



Operating Manual

ISA 4D32

Integrated System Amplifier



DO000315.01

[•-] sound vision.

ISA 4D32 Operating Manual

Version: 0203

Release date: 2025/09/18

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Refer all servicing to qualified personnel, through your Outline dealer.

Important Safety Instructions.

Safety Warnings.

Common symbols and meanings



THE TRIANGLE WITH THE LIGHTNING BOLT IS USED TO ALERT THE USER TO THE RISK OF ELECTRIC SHOCK.



THE TRIANGLE WITH THE EXCLAMATION POINT IS USED TO ALERT THE USER TO IMPORTANT OPERATING OR MAINTENANCE INSTRUCTIONS.



THE CE-MARK INDICATES THE COMPLIANCE OF THE PRODUCT TO ALL THE APPLICABLE EUROPEAN DIRECTIVES



SYMBOL FOR EARTH/GROUND CONNECTION.



SYMBOL INDICATING THAT THE EQUIPMENT IS FOR INDOOR USE ONLY.



SYMBOL FOR CONFORMITY WITH DIRECTIVE 2012/19/EC OF THE EUROPEAN PARLIAMENT ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE).

	OPERATING TEMPERATURE RANGE: 0° C TO +35° C - DERATING ABOVE 35° C
	STORAGE RELATIVE HUMIDITY RANGE: 10% TO 85% HUMIDITY (NON CONDENSING).
	DO NOT USE THE UNIT AT ALTITUDES ABOVE 2000 M.
	DO NOT USE THE UNIT IN TROPICAL ENVIRONMENT.
	TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT ATTEMPT TO OPEN ANY PART OF THE UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	CONNECTION TO THE MAINS SHALL BE DONE ONLY BY A ELECTROTECHNICAL SKILLED PERSON ACCORDING THE NATIONAL REQUIREMENTS OF THE COUNTRIES WHERE THE UNIT IS SOLD.
	DO NOT USE THIS AMPLIFIER IF THE ELECTRICAL POWER CORD IS FRAYED OR BROKEN.
	TO AVOID ELECTRICAL SHOCK, DO NOT TOUCH ANY EXPOSED SPEAKER WIRING WHILE THE AMPLIFIER IS OPERATING.
	DO NOT SPILL WATER OR OTHER LIQUIDS INTO OR ON THE AMPLIFIER.
	THIS DEVICE MUST BE POWERED EXCLUSIVELY BY EARTH CONNECTED MAINS SOCKETS IN ELECTRICAL NETWORKS COMPLIANT TO THE IEC 364 OR SIMILAR RULES
	DISCONNECT THE AC MAINS SOURCE BEFORE ATTEMPTING TO CLEAN ANY PART OF THE AMPLIFIER
	OUTLINE SUGGESTS TO PLUG THE ISA4D32 TO A 16 A RATING, C OR D CURVE, 10 kA SECTIONING BREAKER.
	OUTPUT TERMINALS ARE HAZARDOUS: WIRING CONNECTION TO THESE TERMINALS REQUIRES INSTALLATION BY AN INSTRUCTED PERSON AND THE USE OF READY MADE LEADS.
	PROPERLY FIT THE AC MAINS PLUG TO THE AMPLIFIER INLET. BEFORE POWERING THIS AMPLIFIER, VERIFY THAT THE CORRECT VOLTAGE RATING IS BEING USED.

	TAKE CARE TO LOCK THE OUTPUT TERMINAL BEFORE SWITCHING THE DEVICE ON.
	VERIFY THAT YOUR MAINS CONNECTION IS CAPABLE OF SATISFYING THE POWER RATINGS OF THE DEVICE.
	NO NAKED FLAME SOURCES SUCH AS LIGHTED CANDLES SHOULD BE PLACED ON THE AMPLIFIER.
	TO PREVENT INJURY, THIS APPARATUS MUST BE SECURELY RACK MOUNTED IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.
	THIS EQUIPMENT SHALL BE MOUNTED AT A MAXIMUM HEIGHT OF 2 M
	THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR DAMAGES CAUSED TO PERSONS, THINGS OR DATA DUE TO AN IMPROPER OR MISSING GROUND CONNECTION.
	IT IS ABSOLUTELY NECESSARY TO VERIFY THESE FUNDAMENTAL REQUIREMENTS OF SAFETY AND, IN CASE OF DOUBT, REQUIRE AN ACCURATE CHECK BY QUALIFIED PERSONNEL.



Please read and keep all safety and use instructions.

This product is intended for installation by professional installers only! This document is intended to provide professional installers with basic installation and safety guidelines for this product in typical fixed-installation systems. Please read this document and all safety warnings before attempting installation.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this equipment near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug

does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Warranty and Technical Service

This product is covered by a limited warranty.



