

SPECIFICATION SHEET



Electrical Conductivity Transmitter

WBM-165H

This is a field-installation 2-wire type (24 VDC power supply) electrical conductivity transmitter with practical functions in a robust die-cast aluminum case.

Features

- Available for a wide measurement range from ultra pure water (0 to 0.2 $\mu\text{S}/\text{cm}$) to industrial wastewater (0 to 20mS/cm) and a wide temperature compensation range from -5 to 120°C .
- The temperature of sample water (-5 to 120°C) is measured and displayed.
- Set to the maintenance mode, ST-BY lights up on the LCD display and the transmission output is held at the value immediately before switching.
- The measured value can be set to the electrical conductivity value for operational control.
(Setting range: $\pm 20\%$ of measured value)

Standard Specifications

Product Name : Conductivity Transmitter
Model : WBM-165H
Measurement Range :
0 to .2000/2.000/20.00 $\mu\text{S}/\text{cm}$ (Cell constant 0.01)
0 to 2.000/20.00/200.0 $\mu\text{S}/\text{cm}$ (Cell constant 0.1)
0 to 20.00/200.0/2000 $\mu\text{S}/\text{cm}$ (Cell constant 1)
0 to .2000/2.000/20.00mS/cm (Cell constant 10)
Temperature; -5 to 120°C (Minimum Indicatio: 0.1°C)

Performance (at equivalent input)

Straight Line;

Dedicated Cable Max 20m Conductivity... $\pm 0.5\%$ FS

Temperature; $\pm 0.3^{\circ}\text{C}$ Dedicated Cable 21 to 50m

Conductivity... $\pm 1.0\%$ FS Temperature; $\pm 0.5^{\circ}\text{C}$

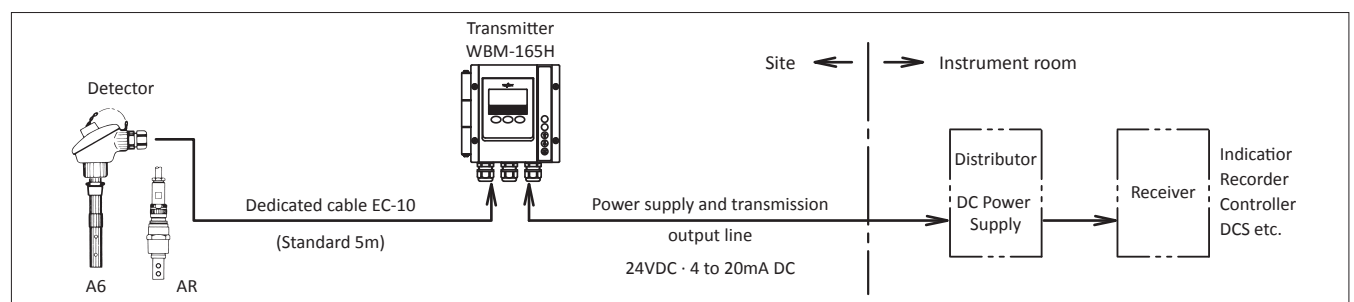
Repeatability ;

