SPECIFICATION SHEET

TOA DKK

RESISTIVITY MONITOR
for Ultra-Pure Water

AQM-250
AR6-212

The AQM-250 is a compact (DIN96 size) and light-weight panel type dual channel resistivity monitor for ultra-pure water. This model, which allows for a range of temperature compensations from 10 to 35°C, is suitable for highly accurate measurements of the resistivity of ultra-pure water (point of use resistivity for semiconductor industry) of 18.24MΩ·cm.

Calibrated with the AR6-212 detector to be connected using actual liquid, this model can be used as a secondary reference standard for the calibration of general resistivity monitors.

AQM-250

Portable type

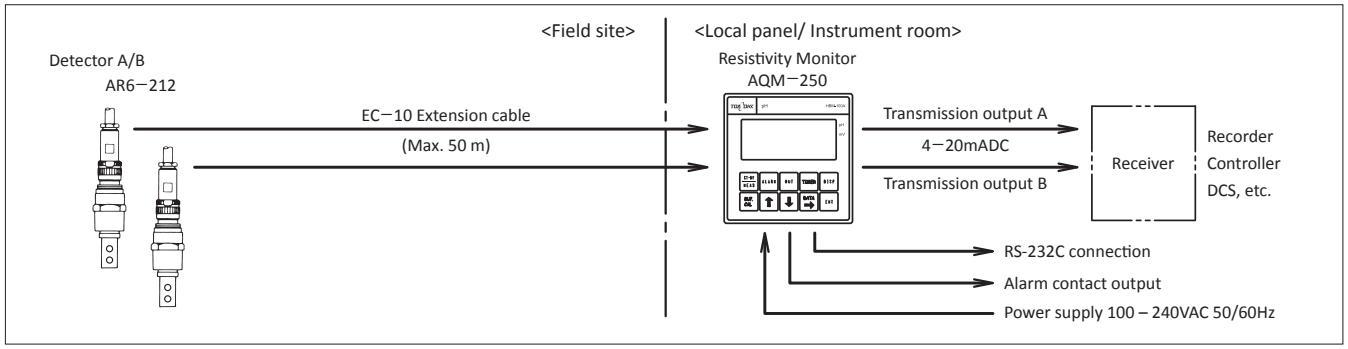
Features

- ○2 detectors connectable (dual channel) with alternate display of measured values.
- ○4 - 20mADC transmission output signals with 2 circuits: OUT1 fixed to detector A resistivity; OUT2 selectable from detector B resistivity or detector A temperature.
- ○Alarm contact output with 2 circuits, contact "c" can be set as the upper limit or lower limit of the measured values.
- ○Digital communication output RS-232C is equipped as standard.
- ○The model operates on a universal AC power supply at 100 - 240VAC/60Hz.
- ○Portable type (optional) is available.
  An instrument and detector can be held in a compact case along with a flow chamber. One-touch connecting of water samples.

Standard Specifications

Product name	: Highly Sensitive Resistivity Monitor
Model	: AQM-250
Measurement range	2 metal electrodes (AR6-212 to be combined)
Temperature	: Display; 0.00 - 20.00MΩ·cm (at 25°C) [Cell constant; 0.1 cm^{-1}]
Display	: 0.0 - 50.0°C, resolution 0.1°C
Temperature compensation	: Digital liquid crystal display (LCD) : Temperature range; 10 - 35°C (No sudden change in temperature) Temperature-sensing element; thermistor (integrated into the detector)
Transmission output	: Isolated output, 4 - 20mADC, Max. load resistance 650Ω, 2 circuits, setting available with the width of 25% or more of measured value.
Alarm functions	: Number of circuits; 2 circuits
Setting range	: 0 - F.S.

