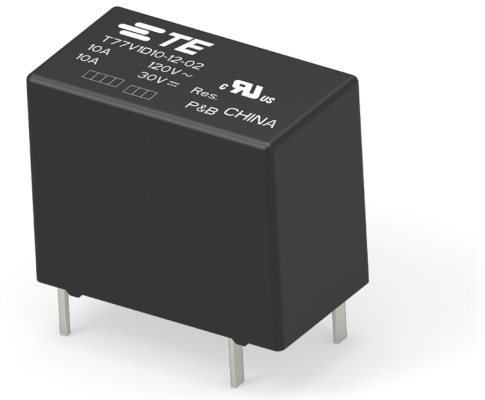
POTTER & BRUMFIELD MINIATURE PCB RELAY T77

GENERAL PURPOSE RELAYS
PCB RELAYS

FEATURES

- 3 to 10A rating
- Small size
- Creepage spacings of 6.5mm between coil and contacts
- 4,000Vrms coil to contact dielectric strength
- UL Class F approved insulation system



APPLICATIONS

- Appliances
- HVAC
- Industrial control
- PLC's

APPROVALS

- VDE 40010327
- UL E29244

Technical data of approved types on request.

CONTACT DATA

Contact Data	1 form A, 1 NO
Contact arrangement	30VDC, 250VAC
Rated voltage	30VDC, 277VAC
Max. switching voltage	3 to 10A
Rated current	3A type: AgNi
Contact material	10A type: AgCdO
Min. recommended contact load	100mA at 5VDC
Frequency of operation	360 ops./h
Operate/release time max.	10ms/4ms
Electrical endurance	

3A type	3A, 250VAC res., -30°C to +55°C	$100x10^3$ ops.
5A type	5A, 250VAC res., -30°C to +40°C	$100x10^3$ ops.
	5A, 250VAC res, -30°C to +85°C	$10x10^3$ ops.
10A type	10A, 250VAC res., -30°C to +55°C	$100x10^3$ ops.
	10A, 250VAC res., -30°C to +85°C	$10x10^3$ ops.

Contact ratings	3A type: 3A 250VAC 5A type: 5A 250VAC 10A type: 10A 250VAC
Mechanical endurance, DC coil	$10x10^6$ operations

COIL DATA

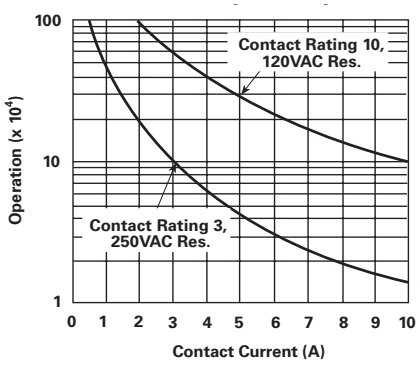
Coil voltage range	5 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class E, F

COIL VERSIONS, DC-COIL

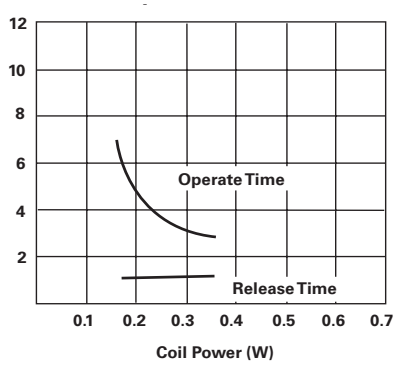
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω ±10%	Rated coil power mW
Sensitive type, 200mW					
003	3	2.25	0.15	45	200
005	5	3.75	0.25	125	200
006	6	4.5	0.3	180	200
009	9	6.75	0.45	405	200
012	12	9	0.6	720	200
024	24	18	1.2	2880	200
048	48	36	2.4	11520	200
Standard type, 450mW					
003	3	2.1	0.15	20	450
005	5	3.5	0.25	55.6	450
006	6	4.2	0.3	80	450
009	9	6.3	0.45	180	450
012	12	8.4	0.6	320	450
024	24	16.8	1.2	1280	450
048	48	33.6	2.4	5120	450

All figures are given for coil without pre-energization, at ambient temperature +23 °C.
Other coil voltages on request.

