

Miniature Power Relay PTF

- 2 pole 15A, 2 form C (C0) contacts
- DC or AC coil
- Plug-in version, PCB or chassis mount version

Typical applications
Panel boards, domestic appliances



F0281-B



Approvals

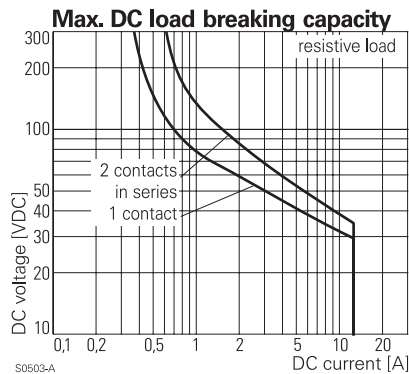
VDE REG.-Nr. A379, UL E58304
Technical data of approved types on request

Contact Data

Contact arrangement	2 form C (C0)
Rated voltage	240VAC
Max. switching voltage	400VAC
Rated current	15A
Limiting making current, max. 20ms	24A
Switching power	2500VA
Contact material	AgNi90/10
Min. recommended contact load	5V at 100mA
Frequency of operation, with/without load	360/36000h ⁻¹
Operate time max., DC coil	15ms
Release time max., DC coil	10ms
Bounce time max., DC coil, form A/form B	5/5 ms

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
PTF2 DC coil	C (C0)	15A, 250VAC, cosφ=1, 70°C	35x10 ³
PTF2 AC coil	C (C0)	15A, 250VAC, cosφ=1, 70°C	6x10 ³
UL 508			
PTF2	A/B (NO/NC)	10A, 250VAC, resistive, 70°C	100x10 ³
PTF2	A/B (NO/NC)	15A, 120VAC, resistive, 70°C	100x10 ³
Mechanical endurance			
DC coil		20x10 ⁶ operations	
AC coil		15x10 ⁶ operations	



Coil Data

Coil voltage range	6 to 220VDC 6 to 230VAC
Operative range, IEC 61810	
DC coil, AC-coil 50Hz:	2
AC coil 60 Hz at 70°C:	90..110% of rated voltage

Coil versions, DC coil

Coil code		Rated	Operate	Release	Coil	Rated coil
STD	LED	voltage	voltage	voltage	resistance	power
	bipolar	VDC	VDC	VDC	Ω±10% ^{1/2)}	mW
006	L06	6	4.5	0.6	48	750
012	L12	12	9.0	1.2	192	750
024	L24	24	18.0	2.4	777	741
048	L48	48	36.0	4.8	3072	750
060	L60	60	45.0	6.0	4845 ¹⁾	743
110	M10	110	82.5	11.0	16133 ²⁾	750
220	N20	220	165.0	22.0	64533 ²⁾	750

1) Coil resistance ±12%, 2) Coil resistance ±15%

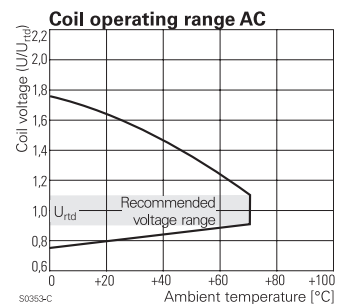
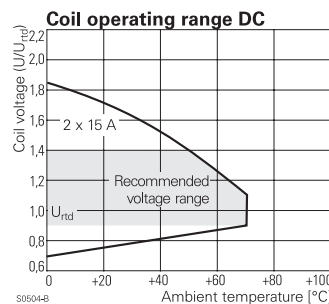
All figures are given for coil without pre-energization, at ambient temperature +23°C

Coil versions, AC coil, 50/60Hz

Coil code	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD	LED	50/60Hz	50/60Hz	Ω±10% ¹⁾²⁾	50/60Hz
		VAC	VAC		VA
506	R06	6	4.8/5.4	1.1	1.0/0.85
512	R12	12	9.6/10.8	3.6	1.0/0.85
524	R24	24	19.2/21.6	7.2	1.0/0.79
548	R48	48	38.4/43.2	14.4	1.0/0.87
560	R60	60	48.0/54.0	18.0	1.0/0.87
615	S15	115	92.0/103.5	34.5	4845 ¹⁾
730	T30	230	184.0/207.0	69.0	19465 ²⁾

1) Coil resistance ±12%, 2) Coil resistance ±15%

All figures are given for coil without pre-energization, at ambient temperature +23°C



Miniature Power Relay PTF (Continued)

