



SC7300R

CONDUCTIVITY TRANSMITTER

OUTLINE

The SC7300R is a digital conductivity transmitter which uses a large-size display.

The cell combined type is installed a cell to the transmitter, and not necessary to installation of the transmitter.

FEATURES

- CELL COMBINED TYPE
- LARGE LCD DISPLAY
- SIMPLE OPERATION
- MULTI RANGE



SPECIFICATIONS

Input range: Refer to range table

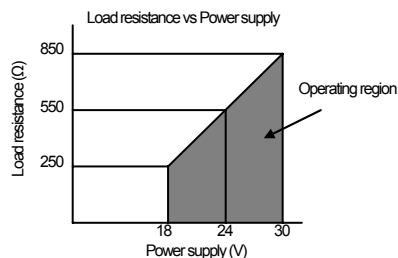
Display: Process variable, temperature, 4 digits, LCD

Linearity: $\pm 0.4\%$ or ± 2 digit whichever larger

Repeatability: $\pm 0.2\%$ or ± 1 digit whichever larger

Output: 4 ~ 20mA DC isolated, 550 Ω max. at 24VDC

Power supply voltage: 18 ~ 30VDC



Temperature compensation: 0 ~ 100°C Pt1000

Temperature sensor by dissociation and sodium chloride (NaCl) solution characteristics curve, and by coefficients of sample

Sample pressure: 1MPa (10kgf/cm²) max.

Sample flow rate: 10cm/min ~ 1m/sec

Cable conduit: G1/2(PF1/2 female)

Mounting:

Cell combined type

Flange mount: JIS 10K-50A flange (FF)

Screw-in mount: R3/4(PT3/4 male)

Nut mount: G1 (PF1 female)

Valve mount: Rc1 (PT1 female)

Cell remote type

2 inch pipe or Wall mount

Material:

Conductivity cell (detector)

Electrode: SUS 316. Carbon graphite

Flange: SUS 304

Bushing: SUS 304

Insulated sleeve: Polyphenylene sulphide

Transmitter

Case: Aluminum casing

Top sheet: Polyester film

Case: Rain-proof, equivalent to IP67 or NEMA4

Case color: Blue (Munsell 10B 5/10.)

Operation conditions: -10 ~ 60°C, 5 ~ 95% R.H.

Weight:

Transmitter: 1.5kg

Cell, Flange mount: 4.7kg

Cell, Screw-in mount: 2.5kg

Cell, Nut mount: 2.6kg

Cell, Valve mount: 5kg

FUNCTIONS

Cable compensation: Line resistance

Error detection: Conductivity 120% and above of Span, conductivity 1% and below of span, temp. 130°C and above, temp. -30°C and below, EEPROM error, identification of error contents on the display

Output hold: Keeps current output

Key lock: Provided to avoid miss-resetting

OPTIONS

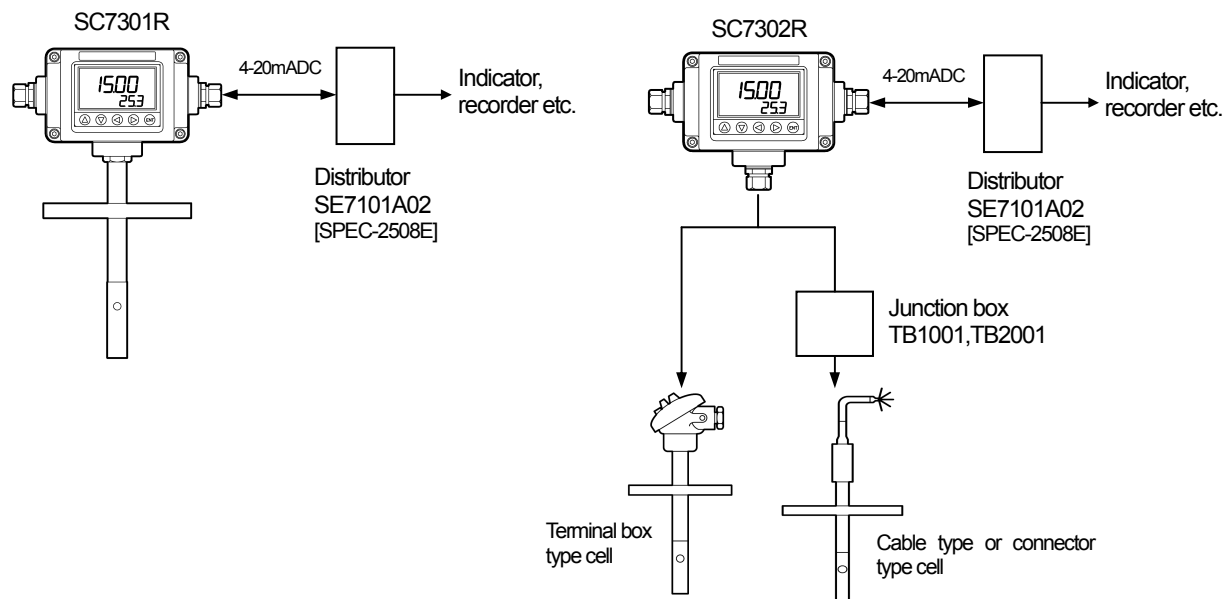
Non-linear output (option): Expands 10% of span into 50%

