

AZ 5 SERIES SUBMINIATURE PCB RELAY

Features

- Subminiature Size for High-Density Packaging
- Coil Sensitivity to 100mW
- Extremely Low Cost
- Coil Voltages to 24VDC
- Epoxy Sealed for Automatic Wave Soldering
- 1 Amp & 2 Amp Contacts
- Life Expectancy to 10 Million Operations
- Meets FCC Part 68.302 1,500V Lightning Surge
- Meets FCC Part 68.304 1,000V Dielectric
- UL File E43203; CSA File 74120

Specifications

Contacts

Arrangement	SPDT (1 Form C) welded crossbar construction
Rating	Noninductive load
Light Duty	Max switched power: 30W or 60VA Max switched current: 1 Amp Max switched voltage: 150VDC or 300VAC UL Rating: 1A @ 30VDC, 0.5A @ 120VAC
Heavy Duty	Max switched power: 60W or 120VA Max switched current: 2 Amp Max switched voltage: 150VDC or 300VAC UL Rating: 2A @ 30VDC, 1A @ 120VAC
Material	Light Duty: Silver alloy, gold clad Heavy Duty: Silver alloy
Resistance	50 milliohms initially

Coil

Power at Pickup Voltage (typical)	Standard coil: 220mW Sensitive coil: 100mW
Max Continuous Dissipation	1.1W @ 20C (68F) ambient 0.8W @ 40C (104F) ambient
Temperature Rise (at nominal voltage)	Standard: 40C (104F) Sensitive: 22C (72F)

General Data

Life Expectancy	Minimum operations
Mechanical	10,000,000
Electrical (standard duty)	500,000 @ 1A, 30VDC
(heavy duty)	400,000 @ 0.5A, 120VAC 200,000 @ 2A, 30VDC 200,000 @ 1A, 120VAC
Operate Time (typical)	Standard: 3ms at nominal voltage Sensitive: 5ms at nominal voltage
Release Time (typical)	1 ms at nominal coil voltage with no coil suppression
Capacitance	Coil to contact: 3.0 pF Contact to contact: 3.0 pF
Bounce (typical)	At 10 mA contact current 2ms at operate, 8ms at release
Dielectric Strength (at sea level)	1,000Vrms coil to contact 500Vrms between open contacts Meets FCC Part 68.302 1,500V lightning surge & Part 68.304 1,000V dielectric
Insulation Resistance	100 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage Standard: -25C (-13F) to 60C (140F) Sensitive: -15C (-13F) to 75C (167F)
(storage)	-25C (-13F) to 105C (221F)
Vibration	0.062" DA @ 10-55 Hz
Shock	Standard: 10g. Sensitive: 6g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Immersion Time	30 seconds maximum
Weight	3.5 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay may pull in with less 'Must Operate' value
- 3 Other coil resistances and sensitivities available upon request
- 4 Specifications subject to change without notice

Relay Ordering Data

Standard Relays - 1 Form C (SPDT)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	AZ 5X Footprint	AZ 5Y Footprint
5	6.8	56	3.5	AZ 5X-1C-5DE	AZ 5Y-1C-5DE
6	8.1	80	4.2	AZ 5X-1C-6DE	AZ 5Y-1C-6DE
12	16.2	320	8.4	AZ 5X-1C-12DE	AZ 5Y-1C-12DE
24	32.4	1,280	16.8	AZ 5X-1C-24DE	AZ 5Y-1C-24DE

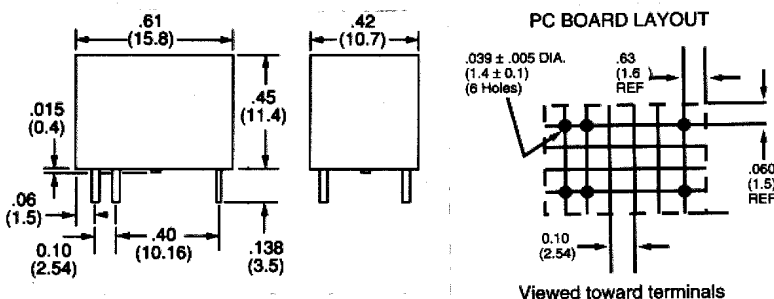
Sensitive Relays - 1 Form C (SPDT)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	AZ 5X Footprint	AZ 5Y Footprint
5	10.0	120	3.5	AZ 5X-1C-5DSE	AZ 5Y-1C-5DSE
6	12.0	180	4.2	AZ 5X-1C-6DSE	AZ 5Y-1C-6DSE
12	24.0	700	8.4	AZ 5X-1C-12DSE	AZ 5Y-1C-12DSE
24	48.0	2,800	16.8	AZ 5X-1C-24DSE	AZ 5Y-1C-24DSE

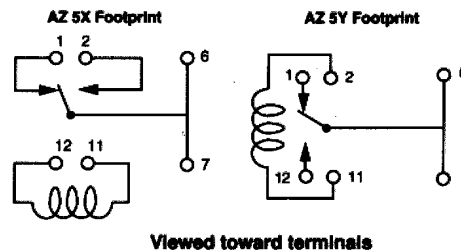
Standard Relays - Heavy Duty

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	AZ 5X Footprint	AZ 5Y Footprint
5	6.8	56	3.5	AZ 5X-1CH-5DE	AZ 5Y-1CH-5DE
6	8.1	80	4.2	AZ 5X-1CH-6DE	AZ 5Y-1CH-6DE
12	16.2	320	8.4	AZ 5X-1CH-12DE	AZ 5Y-1CH-12DE
24	32.4	1,280	16.8	AZ 5X-1CH-24DE	AZ 5Y-1CH-24DE

Mechanical Dimensions



WIRING DIAGRAM



Dimensions are in inches with metric equivalents in parentheses.

0.010" tolerances.

Terminal Dimensions

Terminal Number	Dimensions
	[Tolerance is 0.005 (0.13)]
1, 2, 11, 12	0.025 (0.63) x 0.015 (0.38)
6, 7	0.025 (0.63) x 0.011 (0.18)

AZ 8 SERIES MINIATURE PCB RELAY

Features

- Subminiature Size for High-Density Packaging
- High Sensitivity, 100mW Pickup
- Extremely Low Cost
- Coil Voltages to 48VDC
- Epoxy Sealed for Automatic Wave Soldering
- Contacts Rated at 3, 6 or 10 Amps
- Life Expectancy to 20 Million Operations
- Class B Insulation Standard with Optional Class F

Specifications

Contacts

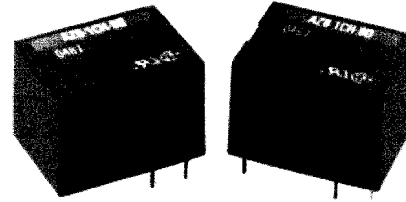
Arrangement	SPDT 3 or 6A & SPST 10A Versions
Rating	Noninductive load Light Duty: Max switched power: 100W or 600VA Max switched current: 3 Amps Max switched voltage: 150VDC or 300VAC UL Rating: 2A @ 28VDC or 300VAC 1/8 HP @ 120VAC 1/10 HP @ 120/240 VAC, 100,000 cycles 1.2/0.6A @ 120/240VAC, Pilot Duty 100,000 3.0/1.5A @ 120/240VAC General Use 100,000 Medium Duty: Max switched power: 180W or 1,800VA Max switched current: 6 Amps Max switched voltage: 150VDC or 300VAC UL Rating: 6A @ 28VDC or 300VAC 1/8 HP @ 120/240VAC, 100,000 cycles 1.5/0.8A @ 120/240VAC, Pilot Duty 100,000 3.8/1.9A @ 120/240VAC General Use 100,000 Heavy Duty: Max switched power: 300W or 2,400VA Max switched current: 10 Amps Max switched voltage: 150VDC or 300VAC UL Rating: 10A @ 30VDC or 120VAC 1/4 HP @ 120VAC 1/2 HP @ 250VAC
Material	Light Duty: Silver Medium Duty: Silver Nickel Heavy Duty: Silver Cadmium Oxide
Resistance	100 milliohms initially

Coil

Power at Pickup Voltage (typical)	Standard coil: 210mW Sensitive coil: 140mW Heavy duty: 228mW (110mw available)
Max Continuous Dissipation	Class B: 2.0W @ 20C (68F) ambient 1.6W @ 40C (104F) ambient Class F: 2.5W @ 20C (68F) ambient 2.1W @ 40C (104F) ambient
Temperature Rise (at nominal voltage)	Standard: 38C (100F) Sensitive: 28C (82F)

