SPECIFICATION SHEET

TOA DKK

Reagentless Free Chlorine Analyzer CD-36D
Detector CLR-21-A

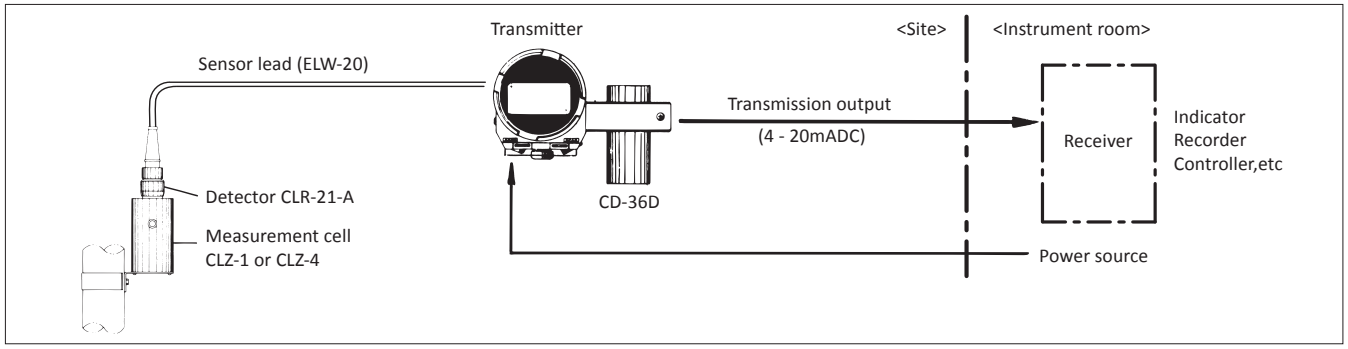
The model CD-36D is for controlling and monitoring the free chlorine in a faucet feed line or water in a swimming pool. The instrument features compact and light weight system, sample-saving and easy maintenance. Measured value is transmitted via 4 - 20 mADC output.

Standard Specifications

Product name : Reagentless Free Chlorine Analyzer
Model : CD-36D
Combined detector : CLR-21-A (with no lead)
Electrode lead wire : ELW-20, standard length 1.5 m
Measurement cell : CLZ-1 (standard) or CLZ-4 (with valve)
Measurement object : Free chlorine, such as drinking water or swimming pool water
Measurement method : Polarograph
Electrode cleaning method : Cleaning of beads using the rotation of the swing rotary
Measurement range : Either of the following (switchable by internal switch)
(1) 0 - 1mg/L (2) 0 - 2mg/L (3) 0 - 3mg/L
Linearity : within ±0.1mg/L (with chlorine standard solution at 0 - 2 mg/L range)
Repeatability : within ±0.1mg/L (with chlorine standard solution at 0 - 2 mg/L range)
Indication : Liquid crystal digital reading
Indication range : 0.00 - about 4.90 mg/L; minimum reading of 0.01 mg/L
Temperature compensation range : 0 - 40˚C
Calibration method : Set to the analytical value of, for instance, the DPD method
Sample water conditions : pH; 5.5 - 8.6 pH(variation within 1pH)
Electrical conductivity; 8mS/m or more (CLZ-2 should be used if electrical conductivity is low)
Temperature; 0 - 40˚C (no freezing)
Pressure; 0.01 - 0.15MPa
Measurement cell flow rate; 50 - 200 mL/min.
Ambient temperature and humidity : 0 - 50˚C and 85%(RH) or lower

