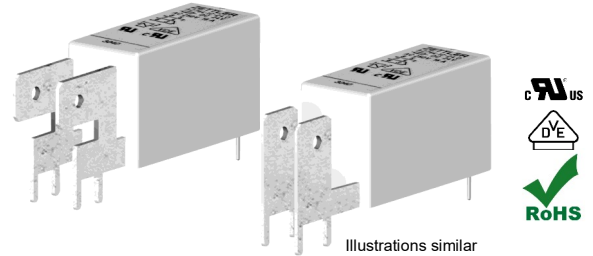


# AZ764F

## 20 AMP HIGH TEMPERATURE POWER RELAY

### FEATURES

- Quick connect Faston and PCB terminals
- 20 Amp switching capability - 18 Amps over Faston terminals
- Ambient temperature up to 105°C (221°F)
- 5 kV dielectric strength, Isolation spacing  $\geq 10$  mm
- Proof tracking index (PTI/CTI) 250
- Compact size, low seated height of 15.7 mm
- UL / CUR file E43203
- VDE certificate 40012572



### CONTACTS

<b>Arrangement</b>	SPST-N.O. (1 Form A)
<b>Ratings (max.)</b>	(resistive load)
switched power	600 W or 5000 VA
switched current	20 A
switched voltage	300 VDC* or 400 VAC
	* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Loads</b>	
<b>UL, CUR</b>	20 A at 250 VAC, general use
<b>VDE</b>	20 A at 250 VAC, resistive, 10k cycles, 85°C 16 A at 250 VAC, resistive, 10k cycles, 105°C 10 A at 250 VAC, resistive, 150k cycles, 105°C
<b>Contact material</b>	AgSnO <sub>2</sub> (silver tin oxide)
<b>Initial resistance</b>	$\leq 100$ m $\Omega$

### COIL

<b>Nominal coil DC voltages</b>	see coil voltage specifications table
<b>Dropout voltage</b>	$\geq 10\%$ of nominal coil voltage
<b>Coil power</b>	
nominal	250 mW
at pickup voltage	140 mW
max. cont. dissipation	2.2 W at 20°C (68°F)
<b>Temperature Rise</b>	16 K (29°F) at nominal coil voltage
<b>Max. temperature</b>	Class F insulation - 155°C (311°F)

### COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm $\pm 10\%$
5	3.75	15.0	102
6	4.5	18.0	144
9	6.75	27.0	330
10	7.5	30.0	400
12	9.0	36.0	580
24	18.0	72.0	2300

### GENERAL DATA

<b>Life Expectancy</b>	(minimum operations)
mechanical	$3 \times 10^7$
electrical	see UL/CUR/VDE ratings
<b>Operate Time</b>	7 ms (typ.) at nominal coil voltage
<b>Release Time</b>	3 ms (typ.) at nominal coil voltage, without coil suppression
<b>Dielectric Strength</b>	(at sea level for 1 min.) 5000 V <sub>RMS</sub> coil to contact 1000 V <sub>RMS</sub> between open contacts
<b>Insulation Resistance</b>	$10^5$ M $\Omega$ (min.) at 20°C, 500 VDC, 50% RH
<b>Isolation spacing</b>	(coil to contact) clearance $\geq 10$ mm creepage $\geq 10$ mm
<b>Insulation</b>	C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC (according to DIN VDE 0110, IEC 60664-1)
<b>Temperature Range</b>	(at nominal coil voltage) operating -40°C (-40°F) to 105°C (221°F)
<b>Vibration resistance</b>	20 g at 30–500 Hz
<b>Shock resistance</b>	30 g
<b>Enclosure</b>	P.B.T. polyester type material group flammability UL94 V-0
<b>Terminals</b>	Tinned copper alloy, P. C. and QC terminals
<b>Soldering</b>	max. temperature 270 °C (518°F) max. time 5 seconds
<b>Cleaning</b>	max. solvent temp. 80°C (176°F) max. immersion time 30 seconds
<b>Dimensions</b>	length - horizontal type 44.5 mm (1.752") length - vertical type 40.5 mm (1.594") width 12.7 mm (0.500") height 15.7 mm (0.618")
<b>Weight</b>	16 grams (approx.)
<b>Packing unit in pcs</b>	12 per carton tube / 600 per carton box
<b>Compliance</b>	UL 508, IEC 61810-1, RoHS, REACH

