

SPECIFICATION SHEET



DISSOLVED OXYGEN CONTROLLER

OBM-102A

This product is a small and lightweight panel-mount type dissolved oxygen analyzer for measurements within the general range of concentration of 0 - 5, 10, and 20 mg/l.

It can be used in combination with polarographic dissolved oxygen electrodes.



Features

- Compact DIN 96 size
It is compact and lightweight, 96 x 96 mm (DIN) in size, 90 mm in depth and approximately 2 kg in weight.
 - Variable transmission output range
Within the measuring range of 0 to 50 mg/l, the output range can be set in increments of 0.01 mg/l, with the width of 100 mg/l or more.
 - Automatic judgment of electrodes at the time of calibration
If normal calibration is impossible, judge zero / slope abnormality or faulty response, display that message and output abnormal signal.
 - Display of sample water temperature
It measures and indicates the temperature of sample water.
 - Correction of measured value
It corrects the measured value to the concentration value for operation management.
 - Automatic return to measurement mode
If it is kept in maintenance mode for two hours, it automatically returns to measurement mode.
- [Option]
- Output for cleaner control (supply voltage for this equipment is outputted)

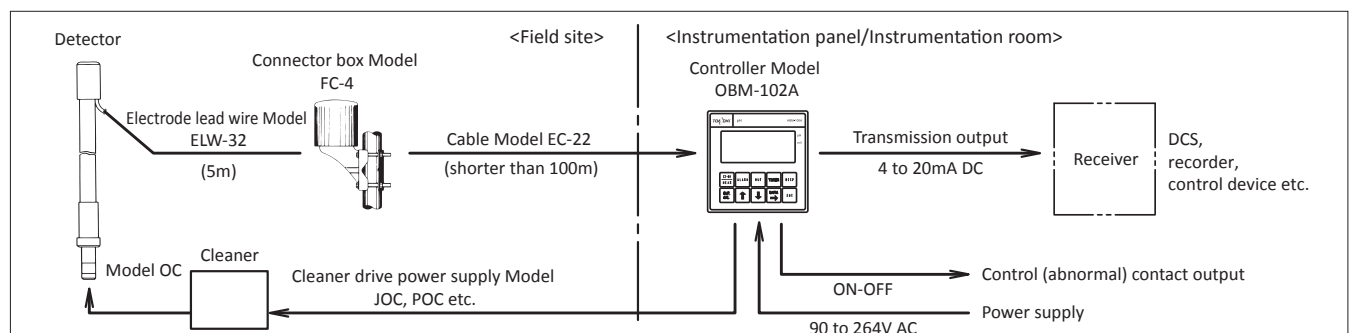
It is an output signal for driving a water jet cleaner or a pulse air jet cleaner which does not have a control function. It is necessary when combining such device.

- RS-232C output
It transmits data to a computer via RS-232C communication.

Standard Specifications

Product Name	: DISSOLVED OXYGEN CONTROLLER
Model	: OBM-102A
Measurement Range	: DO...0.00 - 50.00mg/L (Resolution: 0.01 mg/l) SAT...0.0 - 200.0% (Resolution: 0.1%) Without transmission output (display only) O ₂ ...0.0 - 30.0% (Resolution: 0.1%) Without transmission output (display only) Temperature...-10.0 - 60.0°C (Resolution: 0.1°C)
Temperature compensation	: 0 - 45°C
Transmission output range	: DO...0.00 - 50.00 mg/L (User setting of the upper limit of the measurement range within the range of 1.00 to 50.00 mg/l in increments of 0.01 mg/l)

Configuration



Performance : Linearity; Within $\pm 1\%$ FS, or within 0.05 mg/l in the range of 0 to 2 mg/l (by equivalent input)
 Repeatability; Within $\pm 0.8\%$ FS, or within 0.04 mg/l in the range of 0 to 2 mg/l (by equivalent input)

Control function : Selectable one of upper / lower limit control output and control output with twin timer function

Control contacts ... 2 points (a-contact). Upper limit, lower limit (upper-upper limit, lower-lower limit) can be set

Contact capacity ... 250 V AC 3A or 30 V DC 3A or less (resistance load)

Upper / lower ; adjustment sensitivity · Setting 2 limit control points possible.
 output 0.00 to 5% of measurement range upper limit value (mg/L)

Twin timer ; setting for ON time and OFF time control output respectively in the range of 0.5 to 100 seconds is configurable.

