AZ8

MINIATURE PC BOARD RELAY

FEATURES

- Subminiature size
- High sensitivity, 110 mW pickup
- Coils to 48 VDC
- Hermetically sealed version available
- Epoxy sealed for automatic wave soldering
- Contacts rated at 3, 6 or 10 Amps
- Withstands 6 kV IEEE Lightning Surge (special order)
- Class B insulation (130°C) standard
- Class F insulation (155°C) version available
- UL, CUR file E44211
- VDE approved versions available (Class A Insulation only)

CONTACTS

| Arrangement | SPDT (1 Form C) SPST (1 Form A) 10 A version only |
|-----------------------|---|
| Ratings Light Duty | Resistive load: Max. switched power: 100 W or 600 VA Max. switched current: 3 A Max. switched voltage: 150 VDC or 300 VAC UL Rating: See chart on Page 3 |
| Medium Duty | Max. switched power: 180 W or 1800 VA Max. switched current: 6 A Max. switched voltage: 150 VDC or 300 VAC UL Rating: See chart on Page 3 |
| Heavy Duty | Max. switched power: 300 W or 2400 VA Max. switched current: 10 A Max. switched voltage: 150 VDC or 300 VAC UL Rating: See chart on Page 3 |
| Material | Light duty: Silver Medium duty: Silver nickel Heavy duty: Silver cadmium oxide |
| Resistance | < 100 milliohms initially |

COIL

| Power At Pickup Voltage (typical) Max. Continuous Dissipation Temperature Rise | Standard coil: 210 mW Sensitive coil: 140 mW Heavy duty: 228 mW (110 mW available) Class B: 2.0 W 20°C (68°F) ambient 1.6 W 40°C (104°F) ambient Class F: 2.5 W 20°C (68°F) ambient 2.1 W 40°C (104°F) ambient At nominal coil voltage Standard coil: 38°C (68°F) | | | |
|--|---|--|--|--|
| | Sensitive coil: 28°C (50°F) | | | |
| Temperature | Max. 105°C (221°F) Class A Max. 130°C (266°F) Class B Max. 155°C (311°F) Class F | | | |



GENERAL DATA

| Life Expectancy Mechanical Electrical Light Duty Medium Duty Heavy Duty | Minimum operations 100 million operations 3 x 10 ⁵ at 3 A, 120 VAC 1.8 x 10 ⁵ at 6 A, 120 VAC 1 x 10 ⁵ at 10 A, 120 VAC |
|---|--|
| Operate Time (typical) | 5 ms at nominal coil voltage |
| Release Time (typical) | 2 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 750 Vrms contact to contact 2500 Vrms contact to coil except hermetically sealed version which is 1600 Vrms |
| Insulation Resistance | 1000 megohms min. at 20°C, 500 VDC, 50% RH |
| Dropout | Greater than 5% of nominal coil voltage |
| Ambient Temperature Operating Storage | At nominal coil voltage -55°C (-67°F) to 90°C (194°F) Class B -55°C (-67°F) to 115°C (239°F) Class F -55°C (-67°F) to 130°C (266°F) Class B -55°C (-67°F) to 155°C (311°F) Class F |
| Vibration | 0.062" DA at 10-55 Hz, 10 g at 55-110 Hz |
| Shock | 10 g |
| Enclosure | P.E.T. polyester |
| Terminals | Tinned copper alloy, P.C. |
| Max. Solder Temp. | 270°C (518°F) |
| Max. Solder Time | 5 seconds |
| Max. Solvent Temp. | 80°C (176°F) |
| Max. Immersion Time | 30 seconds |
| Weight | 8 grams |