Mounting bracket: For 2B pipe

Hood: Against sunlight

Cell installed direction: Installation of a cell is possible to right and left of a transmitter

SYSTEM CONFIGURATION

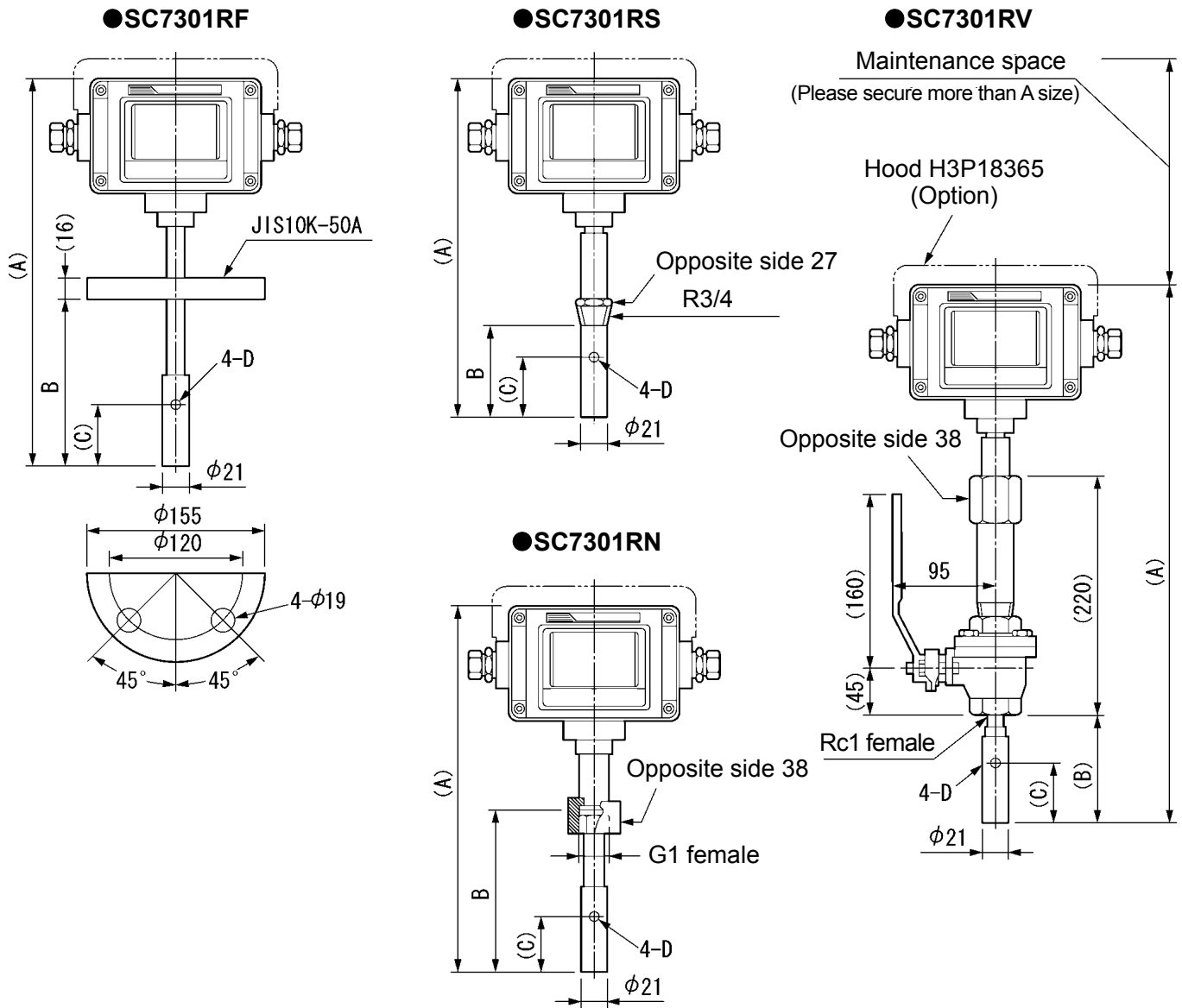


RANGE TABLE

| SI UNIT | | | | USUAL UNIT | | | |
|------------|---------------|------|-------------------------|------------|---------------|-------|--------------------------|
| Range Code | Range | Unit | Cell Constant | Range Code | Range | Unit | Cell Constant |
| 31 | 0.00 ~ 20.00 | μS/m | 1.0 (m ⁻¹) | 01 | 0.000 ~ 0.200 | μS/cm | 0.01 (cm ⁻¹) |
| 32 | 0.0 ~ 50.0 | | | 02 | 0.000 ~ 0.500 | | |
| 33 | 0.0 ~ 100.0 | | | 03 | 0.000 ~ 1.000 | | |
| 34 | 0.0 ~ 200.0 | | | 04 | 0.000 ~ 2.000 | | |
| 35 | 0 ~ 500 | | | 05 | 0.00 ~ 5.00 | | |
| 36 | 0 ~ 1000 | | | 06 | 0.00 ~ 10.00 | | |
| 37 | 0 ~ 2000 | | | 07 | 0.00 ~ 20.00 | | |
| 38 | 0.000 ~ 0.200 | mS/m | 10.0 (m ⁻¹) | 08 | 0.000 ~ 2.000 | μS/cm | 0.1 (cm ⁻¹) |
| 39 | 0.000 ~ 0.500 | | | 09 | 0.00 ~ 5.00 | | |
| 40 | 0.000 ~ 1.000 | | | 10 | 0.00 ~ 10.00 | | |
