

Power PCB Relay RPII/1

- 1 pole 8/12/16A, 1 form C (CO) or 1 form A (NO) contact
- 4kV/8mm coil-contact
- Pinning 3.5 or 5mm (8/12A) and 5mm (16A)
- RoHS compliant (Directive 2011/65/EC)

Typical applications
Power supplies, domestic appliances, heating control, installation



Approvals

VDE Cert. No. 40025448
UL E214025 (only for AgNi versions)
Technical data of approved types on request

Contact Data	8A	12A	16A
Contact arrangement	1 form C (CO) or 1 form A (NO)		
Rated voltage	250VAC		
Max. switching voltage	400VAC		
Rated current	8A	12A	16A
Limiting making current, max. 4s, df 10%	16A	20A	25A
Breaking capacity max.	2000VA	3000VA	4000VA
Contact material	AgNi0.15	AgNi 90/10	AgNi 90/10 AgSnO ₂
Frequency of operation, with/without load	600/36000h ⁻¹		
Operate/release time typ.	8/2ms		
Bounce time typ., form A/form B	2/4ms		

Contact ratings

Type	Contact	Load	Cycles
IEC61810			
RP314/RP714	A (NO)	16A, 250 VAC, resistive, 35°C	100x10 ³
RP314 DC-coil	A (NO)	6A, 250 VAC, cosφ = 0,4, 35°C	250x10 ³
RP31L DC-coil	C (CO)	16A, 250 VAC, resistive, 35°C	10x10 ³
RP414 DC-coil	A (NO)	12A, 250 VAC, resistive, 70°C	100x10 ³
RP414 REM	A (NO)	12A, 250 VAC, resistive, 35°C	100x10 ³
RP41N/RP814	C (CO)	12A, 250 VAC, resistive, 35°C	10x10 ³
RP411/RP412	A (NO)	8A, 250 VAC, resistive, 35°C	100x10 ³
RP411/RP412	C (CO)	8A, 250 VAC, resistive, 35°C	10x10 ³

UL61810-1 (formerly UL508)

RP411/RP412	C(CO)	8A, 250VAC, general purpose, 40°C	6x10 ³
RP314/RP714	C(CO)	16A, 250VAC, general purpose, 40°C	6x10 ³
RP314/RP714	C(CO)	250VAC, 1.5HP, 40°C	6x10 ³
RP*14/RP*1N	C(CO)	12A, 250VAC, general purpose, 70°C	6x10 ³
RP**4/RP**N	A(NO)	10A, 250VAC, resistive, 70°C	100x10 ³

Mechanical endurance

- DC-coil version: >20x10⁶ operations
- REM/bistable version: >1x10⁶ operations

Coil Data

Coil voltage range	5 to 110VDC
Operative range, IEC 61810	2

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
005	5	3.5	0.5	54	500
006	6	4.2	0.6	68	500
012	12	8.4	1.2	270	500
024	24	16.8	2.4	1100 ¹⁾	500
048	48	33.6	4.8	4400 ¹⁾	500
060	60	42.0	6.0	6540 ¹⁾	500
110	110	77.0	11.0	23100 ¹⁾	500

1) Coil resistance ±15%.

All figures are given for coil without pre-energization, at ambient temperature +20°C. Other coil voltages on request.

Coil versions, REM I (1 coil bistable/remance)

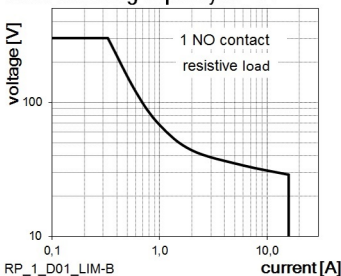
Coil code	Rated voltage VDC	Resistance Ω±15%	Magnetisation range MIN./ Vdc	MAX./Vdc	Demagnetisation range MIN./ Vdc	MAX./Vdc
A12	12	115	9	18	3	4.8
A24	24	460	18	36	6	9.6
A48	48	1748	36	72	12	19.2

Coil versions, REM II (2 coil bistable/remance)

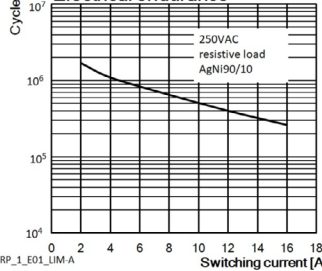
Coil code	Rated voltage VDC	Resistance Ω±15%	Magnetisation range MIN./ Vdc	MAX./Vdc	Demagnetisation range MIN./ Vdc	MAX./Vdc
F05	5	20	3.7	7.5	3.7	6
F12	12	105	9	18	9	14.4
F24	24	460	18	36	18	28.8

All figures are given for coil without pre-energization, at ambient temperature +20°C. Other coil voltages on request.

