

# Relay Interfaces

## R20000 relay modules



DIN 1-3

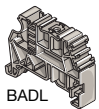
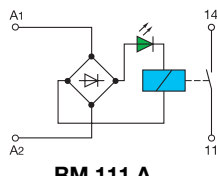
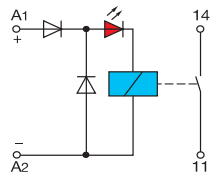
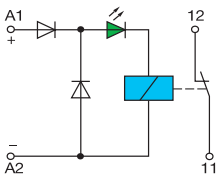
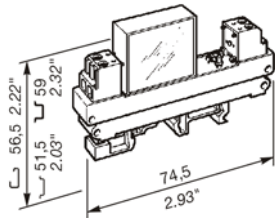
### Relay modules R20000



RM 101



RM 111...

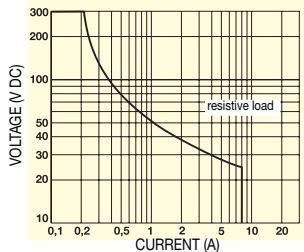


- Relay : 1 NC high level contact 10 mA to 8 A - 12,7 mm .500" spacing
- Relay : 1 NO high level contact 10 mA to 8 A - 12,7 mm .500" spacing

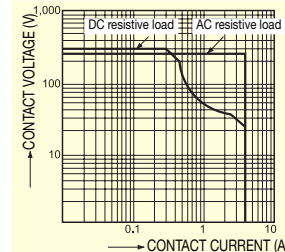
### Characteristics

Relay characteristics	RM 101	RM 111			RM 111 A
<b>COIL</b>					
Rated voltage +20%, -15% on DC +10%, -15% on AC	24 V DC	12 V DC	24 V DC	48 V DC	110 V DC
Frequency					50/60 Hz
Power	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W
Rated current	20 mA	40 mA	20 mA	10 mA	4.3 mA
Drop-out voltage	4.2 V DC	1.2 V DC	4.2 V DC	7.8 V DC	17.1 V DC
Permissible leakage current					14 V AC/DC
Status device	green LED	green LED	red LED		green LED
<b>CONTACT</b>					
Type	1 NC	1 NO			1 NO
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 / 5 A			10 mA / 8 A
Load switching range					
AC1 min. / max.	0.6 VA / 2000 VA	0.6VA/1250VA			0.6 VA / 2000 VA
DC1 min. / max.	0.6 W/see curve 1 hereunder	0.6 W/see curve 2 hereunder			0.6 W/see curve 1 hereunder
Number of on-load operations	2 x 10 <sup>6</sup> resistive				2 x 10 <sup>6</sup> resistive
Number of off-load operations		10 x 10 <sup>6</sup>			2 x 10 <sup>7</sup>
Operating speed					
F	4 ms	10 ms			4 ms
O	6 ms	5 ms			6 ms
Bounce	2 ms	2 ms			2 ms
Insulation coil / contact	2000 V RMS	2000 V RMS			2000 V RMS
Resistance to shock coil / contact	1.2 / 50 μs - 5 kV / 500 Ω	1.2/50μs-4kV/500Ω			1.2 / 50 μs - 5 kV / 500 Ω
Insulation contact / contact					
Ambient temperature storage	-40°C to +80°C				
operating	see derating curves				
<b>Other characteristics</b>					
Body material	orange				
Wire	Solid wire				
size	0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG				
Stranded wire	0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG				
Rated wire size	2.5 mm <sup>2</sup> / 12 AWG				
Wire stripping length	6 mm .236"				
Recommended screwdriver	3.5 mm .137"				
Protection	IP20 NEMA1				
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in				
Approvals	CE		CE	CE	CE
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6				

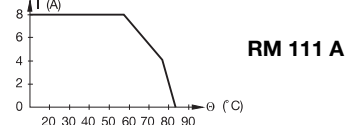
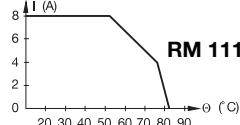
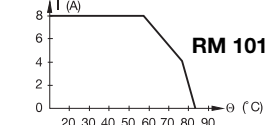
### Max. DC load breaking capacity : curve 1



### Max. DC load breaking capacity : curve 2



### Derating curves



### Order codes

Description	Type	Order P/N	Packaging Weight kg
Relay module 1 NC high level	RM 101 24 V DC	1SNA 020 239 R0200	1
Relay module 1 NO high level	RM 111 12 V DC	1SNA 020 035 R1100	1
Relay module 1 NO high level	RM 111 24 V DC	1SNA 020 032 R1600	1
Relay module 1 NO high level	RM 111 48 V DC	1SNA 020 033 R1700	1
Relay module 1 NO high level	RM 111 110 V DC	1SNA 020 034 R1000	1
Relay module 1 NO high level	RM 111 A 110 V AC/DC	1SNA 020 323 R2600	1

### Accessories

Description	Type	Order P/N	Packaging Weight kg
End section	BADL V0	1SNA 399 903 R0200	50
	BAM	1SNA 103 002 R2600	50
	BAM V0	1SNA 399 306 R0300	50
Lengthwise marker	RLV	1SNA 103 849 R0300	100
Pivoting marker-holder : quantity 20	PEF	1SNA 020 568 R0400	1
Marker	RC55	see markers	

