

- 2 pole 12 A, 3 pole 10 A or 4 pole 6 A, 2, 3 or 4 CO contacts
- DC- or AC-coil
- Switching performance up to 3000 VA
- Relay height 29 mm
- Mechanical and electrical indicator
- Manual test tab, optionally lockable.
- White marking tabs
- RoHS compliant (Directive 2002 / 95 / EC)



FD191-A

Applications

Universal use in control and automation

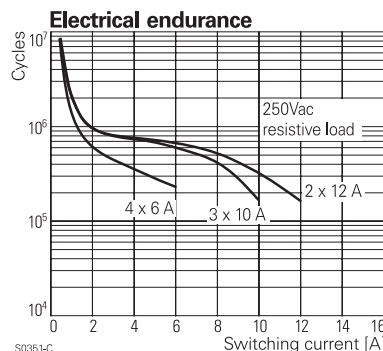
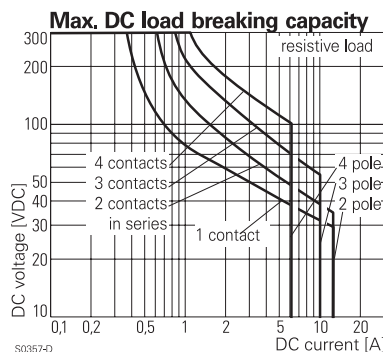
Approvals

REG.-Nr. 115719, US E214025, 00/20059(E2)
 Technical data of approved types on request

Contact data	PT2	PT3	PT5
Contact configuration	2 CO	3 CO	4 CO
Contact set	single contact		
Type of interruption	micro disconnection		
Rated current	12 A	10 A	6 A
Rated voltage / max.switching voltage AC	240/400 VAC	240/400 VAC	240/240 VAC
Maximum breaking capacity AC	3000 VA	2500 VA	1500 VA
Limiting making capacity, max 20 ms	24 A	20 A	12 A
Contact material	AgNi90/10, AgNi90/10 gold plated		
Minimum contact load	12V/10mA, 20mV/1mA gold plated		
Mechanical endurance DC coil	30x10 ⁶ cycles		
AC coil	20x10 ⁶ cycles		
Rated frequency of operation with / without load	6/600 min ⁻¹		

Contact ratings

Type	Load	Cycles
PT270	12 A, 250 VAC, 3000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	168x10 ³
PT270	8 A, 250 VAC, 2000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	750x10 ³
PT270	4 A, 250 VAC, 1000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	8.3x10 ⁶
PT270	3.75 A, 400 VAC, opp. polarity, 70°C, AC3	
PT270	5 A, 250 VAC, opp. polarity, normal/abnormal, 70°C, AC15	
PT270	8 A, 24 VDC, opp. polarity, normal/abnormal, 70°C, DC13	
PT270	1.7 A, 230 VAC, 400 W, opp. polarity, 70°C, AC5b	
PT370	10 A, 250 VAC, 2500 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	159x10 ³
PT370	8 A, 250 VAC, 2000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	466x10 ³
PT370	4 A, 250 VAC, 1000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	1.1x10 ⁶
PT370	2 A, 400 VAC, opp. polarity, 70°C, AC3	
PT370	5 A, 250 VAC, opp. polarity, normal/abnormal, 70°C, AC15	
PT370	8 A, 24 VDC, opp. polarity, normal/abnormal, 70°C, DC13	
PT370	1.7 A, 230 VAC, 400 W, opp. polarity, 70°C, AC5b	
PT570	6 A, 250 VAC, 1500 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	228x10 ³
PT570	2 A, 250 VAC, 500 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	782x10 ³
PT570	3 A, 400 VAC, opp. polarity, 70°C, AC3	
PT570	4 A, 250 VAC, opp. polarity, normal/abnormal, 70°C, AC15	
PT570	6 A, 24 VDC, opp. polarity, normal/abnormal, 70°C, DC13	
PT570	1.7 A, 230 VAC, 400 W, opp. polarity, 70°C, AC5b	
PT570	0.3 A, 110 VDC, 33 W, L/R=22 ms, 1440 h ⁻¹ , DF 8%, NO, prot.D.	3.6x10 ⁶
PT570	3 A on /1 A off, 120 VAC, cosφ 0.8on/0.5off, 600h ⁻¹ , DF 15%, NO	423x10 ³



Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Coil power DC coil	0.75 mW
AC coil	1.0 VA
Operative range DC coil, AC-coil 50Hz	2
AC coil 60 Hz at 70°C, % of U _{rtid}	90..110%

Coil versions, DC-coil

Coil code	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
024	L24	24	18.0	2.4	777±10%	741
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

Coil versions, AC-coil 50/60 Hz

Coil code	LED	Rated voltage VAC	Operate voltage 50/60Hz VAC	Release voltage 50/60Hz VAC	Coil resistance Ohm	Rated coil power 50/60Hz 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
524	R24	24	19.2/21.6	7.2	192±10%	1.0/0.79
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
730	T30	230	184.0/207.0	69.0	19465±15%	1.0/0.90

