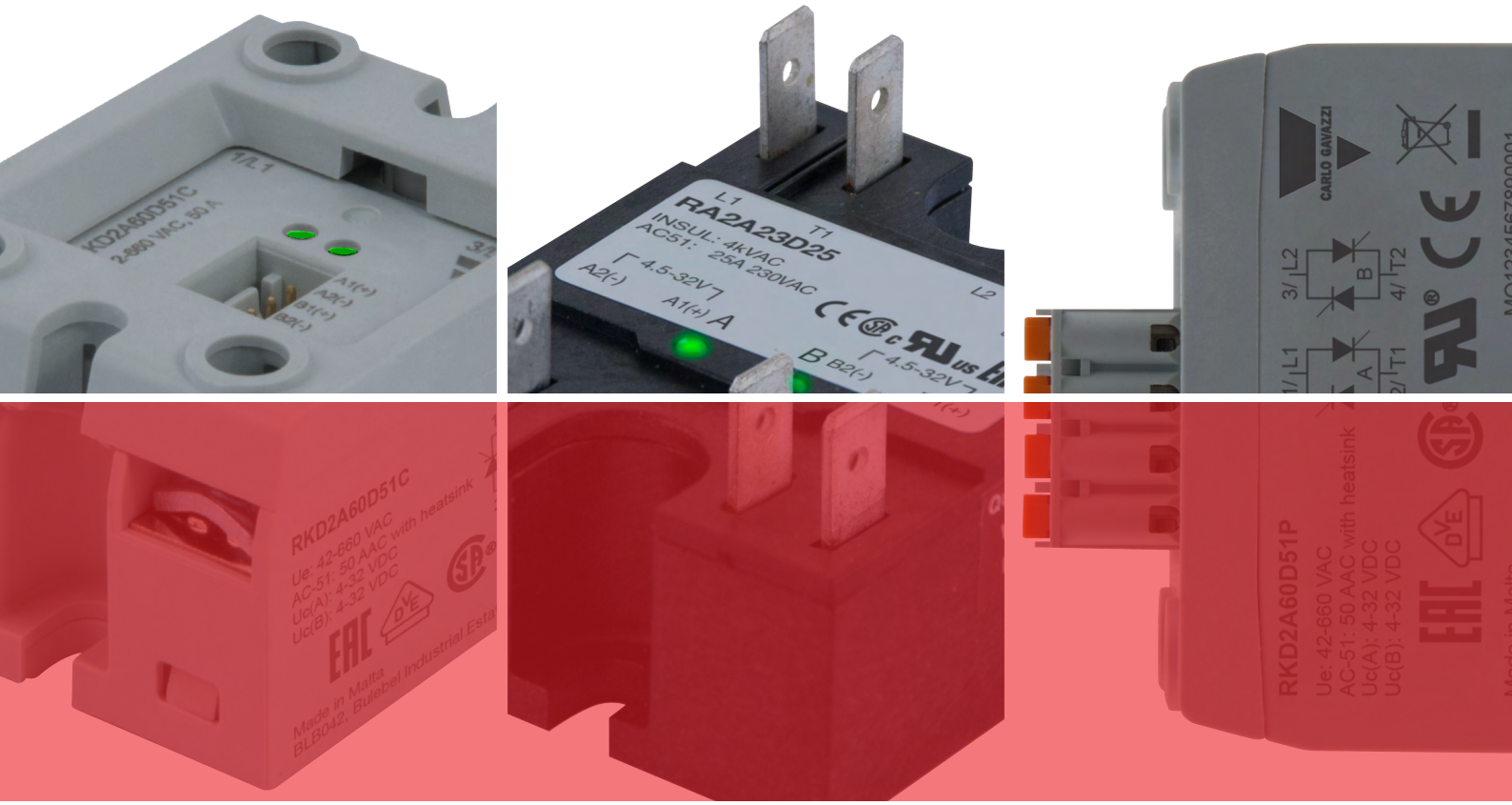
CARLO GAVAZZI
Automation Components

CARLO GAVAZZI



2-pole solid state relays

Switches

RA2A, RK series

2-pole solid state relays

Space costs money! Reducing the size of equipment is becoming a necessity for equipment manufacturers who want to stay competitive. Carlo Gavazzi aligned its product offering accordingly and provide solutions that minimise space requirements without compromising performance.