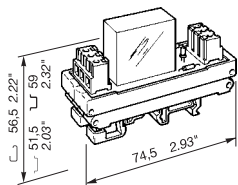
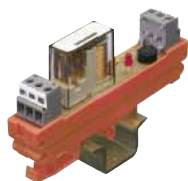
# Relay Interfaces

## R20000 relay modules

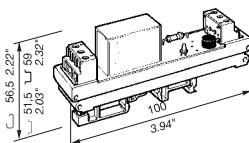


DIN 1-3

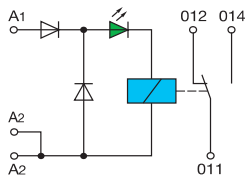
### Relay modules R20000



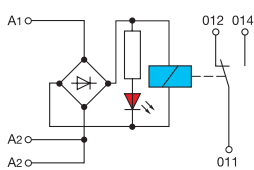
**RM 121 24 V DC**  
**RM 121 A 115 V AC/DC**  
**RM 121 A 220 V AC/DC**



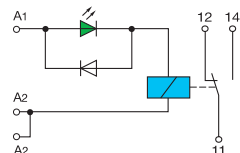
**RM 121 A 24 V DC**



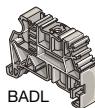
**RM 121 24 V DC**



**RM 121 A 24 V AC/DC**  
**RM 121 A 48 V AC/DC**



**RM 121 A 115 V AC/DC**  
**RM 121 A 220 V AC/DC**

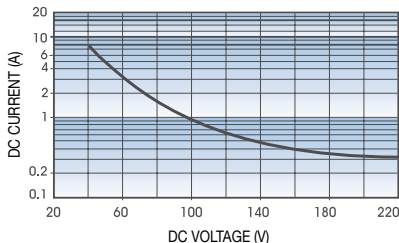


Relay : 1 SPDT high level contact 10 mA 6 A - 17,8 mm .701" or 22,5 mm .886" spacing

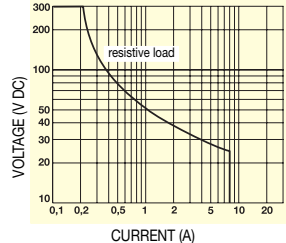
### Characteristics

Relay characteristics	RM 121	RM 121 A	RM 121 A
<b>COIL</b>			
Rated voltage +20%, -15% on DC +10%, -15% on AC	24 V DC	24 V AC/DC	48 V AC/DC
Frequency		50/60 Hz	50/60 Hz
Power	0.65 W	0.7 W	0.9 W
Rated current	26 mA	30 mA	18 mA
Drop-out voltage	4 V DC	3.6 V AC/DC	7.2 V AC/DC
Permissible leakage current			
Status device	green LED	red LED	green LED
<b>CONTACT</b>			
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 / 16 A	10 mA / 10 A	100 mA / 8 A
Load switching range			
AC1 min. / max.	0.6 VA / 4000 VA	0.6 VA / 2500 VA	0.6 VA / 2000 VA
DC1 min. / max.	0.6 W / see curve 1 hereunder	0.6 W / see curve 1 hereunder	0.6 W / see curve 1 hereunder
Number of on-load operations	2 x 10 <sup>5</sup> resistive	2 x 10 <sup>5</sup> resistive	2 x 10 <sup>5</sup>
Number of off-load operations	2 x 10 <sup>7</sup>	2 x 10 <sup>7</sup>	3 x 10 <sup>7</sup>
Operating speed			
F	7 ms	7 ms	10 ms
O	8 ms	4 ms	15 ms
Bounce	3 ms	3 ms	4 ms
Insulation coil / contact	4 000 V RMS	4 000 V RMS	2 500 V RMS
Resistance to shock coil / contact	1.2 / 50 µs - 5 kV / 500 Ω	1.2 / 50 µs - 5 kV / 500 Ω	1.2 / 50 µs - 5 kV / 500 Ω
Insulation contact / contact			1000 V RMS
Ambient temperature storage operating		-40°C to +80°C	see derating curves
<b>Other characteristics</b>			
Body material	orange	UL 94 V2	
Wire	Solid wire	0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG	
size	Stranded wire	0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG	
Rated wire size		2.5 mm <sup>2</sup> / 12 AWG	
Wire stripping length		6 mm .236"	
Recommended screwdriver		3.5 mm .137"	
Protection		IP20 NEMA1	
Recommended torque		0.4 - 0.6 Nm 3.5 - 5.3 lb.in	
Approvals		CE	
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6		

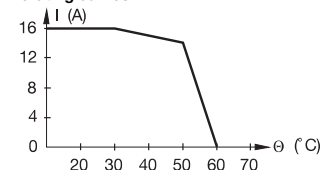
Max. DC load breaking capacity : curve 1



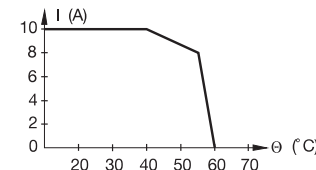
Max. DC load breaking capacity : curve 2



