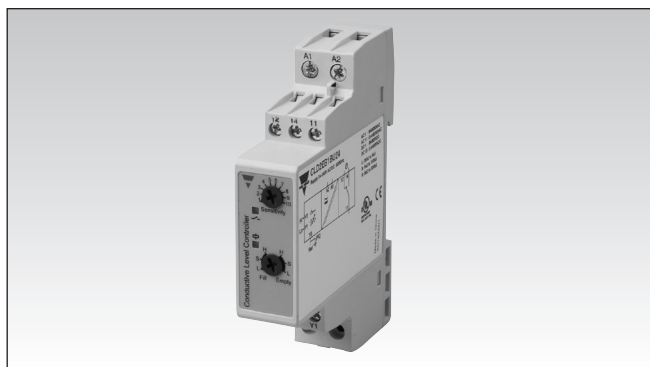


# Conductive Sensors 2-point level controller Type CL with potentiometer

CARLO GAVAZZI



- Conductive level controller
- Sensitivity adjustment from 250 Ω to 500 KΩ
- For filling or emptying applications
- Low-voltage AC electrodes
- Easy installation on DIN rails
- Rated operational voltage:  
24 to 240 VAC/DC
- Output 1 x 8 A / 250 VAC SPDT relay
- LED indication for: Output ON and Power ON



## Product Description

μ-Processor based level controller for liquids with a wide sensitivity range (like sewage water, chemicals, salt water etc.).

Max./min. control of charging/discharging. The sensitivity is adjustable by means of the potentiometer.  
1 x 8 A SPDT relay output.

## Ordering Key

**CLD2EB1BU24**

Conductive level \_\_\_\_\_  
 DIN rail \_\_\_\_\_  
 No of inputs \_\_\_\_\_  
 Charge/discharge \_\_\_\_\_  
 Basic with potentiometer \_\_\_\_\_  
 1 relay output \_\_\_\_\_  
 Relay SPDT \_\_\_\_\_  
 Power supply \_\_\_\_\_

## Type Selection

Mounting	Relay	Ordering no. Supply: 24-240 VAC/DC
DIN-rail	SPDT	<b>CLD2EB1BU24</b>

## Specifications

<b>Rated operational voltage (U<sub>B</sub>)</b> Pin 2 & 10 Rated insulation voltage Rated impulse withstand voltage	20 to 265 VAC/DC, 45 to 65 Hz <2.0 kVAC (rms) 4 kV (1.2/50 μs) (line/neutral)	<b>Dielectric voltage</b>	>2.0 KVAC (rms) (contacts / electronics)
<b>Rated operational power</b> 230 VAC/DC supply 24 VAC/DC supply	2 W 1 W	<b>Rated impulse withstand volt.</b>	4 kV (1.2/50 μs) (contacts / electronics) (IEC 664)
<b>Delay on operate (t<sub>v</sub>)</b>	< 2 s	<b>Operating frequency (f)</b> Relay output	1 Hz
<b>Outputs</b> Rated insulation voltage	250 VAC (rms) (cont./elec.)	<b>Response time</b> OFF-ON (t <sub>on</sub> ) ON-OFF (t <sub>off</sub> )	1 s 1 s
<b>Relay Rating (AgCdO)</b> Resistive loads AC1 DC1	μ (micro gap) 8 A / 250 VAC (2500 VA) 1 A / 250 VDC (250 W) or 10 A / 25 VDC (250 W)	<b>Environment</b> Overvoltage category Degree of protection Pollution degree	III (IEC 60664) IP 20 (IEC 60529, 60947-1) 2 (IEC 60664/60664A, 60947-1)
Small induc. Loads Mechanical life (typical) Electrical life (typical)	AC15 DC13 ≥ 30 x 10 <sup>6</sup> operations @ 18'000 imp/h > 250'000 operations	<b>Temperature</b> Operating Storage	-20° to +50°C (-4° to + 122°F) -40° to +85°C (-40° to +185°F)
<b>Level probe supply</b>	Max. 5 VAC	<b>Housing material</b>	PA66, light grey
<b>Level probe current</b>	Max. 2 mA	<b>Weight</b> AC/DC supply	125 g
<b>Sensitivity</b> Factory settings standard range "S" 100KΩ Ranges L (Low sensitivity) Ranges S (Standard sensitivity) Ranges H (High sensitivity)	250Ω to 500KΩ 250 Ω to 5 KΩ, C <sub>F</sub> * = 4.7 nF 5 KΩ to 100 KΩ, C <sub>F</sub> * = 2.2 nF 50 KΩ to 500 KΩ, C <sub>F</sub> * = 1.0 nF	<b>UL Approvals</b> <b>cULus</b>	UL508
		<b>CE marking</b>	Yes

