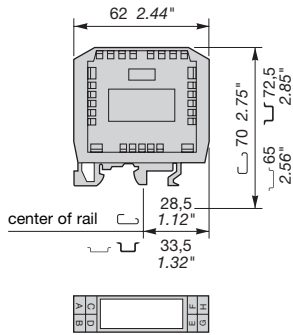


Relay interfaces

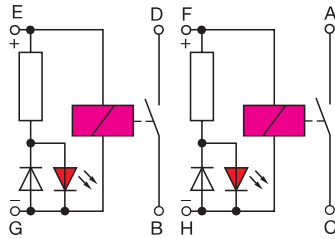
Relay modules
Series 10 000

DIN 1 - 3



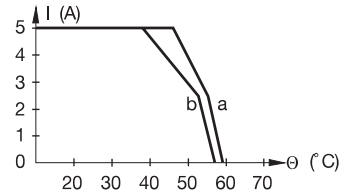
RB 211 24, 48 V DC

Spacing 18 mm .709"



- Sealed relay
- Gold flash on contacts
- Two independent relays

Ambient temperature derating curve



- a : horizontal position
- b : vertical position with 2 contacts loaded

Part numbers

Type	P/N	Type	P/N	Type	P/N
RB 211					
24 V DC	0010 014.12				
48 V DC	0010 015.13				

Approvals (Contact Entelec)



Characteristics

COIL

Rated voltage	+ 20%, - 15% on DC	24 V DC	48 V DC
Power		2 x 0.36 W	2 x 0.48 W
Rated current		15 mA	10 mA
Drop-out voltage		2.4 V DC	4.8 V DC

CONTACT

Type	1 NO + 1 NO
Voltage switching range min. / max.	10 ⁻³ V / 250 V
Current switching range min. / max.	10 ⁻⁶ A / 5 A
Load switching range AC1 min. / max.	10 ⁻⁶ VA / 1250 VA
DC1 min. / max.	10 ⁻⁶ W / see curves, page 680
Number of on-load operations	5 A / 150 W - 2 x 10 ⁵
Number of off-load operations	5 x 10 ⁷
Operating speed C	8 ms
O	4 ms
Bounce	1 ms
Isolation, coil / contacts	2500 V rms
Resistance to shock-wave, coil / contacts	
Isolation, contacts / contacts	1500 V rms

TEMPERATURE

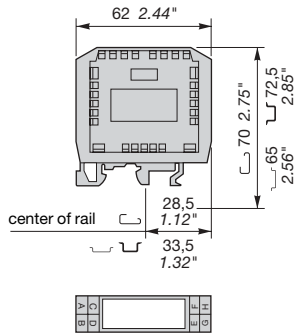
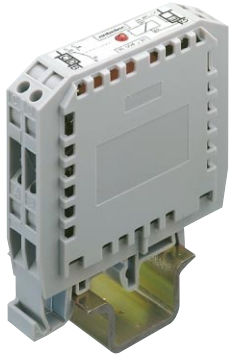
Ambient temperature	
Storage	- 40°C to + 80°C
Operating temperature	- 20°C to + 58°C

Accessories, marking, wire size : see Accessories section.

Relay interfaces

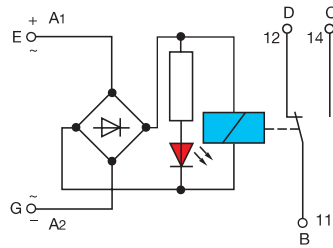
Relay modules
Series 10 000

DIN 1 - 3



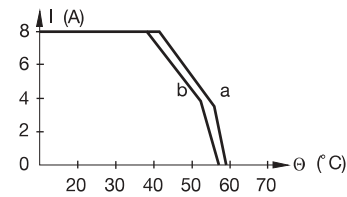
RB 121 A 12 V DC, 24, 48 V AC/DC

Spacing 18 mm .709"



- Contact rated 10 A

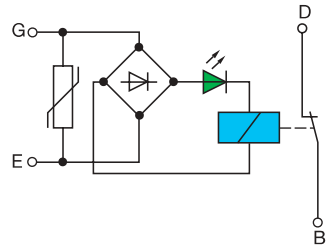
Ambient temperature derating curve



a : horizontal position
b : vertical position

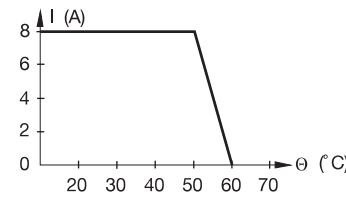
RB 121 AV 48 V AC/DC

Spacing 18 mm .709"



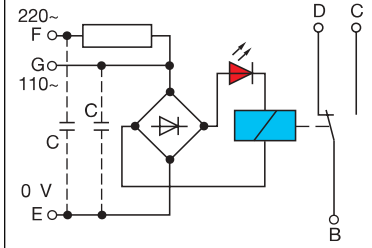
- Input protected against overvoltage by varistor.

Ambient temperature derating curve



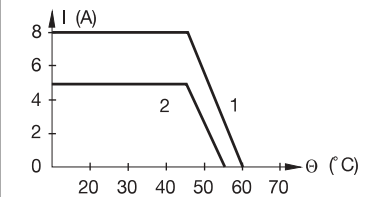
RB 121 A 110 V AC/DC, 220 V AC

Spacing 18 mm .709"



- 110 V AC/DC input : GE
- 220 V AC input : FE
- In option, AC leakage current protection of input by adding capacitor "C" :
i ≤ 1.6 mA (on 110 V AC)
i ≤ 3 mA (on 220 V AC)
- Contact rated 10 A

Ambient temperature derating curve



1 : version 110 V AC/DC
2 : version 220 V AC

Part numbers

Type	P/N	Type	P/N	Type	P/N
RB 121 A 12 V DC 24 V AC/DC 48 V AC/DC	0010 125.16 0010 004.21 0010 005.22	RB 121 AV 48 V AC/DC	0010 006.23	RB 121 A 110 V AC/DC / 220 V AC	0010 132.15

Approvals (Contact Entelec)



