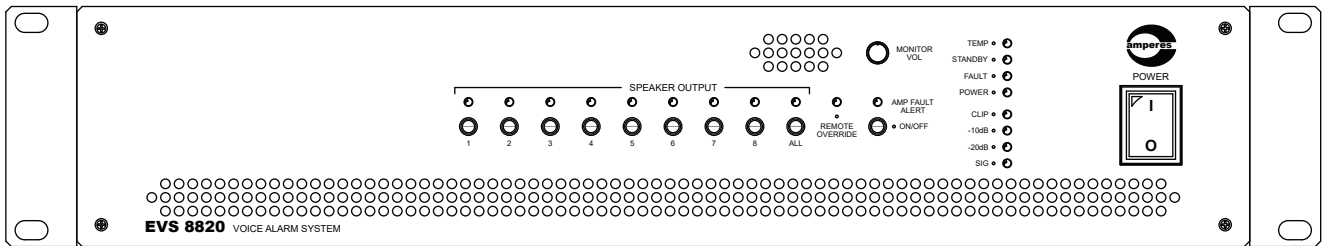




INSTRUCTION MANUAL

EVS8820

Voice Alarm Controller Extension



Thank you for choosing another quality product from Amperes Electronics.

Product in Summary

EVS8820 is an extension amplifier for EVM8810. Combining both the controller and extension unit provides larger setup of 16 zones and above with amplifier capacity of exceeding 2000W 100V line.

It consists of 8 zone speaker line outputs and can conveniently connect to EVM8810 via simple connecting RJ45 cable. EVS8820 is also an 1000W 100V power pack with built in Auto Fault Sensing circuit (AFS).

In essence, Amperes EVM8820 + EVS8810 represent more than just an Integrated Voice Alarm Controller system; it symbolizes an innovative transformation of conventional PA setup to a more compact and versatile system, both for Paging, BGM and EVAC broadcast.

