AZ762H

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 ≥ 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

Arrangement	SPST-NO (1 Form A) SPDT (1 Form C)
Ratings (max.) 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.
Rated Loads UL/CUR	**1 Form A / 1 Form C** 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 **1 Form A / 1 Form C - sensitive DC coil types only** 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	**1 Form A - DC coil types** 16 A at 250 VAC, resistive, 50k cycles, 105°C 18.4 A at 250 VAC, resistive, 20k cycles, 105°C 1) **1 Form A - sensitive DC coil types** 10 A at 250 VAC, resistive, 50k cycles, 105°C 1) **1 Form C - DC coil types** 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
Contact material	AgNi / AgNi+Au (silver nickel / Au plating)
Initial resistance max. typ.	100 mΩ (1A / 6VDC, voltage drop method) < 10 mΩ (at rated load)

COIL

Nominal coil voltages	see coil voltage specifications tables
Dropout	> 10% of nominal coil voltage
Coil power 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
Temperature Rise DC coil types High sensitive DC coil types	typ. at nominal coil voltage 26 K (47°F) 17 K (31°F)
Max. temperature	155°C (311°F), class F insulation system

GENERAL DATA

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

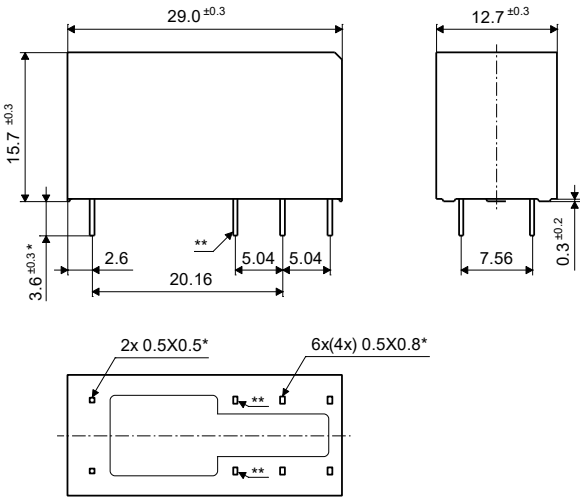
Example ordering data

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

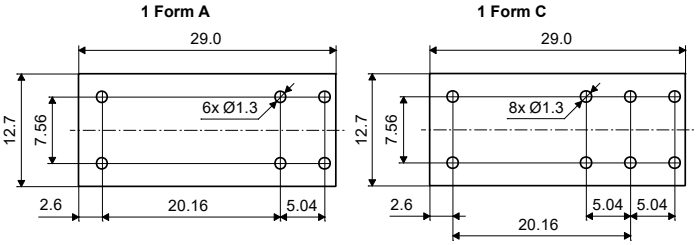
Dimensions in mm. If not stated otherwise, tolerance: ±0.2 mm

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



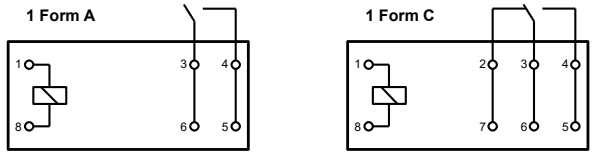
PC BOARD LAYOUT

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

1. All values at reference temperature of 23°C (73°F) unless stated otherwise.
2. Relay may pull in with less than “Must Operate” value.
3. “Maximum Coil Voltage” is the maximum voltage the coil can endure for a short period of time.
4. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
5. Relay adjustment may be affected if excessive shock is applied to the relay or if undue pressure is exerted on the relay case.
6. Substances containing silicone or phosphorus must be avoided in the vicinity to the relay as these will shorten its service life.
7. RTII (flux proof) relays must not be washed, immersion cleaned or conformal coated.
8. With gold plated contacts a minimum load of 10mA/5V/50mW is recommended.
9. Specifications subject to change without notice.

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

Building on a foundation of more than a century of expertise in German precision engineering, ZETTLER Group is a world-class enterprise, engaged in the design, manufacturing, sales and distribution of electronic components. Our industry leadership is based on a unique combination of engineering competence and global scale.

For more information on other ZETTLER Group companies, please visit ZETTLER-group.com. For support on this product or other ZETTLER relays, please visit one of the group sites below.

SITES FOR ZETTLER RELAYS

NORTH AMERICA

American Zettler, Inc.
www.azettler.com
sales@azettler.com

EUROPE

Zettler Electronics, GmbH
www.zettlerelectronics.com
office@zettlerelectronics.com

Zettler Electronics, Poland
www.zettlerelectronics.pl
office@zettlerelectronics.pl

CHINA

Zettler Group, China
www.zettlercn.com
relay@zettlercn.com

ASIA PACIFIC

Zettler Electronics (HK) Ltd.
www.zettlerhk.com
sales@zettlerhk.com