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	$AgSnO_2$
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°C100x10^3 ops.	
L type: 5A, 277VAC resistive, -30°C to +70°C 30x10^3 ops.	
D/L-WG type: 5A, 250VAC resistive, -40°C to +85°C 100x10^3 ops.	

Contact ratings

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

Mechanical endurance, DC coil 10x10^6 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

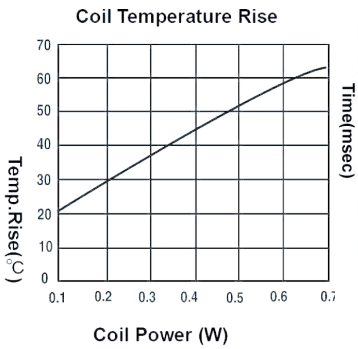
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10 %	Rated coil power mW
Sensitive type (for form A type only)					
003	3	2.25	0.15	45	200
005	5	3.75	0.25	125	200
006	6	4.50	0.30	180	200
009	9	6.75	0.45	405	200
012	12	9.00	0.60	720	200
018	18	13.50	0.90	1620	200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

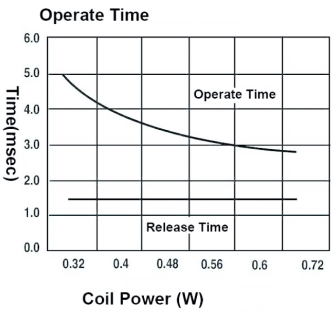
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10 %	Rated coil power mW
Standard type					
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.





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www.te.com

Miniature PCB Relay PCH (Continued)

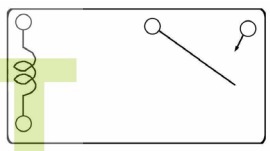
Insulation Data	
Initial dielectric strength	
between open contacts	750V_{rms}
between contact and coil	4000V_{rms}
Initial surge withstand voltage	
between contact and coil	10000V_{rms}
Clearance/creepage	
between contact and coil	NO: ≥ 4.9mm / 6.6mm
between contact and coil	CO: ≥ 4mm / 5mm
Tracking index of relay base	
standard type	PTI 175
WG txype	PTI 250

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

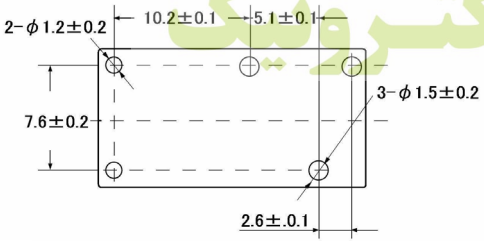
1 form C (CO)

1 form A (NO)

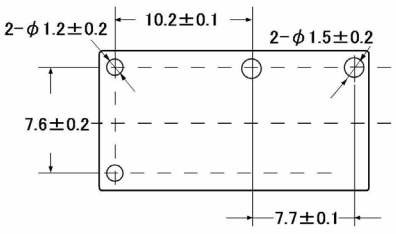


PCB layout
Bottom view on solder pins

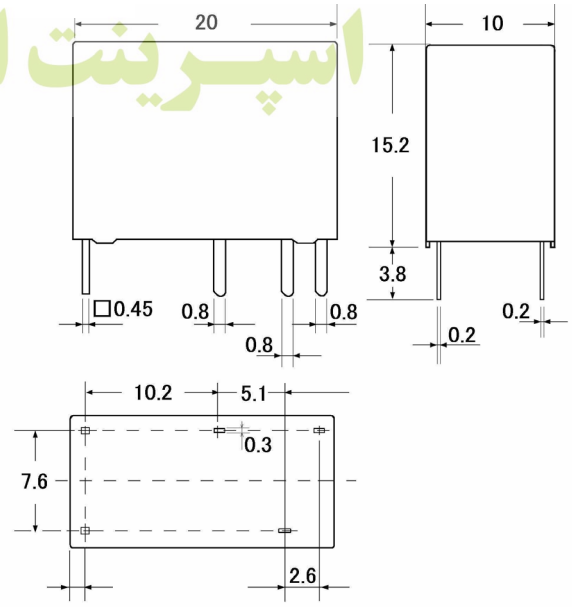
1 form C (CO)



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)

Product code structure — Typical product code: **PCH -1 12 D 2 H ,000**

Type
PCH Miniature PCB Relay PCH

Number of poles
1 1 pole

Coil voltage
Coil code: please refer to coil versions table (e.g. 05=5VDC)

Coil sensitivity
D Standard 400mW
L 200mW (for 1 form A contact only)

Contact material
2 AgSnO

Contact arrangement
Blank 1 form C (CO) contact
M 1 form A (NO) contact

Category of protection
Blank Flux proof, vented cover
H Wash tight, sealed plastic cover

Insulation system designation
Blank Class F system
WG Class F system and for domestic appliances (IEC 60335-1, 4 Edition);

Suffix
,000 Standard type

Other types on request

Product code	Coil	Sensitivity	Cont.material	Arrangement	Enclosure	Insulation	Part number
PCH-105D2H,000	5VDC	Standard	$AgSnO_2$	1 form C (CO)	Wash tight	Class F	9-1440003-0
PCH-105L2M,000		Sensitive		1 form A (NO)	Flux proof		1461352-2
PCH-105L2MH,000					Wash tight		1461353-2
PCH-105L2M-WG					Flux proof	Cl. F, IEC 60335-1	1721768-2
PCH-106D2,000	6VDC	Standard		1 form C (CO)		Class F	9-1440003-8
PCH-109D2H,000	9VDC				Wash tight		9-1440003-2
PCH-112D2,000	12VDC				Flux proof		1440004
PCH-112D2H,000					Wash tight		9-1440003-3
PCH-112D2M,000				1 form A (NO)	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					Flux proof	Cl. F, IEC 60335-1	1721768-5
PCH-124D2,000	24VDC	Standard		1 form C (CO)		Class F	1440004-1
PCH-124D2H,000					Wash tight		9-1440003-5
PCH-124D2M,000				1 form A (NO)	Flux proof		1461350-6
PCH-124D2MH,000					Wash tight		1461351-6
PCH-124L2M,000		Sensitive			Flux proof		1461352-6
PCH-124L2MH,000					Wash tight		1461353-6
PCH-124L2M-WG					Flux proof	Cl. F, IEC 60335-1	1721768-6
PCH-148D2,000	48VDC	Standard		1 form C (CO)		Class F	1461410-2