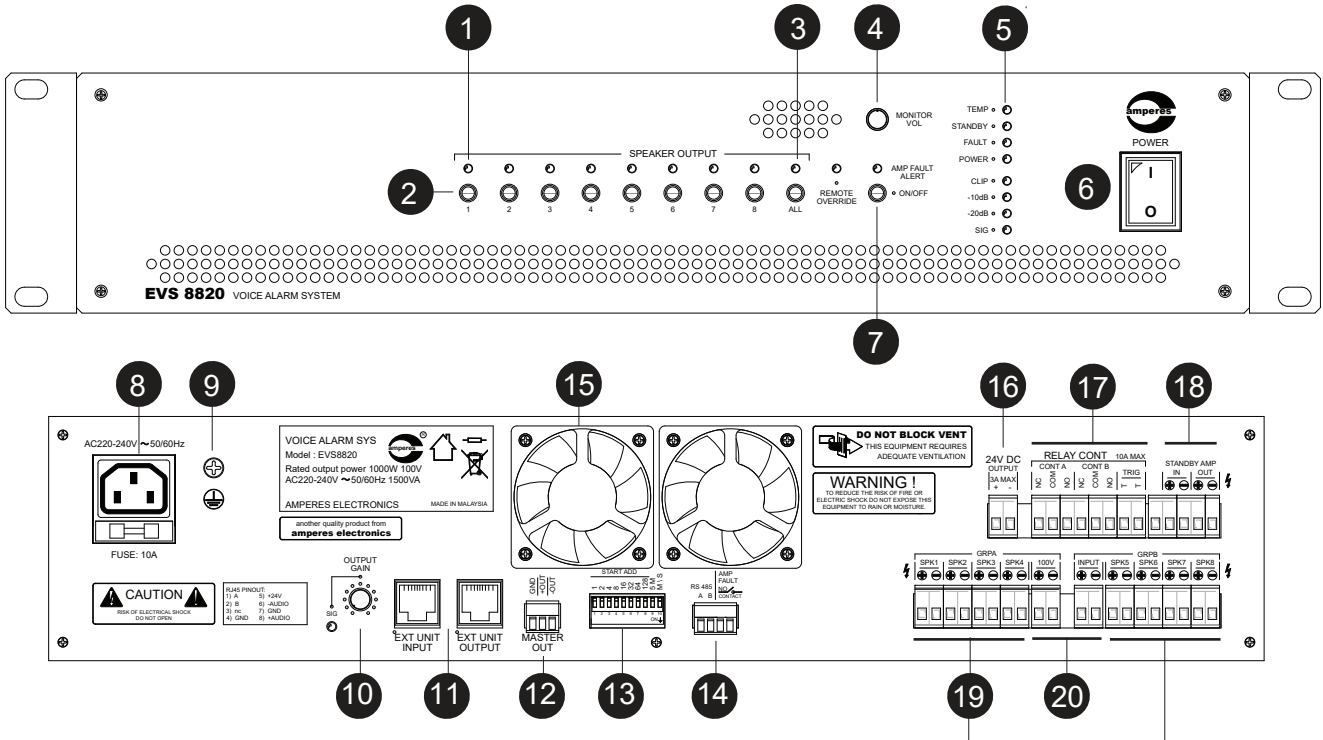


Ver 1 / Updated May 24



Parts Identification

Front View



1. ZONE TRIGGER LED

Indicates which zone is ON, either manually from the front zone switches or activated from remote paging microphone.

2. ZONE ON SWITCH

Zone ON / OFF switch with All Call and will be bypassed whenever there is incoming paging activity.

3. MONITOR SPEAKER

The amplifier output monitor speaker, to listen to the audio coming out from the amplifier regardless whether the zone is triggered or not.

4. MONITOR SPEAKER VOLUME CONTROLLER

This knob is used to control the speaker volume of the monitor speaker.

5. INDICATING LEDs

Various LEDs to indicate the followings :

- Clip - When incoming signal exceeds +4 dBu
- Signal LED - Indicates incoming audio level
- Temp - Lits when internal temperature exceeds 40 deg C and also indicating the fan starts
- Standby - ON when the amplifier is set to standby mode
- Fault - ON when the amplifier circuit is faulty, is when there is no pilot tone detected at amplifier output terminal
- Power - Indicates incoming AC supply

6. POWER SWITCH

Mains AC power switch. The unit operates with 220 - 240V AC, 50 / 60 Hz.

7. FAULT ALERT LED AND BUZZER SWITCH

Upon failure of amplifier output, the Fault LED and buzzer will be ON. The switch is used to silence the buzzer, but the LED will remain lit until the fault is removed. A short circuit occurred at amplifier terminal which is caused by speaker line shorted, will also cause this LED and buzzer to turn ON.

Parts Identification

8. INCOMING AC INLET

The unit operates on 220 - 240 V AC, 50/60 Hz. The connector comes with fuse of 10 A rating.

9. GROUND TERMINAL

Ground terminal is provided with additional terminal to link the unit to earth.

10. AUDIO INPUT SIGNAL VOLUME CONTROL KNOB

It is the input gain control, comes with LED indicator.

11. CASCADE LINK

When it is to connect to the main unit EVM8810, connect it with RJ45 connectors, and also to subsequent extension unit.

12. MASTER OUTPUT

It is the audio output from EVM8810 master output. It can be ignored if not used.

13. STARTING ADDRESS, STANDBY SWITCH AND TIMER

Zone assignment to the first channel of the device is using the DIP switch 1 to 8, while switch 9 is to set it to standby mode. DIP switch determines the duration of inactivity before it turn to standby mode.

<u>DIP Switch 1 to 8</u>	<u>DIP Switch 9</u>	<u>DIP Switch 10</u>
1000 0000 : Zone 1 to 8	ON : Standby mode ON	ON : Timer 5 minutes
1001 0000 : Zone 9 to 16	OFF : Standby mode OFF	OFF : Timer Infinity
1000 1110 : Zone 17 to 24		

14. FAULT CONTACT AND RS485 DATA PORT

Whenever the amplifier is diagnosed as faulty, a the relay shall close and data will be sent via RS485. This can be connected to iPX5500 Comm Box, linked to PMX III for alert. Also, the data port is used for control and monitoring via the software.