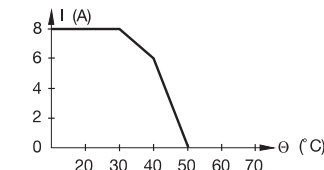
### Derating curves



**RM 121 24 V DC**



**RM 121 A 24 - 48 V AC/DC**



**RM 121 A 115 - 220 V AC/DC**

### Order codes

Description	Type	Order P/N	Packaging Weight kg
Relay module 1 SPDT high level 22.5 mm sp.	RM 121	24 V DC 1SNA 020 046 F2400	1
Relay module 1 SPDT high level 17.8 mm sp.	RM 121 A	24 V AC/DC 1SNA 020 042 F2000	1
Relay module 1 SPDT high level 17.8 mm sp.	RM 121 A	48 V AC/DC 1SNA 020 043 F2100	1
Relay module 1 SPDT high level 17.8 mm sp.	RM 121 A	115 V AC/DC 1SNA 020 044 F2200	1
Relay module 1 SPDT high level 17.8 mm sp.	RM 121 A	220 V AC/DC 1SNA 020 045 F2300	1

### Accessories

End section	BADL V0	1SNA 399 903 F0200	50
	BAM	1SNA 103 002 F2600	50
	BAM V0	1SNA 399 306 F0300	50
Lengthwise marker	RLV	1SNA 103 849 F0300	100
Pivoting marker-holder : quantity 20	PEF	1SNA 020 568 F0400	1
Marker	RC55	see markers	

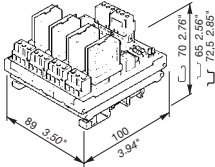
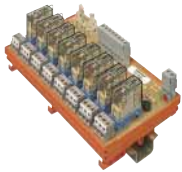
# Relay Interfaces



## 4, 8 and 16 relay modules R20000

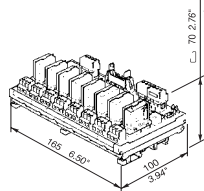
DIN 1-3

### Relay modules R20000



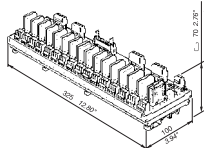
#### RM 421 A

Inputs : connection using pluggable connectors



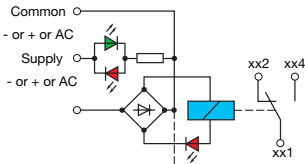
#### RM 821 A

10 point socket with extractors  
Inputs : 24 and 48 V module connection using HE 10/10 connector mounted in parallel with pluggable connectors.  
110 et 220 V module connection using pluggable connectors only.



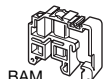
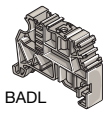
#### RM 1621 A

20 point socket with extractors  
Inputs : 24 and 48 V module connection using HE 10/20 connector mounted in parallel with pluggable connectors.  
110 et 220 V module connection using pluggable connectors only.



#### RM 421 A - RM 821 A - RM 1621 A

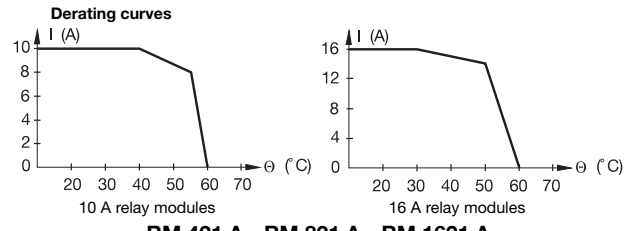
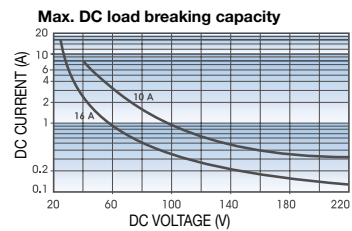
- Red diode R lighted when + on common  
- Green diode V lighted when - on common  
- Red diode R, green diode V both lighted when alternative



- 4 relays : 1 SPDT high level contact from 10 mA to 16 A - 89 mm 3.50" spacing
- 8 relays : 1 SPDT high level contact from 10 mA to 16 A - 165 mm 6.50" spacing
- 16 relays : 1 SPDT high level contact from 10 mA to 16 A - 325 mm 12.80" spacing

