Product data sheet Characteristics

RSB1A120BD

Harmony, Interface plug-in relay, 12 A, 1 CO, 24 V DC





Main

Range of product	Harmony Electromechanical Relays	
Series name	Interface relay	
Product or component type	Plug-in relay	
Device short name	RSB	
Contacts type and composition	1 C/O	
Contact operation	Standard	
[Ithe] conventional enclosed thermal current	12 A at -4040 °C	
Status LED	ED Without	
Control type	Without push-button	

Complementary

Shape of pin	Flat (PCB type)
Average coil resistance	1440 Ohm network: AC at 20 °C +/- 10 %
[Ue] rated operational voltage	16.836 V DC
[Ui] rated insulation voltage	400 V conforming to EN/IEC 60947
[Uimp] rated impulse withstand voltage	3.6 kV IEC 61000-4-5
Contacts material	Silver alloy (AgNi)
[le] rated operational current	12 A (AC-1/DC-1) NO conforming to IEC 6 A (AC-1/DC-1) NC conforming to IEC
Minimum switching current	10 mA
Maximum switching voltage	300 V DC conforming to IEC
Minimum switching voltage	12 V
Maximum switching capacity	3000 VA/336 W
Resistive rated load	12 A at 250 V AC 12 A at 28 V DC
Minimum switching capacity	120 mW at 10 mA, 12 V
Operating rate	<= 600 cycles/hour under load <= 18000 cycles/hour no-load
Mechanical durability	30000000 cycles
Electrical durability	100000 Cycles, 12 A at 250 V, AC-1 NO 100000 cycles, 6 A at 250 V, AC-1 NC
Operating time	20 ms operating 20 ms reset
Average coil consumption	0.45 W DC
Drop-out voltage threshold	>= 0.1 Uc DC
Safety reliability data	B10d = 100000
Protection category	RT I
Test levels	Level A group mounting
Operating position	Any position
Net weight	0.014 kg
Sale per indivisible quantity	10
Device presentation	Complete product

Environment

Dielectric strength	1000 V AC between contacts	
	2500 V AC between poles	
	5000 V AC between coil and contact	
Standards	CSA C22.2 No 14	
	UL 508	
	EN/IEC 61810-1	
Product certifications	UL	
	CSA	
	EAC	
Ambient air temperature for storage	-4085 °C	
Vibration resistance	+/- 1 mm (f= 1055 Hz) conforming to EN/IEC 60068-2-6	
IP degree of protection	IP40 conforming to EN/IEC 60529	
Shock resistance	10 gn (duration = 11 ms) for not operating conforming to EN/IEC 60068-2-27	
	5 gn (duration = 11 ms) for in operation conforming to EN/IEC 60068-2-27	
Ambient air temperature for operation	-4085 °C (DC)	

Packing Units

Package 1 Weight	0.014 kg	
Package 1 Height	0.170 dm	
Package 1 width	3.330 dm	
Package 1 Length	0.270 dm	

Offer Sustainability

Sustainable offer status	Green Premium product	
REACh Regulation	REACh Declaration	
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)	
Toxic heavy metal free	Yes	
Mercury free	Yes	
RoHS exemption information	€Yes	
China RoHS Regulation	China RoHS Declaration	
Environmental Disclosure	Product Environmental Profile	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins	

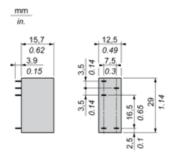
Contractual warranty

Warranty	1	18 months

Product data sheet Dimensions Drawings

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Dimensions

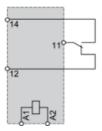


Product data sheet Connections and Schema

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Wiring Diagram





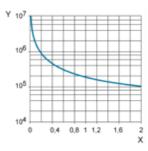
NOTE: For DC input, A1 have to be +, otherwise it would short circuit from protection module

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Electrical Durability of Contacts

Durability (inductive load) = durability (resistive load) x reduction coefficient.

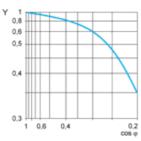
Resistive AC load



X Switching capacity (kVA)

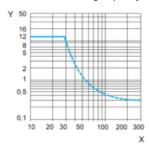
Y Durability (Number of operating cycles)

Reduction coefficient for inductive AC load (depending on power factor $\cos \phi$)



Y Reduction coefficient (A)

Maximum switching capacity on resistive DC load



X Voltage DC

Y Current DC

Note: These are typical curves, actual durability depends on load, environment, duty cycle, etc.