

**Miniature Power Relay PTF**

- 2 pole 15 A, 2 CO contacts
- DC or AC coil
- Plug-in version, PCB or chassis mount version

**Applications**

Panel boards, domestic appliances



F0281-B

**Approvals**

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

**Contact data**

Contact configuration	2 CO contacts
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	240 / 400 VAC
Rated current	10 A / 250 VAC 15 A / 120 VAC
Maximum breaking capacity AC	2500 VA / 250 VAC 1800 VA / 120 VAC
Limiting making capacity, max 20 ms	20 A / 250 VAC 30 A / 120 VAC
Contact material	AgNi90/10
Minimum contact load	5V/100mA
Rated frequency of operation with / without load	6/600 min <sup>-1</sup>
Operate- / release time DC coil	max 15 / 10 ms
Bounce time DC coil NO / NC contact	max 5 / 5 ms

**Contact ratings**

Type	Contact	Load	Ambient temp. [°C]	Cycles
<b>IEC 61810</b>				
PT F2 DC-coil	CO	15 A, 250 VAC, cosφ=1	70°C	35x10 <sup>3</sup>
PT F2 AC-coil	CO	15 A, 250 VAC, cosφ=1	70°C	6x10 <sup>3</sup>
<b>UL 508</b>				
PT F2	NO / NC	10 A, 250 VAC, resistive	70°C	100x10 <sup>3</sup>
PT F2	NO / NC	15 A, 120 VAC, resistive	70°C	100x10 <sup>3</sup>

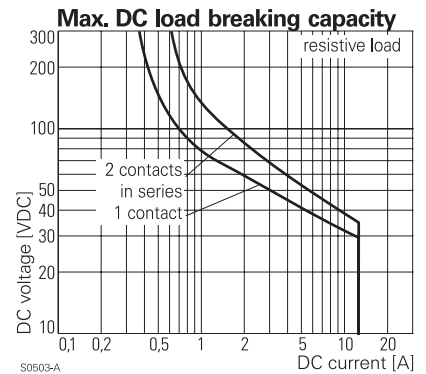
**Coil data**

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Operative range to IEC 61810 DC coil, AC-coil 50Hz	2
AC coil 60 Hz at 70°C, % of U <sub>rid</sub>	90..110%

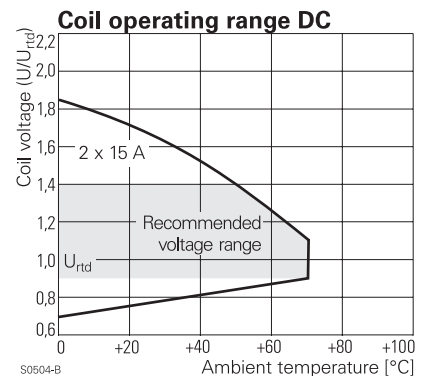
**Coil versions, DC-coil**

Coil code	STD	LED bipolar	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
006	L06		6	4.5	0.6	48±10%	750
012	L12		12	9.0	1.2	192±10%	750
<b>024</b>	<b>L24</b>		<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>777±10%</b>	<b>741</b>
048	L48		48	36.0	4.8	3072±10%	750
060	L60		60	45.0	6.0	4845±12%	743
110	M10		110	82.5	11.0	16133±15%	750
220	N20		220	165.0	22.0	64533±15%	750

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



S0503-A



S0504-B

**Miniature Power Relay PTF (Continued)**

**Coil versions, AC-coil 50 / 60 Hz**

Coil code	LED	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
		VAC	50 / 60 Hz	50 / 60 Hz	Ohm	50 / 60 Hz VA
506	R06	6	4.8 / 5.4	1.8	11 ± 10%	1.0 / 0.85
512	R12	12	9.6 / 10.8	3.6	48 ± 10%	1.0 / 0.85
<b>524</b>	<b>R24</b>	<b>24</b>	<b>19.2 / 21.6</b>	<b>7.2</b>	<b>192 ± 10%</b>	<b>1.0 / 0.79</b>
548	R48	48	38.4 / 43.2	14.4	777 ± 10%	1.0 / 0.87
560	R60	60	48.0 / 54.0	18.0	1306 ± 10%	1.0 / 0.87
615	S15	115	92.0 / 103.5	34.5	4845 ± 12%	1.0 / 0.86
<b>730</b>	<b>T30</b>	<b>230</b>	<b>184.0 / 207.0</b>	<b>69.0</b>	<b>19465 ± 15%</b>	<b>1.0 / 0.90</b>