Characteristics

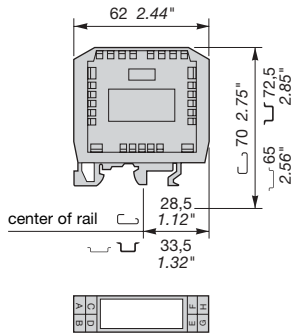
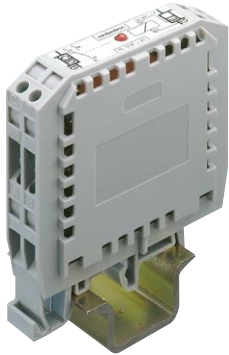
COIL		RB 121 A			RB 121 AV		RB 121 A	
Rated voltage		12 V DC	24 V AC/DC	48 V AC/DC	48 V AC/DC	110 V AC/DC	220 V AC	
+ 20%, - 15% on DC ± 10% on AC		12 V DC	24 V AC/DC	48 V AC/DC	48 V AC/DC	110 V AC/DC	220 V AC	
Power		0.5 W	0.7 W	0.7 W	0.96 W	0.5 W	1.1 VA	
Rated current		41 mA	29 mA	15 mA	20 mA	4.3 mA	5 mA	
Drop-out voltage		3.2 V DC	5 V AC/DC	8.6 V AC/DC	5.6 V AC/DC	14.5 V AC/DC	25.2 V AC	
CONTACT		RB 121 A			RB 121 AV		RB 121 A	
Type		1 SPDT			1 SPDT		1 SPDT	
Voltage switching range min. / max.		12 V / 380 V			12 V / 380 V		12 V / 380 V	
Current switching range min. / max.		10 mA / 8 A (10 A)			10 mA / 8 A		10 mA / 8 A (10 A)	
Load switching range AC1 min. / max.		0.6 VA / 2000 VA			0.6 VA / 2000 VA		0.6 VA / 2000 VA	
DC1 min. / max.		0.6 W / see curves, page 681			0.6 W / see curves, page 681		0.6 W / see curves, page 681	
Number of on-load operations		2 x 10 ⁵			2 x 10 ⁵		2 x 10 ⁵	
Number of off-load operations		2 x 10 ⁷			2 x 10 ⁷		2 x 10 ⁷	
Operating speed C		7 ms			7 ms		7 ms	
O		6 ms			6 ms		6 ms	
Bounce		2 ms			2 ms		2 ms	
Isolation, coil / contacts		2500 V rms			2500 V rms		2500 V rms	
Resistance to shock-wave, coil / contacts								
Isolation, contacts / contacts		1500 V rms			1500 V rms		1500 V rms	
TEMPERATURE		RB 121 A			RB 121 AV		RB 121 A	
Ambient temperature								
Storage		- 40°C to + 80°C			- 40°C to + 80°C		- 40°C to + 80°C	
Operating temperature		- 20°C to + 58°C			- 20°C to + 60°C		- 20°C to + 60°C	

Accessories, marking, wire size : see Accessories section.

Relay interfaces

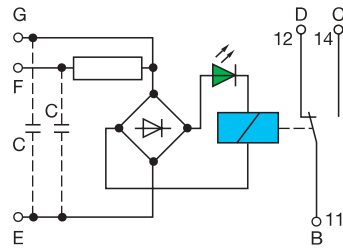
Relay modules
Series 10 000

DIN 1 - 3



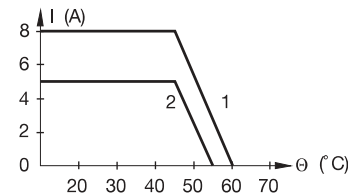
RB 121 A 110, 135 V AC/DC

Spacing 18 mm .709"



- 110 V AC/DC input : GE
- 135 V AC/DC input : FE
- In option, AC leakage current protection of input by adding capacitor "C".

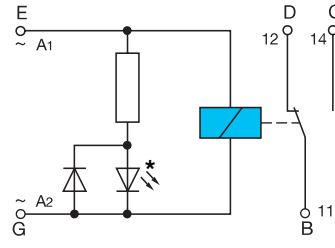
Ambient temperature derating curve



1 : version 110 V AC/DC
2 : version 135 V AC/DC

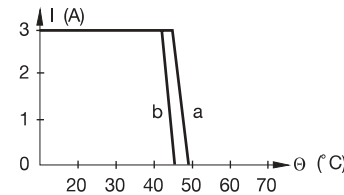
RB 121 B 24, 48, 115 V AC

Spacing 23 mm .905"



- Red LED for the 24 and 48 V AC.
- Green LED in series with the relay for the 115 V AC.

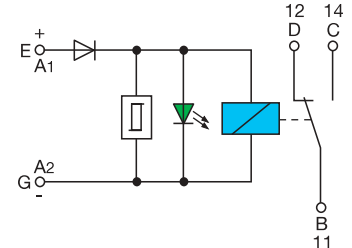
Ambient temperature derating curve



a : horizontal position
b : vertical position

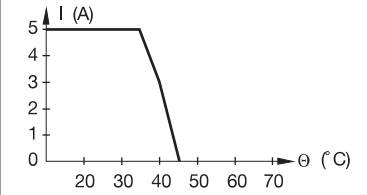
RB 121 S with threshold 24 V DC

Spacing 18 mm .709"



- LED and relay non-energized for resistive source (3,9 kΩ) current ≤ 6 mA in parallel on the contact.

