

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

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| 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 x 10 ⁷ 1 x 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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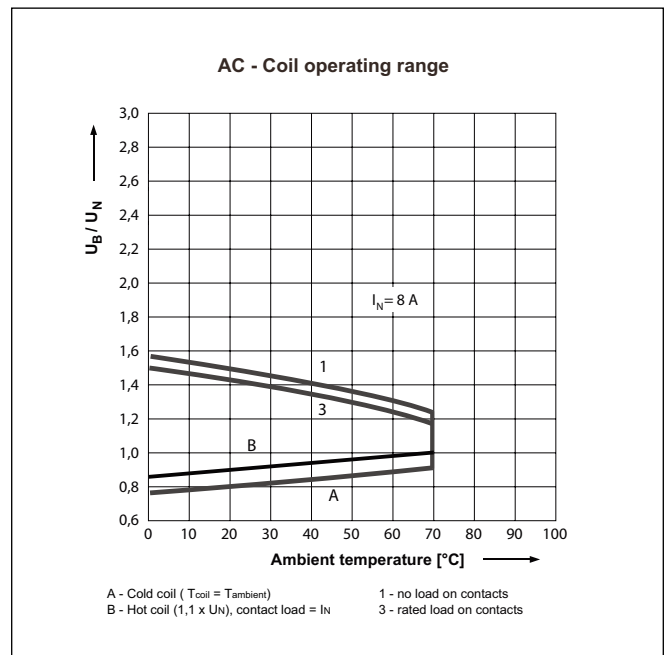
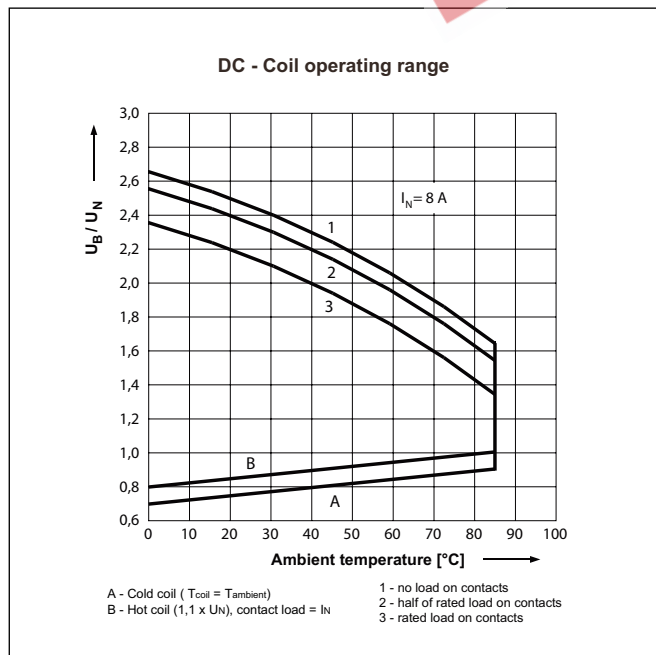
AZ742S

RELAY ORDERING DATA

| COIL SPECIFICATIONS - DC COIL | | | | ORDER NUMBER* | |
|-------------------------------|------------------|---------------------|--------------------------------|----------------|----------------|
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ | 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 $\pm 10\%$ | Coil Resistance Ohm $\pm 10\%$ | 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.