This Outline product contains no user-serviceable parts. All warranty repairs must be carried by a certified technician.

Contact The Authorized Service Center For Ordinary And Extraordinary Maintenance.

To learn more about warranty terms and conditions, visit outline.it/terms-of-use/

For any service related enquiry, please send an email to 'tech@outline.it'.

Regulatory Compliance Statements

Europe



If the time arises to dispose of your product, please recycle all possible component.

This symbol indicates that when the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling. By separating this product from other household-type waste, the volume of waste sent to incinerators or land-fills will be reduced and natural resources will thus be conserved.

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) aims to minimise the impact of electrical and electronic goods on the environment. Outline comply with the Directive 2012/19/EU of the European Parliament on waste electrical finance the cost of treatment and recovery of electronic equipment (WEEE) in order to reduce the amount of WEEE that is being disposed of in land-fill site. All of our products are marked with the WEEE symbol; this indicates that this product must NOT be disposed of with other waste. Instead it is the user's responsibility to dispose of their waste electrical and electronic equipment by handing it over to an approved reprocessor, or by returning it to Outline for reprocessing. For more information about where you can send your waste equipment for recycling, please contact Outline or one of your local distributors.

USA

FCC Supplier's Declaration of Conformity

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance

with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures

Canada

Canadian Caution

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

- 1) This device may not cause interference.
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures

ICES-003 Class A Notice

This Class A digital apparatus complies with Canadian ICES-003.

Radiation Exposure Statement

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

EC Declaration Of Conformity

We declare that under our sole responsibility the products:

Model Name: ISA4D32

Intended use: Professional Audio Amplifier



Are in conformity with the provisions of the following EC Directives, including all amendments, and with national legislation implementing these directives:

2014/35/EU Low Voltage Directive

2014/30/EU Electromagnetic Compatibility Directive

2011/65/EU RoHs Directive

The following harmonized standards are applied:

EN 55032:2015,

EN 55032:2015/A11:2020

EN 55035:2017,

EN 55035:2017/A11:2020

EN 61000-3-2:2014

EN 61000-3-3:2013

EN 61000-3-11:2000

EN 62368-1:2014

EN 62368-1:2014/AC:2015

Flero,

January 2022

Stefano Noselli

Production and purchase director

A handwritten signature in black ink, appearing to read 'S. Noselli', is written over a faint, light-colored rectangular background.

Preliminary Operations.

Package list.

After unpacking the unit, check very carefully for any damage. If any damage is found, please notify your dealer.

The box contains the following:

- 1x ISA4D32 amplifier

- 1x Phoenix MC 1,5/4-ST-3,81 - 1803594 plug
- 2x Phoenix MC 1,5/12-ST-3,81 - 1803675 plug
- 1x Phoenix PC 5/8-STF1-7,62 - 177891 plug
- 1x IEC power cord
- 1x User guide

Location.

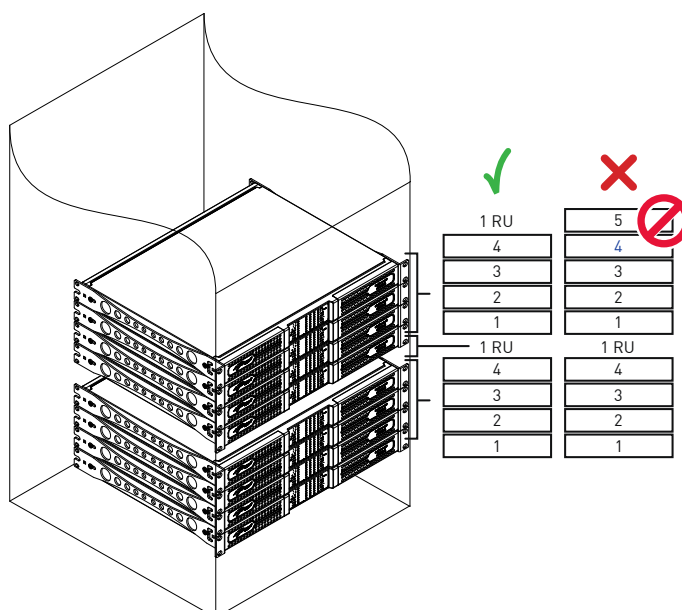
Install your ISA4D32 Amplifier in well ventilated rack cabinets.

Secure both front and rear brackets to the rack.

