

Solution Details

Measurement system

2-wire/4-wire pH/ORP measurement system

Sensor/Holder

KCl refillable ORP sensor

OR8EFG-AU-□□-TT1-□*A

KCl refillable pH sensor

PH8EFP-□□-TN-TT1-N-□*A

Submersion type holder

PH8HS-PP-□□-T-NN-NN*A

Terminal box (when needed)

WTB10-PH5 (for 2-wire system)

WTB10-PH3 (for 4-wire system)

Converter/transmitter

2-wire pH/ORP transmitter (pH+ORP 2 input)

FLXA21-D-P-S-AA-P1-P1-A-N-LA-N

Distributor (for 2-wire system)

PH201G- A□*B

4-wire pH/ORP converter

PH450G-A-□

Utilities

FLXA21

Power supply: 23 to 40 V DC (from distributor)

PH201G distributor (for 2-wire system)

Power supply: 100 V: 20 to 130 V DC/80 to 138 V AC, 47 to 63 Hz
220 V: 120 to 340 V DC/138 to 264 V AC, 47 to 63 Hz

Power consumption: 24 V DC: approx. 200 mA
100 V AC: approx. 7 VA
220 V AC: approx. 11 VA

PH450G

Power supply: 90 to 264 V AC, 50/60 Hz

Power consumption: approx. 15 VA

Measurement Conditions

1. Check solutions for ORP analyzer

Oxidation-reduction potential of check solutions (quinhydrone/iron solutions)

A check solution is used to determine whether the ORP sensor is operating correctly. There are two types of check solutions: quinhydrone and iron.

Quinhydrone solution: approx. 200 to 300 mV

Iron solution: approx. 420 to 520 mV

Unlike a pH standard solution, an ORP check solution does not always indicate a constant reference value. Whether the sensor is operating normally can be determined by seeing whether its readings are within the acceptable range.

Preparation of a check solution (250 mL)

Quinhydrone solution: dissolve the following reagent in pure water and dilute to 250 mL.

Quinhydrone salts: P/N K9024EC

Ferrous & ferric: dissolve the following reagent in a 2-mol/L sulfuric acid solution and dilute to 250 mL.

Ferrous & ferric salts: P/N K9024ED

2. Use of a gold electrode for ORP measurement

For ORP measurement of chromate wastewater, the use of a gold electrode is recommended.

