferrule mounting	
OUTLINE		 <p style="text-align: center;">Flange size : JIS 5K 50A</p>	 <p style="text-align: center;">Fitting size : equivalent to ISO 2S</p>	
MEASURED MATERIAL	Liquids			
OPERATING CHARACTERISTICS	Linearity ^{※1}	±3 mm (L≤2000mm), ±10 mm (L>2000mm)		
	Analog output accuracy ^{※1}	±0.5 % of span		
	Temperature characteristics	±0.02 % of span/°C		
	Dielectric constant	$\epsilon \geq 1.8$		
	Blanking ^{※2}	upper: 25 mm min. / lower: 2% of L + 30 mm min. (40 mm min.)		
ELECTRICAL CHARACTERISTICS	Power supply	24 V DC ±10 %		
	Power consumption	1.0 W max. (excluding open collector output)		
	Output signal	4 to 20 mA DC, 3 wire		
	Alarm output	Open collector NPN/PNP (selectable), 5 points, 26.4 V, 50 mA DC Voltage drop : 2V max. for NPN, 2.5V max. for PNP Each point configured independently for OFF, setpoint, measurement error, or device error		
	Load resistance	500 Ω max. at 24V DC		
	Measurement cycle	approx. 0.3 s		
	Resolution	1 mm		
MECHANICAL CHARACTERISTICS	Pressure (static)	- 0.1 to + 0.2 MPa (excluding process connection)		
	Lateral load	1.5 N·m		
WORKING TEMPERATURE	Housing	- 20 to + 60 °C (no condensation)		
	Wetted parts	- 20 to + 100 °C (no freezing)		
RELATIVE HUMIDITY		85 % max.		
PROTECTION CLASS	Housing	IP 65 / 67		
	Wetted parts	IP 68 (4.5 MPa for 10 minutes)		
MATERIAL	Non-wetted	Housing	Glass reinforced PBT (with anti-static agent), Stainless Steel, PC (clear), VMQ, CR, PBT, EPDM, Brass (C3604BD, nickel plated)	
		Process connection	316SS	316SS, 316LSS
		Gasket B	NBR ^{※7}	_____
		Earth plate ^{※3}	304SS	_____
		Rod	316SS	
	Insulator	PEEK		
	Connector	Brass (C3604BD, nickel plated)		
Wetted	Tubing	PTFE, PFA	PFA	PTFE, PFA
	Gasket A	PTFE ^{※7}	_____	_____
OTHERS	Process connection ^{※4※5}	G1	JIS5K50A	ISO 2S or equivalent
	Tubing diameter ^{※6}	12 mm (rod diameter: 8 mm)		
	Housing rotation	300°		
	Cable	0.25 mm ² × 8C (M12 A-code female connector)		
MASS (approx.)	Housing, process connection	0.6 kg	2.0 kg	0.9 kg
	Probe	0.7 kg/1000mm		

※1 Reference conditions
 - Environmental: +25 °C, 60 %RH
 - Application: metal tank (84.9mm I.D.), between 60mm below the reference point to 10 mm above probe end, water (ϵ = approx. 80)
 ※2 With water (ϵ = approx. 80). The lower the dielectric constant of the material, the longer the blanking will be.
 - With Kerosene (ϵ = 1.8) upper blanking 50 mm min., lower blanking 30 mm min.
 ※3 Connect the earth plate and the external earth terminal on the housing with the supplied earth wire.

※4 When installing the threaded or flanged version on a non-metallic tank with no or smaller than φ200 mm metallic connection, use a metal plate/flange φ200 mm or larger. Make sure the threaded connection is directly connected to the metal plate.
 ※5 Use a metal clamp to secure the sanitary fitting to the metal piping.
 ※6 Tubing expands and contracts with temperature changes.
 ※7 NBR gasket is in No. 6500, and PTFE gasket in No.7020 from VALQUA, LTD.