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

Insulation

	PT2	PT3	PT5
Dielectric strength coil-contact circuit	2500 V _{rms}	2500 V _{rms}	2500 V _{rms}
open contact circuit	1200 V _{rms}	1200 V _{rms}	1200 V _{rms}
adjacent contact circuits	2500 V _{rms}	2500 V _{rms}	2000 V _{rms}
Clearance / creepage coil-contact circuit	≥ 4/4 mm	≥ 4/4 mm	≥ 4/4 mm
adjacent contact circuits	≥ 3.5/9.5 mm	≥ 2.6/3.5 mm	≥ 1.8/3.5 mm
Material group of insulation parts	≥ IIIa		
Insulation to IEC 60664-1			
Type of insulation coil-contact circuit	basic	basic	basic
open contact circuit	functional	functional	functional
adjacent contact circuits	basic	basic	functional
Rated insulation voltage	250 V	250 V	250 V
Pollution degree	2	2	2
Rated voltage system	240/400 V	240 V	240 V
Overvoltage category	III	III	III

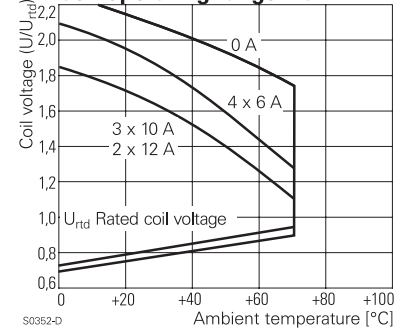
Other data

RoHS - Directive 2002/95/EC	compliant
Ambient temperature range	-40...+70°C
Operate- / release time	15/10 ms
Bounce time NO / NC contact	5 ms
Vibration resistance (function) NO / NC contact	7/4 g
Shock resistance (function) NO / NC contact	20/5 g
Category of protection	RTII- flux proof
Mounting distance	0 mm, dense packing
Resistance to soldering heat	270°C / 10s
Relay weight	30 g
Packaging unit	10/250 pcs

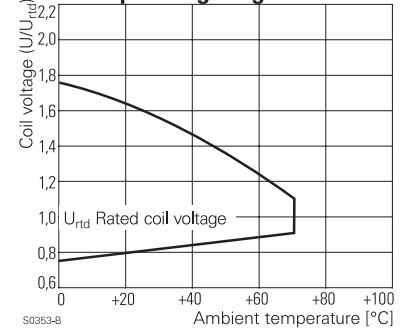
Accessories

For details see datasheet Accessories Miniature Relay PT

Coil operating range DC



Coil operating range AC



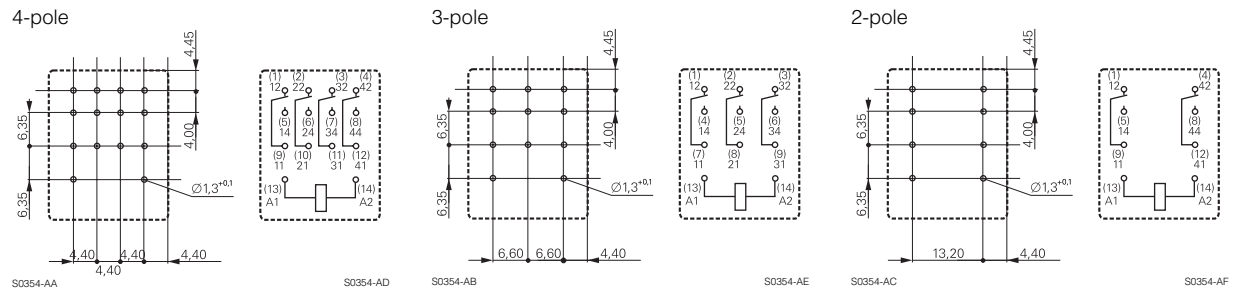
Miniature Relay PT (Continued)

