

# General Specifications

Model FC500G  
Free Available Chlorine Analyzer  
(Non-reagent Type)

EXA FC

## GS 12F5A2-E

The Model FC500G is designed to measure free available chlorine without using reagent, and achieved a long maintenance period with electrode cleaning system.

### SPECIFICATION

**Measured Object:**

Free available chlorine contained in tap water

**Measuring System:**

Polarographic method using rotating electrode

**Measuring Ranges:**

0 to 1 / 0 to 2 / 0 to 3 mg/l (Model FC500G-1)  
0 to 5 / 0 to 10 mg/l (Model FC500G-5)  
(Air purge is necessary.)

**Indication:** Digital (3 1/2 LCD)

**Output Signal:**

4 to 20 mA DC (Load resistance: Maximum 500 Ω)

**Operating pH Range of Sample Solution:**

pH 6.5 to 7.5: For measured liquids whose pH exceeds the above limits, error increases (refer to the following figure).

**Sample Solution Temperature:**

0 to 40 °C (temperature compensation range 5 to 35 °C).

**Sample Solution Pressure:**

1 to 30 kPa (for without VALVE)  
1 to 150 kPa (with VALVE)

**Sample Solution Flow Rate:**

0.1 to 2.5 l/min (at cell inlet)

**Sample Solution Conductivity:**

100 to 300 μS/cm

**Sample Solution SS (Suspended Solid):**

10 mg/l or less

**Air Purging (for only 0 to 5 / 0 to 10 mg/l Range)**

**Supply Air Pressure:**

About 50 to 140 kPa

**Air Consumption:**

About 5 l/min

**Electrode:**

**Indicator Electrode:**

Rotating gold electrode

**Counter Electrode:**

Silver electrode (with Pt 1000 installed)

**Electrode Cleaning:**

Glass beads used for cleaning

**Wetted Part Materials:**

**Measuring Tank:**

Acrylic resin (molding)

**Piping:** Flexible PVC and PE

**Color:** Muncell 5Y7/1

**Finish:** Baked polyurethane resin coating

**Mounting:** On the wall or 2 inch pipe



**Ambient Temperature:**

-5 to 50 °C

**Power Supply:**

100 or 110 V AC; or 200 or 220 V AC as per order ±10 %, 50 or 60 Hz

**Power Consumption:**

Approximately 15 VA (100 or 110 V),  
20 VA (200 or 220 V)

**Weight:** Approximately 6.5 kg

**Characteristics:**

**Reproducibility:**

2 % of full scale

**Linearity:** ±5 % of full scale

**Stability:**

Zero Drift: Within ±1 % of full scale/month

Span Drift: Maximum -10 % of full scale/month

**Response Time:**

Approximately 2 minutes (time required to obtain a value within 90 % of final value)

**Ambient Temperature Influence:**

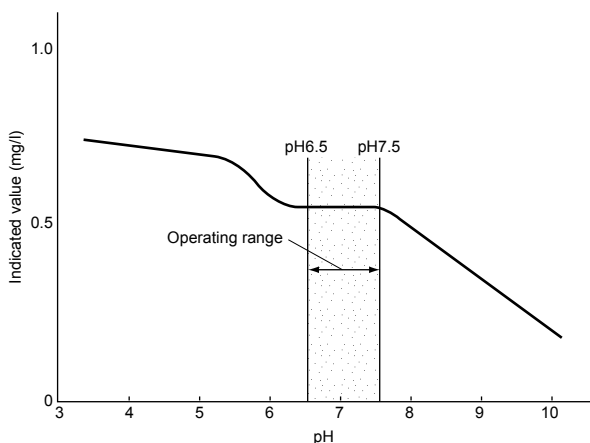
±0.5 % of full scale/10 °C

**Power Voltage Fluctuation Influence:**

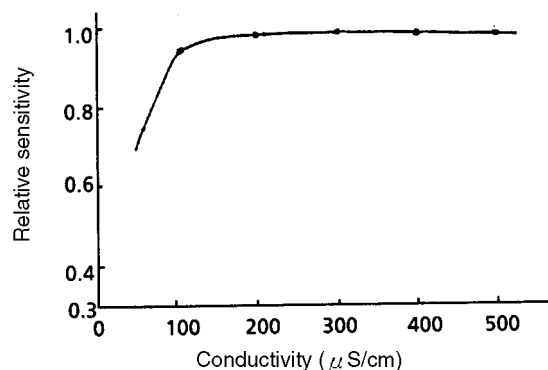
±0.5 % of full scale/10 % of rated voltage

**Sample Solution Temperature Compensation Error:**

±3 % of full scale/5 to 35 °C



**Figure 1 Sensitivity characteristics of diffusion current by pH value**



**Figure 2 Sensitivity characteristics of diffusion current by conductivity**

Note: If conductivity exceeds 300  $\mu\text{S/cm}$ , default value of applied voltage should be changed.