MODEL		GW200NPT1	GW200FPT1	GW200SPT1
OVERVIEW		Heat Proof type up to 150°C Tubing type with Plug for G1 thread mounting	Heat Proof type up to 150°C Tubing with Flare for JIS5K50A flange mounting	Heat Proof type up to 150°C Tubing type with Gasket for ISO 2S Ferrule mounting
OUTLINE				
MEASURED MATERIAL		Liquids		
OPERATING CHARACTERISTICS	Linearity ^{※1}	±3 mm (L≤2000mm), ±10 mm (L>2000mm)		
	Analog output accuracy ^{※1}	±0.5 % of span		
	Temperature characteristics	±0.02 % of span/°C		
	Dielectric constant	$\epsilon_r \geq 1.8$		
	Probe length	300 to 4000 mm		
	Blanking ^{※2}	upper: 25 mm min. / lower: 2% of L + 30 mm min. (40 mm min.)		
ELECTRICAL CHARACTERISTICS	Power supply	24 V DC ±10 %		
	Power consumption	1.0 W max. (excluding open collector output)		
	Output signal	4 to 20 mA DC, 3 wire		
	Alarm output	Open collector NPN/PNP (selectable), 5 points, 26.4 V, 50 mA DC Voltage drop : 2V max. for NPN, 2.5V max. for PNP Each point configured independently for OFF, setpoint, measurement error, or device error		
	Load resistance	500 Ω max. at 24V DC		
	Measurement cycle	approx. 0.3 s		
Resolution		1 mm		
MECHANICAL CHARACTERISTICS	Pressure (static)	- 0.1 to + 0.2 MPa (excluding process connection)		
	Lateral load	1.5 N·m		
WORKING TEMPERATURE	Housing	- 20 to + 60 °C (no condensation)		
	Wetted parts	- 20 to + 150 °C (no freezing)		
RELATIVE HUMIDITY		85 % max.		
PROTECTION CLASS	Housing	IP 65 / 67		
	Wetted parts	IP 68 (4.5 MPa for 10 minutes)		
MATERIAL	Non-wetted	Housing	Glass reinforced PBT (with anti-static agent), Stainless Steel, PC (clear), VMQ, CR, PBT, EPDM, Brass (C3604BD, nickel plated)	
		Process connection	316SS	316SS, 316LSS
		Gasket B	NBR ^{※7}	—
		Earth plate ^{※3}	304SS	—
		Rod	316SS	
		Insulator	PEEK	
	Wetted	Connector	Brass (C3604BD, nickel plated)	
		Tubing	PTFE, PFA	PFA
OTHERS	Gasket A	PTFE ^{※7}	—	—
	Process connection ^{※4} ^{※5}	G1	JIS5K50A	ISO 2S or equivalent
MASS (approx.)	Tubing diameter ^{※6}	12 mm (rod diameter: 8 mm)		
	Housing rotation	300°		
	Cable	0.25 mm ² × 8C (M12 A-code female connector)		
MASS (approx.)	Housing, process connection	0.9 kg	2.3 kg	1.2 kg
	Probe	0.7 kg/1000mm		

※1 Reference conditions
- Environmental: +25 °C, 60 %RH
- Application: metal tank (84.9mm I.D.), between 60mm below the reference point to 10 mm above probe end, water (ϵ_r = approx. 80)
※2 With water (ϵ_r = approx. 80). The lower the dielectric constant of the material, the longer the blanking will be.
- With Kerosene (ϵ_r = 1.8) upper blanking 50 mm min., lower blanking 30 mm min.,
※3 Connect the earth plate and the external earth terminal on the housing with the supplied earth wire.

※4 When installing the threaded or flanged version on a non-metallic tank with no or smaller than φ200 mm metallic connection, use a metal plate/flange φ200 mm or larger. Make sure the threaded connection is directly connected to the metal plate.
※5 Use a metal clamp to secure the sanitary fitting to the metal piping.
※6 Tubing expands and contracts with temperature changes.
※7 NBR gasket is in No. 6500, and PTFE gasket in No.7020 from VALQUA, LTD.

