



95 Series Relay



90 Series Relay



86 Series Timer



97 Series Relay



100 Series Relay



P Series Socket

Relays • Timers • Sockets

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CONTACT LAYOUT	TYPE	RATING (UL / CSA)		MINIMUM ORDER	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
		AMP	HP						

Open- Basic Relay

	SPST - NO	30A / 277VAC 20A / 30VDC	2HP / 250VAC 1HP / 125VAC	250 PCS.	6 VDC	105250	9001D006	0.1	\$7.70
					12 VDC	105252	9001D012	0.1	\$7.70
					24 VDC	105253	9001D024	0.1	\$7.70
	SPDT	SEE BELOW*		250 PCS.	6 VDC	105264	9003D006	0.1	\$8.20
		12 VDC	105266		9003D012	0.1	\$8.20		
		24 VDC	105267		9003D024	0.1	\$8.20		

Enclosed - Not Sealed

	SPST - NO	30A / 277VAC 20A / 30VDC	2HP / 250VAC 1HP / 125VAC	250 PCS.	6 VDC	105271	9011D006	0.1	\$8.35
					12 VDC	105273	9011D012	0.1	\$8.35
					24 VDC	105274	9011D024	0.1	\$8.35
	SPDT	SEE BELOW*		250 PCS.	6 VDC	105285	9013D006	0.1	\$8.80
		12 VDC	105287		9013D012	0.1	\$8.80		
		24 VDC	105288		9013D024	0.1	\$8.80		

Enclosed - Sealed

	SPST - NO	30A / 277VAC 20A / 30VDC	2HP / 250VAC 1HP / 125VAC	250 PCS.	6 VDC	105292	9051D006	0.1	\$9.05
					12 VDC	105294	9051D012	0.1	\$9.05
					24 VDC	105295	9051D024	0.1	\$9.05
	SPDT	SEE BELOW*		250 PCS.	6 VDC	105306	9053D006	0.1	\$9.50
		12 VDC	105308		9053D012	0.1	\$9.50		
		24 VDC	105309		9053D024	0.1	\$9.50		

Specifications

DIMENSIONS	CONTACT DATA	
<p>CONTACT PINS: 2.1 LONG x 0.1 DIA COIL PINS: 1.1 LONG x 0.1 DIA</p>	OPERATING TIME	OPERATE: 15 ms (MAX) RELEASE: 10 ms (MAX)
	CONTACT MATERIAL	AG/SN/O
	COIL DATA	
	DC POWER CONSUMED	0.93 W
	VOLTAGE TOLERANCE	+10% -10%
	GENERAL DATA	
	EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 100,000
	OPERATING TEMP.	-20 +140 DEG F (-30 +60 DEG C)
	DIMENSIONS (HxWxD)	22.5 x 16.5 x 20.2 mm
	APPROVALS	cULus FILE NUMBER: E155477 FILE NUMBER: LR90143

* SPDT Rating: NO contact - UL / CSA - 20A / 277 VAC, 20A / 30 VDC, 2HP / 250 VAC, 1HP / 125 VAC
NC contact - UL / CSA - 10A / 277 VAC, 10A / 30 VDC, .5HP / 250 VAC, .25HP / 125 VAC

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	AMP RATING	MINIMUM ORDER	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
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92 Series • No Mounting Tab

SEE BELOW	SPST - NO	40A / 12VDC	1000 PCS.	12 VDC	112067	9221D01201	0.1	C F O N S T R U C T O R Y
		24 VDC	112068	9221D02401	0.1			
	SPST - NO / COM	30A / 12VDC	1000 PCS.	12 VDC	112069	9216D01201	0.1	
		24 VDC	112070	9216D02401	0.1			
	SPDT	40A (NO)	1000 PCS.	12 VDC	112071	9213D01201	0.1	
		30A (NC)	24 VDC	111864	9213D02401	0.1		

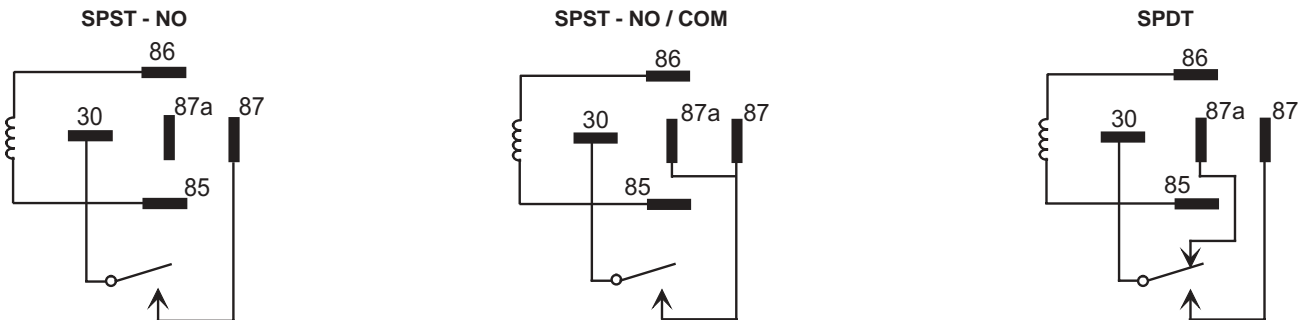
92 Series • with Mounting Tab

SEE BELOW	SPST - NO	40A / 12VDC	1000 PCS.	12 VDC	105313	9221D01202	0.1	C F O N S T R U C T O R Y
		24 VDC	105314	9221D02402	0.1			
	SPST - NO / COM	30A / 12VDC	1000 PCS.	12 VDC	112072	9216D01202	0.1	
		24 VDC	112073	9216D02402	0.1			
	SPDT	40A (NO)	1000 PCS.	12 VDC	105312	9213D01202	0.1	
		30A (NC)	24 VDC	112074	9213D02402	0.1		

Specifications

DIMENSIONS	CONTACT DATA	
	OPERATING TIME	OPERATE: 10 ms (MAX) RELEASE: 10 ms (MAX)
	COIL DATA	
	VOLTAGES	12 / 24 VDC ONLY
	DC POWER CONSUMED	1.8 W
	VOLTAGE TOLERANCE	+10% -10%
	GENERAL DATA	
	EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 100,000
OPERATING TEMP.	-22 +160 DEG F (-30 +70 DEG C)	
DIMENSIONS (HxWxD)	28 x 30.5 x 25 mm	

Contact Layout



Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	AMP RATING	MINIMUM ORDER	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
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93 Series • Flux Tight

	SPST - NO	12A / 125 VAC*	1000 PCS.	6 VDC	105318	9311D006	0.1	\$5.00
		10A / 125 VAC		12 VDC	105320	9311D012	0.1	\$5.00
		7A / 250 VAC / 30 VDC		24 VDC	105322	9311D024	0.1	\$5.00
	SPDT	12A / 125 VAC*	1000 PCS.	6 VDC	105336	9313D006	0.1	\$6.70
		10A / 125 VAC		12 VDC	105338	9313D012	0.1	\$6.70
		7A / 250 VAC / 30 VDC		24 VDC	105340	9313D024	0.1	\$6.70

93 Series • Epoxy Sealed

	SPST - NO	12A / 125 VAC*	1000 PCS.	6 VDC	112075	9321D006	0.1	\$5.70
		10A / 125 VAC		12 VDC	105342	9321D012	0.1	\$5.70
		7A / 250 VAC / 30 VDC		24 VDC	105343	9321D024	0.1	\$5.70
	SPDT	12A / 125 VAC*	1000 PCS.	6 VDC	105346	9323D006	0.1	\$6.70
		10A / 125 VAC		12 VDC	105347	9323D012	0.1	\$6.70
		7A / 250 VAC / 30 VDC		24 VDC	105348	9323D024	0.1	\$6.70

