

Application	Interrupted	Uninterrupted
Thermal Current Rating ( $I_{th}$ )		100A
Intermittent Current Rating:		
30% Duty		185A
40% Duty		160A
50% Duty		140A
60% Duty		130A
70% Duty		120A
Rated Fault Current Breaking Capacity ( $I_{cn}$ ) 5ms Time Constant: (in accordance with UL583*)		
PC100		400A at 48V D.C.
PC100B		400A at 96V D.C.
Rated Fault Current Breaking Capacity ( $I_{cn}$ ) Resistive Load: (in accordance with UL583*)		
PC100		150A at 48V D.C.
PC100B		150A at 96V D.C.
Maximum Recommended Contact Voltages ( $U_e$ ):		
PC100		48V D.C. 60V D.C.
PC100B		96V D.C.
Typical Voltage Drop per pole across New Contacts at 100A		50mV
Mechanical Durability		>3 x 10 <sup>6</sup> Cycles
Coil Voltage Available ( $U_s$ ) (Rectifier board required for A.C.)		From 6 to 130V D.C.
Coil Power Dissipation:		
Highly Intermittent Rated Types		14 - 21 Watts
Intermittently Rated types		10 - 14 Watts
Prolonged Rated Types		7 - 10 Watts
Continuously Rated Types		5 - 7 Watts
Maximum Pull-In Voltage (Coil at 20° C) Guideline:		
Highly Intermittent Rated types (Max 25% Duty Cycle)		60% $U_s$
Intermittently Rated types (Max 70% Duty Cycle)		60% $U_s$
Prolonged Operation (Max 90% Duty Cycle)		60% $U_s$
Continuously Rated Types (100% Duty Cycle)		66% $U_s$
Drop-Out Voltage Range		10 - 25% $U_s$
Typical Pull-In Time		15ms
Typical Drop-Out Time (N/O Contacts to Open):		
Without Suppression		6ms
With Diode Suppression		35ms
With Diode and Resistor (Subject to resistance value)		8 - 20ms
Typical Contact Bounce Period		3ms
Operating Ambient Temperature		- 40°C to + 60°C
Guideline Contactor Weight:		
PC100		192 gms
With Auxiliary		+ 20 gms
With Blowouts		+ 8 gms
<b>Auxiliary Details</b>		
Auxiliary Thermal Current Rating		5A
<b>Auxiliary Contact Switching Capabilities (Resistive Load):</b>		
		5A at 24V D.C.
		1A at 60V D.C.
		0.5A at 120V D.C.
		0.25A at 240V D.C.
<b>Advised Connection Sizes for Maximum Continuous Current</b>		
Circuit Board Tracks		Rated suitable for Application
<b>Key:</b> <span style="color: red;">■</span> = Interrupted <span style="color: blue;">▲</span> = Uninterrupted		
<b>Note:</b> Where applicable values shown are at 20° C		
* Please check our web site for product UL status		

