Product datasheet
Characteristics

RSB1A120BDPV
Interface plug-in relay pre-assembled, 12 A, 1 CO, LED, protection module, 24 V DC

Main

Range of product	Harmony Relay
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	24 V DC
[Ithe] conventional enclosed thermal current	12 A at -40…40 °C
Status LED	1 LED
Control type	Without

Complementary

Average coil resistance	1440 Ohm network: DC at 20 °C +/- 10 %
[Ue] rated operational voltage	19.2...26.4 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)
[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	250 V
Minimum switching voltage	12 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	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
Torque value	0.8 N.m 0.79 N.m
Connections - terminals	Connector, 1 x 0.25...1 x 2.5 mm² (AWG 22...AWG 14) flexible with cable end Connector, 2 x 0.25...2 x 1 mm² (AWG 22...AWG 17) flexible with cable end Connector, 1 x 0.5...1 x 2.5 mm² (AWG 20...AWG 14) solid without cable end Connector, 2 x 0.5...2 x 1.5 mm² (AWG 20...AWG 16) solid without cable end
Net weight	0.050 kg
Sale per indivisible quantity	30
Device presentation	Complete product

Environment

Dielectric strength	1000 V AC between contacts 5000 V AC between coil and contact
Standards	EN/IEC 61810-1 CSA C22.2 No 14 UL 508 IEC 61984
Product certifications	CE UL CSA EAC RoHS REACH
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	IP20 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…85 °C (DC)

Packing Units

Package 1 Weight	53.000 g
Package 1 Height	84.200 mm
Package 1 width	15.600 mm
Package 1 Length	64.200 mm

Offer Sustainability

Sustainable offer status	Green Premium product
REACh free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes

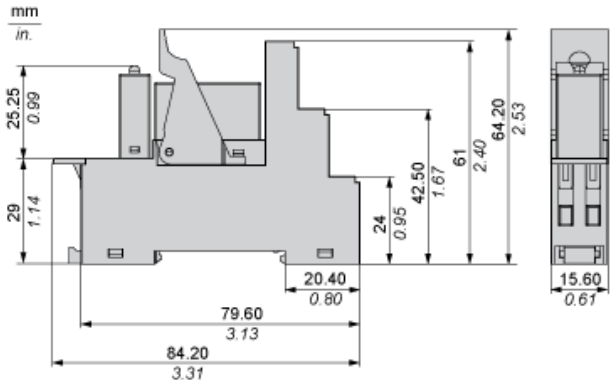
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Contractual warranty

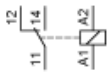
Warranty	18 Months

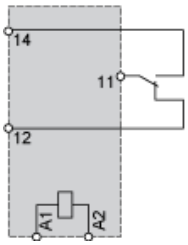
RSB1A120BDPV

Dimensions



Wiring Diagram



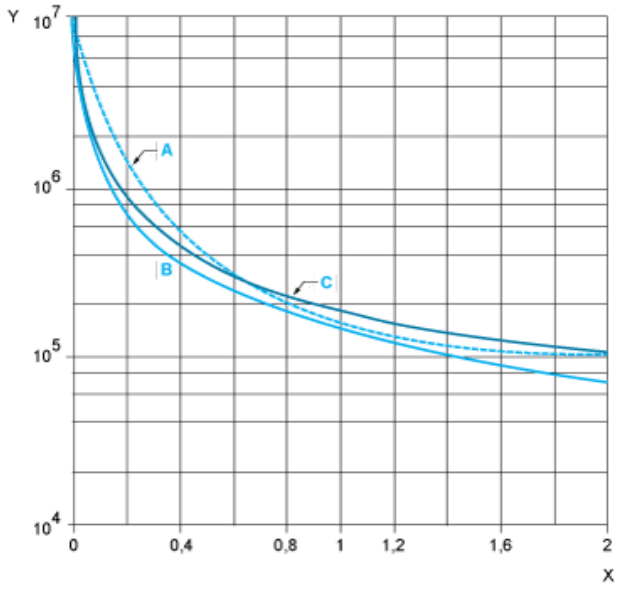


NOTE: For DC input, A1 have to be +, otherwise it would short circuit from protection module

Electrical Durability of Contacts

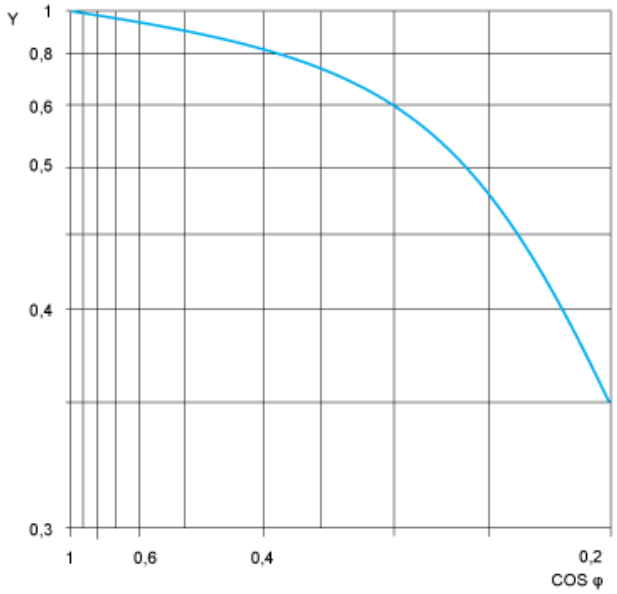
Durability (Inductive Load) = Durability (Resistive Load) x Reduction Coefficient.

Resistive AC Load



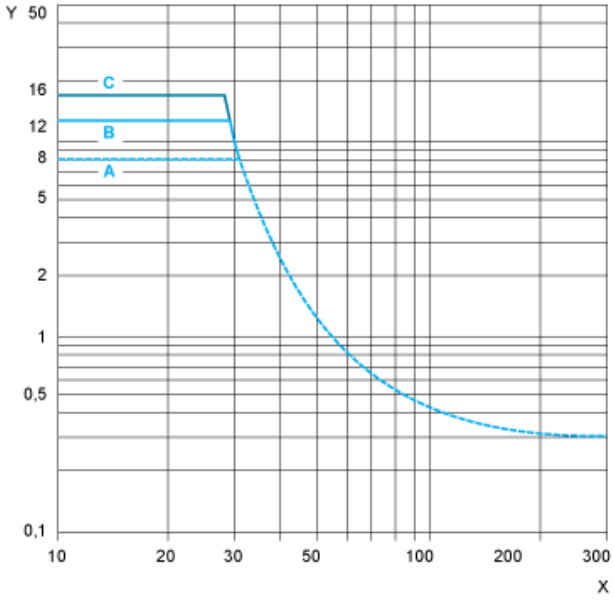
(y) Durability (Number of operating cycles)
(x) Switching capacity (kVA)
A : RSB2A080●●
B : RSB1A160●●
C : RSB1A120●●

Reduction Coefficient for Inductive AC Load (Depending on Power Factor cos ϕ)



(y) Reduction coefficient (A)

Maximum Switching Capacity on Resistive DC Load



(y) Current DC
(x) Voltage DC
A : RSB2A080●●
B : RSB1A160●●
C : RSB1A120●●

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