| 41 | 0.000 ~ 2.000 | | | 11 | 0.00 ~ 20.00 | | |
| 42 | 0.00 ~ 5.00 | | | 12 | 0.00 ~ 50.00 | | |
| 43 | 0.00 ~ 10.00 | | | 13 | 0.0 ~ 100.0 | | |
| 44 | 0.00 ~ 20.00 | | | 14 | 0.0 ~ 200.0 | | |
| 45 | 0.000 ~ 2.000 | mS/m | 100 (m ⁻¹) | 15 | 0.00 ~ 20.00 | μS/cm | 1.0 (cm ⁻¹) |
| 46 | 0.00 ~ 5.00 | | | 16 | 0.0 ~ 50.0 | | |
| 47 | 0.00 ~ 10.00 | | | 17 | 0.0 ~ 100.0 | | |
| 48 | 0.00 ~ 20.00 | | | 18 | 0.0 ~ 200.0 | | |
| 49 | 0.0 ~ 50.0 | | | 19 | 0 ~ 500 | | |
| 50 | 0.0 ~ 100.0 | | | 20 | 0 ~ 1000 | | |
| 51 | 0.0 ~ 200.0 | | | 21 | 0 ~ 2000 | | |
| 52 | 0.00 ~ 20.00 | mS/m | 1000 (m ⁻¹) | 22 | 0.000 ~ 0.200 | mS/m | 10.0 (cm ⁻¹) |
| 53 | 0.0 ~ 50.0 | | | 23 | 0.000 ~ 0.500 | | |
| 54 | 0.0 ~ 100.0 | | | 24 | 0.000 ~ 1.000 | | |
| 55 | 0.0 ~ 200.0 | | | 25 | 0.000 ~ 2.000 | | |
| 56 | 0 ~ 500 | | | 26 | 0.00 ~ 5.00 | | |
| 57 | 0 ~ 1000 | | | 27 | 0.00 ~ 10.00 | | |
| 58 | 0 ~ 2000 | | | 28 | 0.00 ~ 20.00 | | |

Note: Using range code 52 ~ 58 (22 ~ 28), cell separated type only can be manufactured.

