R2B-...-D `UhWX]b['relays





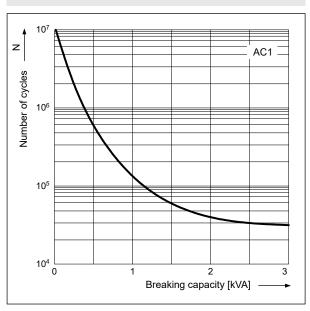


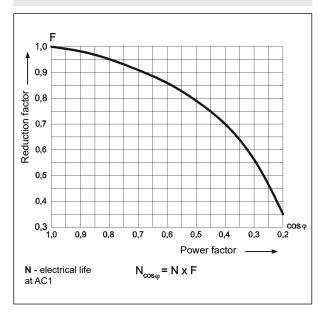
- Energy-saving double-coil `UhW]b[relays
- they do not require continuous power supply, but only one pulse to change the state (two stable states: open or closed)
- Relays with permanent magnet, designed for continuous operation*
- For plug-in sockets: on 35 mm rail mount acc. to EN 60715; on panel mounting
- DC coils, insulation class F: 155 °C
- W (mechanical indicator) standard equipment of relays

contact data	 Recognitions, 	, certifications,	directives:	RoHS,	(€	CA
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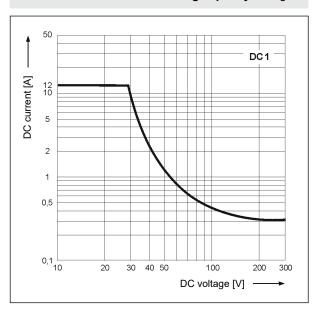
Number and type of contacts	Contact data	Recognitions, certifications, directives: RoHS, CE LA			
Rated Max. switching voltage AC 250 V / 440 V		2 CO			
Rated / max. switching voltage AC 250 V / 440 V	• •				
Min. switching voltage					
Rated load (capacity)	<u> </u>				
AC15 DC11 DC12 DC12 DC12 DC13 DC13 DC14 DC2 DC13 DC2 DC2 DC2 DC2 DC2 DC2 DC3 DC2 DC3 DC3 DC2 DC3		12 A / 250 V AC			
DC1 DC13 0,22 A / 120 V 0,1 A / 250 V (R300) Motor load	` ' ' '				
DC13		,- , , , , , , , , , , , , , , , , , ,			
Motor load					
AC3 acc. to IEC 60947-4-1 0,37 kW 240 V AC, single-phase motor		, , , , , , , , , , , , , , , , , , , ,			
Min. switching current S mA		2, 7, 7, 7, 3, 1			
Max. make current 24 Å Rated current 12 A Max. breaking capacity AC1 3 000 VA Min. breaking capacity 0,3 W Contact resistance ≤ 100 mΩ Max. operating frequency • at rated load AC1 to no load 1 200 cycles/hour Coil data Coil data Rated voltage DC 5, 6, 12, 24, 48, 60 V Operate voltage (reverse polarity) min. 0,8 Un max.: 1,1 Un max.: 1,1 Un max.: 100 s Control pulse time min.: 0,05 s max.: 100 s Rated power consumption DC 3 W Insulation according to EN 60664-1 min.: 0,05 s max.: 100 s Insulation rated voltage 250 V AC Rated surge voltage 4 000 V 1,2 / 50 μs Overvoltage category IIII Insulation pollution degree 3 Dielectric strength between coil and contacts • contact clearance contact clearance • pole - pole 2 500 V AC type of insulation: basic Contact - coil distance • clearance 2 2,5 mm • 4 mm 2 500 V AC type of		, 0 1			
Rated current 12 A Max. breaking capacity 0,3 W Contact resistance ≤ 100 mΩ Max. operating frequency • at rated load AC1	-				
Max. breaking capacity AC1 3 000 VA Min. breaking capacity 0,3 W Contact resistance ≤ 100 mΩ Max. operating frequency • at rated load AC1 1 2000 cycles/hour Coil data 2 0,8 Un 12 000 cycles/hour Rated voltage DC 5, 6, 12, 24, 48, 60 V Operate voltage ≤ 0,8 Un max.: 1,1 Un Reset voltage (reverse polarity) min.: 0,8 Un max.: 100 s Control pulse time min.: 0,8 Un max.: 100 s Rated power consumption DC < 3 W					
Min. breaking capacity Contact resistance ≤ 100 mΩ Max. operating frequency • at rated load AC1 1200 cycles/hour 12 000 cycles/hour 10 00 00					
Contact resistance ≤ 100 mΩ Max. operating frequency • at rated load AC1 • no load 1 200 cycles/hour Coil data 12 000 cycles/hour Rated voltage DC 5, 6, 12, 24, 48, 60 V Operate voltage ≤ 0,8 U _n max:: 1,1 U _n Reset voltage (reverse polarity) min.: 0,8 U _n max:: 1,1 U _n Control pulse time min.: 0,05 s max:: 100 s Rated power consumption DC < 3 W					
Max. operating frequency • at rated load AC1 1 200 cycles/hour Coil data Rated voltage DC 5, 6, 12, 24, 48, 60 V Operate voltage S, 6, 12, 24, 48, 60 V Reset voltage (reverse polarity) min.: 0,8 Un max.: 1,1 Un Control pulse time min.: 0,05 s max.: 100 s Rated power consumption DC < 3 W					