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# AZ764F

## ORDERING DATA

AZ764F  -1AE-   DS

**Nominal coil voltage**  
see coil voltage specifications table

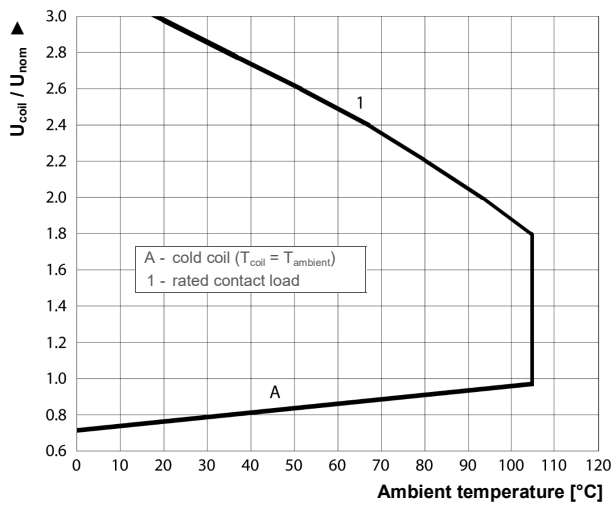
**Terminal shape**  
H: horizontal type - horizontal quick connect terminals  
V: vertical type - vertical quick connect terminals

### Example ordering data

AZ764FH-1AE-12DS Horizontal type, 12 VDC nominal coil voltage

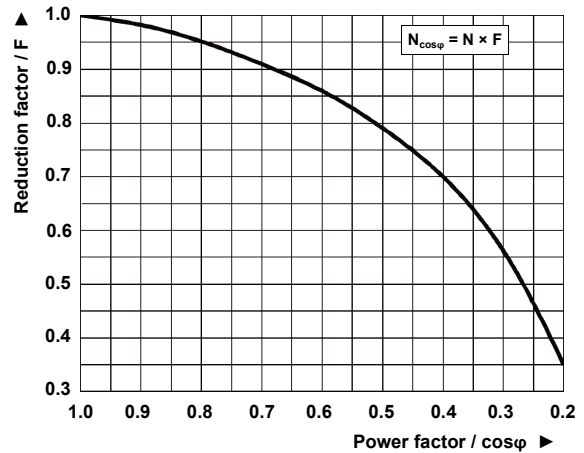
AZ764FV-1AE-9DS Vertical type, 9 VDC nominal coil voltage

