

# Miniature Relay PT

2 pole 12 A, 3 pole 10 A or 4 pole 6 A  
DC- or AC-coil



F0191-A

## Features

- 2, 3 or 4 C/O contacts
- Switching performance up to 3000 VA
- Relay height 29 mm
- Cadmium-free contact material
- Mechanical and electrical indicator
- Manual test tab, optionally lockable.
- White marking tabs

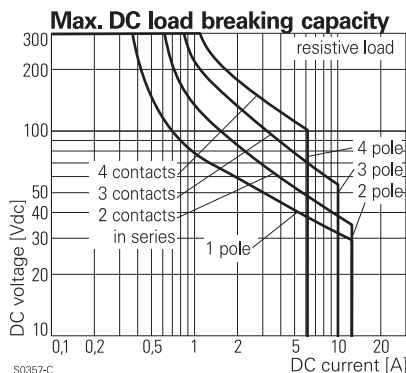
## Applications

Universal use in control and automation



Technical data of approved types on request

Contact data	PT2	PT3	PT5
Configuration	2 C/O	3 C/O	4 C/O
Type of contact	single contacts		
Rated current	12 A	10 A	6 A
Rated voltage / max. breaking voltage AC	250 Vac	250 Vac	250 Vac
Maximum switching voltage	440 Vac	440 Vac	250 Vac
Maximum breaking capacity AC	3000 VA	2500 VA	1500 VA
Make current	24 A	20 A	12 A
Contact material	AgNi 90/10, AgNi 90/10 gold plated		
Minimum contact load	24 V, 10 mA / 20 mV, 1 mA gold plated		

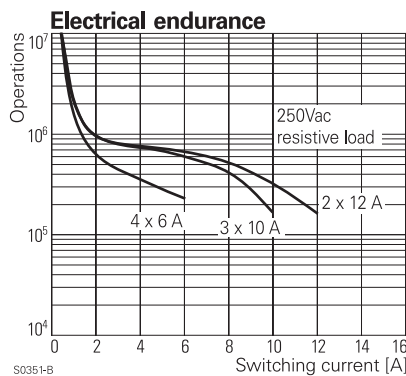


## Contact ratings

Type	Load	Operations	Standard
PT570	6 A, 250 Vac, on the C/O contact	1x10 <sup>5</sup>	VDE 0435

## Coil data

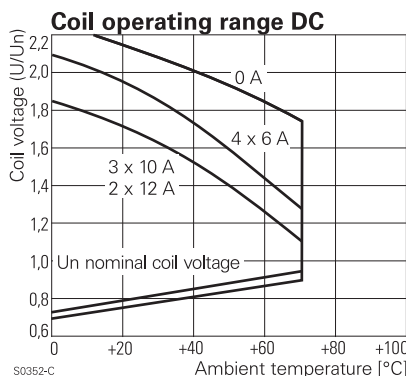
Nominal voltage	DC coil	6...220 Vdc
	AC coil	6...230 Vac
Nominal coil power	DC coil	typ. 0.75 W
	AC coil	typ. 1.0 VA
Operate category	2 / b	
Operating range for AC coil 60Hz at 70°C	90...110% U <sub>nom</sub>	



## Coil versions, DC-coil

Coil code	Nominal voltage	Pull-in voltage	Release voltage	Coil resistance	Coil current	
Standard	Vdc	Vdc	Vdc	Ω	mA	
LED bipolar	Vdc	Vdc	Vdc	Ω	mA	
006	L06	6	4.5	0.6	48±10%	125.0
012	L12	12	9.0	1.2	192±10%	62.5
<b>024</b>	<b>L24</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>777±10%</b>	<b>31.3</b>
048	L48	48	36.0	4.8	3072±10%	15.6
060	L60	60	45.0	6.0	4845±12%	12.5
110	M10	110	82.5	11.0	16133±15%	6.8
220	N20	220	165.0	22.0	64533±15%	3.4

All figures are given for coil without preenergization, at ambient temperature +20°C



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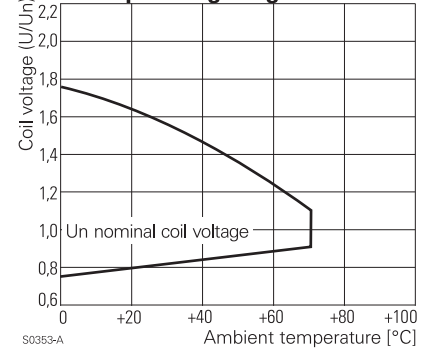
2 pole 12 A, 3 pole 10 A or 4 pole 6 A  
DC- or AC-coil

## Coil versions, AC-coil

Coil code		Nominal voltage	Pull-in voltage	Release voltage	Coil resistance	Coil current
Standard	LED	Vac	Vac	Vac	$\Omega$	mA
506	R06	6	4.8	1.8	$11 \pm 10\%$	166.5
512	R12	12	9.6	3.6	$48 \pm 10\%$	83.3
<b>524</b>	<b>R24</b>	<b>24</b>	<b>19.2</b>	<b>7.2</b>	<b><math>192 \pm 10\%</math></b>	<b>41.6</b>
548	R48	48	38.4	14.4	$777 \pm 10\%$	21.3
560	R60	60	48.0	18.0	$1306 \pm 10\%$	16.7
615	S15	115	92.0	34.5	$4845 \pm 12\%$	8.8
<b>730</b>	<b>T30</b>	<b>230</b>	<b>184.0</b>	<b>69.0</b>	<b><math>19465 \pm 15\%</math></b>	<b>4.3</b>

All figures are given for coil without preenergization, at ambient temperature +20°C

