## Legacy <br> Printed Circuit Board \& Reed Relays

Catalog
2017


Schneider
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Built in small industry-standard packages, the legacy line of printed circuit board (PCB) relays is ideal for a variety of applications.

## Key Features

■ Space-saving package design

- Single and double pole switching
- Ratings range from 0.25 to 20 A
- Sealed for wash-down process
- Wave solderable

|  | Series | Style | Contact Configuration | Output <br> Current <br> Range (A) | Output <br> Voltage <br> Range | Minimum Switching Requirement (mA) | Response Time (ms) | Page |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 117SIP | Miniature reed relay | SPST | 0.25-0.35 | $\begin{aligned} & 120 \mathrm{Vac}, \\ & 200 \mathrm{Vdc} \end{aligned}$ | 10 | 0.45 | 4 |
|  | 107DIP | Miniature reed relay | SPST | 0.25-0.35 | $\begin{aligned} & 120 \mathrm{Vac}, \\ & 100 \mathrm{Vdc} \end{aligned}$ | 10 | 1 | 7 |
|  | 171DIP | Miniature reed relay | SPST; DPST | 0.25-0.35 | $\begin{aligned} & 60-120 \mathrm{Vac}, \\ & 100 \mathrm{Vdc} \end{aligned}$ | 10 | 1 | 10 |
|  | 172DIP | Miniature reed relay | SPDT; DPDT | 0.25-0.35 | 60 Vac , 100 Vdc | 10 | 1 | 13 |
|  | 276 | Electromechanical relay | SPST; SPDT | 7-10 | 240 Vac, <br> 30 Vdc | 100 | 10 | 16 |
|  | 976 | Electromechanical relay | SPST; DPDT | 5-20 | $\begin{aligned} & 240 \mathrm{Vac}, \\ & 30-48 \mathrm{Vdc} \end{aligned}$ | 100 | 10 | 19 |

976


| Rated Output Current | Contact Configuration | Input Voltage (Vdc) | Coil Resistance ( $\Omega$ ) | Wiring Diagram | Standard Part Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.35 A (AC); 0.25 A (DC) | SPST-NO | 5 | 500 | A | 117SIP-1 |
|  |  | 12 | 1000 | A | 117SIP-3 |
|  | SPST-NC | 5 | 500 | B | 117SIP-22 |
|  | SPST-NO w/clamping diode | 5 | 500 | C | 117SIP-6 |
|  | SPST-NC w/clamping diode | 5 | 500 | D | 117SIP-18 |

Part Number Explanation


Specifications (UL 508)

| Part Number 117SIP | Specifications |
| :---: | :---: |
| Input Characteristics |  |
| Input Voltage Range | 5-24 Vdc |
| Operating Range (\% of Nominal) | 80\%-110\% |
| Average Power Consumption | 0.29 W |
| Drop-out Voltage Threshold | 10\% |
| Output Characteristics |  |
| Contact Configuration | SPST-NO; SPST-NC |
| Contact Materials | Ruthenium |
| Output Current Load | 0.35 A (AC); 0.25 A (DC) |
| Output Voltage Range | $120 \mathrm{Vac} ; 200 \mathrm{Vdc}$ |
| Output Load Wattage | 10 W |
| Minimum Switching Requirement | 1 mA |
| General Characteristics |  |
| Electrical Life (Operations at rated current) | 200,000 operations |
| Mechanical Life (Unpowered) | 100,000,000 operations |
| Operating Time (Response time) | 1 ms |
| Dielectric Strength (Between coil and contact) | 500 V (rms) |
| Dielectric Strength (Between poles) | 500 V (rms) |
| Dielectric Strength (Between contacts) | 200 V (rms) |
| Storage Temperature Range | $-40-105{ }^{\circ} \mathrm{C}\left(-40-221^{\circ} \mathrm{F}\right)$ |
| Operating Temperature Range | $-40-85{ }^{\circ} \mathrm{C}\left(-40-185{ }^{\circ} \mathrm{F}\right)$ |
| Vibration Resistance (Operational) | $20 \mathrm{~g}-\mathrm{n}, 10-2000 \mathrm{~Hz}$ |
| Shock Resistance | $50 \mathrm{~g}-\mathrm{n}$ |
| Weight | 1 g (0.035 oz) |
| Agency Approvals | RoHS |

