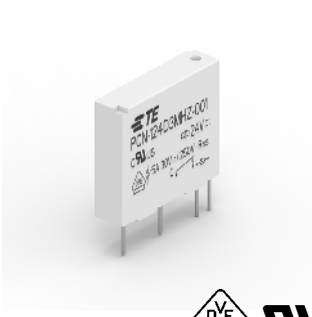
Slimline PCB Relay PCN(H)

- **1 pole 5 A, 1 form A (NO) contact**
- **Only 5mm wide**
- **5A switching current, load current up to 5A**
- **Sensitive coil 120mW (standard)**
- **Allows high function-/packing density**
- **Cadmium-free contacts**
- **Z type with reinforced insulation**
- **RoHS compliant (Directive 2002/95/EC)**
- **Anti-explosive version (meet ANSI/ISA-12.12.01)**
- **Bi-furcated contact version available**



Typical applications
PLC, temperature control, I/O modules.

Approvals

VDE REG.-Nr.40001589, UL E82292, CQC 08001026045
Technical data of approved types on request.

Contact Data

Type	PCN	PCNH
Contact arrangement	1 from A (NO)	
Rated voltage	250VAC/30VDC	
Max. switching voltage	277VAC/125VDC	250VAC/125VDC
Rated current	3A/5A	5A
Limiting continuous current	5A	5A
Breaking capacity max.	750VA (3A), 1250VA(5A)	1250VA(5A)
Contact material	AgNi, gold plated	AgNI
Contact style	bifurcated contact	single contact
Min. recommended contact load (reference)	5VDC,100mA	
Initial contact resistance (at 100mA, 6VDC)	30mΩ	100mΩ
Frequency of operation, with/without load	10/300min^{-1}	

Contact ratings

Load	Cycles
IEC 61810	
PCN	
3A,250VAC, cosφ=1, +70°C	100x10^3
3A/30VDC, L/R=0ms, +70°C	100x10^3
5A, 250VAC, cosφ=1, +85°C	30x10^3
5A 30VDC, L/R=0ms, +85°C	70x10^3
PCNH	
5A, 250VAC, cosφ=1, +85°C	10x10^3
5A 30VDC, L/R=0ms, +85°C	10x10^3
Contact ratings (continued)	
UL 508	
PCN	
3A, 250VAC, resistive, +25°C	100x10^3
Pilot duty, B300, +25°C	6x10^3
Pilot duty, R300, +25°C	6x10^3
9A LRA, 1.5A FLA, 240VAC, +45°C	30x10^3
PCNH	
5A, 250VAC, resistive, +25°C	30x10^3
5A, 30VDC, resistive, +25°C	30x10^3
Pilot duty, B300, +25°C	6x10^3
Pilot duty, R300, +25°C	6x10^3
Mechanical endurance, DC coil	>10x10^6 operations

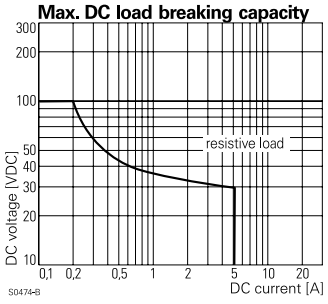
Coil Data

Coil voltage range	3 to 24VDC
Operative range, IEC 61810	1
Coil insulation system according UL	Class F

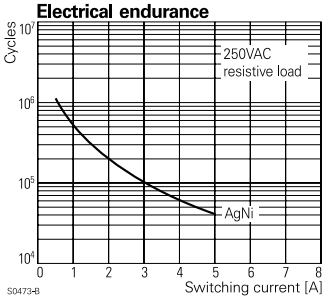
Standard D coil version (120mW), DC coil (PCN and PCNH)

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
03	3	2.1	0.3	75	120
04	4.5	3.15	0.45	169	120
05	5	3.5	0.5	208	120
06	6	4.2	0.6	300	120
09	9	6.3	0.9	675	120
12	12	8.4	1.2	1200	120
18	18	12.6	1.8	2700	120
23	23.5	16.45	2.35	4602	120
24	24	16.8	2.4	4800	120

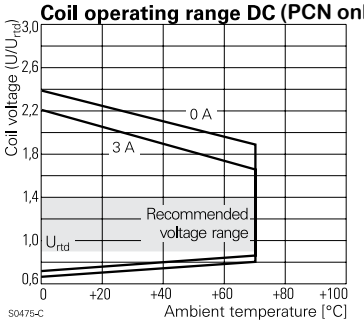
Max. DC load breaking capacity



Electrical endurance



Coil operating range DC (PCN only)



Slimline PCB Relay PCN(H) (Continued)

Sensitive L coil version (100mW), DC coil (PCN only)

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
03	3	2.1	0.3	90	100
04	4.5	3.15	0.45	202	100
05	5	3.5	0.5	250	100
06	6	4.2	0.6	360	100
09	9	6.3	0.9	810	100
12	12	8.4	1.2	1440	100
18	18	12.6	1.8	3240	100
23	23.5	16.45	2.35	5522	100
24	24	16.8	2.4	5760	100

High performance H coil version (180mW), DC coil (PCNH only)

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
03	3	2.1	0.3	50	180
04	4.5	3.15	0.45	112.5	180
05	5	3.5	0.5	139	180
06	6	4.2	0.6	200	180
09	9	6.3	0.9	450	180
12	12	8.4	1.2	800	180
18	18	12.6	1.8	1800	180
24	24	16.8	2.4	3200	180

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Sensitive coil is for 3A only.

