# 219 Series - Industrial Relays
## DPDT, up to 6PST, 10 Amps

File No. E13224

Versatile. Rugged. Proven. These are but a few words used by customers to describe the 219 series. When long life and cost of down time / service are important the 219 solves the problem. It's a standard throughout industrial applications which many other relays are measured against. Capable of up to four poles double throw or six poles single throw. Contact arrangements are easily customized for special applications. NUCLEAR versions are available that utilize special platings and materials to minimize wear. All 219s are built with materials that meet the UL 94-V0 requirements.

## GENERAL SPECIFICATIONS (@ 25° C)

| | |
|---|---|
| ***Contacts:*** | |
| Contact Configuration | Up to 4PDT or 6PST |
| Contact Material | Silver Alloy-Gold Diffused |
| Contact Rating | |
| 120 / 240VAC Resistive | 10 Amp / 5 Amp |
| 28VDC Resistive | 10 Amp |
| Contact Resistance, Initial | 50 milliohms max @ 6vdc |
| ***Coil:*** | |
| Coils Available | AC and DC |
| Nominal Coil Power | AC 5VA DC 1.8-2.5W |
| Input Voltage Tolerance - AC | 85% to 110% of nominal |
| Input Voltage Tolerance - DC | 80% to 110% of nominal |
| Drop-out voltge | 10% of nominal |
| Duty | Continuous |
| ***Timing:*** | |
| Operate Time (max) | 25 mS |
| Release Time (max) | 20 mS |
| ***Dielectric Strength:*** | |
| Across Open Contacts | 500Vrms |
| Between mutually insulated point | 1500Vrms |
| Insulation resistance | 1,000 Mohms min @ 500VDC |
| ***Temperature:*** | |
| Operating | AC = -20 to 60°C (-4 to 140°F)<br>DC = -20 to 70°C (-4 to 158°F) |
| Storage | -40 to 105°C (-40 to 221°F) |
| ***Life Expectancy:*** | |
| Electrical (full load) | 100,000 |
| Mechanical (no load) | 10,000,000 |
| ***Miscellaneous:*** | |
| Mounting Position | Any |
| Enclosure | Clear Polycarbonate |
| Weight | 8.5oz (241 grams) |
| Mating socket | 12 PIN: 27390 (D) |
| (UL Listed when used) | 14 PIN: 33377 (D) |
| | (D) is option for DIN Rail Mount |

# General Purpose Relays

**Ordering Code** **219** **XBX** **PL** **-24VDC**

***Series***
219

***Contact Arrangement***
XBX (DPDT)
ABA (1 Pole N.O. + DPDT + 1 Pole N.C.)
BBX (2 Pole NO & DPDT)
XDX (4PDT)
FXX (6 Pole-NO)
DXB (4 Pole - NO & 2 Pole-NC)

***Optional Features***
Permanent Magnet Blowout - CODE 69
Polycarbonate covers - CODE P
Indicator Lamp - CODE L
Manual Actuator - CODE M
Bifurcated Contacts - CODE 33

***Coil Voltage***
AC: 12, 24, 120, 240, (Add VAC)
DC: 6, 12, 24/28, 32, 48, 115/125, 250 (Add VDC)

Coil voltages and frequencies must be specified

## Contact Load Ratings

### Highest Load for Standard Contacts

(Current - A, Resistive unless otherwise noted)

| Voltage | Make | Carry | Break |
|---|---|---|---|
| 28 VDC, “69” | 10A | | |
| | | 10A | |
| | 10A | | |
| 48 VDC, “69” | 10A | | |
| | | 5A | |
| | 5A | | |
| 125 VDC, “69” | 10A | | |
| | | 4A | |
| | 3A | | |
| 250 VDC, “69” | 4A | | |
| | | 2A | |
| | 1A | | |
| 120 VAC | 10A*, 3A Inductive, 1/6HP* | | |
| | | 10A*, 3A Inductive, 1/6HP* | |
| | 10A*, 3A Inductive, 1/6HP* | | |
| 240 VAC | 10A, 5A*, 1/3HP* | | |
| | | 10A, 5A*, 1/3HP* | |
| | 10A, 5A*, 1/3HP* | | |
| 277 VAC | 10A | | |
| | | 7A | |
| | 4.5A | | |

**Contact ratings which include an “ * ” are UL Approved.**

**Use Code “69” for blowout magnet when switching voltages above 40VDC. (NOT UL OR CSA APPROVED)**

**Use Code “33” for bifurcated contacts when switching low level current below 50mA.**

## 219 Coil Specifications

| AC Coils, 50/60HZ | | | | | DC Coils | | | |
|---|---|---|---|---|---|---|---|---|
| Nominal voltage | Resistance ohms ±10% | Milliamperes Cold | Hot | Impedance ohms | Nominal voltage | Resistance ohms ±10% | Milliamperes Cold | Hot |
| 6 | 1.1 | 1500 | 840 | 7.2 | 6 | 15.5 | 385 | 304 |
| 12 | 4.2 | 750 | 410 | 27 | 12 | 63.5 | 189 | 147 |
| 24 | 15.5 | 375 | 200 | 120 | 24 /28* | 250 | 96 | 77 |
| 120 | 540 | 75 | 40 | 2,700 | 32 | 375 | 86 | 62 |
| 240 | 2100 | 32 | 17 | 13,400 | 37.5 | 375 | 100 | 80 |
| | | | | | 48 | 975 | 49 | 39 |
| | | | | | 115/125* | 6200 | 20 | 16 |
| | | | | | 250 | 27777 | 9 | 7 |

Note: Stock 24VDC and 115VAC relays have nameplates stamped 24/28VDC and 115/125VAC respectively. These relays operate at 80% of the lower voltages and operate within allowable temperature rises at higher voltages.