

# TIME DELAY RELAYS

**246 & 247**



2.62 x 1.46 x 4.06

- ✦ INDUSTRIAL
- ✦ VERSATILE DESIGN
- ✦ BLOWOUT MAGNET AVAILABLE
- ✦ LONG OPTION LIST

**831 VOLTAGE SENSOR**



MANUFACTURED UNDER ISO 9002

3.54 x 0.692 x 2.56

- ✦ INDEPENDENT UPPER AND LOWER LIMITS
- ✦ TIME DELAY
- ✦ TWO LEDs
- ✦ DIN MODULE

**236 VOLTAGE SENSOR**



MANUFACTURED UNDER ISO 9002 QS 9000

SEE PAGE 26

- ✦ INDEPENDENT PICK UP AND DROP OUT ADJUSTMENT
- ✦ ELECTROMECHANICAL OUTPUT
- ✦ SOCKET COMPATIBLE

**235 CURRENT SENSOR**



1.53 x 1.40 x 3.52

- ✦ WIDE SENSE RANGE
- ✦ SOCKET COMPATIBLE
- ✦ KNOB ADJUSTMENT

On delay or off delay	Voltage sensor	Voltage sensor	Current sensor
1	1	1	1
0.1 to 300 seconds	0.1 to 10 seconds	Optional on PX	
See ordering code	Normal sense	24, 120, 240, 480	120
	Voltage 120	24	
5 VA / 2.5 W	1.2 VA	3.5 VA / W	2 VA
Yes	Yes	Yes	Yes
<b>DPDT, 3PDT 4PDT AND OTHERS</b>	<b>SPDT</b>	<b>PX=DPDT, CX=SPDT</b>	<b>SPDT</b>
10 amps resistive @ 120	15 amps resistive @ 240	DPDT=10 amps @ 240	10 amps @ 120
		SPDT=13 amps @ 240	
10 amps resistive @ 28	15 amps resistive @ 24	DPDT=10 amps @ 28	6 amps @ 28
		SPDT=13 amps @ 28	
Silver alloy	Silver-Nickel 90/10	Silver Alloy	Silver Alloy
1,500	1,000	1,000	500
1,500	2,500	2,500	2,500
1,500	Not applicable	2500	Not applicable
-20	-20	-20	-20
AC:+45, DC: +70	+55	+55	+55
-20	-30	-30	-40
+85	+70	+85	+85
100,000	70,000	100,000	200,000
10,000,000	10,000,000	DPDT= 10,000,000, SPDT= 5,000,000	5,000,000
40	40	40	40
227	60	DPDT: 156, SPDT: 125	113

27390D, 33377D

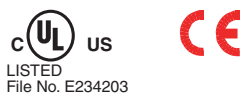
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70-463-1, 70-464-1

70-463-1



PAGE 18, 19



PAGE 20



PAGE 21



PAGE 22

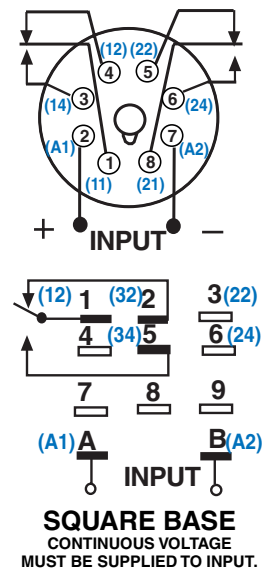
## SPDT, 13 AMPS & DPDT, 10 AMPS

WIRING DIAGRAM  
(VIEWED FROM PIN END)

**UL**  
UL Recognized  
File No. E62636



CLASS 236 VOLTAGE SENSING RELAYS COMBINE A SOLID STATE SENSOR WITH A SPDT, 13 AMP OR DPDT 10 AMP RELAY. PULL-IN & DROPOUT VOLTAGES ARE INDEPENDENTLY ADJUSTABLE. THE 236 CAN BE USED EITHER AS A OVER OR UNDER VOLTAGE DETECTING RELAY. STATUS L.E.D. INCLUDED.