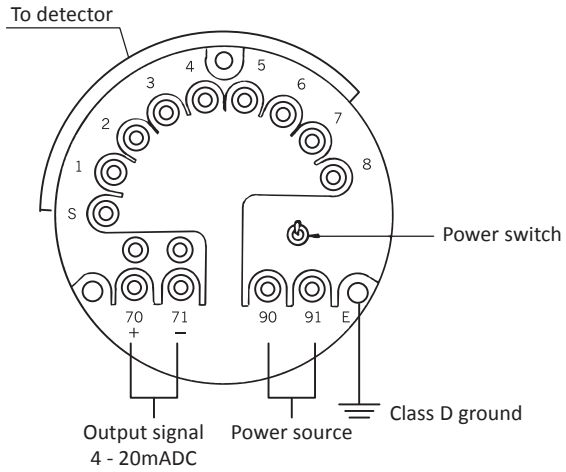
Output : 4 - 20mADC (load resistance; 600Ω or under) ground insulation type
Power supply : Either of the following (designation necessary)
(1) 100VAC 50/60Hz (2) 110VAC 50/60Hz
(3) 115VAC 50/60Hz (4) 120VAC 50/60Hz
(5) 200VAC 50/60Hz (6) 220VAC 50/60Hz
(7) 240VAC 50/60Hz
Power consumption : Approx 10 VA
Cable entry : G 3/4 (PF 3/4) 3 locations
Providing one is used for electrode lead wire
Pipe connection : CLZ-1; Sample water inlet...Rc 1/4 (PT 1/4)
Drain outlet; Rc 1/4 (PT 1/4)
CLZ-4; Sample water inlet...Rc 1/2 (PT 1/2)
Drain outlet; Rc 1/2 (PT 1/2)
Structure : Indoor unit
Construction : Transmitter; IP55
Detector; IP52
In order to use the product outdoors, the detector must be rain proofed.
Mounting : 50 A (external diameter; 60.5 mm), with pipe installation
Materials/Surface finish : Transmitter; AC4C (cast aluminum), metallic silver and blue coating
Detector; A1050P (aluminum pipe), Equivalent to Munsell 5PB8/1 (Wetted part:PVC, SUS304)
Flow cell; Acrylic resin (CLZ-1), Acrylic resin, PVC (CLZ-4)

System configuration



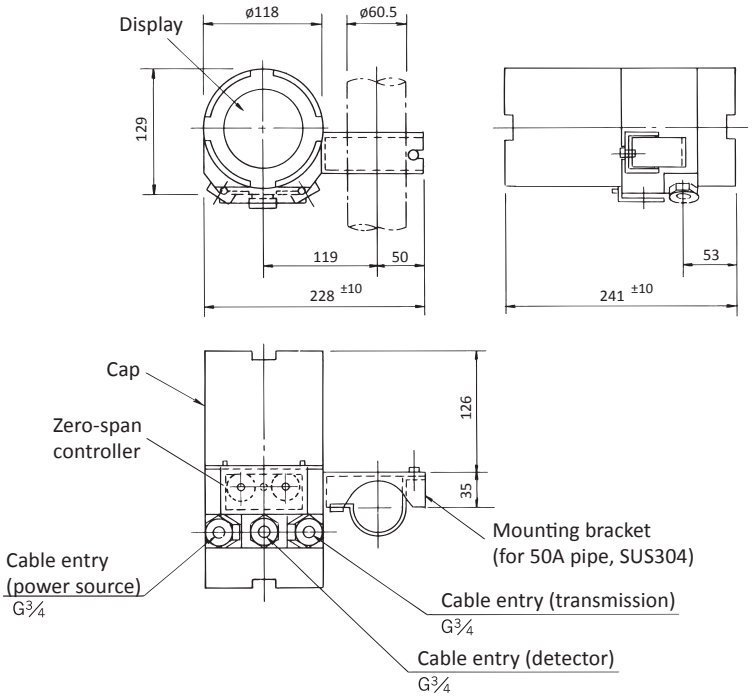
Weight : Transmitter; Approx. 3.5 kg
Detector; Approx. 2 kg
Flow cell; Approx. 1.5 kg (CLZ-1),
Approx. 2.5 kg (CLZ-4)