Ambient temperature derating curve



Part numbers

Type	P/N	Type	P/N	Type	P/N
RB 121 A 110 V AC/DC 135 V AC/DC	0010 226.23	RB 121 B 24 V AC 48 V AC 115 V AC 115 V AC orange	0010 065.25 0010 066.26 0010 067.27 0010 088.25	RB 121 S 24 V DC	0010 238.07

Approvals (Contact Entelec)



Characteristics

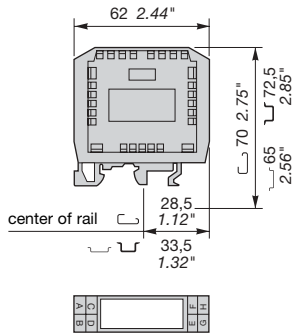
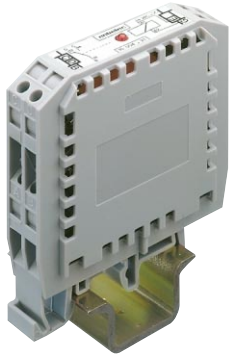
COIL		110 V AC/DC		135 V AC/DC		24 V AC			48 V AC			115 V AC			24 V DC		
Rated voltage	+ 20%, - 15% on DC + 10%, - 15% on AC															+ 10%, - 10% on DC	
Power		0.5 W		0.6 W		1.5 VA		1.5 VA		1.3 VA						0.62 W	
Rated current		4.3 mA		4.4 mA		61 mA		31 mA		11 mA						26 mA	
Drop-out voltage		11 V AC/DC		13.5 V DC		4.3 V AC		8.6 V AC		20.7 V AC						3 V	
Drop-in voltage																18 V	
Permissible leakage current																6 mA max.	
CONTACT																	
Type		1 SPDT				1 SPDT						1 SPDT					
Voltage switching range min. / max.		12 V / 250 V				12 V / 250 V						12 V / 250 V					
Current switching range min. / max.		10 mA / 8 A				10 mA / 3 A						10 mA / 5 A					
Load switching range AC1 min. / max.		0.6 VA / 2000 VA				580 mVA / 750 VA						0.6 VA / 1250 VA					
DC1 min. / max.		see curves, page 681				230 mW / see curves, page 681						0.6 W / see curves, page 681					
Max. load															see curves, page 681		
Number of on-load operations		2 x 10 ⁵				3 A / 100 W - 5 x 10 ⁵			3 A / 750 VA - 10 ⁵						2 x 10 ⁵		
Number of off-load operations		2 x 10 ⁷				10 ⁷									2 x 10 ⁷		
Operating speed	C	7 ms				2 ms						3.6 ms					
	O	6 ms				2 ms						9 ms					
Bounce		2 ms				0.5 ms						2 ms					
Isolation, coil / contacts		2500 V rms				1500 V rms						3000 V rms					
Isolation, contacts / contacts		1500 V rms				750 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 + 60°C				- 20°C to + 48°C						-20°C to +45°C					

Accessories, marking, wire size : see Accessories section.

Relay interfaces

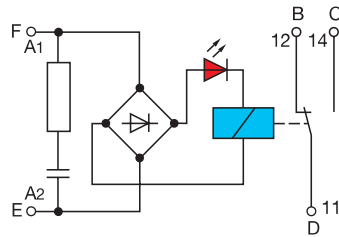
Relay modules
Series 10 000

DIN 1 - 3



RB 121 AR1 110 V AC/DC

Spacing 18 mm .709"



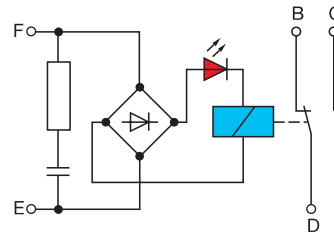
RB 121 AR1

Input protected from leakage current by RC
R = 33 Ω C = 1 μF / 250 V
Orange box

NOTE: coil is protected from leakage current: 4 mA

RB 121 AR2 110 V AC/DC

Spacing 18 mm .709"

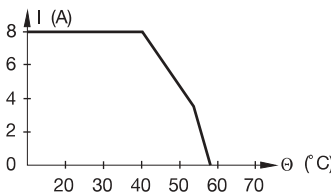


RB 121 AR2

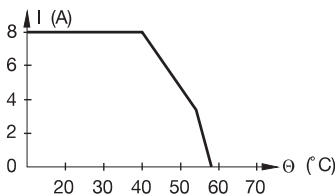
Input protected from leakage current by RC
R = 330 Ω C = 0,1 μF / 250 V
Orange box

NOTE: coil is protected from leakage current: 0.4 mA

Ambient temperature derating curve



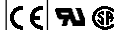
Ambient temperature derating curve



Part numbers

Type	P/N	Type	P/N
RB 121 AR1 110 V AC/DC	0010 158.07	RB 121 AR2 110 V AC/DC	0010 168.01

Approvals (Contact Entelec)



Characteristics

COIL

	RB 121 AR1	RB 121 AR2
Rated voltage	110 V DC + 20%, - 15% on DC ± 10% on AC	110 V AC
Power	0.5 W	1 VA
Rated current	4.5 mA	9 mA
Drop-out voltage	19 V DC	20 V AC

CONTACT

	RB 121 AR1	RB 121 AR2
Type	1 SPDT	1 SPDT
Voltage switching range min. / max.	12 V / 380 V	12 V / 380 V
Current switching range min. / max.	10 mA / 8 A (10 A)	10 mA / 8 A (10 A)
Load switching range AC1 min. / max.	0.6 VA / 2000 VA	0.6 VA / 2000 VA
DC1 min. / max.	0.6 W / see curves, page 681	0.6 W / see curves, page 681
Number of on-load operations	2 x 10 ⁵	2 x 10 ⁵
Number of off-load operations		
Operating speed	7 ms	7 ms
Bounce	3 ms	3 ms
Isolation, coil / contacts	2 ms	2 ms
Resistance to shock-wave, coil / contacts	2500 V rms	2500 V rms
Isolation, contacts / contacts	1000 V rms	1000 V rms

TEMPERATURE

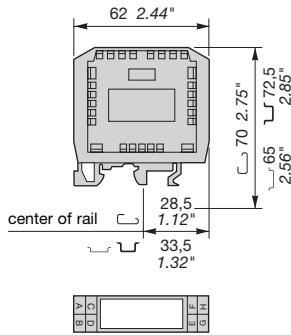
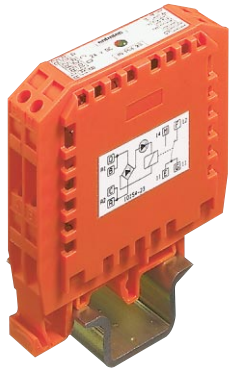
	RB 121 AR1	RB 121 AR2
Ambient temperature		
Storage	- 40°C to + 80°C	- 40°C to + 80°C
Operating temperature	- 20°C to + 58°C	- 20°C to + 58°C

Accessories, marking, wire size : see Accessories section.

