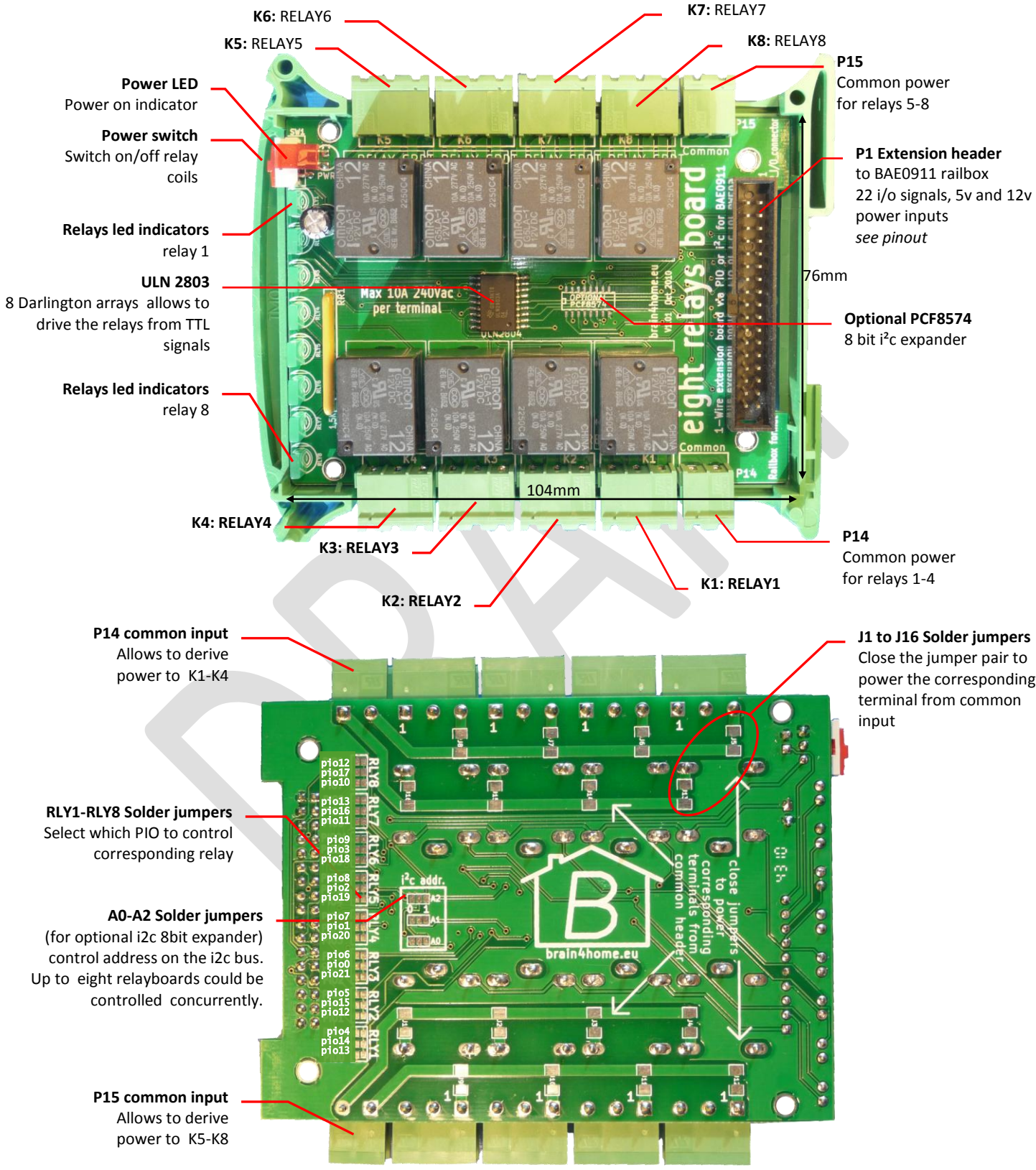


EIGHT RELAY RAILBOX BOARD FOR BAE0911

OVERVIEW



Caution: This relay board may drive electrical equipment up to 250Vac @ 10A. Please install appropriate protection circuits (fuse) and enclosure. Always disconnect from mains before manipulating.

PINOUT

Operating the relays without common power:

K1-K8	RELAY TERMINALS
1	NORMALY OPEN
2	COMMON
3	NORMALY CLOSED

Operating the relays with corresponding J1-J16 closed:

K1-K8	RELAY TERMINALS
1	NORMALY POWERON
2	COMMON
3	NORMALY POWEROFF

Address selector for optional i²C expander:

A2	A1	A0	i ² C address PCF8574A
0	0	0	0x20
0	0	1	0x21
0	1	0	0x22
0	1	1	0x23
1	0	0	0x24
1	0	1	0x25
1	1	0	0x26
1	1	1	0x27

P1	I/O EXTENSION
1	+12V
2	GND
3	+12V
4	GND
5	+5V
6	GND
7	+5V
8	DQ
9	PIO 13 / ADC 13
10	PIO 12 / ADC 12
11	PIO 21 / SCL
12	PIO 20 / SDA
13	PIO 19 / SS
14	PIO 18 / MISO
15	PIO 11 / ADC 11
16	PIO 10 / ADC 10
17	PIO 14 / ADC 14
18	PIO 15 / ADC 15
19	PIO 0 / ADC 0
20	PIO 1 / ADC 1
21	PIO 2 / ADC 2
22	PIO 3 / ADC 3
23	PIO 16 / PMW 2a
24	PIO 17 / PWM 2b
25	PIO 4 / ADC 4 / RX
26	PIO 5 / ADC 5 / TX
27	PIO 6 / ADC 6 / SPCLK
28	PIO 7 / ADC 7 / MOSI
29	PIO 8 / ADC 8 / PWM 1a
30	PIO 9 / ADC 9 / PWM 1b
31	Reserved
32	Reserved
33	Reserved
34	Reserved

The board requires 12Vdc @ 500mA to operate relays. The 5v input is required when PCF8574 i²C is installed

SUPPORT

Online support is available via the forum on www.brain4home.eu and via the discussion list. To subscribe, list-subscribe@brain4home.eu

AVAILABILITY

Chips and boards can be ordered online on www.brain4home.eu

CONDITION OF USE

The BAE chips are intended for hobbyist usage and are not approved for use where it constitute or may constitute a danger to human life or health.

TERMS OF LICENSE

The software embedded in the chips is protected by copyright laws. Customer is not allowed to reverse engineer, decompile, or disassemble the embedded software.

ABOUT THE AUTHOR

I'm Pascal Baerten, an IT consultant with technical background in automation. I followed A2 technical studies until 1985 where I played with CNC machines and pneumatic automates. Graduated in Computer Sciences from the Robert Shuman High school in Belgium in 1989, my thesis was titled "A terminal emulator" where I mastered serial communication and networking programming.

My first computer was a Sinclair ZX81, where I learned the basics of exploiting very constrained computing resources in assembler. Later, a Commodore 64 opened the way to interfacing computers with electronic toys.

Since 1990 I developed network based resource sharing solutions in assembler and C.: Telex server, Fax server, Minitel server, mainframe front end, mail server, print server, text2speech telephone server, database gateway, IM server ...

As skilled networking/server architect, I'm working as IT consultant for large financial companies since 1997.

In parallel, developments in home automation have contributed to accumulate some experience with microcontrollers and embedded computing.

REVISION HISTORY

Revision #	Date	Description
0.1	Jan 15, 2011	Initial draft