

# 75 Amp Screw Terminal Automotive Relay

# PC775



## FEATURES

- 75 Amp at 14 VDC Continuous Carry Current at 25°C
- Max Switching Current of 150 Amps
- Bifurcated Contacts Standard
  - Tungsten Contacts Connect First Switching the Load
  - Oversized Silver Tin Contacts Carry the Load
- 12 and 24 VDC Versions
- -40°C to 125°C Operating Temperature
- Copper Stud Construction for Efficient Heat Dissipation
- Class H Insulation System (180°C)
- RoHS Compliant

## CONTACT RATINGS 14 VDC at 25°C

Contact Form	1 Form A SPST/NO Bifurcated Normally Open
Max Switching Current	Make 150 A <sup>(1)</sup>
	Break 75 A
Max Continuous Current	75 A @ 25°C
	50 A @ 85°C
	20 A @ 105°C
Max Switching Voltage	32 VDC
Max. Switching Power	1,200 W
Minimum Load	1 A @ 12 VDC

## CONTACT RATINGS 28 VDC at 25°C

Contact Form	1 Form A SPST/NO Bifurcated Normally Open
Max Switching Current	Make 75 A <sup>(1)</sup>
	Break 37.5 A
Max Continuous Current	50 A @ 25°C
	30 A @ 85°C
	10 A @ 105°C
Max Switching Voltage	32 VDC
Max. Switching Power	1,200 W
Minimum Load	1 A @ 24 VDC

## CONTACT DATA

Material	W, AgSnO2	
Initial Contact Resistance	50 mΩ Max @ 0.1 A, 6 VDC	
Service Life	Electrical	1 x 10 <sup>5</sup> Operations
	Mechanical	1 x 10 <sup>6</sup> Operations

<sup>(1)</sup>With current load applied for a maximum of 1 seconds at a maximum duty cycle of 10%

## ORDERING INFORMATION

Model:	PC775	-1A	-24	C	-R	-X
Contact Form:	1A: 1A SPST Bifurcated					
Coil:	6: 6 VDC, 12: 12 VDC, 24: 24 VDC					
Enclosure:	C: Dust Cover IP54 Rated					
Coil Power:	Nil: 2.9 Watts					
Snubber Components:	Nil: None, R: Resistor, D: Diode, D2: Double Diode					
RoHS Compliant:	X: RoHS Compliant					

### Coil Options

Resistor Values:  
6V - 180 ohm  
12V - 680 ohm  
24V - 2,700 ohm  
Diode: 1N4005

## CROSS REFERENCES

<b>TE: V23232</b>
Example: V23232-D0001-X001 crosses to PC775-1A-12C-X
Example: V23232-D0002-X008 crosses to PC775-1A-24C-X
Example: V23232-D0002-X014 crosses to PC775-1A-24C-R-X
<b>BOSCH: 0 332 002 255/168/150/155</b>
Example: 0332002255 crosses to PC775-1A-24C-X
Example: 0332002168 crosses to PC775-1A-12C-R-X
Example: 0332002150 crosses to PC775-1A-12C-X
Example: 0332002155 crosses to PC775-1A-12C-X

## CHARACTERISTICS

Operate Time	7 msec Typical
Release Time	5 msec Typical
Insulation Resistance	100 MΩ Min @ 500VDC
Dielectric Strength	50 Hz 750 V, 1 Min Between Contact and Coil
	50 Hz 500 V, 1 Min Between Contacts
Shock Resistance	147 m/s <sup>2</sup> 11 msec
Vibration Resistance	10-40 Hz Double Amplitude 1.5mm
Terminal Strength	100 N
Power Consumption	2.88 W
Operating Temperature	-40°C to 125°C
Storage Temperature	-40°C to 155°C
Weight	50 grams

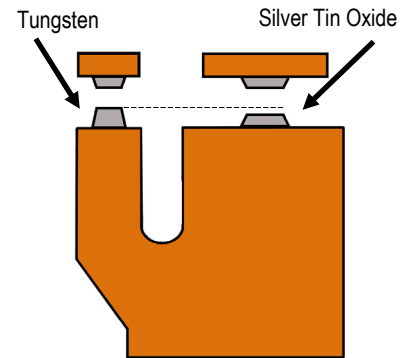
Coil Voltage (VDC)		Resistance (Ohms ± 10%)	Must Operate Voltage Max (VDC)	Must Release Voltage Min. (VDC)	Coil Power (W)
Rated	Max				
6	7.8	12.5	3.9	1.2	2.9
12	15.6	50	7.8	2.4	
24	31.2	200	15.6	4.8	