Power-off output signal : Outputs open contact signal when power is off.

Cleaning in progress signal input : During closed contact input, it holds the transmission output. No voltage contact.

Abnormal signal output : Closed contact signal is transmitted when the sample water temperature exceeds the temperature compensation range, or the equipment failure is occurred.

Contact capacity ; 250 V AC, 3 A, or 30 V DC 3 A or less (resistance load)

Indicator : LCD digital

Calibration : Zero; (1) Electrical zero, (2) Using zero solution
 Span; Atmosphere or atmospheric saturated water

Transmission output : Insulation type 4 to 20 mA DC,
 Load resistance; 650 Ω or less

Ambient temperature : Between -10 and 50°C , lower than and humidity 90%RH

Power supply : 90 to 264 V AC, 50 or 60 Hz

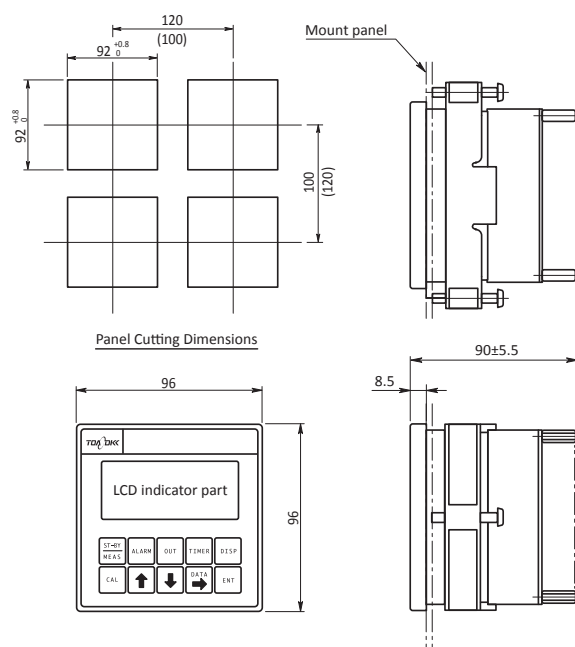
Power consumption : Approx. 10 VA

Construction : Panel mount, indoor installation

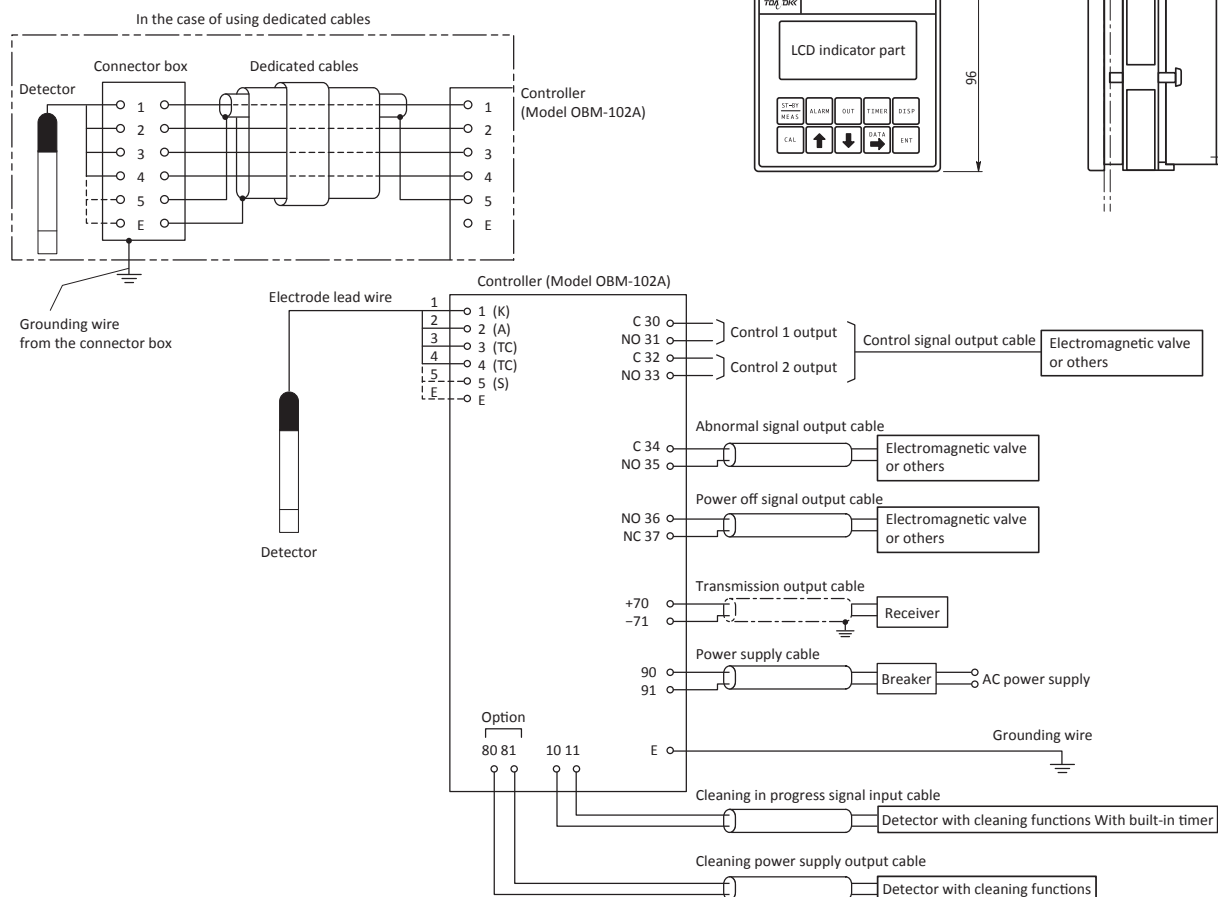
Weight : Approx. 0.5 kg

Dimensions

Unit : mm



Terminal connection



Product code

OBM102A-1-		☐	☐	☐	☐	Transmission output range (4 to 20 mA DC)
A	.....					0.00 - 5.00mg/L
B	.....					0.00 - 10.00mg/L
C	.....					0.00 - 20.00mg/L
Y	.....					Custom specifications* ¹
						Digital (RS-232C) output
0	.....					None (standard)
1	.....					Equipped
						Applicable electrode* ²
A	.....					Model 7533L/7699L (General Polarographic electrode)
