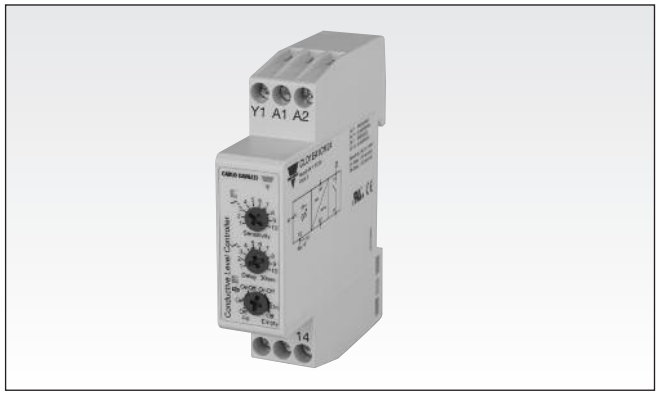
Conductive Sensors
1-point Basic Level Controller
Type CL with Potentiometer and Time Control



- **Conductive level controller**
- **Sensitivity adjustment 5 KΩ to 150 KΩ**
- **For filling or emptying applications**
- **Low-voltage AC electrodes**
- **Easy installation on DIN rails 17.5 mm**
- **Rated operational voltage: 24 VAC/DC**
- **Output 8A/250 VAC SPST relay**
- **LED indication for: Output ON, Power ON**

Product Description

µ-Processor based level controller for liquids with a wide sensitivity range from 5 KΩ to 150 KΩ.

One probe level control with built in ON or OFF time delay for filling or emptying applications. The time delay can be set from 1 to 30 seconds.

Ordering Key

CLD1EA1CM24

- **Type**
- **DIN rail mounting**
- **Inputs**
- **Function**
- **Adjustment**
- **Outputs**
- **Relay versions**
- **Power supply**

Type Selection

Mounting	Ordering no. Supply: 24 VAC/DC
DIN-rail	**CLD1EA1CM24**

Specifications

Rated operational voltage (U_B)		
Supply class 2		
Pin A1 & A2	24	19.2 to 28.8 VAC/DC
Rated insulation voltage		<2.0 kVAC (rms)
Rated impulse withstand voltage		4 kV (1.2/50 µs) (line/neutral)
Rated operational power		
AC/DC supply		5 VA / 5 W
Delay on operate (t_v)		< 300 mS
Outputs		
Rated insulation voltage		250 VAC (rms) (cont./elec.)
Relay Rating (AgCdO)		µ (micro gap)
Resistive loads	AC1	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 @ 18'000 imp/h
Electrical life (typical)	AC1	> 250'000 operations
Level probe supply		Max. 5 VAC
Level probe current		Max. 2 mA
Sensitivity		5 KΩ to 150 KΩ, C_F = 2.2 nF* Factory preset 150 KΩ

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) max	
Relay output	0.5 Hz
Response time	
OFF-ON (t_{on})	1 sec to 30 sec adjustable
ON-OFF (t_{off})	1 sec to 30 sec adjustable
Environment	
Overvoltage category	III (IEC 60664)
Degree of protection	IP 20 /IEC 60529, 60947-1)
Pollution degree	2 (IEC 60664/60664A, 60947-1)
Temperature	
Operating	-20° to +50°C (-4° to + 122°)
Storage	-50° to +85°C (-58° to +185°F)
Housing material	ABS VO, light grey
Weight	
AC/DC supply	125 g
Approvals	
UL cULus	UL508, UL325, CSA-C22.2 No.247
CSA	Yes
CE marking	Yes

*C_F = maximum Cable Capacitance

CARLO GAVAZZI

Mode of Operation

Connection cable
2 conductor PVC cable, normally screened. Cable length: max. 100 m. The resistance between the cores and the ground must be at least 150K. 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 Y2 (reference).

The filling or emptying process operate around one single electrode and a time control circuit.

