

# RSB1A160BDPV

Harmony, Interface plug-in relay pre-assembled, 16 A, 1 CO, with LED, with protection circuit, 24 V 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 EN/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
Operating position	Any position
Torque Value	7.08 Lbf.in (0.8 N.m) 7.0 lbf.in (0.79 N.m)

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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	EN/IEC 61810-1 CSA C22.2 No 14 UL 508 IEC 61984
Product Certifications	CE UL CSA EAC
Ambient Air Temperature for Storage	-40...185 °F (-40...85 °C)
Vibration resistance	+/- 1 mm 10...55 Hz)EN/IEC 60068-2-6
IP degree of protection	IP20 conforming to EN/IEC 60529
Shock resistance	10 gn 11 ms) not operating EN/IEC 60068-2-27 5 gn 11 ms) in operation EN/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
Nbr. of units in pkg.	180
Package weight(Lbs)	180 lb(US) (81.65 kg)
Returnability	No

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	3.31 in (8.42 cm)
Package 1 width	0.61 in (1.56 cm)
Package 1 Length	2.53 in (6.42 cm)
Unit Type of Package 2	BB1
Number of Units in Package 2	30
Package 2 Weight	4.38 lb(US) (1.988 kg)
Package 2 Height	7.48 in (19 cm)
Package 2 width	3.54 in (9 cm)
Package 2 Length	10.63 in (27 cm)
Unit Type of Package 3	S03
Number of Units in Package 3	180
Package 3 Weight	28.14 lb(US) (12.762 kg)
Package 3 Height	11.81 in (30 cm)
Package 3 width	11.81 in (30 cm)
Package 3 Length	15.75 in (40 cm)

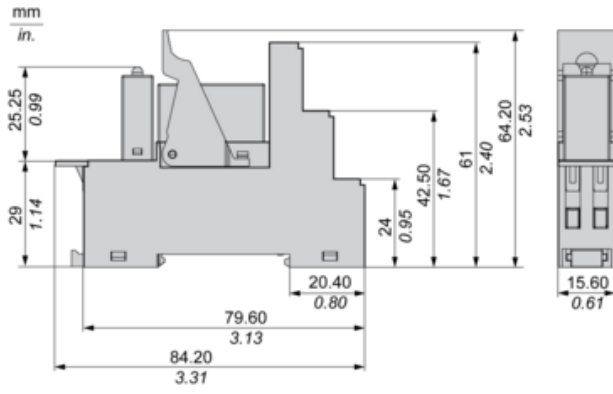
## Offer Sustainability

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
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

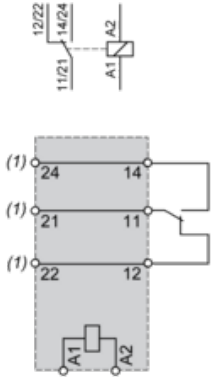
## Contractual warranty

Warranty	18 Months
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Dimensions



## Wiring Diagram



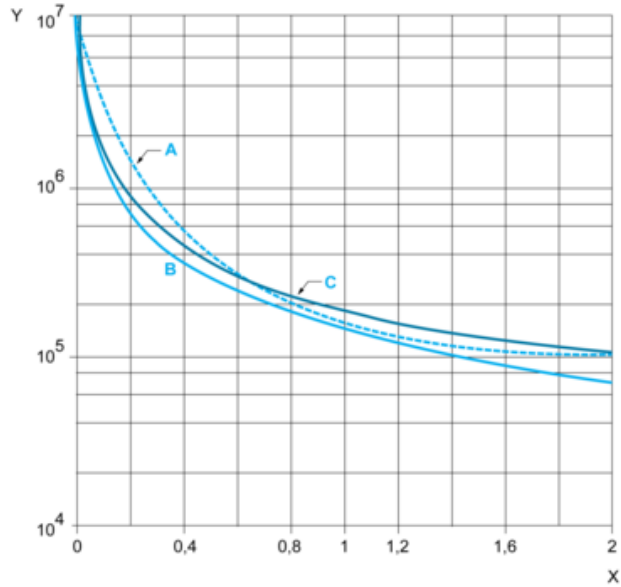
(1) Terminals 11 and 21, 14 and 24, 12 and 22 must be linked for this references

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)

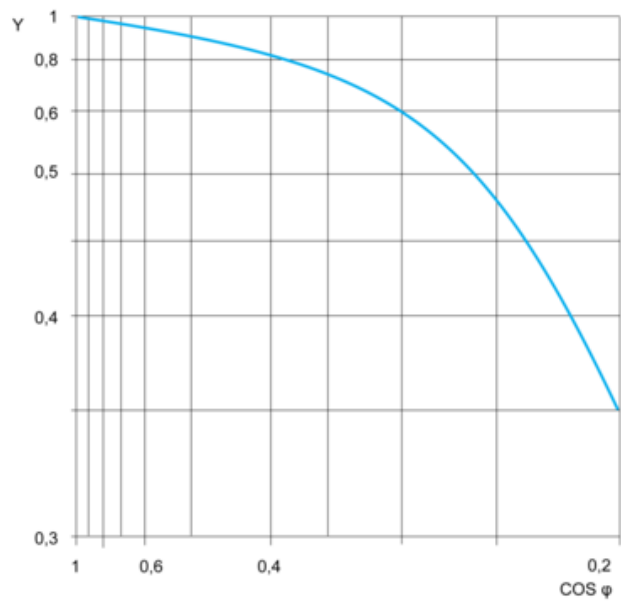
(x) Switching capacity (kVA)

A : RSB2A080●●

B : RSB1A160●●

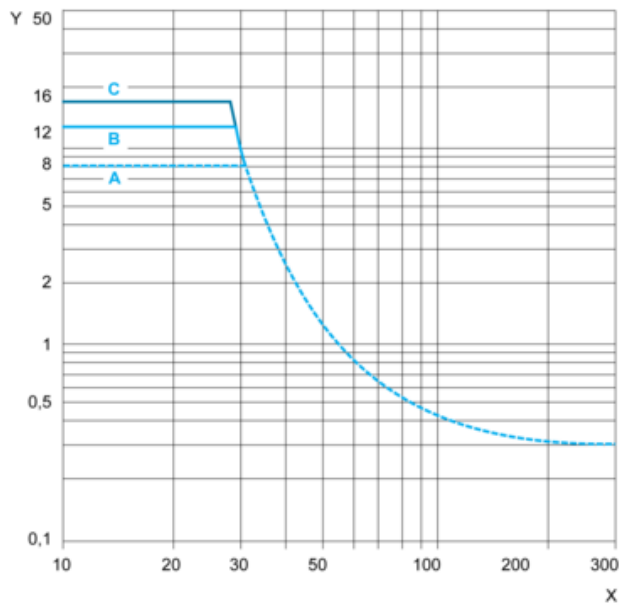
C : RSB1A120●●

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



(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.

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