Relay Packages

Complete packages consisting of a relay mounted on a socket see Package PT

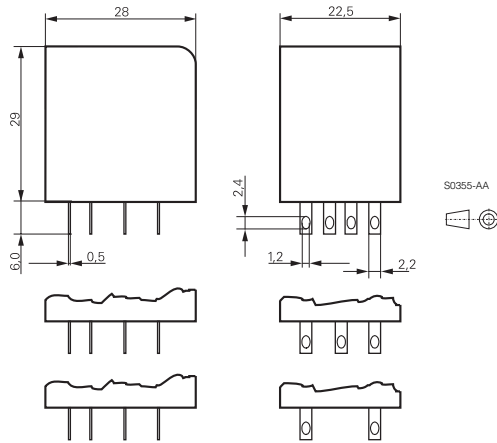
PCB layout / terminal assignment

Bottom view

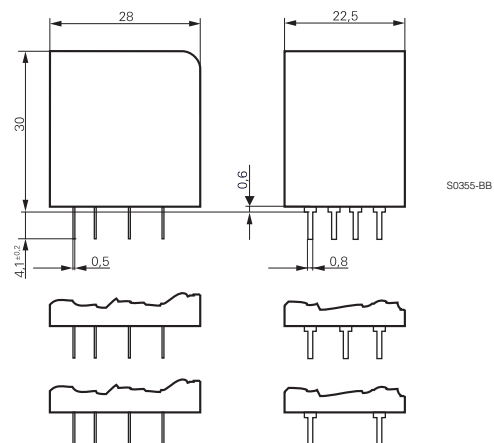


Dimensions

Solder- and plug-in terminals (standard version)



PCB version



Product key

Type

Contact configuration

- 2** 2 CO contacts
- 3** 3 CO contacts
- 5** 4 CO contacts

Contact material

- 7** AgNi 90/10, with test button*)
- 8** AgNi 90/10 gold plated, with test button*)

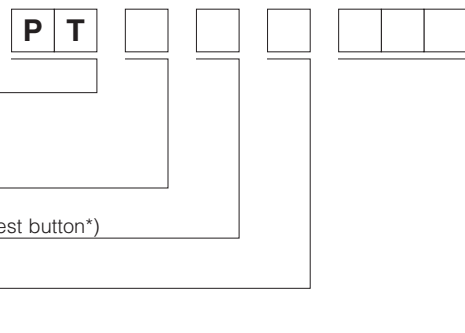
Version

- 0** standard, 2.8 mm quick connect term.
- 1** PCB terminals

Coil

Coil code: please refer to coil versions table, preferred types in bold print

*) Version with closed cap without test button available on request
Other types on request



Product key	Cont. Config.	Cont. material	Version	Coil	Coil	Part number						
PT270024	2 CO contacts	AgNi 90/10 test button	AMP 2.8 connectors	DC coil	24 VDC	4-1419111-2						
PT270524				AC-coil	24 VAC	4-1419111-8						
PT270615				115 VAC	5-1419111-0							
PT270730				230 VAC	5-1419111-1							
PT270L24				DC coil+LED	24 VDC	9-1415001-1						
PT270R24				AC-coil+LED	24 VAC	0-1415002-1						
PT270S15				115 VAC	2-1415039-1							
PT270T30				230 VAC	3-1415002-1							
PT271024				PCB terminals			DC coil	24 VDC	5-1419111-3			
PT271524							AC-coil	24 VAC	5-1419111-6			
PT271615							115 VAC	4-1419135-0				
PT271730							230 VAC	5-1419111-8				
PT370024							3 CO contacts	AgNi 90/10 test button	AMP 2.8 connectors	DC coil	24 VDC	6-1419111-1
PT370524										AC-coil	24 VAC	6-1419111-6
PT370615	115 VAC	6-1419111-8										
PT370730	230 VAC	6-1419111-9										
PT370L24	DC coil+LED	24 VDC	5-1415002-1									
PT370R24	AC-coil+LED	24 VAC	7-1415002-1									
PT370S15	115 VAC	9-1415039-1										
PT370T30	230 VAC	9-1415002-1										
PT371024	PCB terminals			DC coil	24 VDC	7-1419111-1						
PT371524				AC-coil	24 VAC	7-1419111-3						
PT371615				115 VAC	0-1393154-8							
PT371730				230 VAC	7-1419111-5							
PT570024				4 CO contacts	AgNi 90/10 test button	AMP 2.8 connectors				DC coil	24 VDC	1-1393154-2
PT570524										AC-coil	24 VAC	8-1419111-7
PT570615							115 VAC	9-1419111-0				
PT570730	230 VAC	9-1419111-1										
PT570L24	DC coil+LED	24 VDC	6-1415001-1									
PT570R24	AC-coil+LED	24 VAC	7-1415001-1									
PT570S15	115 VAC	7-1415003-1										
PT570T30	230 VAC	8-1415001-1										
PT571024	PCB terminals						DC coil	24 VDC	9-1419111-3			
PT571524							AC-coil	24 VAC	9-1419111-6			
PT571615							115 VAC	1-1393154-5				
PT571730							230 VAC	9-1419111-8				
PT580024							AgNi 90/10 gold plated test button	AMP 2.8 connectors		DC coil	24 VDC	1-1393154-7
PT580524										AC-coil	24 VAC	2-1393154-1
PT580730				230 VAC	2-1393154-2							
PT580L24	DC coil+LED	24 VDC	5-1415026-1									
PT580R24	AC-coil+LED	24 VAC	6-1415026-1									
PT580S15	230 VAC	7-1415026-1										
PT580T30	PCB terminals			DC coil	24 VDC	7-1419135-2						
PT581024				AC-coil	230 VAC	2-1393154-3						