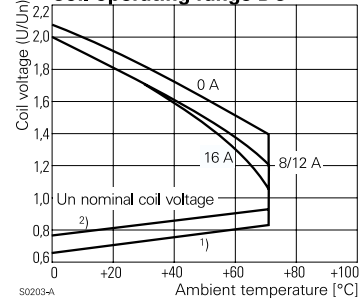
Max. breaking capacity RPII/1



Electrical endurance



Coil operating range DC



Power PCB Relay RPII/1 (Continued)

Insulation Data

Initial dielectric strength	
between open contacts	1000V _{rms}
between contact and coil	4000V _{rms}
Clearance/creepage	
between contact and coil	≥8/8mm
Material group of insulation parts	IIIa

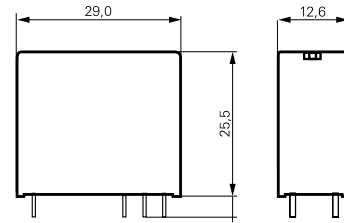
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

Ambient temperature	-40 to +70°C
Category of environmental protection	IEC 61810
	RTII - flux proof, RTIII - wash tight
Vibration resistance (functional), form A/form B, 30 to 300Hz	10/2g
Shock resistance (destructive)	100g
Terminal type	PCB-THT
Weight	18g
Resistance to soldering heat THT, IEC 60068-2-20	
flux proof version	270°C/10s
wash tight version	260°C/5s
Packaging/unit	tube/20 pcs., box/500 pcs.

Dimensions

Dimensions in mm

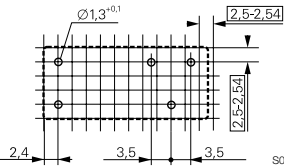


Monostable and REM I (REM II version has 3 coil terminals)

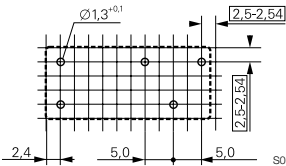
PCB layout / terminal assignment

Bottom view on solder pins
Dimensions in mm

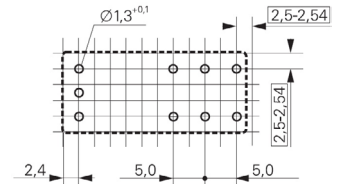
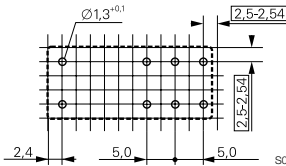
8/12A, pinning 3.5 mm



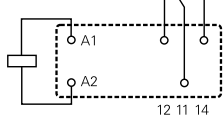
8/12A, pinning 5 mm



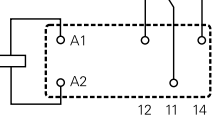
16A, pinning 5 mm



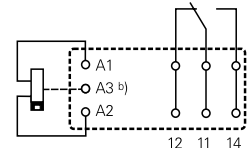
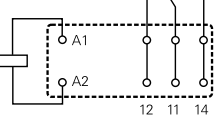
1 form C (1 CO)



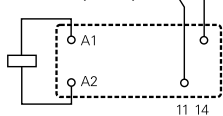
1 form C (1 CO)



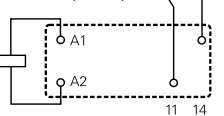
1 form C (1 CO)



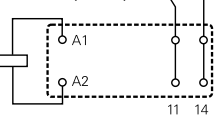
1 form A (1 NO)



1 form A (1 NO)



1 form A (1 NO)



a)

a) Indicated contact position during or after coil energization with reset voltage.

b) For 2 coil version only

A2-A3 is set coil,
A1-A3 is reset coil,
A1&A2 always same polarity,
A3 opposite polarity.