Dimensions,
Wiring Diagrams

Legacy PCB \& Reed Relays
117SIP
SPST, 0.35 A (AC); 0.25 A (DC)

## Dimensions: Inches (Millimeters)



## Wiring Diagrams



Figure A
SPST-NO Without diode


Figure B
SPST-NC Without diode


Figure C
SPST-NO With diode


Figure D SPST-NC With diode


| Rated Output Current | Contact Configuration | Input Voltage (Vdc) | Coil Resistance (Q) | Wiring Diagram | Standard Part Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $0.35 \mathrm{~A}(\mathrm{AC}) ; 0.25 \mathrm{~A}$ (DC) | SPST-NO | 5 | 500 | E | 107DIP-1 |
|  |  | 12 | 1000 | E | 107DIP-3 |
|  | SPST-NO w/clamping diode | 5 | 500 | F | 107DIP-5 |
|  |  | 12 | 1000 | F | 107DIP-7 |

Part Number Explanation


Specifications (UL 508)

| Part Number 107DIP | Specifications |
| :---: | :---: |
| Input Characteristics |  |
| Input Voltage Range | 5-24 Vdc |
| Operating Range (\% of Nominal) | 80\%-110\% |
| Average Power Consumption | 0.29 W |
| Drop-out Voltage Threshold | 10\% |
| Output Characteristics |  |
| Contact Configuration | SPST-NO |
| Contact Materials | Ruthenium |
| Output Current Load | 0.35 A (AC); 0.25 A (DC) |
| Output Voltage Range | $120 \mathrm{Vac} ; 100 \mathrm{Vdc}$ |
| Output Load Wattage | 10 W |
| Minimum Switching Requirement | 1 mA |
| General Characteristics |  |
| Electrical Life (Operations at rated current) | 200,000 operations |
| Mechanical Life (Unpowered) | 100,000,000 operations |
| Operating Time (Response time) | 1 ms |
| Dielectric Strength (Between coil and contact) | 1000 V (rms) |
| Dielectric Strength (Between poles) | 1000 V (rms) |
| Dielectric Strength (Between contacts) | 200 V (rms) |
| Storage Temperature Range | $-40-105^{\circ} \mathrm{C}\left(-40-221^{\circ} \mathrm{F}\right)$ |
| Operating Temperature Range | $-40-85^{\circ} \mathrm{C}\left(-40-185{ }^{\circ} \mathrm{F}\right)$ |
| Vibration Resistance (Operational) | $20 \mathrm{~g}-\mathrm{n}, 10-2000 \mathrm{~Hz}$ |
| Shock Resistance | $50 \mathrm{~g}-\mathrm{n}$ |
| Weight | $1 \mathrm{~g}(0.035 \mathrm{oz})$ |
| Agency Approvals | RoHS |

Dimensions,
Wiring Diagrams

Legacy PCB \& Reed Relays
107DIP
SPST-NO, 0.35 A (AC); 0.25 A (DC)

Dimensions: Inches (Millimeters)


## Wiring Diagrams

Figure E
SPST-NO Without diode



Circuit board pin spacing viewed from component side

0.1 in. grid ( 2.54 mm )


Figure $F$ SPST-NO With diode


171DIP

## Description

The 171DIP reed relays are uniquely designed in a standard style dual in-line package capable of switching up to $0.35 \mathrm{~A}(\mathrm{AC}) ; 0.25 \mathrm{~A}$ (DC).