Specifications

DIMENSIONS	CONTACT DATA	
	OPERATING TIME	OPERATE: 15 ms (MAX) RELEASE: 15 ms (MAX)
	CONTACT MATERIAL	AG/SN/O
	COIL DATA	
	DC POWER CONSUMED	0.36 W
	VOLTAGE TOLERANCE	+10% -10%
	GENERAL DATA	
	EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 100,000
	OPERATING TEMP.	-20 +140 DEG F (-30 +60 DEG C)
	DIMENSIONS (HxWxD)	22.5 x 16.5 x 20.2 mm
	APPROVALS	FILE NUMBER: E155477 FILE NUMBER: LR90143-79

* 12 Amp / 125 VAC - 30,000 Operations

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	AMP RATING	MINIMUM ORDER	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
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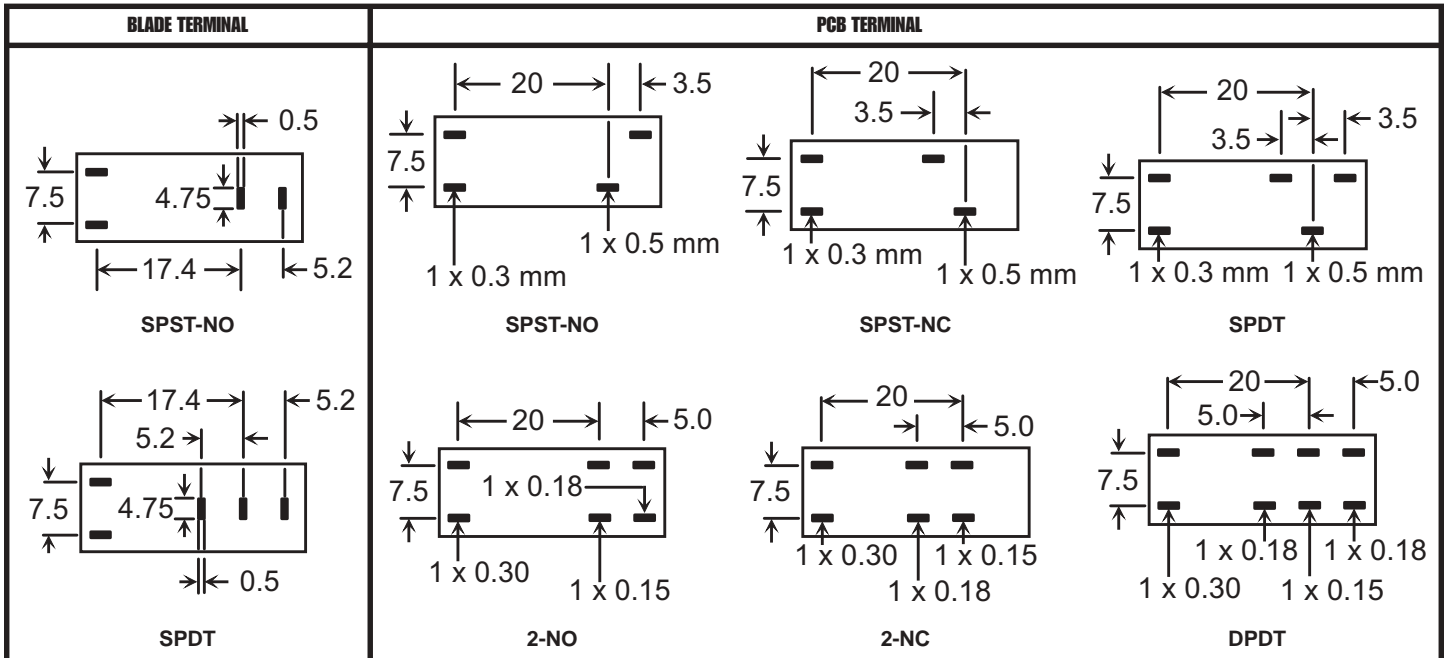
94 Series • Blade Terminal • Basic Relay

	SPST - NO	12 A / 250 VAC	250 PCS.	6 VDC	105353	9411D006	0.1	\$4.15
		12 A / 30 VDC		12 VDC	105355	9411D012	0.1	\$4.15
				24 VDC	105356	9411D024	0.1	\$4.15
	SPDT	10 A / 250 VAC	250 PCS.	6 VDC	105362	9413D006	0.1	\$4.70
		10 A / 30 VDC		12 VDC	105364	9413D012	0.1	\$4.70
				24 VDC	105365	9413D024	0.1	\$4.70

94 Series • PCB Terminal • Basic Relay

	SPST - NO	12A / 277VAC	250 PCS.	6 VDC	105371	9471D006	0.1	\$4.15
		12A / 30VDC		12 VDC	105373	9471D012	0.1	\$4.15
		1/2 HP 125 / 250 VAC		24 VDC	105374	9471D024	0.1	\$4.15
SOCKET					104201	ZVP3	0.1	\$7.70
	SPDT	12A / 277VAC	250 PCS.	6 VDC	105389	9473D006	0.1	\$4.70
		12A / 30VDC		12 VDC	105391	9473D012	0.1	\$4.70
		1/2 HP 125 / 250 VAC		24 VDC	105392	9473D024	0.1	\$4.70
SOCKET					104201	ZVP3	0.1	\$7.70
	2 - NO	5A / 277VAC	250 PCS.	6 VDC	105397	9484D006	0.1	\$4.50
		5A / 30VDC		12 VDC	105399	9484D012	0.1	\$4.50
		1/8 HP 125 / 250 VAC		24 VDC	105401	9484D024	0.1	\$4.50
SOCKET					104200	ZVP5	0.1	\$9.00
	SPDT	5A / 277VAC	250 PCS.	6 VDC	105416	9486D006	0.1	\$5.30
		5A / 30VDC		12 VDC	105418	9486D012	0.1	\$5.30
		1/8 HP 125 / 250 VAC		24 VDC	105420	9486D024	0.1	\$5.30
SOCKET					104200	ZVP5	0.1	\$9.00

Dimensions



Specifications and Additional 94 Series PCB Relays Next Page.

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	RATING		MINIMUM ORDER	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
		AMP	HP						

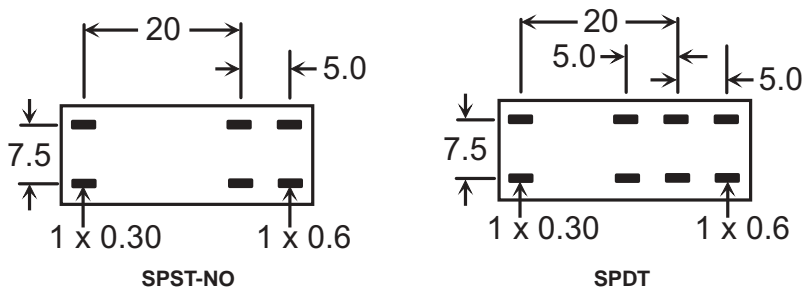
94 Series • PCB Terminal • Joined Contacts

	SPST - NO	16 A / 250 VAC	1/2HP	250 PCS.	6 VDC	105428	9491D006	0.1	\$4.75
		20 A / 125 VAC	125 / 250		12 VDC	105432	9491D012	0.1	\$4.75
		20 A / 30 VDC	VAC		24 VDC	105436	9491D024	0.1	\$4.75
SOCKET						104200	ZVP5	0.1	\$9.00
	SPDT	16 A / 250 VAC	1/2HP	250 PCS.	6 VDC	105468	9493D006	0.1	\$5.00
		20 A / 125 VAC	125 / 250		12 VDC	105472	9493D012	0.1	\$5.00
		20 A / 30 VDC	VAC		24 VDC	105476	9493D024	0.1	\$5.00
		SOCKET						104200	ZVP5

