



FEATURES

- ISO 280 Footprint
- 1A, 1B, and 1C Contact Forms Available
- Shrouded Cover Option
- Contact Switching Capacity up to 120 Amps
- 40 Amps Continuous Carrying Current
- 85°C Operating Temperature
- Internal Diodes or Resistors Available
- RoHS Compliant

CONTACT RATINGS @ 14 VDC

Contact Form	1 Form A, 1 Form B, 1 Form C	
	Normally Open	Normally Closed
Max Switching Current	Make 120 A	Make 90 A
	Break 40 A	Break 30 A
Max Switching Voltage	75 VDC	
Max Continuous Current Standard	40 A	30 A
Max Switching Power	560 Watts	
Minimum Load	0.1 A at 12 VDC	

CONTACT RATINGS @ 28 VDC

Contact Form	1 Form A (SPST) or 1 Form C (SPDT)	
	Normally Open	Normally Closed
Max Switching Current	Make 60 A	Make 45 A
	Break 20 A	Break 30 A
Max Switching Voltage	75 VDC	
Max Continuous Current Standard	20 A	15 A
Max Switching Power	560 Watts	
Minimum Load	0.1 A at 12 VDC	

CHARACTERISTICS

Operate Time	7 msec or less (without coil suppression)
Release Time	5 msec or less (without coil suppression)
Insulation Resistance	100 MΩ min at 500VDC, 50% RH
Dielectric Strength	750 Vrms, 50 Hz 1 min. between coil and contacts 500 Vrms, 50 Hz 1 min. between contacts
Shock Resistance	200 m/s ² 11 ms
Vibration Resistance	DA (double amplitude) 127 mm, 10-40 Hz; 40-70 Hz: 5 g DA (double amplitude) 0.5 mm, 70-100 Hz; 100-500 Hz: 10 g
Drop Resistance	1 Meter Height Drop on Concrete In Final Enclosure
Terminal Strength	10N
Ambient Temperature Range	- 40 to 85°C Operating
Relative Humidity	95% (at 25°C)
Weight	C: 29 grams S3: 40 grams
Solderability	260°C For 5 seconds

CONTACT DATA

Material	AgSnOInO (Silver Tin Indium Oxide)	
Initial Contact Resistance	100 mΩ max at 1 A, 6 VDC	
Service Life	Electrical	1 x 10 ⁵ Operations
	Mechanical	1 x 10 ⁷ Operations

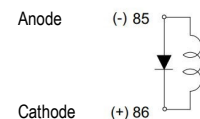
ORDERING INFORMATION

Example:	PC685	-1C	-12	C	-R	-X
Model:	PC685					
Contact Form:	1A, 1B, 1C					
Coil Voltage:	6, 12, 24					
Enclosure:	C: Dust Cover, C3: Shrouded Cover w/ Metal Bracket					
Parallel Component:	Nil: None, D: Diode, R: Resistor					
RoHS Compliant:	-X					

Coil Options

Resistor Values (1/4 Watt):
 6V - 180 ohm
 12V - 680 ohm
 24V - 2,700 ohm
 Diode: 1N4005

Orientation of Optional Diode



*Contact Picker if You Require the Opposite Polarity or a Dual Diode

(1) Flux Tight relays are constructed such that Flux will not enter the relay in an automated soldering process, they are NOT Suitable for water wash cleaning.

Box Quantity: 500; Inner Box: 250

COIL DATA

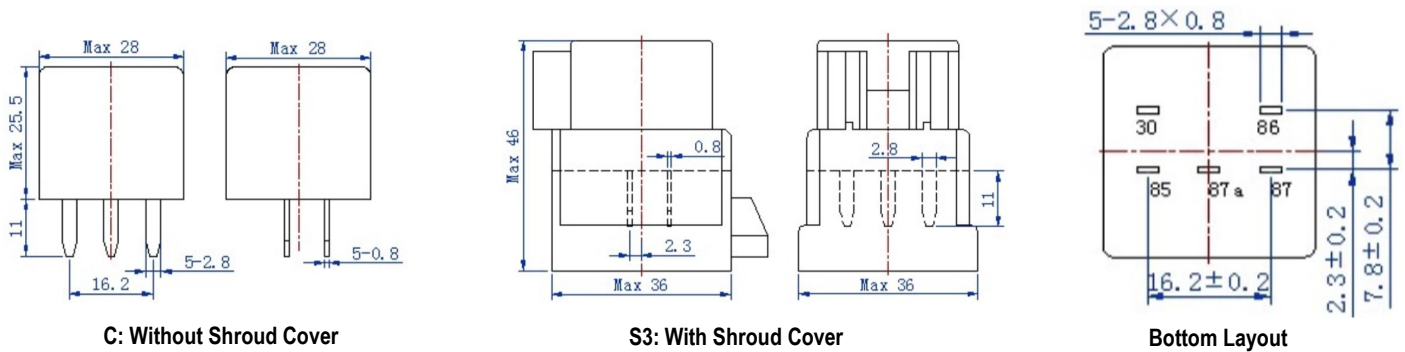
Coil Voltage (VDC)		Must Operate Voltage Max (VDC)	Must Release Voltage Min. (VDC)	Optional Resistor Values (Ohms ± 10%)	Rated Current (mA)		Resistance (Ohms ± 10%)		Coil Power (W)	
Rated	Max				Without Resistor	With Resistor	Without Resistor	With Resistor	Without Resistor	With Resistor
6	7.8	3.9	0.6	180	300	333	20	18	1.8	2
12	15.6	7.8	1.2	680	150	169	80	71		
24	31.2	15.6	2.4	2700	75	84	320	286		

NOTES:

The use of any coil voltage less than the rated voltage will compromise the operation of the relays. Must Operate Voltage is listed for test purposes only and is not to be used as design criteria. Pickup and release voltages are for test purposes only and are not to be used as design criteria. Dimensions are in mm, Inches are listed for reference only.

DIMENSIONS (mm / inches)

In compliance with SAE J1744



Wiring Diagram