### Characteristics

Relay characteristics	RM 421 A	RM 821 A	RM 1621 A
Modules equipped with relays	16 Amps	10 Amps	
<b>COIL</b>			
Rated voltage +20%, -15% on DC +10%, -15% on AC	24 V AC/DC	48 V AC/DC	110 V AC/DC 220 V AC/DC
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Power	1.32 W	1.32 W	1.32 W
Rated current	50 AC/56 DC	24 AC/28 DC	11 AC/12 DC 6 AC/65 DC
Drop-out voltage	6 AC/5.4 DC	8.7 AC/7.8 DC	15.5 AC/14 DC 27.8 AC/25 DC
Permissible leakage current			
Status device	see description on left column		
<b>CONTACT</b>			
Type	1 SPDT	1 SPDT	
Voltage switching range min./max.	12 V / 250 V AC		
Current switching range min./max.	10 mA / 16 A	10 mA / 10 A	
Load switching range			
AC1 min. / max. DC1 min. / max.	0.6 VA / 4000 VA 0.6 W / see curve hereunder	0.6 VA / 2500 VA 0.6 W / see curve hereunder	
Number of on-load operations	2 x 10 <sup>6</sup> resistive	2 x 10 <sup>6</sup> resistive	
Number of off-load operations	2 x 10 <sup>7</sup>	2 x 10 <sup>7</sup>	
Operating speed	5 ms	5 ms	
	5 ms	5 ms	
Bounce	4 ms	4 ms	
Insulation coil / contact	4 000 V RMS	4 000 V RMS	
Resistance to shock coil / contact	1.2 / 50 µs - 5 000 V / 500 Ω	1.2 / 50 µs - 5 000 V / 500 Ω	
Insulation contact / contact	2 500 V RMS	2 500 V RMS	
Ambient temperature storage operating	-40°C to +80°C see derating curves		
<b>Other characteristics</b>			
Body material	UL 94 V2		
Wire	Solid wire		
size	0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG		
Stranded wire	0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG		
Rated wire size	2.5 mm <sup>2</sup> / 12 AWG		
Wire stripping length	6 mm .236"		
Recommended screwdriver	3.5 mm .137"		
Protection	IP20 NEMA1		
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in		
Approvals	(RM 421 A 24 and 110 V AC/DC - RM 821 A 24 and 110 V AC/DC - RM 1621 A 24 and 110 V AC/DC)		
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6		



### Order codes

Description	Type	Order P/N	Packaging Weight kg
Pluggable 4 relay module 1SPDT high level 16A	RM 421 A	24 V AC/DC 1SNA 020 054 R2400	1
Pluggable 4 relay module 1SPDT high level 10A	RM 421 A	48 V AC/DC 1SNA 020 051 R2100	1
Pluggable 4 relay module 1SPDT high level 10A	RM 421 A	110 V AC/DC 1SNA 020 052 R2200	1
Pluggable 4 relay module 1SPDT high level 10A	RM 421 A	220 V AC/DC 1SNA 020 053 R2300	1
Pluggable 8 relay module 1SPDT high level 16A	RM 821 A	24 V AC/DC 1SNA 020 070 R0000	1
Pluggable 8 relay module 1SPDT high level 10A	RM 821 A	48 V AC/DC 1SNA 020 067 R2100	1
Pluggable 8 relay module 1SPDT high level 10A	RM 821 A	110 V AC/DC 1SNA 020 068 R0200	1
Pluggable 8 relay module 1SPDT high level 10A	RM 821 A	220 V AC/DC 1SNA 020 069 R0300	1
Pluggable 16 relay module 1SPDT high level 16A	RM 1621 A	24 V AC/DC 1SNA 020 086 R1500	1
Pluggable 16 relay module 1SPDT high level 10A	RM 1621 A	48 V AC/DC 1SNA 020 083 R1200	1
Pluggable 16 relay module 1SPDT high level 10A	RM 1621 A	110 V AC/DC 1SNA 020 084 R1300	1
Pluggable 16 relay module 1SPDT high level 10A	RM 1621 A	220 V AC/DC 1SNA 020 085 R1400	1

### Accessories

End section	Type	Order P/N	Packaging Weight kg	
12 V relay for 24 V 16 A modules 24 V relay for 48 V 10 A modules 60 V relay for 110 V 10 A modules 110 V relay for 220 V 10 A modules	BADL V0	1SNA 399 903 R0200	50	
	BAM	1SNA 103 002 R2600	50	
	BAM V0	1SNA 399 306 R0300	50	
Lengthwise marker Pivoting marker-holder : quantity 20	RLV	1SNA 103 849 R0300	100	
	PEF	1SNA 020 568 R0400	1	
	Marker	RC55	see markers	

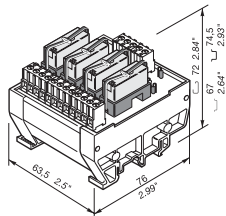
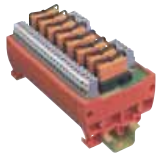
# Relay Interfaces



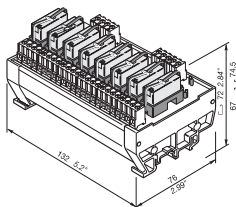
## 4, 8 and 16 relay modules R20000

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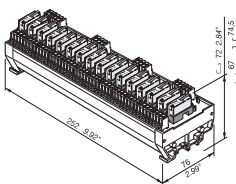
### Relay modules R20000



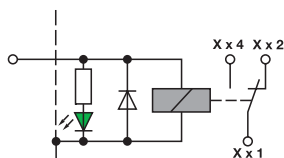
RM 421...



RM 821...

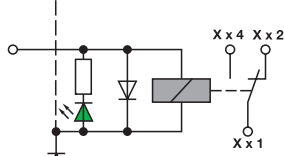


RM 1621...