94 Series • PCB Terminal • Joined and Sealed

	SPST - NO	16 A / 250 VAC	1/2HP	250 PCS.	6 VDC	105429	9491D00605	0.1	\$5.20
		20 A / 125 VAC	125 / 250		12 VDC	105433	9491D01205	0.1	\$5.20
		20 A / 30 VDC	VAC		24 VDC	105437	9491D02405	0.1	\$5.20
SOCKET						104200	ZVP5	0.1	\$9.00
	SPDT	16 A / 250 VAC	1/2HP	250 PCS.	6 VDC	105469	9493D00605	0.1	\$5.45
		20 A / 125 VAC	125 / 250		12 VDC	105473	9493D01205	0.1	\$5.45
		20 A / 30 VDC	VAC		24 VDC	105477	9493D02405	0.1	\$5.45
		SOCKET						104200	ZVP5

Dimensions



Specifications

CONTACT DATA	
OPERATING TIME	OPERATE: 20 ms (MAX) RELEASE: 10 ms (MAX)
CONTACT MATERIAL	AG/CD/O
COIL DATA	
DC POWER CONSUMED	0.7 W
VOLTAGE TOLERANCE	+10% -10%
GENERAL DATA	
EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 100,000
OPERATING TEMP.	-20 +140 DEG F (-30 +60 DEG C)
DIMENSIONS (HxWxD)	BLADE: 29 x 13 x 29 mm PCB: 29 x 13 x 25.5 mm
APPROVALS FILE NUMBER: E155477 FILE NUMBER: LR90143-24	

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	AMP RATING	CARTON QUANTITY	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
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95 Series • Plug In (Solder) Terminal • Basic Relay

	DPDT	5 A / 240 VAC 5 A / 28 VDC	50 EACH	24 VAC 120 VAC 230 VAC 24 VDC	105559 105563 105567 105579	9566A024 9566A120 9566A240 9566D024	0.1 0.1 0.1 0.1	\$7.60 \$8.00 \$8.85 \$7.60	
	SOCKET					115906	PYF08A	0.1	\$6.40
	4PDT	5 A / 240 VAC 5 A / 28 VDC	50 EACH	24 VAC 120 VAC 230 VAC 24 VDC	105595 105599 105603 105615	9568A024 9568A120 9568A240 9568D024	0.1 0.1 0.1 0.1	\$8.60 \$9.00 \$10.60 \$8.60	
	SOCKET					115907	PYF14A	0.1	\$7.70

95 Series • Plug In (Solder) Terminal • with Indicator Light

	DPDT	5 A / 240 VAC 5 A / 28 VDC	50 EACH	24 VAC 120 VAC 230 VAC 24 VDC	105561 105565 105569 105581	9566A02430 9566A12030 9566A24030 9566D02430	0.1 0.1 0.1 0.1	\$9.60 \$10.00 \$10.85 \$9.60	
	SOCKET					115906	PYF08A	0.1	\$6.40
	4PDT	5 A / 240 VAC 5 A / 28 VDC	50 EACH	24 VAC 120 VAC 230 VAC 24 VDC	105597 105601 105605 105617	9568A02430 9568A12030 9568A24030 9568D02430	0.1 0.1 0.1 0.1	\$10.60 \$11.00 \$12.60 \$10.60	
	SOCKET					115907	PYF14A	0.1	\$7.70

95 Series • Plug In (Solder) Terminal • with Top MTD Flange

	DPDT	5 A / 240 VAC 5 A / 28 VDC	50 EACH	24 VAC 120 VAC 230 VAC 24 VDC	105560 105564 105568 105580	9566A02401 9566A12001 9566A24001 9566D02401	0.1 0.1 0.1 0.1	\$7.80 \$8.20 \$9.05 \$7.80	
	SOCKET					115906	PYF08A	0.1	\$6.40
	4PDT	5 A / 240 VAC 5 A / 28 VDC	50 EACH	24 VAC 120 VAC 230 VAC 24 VDC	105596 105600 105604 105616	9568A02401 9568A12001 9568A24001 9568D02401	0.1 0.1 0.1 0.1	\$8.80 \$9.20 \$11.05 \$8.80	
	SOCKET					115907	PYF14A	0.1	\$7.70

Specifications

DIMENSIONS	CONTACT DATA	
	OPERATING TIME	OPERATE: 25 ms (MAX) RELEASE: 25 ms (MAX)
	CONTACT MATERIAL	AG/CD/O
	COIL DATA	
	AC POWER CONSUMED	1.2 VA
	DC POWER CONSUMED	0.9 W
	VOLTAGE TOLERANCE	+10% -10%
	GENERAL DATA	
	EXPECTED LIFE (MIN)	MECHANICAL: 50,000,000 ELECTRICAL: 500,000+
	OPERATING TEMP.	-10 +130 DEG F (-25 +55 DEG C)
	DIMENSIONS (HxWxD)	27.5 x 21.5 x 36 mm
APPROVALS FILE NUMBER: E156072 FILE NUMBER: LR90143-36M		

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	RATING		CARTON QUANTITY	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
		AMP	HP						

96 Series • Blade Terminal • Basic Relay

	SPDT	15 A / 240 VAC	1/2 HP / 120V	50 EACH	24 VAC	105776	9673A024	0.1	\$7.20	
		15 A / 28 VDC			120 VAC	105780	9673A120	0.1	\$7.80	
					230 VAC	105783	9673A240	0.1	\$9.30	
						24 VDC	105795	9673D024	0.1	\$7.20
	SOCKET						115867	PTF08A	0.1	\$6.50
		DPDT	10 A / 277 VAC	1/3 HP / 120 V 1/2 HP / 240 V	50 EACH	24 VAC	105704	9666A024	0.1	\$8.20
10 A / 28 VDC			120 VAC			105708	9666A120	0.1	\$8.70	
			230 VAC			105712	9666A240	0.1	\$10.25	
					24 VDC	105724	9666D024	0.1	\$8.20	
SOCKET						115867	PTF08A	0.1	\$6.50	

96 Series • Blade Terminal • with Indicator Light

	SPDT	15 A / 240 VAC	1/2 HP / 120V	50 EACH	24 VAC	105778	9673A02430	0.1	\$9.20	
		15 A / 28 VDC			120 VAC	105781	9673A12030	0.1	\$9.80	
					230 VAC	105785	9673A24030	0.1	\$11.30	
						24 VDC	105797	9673D02430	0.1	\$9.20
	SOCKET						115867	PTF08A	0.1	\$6.50
		DPDT	10 A / 277 VAC	1/3 HP / 120 V 1/2 HP / 240 V	50 EACH	24 VAC	105706	9666A02430	0.1	\$10.20
10 A / 28 VDC			120 VAC			105710	9666A12030	0.1	\$10.70	
			230 VAC			105714	9666A24030	0.1	\$12.25	
					24 VDC	105726	9666D02430	0.1	\$10.20	
SOCKET						115867	PTF08A	0.1	\$6.50	

96 Series • Blade Terminal • with Top MTD Flange

	SPDT	15 A / 240 VAC	1/2 HP / 120V	50 EACH	24 VAC	105777	9673A02401	0.1	\$7.40	
		15 A / 28 VDC			120 VAC	112077	9673A12001	0.1	\$8.00	
					230 VAC	105784	9673A24001	0.1	\$9.30	
						24 VDC	105796	9673D02401	0.1	\$7.40
	SOCKET						115867	PTF08A	0.1	\$6.50
		DPDT	10 A / 277 VAC	1/3 HP / 120 V 1/2 HP / 240 V	50 EACH	24 VAC	105705	9666A02401	0.1	\$8.40
10 A / 28 VDC			120 VAC			105709	9666A12001	0.1	\$8.90	
			230 VAC			105713	9666A24001	0.1	\$10.45	
					24 VDC	105725	9666D02401	0.1	\$8.40	
SOCKET						115867	PTF08A	0.1	\$6.50	