Conductivity... $\pm 0.2\%$ FS Temperature; $\pm 0.1^{\circ}\text{C}$

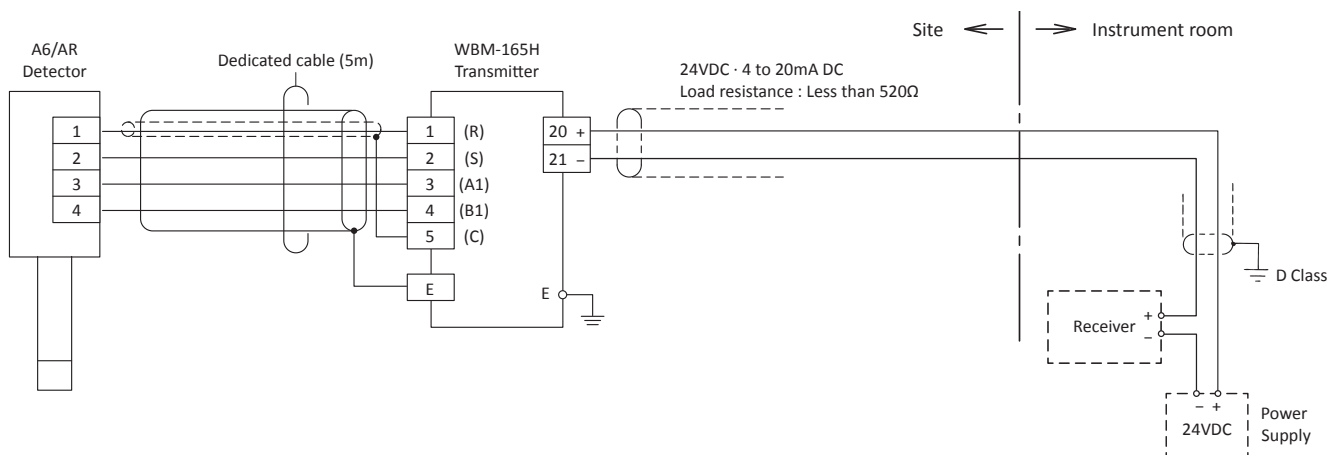


Indicator	: LCD Display (4-digital display)
Power supply · power consumption	: 2-wire type 24VDC, less than 0.6VA
Transmission output	: 25% or more of the measurement range to be set optionally.
Transmission output	: 4 to 20mA DC isolated type. Load resistance; Less than 50Ω
Ambient temperature and humidity	: -20 to 55°C , less than 95%RH (During transportation; -30 to 65°C , less than 98%RH)
Structure	: IP65 (Equivalent to NEMA4X)
Mounting method	: 50A Pipe mounting (Option: wall, rack mounting)
Weight	: Approximately 2kg
Case Material · Coating	: Die-cast aluminum / metallic silver (Display key operation panel; Polyester resin · Munsell N1.5)
Wiring port	: 3 cable gland locations (For 6 to 12 outer diameter cable)
Combination detector	: A6 cell or AR cell (Dedicated cable EC-10 type between transmitter and detector, max. 50m)