Terminal Connection Diagram



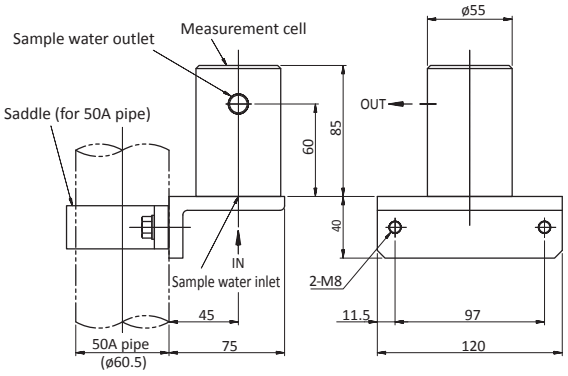
Dimensions

Unit : mm

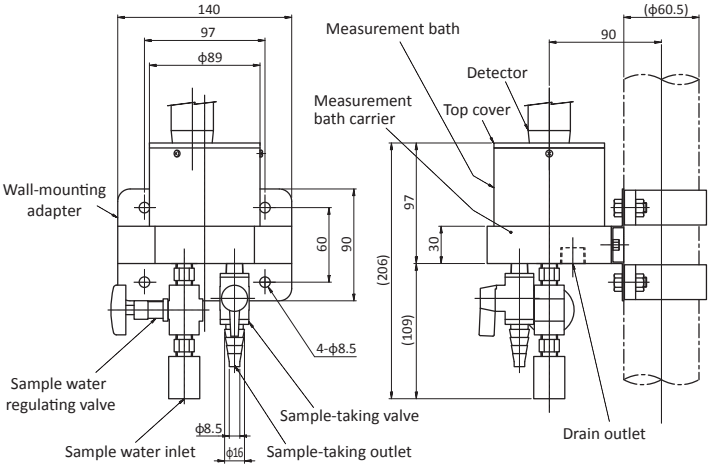


● Measurement cell

Model : CLZ-1

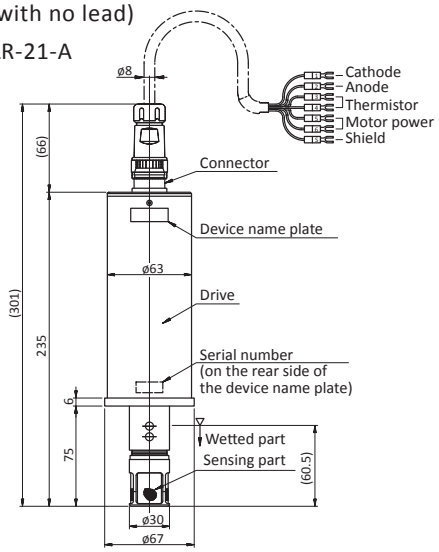


Model : CLZ-4



● Detector (with no lead)

Model : CLR-21-A



● Electrode lead Model : ELW-20

ELW20-1-□□

Lead length
E ····· 1m
F ····· 1.5m (standard)
H ····· 2m
K ····· 5m (max.)
Y ····· Custom specification

Connecting terminal shape
F ····· Arrow crimp terminal (M3)
Z ····· Custom specification

Product code

CD36D-4-□□□□□□□□

- Power supply voltage
  - A: 100VAC, 50/60Hz
  - B: 110VAC, 50/60Hz
  - C: 115VAC, 50/60Hz
  - D: 120VAC, 50/60Hz
  - E: 200VAC, 50/60Hz
  - F: 220VAC, 50/60Hz
  - G: 240VAC, 50/60Hz
- Measurement range
  - 1: 0 - 1
  - 2: 0 - 2
  - 3: 0 - 3
- Measurement unit
  - A: mg/L (standard)
  - B: ppm
- Cable port adapter
  - 0: None, G3/4 (PF3/4) (standard)
  - 1: G1/2 (PF1/2), SUS304
  - 2: NPT1/2, SUS304
- Applicable detector *1
  - 0: None
  - 1: CLR-21-A (the ELW-20 electrode lead must be ordered separately)
  - 8: Custom specification
- Applicable flow cell *2
  - 0: None
  - 1: CLZ-1: No flow regulating valve provided
  - 2: CLZ-4: Flow regulating valve provided
  - 3: CLZ-1 equipped with CLZ-2 pure water measurement column
- Optional components for pole stand assembly *3
  - A: Not required
  - B: Required (the B-150 or ZB-1 must be ordered separately)
- Markings
  - 0: Japanese (standard)
  - 1: English