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2005-08-04

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MECHANICAL DATA

PC BOARD LAYOUT

* Not used on 2 Form A relay

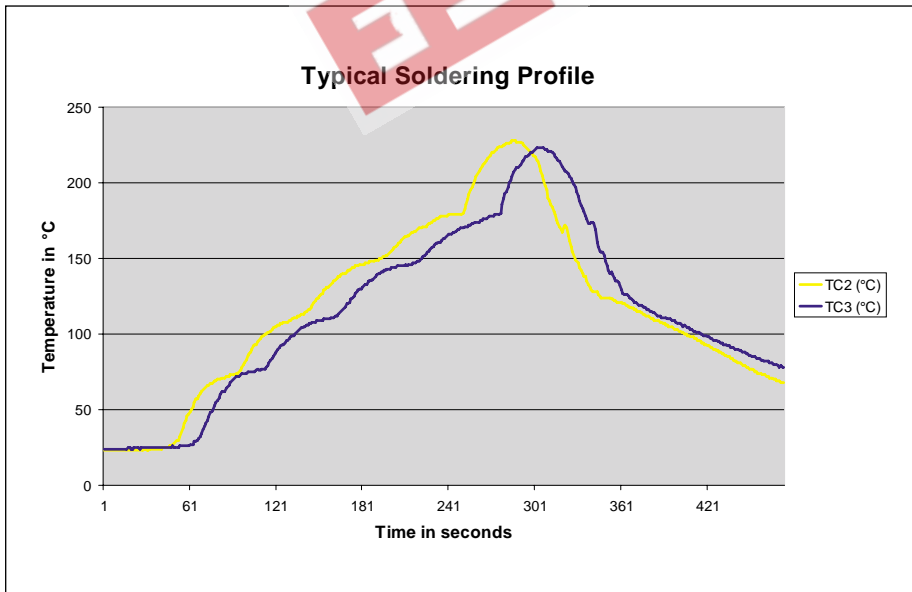
Viewed toward terminals

WIRING DIAGRAMS

2 Form C **2 Form A**

Viewed toward terminals

Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm .010$ "



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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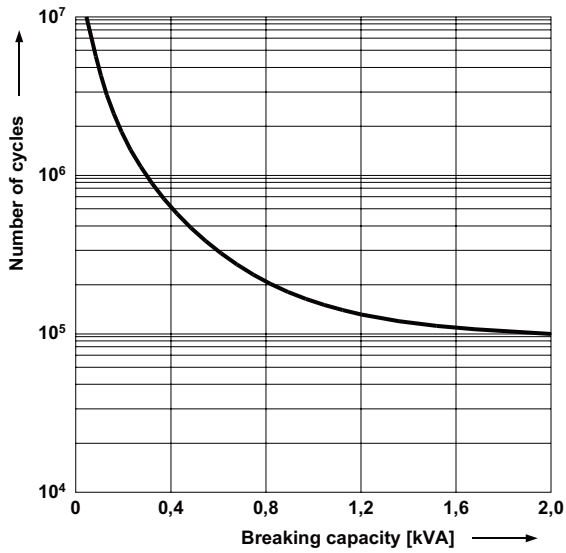
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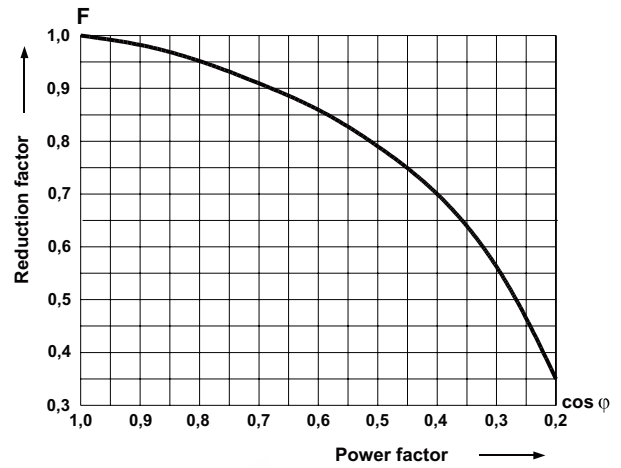
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Electrical life at 250 VAC, resistive load

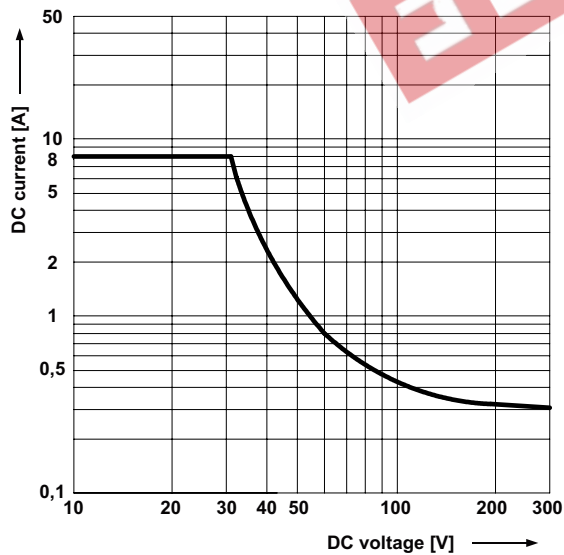


Electrical life reduction factor at inductive AC load



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

Max. DC resistive load breaking capacity



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