

Level Sensors Amplifier, Conductive Types SV 110/210, SV 115/215 (Discharging)

CARLO GAVAZZI



SV 110/210



SV 115/215

- Level control for conductive liquids
- Max.-min. control of DISCHARGING
- SV 110/210: Fixed sensitivity
- SV 115/225: Adjustable sensitivity
- 10 A SPDT or 8 A DPDT output relay
- LED-indications: Power supply and relay ON
- AC or DC power supply

Product Description

Level control relay for conductive liquids which can control two levels of discharging. Usable for one level detection with pin 5 and 7 short-circuited.

Ordering Key

SV 110 024

Housing _____
Output _____
Power supply _____

Type Selection

Plug	Output	Supply: 24 VAC	Supply: 115 VAC	Supply: 230 VAC	Supply: 24 VDC
Circular	SPDT	SV 110 024	SV 110 115	SV 110 230	SV 110 724
	DPDT	SV 210 024	SV 210 115	SV 210 230	SV 210 724
	SPDT	SV 115 024	SV 115 115	SV 115 230	SV 115 724
	DPDT	SV 215 024	SV 215 115	SV 215 230	SV 215 724

Input Specifications

Level probe supply		Max. 24 VAC
Level probe current		Max. 2.5 mA
Sensitivity		
SV110/SV210	ON	From 22 to 29 kΩ
	OFF	From 32 to 40 kΩ
SV115/SV215	ON	From 2-6 to 20-30 kΩ (adj.)
	OFF (AC)	From 3-13 to 30-40 kΩ (adj.)
	OFF (DC)	From 3-9 to 42-52 kΩ (adj.)

General Specifications

Indication for		
Power supply ON		LED, green
Output ON		LED, red (724 only red)
Environment		
Degree of protection		IP 20 B
Pollution degree		3 (IEC 60664)
Operating temperature		-20 to +50°C (-4 to +122°F)
Storage temperature		-50 to +85°C (-58 to +185°F)
Approvals		UL, CSA
CE-marking		Yes

Supply Specifications

Power supply	AC types	Overvoltage cat. II (IEC 60664)
Rated operational voltage through pins 2 and 10	230	230 VAC ± 15% 50/60 Hz, -5/+5 Hz
	115	115 VAC ± 15% 50/60 Hz, -5/+5 Hz
	024	24 VAC ± 15% 50/60 Hz, -5/+5 Hz
Rated insulation voltage		250 VAC (rms)
Rated impulse withstand volt.		4 kV (1.2/50 μs) (line/neutral)
Power supply	DC types	Overvoltage cat. II (IEC 60664)
Rated operational voltage	724	24 VDC ± 15% (pin 2 pos.)
Rated insulation voltage		None
Rated impulse withstand volt.		800 V (1.2/50 μs)



Output Specifications

			SV110/SV115	SV210/SV215
Output			SPDT relay	DPDT relay
Rated insulation voltage			250 VAC (rms) (cont./elec.)	250 VAC (rms) (Cont./elec., cont./cont.)
Contact ratings (Ag-CdO)			μ (micro gap)	μ (micro gap)
Resistive loads	AC 1		10 A/250 VAC (2500 VAC)	8 A/250 VAC (200 VA)
	DC 1		1 A/250 VAC (250 W)	0,4 A/250 VDC (100 W)
Small inductive loads		or	10 A/25 VDC (250 W)	4 A/25 VDC (100 W)
	AC 15		2.5 A/230 VAC	2.5 A/230 VAC
	DC 13		5 A/24 VDC	5 A/24 VDC
Mechanical life			≥ 5 x 10 ⁷ operations	≥ 5 x 10 ⁷ operations
Electrical life			≥10 ⁵ operations	≥10 ⁵ operations
Operation frequency			≤ 7200 operations/h	≤ 7200 operations/h
Insulation voltages				
Rated insulation voltage	AC		≥ 2.0 kVAC (rms) (cont./elect.)	≥ 2.0 kVAC (rms) (cont./elect.)
	DC		None	None
Rated impulse withstand voltage	AC		4 kV (1.2/50 μs) (cont./elect.) (IEC 60664)	4 kV (1.2/50 μs) (cont./elect.) (IEC 60664)
	DC		800 V	800 V

Mode of Operation

Max. and min. control of discharging.

Example 1

The diagram shows the level control connected as max. and min. control, i.e. detec-

tion of 2 levels. The relay operates when the max. electrode is in contact with the liquid. The relay releases when the min. electrode is no longer in contact with the liquid. By use of a container of

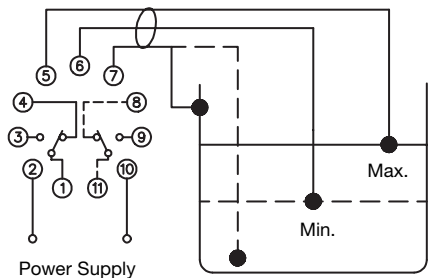
a conductive material (pin 7) can be connected to the container. If the container is made of a non-conductive material, an additional electrode is needed, indicated by the dotted line in the diagram.

Example 2

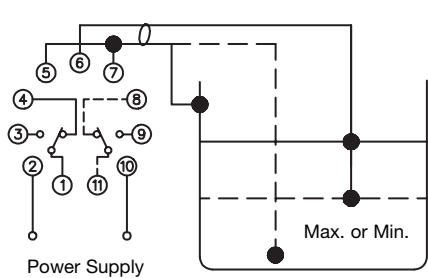
If only one level is required, pins 5 and 7 must be interconnected to select either max. or min. control.

Wiring Diagrams

SV 1xx/SV 2xx, two levels
Example 1



SV 1xx/SV 2xx, one level
Example 2



Operation Diagram



Accessories

Conductive level probe: 1 or 2 electrodes
VH..., VPC..., VPP...
VN..., VNY..., VNI...
VT..., VTI..., VS...