AZ742S

8 A DPDT MINIATURE POWER RELAY SMT

FEATURES

- Dielectric strength 5000 Vrms
- Low height: 15.7 mm
- 8 Amp switching — double pole contacts
- AC and DC coils
- Flux proof version
- Isolation spacing greater than 10 mm
- Proof tracking index (PTI/CTI) 250
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1) EN 60335-1 (VDE 0700, part 1)
- UL, CUR file E43203
- VDE file 40012572

CONTACTS

Arrangement	DPDT (2 Form C) DPST (2 Form A)
Ratings	Resistive load: Max. switched power: 2 X 240 W or 2000 VA Max. switched current: 2 X 8 A Max. switched voltage: 300 VDC* or 400 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Load	
UL, CUR	8 A at 250 VAC General Use
VDE	8 A at 250 VAC
Material	Silver nickel, silver nickel gold plated or silver tin oxide
Resistance	< 100 milliohms initially

COIL

Power	
At Pickup Voltage (typical)	200 mW (DC coil) .422 VA (AC coil)
Max. Continuous Dissipation	1.7 W at 20°C (68°F) ambient 1.7 VA at 20°C (68°F) ambient
Temperature Rise	26°C (47°F) at nominal coil voltage
Max. Temperature	155°C (311°F)

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than “Must Operate” value.
3. Specifications subject to change without notice.

GENERAL DATA

Life Expectancy **Mechanical** **Electrical**	Minimum operations 3×10^7 1×10^5 at 8 A 250 VAC res.
Operate Time (typical)	7 ms at nominal coil voltage
Release Time (typical)	3 ms at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	5000 Vrms coil to contact 2500 Vrms between contact sets 1000 Vrms between open contacts
Insulation Resistance	10^5 megohms min. at 500 VDC, 20°C, 50% RH
Insulation (according to DIN VDE 0110, IEC 60664-1)	B250 at 2 Form C C250 at 2 Form A Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC
Dropout DC coils **AC coils**	Greater than 10% of nominal coil voltage Greater than 15% of nominal coil voltage
Ambient Temperature **Operating** **Storage**	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) - DC coils -40°C (-40°F) to 70°C (158°F) - AC coils -40°C (-40°F) to 105°C (221°F)
Vibration	Break contacts: 5 g at 20…500 Hz Make contacts: 20 g at 30…500 Hz
Shock	20 g
Enclosure	P.B.T. polyester, UL-94 : V0
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	270°C (518°F)
Max. Solder Time	see soldering profile
Weight	14 grams
Packing unit in pcs	20 per carton tube / 1000 per carton box

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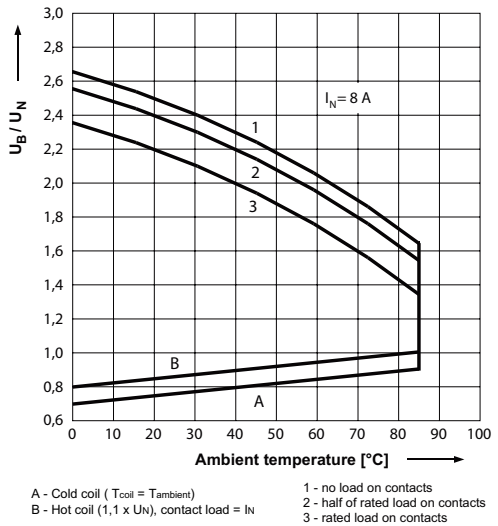
RELAY ORDERING DATA

COIL SPECIFICATIONS - DC COIL				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	2 Form A	2 Form C
3	2.25	7.6	22	AZ742S–2A–3D	AZ742S–2C–3D
5	3.75	12.7	60	AZ742S–2A–5D	AZ742S–2C–5D
6	4.5	15.3	90	AZ742S–2A–6D	AZ742S–2C–6D
9	6.75	22.9	200	AZ742S–2A–9D	AZ742S–2C–9D
12	9.0	30.6	360	AZ742S–2A–12D	AZ742S–2C–12D
18	13.5	45.9	710	AZ742S–2A–18D	AZ742S–2C–18D
24	18.0	61.2	1,440	AZ742S–2A–24D	AZ742S–2C–24D
36	27.0	92.0	3,140	AZ742S–2A–36D	AZ742S–2C–36D
48	36.0	122.0	5,700	AZ742S–2A–48D	AZ742S–2C–48D
60	45.0	153.0	7,500	AZ742S–2A–60D	AZ742S–2C–60D
110	82.5	280.0	25,200	AZ742S–2A–110D	AZ742S–2C–110D