Wire type

MODEL		GW200NWA1	GW200FWA1	GW200SWA1
OVERVIEW		G $\frac{3}{4}$ thread mounting	JIS5K50A flange mounting	ISO 2S Ferrule mounting
OUTLINE		<p>Weight : About 350g</p>	<p>Flange size : JIS 5K 50A Weight: About 350g</p>	<p>Fitting siz : equivalent to ISO 2S Weight : About 350g</p>
MEASURED MATERIAL		Liquids		
OPERATING CHARACTERISTICS	Linearity ^{**1}	±3 mm (L≤2000mm), ±10 mm (L>2000mm)		
	Analog output accuracy ^{**1}	±0.5 % of span		
	Temperature characteristics	±0.02 % of span/°C		
	Dielectric constant	$\epsilon_r \geq 1.8$		
	Probe length	300 to 8000 mm		
Blanking ^{**2}		upper : 80 mm min. / lower : 160 mm min.		
ELECTRICAL CHARACTERISTICS	Power supply	24 V DC ±10 %		
	Power consumption	1.0 W max. (excluding open collector output)		
	Output signal	4 to 20 mA DC, 3 wire		
	Alarm output	Open collector NPN/PNP(selectable), 5 points, 26.4 V, 50 mA DC Voltage drop : 2V max. for NPN, 2.5V max. for PNP Each point configured independently for OFF, setpoint, measurement error, or device error		
	Load resistance	500 Ω max. at 24V DC		
	Measurement cycle	approx. 0.3 s		
Resolution		1 mm		
MECHANICAL CHARACTERISTICS	Pressure (static)	- 0.1 to + 3 MPa (excluding process connection)		
	Tensile load	4 kN		
WORKING TEMPERATURE	Housing	- 20 to + 60 °C (no condensation)		
	Wetted parts	- 20 to + 100 °C (no freezing)		
RELATIVE HUMIDITY		85 % max.		
PROTECTION CLASS	Housing	IP 65 / 67		
	Wetted parts	IP 68 (4.5 MPa for 10 minutes)		
MATERIAL	Non-wetted	Housing	Glass reinforced PBT (with anti-static agent), Stainless Steel, PC (clear), VMQ, CR, PBT, EPDM, Brass (C3604BD, nickel plated)	
		Process connection	316SS	316SS, 316LSS
	Wetted	Rod	316SS	
		Screw	316LSS	
		Insulator	PEEK	
		O-ring	FKM	
Gasket	NBR ^{**5}			
OTHERS	Process connection ^{**3**4}	G $\frac{3}{4}$	JIS5K50A	ISO 2S or equivalent
	Rod diameter	4 mm (pipe φ8 mm, weight φ20mm)		
	Housing rotation	300°		
	Cable	0.25 mm ² × 8C (M12 A-code female connector)		
MASS (approx.)	Housing, process connection	0.6 kg	2.0 kg	0.9 kg
	Probe	Wire 70 g/m, weight 350g		

*1 Reference conditions

- Environmental: +25 °C, 60 %RH

- Application: metal tank (84.9mm I.D.), between 60mm below the reference point to 10 mm above probe end, water (ϵ_r = approx. 80)

*2 With water (ϵ_r = approx. 80). The lower the dielectric constant of the material, the longer the blanking will be.

- With Kerosene (ϵ_r = 1.8) upper blanking 50 mm min., lower blanking 30 mm min..

