

# PCF series

## 25A Miniature Power PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E58304

CSA File No. LR48471

TUV File No. R9551880

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

### Features

- Meet UL 508, CSA, TUV requirements.
- 1 Form A contact arrangements.
- Quick connect terminal type and PC board type.
- Meet 5,000V dielectric voltage between coil and contacts.
- Meet 10,000V surge voltage between coil and contacts (1.2 / 50µs).

### Contact Data @ 20°C

Arrangements: 1 Form A.

Material: AgSnO

Max. Switching Rate: 300 ops./min. (no load).  
30 ops./min. (rated load).

Expected Mechanical Life: 10 million operations (no load).

Expected Electrical Life: 100,000 operations (rated load).

Minimum Load: 100mA @ 5VDC.

Initial Contact Resistance: 100 milliohms @ 1A, 6VDC.

### Coil Data @ 20°C

PCF / PCFN				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
06	150.0	40	4.50	0.30
09	100.0	90	6.75	0.45
12	75.0	160	9.00	0.60
24	37.5	640	18.00	1.20

### Contact Ratings

Ratings: 25A @ 250VAC resistive.  
23A @ 277VAC resistive.

20A @ 250VAC inductive (cosφ= 0.4).

Max. Switched Voltage: AC: 250V.

Max. Switched Current: 25A.

Max. Switched Power: 6,370VA.

### Initial Dielectric Strength

Between Open Contacts: 1,000VAC 50/60 Hz. (1 minute).

Between Coil and Contacts: 5,000VAC 50/60 Hz. (1 minute).

Surge Voltage Between Coil and Contacts: 8,000V (1.2 / 50µs).

### Initial Insulation Resistance

Between Mutually Insulated Elements: 1,000M ohms min. @ 500VDC.

### Coil Data

Voltage: 6 to 24VDC.

Nominal Power: 900 mW.

Coil Temperature Rise: 55°C max., at rated coil voltage.

Max. Coil Power: 130% of nominal.

Duty Cycle: Continuous.

### Operate Data

Must Operate Voltage: 75% of nominal voltage or less.

Must Release Voltage: 5% of nominal voltage or more.

Operate Time: 20 ms max.

Release Time: 10 ms max.

### Environmental Data

Temperature Range:

Operating: -30°C to +55°C

Vibration, Mechanical: 10 to 55 Hz., 1.5mm double amplitude

Operational: 10 to 55 Hz., 1.5mm double amplitude.

Shock, Mechanical: 1,000m/s<sup>2</sup> (100G approximately).

Operational: 100m/s<sup>2</sup> (10G approximately).

Operating Humidity: 20 to 85% RH. (Non-condensing).

### Mechanical Data

Termination PCF: Printed circuit terminals with quick connect terminals.

PCFN: Printed circuit terminals.

Enclosure (94V-0 Flammability Ratings):

PCF / PCFN: Vented (Flux-tight) plastic cover.

Weight: 0.99 oz (28g) approximately.

**Ordering Information**

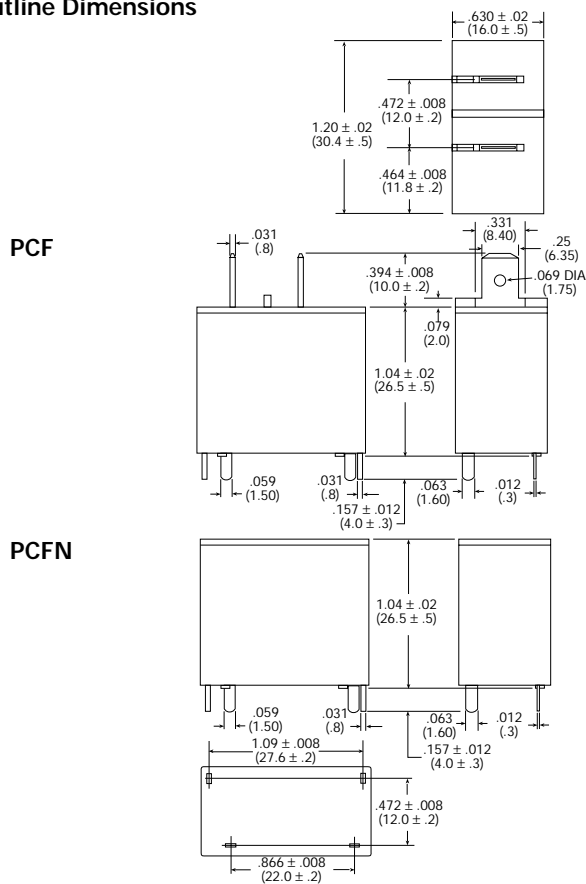
<b>Typical Part Number ▶</b>		<b>PCFN</b>	<b>-1</b>	<b>24</b>	<b>D</b>	<b>2</b>	<b>M</b>	<b>,000</b>
<b>1. Basic Series:</b> PCFN = 25A PC Board Terminals      PCF = Quick Connect Terminals								
<b>2. Enclosure:</b> 1 = 1 pole								
<b>3. Coil Voltage:</b> 06 = 6VDC      09 = 9VDC      12 = 12VDC      18 = 18VDC      24 = 24VDC								
<b>4. Coil Input:</b> D = Standard								
<b>5. Contact Material:</b> 2 = AgSnO								
<b>6. Contact Arrangement:</b> M = 1 Form A, SPST-NO								
<b>7. Suffix:</b> ,000 = Standard model      Other Suffix = Custom model								