Specifications

DIMENSIONS	CONTACT DATA		
<p>96 Series SPDT and DPDT</p>	OPERATING TIME	OPERATE: 25 ms (MAX) RELEASE: 25 ms (MAX)	
	CONTACT MATERIAL	AG/CD/O	
	COIL DATA		
	AC POWER CONSUMED	1.2 VA	
	DC POWER CONSUMED	0.9 W	
	VOLTAGE TOLERANCE	+10% -10%	
	GENERAL DATA		
	EXPECTED LIFE (MIN)	MECHANICAL: 50,000,000 ELECTRICAL: 500,000	
	OPERATING TEMP.	-10 +130 DEG F (-25 +55 DEG C)	
	DIMENSIONS (HxWxD)	27.5 x 21.6 x 35.2 mm	
APPROVALS FILE NUMBER: E155477 FILE NUMBER: LR90143-7, -73			

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



TYPE	RATING		CARTON QUANTITY	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
	AMP	HP						

97 Series • Octal • with Push to Test

DPDT	10 A / 120 VAC	1/6 HP / 120 V	20 EACH	24 VAC	105860	9726A02410	0.1	\$13.30
	5 A / 240 VAC	1/3 HP / 230 V		120 VAC	105868	9726A12010	0.1	\$13.30
	10 A / 28 VDC			230 VAC	105872	9726A24010	0.1	\$14.30
				24 VDC	105884	9726D02410	0.1	\$13.30
SOCKET					115903	PF083A	0.1	\$4.60
3PDT	10 A / 120 VAC	1/6 HP / 120 V	20 EACH	24 VAC	105904	9737A02410	0.1	\$15.30
	5 A / 240 VAC	1/3 HP / 230 V		120 VAC	105912	9737A12010	0.1	\$15.30
	10 A / 28 VDC			230 VAC	105916	9737A24010	0.1	\$16.30
				24 VDC	105928	9737D02410	0.1	\$15.30
SOCKET					115904	PF113A	0.1	\$6.50

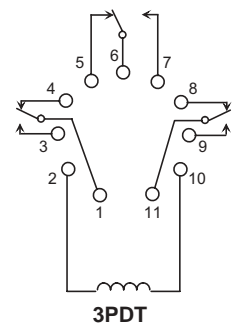
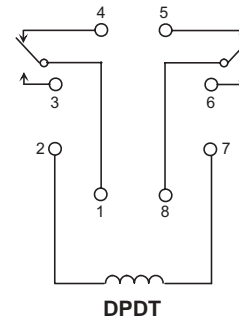
97 Series • Octal • with Push to Test and Light

DPDT	10 A / 120 VAC	1/6 HP / 120 V	20 EACH	24 VAC	105862	9726A02450	0.1	\$16.30
	5 A / 240 VAC	1/3 HP / 230 V		120 VAC	105870	9726A12050	0.1	\$16.30
	10 A / 28 VDC			230 VAC	105874	9726A24050	0.1	\$17.30
				24 VDC	105886	9726D02450	0.1	\$16.30
SOCKET					115903	PF083A	0.1	\$4.60
3PDT	10 A / 120 VAC	1/6 HP / 120 V	20 EACH	24 VAC	105906	9737A02450	0.1	\$18.25
	5 A / 240 VAC	1/3 HP / 230 V		120 VAC	105914	9737A12050	0.1	\$18.25
	10 A / 28 VDC			230 VAC	105918	9737A24050	0.1	\$19.30
				24 VDC	105930	9737D02450	0.1	\$18.25
SOCKET					115904	PF113A	0.1	\$6.50

Specifications

CONTACT DATA	
OPERATING TIME	OPERATE: 20 ms (MAX) RELEASE: 20 ms (MAX)
CONTACT MATERIAL	AG/CD/O
COIL DATA	
AC POWER CONSUMED	2.0 VA
DC POWER CONSUMED	1.2 W
VOLTAGE TOLERANCE	+10% -10%
GENERAL DATA	
EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 500,000
OPERATING TEMP.	-50 +160 DEG F (-45 +70 DEG C)
DIMENSIONS (HxWxD)	35 x 33 x 54.5 mm
APPROVALS	UL FILE NUMBER: E155477 SF FILE NUMBER: LR90143-2

Contact Layout



Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	RATING		CARTON QUANTITY	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
		AMP	HP						

98 Series • 3/16" Blade Terminal • with Push to Test

	DPDT	10 A / 240 VAC	1/3 HP / 120 V	20 EACH	24 VAC	106021	9826A02410	0.2	\$12.80
		10 A / 28 VDC	1/2 HP / 240 V		120 VAC	106029	9826A12010	0.2	\$12.80
					230 VAC	106037	9826A24010	0.2	\$14.30
					24 VDC	106061	9826D02410	0.2	\$12.80
	SOCKET					104198	ZVK	0.1	\$8.20
	SOCKET					104199	ZVKD	0.1	\$8.20
	3PDT	10 A / 240 VAC	1/3 HP / 120 V	20 EACH	24 VAC	106093	9837A02410	0.2	\$14.80
		10 A / 28 VDC	1/2 HP / 240 V		120 VAC	106101	9837A12010	0.2	\$14.80
					230 VAC	106109	9837A24010	0.2	\$16.20
					24 VDC	106133	9837D02410	0.2	\$14.80
SOCKET					104198	ZVK	0.1	\$8.20	
SOCKET					104199	ZVKD	0.1	\$8.20	

98 Series • 3/16" Blade Terminal • with Push to Test and Light

	DPDT	10 A / 240 VAC	1/3 HP / 120 V	20 EACH	24 VAC	106025	9826A02450	0.2	\$15.80
		10 A / 28 VDC	1/2 HP / 240 V		120 VAC	106033	9826A12050	0.2	\$15.80
					230 VAC	106041	9826A24050	0.2	\$17.30
					24 VDC	106065	9826D02450	0.2	\$15.80
	SOCKET					104198	ZVK	0.1	\$8.20
	SOCKET					104199	ZVKD	0.1	\$8.20
	3PDT	10 A / 240 VAC	1/3 HP / 120 V	20 EACH	24 VAC	106097	9837A02450	0.2	\$17.80
		10 A / 28 VDC	1/2 HP / 240 V		120 VAC	106105	9837A12050	0.2	\$17.80
					230 VAC	106113	9837A24050	0.2	\$19.30
					24 VDC	106137	9837D02450	0.2	\$17.80
SOCKET					104198	ZVK	0.1	\$8.20	
SOCKET					104199	ZVKD	0.1	\$8.20	

98 Series • 3/16" Blade Terminal • with Side Mounted Flange

	DPDT	10 A / 240 VAC	1/3 HP / 120 V	20 EACH	24 VAC	106020	9826A02402	0.2	\$11.90
		10 A / 28 VDC	1/2 HP / 240 V		120 VAC	106028	9826A12002	0.2	\$11.90
					230 VAC	106036	9826A24002	0.2	\$13.40
					24 VDC	106060	9826D02402	0.2	\$11.90
	3PDT	10 A / 240 VAC	1/3 HP / 120 V	20 EACH	24 VAC	106092	9837A02402	0.2	\$13.90
		10 A / 28 VDC	1/2 HP / 240 V		120 VAC	106100	9837A12002	0.2	\$13.90
					230 VAC	106108	9837A24002	0.2	\$15.40
					24 VDC	106132	9837D02402	0.2	\$13.90

