

Solid State Relays

2 Independent Poles - With Integrated Heatsink

Types RJD2A



- AC semiconductor contactor
- Two pole switching with individual control
- Direct copper bonding (DCB) technology
- LED-indication
- Housing free of moulding mass
- Cage clamp output terminals
- Input range: 4-32 VDC
- Operational ratings: up to 2x45 AAC and 600 VAC
- Non-repetitive voltage: Up to 1200 Vp
- Opto-isolation > 4000 VACrms

Preliminary Datasheet

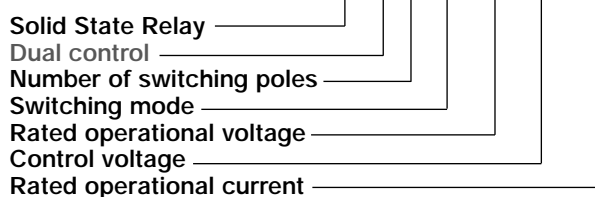
Product Description

This product is designed in such a way as to replace electro-mechanical contactors in industrial heating and motor applications, especially when switching is frequent. This product is ready to mount on DIN-rail or chassis and comes with integral heatsink. Cage clamp terminals are used to ensure secure load connection with cable up to 25mm².

The RJD2A series consists of two switching poles which are independently controlled. Green LEDs indicate the status of each control input. The relay will switch on when the sinusoidal curve crosses zero and switches off when the current crosses zero.

Ordering Key

RJ D2 A 60 D 30



Type Selection

Switching mode	Rated operational voltage	Control voltage	Rated operational current
A: Zero switching	23: 230 VACrms 60: 600 VACrms	D: 4-32VDC	30: 2x30 AACrms (Midi) 45: 2x45 AACrms (Power)

General Specifications

	RJD2A23...	RJD2A60...
Operational voltage range	24 to 280 VAC	42 to 660 VAC
Non-rep. peak voltage	650 V _p	1200 V _p
Operational frequency range	45 to 65 Hz	45 to 65 Hz
Power factor	≥ 0.5 @ 230 VACrms	≥ 0.5 @ 600 VACrms
Approvals	UL*, cUL*	UL*, cUL*
CE-marking	Yes	Yes

* Approvals pending

Selection Guide

Rated Operational	Control Voltage	Rated Operational current	
		2x30A (Midi)	2x45A (Power)
230VACrms	4-32VDC	RJD2A23D30	RJD2A23D45
600VACrms	4-32VDC	RJD2A60D30	RJD2A60D45

Input Specifications

Control voltage range	4 - 32 VDC
Pick-up voltage	3.8 VDC
Reverse voltage	32 VDC
Drop-out voltage	1 VDC
Maximum input current	15 mA
Response time pick-up	1 cycle
Response time drop-out	1 cycle



Housing Specifications

Weight	Approx. 480g (MIDI) Approx. 800g (Power)
Housing material	PBT FR
Control terminal cable size	
Min	1 x 0.5 mm ² (1 x AWG20)
Max	1 x 4.0 mm ² (1 x AWG12) or 2 x 2.5 mm ² (2 x AWG14)
Mounting torque max.	0.6 Nm
Power terminal cable size	
Min	1 x 4 mm ² (1 x AWG12)
Max	1 x 25 mm ² (1 x AWG3) or 2 x 10 mm ² (2 x AWG6)
Mounting torque max.	2.5 Nm

Thermal Specifications

Operating temperature	-30 to +70°C
Storage temperature	-40 to +100°C

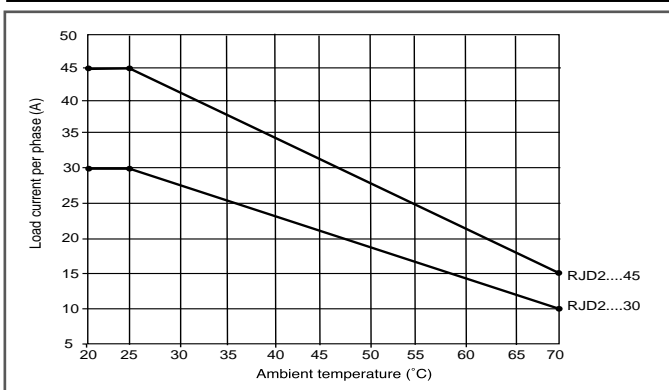
Insulation

Rated insulation voltage	
Input to output	≥ 4000 VACrms
Output to case	≥ 4000 VACrms

Output Specifications

	RJD2A...30 (Midi)	RJD2A...45 (Power)
Rated operational current		
AC51 @Ta=25°C	2x30AACrms	2x45AACrms
AC53a @Ta=25°C	2x30AACrms	2x30AACrms
Min. operational current	150 mAACrms	150 mAACrms
Rep. overload current t = 1s	< 200 AACrms	< 200 AACrms
Non rep. surge current Tj(init.) = 25°C and t = 10 ms	1900 Ap	1900 Ap
Off-state leakage current @ rated voltage and frequency	< 3 mArms	< 3 mArms
I ² t for fusing t = 10 ms	18000 A ² s	18000 A ² s
Critical di/dt	≥ 100 A/μs	≥ 100 A/μs
On-state voltage drop @ rated current	1.6 Vrms	1.6 Vrms
Critical dv/dt commutating	500 V/μs	500 V/μs
Critical dV/dt off-state	500 V/μs	500 V/μs

Derating Curve



Dissipation Curve