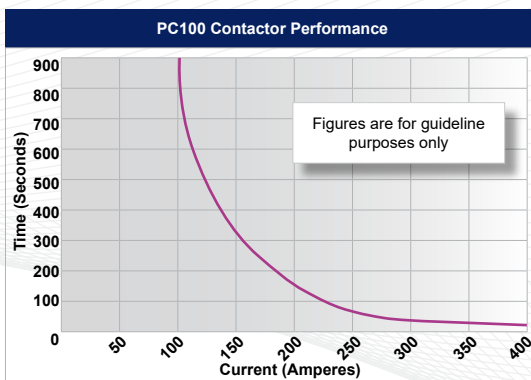
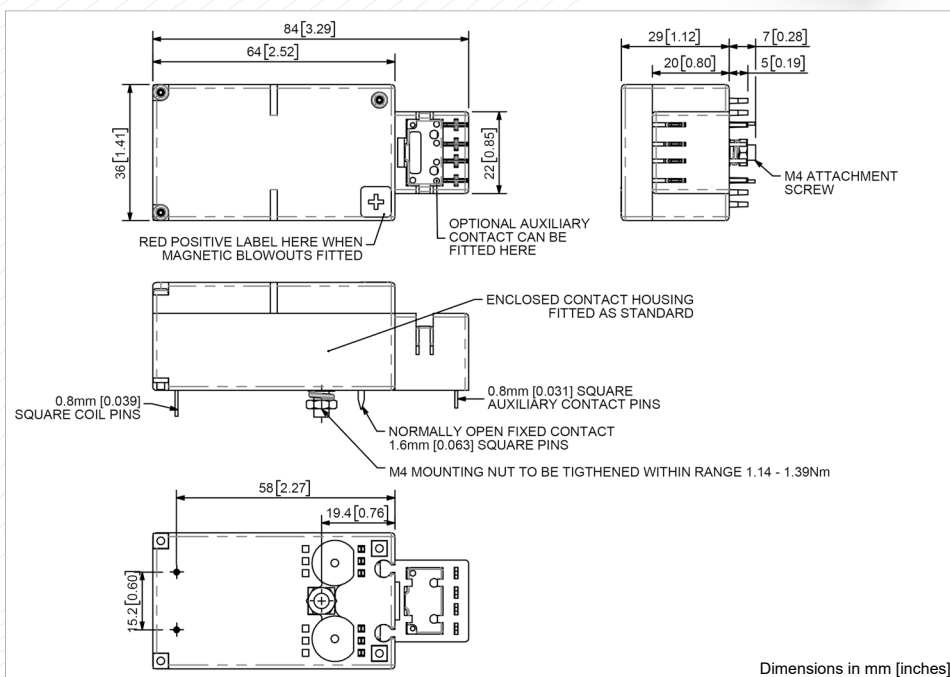
The PC100 is a miniature series single pole single throw contactor designed for printed circuit board mounting. Devised for both interrupted and uninterrupted loads, the PC100 is suitable for switching Resistive, Capacitive and Inductive loads. Typical applications include Telecommunication, UPS and other power conversion systems.

- Interrupted** current - opening and closing on load with frequent switching (results in increased contact resistance).
- Uninterrupted** current - no or infrequent load switching requirements (maintains a lower contact resistance).

The PC100 features single pole double breaking main contacts with silver alloy tips, which are weld resistant, hard wearing and have excellent conductivity. The PC100 can be secured to the printed circuit board by means of an M4 bolt.



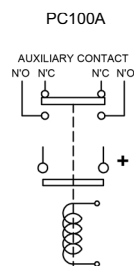
PC100



Contact Performance Key:

— Interrupted & Uninterrupted Current

Connection Diagram



PC100 Available Options

General	Suffix
Auxiliary Contacts	○ A
Auxiliary Contacts - V4	X
Magnetic Blowouts†	○ B
Magnetic Blowouts - High Powered†	X
Armature Cap	X
Mounting Base (see overleaf)	○
Magnetic Latching† (Not fail safe)	○ M
Closed Contact Housing†	○
Environmentally Protected IP66§	○ P
EE Type (Steel Shroud)	X

Contacts

Large Tips	X
Textured Tips	○ T
Silver Plating	X
Washable	○ W

Coil

AC Rectifier Board (Fitted)	X
Coil Suppression†	X
Flying Leads	X
Manual Override Operation	X
M4 Stud Terminals	X
M5 Terminal Board	X
Vacuum Impregnation	X

**Key:** Optional ○ Standard ● Not Available X

† Connections become polarity sensitive

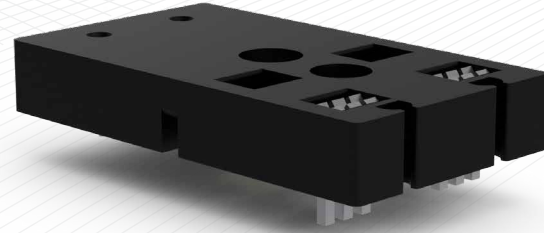
‡ Enclosed top cover standard when blowouts not fitted

§ Not Suitable with Mounting Base

- Performance data provided should be used as a guide only. Some de-rating or variation from figures may be necessary according to application.
- Thermal current ratings stated are dependant upon the size of conductor being used
- For further technical advice email: [technical@albrightinternational.com](mailto:technical@albrightinternational.com)
- Albright reserve the right to change data without prior notice