Coil data 12 000 cycles/hour Rated voltage DC 5, 6, 12, 24, 48, 60 V Operate voltage ≤ 0,8 Un max.: 1,1 Un Reset voltage (reverse polarity) min.: 0,8 Un max.: 1,1 Un Control pulse time min.: 0,05 s max.: 100 s Rated power consumption DC < 3 W					
Rated voltage					
Rated voltage		12 UUU cycles/nour			
Seset voltage					
Reset voltage (reverse polarity)	<u> </u>				
Control pulse time	,	≤ 0,8 U _n			
Rated power consumption DC < 3 W Insulation according to EN 60664-1 Insulation rated voltage 250 V AC Rated surge voltage 4 000 V 1,2 / 50 μs Overvoltage category IIII Insulation pollution degree 3 Dielectric strength • between coil and contacts • contact clearance • pole - pole • clearance • creepage • cospanie • cospan	Reset voltage (reverse polarity)	$min.: 0,8 \ U_n \qquad \qquad max.: 1,1 \ U_n$			
Insulation according to EN 6064-1 Insulation rated voltage 250 V AC Rated surge voltage 4 000 V 1,2 / 50 μs Overvoltage category III Insulation pollution degree 3 Dielectric strength • between coil and contacts • contact clearance • pole - pole 2 500 V AC type of insulation: basic Contact - coil distance • clearance • creepage • creepage ≥ 2,5 mm ≥ 4 mm General data Operating / release time (typical values) 13 ms / 3 ms Electrical life • resistive AC1 • cosφ > 5 x 10 ⁴ 12 A, 250 V AC Mechanical life (cycles) > 2 x 10 ⁷ Dimensions (L x W x H) 28,6 x 21 x 35,5 mm Weight 35 g Ambient temperature • storage (non-condensation and/or icing) • operating -40+85 °C -20+55 °C Cover protection category IP 40 EN 60529	Control pulse time	min.: 0,05 s max.: 100 s			
Insulation rated voltage	Rated power consumption DC	< 3 W			
Insulation rated voltage	Insulation according to EN 60664-1				
Rated surge voltage $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	250 V AC			
Overvoltage category III Insulation pollution degree 3 Dielectric strength • between coil and contacts • contact clearance • pole - pole 2 500 V AC 2 500 V AC 2 500 V AC 4 mm type of insulation: basic type of insulation: basic Contact - coil distance • clearance • creepage ≥ 2,5 mm ≥ 4 mm General data 2 500 V AC type of insulation: basic Operating / release time (typical values) 13 ms / 3 ms Electrical life • resistive AC1 • cosφ > 5 x 10 ⁴ see Fig. 2 12 A, 250 V AC Mechanical life (cycles) > 2 x 10 ⁷ Dimensions (L x W x H) 28,6 x 21 x 35,5 mm Weight 35 g Ambient temperature • storage • operating -40+85 °C -20+55 °C Cover protection category IP 40 EN 60529	•				
Insulation pollution degree Dielectric strength • between coil and contacts • contact clearance 1 €00 V AC type of insulation: basic • contact - coil distance • clearance ≥ 2,5 mm • creepage ≥ 4 mm General data Operating / release time (typical values) I3 ms / 3 ms Electrical life • resistive AC1 • cosφ See Fig. 2 Mechanical life (cycles) Dimensions (L x W x H) September 100 V AC type of insulation: basic type of insulation: basic type of insulation: basic 12 x y x 0 insulation: basic 13 ms / 3 ms 12 x x 3 ms 12 x x 250 V AC 13 ms / 3 ms 14 x 250 V AC 15 x 250 V AC 16 x 250 V AC 17 x 350 V AC 18 x 350 V AC 19 x 350		· · ·			
Dielectric strength					
• contact clearance • pole - pole Contact - coil distance • clearance • creepage • creepage Contact - coil distance • clearance • creepage • creepage • creepage Coperating / release time (typical values) Electrical life • resistive AC1 • cosφ • cosφ Mechanical life (cycles) Dimensions (L x W x H) Veight Ambient temperature • storage • operating • operating • contact - coil distance • clearance • type of clearance: micro-disconnection type of insulation: basic 2 2,5 mm ≥ 4 mm Cosquerity A To A, 250 ∨ AC see Fig. 2 Mechanical life (cycles) > 2 x 10 ⁷ Dimensions (L x W x H) 28,6 x 21 x 35,5 mm Weight Ambient temperature • storage -40+85 °C -20+55 °C Cover protection category					