15. VENT FAN

The fan runs whenever the heat sink temperature reaches approximately 40 deg C.

16. 24V DC OUTPUT

The aux 24V DC is available to power external devices, such as to override external volume controller. Do not exceed 3A in usage.

17. RELAY CONTACTS

Whenever emergency paging is activated, it will trigger the built in relay. The dry contacts A and B can be used to override external volume controllers or to trigger mimic panel, link to BAS system, etc.

18. STANDBY AMPLIFIER INPUT / LINK

Connect standby amplifier's output to the IN terminals and to further link to other duty amp, connect the OUT terminal to the next amplifier's IN ports. Standby amplifier will power up the zones for duty unit connected closest to it and at any one time, only one takeover will take place.

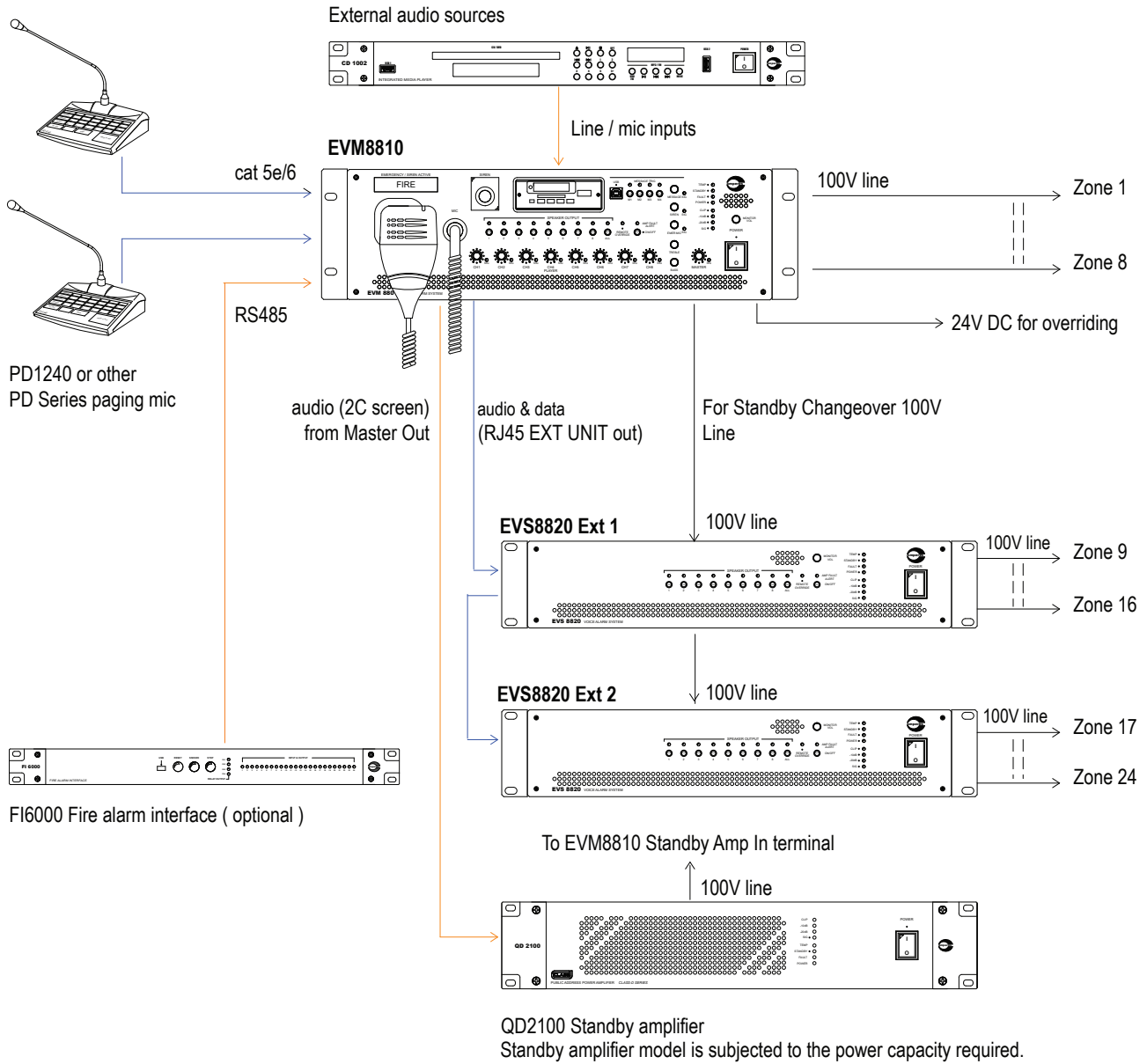
