

Panel Conductivity meter (Double channels)

WBM-210A

Small and light weight panel type double channels conductivity meter.

It can support a wide measurement range from ultra pure water (0 to 0.2000 $\mu\text{S} / \text{cm}$) at semiconductor factories to factory waste (0 to 20.00 mS / cm). It also covers a wide temperature compensation range (-5 to 120 $^{\circ}\text{C}$).

It has transmission output (4 to 20mA DC 2-circuit), alarm output (2-circuit C contact) and RS-232C digital output.



Features

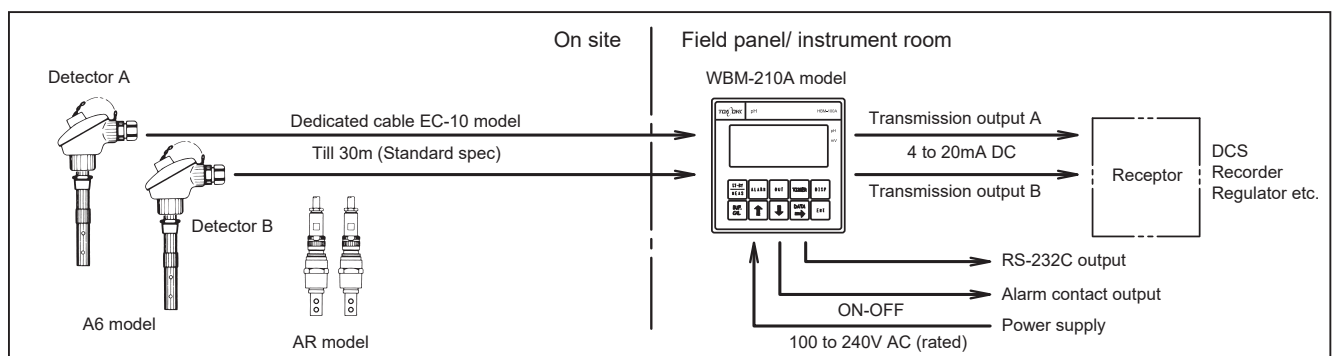
- **DIN 96 small size**
96 mm x 96 mm (DIN specification) x 171 mm, small and portable type.
- **Two detectors can be connected, and two locations can be measured.**
By key operation, both measurement values, ratio of two measured values, removal rate can be switched and displayed sequentially. And also can be set automatically switch them at 5 second intervals.
- **The power supply is 90 to 264V AC free power.**
- **It also measures temperature.**
It measures water temperature while measuring conductivity in each measuring point (temperature is approximate value)
- **It has a cell constant setting function.**
When the detector is replaced, set the cell constant by key operation. By doing so you can make accurate measurements.
- **Two-point no voltage alarm contact output is equipped.**
For each contact output, one alarm condition can be set from the following items.
Upper or lower limit of conductivity at both measuring points, resistivity ratio of both measuring points, removal rate, etc.
- **Digital communication output RS-232C is standard equipment.**

- **Transmission output is an insulated 4 to 20mA DC 2 circuit.**
Since it's input and output insulation type, it can be corresponding to all external connecting machines.

Standard specification

- Product name** : Panel conductivity meter
Model : WBM-210A
Test range : to choose from 4 kinds of cell constants, and specify type 1 to 4 below.
- | | | |
|-------------------|---|-----------------|
| Display... | ① 0 to 20 $\mu\text{S}/\text{cm}$ (3 ranges) | (cell constant) |
| | (0 to 0.2/0 to 2/0 to 20 $\mu\text{S}/\text{cm}$) | [0.01/cm] |
| | ② 0 to 200 $\mu\text{S}/\text{cm}$ | |
| | (0 to 2/0 to 20/0 to 200 $\mu\text{S}/\text{cm}$) | [0.1/cm] |
| | ③ 0 to 2000 $\mu\text{S}/\text{cm}$ | |
| | (0 to 20/0 to 200/0 to 2000 $\mu\text{S}/\text{cm}$) | [1.0/cm] |
| | ④ 0 to 20 mS/cm | |
| | (0 to 0.2/0 to 2/0 to 20 mS/cm) | [10.0/cm] |
- Output...** Optional setting, however, the setting width is 25% or more of the measurement range
- Temperature...** -5 to 120 $^{\circ}\text{C}$, resolution 0.1 $^{\circ}\text{C}$

