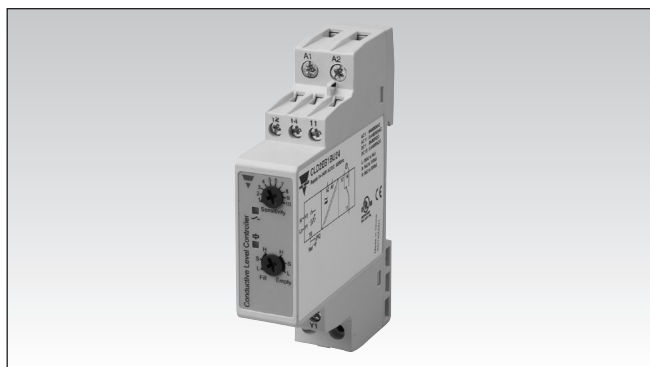


Conductive Sensors 2-point level controller Type CL with potentiometer

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



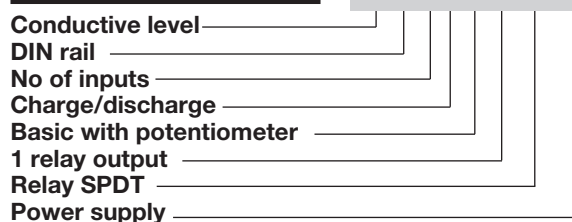
Product Description

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



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 μs) (line/neutral)
Rated operational power 230 VAC/DC supply 24 VAC/DC supply	2 W 1 W
Delay on operate (t_v)	< 2 s
Outputs Rated insulation voltage	250 VAC (rms) (cont./elec.)
Relay Rating (AgCdO) Resistive loads	μ (micro gap) 8 A / 250 VAC (2500 VA) DC1 1 A / 250 VDC (250 W) or 10 A / 25 VDC (250 W)
Small induc. Loads	AC15 0,4 A / 250 VAC DC13 0,4 A / 30 VDC
Mechanical life (typical)	≥ 30 x 10 ⁶ operations
Electrical life (typical)	@ 18'000 imp/h > 250'000 operations
Level probe supply	Max. 5 VAC
Level probe current	Max. 2 mA
Sensitivity	250Ω to 500KΩ Factory settings standard range "S" 100KΩ Ranges L (Low sensitivity) 250 Ω to 5 KΩ, C _F * = 4.7 nF Ranges S (Standard sensitivity) 5 KΩ to 100 KΩ, C _F * = 2.2 nF Ranges H (High sensitivity) 50 KΩ to 500 KΩ, C _F * = 1.0 nF

Dielectric voltage	>2.0 KVAC (rms) (contacts / electronics)
Rated impulse withstand volt.	4 kV (1.2/50 μs) (contacts / electronics) (IEC 664)
Operating frequency (f) Relay output	1 Hz
Response time OFF-ON (t _{on}) ON-OFF (t _{off})	1 s 1 s
Environment Overvoltage category Degree of protection Pollution degree	III (IEC 60664) IP 20 (IEC 60529, 60947-1) 2 (IEC 60664/60664A, 60947-1)
Temperature Operating Storage	-20° to +50°C (-4° to + 122°F) -40° to +85°C (-40° to +185°F)
Housing material	PA66, light grey
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

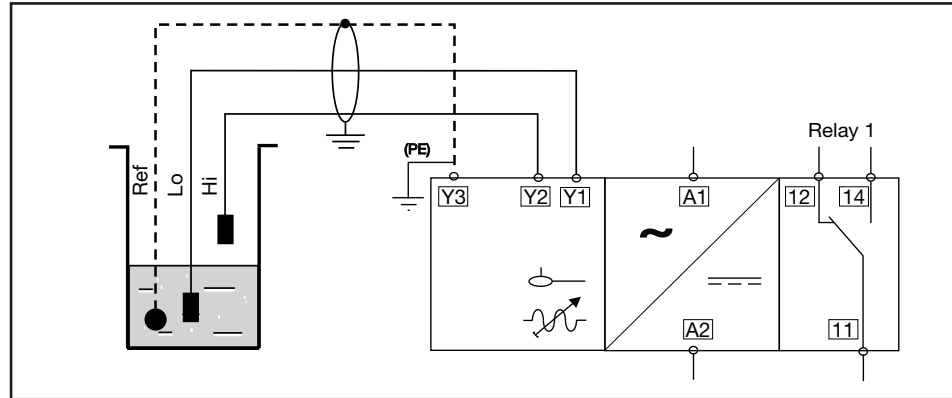
2, 3, or 4 conductor PVC cable, normally screened. Cable length: max. 100 m. The resistance between the cores and the ground must be at least 500k. Normally, it is recommended to use a screened cable between probe and controller, e.g. where the cable is placed in parallel to the load cables (mains).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

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.