Insulation Data

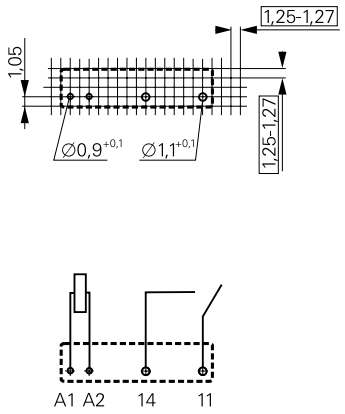
Initial dielectric strength	
between open contacts	$750V_{rms}$
between contact and coil	$3000V_{rms}$
Initial surge withstand voltage	
between contact and coil	4000V (standard)
Clearance/creepage	
between contact and coil	>3.5mm
Tracking index of relay base	PTI 600 (reinforce) PTI 175 (general)

Other Data

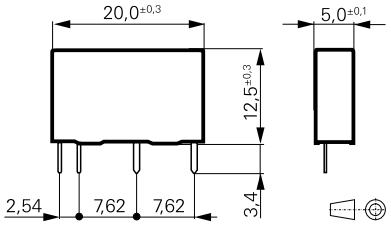
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	-40 to 85°C
Category of environmental protection	
IEC 61810	RTIII - wash tight
Vibration resistance (functional)	10 to 55Hz, 1.5mm
Vibration resistance (destructive)	10 to 55Hz, 1.5mm
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	min. 98m/s², 11ms
Shock resistance (destructive)	min. 980m/s², 6ms
Terminal type	PCB-THT
Resistance to soldering heat THT	
IEC 60068-2-20	260°C/5s
Packaging/unit	box/2000 pcs.

PCB layout / terminal assignment

Bottom view on solder pins



Dimensions



Slimline PCB Relay PCN(H) (Continued)

Product code structure	Typical product code	PCN	1	05	D	3	M	H	Z	,001

Type
PCN PCN small slim power PCB Relay (Bifurcated contact)
PCNH PCNH small slim power PCB Relay (Single contact)

Number of poles
1 1pole

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

Coil version
D standard 120mW **L** high sensitivity 100mW **H** higher performance 180mW

Contact material
3 AgNi

Contact arrangement
M 1 form A, 1 NO contact

Enclosure
H RTIII - wash tight **blank** RTII - flux proof

Insulation
Z Reinforced insulation (tracking resistance of relay base, case PTI 600)

Version
Suffix
,00000-99999 Customer code

Product code	Contact	Coil voltage	Cont. material	Enclosure	Rating	Rating	Part Number
PCN-105D3MH,000	1- pole	5VDC	120mW	AgNi	RTIII - wash tight	3A	1-1461491-2
PCN-124D3MH,000		24VDC			anti-explosive		1-1461491-8
PCN-105D3MHF,000		5VDC					1649771-3
PCN-124D3MHZ-S,000		24VDC					1721449-9
PCN-105D3MHZ,000		5VDC					3-1461491-0
PCN-106D3MHZ,000		6VDC					3-1461491-1
PCN-112D3MHZ,000		12VDC					3-1461491-3
PCN-123D3MHZ,000		23VDC					3-1461491-5
PCN-124D3MHZ,000		24VDC					3-1461491-6
PCN-124D3MHYZ,000B		24VDC					3-1461917-6
PCN-103L3MHZ		3VDC	100mW				2-1721066-5
PCN-105L3MHZ		5VDC					2-1721066-7
PCN-103L3MHZ,000B		3VDC					1721066-9
PCN-105L3MHZ,01300		5VDC					4-1721066-1
PCN-124D3MH		24VDC	120mW			5A	1721192-1
PCN-124D3MHZ,001		24VDC					3-1461491-8
PCN-109D3MHZ,100		9VDC					1721095-5
PCN-124D3MHZ,100		24VDC					1721095-9
PCN-112D3MHZ,001		12VDC					1721441-8
PCNH-112D3MHZ,000		12VDC					1649386-5
PCNH-112H3MHZ		12VDC	180mW				1721126-5
PCNH-124H3MHZF,00000		24VDC					2-1721520-0
PCNH-118H3MHZF,00000		18VDC					2071417-1