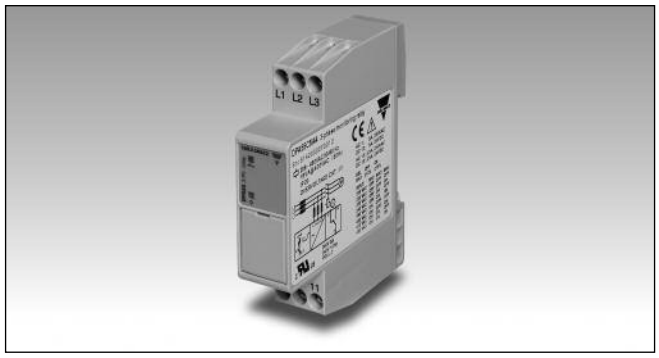
Monitoring Relays
3-Phase Voltage selection
Type DPA55



- **3-phase monitoring relay for phase sequence**
- **Detects if voltage is at the desired level (± 10% or ±15%)**
- **Measures own power supply**
- **Wide power supply range: 208 to 480 VAC (±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

3-Phase relay for detection of incorrect mains voltage. Also detecting incorrect phase sequence and phase loss.
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

DPA 55 C M44

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

Type Selection

Mounting	Output	Supply: 208 to 480 VAC
DIN-rail	SPDT	**DPA 55 C M44**

Input Specifications

Input	
L1, L2, L3	Terminals L1, L2, L3 Measures on own supply
Measuring range	177 to 550 VAC
Hysteresis	< 3V

Supply Specifications

Power supply	Overvoltage cat. II (IEC 60664, IEC 60038)
Rated operational voltage through terminals: L1, L2, L3	208 to 480 VAC ± 15%, 45 to 65 Hz
Rated operational power	18 VA @ 400 VAC, 50 Hz Supplied by L1 and L3

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	≥ 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)

General Specifications

Reaction time	
Alarm ON delay	< 100 ms
Alarm OFF delay	< 300 ms
Accuracy	(15 min warm-up time)
Temperature drift	± 1000 ppm/°C
Repeatability	± 0.5% on full scale
Indication for	
Power supply ON	LED, green
Relay ON	LED, yellow
Environment	
Degree of protection	IP 20
Pollution degree	2
Operating temperature	
@ Max. voltage, 50 Hz	-20 to +60°C, R.H. < 95%
@ Max. voltage, 60 Hz	-20 to +50°C, R.H. < 95%
Storage temperature	-30 to +80°C, R.H. < 95%

Housing	
Dimensions	17.5 x 81 x 67.2 mm
Material	PA66
Weight	Approx. 80 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC 60947
Approvals	UL, CSA
CE Marking	Yes
EMC	Electromagnetic Compatibility
Immunity	According to EN 61000-6-2
Emission	According to EN 61000-6-3

Mode of Operation

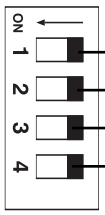
DPA55 monitors its own 3- phase power supply.
The relay operates when all the phases are present, the phase sequence is correct and each phase-phase voltage is within the desired tolerance (± 10% or ± 15%).

Example 1
The relay monitors that the power supply is the correct one for the required equipment.

Example 2
The relay releases in case of incorrect phase sequence or when the voltage is outside the set limits.

Range setting

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

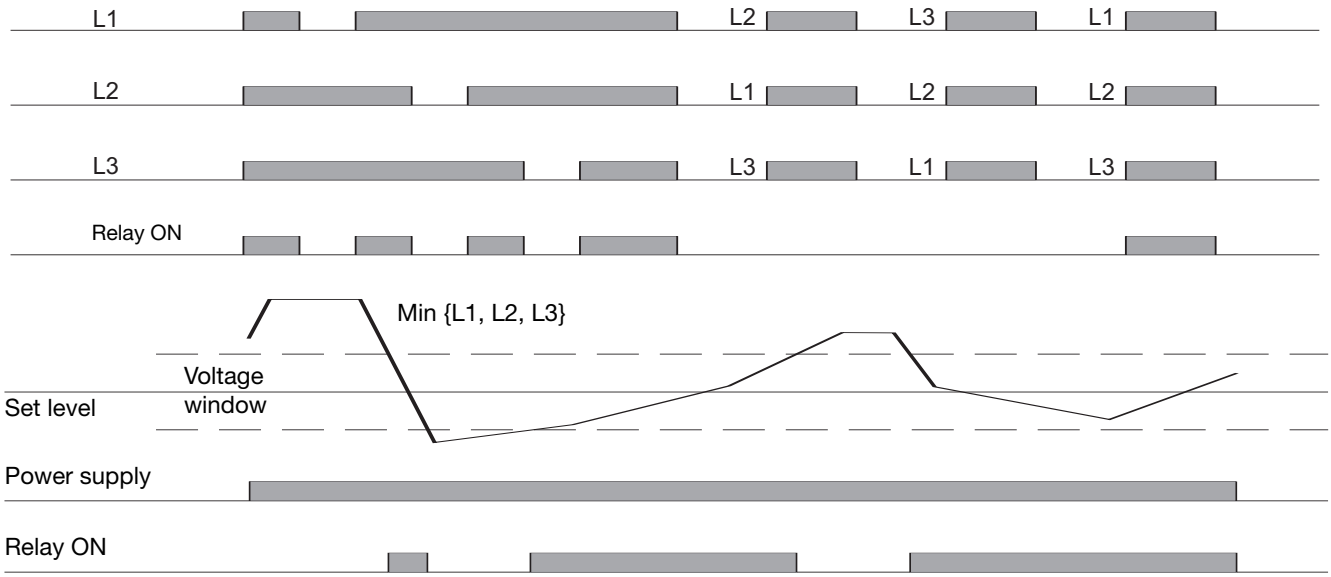


Voltage window
ON: ± 15 %
OFF: ± 10 %

Measuring range

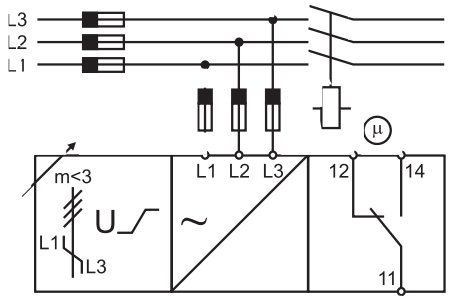
	SW2	SW3	SW4
208 VAC	OFF	OFF	OFF
220 VAC	OFF	OFF	ON
230 VAC	OFF	ON	OFF
240 VAC	OFF	ON	ON
380 VAC	ON	OFF	OFF
400 VAC	ON	OFF	ON
415 VAC	ON	ON	OFF
480 VAC	ON	ON	ON

Operation Diagrams

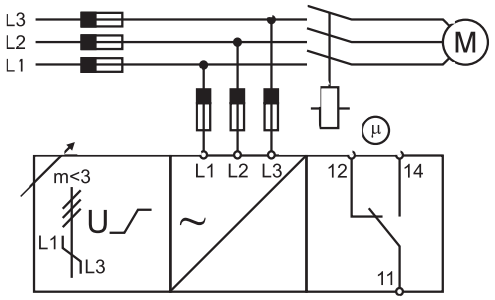


Wiring Diagrams

Example 1



Example 2



Dimensions