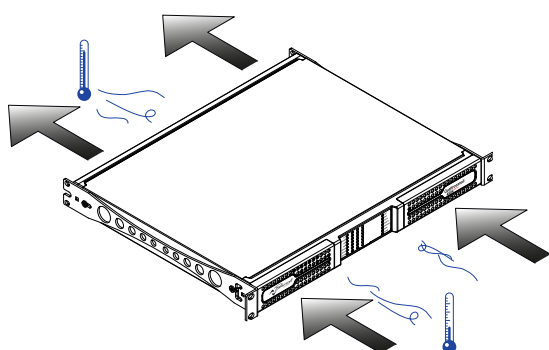
Connect the AC Mains connector to a circuit breaker.

Install the amplifier far from EMF emitting devices.

Avoid placing the amplifier close to heat generating sources.



Cooling.



The ventilation openings must not be impeded by any item, keep a distance of at least 50 cm from the front and rear ventilation openings of the amplifier.

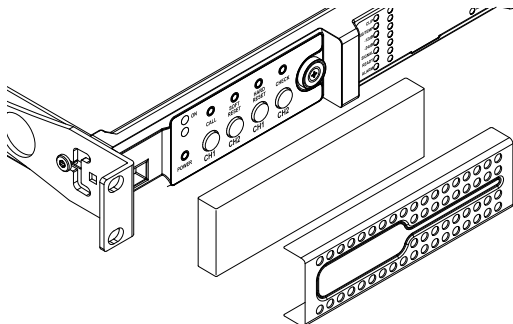
ISA4D32 implements a forced-air cooling system to

maintain constant operating temperatures. Air enters from the front panel, exiting at the back of the amplifier. The cooling system features variable-speed DC fans controlled by the heat sink mounted sensors. This ensures that fan noise and internal dust accumulation are kept to a minimum.

In the rare event of overheating, sensing circuits shut down all channels until the amplifier cools down to a safe operating temperature. Normal operation is resumed automatically without the need for user intervention.

ISA4D32 amplifiers can be stacked one on top of the other, leave one rack unit empty every four to guarantee adequate air flow.

Cleaning.



Use a dry cloth for cleaning the chassis and the front panel. Air filter cleaning should be scheduled in accordance with the dust levels in the amplifier's operating environment.

In order to clean the vent filters remove the front cover by firmly gripping the outermost silver panels and pull them outwards.

Use compressed air to remove the dust from filters, or wash it with clean water (let the filter dry thoroughly before reinstalling them).

AC Mains supply.

ISA4D32 amplifiers implement an universal switching mode power supply with power factor correction operating in the range from 100 V_{AC} up to 240 V_{AC} ±10%.

AC mains connection is in the rear panel through the IEC C20 inlet, the approved power cord is provided.

Switching the amplifier on and off.

Once properly powered (power cord inserted, sectioning breaker closed), the system can be either ON or in STANDBY mode depending on its state at latest power off. In order to toggle the amplifier between ON

and STANDBY keep pressed the power button for 3 seconds. Please, consider that the operating condition can be modified by the REMOTE ON and REMOTE OFF configuration.

Energy save.

The Smart Rails Management technology implemented in the power supply unit allows to reduce the power consumption when the input signal falls under a defined threshold.

When On, Energy Save is active on each channel independently.

If the signal is missing for more than 30 minutes on all

channels, the auto standby is applied and the main PSU is turned off to further save energy (Time out time is selectable via Armonía). Normal operation is resumed in a matter of milliseconds when an incoming signal is detected.

In order to activate the Energy Save feature, operate the NRG SAVE dip switch on the rear panel.

Breaker save.

This feature may be activated when the power grid is unable to provide enough current to continuously drive the loads, or when the number of amplifier connected to the same outlet is such that one can reach the critical power absorption of the line.

When activated, the Breaker Save halves the maximum

continuous current absorption from the mains. This slightly reflects on the overall performance of the system, reducing the available output power.

In order to activate the Breaker Save feature, locate the BRK SAVE switch on the rear panel.

Remote On/Off.

Remote ON/OFF is available through the dedicated terminals on the rear panel.

Both terminals respond to the differential voltage between the contacts: a voltage difference in the range $5 V_{DC} - 24 V_{DC}$ triggers the control. Any voltage

exceeding $28 V_{DC}$ may damage the input circuitry. The couple of terminals act depending on the actual state of the amplifier, in accordance with the following table.

REMOTE ON	REMOTE OFF	AMPLIFIER STATE
$V_{diff} \geq 5V$	Any	Force Turn ON
$V_{diff} < 3V$	$V_{diff} \geq 5V$	Force Turn OFF
$V_{diff} < 3V$	$V_{diff} < 3V$	No Change (Keep either standby or in current state)

Gain selection.