Specifications

DIMENSIONS	CONTACT DATA	
	OPERATING TIME	OPERATE: 20 ms (MAX) RELEASE: 20 ms (MAX)
	CONTACT MATERIAL	AG/CD/O
	COIL DATA	
	AC POWER CONSUMED	9826 (all voltages): 2.0VA 9837(all voltages): 2.7VA
	DC POWER CONSUMED	1.2 W
	VOLTAGE TOLERANCE	+10% -10%
	GENERAL DATA	
	EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 500,000+ (10 Amp / 120 VAC)
	OPERATING TEMP.	-50 +160 DEG F (-45 +70 DEG C)
	DIMENSIONS (HxWxD)	38 x 35 x 47.6 mm
APPROVALS		FILE NUMBER: E155477 FILE NUMBER: LR90143-2

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	RATING		CARTON QUANTITY	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
		AMP	HP						

99 Series • 1/4" Blade Terminal • with Side Mounted Flange • DPDT and 3PDT

<p>DPDT</p>	<p>3PDT</p>	DPDT	25 A / 277 VAC	1 HP / 120 V	20 EACH	24 VAC	106157	9926A02402	0.2	\$20.50
			10 A / 600 VAC	1.5 HP / 240V		120 VAC	106158	9926A12002	0.2	\$20.50
						230 VAC	106159	9926A24002	0.2	\$22.00
<p>3PDT</p>	<p>3PDT</p>	3PDT	20 A / 277 VAC	3/4 HP / 120 V	20 EACH	24 VAC	115203	9937A02402	0.2	\$25.50
				1 HP / 240 V		120 VAC	106160	9937A12002	0.2	\$25.50
						230 VAC	112079	9937A24002	0.2	\$27.50

99 Series • 1/4" Blade Terminal • with Side Mounted Flange • 1NO-DM/DB and 1NO+1NC-DM/DB

<p>1NO-DM/DB</p>	<p>1NO+1NC DM/DB</p>	1NO-DM/DB	30 A / 300 VAC	1 HP / 120 V	20 EACH	24 VAC	112080	9981A02402	0.2	\$16.80
			15 A / 600 VAC	1.5 HP / 240 V		120 VAC	112081	9981A12002	0.2	\$16.80
			30 A / 28 VDC	1.5 HP / 600 V		230 VAC	112082	9981A24002	0.2	\$18.30
<p>1NO-DM/DB</p>	<p>1NO+1NC DM/DB</p>	1NO+1NC DM/DB	30 A / 300 VAC	1 HP / 120 V	20 EACH	24 VAC	112083	9989A02402	0.2	\$20.00
			15 A / 600 VAC	1.5 HP / 240 V		120 VAC	112084	9989A12002	0.2	\$20.00
			30 A / 28 VDC	1.5 HP / 600 V		230 VAC	112085	9989A24002	0.2	\$22.00

Specifications

DIMENSIONS	CONTACT DATA		
<p>DPDT</p>	OPERATING TIME	OPERATE: 25 ms (MAX) RELEASE: 25 ms (MAX)	
	CONTACT MATERIAL	AG/CD/O	
<p>3PDT</p>	COIL DATA		
	AC POWER CONSUMED	3.0VA(9926, all voltages) / 3.4VA(9937, 9981, 9989, all voltages)	
	DC POWER CONSUMED	1.2W(9926, all voltages) / 1.5W(9937, 9981, 9989, all voltages)	
	VOLTAGE TOLERANCE	+10% -10%	
	GENERAL DATA		
	EXPECTED LIFE (MIN)	MECHANICAL: 10,000,000 ELECTRICAL: 100,000	
	OPERATING TEMP.	-22 +122 DEG F (-30 +55 DEG C) / -40 +140 DEG F (-40 +60 DEG C)	
	DIMENSIONS (HxWxD)	38 x 34.8 x 46.3 mm (INCLUDING TERMINALS)	
	APPROVALS		
	US FILE NUMBER: E155477 FILE NUMBER: LR90143-46		

Other coil voltages and contact configurations available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4



CONTACT LAYOUT	TYPE	RATING (UL / CSA)		CARTON QUANTITY	COIL VOLTAGE	CATALOG NUMBER	MODEL NUMBER	WT Lbs (each)	LIST PRICE (each)
		AMP	HP						

100 Series SPST - NO - DM

	SPST NO - DM	30 A / 220 V	3 HP / 277 V 1.5 HP / 120 V	100 EACH	12 VAC	111716	10011A012	0.2	\$21.00
					24 VAC	111717	10011A024	0.2	\$21.00
					120 VAC	111718	10011A120	0.2	\$23.00
					230 VAC	111719	10011A230	0.2	\$25.50
					6 VDC	111720	10011D006	0.2	\$18.00
					12 VDC	111721	10011D012	0.2	\$18.00
					24 VDC	111722	10011D024	0.2	\$18.00
					110 VDC	111723	10011D110	0.2	\$19.50

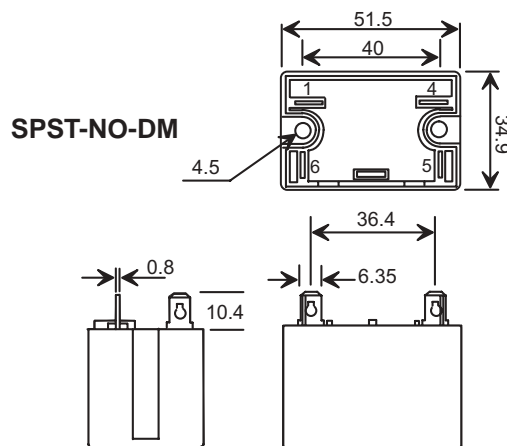
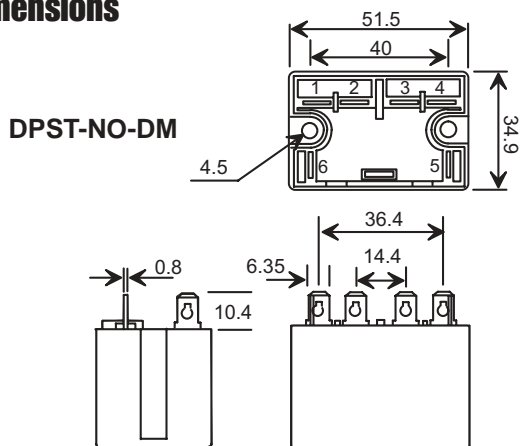
100 Series DPST - NO - DM

	DPST NO - DM	25 A / 220 V	2 HP / 277 V 1 HP / 120 V	100 EACH	12 VAC	111724	10022A012	0.2	\$27.50
					24 VAC	111725	10022A024	0.2	\$27.50
					120 VAC	111726	10022A120	0.2	\$29.50
					230 VAC	111727	10022A230	0.2	\$33.00
					6 VDC	111728	10022D006	0.2	\$21.00
					12 VDC	111729	10022D012	0.2	\$21.00
					24 VDC	111730	10022D024	0.2	\$21.00
					110 VDC	111731	10022D110	0.2	\$22.50

Specifications

CONTACT RATING:	SPST-NO-DM	DPST-NO-DM
RATED LOAD (RESISTIVE)	30 A 220 V	25 A 220 V
MAX SWITCHING CURRENT	30 A	25 A
MAX SWITCHING VOLTAGE	277 VAC	277 VAC
MAX SWITCHING CAPACITY	6,600 VA	5,500 VA
HP RATING	1.5 HP @ 125 VAC 3.0 HP @ 277 VAC	1 HP @ 125 VAC 2 HP @ 277 VAC
OPERATE TIME	30 ms MAX	
RELEASE TIME	30 ms MAX	
LIFE EXPECTANCY	5,000,000 OPERATIONS 100,000 OPERATIONS	
MECHANICAL		
ELECTRICAL		
OPERATING TEMPERATURE	-65 TO +160 DEG F (-55 TO +70 DEG C)	
APPROVALS:	FILE NUMBER: E155477	