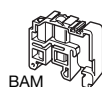
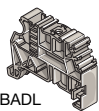
RM 421 N  
RM 821 N  
RM 1621 N

Negative common



RM 421 P  
RM 821 P  
RM 1621 P

Positive common

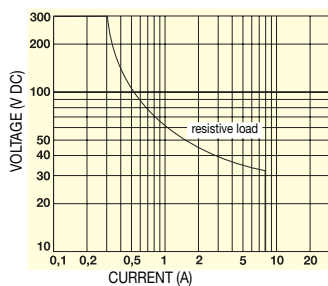


- 4 relays : 1 SPDT low level contact 1 mA to 8 A N or P version - 63,5 mm 2.5" spacing
- 8 relays : 1 SPDT low level contact 1 mA to 8 A N or P version - 132 mm 5.2" spacing
- 16 relays : 1 SPDT low level contact 1 mA to 8 A N or P version - 252 mm 10.0" spacing

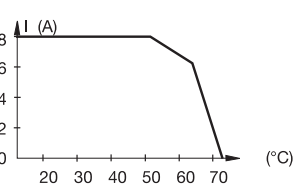
### Characteristics

Relay characteristics	RM 421 N	RM 421 P	RM 821 N	RM 821 P	RM 1621 N	RM 1621 P
<b>COIL</b>						
Rated voltage +20%, -15% on DC +10%, -15% on AC				24 V DC		
Frequency						
Power				0.36 W		
Rated current				15 mA		
Drop-out voltage				2.4 V		
Permissible leakage current						
Status device				green LED		
<b>CONTACT</b>						
Type				1 SPDT		
Voltage switching range min./max.				5 V / 250 V		
Current switching range min./max.				1 mA / 8 A		
Load switching range						
AC1 min. / max.				5 mW / 2 000 VA		
DC1 min. / max.				5 mW / see curve hereunder		
Number of on-load operations				10 <sup>8</sup> resistive		
Number of off-load operations				30 x 10 <sup>6</sup>		
Operating speed						
F				7 ms		
O				3 ms		
Bounce				1 ms		
Insulation coil / contact				5 000 V RMS		
Resistance to shock coil / contact						
Insulation contact / contact				2 500 V RMS		
Ambient temperature				-40°C to +80°C		
operating				see derating curves		
<b>Other characteristics</b>						
Body material				orange		
Wire				Solid wire		
size				Stranded wire		
Rated wire size				0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG		
Wire stripping length				0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG		
Recommended screwdriver				2.5 mm <sup>2</sup> / 12 AWG		
Protection				6 mm .236"		
Recommended torque				3.5 mm .137"		
Approvals				IP20 NEMA1		
				0.4 - 0.6 Nm 3.5 - 5.3 lb.in		
				CE		
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6					

### Max. DC load breaking capacity



### Derating curves



RM 421 N - RM 421 P  
RM 821 N - RM 821 P  
RM 1621 N - RM 1621 P

### Order codes

Description	Type	Order P/N	Packaging Weight kg
4 relay module 1 SPDT pluggable low level(1)	RM 421 N	24 V DC 1SNA 020 604 R0100	1
4 relay module 1 SPDT pluggable low level(2)	RM 421 P	24 V DC 1SNA 020 605 R0200	1
8 relay module 1 SPDT pluggable low level(1)	RM 821 N	24 V DC 1SNA 020 112 R1300	1
8 relay module 1 SPDT pluggable low level(2)	RM 821 P	24 V DC 1SNA 020 114 R1500	1
16 relay module 1 SPDT pluggable low level(1)	RM 1621 N	24 V DC 1SNA 020 113 R1400	1
16 relay module 1 SPDT pluggable low level(2)	RM 1621 P	24 V DC 1SNA 020 115 R1600	1

(1) Negative common - (2) Positive common

### Accessories

Accessories	Order P/N	Packaging Weight kg
End section	BADL V0 1SNA 399 903 R0200	50
	BAM 1SNA 103 002 R2600	50
	BAM V0 1SNA 399 306 R0300	50
Schrack 24 V relay	1SNA 179 208 R2400	10
Lengthwise marker	RLV 1SNA 103 849 R0300	100
Pivoting marker-holder : quantity 20	PEF 1SNA 020 568 R0400	1
Marker	RC55 see markers	

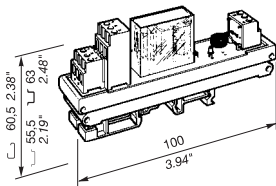
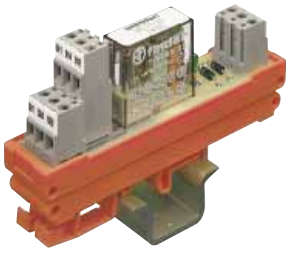
# Relay Interfaces

## Relay modules R20000

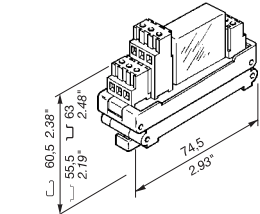


DIN 1-3

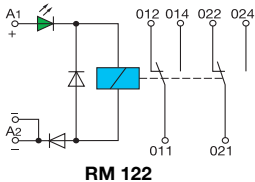
### Relay modules R20000



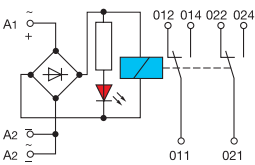
RM 122 A - 24/48 V AC/DC  
RM 122 - 24 V DC