Configuration Diagram



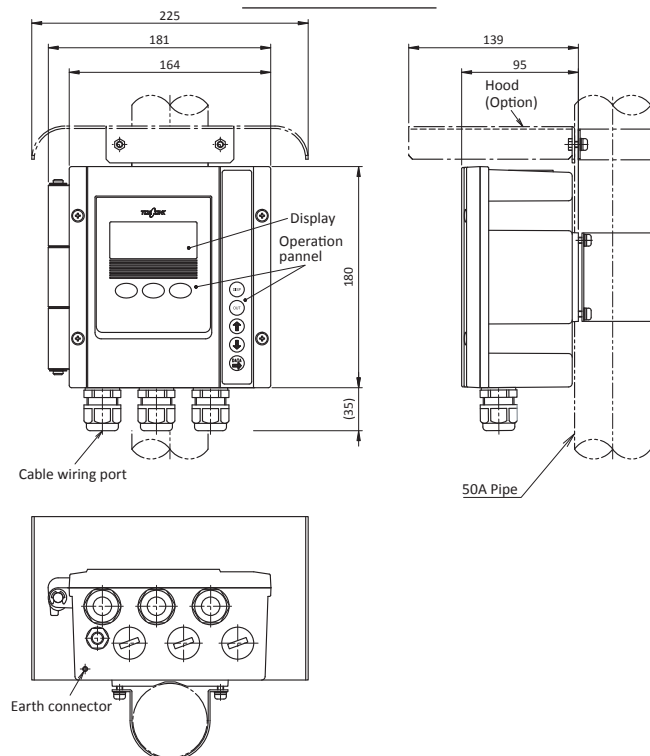
Terminal Connection



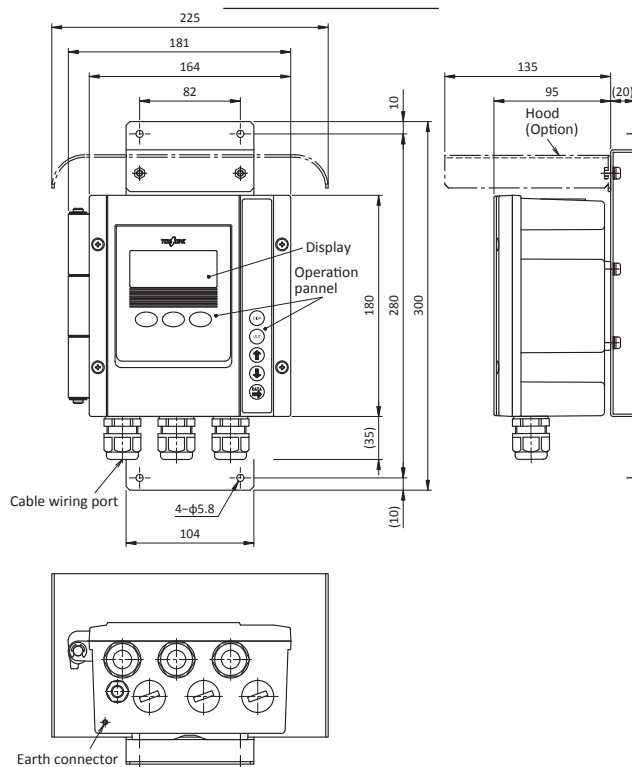
Dimensions

Unit : mm

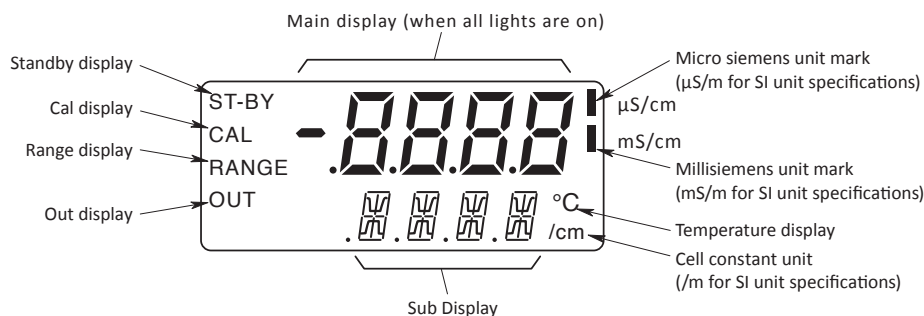
50A Pipe mounting



Wall · Rack mounting



Display Pannel



Product code

[illegible]

- *1. The above measurement (display) ranges are determined by the reference cell constants of combined the detector, and there are three ranges as low, medium, and high respectively.
The ranges beyond the standard measurement (display) range are “special”, that requires software change.
- *2. In the scope of the standard measurement (display) range of A to H as shown above to be set to the medium range.
For “Other specifications”, can be set to any value more than 25% of each range. For example, if the measurement (display) range is 0 to 20.00μS/cm, the minimum setting is 0 to 5.00μS/cm, or 5.00 to 10.00μS/cm, etc.is also available.
- *3. The standard coating is a melamine resin for base and top coat with an average film thickness of 30 μm or more.
Heavy duty anti-corrosion coating is epoxy resin for base and middle coat, and polyurethane resin for top coat, with an average film thickness of 100 μm or more.
- *4. Install a ceramic surge arrester (simple type) on the power transmission line.
- *5. Three wiring ports are provided with φ6 to φ12 cable glands. Select G 1/2 or NPT 1/2 in case of using conduit, Three SUS adapters (with gaskets) are provided, remove the cable gland and attach the required number of adapters to the wiring ports.
Leave the unused cable glands attached at the wiring port and use them as plugs (hole plugging).

