OD 7685.010

Dissolved oxygen controller

Main features

Input from galvanic cell
Scales: PPM - mg/l - % air sat. - mmHg
Autoranging

Temperature readout in °C or °F
Dual filter software

Calibration parameters display
Dual set-point and alarm conditions display

Autocalibration in air
Automatic or manual temperature compensation
Pressure, R.H., salinity compensation

Dual isolated output:
- 0/20 mA or 4/20 mA selectable
- programmable input on the span

Automatic or manual operation
Dual set-point with hysteresis, delay, and min/max programmable functions

Autoclean relay and holding function for input and outputs

EEPROM parameters storage
Automatic overload protection and reset
Extractable terminal block
96x96 (1/4 DIN) housing

Applications

- water treatment
- activated sludge
- de-nitrification
- fish pond

Technical Specifications

in addition to those common in the series 7685

*** Galvanic cell**
membrane: 1 mil - 2 mil - 5 mil (5 mil standard)
cable length: 15 m

*** Scales**
0/400 - 0/200.0 - 0/20.00 mmHg
0/400 - 0/200.0 - 0/20.00 % air saturation
0/40.0 - 0/20.0 PPM - 0/2000 PPB
0/40.0 - 0/20.00 mg/lt - 0/2000 µgr/lt

* Software filter 90%RT: 0.5/50.0 s for small/large variations
Zero: ± 1 mV
Sensitivity: 62.5/212.5 %

Temperature
measuring and compensation range: +2/+52 °C or 28,4/125,5 °F
Zero: ± 2 °C or ±3,6 °F
Input: Pt100 3 wires

Temperature compensation
Internal table for each membrane type
Reference temperature: 20 °C or 68 °F
Manual compensation: 0/50.0 °C or 32/122 °F

Secondary parameters
Pressure: 500/800 mmHg
Salinity: 0/60,000 PPM
Relative humidity: 0/100 %

Analog outputs
Dual isolated for D.O and temperature

Set points
Dual with ON/OFF programmable functions

*** Autoclean function**
Disable - manual - auto + manual
* Repetition cycle: 0.1/24 hours
* Number of cycles: from 1 to 10
* Compressor time: 0.5/60.0 sec.
* Discharge time: 0.5/10.0 sec.
* Holding time: 0/20.0 min. (for measuring, outputs, relays)

Option
091.4143 9/36VDC power supply

B&C electronics
B&C Electronics srl 20866 Carnate MB Tel. +39 039631721 Fax +39 0396076099 sales@bc-electronics.it **www.bc-electronics.it**

OD 8182

Autoclean D.Oxygen probe

Main features

The submersible probe is equipped with a galvanic membraned sensor and a RTD temperature element.

It is equipped with a titanium nozzle to inject pressured air, for membrane autocleaning.

The design of the sensing element and the high quality of manufacturing materials, allow for great Zero stability and great performances, even in effluents with high Sulfite concentrations. Furthermore, the probe requires very little maintenance and long calibration intervals.

The sensor is supplied with the following:

- Connecting cable L= 15 m
- Kit of 10 membranes 5 mils.
- Electrolyte 120 cc
- Kit of spare O-rings and screw
- PVC tubing for pressured air L= 33 m

Main Specifications

Response time: 90% in 180 s with 5 mils membrane
Temp. sensor: Pt100 integral to sensor
Temp. limits: -5 to +55 °C
Connections: 5 wires cable, 15 m (150 m max)
15 m flexible tubing 1/4"-3/8"
Materials: Noryl and AISI316

Accessories

Choose one of the following accessory for the installation

0012.450043
Adapter for extension pipe.

0012.000624
Swivel mounting.The supply including 0012.450043 adapter.

Spares

0012.020007 DO sensor
0012.040003 Assembled Lead electrode
0012.050001 Kit of 10 membranes 5 mils
0012.090007 Electrolyte bottle 120 cc.
0012.050014 Kit Screw and O-rings
0012.440040 PVC tubing for pressured air L= 33 m

Technical Specifications

Sensing element:	regenerable
Drift:	< 1% year
Type:	submersible with removable sensor
Response time:	95%< 60s
Temperature compensation:	internal table
Temperature sensor:	RTD Pt 100 built-in
Compensation range:	0.0/50.0 °C
Power supply:	from OD 7685.010
Operating temperature:	-5/+55 °C
Pressure:	1 Bar max
Autocleaning:	by means of pressured air nozzle
Air pressure:	3 Bar max
Materials:	Noryl, AISI 316 eTitanium
Diameter:	60 mm
Length:	165 mm
Thread:	2" NPT
Cable:	5x0,4 L=15m
Pressured air tubing:	PVC 1/4" - 3/8"
Protection:	IP68

0012.001246

Main features

The controller can be installed in the autoclean module **0012.001246**, which provides the required pressured air in those applications where is needed.

