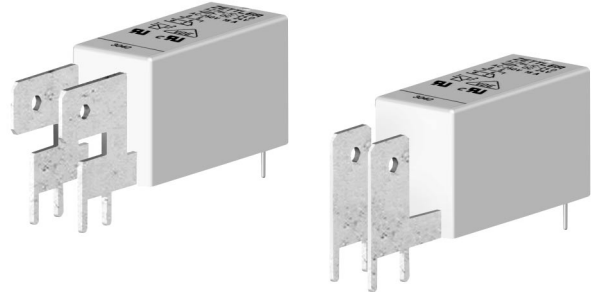


# AZ764F

## 20 AMP HIGH TEMPERATURE MINIATURE POWER RELAY

### FEATURES

- Quick connect Faston and PCB terminals
- Ambient Temperature up to 105°C (221°F)
- Dielectric strength 5000 Vrms
- Low height: 15.7 mm
- 20 Amp switching (18 A over Faston)
- AC and DC (standard and sensitive) coils
- Isolation spacing greater than 10 mm
- Proof tracking index (PTI/CTI) 250
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1)  
EN 60335-1 (VDE 0700, part 1)
- UL, CUR pending
- VDE file 40012572 (sensitive DC coils only)



### CONTACTS

|                               |  |
|-------------------------------|--|
| <b>Arrangement</b>            | SPST (1 Form A)  |
| <b>Ratings</b>                | Resistive load:<br>Max. switched power: 600 W or 5000 VA<br>Max. switched current: 20 A<br>Max. switched voltage: 300 VDC* or 400 VAC<br>* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |
| <b>Rated Load<br/>UL, CUR</b> | 20 A at 250 VAC general use  |
| <b>VDE</b>                    | 10 A at 250 VAC resistive, 105 °C, 150k cycles<br>16 A at 250 VAC resistive, 105 °C, 10k cycles<br>20 A at 250 VAC resistive, 85 °C, 10k cycles  |
| <b>Material</b>               | Silver tin oxide   |
| <b>Resistance</b>             | < 100 milliohms initially  |

### GENERAL DATA

|  |   |
|--|---|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b><br>(ohmic load at<br>105°C / 221°F) | Minimum operations<br>3 x 10 <sup>7</sup><br>1.7 x 10 <sup>5</sup> at 10 A 230 VAC res.<br>2.8 x 10 <sup>5</sup> at 8 A 230 VAC res.<br>3.2 x 10 <sup>5</sup> at 6 A 230 VAC res.             |
| <b>Operate Time (typical)</b>  | 7 ms at nominal coil voltage  |
| <b>Release Time (typical)</b>  | 3 ms at nominal coil voltage<br>(with no coil suppression)  |
| <b>Dielectric Strength</b><br>(at sea level for 1 min.)  | 5000 Vrms coil to contact<br>1000 Vrms between open contacts  |
| <b>Insulation<br/>Resistance</b>   | 10 <sup>5</sup> megohms min. at 500 VDC,<br>20°C, 50% RH  |
| <b>Insulation</b><br>(according to<br>DIN VDE 0110,<br>IEC 60664-1)                                  | C250<br>Overvoltage category: III<br>Pollution degree: 3<br>Nominal voltage: 250 VAC  |
| <b>Dropout</b> DC coils<br>AC coils  | Greater than 10% of nominal coil voltage<br>Greater than 15% of nominal coil voltage  |
| <b>Ambient Temperature<br/>Operating</b>   | At nominal coil voltage<br>-40°C (-40°F) to 105°C (221°F) - DC sens.<br>-40°C (-40°F) to 85°C (185°F) - DC std.<br>-40°C (-40°F) to 70°C (158°F) - AC coils<br>-40°C (-40°F) to 105°C (221°F) |
| <b>Storage</b>   |   |
| <b>Vibration</b>   | 20 g at 30...500 Hz   |
| <b>Shock</b>   | 30 g  |
| <b>Enclosure</b>   | P.B.T. polyester, UL-94 : V0  |
| <b>Terminals</b>   | Tinned copper alloy<br>P.C. and quick connect   |
| <b>Max. Solder Temp.</b>   | 270°C (518°F)   |
| <b>Max. Solder Time</b>  | 5 seconds   |
| <b>Weight</b>  | 16 grams  |
| <b>Packing unit in pcs</b>   | 12 per carton tube / 600 per carton box   |