\*C<sub>F</sub> = maximum Cable Capacitance

## Mode of Operation

### Connection cable

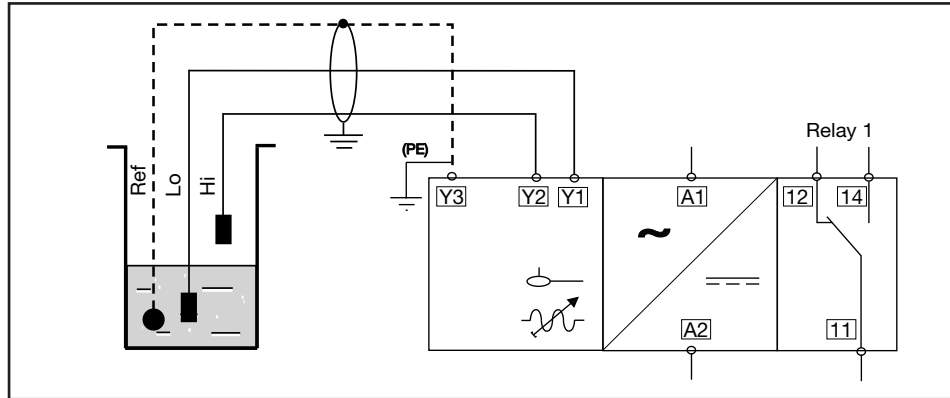
2, 3, or 4 conductor PVC cable, normally screened. Cable length: max. 100 m. The resistance between the cores and the ground must be at least 500k. Normally, it is recommended to use a screened cable between probe and controller, e.g. where the cable is placed in parallel to the load cables (mains). The screen has to be connected to the reference port (Ref) must be connected to Protective Earth (PE).

electrodes are in contact with the liquid. The reference (Ref) must be connected to the container or if the container consists

of a non-conductive material, to an additional electrode. (To be connected to pin Y3). (In the diagram this electrode is shown by the dotted line).

### NB!

If only one level detection is required - interconnect the two inputs Y1 and Y2.

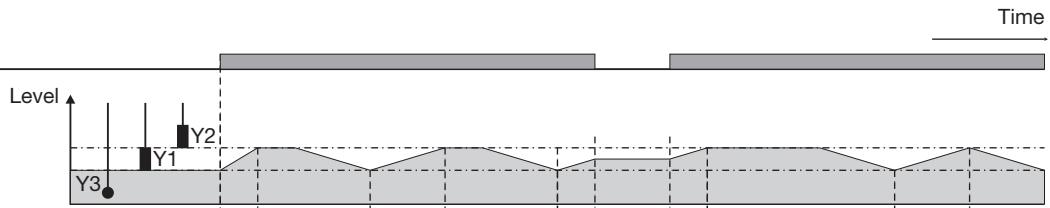
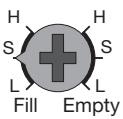


### Example 1

The diagram shows the level control connected as max. and min. control. The relays react to the low alternating current created when the

### Filling

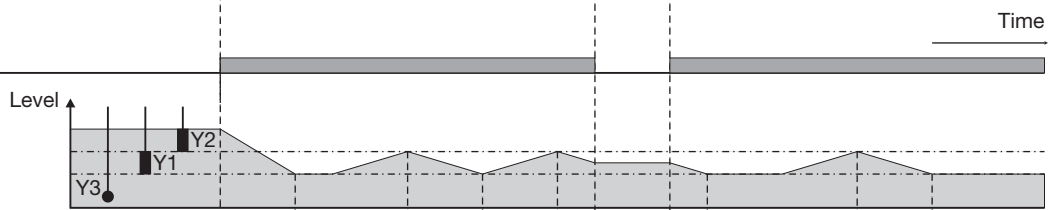
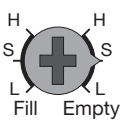
Power supply ON



