Miniature Power PCB Relay T7N/T7N-WG

- **1 pole 10A, 1 form C (1CO) or 1 form A (1NO) contact**
- **Version T7N-WG with tracking resistance CTI 325**
- **WG version: Product in accordance to IEC60335-1**

F0189-D

Typical applications
Domestic appliances, heating control, building control, measurement&control

Approvals

T7N: VDE REG.-Nr. 6175, UL E214025
T7N-WG: VDE REG.-Nr. 119012, UL E214025
Technical data of approved types on request

Contact Data

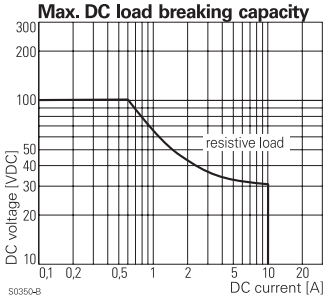
Contact arrangement	1 form C (1CO) or 1 form A (1NO)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	10A
Limiting making current, max 4 s, duty factor 10%	35A
Breaking capacity max.	2500VA
Contact material	$AgSnO_2$, AgCdO
Frequency of operation, with/without load	1800/18000h^{-1}
Operate/release time max.	9/5ms
Bounce time max., form A	3ms

Contact ratings

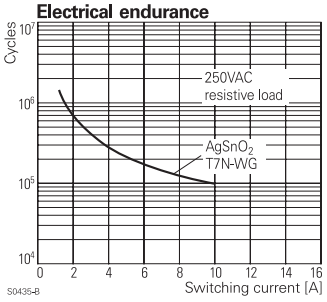
Type	Contact	Load	Cycles
IEC 61810			
T7NV1D4-…-WG(-A)	A (NO)	10A, 250VAC, cosφ=1, 85°C	100x10^3
T7NS1D4-…-WG(-A)	A (NO)	10A, 250VAC, cosφ=1, 85°C	6x10^3
T7NV5D4-…-WG(-A)	A of C	10A, 250VAC, cosφ=1, 85°C	100x10^3
T7NS5D4-…-WG(-A)	A of C	10A, 250VAC, cosφ=1, 85°C	6x10^3
T7NV5D4-…-WG(-A)	B of C	6A, 250VAC, cosφ=1, 85°C	50x10^3
T7NS5D4-…	C (CO)	10A/5A, 250VAC, cosφ=1, 85°C	6x10^3
T7NS1D4-…-WG(-A)	A (NO)	10A, 250VAC, cosφ=1, 85°C	6x10^3
UL 508			
T7N...D4-…-WG(-A)	A (NO)	10A, 250VAC, resistive, 85°C	100x10^3
T7N...D4-…-WG(-A)	A (NO)	1/4hp, 120VAC, motor, 40°C	100x10^3
T7N...D4-…	A (NO)	10A, 250VAC, resistive, 85°C	30x10^3

Mechanical endurance, >10x10^6 operations

Max. DC load breaking capacity



Electrical endurance



Coil Data

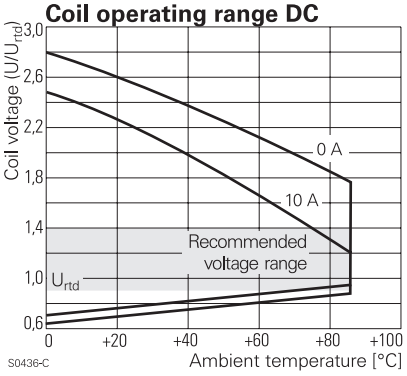
Coil voltage range	5 to 48 VDC
Operative range, IEC 61810	2
Non-release voltage, % of rated coil voltage	50%
Coil insulation system according UL1446	class F

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
05	5	3.5	0.5	70	357
06	6	4.2	0.6	100	360
09	9	6.3	0.9	225	360
12	12	8.4	1.2	400	360
18[1)]	18	13.5	1.8	900	360
24	24	16.8	2.4	1600	360
36	36	25.2	3.6	3600	360
48	48	33.6	4.8	6400	360

1) 18VDC coil: UL approval only, not registered with VDE.
All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

Coil operating range DC

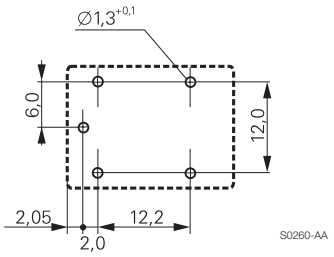


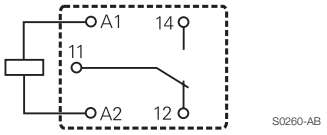
Insulation Data	T7N	T7N-WG
Initial dielectric strength		
between open contacts	1000 V$_{rms}$	1000 V$_{rms}$
between contact and coil	2500 V$_{rms}$	2500 V$_{rms}$
Clearance/creepage		
between contact and coil	≥2/3mm	≥2.5/3.5mm
Material group of insulation parts	IIIa	IIIa
Tracking index of relay base	PTI175	PTI325