### COIL

|  |  |
|--|--|
| <b>Power</b>                                     |  |
| <b>At Pickup Voltage<br/>(typical)</b>           | 140 mW (sensitive DC coil)<br>200 mW (standard DC coil)<br>.422 VA (AC coil)               |
| <b>Max. Continuous<br/>Dissipation</b>           | 2.2 W at 20°C (68°F) ambient (DC coil)<br>1.7 VA at 20°C (68°F) ambient (AC coil)          |
| <b>Temperature Rise<br/>(at nominal voltage)</b> | 16°C (29°F) (sensitive DC coil)<br>26°C (47°F) (standard DC coil)<br>26°C (47°F) (AC coil) |
| <b>Max. Temperature</b>                          | 155°C (311°F)  |

### NOTES

|   |
|---|
| 1. All values at 20°C (68°F).   |
| 2. Relay may pull in with less than "Must Operate" value.   |
| 3. Specifications subject to change without notice.   |
| 4. Allow suitable slack on leads when wiring and do not subject the terminals to excessive force. |

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# AZ764F

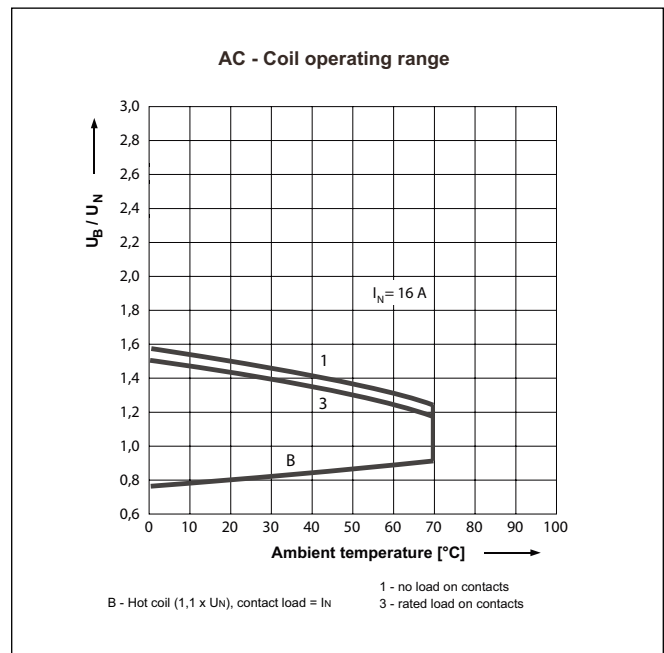
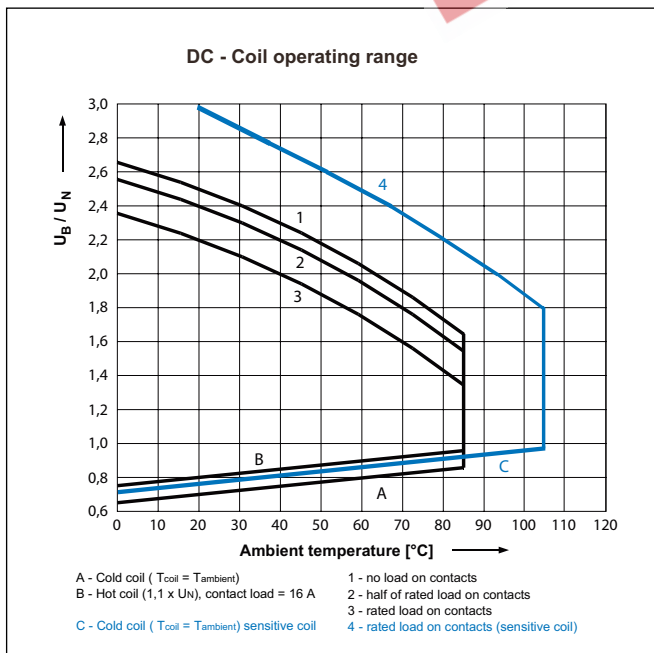
## RELAY ORDERING DATA