| Feature | Benefit |
| :--- | :--- |
| Small size | Saves space on a PC board |
| High shock resistance (50 g-n) | Helps avoid damage in harsh conditions |
| Industry standard pin spacing | Designed for simple routing on PC board |
| Can withstand a lead-free solder reflow process | Meets industry standards |
| RoHS Compliant | Meets industry standards for RoHS <br> compliant reflow processes |


| Rated Output Current | Contact Configuration | Input Voltage (Vdc) | Coil Resistance ( $\Omega$ ) | Wiring Diagram |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |$)$

Part Number Explanation


## Legacy PCB \& Reed Relays

171DIP
SPST, 0.35 A (AC); 0.25 A (DC)
DPST-NO, 0.35 A (AC); 0.25 A (DC)

Specifications (UL 508)

| Part Number 171DIP | Specifications |
| :---: | :---: |
| Input Characteristics |  |
| Input Voltage Range | 5-24 Vdc |
| Operating Range (\% of Nominal) | 80\%-110\% |
| Average Power Consumption | 0.29 W |
| Drop-out Voltage Threshold | 10\% |
| Output Characteristics |  |
| Contact Configuration | SPST-NO; SPST-NC: DPST-NO |
| Contact Materials | Ruthenium |
| Output Current Load | 0.35 A (AC); 0.25 A (DC) |
| Output Voltage Range | 60 Vac (SPST); 120 Vac (DPST); 100 Vdc |
| Output Load Wattage | 10 W |
| Minimum Switching Requirement | 1 mA |
| General Characteristics |  |
| Electrical Life (Operations at rated current) | 200,000 operations |
| Mechanical Life (Unpowered) | 100,000,000 operations |
| Operating Time (Response time) | 1 ms |
| Dielectric Strength (Between coil and contact) | 1000 V (rms) |
| Dielectric Strength (Between poles) | 1000 V (rms) |
| Dielectric Strength (Between contacts) | 200 V (rms) |
| Storage Temperature Range | $-40-105^{\circ} \mathrm{C}\left(-40-221^{\circ} \mathrm{F}\right)$ |
| Operating Temperature Range | $-40-85{ }^{\circ} \mathrm{C}\left(-40-185{ }^{\circ} \mathrm{F}\right)$ |
| Vibration Resistance (Operational) | $20 \mathrm{~g}-\mathrm{n}, 10-2000 \mathrm{~Hz}$ |
| Shock Resistance | $50 \mathrm{~g}-\mathrm{n}$ |
| Weight | 1 g (0.035 oz) |
| Agency Approvals | RoHS |

## Dimensions, <br> Wiring Diagrams

Legacy PCB \& Reed Relays
171DIP
SPST, 0.35 A (AC); 0.25 A(DC)
DPST-NO, 0.35 A(AC); $0.25 \mathrm{~A}(\mathrm{DC})$

Dimensions: Inches (Millimeters)


Circuit board pin spacing viewed from component side


## Wiring Diagrams



Figure G
SPST-NO Without diode


Figure J
SPST-NC With diode


Figure H SPST-NO With diode


Figure K DPST-NO Without diode


Figure I
SPST-NC Without diode


Figure L DPST-NO With diode


## Description

The 172DIP reed relays are uniquely designed in a standard style dual in-line package capable of switching up to 0.35 A (SC); 0.25 A (DC).


| Rated Output Current | Contact Configuration | Input Voltage (Vdc) | Coil Resistance (Q) | Wiring Diagram | Standard Part Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.35 A (AC); 0.25 A (DC) | SPDT | 5 | 200 | M | 172DIP-1 |
|  |  |  |  | 0 | 172DIP-31 |
|  |  |  |  | P | 172DIP-141 |
|  |  | 12 | 1000 | M | 172DIP-3 |
|  |  |  |  | 0 | 172DIP-33 |
|  |  |  |  | P | 172DIP-145 |
|  | SPDT w/clamping diode | 5 | 200 | N | 172DIP-5 |
|  |  |  |  | Q | 172DIP-147 |
|  |  | 12 | 1000 | N | 172DIP-7 |
|  |  |  |  | Q | 172DIP-149 |
|  |  | 24 | 2200 | N | 172DIP-8 |
|  |  |  |  | Q | 172DIP-150 |
|  | DPDT | 12 | 266 | R | 172DIP-19 |
|  | DPDT w/clamping diode | 5 | 46 | S | 172DIP-21 |
|  |  | 12 | 266 | S | 172DIP-23 |