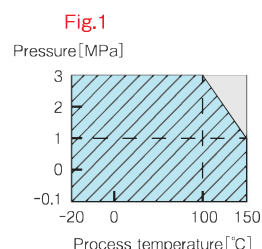
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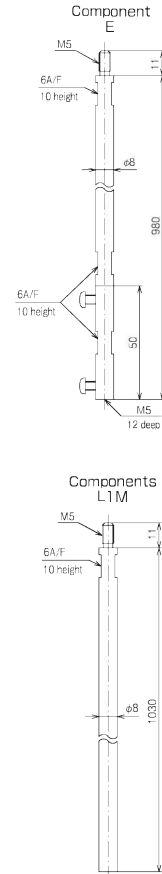
MODEL		GW200NWT1	GW200FWT1	GW200SWT1
OVERVIEW		Heat Proof type up to 150°C G $\frac{3}{4}$ thread mounting	Heat Proof type up to 150°C JIS5K50A flange mounting	Heat Proof type up to 150°C ISO 2S Ferrule mounting
OUTLINE				
MEASURED MATERIAL		Liquids		
OPERATING CHARACTERISTICS	Linearity ^{**1}	±3 mm (L≤2000mm), ±10 mm (L>2000mm)		
	Analog output accuracy ^{**1}	±0.5 % of span		
	Temperature characteristics	±0.02 % of span/°C		
	Dielectric constant	$\epsilon_r \geq 1.8$		
	Probe length	300 to 8000 mm		
	Blanking ^{**2}	upper : 25 mm min. / lower : 160 mm min.		
ELECTRICAL CHARACTERISTICS	Power supply	24 V DC ±10 %		
	Power consumption	1.0 W max. (excluding open collector output)		
	Output signal	4 to 20 mA DC, 3 wire		
	Alarm output	Open collector NPN/PNP(selectable), 5 points, 26.4 V, 50 mA DC Voltage drop : 2V max. for NPN, 2.5V max. for PNP Each point configured independently for OFF, setpoint, measurement error, or device error		
	Load resistance	500 Ω max. at 24V DC		
	Measurement cycle	approx. 0.3 s		
	Resolution	1 mm		
MECHANICAL CHARACTERISTICS	Pressure (static)	- 0.1 to + 1 MPa (excluding process connection, Fig.1)		
	Tensile load	4 kN		
WORKING TEMPERATURE	Housing	- 20 to + 60 °C (no condensation)		
	Wetted parts	- 20 to + 150 °C (no freezing)		
RELATIVE HUMIDITY		85 % max.		
PROTECTION CLASS	Housing	IP 65 / 67		
	Wetted parts	IP 68 (4.5 MPa for 10 minutes)		
MATERIAL	Non-wetted	Housing	Glass reinforced PBT (with anti-static agent), Stainless Steel, PC(clear), VMQ, CR, PBT, EPDM, Brass (C3604BD, nickel plated)	
		Process connection	316SS	316SS, 316LSS
	Wetted	Rod	316SS	
		Screw	316LSS	
		Insulator	PEEK	
		O-ring	FKM	
Gasket	NBR ^{**5}			
OTHERS	Process connection ^{**3**4}	G $\frac{3}{4}$	JIS5K50A	ISO 2S or equivalent
	Rod diameter	4 mm (pipe φ8 mm, weight φ20mm)		
	Housing rotation	300°		
	Cable	0.25 mm ² × 8C (M12 A-code female connector)		
MASS (approx.)	Housing, process connection	0.9 kg	2.3 kg	1.2 kg
	Probe	Wire 70 g/m, weight 350g		

^{**1} Reference conditions
- Environmental: +25 °C, 60 %RH
- Application: metal tank (84.9mm I.D.), between 60mm below the reference point to 10 mm above probe end, water (ϵ_r = approx. 80)
^{**2} With water (ϵ_r = approx. 80). The lower the dielectric constant of the material, the longer the blanking will be.
- With Kerosene (ϵ_r = 1.8) upper blanking 50 mm min., lower blanking 30 mm min..
^{**3} When installing the threaded or flanged version on a non-metallic tank with no or smaller than φ200 mm metallic connection, use a metal plate/flange φ200 mm or larger. Make sure the threaded connection is directly connected to the metal plate.
^{**4} Use a metal clamp to secure the sanitary fitting to the metal piping.
^{**5} No. 6500 from VALQUA, LTD..



Optional components

Item	Description	Remarks
Component E	Extension rod (930mm, 316SS) ×1 Connection rod (50mm, 316SS) ×1 Screw (M4×5mm, 316LSS) ×2	980mm extension kit for rod versions(GW200□R□□).
Component L1M	End rod (1030mm, 316SS) ×1	For GW200NR□□1, L=1070mm, (L=1005mm for Heat proof)
Component L2M	Component E ×1 Component L1M×1	For GW200NR□□1, L=2050mm, (L=1985mm for Heat proof)
Component L3M	Component E ×2 Component L1M ×1	For GW200NR□□1, L=3030mm, (L=2965mm for Heat proof)
Component L4M	Component E ×3 Component L1M ×1	For GW200NR□□1, L=4010mm, (L=3945mm for Heat proof)
Component L5M	Component E ×4 Component L1M ×1	Extends the rod length of GW200NRT1 to 4925mm
Component G1	Gasket (No.6500, VALQUA, LTD.) ×1 (φ42mm, φ27mm, 2mm thick)	For G¾. Standard accessory to GW200N□□□.
Component G2	Gasket (No.7020, VALQUA, LTD.) ×1 (φ49mm, φ34.5mm, 2mm thick)	For G1. Standard accessory to GW200NP□□□.
Component E1 (Earth plate A)	G¾ threaded earth plate ×1 (φ200mm, 2mm thick, 304SS)	Comes with a gasket for G¾ thread.
Earth plate B	Earth plate for flange ×1 (φ200mm, 6mm thick, 304SS)	Specify the flange size at the time of order.
Threaded tubing	PFA tubing with G1 threaded connection in PTFE ×1	Standard accessory to GW200NP□□ versiond. Specify probe length at the time of order.
Flared tubing	PFA flared tubing for JIS 5K 50A ×1	Standard accessory to GW200FP□□ versiond. Specify probe length at the time of order.
Tubing with gasket	PFA tubing with a PTFE gasket fitted to ISO 2. OS connection ×1	Standard accessory to GW200SP□□□. Specify probe length at the time of order.