The ISA4D32 amplifiers can operate with different gain applied to the input signal. This feature is designed to match the voltage of the input signal.

A proper combination of the position of two GAIN switches on the rear panel sets the operating gain of the amplifier.

Connections.

Signal grounding.

There is no ground switch or terminal on the ISA4D32 amplifiers. The unit's signal grounding system is automatic. In order to limit hum and/or interference entering the signal path, use balanced input

connections.

In the interests of safety, the unit **MUST** always operate with electrical safety earth connected to the chassis via the dedicated Protective Earth wire. ⚡

Analog audio Input connections.

Analog input connections are made via the Phoenix MC 1,5/6-ST-3,81 5447900 connector.

Remote level adjustment.

The level of each channel can be remotely adjusted by means of a linear 10 kΩ potentiometer connected to the input LEVEL connector.

When the CH1 MSTR switch is in the OFF position the remote level potentiometers work independently on each separate channel.

When the CH1 MSTR switch is in the ON position the remote level potentiometer of channel 1 acts as a master level, controlling the volume of both channels.

The remote level controls are in series with the level adjustment knobs in the front panel.

Digital audio Input connection.

ISA4D32 accepts two input streams from the dedicated audio over IP port. Cabling must comply to TIA/EIA-568-B and adopt the T568B scheme pinout.

In order to implement a Dante™/AES67 network, a computer running Dante™ Controller have to be used. Dante™ Controller is a software application that

manages devices on the network.

ISA4D32 amplifiers are automatically discovered and displayed in Dante™ Controller with the default identifier:

MODELNAME-SERIAL (e.g. ISA4D32 1604-71520).

Ethernet connection.

The port labelled Ethernet is designed to remotely control the amplifier via an Ethernet connection through a personal computer and ArmoniaPlus software.

Outline recommend the use of Ethernet Cat5 straight through-patch-cables with pin/pair assignments TIA/EIA-568-B, i.e. T568B.

Output connections.

Output connections are made via the Phoenix PC 5/4-STF1-7,62 177859 port.

Any mixed configuration of low and high impedance

output loads can be made: in order to set the load configuration, each channel is provided with four DIP switches.

Hi-Z 70/100 V operations.

Any channel can drive 70V/100V (Hi-Z) distributed line loudspeakers. In order to connect any channel's output to a 70V/100V line, the rear panel DIP switch corresponding to the channel must be set.

Outline recommends to use the built-in HPF (High Pass Filter) when the amplifier is set to drive a distributed

line to prevent loudspeaker transformer saturation, which can considerably degrade sound performance.

The HPF can be activated by means of the DIP switch corresponding to the channel, two cutting frequency are available 35 Hz and 70 Hz.

Lo-Z 2Ω load operation.

ISA4D32 amplifiers are optimized for working with 4Ω output loads but a special configuration allows to connect low loads down to 2Ω.

The 2Ω switch allows to activate on all output channels set to match low impedance (i.e. in Lo-Z configuration)

an operating condition that optimizes the performance with very low loads, by limiting the maximum output voltage to 85 V_{peak} per channel.

For optimal 2Ω performance, it is recommended to select LowZ mode for all the amplifier's channels.

Diagnostics - GPO - alarms.

ISA4D32 provides a pair of paralleled general purpose output connections per channel: one Normally OpenⓄNO and one Normally ClosedⓄNC.

The connections are available on the back panel via the 6-pin Phoenix MC 1.5/6-ST-3.81 5447900 connector.

When the amplifier is in normal operating condition the NO contacts are closed, whilst the NC contacts are open, and vice-versa.

These contacts are used to report potentially dangerous faults or generally unsafe operation conditions by

toggling alarm switches relative to the following events, and any fault preventing the normal operation of an output channel:

No AC mains (i.e. system shutdown);

Thermal stress: the system temperature is too high and the thermal protection is engaged;

Short circuit in output wiring: either the loudspeaker or the line is in short;

Amplifier is in Standby

ISA4D32 features further monitoring on pilot tone and output load through ArmoníaPlus.

Self-check.

The self check procedure tests the amplifier status and reports the user in case of failures.

After few minutes, at the end of the self check procedure, a combination of lit LED in the LED panel provides information about the amplifier status.

In order to exit the self check test and resume normal operations, press once the self check push button (6). If self check cannot be started because of a fault, the check LED will blink fast, whilst a reassuring slow blink is an indication of a completed self check procedure.

Pilot tone monitoring.

The detection of a mismatch in the input pilot tone parameters (frequency and voltage level) can be used to trigger the backup policy and activate an alert through the general purpose output switch.