Structure chart

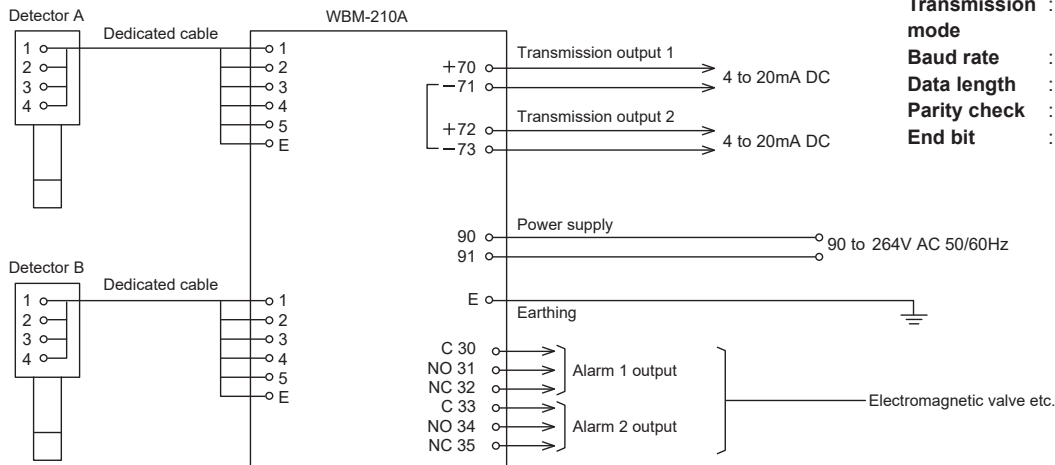


Display : electronic liquid crystal display (LCD)
Temperature compensation : compensation range... -5 to 120°C
 Temperature detecting element... thermistor (in-built in detector)
Transmission output : insulation type, 4 to 20 mA DC, load resistance is 650 Ω or less.
 Equipped with 2 circuits
 Besides the electric conductivity, the ratio of both electric conductivity and the removal ratio are also corresponded.
Warning function : Equipped with 2 circuits
 Selectable from electric conductivity, electric conductivity ratio or removal rate
 Upper and lower limit settable range
 Electric conduction: 0 to FS
 Electrical conductivity ratio: 0 to 100%
 Removal rate: 0 to 100%
 Contact output... no voltage c contact
 Contact capacity... 250V AC 3A or 30V DC 3A (resistive load)
 Alarm display... It displays when there is an alarm.

Other functions : when scale out... liquid crystal display flashes.
Performance : linearity... within ±0.5%FS (excluding the detector)
 Repeatability... within ±0.3%FS (excluding the detector)
Power supply : 90 to 264VAC, 50/60Hz
Power consumption : about 10VA
Ambient humidity and temperature : below 95%RH, -10 to 50°C
Materials : main body... aluminum
 Display position and operating position... polyester film
Installation method : panel mounting
Boundary dimension : 96 (W) x 96 (H) x 171 (D) mm
 Engravings... 92 (W) x 92 (H) mm
Weight : 0.8kg