Part Number Explanation


Specifications (UL 508)

| Part Number 172DIP | Specifications |
| :---: | :---: |
| Input Characteristics |  |
| Input Voltage Range | 5-24 Vdc |
| Operating Range (\% of Nominal) | 80\%-110\% |
| Average Power Consumption | 0.29 W |
| Drop-out Voltage Threshold | 10\% |
| Output Characteristics |  |
| Contact Configuration | SPDT; DPDT |
| Contact Materials | Ruthenium |
| Output Current Load | 0.35 A (AC); 0.25 A (DC) |
| Output Voltage Range | $60 \mathrm{Vac} ; 100 \mathrm{Vdc}$ |
| Output Load Wattage | 5 W |
| Minimum Switching Requirement | 1 mA |
| General Characteristics |  |
| Electrical Life (Operations at rated current) | 200,000 operations |
| Mechanical Life (Unpowered) | 100,000,000 operations |
| Operating Time (Response time) | 1 ms |
| Dielectric Strength (Between coil and contact) | 1000 V (rms) |
| Dielectric Strength (Between poles) | 1000 V (rms) |
| Dielectric Strength (Between contacts) | 150 V (rms) |
| Storage Temperature Range | $-40-105^{\circ} \mathrm{C}\left(-40-221^{\circ} \mathrm{F}\right)$ |
| Operating Temperature Range | $-40-85{ }^{\circ} \mathrm{C}\left(-40-185{ }^{\circ} \mathrm{F}\right)$ |
| Vibration Resistance (Operational) | $20 \mathrm{~g}-\mathrm{n}, 10-2000 \mathrm{~Hz}$ |
| Shock Resistance | $50 \mathrm{~g}-\mathrm{n}$ |
| Weight | $1 \mathrm{~g}(0.035 \mathrm{oz})$ |
| Agency Approvals | RoHS |

Dimensions,
Wiring Diagrams

Legacy PCB \& Reed Relays
172DIP
SPDT, 0.35 A (AC); 0.25 A (DC)
DPDT, 0.35 A (AC); 0.25 A (DC)

## Dimensions: Inches (Millimeters)



Circuit board pin spacing viewed from component side


## Wiring Diagrams



Figure M SPDT Without diode


Figure Q SPDT With diode


Figure N SPDT With diode


Figure R
DPDT Without diode


Figure 0 SPDT Without diode


Figure S DPDT With diode

Legacy PCB \& Reed Relays
276
SPST, 10 A
SPDT, 7 A


276

## Description

The 276 series relays offer high switching capacity in a small package.

| Feature | Benefit |
| :--- | :--- |
| High current switching capacity | Enables the relay to switch up to 10 A |
| HP rated | UL approved to switch up to $1 / 10 \mathrm{hp}$ |
| Low-profile design | Uses less than $12.7 \mathrm{~mm}^{2}\left(0.5 \mathrm{in}^{2}\right)$ of space on a PC board |
| Small footprint | Saves valuable space on a printed circuit board |
| Epoxy sealed | Allows the relay to be washed after assembly |


| Rated Output Load (A) | Contact Configuration | Input Voltage (Vdc) | Coil Resistance <br> (Q) | Wiring Diagram | Standard Part Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | SPDT | 5 | 125 | T | 276XAXH-5D |
|  |  | 12 | 720 | T | 276XAXH-12D |
|  |  | 24 | 2880 | T | 276XAXH-24D |
| 10 | SPST-NO | 5 | 125 | U | 276AXXH-5D |
|  |  | 12 | 720 | U | 276AXXH-12D |