**NOTES:**

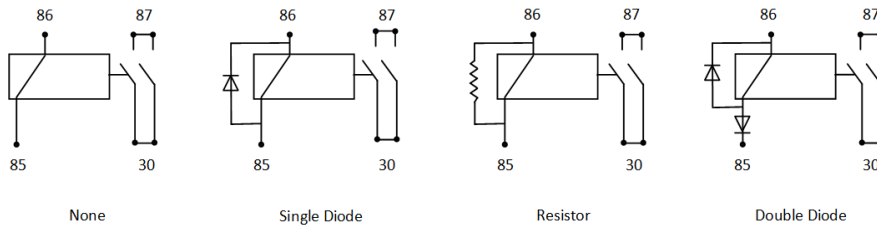
The use of any coil voltage less than the rated voltage will compromise the operation of the relays. Must Operate Voltage is listed for test purposes only and is not to be used as design criteria. Pickup and release voltages are for test purposes only and are not to be used as design criteria. Dimensions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

**Bifurcated Contacts**

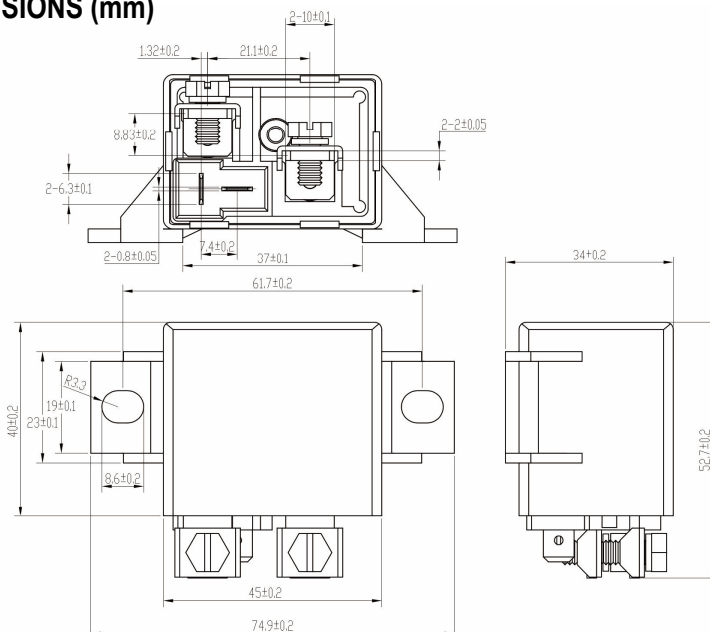
- The goal is to keep the primary over-sized AgSnO2 contacts clean and free from pitting which can result from the high currents generated by inductive loads both during closing and opening of the contacts.
- Tungsten contacts have an extremely low vapor pressure even at high temperatures as are found during the arcing conditions that exist when relay contact open and close. Specifically, Tungsten has excellent arc resistance, good electrical conductivity, low thermal expansion and superior thermal conductivity while being a hard metal.
- Thus the bifurcated (dual) contacts are designs such that the tungsten contacts close first and open last a split second ahead of the Silver Tin Oxide contacts absorbing the high inrush and surge currents.
- The oversized Silver Tin Oxide contacts, which are superior in terms of electrical conductivity and have lower contact resistance, carry the non-arcing load generating less steady state heat.
- The Tungsten contacts close first and open last absorbing the surge currents.



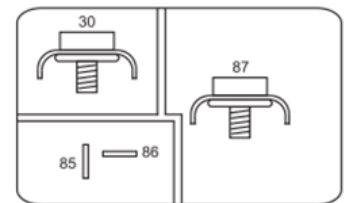
**WIRING DIAGRAMS**



**DIMENSIONS (mm)**



Screws: 2x M5 X 10mm



**Coil Terminal Connectors**

- Delphi 2973781 Merti-Pack 2-Way Female Connector, Black, 56 Series
- TE 180907 FF 250 Receptacle, 2P, Nylon