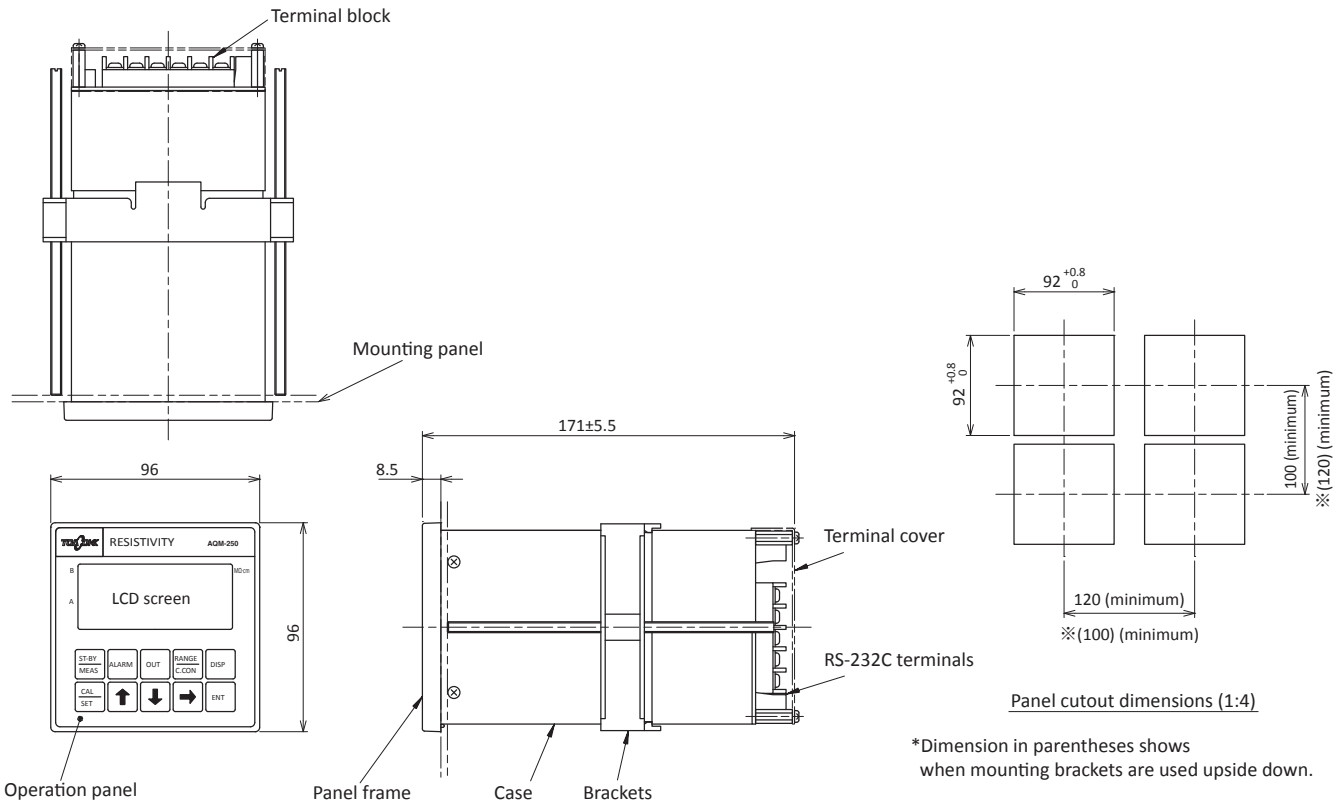
Configuration



Contact output	: No-voltage contact “c”
Contact capacity	: 250VAC, 3A or 30VDC, 3A (resistance load)
ALARM indication	: Displayed when an alarm occurs
Number of detectors connectable	: 1 or 2 detectors
Other functions	: Over-scale indication; Blinking LCD Transmitter operation check; using equivalent resistance unit
Performance	: Linearity; ± 0.01MΩ·cm or less (at equivalent input) Repeatability; ± 0.01MΩ·cm or less (at equivalent input) Temperature compensation; ± 0.20MΩ·cm or less (at equivalent input) Power requirements; 100 - 240VAC ±10%, 50/60Hz
Power consumption	: Approx. 10VA
Ambient temperature/ humidity	: -10 - 50°C, 95%RH or less Case; Material···Aluminum, plastic Mounting; Panel mount Panel cutout; 92(W) × 92(H) mm
Dimensions	: 96(W) × 96(H)×171(D) mm
Weight	: Approx. 0.8 kg

