LEAFLET

EC3020

E. Conductivity controller

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Applications

- deionized water
- drinking water
- food industry
- surface treatment

Selectable input from:
- 2 electrodes
- 4 electrodes pre-amplified cell
- electrodeless pre-amplified cell

Scales: from 0.2 mS to 40 Siemens
Autoranging
Conversion in % - gr/l - Bè
Temperature readout
Dual filter software

Calibration parameters display
Dual set-point and alarm conditions display
Automatic or manual temp. compensation
Automatic or manual acquisition of the
temperature compensation table

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

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

Accessories

The controller can be used with all
B&C/Nieuwkoop conductivity cells,
including the 4-electrodes and toroidal
amplified probes

Input from 2-electrode cells

K cm⁻¹	0,1	0,2	0,5	1,0	2,0	5,0	10,0
Range	0,2000µS	0,4000µS	1,000µS	2,000µS	4,000µS	10,00µS	20,00µS
	2,000µS	4,000µS	10,00µS	20,00µS	40,00µS	100,0µS	200,0µS
	20,00µS	40,00µS	100,0µS	200,0µS	400,0µS	1000µS	2000µS
	200,0µS	400,0µS	1000µS	2000µS	4000µS	10,00mS	20,00mS
	2000µS	4000µS	10,00mS	20,00mS	40,00mS	100,0mS	200,0mS

Input from microtransmitters 080310 connected to 4-electrode cells or input from microtransmitters 080315 connected to electrodeless cells

K cm⁻¹	0,1	0,2	0,5	1,0	2,0	5,0	10,0
Range	0,2000mS	0,4000mS	1,000mS	2,000mS	4,000mS	10,00mS	20,00mS
	2,000mS	4,000mS	10,00mS	20,00mS	40,00mS	100,0mS	200,0mS
	20,00mS	40,00mS	100,0mS	200,0mS	400,0mS	1000mS	2000mS
	200,0mS	400,0mS	1000mS	2000mS	4000mS	10,00S	20,00S
	2000mS	4000mS	10,00S	20,00S	40,00S	100,0S	200,0S

Technical Specifications
in addition to those common in the series 7685

Scales (See tables Scales vs. K)
* Autoranging: on/off
* Indirect scale: on/off
Zero adjustment: ±10 %
Sens. adjustment: 60/160 %
* Software filter 90%RT: 0.4/20.0 s for small/large variations

Temperature
Measuring and compensation range: -10.0/+110.0 °C
Resolution: +/- 0.1 °C
Zero adjustment: +/- 1 °C
Manual Temp. comp: -10.0/+110.0 °C

Options
091.3713   dual analog programmable and isolated output.
The operator may select an output for Temperature.
091.4143   9/36 VDC power supply

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General information

The 7685 Series includes all of the most complete and
most performing analyzers of B&C/Nieuwkoop.
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 openModbus 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
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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.

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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: 250 Vac
Load: 600 ohm max

Analog output 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: 250 Vac
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: 110/220 Vac ± 10% 50/60 Hz
Isolation: 4 kV between primary and secondary (IEC 348)
Power: 5 VA 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	24 Vac power supply
091.414X	9/36 VDC power supply

The technical specifications could be changed without notice

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