*1. This instrument can be used together with the CLR-21-A detector.

*2. There are two available types of flow cells: a valve-equipped cell and valveless cell. Each type is equipped with a mounting bracket for a 50A pipe.

Flow cell	Sample inlet	Sample outlet	Sample flow regulating valve	Sample-taking valve for manual analysis
Model CLZ-1	Rc1/4	Rc1/4	None	None
Model CLZ-4	Rc1/2	Rc1/2	Included	Included

The CLZ-2 pure water measurement column is required when the conductivity of the sample is 8mS/m (80μS/cm) or less.

*3. When mounting the transmitter, detector, and flow cell on a pole stand, select one of the following stands:
Product code: B150-3-C□-S "Custom specification: Includes item xx "
ZB-1-1-B□- S "Custom specification: Includes item xx "

Note1: This instrument is for controlling and monitoring the free chlorine in a faucet feed line or water in a swimming pool. The system components can be assembled to form a compact unit.
The sample inlet pressure ranges from 0.01 to 0.15 MPa. The flow rate ranges 50 to 200 mL/min.
The indication range is from 0 to approximately 4.90 mg/L (ppm). The transmission output for each measurement range is 4 to 20mA DC.

Note 2:When you separately order an individual product, such as an optional component, spare part, detector, or flow cell to be used together with the device, make sure to specify the corresponding product code from the following table:

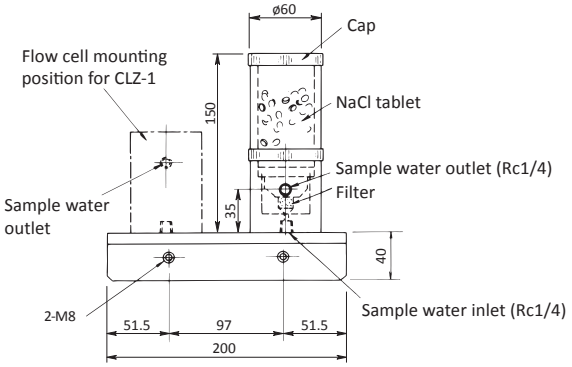
Product name and specifications	Product code
Detector for residual chlorine analyzer (no lead type)	CLR21A-0-1
Flow cell (valveless) for free chloride electrode	CLZ1-0-1
Pure water measurement column (includes mounting brackets and NaCl tablets, Rc 1/4 inlet/outlet)	CLZ2-0-1
*Required when the conductivity of the sample is 8 mS/m (80 μS/cm) or less.	
Spare NaCl tablets (500g)	Code No. 143A203
Flow cell (valve-equipped) for free chloride electrode	CLZ4-0-1
Electrode lead	ELW20-1-□F
Detector for free chlorine analyzer (CLR-21-A)	EL2132-0-Y

Optional

● Column for pure water measurement

Model : CLZ-2

This is an adaptor that adds NaCl to increase the electrical conductivity of the sample water (less than 80μs/cm) and enable stable measurement of free chlorine in sample water.