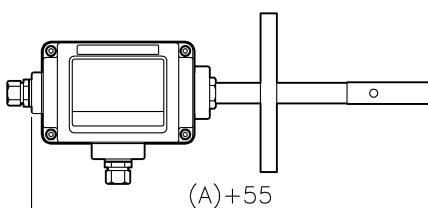
DIMENSIONS (Cell combined type) (Unit: mm)



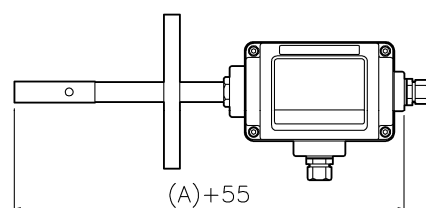
EACH DIMENSION (Unit: mm)

| PART CODE/TYPE | A | | | | B | | | C | D |
|----------------------|-----|-----|-----|-----|------|----|-----|----|----|
| | F | S | V | N | F, N | S | V | | |
| 31 ~ 37 (01 ~ 07) | 331 | 286 | 512 | 325 | 150 | 81 | 136 | 55 | Φ8 |
| 38 ~ 44 (08 ~ 14) | 287 | 242 | 468 | 281 | 106 | 37 | 92 | 11 | Φ6 |
| 45 ~ 51 (15 ~ 21) | 331 | 286 | 512 | 325 | 150 | 81 | 136 | 55 | Φ8 |

●The right installation of a cell

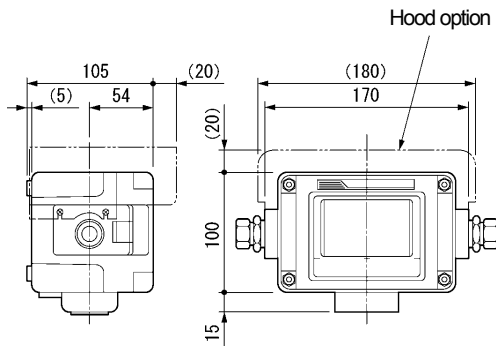


●The left installation of a cell

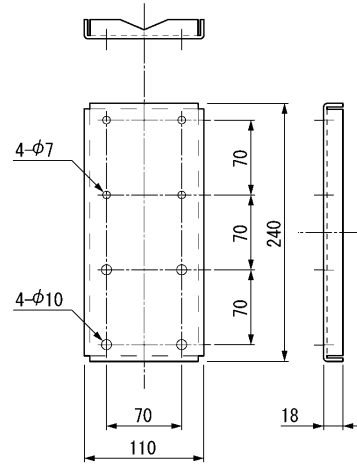


DIMENSION (cell separated type)

(Unit: mm)



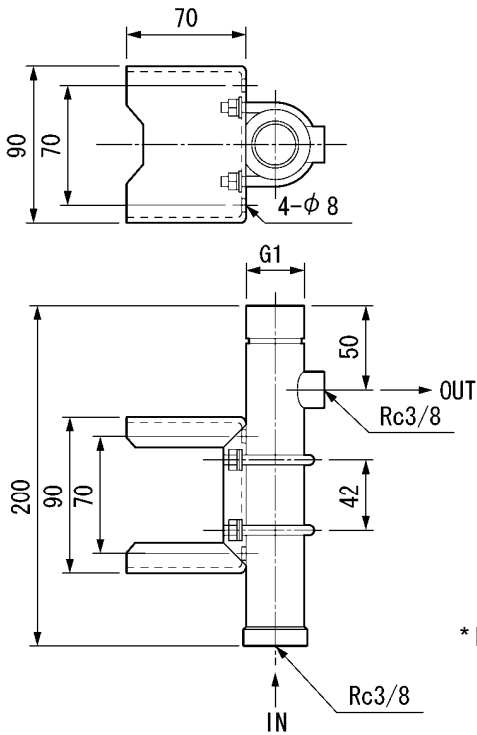
MOUNTING BRACKET



CELL CHAMBER

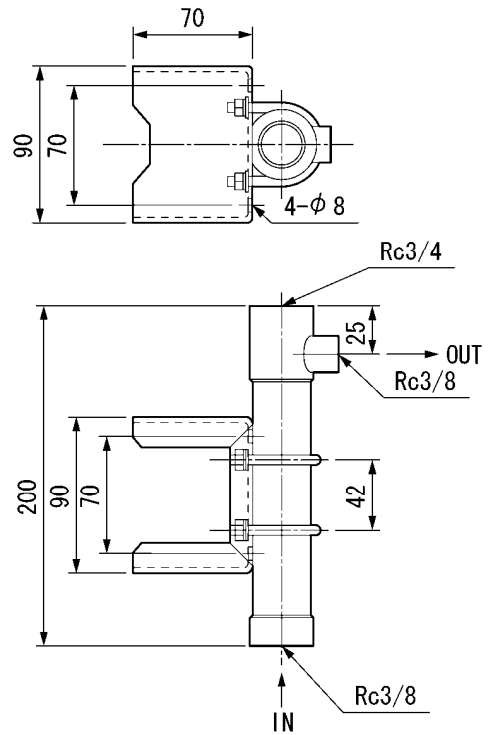
(Unit: mm)

CH 1001AN



* Mounting bolts, nuts, U bolts for 2B pipe are attached.