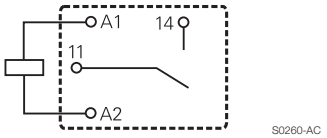
Miniature Power PCB Relay T7N/T7N-WG (Continued)

Other Data	T7N	T7N-WG
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter		
Resistance to heat and fire	according EN60335, par.30	
Ambient temperature	-40 to 85°C	
Category of environmental protection IEC 61810	RTIII - wash tight (RTII - flux proof)	RTII - flux proof RTIII - wash tight
Vibration resistance (functional), form A/form B, 30 to 400Hz	>14/8g	
Shock resistance (destructive)	100g	
Terminal type	PCB-THT	
Weight	11 g	
Resistance to soldering heat THT, IEC 60068-2-20		
flux proof version	270°C/10s	
wash tight version	260°C/5 s	
Packaging unit	25pcs., 1000 pcs.	

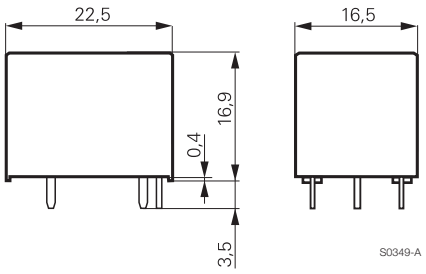
PCB layout / terminal assignment
Bottom view on solder pins







Dimensions



Product code structure

Typical product code	T7N	V	1	D	4	-06	-WG

Type
T7N Miniature Power PCB Relay T7N

Version
S Wash tight **V** Flux proof

Contact configuration
1 1 form A contact (1 NO) **5** 1 form C contact (1 CO)

Coil version
H DC coil 450mW **D** DC coil 360mW

Contact material
1 AgCdO **4** $AgSnO_2$

Coil
Coil code: please refer to coil versions table

Version
Blank T7N standard version, CTI 225
WG CTI 325 version, product in accordance with IEC 60335-1
WG-A CTI 325 for relay base only

Other types on request

Miniature Power PCB Relay T7N/T7N-WG (Continued)

Product code	Version	Cont. material	Cont.arrangement	Coil	Part number
T7NS1D4-05	Wash tight	$AgSnO_2$	1 form A	5VDC	6-1440006-9
T7NS1D4-06	CTI 225		1 NO contact	6VDC	7-1440006-0
T7NS1D4-09				9VDC	7-1440006-1
T7NS1D4-12				12VDC	7-1440006-2
T7NS1D4-24				24VDC	7-1440006-4
T7NS1D4-36				36VDC	7-1440006-5
T7NS1D4-48				48VDC	7-1440006-6
T7NS5D4-05			1 form C	5VDC	5-1440005-2
T7NS5D4-06			1 CO contact	6VDC	6-1440006-1
T7NS5D4-09				9VDC	6-1440006-2
T7NS5D4-12				12VDC	6-1440006-3
T7NS5D4-24				24VDC	6-1440006-5
T7NS5D4-36				36VDC	6-1440006-6
T7NS5D4-48				48VDC	6-1440006-7
T7NV1D4-05-WG	Flux proof		1 form A	5VDC	1721133-8
T7NV1D4-06-WG	CTI 325		1 NO contact	6VDC	1721133-9
T7NV1D4-09-WG	according			9VDC	1-1721133-0
T7NV1D4-12-WG	IEC 60335-1			12VDC	1-1721133-1
T7NV1D4-24-WG				24VDC	1-1721133-2
T7NV1D4-36-WG				36VDC	1-1721133-3
T7NV1D4-48-WG				48VDC	1-1721133-4
T7NV5D4-05-WG			1 form C	5VDC	1649305-8
T7NV5D4-06-WG			1 CO contact	6VDC	1649305-9
T7NV5D4-09-WG				9VDC	1-1649305-0
T7NV5D4-12-WG				12VDC	1-1649305-1
T7NV5D4-24-WG				24VDC	1-1649305-2
T7NV5D4-36-WG				36VDC	1-1649305-3
T7NV5D4-48-WG				48VDC	1-1649305-4
T7NV1D4-05-WG-A	Flux proof		1 form A	5VDC	2-1649280-0
T7NV1D4-06-WG-A	relay base		1 NO contact	6VDC	2-1649280-1
T7NV1D4-09-WG-A	CTI 325			9VDC	2-1649280-2
T7NV1D4-12-WG-A				12VDC	2-1649280-3
T7NV1D4-24-WG-A				24VDC	2-1649280-4
T7NV1D4-36-WG-A				36VDC	2-1649280-5
T7NV1D4-48-WG-A				48VDC	2-1649280-6
T7NV5D4-05-WG-A			1 form C	5VDC	1-1649324-0
T7NV5D4-06-WG-A			1 CO contact	6VDC	1-1649324-1
T7NV5D4-09-WG-A				9VDC	1-1649324-2
T7NV5D4-12-WG-A				12VDC	1-1649324-3
T7NV5D4-24-WG-A				24VDC	1-1649324-4
T7NV5D4-36-WG-A				36VDC	1-1649324-5
T7NV5D4-48-WG-A				48VDC	1-1649324-6