NOTES

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



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RELAY ORDERING DATA

| COIL SPECIFICATIONS | | | | ORDER NUMBER* | | | |
|-----------------------------------|------------------------|---------------------|---------------------|--|--------------|-----------------------------|-----------------|
| STANDARD RELAYS: 1 Form C (SPDT) | | | | LIGHT DUTY (3 Amp contact) MEDIUM DUTY (6 Amp co | | | (6 Amp contact) |
| Nominal Coil VDC | Max. VDC Continuous | Resistance ± 10% | Must Operate VDC | Unsealed | Epoxy Sealed | Unsealed | Epoxy Sealed |
| 5 | 10.6 | 56 | 3.25 | AZ8-1C-5D | AZ8-1C-5DE | AZ8-1CH-5D | AZ8-1CH-5DE |
| 6 | 12.6 | 80 | 3.90 | AZ8-1C-6D | AZ8-1C-6DE | AZ8-1CH-6D | AZ8-1CH-6DE |
| 9 | 19.0 | 180 | 5.85 | AZ8-1C-9D | AZ8-1C-9DE | AZ8-1CH-9D | AZ8-1CH-9DE |
| 12 | 25.0 | 320 | 7.80 | AZ8-1C-12D | AZ8-1C-12DE | AZ8-1CH-12D | AZ8-1CH-12DE |
| 18 | 37.8 | 720 | 11.7 | AZ8-1C-18D | AZ8-1C-18DE | AZ8-1CH-18D | AZ8-1CH-18DE |
| 24 | 50.0 | 1,280 | 15.60 | AZ8-1C-24D | AZ8-1C-24DE | AZ8-1CH-24D | AZ8-1CH-24DE |
| 48 | 87.0 | 3,800 | 31.20 | AZ8-1C-48D | AZ8-1C-48DE | AZ8-1CH-48D | AZ8-1CH-48DE |
| SENSITIVE RELAYS: 1 Form C (SPDT) | | | | LIGHT DUTY (3 Amp contact) | | MEDIUM DUTY (6 Amp contact) | |
| Nominal Coil VDC | Max. VDC Continuous | Resistance ± 10% | Must Operate VDC | Unsealed | Epoxy Sealed | Unsealed | Epoxy Sealed |
| 5 | 12.6 | 80 | 3.25 | AZ8-1C-5DS | AZ8-1C-5DSE | AZ8-1CH-5DS | AZ8-1CH-5DSE |
| 6 | 14.8 | 110 | 3.90 | AZ8-1C-6DS | AZ8-1C-6DSE | AZ8-1CH-6DS | AZ8-1CH-6DSE |
| 9 | 22.4 | 250 | 5.85 | AZ8-1C-9DS | AZ8-1C-9DSE | AZ8-1CH-9DS | AZ8-1CH-9DSE |
| 12 | 30.0 | 440 | 7.80 | AZ8-1C-12DS | AZ8-1C-12DSE | AZ8-1CH-12DS | AZ8-1CH-12DSE |
| 24 | 60.0 | 1,780 | 15.60 | AZ8-1C-24DS | AZ8-1C-24DSE | AZ8-1CH-24DS | AZ8-1CH-24DSE |
| 48 | 120.0 | 7,120 | 31.20 | AZ8-1C-48DS | AZ8-1C-48DSE | AZ8-1CH-48DS | AZ8-1CH-48DSE |
| STANDARD RELAYS: 1 Form C (SPDT) | | | | HEAVY DUTY (10 Amp contact) | | | |
| Nominal Coil VDC | Max. VDC Continuous | Resistance ± 10% | Must Operate VDC | Unsealed | | Epoxy Sealed | |
| 5 | 10.6 | 56 | 4.0 | AZ8-1CT-5D | | AZ8-1CT-5DE | |
| 6 | 12.6 | 80 | 4.8 | AZ8-1CT-6D | | AZ8-10 | CT-6DE |
| 9 | 19.0 | 180 | 7.2 | AZ8-1CT-9D | | AZ8-10 | CT-9DE |
| 12 | 25.0 | 320 | 9.6 | AZ8-1CT-12D | | AZ8-10 | CT-12DE |
| 24 | 50.0 | 1,280 | 19.2 | AZ8-1CT-24D | | AZ8-10 | CT-24DE |
| 48 | 87.0 | 3,800 | 38.4 | AZ8-1CT-48D | | AZ8-1CT-48DE | |

^{*}To indicate Class F version, add suffix "F". Other coil resistances and sensitivities available. Please contact the factory. Substitute "1AT" in place of "1CT" to indicate 1 Form A. For Hermetically sealed version, substitute "H" for "E".