ALTERNATE NEMA OR IEC ( ) NUMBERS VIEWED FROM PIN SIDE

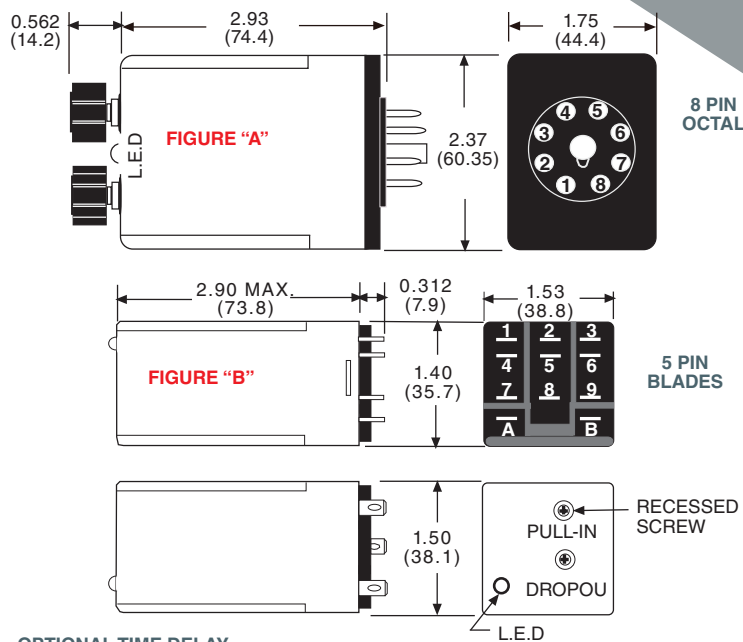
### GENERAL SPECIFICATIONS (@ 25°C)

	UNITS	
<b>INPUT/SENSING</b>		
Standard Voltage Nominal:	VAC 50/60 Hz VDC	24, 120, 240, 480 24
Input Voltage Absolute Maximum:	maximum	Nominal +60% except 480volt where 600 VAC is maximum
Upper Input Voltage Range:	nominal	75 to 115%
Lower Input Voltage Range:		75 to 95% of set pickup
Power Consumption:	maximum	3.5 VA / W
Transient Protection:		Yes
Reverse Polarity Protection:	DC	Yes
Operate Time:	mS maximum	25
Release Time:		20
Input Indication:		Green LED
<b>TIMING</b>		
Time Scales:		Optional on PX
Setting Adjustment:		PX= KNOB, CX=Recessed potentiometer
Reset Time:	mS maximum	150
<b>OUTPUT</b>		
Contact Rating AC Amperes (AC1):	VAC 50/60Hz	DPDT=10 amps @ 240 SPDT=13 amps @ 240
Contact Rating DC Amperes (DC1):		DPDT=10 amps @ 28 SPDT=13 amps @ 28
Contact Rating Horsepower:	HP @ VAC	1/3 @ 120, 1/2 @ 240
Contact Rating Pilot Duty:		B300
Minimum Load:	mW	500
Contact Material:		Silver Alloy
Output Indication:		No
<b>DIELECTRIC STRENGTH</b>		
Across Open Contacts:	V rms	1,000
Input to Contacts:	V rms	2,500
Pole to Pole:	V rms	2,500
<b>TEMPERATURE</b>		
Operating, Lower:	°C	-20
Operating, Upper:	°C	+55
Storage, Lower:	°C	-30
Storage, Upper:	°C	+85
<b>LIFE EXPECTANCY</b>		
Electrical Full Load	operations	100,000
Mechanical @ no Load :	operations	DPDT= 10,000,000 SPDT= 5,000,000
<b>MISCELLANEOUS</b>		
Operating Position:		Any
Cover Protection Category:	IP	40
Terminals:		PX= 8 pin octal CX= 0.187 x 0.020 quick connect
Weight:	Inch grams	DPDT: 156, SPDT: 125