**■ ACCESSORIES**

- Fuse (1 A).....4 pcs.
- Glass Beads.....1 (2 bags)
- Allen Wrench.....2 pcs.
- Screwdriver (flat beads) ...1 pc.
- Polishing Powder.....1 bottle

**■ MODEL AND SUFFIX CODES**

**1. (Non-Reagent Type) Free Available Chlorine Analyzer**

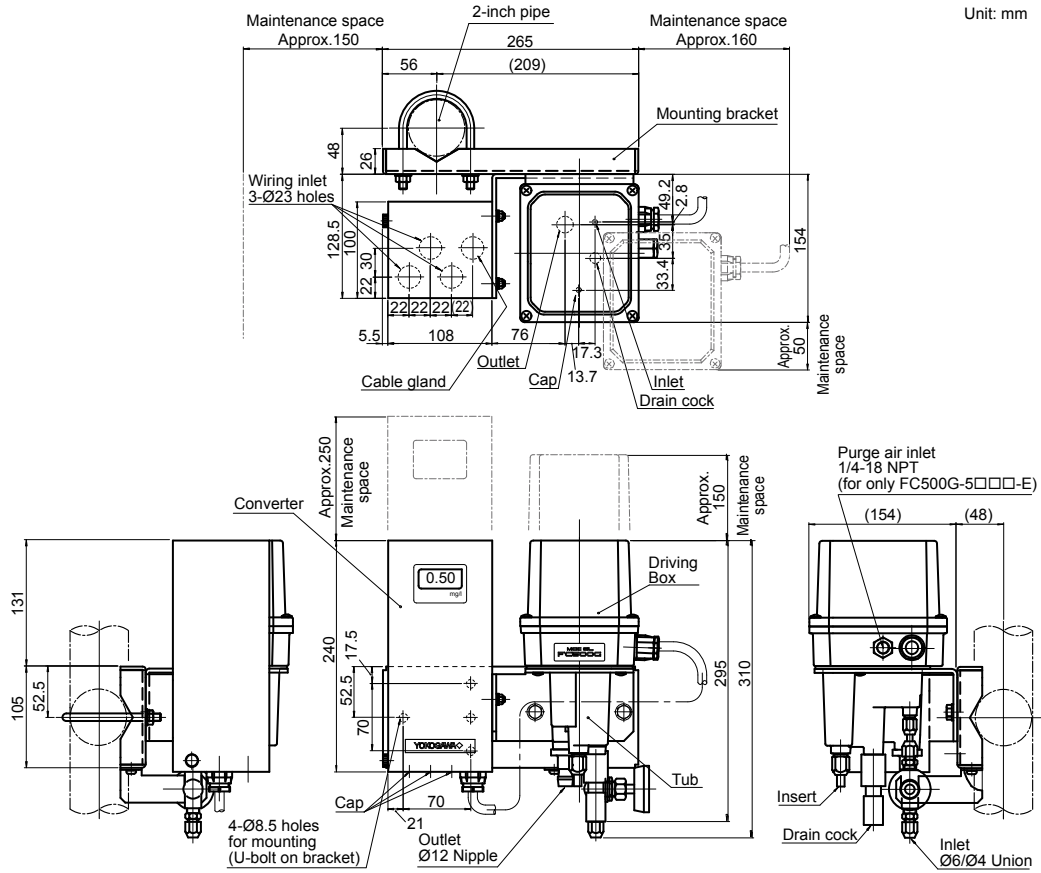
Model	Basic Code	Option Code	Description
FC500G	.....	.....	Free Available Chlorine Analyzer
Range	-1 -5	.....	0 to 1 / 0 to 2 / 0 to 3 mg/l Switchable 0 to 5 / 0 to 10 mg/l Switchable
Output signal	1	.....	4 to 20 mA DC
Power	3 4 5 6	.....	100 V $\pm 10\%$ , 50/60 Hz 110 V $\pm 10\%$ , 50/60 Hz 200 V $\pm 10\%$ , 50/60 Hz 220 V $\pm 10\%$ , 50/60 Hz
Inlet Valve	0 1	.....	Without Valve With Valve
Language	-E	.....	English

