

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
- Versions with AgSnO₂ contact material:
RoHS compliant (Directive 2002/95/EC) as per
product date code 0424

Applications

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



F0189-B

Approvals

T7N: VDE REG.-Nr. 6175, cULus E214025;

T7N-WG: VDE REG.-Nr. 119012, cULus E214025

Technical data of approved types on request

Contact data	T7N	T7N-WG
Contact configuration	1 CO or 1 NO	1 CO or 1 NO
Contact set	single contact	single contact
Type of interruption	micro-disconn.	micro-disconn.
Rated current	10 A	10 A
Rated voltage / max.switching voltage AC	240/400 VAC	240/400 VAC
Maximum breaking capacity AC	2500 VA	2500 va
Limiting making capacity, max 4 s, duty factor 10%	35 A	35 A
Contact material	AgSnO ₂ / AgCdO	AgSnO ₂
Mechanical endurance	10x10 ⁶ cycles	10x10 ⁶ cycles
Rated frequency of operation with / without load	30/300 min ⁻¹	30/300 min ⁻¹

Contact ratings

Type	Load	Cycles
T7N-WG CO (NO tested): 10 A, 250 V, 85 °C, resistive, EN61810-1		100x10 ³
T7N-WG CO (NC tested): 6 A, 250 V, 85 °C, resistive, EN61810-1		50x10 ³
T7N (AgSnO ₂): 10 A, 250 V, 85 °C, resistive, EN61810-1		10x10 ³
T7N (AgSnO ₂): 5 A, 250 V, 85 °C, resistive, EN61810-1		100x10 ³
T7N (AgCdO): 5 A, 250 V, 85 °C, resistive, EN61810-1		100x10 ³

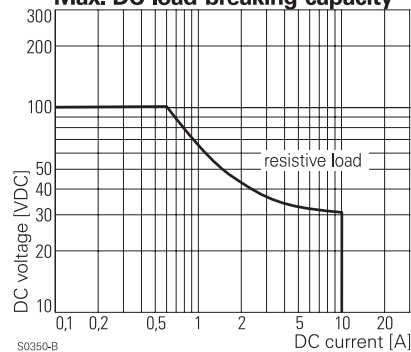
Coil data	T7N	T7N-WG
Rated voltage range DC coil	3...48 VDC	5...48 VDC
Rated power DC coil	typ. 360 mW	typ. 360 mW
Operative range	2	2
Non-release voltage, % of rated coil voltage	50%	50%
Coil insulation system according UL1446	class F	class F

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
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

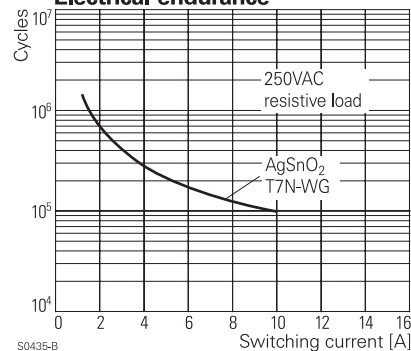
All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request

Max. DC load breaking capacity



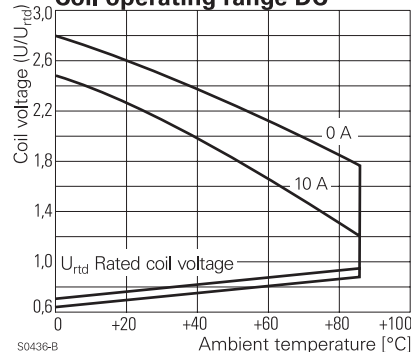
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Electrical endurance



S0435-B

Coil operating range DC



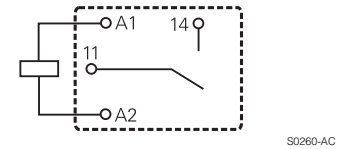
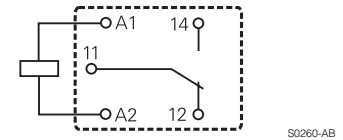
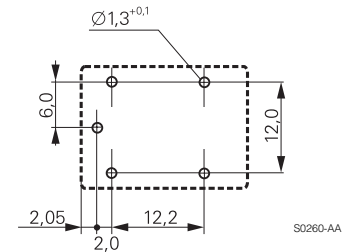
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Miniature Power PCB Relay T7N / T7N-WG (Continued)

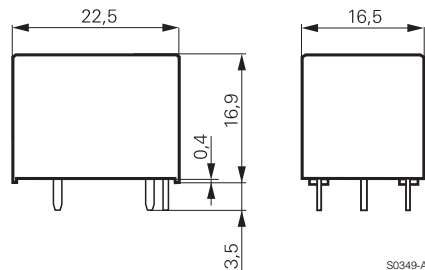
Insulation	T7N	T7N-WG
Dielectric strength coil-contact circuit	2500 V _{rms}	2500 V _{rms}
open contact circuit	1000 V _{rms}	1000 V _{rms}
Clearance / creepage coil-contact circuit	≥ 2/3 mm	≥ 2,5 / 3,5 mm
Material group of insulation parts	IIIa	IIIa
Tracking index of relay base	CTI 225	CTI 325
Insulation to IEC 60664-1		
Type of insulation coil-contact circuit	basic	basic
open contact circuit	functional	functional
Rated insulation voltage	250 V	250 V
Pollution degree	2	2
Rated voltage system	240 V	240 V
Overvoltage category	II	II

Other data	T7N	T7N-WG
RoHS - Directive 2002/95/EC		
Versions with AgSnO ₂ contacts:	compliant as per product date code 0424	
Flammability class according to UL94	V0	V0
For WG version: GWFI to IEC 60695-2-12	-	850°C
GWIT to IEC 60695-2-13	-	775°C
Ambient temperature range	-40...85°C	-40...85°C
Operate- / release time	typ. 10/5 ms	typ. 10/5 ms
Vibration resistance (function) NO / NC contact	>14 / 8 g, 30...400 Hz	
Shock resistance (destruction)	100 g	100 g
Category of protection	RTIII - wash tight (RTII - flux proof)	RTII - flux proof RTIII - wash tight
Mounting	PCB	PCB
Resistance to soldering heat flux-proof version	270°C / 10 s	270°C / 10 s
wash-tight version	260°C / 5 s	260°C / 5 s
Relay weight	11 g	11 g
Packaging unit	25/1000 pcs	25/1000 pcs

PCB layout / terminal assignment
Bottom view on solder pins



Dimensions



Product key

Type							
Version							
S wash tight							
V flux proof							
Contact configuration							
1 1 NO contact							
5 1 CO contact							
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

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

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			48 VDC	7-1440006-6	
T7NS5D4-05					1 CO contact
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
T7NV1D4-06-WG			6 VDC	0-1649336-9	
T7NV1D4-09-WG			9 VDC	1-1649336-0	
T7NV1D4-12-WG			12 VDC	1-1649336-1	
T7NV1D4-24-WG			24 VDC	1-1649336-2	
T7NV1D4-36-WG			36 VDC	1-1649336-3	
T7NV1D4-48-WG			48 VDC	1-1649336-4	
T7NV5D4-05-WG					1 CO contact
T7NV5D4-06-WG	6 VDC	0-1649305-9			
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
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
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