Product data sheet
Characteristics

RSB1A120B7S
Harmony, Interface plug-in relay with socket, 12 A, 1 CO, 24 V AC

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 -40…40 °C
Status LED	Without
Control type	Without push-button

Complementary

Shape of pin	Flat
Average coil resistance	400 Ohm network: AC at 20 °C +/- 15 %
[Ue] rated operational voltage	19.2...26.4 V AC 50 Hz 20.4...26.4 V AC 60 Hz
[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 (Ag/Ni)
[Ie] 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	5 mA
Maximum switching voltage	300 V DC 400 V AC
Minimum switching voltage	5 V
Maximum switching capacity	3000 VA AC 336 W DC
Resistive rated load	12 A at 250 V AC 12 A at 28 V DC
Minimum switching capacity	300 mW at 5 mA
Operating rate	<= 600 cycles/hour under load <= 72000 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	10 ms between coil de-energisation and making of the Off-delay contact 12 ms between coil energisation and making of the On-delay contact
Marking	CE
Average coil consumption	0.75 VA AC 60 Hz
Drop-out voltage threshold	>= 0.15 Uc AC
Safety reliability data	B10d = 100000
Protection category	RT I
Operating position	Any position
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	UL 508 CSA C22.2 No 14 EN/IEC 61810-1
Product certifications	UL CSA GOST
Ambient air temperature for storage	-40…85 °C
Vibration resistance	+/- 1 mm (f= 10…55 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	-40…70 °C (AC) -40…85 °C (DC)

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	52 g
Package 1 Height	7.7 cm
Package 1 width	10.2 cm
Package 1 Length	34 cm
Unit Type of Package 2	BB1
Number of Units in Package 2	20
Package 2 Weight	1.09 kg
Package 2 Height	7.7 cm
Package 2 width	10.2 cm
Package 2 Length	34 cm
Unit Type of Package 3	S03
Number of Units in Package 3	140
Package 3 Weight	8.875 kg
Package 3 Height	30 cm
Package 3 width	30 cm
Package 3 Length	40 cm

Offer Sustainability

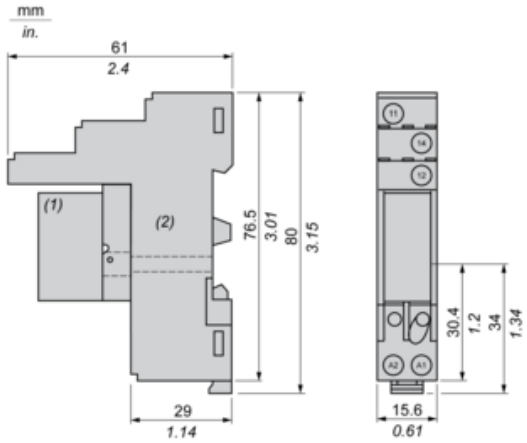
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
WEEE	The product must be disposed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

Contractual warranty

Warranty	18 months

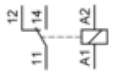
Dimensions

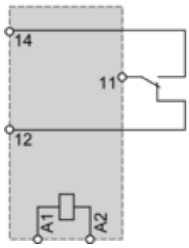
Relay Complete with Socket



(1) Relays
(2) Socket

Wiring Diagram



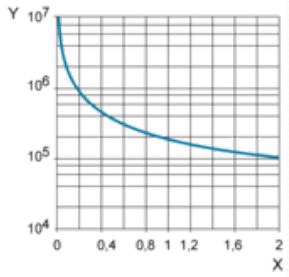


NOTE: For DC input, A1 have to be +, otherwise it would short circuit from protection module

Electrical Durability of Contacts

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

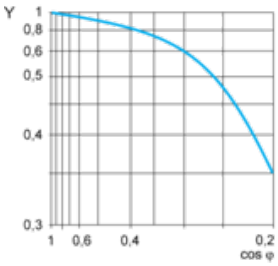
Resistive AC load



X Switching capacity (kVA)

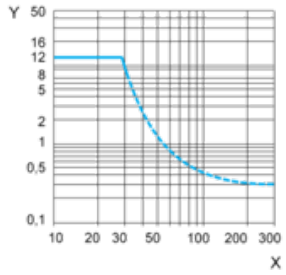
Y Durability (Number of operating cycles)

Reduction coefficient for inductive AC load (depending on power factor cos ϕ)



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.