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

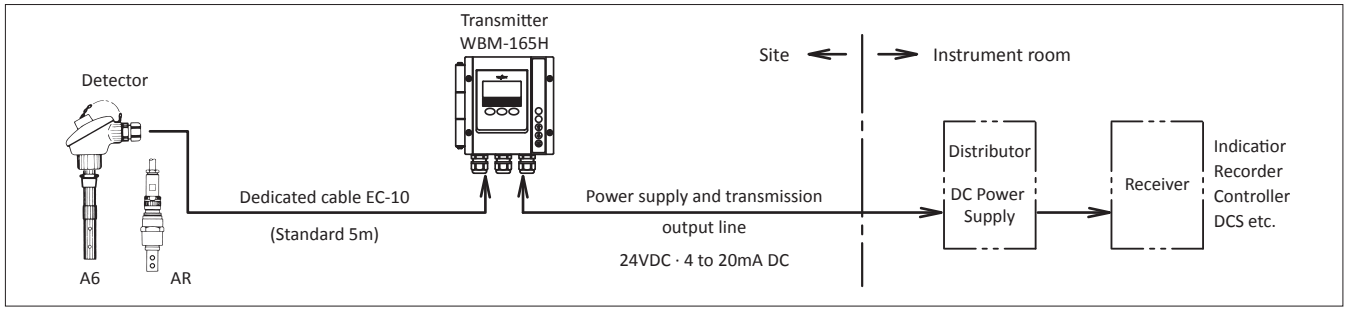
○Available for a wide measurement range from ultra pure water (0 to 0.2 μS/cm) to industrial wastewater (0 to 20mS/cm) and a wide temperature compensation range from −5 to 120°C.
○The temperature of sample water (−5 to 120°C) is measured and displayed.
○Set to the maintenance mode, ST-BY lights up on 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: ±20% of measured value)

Standard Specifications

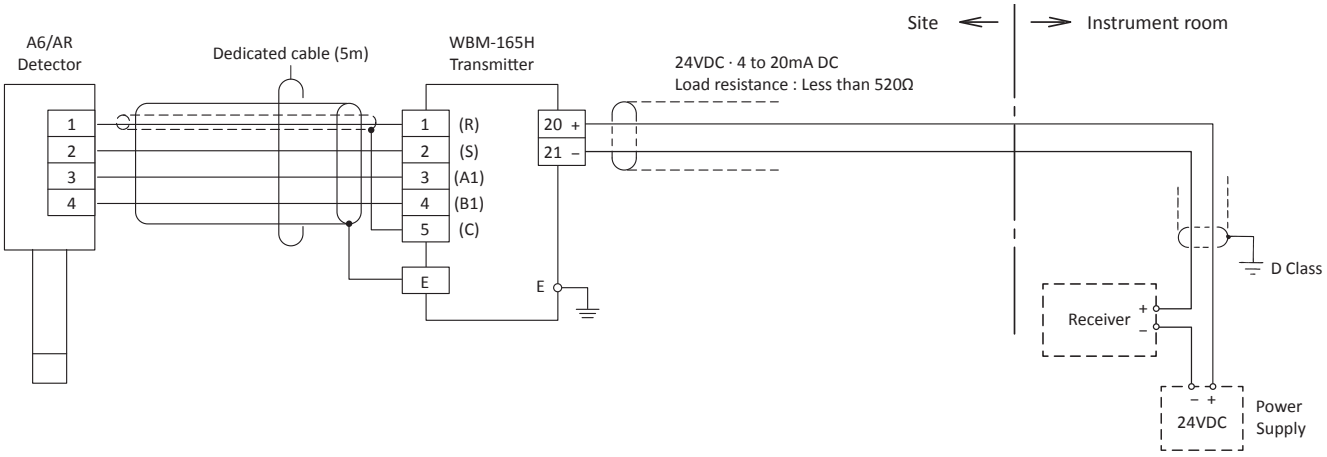
Product Name : Conductivity Transmitter
Model : WBM-165H
Measurement Range :
0 to .2000/2.000/20.00μS/cm (Cell constant 0.01)
0 to 2.000/20.00/200.0μS/cm (Cell constant 0.1)
0 to 20.00/200.0/2000μS/cm (Cell constant 1)
0 to .2000/2.000/20.00mS/cm (Cell constant 10)
Temperature; −5 to 120˚C (Minimum Indicatio: 0.1˚C)
Performance (at equivalent input)
Straight Line ;
Dedicated Cable Max 20m Conductivity…±0.5%FS
Temperature; ±0.3˚C Dedicated Cable 21 to 50m
Conductivity…±1.0%FS Temperature; ±0.5˚C
Repeatability ;
Conductivity…±0.2%FS Temperature; ±0.1˚C

Indicator : LCD Display (4-digital display)
Power supply · power consumption : 2-wire type 24VDC, less than 0.6VA
Transmission output range : 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