RELAY ORDERING DATA - VDE APPROVED VERSIONS

| COIL SPECIFICATIONS | | | | ORDER NUMBER | | |
|---|------------------------|---------------------|---------------------|-----------------------------------|-----------------------|--|
| STANDARD RELAYS: 1 Form C (SPDT) – VDE | | | DE | MEDIUM DUTY | | |
| Nominal Coil VDC | Max. VDC Continuous | Resistance ± 10% | Must Operate VDC | Unsealed Epoxy Sealed 6 Amp 5 Amp | | |
| 5 | 10.6 | 56 | 3.25 | AZ8-1CH-5DA | AZ8-1CH-5DEA | |
| 6 | 12.6 | 80 | 3.90 | AZ8-1CH-6DA | AZ8-1CH-6DEA | |
| 9 | 19.0 | 180 | 5.85 | AZ8-1CH-9DA | AZ8-1CH-9DEA | |
| 12 | 25.0 | 320 | 7.80 | AZ8-1CH-12DA | AZ8-1CH-12DEA | |
| 24 | 50.0 | 1,280 | 15.60 | AZ8-1CH-24DA | AZ8-1CH-24DEA | |
| 48 | 87.0 | 3,800 | 31.20 | AZ8-1CH-48DA | AZ8-1CH-48DEA | |
| SENSITIVE RELAYS: 1 Form C (SPDT) – VDE | | | DE | MEDIUM DUTY | | |
| Nominal Coil VDC | Max. VDC Continuous | Resistance ± 10% | Must Operate VDC | Unsealed 6 Amp | Epoxy Sealed 5 Amp | |
| 5 | 12.6 | 80 | 3.25 | AZ8-1CH-5DSA | AZ8-1CH-5DSEA | |
| 6 | 14.8 | 110 | 3.90 | AZ8-1CH-6DSA | AZ8-1CH-6DSEA | |
| 9 | 22.4 | 250 | 5.85 | AZ8-1CH-9DSA | AZ8-1CH-9DSEA | |
| 12 | 30.0 | 440 | 7.80 | AZ8-1CH-12DSA | AZ8-1CH-12DSEA | |
| 24 | 60.0 | 1,780 | 15.60 | AZ8-1CH-24DSA | AZ8-1CH-24DSEA | |
| 48 | 120.0 | 7,120 | 31.20 | AZ8-1CH-48DSA | AZ8-1CH-48DSEA | |



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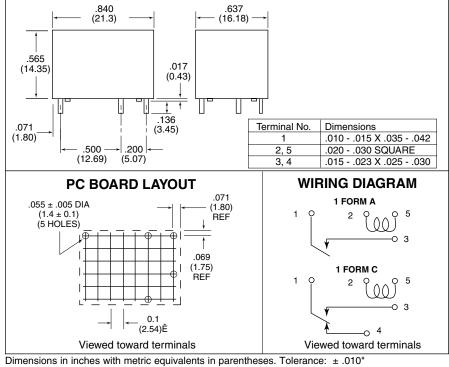
UL, CUR RATINGS

| Light Duty | 2 A at 28 VDC or 300 VAC 1/8 HP at 120 VAC 1/10 HP at 120/240 VAC (100,000 cyc) 1.2/0.6 A at 120/240 VAC, Pilot Duty 100,000 cyc 3.0/1.5 A at 120/240 VAC General Use 100,000 cyc |
|-------------|--|
| Medium Duty | 6 A at 28 VDC or 300 VAC 1/8 HP at 120/240 VAC (100,000 cyc) 1.5/0.8 A at 120/240 VAC, Pilot Duty 100,000 cyc 3.8/1.9 A at 120/240 VAC General Use 100,000 cyc |
| Heavy Duty | SPST: 10 A at 24 VDC / 125 VAC Resistive 1/4 HP at 120 / 125 VAC 1/2 HP at 250 VAC 7 A at 277 VAC Resistive SPDT: 10 A at 250 VAC General Use 7 A at 277 VAC Resistive 6 A at 24 VDC Resistive 1/4 HP at 125 VAC |

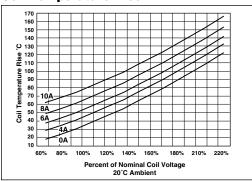
VDE RATINGS

| Sealed | 5 A at 250 VAC resistive, 10,000 cycles |
|----------|---|
| Unsealed | 6 A at 250 VAC resistive, 50,000 cycles |

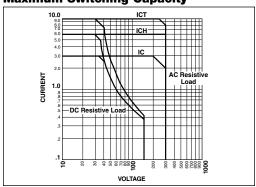
MECHANICAL DATA



Coil Temperature Rise



Maximum Switching Capacity





HERMETICALLY SEALED VERSION



MECHANICAL DATA

