

MIRAND Audio TSSA V4 and V8 User Manual.

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General description

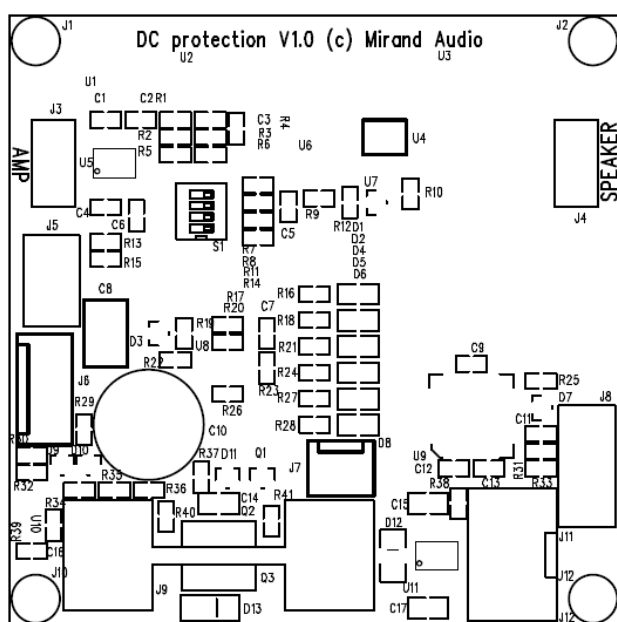
The DC protection module incorporates a microcontroller that keeps track of Excessive DC, overcurrent, Under voltage lockout. And in cases of error the module disables the output. The modules also has a delayed reactivation after it has recovered to normal operation. In case of overcurrent reactivation can only be possible through the reset input.

It does not need auxiliary power, as it runs of the power for the output stage. Rather than using an power relay it relies on the use of an discrete SSR solution with two 195Apeak mosfet with an RDSON of only 2mOhm.

Key specifications

- Supply voltage : up to +/-75VDC
- Under voltage lockout is +/-15VDC
- DC offset lockout : 1.5Vdc
- Overcurrent protection: 9.3A, 14A, 18A, 28A, 56A, 136A.
- Reset input, LED status output.
- Size (WxLxH): 70x70x33mm

Connection diagram.



DC protection module.

Speaker connector.

Type: Blade Faston 6.3mmx0.8mm			
PIN	Function	Description	Type
J3	Input from amplifier	Speaker Terminal from amplifier module	Input
J4	Output to speaker	Terminal to speaker	Output

Table 1: Speaker connector Specification

Power input – for use with other amp than TSSA V2/V4/V8

PIN	Function	Description	Type
J5-1	Power +	Inverting Signal input for amp.	Input
J5-2	GND	Signal GND input for amp.	Input
J5-3	Power -	NON - Inverting Signal input for amp.	Input

Table 2: Power input connector Specification

When running the DC protection with other amplifier modules than TSSA V2/V4 and V8 Power needs to be supplied through J5. It will work with any amplifier supply voltage of up to +/-75Vdc

Power input connector – for use with TSSA V2/V4/V8

J6 power connector is 1 to 1 straight through connector for use with TSSA V2/V4/V8 in case of the use of this connector J5 connector is not needed.

Status led output and reset connector.

PIN	Function	Description	Type
J8-1	Status LED anode	Status LED output anode.	Input
J8-2	GND	Status LED cathode.	Input
J8-3	Reset input	Reset input for recovery from overcurrent. Active low. Short to GND for “reset”.	Input
J8-4	GND	Reset GND.	Input

Table 3: Status LED and reset connector Specification

Overcurrent protection.

The dipswitch S1 is used to set overcurrent protection.

Switches	Peak current
1 – 4 ON	9.3A
1 OFF, 2-4 ON	14A
1-2 OFF, 3-4 ON	18A
1-2,4 OFF, 3 ON	28A
1-3 OFF, 4 ON	56A
All OFF	136A

Status LEDS

LED	Function
D1	STATUS
D2	SSR enable LED
D4	Current Limit LED
D5	DC fault LED
D6	Under voltage fault LED
D8	+5V Power indicator

Undervoltage fault status LED: 0.2sec/1sec interval.

DC fault status LED: 1sec/1sec interval.

Over current fault status LED: 0.3sec/0.3sec interval.

Heatsink size notes.

The mosfet need to be mounted on chassis when used in system with high peak current of more than 20amp. In general they do not produce heat. But not to destroy the mosfet at high peak current they need to be mounted on the chassis.

Cabling notes.

Always use shielded or at least twist the cables to reduce coupling as much as possible between the wires.

Ordering information

Part number: DC protection V1.0

Contact information

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