### OUTLINE DIMENSIONS

DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



OPTIONAL TIME DELAY AVAILABLE IN OCTAL PIN VERSION

**Mating Sockets**  
70-464-1, 70-750D8-1: ACPX/CPX 70-463-1: ACX  
See section 7

STANDARD PART NUMBERS	FIG.	NOMINAL INPUT VOLTAGE	VOLTAGE PULL-IN RANGE	VOLTAGE DROP-OUT RANGE
W236ACPX-1	A	120 VAC	92 TO 140 VAC	75% TO
W236ACPX-4	A	24 VAC	20 TO 30 VAC	95% OF
W236CPX-1	A	24 VDC	20 TO 30 VDC	PICKUP
W236ACX-1	B	120 VAC	90 TO 138 VAC	VOLTAGE
W236ACX-2	B	208 / 220 / 240 VAC	180 TO 276 VAC	SETTING
W236ACX-4	B	480 VAC	360 TO 552 VAC	

CALL FACTORY FOR OTHER VOLTAGES, TIME AND FUNCTIONS

## CROSS REFERENCE GUIDE

MAGNECRAFT & STRUTHERS-DUNN	POTTER & BRUMFIELD	SQUARE D	OMRON	A / B	NCC	IDEC
TDRPRO-5000	CNM5, CNS-35-96, CNS-35-76	9050JCK70V14	H3CA-A			
TDRPRO-5001			H3CA-8H			
TDRPRO-5002	CN1, CNS-35-92, CNS-35-72		H3CA-8			
TDRSOXP-24				700HRM12TU24		RTE-P1AD24
TDRSOXP-120				700HRM12TA17		RTE-P1AF20
TDRSOXP-240				700HRM12TA17		RTE-P1AF20
TDRSRXP-12					T2K-xxxxx-466	RTE-P2D12
TDRSRXP-24					T2K-xxxxx-467/462	RTE-P2AD24
TDRSRXP-120					T2K-xxxxx-461	RTE-P1AF20
TDRSOXB-12						RTE-B1D12
TDRSOXB-24						RTE-B1AD24
TDRSOXB-120						RTE-B1AF20
TDRSRXB-12						RTE-B2D12
TDRSRXB-24						RTE-B2AD24
TDRSRXB-120						RTE-B2AF20
MAGNECRAFT & STRUTHERS-DUNN	POTTER & BRUMFIELD	SQUARE D	CUTLER HAMMER	A / B	SIEMENS	OTHER
W211ACPSOX-18	CDB-38-70001					
W211ACPSOX-5	CDB-38-70003 CGB-38 70010S CHB-38-70001 CKB-38-70010 CB-1003B-70	9050JCK11V20	MTON1P120A	700HT12AA1	OND-0110-120A	SST12AAA (AGASTAT) 5YZ86 (GRAINGER) 7268K23 (McMASTER CAR) TIK-00010-461 (NCC)
W211ACPSOX-7	CKB-38-70180 CHB-38-70003 CB-1005B-70 CDB-38-70005	9050JCK15V20	MTON2P120A	700HT12BA1	OND-1180-120A	5X829 (GRAINGER) 7268K26 (McMASTER CAR)
W211ACPSOX-8	CGB-38-70005M			700HT12CA1		R28-11A10-120M(NET) 5X830 (GRAINGER) 7268K51 (McMASTER CAR)
W211ACPSOX-60	CGB-38-70010M	9050JCK16V20				6X601 (GRAINGER)
W211ACPSOX-61		9050JCK17V20				7268K53 (McMASTER CAR)
W211ACPSOX-62	CGB-38-70050M	9050JCK18V20				7268K54 (McMASTER CAR)
W211ACPSOX-63	CB-1007B70	9050JCK19V20				
W211CPSOX-1	CHD-38-30001 CB-1028D-30 CDD-38-30003			700HT12AZ24	OND-0110-24D	
W211ACPSRX-5	CHB-38-70011 CDB-38-70014 CB-1021B-78	9050JCK21V20	MTOF1P120A	700HT22AA1	OFD-0110-120A	SST22AAA (AGASTAT) 7268K43 (McMASTER CAR)
W211ACPSRX-7	CHB-38-70013	9050JCK25V20	MTOF2P120A	700HT22BA1	OFD-1180-120A	7268K46 (McMASTER CAR) 6X154 (GRAINGER) T3K-00010-461 (NCC)
W211CPSRX-1	CHD-38-30011			700HT22AZ24		7268K32 (McMASTER CAR)
W211CPSRX-3	CHD-38-30013 CDD-38-30008			700HT22BZ24		

THE CROSS REFERENCE IS INTENDED TO MATCH FOOT PRINT, INTERNAL WIRING, AND CONTACT LOAD RATINGS. CONSTRUCTION FEATURES AND GENERAL SPECIFICATIONS SHOULD BE COMPARED IF EXACT REPLACEMENT IS REQUIRED.

