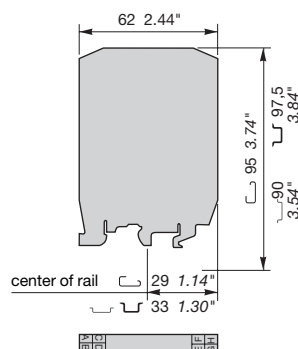


## Relay interfaces

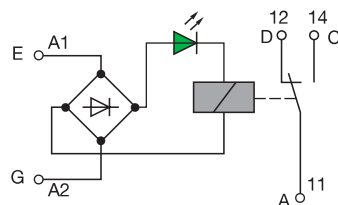
Relay modules  
Series 30 000

 **DIN 1 - 3**



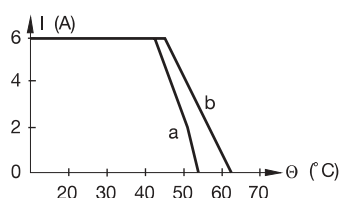
### RB 121 24 V DC

Spacing 11.5 mm .453"



- Economy version of RB 121 A
- DC input only

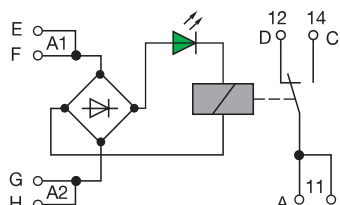
Ambient temperature derating curve



a : horizontal position  
b : vertical position e\* = 20 mm .788"

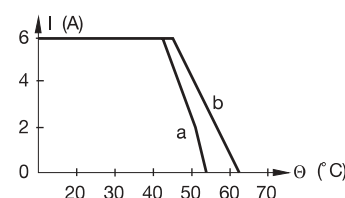
### RB 121 A 12 V DC, 24 V AC/DC

Spacing 11.5 mm .453"



- Sealed relay
- Input protected against leakage currents
- Easy access to clamps for wiring
- Double wire clamps simplify daisy chaining

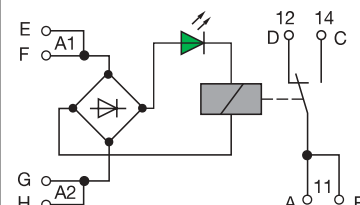
Ambient temperature derating curve



a : horizontal position  
b : vertical position e\* = 20 mm .788"

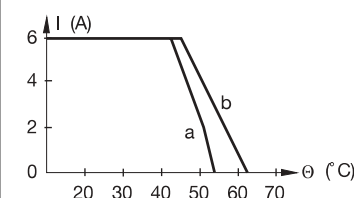
### RB 121 A 48 V AC/DC

Spacing 11.5 mm .453"








- Sealed relay
- Input protected against leakage currents
- Easy access to clamps for wiring
- Double wire clamps simplify daisy chaining

Ambient temperature derating curve



a : horizontal position  
b : vertical position e\* = 20 mm .788"