Relay ON [11-14]

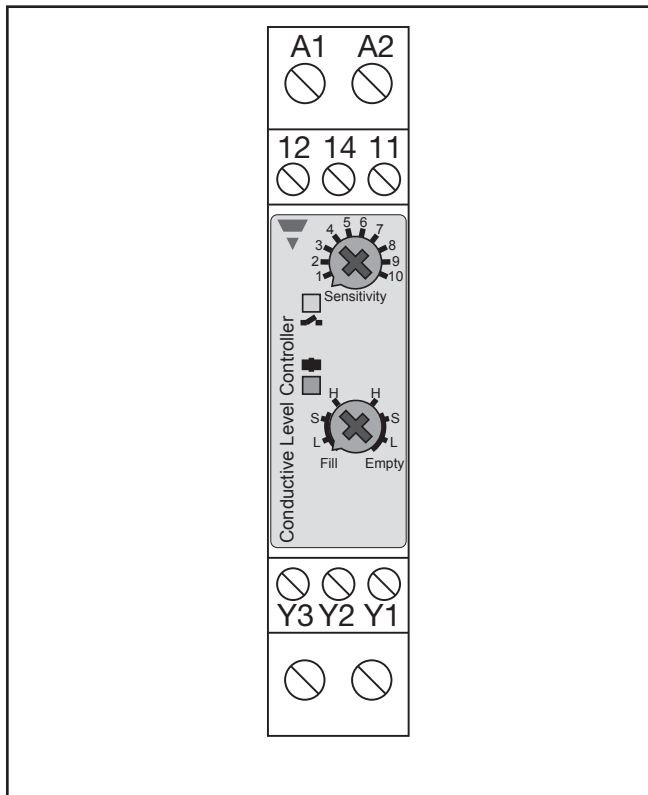
### Emptying

Power supply ON

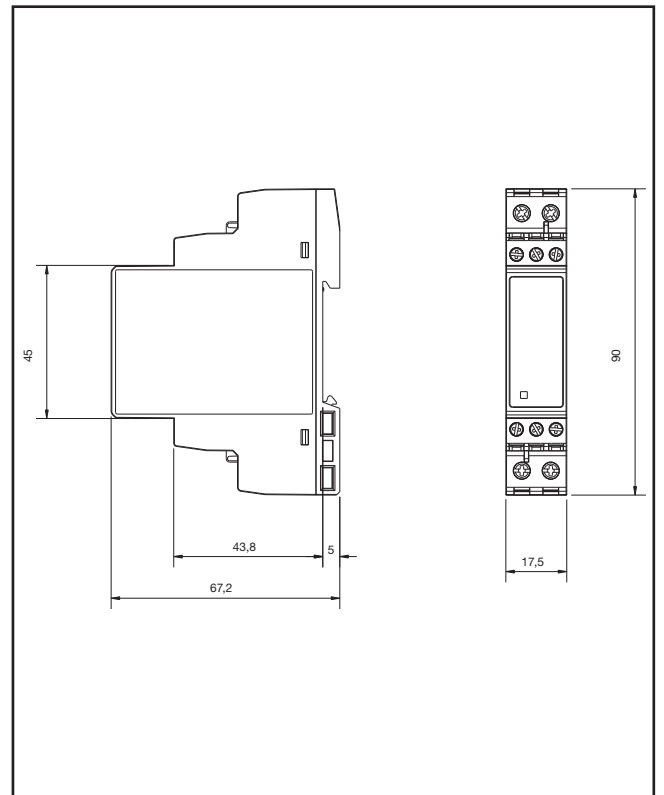


Relay ON [11-14]

## Wiring Diagram



## Dimension Drawings



## Delivery Contents

- Amplifier
- Packaging: Carton box
- Manual