

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

DIN-rail

Output

SPDT

Supply: 208 to 480 VAC

DUA 55 C M44

Input Specifications

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

Supply Specifications

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

Output Specifications

Output	SPDT relay, N.E.
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	$\geq 30 \times 10^6$ operations
Electrical life	$\geq 10^5$ operations (at 8 A, 250 V, $\cos \varphi = 1$)
Operating frequency	≤ 7200 operations/h
Dielectric strength	
Dielectric voltage	≥ 2 kVAC (rms)
Rated impulse withstand volt.	4 kV (1.2/50 μ s)

General Specifications

Reaction time Alarm ON delay Alarm OFF delay	< 100 ms < 300 ms
Accuracy Temperature drift Repeatability	(15 min warm-up time) ± 1000 ppm/ $^{\circ}$ C $\pm 0.5\%$ on full scale
Indication for Power supply ON Relay ON	LED, green LED, yellow

Environment Degree of protection Pollution degree Operating temperature @ Max. voltage, 50 Hz @ Max. voltage, 60 Hz Storage temperature	IP 20 2 -20 to $+60^{\circ}$ C, R.H. < 95% -20 to $+50^{\circ}$ C, R.H. < 95% -30 to $+80^{\circ}$ C, R.H. < 95%
Housing Dimensions Material	17.5 x 81 x 67.2 mm PA66
Weight	Approx. 80 g



General Specifications (cont.)

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

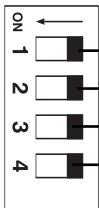
Mode of Operation

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.

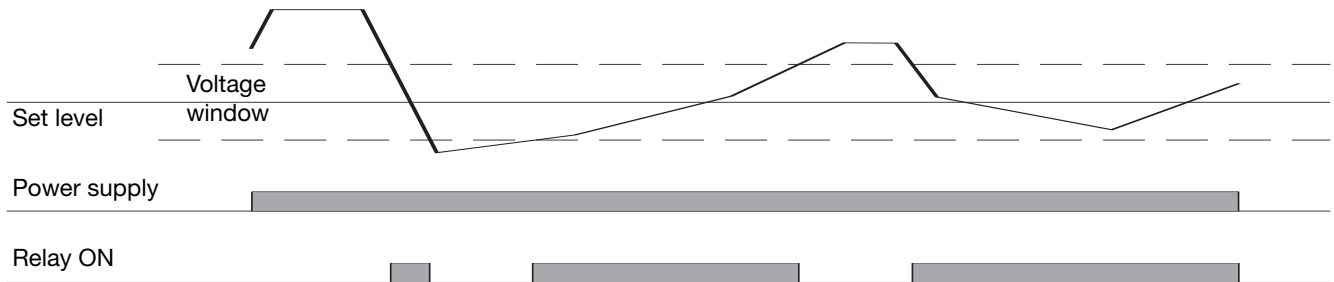
Range setting

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

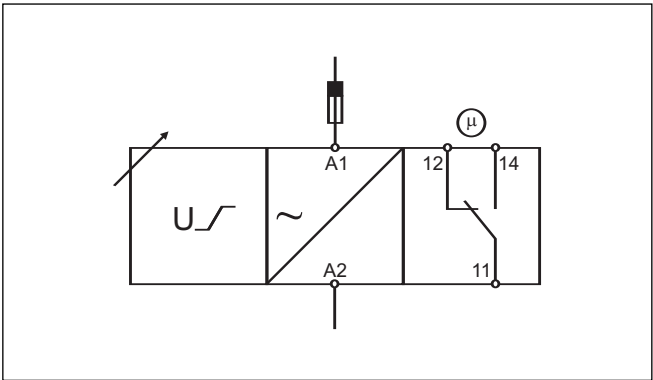


Voltage window			
ON: $\pm 15\%$ OFF: $\pm 10\%$			
Measuring range			
	SW2	SW3	SW4
208 VAC	OFF	OFF	OFF
220 VAC	OFF	OFF	ON
230 VAC	OFF	ON	OFF
240 VAC	OFF	ON	ON

Operation Diagram



Wiring Diagram



Dimensions