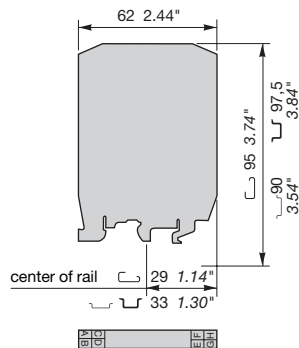
Part numbers	Type	P/N	Type	P/N	Type	P/N
	<b>RB 121</b> 24 V DC	<b>0030 031.17</b>	<b>RB 121</b> 12 V DC	<b>0030 001.22</b>	<b>RB 121 A</b> 48 V AC/DC	<b>0030 003.24</b>
	*e = distance between relays mounted in a vertical assembly		<b>RB 121 A</b> 24 V AC/DC 	<b>0030 002.23</b>		
<b>Approvals</b> (Contact Entrelec)						
<b>Characteristics</b>						
<b>COIL</b>						
Rated voltage + 20%, - 15% on DC ± 15% on AC	24 V DC	12 V DC	24 V AC	24 V DC	48 V AC	48 V DC
Power	0.44 W	0.5 W	0.52 VA	0.44 W	0.62 VA	0.48 W
Rated current	18 mA	42 mA	22 mA	18 mA	13 mA	10 mA
Drop-out voltage at 20°C	4.6 V	2.8 V	4.6 V	4.6 V	5.8 V	5.8 V
Drop-in voltage at 20°C	14 V DC	7.5 V	12 V AC	14 V DC	26 V AC	30 V DC
Permissible leakage current	1.8 mA	3.5 mA	2.2 mA	1.8 mA	1 mA	1 mA
<b>CONTACT</b>						
Type	1 SPDT	1 SPDT	1 SPDT	1 SPDT	1 SPDT	1 SPDT
Voltage switching range min. / max.	5 V / 150 V DC - 250 V AC	5 V / 150 V DC - 250 V AC	5 V / 150 V DC - 250 V AC	5 V / 150 V DC - 250 V AC	5 V / 150 V DC - 250 V AC	5 V / 150 V DC - 250 V AC
Current switching range min. / max.	1 mA / 6 A	1 mA / 6 A	1 mA / 6 A	1 mA / 6 A	1 mA / 6 A	1 mA / 6 A
Load switching range AC1 min. / max.	5 mVA / 1500 VA	5 mVA / 1500 VA	5 mVA / 1500 VA	5 mVA / 1500 VA	5 mVA / 1500 VA	5 mVA / 1500 VA
DC1 min. / max.	5 mW / 192 W	5 mW / 192 W	5 mW / 192 W	5 mW / 192 W	5 mW / 192 W	5 mW / 192 W
Number of on-load operations	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
Number of off-load operations	5 x 10 <sup>6</sup>	5 x 10 <sup>6</sup>	5 x 10 <sup>6</sup>	5 x 10 <sup>6</sup>	5 x 10 <sup>6</sup>	5 x 10 <sup>6</sup>
Operating speed C	5 ms	5 ms	5 ms	5 ms	5 ms	5 ms
O	11 ms	11 ms	11 ms	11 ms	12 ms	12 ms
Bounce	1 ms	1 ms	1 ms	1 ms	1 ms	1 ms
Isolation, coil / contacts	3500 V rms	3500 V rms	3500 V rms	3500 V rms	3500 V rms	3500 V rms
Resistance to shock-wave, coil / contacts						
Isolation, contacts / contacts	1000 V rms	1000 V rms	1000 V rms	1000 V rms	1000 V rms	1000 V rms
<b>TEMPERATURE</b>						
Ambient temperature						
Storage	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C
Operating temperature	- 20°C to + 62°C	- 20°C to + 62°C	- 20°C to + 62°C	- 20°C to + 62°C	- 20°C to + 62°C	- 20°C to + 62°C

Accessories, marking, wire size : see Accessories section.

## Relay interfaces

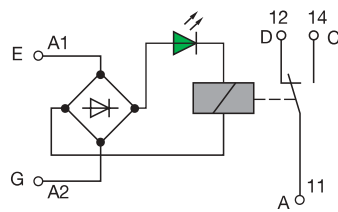
Relay modules  
Series 30 000

 **DIN 1 - 3**



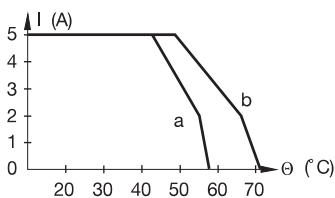
### RB 121 B 230 V AC/50Hz

Spacing 11.5 mm .453"



- Economy version of the 0030 006.27
- No leakage current protection
- No double wire clamps on coil contact

Ambient temperature derating curve

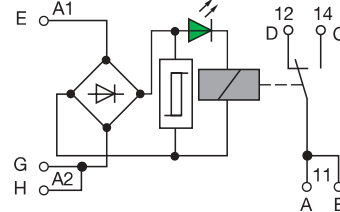


a : horizontal position

b : vertical position \*e = 20 mm .788"

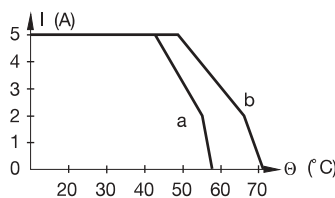
### RB 121 B 110, 230 V AC/50Hz 115 V AC/60Hz

Spacing 11.5 mm .453"



- Protection against capacitive leakage currents  $\leq 2$  mA
- Sealed relay
- Easy access to clamps for wiring
- Double wire clamps simplify daisy chaining

Ambient temperature derating curve

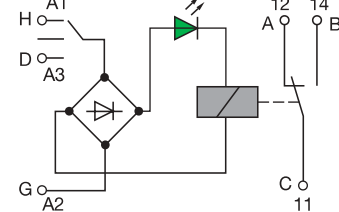


a : horizontal position

b : vertical position \*e = 20 mm .788"

