AZSR1160

160 AMP POWER RELAY

FEATURES

- 160 Amp switching capability
- Clearance and creepage of ≥ 10 mm
- Wide contact gap of ≥ 3.6 mm
- 4 kV dielectric strength, 10 kV surge withstand voltage
- UL Class F insulation (155°C)
- UL / CUR E365652
- TÜV B0887930013

Illustration similar

CONTACTS

Arrangement	SPST-N.O. (1 Form A)
Ratings (max.)	(resistive load)
switched power	110400 VA
switched current	160 A
continuous current	160 A
switched voltage	690 VAC
Rated Loads	
UL/CUR/TÜV	60 A make - 160 A carry - 60 A break at 690 VAC, resistive, 85°C, 30k cycles 160 A at 690 VAC, resistive, 85°C, 1k cycles
Contact material	$AgSnO_2$ - silver tin oxide
Contact gap	≥ 3.6 mm
Contact resistance	
initial	≤ 100 mΩ (1 A - voltage drop method)

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	3.0 W
at pickup voltage	1.7 W
holding power	480 mW
Temperature Rise	70 K (126°F) at nominal coil voltage
Max. temperature	Class F insulation - 155°C (311°F)

COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Cont. VDC	Resistance Ohm ± 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 20°C (68°F), upright position, terminals downward.

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1×10^6
electrical	see UL/CUR/TÜV ratings
Operate Time	40 ms (max.) at nominal coil voltage
Release Time	15 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 4000 V_{RMS} coil to contact 2200 V_{RMS} between open contacts
Surge Voltage	
coil to contact	10 kV (at 1.2 x 50 µs)
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Creepage	
coil to contact	≥ 10.0 mm
Clearance	
coil to contact	≥ 10.0 mm
Temperature Range	(at nominal coil voltage)
operating	-40°C (-40°F) to 85°C (185°F)
Vibration resistance	1.5 mm (0.062") DA at 10–55 Hz
Shock resistance	10 g
Enclosure	P.B.T. polyester
protection category	RT II, flux proof
material group	IIIa
Terminals	Tinned copper alloy, P. C.
Soldering	
max. temperature	270 °C (518°F)
max. time	5 seconds
Cleaning	
max. solvent temp.	80°C (176°F)
max. immersion time	30 seconds
Dimensions	
length	62.0 mm (2,441")
width	63.3 mm (2,492")
height	41.7 mm (1.642")
Weight	265 grams (approx.)
Compliance	UL 508, IEC 61810-1, RoHS, REACH

ZETTLER electronics GmbH - A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany
phone: +49 89 800 97-0
fax: +49 89 800 97-200
office@ZETTLERelectronics.com
www.ZETTLERelectronics.com

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ORDERING DATA

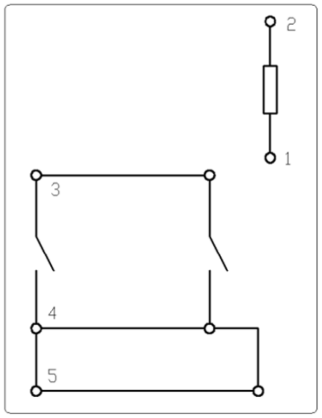
AZSR1160-1AE-□□D

Nominal coil voltage
see coil voltage specifications table

Example ordering data
AZSR1160-1AE-12D 12 VDC nom. coil voltage

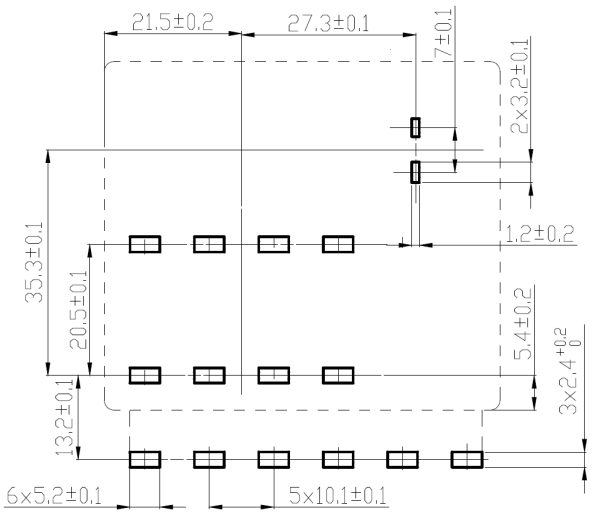
WIRING DIAGRAMS

Viewed towards terminals.



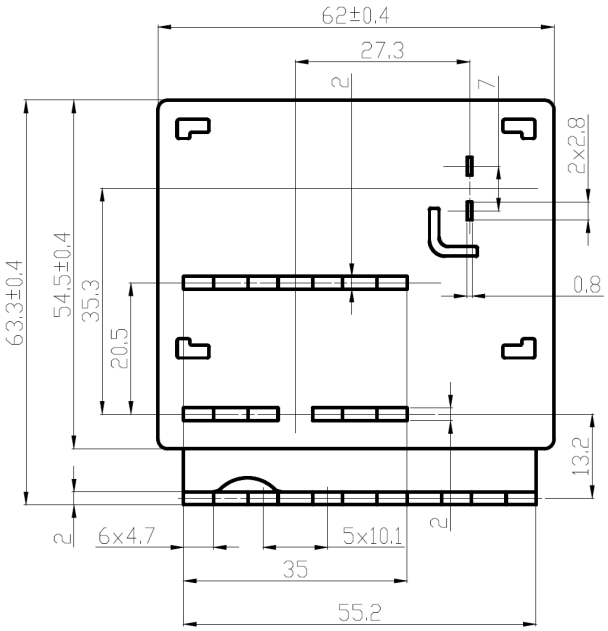
PC BOARD LAYOUT

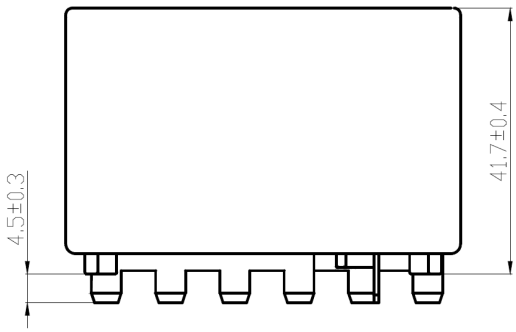
Dimensions in mm. Viewed towards terminals.



MECHANICAL DATA

Dimensions in mm. Viewed towards terminals.





NOTES

1. Specifications subject to change without notice.
2. All values at 20°C (68°F) unless otherwise stated.
3. Relay may pull in with less than “Must Operate” value.
4. Provide sufficient PCB cross section on load terminals as heat spreader.
5. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.

DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf

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.