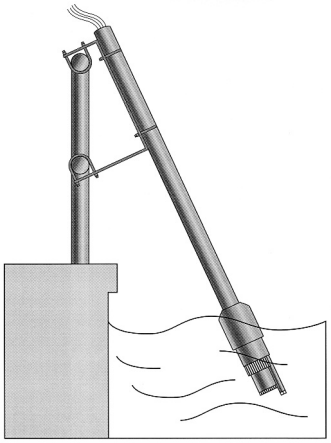
The module is made of the following parts:
- an IP65 enclosure, with a front panel location for installing the 7685 controller,
- a printed circuit for controlling the air compressor, the solenoid valve and an alarm relay for the compressor malfunctioning,
- an air compressor that generates air up to 3 Bar,
- a safety valve to avoid over pressure,
- a S.Steel reservoir, of approx. 9 cm in diameter, where the air is accumulated.

The cleaning is completely automatic, and the user can program the frequency through the controller software and dedicated menu.

The cleaning cycle is activated by the autoclean relay of the controller.
During this cycle, and during the set holding time, the measures remains steady to the value detected before the cleaning.The holding time can be programmed by the user, based on his application and process.
Once the cleaning is over, the module remains in stand-by until the next cycle.
It is also possible to activate the cycle manually, as described in the controller instruction manual.

Technical Specifications

Power supply:	110/220 Vac ±10%, 50/60 Hz.
Operating temperature:	-5/+50 °C, 0-95% humidity
Enclosure:	plastic
Mounting:	wall
Cleaning system:	pressured air at 3 Bar
Air output:	PVC tubing, length 15 m
Power:	300 VA max.
Protection:	IP65



Typical installation of the submersible sensor.

7685 Series microprocessor-based

General information

The **7685 Series** ncludes all of the most complete and most performing analyzers of B&C Electronics.

They include all of the following measures:

- **pH - ORP**
- **Conductivity - Resistivity**
- **Free residual chlorine, combined and total**
- **Residual chlorine dioxide**
- **Residual dissolved ozone**
- **Dissolved oxygen**
- **Turbidity and Suspended Solids**
- **Residual dissolved Sulfide/Sulfite**
- **ISE**

All controllers are manufactured in robust aluminum enclosures DIN 43700, with front panels in polycarbonate.
Their reliability and precision, along with their functionality, make them easy to use in all applications. Finally, 7685 Series guarantees one of the best performance-price ratio in the marketplace.

Common features

Selectable input.

Input from RTD Pt100 3 wires.

Temperature readout.

Dual filter software.

Operating mode: automatic and manual.

Calibration parameters display.

Set-point and alarm conditions display.

Automatic or manual temperature compensation
0/20 mA or 4/20 mA programmable isolated output.

Dual set-point with hysteresis, delay and min/max programmable functions.

Min/max and set-points timing alarm relay.

Software: 3 access levels, user friendly, keyboard lock,watch-dog EEPROM parameters storage.

Automatic overload protection and reset.

Extractable terminal blocks.

96X96 (1/4" DIN) housing.

Technical Specifications

common to all instruments of the 7685 Series

Temperature
Input: RTD Pt100 2/3 wires

Set point A and B:
Operation: ON/OFF
Hysteresis: adjustable
Delay: 0.0/99.9 s
* Function: Max/Min
Relay contacts: SPDT 220V 5 A (resistive load)

Alarm:
Low/High: adjustable
Delay: 0.0/99.9 s
* Relay status: activated/deactivated
* Alarm on max. operating time of set-point A/B: ON/OFF
* Max operating time of set-point A/B: 0/60 minutes
* Relay contacts: SPDT 220V 5 A (resistive load)

Analog output N° 1
* Input corresponding to the analog output (option 091.371x): selectable
* Output range: 0-20/4-20 mA (it can be made to represent any segment of the measuring scale
Response time: 2.5 s for 98%
Isolation: 250Vac
Load: 600 ohm max

Analog outpunt N° 2 (option 091.371x)
* Input corresponding to the analog output: selectable
* Output range: 0-20/4-20 mA (it can be made to represent any segment of the measuring scale
Response time: 2.5 s for 98%
Isolation: 250Vac
Load: 600 ohm max

Configuration (*)
The above parameters indicated by asterisks "*", may be selected in the Configuration menu

General Specification
Alphanumeric display: 1 line x 16 characters
Operating temperature: 0/50 °C
Humidity: 95% without condensation
Power supply: 110/220Vac ± 10% 50/60 Hz
Isolation: 4 kV between primary and secondary (IEC 348)
Power: 5VA max.
Terminal block: extractable
Weight: 850 g
Dimensions: 96 x 96 x 155 mm

Options

091.701	RS 232 isolated output The output sends the data to the serial port of the computer.
091.404	24Vac power supply
091.414X	9/36VDC power supply

The technical specifications could be changed without notice