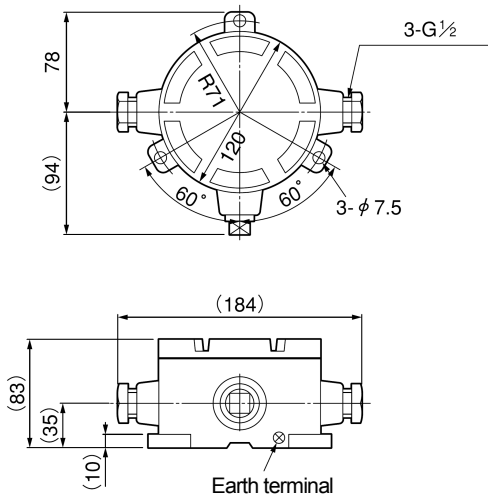
CH 1001AS



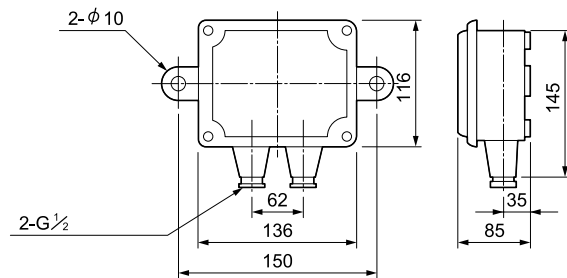
JUNCTION BOX

(Unit: mm)

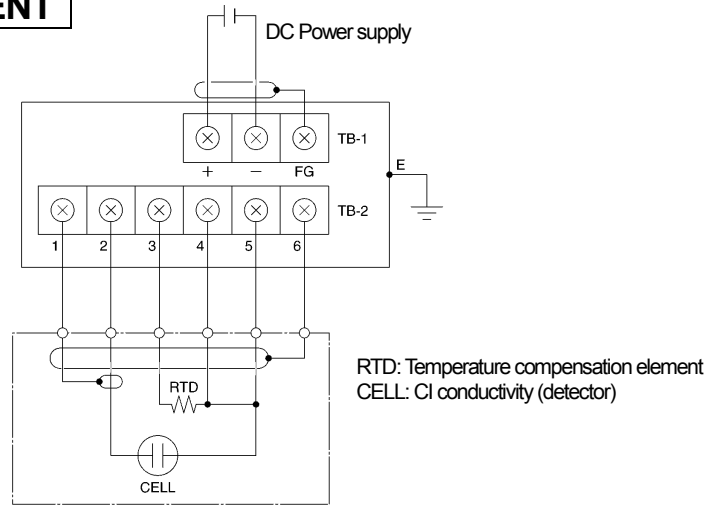
TB1001



TB2001A3



TERMINAL ASSIGNMENT



Note: The terminal 1 & 6 of TB-2 are not connected; in case of the model is cell combined type.

MODEL CODE NUMBER

| MODEL | DESCRIPTION |
|---------|---|
| SC7301R | Digital conductivity transmitter, cell combined, standard |
| SC7302R | Digital conductivity transmitter, cell separated |
| CODE | MOUNTING |
| F | Flange (JIS 10K-50A) |
| S | Screw - in (R3/4) |
| V | Valve (Rc1) |
| N | Nut (G1) |
| C | Valve (without valve) |
| D | Fill "D" if model is cell separated type |
| Z | Custom, consult factory |
| CODE | RANGE |
| hh | Select code number from range table |
| CODE | OUTPUT |
| 0 | Standard output |
| 1 | Non - linear output |
| CODE | OPTION |
| N | None |
| A | Hood |
| B | Mounting Bracket |
| C | Hood & Mounting Bracket |
| CODE | OTHERS |
| N | Standard |
| A | Transmitter only, for exchange |
| C | Cell only, for exchange |
| CODE | SPECIFIC SPECIFICATION |
| N | None |
| A | The right installation of a cell 1) |
| B | The left installation of a cell 1) |
| Z | Custom, consult factory |

1) Refer to DIMENSION for direction of a cell.

⚠ CAUTION

Do not install this device before consulting instruction manual

Specifications are subject to change without notice.

For further information, a quotation or a demonstration please contact to:

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