

Level Control	<input type="checkbox"/> supply, <input type="checkbox"/> drainage
Input	<input type="checkbox"/> contact, <input type="checkbox"/> resistive
Threshold Adjustment	<input type="checkbox"/> 10...50 k $\Omega$ , via front-panel potentiometer
Output	<input type="checkbox"/> relay 5A/250VAC with NO/NC contact, <input type="checkbox"/> SSR 1A/250VAC, <input type="checkbox"/> MOS gate 0.1A/60V, optically isolated, <input type="checkbox"/> 5...24 VDC, 30 mA for external SSR
Power Supply	<input type="checkbox"/> 230 VAC, <input type="checkbox"/> 115 VAC, <input type="checkbox"/> 90...250 VAC/DC, <input type="checkbox"/> 24 VAC, <input type="checkbox"/> 12...24 VAC/DC
Consumption	less than 2 VA
Operating Temperature / Humidity	-10...65 °C / 0...85% RH
Protection Class: front / terminals	IP40 / IP20

v3-06.10

COMECO Inc., P.O.Box 378, Plovdiv 4000, BULGARIA, tel: +359 32 646523, 646524, fax: 634089  
e-mail: info@comeco.org, WWW.COMECOGROUP.COM

## LEVEL CONTROLLER

# LC20

## OPERATION MANUAL



Please read this Operation Manual before mounting and operating!  
Save the Manual for future references!

## Warranty and Support

### Warranty

COMECO warrants this product to be free from defects in materials and workmanship for 2 years. If your unit is found to be defective within that time, we will promptly repair or replace it. This warranty does not cover accidental damage, wear or tear, or consequential or incidental loss. This warranty does not cover any defects caused by wrong transportation, storage, installation, or operating (see 'Specifications').

### Technical support

In the unlikely event that you encounter a problem with your COMECO device, please call your local dealer or contact directly our support team.

.....  
serial number

.....  
manufacturing date

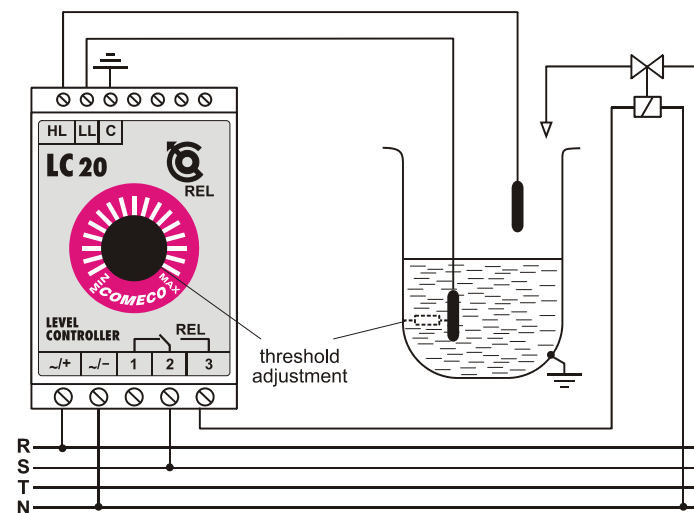
QC check mark .....(passed)  
(stamp)

88 Slavyanska Str.  
P.O.Box 378  
Plovdiv 4000, BULGARIA  
tel: +359 32 646523, 646524  
fax: +359 32 634089, 646517  
e-mail: support@comeco.org

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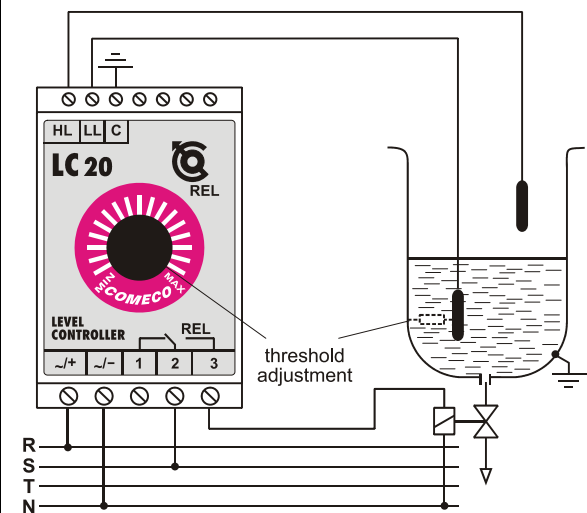
## Wiring