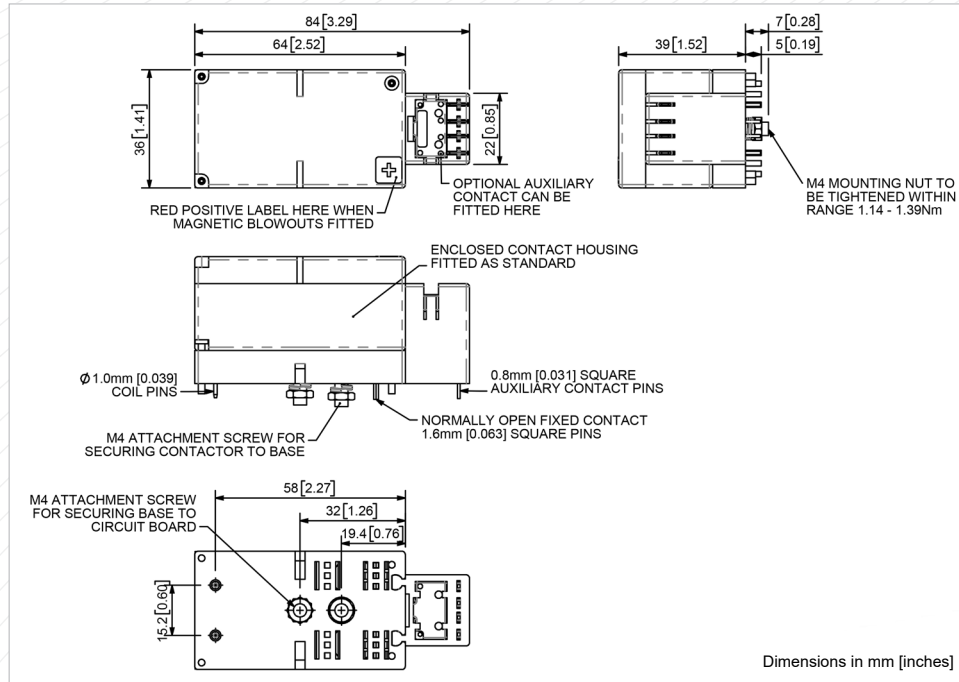
## Mounting Boards

All configurations of the PC100 can be supplied with an optional separate mounting base which can be soldered to the circuit board. After soldering and washing the printed circuit board, the PC contactor can be plugged into the base and secured by means of an M4 nut on the underside of the board. Removal for servicing or replacement is possible by removal of the nut and unplugging the PC contactor from the base.



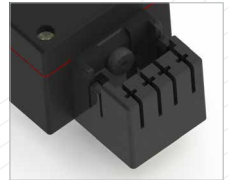
PC100 Mounting Base

## PC100 with Mounting Base Drawing

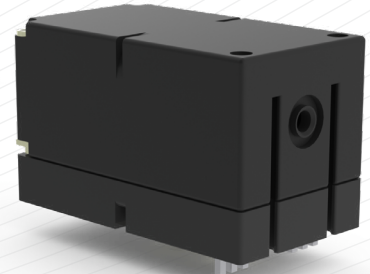


## Washable Contactors and Auxiliary Contacts (PC100AW)

Normally the auxiliary contacts are supplied already fitted to the contactor. However, if the printed circuit boards are to be washed after soldering, the auxiliary contact is supplied separately and the contactor is temporarily sealed with a rubber plug. After washing this is removed and the auxiliary contact can then be fitted.


PC100 showing  
Temporary  
Rubber Plug

**Note:** The PC100AW contactors (with or without optional mounting board) are not therefore fully protected against the environment to the same degree as the PC100P.

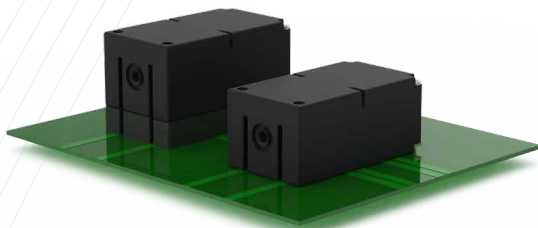


PC100 on Mounting Base

## Installation

To accommodate the PC Contactors, printed circuit boards should be drilled in accordance with the mounting details opposite. Prior to soldering, the PC100 can be secured to the circuit board by means of a M4 bolt which protrudes from the underside of the contactor.

If the full current ratings of the contactors are to be utilised, circuit board tracks should have the appropriate thickness and width of copper. Conventional hand or wave soldering techniques can be used.


PC100 with Mounting Base and PC100  
on Printed Circuit Board

## Mounting Detail