The output pilot tone detection relies on an external

signal passing through the amplifier or the internal post DSP pilot tone generator; in both cases any mismatch between the detected signal and the set thresholds triggers the general purpose output switches.

Networking.

ISA4D32 amplifiers support star network topology via the Ethernet port and Dante™/AES67 dedicated AoIP port.

IP addressing.

Factory default network settings are DHCP/AutoIP.

In order for the amplifier to self-configure when connected to an existing LAN or PC. Fixed IP policy can also be adopted and configured through ArmoníaPlus.

If a DHCP server is not active within the network, the amplifier platform initiates a stateless address auto-configuration (i.e. Zero-configuration networking methodology – Zeroconf): it self assigns a local numeric

As a rule of thumb, turn the DHCP server on before connecting the amplifiers.

IP addressing of a ISA4D32 amplifier is established during the bootstrap: when the amplifier discovers a DHCP server on the network during the startup, it

network address (of the type 169.254.x.y – 172.31.*.* for the secondary network if present – with a subnet mask 255.255.0.0) and automatically distributes and resolves the host names of the networking devices.

Both Armonia and the ISA4D32 must belong to the same subnet. If a DHCP server is present on the network and a ISA4D32 amplifier is in AUTO IP, networking may become unstable.

negotiates the networking parameters. If the ISA4D32 does not reveal a DHCP server on the network during the startup, it set itself in AUTO IP mode.

ArmoníaPlus.

ArmoníaPlus is the default configuring interface that allows system setting and customization of the ISA4D32 amplifiers.

Armonía can be installed on a PC running Windows (XP SP3 and higher).

Download ArmoníaPlus for free from the dedicated website:

<https://www.powersoft.com/en/software/armoniaplus/>

Input selection and backup policy.

In ISA4D32 amplifiers it is possible to select among two input signal sources per channel: analog and Dante™/AES67 streams.

ArmoníaPlus software provides an interface to select the input source. Furthermore ISA4D32 amplifiers implement a backup policy aimed to improve reliability

against signal fault.

By assigning a bus priority to the two different input sources per channel, the system is able to automatically switch to a reliable input connection in case of signal drop or pilot tone mismatch.

Output load monitoring.

Through the ArmoníaPlus software it is possible to set the thresholds on the load impedance, at given

frequency, that trigger the general purpose output of any channel in ISA4D32 amplifiers.

Front panel.



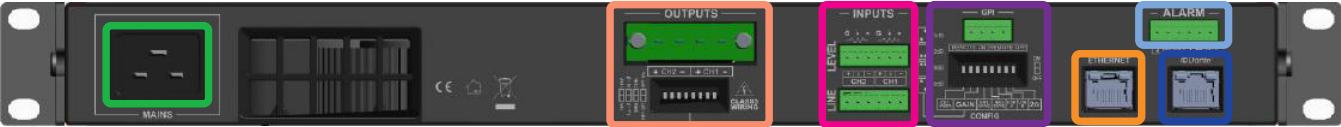
Control Panel	
1	Operating Mode LEDs (ON/STANDBY)
2	Power pushbutton
3	Armonia Callback pushbutton
4	Soft Reset pushbutton
5	Hard Reset pushbutton
6	Self Check pushbutton
7	CH1, CH2, CH3, CH4 attenuators



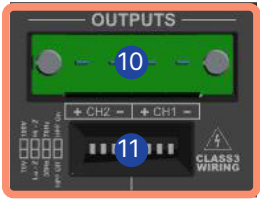
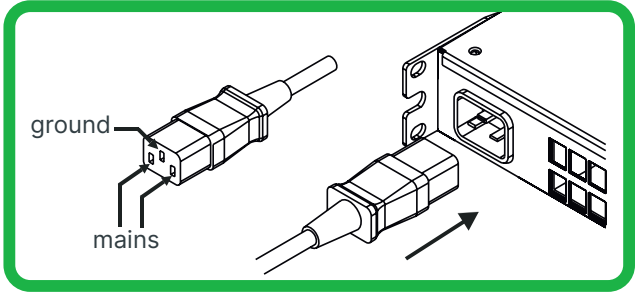
LED Panel	
8	Channel Status LED meters
9	System Status LEDs

Serial Port	
Reserved for service operations	

Rear panel.