## Part Number Explanation



Legacy PCB \& Reed Relays
276
SPST, 10 A
SPDT, 7 A

Specifications (UL 508)

| Part Number | 276XAX | 276AXX |
| :---: | :---: | :---: |
| Input Characteristics |  |  |
| Input Voltage Range | 3-24 Vdc |  |
| Operating Range (\% of Nominal) | 80\%-110\% |  |
| Average Power Consumption | 0.2 W |  |
| Drop-out Voltage Threshold | 10\% |  |
| Output Characteristics |  |  |
| Contact Configuration | SPDT | SPST-NO |
| Contact Materials | Silver Alloy |  |
| Output Current Load | 7 A | 10 A |
| Maximum Output Voltage | $\begin{aligned} & 7 \mathrm{~A} @ 240 \mathrm{Vac} 50 / 60 \mathrm{~Hz} \text {; } \\ & 7 \mathrm{~A} @ 30 \mathrm{Vdc} ; \\ & 1 / 10 \mathrm{hp} @ 120 \mathrm{Vac} \\ & \hline \end{aligned}$ | 10 A @ 240 Vac $50 / 60 \mathrm{~Hz}$; 10 A @ 30 Vdc; 1/6 hp @ 120 Vac |
| Minimum Switching Requirement | 100 mA |  |
| General Characteristics |  |  |
| Electrical Life (Operations at rated current) | 100,000 operations |  |
| Mechanical Life (Unpowered) | 5,000,000 operations |  |
| Operating Time (Response time) | 10 ms |  |
| Dielectric Strength (Between coil and contact) | 2000 Vac |  |
| Dielectric Strength (Between contacts) | 1000 Vac |  |
| Storage Temperature Range | $-40-85^{\circ} \mathrm{C}\left(-40-185{ }^{\circ} \mathrm{F}\right)$ |  |
| Operating Temperature Range | $-40-70{ }^{\circ} \mathrm{C}\left(-40-158{ }^{\circ} \mathrm{F}\right)$ |  |
| Vibration Resistance (Operational) | $1.5 \mathrm{~g}-\mathrm{n}, 10-55 \mathrm{~Hz}$ |  |
| Shock Resistance | $20 \mathrm{~g}-\mathrm{n}$ |  |
| Weight | $5.5 \mathrm{~g}(0.19 \mathrm{oz})$ |  |
| Agency Approvals | UR (E43641), RoHS |  |

## Dimensions, <br> Legacy PCB \& Reed Relays

Wiring Diagrams 276
SPST, 10 A
SPDT, 7 A

## Dimensions: Inches (Millimeters)



Circuit board pin spacing viewed from component side

0.1 in. grid ( 2.54 mm )

## Wiring Diagrams




## Description

The 976 series enclosed printed circuit board relays are used to switch resistive and inductive loads in industrial applications.

| Feature | Benefit |
| :--- | :--- |
| High current switching capacity | Enables the relay to switch up to 20 A |
| AC coil voltages available | Expands application use |
| 8 mm coil to contact clearance | Meets international standards |
| Epoxy sealed | Allows the relay to be washed after assembly |


| Rated Output Current (A) | Contact Configuration | Input Voltage | Coil Resistance (Q) | Wiring Diagram | Standard Part Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | DPDT | 12 Vdc | 270 | X | 976XBXH-12D |
|  |  | $24 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 250 | X | 976XBXH-24A |
|  |  | 24 Vdc | 1100 | X | 976XBXH-24D |
|  |  | $120 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 5600 | X | 976XBXH-120A |
|  |  | $240 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 22000 | X | 976XBXH-240A |
| 12 | SPDT | $24 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 250 | V | 976XAXH-24A |
|  |  | 24 Vdc | 1100 | V | 976XAXH-24D |
|  |  | $120 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 5600 | V | 976XAXH-120A |
|  |  | $240 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 22000 | V | 976XAXH-240A |
| 20 | SPDT | $24 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 250 | W | 976XAX97H-24A |
|  |  | 24 Vdc | 1100 | W | 976XAX97H-24D |
|  |  | $120 \mathrm{Vac} 50 / 60 \mathrm{~Hz}$ | 5600 | W | 976XAX97H-120A |

