Boutronic

Switch Supply JGA2068

Manual

v1.0a

24-7-2025

Index

Intro

The Switch Supply is a universal power supply on DIN-rail with:

- 1 input 10 – 30 VDC or 10 – 24 VAC.
- 1 adjustable output by use of internal potentiometer, or
  1 adjustable output by use of external potentiometer.

Liability and warranty

Every Switch Supply is checked before sending for correct operation.
Therefore Boutronic has a warranty period of 1 year.

The warranty expires if:

- The defect is caused by gross negligence or by improper installation
- Repairs and/or modifications to the Switch Supply without permission from Boutronic.

Boutronic is in no way liable for damage caused as a direct or indirect consequence by the use of the Switch Supply.

Manual JGA2068 Switch Supply
April 2025

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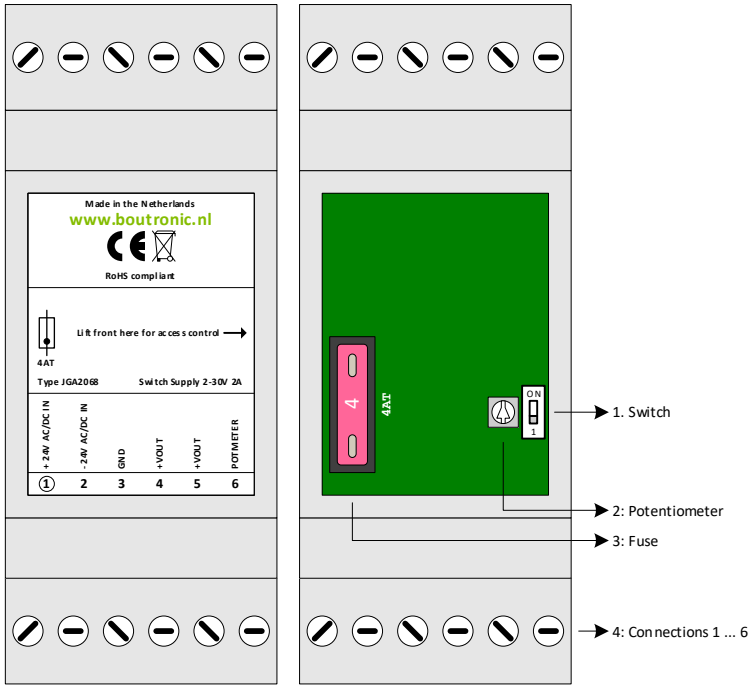
Connections

In the figure below, the Switch Supply has been shown schematically:



Clarification:

Nr	Onderdeel	Omschrijving
1.	Switch	This can be used to switch between the internal potentiometer or external potentiometer. ON: Use the internal potentiometer OFF: Do **NOT** use the internal potentiometer
2.	Potmeter	Internal potentiometer to adjust the voltage of the output.
3.	Fuse	4AT fuse
4.	Connections 1 … 6	connections 1 ... 6

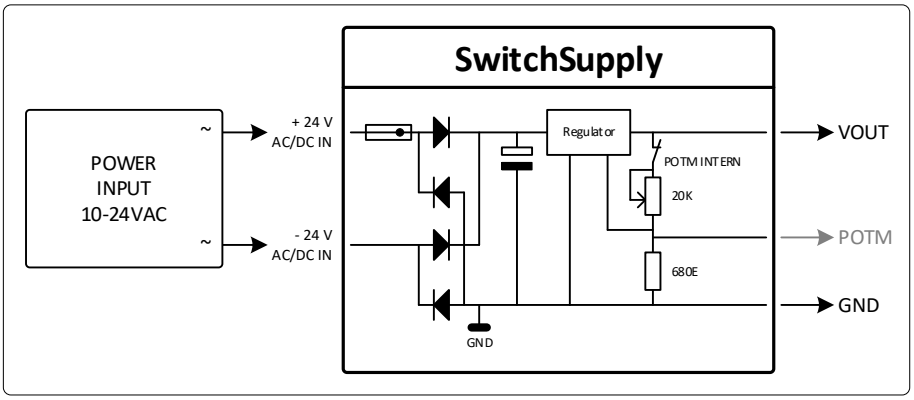
Connections

Nr	Naam	Omschrijving
1.	+ 24V AC/DC IN	Positive connection Power in
2.	- 24V AC/DC IN	Negative connection Power in
3.	GND	Ground connection for power out
4.	+V OUT	Positive connection for power out
5.	+V OUT	Positive connection for power out
6.	Potentiometer	External potentiometer connection to adjust the voltage of power out

Connection example

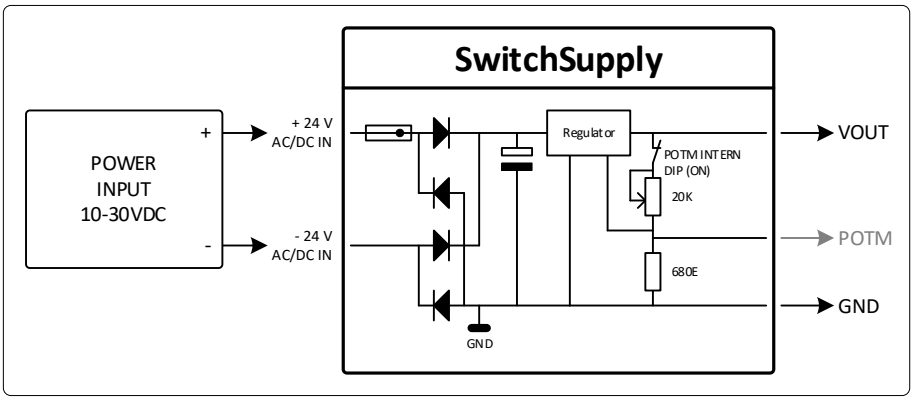
In this chapter a couple of connection examples are given for the Switch Supply.

