AZ733

DPST/DPDT MINIATURE POWER RELAY

FEATURES

- Dielectric strength 5000 VAC
- Epoxy sealed versions available
- Gold plated versions available
- 12 Amp switching capability
- Double pole contacts
- Isolation spacing greater than 8 mm
- UL, CUR file E44211
- TÜV certificate R50129285

Illustration similar

CONTACTS

Arrangement	DPST (2 Form A) DPDT (2 Form C)
Ratings (max.) switched power switched current switched voltage	(resistive load) 360 W or 3324 VA 12 A 250 VDC* or 400 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Loads UL/CUR	12 A at 277 VAC resistive, 85°C, 100k cycles (NO), 30k cycles (NC) [1][2] 10 A at 277 VAC cos φ 0.6, 40°C, 30k cycles (NO), 10k cycles (NC) [2] 12 A at 30 VDC resistive, 85°C, 10k cycles [1][2] 1/2 HP at 125 VAC, 40°C, 100k cycles (NO) [2] 1/3 HP at 125 VAC, 40°C, 1k cycles (NO/NC) [1][2] 3/4 HP at 250 VAC, 40°C, 100k cycles (NO) [2] TV5 at 125 VAC, 40°C, 25k cycles (NO) [2]
TÜV	DPST (2 Form A) versions 12 A at 250 VAC resistive, 70°C, 10k cycles [1][2] 10 A at 250 VAC resistive, 70°C, 30k cycles [1] 10 A at 250 VAC resistive, 70°C, 50k cycles [2] DPDT (2 Form C) versions 10 A at 250 VAC resistive, 70°C, 30k cycles [1]
Contact materials	AgNi (silver nickel) [1] $AgSnO_2$ (silver tin oxide) [2] gold plating available
Initial resistance max. typ.	(1A / 24V, voltage drop method) 50 mΩ < 5 mΩ

COIL

Nominal coil DC voltages	see coil voltage specifications table
Dropout voltage	> 10% of nominal coil voltage
Coil power at nominal voltage at pickup voltage	(typ. at 23°C) 530 mW (approx.) 340 mW (approx.)
Temperature Rise	typ. 34 K (61°F) at nominal coil voltage
Max. temperature	155°C (311°F), class F

GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 1 x 10^7 1 x 10^5 at 10 A 250 VAC resistive
Operate Time max. typ.	(at nominal coil voltage) 15 ms < 10 ms
Release Time max. typ.	(at nom. coil voltage, without coil suppression) 5 ms < 4 ms
Dielectric Strength coil to contact between open contacts between contact sets	(at sea level for 1 min.) 5000 VAC 1000 VAC 3000 VAC
Surge voltage coil to contact	(1.2/50 µs) 10 kV
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Insulation coil to contacts	Reinforced insulation (rated voltage: 250 VAC, pollution degree: 2, overvoltage category: II)
Clearance coil to contacts between contact sets	≥ 8.0 mm ≥ 3.5 mm
Creepage coil to contacts between contact sets	≥ 8.0 mm ≥ 6.5 mm
Temperature Range operating	at nominal coil voltage -40°C (-40°F) to 85°C (185°F)
Vibration	0.062" (1.5 mm) DA at 10–55 Hz
Shock	10 g
Enclosure protection category	P.B.T. polyester RT II (flux tight), RT III (wash tight)
Terminals	Tinned copper alloy, P. C.
Soldering max. temperature max. time	270°C (518°F) 5 seconds
Cleaning max. solvent temp. max. immersion time	80°C (176°F) 30 seconds
Dimensions length width height	29.0 mm (1.14") 13.0 mm (0.51") 25.9 mm (1.02")
Weight	18 grams (approx.)
Packing unit in pcs	50 per plastic tray / 500 per carton box
Compliance	UL 508, IEC 61810-1, RoHS, REACH