Part Number Explanation


SPDT, 12 to 20 A
DPDT, 5 A

Specifications (UL 508)

| Part Number | 976XAX97H | 976XAXH | 976XBXH |
| :---: | :---: | :---: | :---: |
| Input Characteristics |  |  |  |
| Input Voltage Range | $\begin{aligned} & \text { 6-240 Vac; } \\ & 3-110 \mathrm{Vdc} \end{aligned}$ |  |  |
| Operating Range (\% of Nominal) | 85\%-110\% |  |  |
| Average Consumption | $\begin{aligned} & \hline 1.2 \mathrm{VA} ; \\ & 0.53 \mathrm{~W} \\ & \hline \end{aligned}$ |  |  |
| Drop-out Voltage Threshold | $\begin{aligned} & \hline 30 \% \mathrm{AC} ; \\ & 10 \% \mathrm{DC} \end{aligned}$ |  |  |
| Output Characteristics |  |  |  |
| Contact Configuration | SPDT | SPDT | DPDT |
| Contact Materials | Silver Alloy |  |  |
| Output Current Load | 20 A | 12 A | 5 A |
| Maximum Switching Voltage | 300 V |  |  |
| Output Voltage Range | $\begin{aligned} & 20 \mathrm{~A} @ 125 \mathrm{Vac} 50 / 60 \mathrm{~Hz} ; \\ & 16 \mathrm{~A} @ \text { Vac } 50 / 60 \mathrm{~Hz} ; \\ & 20 \mathrm{~A} @ 30 \mathrm{Vdc} ; 10 \mathrm{~A} @ 48 \mathrm{Vdc} \end{aligned}$ | NO: 12 A @ 240 vac $50 / 60 \mathrm{~Hz}$, 12 A @ 30 Vdc; NC: 10 A @ 240 Vac $50 / 60 \mathrm{~Hz}$, $10 \mathrm{~A} @ 30 \mathrm{Vdc}$ | $\begin{aligned} & 5 \mathrm{~A} @ 240 \mathrm{Vac} 50 / 60 \mathrm{~Hz} \text {; } \\ & 5 \mathrm{~A} @ 30 \mathrm{Vdc} \end{aligned}$ |
| General Characteristics |  |  |  |
| Electrical Life (Operations at Rated Current) | 100,000 operations |  |  |
| Mechanical Life (Unpowered) | 10,000,000 operations |  |  |
| Operating Time (Response time) | 15 ms |  |  |
| Dielectric Strength (Between coil and contact) | 5000 V (rms) |  |  |
| Dielectric Strength (Between contacts) | 1000 V (rms) |  |  |
| Storage Temperature Range | $-40-85^{\circ} \mathrm{C}\left(-40-185{ }^{\circ} \mathrm{F}\right)$ |  |  |
| Operating Temperature Range | $-40-55^{\circ} \mathrm{C}\left(-40-131^{\circ} \mathrm{F}\right)$ |  |  |
| Vibration Resistance (Operational) | $3 \mathrm{~g}-\mathrm{n}, 10-55 \mathrm{~Hz}$ |  |  |
| Shock Resistance | $10 \mathrm{~g}-\mathrm{n}$ |  |  |
| Weight | 17 g (0.6 oz) |  |  |
| Agency Approvals | UR (E191122), TUV, RoHS |  |  |

Dimensions,
Wiring Diagrams

## Legacy PCB \& Reed Relays

 976SPDT, 12 to 20 A
DPDT, 5 A

Dimensions: Inches (Millimeters)


Circuit board pin spacing viewed from component side

0.1 in. grid
( 2.54 mm )

(20.0)


## Wiring Diagrams



Figure V SPDT, 12 A


Figure W SPDT, 20 A


Figure $\mathbf{X}$ DPDT, 5 A

## Printed Circuit Board Relays

Printed circuit board (PCB) relays are compact relay devices used for power management in control system designs which require the relay to be mounted directly on the printed circuit board. They are used in applications where the relay must be small enough to be mounted on a printed circuit board. They must be easy to manufacture with the same machinery used in the printed circuit board line.

