

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

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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

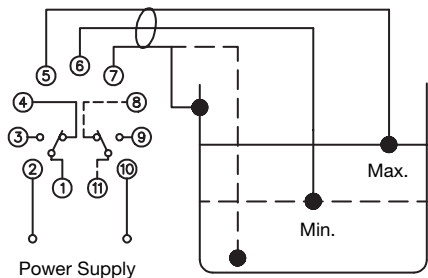
a conductive material (pin 7) can be connected to the container. If the container is made of a non-conductive material, an additional electrode is needed, indicated by the dotted line in the diagram.

Example 2

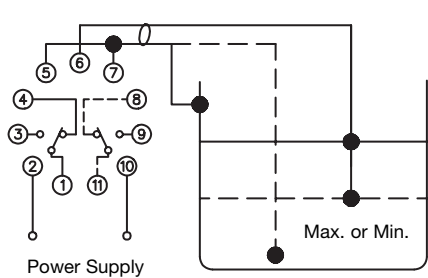
If only one level is required, pins 5 and 7 must be interconnected to select either max. or min. control.

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...