Dimensions



Note: Dimensions are in millimeters. Inches = mm / 25.4

Multi Function • Multi Range • Multi Voltage



85 Series Multi Function / Range / Voltage Timers

- **Multi Function:** Each timer can function as "On Delay", "Repeat Cycle", "Off Delay" or "Reverse Repeat Cycle" timer
- **Multi Range:** Each timer offers a choice of (4) timing ranges: 0.05 / 1 Sec. : 0.12 / 10 Sec.: 0.6 Sec. / 1 Min.: 6 Sec. / 10 Min. or 0.05 / 1 Min.: 0.12 / 10 Min.: 0.6 Min. / 1 Hour: 1 Min. / 10 Hour
- **Multi Input Voltage:** Each timer offers input voltages from 24 VAC / VDC through 240 VAC / VDC, 50 / 60 Hz without changing wiring or dip switches
- **Not for direct motor starting**

UL File Number E158650

OUTPUT	TIMING RANGE	SWITCH " T " (TIME RANGE) SETTING				MODEL NUMBER	CATALOG NUMBER	WT Lbs (each)	LIST PRICE (each)
		00	10	01	11				
11 PIN DPDT	SEC(s) - MIN (m)	0.05(s) - 1(s)	0.12(s) - 10(s)	0.6(s) - 1(m)	6(s) - 10(m)	8511A240	104214	0.3	\$64.00
	MIN (m) - HOUR (h)	0.05(m) - 1(m)	0.12(m) - 10(m)	0.6(m) - 1(h)	1(m) - 10(h)	8521A240	104216	0.3	\$64.00
8 PIN SPDT	SEC (s) - MIN (m)	0.05(s) - 1(s)	0.12(s) - 10(s)	0.6(s) - 1(m)	6(s) - 10(m)	8542A240	104217	0.3	\$62.00
	MIN (m) - HOUR (h)	0.05(m) - 1(m)	0.12(m) - 10(m)	0.6(m) - 1(h)	1(m) - 10(h)	8552A240	104218	0.3	\$62.00
PANEL MOUNT ADAPTOR for snap mounting into a panel cutout.							115880	0.1	\$2.00

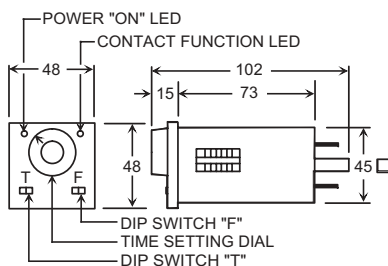
Function Chart

FUNCTION	SWITCH " F " SETTING	DESCRIPTION
ON DELAY	0 0	On Delay: Timing begins when power is applied. The output contacts transfer when the "On Delay" time delay setting is reached. To reset the timer, remove the input power or operate the customer supplied external "reset" switch.
REPEAT CYCLE	1 0	Repeat Cycle: Timing begins when power is applied. The output contacts transfer when the time delay setting is reached. The output contacts remain transferred until the time delay setting is again reached. The output contacts are then released and return to the original state. The timer automatically resets and repeats the timing cycle until the input power is removed.
OFF DELAY	0 1	Off Delay: Timing requires a customer supplied normally closed external switch connected to the "reset" terminals. Applying power immediately transfers the output contacts. Timing begins when the "reset" switch is opened. When the time delay setting is reached, the output contacts are released. Reset the timer by operating the customer supplied external "reset" switch.
INTERVAL (REVERSE ON DELAY)	0 1	Interval: Applying power immediately transfers the output contacts and timing begins. Once the time delay setting is reached, the output contacts are released. Reset the timer either by removing the input power or operating the customer supplied external "reset" switch.

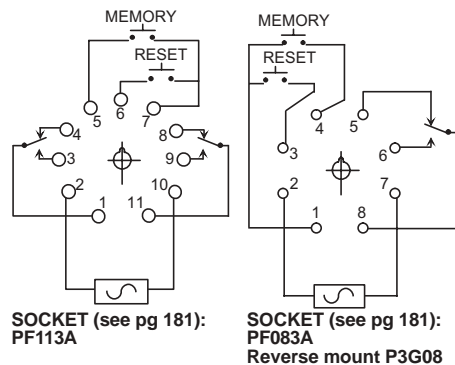
Reset Switch: Customer supplied. Normally closed switch required for "Off Delay" function. "On Delay", "Repeat Cycle" and "Interval" Timing resets the timer to zero.

Memory Switch: Customer supplied. Pauses the timing cycle at that point in the cycle. When it is released it allows the cycle to resume from the same point.

Physical Layout



Connection Diagram



Specifications

INPUT VOLTAGE	24-240 VAC / VDC 50 / 60 Hz
CONTACT RATING	10A / 250 VAC & 10A / 30 VDC
MOUNTING	8 OR 11 PIN OCTAL BASE
INPUTS	POWER MEMORY (OPTIONAL) RESET (OPTIONAL)
ELECTRICAL LIFE	250,000 CYCLES
REPEATABILITY	+/- 1%
SETTING TOLERANCE	+/- 10%
RESET TIME	0.1 SEC MAX.
OPERATING TEMP.	+15° +120° F (-10° +50° C)
OPERATING HUMIDITY	85% RH MAX.

Note: Dimensions are in millimeters. Inches = mm / 25.4

Do not connect power to the reset or memory terminals. These terminals are only for dry control contacts. Connecting power to the reset or memory terminals will destroy the timer.

Multi Range • Multi Voltage • On Delay



The Advance Controls, Inc. 86 Series On Delay Timers offer two (2) different time spans, a choice of four (4) different timing ranges within each time span and a wide range of operating voltages.

Multi Range: By simply setting the time span switch and multiplier switch located on the timer faceplate to the proper position, the timer's range is automatically set. The faceplate dial automatically changes to indicate the timer's time range. Thus, the correct time range is always shown on the faceplate eliminating any confusion concerning the timer's timing range.

Wide Range Of Input Voltages: A wide range of input voltages are allowed (24 VAC / DC through 240 VAC / DC, 50 / 60 Hz) without wiring changes or dip switch settings.

Timing begins once power is applied to the timer coil. When the time delay setting is reached, the relay contacts transfer and remain transferred until the timer is reset. The timer is reset by removing power to the coil.

Note: Not for direct motor starting.

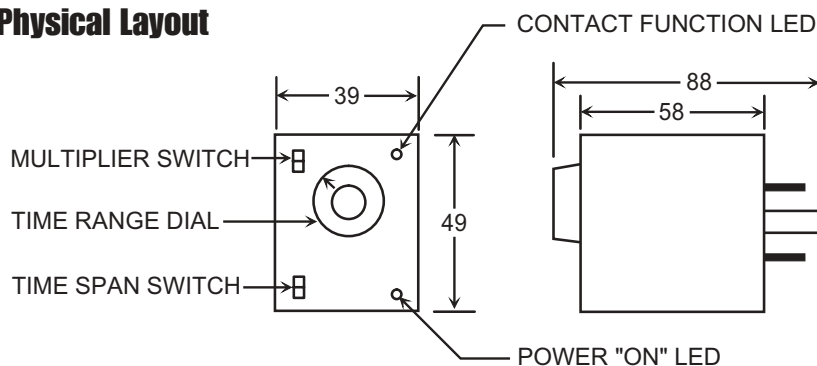
UL File Number E158650

OUTPUT	TIME SPAN SWITCH SETTING	MULTIPLIER SWITCH SETTING		MODEL NUMBER	CATALOG NUMBER	WT Lbs	LIST PRICE
		1	10				
8 PIN DPDT	SEC (s)	0.05(s) - 1(s)	0.12(s)-10(s)	8611A240	104220	0.3	\$50
8 PIN DPDT	MIN (m)	0.6(s) - 1(m)	6(s)-10(m)	8611A240	104220	0.3	\$50
8 PIN DPDT	MIN (m)	0.05(m)-1(m)	0.12(m)-10(m)	8621A240	104222	0.3	\$50
8 PIN DPDT	HRS (h)	0.6(m) - 1(h)	1(m)-10(h)	8621A240	104222	0.3	\$50