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COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.1	5.7	17
5	3.5	9.4	47
6	4.2	11.4	68
9	6.3	17.4	160
12	8.4	22.8	275
18	12.6	27.9	620
24	16.8	45.7	1100
48	33.6	89.0	4170
60	42.0	115.3	7000

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

ORDERING DATA

AZ733-□□□-□□D□□

Plating option
nil: no plating
A: gold plated

Sealing option
nil: non sealed (RT II - flux tight)
E: sealed version (RT III - wash tight)

Coil type
D: DC coil

Nominal coil voltage
see coil voltage specifications

Contact material
Nil: AgCdO - not available in all regions
B: AgNi (silver nickel)
E: $AgSnO_2$ (silver tin oxide)

Contact arrangement
2A: DPST (2 Form A)
2C: DPDT (2 Form C)

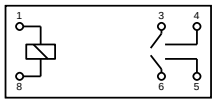
Example ordering data

AZ733-2AE-9D silver tin oxide, 9 VDC nominal coil voltage, flux tight
AZ733-2AB-12DE silver nickel, 12 VDC nominal coil voltage, wash tight

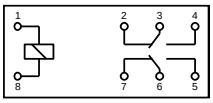
WIRING DIAGRAM

Viewed towards terminals

2 Form A



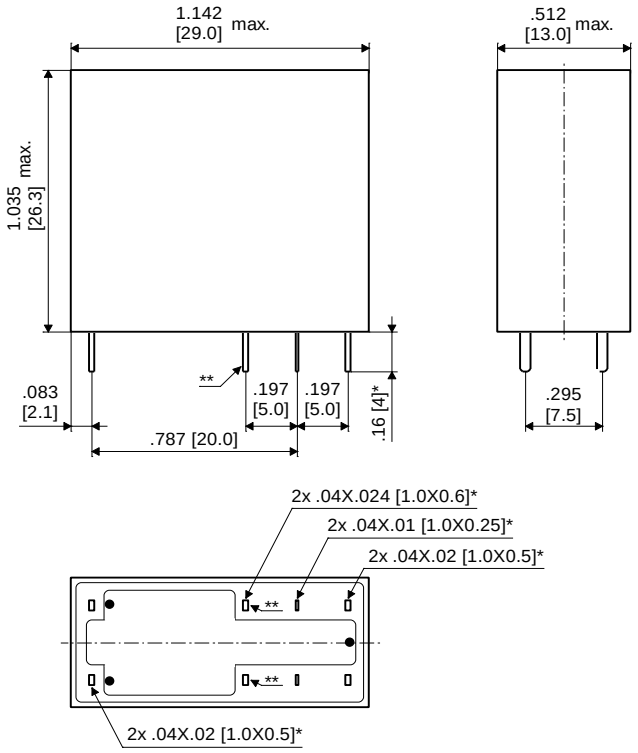
2 Form C



MECHANICAL DATA

Dimensions in inches with metric equivalents in parentheses. Tolerance: ±.01”

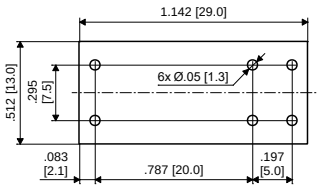
Notes: * Pin dimensions for reference only and given without tin coating.
** Only for DPDT (2 Form C) contact arrangement versions.



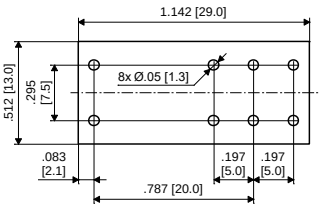
PC BOARD LAYOUT

Layout recommendation. Viewed towards terminals.
Dimensions in inches with metric equivalents in parentheses.

2 Form A



2 Form C



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. Relay adjustment may be affected if excessive shock is applied to the relay.
6. Relay adjustment may be affected if undue pressure is exerted on the relay case.
7. Specifications subject to change without notice.

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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