

RESISTIVITY MONITOR FOR ULTRAPURE WATER

Model: AQM-100

This resistivity monitor is suitable for use with ultra-pure water producing systems and outlet-points in semiconductor plants.

The compact size (DIN 96 x 96 x 115mm), low weight and competitive price allows integration into semiconductor manufacturing equipment. The design and construction of the Model AQM-100 is based on decades of continuous product development and field experience enabling this instrument to offer superior accuracy, performance and cost of ownership benefits.

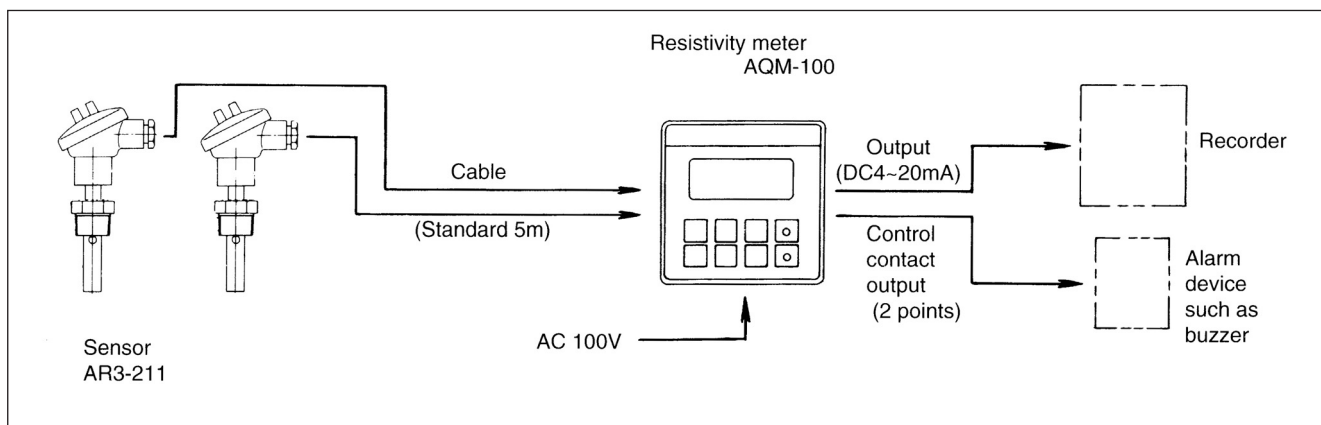
FEATURES

- **Compact and light weight design:**
Dimensions: 96 x 96 x 115mm, panel cut-out: 92 x 92 mm (DIN size)
- **Superior Accuracy:**
Highly accurate temperature compensation is achieved by using a precision resistor together with microprocessor calculations. Accuracy exceeds performance of analogue type instruments.
- **Suitable for High Temperatures:**
Suitable for sample temperatures up to 99.9°C .
- **Suitable for Sterilisation Applications:**
Can be used for measurement during hot water sterilization processes for ultra-pure water.
- **Dual sensor operation:**
Water quality at two locations can be displayed by selection from keypad. The output signal and control contacts correspond to the selected sensor.
- **Temperature indication:**
As well as resistivity, sample temperature can also be monitored at each location
- **Cell constant adjustable:**
The cell constant can be easily adjusted from the front panel keypad, enabling accurate measurement to be maintained.
- **LCD display and sealed key pad:**
No metal dust producing parts and high visibility digital display enables this unit to be installed in a "clean room" environment.



- **Two control points can be set:**
Low limit and lower low limit can be set. When the measured value drops below the set point, the corresponding LED is lit and a volt-free contact is activated.
- **Isolated 4~20mA DC dual output signals:**
Two isolated 4~20mA analogue signals are available for connection to any external device.
- **Easy trouble shooting**
Any fault can be isolated to either the sensor or transmitter/cable by removing the sensor connector and substituting with an equivalent resistor unit in its place.