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

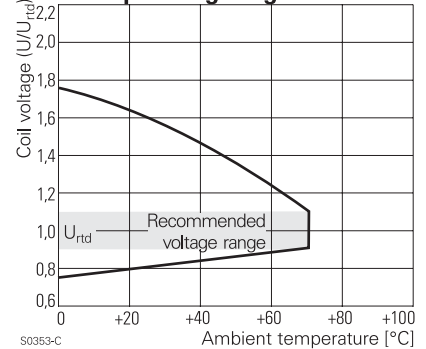
**Insulation**

Dielectric strength coil-contact circuit	2500 V <sub>rms</sub>
open contact circuit	1200 V <sub>rms</sub>
adjacent contact circuits	2500 V <sub>rms</sub>
Clearance / creepage coil-contact circuit	≥ 3.1 / 3.1 mm
adjacent contact circuits	≥ 4.4 / 8.8 mm
Material group of insulation parts	IIIa
Insulation to IEC 61810-1	
Type of insulation coil-contact circuit	basic
open contact circuit	micro disconnection
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	230 / 400 V
Overvoltage category	III

**Other data**

Mechanical endurance DC coil	20x10 <sup>6</sup> cycles
AC coil	15x10 <sup>6</sup> cycles
Material	
RoHS - Directive 2002/95/EC	compliant
Environment	
Ambient temperature range	-40...+70°C
Vibration resistance (function) NO / NC contact	7 / 4 g
Shock resistance (function) NO / NC contact	20 / 5 g
Category of protection	RTII - flux proof
Processing	
Resistance to soldering heat	270°C / 10 s
Relay weight	30 g
Packaging unit	20 pcs

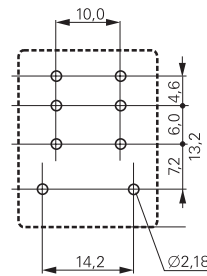
**Coil operating range AC**



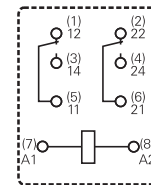
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**PCB layout / terminal assignment**

Bottom view on pins



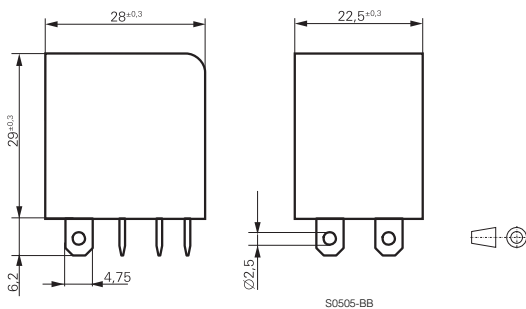
S0507-AA



S0507-AB

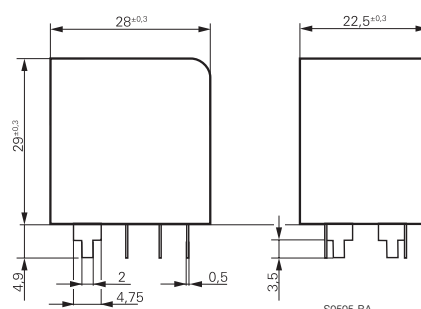
**Dimensions**

Solder- and plug-in terminals (standard version)



S0505-BB

PCB version

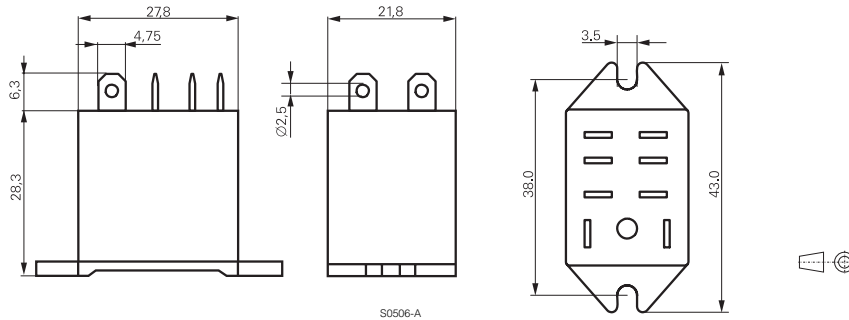


S0505-BA

**Miniature Power Relay PTF (Continued)**

**Dimensions**

Flange mount version



**Product key**

Typical product key

**PTF 2 0 524**

**Type**

**PTF** Miniature Power Relay PTF

**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, preferred types in bold print

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