## DC COIL OPERATING RANGE

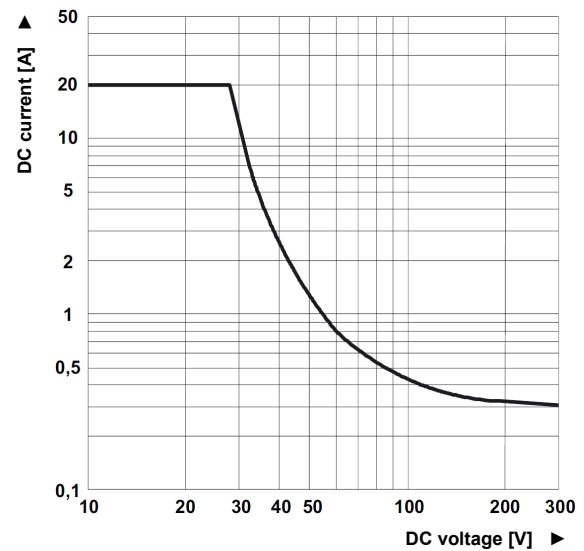


## INDUCTIVE LOADS LIFE REDUCTION

Electrical life reduction factor at inductive AC load

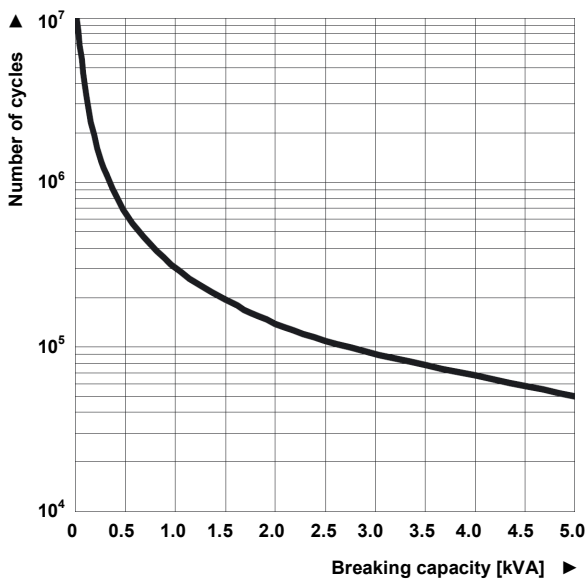


## MAX DC RESISTIVE LOAD BREAKING CAPACITY



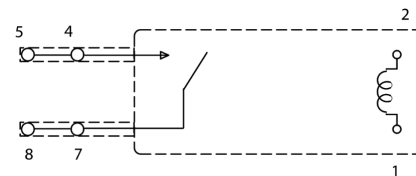
## LIFE EXPECTANCY

Electrical life at 250VAC, resistive load



## WIRING DIAGRAMS

Viewed towards terminals.



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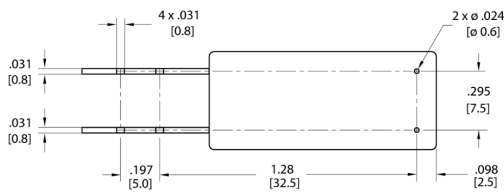
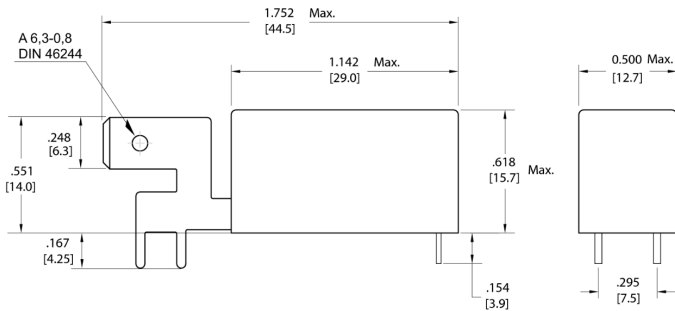
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# AZ764F

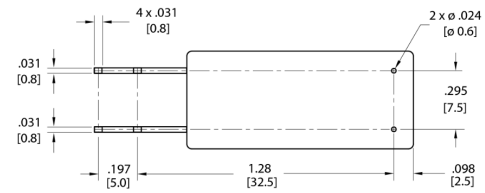
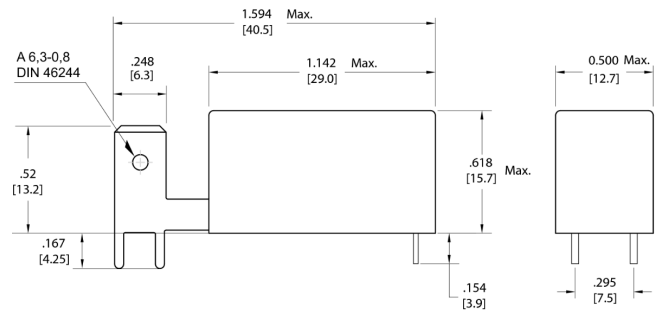
## MECHANICAL DATA - HORIZONTAL TYPE

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "



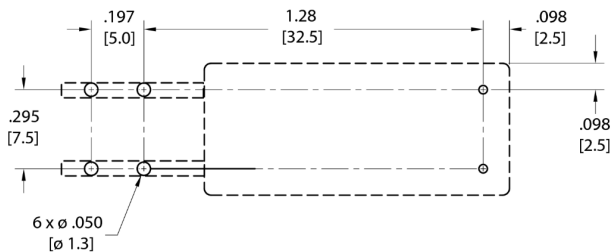
## MECHANICAL DATA - VERTICAL TYPE

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "



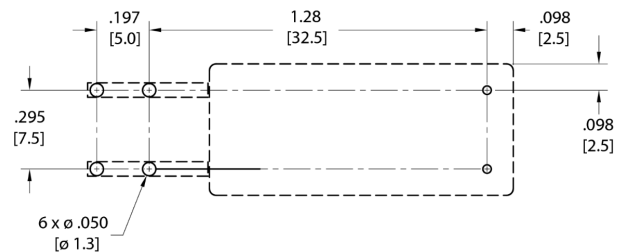
## PC BOARD LAYOUT - HORIZONTAL TYPE

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "  
Viewed towards terminals.



## PC BOARD LAYOUT - VERTICAL TYPE

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "  
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. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
5. Allow suitable slack on leads when wiring.
6. Do not subject the terminals to excessive force.

## 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](http://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.

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