Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

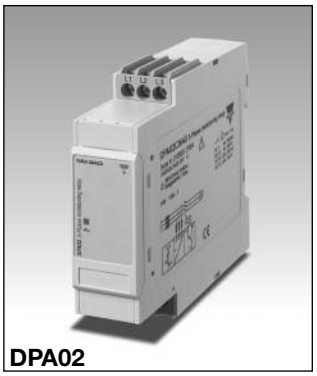
With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Monitoring Relays
3-Phase Sequence
Types DPA02, PPA02


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 (±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

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

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	177 to 275 VAC
380 to 415 VAC	323 to 475 VAC

Supply Specifications

Power supply	Overvoltage cat. III (IEC 60664, IEC 60038)
Rated operational voltage through terminals: L1, L2, L3 (DPA02) 5, 6, 7 (PPA02)	
M23:	208 to 240 VAC ± 15%, 45 to 65 Hz
M40:	380 to 415 VAC ± 15%, 45 to 65 Hz
Rated operational power	5 VA @ 230 VAC, 50 Hz (M23) ≤6,5 VA @ 230 VAC, 60 Hz (M23) 8 VA @ 400 VAC, 50 Hz (M40) ≤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 ($AgSnO_2$)		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		≥ 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		< 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

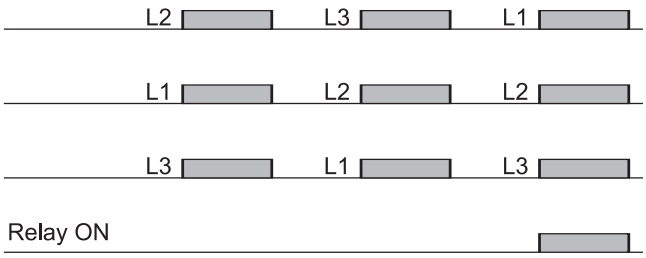
Weight	Approx. 100 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC 60947
Product standard	EN 60947-5-1
Approval	CSA CCC (GB14048.5) only DPA
CE Marking	L.V. Directive 2006/95/EC EMC Directive 2004/108/EC
EMC	
Immunity	According to EN 61000-6-2
Emissions	According to EN 61000-6-3

Mode of Operation

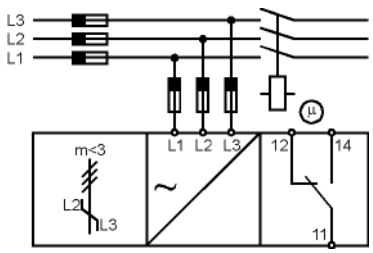
DPA02 and PPA02 monitor their own 3-phase power supply. The relay operates when the phase sequence is correct.

Example
The relay monitors the mains' phase sequence.

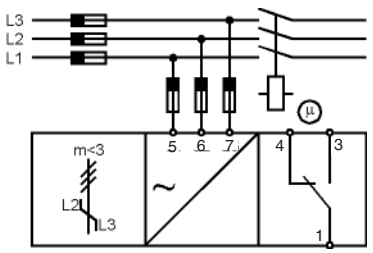
Operation Diagram



Wiring Diagrams



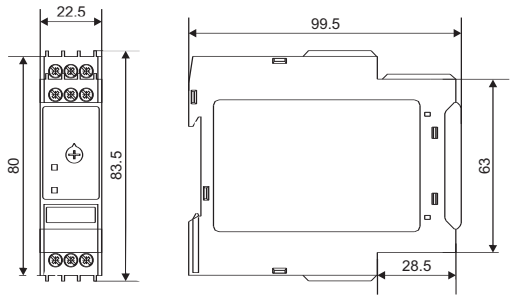
DPA02



PPA02

Dimensions

DIN-rail



Plug-in