

# Monitoring Relays

## 1-Phase Voltage selection

### Type DUA55

CARLO GAVAZZI



- Detects if voltage is at the desired level ( $\pm 10\%$  or  $\pm 15\%$ )
- Measures own power supply
- Wide power supply range: 208 to 480 VAC ( $\pm 15\%$ )
- Output: 5 A SPDT relay normally energized
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 17.5 mm DIN-rail housing (DIN 43880)
- LED indication for relay and power supply ON

## Product Description

1-Phase relay for detection of incorrect mains voltage. This unit allows to stop incorrect power supply voltage when different from the desired one. Power supply range from

208 to 480 VAC plus selection of the different possible nominal voltages. For mounting on DIN-rail. Housing 17.5 mm wide suitable both for back and front panel mounting.

## Ordering Key

**DUA 55 C M44**

Housing \_\_\_\_\_  
 Function \_\_\_\_\_  
 Type \_\_\_\_\_  
 Item number \_\_\_\_\_  
 Output \_\_\_\_\_  
 Power supply \_\_\_\_\_

## Type Selection

Mounting	Output
DIN-rail	SPDT

Supply: 208 to 480 VAC

DUA 55 C M44

## Input Specifications

<b>Input</b> L, N	Terminals A1, A2 Measures on own supply
<b>Measuring range</b>	177 to 550 VAC

## Output Specifications

<b>Output</b>	SPDT relay, N.E.
<b>Rated insulation voltage</b>	250 VAC
<b>Contact ratings (AgSnO<sub>2</sub>)</b>	$\mu$
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>	$\geq 30 \times 10^6$ operations
<b>Electrical life</b>	$\geq 10^5$ operations (at 8 A, 250 V, $\cos \varphi = 1$ )
<b>Operating frequency</b>	$\leq 7200$ operations/h
<b>Dielectric strength</b>	
Dielectric voltage	$\geq 2$ kVAC (rms)
Rated impulse withstand volt.	4 kV (1.2/50 $\mu$ s)

## Supply Specifications

<b>Power supply</b> Rated operational voltage through terminals: A1, A2	Overvoltage cat. II (IEC 60664, IEC 60038) 208 to 480 VAC $\pm 15\%$ , 45 to 65 Hz
<b>Rated operational power</b>	6 VA @ 230 VAC, 50 Hz

## General Specifications

<b>Reaction time</b> Alarm ON delay Alarm OFF delay	< 100 ms < 300 ms	<b>Environment</b> Degree of protection Pollution degree Operating temperature @ Max. voltage, 50 Hz @ Max. voltage, 60 Hz Storage temperature	IP 20 2 -20 to +60°C, R.H. < 95% -20 to +50°C, R.H. < 95% -30 to +80°C, R.H. < 95%
<b>Accuracy</b> Temperature drift Repeatability	(15 min warm-up time) $\pm 1000$ ppm/°C $\pm 0.5\%$ on full scale	<b>Housing</b> Dimensions Material	17.5 x 81 x 67.2 mm PA66
<b>Indication for</b> Power supply ON Relay ON	LED, green LED, yellow	<b>Weight</b>	Approx. 80 g

## General Specifications (cont.)

<b>Screw terminals</b> Tightening torque	Max. 0.5 Nm acc. to IEC 60947
<b>Approvals</b>	UL, CSA
<b>CE Marking</b>	Yes
<b>EMC</b> Immunity Emission	Electromagnetic Compatibility According to EN 61000-6-2 According to EN 61000-6-3

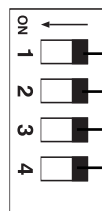
## Mode of Operation

DUA55 monitors its own 1-phase power supply. The relay operates when the monitored voltage is within the desired tolerance ( $\pm 10\%$  or  $\pm 15\%$ ).

**Example**  
The relay monitors that the power supply is the correct one for the required equipment.

## Range setting

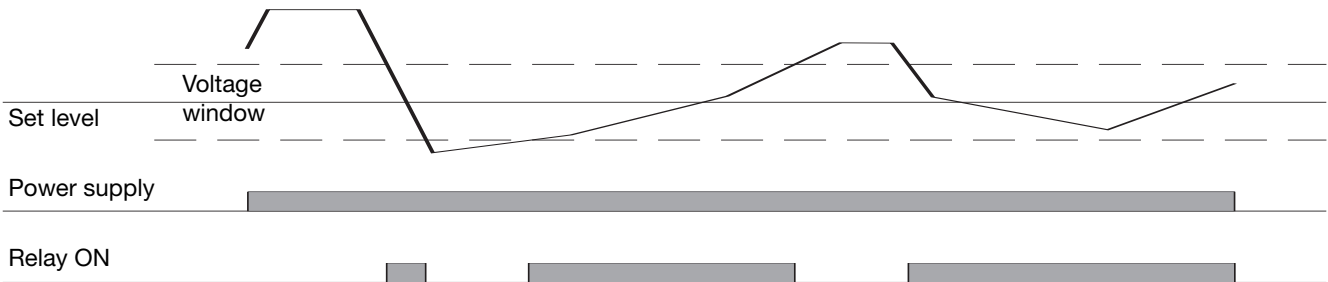
Select the proper nominal voltage level using DIP-switches as shown below.



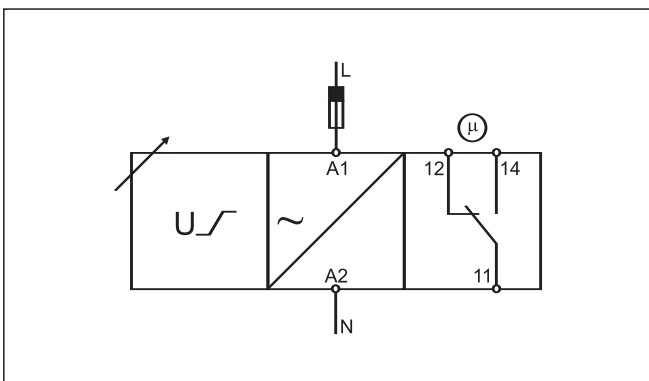
Voltage window	
ON:	$\pm 15\%$
OFF:	$\pm 10\%$

Measuring range			
	SW2	SW3	SW4
208 VAC	OFF	OFF	OFF
220 VAC	OFF	OFF	ON
230 VAC	OFF	ON	OFF
240 VAC	OFF	ON	ON

## Operation Diagram



## Wiring Diagram



## Dimensions