## How Electromechanical PCB Relays Work

Electromechanical PCB relays consist of a coil, armature and contacts (see figure below). When power is applied to the coil, the resulting magnetic field causes the armature to move and the contacts to open or close.

## Advantages

- Higher contact ratings than reed relays and smaller than traditional plug-in relays
- A wider range of form, fit and function than reed relays

■ UL recognized to meet industry standards for product safety and compliance

## How Reed Relays Work

Reed relays consist of a coil wrapped around a sealed glass tube containing the reeds and contacts (see figure below). When power is applied to the coil, the resulting magnetic field causes the reeds to move and the contacts to close (1).

## Advantages

- Highly reliable due to longer mechanical and electrical life than electromechanical relays
- Can switch about ten times faster than an electromechanical relay with similar ratings
- Small, industry standard packaging which does not require unique machinery to populate


## Electromechanical PCB Relays vs. Reed Relays


(1) Note that it is important to keep reed relays at a proper distance from each other because of the possibility of magnetic-interaction between them. Proper magnetic shielding must be used to contain stray magnetic fields. When installing reed relays into equipment, be aware of the devices in the equipment which can produce magnetic fields. Position the relays as far away as possible from any stray magnetic fields, and shield them to prevent false operations. A general rule is to space reed relays no closer together than 0.5 inches.

## Applications

The legacy PCB relay offer consists of reed relays ideal for applications requiring fast, reliable low-level switching capability in a very small package, and electromechanical PCB relays ideal for applications requiring higher ratings than reed relays and a smaller package than traditional plug-in relays.

Typical Examples of PCB and Reed Relay Applications


## Automotive

Anti-lock brake systems, cruise control, doors, power steering, power windows, sunroofs


Electronics \& Communication
Cellular phones, computers, copiers, microphones, radio transmitters, speakers


Construction \& Security
Conveyor belts, elevators, emergency lamps, hoists, lifts, security alarms


HVAC \& Refrigeration
Air conditioners, blowers, compressors, motorized ducts/vents, refrigerators, space heaters


## Domestic Appliances

Coffee machines, dish washers, food processors, microwaves, ovens, stoves, vacuum cleaners, washing machines


Industrial Automation
Human/machine interfaces, motion controllers, PLCs, power supplies, solder/wave reflow systems, variable speed drives

## A Complete Range of Printed Circuit Board and Reed Relays

Printed circuit board and reed relays are compact devices used for high power and low level applications that require printed circuit board assembly.

## Selecting a Printed Circuit Board or Reed Relay

The list below is an example of the specifications to look for when selecting a printed circuit board or reed relay.


Use the catalog specifications or online parametric search to determine a recommended part number (www.serelays.com).

The Schneider Electric Relays website (www.serelays.com) was designed to enable users to easily find the proper relay to fit design requirements and to help simplify and shorten workflow.

## Easily find the proper relay to fit design requirements

## - Online Catalog

Find the right product by choosing specifications compare products side-byside and view technical specifications, 2D and 3D drawings and associated accessories.

- Cross Reference Search

Search our comprehensive database to identify by manufacturer and part number, and link directly to part specifications.

- 3D CAD Library

View, email, download or insert a file directly into your open CAD software pane and select from 18 different file formats.

- Order Free Samples

Schneider Electric offers free samples as a courtesy to individuals and companies evaluating our products in their designs and applications. Sample orders are subject to approval.

## Simplify and shorten workflow

- Interactive Tools

View interactive learning tools such as our PCB \& Reed Relay Learning Tool which helps you learn more about legacy electromechanical PCB relays and reed relays, including industries and applications, principles of operation and advantages of using each type of relay.

■ Distributor Inventory Search
Search authorized distributors' current Schneider Electric inventory and buy online.
(Buy online not available for all distributors).

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