General Data

Life Expectancy	Minimum operations
Mechanical	100,000,000
Electrical (light duty)	300,000 @ 3A, 120VAC
(medium duty)	180,000 @ 6A, 120VAC
(heavy duty)	100,000 @ 10A, 120VAC
Operate Time	5ms at nominal voltage (typical)
Release Time	2ms at nominal coil voltage with no coil suppression (typical)
Dielectric Strength (at sea level)	750Vrms contact to contact 3,000Vrms contact to coil VDE 2,000Vrms contact to coil standard
Insulation Resistance	1,000 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 5% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage Class B: -55C (-67F) to 90C (194F) Class F: -55C (-67F) to 115C (239F)
(storage)	Class B: -55C (-67F) to 130C (266F) Class F: -55C (-67F) to 155C (311F)
Vibration	0.062" DA @ 10-55 Hz, 10g @ 55-110 Hz
Shock	10 g
Enclosure	P.E.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Immersion Time	30 seconds maximum
Weight	8 grams



- UL, CUR File E44211
- VDE Approved Versions Available

Relay Ordering Data

Standard Relays - 1 Form C (SPDT)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Epoxy Sealed
5	10.6	56	3.25	AZ 8-1C-5D	AZ 8-1C-5DE
6	12.6	80	3.90	AZ 8-1C-6D	AZ 8-1C-6DE
9	19.0	180	5.85	AZ 8-1C-9D	AZ 8-1C-9DE
12	25.0	320	7.80	AZ 8-1C-12D	AZ 8-1C-12DE
24	50.0	1,280	15.60	AZ 8-1C-24D	AZ 8-1C-24DE
48	87.0	3,800	28.80	AZ 8-1C-48D	AZ 8-1C-48DE

Standard Relays - 1 Form C (SPDT)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Epoxy Sealed
5	10.6	56	3.25	AZ 8-1CH-5D	AZ 8-1CH-5DE
6	12.6	80	3.90	AZ 8-1CH-6D	AZ 8-1CH-6DE
9	19.0	180	5.85	AZ 8-1CH-9D	AZ 8-1CH-9DE
12	25.0	320	7.80	AZ 8-1CH-12D	AZ 8-1CH-12DE
24	50.0	1,280	15.60	AZ 8-1CH-24D	AZ 8-1CH-24DE
48	87.0	3,800	28.80	AZ 8-1CH-48D	AZ 8-1CH-48DE

Sensitive Relays - 1 Form C (SPDT)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Epoxy Sealed
5	12.6	80	3.25	AZ 8-1C-5DS	AZ 8-1C-5DSE
6	14.8	110	3.90	AZ 8-1C-6DS	AZ 8-1C-6DSE
9	22.4	250	5.85	AZ 8-1C-9DS	AZ 8-1C-9DSE
12	30.0	440	7.80	AZ 8-1C-12DS	AZ 8-1C-12DSE
24	60.0	1,780	15.60	AZ 8-1C-24DS	AZ 8-1C-24DSE

Sensitive Relays - 1 Form C (SPDT)

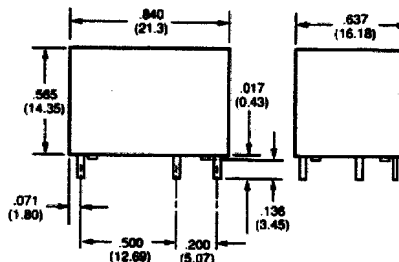
Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Epoxy Sealed
5	12.6	80	3.25	AZ 8-1CH-5DS	AZ 8-1CH-5DSE
6	14.8	110	3.90	AZ 8-1CH-6DS	AZ 8-1CH-6DSE
9	22.4	250	5.85	AZ 8-1CH-9DS	AZ 8-1CH-9DSE
12	30.0	440	7.80	AZ 8-1CH-12DS	AZ 8-1CH-12DSE
24	60.0	1,780	15.60	AZ 8-1CH-24DS	AZ 8-1CH-24DSE

Standard Relays - 1 Form A (SPST)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Epoxy Sealed
5	10.6	56	4.00	AZ 8-1AT-5D	AZ 8-1AT-5DE
6	12.6	80	4.80	AZ 8-1AT-6D	AZ 8-1AT-6DE
9	19.0	180	7.20	AZ 8-1AT-9D	AZ 8-1AT-9DE
12	25.0	320	9.60	AZ 8-1AT-12D	AZ 8-1AT-12DE
24	50.0	1,280	19.20	AZ 8-1AT-24D	AZ 8-1AT-24DE
48	87.0	3,800	38.40	AZ 8-1AT-48D	AZ 8-1AT-48DE

To indicate Class F version, add suffix "F". Other coil resistances and sensitivities are available.

Mechanical Dimensions



TERMINAL DIMENSIONS

Terminal Number	Dimensions
1	.010 - .015 x .035 - .042
2,5	.020 - .030 Square
3,4	.015 - .023 x .025 - .030

Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"



AZ 692

AZ 690 10 AMP MINIATURE POWER RELAY

Features

- Isolation Spacing Greater Than 8mm
- Dielectric Strength 4,000Vrms Coil to Contact
- 10 Amp Switching
- Single Pole – Forms A, B, C Available
- Life Expectancy to 30 Million Operations
- THINPAK Version Less Than 0.5" High
- SLIMPAK Version Saves Board Space
- Epoxy Sealed for Automatic Wave Soldering and Cleaning
- UL File E44211; CSA File LR85091; VDE 4120-4940-4002/A1
- Approvals/Standards Include UL, CSA, VDE, IEC, CEE & SEMKO

Specifications

Contacts

Arrangement	SPDT (1 Form C), SPST (1 Form A & 1 Form B)
Rating	Noninductive load Max switched power: 300W or 2,000VA Max switched current: 10A, 64A for 2msec Max switched voltage: 150VDC* or 380VAC 10A @ 24VDC or 115VAC 1/4HP 120VAC Motor Load 10A @ 250VAC General Use
UL Rating	
Material	Silver Cadmium Oxide
Resistance	50 milliohms initially (at rated current)

Coil

Power at Pickup Voltage (typical)	Standard coil: 337mW Sensitive coil: 234mW
Max Continuous Dissipation	1.9W @ 20C (68F) ambient 1.4W @ 40C (104F) ambient
Temperature Rise (at nominal voltage)	Standard: 40C (104F) Sensitive: 28C (79F)
Temperature	110C (230F) Maximum

General Data

Life Expectancy	Minimum operations
Mechanical	30,000,000
Electrical	100,000 @ 10A, 30VDC or 115VAC 200,000 @ 8A, 250VAC
Operate Time	6ms at nominal voltage (typical)
Release Time (typical)	2ms at nominal coil voltage with no coil suppression
Dielectric Strength (at sea level)	4,000Vrms coil to contact 1,000Vrms between open contacts
Insulation Resistance	10,000 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage Standard: -55C (-67F) to 70C (158F) Sensitive: -55C (-67F) to 80C (176F)
(storage)	-55C (-67F) to 110C (230F)
Vibration	0.062" DA @ 10-55 Hz
Shock	20g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Max Solvent Time	60C (176F)
Immersion Time	30 seconds maximum
Weight	17 grams

International Approvals

Germany	VDE 0860/8.81 paragraphs 10, 14 VDE 0806/8.81 paragraphs 7, 11, 15, 16, 29 VDE 0631/9.77 paragraphs 9, 12, 14 VDE 0730/T.1/3.72 paragraph 22
Sweden	SEMKO 43-9577/1-2 & SEMKO 43-9576/1-2
Norway	NEMKO 55938/M 54234 T
Finland	SEIT 050471-01
Switzerland	SEV D 3.31/88
USA	UL File e44211
Canada	CSA File LR85091

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay may pull in with less 'Must Operate' value
- 3 Unsealed relays should not be dip cleaned
- 4 Specifications subject to change without notice

Relay Ordering Data

Standard Relays - 1 Form C (SPDT)

Coil Specifications				Single Pole 0.138 Spacing	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Sealed
5	8	38	3.5	AZ 692-125-2*	AZ 2692-125-2*
6	10	58	4.2	AZ 692-112-2	AZ 2692-112-2
12	19	215	8.4	AZ 692-08-2	AZ 2692-08-2
24	35	740	16.8	AZ 692-560-2	AZ 2692-560-2
48	74	3,200	33.6	AZ 692-04-2	AZ 2692-04-2

Sensitive Relays - 1 Form C (SPDT)

Coil Specifications				Single Pole 0.138 Spacing	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Sealed
5	8	47	3.5	AZ 692-118-52*	AZ 2692-118-52*
6	10	80	4.2	AZ 692-010-52	AZ 2692-010-52
12	21	330	8.4	AZ 692-071-52	AZ 2692-071-52
24	41	1,200	16.8	AZ 692-052-52	AZ 2692-052-52
48	80	4,700	33.6	AZ 692-518-52	AZ 2692-518-52