### Supply control (tank filling)



## Wiring

### Drainage control (tank emptying)



LC20 is a low-cost electronic level controller / indicator for rail mounting. Through its relay output, this device directly controls electrical pumps, valves, etc. and may be used either for tank emptying (drainage) or tank filling (supply). Two versions are available employing different methods for level measurement. An LC20 with resistive input measures electrical conductivity of the liquid between electrodes or between electrode and metal tank body, and is applicable for liquids with relatively high conductivity that are normally used in chemical, paper, food, wine, biotechnological industries, etc. The contact-input LC20 accepts signals from contact level switches (float, optical), and is applicable for various non-conductive liquids or cases of heavy condensation, vaporization, or foaming, such as in heating and water supply installations. An optional output activation threshold adjustment via potentiometer on the front panel provides better adaptation to liquids with different conductivity for both versions.

## Mounting

### Mounting

LC20 can be easily mounted on every 35 mm rail conforming to EN50022.

- ◆ Place the rail lower edge into the lower slot on the device back.
- ◆ Press the controller against the upper rail edge until it fits in.

### Dismounting

- ◆ Using a screwdriver's tip, pull up the black plate on the device back.
- ◆ Tilt the controller downwards and take it off the rail.



The undersigned hereby declares, on behalf of COMECO Inc., that this device has been manufactured in compliance with standards EN 61000 and EN 61010, and meets the requirements of Directives 73/23/EEC and 89/336/EEC.

Vladimir Sakaliyski  
CEO  
COMECO Inc.

## Waste Disposal



*Do not dispose of electronic devices together with household waste material!*

If disposed of within European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing the WEEE Directive 2002/96 on the Waste Electrical and Electronic Equipment.

## Operating

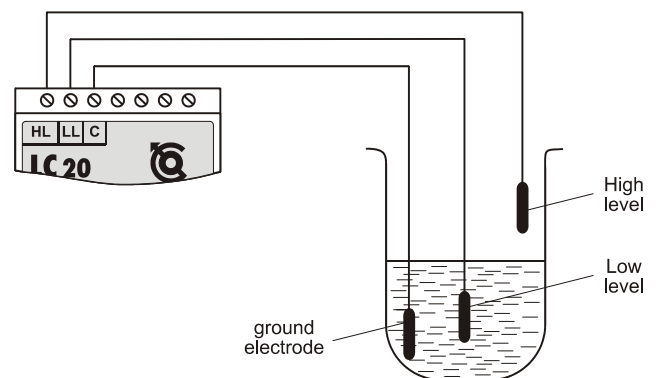
- ◆ LC20 starts operating immediately after power-on.
- ◆ The 'REL' LED lights while the output relay is active.
- ◆ After the warm-up time, if necessary, adjust the activation threshold via the potentiometer on the front panel (if such is installed).

## Electro-Magnetic Interference (EMI) Issues

- ◆ All signal wires must be shielded. They must not be packaged together with power cables!
- ◆ Never lay the signal wires close to inductive or capacitive noise sources, such as relays, contactors, motors, etc.!
- ◆ All shields have to be grounded ONLY at one end, as closer as possible to the controller terminals!
- ◆ Avoid sharing supply lines with powerful consumers, especially with inductive loads, switched on and off.
- ◆ To stop unwelcome interference signals entering through the power supply lines, use shielded 1:1 isolation transformer!
- ◆ Shunt all switched (not only those switched by the controller) inductive consumers with special suppression networks: RC group and varistor - for AC loads, or diode - for DC loads.

## Wiring

### Connecting non-metal tank



### Connecting pump