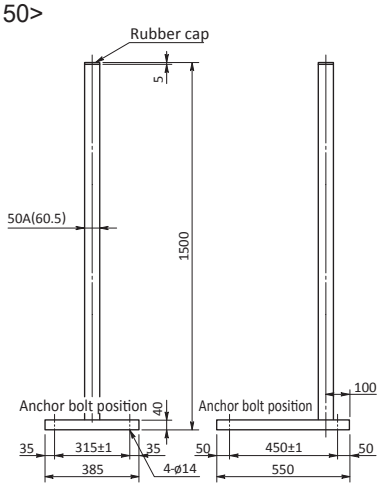


● Pole stand

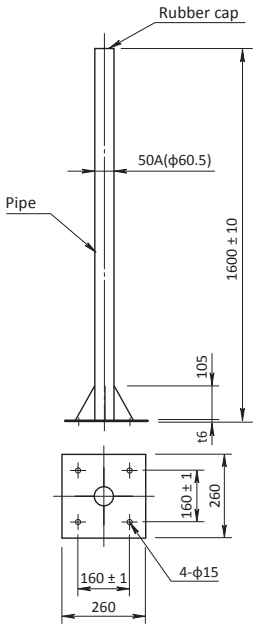
Model : B-150 or ZB-1

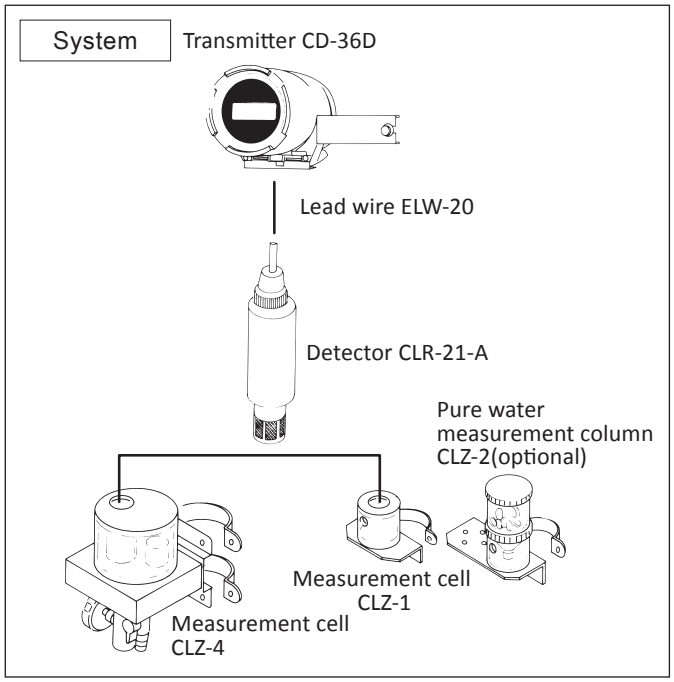
This is the frame for mount the transmitter (CD-36D) and the detector (electrode and measurement cell).

<B-150>

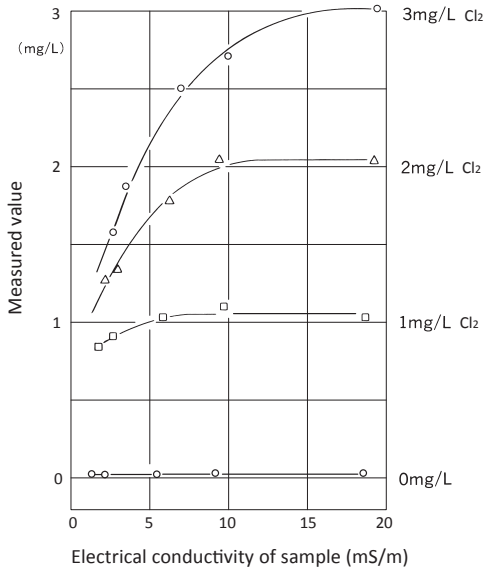


<ZB-1>





Electric conductivity characteristics of Cl_2 sensor



● Since tap water generally has an electrical conductivity of about 20mS/m and that value rarely fluctuates, no serious influence will occur. But when the level goes below 10mS/m, the device will show a reading smaller than it actually is, and therefore there occurs a substantial problem when measurement is for 2mg/L or more.

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

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