

Miniature Relay PT

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



F0191-A

- 2, 3 or 4 C/O contacts
- Switching performance up to 3000 VA
- Relay height 29 mm
- Cadmium-free contact material
- Mechanical 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 contact | 3 C/O contact | 4 C/O |
| contact | | | |
| 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 life

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

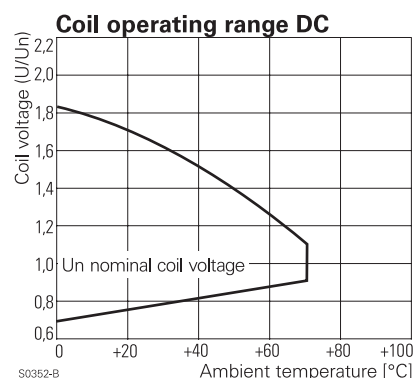
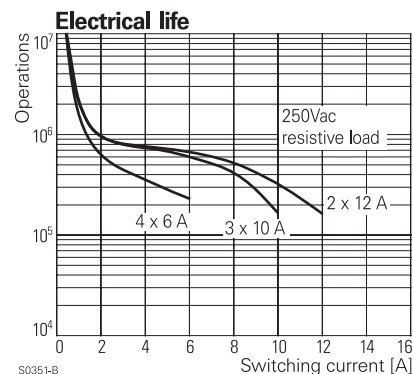
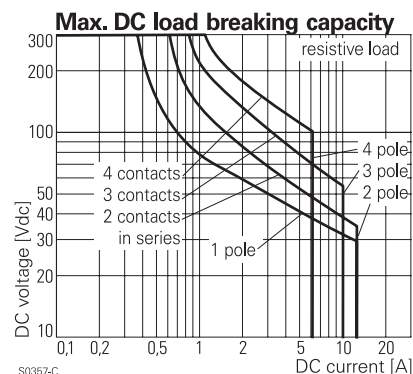
Coil data

| | | |
|--|---------|----------------------------|
| 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 _{nom} |

Coil versions, DC-coil

| Coil Code | LED | Nominal voltage Vdc | Pull-in voltage Vdc | Release voltage Vdc | Coil resistance Ω | coil current mA |
|------------|------------|---------------------|---------------------|---------------------|-------------------|-----------------|
| 006 | L06 | 6 | 4,5 | 0,6 | 48±10% | 125,0 |
| 012 | L12 | 12 | 9,0 | 1,2 | 192±10% | 62,5 |
| 024 | L24 | 24 | 18,0 | 2,4 | 777±10% | 31,3 |
| 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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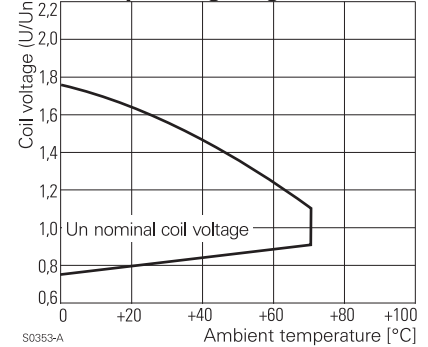
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Coil versions, AC-coil

| Coil Code | LED | Nominal voltage Vac | Pull-in voltage Vac | Release voltage Vac | Coil resistance Ω | Coil current 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 |
| 524 | R24 | 24 | 19,2 | 7,2 | $192 \pm 10\%$ | 41,6 |
| 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 |
| 730 | T30 | 230 | 184,0 | 69,0 | $19465 \pm 15\%$ | 4,3 |

*) for 50 Hz only. All figures are given for coil without preenergization, at ambient temperature +20°C