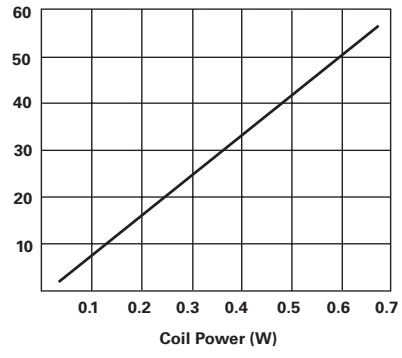
ELECTRICAL ENDURANCE



OPERATE TIME



COIL TEMPERATURE RISE



INSULATION DATA

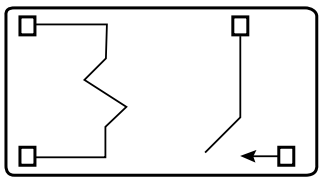
Initial dielectric strength	
between open contacts	750Vrms
between contact and coil	4000Vrms
Clearance/creepage	
between contact and coil	>3.2/6.4mm

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	3A type: -30°C to +105°C 5A and 10A type: -30°C to +85°C
Category of environmental protection	
IEC 61810	RTII - dust protected RT III - wash tight
Shock resistance (functional)	10g
Shock resistance (destructive)	100g
Weight	9g
Resistance to soldering heat THT	
IEC 60068-2-20	RTII: 270°C/10s RTIII: 260°C/5s
Packaging/unit	Tray/100, carton box/1000

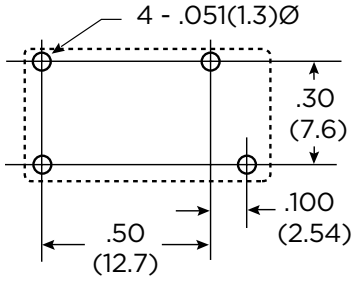
TERMINAL ASSIGNMENT

Bottom view on solder pins

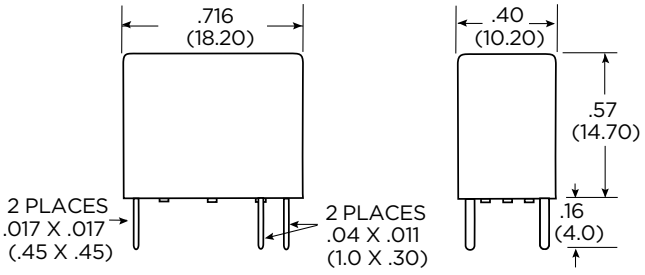


PCB LAYOUT

Bottom view on solder pins



DIMENSIONS (Unit: mm)



PRODUCT CODE STRUCTURE

Type

T77	Miniature PCB Relay T77

Category of protection

V	Flux proof
S	Wash tight

Contact arrangement

1	1 Form A, 1NO

Coil input

D	DC coil

Contact rating and coil power

5	5A type, coil power 450mW
3	3A type, coil power 200mW
10	10A type, coil power 450mW

Special types

Blank	Standard

Insulation system

Blank	UL Class 155 (F)
A	UL Class 120 (E)

Coil voltage

Coil code	please refer to coil versions table (e.g. 12 = 12VDC)

PRODUCT INFORMATION

Product code	Enclosure	Contact rating	Cont.material	Coil voltage	Coil power	Part number
T77S1D3-05	Wash tight	3A	AgNi	5VDC	200mW	1-1393194-3
T77V1D3-12	Flux proof	3A	AgNi	12VDC	200mW	2-1393194-6
T77S1D3-12	Wash tight	3A	AgNi	12VDC	200mW	1-1393194-5
T77V1D3-24	Flux proof	3A	AgNi	24VDC	200mW	2-1393194-7
T77S1D3-24	Wash tight	3A	AgNi	24VDC	200mW	1-1393194-6
T77V1D10-05	Flux proof	10A	AgCdO	5VDC	450mW	1-1393194-8
T77S1D10-05	Wash tight	10A	AgCdO	5VDC	450mW	1393194-7
T77V1D10-09	Flux proof	10A	AgCdO	9VDC	450mW	1440005-1
T77S1D10-03	Wash tight	10A	AgCdO	3VDC	450mW	1393194-6
T77V1D10-12	Flux proof	10A	AgCdO	12VDC	450mW	1-1393194-9
T77S1D10-12	Wash tight	10A	AgCdO	12VDC	450mW	1393194-9
T77V1D10-24	Flux proof	10A	AgCdO	24VDC	450mW	2-1393194-1
T77S1D10-24	Wash tight	10A	AgCdO	24VDC	450mW	1-1393194-0

Notes:

1. Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
2. Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at **http://relays.te.com/definitions.**
3. Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.
4. For general information on Force-Guided-Relays and our portfolio, please visit **http://www.te.com/fgr**.
5. For more detailed product-specific-information (such as B10d values, switching times, etc) please contact our Product Information Center (**https://www.te.com/usa-en/customer-support/customer-service.html**) and ask for the product-specification.

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