**2. Spare Parts**

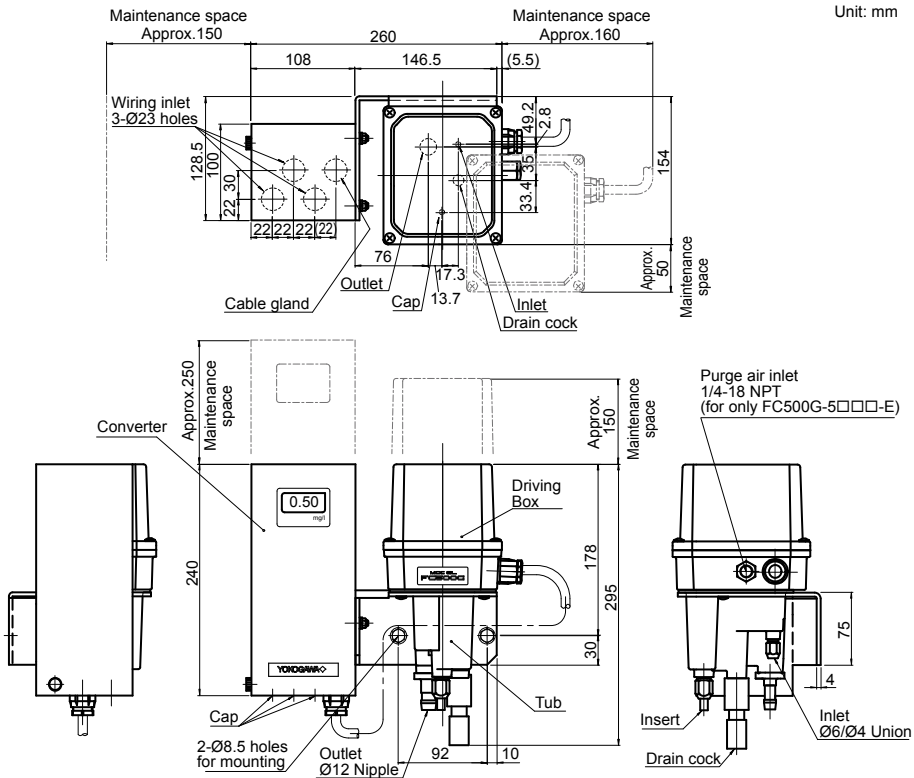
Name	Parts No.	Note
Indicator Electrode	K9332MB	Rotating Electrode
Counter Electrode	K9332MK	Reference Electrode
Glass Beads	K9332ZJ	Washing Indicating Electrode (2 bags)
Polishing Powder	K9088PE	Polishing Indicating Electrode
Brush	K9332JX	
Slip Ring	K9332JZ	
Grease	K9044FX	

## EXTERNAL DIMENSIONS

### (1) With Inlet Valve (FC500G-□□□1-E)



### (2) Without Inlet Valve (FC500G-□□□0-E)



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## Inquiry Sheets for Model FC500G Free Available Chlorine Analyzer

### 1. General Information

Name of your company; \_\_\_\_\_  
Person in charge; \_\_\_\_\_ Belongs to: \_\_\_\_\_ (TEL. \_\_\_\_\_)  
Name of Plant; \_\_\_\_\_  
Measuring point; \_\_\_\_\_  
Purpose of use;  Indication  Record  Alarm  Control  
Power supply; \_\_\_\_\_ V AC, \_\_\_\_\_ Hz

### 2. Measuring Conditions

- (1) Liquid temperature; \_\_\_\_\_ to \_\_\_\_\_, Normal \_\_\_\_\_ [°C]
- (2) Liquid pressure; \_\_\_\_\_ to \_\_\_\_\_, Normal \_\_\_\_\_ [kPa]
- (3) Flow rate; \_\_\_\_\_ to \_\_\_\_\_, Normal \_\_\_\_\_ [l/min]
- (4) Ammoniacal Contaminants;  No  Yes
- (5) Slurry or soiling components;  No  Yes
- (6) Name of measured liquid; \_\_\_\_\_
- (7) Composition of measured liquid; \_\_\_\_\_
- (8) Other; \_\_\_\_\_

### 3. Installation Location

- (1) Ambient temperature; \_\_\_\_\_
- (2) Installation location:  Indoors \_\_\_\_\_
- (3) Other; \_\_\_\_\_

### 4. User Requirements

- (1) Measuring range; \_\_\_\_\_ to \_\_\_\_\_ mg/l
- (2) Transmission output;  4 to 20 mA DC \_\_\_\_\_
- (3) Selection of component instruments;  Free Chlorine Analyzer  Accessories
- (4) Other; \_\_\_\_\_