OD 7685

Dissolved Oxygen controller

Applications

- water treatment
- drinking water
- fish pond
- food industry
- biotechnology

Selectable input from:

- polarographic high/low current cells
- galvanic cells
- 080610.2 preamplifie

Scales: PPM - mg/l - % air sat. - mmHg
Autoranging

Temperature readout
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

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

Alarm:

- continuous/flashing
- min/max and delay programmable
- on set-points timing

- 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

SZ 654.1
Polarographic D.O. cell with built-in Pt100.
250 nA, current in air at 20 °C, temperature 0/45 °C.
Epoxy body L=110 mm, D=12 mm, cable 5 m.
Ship with spare membrane and electrolyte.

SZ 659.R1 spare membrane/electrolyte.

Technical Specifications

in addition to those common in the series 7685

Polarographic Cell
Low Current cell: 25/75 nA
High Current cell: 140/510 nA
* Polarization: 0/1250 mV

Galvanic Cell
Input: 17/51 mV

Selectable scales
0/200.0 mmHg D.O. partial pressure
0/200.0 % air saturation
0/20.00 PPM
0/20.00 mg/l
* Software filter 90%RT: 0.4/20.0 s for small/large variations
Zero adjustment: +/- 10%
Sensitivity adjustment: 80/170 %
Display resolution at 20°C: 1/1000

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

Temperature
Input: RTD Pt100 2/3 wires connection
Measuring and compensation range: -2/+52 °C
Resolution: ±0.1 °C
Zero adjustment: ±2 °C
Manual temp. comp.: 0/50 °C

Options

091.3713	dual analog programmable and isolated output. The operator may select an output for temperature.
091.701	RS232 isolated output.
091.404	24 Vac power supply
091.4143	9/36 VDC power supply

7685 Series microprocessor-based

General information

The **7685 Series** includes 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

Fieldbus Communication

The system is based on a digital communication through an open Modbus protocol, which interacts with the following Fieldbus: Profibus DP, Profinet, Modbus-TCP, DeviceNet, CANopen, EtherNet /IP/Modbus-TCP
Customers can view the main data and functions, such us:

- Primary and secondary measuring values
- Error messages
- Set-points relay, alarm relay and autoclean relay status

The "Virtual Instrument" is an innovative solution through which Customers can perform, from a remote station, all specific operations.
Custom versions with bidirectional communication of data are available for O.E.M. and system integrators.

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

OD 125.2

Dissolved Oxygen Temperature meter

High accuracy and reliability
LCD display
Temperature visualization
Automatic or manual temperature compensation
Corrosion resistant

This instrument is designed for a reliable D. Oxygen measuring in waste water and in field applications.

By pressing any key the instrument will switch on or will extend the operation for about 5 minutes.

The temperature compensation on the readout is automatic or manual.
The zero and sensitivity adjustment allows a very accurate calibration of the meter.

The plastic case with the policarbonate membrane provide a corrosion resistance in field applications.

Technical Specifications

Display: LCD 3 1/2 digit			
Scales:	0/19.99 ppm	0/100 % air sat.	-20.0/+120.0 °C
Zero: ± 15 %	Sensitivity: ± 20 %		
Input:	from polarographic cell, BNC connectors		
	from Pt1000, jack connector		
Liquid speed: 0.3 / 0.7 m/s			
Response time: 15 s at 95%			
Compensation:	error ±1% f.s. for ±5 °C		
	rom the calibration temperature		
Power: 9Vdc battery			
Battery life: 100 hours operation			
Dimensions: 92 x 155 x 33 mm			
Weight: 300 g			

The technical specifications could be changed without notice.

Accessories and sensors

to be ordered separately

BC 921
carrying case

SZ 664.2
Polarographic D.O. cell with built-in Pt1000.
250 nA, current in air at 20 °C, temperature 0/60 °C.
Epoxy body L=125 mm, D=21.5 mm, cable 5 m with BNC/Jack connectors.
Ship with spare membrane and electrolyte.
Applications: submersible, portable instruments in water treatment.
SZ 669.R1 spare membrane/electrolyte.

SP 51501 - SP 51511
suggested temperature sensors