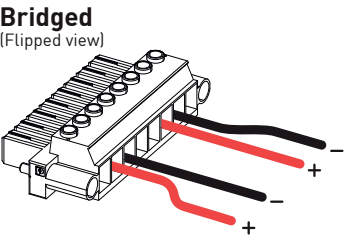
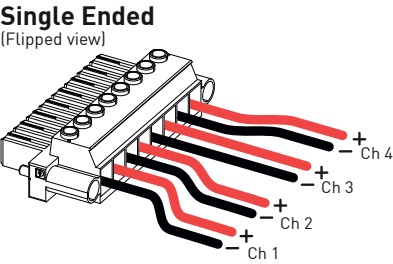
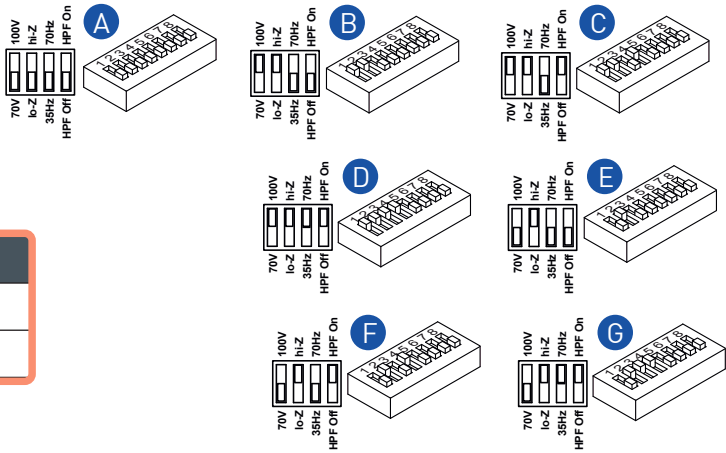


AC Mains Connector
IEC C19

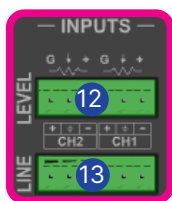


Output section

10 Output connector
11 Output configuration Dip Switches



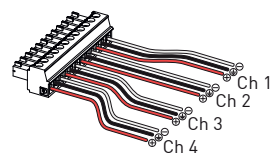
	Low-Z	High-Z	100 V	70 V	HPF @ 35 Hz	HPF @ 70 Hz
A	•					
B		•	•			
C		•	•		•	
D		•	•			•
E		•		•		
F		•		•	•	
G		•		•		•



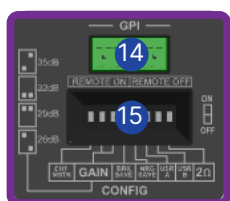
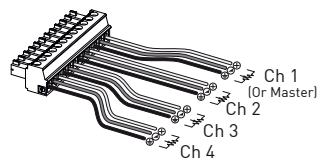
Input section

- 12 Remote Level connector
- 13 Line Input connector

Input



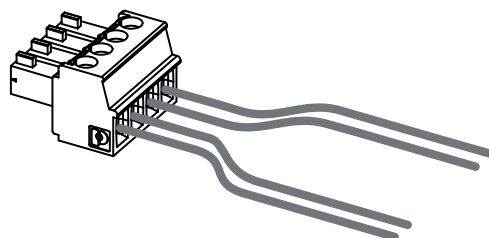
Remote Level



Remote On/Off - Configuration Dip Switches

- 14 Remote On/Off connector (Phoenix MC1,5/4-ST-3,81 1803594)
- 15 System Configuration Dip Switches

Remote On/Off



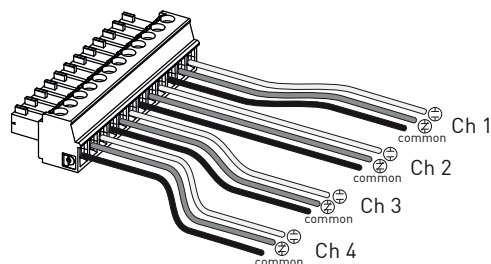
Input Gain Selection

26 dB	29 dB	32 dB	35 dB	CH1 Master	BRK Save	NRG Save	USR A	USR B	2 Ω
2-3	2-3	2-3	2-3	1	4	5	6	7	8



Alarm

GPO/Alarm connector



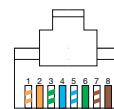
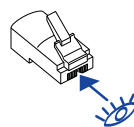


Ethernet and Dante™ ports

16 Ethernet port (RJ45)

17 Dante™ port (RJ45)

Network Connector RJ45 pinout



Color code (TIA/EIA-568-B)

Pin



ORANGE / WHITE

1



ORANGE

2



GREEN / WHITE

3



BLUE

4



BLUE / WHITE

5



GREEN

6



BROWN / WHITE

7



BROWN

8

LED charts.