Relay interfaces

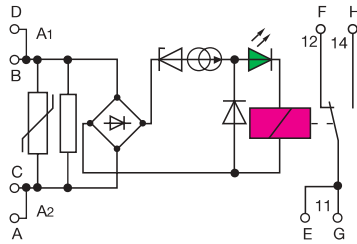
Relay modules
Series 10 000

DIN 1 - 3



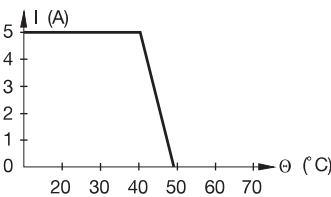
RB 121 CV CNOMO 24, 48 V DC

Spacing 18 mm .709"



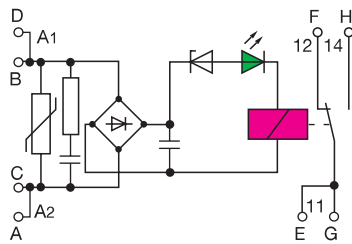
- Orange box
- Input protected against overvoltage
- Protection against leakage currents ≤ 1 mA
- In accordance with CNOMO specifications and two-wire static sensors compatible

Ambient temperature derating curve



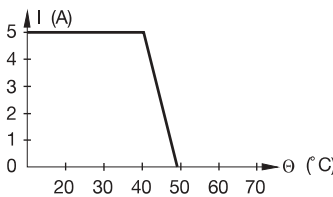
RB 121 BCVR CNOMO 110 V AC

Spacing 18 mm .709"



- Orange box
- Input protected against overvoltage
- Protection against leakage currents ≤ 2.2 mA
- In accordance with CNOMO specifications and two-wire static sensors compatible

Ambient temperature derating curve



Part numbers	Type	P/N	Type	P/N	Type	P/N
	RB 121 CV		RB 121 BCVR			
	24 V DC	0010 154.23	110 V AC	0010 156.25		
	48 V DC	0010 155.24				

Approvals (Contact Entelec) CE CE

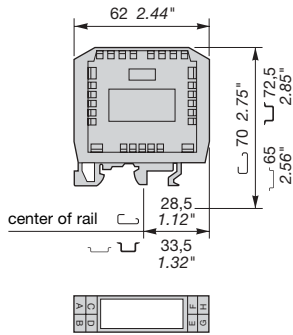
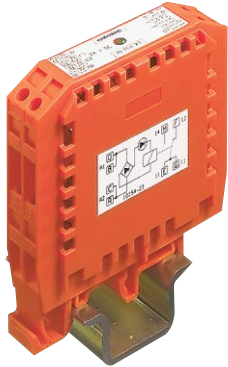
Characteristics						
COIL						
Rated voltage	+ 20%, -15% on DC + 10%, -15% on AC	24 V DC	48 V DC	110 V AC		
Voltage min. / max.		13.2 V / 26.4 V	32.4 V / 52.8 V	82 V / 121 V		
Power		0.8 W	1.2 W	4.4 VA		
Rated current		34 mA	24 mA	40 mA		
Drop-out voltage		5 V DC	12 V DC	20 V AC		
Drop-in voltage						
Permissible leakage current		1 mA		2.2 mA		
CONTACT						
Type		1 SPDT		1 SPDT		
Voltage switching range min. / max.		10 ⁻³ V / 250 V		10 ⁻³ V / 250 V		
Current switching range min. / max.		10 ⁻⁶ A / 5 A		10 ⁻⁶ A / 5 A		
Load switching range AC1 min. / max.		10 ⁻⁶ VA / 1250 VA		10 ⁻⁶ VA / 1250 VA		
DC1 min. / max.		10 ⁻⁶ W / see curves, page 681		10 ⁻⁶ W / see curves, page 681		
Max. load						
Number of on-load operations		$\geq 10^6$ (1A cos $\varphi = 0.5$)		$\geq 10^6$ (1A cos $\varphi = 0.5$)		$\geq 10^6$ (2A resistive)
Number of off-load operations		5 x 10 ⁷		5 x 10 ⁷		
Operating speed	C	8 ms		8 ms		
	O	4 ms		4 ms		
Bounce		1 ms		1 ms		
Isolation, coil / contacts		2500 V rms		2500 V rms		
Resistance to shock-wave, coil / contacts						
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		- 20°C to + 48°C		- 20°C to + 48°C		

Accessories, marking, wire size : see Accessories section.

Relay interfaces

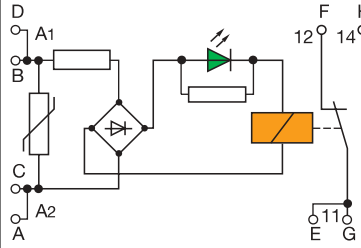
Relay modules
Series 10 000

DIN 1 - 3



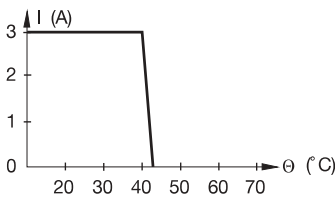
RB 121 CV CNOMO 24, 48 V DC

Spacing 18 mm .709"



- Orange box
- Input protected against overvoltage
- Protection against leakage currents ≤ 3.5 mA
- In accordance with CNOMO specifications

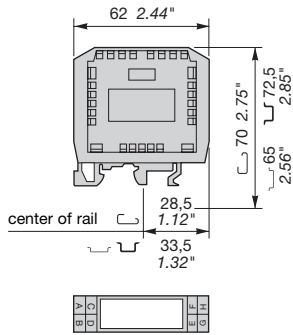
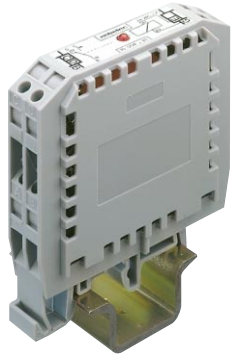
Ambient temperature derating curve



