

PHIMU

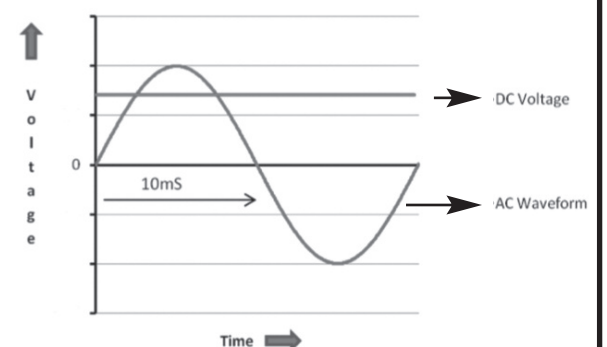
DC Load Break Switches

PHIMU DC Isolators have been specifically designed to switch **Direct Current (DC)** at voltages up to 1000Volts. Their robust design and ability to switch such voltages, at rated current, means that they are ideally suited to be used in the switching of Photovoltaic (PV) systems.

Differences between AC and DC switching:

Alternating Current (AC) rises and falls in value with time, passing through zero volts twice in each cycle. This means that when making or breaking AC current any arc that is created is suppressed as the voltage falls to Zero.

When switching DC the voltage is constant and current does not reduce to zero. Any arc that is created has to be suppressed as quickly as possible so as to reduce the destructive energy within it. There are two methods that can be used to achieve a successful arc quenching, firstly by breaking the arc as quickly as possible and secondly by increasing the length of the arc to the point that it can no longer sustain itself.



The PHIMU DC switch achieves ultra-rapid switching through a 'Snap Action', spring driven, operating mechanism. When the front actuator is rotated energy is accumulated in the mechanism until a point is reached at which the contacts are fired open or closed. This system will operate the switch under load within 5mS thereby reducing the arcing time to a minimum.

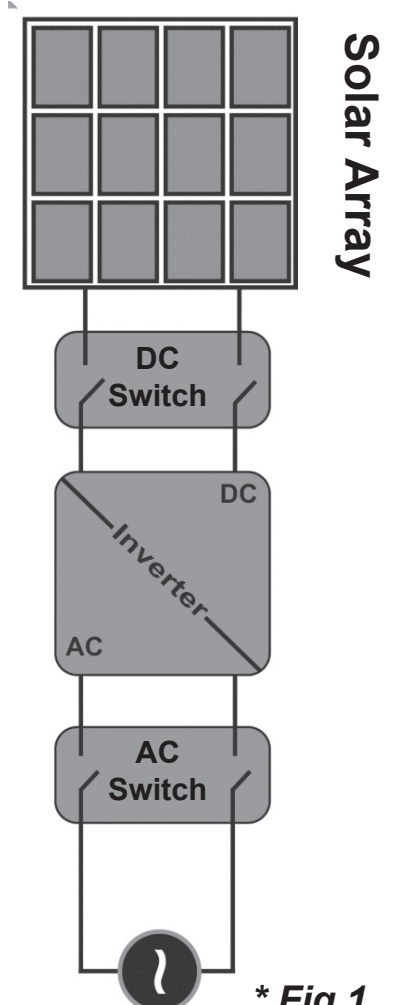
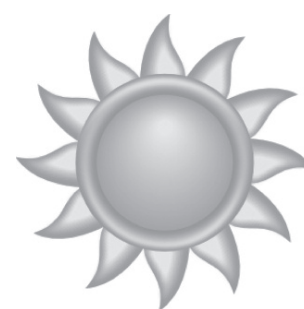
In order to reduce the chances of an arc propagating, the PHIMU switch employs rotary contact technology. This is designed to make and break the circuit through a revolving double break contact assembly that wipes as it moves. The wiping action has the added advantage of keeping the contact faces clean thereby reducing the circuit resistance and increasing the life of the switch.

The PHIMU boxed DC isolators are manufactured from flame retardant polycarbonate plastic resulting in an extremely strong, reliable, safe switch. They are also supplied in an enclosure which gives plenty of space for cabling.

Key Features:

- IP65 rated enclosure
- Ample internal space for easier wiring
- Polycarbonate flame retardant RoHs compliant plastic
- 16A, 25A & 32A all rated up to 1000V DC
- Unique spring loaded switching mechanism for high speed switching (5mS max)
- Knife edge self-cleaning contacts for increased switch life
- Long arc chambers to help rapid arc suppression
- 16mm² rising clamp terminals for easy wiring

All Photo Voltaic installations must have a DC Switch to disconnect the DC/AC inverter from the photovoltaic panels in accordance with **IEC 60364-7-712**. as per * **fig 1**.



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* Fig 1