COIL SPECIFICATIONS - AC COIL					ORDER NUMBER*	
Nominal Coil VAC	Must Operate VAC	Max. Continuous VAC	Nominal Current mA ± 10%	Coil Resistance Ohm ± 10%	2 Form A	2 Form C
12	9.6	18.0	63.0	100	AZ742S–2A–12A	AZ742S–2C–12A
24	19.2	36.0	31.3	400	AZ742S–2A–24A	AZ742S–2C–24A
48	38.4	72.0	15.6	1,550	AZ742S–2A–48A	AZ742S–2C–48A
60	48.0	90.0	12.5	2,600	AZ742S–2A–60A	AZ742S–2C–60A
110	88.0	165.0	6.8	8,900	AZ742S–2A–110A	AZ742S–2C–110A
115	92.0	172.5	6.5	9,600	AZ742S–2A–115A	AZ742S–2C–115A
120	96.0	180.0	6.3	10,200	AZ742S–2A–120A	AZ742S–2C–120A
220	176.0	330.0	3.4	35,500	AZ742S–2A–220A	AZ742S–2C–220A
230	184.0	345.0	3.3	38,500	AZ742S–2A–230A	AZ742S–2C–230A
240	192.0	360.0	3.1	42,500	AZ742S–2A–240A	AZ742S–2C–240A

* "2A" or "2C" denote silver nickel contacts.
Add suffix "G" at "2A" or "2C" for gold plated silver nickel contacts.
Add suffix "E" at "2A" or "2C" for silver tin oxide contacts.

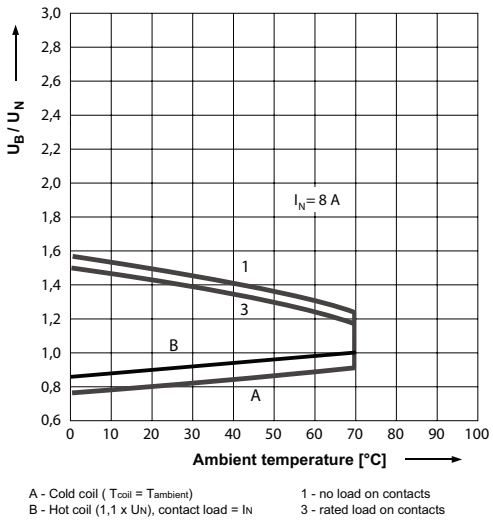
DC - Coil operating range



A - Cold coil ($T_{coil} = T_{ambient}$)
B - Hot coil (1,1 x U_N), contact load = I_N

1 - no load on contacts
2 - half of rated load on contacts
3 - rated load on contacts

AC - Coil operating range



A - Cold coil ($T_{coil} = T_{ambient}$)
B - Hot coil (1,1 x U_N), contact load = I_N

1 - no load on contacts
3 - rated load on contacts

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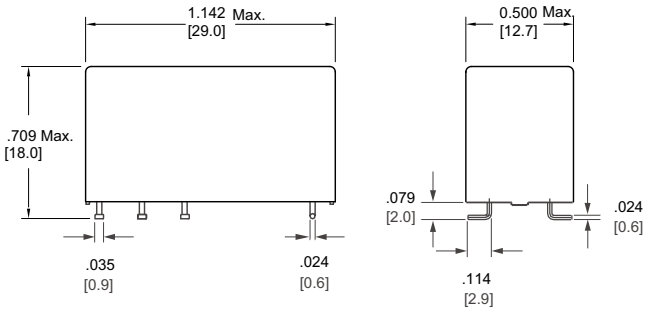
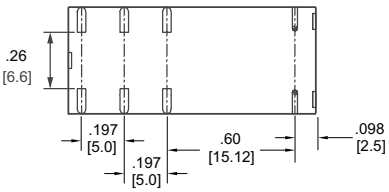
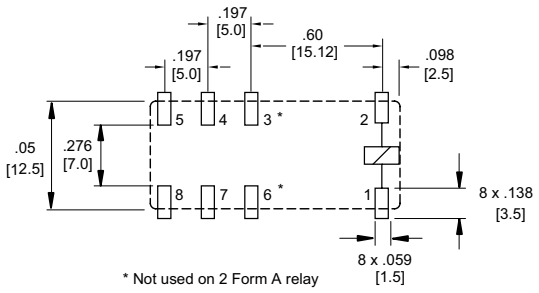
MECHANICAL DATA





