

# 246/247 Series - Time Delay Relays

## Up to 4PDT or 6PST, 10 Amp



E13224



LISTED

with socket

Rugged, industrial time delay versions of the popular 219 series. Contacts can be configured up to four pole double throw or six pole single throw. Blowout magnets can be added to increased DC switching capacity. Time ranges are adjustable over a 1:10 range. Knob adjustment and integral hold down clip are standard. A large option list makes this product easily customized for special applications.

### GENERAL SPECIFICATIONS (@ 25° C)

#### Timing:

Functions Available	On-delay, Off-delay
Time Range	Up to 10 minutes
Timing Adjustment	Knob
Timing Repeatability (Constant voltage and temperature)	3%
Reset Time maximum	150mS
Input Pulse Length minimum	50mS

#### Contacts:

Contact Configuration	Up to 4PDT, 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	5VA 2.5W
Input Voltage Tolerance - AC	85% to 110% of nominal
Input Voltage Tolerance - DC	80% to 110% of nominal
Transient Protection	Yes
Reverse Polarity Protection	Yes
Duty	Continuous

#### Dielectric Strength:

Across Open Contacts	500Vrms
Between Mutually Insulated Points	1500Vrms
Insulation Resistance	1,000 Mohms min @ 500VDC

#### Temperature:

Operating	-20 to 70°C (-4 to 158°F)
Storage	-40 to 105°C (-40 to 221°F)

#### Life Expectancy:

Electrical (full load operations)	100,000
Mechanical (no load operations)	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) <b>Purchase Separately</b>

(D) is option for DIN Rail Mount - Not UL listed



Industrial Pin Out

# 246/247 Series - Time Delay Relays

## Up to 4PDT or 6PST, 10 Amp

**Ordering Code**      **247**   **XBX**   **69PLM33V**   **-010**   **120VAC**

**Series**

246 - On delay plug-in  
247 - Off delay plug-in

**Contact Arrangement**

XBX (DPDT) - (2 form C)  
XCX (3PDT) - (3 form C)  
ABA (1 form A & 2 form C & 1 form B)  
BBX (2 form A & 2 form C) 246 only  
DXB (4 form A & 2 form B) 246 only (14PIN)  
FXX (6 form A) 246 only (14 PIN)  
XDX (4 form C) (14 PIN)  
CXA (3 form A & 1 form B)  
Other Contact Arrangements Available

**Standard Features (Sequence)**

Blowout Magnet - CODE 69  
Plug in with polycarbonate cover - CODE P  
Indicator Lamp - CODE L  
Manual Actuator - CODE M  
Bifurcated Contacts (5 Amps max) - CODE 33  
Coil Suppression Diode - CODE V

**Adjustable Timing Ranges**

0.1 - 1.0 Seconds - CODE 001  
0.2 - 2.0 Seconds - CODE 002  
1.0 - 10 Seconds - CODE 010  
3.0 - 30 Seconds - CODE 030  
6.0 - 60 Seconds - CODE 060  
18 - 180 Seconds - CODE 180  
30 - 300 Seconds - CODE 300  
30 Minutes - CODE 30M  
60 Minutes - CODE 60M

**Adjustment Options**

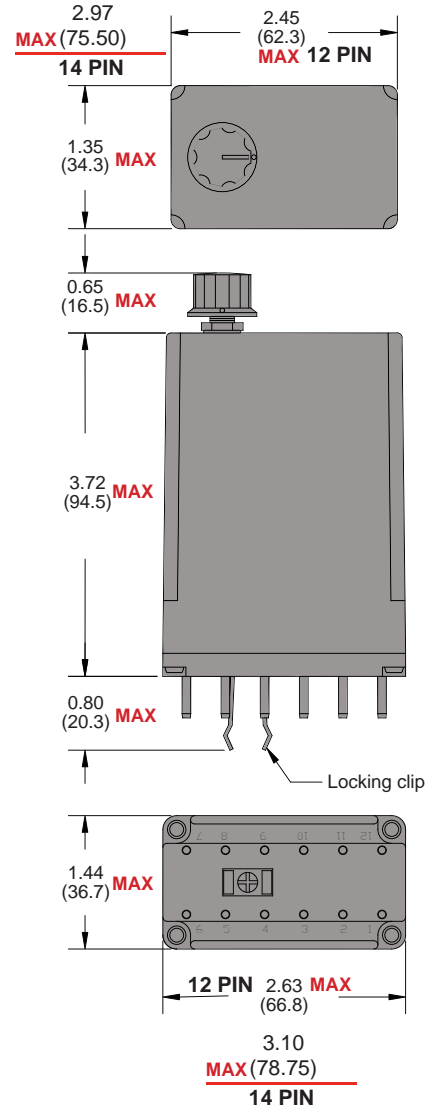
Adjustment Knob - Standard for Adjustable Timing  
No knob for fixed timing Option  
Remote Adjustment (External pot required) - CODE R (ie; 30R)  
Fixed Timing - CODE (specify time) F (ie; 3 Seconds = 3F)

**Operating Voltage**

AC: 24, 120, 240 (Add VAC)  
DC: 12, 24,48,115-125,250 (Add VDC)

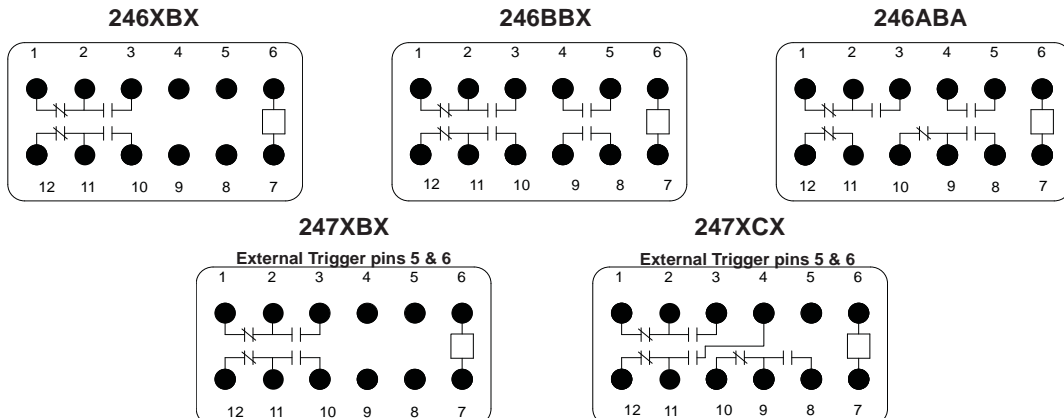
**Outline Dimensions**

Dimensions Shown in inches & (millimeters)



Use with  
Socket  
27390  
or  
27390D  
Purchased  
Separately

**246/247 Wire Diagram**



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## 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 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
	1Amp	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.

## Coil Specifications

AC Coils, 50/60HZ					DC Coils			
Nominal voltage	Resistance ohms ±10%	Milliamperes		Impedance ohms	Nominal voltage	Resistance ohms ±10%	Milliamperes	
		Cold	Hot				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.

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## 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
	0.5A, Inductive	Make & Break
125 VDC, "69" DOUBLE MAKE	4A	Make & Break
	1.1A, Inductive	Make & Break
250 VDC, "69"	4A	Make & Carry
	2A	Carry & Break
	1A	Make & Break
	0.15A, Inductive	Make & Break
250 VDC, "69" DOUBLE MAKE	1.5A	Make & Break
	0.55A, Inductive	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

### 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 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

### 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

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

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