Cautions

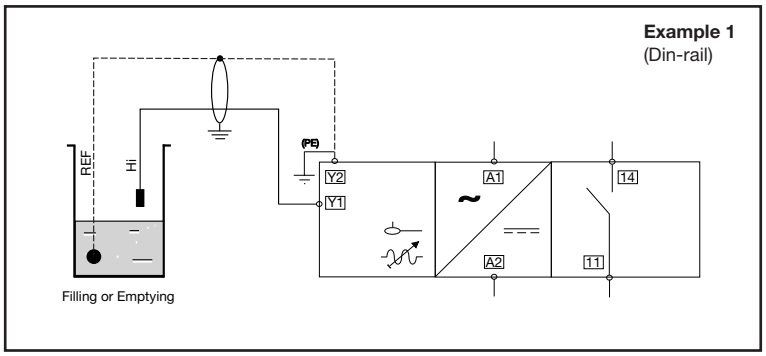
Overrunning of tank filling
Cautions must be taken to assure that the tank cannot overrun. Factors that have to be considered are the pump performance, the rate of discharge from the tank, the position of the single level electrode and the time delay.

Prevent dry running of pump on emptying
Care must be taken to ensure that the pump cannot run dry. Similar considerations must be given as mentioned above. Specifically keeping the time delay to a minimum will minimize this risk, but again, it will increase the switching rate.

Example 1
The diagram shows the level control connected as filling or emptying control. The relay react to the low alternating current created when the electrodes are in contact with the liquid.

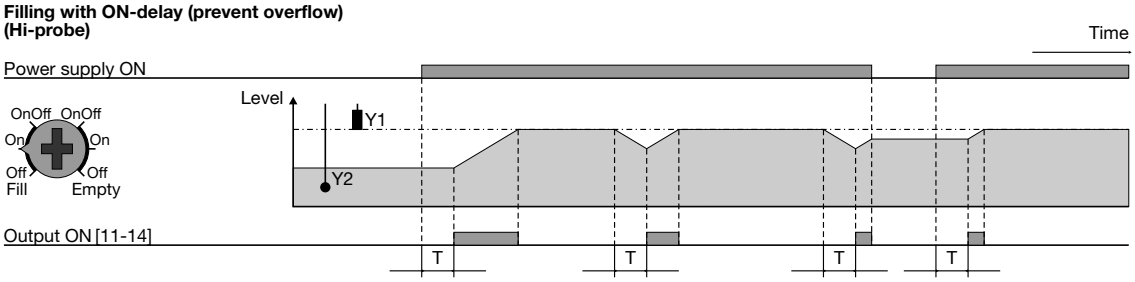
The reference (Ref) must be connected to the container or if the container consists of a non-conductive material, to an additional electrode. (To be connected to pin Y2). (In the diagram this electrode is shown by the dotted line).

Example 1
(Din-rail)

