

# 219 Series - Industrial Relays

## DPDT, up to 6PST, 10 Amps



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 voltage	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) 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 (Approximately)	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)

\*See our website configurator for more contact configurations

**Optional Features**

- Permanent Magnet Blowout - CODE 69
- Polycarbonate Cover - CODE P
- Indicator Lamp - CODE L
- Manual Actuator - CODE M
- Bifurcated Contacts - CODE 33
- Coil Suppression Diode - CODE V

**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

## UL Contact Load Ratings

Contact Configuration	Current / HP	Load Voltage	Load Frequency	Type of Load
All Styles EXCEPT Code 33	10 Amp	120 VAC	50/60Hz	Resistive
	5 Amp	240 VAC	50/60Hz	Resistive
	10 Amp	28 VDC	DC	Resistive
	0.5 Amp	125 VDC	DC	Resistive
	1/6HP	120 VAC	50/60Hz	Motor
	1/3HP	240 VAC	50/60Hz	Motor
Code 33	5 Amp	120 VAC	50/60Hz	General Purpose
	2.5 Amp	240 VAC	50/60Hz	General Purpose

**Additional UL Contact Ratings for Code "69" relays incorporating a blowout magnet.**

Contact Configuration	Current / HP	Load Voltage	Load Frequency	Type of Load
All Styles EXCEPT Code 33	3 Amp	125 VDC	DC	Resistive
	1 Amp	250 VDC	DC	Resistive

See the next page for additional Contact Ratings

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

# General Purpose Relays

## Additional Contact Ratings

### Highest Load for Standard Contacts

\*Current - A, Resistive unless otherwise noted

Voltage	Current, A	Switching Type
28 VDC, "69"	10A	Make & Break
48 VDC, "69"	10A	Make & Carry
	5A	Make & Break
125 VDC, "69"	10A	Make & Carry
	4A	Carry & Break
	3A	Make & Break
250 VDC, "69"	4A	Make & Carry
	2A	Carry & Break
	1A	Make & Break
120 VAC	10A, 3A Inductive, 1/6 HP	Make & Break
240 VAC	10A, 1/3 HP	Make & Break
277 VAC	10A	Make & Carry
	7A	Carry & Break
	4.5A	Make & Break

### Lowest Load for Standard Contacts

\*Current - A, Resistive unless otherwise noted

Voltage	Current, A	Switching Type
5 VDC	1A	Make & Break
12 VDC	0.75A	Make & Break
28 VDC	0.050A	Make & Break
48 VDC	0.050A	Make & Break
125VDC	0.050 A	Make & Break
250 VDC	0.050A	Make & Break
120 VAC	0.050A	Make & Break
240 VAC	0.050A	Make & Break
480 VAC	0.050A	Make & Break

Use Code "69" for blowout magnet when switching voltages above 40VDC.

Use Code "33" for bifurcated contacts when switching low level current below 50mA.

### Highest Load for Bifurcated Contacts

\*Current - A, Resistive unless otherwise noted

Voltage	Current, A	Switching Type
28 VDC	5A	Make & Carry
	3A	Carry & Break
	2.5	Make & Break
48 VDC	3A	Make & Carry
	2A	Carry & Break
	1.5A	Make & Break
125VDC	1A	Make & Carry
	0.5	Carry & Break
	0.25	Make & Break
250 VDC	0.5A	Make & Carry
	0.25A	Carry & Break
	0.1A	Make & Break
120 VAC	5A	Make & Carry
	3A	Carry & Break
	5	Make & Break
240 VAC	2.5A	Make & Carry
	1.5A	Carry & Break
	2.5 A	Make & Break
277 VAC	2.5A	Make & Carry
	1.5A	Carry & Break
	1.0A	Make & Break
480 VAC	0.5A	Make & Carry
	0.2A	Make & Break

### Lowest Load for Bifurcated Contacts

\*Current - A, Resistive unless otherwise noted

Voltage	Current, A	Switching Type
5 VDC	0.1A	Make & Break
12 VDC	0.075A	Make & Break
28 VDC	0.01A	Make & Break
48 VDC	0.005A	Make & Break
125VDC	0.005A	Make & Break
250 VDC	0.001A	Make & Break
120 VAC	0.01A	Make & Break
240 VAC	0.005A	Make & Break
480 VAC	0.001A	Make & Break