B	.....					Model 7536L/7695L (Polarographic electrode for human waste)
C	.....					Model 7546L (Polarographic electrode for float type)
D	.....					Polarographic electrode for fermentation (765□L, 766□L, 767□L)
E	.....					Galvanic electrode for fermentation (OE-9160/9250/9320/9PM1)
F	.....					Polarographic electrode for fermentation (ELD-011/012/013/015/029)
						AC output* ³ for washing device control
0	.....					None
1	.....					Equipped (combined with Model JOC-711C, POC-7E and others)
						Language
A	.....					Japanese (standard)
B	.....					English

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

*1. The measurement range is from 0.00 to 50.00 mg/l. Set the transmission output range in increments of 0.01mg/l with a width of 1.00mg/l or more.

*2. Output properties vary depending on the electrode. Designate the correct electrode model combined in six categories.

*3. This product supports any power supply voltage but the power supply voltage for the cleaning device (POC / JOC Series) is limited to 100V AC.

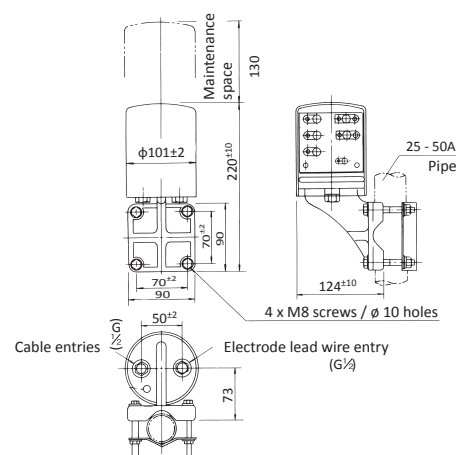
If the power supply voltage for this product is more than 100V AC, a Model ZP-30 step-down transformer is required.

Related Devices

● Connector box

It is used in a case when the controller and electrode are installed away from each other and the standard electrode lead length is too short.

