

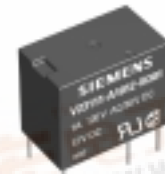
**PCB relay for DC operation,  
neutral, monostable**

**Features**

- Miniaturized universal relay for a wide variety of switching functions
- Optimized for a minimum space on the printed circuit board
- Extremely compact structure
- Low coil power requirement for IC compatibility

**Typical applications**

- Communication peripherals
- Telecommunications terminal and accessories
- Control equipment
- Security applications
- Video recording equipment



ECR1875-9

Approx. 1.5 x original size

**Version**

- Monostable, 1 winding
- With 1 changeover contact
- Gold overlay silver nickel alloy contacts
- For printed circuit assembling
- Plastic case
- Immersion cleanable

**Approvals**



CSA

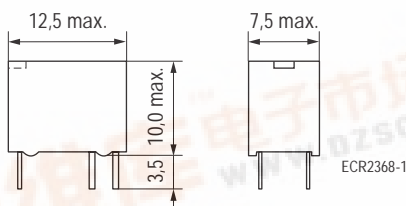
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UL

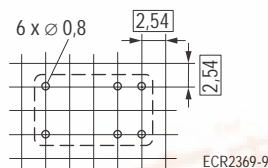
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**Dimension drawing (in mm)**



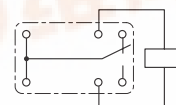
**Mounting hole layout**

View on the terminals



**Terminal assignment**

View on the terminals



ECR2370-C

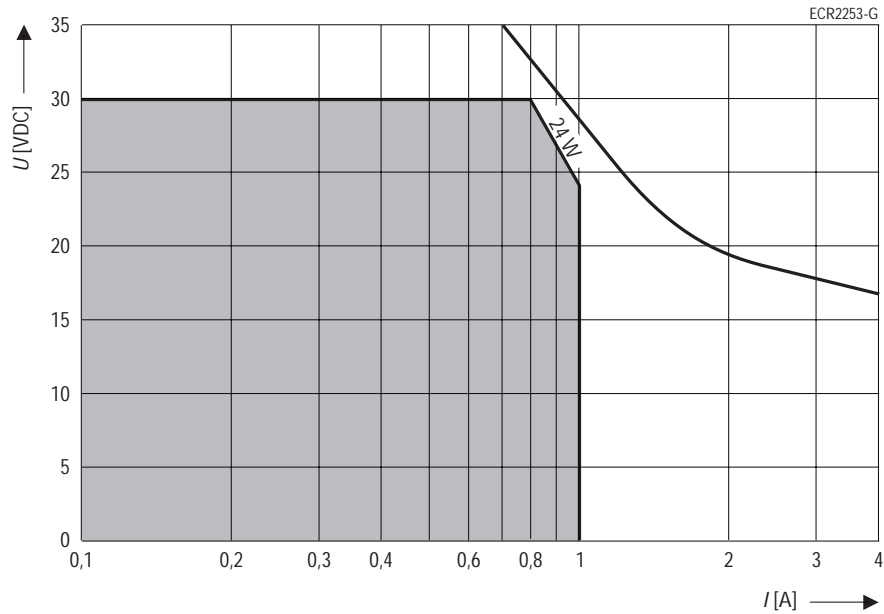
Basic grid 2.54 mm according to EN 60097 and DIN 40803

# Miniature Relay P1n

[查询"0-1393781-6"供应商](#)

Contact data	
Number of contacts and type	1 changeover contact
Contact assembly	single contact
Contact material	gold overlay silver nickel alloy
Limiting continuous current at max. ambient temperature	1 A
Maximum switching current	1 A
Maximum switching voltage	120 VAC 30 VDC
Maximum switching capacity	
AC voltage	120 VA
DC voltage	24 W
Contact resistance (initial value) / measuring current / driver voltage	≤ 50 mΩ / 100 mA / 6 VDC

## Load limit curve



$I$  = switching current

$U$  = switching voltage

■ = recommended application field

Load limit curve:

Quenching of the arc during the transit time

# Miniature Relay P1n

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Coil data	
Nominal voltages	from 3 VDC to 24 VDC
Nominal power consumption, typ.	150 mW
Operative range/pick-up class according to EN 61810-1 / IEC 61810-1	1 / a
Maximum operating voltage	≤ 75 % of the nominal voltage
Maximum release voltage	≥ 5 % of the nominal voltage

Coil versions					
Nominal voltage $U_{nom}$	Operating current	Operating voltage range at 20 °C		Resistance at 20 °C	Coil number Ordering code
		Minimum voltage $U_I$	Maximum voltage $U_{II}$		
VDC	mA	VDC	VDC	Ω	
3	50.0	2.25	6.61	60 ± 6	03
5	30.0	3.75	10.98	166 ± 16.6	05
6	25.0	4.50	13.22	240 ± 24	06
9	16.7	6.75	19.83	540 ± 54	09
12	12.5	9.00	26.44	960 ± 96	12
24	6.3	18.00	52.89	3840 ± 384	24