• pole - pole Contact - coil distance • clearance • creepage • creepage Contact - coil distance • creepage • creepage • creepage • type of insulation: basic ≥ 2,5 mm ≥ 4 mm Contact - coil distance • creepage • creepage • type of insulation: basic ≥ 2,5 mm ≥ 4 mm Contact - coil distance • creepage • type of insulation: basic • 2,5 mm ≥ 4 mm Contact - coil distance • creepage • 13 ms / 3 ms Fig. 2 Fig. 2 Mechanical life (cycles) • cosφ • co	<u>~</u>	21			
Contact - coil distance • clearance • creepage • creepage 2 2,5 mm ≥ 4 mm General data Operating / release time (typical values) Electrical life • resistive AC1 • cos ϕ Mechanical life (cycles) Dimensions (L x W x H) Veight Ambient temperature • storage (non-condensation and/or icing) • clearance • creepage 2 4 mm 13 ms / 3 ms 12 A, 250 V AC see Fig. 2 28,6 x 21 x 35,5 mm 28,6 x 21 x 35,5 mm 40+85 °C -20+85 °C -20+55 °C Cover protection category IP 40 EN 60529		21			
• creepage ≥ 4 mm General data Operating / release time (typical values) 13 ms / 3 ms Electrical life • resistive AC1 > 5 x 10⁴ 12 A, 250 V AC • cosφ see Fig. 2 Mechanical life (cycles) > 2 x 10⁻ Dimensions (L x W x H) 28,6 x 21 x 35,5 mm Weight 35 g Ambient temperature • storage -40+85 °C (non-condensation and/or icing) • operating -20+55 °C Cover protection category IP 40 EN 60529		1			
General data Operating / release time (typical values) Electrical life • resistive AC1	•				
Operating / release time (typical values)13 ms / 3 msElectrical life • resistive AC1 • cosφ> 5 x 10 ⁴ 12 A, 250 V AC• cosφsee Fig. 2Mechanical life (cycles)> 2 x 10 ⁷ Dimensions (L x W x H)28,6 x 21 x 35,5 mmWeight35 gAmbient temperature • storage (non-condensation and/or icing)• operating -40+85 °CCover protection categoryIP 40 EN 60529	, 0	- T IIIII			
Electrical life• resistive AC1> 5 x 10412 A, 250 V AC• cosφsee Fig. 2Mechanical life (cycles)> 2 x 107Dimensions (L x W x H) $28,6 \times 21 \times 35,5 \text{ mm}$ Weight 35 g Ambient temperature• storage-40+85 °C(non-condensation and/or icing)• operating-20+55 °CCover protection categoryIP 40EN 60529	_	40			
• cosφ see Fig. 2 Mechanical life (cycles) > 2 x 10 ⁷ Dimensions (L x W x H) 28,6 x 21 x 35,5 mm Weight 35 g Ambient temperature • storage -40+85 °C (non-condensation and/or icing) • operating -20+55 °C Cover protection category IP 40 EN 60529					
Mechanical life (cycles)> 2 x 107Dimensions (L x W x H)28,6 x 21 x 35,5 mmWeight35 gAmbient temperature• storage-40+85 °C(non-condensation and/or icing)• operating-20+55 °CCover protection categoryIP 40 EN 60529	e resistive AC1				
Dimensions (L x W x H) 28,6 x 21 x 35,5 mm Weight 35 g Ambient temperature • storage (non-condensation and/or icing) • operating -20+55 °C Cover protection category IP 40 EN 60529	•	-			
Weight 35 g Ambient temperature • storage -40+85 °C (non-condensation and/or icing) • operating -20+55 °C Cover protection category IP 40 EN 60529	` • /				
Ambient temperature • storage -40+85 °C (non-condensation and/or icing) • operating -20+55 °C Cover protection category IP 40 EN 60529	· · · · · · · · · · · · · · · · · · ·				
(non-condensation and/or icing) • operating -20+55 °C Cover protection category IP 40 EN 60529	-	-			
Cover protection category IP 40 EN 60529	·				
1 0,					
Environmental protection RTI EN 61810_1					
· · · · · · · · · · · · · · · · · · ·	Environmental protection	RTI EN 61810-1			
Shock resistance (NO/NC) 10 g / 5 g	Shock resistance (NO/NC)	10 g / 5 g			
Vibration resistance 5 g 10150 Hz	,	5 g 10150 Hz			

