

DESIGN NOTE 014

Voltage monitor circuit configuration



Abstract

A short overview about a voltage monitor circuit configuration which is applicable for any product with a remote control pin.

Contents

Voltage monitor circuit configuration	3
---------------------------------------------	-------------------

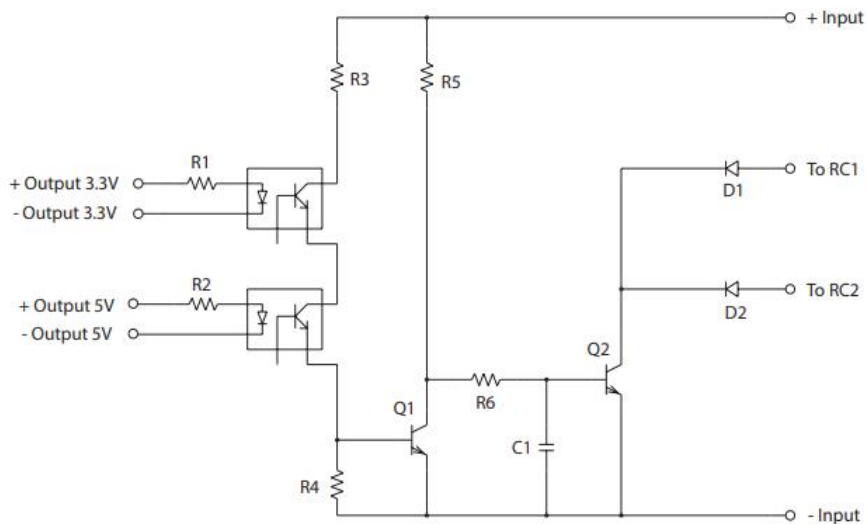
Voltage monitoring circuit configuration

In some applications it is necessary to monitor the output voltages and shut down all converters if any of these fails. The enclosed example shows how to monitor two outputs.

Increasing the number of monitored outputs is simply done by adding an optocoupler for each additional output in series with the base of Q1. R5 and C1 in the circuit diagram are used to set a time constant delaying the voltage monitoring during start-up. The values used in the example provide approximately 60 ms delay. Consult the converter's datasheet to determine the required delay for your application. The circuit is latching and requires that the input voltage be toggled off-on to restart the converters.

Component values	
R1	1.8 kΩ
R2	3.6 kΩ
R3	1 MΩ
R4	510 kΩ
R5	1 MΩ
R6	12 ohm
C1	4.7 μF
D1, D2	BAS 70
Q1, Q2	MMBTA 42L

Table 1: Component values



Picture 1: Circuit diagram



flex[®] Power Modules

Flex Power Modules, a business line of Flex, is a leading manufacturer and solution provider of scalable DC/DC power converters primarily serving the data processing, communications, industrial and transportation markets. Offering a wide range of both isolated and non-isolated solutions, its digitally-enabled DC/DC converters include PMBus compatibility supported by the powerful [Flex Power Designer](#).

EMEA (Headquarters) | Torshamnsgatan 28 A, 16440 Kista, Sweden

APAC | 33 Fuhua Road, Jiading District, Shanghai, China 201818

Americas | 6201 America Center Drive, San Jose, CA 95002, USA

✉ pm.info@flex.com

🐦 twitter.com/flexpowermodule

🌐 flexpowermodules.com

👤 flexpowermodules.com/wechat

🌐 flexpowerdesigner.com

in [linkedin.com/showcase/flex-power-modules](https://www.linkedin.com/showcase/flex-power-modules)

📺 [youtube.com/flexintl](https://www.youtube.com/flexintl)

The content of this document is subject to revision without notice due to continued progress in methodology, design and manufacturing. Flex shall have no liability for any error or damage of any kind resulting from the use of this document.