Relay interfaces

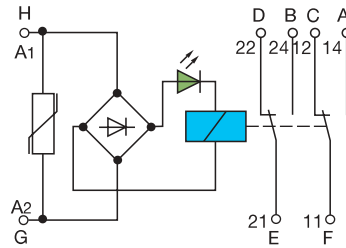
Relay modules
Series 10 000

DIN 1 - 3



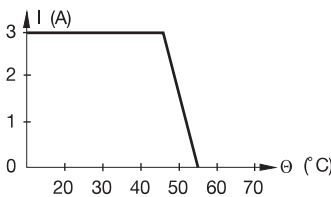
RB 122 A 24, 135 V AC/DC, 220 V AC

Spacing 18 mm .709"



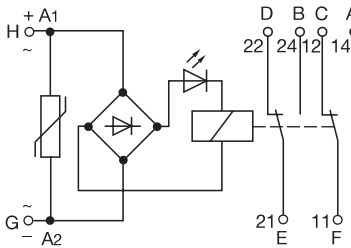
- Red LED for version 220 V AC
- Green LED for version 135 V AC/DC
- Red LED for version 24 V AC/DC

Ambient temperature derating curve



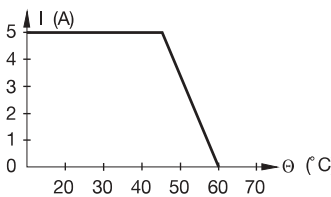
RB 122 AV 24, 48 V AC/DC

Spacing 18 mm .709"



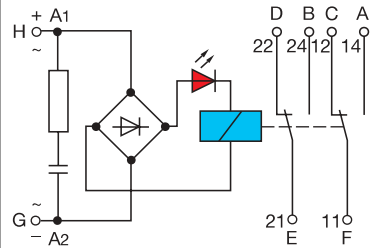
- Input protected against overvoltages

Ambient temperature derating curve



RB 122 AR 110 V AC/DC

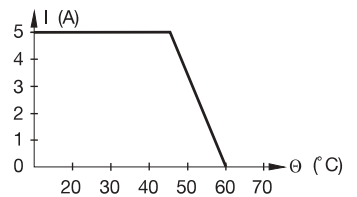
Spacing 23 mm .906"



- Protection against leakage currents ≤ 1.6 mA

R = 100 Ω
C = 0.47 μF/250 V

Ambient temperature derating curve



Part numbers

Type	P/N	Type	P/N	Type	P/N
RB 122 A		RB 122 AV		RB 122 AR	
24 V AC/DC spacing 18 mm	0010 237.26	24 V AC/DC	0010 121.12	110 V AC/DC	0010 011.17
135 V AC/DC spacing 18 mm	0010 228.05	48 V AC/DC	0010 122.13		
220 V AC spacing 23 mm	0010 123.14				

Approvals (Contact Entelec)



Characteristics

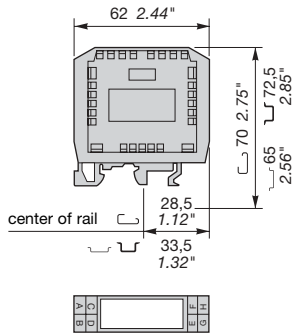
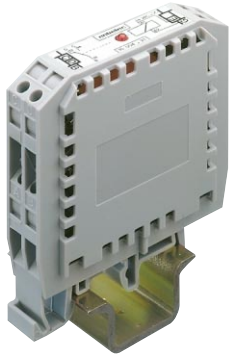
COIL		RB 122 A			RB 122 AV		RB 122 AR
Rated voltage		24 V AC/DC	135 V AC/DC	220 V AC	24 V AC/DC	48 V AC/DC	110 V AC/DC
Power		0.7 W	0.8 W	1.2 VA	0.7 W	0.7 W	0.7 W - 1.8 VA
Rated current		26 mA	5.8 mA	5.5 mA	26 mA	14 mA	16 mA
Drop-out voltage		2.4 V AC/DC	13.5 V AC/DC	22 V AC	2.4 V AC/DC	4.8 V AC/DC	11 V AC/DC
Permissible leakage current							1.6 mA
CONTACT							
Type		1 DPDT			1 DPDT		1 DPDT
Voltage switching range min. / max.		4 V / 250 V		12 V / 250 V	12 V / 250 V		12 V / 250 V
Current switching range min. / max.		10 mA / 3 A			10 mA / 5 A		10 mA / 5 A
Load switching range AC1 min. / max.		0.5 mVA / 1250 VA		0.6 VA / 750 VA	0.6 VA / 1250 VA		0.6 VA / 1250 VA
DC1 min. / max.		10 mVA / 1250 VA		see curves, page 681	0.6 W / see curves, page 681		0.6 W / see curves, page 681
Number of on-load operations		2 x 10 ⁵			2 x 10 ⁵		2 x 10 ⁵
Number of off-load operations		2 x 10 ⁷			2 x 10 ⁷		2 x 10 ⁷
Operating speed C		7 ms			7 ms		7 ms
O		4 ms			4 ms		4 ms
Bounce		3 ms			3 ms		3 ms
Isolation, coil / contacts		2000 V rms			2000 V rms		2000 V rms
Resistance to shock-wave, coil / contacts							
Isolation, contacts / contacts		2000 V rms			2000 V rms		2000 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 + 55°C			- 20°C to + 60°C		- 20°C to + 60°C

Accessories, marking, wire size : see Accessories section.

Relay interfaces

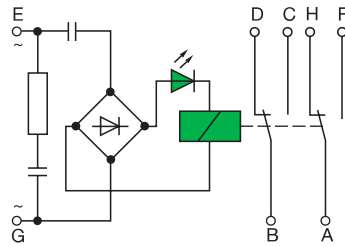
Relay modules
Series 10 000

DIN 1 - 3



RB 122 BR 110, 220 V AC

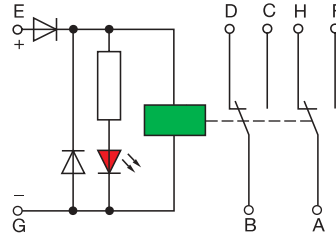
Spacing 23 mm .906"



- Protected against leakage currents ≤ 3 mA
- Sealed relay
- Gold layer on contacts

