

AZSR1180

180 AMP POWER RELAY

FEATURES

- 180 Amp switching capability
- Contact gap: 3.6 mm
- Dielectric strength 4 kV_{RMS}
- 10kV Surge
- UL class F insulation(155 °C)
- UL / CUR E365652
- TÜV B0887930013
- CQC 18002210952



CONTACTS

| | |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Arrangement | SPST-N.O. (1 Form A) |
| Ratings (max.) switched power switched current continuous current switched voltage | (resistive load) 144000 VA 180 A 180 A 800 VAC |
| Rated Loads UL/CUR/TÜV/CQC | 180A at 800VAC, resistive, 85°C, 50 cycles 40A at 800VAC on, carry 180A, 40A 800VAC off, resistive, 85°C, 30k cycles |
| Contact material | AgSnO ₂ (silver tin oxide) |
| Contact gap | 3.6 mm |
| Contact resistance initial typical | (load contact) ≤ 100 mΩ < 10 mΩ |

COIL

| | |
|--------------------------------------------------------------------|----------------------------------------|
| Nominal coil DC voltages | 6, 9, 12, 24, 48 |
| Dropout voltage | > 5% of nominal coil voltage |
| Holding voltage | > 40% of nominal coil voltage |
| Coil power nominal holding power at pickup voltage | (at 23 °C) 3 W 480 mW 1687 mW |
| Temperature Rise | 70 K at nom. coil voltage, 85°C |
| Max. temperature | Class F insulation - 155°C (311°F) |

GENERAL DATA

| | |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Life Expectancy mechanical electrical | (minimum operations) 1 x 10 ⁶ see UL/CUR/TÜV/CQC ratings |
| Operate Time | 40 ms (max.) at nominal coil voltage |
| Release Time | 15 ms (max.) at nominal coil voltage, without coil suppression |
| Dielectric Strength coil to load contacts open load contacts | (at sea level for 1 min.) 4000 V _{RMS} 2600 V _{RMS} |
| Surge Voltage | 10kV @1.2/50µs (coil to contacts) |
| Insulation Resistance | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH |
| Temperature Range operating | (at nominal coil voltage) -40°C (-40°F) to 85°C (185°F) |
| Vibration resistance | 0.062" (1.5 mm) DA at 10–55 Hz |
| Shock | 10 g |
| Enclosure protection category material group flammability | P.B.T. polyester RT II, flux proof Illa UL94 V-0 |
| Terminals | Tinned copper alloy, P. C. |
| Soldering max. temperature max. time | 270 °C 5 s |
| Dimensions length width height | 63.3 mm (2.49") 62 mm (2.44") 41.7 mm (1.64") |
| Weight | 265 grams (approx.) |
| Compliance | UL 508, IEC 61810-1, RoHS, REACH |
| Packing unit in pcs | 5 per plastic tray / 50 per carton box |

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COIL VOLTAGE SPECIFICATIONS

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm $\pm 10\%$ |
|------------------|------------------|------------------|----------------|---------------------------|
| 6 | 4.5 | 2.4 | 6.6 | 12 |
| 9 | 6.7 | 3.6 | 9.9 | 27 |
| 12 | 9.0 | 4.8 | 13.2 | 48 |
| 24 | 18.0 | 9.6 | 26.4 | 192 |
| 48 | 36.0 | 19.2 | 52.8 | 768 |

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

ORDERING DATA

AZSR1180-1AE-D

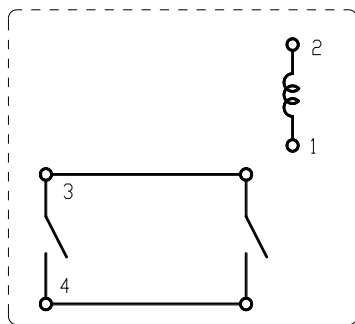
Nominal coil voltage
see coil voltage specifications table

Example ordering data

AZSR1180-1AE-12D With 12 VDC coil

WIRING DIAGRAMS

Viewed towards terminals

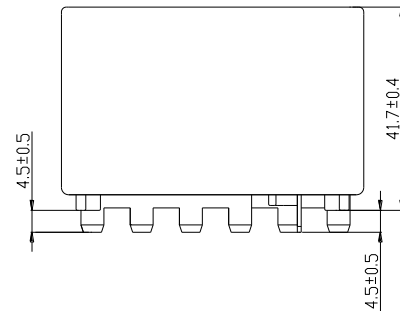
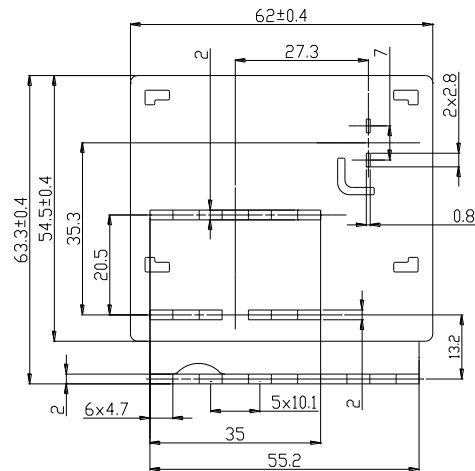


NOTES

- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

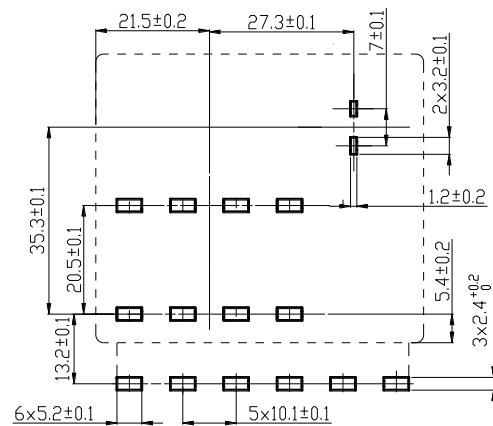
MECHANICAL DATA

Dimensions in mm. Tolerance: $\pm 0.3\text{mm}$



PC BOARD LAYOUT

Viewed towards terminals. Dimensions in mm.



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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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