## Coil operating range AC



Insulation	PT2	PT3	PT5
Dielectric strength coil-contacts	2500 V <sub>rms</sub>	2500 V <sub>rms</sub>	2500 V <sub>rms</sub>
open contact circuit in unenergized position typ. adjacent contacts	1500 V <sub>rms</sub>	1500 V <sub>rms</sub>	1500 V <sub>rms</sub>
	2500 V <sub>rms</sub>	2500 V <sub>rms</sub>	2000 V <sub>rms</sub>
Clearance / creepage	3 / 4 mm	2.6 / 4 mm	1.8 / 3 mm
Insulation to IEC 60664			
Voltage rating	240 V	240 V	240 V
Pollution degree	3	3	2
Overvoltage category	III	III	III
Insulation to VDE 0110b (2/79)			
Insulation category / ref. voltage	C / 250	C / 250	B / 250
Tracking resistance of relay base		CTI 175	

## Other data

Flammability class according to UL 94	V-0	
Ambient temperature	DC-coil	-40...+70 °C
	AC-coil	-40...+70 °C
Mechanical life	DC-coil	>30x10 <sup>6</sup> ops.
	AC-coil	>20x10 <sup>6</sup> ops.
Max. switching rate at rated- / minimum load	6 min <sup>-1</sup> / 600 min <sup>-1</sup>	
Operate- / release time	15 / 10 ms	
Bounce time	5 ms	
Vibration resistance N/O contact/N/C contact	>7 / 4 g	
Shock resistance (function) N/O contact/N/C contact	>20 / 5 g	
Category of protection (IEC 61810)	RT II	
Relay weight	30 g	
Packaging unit	10 pcs.	
Accessories	see accessories PT	

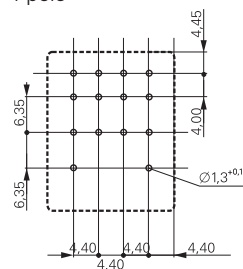
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## PCB layout / terminal assignment

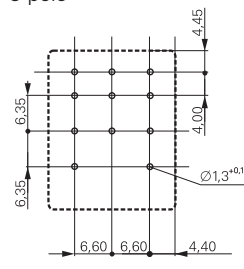
View on solder pins  
Dimensions in mm

4-pole



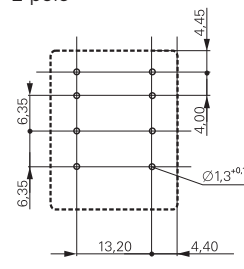
S0354-AA

3-pole

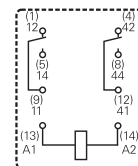


S0354-AB

2-pole



S0354-AC

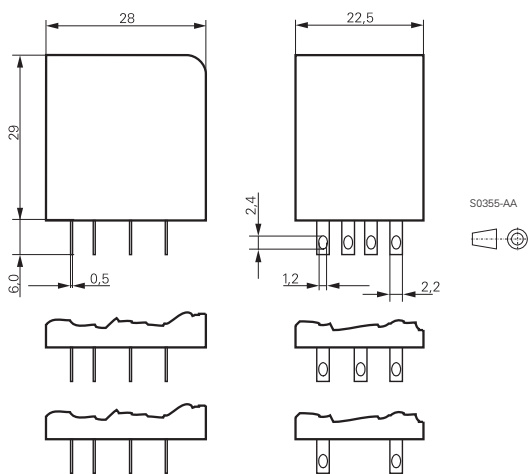


S0354-AF

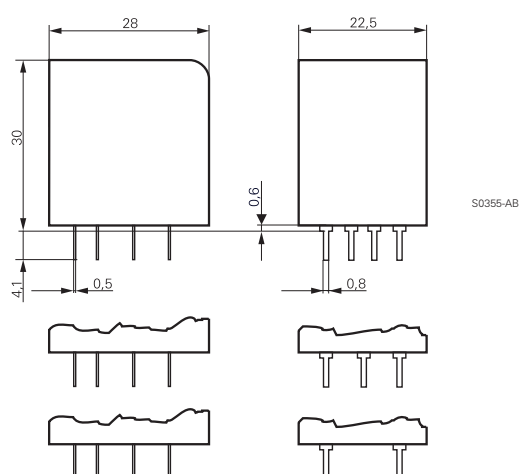
## Dimensions

Dimensions in mm

Solder- and plug-in terminals (standard version)



PCB version



## Product key

Type

Contact configuration

- 2** 2 C/O contacts
- 3** 3 C/O contacts
- 5** 4 C/O contacts

Contact material

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

Version

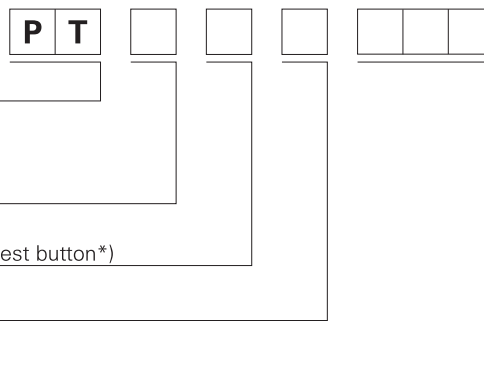
- 0** standard, AMP 2.8
- 1** PCB terminals

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.



# Miniature Relay PT

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Product key	Cont. config.	Cont. material	Version	Coil	Coil	Part number		
PT270024	2 C/O 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 C/O 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 C/O 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
PT580T30							230 Vac	7-1415026-1
PT581024					PCB terminals	DC coil	24 Vdc	7-1419135-2
PT581730						AC-coil	230 Vac	2-1393154-3

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