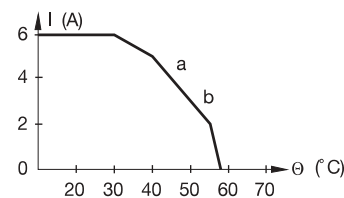
### RB 121 AI 24 V AC/DC

Spacing 11.5 mm .453"



- Built-in switch forces energized level of relay coil to 0 or 1
- Sealed relay
- Easy access to clamps for wiring

Ambient temperature derating curve



a : horizontal position

b : vertical position \*e = 4 mm .157"

## Part numbers

### Type

### P/N

#### RB 121 B

230 V AC 50 Hz

**0030 032.10**

\*e = distance between relays mounted in a vertical assembly

### Type

### P/N

#### RB 121 B

110 V AC 50 Hz

**0030 004.25**

115 V AC 60 Hz

**0030 005.26**

230 V AC 50 Hz

**0030 006.27**

### Type

### P/N

#### RB 121 AI

24 V AC/DC

**0030 007.20**

## Approvals (Contact Entrelec)



## Characteristics

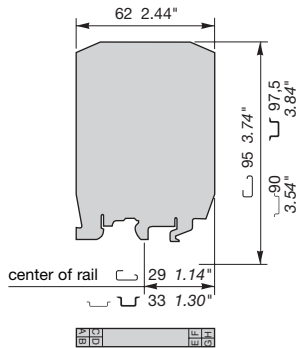
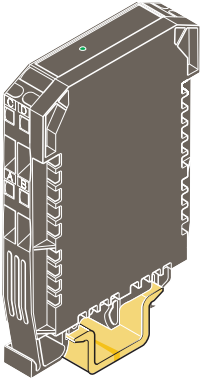
COIL							
Rated voltage	+ 20%, - 15% on DC + 10% on AC	230 V AC	110 V AC	115 V AC	230 V AC	24 V AC ± 10%	24 V DC ± 10%
Power		2.65 VA	1.54 VA	1.6 VA	3.22 VA	0.53 VA	0.44 W
Rated current		11.5 mA	14 mA	14 mA	14 mA	22 mA	18 mA
Drop-out voltage at 20°C		40 V AC	30 V AC	30 V AC	60 V AC	5.5 V	4.6 V
Drop-in voltage at 20°C		100 V AC	60 V AC	60 V AC	120 V AC	12.5 V AC	14.5 V DC
Permissible leakage current		1 mA max.	2 mA max.	2 mA max.	3.6 mA max.	2.2 mA	1.8 mA
CONTACT							
Type		1 SPDT	1 SPDT			1 SPDT	
Voltage switching range min. / max.		5 V / 150 V DC - 250 V AC	5 V / 150 V DC - 250 V AC			5 V / 150 V DC - 250 V AC	
Current switching range min. / max.		1 mA / 5 A	1 mA / 5 A			1 mA / 6 A	
Load switching range	AC1 min. / max.	5 mVA / 1250 VA	5 mVA / 1250 VA			5 mVA / 1500 VA	
	DC1 min. / max.	5 mW / 192 W	5 mW / 192 W			5 mW / 192 W	
Number of on-load operations		1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>			1 x 10 <sup>5</sup>	
Number of off-load operations		5 x 10 <sup>6</sup>	5 x 10 <sup>6</sup>			5 x 10 <sup>6</sup>	
Operating speed	C	5 ms	5 ms			5 ms	
	O	11 ms	10 ms			11 ms	
Bounce		1 ms	1 ms			1 ms	
Isolation, coil / contacts		3000 V rms	3000 V rms			3000 V rms	
Resistance to shock-wave, coil / contacts							
Isolation, contacts / contacts		1000 V rms	1000 V rms			1000 V rms	
TEMPERATURE							
Ambient temperature							
Storage		- 40°C to + 80°C	- 40°C to + 80°C			- 40°C to + 80°C	
Operating temperature		- 20°C to + 73°C	- 20°C to + 73°C			- 20°C to + 57°C	

Accessories, marking, wire size : see Accessories section.