Standard Relays - 1 Form C (SPDT)

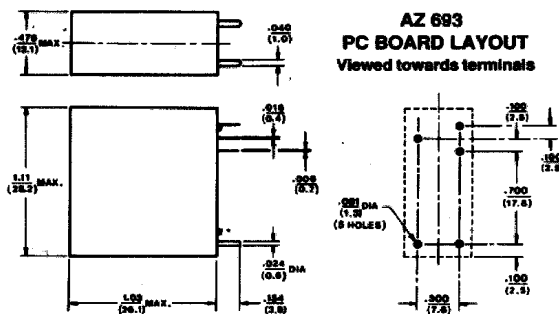
Coil Specifications				Single Pole 0.100 Spacing	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Sealed
5	8	38	3.5	AZ 693-125-2*	AZ 2693-125-2*
6	10	58	4.2	AZ 693-112-2	AZ 2693-112-2
12	19	215	8.4	AZ 693-08-2	AZ 2693-08-2
24	35	740	16.8	AZ 693-560-2	AZ 2693-560-2
48	74	3,200	33.6	AZ 693-04-2	AZ 2693-04-2

Sensitive Relays - 1 Form C (SPDT)

Coil Specifications				Single Pole 0.100 Spacing	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Sealed
5	8	47	3.5	AZ 693-118-52*	AZ 2693-118-52*
6	10	80	4.2	AZ 693-010-52	AZ 2693-010-52
12	21	330	8.4	AZ 693-071-52	AZ 2693-071-52
24	41	1,200	16.8	AZ 693-052-52	AZ 2693-052-52
48	80	4,700	33.6	AZ 693-518-52	AZ 2693-518-52

*Substitute '4' or '54', '5' or '55' in place of '2' or '52' to indicate 1 Form A & 1 Form B respectively.

Mechanical Dimensions



Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"

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**AZ 696 10 AMP SUBMINIATURE POWER RELAY****Features**

- Subminiature Size for High-Density Packaging
- High Sensitivity to 100mW
- 4,000Vrms Dielectric Strength
- Isolation Spacing Greater Than 8mm
- Epoxy Sealed for Automatic Wave Soldering
- 10 Amp Switching Capability
- Single Pole – Forms A & C Available
- UL File E44211
- CSA File LR 85091
- Approvals/Standards Also Include VDE, IEC, SEMKO & CEE

Specifications**Contacts**

Arrangement	SPDT (1 Form C) & SPST (1 Form A)
Rating	Noninductive load
Light Duty	Max switched power: 300W or 2,000VA
	Max switched current: 10 Amps
	Max switched voltage: 150VDC* or 300VAC
UL Rating	10A @ 30VDC
	10A @ 250VAC general purpose
	1/4 HP 120 VAC
	1/2 HP 250 VAC
	B 300 Pilot Duty
Material	Silver Cadmium Oxide
Resistance	50 milliohms initially (at rated current)

Coil

Power at Pickup Voltage	100mW (typical)
Max Continuous Dissipation	1.5W @ 20C (68F) ambient
Temperature Rise	1.2W @ 40C (104F) ambient
Temperature	20C (68F) at nominal coil voltage
	110C (230F) Maximum

General Data

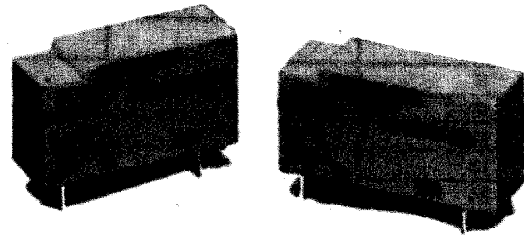
Life Expectancy	Minimum operations
Mechanical	10,000,000
Electrical	100,000 at rated load
Operate Time	10ms at nominal coil voltage (typical)
Release Time (typical)	1 ms at nominal coil voltage with no coil suppression
Dielectric Strength	4,000Vrms coil to contact (at sea level)
Insulation	1,000 megohms min @ 20C (68F),
Resistance	500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage
(storage)	-40C (-40F) to 70C (158F)
	-40C (-40F) to 110C (230F)
Vibration	0.062" DA @ 10-55 Hz
Shock	20g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Solvent Temp	80C (176F) maximum
Immersion Time	30 seconds maximum
Weight	14 grams

International Approvals

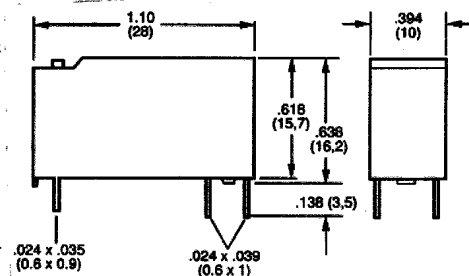
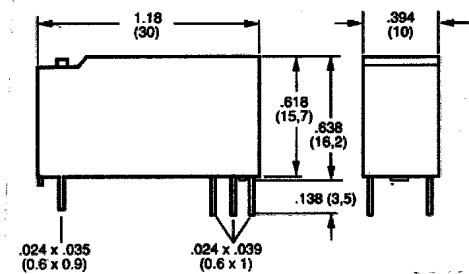
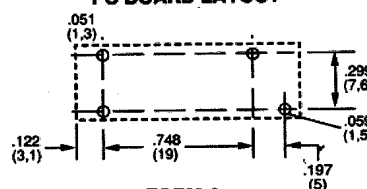
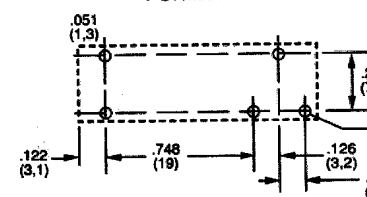
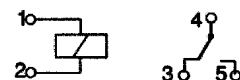
Germany	VDE 0435/09.72 at 8 Amps
	VDE 0631/12.83 at 8 Amps
	VDE 0700/12.81 at 8 Amps

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay will pull in with less than "Must Operate" value
- 3 Specifications are subject to change without notice

**Relay Ordering Data****Standard Relays**

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	1 Form A (SPST-NO)	1 Form C (SPDT)
5	12	110	3.5	AZ 696-1A-5DE	AZ 696-1C-5DE
6	14	160	4.2	AZ 696-1A-6DE	AZ 696-1C-6DE
12	29	660	8.4	AZ 696-1A-12DE	AZ 696-1C-12DE
24	54	2,200	16.8	AZ 696-1A-24DE	AZ 696-1C-24DE
48	102	8,000	33.6	AZ 696-1A-48DE	AZ 696-1C-48DE

Mechanical Dimensions**FORM A****FORM C****PC BOARD LAYOUT****FORM A****FORM C****WIRING DIAGRAM****1 FORM A****1 FORM C**

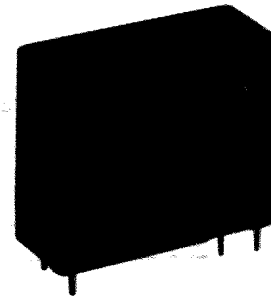
Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"



AZ 725 MINIATURE POWER RELAY

Features

- 5,000Vrms Dielectric Strength
- 16 Amp Switching - Single Pole Contacts
- Isolation Spacing Greater Than 8mm
- Molded Materials - All 94V-0
- UL File E44211
- CSA File LR 700496
- VDE 6010

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Specifications

Contacts

Arrangement	SPDT (1 Form C) & SPST (1 Form A)
Rating	Noninductive load Max switched power: 384W or 4,000VA Max switched current: 16A Max switched voltage: 150VDC or 400VAC 16A @ 250VAC resistive <i>*Note: If switching voltage is greater than 30VDC, special precautions must be taken.</i>
UL, CSA Rating	
Min Load	5VDC @ 0.1A
Material	Silver Cadmium Oxide
Resistance	30 milliohms initially

Coil

Power at Pickup Voltage	270mW (typical)
Max Continuous Dissipation	1.8W @ 20C (68F) ambient 1.5W @ 40C (104F) ambient
Temperature Rise	34C (93F) at nominal coil voltage
Temperature	130C (266F) Maximum

General Data

Life Expectancy	Minimum operations
Mechanical	20,000,000
Electrical	100,000 at rated load
Operate Time	7ms at nominal coil voltage (typical)
Release Time	3ms at nominal coil voltage with no coil suppression (typical)
Dielectric Strength	5,000Vrms coil to contact (at sea level)
Insulation Resistance	1,000 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage -40C (-40F) to 85C (185F)
(storage)	-40C (-40F) to 130C (266F)
Vibration	0.062" DA @ 10-55 Hz
Shock	10g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Weight	19 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay will pull in with less than "Must Operate" value
- 3 Specifications are subject to change without notice

