



KAmoRPiPwrRELAY



Rev. 20241101190127

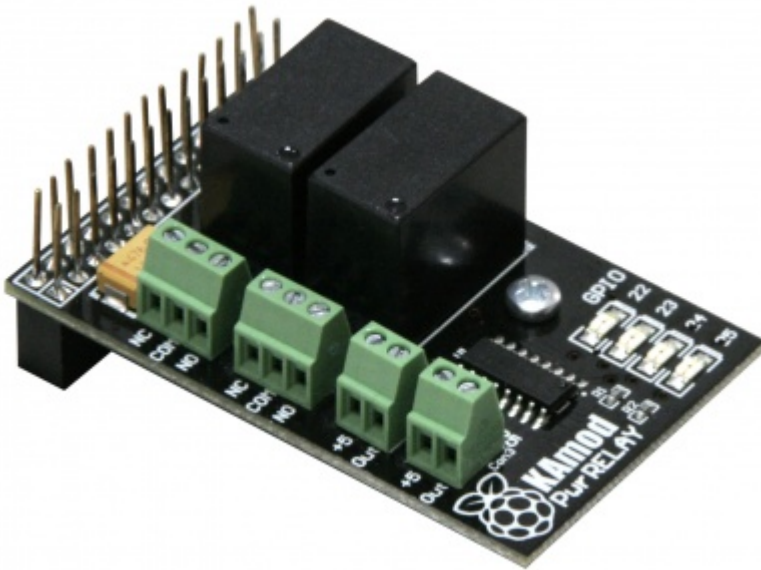
Źródło: <https://wiki.kamamilabs.com/index.php?title=KAmoRPiPwrRELAY>

Table of contents

Basic features and parameters	1
Standard equipment	3
Schematic	4
View of board	5
Relay outputs	6
Transistor outputs	7
Outputs and corresponding GPIO lines of RaspberryPi minicomputer	8
Installation the expander on the RaspberryPi minicomputer connector	9
Installation the expander on the RaspberryPi+ minicomputer connector	10

Introduction

[KAmoRPiPwrRELAY](#) is a universal functional expander for RaspberryPi and Raspberry Pi+ minicomputers, equipped with two electromechanical relays and two transistor drivers (open-collector outputs) that buffer four GPIO lines and make possible to e.g. remote lighting control, switching on of heating and other tasks requiring remote access.



Basic features and parameters

- Compatibility with RaspberryPi i RaspberryPi+ minicomputers
- Four binary outputs, including:
 - Two relay outputs
 - Two transistor outputs
- Output states monitored with LED
- Extended I/O pins of Rpi minicomputer
- Screw terminals ARK

Relay outputs

- Two SPDT outputs
- Maximum switching voltage: 250VAC/30VDC
- Maximum switching current (resistive load): 10A
- Recommended maximum load currents: 5A/240VAC, 5A/28VDC

Transistor outputs

- Two open-collector lines
- Output circuits protected by diodes connected to +5V
- They can be used directly or to control two additional relays
- Maximum output current:
 - 300mA/channel (by using one channel) or
 - 200mA/ channel (by using two channels)

