

# RSB1A160BDPV

interface plug in relay, Harmony  
Electromechanical Relays, pre assembled,  
16A, 1CO, with LED, 24V DC



## Main

Range of Product	Harmony Electromechanical Relays
Series name	Interface relay
Product or Component Type	Pre-assembled plug-in relay with socket
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	16 A -40...104 °F (-40...40 °C)
Status LED	1 LED
Control type	Without

## Complementary

Average coil resistance	1440 Ohm DC 20 °C +/- 10 %
[Ue] rated operational voltage	19.2...26.4 V DC
[Ui] rated insulation voltage	400 V IEC 60947
[Uimp] rated impulse withstand voltage	3.6 kV IEC 61000-4-5
Contacts material	Silver alloy (AgNi)
[Ie] rated operational current	16 A AC-1/DC-1) NO IEC 8 A AC-1/DC-1) NC IEC
Minimum switching current	10 mA
Maximum switching voltage	300 V DC IEC
Minimum switching voltage	12 V
Maximum switching capacity	4000 VA AC 448 W DC
Resistive rated load	16 A 250 V AC 16 A 28 V DC
Minimum switching capacity	120 mW 10 mA, 12 V
Operating rate	<= 600 cycles/hour under load <= 18000 cycles/hour no-load
Mechanical durability	30000000 cycles
Electrical durability	70000 Cycles, 16 A at 250 V, AC-1 NO 70000 cycles, 8 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	7.08 Lbf.in (0.8 N.m) 7.0 lbf.in (0.79 N.m)

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Connections - terminals	Connector, 1 x 0.25...1 x 2.5 mm <sup>2</sup> AWG 22...AWG 14) flexible with cable end Connector, 2 x 0.25...2 x 1 mm <sup>2</sup> AWG 22...AWG 17) flexible with cable end Connector, 1 x 0.5...1 x 2.5 mm <sup>2</sup> AWG 20...AWG 14) solid without cable end Connector, 2 x 0.5...2 x 1.5 mm <sup>2</sup> AWG 20...AWG 16) solid without cable end
Net Weight	0.11 lb(US) (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	IEC 61810-1 CSA C22.2 No 14 UL 508 IEC 61984
Product Certifications	CE[RETURN]UL[RETURN]CSA[RETURN]EAC
Ambient Air Temperature for Storage	-40...185 °F (-40...85 °C)
Vibration resistance	+/- 1 mm 10...55 Hz)IEC 60068-2-6
IP degree of protection	IP20 conforming to IEC 60529
Shock resistance	10 gn 11 ms) not operating IEC 60068-2-27 5 gn 11 ms) in operation IEC 60068-2-27
Ambient air temperature for operation	-40...185 °F (-40...85 °C) DC)

## Ordering and shipping details

Category	21127-ZELIO ICE CUBE RELAYS
Discount Schedule	CP2
GTIN	03606489562724
Returnability	No