The data in bold type relate to the standard versions of the relays. *The relays are designed for continuous operation while maintaining the parameters declared in the data sheet. • • For single phase motors for 110-120 V AC do not use motors with higher FLA than given for 240 V AC.

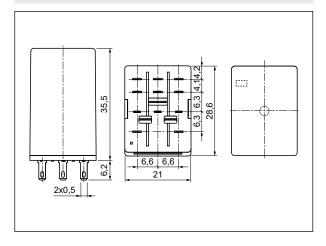




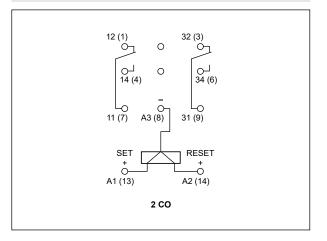
Max. DC resistive load breaking capacity Fig. 3



Dimensions - plug-in version



Connection diagram (pin side view)



Prelpol ® s.A.

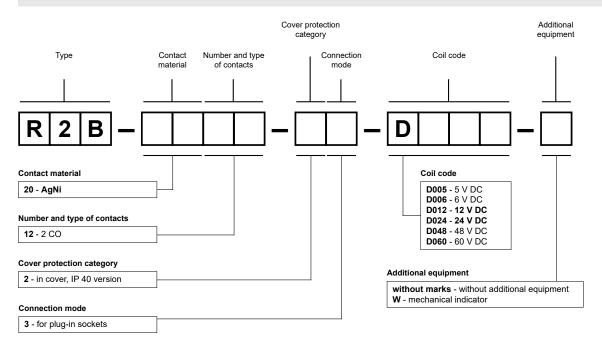
Mounting, sockets and accessories for relays

Relays **R2B-...-D** are offered in versions for plug-in sockets. **With W equipment as standard (W** - mechanical indicator).

	Accessories					
Sockets	Retainer	Spring	Description	Additional		
for R2BD	/ retractor clips	wire clips	plates	equipment		
Screw terminals	Screw terminals sockets, 35 mm rail mount (acc. to EN 60715) or on panel mounting (two M3 screws)					
GZT3	GZT4-0040, GZP4-0400	G4 1052	GZT4-0035	M ❷, ZGGZ4 ❸		
GZM3	GZT4-0040, GZP4-0400	G4 1052	GZT4-0035	M ❷, ZGGZ4 ❸		

Signalling / protecting modules type M... - see www.relpol.com.pl
Interconnection strips ZGGZ4 - see www.relpol.com.pl

Ordering codes



Example of ordering code:

R2B-2012-23-D012-W

|æ&@] * relay R2B-...-D with two coils, for plug-in sockets, two changeover contacts, contact material AgNi, coil voltage 12 V DC, with mechanical indicator, in cover IP 40

PRECAUTIONS:

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^{1.} Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.