Amongst these solutions are 2-pole solid state relays that have two outputs which can be either independently or commonly controlled, packaged in one housing providing up to 50% space savings.

The **RA2A** series covers ratings up to 40 AAC per pole and is equipped with FASTON terminations whilst the **RK** series is a more advanced version using the latest design and assembly technology covering ratings up to 75 AAC per pole and is equipped with screw terminations.

Space optimisation solutions

Space savings
- Up to 50% space savings for 2-poles
- Economy switching of 3-phase loads using 2-poles

Time savings in installation
- FASTONs for low current loads (RA2)
- Spring plug for control termination (RK..P)

Long lifetime
- Robust solution with back-to-back thyristor technology instead of triacs
- No internal moulding mass to reduce thermal stresses
- Wire bonding on power chips to reduce thermal and mechanical stresses (RK)

Efficient heat dissipation
- Optimal thermal efficiency by design - low junction temperature due to the low junction to heatsink thermal resistance (RK)

Certifications and conformance
- Certified to International standards
- 100,000 cycle test according UL requirements for Food equipment (RK)
- Conformance to glow wire requirements for Food equipment according to EN 60335 (RK)

One stop shop
- A range of Accessories including heatsinks and cables for a complete package from one supplier

CARLO GAVAZZI Automation Components. Specifications are subject to change without notice. Illustrations are for example only.

Plastic & rubber

- Injection machines
- Thermoforming machines
- Temperature control units
- Dryers

Food & beverage

- Electrical ovens
- Fryers
- Griddles
- Coffee machines

Product range overview

Series	RA2A	RA2A...C	RK...C	RK...P
Current ratings	2x 25 A, 40 A	2x 25 A, 40 A	2x 50 A, 75 A	2x 50 A, 75 A
Max. operating voltage	660 VAC	660 VAC	660 VAC	660 VAC
Power connection	FASTON 6.35mm	FASTON 6.35mm	Screw	Screw
Control connection	FASTON 6.35mm	2.54mm pitch header	2.54mm pitch header	spring plug (provided)
Variants	Dual output with independent control		Dual output with independent or common control	
Switching mode	Zero cross	Zero cross	Zero cross	Zero cross or Instant on
Control ON LED indication (x2)	■	■	■	■
DC control voltage	■	■	■	■
Integrated overvoltage protection	-	Varistor	Transil	Transil
Dimensions W x H x D mm	45 x 58 x 32	45 x 58 x 35	45 x 58 x 33	45 x 58 x 44
Approvals	CE cULus SP EAC UKCA	CE cULus EAC UKCA	CE cULus SP DVE EAC UKCA	

RA2A series

2-pole solid state relays

The **RA2A** series consists of solid state relays having 2 outputs independently controlled packaged in a housing having a maximum width of 45mm. This gives a maximum 50% space saving in control panels when compared to 2x standard 1-pole solid state relays.

The **RA2A** is equipped with FASTON terminals on both input and output for time savings in installations. The **RA2A..C** variants are also equipped with FASTONs on the output but the control termination consists of a 2.54mm pitch header.

Ratings go up to 660 VAC, 40 A. The **RA2A** is ideally suited for resistive loads, and the **RA2A..M** is specifically designed for inductive loads.

Fast installation with quick connect terminals

Applications

In some cases, the application conditions will necessitate that the solid state relay is mounted on a heatsink in order to keep the junction temperature of the solid state relay from exceeding its maximum rating.

The size of heatsink required can be determined either from the product datasheets or by making use of the online Heatsink Selector Tool available at:
http://www.gavazziautomation.com/en-gb/products/solid-state-relays/heatsink-selector-tool

Carlo Gavazzi offers a range of heatsinks that can be provided with a pre-mounted solid state relay. Consult a Carlo Gavazzi representative for further details regarding these assemblies.

