

Miniature Power PCB Relay T7N / T7N-WG

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

Applications

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



F0189-D

Approvals

T7N: REG.-Nr. 6175, us E214025;

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

Contact data

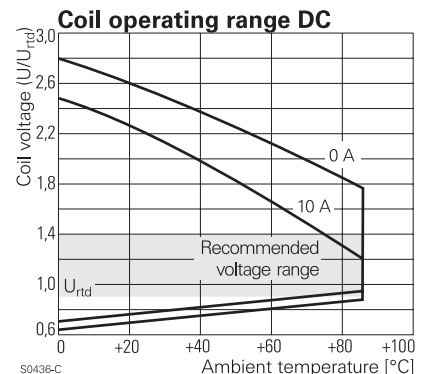
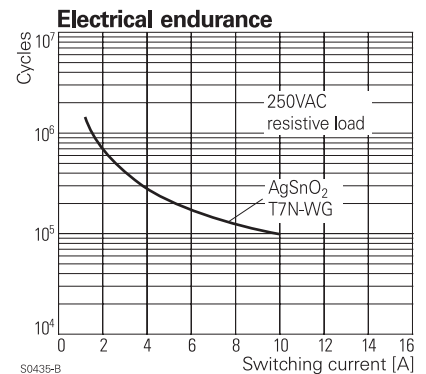
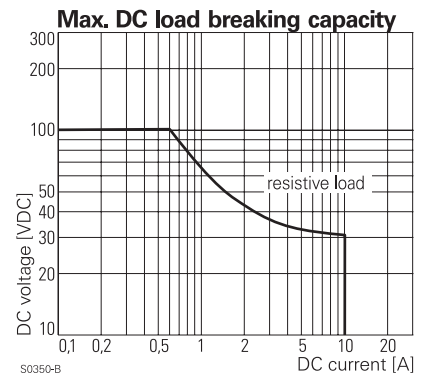
Contact configuration	1 CO or 1 NO
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	10 A
Maximum breaking capacity AC	2500 VA
Limiting making capacity, max 4 s, duty factor 10%	35 A
Contact material	AgSnO ₂ / AgCdO
Rated frequency of operation with / without load	30 / 300 min ⁻¹
Operate- / release time	max. 9 / 5 ms
Bounce time NO contact	max. 3 ms

Contact ratings

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

Coil data

Rated coil voltage range DC coil	5...48 VDC
Operative range to IEC 61810	2



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

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

All figures are given for coil without preenergization, at ambient temperature +23°C

Other coil voltages on request

¹⁾ UL approval only

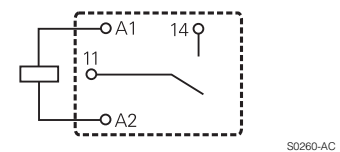
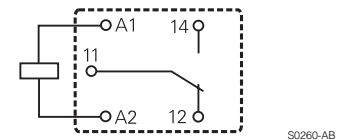
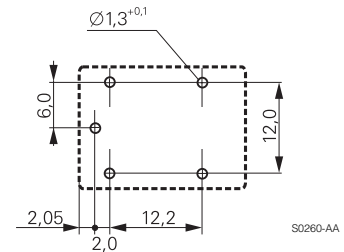
Insulation	T7N	T7N-WG
Dielectric strength coil-contact circuit		2500 V _{rms}
open contact circuit		1000 V _{rms}
Clearance / creepage coil-contact circuit	≥ 2/3 mm	≥ 2,5 / 3,5 mm
Material group of insulation parts		IIIa
Tracking index of relay base	PTI 175	PTI 325
Insulation to IEC 618101		
Type of insulation coil-contact circuit		basic
open contact circuit		micro disconnection
Rated insulation voltage		250 V
Pollution degree		2
Rated voltage system		240 V
Overvoltage category		II

Other data

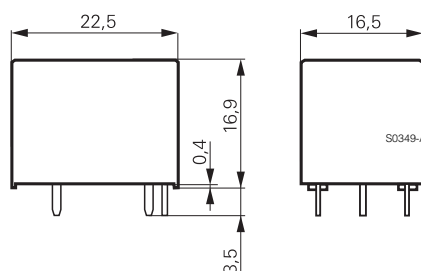
Mechanical endurance	10x10 ⁶ cycles
Material	
RoHS - Directive 2002/95/EC	compliant as per product date code 0424
Resistance to heat and fire, WG version	according EN60335, par.30
Environment	
Ambient temperature range	-40...85°C
Vibration resistance (function) NO / NC cont.	>14 / 8 g, 30...400 Hz
Shock resistance (destruction)	100 g
Category of protection, T7N	RTIII - wash tight, (RTII - flux proof)
T7N-WG	RTII - flux proof, RTIII - wash tight
Processing	
Mounting	PCB
Resistance to soldering heat	
flux-proof version	270°C / 10 s
wash-tight version	260°C / 5 s
Relay weight	11 g
Packaging unit	25/1000 pcs

PCB layout / terminal assignment

Bottom view on solder pins



Dimensions



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

Product key	Typical product key						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 NO contact (1 form A)			5 1 CO contact (1 form C)									
Coil version	H DC coil 450 mW			D DC coil 360 mW									
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

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