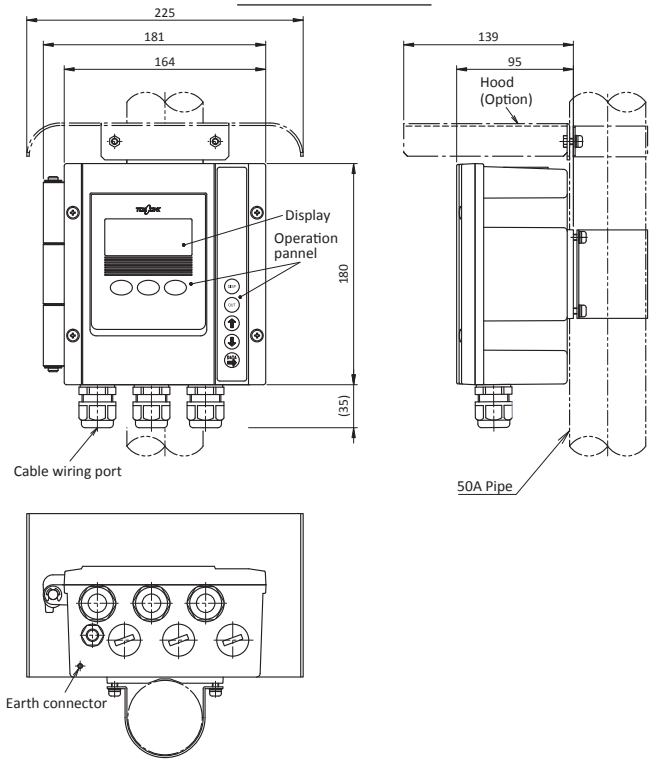
Terminal Connection



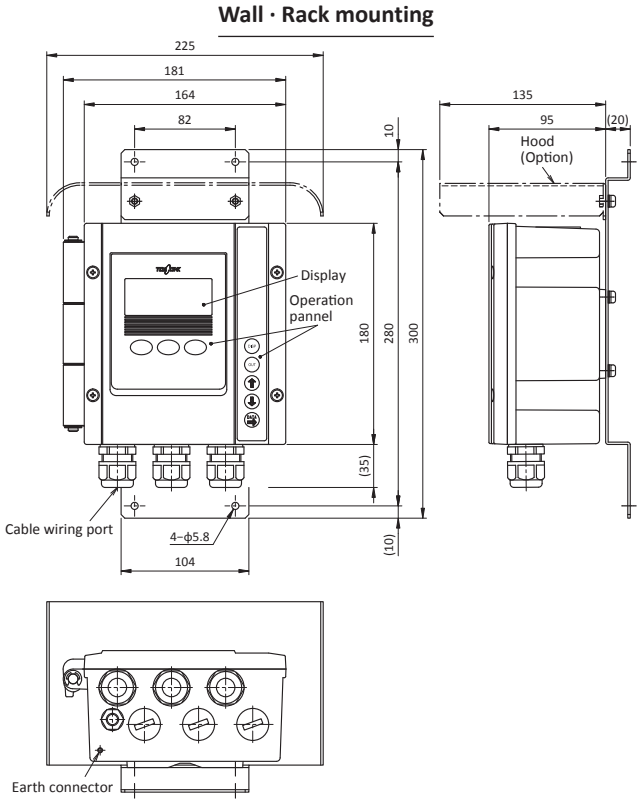
Dimensions

Unit : mm

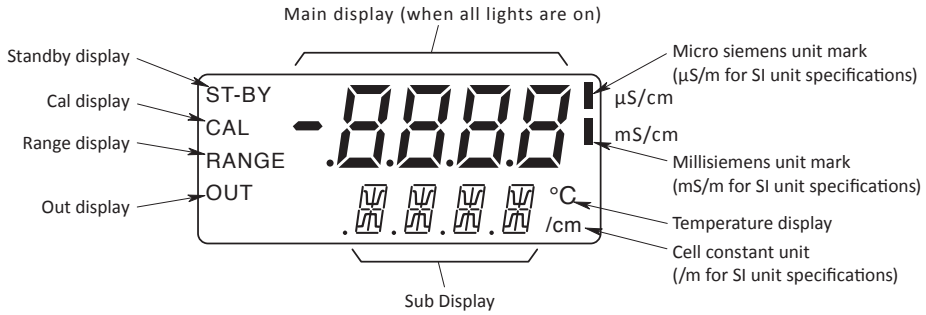
50A Pipe mounting



Wall · Rack mounting



Display Pannel



Product code

WBM165H-1-□□□□□□□□□□

- Refere nce cell constant and measurement (Display) range*1
  - A: 0.01/cm 0 to .2000/2.000/20.00µS/cm
  - B: 0.1/cm 0 to 2.000/20.00/200.µS/cm
  - C: 1.0/cm 0 to 20.00/200.00/2000.µS/cm
  - D: 10.0/cm 0 to .2000/2.000/20.00mS/c m (Above S/cm Unit System)
  - E: 1/m 0 to 20.00/200.0/2000µS/m (Below S/mUnit System)
  - F: 10/m 0 to .2000/2.000/20.00mS/m
  - G: 100/m 0 to 2.000/20.00/200.mS/m
  - H: 1000/m 0 to 20.00/200.00/2000mS/m
- Transmission output (4 to 20mA DC) range*2
  - A: Above standard measurement (display) range
  - Y: Other designation (to be specified in external comments)
- Simultaneous production of detectors
  - 0: No
  - 1: Yes
- Surface coating*3
  - A: Standard coating
  - B: Heavy duty anti-corrosion coating
- Built-in arrestor*4
  - 0: No
  - 1: Yes