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Main features

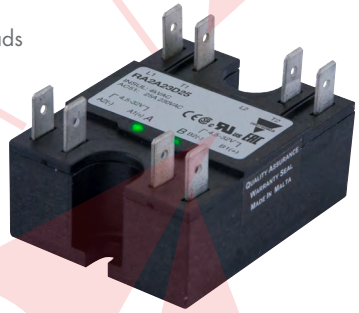
Fast installation
Quick connect terminals (FASTONs)

Long lifetime
Free of moulding mass to ensure components are not subject to thermal and mechanical stresses

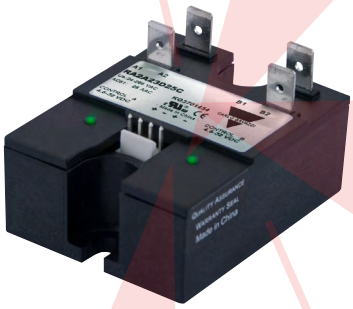
User friendly
2x green LEDs for control ON indication

Compact
2 independently controlled poles in 1 housing

Versatile
RA2A for resistive loads
RA2A..M for inductive loads



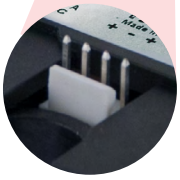
Approvals



Approvals

Control termination
6.35mm FASTONs for **RA2A**

Reliable
Integrated overvoltage protection for **RA2A..C**



Control termination
2.54mm pitch header for **RA2A..C**

Selection guide

RA2A series - 2 independently controlled poles for resistive loads

Control termination	Max. current	Control voltage	Operational voltage		
			24-265 VAC	42-530 VAC	42-660 VAC
Fastons	2 x 25 AAC	4.5 - 32 VDC	RA2A23D25	RA2A48D25	RA2A60D25
	2 x 40 AAC	4.5 - 32 VDC	RA2A23D40	RA2A48D40	RA2A60D40
Pins	2 x 25 AAC	4.5 - 32 VDC	RA2A23D25C	-	RA2A60D25C
	2 x 40 AAC	4.5 - 32 VDC	RA2A23D40C	-	RA2A60D40C

RA2A..M series - 2 independently controlled poles for inductive loads

Control termination	Max. current	Control voltage	Operational voltage		
			24-265 VAC	42-530 VAC	42-660 VAC
Fastons	2 x 25 AAC	4.5 - 32 VDC	RA2A23D25M	RA2A48D25M	RA2A60D25M
	2 x 40 AAC	4.5 - 32 VDC	RA2A23D40M	RA2A48D40M	RA2A60D40M

Further details are available on online datasheets at www.gavazziautomation.com

RK series
2-pole solid state relays

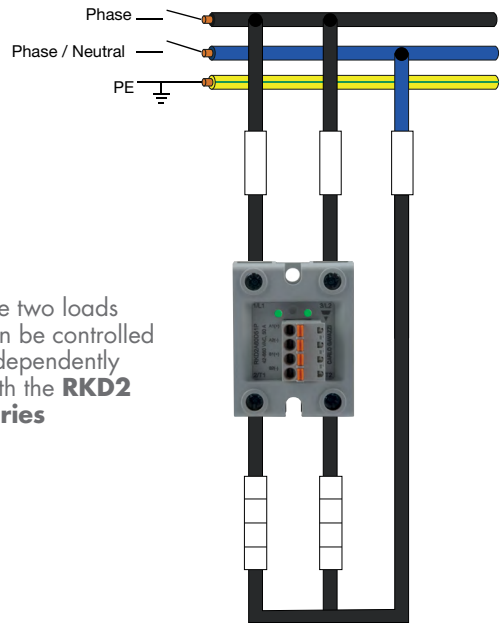
The **RK** series also consists of solid state relays with 2 outputs packaged in a platform having a maximum product width of 45mm. However, the **RK** series is dedicated for high rated loads up to 660 VAC, 75 A and hence termination for power connection consists of screw terminals.

The **RK..P** is equipped with a spring plug for control connection that is provided with the solid state relay whilst the **RK..C** is equipped with a 2.54mm pitch header.