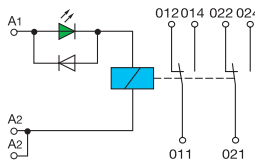
RM 122 A - 115/220 V AC/DC



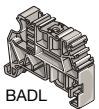
RM 122



RM 122 A - 24/48 V AC/DC



RM 122 A - 115/220 V AC/DC

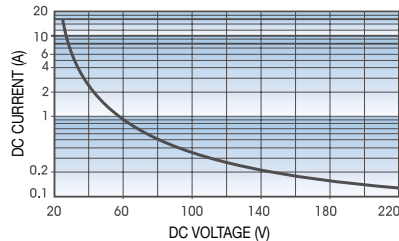


Relay : 1 DPDT high level contact from 10 mA to 8 A - 23 mm .906" spacing

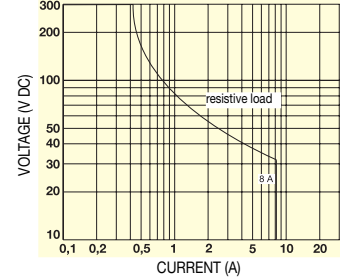
### Characteristics

Relay characteristics	RM 122	RM 122 A	RM 122 A
<b>COIL</b>			
Rated voltage +20%, -15% on DC +10%, -15% on AC	24 V DC	24 V AC/DC	48 V AC/DC
Frequency		50/60 Hz	50/60 Hz
Power	0.6 W	0.7 W	0.9 W
Rated current	25 mA	30 mA	18 mA
Drop-out voltage	5.6 V DC	3.6 V AC/DC	7.2 V AC/DC
Permissible leakage current			
Status device	green LED	red LED	green LED
<b>CONTACT</b>			
Type	1 DPDT		
Voltage switching range min./max.	12 V / 250 V		
Current switching range min./max.	10 mA / 5 A	10 mA / 5 A	10 mA / 8 A
Load switching range			
AC1 min. / max.	0.6 VA / 1250 VA	0.6 VA / 1250 VA	0.6 VA / 2000 VA
DC1 min. / max.	0.6 W / see curve 1	0.6 W / see curve 1	0.6 W / see curve 2
Number of on-load operations	2 x 10 <sup>5</sup> resistive	2 x 10 <sup>5</sup> resistive	2 x 10 <sup>5</sup> resistive
Number of off-load operations	10 <sup>7</sup>	10 <sup>7</sup>	3 x 10 <sup>7</sup>
Operating speed			
F	7 ms	7 ms	10 ms
O	4 ms	4 ms	15 ms
Bounce	3 ms	3 ms	4 ms
Insulation coil / contact	4000 V RMS	4000 V RMS	3000 V RMS
Resistance to shock coil / contact			
Insulation contact / contact	1500 V RMS	2000 V RMS	1000 V RMS
Ambient temperature storage	-40°C to +80°C		
operating	see derating curves		
<b>Other characteristics</b>			
Body material	orange		
Wire	Solid wire		
size	Stranded wire		
Rated wire size	2.5 mm <sup>2</sup> / 12 AWG		
Wire stripping length	7 mm .276"		
Recommended screwdriver	3.5 mm .137"		
Protection	IP20 NEMA1		
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in		
Approvals	CE		
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6		

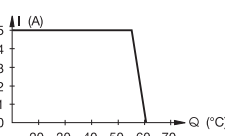
Max. DC load breaking capacity : curve 1



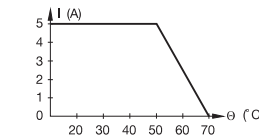
Max. DC load breaking capacity : curve 2



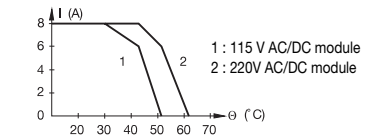
### Derating curves



RM 122



RM 122 A - 24/48 V AC/DC



RM 122 A - 115/220 V AC/DC

### Order codes

Description	Type	Order P/N	Packaging Weight kg
Relay module 1 DPDT high level	RM 122 24 V DC	1SNA 020 139 R2600	1
Relay module 1 DPDT high level	RM 122 A 24 V AC/DC	1SNA 020 106 R2600	1
Relay module 1 DPDT high level	RM 122 A 48 V AC/DC	1SNA 020 107 R2700	1
Relay module 1 DPDT high level	RM 122 A 115 V AC/DC	1SNA 020 141 R2000	1
Relay module 1 DPDT high level	RM 122 A 220 V AC/DC	1SNA 020 142 R2100	1

### Accessories

End section	BADL V0	1SNA 399 903 R0200	50
	BAM	1SNA 103 002 R2600	50
	BAM V0	1SNA 399 306 R0300	50
Lengthwise marker	RLV	1SNA 103 849 R0300	100
Marker	RC55	see markers	

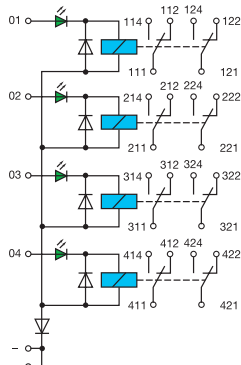
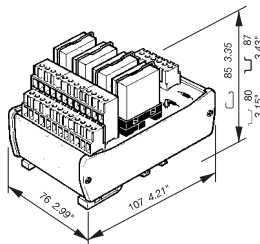
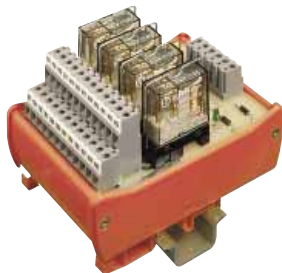
# Relay Interfaces