Relay Ordering Data

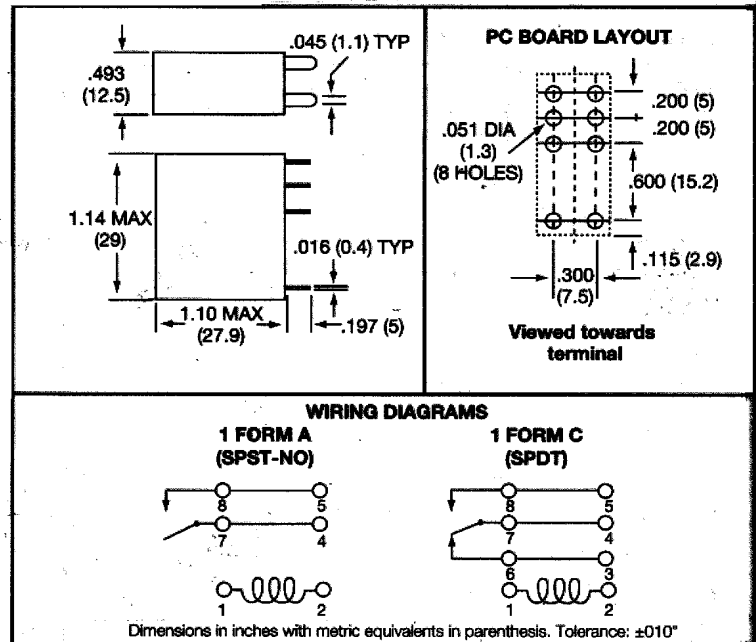
Form A (SPST)

Coil Specifications					ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Current mA nominal	
5	7.5	49	3.5	102	AZ 725-1A-5D
6	9	66	4.2	88.2	AZ 725-1A-6D
12	18	260	8.4	46.2	AZ 725-1A-12D
24	36	1,100	16.8	21.8	AZ 725-1A-24D
48	72	4,400	33.6	10.9	AZ 725-1A-48D
60	90	7,000	42.0	8.6	AZ 725-1A-60D

Form C (SPDT)

Coil Specifications					ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Current mA nominal	
5	7.5	49	3.5	102	AZ 725-1C-5D
6	9	66	4.2	88.2	AZ 725-1C-6D
12	18	260	8.4	46.2	AZ 725-1C-12D
24	36	1,100	16.8	21.8	AZ 725-1C-24D
48	72	4,400	33.6	10.9	AZ 725-1C-48D
60	90	7,000	42.0	8.6	AZ 725-1C-60D

Mechanical Dimensions

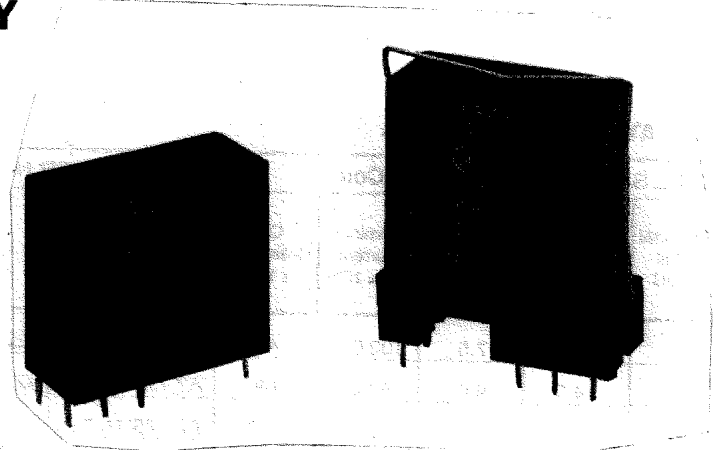


Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"

AZ 732 AZ 730 MINIATURE POWER RELAY

Features

- 4,000Vrms Dielectric Strength
- 8 Amp Switching Capability
- Isolation Spacing Greater Than 8mm
- Double-Pole, Forms A, B & C Available
- Life Expectancy to 30 Million Operations
- SLIMPAK Version Saves Board Space
- VDE 4120-4940-4002/A1
- UL File E44211
- Epoxy Sealed for Automatic Wave Soldering
- Approvals/Standards Also Include IEC, SEMKO & CEE



Specifications

Contacts

Arrangement	DPDT (2 Form C)
Rating	Noninductive load Max switched power: 300W or 2,770VA Max switched current: 10A; 51 Amps for 2msec Max switched voltage: 150*VDC or 277VAC 10A @ 30VDC or 277VAC 1/8 HP 120VAC Motor Load <i>*Note: If switching voltage is greater than 30VDC, special precautions must be taken.</i>
UL, CSA Rating	
Material	Silver Cadmium Oxide
Resistance	30 milliohms initially

Coil

Power at Pickup Voltage (typical)	Standard coil: 337mW Sensitive coil: 250mW
Max Continuous Dissipation	1.9W @ 20C (68F) ambient 1.4W @ 40C (104F) ambient
Temperature Rise (at nominal voltage)	Standard: 40C (104F) Sensitive: 32C (90F)
Temperature	110C (230F) Maximum

General Data

Life Expectancy	Minimum operations
Mechanical	30,000,000
Electrical	100,000 @ 8A, 30VDC 200,000 @ 8A, 115VAC or 6A, 250VAC
Operate Time	7ms at nominal voltage (typical)
Release Time (typical)	2ms at nominal coil voltage with no coil suppression
Dielectric Strength (at sea level)	4,000Vrms coil to contact 2,500Vrms contact to contact 1,000Vrms between open contacts
Insulation Resistance	10,000 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage Standard: -55C (-67F) to 70C (158F) Sensitive: -55C (-67F) to 80C (178F)
(storage)	-55C (-67F) to 110C (230F)
Vibration	0.062" DA @ 10-55 Hz
Shock	20g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Max Solvent Time	80C (178F)
Immersion Time	30 seconds maximum
Weight	20 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay may pull in with less 'Must Operate' value
- 3 Unsealed relays should not be dip cleaned
- 4 Specifications subject to change without notice

Relay Ordering Data

Standard - 2 Form C (DPDT)

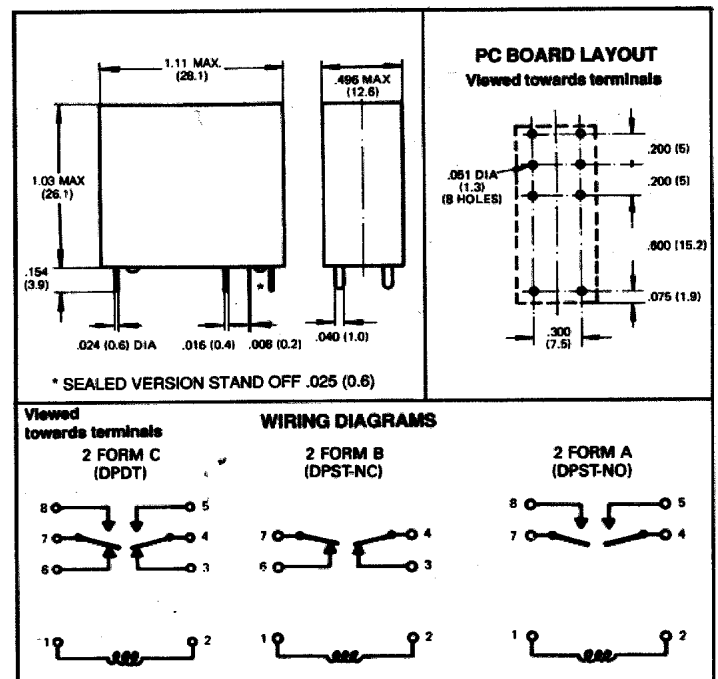
Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Sealed
5	8	38	3.5	AZ 732-125-2*	AZ 2732-125-2*
6	10	58	4.2	AZ 732-112-2	AZ 2732-112-2
12	19	215	8.4	AZ 732-08-2	AZ 2732-08-2
24	35	740	16.8	AZ 732-560-2	AZ 2732-560-2
48	74	3,200	33.6	AZ 732-04-2	AZ 2732-04-2

Sensitive - 2 Form C (DPDT)

Coil Specifications				ORDER NUMBER	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	Unsealed	Sealed
5	8	47	3.5	AZ 732-118-52*	AZ 2732-118-52*
6	10	70	4.2	AZ 732-010-52	AZ 2732-010-52
12	21	270	8.4	AZ 732-071-52	AZ 2732-071-52
24	41	1,100	16.8	AZ 732-052-52	AZ 2732-052-52
48	80	4,400	33.6	AZ 732-518-52	AZ 2732-518-52

*Substitute '4' or '52' in place of '2' or '52' to indicate 2 Form A & 2 Form B respectively.