Combination Detector

Product Name : Conductivity detector
 Model : A6 cell, AR cell
 Cell Constant : A6 cell...0.01/cm, 0.1/cm, 1.0/cm, 10.0/cm
 AR cell (For compact · pure water)
 ...0.01/cm, 0.1/cm
 Thermometer : Thermistor (Sealed in the inner pole)
 Sample Water : Temperature...0 to 100°C
 Condition : Pressure...Less than 1MPa
 AR cell is less than 0.5MPa

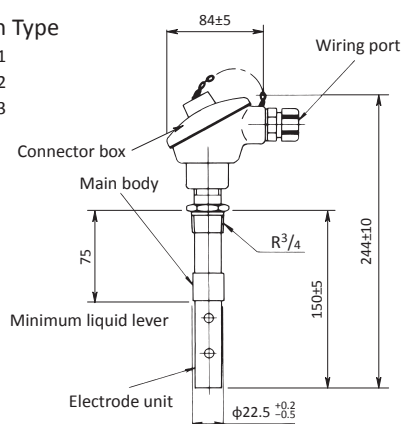
Material : Main body...SUS 316
 Electrode... SUS 316
 Electrode insulator...Glass (hermetic seal), PTFE
 Piping Connection : Case...SUS 316 or P.P. (Polypropylene)
 Dedicated Cable : R 3/4 Screwed or flanged connection
 : EC-10 Type (Outer diameterφ8)
 Longest 50m

Dimensions

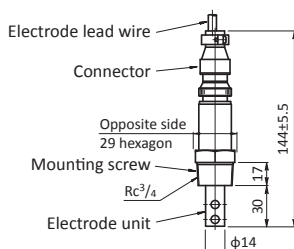
Unit : mm

● Screw In Type

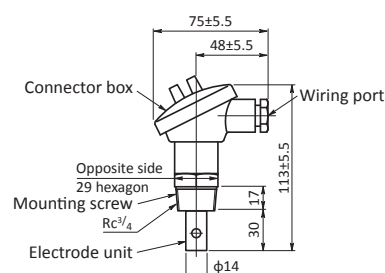
A6-111
 A6-112
 A6-113



AR4-212

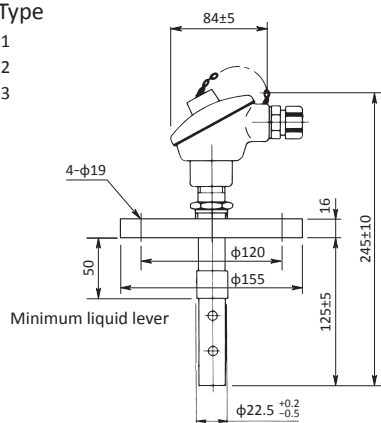


AR5-212



● Flange Type

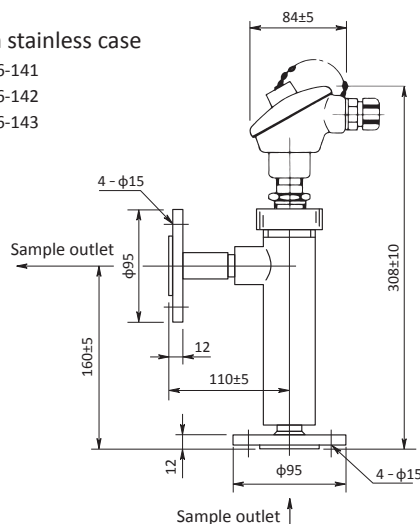
A6-121
 A6-122
 A6-123



Flange specification: 50A JIS 10K FF

● With stainless case

A6-141
 A6-142
 A6-143



Flange specification:
 15A JIS 10K RF



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CAUTION

Please read the operation manual carefully
 before using products.