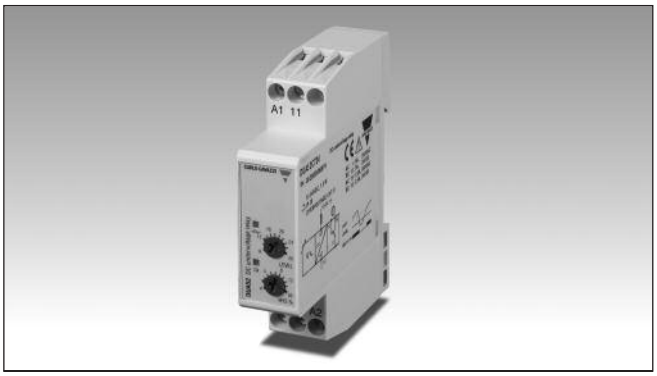
# Monitoring Relays
# DC Under Voltage
# Type DUA52






- **DC undervoltage monitoring relay**
- **Measuring if power supply is below the set level**
- **Measures on own power supply**
- **Measuring ranges: 8 - 28 V DC and 38 - 58 V DC**
- **Adjustable hysteresis: 4 to 50%**
- **Output: 5 A SPDT NE relay**
- **For mounting on DIN-rail in accordance with DIN/EN 50 022**
- **17.5 mm housing (DIN 43880)**
- **LED indication for relay and power supply ON**

## Product Description

DUA52 is a voltage monitoring relay that measure its own power supply. The measuring ranges are 8-28 VDC and 38-58 VDC. It has separate potentiometers for setpoint and hysteresis. Typical applications are monitoring of backup batteries, batteries on diesel generator sets and the like.

## Ordering Key

**DUA 52 C 724**

- **Housing**
- **Function**
- **Type**
- **Item number**
- **Output**
- **Power supply**

## Type Selection

| Mounting | Output | Measuring range: 8 to 28V | Measuring range: 38 to 58V |
|---|---|---|---|
| DIN-rail | SPDT | **DUA 52 C 724** | **DUA 52 C 748** |

## Input Specifications

| | | |
|---|---|---|
| **Input** | | |
| Own power supply | | A1, A2 |
| | 748 | 48V DC |
| | 724 | 12 to 24V DC |
| **Measuring ranges** | | **Level** |
| | 724 | 8 to 28 V |
| | 748 | 38 to 58 V |

## Output Specifications

| | | |
|---|---|---|
| **Output** | | SPDT relay |
| Rated insulation voltage | | 250 VAC |
| **Contact ratings** ($AgSnO_2$) | | µ |
| Resistive loads | AC 1 | 5 A @ 250 VAC |
| | DC 12 | 5 A @ 24 VDC |
| Small inductive loads | AC 15 | 2.5 A @ 250 VAC |
| | DC 13 | 2.5 A @ 24 VDC |
| **Mechanical life** | | ≥ 30 x $10^6$ operations |
| **Electrical life** | | ≥ $10^5$ operations (at 8 A, 250 V, cos φ = 1) |
| **Operating frequency** | | ≤ 7200 operations/h |
| **Dielectric strength** | | |
| Dielectric voltage | | 2 kVAC (rms) |
| Rated impulse withstand volt. | | 4 kV (1.2/50 µs) |

## Supply Specifications

| | | |
|---|---|---|
| **Power supply** | | Overvoltage cat. III (IEC 60664, IEC 60038) |
| Rated operational voltage through terminals: | | |
| A1 and A2 | 724 | 8 to 28 VDC |
| | 748 | 38 to 58 VDC |
| Dielectric voltage | | None |
| **Dielectric voltage** | | |
| Supply to output | | 2 kV |
| **Rated operational power** | | 1.5 W |

## Range and Level Setting

**Selection of level:**

**Centre knob:**
Setting of level on absolute scale.

**Lower knob:**
Setting of hysteresis on relative scale

## Mode of Operation

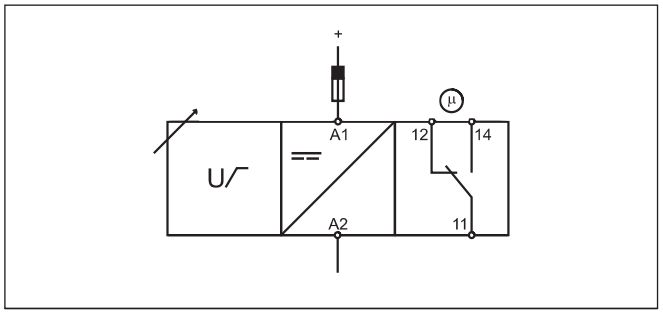
DUA52 monitors the DC value of its own power supply.

The output is energized when the measured voltage is rising above the setpoint plus hysteresis, and is deenergized when the measured voltage drops below the setpoint value.

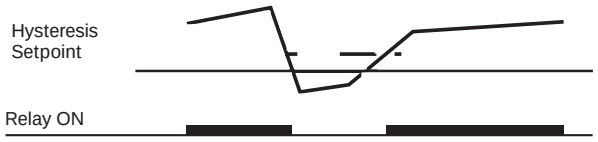
## General Specifications

| | |
|---|---|
| **Power ON delay** | < 200 ms |
| **Reaction time** | (input signal variation from -20% to +20% or from +20% to -20% of set value) |
| Alarm ON delay | < 200 ms |
| Alarm OFF delay | < 200 ms |
| **Accuracy** | (15 min warm-up time) |
| Temperature drift | ± 1000 ppm/°C |
| Alarm delay | ± 10% on set value ± 50 ms |
| Repeatability | ± 0.5% on full-scale |
| **Indication for** | |
| Power supply ON | LED, green |
| Output relay ON | LED, yellow |
| **Environment** | |
| Degree of protection | IP 20 |
| Pollution degree | 3 |
| Operating temperature | -20 to 60°C, R.H. < 95% |
| Storage temperature | -30 to 80°C, R.H. < 95% |
| **Housing dimensions** | |
| DIN-rail version | 17.5 x 81 x 67.2 mm |
| **Weight** | Approx. 75 g |
| **Screw terminals** | |
| Tightening torque | Max. 0.5 Nm acc. to IEC 60947 |
| **Approvals** | UL, CSA |
| **CE Marking** | Yes |

## Wiring Diagram




## Operation Diagram




## Dimensions