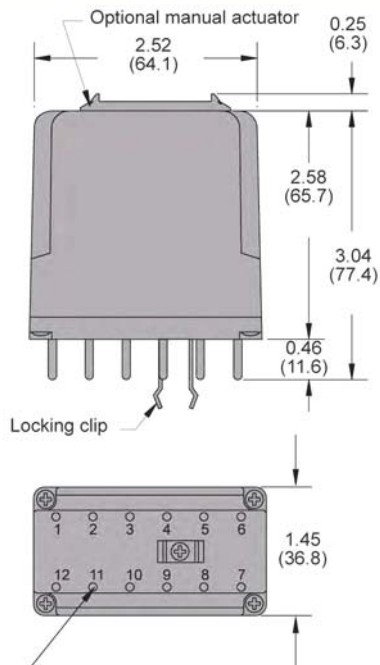
# 219 Series - Industrial Relays

## DPDT, Up To 6PST, 10 Amps

### Outline Dimensions

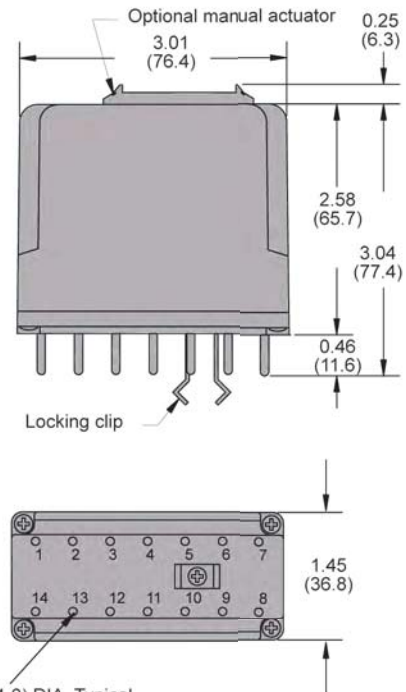
Dimensions Shown in inches & (millimeters)

#### 12 Pin Plug-in



.10 x .43 (2.5 x 11.0) DIA. Typical of all pin dimensions

#### 14 Pin Plug-in



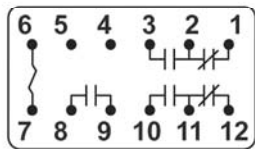
.10 x .43 (2.5 x 11.0) DIA. Typical of all pin dimensions



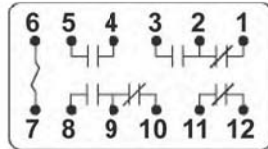
# General Purpose Relays

## 219 Wire Diagram (Top View) 12-Pin

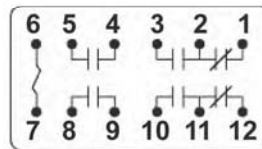
**219ABX**  
(SPST-N.O. + DPDT)



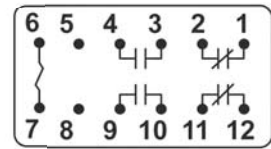
**219ABA**  
(DPDT+SP-NO+1P-NC)



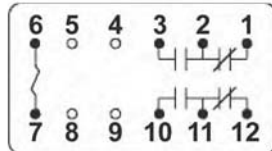
**219BBX**  
(DPDT+2P-N.O.)



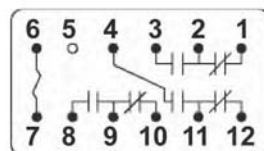
**219BXX**  
(DPDT+2P-N.O.)



**219XBX**  
(DPDT)



**219XCX**  
(3PDT)



Many additional contact combinations and wiring schematics are available. Contact sales with requirements.

### Standard Diode Suppression Wiring

(applies to relays with option "V", alternative polarity/wiring is also available as a special)

(12-Pin)

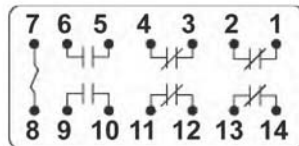


## 219 Wire Diagram (Top View) 14-Pin

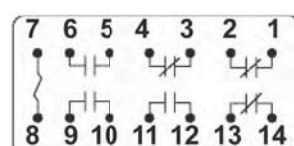
(14-Pin)



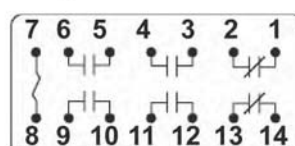
**219BXD**  
(2P-NO+4P-NC)



**219CXC**  
(3P-NO+3P-NC)



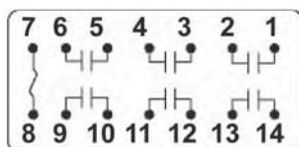
**219DXB**  
(4P-NO+2P-NC)



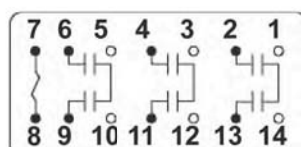
**219EXA**  
(5P-NO+1P-NC)



**219FXX**  
(6P-NO)



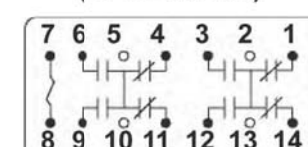
**219KXX**  
(3PST-DM)



**219XDX**  
(4PDT)



**219XJX**  
(DPDT-DM/DB)



UL LISTED when used with mating sockets  
27390 for 12 pin or 33377 for 14 pin