LED bars, signal metering. 8

Color	Sig. Metering	Warning	
		Lighting	Description
ORANGE	User Limiter	-	-
YELLOW	-6 dB	Solid ON	Thermal warning Thermal protection engaged
		Flashing	Auto Standby
GREEN	-12 dB	-	-
GREEN	-24 dB	-	-
GREEN	-60 dB	Solid ON	Signal presence
		Blinking	Channel muted
GREEN		Solid ON	Channel Ready
RED		Solid ON	Channel fault

* Red LED lights on in case of any kind of channel fault that prevents the normal channel operating

Lighting	Timings	Description
Flashing	100 ms ON 900 ms OFF	
Blinking	500 ms ON 500 ms OFF	

Operating mode LEDs. 1

Color	Name	Operating mode	
		Standby	Power On
GREEN	POWER ON	-	Solid ON
ORANGE	Standby	Solid ON	-
ORANGE	Auto Standby	Blinking	-
ORANGE	Error Code	Blink Counter	-

LED bar, system status. 9

Color	Name	Warning	
		Lighting	Description
ORANGE	Limit	Flashing	Breaker Save Enabled
		Solid ON	Breaker Save limiting power draw
YELLOW	Temp	Solid ON	Thermal warning Thermal protection engaged
ORANGE	Check	Solid ON	System self checking
		Blinking	Self check completed
		Fast Blinking	Self check unavailable
GREEN	Remote	Solid ON	Connected to Armonia
		Off	Not connected to Armonia
GREEN	Power ON	Solid ON	System ready
		Off	System off
GREEN	Mains	Solid ON	AC Mains voltage within the operating range
		Off	Undervoltage
		Flashing	Over/ Undervoltage Warning
		Fast Blinking	Overvoltage
		Blinking	Mains FUSES blown
RED		Solid ON	PSU fault* OR Critical Faults

* Red LED lights on in case of any kind of PSU fault that prevents normal operating.

Lighting	Timings	Description
Flashing	100 ms ON 400 ms OFF	
Fast Blinking	100 ms ON 100 ms OFF	
Blinking	500 ms ON 500 ms OFF	

Control panel.

Label	Type	Action	Description
Power 2	Pushbutton	press 3 seconds	Toggle system ready/standby mode
Call 3	Pushbutton	press	Highlight the amplifier in the Armonia workspace
Soft Reset* 4	Pushbutton	press 3 seconds	Reset network parameters to factory default
Hard Reset* 5	Pushbutton	press 3 seconds	Reboot the system
Check 6	Pushbutton	press 3 seconds	Start the self-checking procedure**
Ch #*** 7	Potentiometer	turn counter-clockwise	Attenuate the output level of the signal on channel

The push-buttons are disabled when connected to Armonía.

* Keep pressed both the SOFT RESET button and the HARD RESET button for at least 3 seconds to completely reset the amplifier to its factory default configuration (this won't delete any preset stored in the internal memory).

** Press again to resume normal operations.

*** The potentiometer is in series with the remote level control so it can be used to limit the output volume regardless to any remote adjustment.

