



**NIEUWKOOP**

# LEAFLET



## **EC3020**

E. Conductivity controller



TO MEASURE  TO KNOW



**Main features**

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

**Applications**

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

| <b>Input from 2-electrode cells</b> |            |            |            |            |            |            |             |
|-------------------------------------|------------|------------|------------|------------|------------|------------|-------------|
| <b>K cm<sup>-1</sup></b>            | <b>0,1</b> | <b>0,2</b> | <b>0,5</b> | <b>1,0</b> | <b>2,0</b> | <b>5,0</b> | <b>10,0</b> |
| <b>Range</b>                        | 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     |

  

| <b>Input from microtransmitters 080310 connected to 4-electrode cells or input from microtransmitters 080315 connected to electrodeless cells</b> |            |            |            |            |            |            |             |
|---|------------|------------|------------|------------|------------|------------|-------------|
| <b>K cm<sup>-1</sup></b>  | <b>0,1</b> | <b>0,2</b> | <b>0,5</b> | <b>1,0</b> | <b>2,0</b> | <b>5,0</b> | <b>10,0</b> |
| <b>Range</b>  | 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      |

| <b>Technical Specifications</b>                                |   |
|--|---|
| in addition to those common in the series 7685                 |   |
| <b>Scales</b> (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 |   |
| <b>Temperature</b>   |   |
| 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                             |   |
| <b>Options</b>   |   |
| <b>091.3713</b>  | dual analog programmable and isolated output.<br>The operator may select an output for Temperature. |
| <b>091.4143</b>  | 9/36VDC power supply  |



## 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

## 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 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: 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



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