Model	: FC-4
Construction	: Outdoor type
Weight	: Approx. 0.9kg
Case	: ABS resin
Base	: ABS resin
Color	: Satin chromium plating
Installation:	: Mountable on a 25A to 50A pipe, a wall or a board

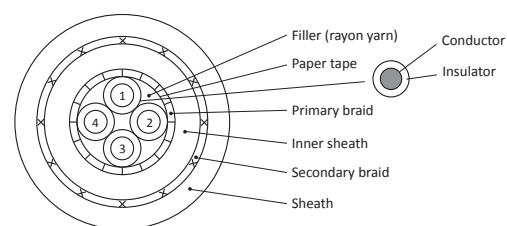


Model FC-4 Exterior Dimension

● Dedicated cables

The dedicated cable is specific to the dissolved oxygen meter and intended to be used between the transformer and the connector box.

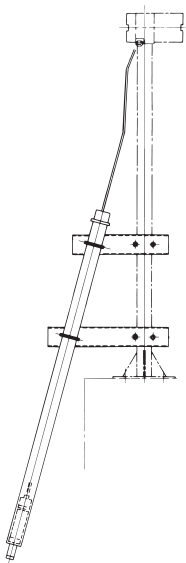
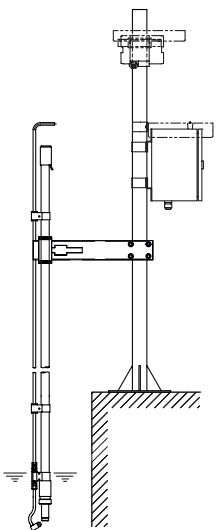
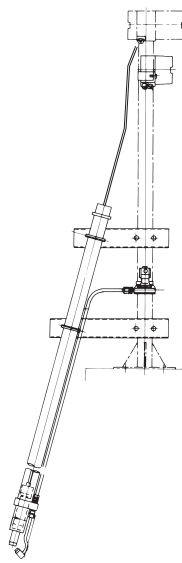
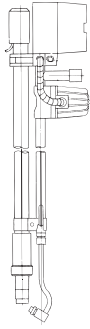
Model	: EC-22
Exterior diameter	: Φ8
Insulators	: Polyethylene and vinyl
Coat	: Vinyl
Interline insulation resistance	: 10 ⁵ MΩ or more for every 100m
Extension distance between	: 100m maximum, no relay permitted in
Standard lengths	: 5 to 100m in increments of 5m
Weight	: Approx. 0.5kg for every 5m



Model EC-22 Cross-Section View

Applicable detectors

The model, general specifications and configuration of the typical detectors are listed in the following table. Properly select the detector in accordance with installation and measurement conditions.

Product name	Immersion type DO electrode holder	Drop-in type DO detector	Immersion type detector with pulse air jet cleaner	Drop-in type detector with water jet cleaner	Immersion type detector with water jet cleaner
Model	OC-711	OC-950	POC-7D	JOC-950C	JOC-711C
Construction	Outdoor installation, rainproof				
Auto cleaning method	None	None	Pulse air jet	Water jet or air jet	Water jet or air jet
Wetted materials	PVC	PVC/SUS304	PVC/SUS316	PVC/SUS316	PVC/SUS316
Sample Temperature	0~45°C				
Pressure	Atmospheric pressure				
Flow velocity	Electrode section is at least 10 cm/s				
Detector length	Holder length: 0.5~3.5m	Protection tube length: 2~6m	Holder length: 1~3m	Protection tube length: 2~6m	Holder length: 0.5~3m
Weight	Approximately 1 kg (length: 1m)	Approximately 17 kg (length: 5 m)	Approximately 4 kg (length: 1 m)	Approximately 20kg (length: 5m)	Approximately 7 kg (length: 1 m)
Cleaning water or air	None	None	Instrument air 0.2~0.5MPa	Industrial water or instrument air 0.2~0.5MPa	Industrial water or instrument air 0.2~0.5MPa
Power supply	Not required	Not required	100VAC, 50/60Hz	100VAC, 50/60Hz	100VAC, 50/60Hz
Configuration					



DKK-TOA CORPORATION



CAUTION

Please read the operation manual carefully before using products.

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