## 4 relay modules R20000

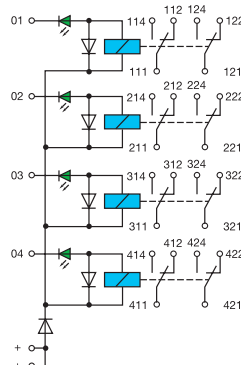


DIN 1-3

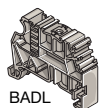
Relay modules R20000



RM 422 N



RM 422 P



BADL



BAM



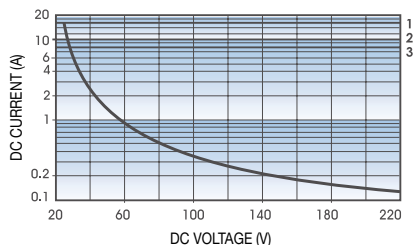
RLV

4 relays : 1 DPDT high level contact from 10 mA to 5 A N or P version - 76 mm 3" spacing

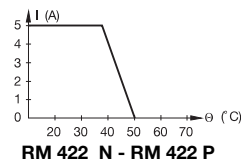
### Characteristics

Relay characteristics	RM 422 N - RM 422 P	
	RM 422 N	RM 422 P
<b>COIL</b>		
Rated voltage +20%, -15% on DC +10%, -15% on AC	24 V DC	48 V DC
Frequency		
Power	0.6 W	0.6 W
Rated current	24 mA	13 mA
Drop-out voltage	5.6 V DC	8 V DC
Permissible leakage current		
Status device	green LED	
<b>CONTACT</b>		
Type	1 DPDT	
Voltage switching range min./max.	12 V / 250 V	
Current switching range min./max.	10 mA / 5 A	
Load switching range		
AC1 min. / max.	0.6 VA / 1250 VA	
DC1 min. / max.	0.6 W / see curve	
Number of on-load operations	10 <sup>5</sup>	
Number of off-load operations	2 x 10 <sup>7</sup>	
Operating speed	F	7 ms
	O	4 ms
Bounce	3 ms	
Insulation coil / contact	4000 V RMS	
Resistance to shock coil / contact		
Insulation contact / contact	1500 V RMS	
Ambient temperature storage	-40°C to +80°C	
operating	see derating curves	
<b>Other characteristics</b>		
Body material	orange	
Wire	UL 94 V2	
Wire size	Solid wire	
size	Stranded wire	
Rated wire size	0 - 4 mm <sup>2</sup> / 20 - 12 AWG	
Wire stripping length	0 - 2.5 mm <sup>2</sup> / 20 - 12 AWG	
Recommended screwdriver	2.5 mm <sup>2</sup> / 12 AWG	
Protection	7 mm .276"	
Recommended torque	3.5 mm .137"	
Approvals	IP20 NEMA1	
	0.4 - 0.6 Nm 3.5 - 5.3 lb.in	
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6	

Max. DC load breaking capacity



Derating curves



### Order codes

Description	Type	Order P/N	Packaging Weight kg	
4 relay module 1 DPDT high level negative common	RM 422 N	24 V DC	1SNA 020 144 R2300	1
4 relay module 1 DPDT high level positive common	RM 422 P	24 V DC	1SNA 020 146 R2500	1
4 relay module 1 DPDT high level negative common	RM 422 N	48 V DC	1SNA 020 145 R2400	1
4 relay module 1 DPDT high level positive common	RM 422 P	48 V DC	1SNA 020 147 R2600	1

### Accessories

End section	BADL V0	1SNA 399 903 F0200	50
	BAM	1SNA 103 002 R2600	50
	BAM V0	1SNA 399 306 F0300	50
24 V relay for 24 V module		1SNA 174 855 R2700	10
	48 V relay for 48 V module		1SNA 174 856 R2000
Lengthwise marker	RLV	1SNA 103 849 F0300	100
Marker	RC55	see markers	

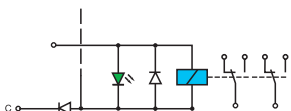
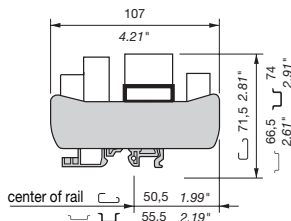
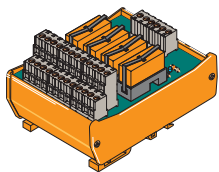
# Relay Interfaces