24 VAC



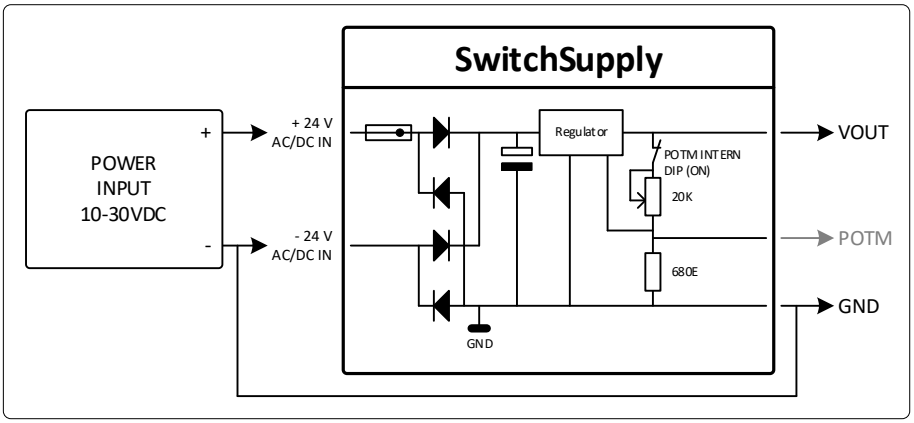
In the example above, an alternating current power supply is connected to the Power in connections. The internal potentiometer is used (DIP on **ON**). The external potentiometer is NOT used.

24 VDC with isolated GND



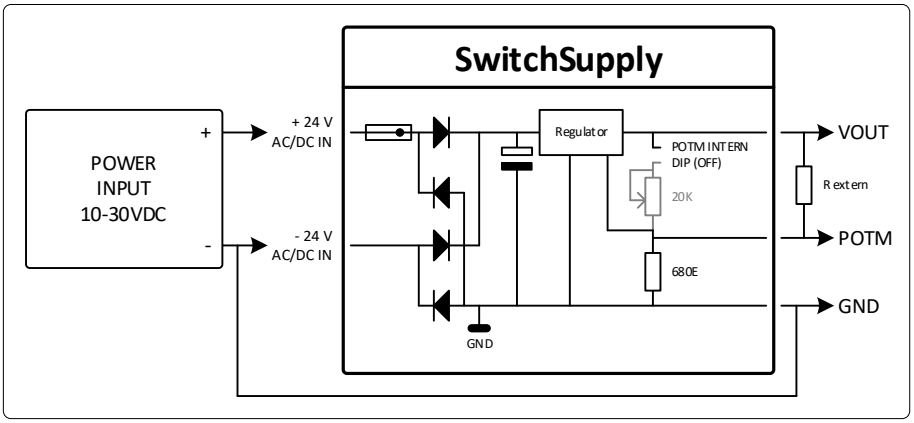
In the example above, a direct current power supply is used and is connected to the Power in connections. The internal potentiometer is used (DIP on **ON**). The external potentiometer is NOT used. The GND of Power in and Power out are isolated from each other.

24 VDC with linked GND



In the example above, a direct current power supply is used and is connected to the Power in connections. The internal potentiometer is used (DIP on **ON**). The external potentiometer is NOT used. The GND of Power in and Power out are linked with each other.

24 VDC with linked GND and resistor or potentiometer.



In the example above, a direct current power supply is used and is connected to the Power in connections. To adjust the voltage of Power out an external potentiometer or resistor (R extern) is used. The internal DIP is set to **OFF**, which disables the internal potentiometer.

Calculating the voltage of power out

The output voltage can be calculated using the formula below:

$$V_{out} = 1{,}23V \times \left(1 + \frac{R_{extern}}{680}\right)$$

If the desired output voltage is known, the resistor R_{extern} can be calculated using the formula below:

$$R_{extern} = 680 \times \left(\frac{V_{out}}{1{,}23} - 1\right)$$

Remark:

The internal resistor value of 680Ω can vary slightly, always be sure to measure the output voltage.

Technical specifications

General

Description	Value	Unit	Remarks
Measurements	90 x 36 x 58	mm	L x W x H
Mounting	DIN-rail (Top hat rail)		IEC/EN 60715
Material	Plastic ABS		
Weight	85	gram	

Power

	Min	Typ.	Max	Eenheid	Opmerkingen
Power in	10	-	30	VDC	
	10	-	24	VAC	
	-	-	2	A	
Power out	2	-	30	VDC	
	-	-	2	A	1

1. Gezekerd met 4AT zekering

Housing measurements