Detector connection number : maximum two

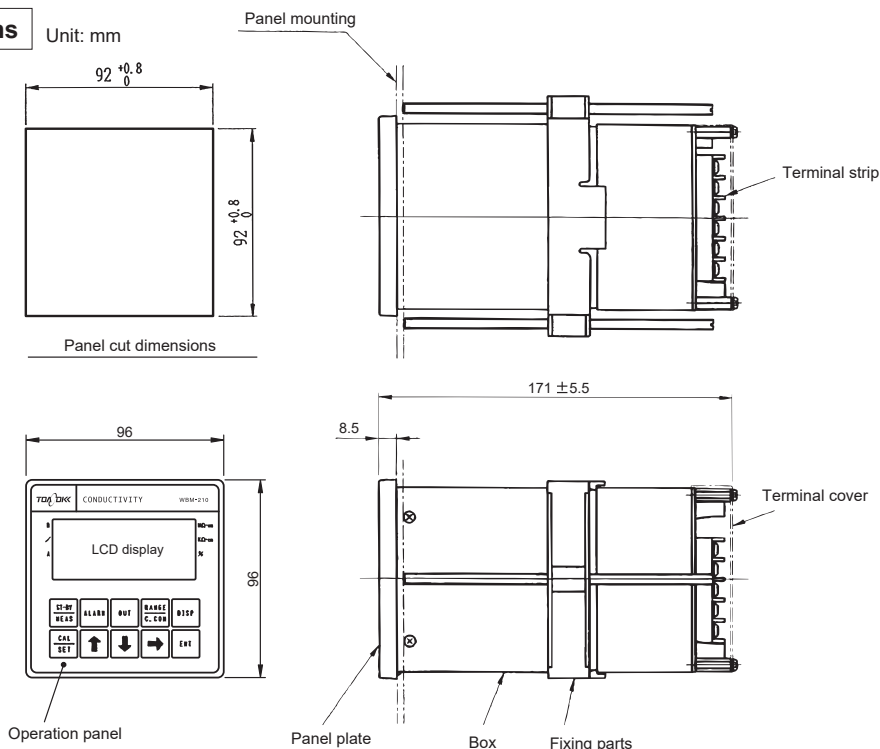
Wiring diagram



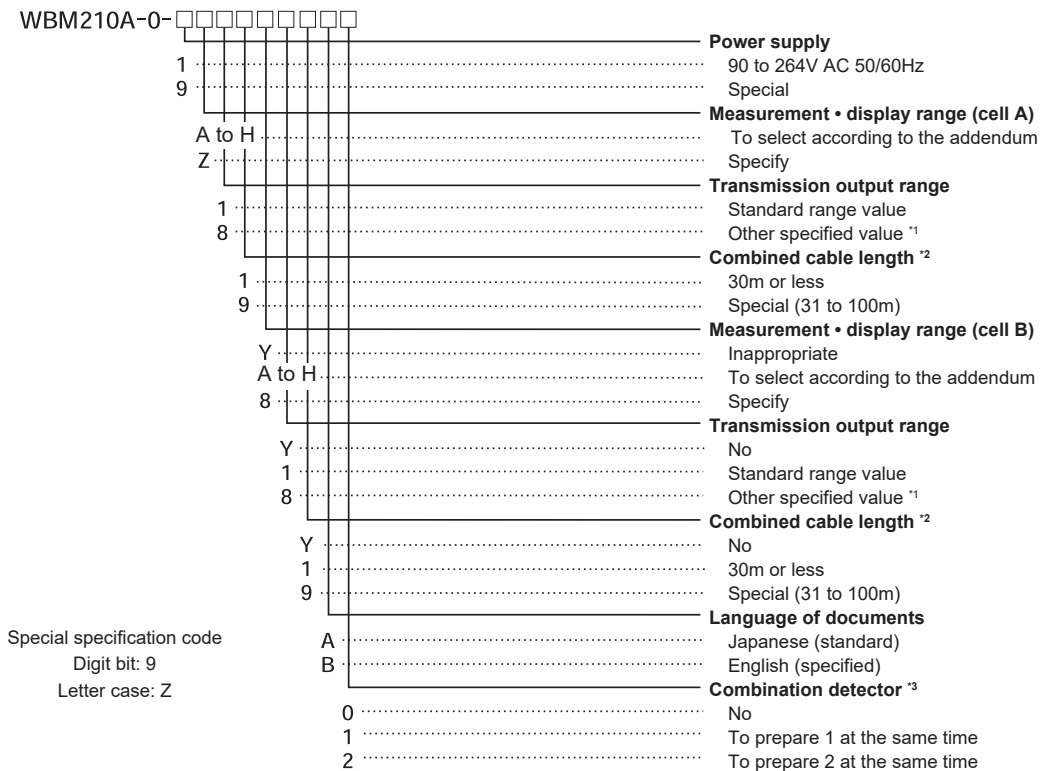
RS-232C communication

Specification : abide by JIS X5103
Transmission mode : non-synchronous, half-duplex communication
Baud rate : 9600 bps
Data length : 8 bit
Parity check : no parity
End bit : 1 bit

Outline Dimensions



Product code



Addendum

Mark selection	Test display range	Electrode constant	Test organization
A	0to.2000/2.000/20.00μS/cm at25°C	0.01/cm	S/cm
B	0to2.000/20.00/200.0μS/cm at25°C	0.1/cm	
C	0to20.00/200.0/2000μS/cm at25°C	1.0/cm	
D	0to.2000/2.000/20.00mS/cm at25°C	10.0/cm	
E	0to20.00/200.0/2000μS/m at25°C	1/m	S/m
F	0to.2000/2.000/20.00mS/m at25°C	10/m	
G	0to2.000/20.00/200.0mS/m at25°C	100/m	
H	0to20.00/200.0/2000mS/m at25°C	1000/m	

- *1. The transmission output range can be set arbitrarily. However, a width of 25% or more of the measurement display range is required.
Example) When measurement display range is 0 to 20 μS / cm transmission output range can be set 0 to 5, 0 to 10, 1 to 20 μS / cm, etc.
- *2. Dedicated cable (model EC-10) is required.
For 31 to 100m cable, it needs to be readjusted.
- *3. If not to make together with the detector, please advise the data of the combination detector (serial No. etc.).