※ Probe can be cut to the specified length at factory upon request.

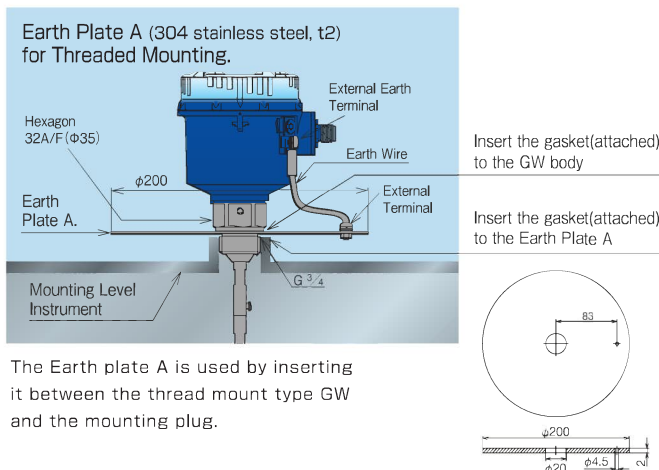
When the mounting seat material is resin (Earth plate mounting image)

● The cases in which Earth Plate is required

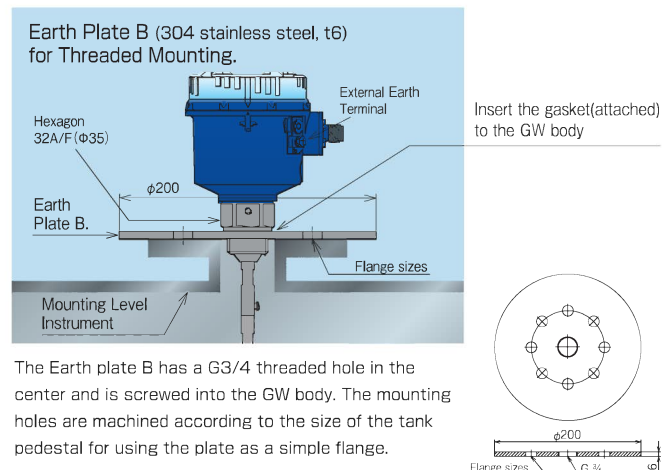
Required when the tank is non-metal tank, when the pit is an open yard pit and when the mounting part (Plug or Flange) is non-metal.

● The aim in using the Earth Plate

In the above case, sufficient reflection from the liquid surface is often not obtained, so a ground plate is set to the sensor and used to stabilize the reflection from the liquid surface.



The Earth plate A is used by inserting it between the thread mount type GW and the mounting plug.



The Earth plate B has a G3/4 threaded hole in the center and is screwed into the GW body. The mounting holes are machined according to the size of the tank pedestal for using the plate as a simple flange.

Special cable with 8 pin connector



The end of the cable core is a loose wire.
The connector is a straight type [Connector material: brass (zinc plated)]
L-shaped connectors is not available.

Item	Sheathed Material	Length
C1	PVC	5 m
C2	PVC	10 m
C3	PUR	5 m
C4	PUR	10 m

PUR : Oil resistant cable.
Use PVC material type as wet part for water and aqueous solution applications.