Dimensions

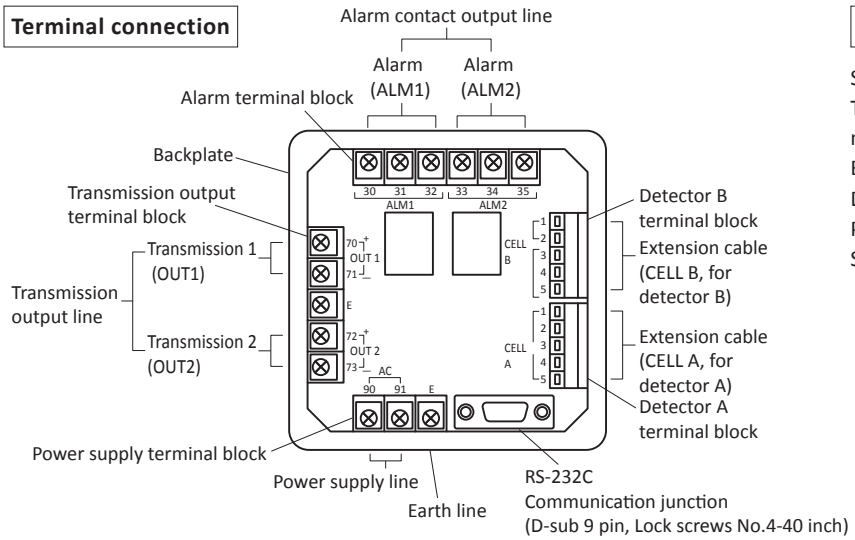
Unit : mm



Panel cutout dimensions (1:4)

*Dimension in parentheses shows when mounting brackets are used upside down.

Terminal connection



RS-232C Communication Specifications

Standard	: conforming to JIS X5103
Transmission method	: Asynchronous, Half-duplex communication
Baud rate	: 9600 bps
Data length	: 8 bit
Parity check	: Non-parity
Stop bit	: 1bit

Product code

AQM250-0-□□□

Detector to be connected (AR6-212)
- 0 ····· N/A*1
- 1 ····· Manufactured together with instrument (1 set)
- 2 ····· Manufactured together with instrument (2 sets)

Mounting form
- A ····· Panel mount (Standard)
- B ····· Portable type*2

Language of documents
- A ····· Japanese (Standard)
- B ····· English

*1. If the instrument was NOT manufactured together with the detector, send the detector to be connected because it needs connection adjustment.

*2. For the Portable type, a set of detectors and flow chambers are held in a light-weight, compact case. (Weight: Approx. 5 kg)
Refer to page 4 for details.

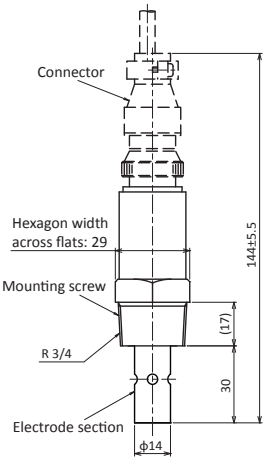
■ Supported detectors

Standard Specifications

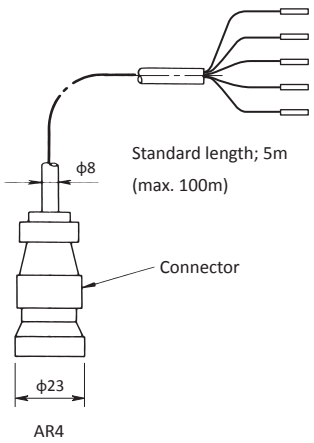
Product name	: Resistivity Analyzer
Model	: AR6-212
Cell constant	: 0.1 cm^{-1}
Temperature-sensing element	: Thermistor (sealed inside the inner electrode)
Sample water conditions	: Temperature; 0 - 50°C Pressure; 0.5MPa or less
Materials	: Electrode; Titanium Mounting screw; SUS316 (PTFE-coated) Seal; Fluoro rubber Connector; Plastic
Pipe connections	: R3/4, screw-in type
Extension cable	: Model; EC-10, Outside diameter; Φ8, Standard length; 5m (max. 100m), Equipped with connector

Dimensions

Unit : mm



Detector: AR6-212



Extension cable: Model; EC-10

Product code

AR62-0-□□

Connection standards
- 1 ····· R3/4 standard
- 9 ····· Custom spec.

Language of documents
- A ····· Japanese (Standard)
- B ····· English
- Z ····· Custom spec.

Portable type

This model is a portable type highly sensitive resistivity monitor AQM-250 for ultra-pure water held in a compact case along with a flow chamber equipped with pipe-connected detector AR6-212. One-touch connector for the attached tube serves as supply port and drain port for water samples.

In addition, this model is equipped with transmission output terminals for recording the measured values. It can be used for regular maintenance and continuous monitoring of an ultra-pure water production system, evaluation of the system, and periodic calibration of resistivity analyzer in general.