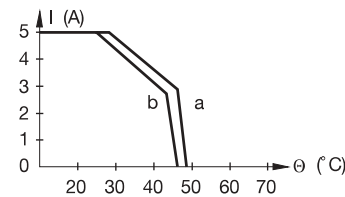
RB 122 12, 24, 48 V DC

Spacing 18 mm .709"



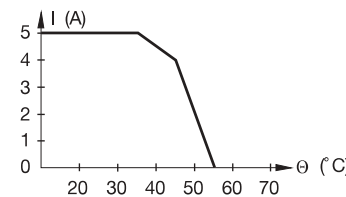
- For 48 V DC version LED in series with the relay

Ambient temperature derating curve



a : horizontal position
b : vertical position
2 contacts loaded

Ambient temperature derating curve



2 contacts loaded

Part numbers

Type	P/N	Type	P/N
RB 122 BR		RB 122	
110 V AC	0010 115.14	12 V DC	0010 174.27
220 V AC	0010 089.26	24 V DC	0010 059.07
		48 V DC	0010 060.04

Approvals (Contact Entelec)



Characteristics

COIL

	110 V AC	220 V AC	12 V DC	24 V DC	48 V DC
Rated voltage + 20%, - 15% on DC $\pm 10\%$ on AC					
Power	6.6 VA	1.1 VA	0.26 W	0.31 W	0.48 W
Rated current	40 mA	5.1 mA	22 mA	13 mA	10 mA
Drop-out voltage	11 V AC	22 V AC	2 V DC	2.4 V DC	4.8 V DC
Permissible leakage current	3 mA	3 mA			

CONTACT

	110 V AC	220 V AC	12 V DC	24 V DC	48 V DC
Type	1 DPDT		1 DPDT		
Voltage switching range min. / max.	10^{-3} V / 250 V		10^{-3} V / 250 V		
Current switching range min. / max.	10^7 A / 5 A		10^7 A / 5 A		
Load switching range AC1 min. / max.	10^{-10} VA / 1000 VA		10^{-10} VA / 1000 VA		
DC1 min. / max.	10^{-10} W / see curves, page 680		10^{-10} W / see curves, page 680		
Number of on-load operations	5 A / 100 W - 10^5	5 A / 1 KVA - 10^5	10^5	5A/100W- 10^5	5A/1KVA- 10^5
Number of off-load operations	2×10^8		2×10^8		
Operating speed C	8 ms		8 ms		
O	3 ms		7.5 ms	3 ms	
Bounce	0.5 ms		0.21 ms	0.5 ms	
Isolation, coil / contacts	1500 V rms		1500 V rms		
Resistance to shock-wave, coil / contacts					
Isolation, contacts / contacts	1500 V rms		1500 V rms		

TEMPERATURE

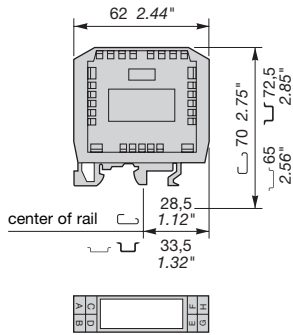
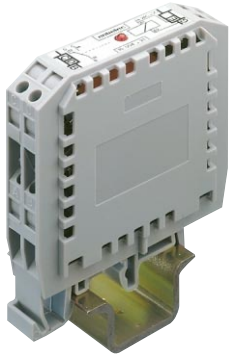
	110 V AC	220 V AC	12 V DC	24 V DC	48 V DC
Ambient temperature					
Storage	- 40°C to + 80°C		- 40°C to + 80°C		
Operating temperature	- 20°C to + 48°C		- 20°C to + 55°C		

Accessories, marking, wire size : see Accessories section.

Relay interfaces

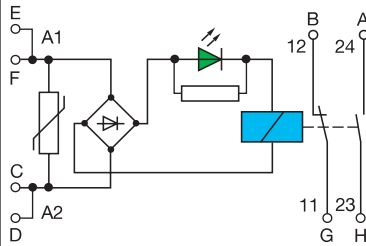
Relay modules
Series 10 000

DIN 1 - 3



RB 131 CV CNOMO 24, 48 V DC

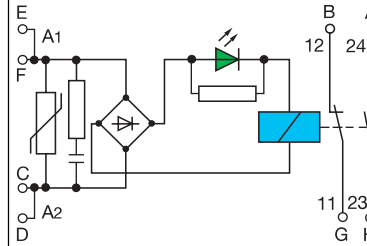
Spacing 18 mm .709"



- Grey box
- Input protected against overvoltage
- Protected against leakage currents ≤ 1 mA or 2 mA
- In accordance with CNOMO specifications

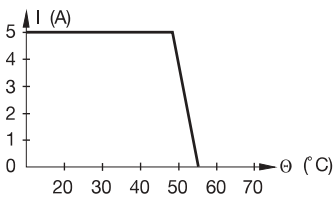
RB 131 BCVR CNOMO 110 V AC

Spacing 18 mm .709"

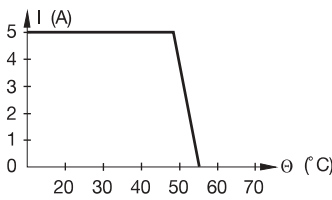


- Grey box
- Input protected against overvoltage
- Protected against leakage currents ≤ 2 mA
- In accordance with CNOMO specifications

Ambient temperature derating curve



Ambient temperature derating curve



Part numbers

Type	P/N
RB 131 CV	
24 V DC	0010 181.17
48 V DC	0010 182.10

Type	P/N
RB 131 BCVR	
110 V AC	0010 183.11

Approvals (Contact Entelec)



Characteristics

COIL

	24 V DC	48 V DC	110 V AC
Rated voltage + 20%, - 15% on DC $\pm 10\%$ on AC	24 V DC	48 V DC	110 V AC
Power	0.6 W	0.7 W	1.9 VA
Rated current	25 mA	14 mA	17 mA
Drop-out voltage	2.4 V DC	4.8 V DC	11 V AC
Permissible leakage current	1 mA	2 mA	2 mA