Mechanical Dimensions



Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"



AZ 820 SERIES SUBMINIATURE DIP RELAY

Features

- Low Profile for Compact Board Spacing
- Standard PC 0.1" Grid Terminal Spacing
- Fits Standard 16-Pin IC Socket
- Coil Voltages to 48VDC
- Epoxy Sealed for Automatic Wave Soldering
- CSA File LR 36664
- Life Expectancy to 10 Million Operations
- Meets FCC Part 68.302 1,500V Lightning Surge
- Meets FCC Part 68.304 1,000V Dielectric
- UL File E43203

Specifications

Contacts

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Rating	Noninductive load Max switched power: 30W or 60VA Max switched current: 2 Amps Max switched voltage: 150VDC or 300VAC
UL, CSA Rating	1A @ 30VDC 0.5A @ 125VAC
Material	Silver Palladium, Gold Clad
Resistance	50 milliohms initially

Coil

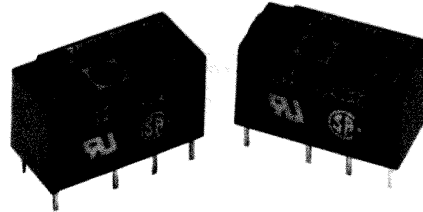
Power at Pickup Voltage	250mW (typical)
Max Continuous Dissipation	1.6W @ 20C (68F) ambient 1.15W @ 40C (104F) ambient
Temperature Rise	45C (113F) at nominal coil voltage
Temperature	120C (248F) Maximum

General Data

Life Expectancy	Minimum operations 10,000,000
Mechanical	500,000 at 1A, 30VDC
Electrical	
Operate Time	5ms at nominal coil voltage (typical)
Release Time	2 ms at nominal coil voltage (typical) with no coil suppression
Capacitance	1.5pF contact to contact 1.5pF contact set to contact set 2.6pF contact to coil
Bounce	At 10mA contact current 2 ms at operate NO side 3 ms at release NC side
Dielectric Strength	1,000Vrms NC contact to coil (at sea level) 1,500Vrms all other points 1,000Vrms across contacts Meets FCC Part 68.302 Lightning Surge Meets FCC Part 68.304 1,000V Dielectric
Insulation Resistance	1,000 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage -55C (-67F) to 75C (167F)
(storage)	-55C (-67F) to 120C (248F)
Vibration	0.062" DA @ 10-55 Hz
Shock	20g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Solvent Temp	80C (176F) maximum
Immersion Time	30 seconds maximum
Weight	5 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay may pull in with less 'Must Operate' value
- 3 Relay adjustment may be affected if undue pressure is exerted on relay case
- 4 Specifications subject to change without notice

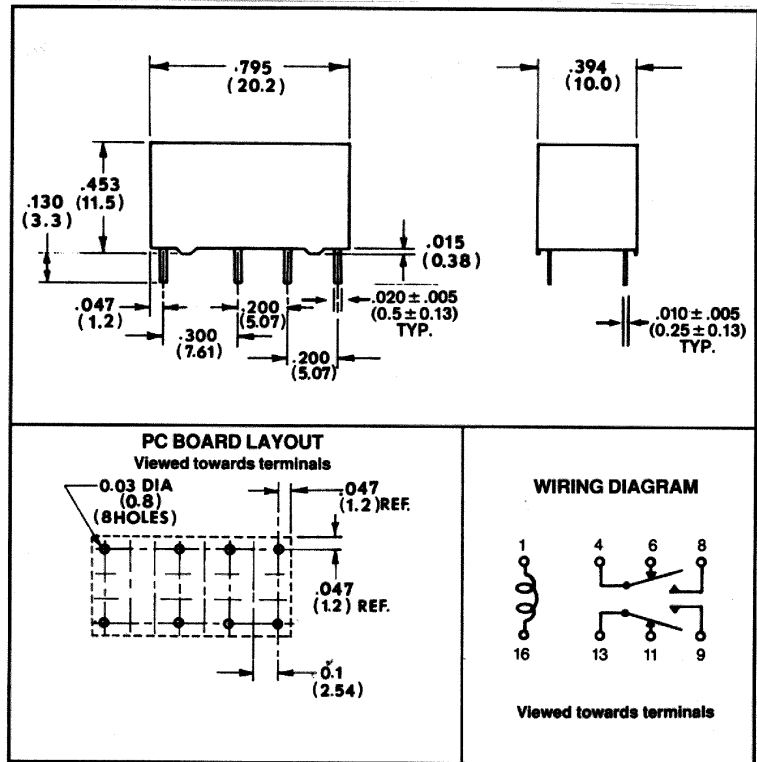


Relay Ordering Data

Standard Relays - 2 Form C (DPDT)

Coil Specifications				ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	
5	7.5	45	3.5	AZ 820-2C-5DE
6	9.0	66	4.2	AZ 820-2C-6DE
12	18.0	280	8.4	AZ 820-2C-12DE
24	36.0	1,070	16.8	AZ 820-2C-24DE
48	72.0	4,000	34.6	AZ 820-2C-48DE

Mechanical Dimensions



Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"



AZ 830 POLARIZED DIP RELAY SINGLE SIDE STABLE

Features

- Low Profile for Compact Board Spacing
- High Sensitivity, 100mW Pick-up
- Fits Standard 16-Pin IC Socket
- Coil Voltages to 48VDC
- Epoxy Sealed for Automatic Wave Soldering
- High Switching Capacity, 60W, 125VA
- Life Expectancy to 100 Million Operations
- Meets FCC Part 68.302 1,500V Lightning Surge
- Meets FCC Part 68.304 1,000V Dielectric
- UL File E43203; CSA File LR 36664

Specifications

Contacts

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Rating	Noninductive load Max switched power: 60W or 125VA Max switched current: 2 Amps Max switched voltage: 150VDC or 300VAC
UL, CSA Rating	2A @ 30VDC 1A @ 120VAC
Material	Silver Alloy, Gold Clad. Silver Palladium, gold clad available upon request (not recommended for current greater than 1 Amp)
Resistance	50 milliohms initially

Coil

Power at Pickup Voltage (typical)	Standard coil: 200mW Sensitive coil: 100mW
Max Continuous Dissipation	1.2W @ 20C (68F) ambient 0.9W @ 40C (104F) ambient
Temperature Rise (at nominal voltage)	Standard: 38C (100F) Sensitive: 21C (70F)
Temperature	Maximum 115C (239F)

General Data

Life Expectancy	Minimum operations 100,000,000
Mechanical	500,000 @ 2A, 30VDC or 1A, 125VAC
Electrical	200,000 @ 1A, 30VDC or 0.5A, 125VAC
Operate Time	3ms at nominal voltage (typical)
Release Time (typical)	2ms at nominal coil voltage with no coil suppression
Capacitance	1.0pF contact to contact 1.0pF contact set to contact set 2.0pF contact to coil
Bounce	At 10mA contact current 1.5 ms at operate NO side 2.5 ms at operate NC side
Dielectric Strength (at sea level)	1,500Vrms contact to coil 1,000Vrms between contact sets 1,000Vrms across contacts Meets FCC Part 68.302 Lightning Surge Meets FCC Part 68.304 1,000V Dielectric
Insulation Resistance	1,000 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage Standard: -40C (-40F) to 70C (158F) Sensitive: -40C (-40F) to 85C (185F)
(storage)	-40C (-40F) to 115C (239F)
Vibration	0.062" DA @ 10-55 Hz
Shock	40g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Max Solvent Time	80C (176F)
Immersion Time	30 seconds maximum
Weight	5 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay may pull in with less 'Must Operate' value
- 3 Relay has fixed coil polarity
- 4 Maintain 5mm space between relays for magnetic isolation
- 5 Specifications subject to change without notice

Relay Ordering Data

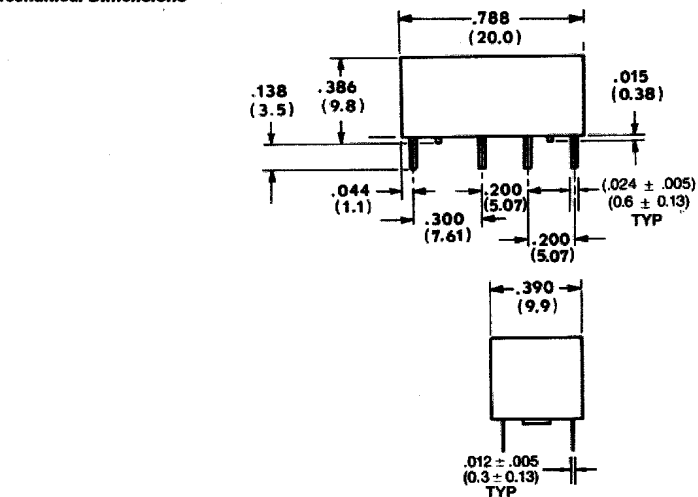
Standard Relays

Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER
5	7.5	62.5	3.5	AZ 830-2C-5DE
6	9.0	90	4.2	AZ 830-2C-6DE
12	18.0	360	8.4	AZ 830-2C-12DE
24	36.0	1,440	16.8	AZ 830-2C-24DE
48	72.0	5,760	33.6	AZ 830-2C-48DE

