

IO 50 SQFlex



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English (US) Installation and operating instructions

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Original installation and operating instructions.

1. Applications

The IO 50 SQFlex switch box is made for solar-powered SQFlex systems and is an on/off switch for the system power supply.

In addition, the IO 50 functions as a connection point for all necessary cables.

By means of the on/off switch, it is possible to

- start/stop the pump
- reset alarms.

All installations must comply with local or National Electrical Codes (NEC article 690, Solar Photovoltaic Systems).

2. Installation



Warning

Before starting any work on the IO 50, make sure that the power supply has been disconnected and that it cannot be accidentally connected.

2.1 Mechanical installation

The IO 50 SQFlex must be placed on a firm and stable surface that fits the box.

2.2 Electrical connection

The electrical connection must be carried out by an authorized electrician in accordance with local regulations.

Two typical wirings are shown on page 14.

- One DC conductor grounded.
This option is intended for permanently mounted solar panels.
Note: For systems with an open-circuit voltage above 50 V, one conductor must be grounded, NEC 690.
- AC connection.
This option is intended for portable AC generators or systems with an open-circuit voltage below 50 VDC.

Position of wire jumpers

Wiring	Place the wire jumpers between		
One DC conductor grounded	1L1 - 3L2	5L3 - 7L4	4T2 - 6T3

Explanation

The jumpers are necessary in order to meet the demands of the circuit breaker due to the complexity of handling DC currents. This means that contact sets in series connection are required.

Warning



Never make any connections in the IO 50 unless the power supply has been disconnected. The IO 50 must be connected in accordance with the rules and standards in force for the application in question.

Use appropriate compression fittings to ensure watertight cable entries.

The IO 50 must be grounded.

The DC supply voltage is stated on the nameplate. Make sure that the IO 50 is suitable for the power supply on which it will be used.

3. Technical data

System voltages

- DC: Maximum 300 V, PE.
- AC: Maximum 254 V, 50/60 Hz, PE.

Note

All four relay contacts must be used to meet the rated DC voltage. See the connection diagrams on page 14.

Maximum current

8.4 A.

Ambient temperature

T_{amb.}: -30 °C to 50 °C.

Enclosure class

NEMA 3R or IP55.

Disposal

This product or parts of it must be disposed of in an environmentally sound way:

1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.

Subject to alterations.

Appendix

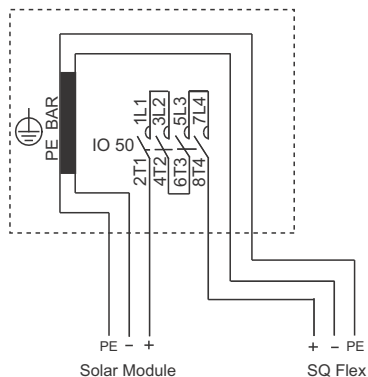


Fig. 1 Connection diagram, one DC conductor grounded

TM04 5893 2710

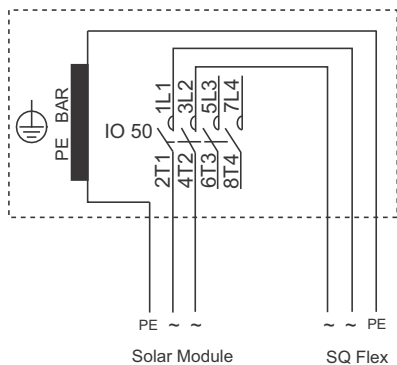


Fig. 2 Connection diagram, AC connection

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Note

Install the jumpers as indicated in section 2.2 Electrical connection.

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