Level Sensors
Amplifier, Conductive
Type ELC (Charging), ELD (Discharging)

CARLO GAVAZZI

- Level control for conductive liquids
- Max./min. control of charging (ELC) or discharging (ELD)
- Adjustable sensitivity: 10 - 100 kΩ
- Output: 5 A SPDT
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 22.5 mm housing
- LED-indication for relay and power supply ON
- AC power supply

Product Description

Level control relay with max./min. control of charging or discharging. The sensitivity is adjustable on absolute scale from 10 to 100 kΩ. When using only the max. level sensor, single level control is possible.

Ordering Key

ELC C 230 100K

- **Housing**
- **Function**
- **Type**
- **Output**
- **Power supply**
- **Measuring range**

Type Selection

Mounting	Output	Type	Supply: 24 VAC	Supply: 115 VAC	Supply: 230 VAC
For DIN-rail	SPDT	Charge (Filling)	**ELC C 024 100K**	**ELC C 115 100K**	**ELC C 230 100K**
	SPDT	Discharge (Emptying)	**ELD C 024 100K**	**ELD C 115 100K**	**ELD C 230 100K**

Input Specifications

Input	
through Y1 & Y2	Max. level
through Y1 & Y3	Min. level
Range	10 - 100 kΩ
Reaction time	≤ 3 s
Repeat accuracy	≤ 20 kΩ (typ. 5 kΩ)
Sensor voltage	≤ 25 VAC/250 µA (rms)

Supply Specifications

Power supply		Overvoltage cat. III (IEC 60664)
Rated operational volt.		
through term. A1 & A2	024	24 VAC ±15%
	115	115 VAC ±15%
	230	230 VAC ±15%
Frequency		50/60 Hz, -5/+5 Hz
Voltage interruption		≤ 40 ms
Dielectric voltage		≥ 2 kVAC (rms)
Rated impulse withstand volt.		4 kV (1.2/50 µs)
Rated operational power		2.5 VA

Output Specifications

Output		SPDT relay
Rated insulation voltage		250 VAC (contact/elect.)
Contact ratings (AgCdO)		
Resistive loads	AC 1	5 A/250 VAC
	DC 1	5 A/24 VDC
Small inductive loads	AC 15	2 A/250 VAC
	DC 13	3 A/24 VDC
Mechanical life		≥ 40 x 10^6 operations
Electrical life		≥ 10^5 operations (at max. load)
Operating frequency		≤ 7200 operations/h

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General Specifications

Power ON delay	≤ 3 s
Accuracy	
Max. level	-20/+50%
Min. level	±50%
Drift	
Temperature	≤ 1 kΩ/°C
Supply voltage	≤ 0.5%/V
Indication for	
Power supply ON	LED, green
Output ON	LED, yellow
Environment	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20 to +50°C (-4 to +122°F)
Storage temperature	-50 to +85°C (-58 to +185°F)
Dimensions	100x22.5x91.7 mm (LxWxH)
Weight	170 g
Approvals	UL, CSA (only ELC-type)
CE-marking	Yes

Mode of Operation

ELC
Relay for the control of charging of conductive liquids.
The relay operates when the level drops below the min. level sensor.
The relay releases if the level rises above the max. level sensor.
Single level control is obtained by connecting the max. level sensor only.

ELD
Relay for the control of discharging of conductive liquids.
The relay operates when the level rises above the max. level sensor.
The relay releases when the level drops below the min. level sensor.
Single level control is obtained by connecting the max. level sensor only.

Level Setting

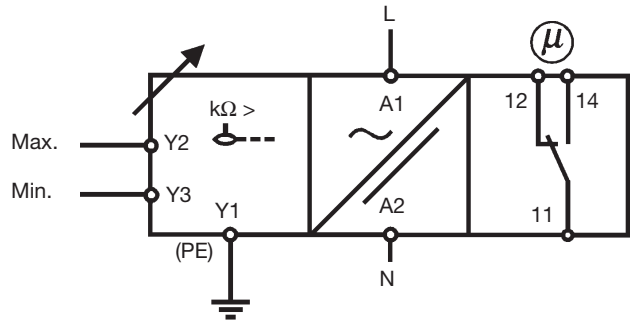
Setting of level on absolute scale, 10-100 kΩ.

Accessories

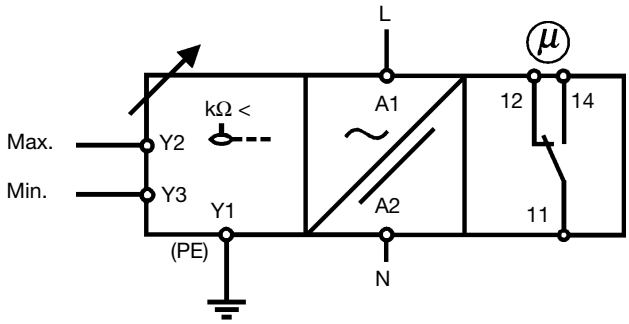
Conductive level probes: VH, VPC, VPP, VN, VNI, VNY, VNYI, VT, VTI, VS.

Wiring Diagrams

ELC

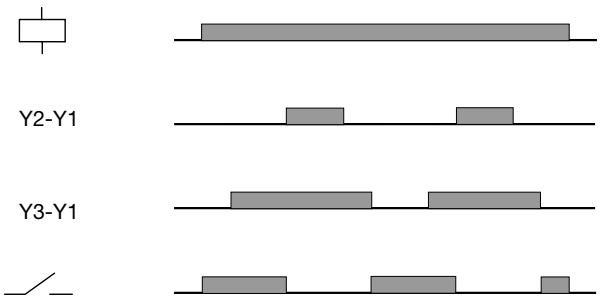


ELD



Operation Diagrams

ELC



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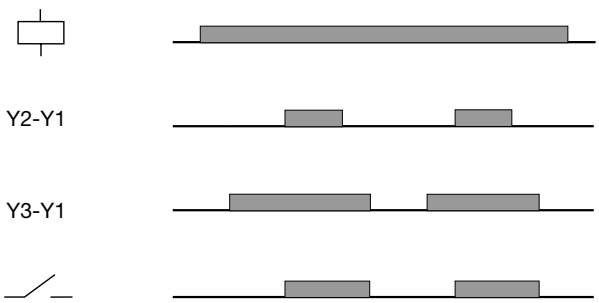

Specifications are subject to change without notice (25.06.99)