

40 AMP 280-ISO AUTOMOTIVE RELAY

FEATURES

- 40 Amp 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: 560 W (SPST) 560 W (N.O.) 420 W (N.C.) Max. switched current: 40 A (SPST) 40 A (N.O.) 30 A (N.C.) *See Contact Data Table for additional ratings. Max. switched voltage: 75 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	Minimum operations
Mechanical	1 x 10 ⁷
Electrical	1 x 10 ⁵ at 40 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	-55°C (-67°F) to 125°C (257°F)
Storage	-55°C (-67°F) to 155°C (311°F)
Vibration	1.27mm DA 10-40 Hz 5 g 40-70 Hz 0.5mm DA 70-100 Hz 10 g 100-500 Hz
Shock	196 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	28 grams (37 grams shrouded version)

RELAY ORDERING DATA

COIL SPECIFICATIONS			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$
12	7.2	21.0	90
24	14.4	42.0	360

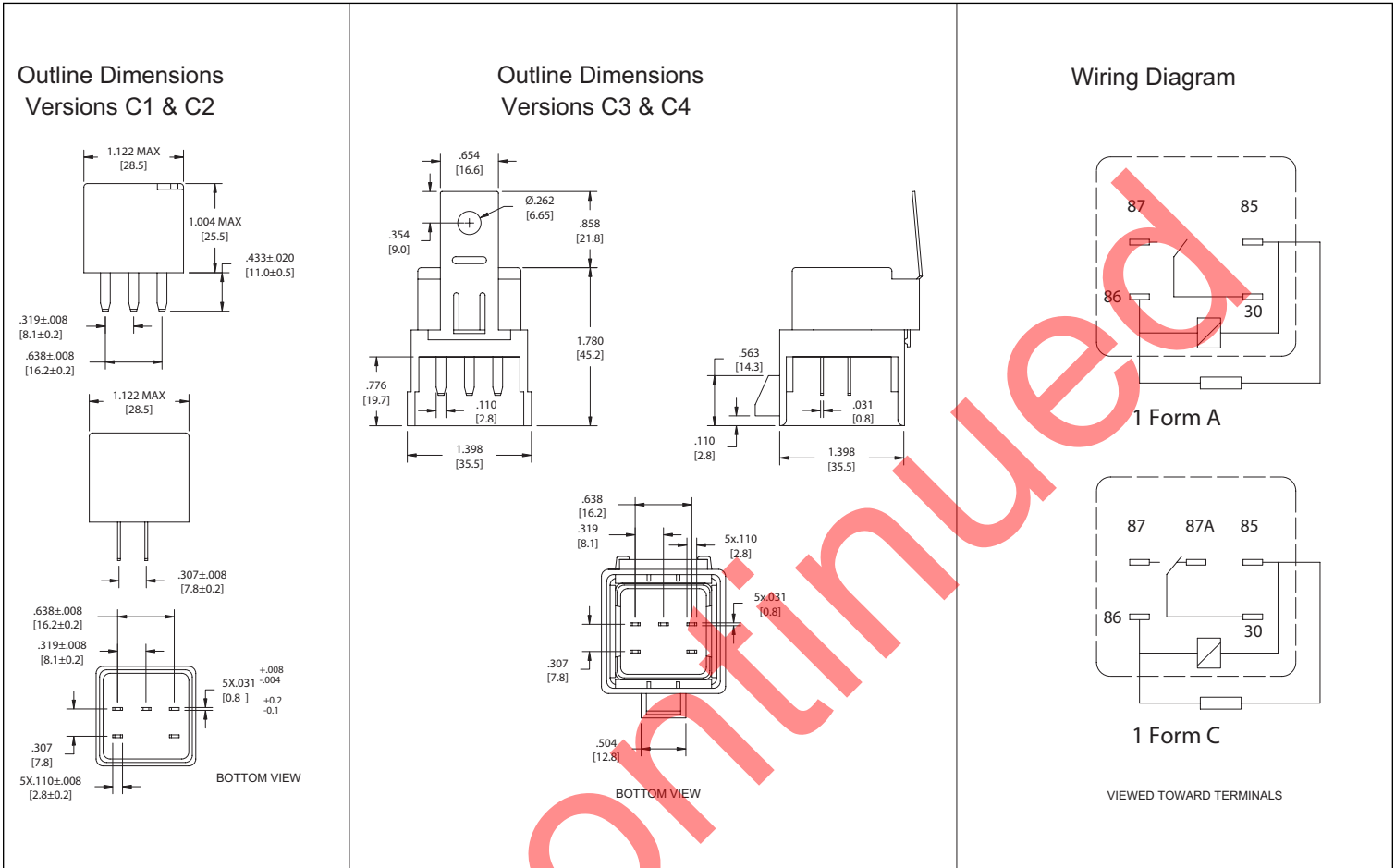
RELAY ORDERING DATA

AZ986-1C-12DC2R1

- Blank - Standard no diode, no resistor
- R1 - 180 Ohm, ½ w resistor in parallel with 6 V coil
680 Ohm, ½ w resistor in parallel with 12 V coil
2700 Ohm ½ w resistor in parallel with 24 V coil
- R2 - 220 Ohm, ½ w resistor in parallel with 6 V coil
820 Ohm, ½ w resistor in parallel with 12 V coil
3200 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
- 24D - 24 volt coil
12D - 12 volt coil
- 1A - SPNO Single pole normally open
1C - SPDT Single pole double throw
- Basic series designation - AZ986

AZ986

MECHANICAL DATA

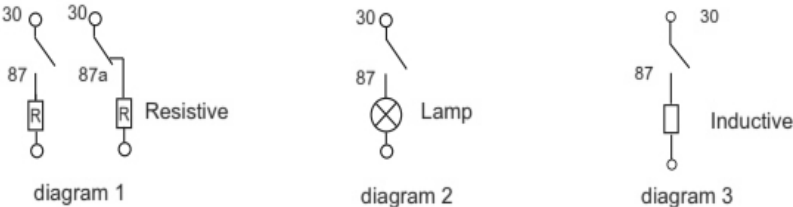


Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm .010"$

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.

AMERICAN ZETTLER, INC.

2/27/13