

## 16 AMP HIGH TEMPERATURE POWER RELAY

### FEATURES

- 18.4 Amp switching capability
- Operating ambient temperature up to 105°C (221°F)
- 5 kV dielectric strength, Isolation spacing  $\geq 10$  mm
- Reinforced insulation according IEC 60730-1, IEC 60335-1
- Glow wire approved versions acc. IEC 60335-1 available
- Compact size, low seated height of 15.7 mm
- UL / CUR file E44211
- VDE certificate 40006031



### CONTACTS

<b>Arrangement</b>	SPST-NO (1 Form A) SPDT (1 Form C)
<b>Ratings (max.)</b> switched power switched current switched voltage	(resistive load) 4600 VA (2770 VA for sensitive coil versions) 18.4 A (10 A for sensitive coil versions) 125 VDC* or 440 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Loads</b> UL/CUR	<b>1 Form A / 1 Form C</b> 18.4 A at 250 VAC, res., 105°C, 20k cycles, (NO) 16 A at 277 VAC, gen. use, 105°C, 50k cycles, (NO) 5 A at 30 VDC, resistive, 105°C, 100k cycles  <b>1 Form A / 1 Form C - sensitive DC coil types only</b> 10 A at 277 VAC, general use, 85°C, 70k cycles, (NO) 10 A at 277 VAC, general use, 85°C, 10k cycles, (NC)
VDE	<b>1 Form A - DC coil types</b> 16 A at 250 VAC, resistive, 50k cycles, 105°C 18.4 A at 250 VAC, resistive, 20k cycles, 105°C <sup>1)</sup>  <b>1 Form A - sensitive DC coil types</b> 10 A at 250 VAC, resistive, 50k cycles, 105°C <sup>1)</sup>  <b>1 Form C - DC coil types</b> 16 A at 250 VAC, resistive, 50k cycles, 105°C, (NO) 5 A at 250 VAC, resistive, 50k cycles, 105°C, (NC)  Note: 1) tested with RTII flux proof versions
<b>Contact material</b>	AgNi / AgNi+Au (silver nickel / Au plating)
<b>Initial resistance</b> max. typ.	100 mΩ (1A / 6VDC, voltage drop method) < 10 mΩ (at rated load)

### COIL

<b>Nominal coil voltages</b>	see coil voltage specifications tables
<b>Dropout</b>	> 10% of nominal coil voltage
<b>Coil power</b> DC coil types nominal at pickup voltage High sensitive DC coil types nominal at pickup voltage	typ. at 23°C (73°F) coil temperature  400 mW 200 mW  250 mW 140 mW
<b>Temperature Rise</b> DC coil types High sensitive DC coil types	typ. at nominal coil voltage 26 K (47°F) 17 K (31°F)
<b>Max. temperature</b>	155°C (311°F), class F insulation system

### GENERAL DATA

<b>Life Expectancy</b> mechanical electrical	(minimum operations) 1 x 10 <sup>7</sup> see UL/CUR/VDE rated loads
<b>Operate Time</b> max. typ.	(at nominal coil voltage) 15 ms 7 ms
<b>Release Time</b> max. typ.	(at nom. coil voltage, without coil suppression) 8 ms 4 ms
<b>Dielectric Strength</b> coil to contacts between open contacts	(at sea level for 1 min.) 5000 VAC 1000 VAC
<b>Surge voltage</b> coil to contact	(1.2/50 μs) 10 kV
<b>Insulation Resistance</b>	1000 MΩ (min.) at 23°C, 500 VDC, 50% RH
<b>Isolation spacing</b> clearance creepage	(coil to contact) ≥ 10 mm ≥ 10 mm
<b>Insulation</b> coil to contacts	Reinforced insulation (rated voltage: 250 VAC, pollution degree: 3, overvoltage category: III)
<b>Temperature Range</b> operating	(at nominal coil voltage) -40°C (-40°F) to 105°C (221°F)
<b>Vibration resistance</b>	0.062" (1.5 mm) DA at 10-55 Hz
<b>Shock resistance</b>	10 g
<b>Enclosure</b> protection category material group	P.B.T. polyester RT II - flux proof, RT III - wash tight IIIa
<b>Terminals</b>	Tinned copper alloy, P. C.
<b>Soldering</b> max. temperature max. time	270 °C (518°F) 5 seconds
<b>Cleaning</b> max. solvent temp. max. immersion time	(RT III - wash tight versions only) 80°C (176°F) 30 seconds
<b>Dimensions</b> length width height	29.0 mm (1.142") 12.7 mm (0.500") 15.7 mm (0.618")
<b>Weight</b>	13.5 grams (approx.)
<b>Packing unit in pcs</b>	50 per plastic tray / 500 per carton box
<b>Compliance</b>	UL 508, IEC 61810-1, RoHS, REACH

