

**Miniature PCB Relay PCH**

- 5 to 10A rating
- 1 form A (NO) and 1 form C (CO) contact arrangements
- Sensitive coil available for 1 form A type

Typical applications  
Appliances, HVAC, refrigerators, microwave ovens



F\_PCH\_B



**Approvals**

VDE 119568, UL E82292, CQC08001023449  
Technical data of approved types on request

**Contact Data**

Contact arrangement	1 Form A (NO)
Rated voltage	30VDC, 277VAC
Max. switching voltage	30VDC, 277VAC
Rated current	5 to 10A
Contact material	AgSnO <sub>2</sub>
Min. recommended contact load	100mA, 5VDC
Frequency of operation	360 ops./h
Operate/release time max.	10/5ms
Electrical endurance	

D type: 5A, 277VAC resistive, -30°C to +70°C 100x10<sup>3</sup> ops.  
L type: 5A, 277VAC resistive, -30°C to +70°C 30x10<sup>3</sup> ops.  
D/L-WG type: 5A, 250VAC resistive, -40°C to +85°C 100x10<sup>3</sup> ops.

**Contact ratings**

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
PCH-..2M-WG	A (NO)	5A 250VAC res, 85°C	100x10 <sup>3</sup>
PCH-..D2-WG	A of C	5A 250VAC res, 85°C	100x10 <sup>3</sup>
PCH-..D2M	A (NO)	5A 250VAC res, 70°C	100x10 <sup>3</sup>
PCH-..L2M	A (NO)	5A 250VAC res, 70°C	30x10 <sup>3</sup>
PCH-..D2	C (CO)	5A/3A 250VAC res, 40°C	30x10 <sup>3</sup>
<b>UL 508</b>			
PCH	A (NO)	10A 125VAC res, 85°C	100x10 <sup>3</sup>
PCH	A (NO)	5A 250VAC general use, 85°C	100x10 <sup>3</sup>

Mechanical endurance, DC coil 10x10<sup>6</sup> operations

**Coil Data**

Coil voltage range	3 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class F

**Coil Data (continued)**

**Coil versions, DC coil**

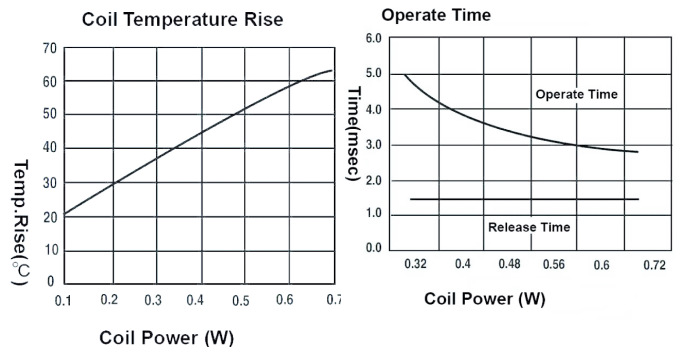
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10 %	Rated coil power mW
<b>Sensitive type (for form A type only)</b>					
003	3	2.25	0.15	45	200
005	5	3.75	0.25	125	200
006	6	4.50	0.30	180	200
009	9	6.75	0.45	405	200
012	12	9.00	0.60	720	200
018	18	13.50	0.90	1620	200
024	24	18.00	1.20	2880	200
048	48	36.00	2.40	11520	200

All figures are given for coil without pre-energization, at ambient temperature +23°C.

**Coil versions, DC coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10 %	Rated coil power mW
<b>Standard type</b>					
003	3	2.10	0.15	23	400
005	5	3.50	0.25	63	400
006	6	4.20	0.30	90	400
009	9	6.30	0.45	202	400
012	12	8.40	0.60	360	400
018	18	12.60	0.90	810	400
024	24	16.80	1.20	1440	400
048	48	33.60	2.40	5760	400

All figures are given for coil without pre-energization, at ambient temperature +23°C.



**Miniature PCB Relay PCH** (Continued)

**Insulation Data**

Initial dielectric strength	
between open contacts	750V <sub>rms</sub>
between contact and coil	4000V <sub>rms</sub>
Initial surge withstand voltage	
between contact and coil	10000V <sub>rms</sub>
Clearance/creepage	
between contact and coil	NO: ≥ 4.9mm / 6.6mm
between contact and coil	CO: ≥ 4mm / 5mm
Tracking index of relay base	
standard type	PTI 175
WG ttype	PTI 250

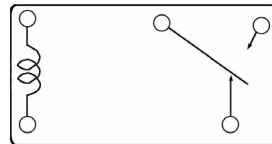
**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customersupport/rohssupportcenter">www.te.com/customersupport/rohssupportcenter</a>	
Ambient temperature	-40°C to +85°C
Category of environmental protection	IEC 61810
	RTII - flux tight
	RTIII - wash tight
Shock resistance (functional)	10g
Shock resistance (destructive)	100g
Weight	7g
Resistance to soldering heat THT	IEC 60068-2-20
	RTII: 270°C/10s
	RTIII: 260°C/5s
Packaging unit	tray/100 pcs., carton box/1000 pcs.