SYSTEM CONFIGURATION



STANDARD SPECIFICATIONS

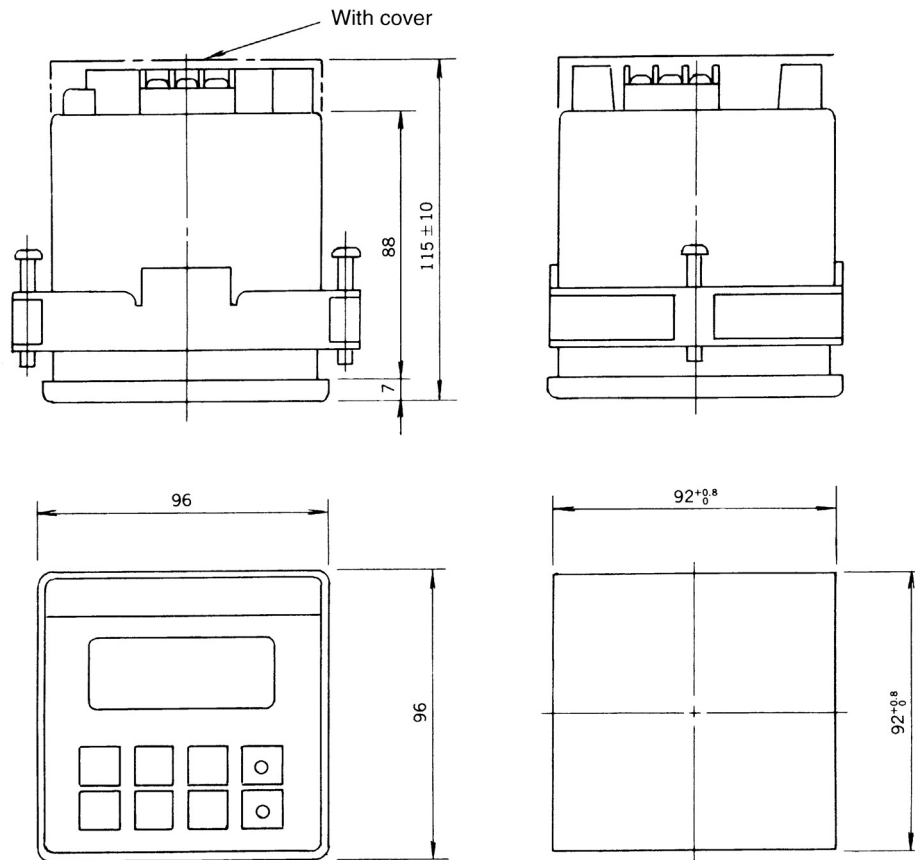
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|--------------------------|--|
| Product Name | : Resistivity monitor for Ultra-pure water |
| Model | : AQM-100 |
| Measurement range | |
| Resistivity | : 0.00~20.0MΩ cm (at 25°C) 0.00~9.99; Indication to two decimal places 10.0~20.0; Indication in tenths |
| Temperature | : 0.0~99.9°C resolution 0.1°C |
| Display | : 3-digit digital LCD |
| Temp Compensation | |
| Temperature range | : 0-100°C Temperature sensing element Platinum temperature bulb 500Ω (Integrated in the sensor) |
| Output | : 4~20mA DC, isolated, max. load 600Ω |
| Control functions | |
| Number of circuits | : 2 circuits of Low and Lower-Low limits |
| Set range | : 0~20MΩ cm |

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|--|--|
| Set accuracy | : Within ±1%FS |
| Sensitivity | : Within ±1%FS |
| Contact output | : Volt-free contacts |
| Contact rating | : 250V AC 3A (resistive load) |
| Alarm indication | : LED is lit when the measured value drops below the set point |
| Sensor connections | : 2 electrode connections available |
| Other functions | : Over scale indication; Blinking LCD transmitter quality check; By equivalent resistor unit |
| Linearity | : Within ±1%FS |
| Repeatability | : Within ±0.5%FS |
| Power requirements | : 100V AC ±10%, 50/60Hz (other voltages available as options) |
| Ambient temperature/ Humidity | : -5°C~50°C, 90% RH or less |
| Case Material | : Plastics |
| Mounting | : Panel mount |
| Panel cut-out | : 92(w) x 92(h)mm |
| Dimensions | : 96(w) x 96(h) x 115(d)mm |