19. SPEAKER OUTPUT TERMINAL

The speaker terminals are divided into 2 groups, each of 4 zones. Group A is directly related to the internal amplifier whereas Group B is independent. Group B zones can be linked to Group A or can be powered by external amplifier. (When the internal power amplifier is insufficient to power all the zones).

20. AMP OUT - GROUP B LINK

When to use Group B zones from the internal amplifier, link both the terminals.

General Schematic Diagram

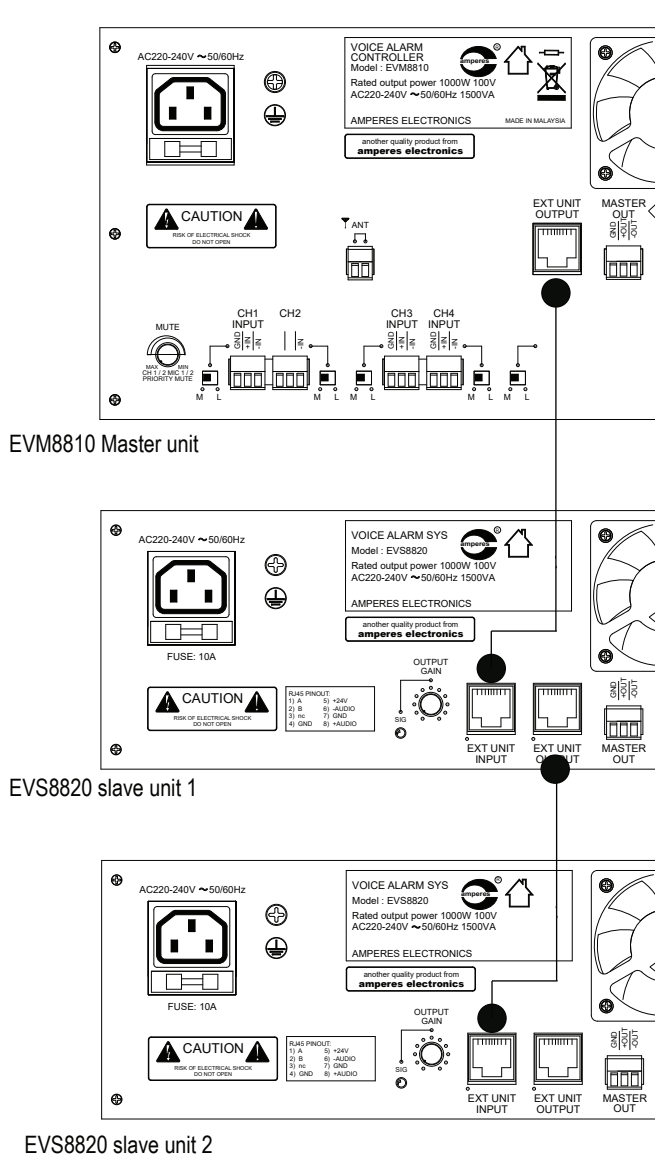


The above diagram illustrates typical configurations using EVM8810 serving Zone 1 to Zone 8 and links to EVS8820 serving Zone 9 to 24. All Amperes PD series of paging microphones can be used in the setup.

Please refer to Connecting the Unit for standby amplifier changeover connections.