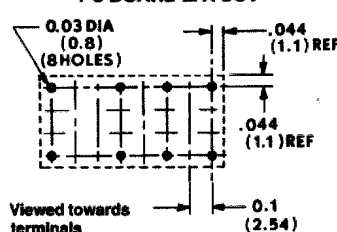
Sensitive Relays

Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER
5	11.0	125	3.5	AZ 830-2C-5DSE
6	13.0	180	4.2	AZ 830-2C-6DSE
12	26.0	720	8.4	AZ 830-2C-12DSE
24	53.0	2,880	16.8	AZ 830-2C-24DSE
48	106.0	11,520	33.6	AZ 830-2C-48DSE

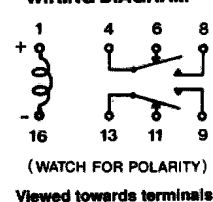
Mechanical Dimensions



PC BOARD LAYOUT



WIRING DIAGRAM

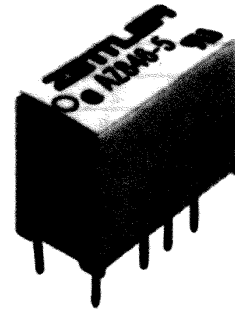


(WATCH FOR POLARITY)
Viewed towards terminals

Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"

**AZ 846 MICRO MINIATURE POLARIZED RELAY****Features**

- Micro Miniature Size - Up To 50% Less Board Space Than Previous Generation Telecom Relays
- High Dielectric and Surge Voltage -
2.5kV Surge (per Bellcore TA-NWT-001089)
1.5kV Surge (per FCC Part 68)
1,000Vrms, Open Contacts
- Low Power Consumption - 79mW Pick-up
- Stable Contact Resistance for Low-level Signal Switching
- All Plastics Meet UL94 V-0, 30 min. Oxygen Index
- UL Recognized & CSA Certified

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S**Specifications****Contacts**

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Rating	Noninductive load Max switched power: 60W or 62.5VA Max switched current: 2 Amps Max switched voltage: 220VDC or 250VAC
UL, CSA Rating	0.5A @ 125VAC 2A @ 30VDC 0.3A @ 110VDC
Material	Silver Alloy, Gold Clad
Resistance	100 milliohms initially @ 6V, 0.1A

Coil

Power	Non latching: 79mW (3-12VDC), 113mW (24VDC) Latching: 56mW (3-12VDC)
Max Continuous Dissipation	826mW @ 20C (68F) ambient 652mW @ 40C (104F) ambient
Temperature Rise (at nominal voltage)	18C (64F) (3-12VDC) 30C (86F) (24VDC)
Temperature	Maximum 115C (239F)

General Data

Life Expectancy	Minimum operations 100,000,000
Mechanical Electrical	100,000 @ 0.5A, 125VAC, resistive 200,000 @ 1A, 30VDC, resistive
Operate, Set or Reset Time	2 ms at nominal coil voltage (typical)
Release Time (typical)	1ms at nominal coil voltage with no coil suppression
Capacitance	<1pF @ 10kHz - open contacts <1pF @ 10kHz - adjacent contact sets
Bounce	At 10mA contact current 1 ms at operate or set 1 ms at release or reset
Dielectric Strength	(see table)
Insulation Resistance	1,000 megohms min @ 25C (77F), 500VDC, 50% RH
Ambient Temp (operating)	At nominal coil voltage Standard: -40C (-40F) to 85C (185F)
Vibration	20g, 10-55Hz operational 30g, 10-55Hz non-destructive
Shock	50g min., 11 ms operational 100g min., 11 ms non-destructive
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	350C (662F) for 3 seconds 280C (500F) for 10 seconds
Max Solvent Temp	80C (176F)
Immersion Time	30 seconds maximum
Weight	1.5 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay may pull in with less 'Must Operate' value
- 3 Relay has fixed coil polarity
- 4 Specifications subject to change without notice

Relay Ordering Data**Single Side Stable (Standard, Non-Latching)**

Coil Specifications				ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	
3	6.90	64	2.25	AZ 846-3
4.5	10.38	145	3.38	AZ 846-4
5	11.50	178	3.75	AZ 846-5
6	13.82	257	4.50	AZ 846-6
9	20.75	579	6.75	AZ 846-9
12	27.64	1,028	9.00	AZ 846-12
24	46.27	2,880	18.00	AZ 846-24

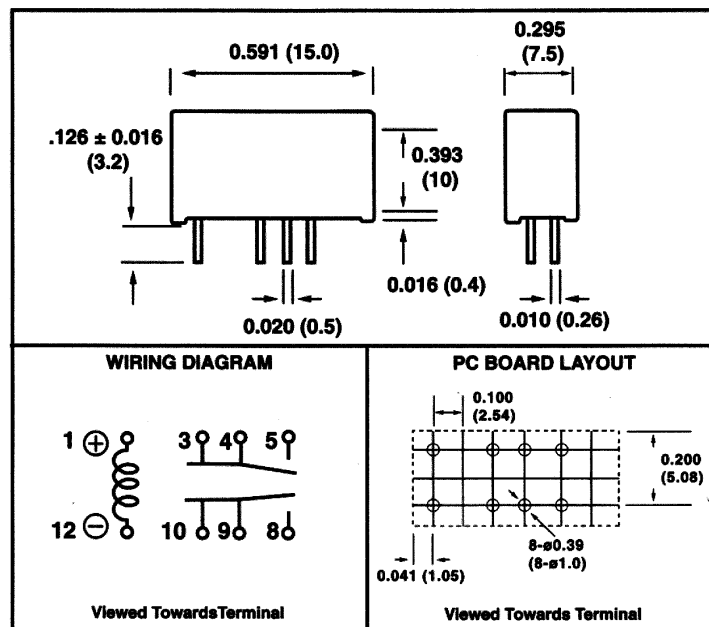
Bistable (Latching) Single Coil

Coil Specifications				ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	
3	8.18	90	2.25	AZ 846P1-3
4.5	12.28	203	3.38	AZ 846P1-4
5	13.63	250	3.75	AZ 846P1-5
6	16.36	360	4.50	AZ 846P1-6
9	24.54	810	6.75	AZ 846P1-9
12	32.72	1,440	9.00	AZ 846P1-12

Dielectric Strength

Surge			Initial Dielectric Strength (minimum)	
Peak (V)	Risetime (us)	Decay (us)	Vrms, 1 min	Consideration
1,500	10	160	1,000	Between open contacts
1,500	2	160	1,000	Between contact sets
2,500	2	10	1,800	Between Coil and Contacts

Decay time measured from beginning of surge (1/2 peak)

Mechanical Dimensions

Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"

**AZ 847 MICRO MINIATURE POLARIZED RELAY****Features**

- Micro Miniature Size - Height: 0.217 in (5.5 mm)
Length: 0.551 in (14 mm), Width: 0.354 in (9 mm)
- High Sensitivity - 79mW Pickup
- Monostable and Bistable (Latching) Two Coil Versions Available
- Meets FCC Part 68.302 1,500V Lightning Surge
- DIP Terminal Layout - Fits 10-pin IC Socket
- UL File E43203
- CSA LR 73363
- Epoxy Sealed for Automatic Wave Soldering and Cleaning

Specifications**Contacts**

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Rating	Noninductive load Max switched power: 30W or 62.5VA Max switched current: 1 Amps Max switched voltage: 110VDC or 125VAC
UL, CSA Rating	1A @ 30VDC 0.5A @ 125VAC
Material	Silver Palladium, Gold Clad
Resistance	50 milliohms initially

Coil

Power at pickup voltage (typical)	Single-side stable: 70-150 mW Bistable (latching) two coil: 100-150mW
Max Continuous Dissipation	700mW @ 20C (68F) ambient 530mW @ 40C (104F) ambient
Temperature Rise	18C (64F) at nominal coil voltage
Temperature	Maximum 105C (221F)