Special spec. code;
Numeric digit: 9
Alphabet: Z

- Power transmission cable wiring port*5
  - 0: Cable gland (standard) for φ6 to φ12
  - 1: G1/2 (3 adapters included)
  - 2: NPT1/2 (3 adapters included)
- Mounting bracket
  - 1: 50A pipe mounting
  - 2: For wall / rack mounting
- Hood (with sunshade or not)
  - 0: No
  - 1: Yes (50A Pipe mounting (Code No.7049930K)
  - 2: Yes (Wall mounting No.69304500)
- Notation
  - A: Japanese (Standard)
  - B: English

*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).

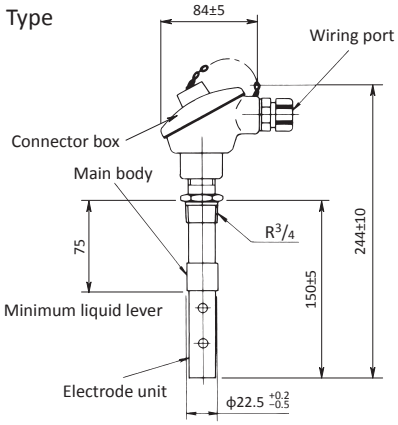
Combination Detector

Product Name	: Conductivity detector	Material	: Main body…SUS 316 Electrode… SUS 316 Electrode insulator…Glass (hermetic seal), PTFE
Model	: A6 cell, AR cell	Piping Connection	Case…SUS 316 or P.P. (Polypropylene)
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	Dedicated Cable	: R 3/4 Screwed or flanged connection : EC-10 Type (Outer diameterφ8) Longest 50m
Thermometer	: Thermistor (Sealed in the inner pole)		
Sample Water Condition	: Temperature…0 to 100˚C Pressure…Less than 1MPa AR cell is less than 0.5MPa		

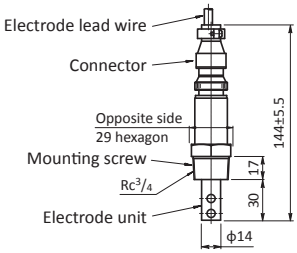
Dimensions Unit : mm

● Screw In Type

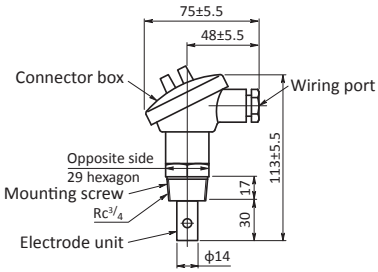
A6-111
A6-112
A6-113



AR4-212

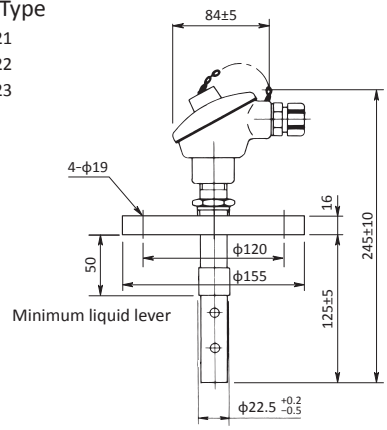


AR5-212



● Flange Type

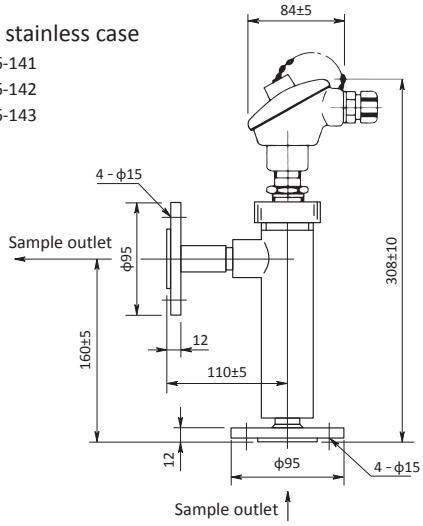
A6-121
A6-122
A6-123



Flange specification: 50A JIS 10K FF

● With stainless case

A6-141
A6-142
A6-143



Flange specification:
15A JIS 10K RF

TOA DKK

DKK-TOA CORPORATION

⚠ CAUTION Please read the operation manual carefully before using producuts.

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