

mP-based Level Controllers Series LC1x

- ◆ Up to 3 levels and 3 relay outputs (independent)
- ◆ Variant for 2 dependent levels plus alarm
- ◆ Input from conductivity cell electrodes
- ◆ Drainage and supply control
- ◆ Output activation threshold adjustment
- ◆ Indication for reached level
- ◆ Low cost

The LC1x series produced by COMECO is a low cost electronic level controller/indicator. It employs measurement of electrical conductivity of the liquid between electrodes or between electrode and metal vessel case. It is applicable to liquids with relatively high conductivity that are normally used in chemical, paper, food, wine, biotechnological industries etc. The level indicator LC10 allows monitoring of 1 or 2 fixed levels and LC11 allows monitoring of 1, 2 or 3 fixed levels. At reaching each level the corresponding relay is activated or deactivated (drainage/supply control). LC10/11 is also available as a variant of a drainage or supply level controller plus an alarm relay (see model LC05). LC11 level indicator/controller is based on a high-tech microprocessor circuit, guaranteeing accuracy and stability, preventing electrolytic polarization and ensuring stable operation. The operator can program the direction of relay action at level reach as well as connection (dependence) between levels. Output relays may be used for reached level signaling or electrical actuator control. The possibility to adjust output activation threshold, as well as light indication make LC11 level indicator a solution for a wide range of level related problems.



LC

Technical specifications

Inputs <i>(up to three inputs)</i>	
Input type	Conductivity cell ⁽¹⁾
- activation threshold ⁽²⁾	≤ 1...500 kΩ
- release threshold ⁽³⁾	≥ 1...10 MΩ
Threshold adjustment	By trimmers on front panel
Operation modes:	Selected by jumpers ⁽⁶⁾
- independent levels	each level controls a relay
- dependent levels	1 relay, controlled by two levels
Indication	
Operating indication	3xLED for reached levels
Power supply indication	LED
Outputs <i>(up to three outputs)</i>	
Relay electromechanical	6A/250V with NO/NC contact
Solid state relay (option)	SSR - 1A/250 VAC
Transistor gate (option)	Open collector - 40mA/40V or TTL
Output action direction:	Selected by jumpers ⁽⁶⁾
- drainage (vessel emptying)	Activates above the level
- supply (vessel filling)	deactivates above the level

Power supply	
Supply voltage	220 or 110 VAC ± 10%
Low voltage supply (option)	24 VAC ± 10%
Consumption	Max. 2 VA
Operating conditions	
Operating temperature	-10 to 65 °C
Operating humidity	0 to 85 %RH
Storage temperature	-20 to 65 °C
Storage humidity	non-condensing, 0 to 95 %RH

Design and materials	
Case material	Plastic
Mounting	In panel cut-out
Wiring	Screw terminals
Dimensions	48 x 96 (front) x 120 mm
Weight	Max. 500 g
Protection front/terminals	IP-44 / IP-20

⁽¹⁾ Measures liquid resistance between measuring electrode and reference electrode (vessel body)

⁽²⁾ Maximal threshold resistance of activation at reaching (exceeding) the level (adjustable)

⁽³⁾ Minimal threshold resistance of release at falling below the level (fixed)

Ordering code



LC1* - G1.G5G5G5.G7G7G7

Code	Feature or option	Code values
*	Power Supply type	0 - up to 2 levels and 2 relay outputs, 1 - up to 3 levels and 3 relay outputs
G1	Power Supply type	A - 220 VAC, B - 110 VAC, E - low voltage-AC ⁽⁴⁾
G5	Relay output type (G5G5 - for LC10)	X - none, C - relay NO/NC, D - SSR, E - open collector NPN, G - TTL
G7	Input signal type (G7G7 - for LC10)	X - none, B - conductivity cell

⁽⁴⁾ Contact COMECO for availability!

⁽⁵⁾ Factory settings: 3 independent levels with drainage action. The customer can request different factory settings

For detailed instructions on ordering coding see chapter "ORDERING CODES"!

COMECO reserves the right of changing specifications without prior notice!