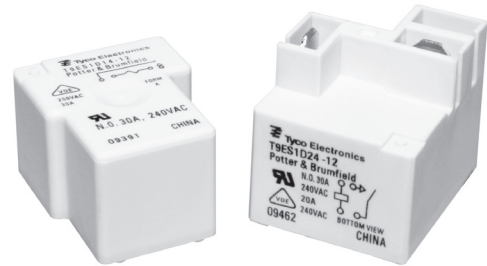


**Power PCB Relay T9E**

- 1 pole 30A, 1 formA(NO) or 1 formC(CO)
- High breaking capacity 7500 VA
- PCB and PCB/quick connect terminals
- UL class F insulation as standard
- Ambient temperature up to 105°C
- Plastic materials according to IEC60335-1

Typical applications  
HVAC, power supplies, domestic appliances, measurement and control.



**Approvals**

VDE 40027903, UL E58304  
Technical data of approved types on request.

**Contact Data**

Contact arrangement	1 form A (NO)	1 form C (CO)
Rated voltage	240VAC	
Max. switching voltage	250VAC (VDE); 300VAC (UL)	
Rated current	30A	20A/10A
Limiting continuous current	30A	
Breaking capacity max.	7500VA	5000/2500VA
Contact material	AgSnOInO (AgCdO optional)	
Min. recommended contact load	1A, 5VDC or 12VAC	
Initial contact resistance	75 mΩ at 1A at 5VDC or 12VAC	
Frequency of operation, with/without load	6/120min <sup>-1</sup>	
Operate/release time max., including bounce	15/15ms	

**Contact ratings**

Type	Contact	Load	Cycles
------	---------	------	--------

**IEC 61810**

AgSnOInO, 1W coil			
1	NO	30A, 250VAC, cosφ=1, 60°C	20x10 <sup>3</sup>
1	NO	20A, 250VAC, cosφ=1, 85°C	100x10 <sup>3</sup>
2	NO	20A, 250VAC, cosφ=1, 70°C	100x10 <sup>3</sup>
1, 2	CO	20A / 10A, 250VAC, cosφ=1, 60°C	20x10 <sup>3</sup>
AgSnOInO, 900mW coil			
1	NO	17A, 250VAC, cosφ=1, 105°C	100x10 <sup>3</sup>
1	NO	20A, 250VAC, cosφ=1, 85°C	100x10 <sup>3</sup>

**EN 60730-1**

AgSnOInO, 1W coil			
1	NO	12(12)A, 240VAC, 60°C	100x10 <sup>3</sup>

**UL 508 1)**

AgSnOInO, 1W coil			
1, 2	NO	30A, 240VAC, general purpose, 25°C	100x10 <sup>3</sup>
AgSnOInO, 900mW coil			
1, 2	NO	TV-8, 125VAC, 25°C	25x10 <sup>3</sup>

1) Additional UL 508 ratings are available.

Mechanical endurance	10x10 <sup>6</sup> ops.
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**Coil Data**

Coil voltage range	6 to 110VDC
Max. coil power	110% of nominal
Max. coil temperature	155°C
Coil insulation system according UL	Class F

**Coil Data (continued)**

**Coil versions, DC coil**

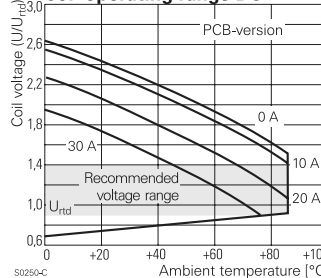
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power W
Code D (1W) coil					
6	6	4.5	0.6	36	1
9	9	6.75	0.9	81	1
12	12	9	1.2	144	1
18	18	13.5	1.8	324	1
22	22	16.5	2.2	484	1
24	24	18	2.4	576	1
48	48	36.2	4.8	2304	1
110	110	82.5	11	12100	1
Code L (900mW) coil					
6	6	4.5	0.6	40	.9
12	12	9	1.2	155	.9
18	18	13.5	1.8	380	.9
24	24	18	2.4	660	.9

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

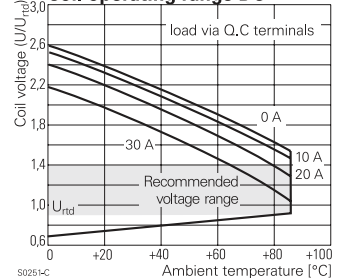
**Insulation Data**

Initial dielectric strength		
between open contacts		1500V
between contact and coil		2500V <sup>ms</sup>
Initial surge withstand voltage		
between contact and coil		6kV (1.2μs/50μs impulse wave)
Initial insulation resistance		
between insulated elements		1x10 <sup>9</sup> Ω
Clearance/creepage		
between contact and coil		≥3mm/4mm

**Coil operating range DC**



**Coil operating range DC**



Coil operating ranges shown above are for 1W coils.