## Relay interfaces

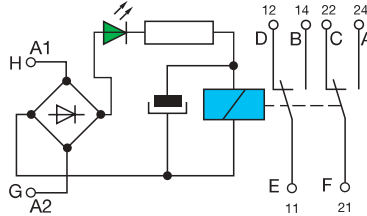
Relay modules  
**Series 30 000**

 **DIN 1 - 3**



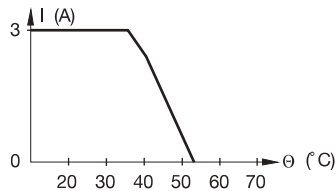
## Instantaneous relay RB 122 A 24 V AC/DC

Spacing 11.5 mm .453"



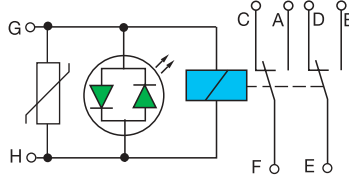
- Max. current in contacts :  
2 x 2.5 A or 1 x 3 A and 1 x 1.5 A
- Sealed relay
- Input protected against leakage currents
- Easy access to clamps for wiring

Derating curve



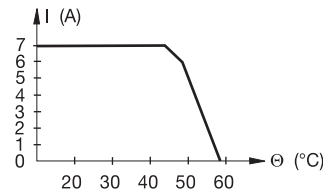
## Instantaneous relay RB 122 24 V DC

Spacing 15 mm .591"



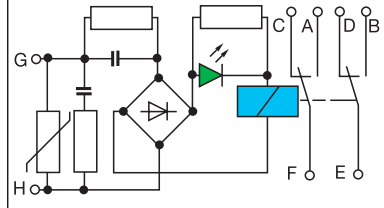
- Schrack relay RT 424024-8A/250 V
- Non-polarized input

Derating curve



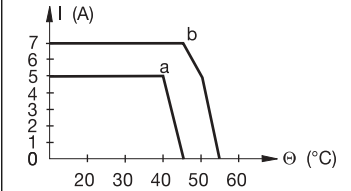
## Instantaneous relay RB 122 B 110 V AC/50Hz 115, V AC/60Hz

Spacing 15 mm .591"



- Schrack relay RT 424024-8A/250 V

Derating curve



a : version 110 V AC  
b : version 115 V AC

## Part numbers

### Type

### P/N

**RB 122 A**  
24 V AC/DC

**0030 011.13**

### Type

### P/N

**RB 122**  
24 V DC

**0030 019.23**

### Type

### P/N

**RB 122 B**  
110 V AC/50Hz  
115 V AC/60Hz

**0030 021.15**  
**0030 022.16**

## Approvals (Contact Entrelec)



## Characteristics

### COIL

Rated voltage + 15%, - 10% on DC  
± 15% on AC

Power 0.4 VA

Rated current 16.8 mA

Drop-out voltage at 20°C 9.2 V

24 V AC

24 V DC

0.4 VA

0.35 W

16.8 mA

14.4 mA

9.2 V

6.5 V

24 V DC

0.48 W

20 mA

2.4 V DC

110 V AC/50Hz

115 V AC/60Hz

3.6 VA

4 VA

33 mA

35 mA

11 V AC

11.5 V AC

Permissible leakage current

2 mA max.

1.5 mA

2 mA

2.6 mA

### CONTACT

Type

1 DPDT

1 DPDT

1 DPDT

Voltage min. / max.

10<sup>-5</sup> V / 250 V AC

12 V / 250 V

12 V / 250 V

Switching current min. / max.

10<sup>-5</sup> A / 2.5 A

100 mA / 7 A

100 mA / 5 A

100 mA / 7 A

Switching power AC1 min. / max.

10<sup>-10</sup> VA / 250 VA

1.2 VA / 1750 VA

1.2 VA / 1250 VA

1.2 VA / 1750 VA

DC1 min. / max.

10<sup>-10</sup> W / 90 W

1.2 W / see curve, page 680

1.2 W / see curve, page 680

Number of on-load operations

1.8 x 10<sup>6</sup> (2 A / 60 W)

Number of off-load operations

10<sup>6</sup>

30 x 10<sup>6</sup>

30 x 10<sup>6</sup>

Switching time C

6 ms

8 ms

6 ms

Switching time O

11 ms

15 ms

12 ms

Bounce time

1 ms

2 ms

2 ms

Isolation, coil / contact

1500 V rms

2500 V rms

2500 V rms

Isolation, contact / contact

1000 V rms

1000 V rms

1000 V rms

### TEMPERATURE

Ambient temperature

Storage

- 40°C to + 80°C

- 40°C to + 80°C

- 40°C to + 80°C

Operating

- 20°C to + 53°C

- 20°C to + 58°C

- 20°C to + 45°C

- 20°C to + 54°C

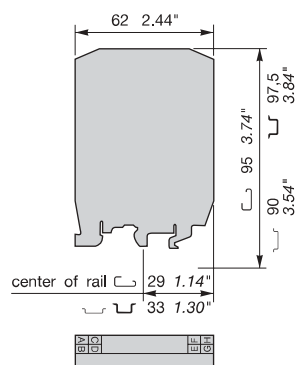
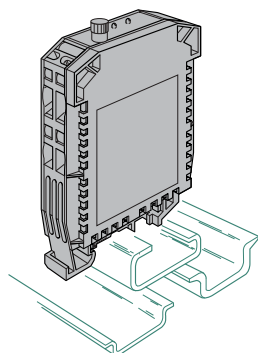
Accessories, marking, wire size : see Accessories section.

