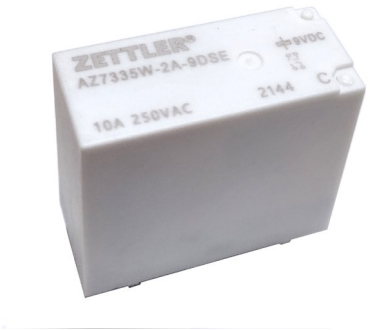
AZ7335W

DPDT MINIATURE POWER RELAY

FEATURES

- 10 Amp switching—double pole contacts
- 5000 Vrms dielectric strength
- 10 kV surge resistance
- 1.5 mm and 2.0 mm contact gap options
- Sealed and halogen free versions available
- Greater than 8.0 mm creepage and clearance
- UL E44211



CONTACTS

Arrangement	DPST-N.O. (2 Form A) DPDT (2 Form C)
Ratings (max.) switched power switched current switched voltage	(resistive load) 360 W or 3000 VA 10 A 30 VDC* or 277 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
UL Rated Loads	**2 Form A / 2 Form C (NO):** 10 A at 277 VAC, 30k cycles, resistive 10 A at 30 VDC, 30k cycles, resistive **2 Form C (NC):** 10 A at 277 VAC, 10k cycles, resistive
Contact material	AgSnO2In2O3
Contact resistance initial	≤50 mΩ initially (6VDC, 1A voltage drop method)

COIL

Nominal coil DC voltages	3, 5, 6, 9, 12, 18, 24, 48
Dropout voltage	> 5 % of nominal coil voltage
Coil power standard (2.0 mm gap) sensitive (1.5 mm gap)	(at 23°C) 1400 mW at nominal coil voltage 800 mW at nominal coil voltage
Max. Temperature	Class F insulation - 155°C (311°F)

GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 5 x 10^5 3 x 10^4 at 10 A, 250 VAC resistive (NO)
Operate Time	10 ms (max.) at nominal coil voltage
Release Time	10 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength coil to contacts open contacts, standard open contacts, sensitive contact sets	(at sea level for 1 min.) 5000 V_{RMS} 2500 V_{RMS} 2000 V_{RMS} 3000 V_{RMS}
Insulation Resistance	1,000 MΩ (min.) at 23°C, 500 VDC
Insulation coil to contacts	Basic insulation (rated voltage: 250 VAC, pollution degree: 2, overvoltage category: II)
Temperature Range operating storage	(at nominal coil voltage) -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 130°C (266°F)
Vibration resistance	0.062" (1.5 mm) DA at 10–55 Hz
Shock	10 g
Enclosure protection category flammability	P.B.T. polyester RT II, flux proof; RT III, wash tight UL94 V-0
Terminals	Tinned copper alloy, P. C.
Soldering max. temperature max. time	 260 °C 5 s per wave
Cleaning recommended temp. max. solvent temp. max. immersion time	(RT III wash tight types) 40°C (104°F) 80°C (176°F) 30 seconds
Dimensions length width height	 28.8 mm (1.134”) 12.6 mm (0.496”) 25.6 mm (1.008”)
Weight	17 grams (approx.)
Compliance	UL 508, IEC 61810-1, RoHS, REACH

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COIL VOLTAGE SPECIFICATIONS — 1.5mm contact gap

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Resistance Ohm ± 10%
3	2.25	3.3	11.25
5	3.75	5.5	31.3
6	4.50	6.6	45
9	6.75	9.9	101
12	9.0	13.2	180
18	13.5	19.8	405
24	18.0	26.4	411
48	36.0	52.8	2880

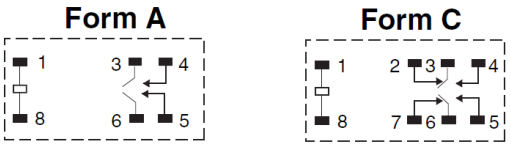
COIL VOLTAGE SPECIFICATIONS — 2.0mm contact gap

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Resistance Ohm ± 10%
3	2.25	3.3	6.4
5	3.75	5.5	17.9
6	4.50	6.6	25.7
9	6.75	9.9	58
12	9.0	13.2	103
18	13.5	19.8	231
24	18.0	26.4	720
48	36.0	52.8	1646

Note: All values at 23°C (73°F), upright position, terminals downward.