\* Not suitable for immersion cleaning processes.

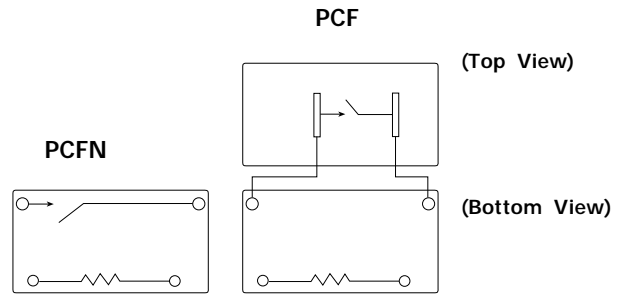
**Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.**

None at present.

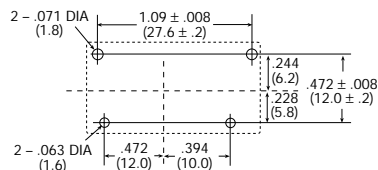
**Outline Dimensions**



**Wiring Diagram**

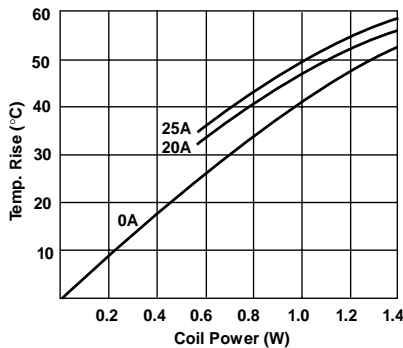


**PC Board Layout (Bottom View)**

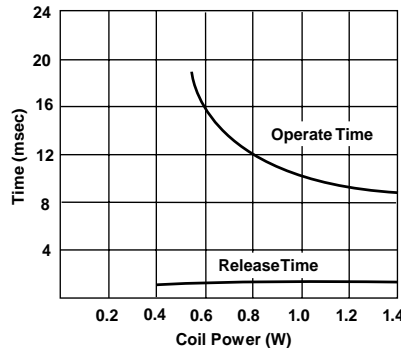


**Reference Data**

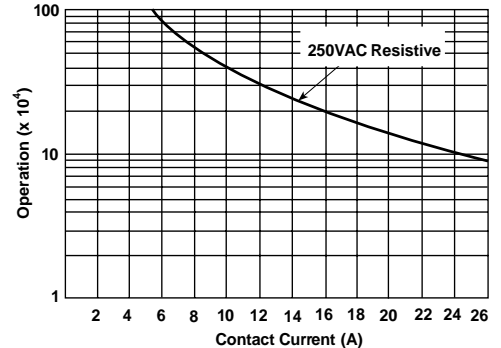
**Coil Temperature Rise**



**Operate Time**



**Life Expectancy**



Dimensions are shown for reference purposes only.

Dimensions are in inches over (millimeters) unless otherwise specified.

Specifications and availability subject to change.

www.tycoelectronics.com  
Technical support:  
Refer to inside back cover.