CONTACT

	1 NC + 1 NO	1 NC + 1 NO
Type	1 NC + 1 NO	1 NC + 1 NO
Voltage switching range min. / max.	12 V / 250 V	12 V / 250 V
Current switching range min. / max.	10 mA / 5 A	10 mA / 5 A
Load switching range AC1 min. / max.	0.6 VA / 1250 VA	0,6 VA / 1250 VA
DC1 min. / max.	0.6 W / see curves, page 680	0.6 W / see curves, page 680
Number of on-load operations	$\geq 10^6$ (1A $\cos \varphi = 0.5$) $\geq 10^6$ (2A resistive)	$\geq 10^6$ (1A $\cos \varphi = 0.5$) $\geq 10^6$ (2A resistive)
Number of off-load operations	2×10^7	2×10^7
Operating speed C	7 ms	7 ms
O	10 ms	10 ms
Bounce	4 ms	4 ms
Isolation, coil / contacts	2500 V rms	2500 V rms
Resistance to shock-wave, coil / contacts		
Isolation, contacts / contacts	≥ 1000 V rms	≥ 1000 V rms

TEMPERATURE

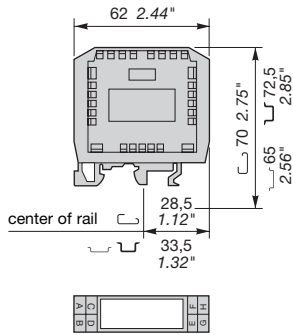
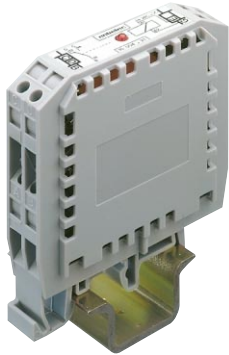
Ambient temperature		
Storage	- 40°C to + 80°C	- 40°C to + 80°C
Operating temperature	- 20°C to + 55°C	- 20°C to + 55°C

Accessories, marking, wire size : see Accessories section.

Relay interfaces

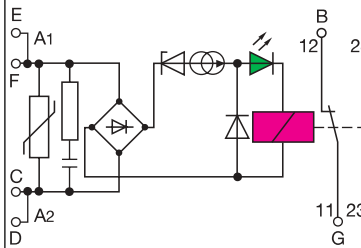
Relay modules
Series 10 000

DIN 1 - 3



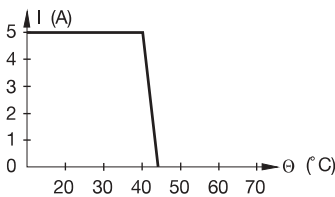
RB 131 CV 24, 48 V DC

Spacing 18 mm .709"



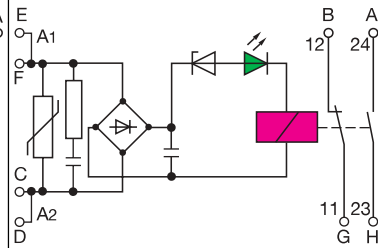
- Grey box
- Input protected against overvoltage
- Protected against leakage currents ≤ 1 mA
- In accordance with CNOMO specifications and two-wire static sensors compatible

Ambient temperature derating curve



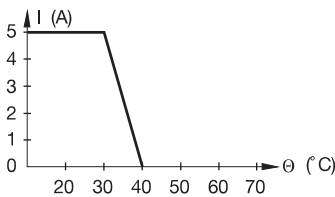
RB 131 BCVR 110 V AC

Spacing 18 mm .709"



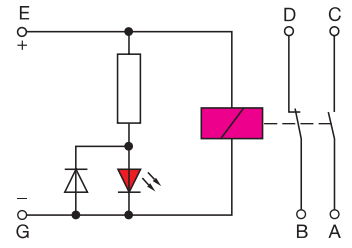
- Grey box
- Input protected against overvoltage
- Protected against leakage currents ≤ 2.2 mA
- In accordance with CNOMO specifications and two-wire static sensors compatible

Ambient temperature derating curve



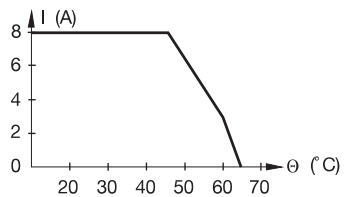
RB 131 24, 48 V DC

Spacing 18 mm .709"



- Grey box
- Input protected against overvoltage
- Protected against leakage currents ≤ 2.2 mA
- In accordance with CNOMO specifications and two-wire static sensors compatible

Ambient temperature derating curve



Part numbers

Type	P/N	Type	P/N	Type	P/N
RB 131 CV		RB 131 BCVR		RB 131	
24 V DC	0010 151.20	110 V AC	0010 153.22	24 V DC	0010 055.23
48 V DC	0010 152.21			48 V DC	0010 056.24

Approvals (Contact Entelec)



Characteristics

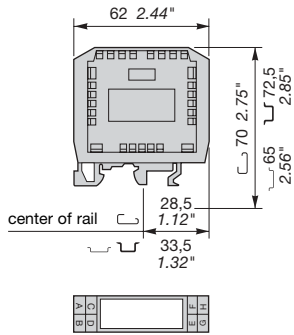
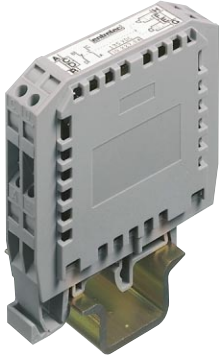
COIL		24 V DC		48 V DC		110 V AC		24 V DC		48 V DC	
Rated voltage	+ 20%, -15% on DC + 10%, -15% on AC					110 V AC					
Voltage switching range min. / max.		13.2 V / 26.4 V		32.4 V / 52.8 V		82 V / 121 V					
Power		0.8 W		1.2 W		4.4 VA		0.36 W		0.48 W	
Rated current		34 mA		24 mA		40 mA		15 mA		10 mA	
Drop-out voltage		5 V DC		12 V DC		20 V AC		2.4 V DC		4.8 V DC	
Permissible leakage current		1 mA				2.2 mA					
CONTACT											
Type		1 NC + 1 NO				1 NC + 1 NO				1 NO + 1 NC	
Voltage switching range min. / max.		10^{-3} V / 250 V				10^{-3} V / 250 V				10^{-3} V / 250 V	
Current switching range min. / max.		10^{-6} A / 5 A				10^{-6} A / 5 A				10^{-6} A / 8 A	
Load switching range AC1 min. / max.		10^{-6} VA / 1250 VA				10^{-6} VA / 1250 VA				10^{-6} VA / 2000 VA	
DC1 min. / max.		10^{-6} W / see curves, page 680				10^{-6} W / see curves, page 680				10^{-6} W / see curves, page 680	
Number of on-load operations		$\geq 10^6$ (1A cos $\varphi = 0.5$) $\geq 10^6$ (2A resistive)				$\geq 10^6$ (1A cos $\varphi = 0.5$) $\geq 10^6$ (2A resistive)				5 A / 100 W - 10^5 8 A / 2 KVA - 10^5	
Number of off-load operations		5×10^7				5×10^7				2×10^7	
Operating speed C		8 ms				8 ms				8 ms	
O		4 ms				4 ms				4 ms	
Bounce		1 ms				1 ms				1 ms	
Isolation, coil / contacts		2500 V rms				2500 V rms				2500 V rms	
Resistance to shock-wave, coil / contacts											
Isolation, contacts / contacts		≥ 1000 V rms				≥ 1000 V rms				1500 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 + 44°C				- 20°C to + 40°C				- 20°C to + 65°C	

