

# Monitoring Relays DC Under Voltage Type DUA52

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- DC undervoltage monitoring relay
- Measuring if power supply is below the set level
- Measures its 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	Supply : 12/24 VDC	Supply: 48 VDC
DIN-rail	SPDT	8 to 28 VDC	<b>DUA 52 C 724</b>	
DIN-rail	SPDT	38 to 58 VDC		<b>DUA 52 C 748</b>

## Input Specifications

<b>Input</b> (voltage level)	Terminals A1, A2 Measures its own power supply
<b>Measuring ranges</b> Direct	<b>Level</b> 38 to 58 VDC 8 to 28 VDC
48 VDC	
12 to 24 VDC	

## Output Specifications

<b>Output</b> Rated insulation voltage	SPDT relay 250 VAC
<b>Contact ratings</b> (AgSnO <sub>2</sub> )	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
<b>Mechanical life</b>	≥ 30 x 10 <sup>6</sup> operations
<b>Electrical life</b>	≥ 10 <sup>5</sup> operations (at 8 A, 250 V, cos φ = 1)
<b>Operating frequency</b>	≤ 7200 operations/h
<b>Dielectric strength</b>	
Dielectric voltage	2 kVAC (rms)
Rated impulse withstand volt.	4 kV (1.2/50 μs)

## Supply Specifications

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

## General Specifications

<b>Power ON delay</b>	< 200 ms
<b>Reaction time</b>	(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
<b>Accuracy</b>	(15 min warm-up time)
Temperature drift	± 1000 ppm/°C
Alarm delay	± 10% on set value ± 50 ms
Repeatability	± 0.5% on full-scale
<b>Indication for</b>	
Power supply ON	LED, green
Output relay ON	LED, yellow
<b>Environment</b>	
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%

<b>Housing</b>	
Dimensions	17.5 x 81 x 67.2 mm
Material	PA66 or Noryl
<b>Weight</b>	Approx. 75 g
<b>Screw terminals</b>	
Tightening torque	Max. 0.5 Nm acc. to IEC 60947
<b>Product standard</b>	EN 60255-6
<b>Approvals</b>	UL, CSA
<b>CE Marking</b>	L.V. Directive 2006/95/EC EMC Directive 2004/108/EC
EMC Immunity	According to EN 60255-26 According to EN 61000-6-2
Emissions	According to EN 60255-26 According to EN 61000-6-3

## Mode of Operation

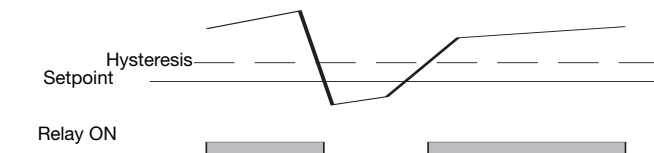
DUA52 monitors the DC value of its own power supply. is rising above the setpoint plus hysteresis, and is deenergized when the measured voltage drops below the setpoint value.

The output is energized when the measured voltage

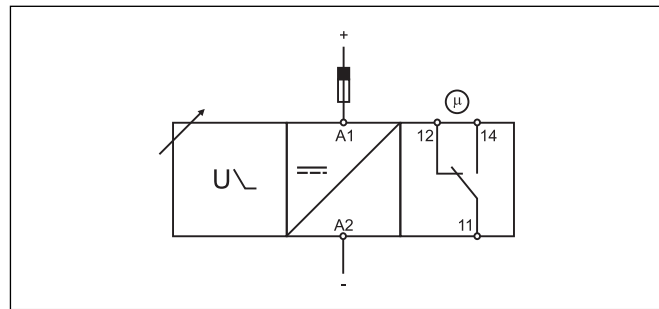
## Range and Level Setting

**Selection of level:** Lower knob: Setting of hysteresis on relative scale  
Centre knob: Setting of level on absolute scale.

## Operation Diagram



## Wiring Diagram



## Dimensions