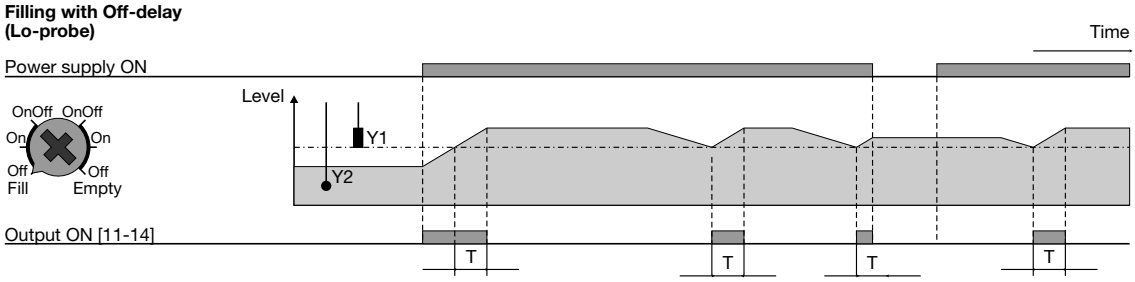


Operation Diagram

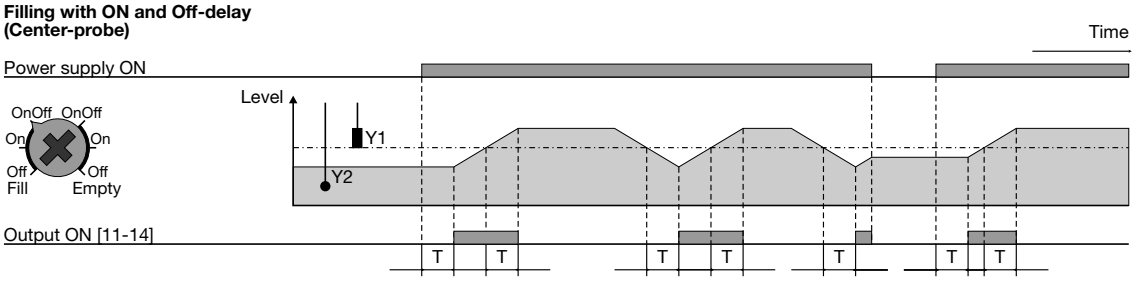
Filling with ON-delay (prevent overflow)
(Hi-probe)



Filling with Off-delay
(Lo-probe)



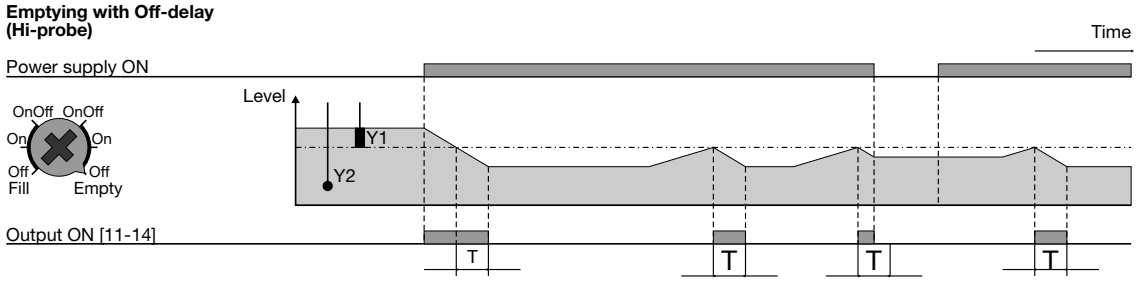
Filling with ON and Off-delay
(Center-probe)