General Data

Life Expectancy	Minimum operations
Mechanical	100,000,000
Electrical	500,000 @ 1A, 30VDC 200,000 @ 0.5A, 125VAC
Operate Time (typical)	2 ms at nominal coil voltage
Release Time (typical)	1ms at nominal coil voltage with no coil suppression
Set Time (bistable) (typical)	2 ms at nominal coil voltage
Reset Time (bistable) (typical)	2 ms at nominal coil voltage
Drop Out	> 5% of nominal coil voltage
Capacitance	0.5pF - contact to contact 1.5pF - contact set to contact set 1.0pF - contact to coil
Dielectric Strength (at sea level)	1,000Vrms contact to coil 1,000Vrms between contact sets 1,000Vrms across contacts Meets FCC Part 68.302 1,500V Lightning Surge
Insulation Resistance	1,000 megohms min @ 25C (77F), 500VDC, 50% RH
Ambient Temp (operating) (storage)	At nominal coil voltage -40C (-40F) to 85C (185F) -40C (-40F) to 85C (185F)
Vibration	0.130" DA @ 10-55 Hz
Shock	50g
Enclosure	LCP
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	250C (482F)
Max Solder Time	5 seconds
Max Solvent Time	80C (176F)
Immersion Time	30 seconds maximum
Weight	1.2 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Relay has fixed coil polarity
- 3 Relay may pull in with less 'Must Operate' value
- 4 Relay adjustment may be affected if undue pressure is exerted
- 5 For complete isolation between the relay's magnetic fields, it is recommended that a 5mm space be provided between relays
- 6 Relay adjustment may be affected if undue pressure is exerted

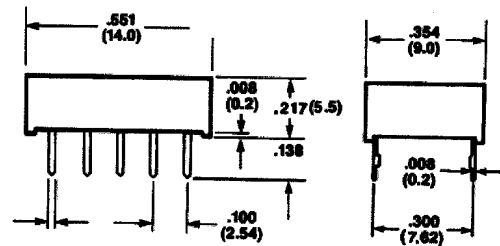
Relay Ordering Data**Single Side Stable**

Coil Specifications				ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	
3	5.7	64.3	2.1	AZ 847-3
5	11.2	178	3.5	AZ 847-5
6	13.4	257	4.2	AZ 847-6
9	20.1	579	6.3	AZ 847-9
12	26.8	1,028	8.4	AZ 847-12
24	44.9	2,880	16.8	AZ 847-24

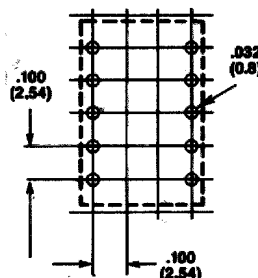
Bistable (Latching) Two Coil

Coil Specifications				ORDER NUMBER
Coil VDC nominal	Max VDC continuous	Coil Resistance*	Must Operate VDC	
3	5.60	45	2.1	AZ 847P2-3
5	9.40	125	3.5	AZ 847P2-5
6	11.20	180	4.2	AZ 847P2-6
9	15.80	405	6.3	AZ 847P2-9
12	22.40	720	8.4	AZ 847P2-12
24	36.70	1,920	16.8	AZ 847P2-24

*for both SET and RESET

Mechanical Dimensions

Terminal Dimensions

PC BOARD LAYOUT

Viewed towards terminals

Dimensions in inches with metric equivalents in parentheses. Tolerance is 0.010"



AZ 941 SERIES MINIATURE PCB RELAY

Features

- Contacts Rated at 3, 5 or 12 Amps
- Extremely Low Cost
- Coil Voltages to 48VDC
- Epoxy Sealed for Automatic Wave Soldering
- Life Expectancy to 10 Million Operations
- UL, CUR File E43203
- Meets FCC Part 68.302 1,500V Lightning Surge
- Meets FCC Part 68.304 1,000V Dielectric

Specifications

Contacts

Arrangement	SPDT (1 Form C) Form A available upon request
Rating	Light Duty
	Noninductive load Max switched power: 90W or 750VA Max switched current: 3 Amp Max switched voltage: 150VDC or 300VAC UL Rating: 3A @ 30VDC or 250VAC
	Medium Duty
Heavy Duty	Max switched power: 150W or 1,250VA Max switched current: 5 Amp Max switched voltage: 150VDC or 300VAC UL Rating: 5A @ 30VDC or 125VAC; 1/10 HP 125VAC
	Max switched power: 300W or 2,500VA Max switched current: 12 Amp Max switched voltage: 150VDC or 300VAC UL Rating: 5A @ 30VDC or 125VAC; 10A @ 277VAC; 12A @ 125VAC; 1/4 HP 125VAC
	Material: Silver Alloy, Gold Clad
Resistance	100 milliohms initially @ 6V, 0.1A

Coil

Power at Pickup Voltage	230mW (typical)
Max Continuous Dissipation	1.1W @ 20C (68F) ambient 0.86W @ 40C (104F) ambient
Temperature Rise	27C (81F) at nominal coil voltage
Temperature	105C (222F) Maximum

General Data

Life Expectancy	Minimum operations 10,000,000
Mechanical Electrical	500,000 at rated load
Operate Time	6ms at nominal coil voltage (typical)
Release Time	2 ms at nominal coil voltage with no coil suppression (typical)
Capacitance	1.5pF contact to contact 1.5pF contact set to contact set 2.6pF contact to coil
Bounce	At 10mA contact current 2 ms at operate NO side 3 ms at release NC side
Dielectric Strength (at sea level)	1,500Vrms NC contact to coil 750Vrms contact to contact Meets FCC Part 68.302 1,500V Lightning Surge Meets FCC Part 68.304 1,000V Dielectric
Insulation Resistance	100 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating) (storage)	At nominal coil voltage -25C (-13F) to 70C (158F) -55C (-67F) to 105C (221F)
Vibration	0.062" DA @ 10-55 Hz
Shock	10g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C.
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Solvent Temp	80C (176F) maximum
Immersion Time	30 seconds maximum
Weight	10 grams

Relay Ordering Data

Standard Relays

Coil Specifications			
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC
5	8.9	70	3.5
6	10.6	100	4.2
12	21.2	400	8.4
24	42.5	1,600	16.8
48	85.0	6,400	33.6

Light Duty (3 Amp Contact)

ORDER NUMBER	
Unsealed	Epoxy Sealed
AZ 941-1C-5D	AZ 941-1C-5DE
AZ 941-1C-6D	AZ 941-1C-6DE
AZ 941-1C-12D	AZ 941-1C-12DE
AZ 941-1C-24D	AZ 941-1C-24DE
AZ 941-1C-48D	AZ 941-1C-48DE

Standard Relays

Coil Specifications			
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC
5	8.9	70	4.0
6	10.6	100	4.8
12	21.2	400	9.6
24	42.5	1,600	19.2
48	85.0	6,400	38.4

Medium Duty (5 Amp Contact)

ORDER NUMBER	
Unsealed	Epoxy Sealed
AZ 941-1CH-5D	AZ 941-1CH-5DE
AZ 941-1CH-6D	AZ 941-1CH-6DE
AZ 941-1CH-12D	AZ 941-1CH-12DE
AZ 941-1CH-24D	AZ 941-1CH-24DE
AZ 941-1CH-48D	AZ 941-1CH-48DE

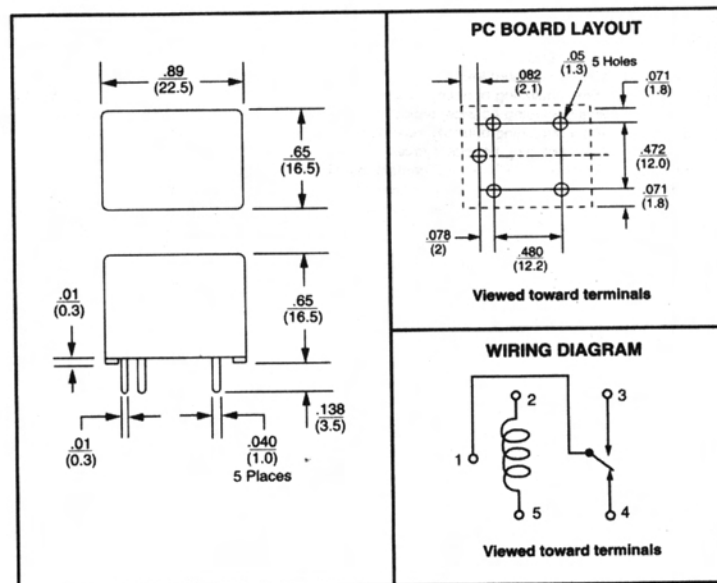
Standard Relays

Coil Specifications			
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC
5	8.9	70	4.0
6	10.6	100	4.8
12	21.2	400	9.6
24	42.5	1,600	19.2
48	85.0	6,400	38.4

Heavy Duty (12 Amp Contact)