# AZ762H

## COIL VOLTAGE SPECIFICATIONS

### DC coils

Nominal Coil VDC	Must Operate VDC	Max. Coil VDC	Nom. Current mA (ref.)	Resistance Ohm
5	3.5	6.5	80.6	62 ±10%
6	4.2	7.8	66.7	90 ±10%
9	6.3	11.7	45.0	200 ±10%
12	8.4	15.6	33.3	360 ±10%
18	12.6	23.4	22.2	810 ±10%
24	16.8	31.2	16.7	1440 ±10%
48	33.6	62.4	8.3	5760 ±15%
60	42.0	78.0	8.0	7500 ±15%

### High sensitive DC coils

Nominal Coil VDC	Must Operate VDC	Max. Coil VDC	Nom. Current mA (ref.)	Resistance Ohm
5	3.8	6.5	50.0	100 ±10%
6	4.5	7.8	41.7	145 ±10%
9	6.8	11.7	27.8	325 ±10%
12	9.0	15.6	20.8	580 ±10%
18	13.5	23.4	13.9	1300 ±10%
24	18.0	31.2	10.4	2300 ±10%
48	36.0	62.4	5.2	9220 ±15%
60	45.0	78.0	4.7	12860 ±15%

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

## ORDERING DATA

**AZ762H**-   -     **F**

**Plating option**  
nil: non plated  
A: gold plating

**Sealing option**  
nil: non sealed (RT II - flux tight)  
E: sealed version (RT III - wash tight)

**Coil option**  
nil: standard coil  
S: high sensitive coil

**Nominal coil voltage**  
see coil voltage specifications tables

**Contact material**  
B: silver nickel - AgNi

**Contact arrangement**  
1A: 1 Form A (SPST-NO)  
1C: 1 Form C (SPDT)

### Example ordering data

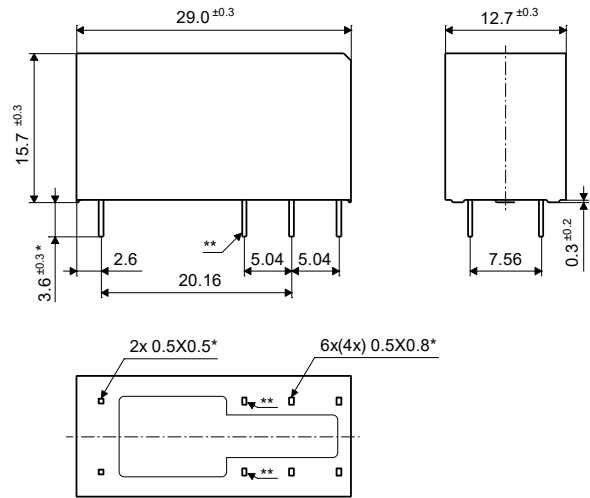
AZ762H-1AB-12DF 1 Form A (SPST-NO), silver nickel, 12 VDC nominal coil voltage, flux tight version,

AZ762H-1CE-24DSEAF 1 Form C (SPDT), silver tin oxide, 24 VDC nominal coil voltage, high sensitive coil, RT III wash tight version, gold plated contacts

## MECHANICAL DATA

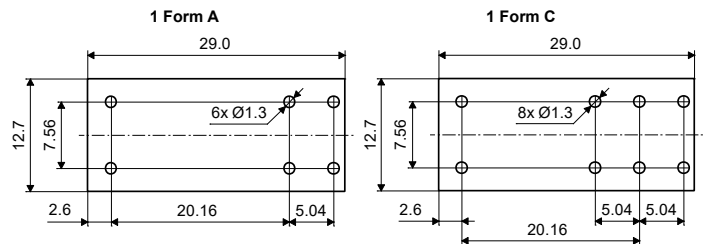
Dimensions in mm. If not stated otherwise, tolerance: ±0.2 mm

Notes: \* Pin dimensions for reference only and given without tin coating.  
\*\* Only for 1 Form C (SPDT) contact arrangement versions.



## PC BOARD LAYOUT

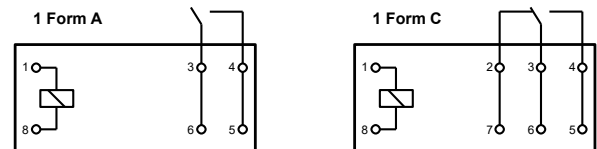
Layout recommendation. Dimensions in mm. Viewed towards terminals.



## WIRING DIAGRAMS

Viewed towards terminals.

Note: Connect associated load terminals on PCB to ensure proper operation and service life.



## NOTES

- All values at reference temperature of 23°C (73°F) unless stated otherwise.
- Relay may pull in with less than "Must Operate" value.
- "Maximum Coil Voltage" is the maximum voltage the coil can endure for a short period of time.
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
- Relay adjustment may be affected if excessive shock is applied to the relay or if undue pressure is exerted on the relay case.
- Substances containing silicone or phosphorus must be avoided in the vicinity to the relay as these will shorten its service life.
- RTII (flux proof) relays must not be washed, immersion cleaned or conformal coated.
- With gold plated contacts a minimum load of 10mA/5V/50mW is recommended.
- 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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