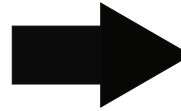
Connecting the Unit

1. CASCADING EVS8820

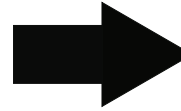


If more zones are required in a setup, the system can be expanded with additional slave unit EVS8820 of up to 2 units, forming a 24 zone system.

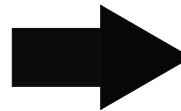
Use the EXT UNIT OUTPUT link with RJ45 / Cat5e to connect to EVS8820 EXT UNIT INPUT port.



Zone 1 to 8
Setup address : 1000 0000 10



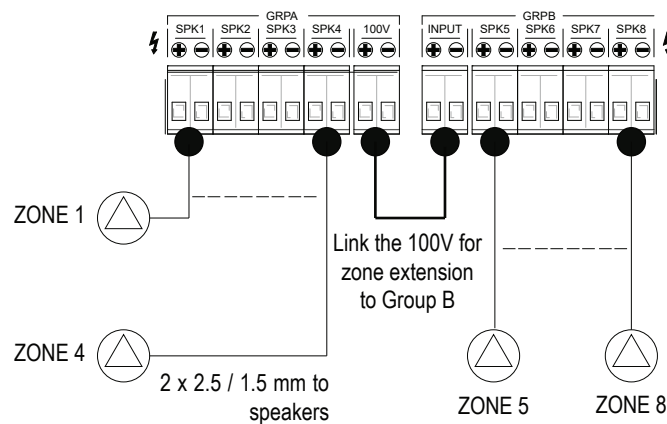
Zone 9 to 16
Setup address : 1001 0000 00



Zone 17 to 24
Setup address : 1000 1000 10

2. CONNECTING SPEAKER OUTPUTS

There are 8 speaker zones available in the unit, divided into 2 groups. The group B is independant from the internal amplifier, which can be used with external amplifier if the speaker loads requires so. When it is to use the Zone 5 to 8 of group B with the internal amplifier, link both groups together as show.