ORDER NUMBER	
Unsealed	Epoxy Sealed
AZ 941-1CT-5D	AZ 941-1CT-5DE
AZ 941-1CT-6D	AZ 941-1CT-6DE
AZ 941-1CT-12D	AZ 941-1CT-12DE
AZ 941-1CT-24D	AZ 941-1CT-24DE
AZ 941-1CT-48D	AZ 941-1CT-48DE

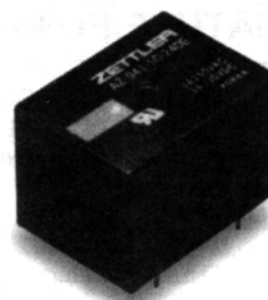
Mechanical Dimensions



Notes

- 1 Electrical life with cover vented
- 2 Other coil resistances and sensitivities available upon request
- 3 Relay may pull in with less than "Must Operate" value
- 4 Unsealed relays should not be dip-cleaned or spray washed
- 5 Specifications subject to change without notice

Dimensions in inches with metric equivalents in parenthesis. Tolerance is 0.010"



7

RELAYS



AZ 2100 MINIATURE POWER RELAY

Features

- Versatility of Both PC and 'Trace-Saver' Quick Connect Terminals on Contacts
- Up to 30 Amp Switching Capability in a Compact Size
- 1 Form A, B and C Contacts Available
- DC Coils to 120VDC
- Life Expectancy to 10 Million Operations
- Class B Insulation for High Temperature Applications
- Class F (155C) Version Available
- Complete UL and CUR Approvals
- Epoxy Sealed Version Available for Automatic Wave Soldering and Cleaning



Specifications

Contacts

Arrangement	SPDT (1 Form C) SPST (1 Form A & 1 Form B)
Rating	Noninductive load Max switched power: 90W or 7,200VA Max switched current: 30A (Form A NO) Max switched current: 15A (Form B NCO) Max switched current: 20A (Form C NO) Max switched current: 15A (Form C NC) Max switched voltage: 30VDC or 300VAC AZ 2100 meets UL 508 Group A spacing and UL 873 refrigeration and safety control spacing requirements. AZ 2101 meets UL 508 Group B spacing requirements.
UL Rating	
Material	Silver alloy
Resistance	20 milliohms initially (at rated load)

Coil

Power at Pickup Voltage	500mW (typical)
Max Continuous Dissipation	2.2W @ 20C (68F) ambient 1.8W @ 40C (104F) ambient
Temperature Rise	36C (97F) at nominal coil voltage
Temperature	130C (266F) Maximum - Class B 155C (311F) Maximum - Class F

General Data

Life Expectancy	Minimum operations 10,000,000
Mechanical Electrical	100,000 at rated load
Operate Time	15ms (including bounce) maximum 9ms (including bounce) typical
Release Time	10ms (including bounce) maximum 7ms (including bounce) typical
Dielectric Strength (at sea level)	Group A: 2,500Vrms NC contact to coil Group B: 2,000Vrms contact to coil 1,500Vrms between open contacts
Insulation Resistance	100 megohms min @ 20C (68F), 500VDC, 50% RH
Dropout	> 10% of nominal coil voltage
Ambient Temp (operating)	At nominal coil voltage -55C (-67F) to 100C (212F) Class B -55C (-67F) to 125C (257F) Class F
(storage)	-55C (-67F) to 130C (266F) Class B -55C (-67F) to 155C (311F) Class F
Vibration	0.062" DA @ 10-55 Hz
Shock	20 g
Enclosure	P.B.T. Polyester
Terminals	Tinned copper alloy, P.C. with Quick-Connect tabs 0.250" wide on top
Max Solder Temp	270C (518F)
Max Solder Time	5 seconds
Solvent Temp	80C (176F) maximum
Immersion Time	30 seconds maximum
Weight	43 grams

Notes

- 1 All values at 20C (68F) unless otherwise indicated
- 2 Other coil resistances and sensitivities available upon request
- 3 Relay may pull in with less than "Must Operate" value
- 4 Unsealed relays should not be dip-cleaned or spray washed
- 5 Specifications subject to change without notice

Relay Ordering Data

UL 508 Group A; UL 873 Version

Coil Specifications				1 Form A (SPST NO)	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Epoxy Sealed
5	7.3	27	3.75	AZ 2100-1A-5D	AZ 2100-1A-5DE
6	8.9	40	4.50	AZ 2100-1A-6D	AZ 2100-1A-6DE
9	13.9	97	6.75	AZ 2100-1A-9D	AZ 2100-1A-9DE
12	17.5	155	9.00	AZ 2100-1A-12D	AZ 2100-1A-12DE
15	22.5	256	11.25	AZ 2100-1A-15D	AZ 2100-1A-15DE
18	27.4	380	13.50	AZ 2100-1A-18D	AZ 2100-1A-18DE
24	36.1	660	18.00	AZ 2100-1A-24D	AZ 2100-1A-24DE
48	68.4	2,560	36.00	AZ 2100-1A-48D	AZ 2100-1A-48DE
70	104.4	5,500	52.50	AZ 2100-1A-70D	AZ 2100-1A-70DE
110	163.2	13,450	82.50	AZ 2100-1A-110D	AZ 2100-1A-110DE

UL 508 Group A; UL 873 Version

Coil Specifications				1 Form C (SPDT)	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Epoxy Sealed
5	7.3	27	3.75	AZ 2100-1C-5D	AZ 2100-1C-5DE
6	8.9	40	4.50	AZ 2100-1C-6D	AZ 2100-1C-6DE
9	13.9	97	6.75	AZ 2100-1C-9D	AZ 2100-1C-9DE
12	17.5	155	9.00	AZ 2100-1C-12D	AZ 2100-1C-12DE
15	22.5	256	11.25	AZ 2100-1C-15D	AZ 2100-1C-15DE
18	27.4	380	13.50	AZ 2100-1C-18D	AZ 2100-1C-18DE
24	36.1	660	18.00	AZ 2100-1C-24D	AZ 2100-1C-24DE
48	68.4	2,560	36.00	AZ 2100-1C-48D	AZ 2100-1C-48DE
70	104.4	5,500	52.50	AZ 2100-1C-70D	AZ 2100-1C-70DE
110	163.2	13,450	82.50	AZ 2100-1C-110D	AZ 2100-1C-110DE

UL 508 Group B

Coil Specifications				1 Form A (SPST NO)	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Epoxy Sealed
5	7.3	27	3.75	AZ 2101-1A-5D	AZ 2101-1A-5DE
6	8.9	40	4.50	AZ 2101-1A-6D	AZ 2101-1A-6DE
9	13.9	97	6.75	AZ 2101-1A-9D	AZ 2101-1A-9DE
12	17.5	155	9.00	AZ 2101-1A-12D	AZ 2101-1A-12DE
15	22.5	256	11.25	AZ 2101-1A-15D	AZ 2101-1A-15DE
18	27.4	380	13.50	AZ 2101-1A-18D	AZ 2101-1A-18DE
24	36.1	660	18.00	AZ 2101-1A-24D	AZ 2101-1A-24DE
48	68.4	2,560	36.00	AZ 2101-1A-48D	AZ 2101-1A-48DE
70	104.4	5,500	52.50	AZ 2101-1A-70D	AZ 2101-1A-70DE
110	163.2	13,450	82.50	AZ 2101-1A-110D	AZ 2101-1A-110DE

UL 508 Group B

Coil Specifications				1 Form C (SPDT)	
Coil VDC nominal	Max VDC continuous	Coil Resistance	Must Operate VDC	ORDER NUMBER	
				Unsealed	Epoxy Sealed
5	7.3	27	3.75	AZ 2101-1C-5D	AZ 2101-1C-5DE
6	8.9	40	4.50	AZ 2101-1C-6D	AZ 2101-1C-6DE
9	13.9	97	6.75	AZ 2101-1C-9D	AZ 2101-1C-9DE
12	17.5	155	9.00	AZ 2101-1C-12D	AZ 2101-1C-12DE
15	22.5	256	11.25	AZ 2101-1C-15D	AZ 2101-1C-15DE
18	27.4	380	13.50	AZ 2101-1C-18D	AZ 2101-1C-18DE
24	36.1	660	18.00	AZ 2101-1C-24D	AZ 2101-1C-24DE
48	68.4	2,560	36.00	AZ 2101-1C-48D	AZ 2101-1C-48DE
70	104.4	5,500	52.50	AZ 2101-1C-70D	AZ 2101-1C-70DE
110	163.2	13,450	82.50	AZ 2101-1C-110D	AZ 2101-1C-110DE

Substitute '1B' in place of '1A' or '1C' to indicate 1 Form B.
To indicate Class F version, add suffix 'F'.