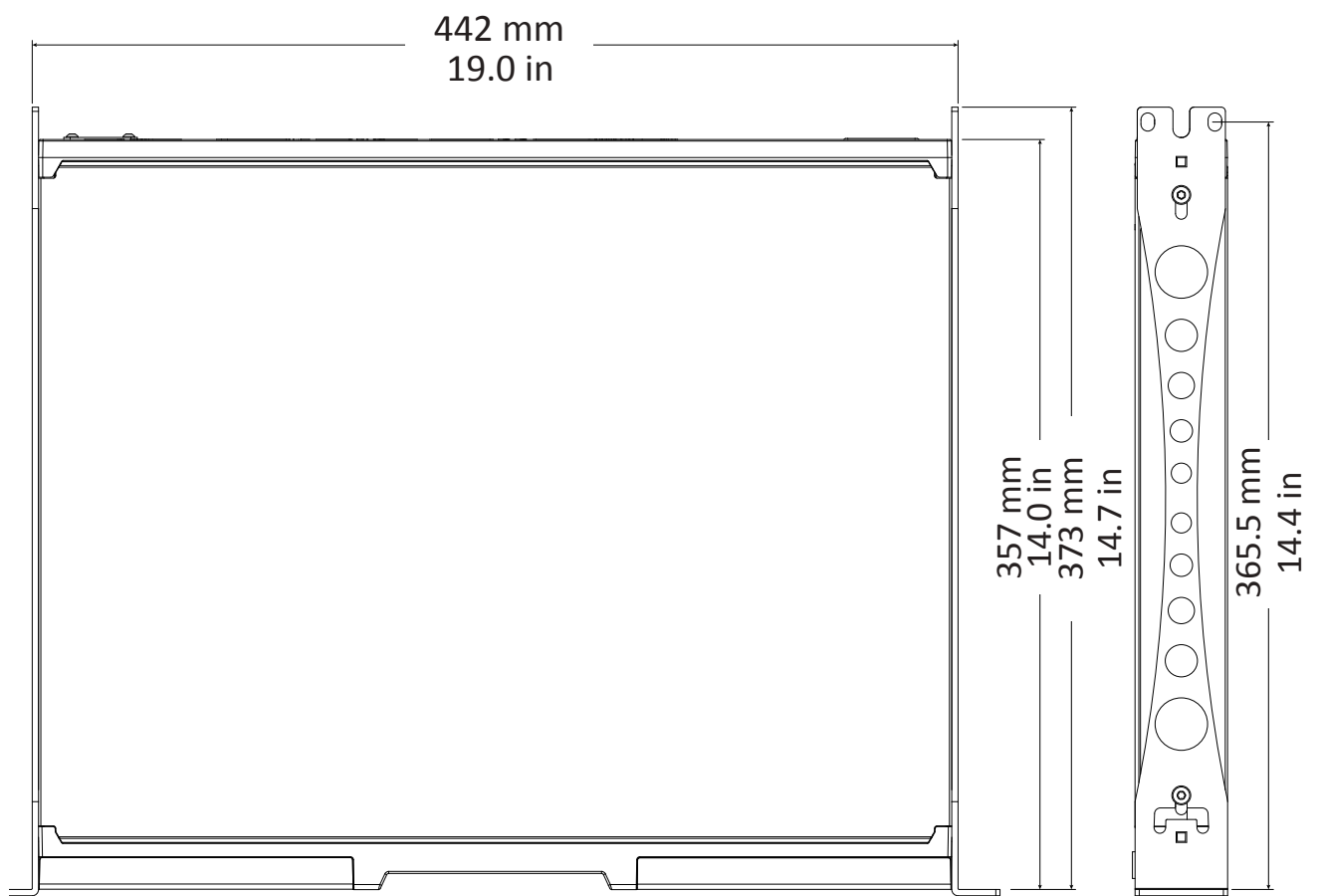
Self check.

	System OK.
	Power Supply fault
	AC Mains voltage out of range (over/under voltage)
	PSU temperature out of range

	Fan Error.
	Channel # Output waveform non-conformity
	Channel # Temperature out of range
	Channel # Output current measurement non conformity*

* An 8Ω dummy load is needed to measure the output current. If the dummy load is not applied the system reports a fault.

Overall dimensions.



ISA4D32 Technical specifications.

PERFORMANCE

Number of channels	4
Output power (per channel)	Single channel mode: 800 W @ 2 Ω , 600 W @ 4 Ω , 600 W @ 8 Ω Bridge mode: 1600 W @ 4 Ω , 1200 W @ 8 Ω
Max output voltage	100 V peak
Max output current	45 A peak
Power consumption	@ 115 V – Standby: 31.1 W 1/8 Power @ 4 Ω : 405 W @ 230 V – Standby: 31.5 W 1/8 Power @ 4 Ω : 405 W
Current Draw (1/8 Power @ 4 Ω)	@ 115 V – 2.1 A @ 240 V – 2.5 A
Thermal dissipation (1/8 Power @ 4 Ω)	@115 V – 360 BTU/h @230 V – 360 BTU/h
AC Mains Power	Universal regulated switch mode with PFC, SRM
Operating voltage	90 V – 264 VAC @ 50-60 Hz
Frequency response	20 Hz – 20 kHz $\pm$ 1.0 dB, 1 W @ 8 Ω
Crosstalk (1kHz)	typical -70 dB
THD+N (from 0.1 W to Half Power)	< 0.1% (typical < 0.05%)
SMPTE IMD (from 0.1 W to Half Power)	< 0.1% (typical < 0.05%)
Input impedance	20 k Ω balanced
AD Converters	24 Bit Tandem™ @ 48 kHz 125 dB-A Dynamic Range – 0.005 % THD+N
DA Converters	24 Bit Tandem™ @ 48 kHz 117 dB-A Dynamic Range – 0.003 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 192 kHz 140 dB Dynamic Range – 0.0001 % THD+N
Internal precision	32 bit floating point
Latency	2.5 ms fixed latency architecture

PHYSICAL

Rack Units	1
Depth	358 mm – 14.1"
Weight	7 kg – 15 lb

SHIPPING DETAILS

Shipping dimensions (H x W x D)	11 × 570 × 550 mm – 3/8" x 22 1/2" x 21 5/8"
Shipping weight	9 kg – 19.8 lb
Order code	O1ISA4D32
Taric number (HS code)	8518.50.00



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