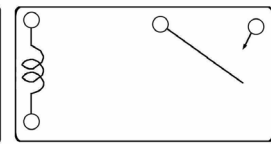
**Terminal assignment**

Bottom view on solder pins

1 form C (CO)



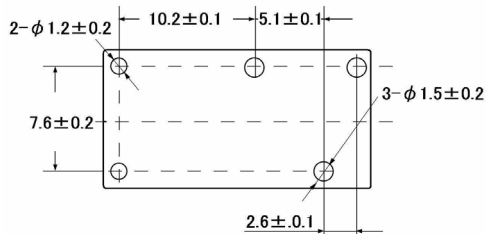
1 form A (NO)



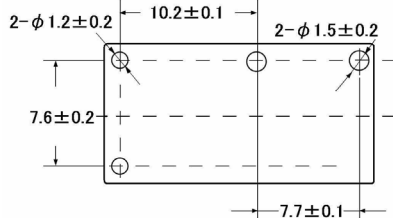
**PCB layout**

Bottom view on solder pins

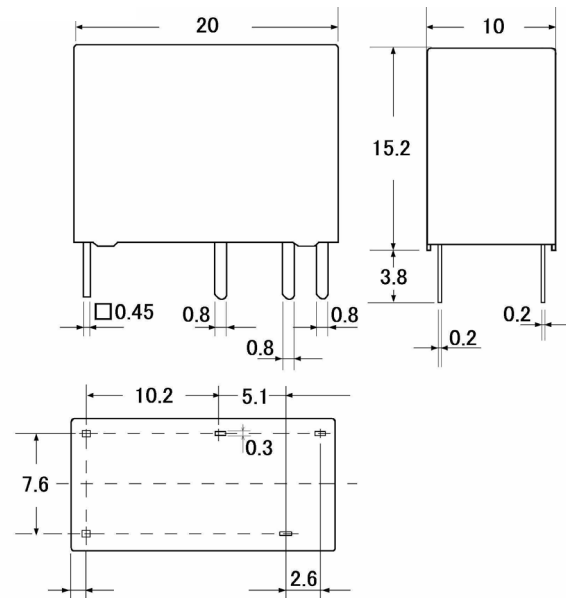
1 form C (CO)



1 form A (NO)



**Dimensions**



\*1a Outline dimensions is omitted.

Tolerance: 0.99mm Max.: +/-0.1mm, 1-2.99mm: +/-0.2mm, 3mm Min.: +/-0.3r

**Miniature PCB Relay PCH** (Continued)

<b>Product code structure</b>	Typical product code	<b>PCH</b>	<b>-1</b>	<b>12</b>	<b>D</b>	<b>2</b>	<b>H</b>	<b>,000</b>
<b>Type</b>	<b>PCH</b> Miniature PCB Relay PCH							
<b>Number of poles</b>	<b>1</b> 1 pole							
<b>Coil voltage</b>	Coil code: please refer to coil versions table (e.g. 05=5VDC)							
<b>Coil sensitivity</b>	<b>D</b> Standard 400mW		<b>L</b> 200mW (for 1 form A contact only)					
<b>Contact material</b>	<b>2</b> AgSnO							
<b>Contact arrangement</b>	<b>Blank</b> 1 form C (CO) contact			<b>M</b> 1 form A (NO) contact				
<b>Category of protection</b>	<b>Blank</b> Flux proof, vented cover			<b>H</b> Wash tight, sealed plastic cover				
<b>Insulation system designation</b>	<b>Blank</b> Class F system			<b>WG</b> Class F system and for domestic appliances (IEC 60335-1, 4 Edition);				
<b>Suffix</b>	<b>,000</b> Standard type							

Other types on request

Product code	Coil	Sensitivity	Cont.material	Arrangement	Enclosure	Insulation	Part number
PCH-105D2H,000	5VDC	Standard	AgSnO <sub>2</sub>	1 form C (CO)	Wash tight	Class F	9-1440003-0
PCH-105L2M,000		Sensitive			1 form A (NO)		Flux proof
PCH-105L2MH,000	6VDC	Standard		1 form C (CO)	Wash tight	Cl. F, IEC 60335-1	1461353-2
PCH-105L2M-WG					Flux proof		1721768-2
PCH-106D2,000	9VDC				Wash tight	Class F	9-1440003-8
PCH-109D2H,000	12VDC				Flux proof		9-1440003-2
PCH-112D2,000					Wash tight		1440004
PCH-112D2H,000				1 form A (NO)	Wash tight		9-1440003-3
PCH-112D2M,000					Flux proof		1461350-5
PCH-112D2M-WG						Cl. F, IEC 60335-1	1721767-5
PCH-112D2-WG				1 form C (CO)			1721766-5
PCH-112L2M,000		Sensitive		1 form A (NO)		Class F	1461352-5
PCH-112L2MH,000					Wash tight		1461353-5
PCH-112L2M-WG	24VDC	Standard		1 form C (CO)	Flux proof	Cl. F, IEC 60335-1	1721768-5
PCH-124D2,000					Wash tight		1440004-1
PCH-124D2H,000				1 form A (NO)	Wash tight		9-1440003-5
PCH-124D2M,000					Flux proof		1461350-6
PCH-124D2MH,000		Sensitive			Wash tight		1461351-6
PCH-124L2M,000					Flux proof		1461352-6
PCH-124L2MH,000	48VDC	Standard		1 form C (CO)	Wash tight		1461353-6
PCH-124L2M-WG					Flux proof		1721768-6
PCH-148D2,000						Cl. F, IEC 60335-1	1721768-6
						Class F	1461410-2