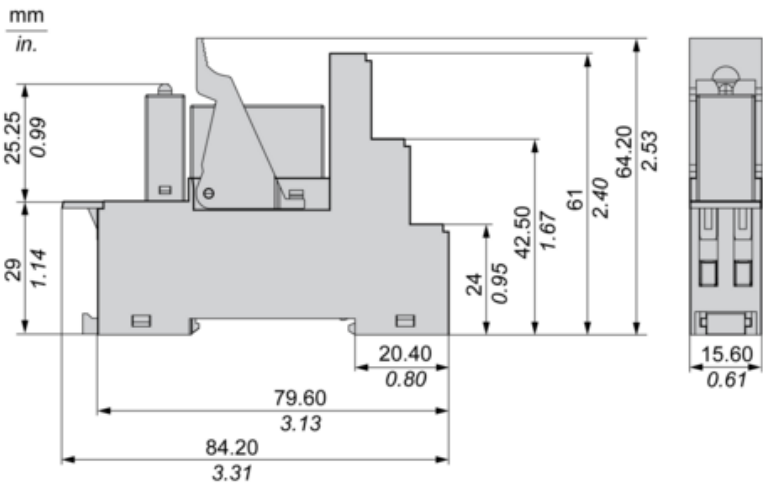
## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	0.70 in (1.778 cm)
Package 1 Width	2.60 in (6.604 cm)
Package 1 Length	3.40 in (8.636 cm)
Package 1 Weight	1.92 oz (54.432 g)
Unit Type of Package 2	BB1
Number of Units in Package 2	30
Package 2 Height	7.48 in (19 cm)
Package 2 Width	3.54 in (9 cm)
Package 2 Length	10.63 in (27 cm)
Package 2 Weight	4.38 lb(US) (1.988 kg)
Unit Type of Package 3	S03
Number of Units in Package 3	180
Package 3 Height	11.81 in (30 cm)
Package 3 Width	11.81 in (30 cm)
Package 3 Length	15.75 in (40 cm)
Package 3 Weight	28.14 lb(US) (12.762 kg)

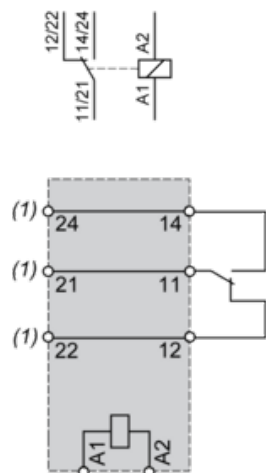
## Offer Sustainability

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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	No need of specific recycling operations
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
<h2>Contractual warranty</h2>	
Warranty	18 Months

Dimensions



## Wiring Diagram



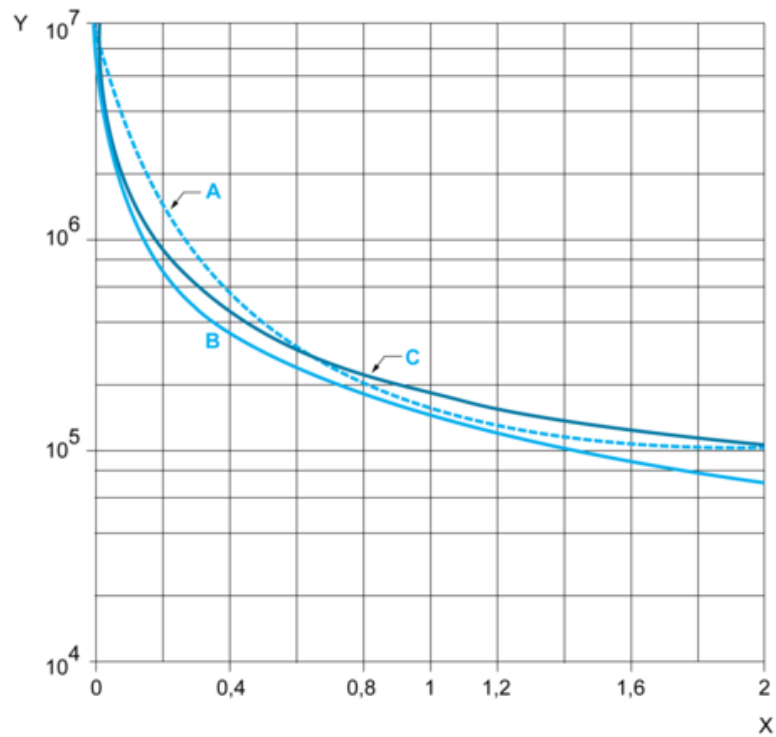
(1) Terminals 11 and 21, 14 and 24, 12 and 22 must be linked for this reference

NOTE: For DC input, A1 has 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)