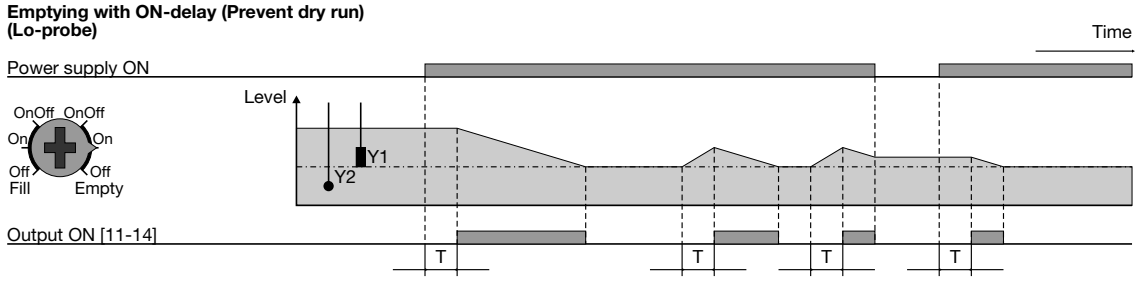
CARLO GAVAZZI

Operation Diagram

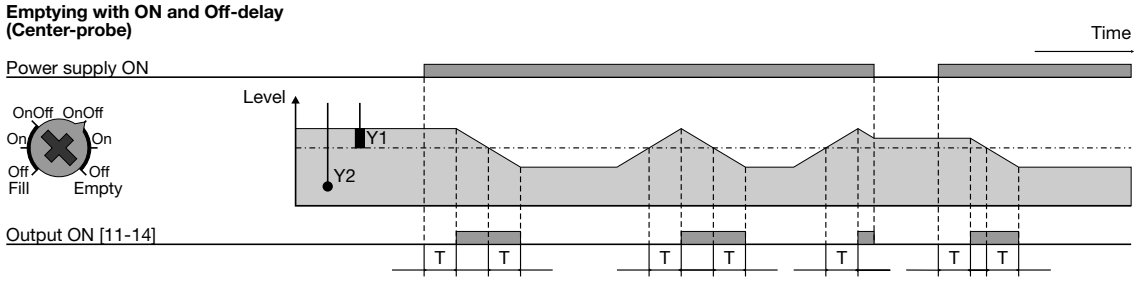
Emptying with Off-delay (Hi-probe)



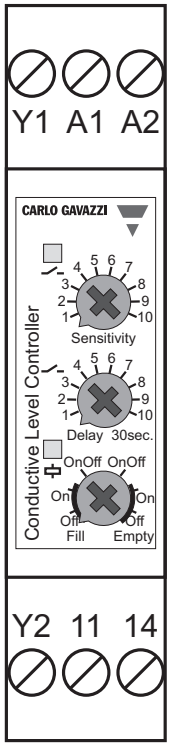
Emptying with ON-delay (Prevent dry run) (Lo-probe)



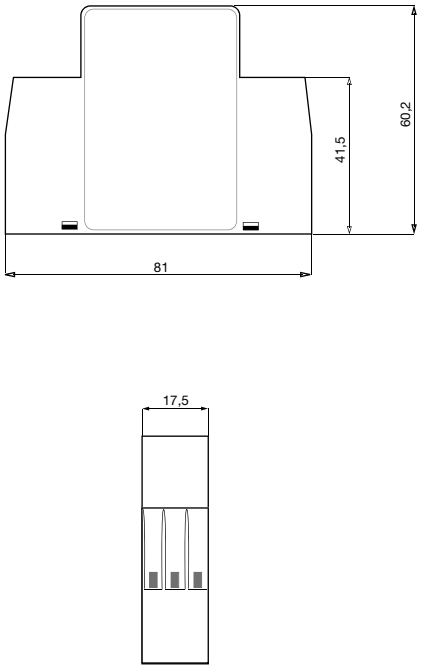
Emptying with ON and Off-delay (Center-probe)



Wiring Diagram



Dimension Drawings



Delivery Contents

- Amplifier
- Packaging: Carton box
- Manual

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Controllers ***category:***

Click to view products by Carlo Gavazzi ***manufacturer:***

Other Similar products are found below :

61FGPN8DAC120 CV500SLK21 70177-1011 F03-03 HAS C F03-31 81550401 FT1A-C12RA-W FT1A-C14SA-B 88981106 H2CAC24A H2CRSAC110B R88A-CRGB003CR-E R88ARR080100S R88A-TK01K DCN1-1 DRT2ID08C DTB4896VRE DTB9696CVE DTB9696LVE E53-AZ01 E53E01 E53E8C E5C4Q40J999FAC120 E5CWLQ1TCAC100240 E5GNQ03PFLKACDC24 B300LKL21 NSCXDC1V3 NSH5-232CW-3M NT20SST122BV1 NV-CN001 OAS-160-N C40PEDRA K31S6 K33-L1B K3MA-F 100-240VAC K3TX-AD31A 89750101 L595020 SRM1-C02 SRS2-1 FT1A-C14SA-S G32X-V2K 26546803 26546805 H7HP-C8D PWRA440A CPM1AETL03CH CV500SLK11 3G2A5BI081 3G2A5IA122