$U_I$  = Minimum voltage at 20 °C with nominal voltage without contact current

$U_{II}$  = Maximum continuous voltage

The operating voltage limits  $U_I$  and  $U_{II}$  are dependent on the temperature according to the formulae:

$$U_{I \text{ t amb}} = k_I \cdot U_{I \text{ 20 °C}} \text{ and}$$

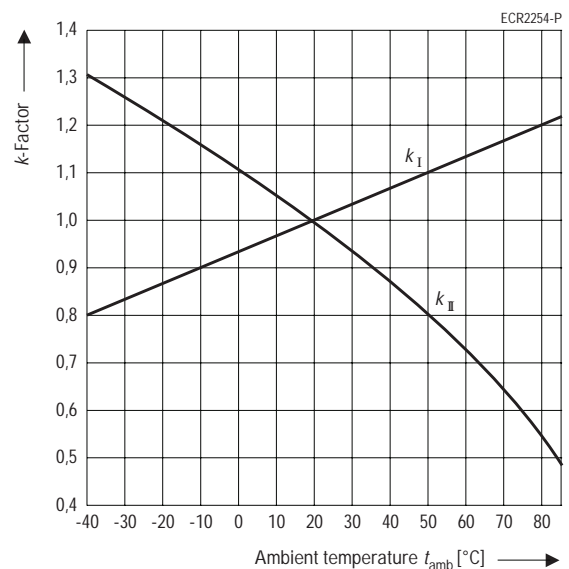
$$U_{II \text{ t amb}} = k_{II} \cdot U_{II \text{ 20 °C}}$$

$t_{amb}$  = Ambient temperature

$U_{I \text{ t amb}}$  = Minimum voltage at ambient temperature  $t_{amb}$

$U_{II \text{ t amb}}$  = Maximum voltage at ambient temperature  $t_{amb}$

$k_I$  a.  $k_{II}$  = Factors (dependent on temperature), see diagram



# Miniature Relay P1n

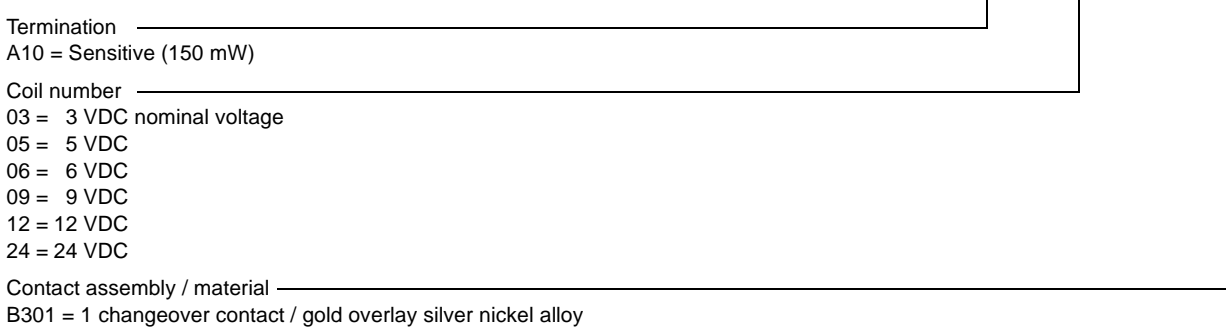
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General data	
Operate time at $U_{nom}$ and at 20 °C	5 ms
Release time at $U_{nom}$ and at 20 °C	5 ms
Maximum switching rate without load	10 operations/s
Ambient temperature range according to EN 61810-1-00 / IEC 61810-1-00 and VDE 0435 part 201	-40 °C ... +85 °C
Thermal resistance	140 K/W
Maximum permissible coil temperature	115 °C
Vibration resistance Frequency range according to EN 60068-2-6 / IEC 60068-2-6	10 ... 55 Hz, 1.5 mm double amplitude (function)
Shock resistance, half sinus, 11 ms according to EN 60068-2-27 / IEC 60068-2-27	10 g (function) 50 g (damage)
Degree of protection according to EN 60529 / IEC 60529 / VDE 0470 part 1	immersion cleanable, IP 67
Electrical endurance at 20 °C	$1 \times 10^5$ operations
Mechanical endurance	$5 \times 10^7$ operations
Mounting position	any
Processing information	ultrasonic cleaning is not recommended
Weight	approx. 3 g

Insulation	
Insulation resistance at 500 V	$\geq 10^8 \Omega$
Dielectric test voltage (1 min) contact / coil at open contact	1500 VAC <sub>rms</sub> 400 VAC <sub>rms</sub>
Surge voltage resistance to FCC 68.302 contact – coil (10 / 160 $\mu$ s)	1500 V

## Ordering code

V 2 3 1 1 1 – A 1 0 – B 3 0 1



**Ordering example:** V23111-A1005-B301  
Miniature Relay P1n, 5 VDC nominal voltage