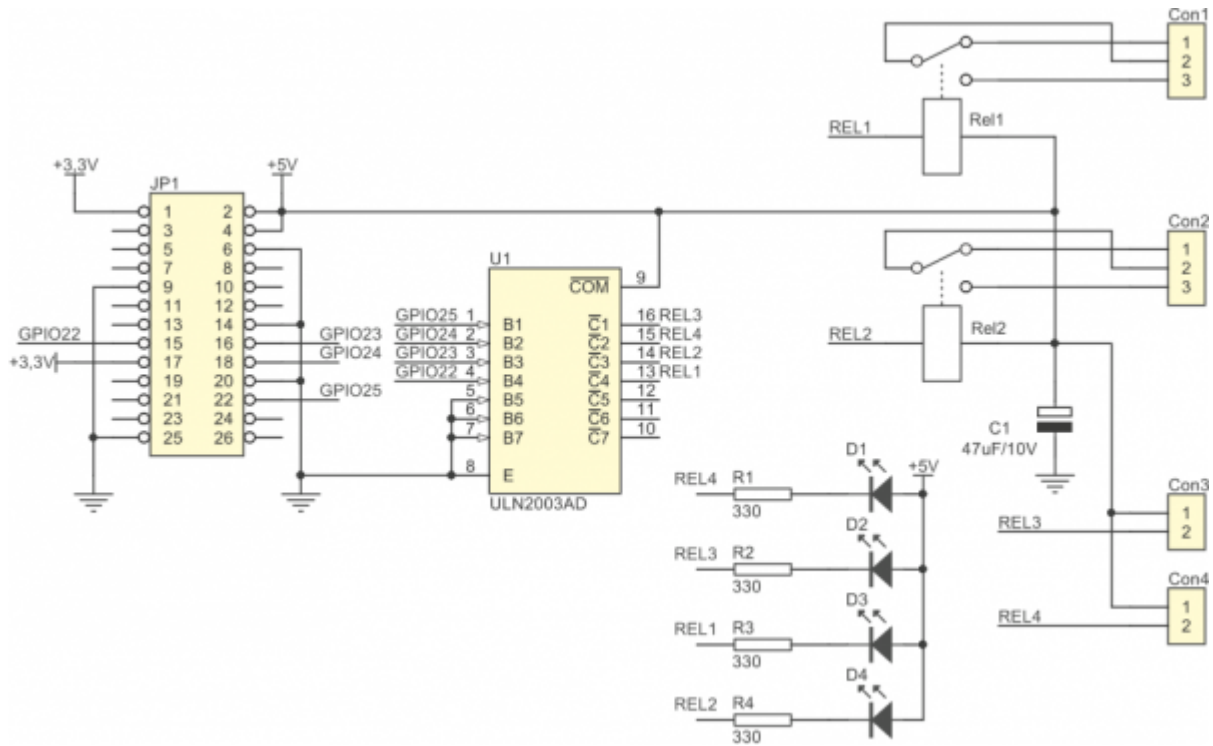


The expander is adapted to cooperate also with RaspberryPi+ minicomputers

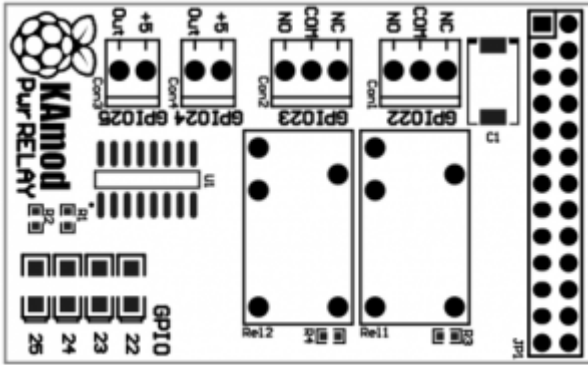
Standard equipment

Code	Description
KAmoRPiPwrRELAY	• Assembled and launched module board

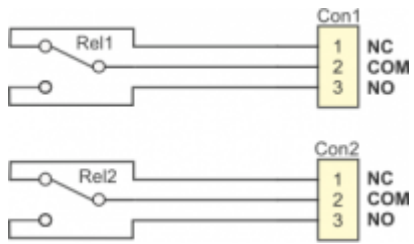
Schematic



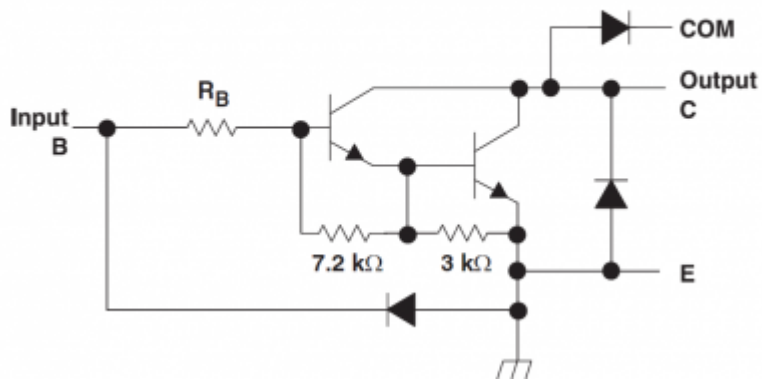
View of board



Relay outputs



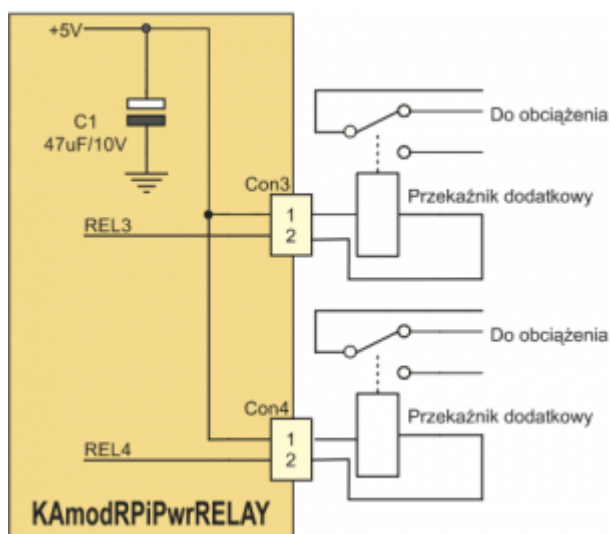
Transistor outputs



Outputs and corresponding GPIO lines of RaspberryPi minicomputer

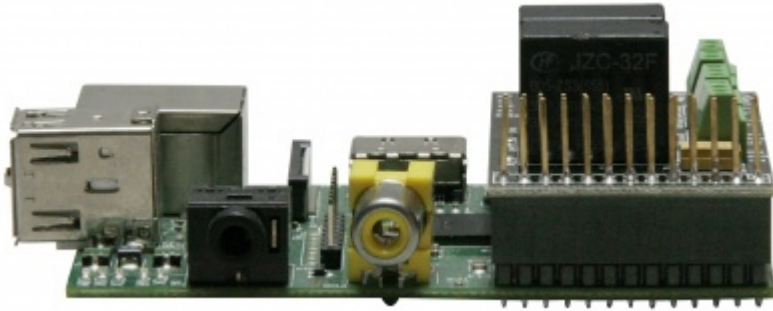
GPIO lines	Output...
GPIO22	...relay Rel1
GPIO23	...relay Rel2
GPIO24	...open-collector Con4
GPIO25	...open-collector Con3

Transistor outputs can be used for direct load control or for controlling the coils of two additional relays (as in the figure below).

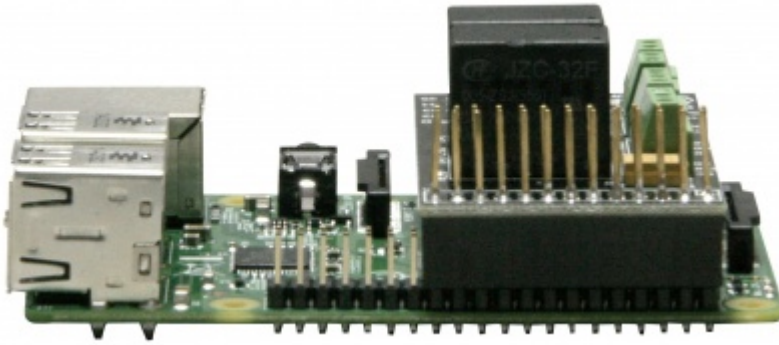


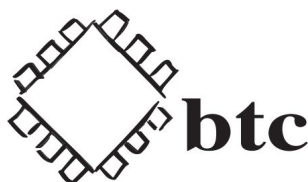
Maximum current load of the transistor outputs is limited by the maximum allowable power loss of the ULN2003 housing (details available in the chip documentation).

Installation the expander on the RaspberryPi minicomputer connector



Installation the expander on the RaspberryPi+ minicomputer connector





BTC Korporacja
05-120 Legionowo
ul. Lwowska 5
tel.: (22) 767-36-20
faks: (22) 767-36-33
e-mail:
sprzedaz@kamami.pl
<https://kamami.pl>

Zastrzegamy prawo do wprowadzania zmian bez uprzedzenia.

Oferowane przez nas płytki drukowane mogą się różnić od prezentowanej w dokumentacji, przy czym zmianom nie ulegają jej właściwości użytkowe.

BTC Korporacja gwarantuje zgodność produktu ze specyfikacją.

BTC Korporacja nie ponosi odpowiedzialności za jakiegokolwiek szkody powstałe bezpośrednio lub pośrednio w wyniku użycia lub nieprawidłowego działania produktu.

BTC Korporacja zastrzega sobie prawo do modyfikacji niniejszej dokumentacji bez uprzedzenia.