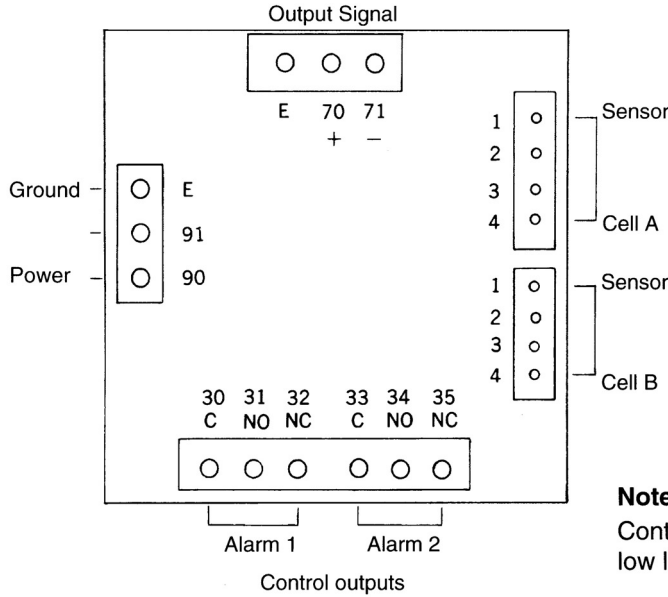
DIMENSIONS

Unit: mm

General tolerance: ±5



TERMINAL CONNECTIONS



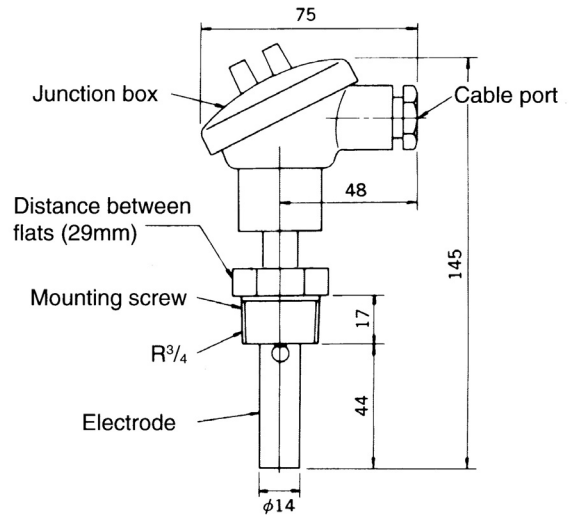
Note:
Control output 1 or 2 can be set as lower low limit or low limit.

RESISTIVITY SENSOR Model: AR3-211

STANDARD SPECIFICATIONS

- Product Name** : Resistivity sensor
- Model** : AR3-211
- Cell Constant** : Approx. 0.01cm-1
- Temp Sensor** : Pt resistance bulb 500 (Sealed in the inner electrode)
- Sample Temperature** : 0~100°C
- Sample Pressure** : 500kPa max.
- Materials**
 - Electrode : Titanium
 - Bushing : Teflon coated 316S.S
 - Sealing : Viton
- Connections** : Junction box (connector type available as option.)
- Piping Connection** : R³/₄ screw-in type
- Connection Cable** : O.D.6mm, standard length 5m (Max. 30m)

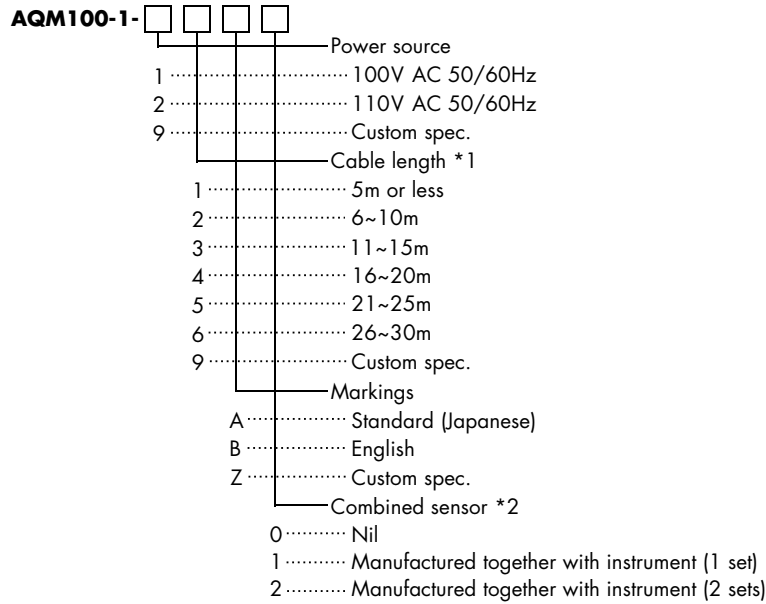
DIMENSIONS



PRODUCT CODE

Model: AQM-100 (Resistivity monitor for pure water)

Product Code



*1 Necessary information to adjust the instrument, max. 30m (Cable must be separately ordered.)

*2 When the instrument is not supplied together with the sensor, information on the sensor to be used by client is required (serial No etc.).

Notes:

1) Measurement range is limited as shown below.

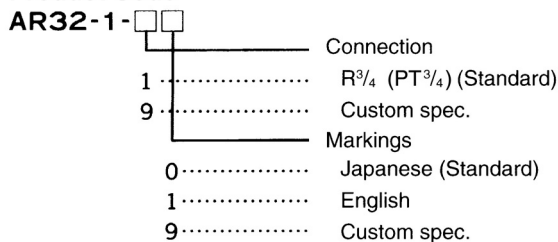
Resistivity : 0.00~20.0MΩ•cm (Temperature compensation range 0~100°C)
Temperature : 0.0~99.9°C

2) The number of sensors to be connected is 2 (cell A, cell B).

However, transmission signal (4~20mA DC) and control contacts (low and lower low limits) are applicable to Sensor A only.

Model: AR3-211 (Resistivity sensor for ultrapure water)

Product Code



DKK-TOA CORPORATION



CAUTION

Do not operate products before consulting instruction manual.

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Information and specifications are for a typical system and are subject to change without notice.