Insulation Data

Initial dielectric strength	
between open contacts	1200V _{rms}
between contact and coil	2500V _{rms}
between adjacent contacts	2500V _{rms}
Clearance/creepage	
between contact and coil	≥3.1/3.1mm
between adjacent contacts	≥4.4/8.8mm
Material group of insulation parts	IIIa

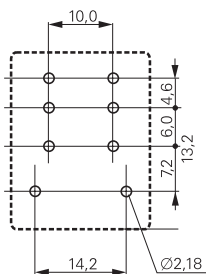
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

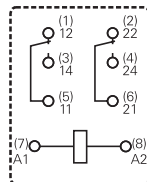
Ambient temperature	
DC coil	-40 to +70°C
AC coil	-40 to +70°C
Category of environmental protection	
IEC 61810	RTII - flux proof
Vibration resistance (functional)	
form A (NO)/form B (NC)	7/4g
Shock resistance (functional)	
form A (NO)/form B (NC)	20/5g
Terminal type	PCB-THT, plug-in quick-connect
Cover retention, pull/push force	100/100N
Weight	30g
Resistance to soldering heat THT	
IEC 60068-2-20	270°C/10s
Packaging unit	20 pcs.

PCB layout / terminal assignment

Bottom view on pins



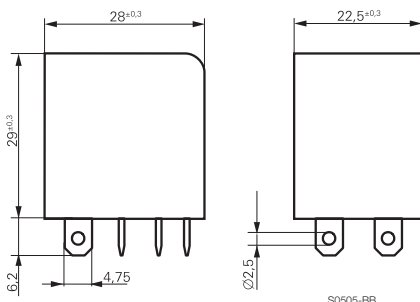
S0507-AA



S0507-AB

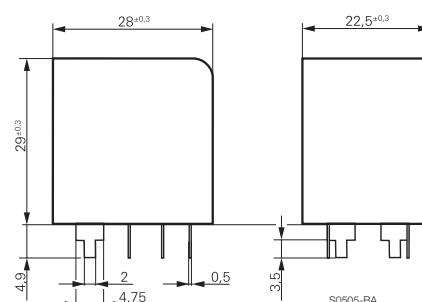
Dimensions

Solder- and plug-in terminals (standard version)



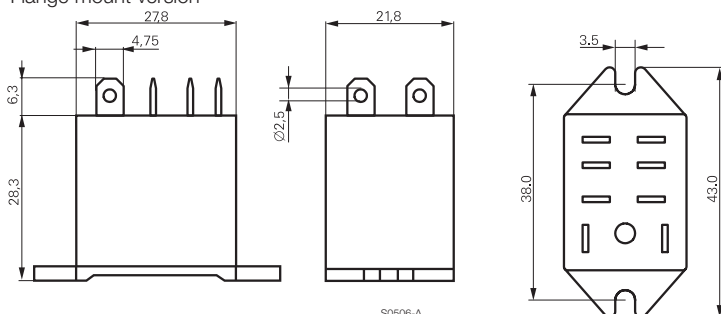
S0505-BB

PCB version



S0505-BA

Flange mount version



S0506-A

Miniature Power Relay PTF (Continued)

Product code structure

Typical product code

Type	PTF Miniature Power Relay PTF	PTF	2	0	524
Contact material	2 AgNi 90/10				
Version	0 Quick connect terminals 1 PCB terminals 2 Flange mount cover				
Coil	Coil code: please refer to coil versions table				

Product code	Contacts	Cont. material	Terminal	Coil	Coil	Part number
PTF20024	2 form C	AgNi 90/10	quick connect term.	DC coil	24VDC	1461937-3
PTF21024	2 CO		PCB			1-1461937-0
PTF20524	contacts		quick connect term.	AC coil	24VAC	1461938-3
PTF20615					115VAC	1461938-7
PTF20730					230VAC	1461938-9
PTF21524			PCB		24VAC	1-1461938-2
PTF21615					115VAC	1-1461938-6
PTF21730					230VAC	1-1461938-8
PTF20L24			quick connect term.	DC + LED	24VDC	1461944-3
PTF20R24				AC + LED	24VAC	1461945-3
PTF20S15					115VAC	1461945-7
PTF20T30					230VAC	1461945-9
PTF22024			flange mount cover	DC coil	24VDC	1721058-3
PTF22524				AC coil	24VAC	1-1721058-0
PTF22615					115VAC	1-1721058-4
PTF22730					230VAC	1-1721058-6