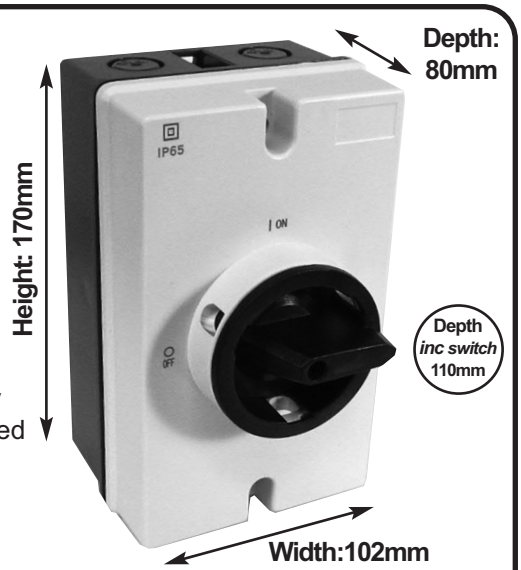
Europa components

4 x **M20** Knockouts

DC **Load Break Switches**

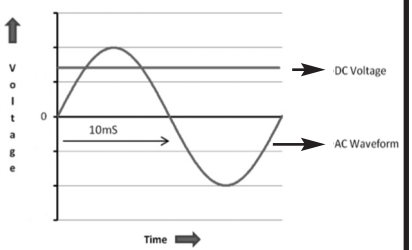


Europa DC Isolators have been specifically designed to switch **Direct Current (DC)** at voltages up to 1000Volts. Their robust design and ability to switch such voltages, at rated current, means that they are ideally suited to be used in the switching of Photovoltaic (PV) systems.

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 Europa 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.

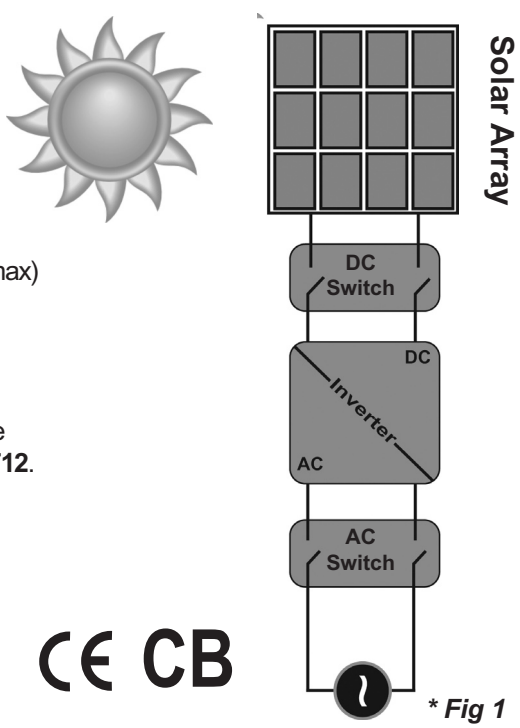
In order to reduce the chances of an arc propagating, the Europa switch employs rotary contact technology. This is designed to make and break the circuit through a revolving double break contact assembly that wipes as it moves. The wiping action has the added advantage of keeping the contact faces clean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

The Europa 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
- 16mm^2 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.***



**** Fig 1***

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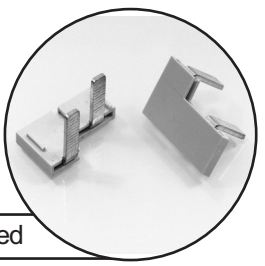
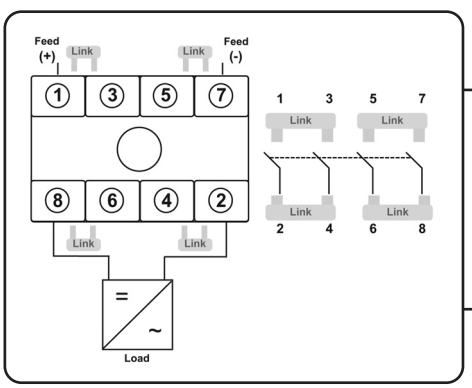
- The switch has 4 separate poles.
- Links can be used to change the way that the poles are connected.
- Poles can be connected in series parallel or a variation of both series and parallel.
- Interconnection of the poles dictates the load that the switch can make and break.
- As the number of poles used increases so the total load switching capacity of the device increases.

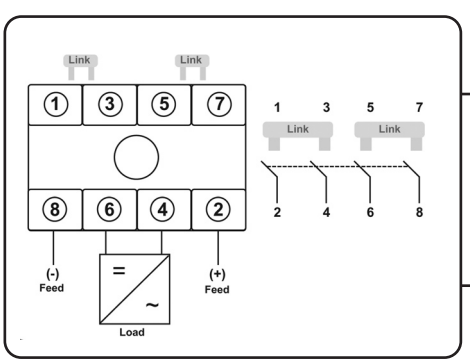


2 insulated **links** are supplied

Electrical **Connection** Options....



2 Poles in parallel connected in series with **2 poles** in parallel	**Ratings (DC21)**	**600V**	**700V**	**800V**	**900V**	**1000V**
	LB164PDC	**29A**	**16A**	**16A**	**13A**	**9A**
	LB254PDC	**45A**	**23A**	**20A**	**16A**	**11A**
	LB324PDC	**50A**	**27A**	**23A**	**20A**	**13A**



4 poles connected in series	**Ratings (DC21)**	**600V**	**700V**	**800V**	**900V**	**1000V**
	LB164PDC	**16A**	**16A**	**16A**	**16A**	**16A**
	LB254PDC	**25A**	**25A**	**25A**	**25A**	**25A**
	LB324PDC	**32A**	**32A**	**32A**	**32A**	**32A**

DC Isolator Switch **Instructions:**

Note:

2 strings can be connected to one switch as long as each string does not rise above 500V

- It is important to ensure that ***all*** electrical connections (including factory connections) are tight, ensure that all terminal screws are tightened firmly.
- It is recommended that for DC, multi-stranded cable, crimp ferules are used to ensure that the wires do not become loose. Loose cables can cause excessive watt loss and generate excessive heat causing severe damage to the switch.
- After installing and wiring the switch carry out the following test: switch on and off several times making sure that a positive snap action can be felt and heard.