| COIL SPECIFICATIONS - DC COIL |                  |                     |                                | ORDER NUMBER*    |
|-------------------------------|------------------|---------------------|--------------------------------|------------------|
| Nominal Coil VDC              | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ |                  |
| 5                             | 3.5              | 12.7                | 60                             | AZ764FH-1AE-5D   |
| 6                             | 4.2              | 15.3                | 90                             | AZ764FH-1AE-6D   |
| 9                             | 6.3              | 22.9                | 200                            | AZ764FH-1AE-9D   |
| 12                            | 8.4              | 30.6                | 360                            | AZ764FH-1AE-12D  |
| 18                            | 12.6             | 45.9                | 710                            | AZ764FH-1AE-18D  |
| 24                            | 16.8             | 61.2                | 1,440                          | AZ764FH-1AE-24D  |
| 48                            | 33.6             | 122.0               | 5,700                          | AZ764FH-1AE-48D  |
| 60                            | 42.0             | 153.0               | 7,500                          | AZ764FH-1AE-60D  |
| 110                           | 77.0             | 280.0               | 25,200                         | AZ764FH-1AE-110D |

| COIL SPECIFICATIONS - DC COIL SENSITIVE VERSION |                  |                     |                                | ORDER NUMBER*    |
|---|------------------|---------------------|--------------------------------|------------------|
| Nominal Coil VDC                                | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ |                  |
| 5   | 3.75             | 15.0                | 102                            | AZ764FH-1AE-5DS  |
| 6   | 4.5              | 18.0                | 144                            | AZ764FH-1AE-6DS  |
| 9   | 6.75             | 27.0                | 330                            | AZ764FH-1AE-9DS  |
| 10  | 7.5              | 30.0                | 400                            | AZ764FH-1AE-10DS |
| 12  | 9.0              | 36.0                | 580                            | AZ764FH-1AE-12DS |
| 24  | 18.0             | 72.0                | 2,300                          | AZ764FH-1AE-24DS |

| COIL SPECIFICATIONS - AC COIL |                  |                     |                               |                                | ORDER NUMBER*    |
|-------------------------------|------------------|---------------------|-------------------------------|--------------------------------|------------------|
| Nominal Coil VAC              | Must Operate VAC | Max. Continuous VAC | Nominal Current mA $\pm 10\%$ | Coil Resistance Ohm $\pm 10\%$ |                  |
| 12                            | 9.0              | 18.0                | 63.0                          | 100                            | AZ764FH-1AE-12A  |
| 24                            | 18.0             | 36.0                | 31.3                          | 400                            | AZ764FH-1AE-24A  |
| 115                           | 86.3             | 172.5               | 6.5                           | 9,600                          | AZ764FH-1AE-115A |
| 230                           | 172.5            | 345.0               | 3.3                           | 38,500                         | AZ764FH-1AE-230A |
| 240                           | 180.0            | 360.0               | 3.1                           | 42,500                         | AZ764FH-1AE-240A |

\* Substitute "FV" for "FH" for vertical quick connect terminals.