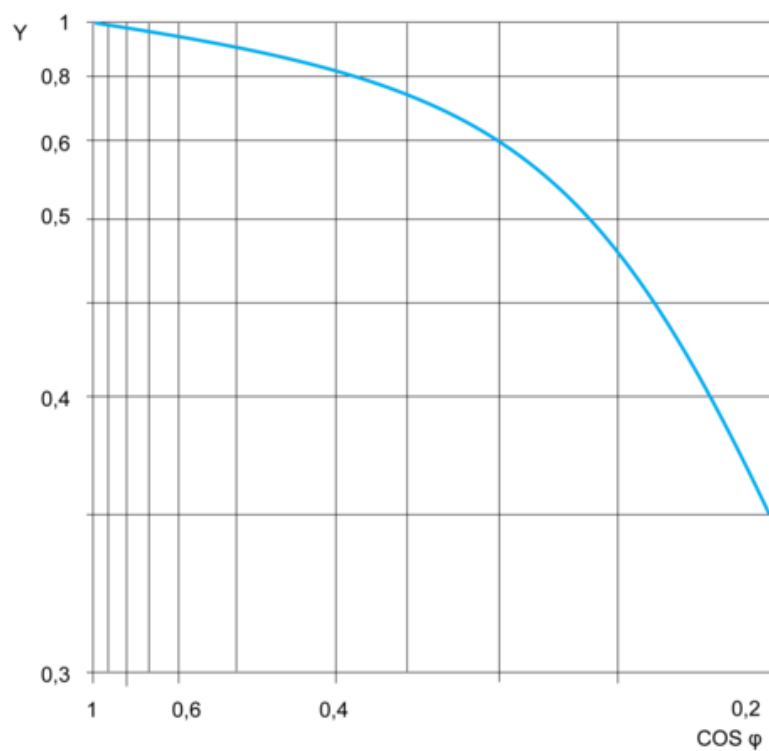
(x) Switching capacity (kVA)

A : RSB2A080●●

B : RSB1A160●●

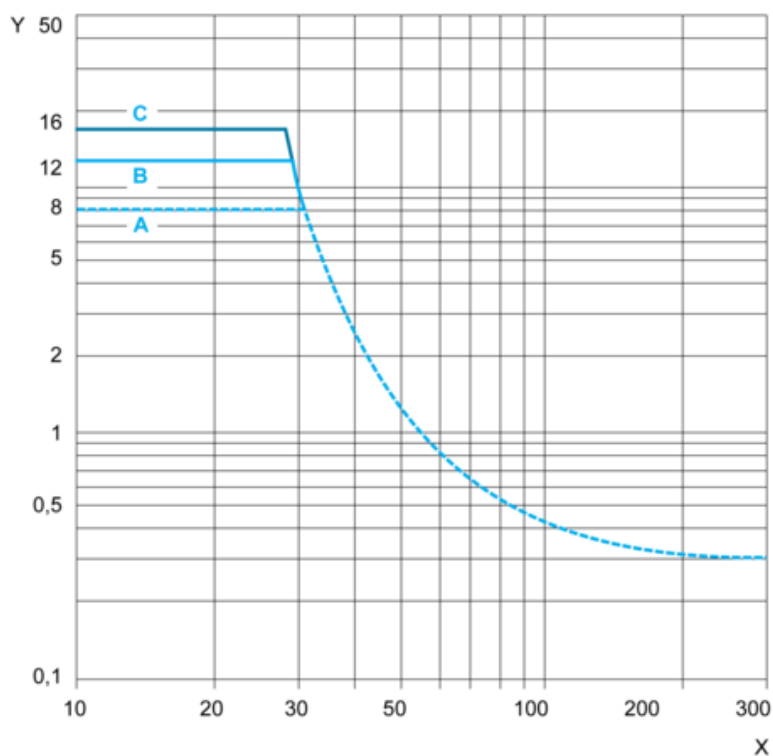
C : RSB1A120●●

### Reduction Coefficient for Inductive AC Load (Depending on Power Factor $\cos \phi$ )



(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.