

AZ9861

40 AMP 280-ISO AUTOMOTIVE RELAY



FEATURES

- 40Amp contact rating
- High operating temperature (125°C)
- SPST (1 Form A), SPDT (1 Form C)
- Available with shrouded weatherproof cover
- Coil suppression available
- ISO/TS 16949, ISO9001, ISO 14000

CONTACTS

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 420 W (SPST) 420 W (N.O.) 240W (N.C.) Max. switched current: 40 A (SPST) (Continuous 125°C, 1Hr) 40 A (N.O.) 30 A (N.C.) *See Contact Data Table for additional ratings. Max. switched voltage: 40 VDC *Note: If switching voltage is greater than 30VDC, special precautions must be taken. Please contact the factory.
Material	Silver tin oxide
Resistance	< 100 milliohms initially (6 V, 1 A voltage drop method)

COIL

Power	
At Pickup Voltage (typical)	0.58 W
Max. Continuous Dissipation	3.7 W at 20°C (68°F)
Temperature Rise	52°C (94°F) at nominal coil voltage
Temperature	Max. 180°C (356°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

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 35 A 14 VDC Res.
Operate Time (max.)	6 ms at nominal coil voltage
Release Time (max.)	3 ms at nominal coil voltage
Dielectric Strength (at sea level for 1 min.)	500 Vrms coil to contact 500 Vrms contact to contact
Insulation Resistance	100 megohms min. at 500 VDC, 20°C 50% RH
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating Storage	-55°C (-67°F) to 125°C (257°F) -55°C (-67°F) to 155°C (311°F)
Vibration	10-1000Hz 19.8m/s ²
Shock	1000 m/s ²
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy 0.110 Quick Connect Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force.
Weight	20 grams (41 grams shrouded version)

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AZ9861

RELAY ORDERING DATA

AZ9861-1C-12DC2R1

- Blank - Standard no diode, no resistor
- R1 - 680 Ohm, ½ w resistor in parallel with 12 V coil
2700 Ohm, ½ w resistor in parallel with 24 V coil
- D1 - 1A7 diode in parallel with coil, anode on #86 terminal
- D2 - 1A7 diode in parallel with coil, cathode on #86 terminal
- D3 - 1A4 diode in parallel with coil, anode on #86 terminal
- D4 - 1A4 diode in parallel with coil, cathode on #86 terminal
- C1 - Plastic dust cover unsealed
- C2 - Plastic dust cover sealed
- C3 - Plastic dust cover, shrouded, steel mounting bracket, unsealed
- C4 - Plastic dust cover, shrouded, steel mounting bracket, sealed
- 12D - 12 volt coil
24D - 24 volt coil
- 1A - SPNO Single pole normally open
1C - SPDT Single pole double throw
- Basic series designation - AZ9861

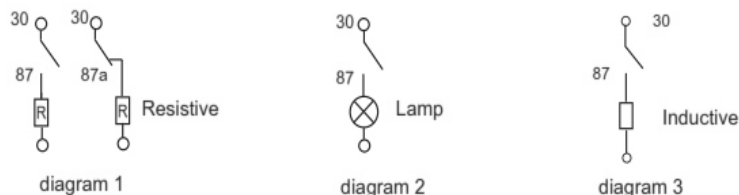
RELAY ORDERING DATA

COIL SPECIFICATIONS			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance ± 10%
12	7.2	21.0	124
24	14.4	42.0	360

CONTACT DATA ²⁾

Load voltage	Load type		Load current A			On/Off ratio		Electrical endurance OPS	Contact material	Load wiring diagram ¹⁾	Ambient temp.
			1C		1A	On s	Off s				
			NO	NC	NO						
13.5VDC	Resistive	Make	35	20	35	2	2	1×10 ⁵	AgSnO ₂	See diagram 1	23°C
		Break	35	20	35						
	Lamp	Make	150	--	150	2	2	1×10 ⁵	AgSnO ₂	See diagram 2	
		Break	30	--	30						
	Inductive	Make	80	--	80	2	2	1×10 ⁵	AgSnO ₂	See diagram 3	
		Break	33	--	33						

1.) The load wiring diagrams are listed below (Ratings of NO, NC are tested based on different samples separately):



2.) Loads mentioned in this chart are for relay with no parallel diode or Zener diode.

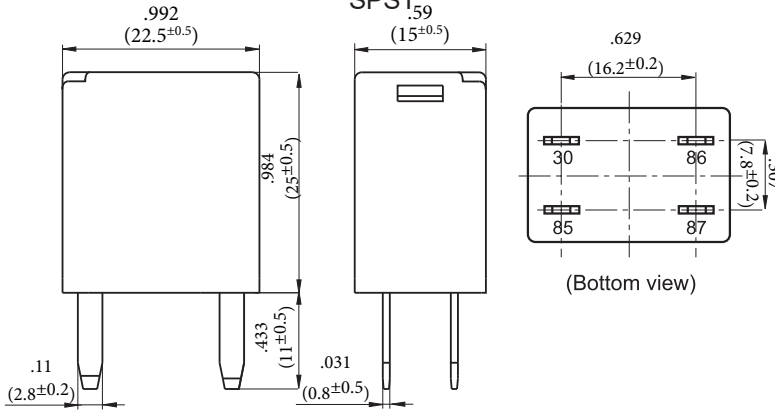
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MECHANICAL DATA