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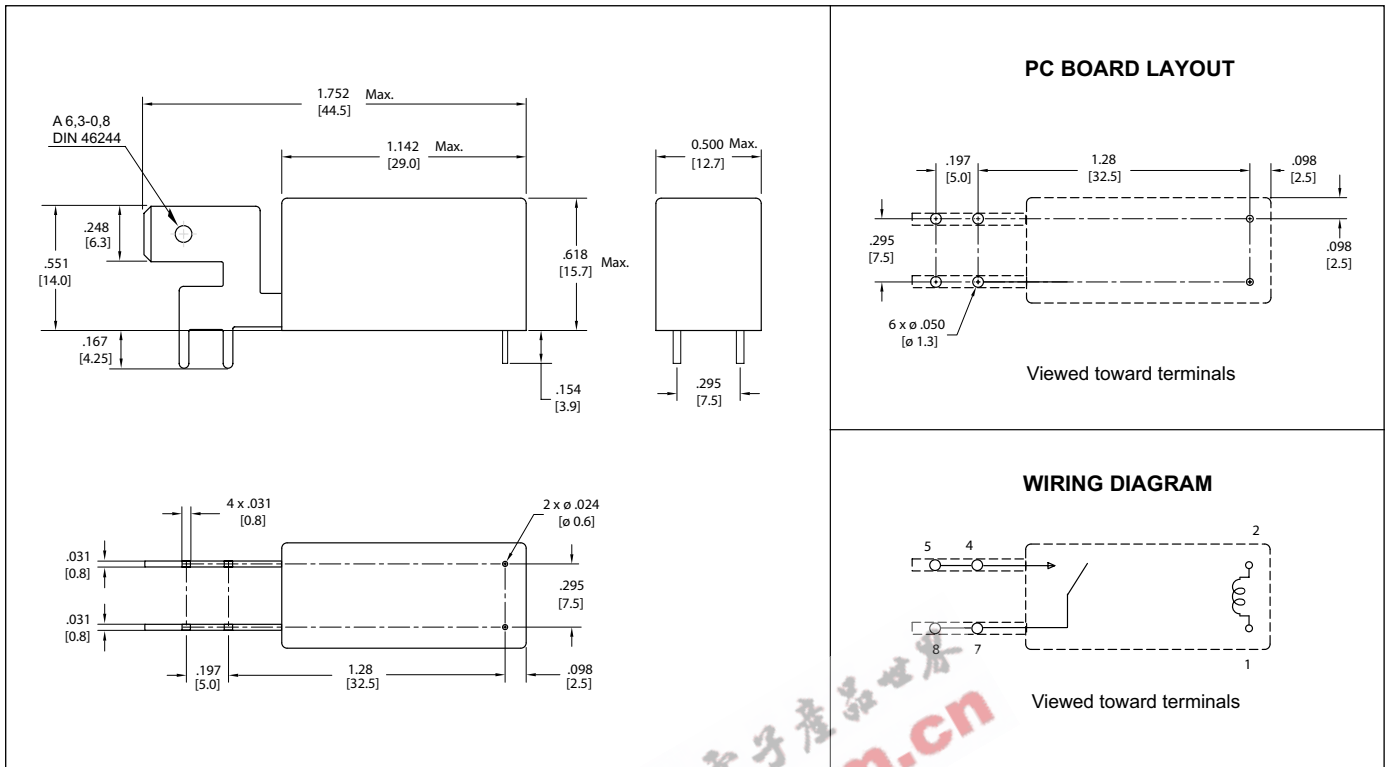
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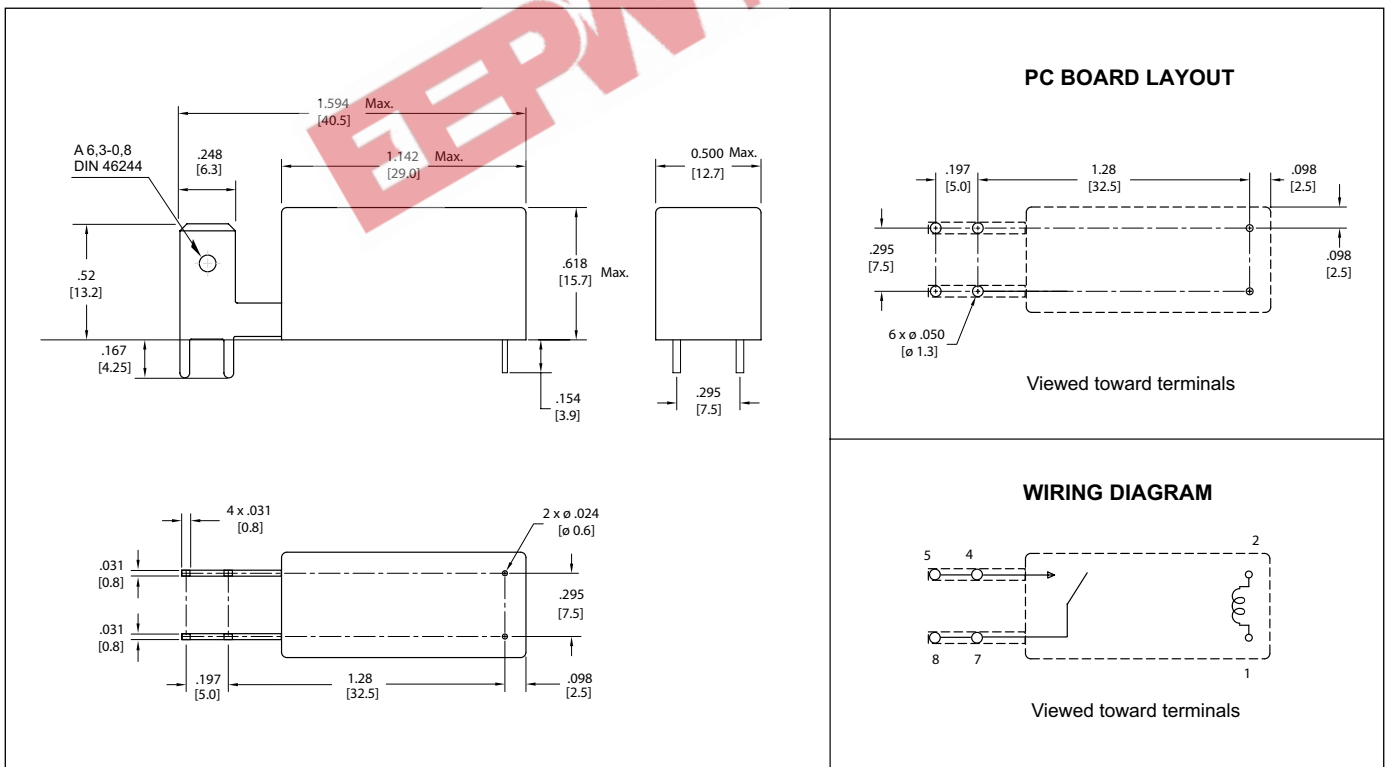
2005-08-22

