

Conductive Sensors 2-point level controller Type CL with potentiometer

CARLO GAVAZZI



- Conductive level controller
- Sensitivity adjustment from 250 Ω to 500 K Ω
- 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	CLD2EB1BU24

Specifications

Rated operational voltage (U_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 μ s) (line/neutral)	Dielectric voltage	>2.0 KVAC (rms) (contacts / electronics)
Rated operational power 230 VAC/DC supply 24 VAC/DC supply		2 W 1 W	Rated impulse withstand volt.	4 kV (1.2/50 μ s) (contacts / electronics) (IEC 664)
Delay on operate (t_v)		< 2 s	Operating frequency (f) Relay output	1 Hz
Outputs Rated insulation voltage		250 VAC (rms) (cont./elec.)	Response time OFF-ON (t_{on}) ON-OFF (t_{off})	1 s 1 s
Relay Rating (AgCdO) Resistive loads Small induc. Loads Mechanical life (typical) Electrical life (typical)		μ (micro gap) 8 A / 250 VAC (2500 VA) 1 A / 250 VDC (250 W) or 10 A / 25 VDC (250 W) 0,4 A / 250 VAC 0,4 A / 30 VDC $\geq 30 \times 10^5$ operations @ 18'000 imp/h > 250'000 operations	Environment Overvoltage category Degree of protection Pollution degree	III (IEC 60664) IP 20 (IEC 60529, 60947-1) 2 (IEC 60664/60664A, 60947-1)
Level probe supply		Max. 5 VAC	Temperature Operating Storage	-20° to +50°C (-4° to + 122°F) -40° to +85°C (-40° to +185°F)
Level probe current		Max. 2 mA	Housing material	PA66, light grey
Sensitivity Ranges L (Low sensitivity) Ranges S (Standard sensitivity) Ranges H (High sensitivity)		250 Ω to 500K Ω Factory settings standard range "S" 100K Ω 250 Ω to 5 K Ω , C_F^* = 4.7 nF 5 K Ω to 100 K Ω , C_F^* = 2.2 nF 50 K Ω to 500 K Ω , C_F^* = 1.0 nF	Screw type	M3
			Tightening torque min/max	0.4Nm/0.8Nm
			Weight AC/DC supply	125 g
			Approvals	cULus UL508, CSA C22.2
			CE marking	Yes

* C_F = maximum Cable Capacitance



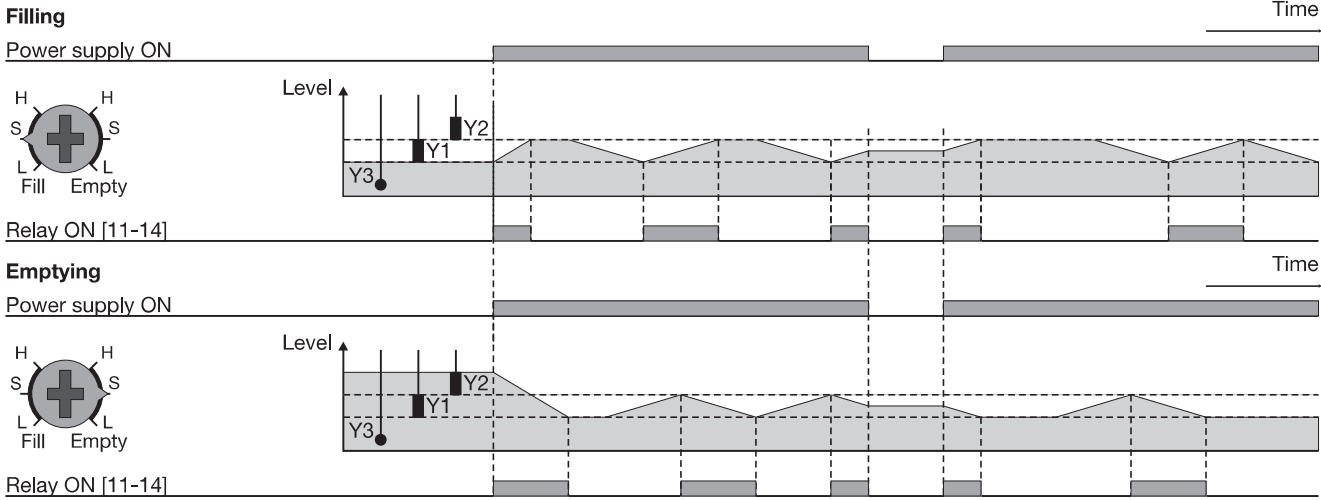
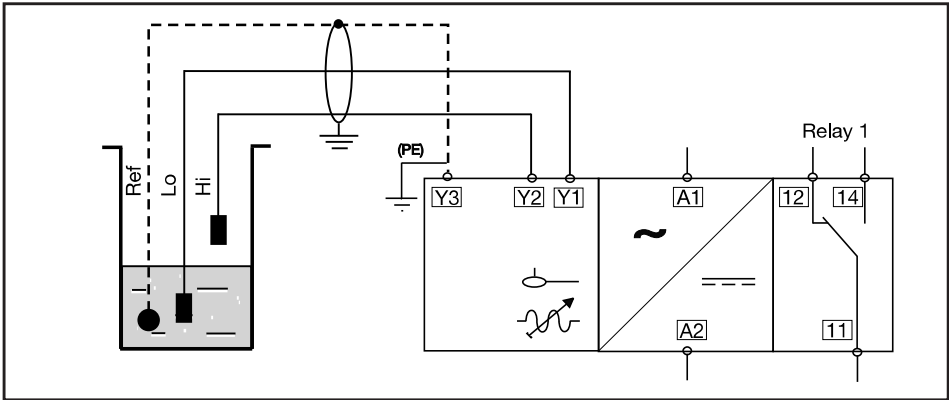
Mode of Operation

