

# AZSR1160

## 160 AMP POWER RELAY

### FEATURES

- 160 Amp switching capability
- Contact gap:  $\geq 3.2\text{mm}$
- Dielectric strength 4 kV<sub>RMS</sub>
- 10kV Surge
- UL class F insulation
- UL / CUR E365652
- TÜV B0887930013
- CQC 18002210952



### CONTACTS

<b>Arrangement</b>	SPST-N.O. (1 Form A)
<b>Ratings (max.)</b> switched power switched current continuous current switched voltage	(resistive load) 110400 VA 160 A 160 A 690 VAC
<b>Rated Loads</b> <b>UL/CUR/TÜV/CQC</b>	160A at 690VAC, resistive, 85°C, 1k cycles 60 A Making, 160A carrying, 60A Breaking, at 690 VAC, resistive, 85°C, 30k cycles
<b>Contact material</b>	AgSnO <sub>2</sub> (silver tin oxide)
<b>Contact gap</b>	3.6 mm
<b>Contact resistance</b> initial typical	(load contact) $\leq 100\ \text{m}\Omega$ $< 10\ \text{m}\Omega$

### COIL

<b>Nominal coil DC voltages</b>	6, 9, 12, 24, 48
<b>Dropout voltage</b>	> 5% of nominal coil voltage
<b>Holding voltage</b>	> 40% of nominal coil voltage
<b>Coil power</b> nominal holding power at pickup voltage	(at 23 °C) 3 W 480 mW 1.7W
<b>Temperature Rise</b>	70 K (126°F) at nom. coil voltage, 85°C
<b>Max. temperature</b>	Class F insulation - 155°C (311°F)

### GENERAL DATA

<b>Life Expectancy</b> mechanical electrical	(minimum operations) $1 \times 10^6$ see UL/CUR/TÜV/CQC ratings
<b>Operate Time</b>	40 ms (max.) at nominal coil voltage
<b>Release Time</b>	15 ms (max.) at nominal coil voltage, without coil suppression
<b>Dielectric Strength</b> coil to load contacts open load contacts	(at sea level for 1 min.) 4000 V <sub>RMS</sub> 2000 V <sub>RMS</sub>
<b>Surge Voltage</b>	10kV @1.2/50 $\mu$ s (coil to contacts)
<b>Insulation Resistance</b>	1000 M $\Omega$ (min.) at 23°C, 500 VDC, 50% RH
<b>Temperature Range</b> operating	(at nominal coil voltage) -40°C (-40°F) to 85°C (185°F)
<b>Vibration resistance</b>	0.062" (1.5 mm) DA at 10–55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b> protection category material group flammability	P.B.T. polyester RT II, flux proof Illa UL94 V-0
<b>Terminals</b>	Tinned copper alloy, P. C.
<b>Soldering</b> max. temperature max. time	270 °C 5 s
<b>Dimensions</b> length width height	63.3 mm (2.49") 62 mm (2.44") 41.7 mm (1.64")
<b>Weight</b>	265 grams (approx.)
<b>Compliance</b>	UL 508, IEC 61810-1, RoHS, REACH
<b>Packing unit in pcs</b>	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

AZSR1160-1AE-D

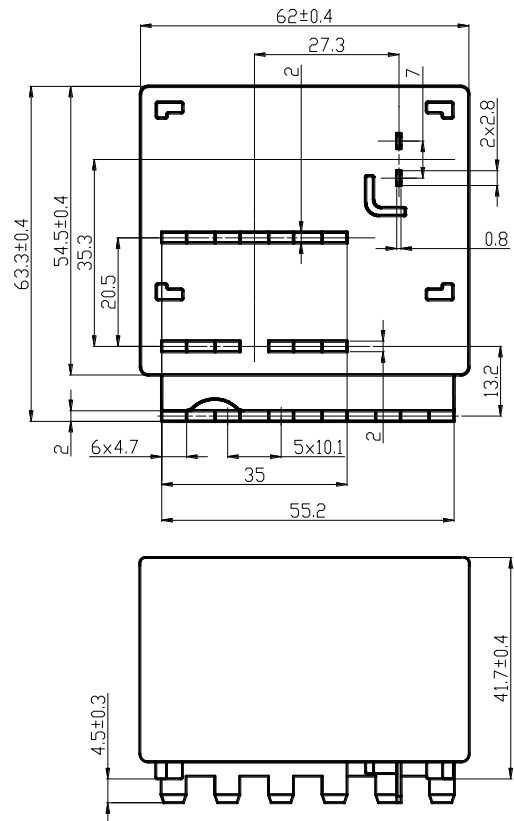
Nominal coil voltage  
see coil voltage specifications table

### Example ordering data

AZSR1160-1AE-12D With 12 VDC coil

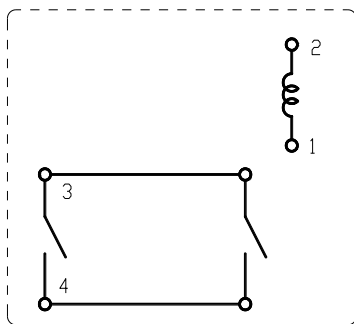
## MECHANICAL DATA

Dimensions in mm. Tolerance:  $\pm$ 0.3mm



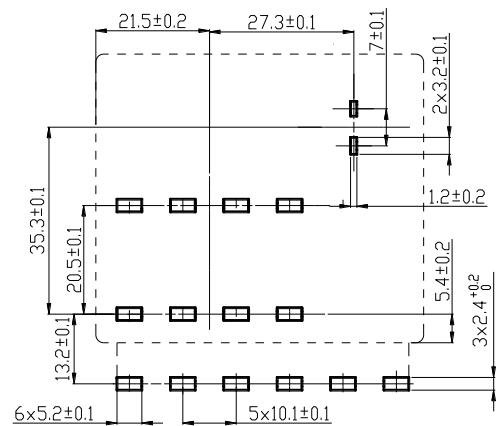
## WIRING DIAGRAMS

Viewed towards terminals



## PC BOARD LAYOUT

Viewed towards terminals. Dimensions in mm.



## NOTES

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

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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.

## ZETTLER GROUP

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