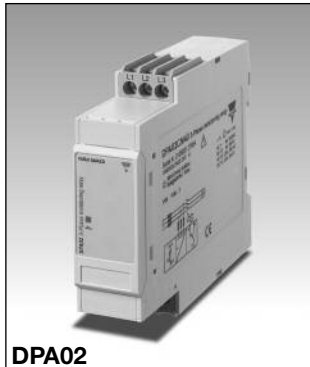


Monitoring Relays 3-Phase Sequence Types DPA02, PPA02

CARLO GAVAZZI



DPA02



PPA02

- 3-Phase monitoring relays for phase sequence
- Measure their own power supply
- Power supply range: 208 to 240 and 380 to 415 VAC ($\pm 15\%$)
- Output 8 A SPDT relay normally energized
- For mounting on DIN-rail in accordance with DIN/EN 50 022 or Plug-in module
- 22.5 mm Euronorm housing (DPA02) or 36 mm Plug-in module (PPA02)
- LED indication for relay ON

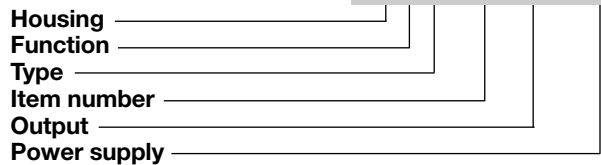
Product Description

3-phase relay for detection of incorrect phase sequence. Supply range from 208 to 240 and 380 to 415 VAC

covered by two multi voltage relays. For mounting on DIN-rail or Plug-in module.

Ordering Key

DPA 02 C M40



Type Selection

Mounting	Output	Supply: 208-240 VAC	Supply: 380-415 VAC
DIN-rail	SPDT	DPA 02 C M23	DPA 02 C M40
Plug-in	SPDT	PPA 02 C M23	PPA 02 C M40

Input Specifications

Input L1, L2, L3	DPA02: Terminals L1, L2, L3 PPA02: Terminals 5, 6, 7 Measure their own supply
Measuring ranges 208 to 240 VAC 380 to 415 VAC	177 to 275 VAC 323 to 475 VAC

Supply Specifications

Power supply Rated operational voltage through terminals: L1, L2, L3 (DPA02) 5, 6, 7 (PPA02)	Overvoltage cat. III (IEC 60664, IEC 60038)
M23:	208 to 240 VAC $\pm 15\%$, 45 to 65 Hz
M40:	380 to 415 VAC $\pm 15\%$, 45 to 65 Hz
Rated operational power	5 VA @ 230 VAC, 50 Hz (M23) $\leq 6,5$ VA @ 230 VAC, 60 Hz (M23) 8 VA @ 400 VAC, 50 Hz (M40) $\leq 8,5$ VA @ 400 VAC, 60 Hz (M40) Supplied by L2 and L3

Output Specifications

Output	SPDT relay, N.E.
Rated insulation voltage	250 VAC
Contact ratings (AgSnO₂)	μ
Resistive loads	AC 1 8 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		< 100 ms
Alarm OFF delay		< 100 ms
Indication for Relay ON		LED, yellow
Environment		(EN 60529)
Degree of protection		IP 20
Pollution degree		3 (DPA02), 2 (PPA02) (IEC 60664)
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	DPA02	22.5 x 80 x 99.5 mm
	PPA02	36 x 80 x 94 mm
Material		PA66 or Noryl

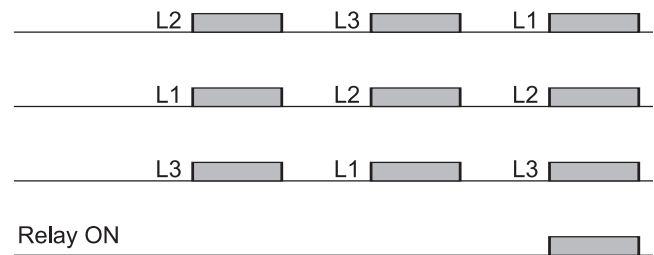
Weight	Approx. 100 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC 60947
Product standard	EN 60947-5-1
Approval	CSA CCC (GB14048.5) only DPA
CE Marking	L.V. Directive 2006/95/EC EMC Directive 2004/108/EC
EMC Immunity Emissions	According to EN 61000-6-2 According to EN 61000-6-3

Mode of Operation

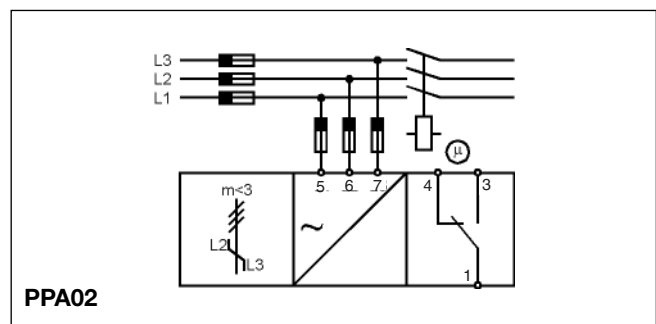
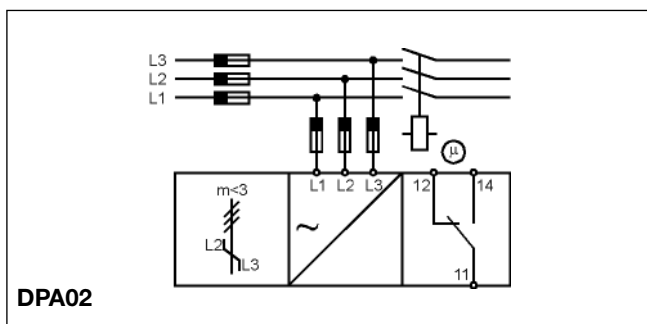
DPA02 and PPA02 monitor their own 3-phase power supply. The relay operates when the phase sequence is correct.

Example
The relay monitors the mains' phase sequence.

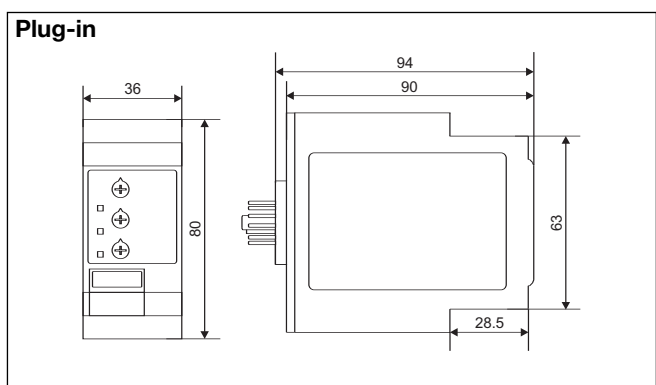
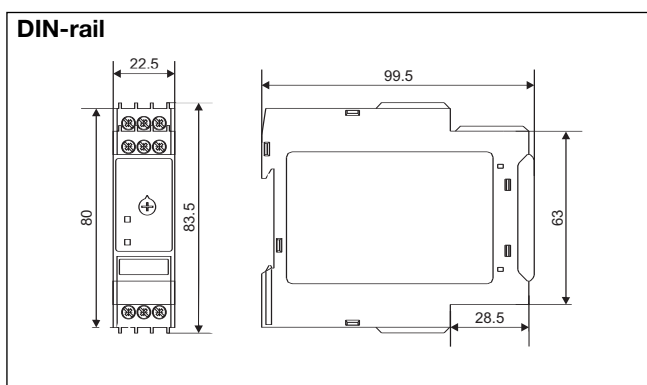
Operation Diagram



Wiring Diagrams



Dimensions



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