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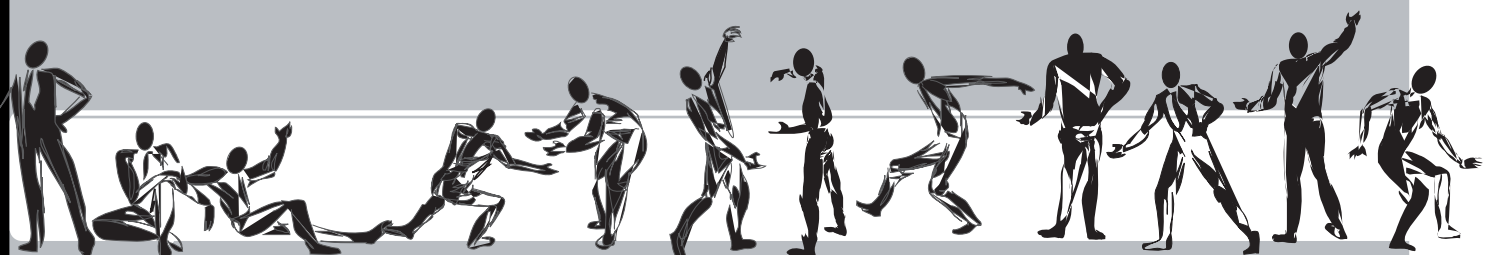
MAGNECRAFT & STRUTHERS-DUNN	POTTER & BRUMFIELD	A / B	SQUARE D	SIEMENS	OTHER
211ACPSOX-3		700HT12BA24	9050JCK15V14	OND-0110-24A	
W211CPSOX-3	CDD-38-30005	700HT12BZ24			7268K35 (McMASTER CAR)
	CHD-38-30003				
	CB-38-70014				
211ACPSRX-8					SS51622-12 (MACROMATIC)
211ACPSRX-60			9050JCK26V20		T3K-00010-461 (NCC)
MAGNECRAFT & STRUTHERS-DUNN	SQUARE D	A / B	McMASTER CAR	GRAINGER	
W222ACPFX-16			7630K17		
W222ACPFX-27	9050JCK57V20	700HV32DA1			
W222ACPFX-11	9050JCK51V20	700HV32AA1	7630K12	1A366	
222CPFX-11		700HV32AZ24			
MAGNECRAFT & STRUTHERS-DUNN	POTTER & BRUMFIELD	A / B	MIDTEX	CUTLER HAMMER	
W388ACPSOX-1	CLF-41-70010				
W388ACPSOX-2			614-12T400		
W388CPSOX-1	CLH-41-70010				
W388CPSOX-2			614-12C400		
W388CPSRX-22	CUA-42-70010		612-12C400		
W388ACPSOX-42	CUA-51-70010	700HS12AA1	612-43T100		
W388ACPSOX-44		700HS12BA1	614-43T400		
W388CPSRX-2		700HS22AZ24	612-43C100	MTON1B120A	
W388CPSRX-4		700HS22BZ24	612-43C400	MTON2B120A	
W388CPSRX-35			612-43T400	MTON2B120A	
W388ACQSOX-1	CLF-42-70010				
MAGNECRAFT & STRUTHERS-DUNN	POTTER & BRUMFIELD	<p><b>FOR TIME DELAY RELAYS APPLICATION ENGINEERING ASSISTANCE</b></p> <p><b>Scott Heilman, PRODUCT MANAGER</b></p> <p>FAX: (843) 395-8530</p> <p>EMAIL: sheilman@magnecraft.com</p>			
W67CPSOX-1	R123012X2E1				
W67CPSOX-2	R123024X2E1				
MAGNECRAFT & STRUTHERS-DUNN	GRAINGER				
W236CPX-1	5Z564				
W236ACPX-1	5Z562				

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