



### 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                         |
| [I <sub>th</sub> e] 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                             | 30250 Ohm network: AC at 20 °C +/- 10 %                                       |
| [U <sub>e</sub> ] rated operational voltage         | 77...165 V DC   |
| [U <sub>i</sub> ] rated insulation voltage          | 400 V conforming to EN/IEC 60947  |
| [U <sub>imp</sub> ] rated impulse withstand voltage | IEC 61000-4-5 3.6 kV  |
| Contacts material                                   | Silver alloy (AgNi)   |
| [I <sub>e</sub> ] rated operational current         | 12 A (AC-1/DC-1) NO conforming to IEC<br>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<br>12 A at 28 V DC   |
| Minimum switching capacity                          | 120 mW at 10 mA, 12 V   |

|                               |   |
|-------------------------------|---|
| Operating rate                | <= 600 cycles/hour under load<br><= 18000 cycles/hour no-load                 |
| Mechanical durability         | 30000000 cycles   |
| Electrical durability         | 100000 cycles, 12 A at 250 V, AC-1 NO<br>100000 cycles, 6 A at 250 V, AC-1 NC |
| Operating time                | 20 ms operating<br>20 ms reset  |
| Average coil consumption      | 0.45 W DC   |
| Drop-out voltage threshold    | >= 0.1 U <sub>c</sub> DC  |
| 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<br>2500 V AC between poles<br>5000 V AC between coil and contact  |
| Standards                             | CSA C22.2 No 14<br>EN/IEC 61810-1<br>UL 508  |
| Product certifications                | EAC<br>UL<br>CSA   |
| 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<br>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 | 0.014 kg |
| Package 1 Height | 0.170 dm |
| Package 1 width  | 3.330 dm |
| Package 1 Length | 0.270 dm |

## Offer Sustainability

|                            |  |
|----------------------------|--|
| Sustainable offer status   | Green Premium product  |
| REACH Regulation           | <a href="#">REACH Declaration</a>  |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><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  |
| 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> |

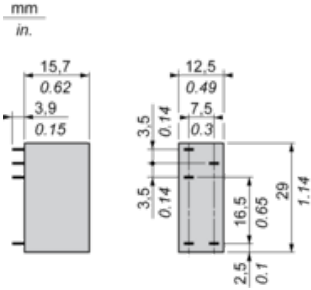
## Contractual warranty

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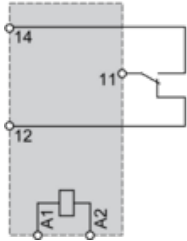
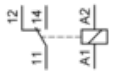
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

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Dimensions



## Wiring Diagram

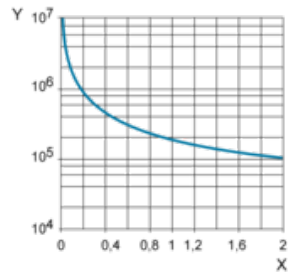


NOTE: For DC input, A1 have to be +, otherwise it would short circuit from protection module

Electrical Durability of Contacts

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

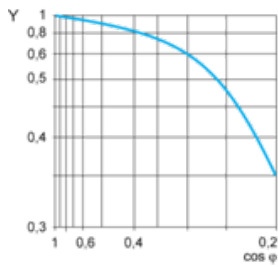
Resistive AC load



X Switching capacity (kVA)

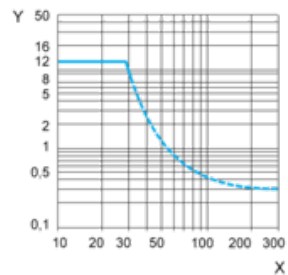
Y Durability (Number of operating cycles)

Reduction coefficient for inductive AC load (depending on power factor  $\cos \phi$ )



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.