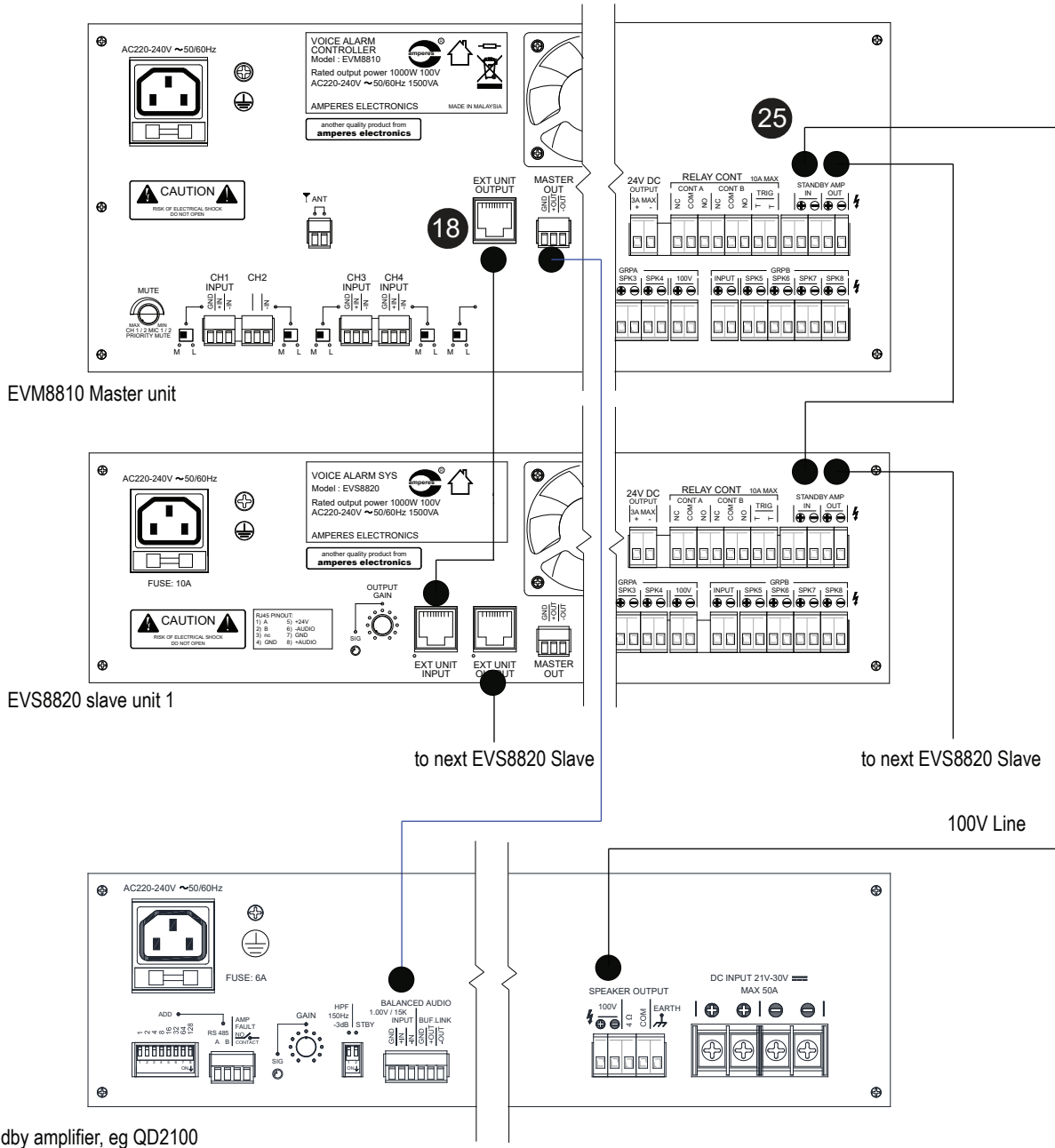


Connecting the Unit

3. STANDBY UNIT CONNECTION

A standby amplifier must be able to cater for the overall loads. The output of the standby unit must be connected to the Standby Amp input (EVM8810). The standby output is then connect to the next slave unit and thereafter to the next slave unit.

In the event of the amp failure, the first unit will be taken over, followed by the second and third.



Technical Specifications

Power supply	220 - 240 V ac : 50 / 60 Hz
Power rating (W at 100V line)	1000 W at 100 V line output
Power consumption (full load) : 240V ac	1500 VA (6.1 A)
Standby current at 240V ac	0.4 A
Input channels	Back up amplifier input port (100V line in) Balanced Line
Input sensitivity / impedance	Line : 1.2 V / 10 kOhm
Frequency response	50 - 15 kHz (+/- 3dB @ 1kHz, 0 dBU)
THD (+ Noise)	< 0.2 %
S/N ratio	>65 dB
Standby amplifier changeover	Built in changeover relay
Zone output	8 zones (front switch and remote paging with All Call
Audio output	Master line output, balanced 0 dBU
Audio link to slave	Line balanced 0 dBU
Emergency dry contact	3A NO relay
Output audio monitoring	Front speaker with volume controller
Controls	Input gain controls
Communication control	RS485 ; 19.2 kbps
Cascade / link	RJ45 port (line audio and RS485 data)
Indicators	Signal, temperature, fault, power, zone selection
Protections	Thermal, short circuit, overload and AC fuses
Cooling system	Auto temperature controls
Cut Off temperature	75 Deg C
Dimensions (W x H x D) mm	482x 88 x 420 with mounting bracket
Net weight (kg)	9.3 kg

Note:

The above specifications are correct at time of printing, but subject to changes without prior notice due to product improvements.

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics authorized service centres may be asked by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts. Cost and risk of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

This warranty does not cover damages caused by misuse, negligence in application as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adapter not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit, moreover the warranty does not cover any damages which may cause to the people and things during the use of the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or identification labels applied to the unit or any other modifications to the physical unit other than its intended usage.

This warranty covers all the material and manufacturing defects and is valid for a period of 36 months from the date of purchase or for a specified period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

The purchaser is deemed to agree to the above warranty conditions once the product packaging is unpacked., Otherwise the product shall be returned to the seller in proper original condition.

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