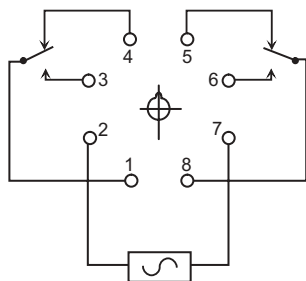
Specifications

INPUT VOLTAGE	24-240 VAC / VDC 50 / 60 Hz
CONTACT RATING	10A / 250 VAC & 10A / 30 VDC
MOUNTING	8 PIN OCTAL BASE
INPUTS	POWER
ELECTRICAL LIFE	250,000 CYCLES
REPEATABILITY	+/- 1%
SETTING TOLERANCE	+/- 10%
RESET TIME	0.1 SEC MAX.
OPERATING TEMP.	+15° +120° F (-10° +50° C)
OPERATING HUMIDITY	85% RH MAX.

Physical Layout



Connection Diagram



SOCKET (see page 181):
Non-Latching: PF083A
Latching: TC8PFA

Other voltages available - consult factory.

Note: Dimensions are in millimeters. Inches = mm / 25.4

Twin Setting Repeat Cycle



The Advance Controls, Inc. Series Twin Setting Repeat Cycle Timer features two timers in one case, acting as a continuously functioning repeat cycle timer. The twin setting repeat cycle timer allows independent setting of both "On" and "Off" time. This provides the needed flexibility required for many timing applications.

When power is applied to the timer coil, the lead timer immediately begins its time delay. Once the lead timer's delay is reached, the relay contacts transfer and remain transferred until the lag timer's delay setting is reached. The relay contacts are released, both timers are reset and the timing cycle automatically begins. Both the lead and the lag timer can be set at any point from zero to full scale by adjusting the twin timers. Any pattern of relay contacts "On" and "Off" can be achieved.



UL File Number E158650

Note: Not for direct motor starting.

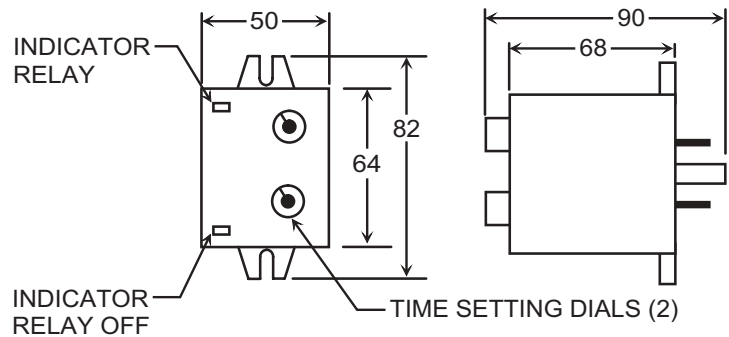
INPUT VOLTAGE	OUTPUT FUNCTION	TIME RANGE								WT Lbs	LIST PRICE
		0-6 SECONDS		0-60 SECONDS		0-6 MINUTES		0-60 MINUTES			
		CATALOG NUMBER	MODEL NUMBER	CATALOG NUMBER	MODEL NUMBER	CATALOG NUMBER	MODEL NUMBER	CATALOG NUMBER	MODEL NUMBER		
24 VAC / VDC	SPDT	104224	8731A024	104227	8732A024	104230	8733A024	104233	8734A024	0.4	\$70
120 VAC	SPDT	104225	8731A120	104228	8732A120	104231	8733A120	104234	8734A120	0.4	\$70
240 VAC	SPDT	104226	8731A240	104229	8732A240	104232	8733A240	104235	8734A240	0.4	\$70
24 VAC / VDC	DPDT	104237	8741A024	104240	8742A024	104241	8743A024	104242	8744A024	0.4	\$75
120 VAC	DPDT	104238	8741A120	111797	8742A120	114717	8743A120	111697	8744A120	0.4	\$75
240 VAC	DPDT	104239	8741A240	115233	8742A240	114718	8743A240	114719	8744A240	0.4	\$75

Other voltages and lag / lead time combinations available - consult factory.

Specifications

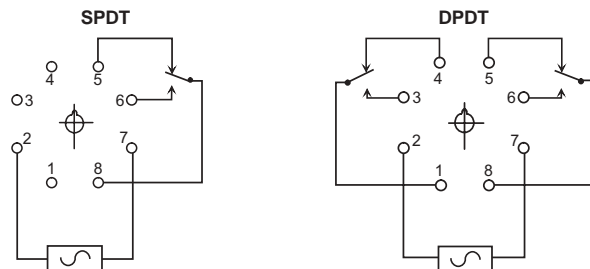
INPUT VOLTAGE	24 VAC / VDC 120 VAC 240 VAC
CONTACT RATING	5 Amp / 250 VAC
MOUNTING	8 PIN OCTAL BASE
INPUTS	POWER
ELECTRICAL LIFE	250,000 CYCLES
REPEATABILITY	+/- 1%
SETTING TOLERANCE	+/- 10%
RESET TIME	0.1 SEC MAX.
OPERATING TEMP.	+15° +120° F (-10° +50° C)
OPERATING HUMIDITY	85% RH MAX.

Physical Layout



Connection Diagram

SOCKET: Non-Latching - PF083A • Latching - TC8PFA (see page 181)



Note: Dimensions are in millimeters. Inches = mm / 25.4

Power Off Delay



The Advance Controls, Inc. 88 Series Power Off Delay Timer maintains control power in a control circuit for a preset time period after the control power is removed from the timer coil. Off delay timers provide a means of continuing control circuit operation for a preset period to complete a function, maintaining a timed delay interval or any other delaying function requiring the control power to continue for a set time period after control power is removed from the timer coil.

When power is applied to the timer coil, the relay contacts immediately transfer and remain transferred until the end of the time delay. The time delay begins when the power is removed from the timer coil. When the time delay setting is reached, the relay contacts are released.

Note: Not for direct motor starting.

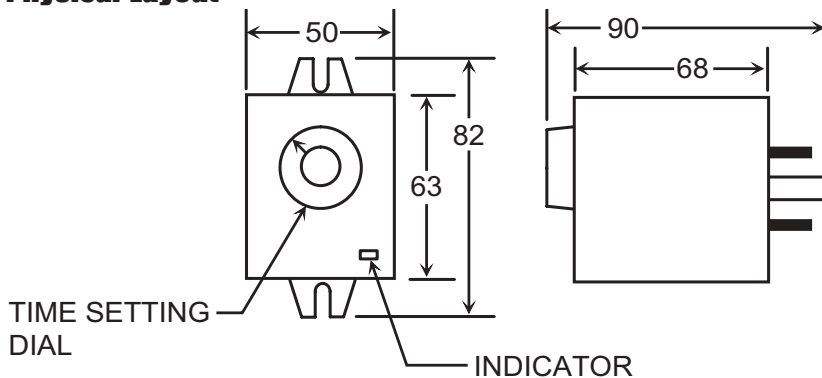
Ordering Information

INPUT VOLTAGE	TIME RANGE				WT Lbs	LIST PRICE
	0-60 SEC		0-360 SEC			
	CATALOG NUMBER	MODEL NUMBER	CATALOG NUMBER	MODEL NUMBER		
24VAC/DVC	104244	8841A024	104247	8842A024	0.5	\$98
120VAC	104245	8841A120	104248	8842A120	0.5	\$98
240VAC	104246	8841A240	104249	8842A240	0.5	\$98