**Power PCB Relay T9E (Continued)**

**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](http://www.te.com/customersupport/rohssupportcenter)

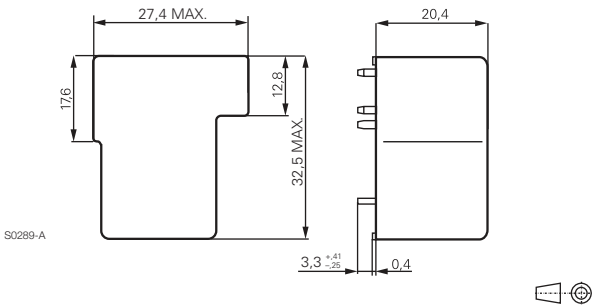
Ambient temperature	-40°C to 85°C / 105°C
DC coil	
Category of environmental protection	RTII - flux proof (T9EV)
IEC 61810	RTIII - wash tight (T9ES)
Vibration resistance (functional)	1.5mm, 10-55 Hz
Shock resistance (functional)	10g for 11msec
Shock resistance (destructive)	100g

**Other Data (Continued)**

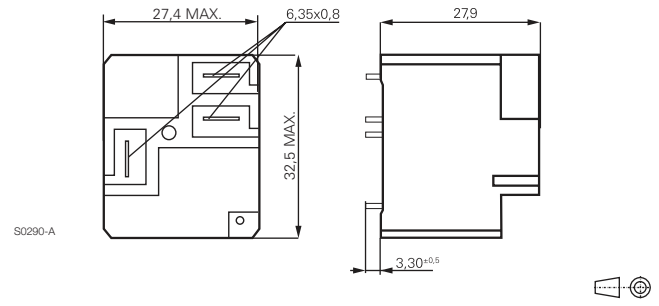
Terminal type	PCB-tht and PCB-tht + quick connect
Weight	26g mounting code 1 33g mounting codes 2 and 5
Resistance to soldering heat THT	
IEC 60068-2-20	260°C
Packaging/unit	tray/50 pcs., box/250 pcs.

**Dimensions**

PCB version



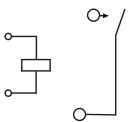
PCB/quick connect version



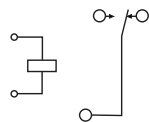
**Terminal assignment**

Bottom view on pins

1 form A



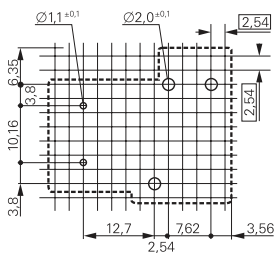
1 form C



**PCB layout**

Bottom view on pins

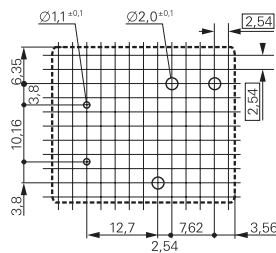
PCB version



S0261-AA

Only necessary terminals are present on single throw models. Consequently, some holes will be unnecessary for single throw models.

PCB/quick connect version



S0261-AH

Only necessary terminals are present on single throw models. Consequently, some holes will be unnecessary for single throw models.

**Power PCB Relay T9E** (Continued)

<b>Product code structure</b>		Typical product code		<b>T9E</b>	<b>S</b>	<b>1</b>	<b>D</b>	<b>1</b>	<b>4</b>	<b>-24</b>
<b>Type</b>										
<b>T9E</b>		Power PCB relay T9E								
<b>Enclosure</b>										
<b>S</b>		Wash-tight plastic case with knock off nib								
<b>V</b>		Flux-proof plastic case								
<b>Contact arrangement</b>										
<b>1</b>		1 form A (1 NO)		<b>5</b>	1 form C (1 CO)					
<b>Coil Input</b>										
<b>D</b>		DC voltage, 1W		<b>L</b>	DC voltage, 900mW					
<b>Mounting and termination</b>										
<b>1</b>		PCB mounting; PCB terminals for coil and contacts								
<b>2</b>		PCB mounting; PCB terminals for coil and contacts; 6.35mm (.250in) QC for contacts								
<b>Contact material</b>										
<b>4</b>		AgSnOInO								
<b>2</b>		AgCdO – optionally available. Contact Product Engineering for availability and ratings.								
<b>Coil voltage</b>										
		Coil code: please refer to coil versions table								

Product Code	Enclosure	Mounting	Contact material	Contacts	Coil version	Coil voltage	Part number
T9ES1L14-18	wash tight	PCB terminals	AgSnOInO	1 form A, 1 NO	900mW	18VDC	1-2027234-8
T9ES1D14-12					1W	12VDC	2027234-2
T9ES1D14-24						24VDC	2027234-7
T9ES1D12-12			AgCdO			12VDC	1-2027234-0
T9ES1D24-12		PCB + quick connect	AgSnOInO			12VDC	2027234-8
T9ES1D22-12			AgCdO			12VDC	1-2027243-3
T9ES5D14-12		PCB terminals	AgSnOInO	1 form C, 1 CO		12VDC	2027234-6
T9ES5D12-24			AgCdO			24VDC	2027234-4
T9ES5D24-12		PCB + quick connect	AgSnOInO			12VDC	2027234-9
T9EV1D14-22	flux proof	PCB terminals		1 form A, 1 NO		22VDC	2027234-5

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