## Relay interfaces

Relay modules

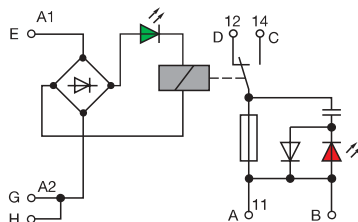
**Series 30 000**

 **DIN 1 - 3**



### Relay with fuse RB 121 AF 24 V AC/DC

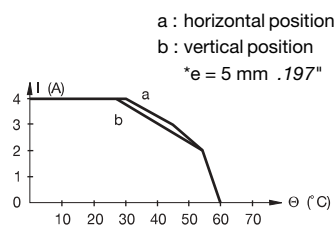
Spacing 15 mm .590"



N.B.: blown fuse indicator sized for 48 to 150 V AC

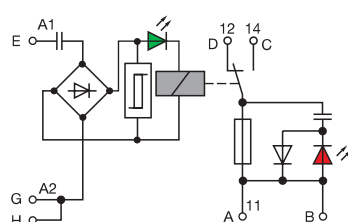
- Short-circuit protection on contact by 5 x 20 mm fuse (delivered with 3.15 A / 250 V fuse)
- Blown fuse indicator (red LED)

Ambient temperature derating curve



### Relay with fuse RB 121 BF 115 V AC/60Hz

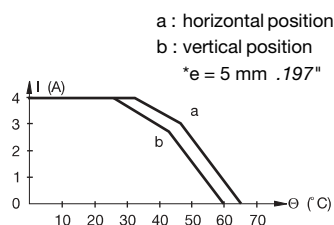
Spacing 15 mm .590"



N.B.: blown fuse indicator sized for 48 to 150 V AC

- Short-circuit protection by 5 x 20 mm fuse (delivered with 3.15 A / 250 V fuse)
- Protection against leakage current  $\leq 2.3$  mA capacitive
- Blown fuse indicator (red LED)

Ambient temperature derating curve



## Part numbers

**Type**

**P/N**

**RB 121 AF**  
24 VAC-DC

**0030 036.14**

\*e = distance between relays mounted in a vertical assembly

**Type**

**P/N**

**RB 121 BF**  
115 VAC / 60 Hz

**0030 037.15**

**Type**

**P/N**

**Approvals** (Contact Entrelec)



## Characteristics

### COIL

Rated voltage + 20%, - 15% on DC  
± 15% on AC

24 VAC

24 VDC

115 VAC / 60Hz

Power

0.52 VA

0.44 W

1.5 VA

Rated current

22 mA

18 mA

13 mA

Drop-out voltage

4.6 V

4.6 V

30 VAC

Permissible leakage current

2.2 mA

1.8 mA

2.3 mA

### CONTACT

Type

1 SPDT

1 SPDT

Blown fuse indicator

Red LED (on AC only)

Red LED (on AC only)

Fuse

3.15 A

3.15 A

Voltage min. / max.

5 V / 150 VDC - 150 VAC

5 V / 150 VDC - 150 VAC

Current switching range min. / max.

1 mA / 3A

1 mA / 3A

Load switching range AC1 min. / max.

5 m VA / 450 VA

5 m VA / 450 VA

DC1 min. / max.

5 mW / 192 W

5 mW / 192 W

Number of on-load operations

$1 \times 10^5$

$1 \times 10^5$

Number of off-load operations

$5 \times 10^6$

$5 \times 10^6$

Operating speed

C

7 ms

5 ms

11 ms

O

11 ms

12 ms

Bounce

1 ms

1 ms

Isolation, coil / contacts

3000 V rms

3500 V rms

Isolation, contacts / contacts

1000 V rms

1000 V rms

### TEMPERATURE

Ambient temperature

Storage

- 40°C to + 80°C

- 40°C to + 80°C

Operating temperature

0°C to + 60°C

0°C to + 65°C

**Accessories, marking, wire size** : see Accessories section.