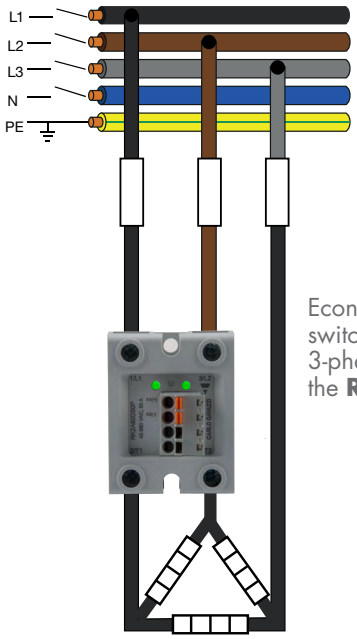
The **RK** series consists of 2 variants:
the **RKD2** series has an independent control for each of the poles, the **RK2** series has common control for the 2 poles making it ideal for economy switching of 3-phase loads.

Screw output termination for high power

Applications



The two loads can be controlled independently with the **RKD2 series**



Economy switching of a 3-phase load with the **RK2 series**

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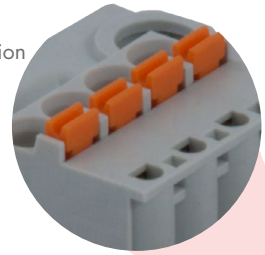
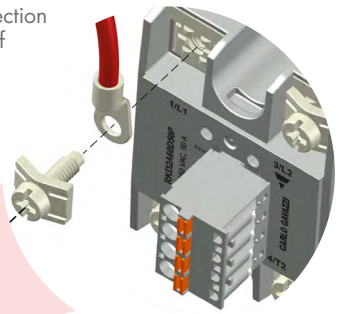
Main features

Easy replacement
Pluggable control termination

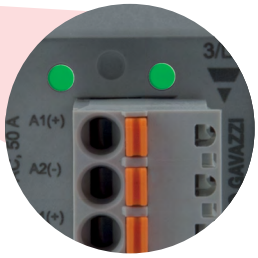


Flexible connections
Removable touch protection cover for connection of ring lugs



Long lifetime
Wire bonding technology for lower thermal and mechanical stresses on power chips

Time saving
Pre-attached thermal interface to backplate



User friendly 2x green LEDs for control ON indication

Low downtime
Integrated overvoltage protection

Space savings
2 poles in a 45mm wide housing **RKD2** for independent control
RK2 for common control

Conformance to Food Industry
UL certified for 100,000 cycle test, Conforms to glow wire requirements of EN 60335

Selection guide

RKD2 series - 2 independently controlled poles

Control termination	Max. current	I^2t	Control voltage	Operational voltage	
				24 - 265 VAC	42 - 660 VAC
Pins	2x 50 AAC	1500 A^2s	4 - 32 VDC	RKD2A23D50C	RKD2A60D50C
	2x 50 AAC	3000 A^2s	4 - 32 VDC	-	RKD2A60D51C
	2x 75 AAC	9800 A^2s	4 - 32 VDC	-	RKD2A60D75C
Spring plug	2x 50 AAC	1500 A^2s	4 - 32 VDC	RKD2A23D50P	RKD2A60D50P
	2x 50 AAC	3000 A^2s	4 - 32 VDC	-	RKD2A60D51P
	2x 75 AAC	9800 A^2s	4 - 32 VDC	-	RKD2A60D75P

RK2 series - common control for the 2 poles

Control termination	Max. current	I^2t	Control voltage	Operational voltage	
				24 - 265 VAC	42 - 660 VAC
Pins	2x 50 AAC	1500 A^2s	4 - 32 VDC	-	RK2A60D50C
	2x 75 AAC	9800 A^2s	4 - 32 VDC	-	RK2A60D75C
Spring plug	2x 50 AAC	1500 A^2s	4 - 32 VDC	-	RK2A60D50P
	2x 75 AAC	9800 A^2s	4 - 32 VDC	-	RK2A60D75P

Instant on versions are also available for 600 VAC: RKD2B60..P, RK2B60..P
Further details are available on online datasheets at www.gavazziautomation.com

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2POLE SSR BRO ENG 10/25
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