

Product data sheet

Specifications



interface plug-in relay, Harmony
electromechanical relays, 12A, 1CO,
48V AC

RSB1A120E7

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
[Uc] Control Circuit Voltage	48 V AC 50/60 Hz
[Ithe] Conventional Enclosed Thermal Current	12 A at -40...40 °C
Status Led	Without
Control Type	Without push-button

Complementary

Shape Of Pin	Flat (PCB type)
Average Coil Resistance	1540 Ohm network: AC at 20 °C +/- 10 %
[Ue] Rated Operational Voltage	38.4...72 V AC 50/60 Hz
[Ui] Rated Insulation Voltage	400 V conforming to IEC 60947
[Uimp] Rated Impulse Withstand Voltage	3.6 kV conforming to IEC 61000-4-5
Contacts Material	Silver alloy (AgNi)
[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	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	10000000 cycles
Electrical Durability	100000 cycles, 12 A at 250 V, AC-1 NO 100000 cycles, 6 A at 250 V, AC-1 NC

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Operating Time	20 ms operating 20 ms reset
Average Coil Consumption	0.75 VA AC
Drop-Out Voltage Threshold	>= 0.15 U _c AC
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	IEC 61810-1 UL 508 CSA C22.2 No 14
Product Certifications	UL CSA EAC
Ambient Air Temperature For Storage	-40...85 °C
Vibration Resistance	+/- 1 mm (f= 10...55 Hz) conforming to IEC 60068-2-6
Ip Degree Of Protection	IP40 conforming to IEC 60529
Shock Resistance	10 gn (duration = 11 ms) for not operating conforming to IEC 60068-2-27 5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27
Ambient Air Temperature For Operation	-40...70 °C (AC)

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	1.6 cm
Package 1 Width	30 cm
Package 1 Length	2.4 cm
Package 1 Weight	15 g
Unit Type Of Package 2	BB1
Number Of Units In Package 2	10
Package 2 Height	1.8 cm
Package 2 Width	2.6 cm
Package 2 Length	31 cm
Package 2 Weight	158 g
Unit Type Of Package 3	S01
Number Of Units In Package 3	350
Package 3 Height	15 cm

Package 3 Width	15 cm
Package 3 Length	40 cm
Package 3 Weight	5.738 kg

Contractual warranty

Warranty	18 months
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Sustainability

Green Premium™ label is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product’s sustainability >](#)



Transparency RoHS/REACH

Well-being performance

✓ Toxic Heavy Metal Free

✓ Mercury Free

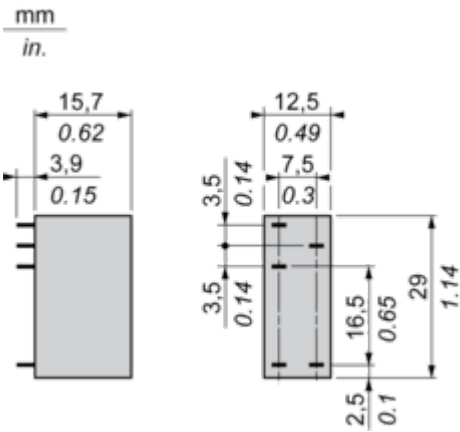
✓ Rohs Exemption Information [Yes](#)

Certifications & Standards

Reach Regulation	REACH Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
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
Circularity Profile	No need of specific recycling operations
California Proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

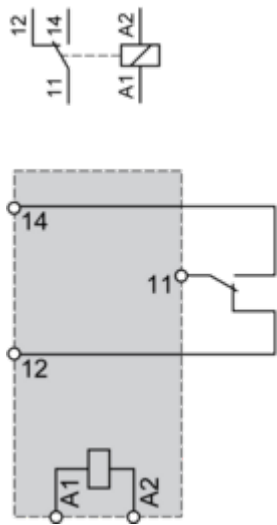
Dimensions Drawings

Dimensions



Connections and Schema

Wiring Diagram

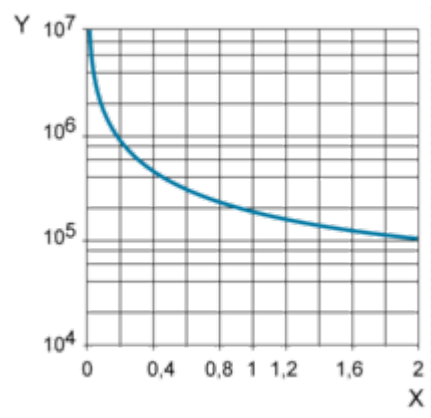


NOTE: For DC input, A1 have to be +, otherwise it would short circuit from protection module

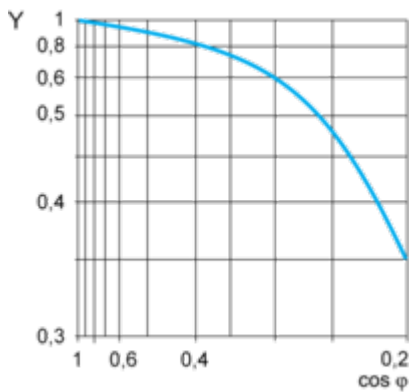
Performance Curves

Electrical Durability of Contacts

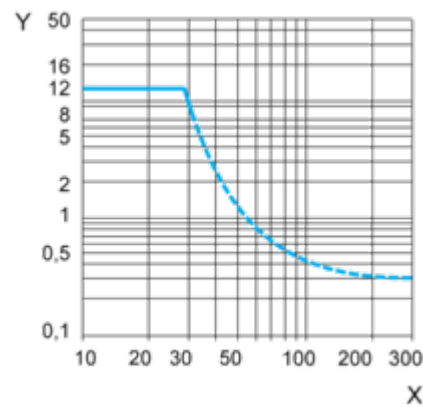
Durability (inductive load) = durability (resistive load) x reduction coefficient.
Resistive AC load



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.