Direction of current not important as long as polarity is correct

Product code structure

Typical product code **RP 3 1 4 024**

Type	RP Power PCB Relay RPII/1			
Version	3 16A, flux proof	7 16A, wash tight	1	4
	4 8/12A, flux proof	8 8/12A, wash tight		
Contact arrangement	1 1 form C contact (1 CO)	3 1 form A contact (1 NO)	5 1 form B contact (1 NC)	
Contact material and pinning	1 AgNi0.15, 8A, pinning 5mm	0 Discontinued: AgCdO, pinning 5mm ²⁾	4 AgNi 90/10, pinning 5mm	N AgNi 90/10, 12A, pinning 3,5mm
	2 AgNi0.15, 8A, pinning 3.5mm	8 Discontinued: AgCdO, 8/12A, pinning 3.5mm ²⁾		
	L AgSnO ₂ , pinning 5mm			
Coil	Coil code: please refer to coil versions table			

2) AgCdO contacts are discontinued and replaced with AgNi contacts (see PCN E-18-003947)

Power PCB Relay RPII/1 (Continued)

Product Code	Version	Contacts	Cont. Material	Pinning	Coil Version	Coil	Part Number															
RP314005	16A, flux proof	1 form C (CO) contact	AgNi 90/10	5 mm	monostable	5VDC	8-1415546-4															
RP314006						6VDC	8-1415546-5															
RP314010						10VDC	8-1415546-6															
RP314012						12VDC	8-1415546-7															
RP314024						24VDC	8-1415546-8															
RP314048						48VDC	8-1415546-9															
RP314110						110VDC	9-1415546-0															
RP314F12						REM II	12VDC	8-1415546-1														
RP314F24							24VDC	8-1415546-2														
RP31L012						8A, flux proof	1 form A (NO) contact	AgSnO ₂		monostable	12VDC	7-1415071-1										
RP31L024											24VDC	8-1415071-1										
RP31L048											48VDC	2-1415044-1										
RP334012											1 form C (CO) contact	AgNi 90/10				12VDC	9-1415546-1					
RP334024																24VDC	9-1415546-2					
RP334048	48VDC	9-1415546-4																				
RP354012	1 form B (NC) contact	12VDC	9-1415546-5																			
RP411012	12A, flux proof	1 form C (CO) contact	AgNi0.15													12VDC	9-1393230-4					
RP411024																24VDC	9-1393230-5					
RP411048																48VDC	9-1393230-6					
RP411060																60VDC	9-1393230-7					
RP411110																110VDC	9-1393230-8					
RP431012																16A, wash tight	1 form A (NO) contact				12VDC	4-1393231-5
RP412012																	1 form C (CO) contact				3,5 mm	12VDC
RP412024								24VDC	1-1393231-2													
RP412F12								REM II	24VDC	1393231-6												
RP414012						12A, flux proof	1 form C (CO) contact	AgNi 90/10	5 mm	monostable							12VDC				1415547-4	
RP414024											24VDC	1415547-5										
RP414A24											REM I	24VDC	9-1415546-6									
RP414F24											REM II	24VDC	9-1415546-7									
RP41N024											1 form A (NO) contact			3,5 mm	monostable		24VDC				1-1415547-7	
RP434024	5 mm	24VDC	9-1415546-3																			
RP43N024	3,5 mm	24VDC	7-1415547-0																			
RP45N024	1 form B (NC) contact	24VDC	7-1415547-1																			
RP714006	16A, wash tight	1 form C (CO) contact		5 mm													6VDC				9-1415546-8	
RP714012																	12VDC				9-1415546-9	
RP714024																24VDC	1415547-1					
RP714048																48VDC	1415547-2					
RP734012																1 form A (NO) contact					12VDC	1415547-6
RP734020																					20VDC	1415547-7
RP734024						24VDC	1415547-8															
RP734036						36VDC	1415547-9															
RP734A12						REM I	12VDC	1415547-3														
RP814012						12A, wash tight	1 form C (CO) contact			monostable											12VDC	1-1415547-0
RP814024											24VDC	1-1415547-1										
RP814048											48VDC	1-1415547-2										

Note. This list represents the most common types and does not show all variants covered by this datasheet. Other types on request.