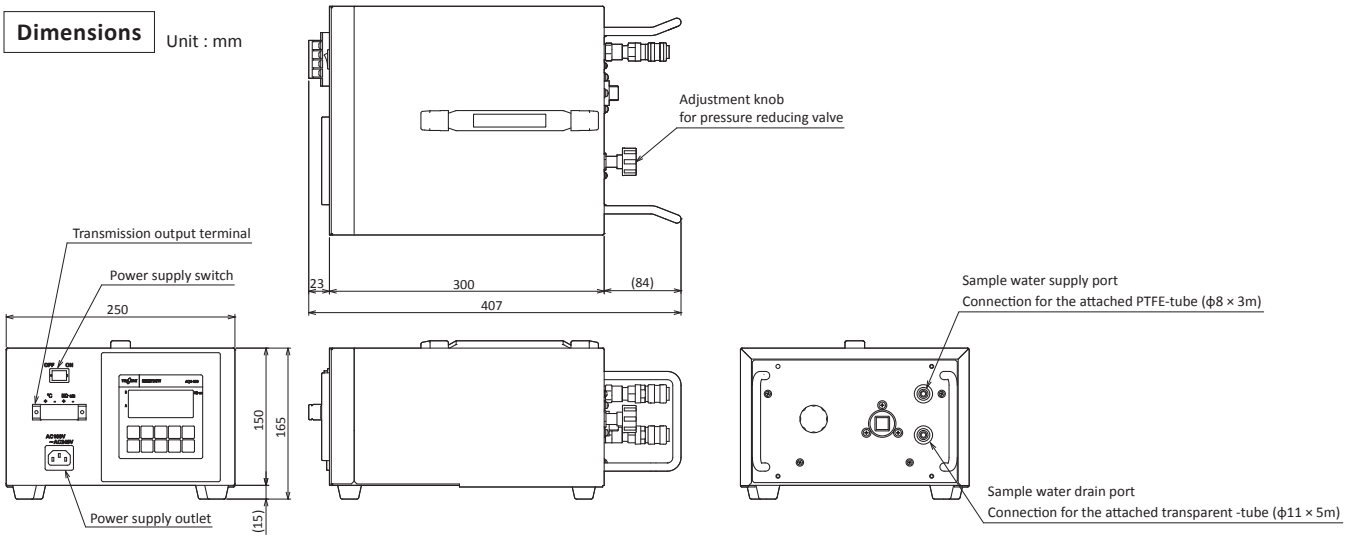
Standard Specifications

Measurement range : 0.00 - 20.00 MΩ·cm at 25°C
Transmission output : (1) MΩ·cm …4 - 20mADC (resistivity)
(2) °C…4 - 20mADC (solution temperature)
Sample water conditions : (1) Temperature; 5 - 45°C,
(2) Pressure; 0.1 - 0.5MPa
Wetted parts : (1) Pipe; SUS316
(2) Flow chamber; acrylic resin
Connection port : One-touch connector attached with check valve
Weight : Approx. 5 kg

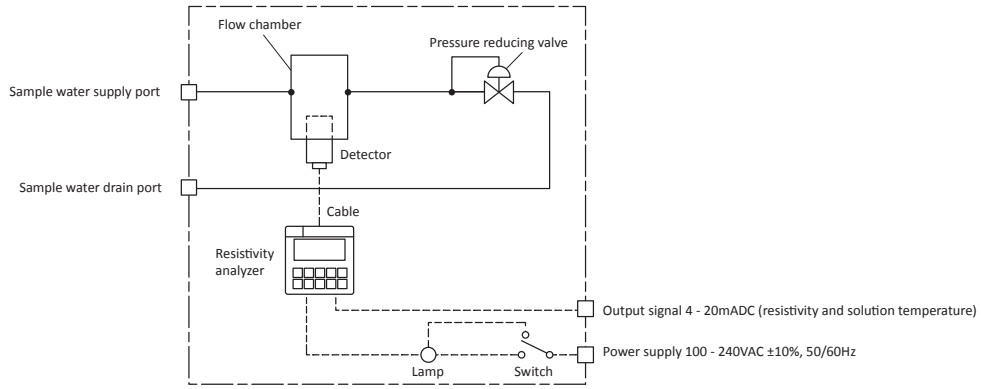
(Joints of alarm contact and RS-232C are not available for the Portable type)

Dimensions

Unit : mm



Flowsheet



Piping and wiring flow

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CAUTION Please read the operation manual carefully before using products.

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