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).

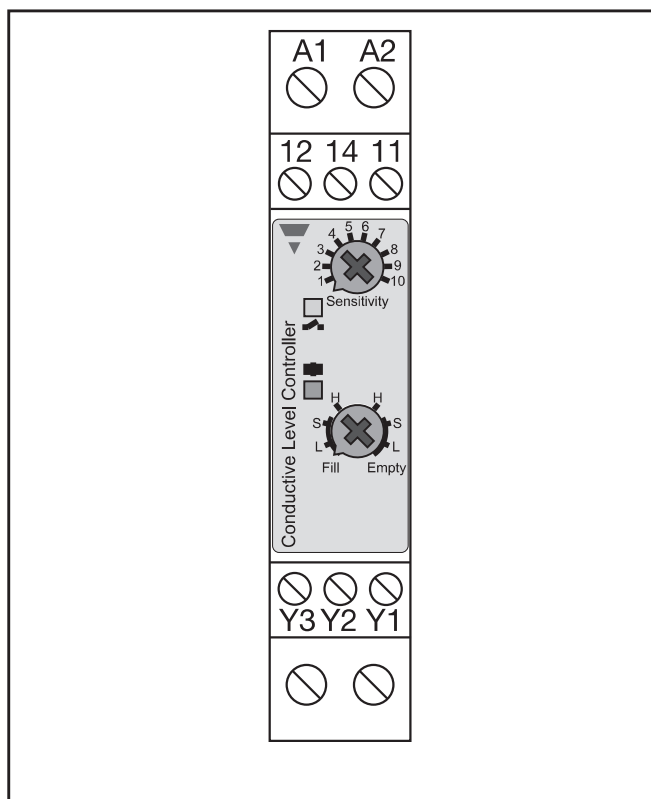
Example 1
The diagram shows the level control connected as max. and min. control. The relays react to the low alternating current created when the

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).

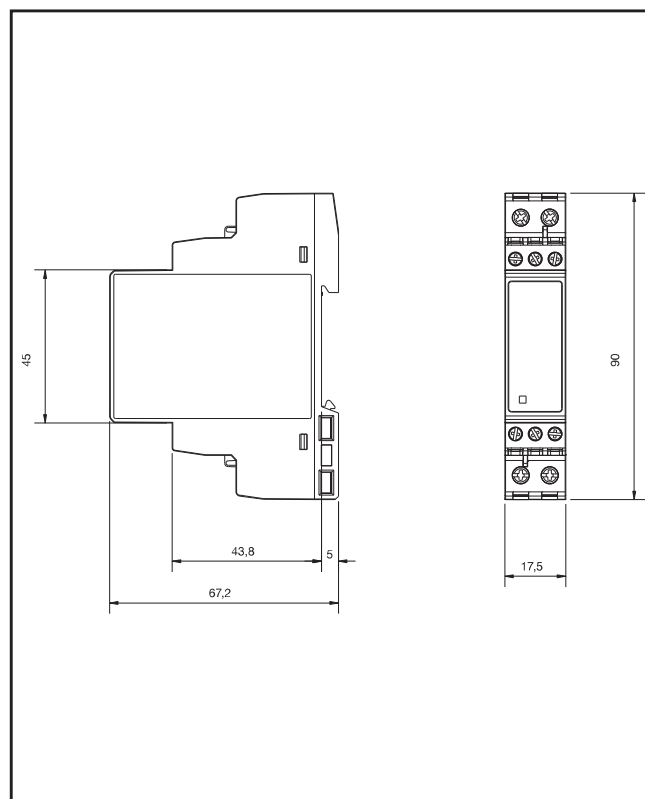
NB!
If only one level detection is required - interconnect the two inputs Y1 and Y2.



Wiring Diagram



Dimension Drawings



Delivery Contents

- Amplifier
- Packaging: Carton box
- Manual