4, 8 and 16 relay modules R20000

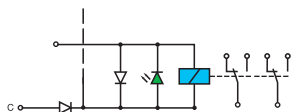
DIN 1-3

## Relay modules R20000



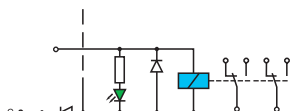
**RM 422 N**

Negative common



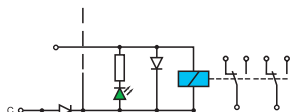
**RM 422 P**

Positive common



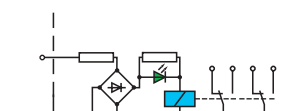
**RM 822 N**  
**RM 1622 N**

Negative common



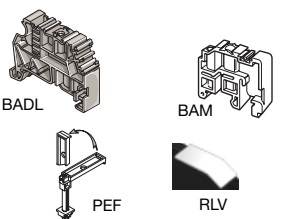
**RM 822 P**  
**RM 1622 P**

Positive common



**RM 822 A**  
**RM 1622 A**

Negative common



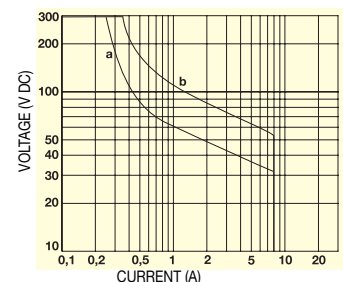
- 4 relays : 1 DPDT high level contact from 100 mA to 4 A - 76 mm 2.99" spacing
- 8 relays : 1 DPDT high level contact from 100 mA to 4 A - 159 mm 6.26" spacing
- 16 relays : 1 DPDT high level contact from 100 mA to 4 A - 300 mm 11.81" spacing

### Characteristics

Relay characteristics	RM 422 N	RM 422 P	RM 822 N	RM 822 P	RM 1622 N	RM 1622 P	RM 822 A	RM 1622 A	
<b>COIL</b>									
Rated voltage +20%, -15% on DC +10%, -15% on AC	24 V DC						110 V AC/DC		
Frequency							50/60 Hz		
Power	0.5 W						0.77 W		
Rated current	21 mA						7 mA		
Drop-out voltage	2.4 V DC						15 V		
Permissible leakage current									
Status device	green LED								
<b>CONTACT</b>									
Type	2 DPDT								
Voltage switching range min./max.	12 V / 250 V AC								
Current switching range min./max.	100 mA / 4 A								
Load switching range	AC1 min. / max. DC1 min. / max.						1.2 VA / 1 000 VA 12 W / see curve hereunder		
Number of on-load operations	2 x 10 <sup>6</sup>								
Number of off-load operations	30 x 10 <sup>6</sup>								
Operating speed	F	9 ms						7 ms (DC) / 12 ms (AC)	
	O	12 ms						12 ms	
Bounce	2 ms								
Insulation coil / contact	3.5 kV								
Resistance to shock coil / contact	10 kV								
Insulation contact / contact	2 kV								
Ambient temperature storage operating	-40°C to +80°C see derating curves								
<b>Other characteristics</b>									
Body material	orange						UL 94 V2		
Wire	Solid wire						0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG		
size	Stranded wire						0 - 2.5 mm <sup>2</sup> / 20 - 14 AWG		
Rated wire size							2.5 mm <sup>2</sup> / 12 AWG		
Wire stripping length							6 mm .236"		
Recommended screwdriver							3.5 mm .137"		
Protection							IP20 NEMA1		
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in								
Approvals							CE		

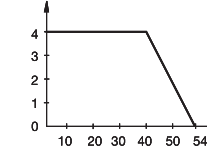
Reference standards CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6

### Max. DC load breaking capacity

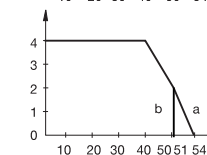


a : 1 contact  
b : 2 serial contacts  
2 pole resistive load

### Derating curves



**RM 422 N**  
**RM 422 P**



**RM 822 N - RM 1622 N**  
**RM 822 P - RM 1622 P**  
**RM 822 A - RM 1622 A**

a : 24 V DC  
b : 110 V AC/DC

### Order codes

Description	Type	Order P/N	Packaging Weight kg
4 relay module 1 DPDT pluggable high level(1)	RM 422 N	24 V DC 1SNA 020 672 R0400	1
4 relay module 1 DPDT pluggable high level(2)	RM 422 P	24 V DC 1SNA 020 673 R0500	1
8 relay module 1 DPDT pluggable high level(1)	RM 822 N	24 V DC 1SNA 020 149 R0000	1
8 relay module 1 DPDT pluggable high level(2)	RM 822 P	24 V DC 1SNA 020 492 R11000	1
8 relay module 1 DPDT pluggable high level	RM 822 A	110 V AC/DC 1SNA 020 150 R05000	1
16 relay module 1 DPDT pluggable high level(1)	RM 1622 N	24 V DC 1SNA 020 151 R22000	1
16 relay module 1 DPDT pluggable high level(2)	RM 1622 P	24 V DC 1SNA 020 493 R12000	1
16 relay module 1 DPDT pluggable high level	RM 1622 A	110 V AC/DC 1SNA 020 152 R23000	1

(1) Negative common - (2) Positive common

### Accessories

End section	Type	Order P/N	Packaging Weight kg
BADL	BADL V0	1SNA 399 903 R02000	50
BAM	BAM	1SNA 103 002 R26000	50
BAM V0	BAM V0	1SNA 399 306 R03000	50
Schrack 24 V relay for 24 V module		1SNA 210 021 R26000	10
Schrack 60 V relay for 110 V module		1SNA 210 022 R27000	10
Lengthwise marker	RLV	1SNA 103 849 R03000	100
Pivoting marker-holder : quantity 20	PEF	1SNA 020 568 R04000	1
Marker	RC55	see markers	