Coil operating range AC

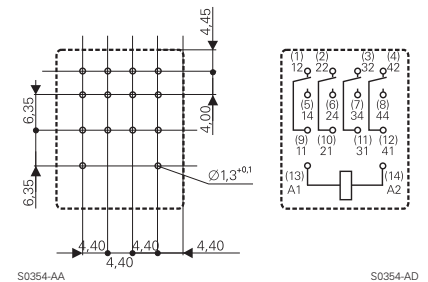


| Insulation | PT2 | PT3 | PT5 |
|---|-----------------------|-----------------------|-----------------------|
| Dielectric strength coil-contacts | 2500 V _{rms} | 2500 V _{rms} | 2500 V _{rms} |
| open contact circuit in unenergized position typ. | 1500 V _{rms} | 1500 V _{rms} | 1500 V _{rms} |
| adjacent contacts | 2500 V _{rms} | 2500 V _{rms} | 2000 V _{rms} |
| Clearance / creepage | 3 / 4 mm | 2.6 / 4 mm | 1.8 / 3 mm |
| Insulation to IEC 664/VDE 0110 (1/89) | | | |
| 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 | |

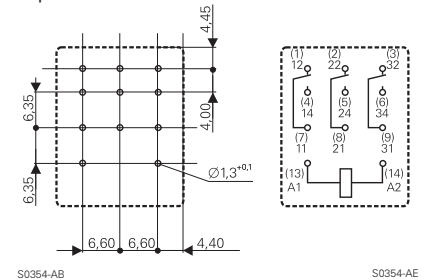
PCB layout / terminal assignment

View on solder pins
Dimensions in mm

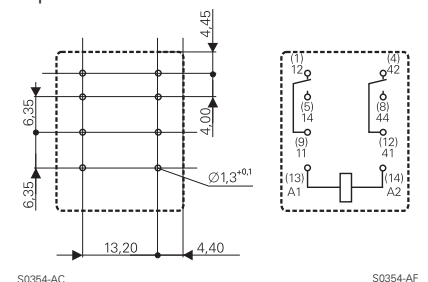
4-pole



3-pole



2-pole



Other data

| | |
|---|--|
| Flammability according UL 94 | V-0 |
| Ambient temperature | DC-coil -40...+70 °C AC-coil -40...+70 °C |
| Mechanical life | DC-coil >30x10 ⁶ ops. AC-coil >20x10 ⁶ ops. |
| Max. switching rate at rated- / minimum load | 6 min ⁻¹ / 600 min ⁻¹ |
| 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 |
| Protection category | IP 50 |
| Relay weight | 30 g |
| Packaging unit | 10 pcs. |
| Accessories | see accessories PT |

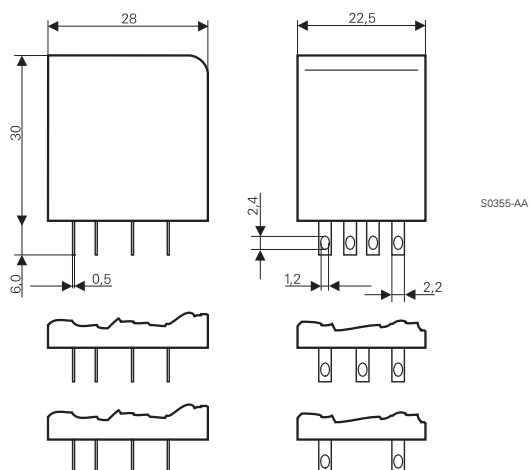
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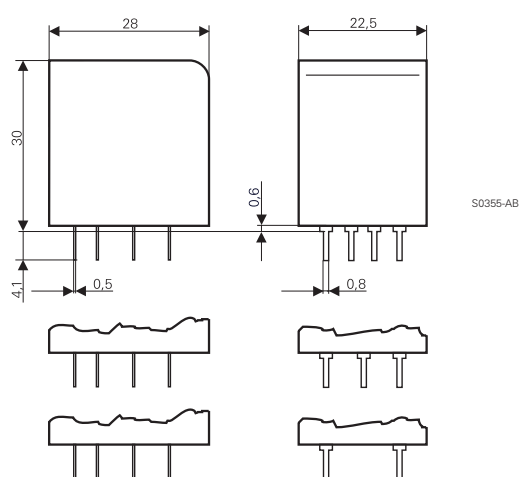
Dimensions

Dimensions in mm

Solder- and plug-in terminals (standard version)



PCB version



Ordering key

| Type | P | T | | | | | | |
|---|---|---|--|--|--|--|--|--|
| 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 | | | | | | | | |
| Other types on request | | | | | | | | |