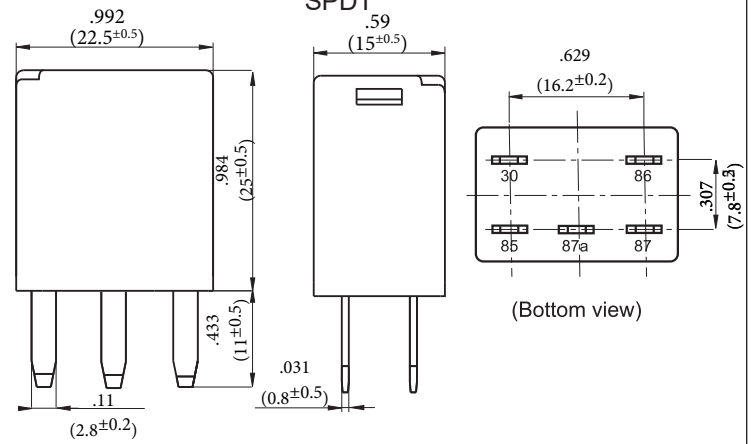
Outline Dimensions
Versions C1 & C2

SPST_{.59}

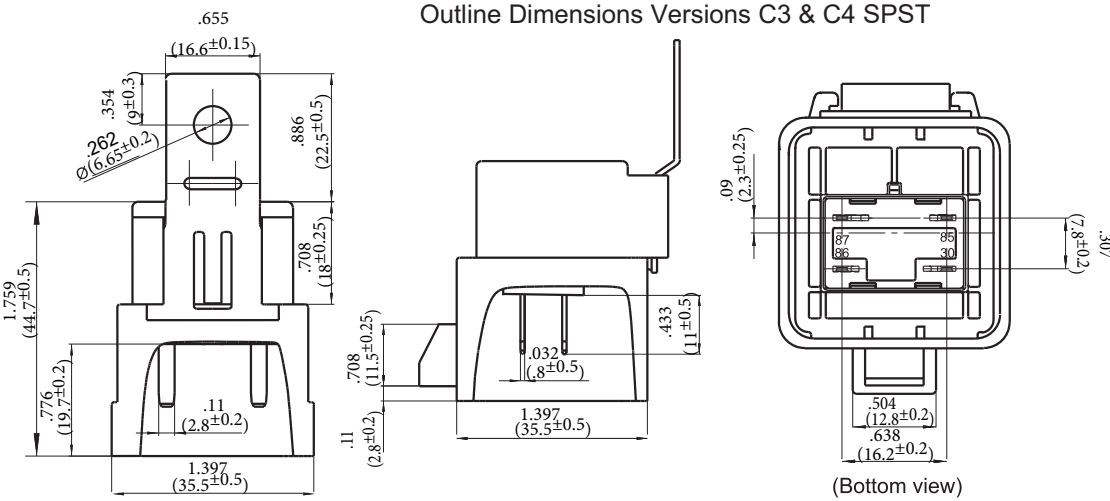


Outline Dimensions
Versions C1 & C2

SPDT_{.59}

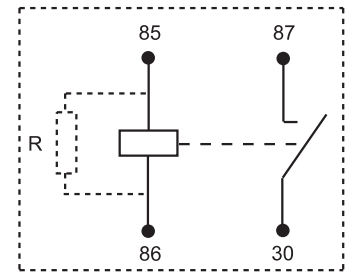


Outline Dimensions Versions C3 & C4 SPST

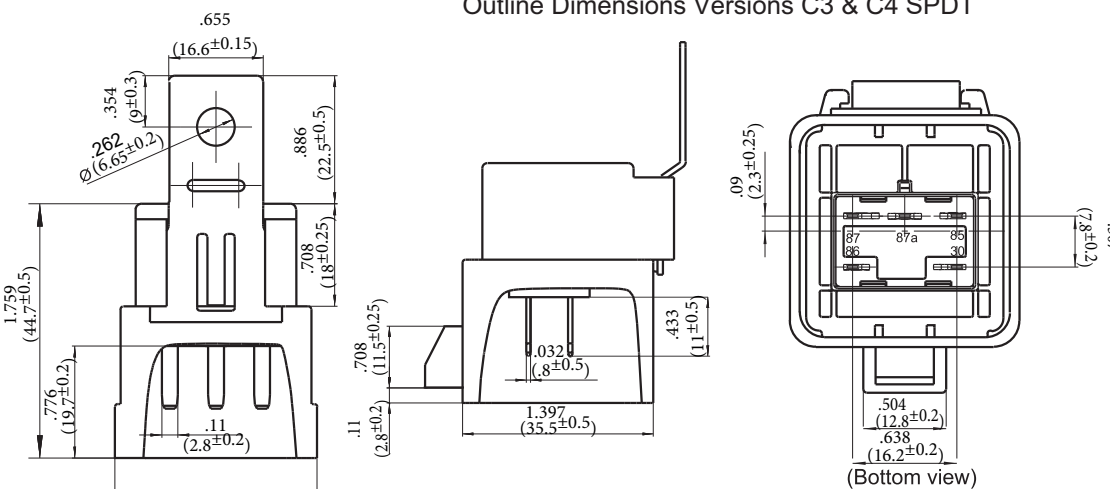


Wiring Diagram

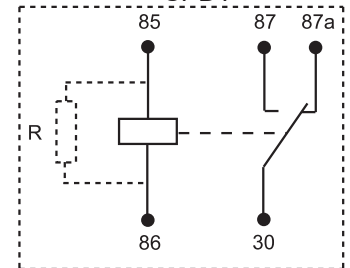
SPST



Outline Dimensions Versions C3 & C4 SPDT



SPDT



Outline Dimensions

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

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