# AZ764F

## MECHANICAL DATA AZ764FH - HORIZONTAL VERSION



## MECHANICAL DATA AZ764FV - VERTICAL VERSION



Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

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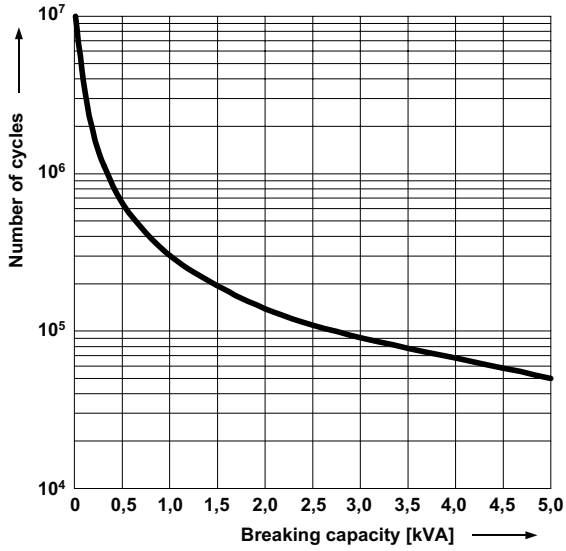
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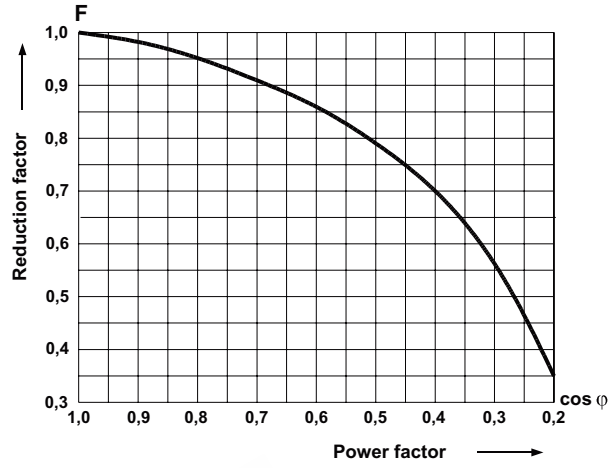
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# AZ764F

Electrical life at 250 VAC, resistive load

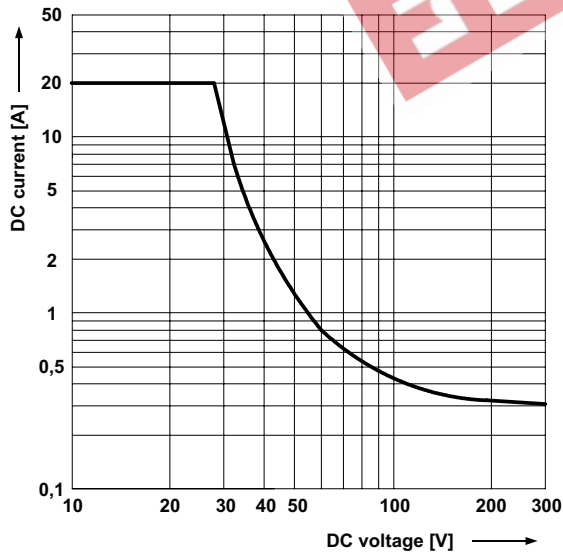


Electrical life reduction factor at inductive AC load



$$N_{\cos \varphi} = N \times F$$

Max. DC resistive load breaking capacity



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