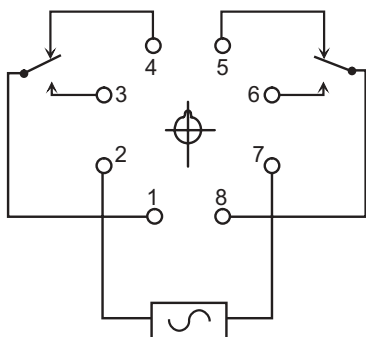
Specifications

INPUT VOLTAGE	24 VAC/DVC • 120 VAC 240 VAC (Specify)
CONTACT RATING	5 Amp / 250 VAC
MOUNTING	8 PIN OCTAL BASE
ELECTRICAL LIFE	250,000 CYCLES
REPEATABILITY	+/- 1%
SETTING TOLERANCE	+/- 10%
MINIMUM POWER APPLICATION TIME	1 SEC
RESET TIME	0.1 SEC MAX.
OPERATING TEMP.	+15° +120° F (-10° +50° C)
OPERATING HUMIDITY	85% RH MAX.

Physical Layout



Connection Diagram



SOCKET: Non-Latching - PF083A
Latching - TC8PFA
(see page 181)

Note: Dimensions are in millimeters. Inches = mm / 25.4

Ordering Information

DRAWING LETTER	CARTON QTY	MODEL NUMBER	CATALOG NUMBER	WT Lbs	LIST PRICE
A	20	PYF08A	115906	0.1	\$6.40
B	20	P3G08	115901	0.1	\$4.95
C	20	PF083A	115903	0.1	\$4.60
D	20	PYF14A	115907	0.1	\$7.70
E	10	TC8PFA	104250	0.1	\$6.90
F	20	PF113A	115904	0.1	\$6.50
G	20	PTF08A	115867	0.1	\$6.50
H	50	ZVP3	104201	0.1	\$7.70
H	50	ZVP5	104200	0.1	\$9.00
J	25	ZVK	104198	0.1	\$8.20
J	25	ZVKD	104199	0.1	\$8.20

Specifications

Ambient Temperature: -40° to +160° F (-40° to +70° C)

Mounting: DIN Rail or Panel Mount

Ratings by Model Number:

P, PYF Series: 10 Amp @ 250 Volt

PTF Series: 15 Amp @ 250 Volt

ZVK and ZVKD: 16 Amp @ 250 Volt

ZVP: 10 Amp @ 250 Volt (5 Amp Max. / Terminal)

Terminal Torque: 9 In/Lb maximum

Additional sockets available - consult factory

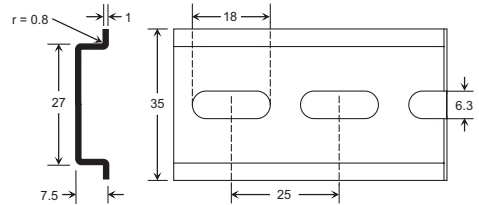


UL FILE: E186212 (P, PTF, PYF Series)
E135170 (ZVK, ZVP Series)

DIN Mounting Rail

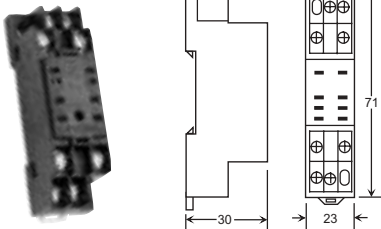
DESCRIPTION	MINIMUM ORDER	CATALOG NUMBER	WT Lbs	LIST PRICE
Slotted Metal, 1 Meter Long	5 Pcs.	117537	0.7	\$8.15

Note: Standard package is 20 Pieces. Additional DIN Rail, see page 363.



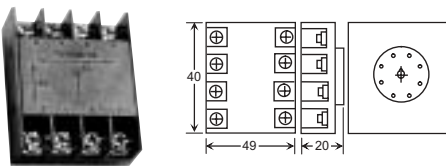
Dimensions

A) PYF Series



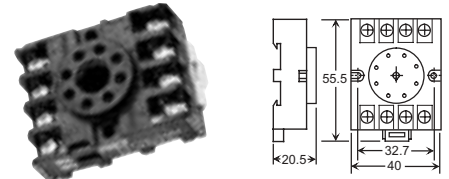
B) P Series

The P3G08 socket allows the 85 series timer to mount into the face of the enclosure.

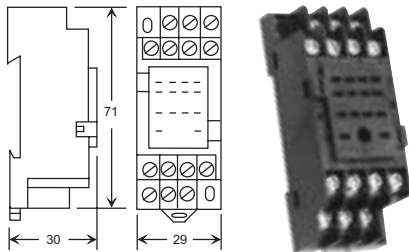


C) P Series

The PF083A and PF113A sockets are non-latching to mount ACI timers and relays.

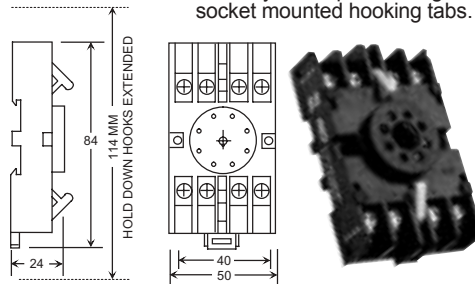


D) PYF Series

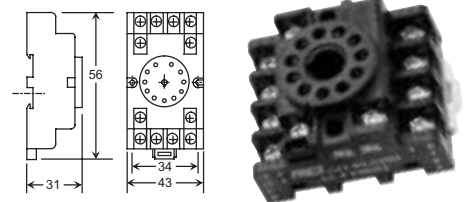


E) P Series

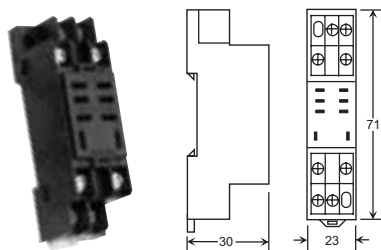
The TC8PFA socket latches the 86, 87 and 88 series timers securely to the panel using socket mounted hooking tabs.



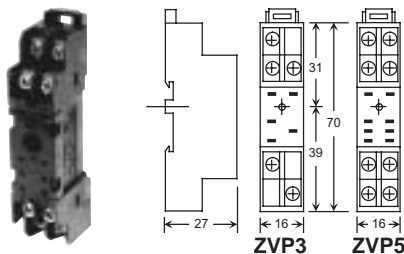
F) P Series



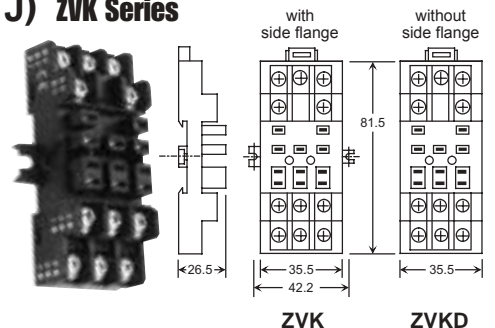
G) PTF Series



H) ZVP Series



J) ZVK Series



Note: Dimensions are in millimeters. Inches = mm / 25.4

Safety Switches are Specialty Devices.

They are specifically designed to meet recognized Safety Switch Standards.

The following devices are **not** recognized Safety Devices:

Limit Switches

Proximity Sensors

Photoelectric Sensors

Snap Switches

Plug-in Relays