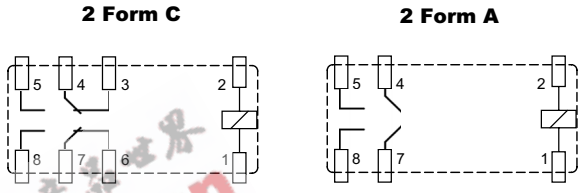
PC BOARD LAYOUT



* Not used on 2 Form A relay

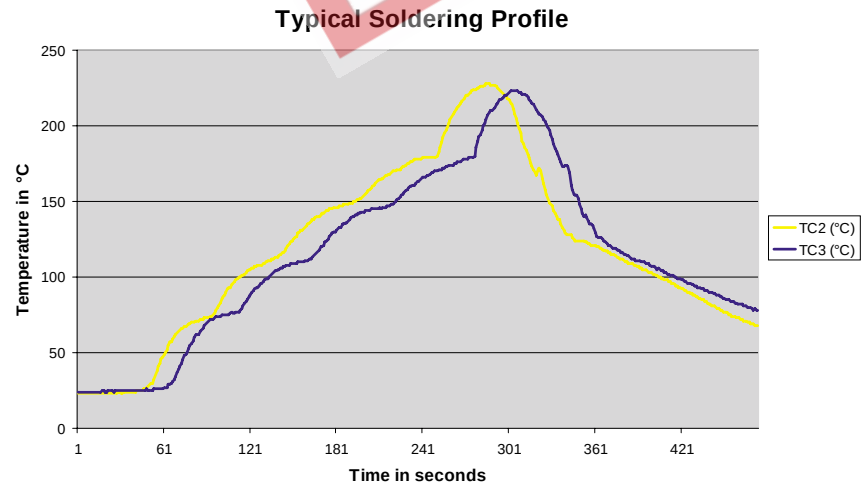
Viewed toward terminals

WIRING DIAGRAMS



Viewed toward terminals

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



NOTES

The soldering profile to the left is an example and is just to show one of various profiles AZ742S has been tested with.

In order to make sure AZ742S fits to a specific profile, we strongly recommend to test under the real environment.

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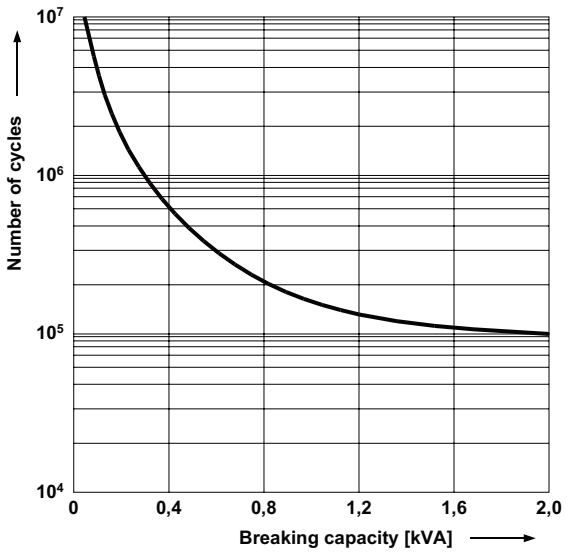
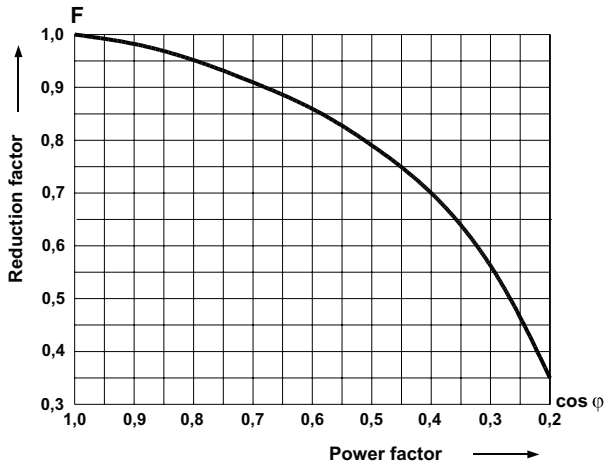
Electrical life at 250 VAC, resistive load

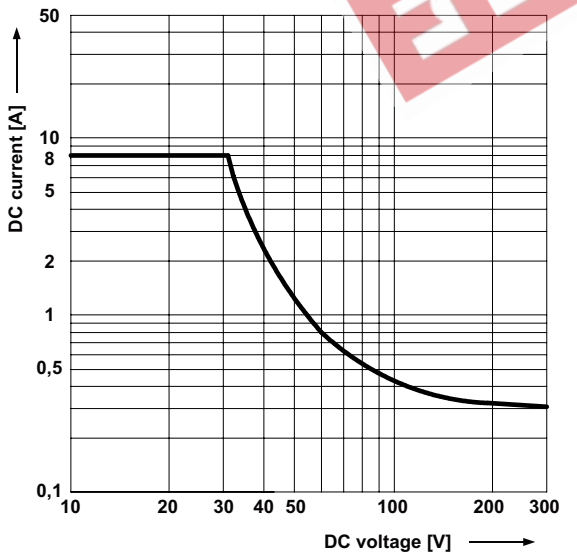


Electrical life reduction factor at inductive AC load



$N_{\cos \varphi} = N \times F$

Max. DC resistive load breaking capacity



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