

# AZ978

## 20 AMP MINIATURE PCB POWER RELAY FOR AUTOMOTIVE USE

### FEATURES

- Up to 20 Amp switching capability in a compact size
- Coils to 24 VDC
- Small footprint
- 1 Form A and C contacts available
- Vibration and shock resistant
- QS9000, ISO9001, ISO14000
- Cost effective
- Designed for high in-rush applications



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load: Max. switched power: 280 W Max. switched voltage: 20 A Max. switched voltage: 150 VDC*  Rate load: 20 A at 14 VDC 1 Form A: 20 A at 12 VDC 1 Form C: 20 A (N.O.)/10 A (N.C.) at 12 VDC  * If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 50 milliohms initially (6V, 1 A voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	534 mW (Standard)
<b>Max. Continuous Dissipation</b>	2.6 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	60°C (108°F) at nominal coil voltage
<b>Max Temperature</b>	160°C (320°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.

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>6</sup> 1 x 10 <sup>5</sup> at 20 A 14 VDC Res.
<b>Operate Time (max.)</b>	10 ms max. at nominal coil voltage
<b>Release Time (max.)</b>	7 ms max. at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> <b>(at sea level for 1 min.)</b>	1000 VDC coil to contact 500 VDC between open contacts
<b>Insulation Resistance</b>	100 megohm min. at 20°C, 500 VDC 50% RH
<b>Dropout</b>	Greater than 8.3% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage -40°C (-40°F) to 115°C (239°F) -40°C (-40°F) to 155°C (311°F)
<b>Vibration</b>	0.062" DA at 10-55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max Solder Time</b>	5 seconds
<b>Max Solvent Temp.</b>	80°C (176°F)
<b>Max Immersion Time</b>	30 Seconds
<b>Weight</b>	16 grams

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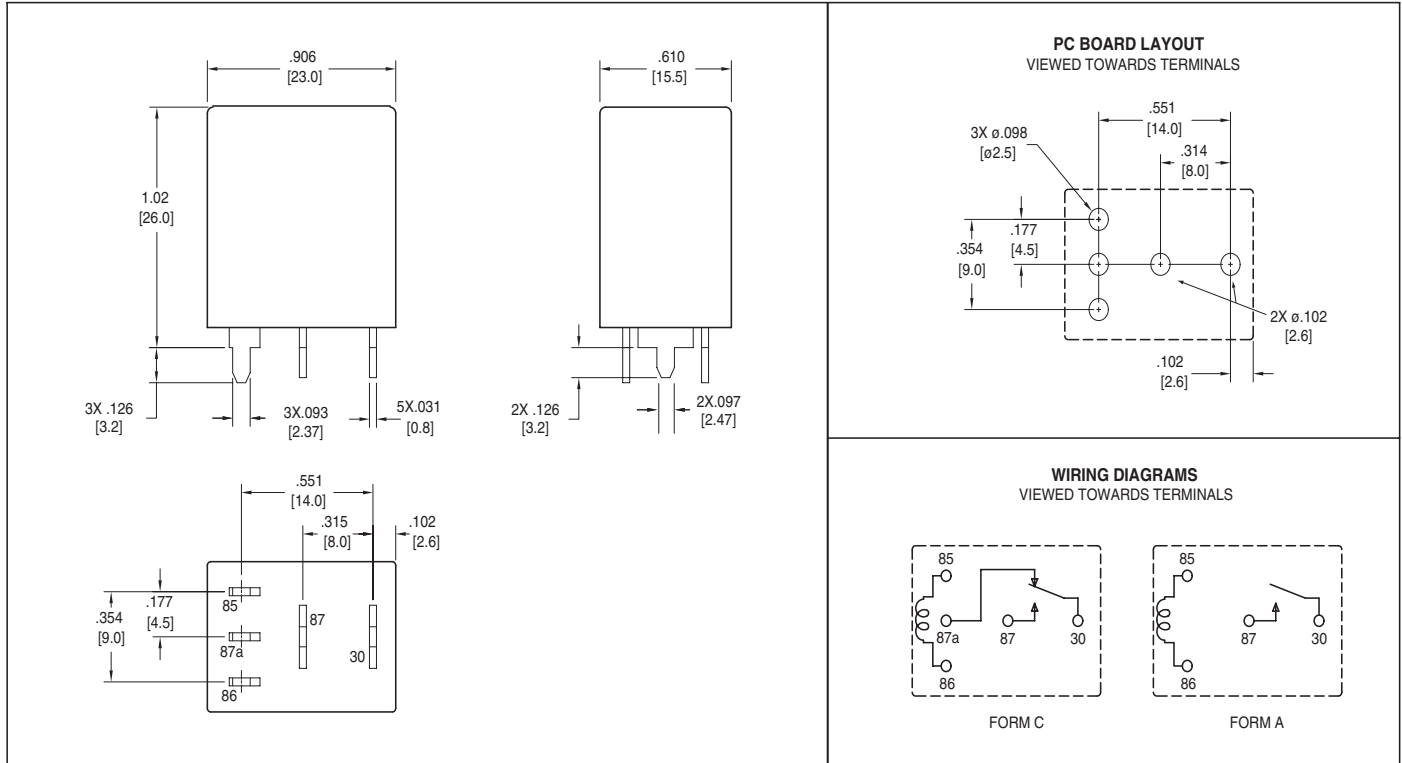
## RELAY ORDERING DATA

STANDARD RELAYS				ORDER NUMBER*	
COIL SPECIFICATIONS				Form A (SPST)	Form C (SPDT)
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$		
6	3.6	7.8	25	AZ978-1A-6D	AZ978-1C-6D
12	7.2	15.6	97	AZ978-1A-12D	AZ978-1C-12D
24	14.4	31.2	384	AZ978-1A-24D	AZ978-1C-24D

SENSITIVE RELAYS				ORDER NUMBER*	
COIL SPECIFICATIONS				Form A (SPST)	Form C (SPDT)
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$		
6	3.6	7.8	32	AZ978-1A-6DS	AZ978-1C-6DS
12	7.2	15.6	123	AZ978-1A-12DS	AZ978-1C-12DS
24	14.4	31.2	483	AZ978-1A-24DS	AZ978-1C-24DS

\*Add suffix "R" for resistor in parallel with coil. Resistor values: 6V: 180 ohms, 12V: 680 ohms, 24V: 2700 ohms.

## MECHANICAL DATA



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