Accessories, marking, wire size : see Accessories section.

Relay interfaces

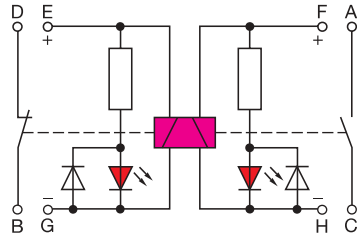
Relay modules
Series 10 000

DIN 1 - 3



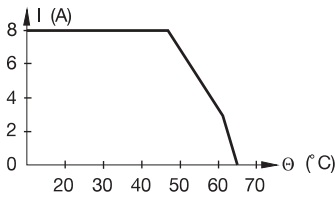
RB 310 Latching relay 24, 48 V DC

Spacing 18 mm .709"



- A pulse between E and G closes AC and opens DB
- A pulse between F and H opens AC and closes DB

Ambient temperature derating curve



Part numbers

Type	P/N
RB 310	
24 V DC	0010 063.23
48 V DC	0010 064.24

Approvals (Contact Entelec)



Characteristics

COIL

	24 V DC	48 V DC
Rated voltage + 20%, - 15% on DC	24 V DC	48 V DC
Power	0.36 W	0.48 W
Rated current	15 mA	10 mA
Drop-out voltage		

CONTACT

Type	1 NO + 1 NC
Voltage switching range min. / max.	10 ⁻³ V / 250 V
Current switching range min. / max.	10 ⁻⁶ A / 8 A
Load switching range AC1 min. / max.	10 ⁻⁶ VA / 2000 VA
DC1 min. / max.	10 ⁻⁶ W / see curves, page 680
Number of on-load operations	5 A / 150 W - 2 x 10 ⁵
Number of off-load operations	5 x 10 ⁷
Operating speed C	8 ms
O	4 ms
Bounce	1 ms
Isolation, coil / contacts	2500 V rms
Resistance to shock-wave, coil / contacts	
Isolation, contacts / contacts	1500 V rms

TEMPERATURE

Ambient temperature	
Storage	- 40°C to + 80°C
Operating temperature	- 20°C to + 65°C

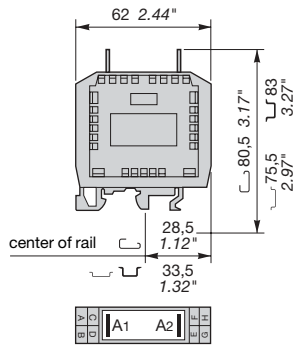
Accessories, marking, wire size : see Accessories section.

Relay interfaces

"Quick-connect" relay modules

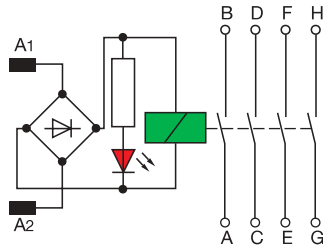
Series 10 000

 **DIN 1 - 3**



RB 114 A 24, 48 V AC/DC

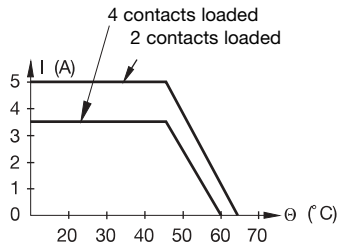
Spacing 18 mm .709"



A1, A2 : quick-connect tab on coil
6.3 x 0.8 mm.

- Sealed relay
- Gold layer on contacts

Ambient temperature derating curve



Part numbers

Type	P/N
RB 114 A	
24 V AC/DC	0010 126.17
48 V AC/DC	0010 127.10

Type P/N Type P/N

Approvals (Contact Entrelec)



Characteristics

COIL		24 V AC/DC	48 V AC/DC
Rated voltage	+ 15%, - 20% on DC ± 10% on AC		
Power		0.6 W / 0.7 VA	0.8 W / 0.9 VA
Rated current		26 mA	17 mA
Drop-out voltage		2.7 V AC/DC	4 V AC/DC
CONTACT			
Type		4NO	
Voltage switching range min. / max.		10 ⁻³ V / 250 V	
Current switching range min. / max.		10 ⁻⁷ A / 5 A	
Load switching range AC1 min. / max.		10 ⁻¹⁰ VA / 1000 VA	
DC1 min. / max.		10 ⁻¹⁰ W / see curves, page 680	
Number of on-load operations		5 A / 100 W - 10 ⁵	5 A / 1 kVA - 10 ⁵
Number of off-load operations		2 x 10 ⁸	
Operating speed	C	8 ms	
	O	3 ms	
Bounce		0.5 ms	
Isolation, coil / contacts		1500 V rms	
Resistance to shock-wave, coil / contacts			
Isolation, contacts / contacts		750 V rms	
TEMPERATURE			
Ambient temperature			
Storage		- 40°C to + 80°C	
Operating temperature		- 20°C to + 65°C	

Accessories, marking, wire size : see Accessories section.