WIRING DIAGRAMS

Viewed towards terminals



ORDERING DATA

AZ7335W-2□□-□□D□□

Sealing option
nil: unsealed (RT II - flux proof)
E: sealed (RT III - wash tight)

Contact gap
nil: 2.0mm (1400mW coil)
S: 1.5mm (800mW coil)

Nominal coil voltage
see coil voltage specifications table

Contact material
nil: AgSnOIn2O3
G: AgSnOIn2O3 + Gold Plating

Contact arrangement
2A: 2 Form A (DPST-N.O.)
2C: 2 Form C (DPDT)

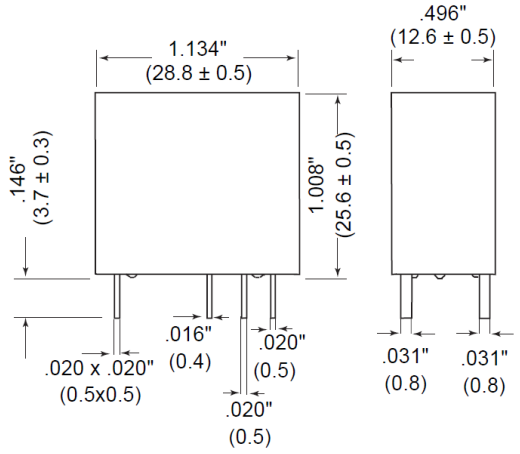
Example ordering data

AZ7335W-2AG-5DS — 2 Form A, Gold plated contacts, 5 VDC nominal coil voltage, 1.5mm contact gap (800mW coil), flux proof

AZ7335W-2C-12DE — 2 Form C, 12 VDC nominal coil voltage, 2.0mm contact gap (1400mW coil), epoxy sealed

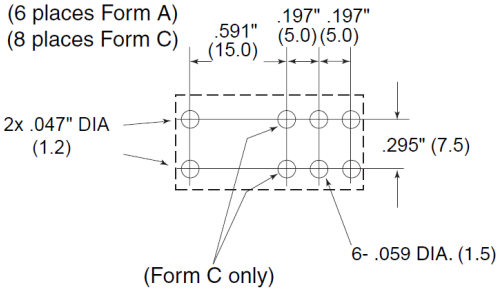
MECHANICAL DATA

Dimensions in inches with metric equivalents in parentheses. Tolerance: ±.010"



PC BOARD LAYOUT

Viewed towards terminals. Dimensions in inches with metric equivalents in parentheses. Tolerance: ±.010"



NOTES

1. All values at reference temperature of 23°C (73°F) unless stated otherwise.
2. Relay may pull in with less than "Must Operate" value.
3. "Max. Continuous Voltage" is the maximum voltage the coil can endure for a short period of time.
4. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
5. Provide sufficient PCB cross section as heat spreader on terminals.
6. Relay adjustment may be affected if exposed to excessive shock.
7. For automated dual wave soldering process we recommend preheating with 120°C (248°F) for max. 120 seconds (including ramp time) and a soldering temperature of 260 ±5°C (500 ±9°F) for max. 10 seconds soldering time (5 seconds per wave) in accordance to annex N of IEC61810-1 and the IEC 61760-1 profile for wave soldering . For manual soldering we recommend 350°C (662°F) max. temperature for max. 5 seconds. During the soldering process, no force may be exerted on the relay terminals.
8. Non-sealed relays must not be washed, immersion cleaned or conformal coated as substances may enter the case and cause corrosion or seizure of mechanical parts.
9. With sealed versions of this relay type, the auxiliary vent hole should be cut open after washing or conformal coating to achieve the specified performance and service life. Care must be taken to ensure no particles get into the relay as a result of the cutting process.
10. If washing a sealed relay, temperature of washing liquid and surface handling cleanser should be controlled below 40°C and within 10°C of component temperature. Limit pressure wash to 1.5 bar max and cleaning time to 2 minutes. A water rinse is recommended to remove cleaning agents. Never use ultrasonic wash.

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DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER relay websites. The specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.

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