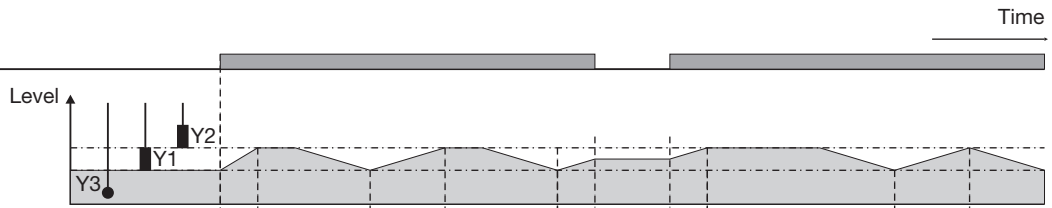


Example 1

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

Filling

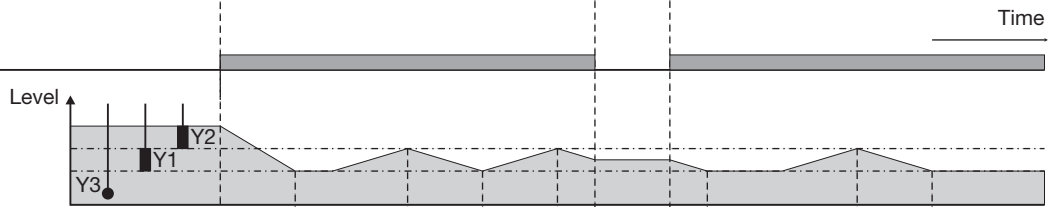
Power supply ON



Relay ON [11-14]

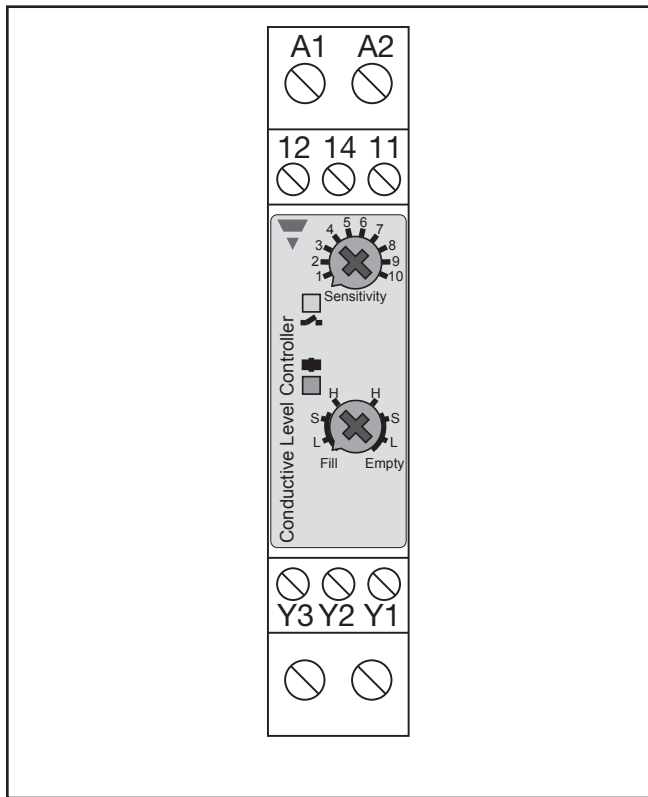
Emptying

Power supply ON

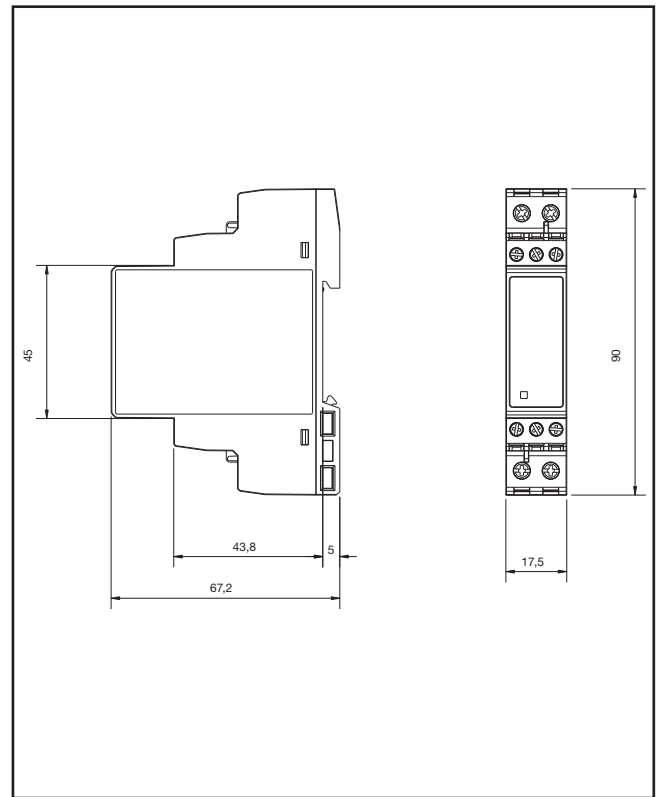


Relay ON [11-14]

Wiring Diagram



Dimension Drawings



Delivery Contents

- Amplifier
- Packaging: Carton box
- Manual