■ Combination detector (representative case)

Product name : conductivity detector
Model : A6, AR
Cell : A6 ...0.01/cm, 0.1/cm, 1.0/cm, 10.0/cm
constant : AR (small size • for pure water use)
 0.01/cm, 0.1/cm
Temperature : thermistor (inside electrode)
sensory element
Simple : temperature... 0 to 100°C
water condition : Pressure... 1MPa or less
 AR electrode is 0.5 MPa or less

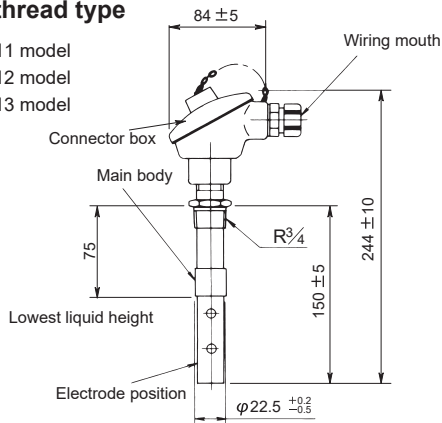
Materials : electrode...SUS316
 AR electrode is made of titanium.
 Electrode insulator...glass • PTFE
 AR electrode is FKM • PPS
 Installation position...SUS316
 Connector box...aluminum casting
 Box...SUS316 or PP (polypropylene)
Tubing connection : R $\frac{3}{4}$ screw thread or flange connection
Specialized cable : EC-10 type (external diameter $\phi 8$) reaches standard till 30m.

Outline outline dimensions

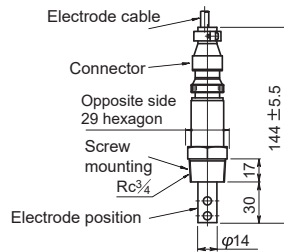
Unit: mm

● Screw thread type

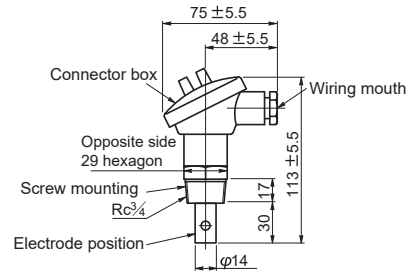
A6-111 model
 A6-112 model
 A6-113 model



AR4-212 model

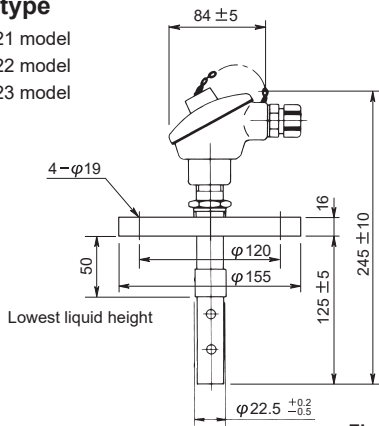


AR5-212 model



● Flange type

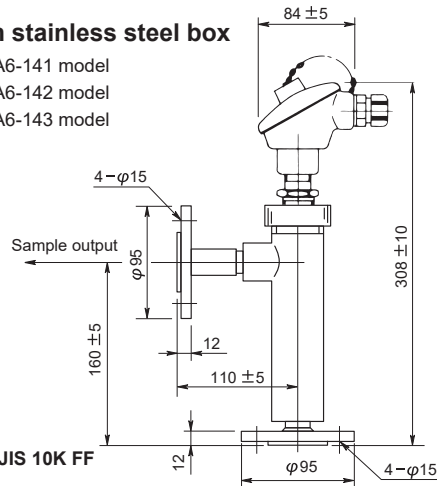
A6-121 model
 A6-122 model
 A6-123 model



Flange specification: 50A JIS 10K FF

● With stainless steel box

A6-141 model
 A6-142 model
 A6-143 model



Flange specification: 15A JIS 10K RF



DKK-TOA CORPORATION



Please read the operation manual carefully before using products.

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Information and specifications are subject to change without notice.