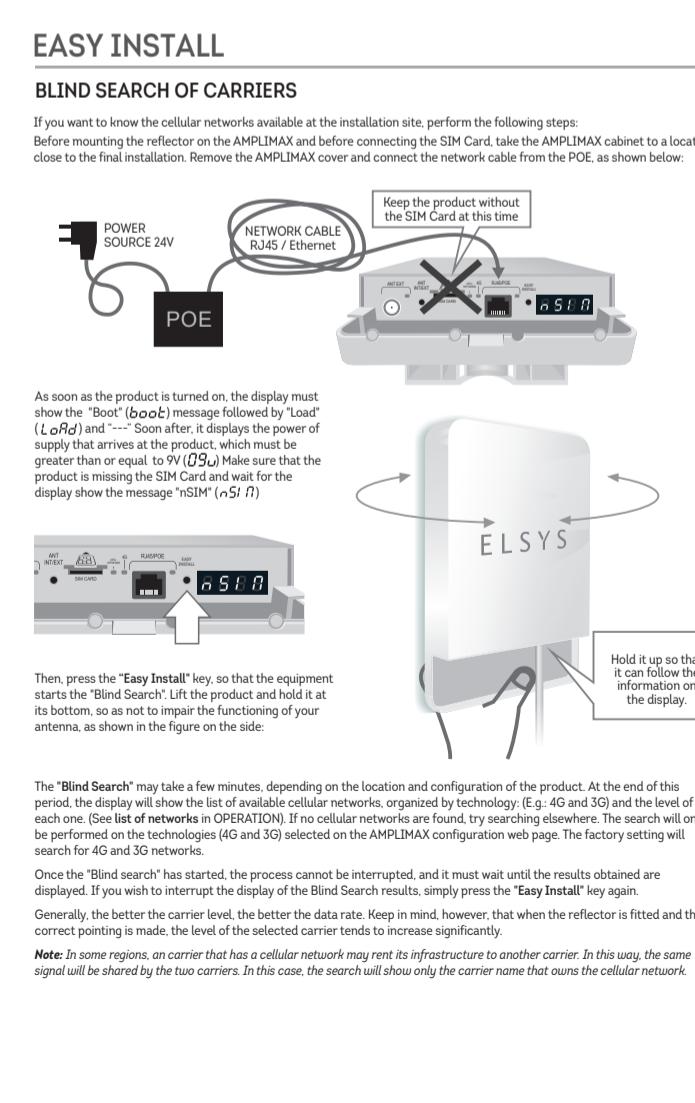


420mm



297mm



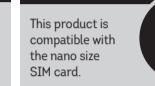
BEFORE USING

ATTENTION

To avoid physical and functional damage, do not open this device beyond connections compartment. Prevent it from falls and / or violent shocks. Always use its original font. Avoid using this product or the devices connected to it during storms. There is a risk of electric shock due to lightning strike.



IMPORTANT



This product is compatible with the nano size SIM card.

Never insert the adapter that came with the product without the SIM card to avoid damaging the product's connector.

PLEASE NOTE: The source voltage for this product is 24 VDC. As this value is higher than that supported by most products on the market, be careful not to connect it to other equipment, otherwise it will be damaged.

BASIC REQUIREMENTS

- Network cable (RJ45) to connect Amplimax to POE - length depends on each installation.
- SIM Card nano (with active data plan).

ABOUT THE RANGE OF THIS PRODUCT

The range of AMPLIMAX depends on a number of factors, such as: frequency of operation, location and height of installation, terrain profile, number and type of obstacles between the product and the cell tower, rain and reflections. Due to these factors it is not possible to predict it accurately. Based on the experiences already made and published in the literature, we present below an estimated comparison between two scenarios:

Scenario 1: USB modem connected indoors.

Scenario 2: AMPLIMAX ELSYS installed on the roof, at a height of 5 meters.

The table below describes the improvement in the range and level received from AMPLIMAX in scenario 2 regarding to the USB modem in scenario 1:

Frequency band	850 MHz
Received level (mW)	Up to 200X more than the 3G / 4G USB modem
Range (km)	Up to 5X more than the 3G / 4G USB modem

ATTENTION This product has an active data collection function. For more information or deactivation, refer to the item "Data Collection" in this manual.

TECHNICAL SPECIFICATIONS

Supply voltage

• 12-32 VDC

Frequency Bands

• 4G: 600 (B1), 700 (B12, B13, B14), 850 (B5),

1700 (B4, B6), 1900 (B2) MHz

• 3G: 850 (B5), 1700 (B4) and 1900 (B2) MHz

Rate of data transmission:

• LTE R9: (DL) 70Mbps Max and (UL) 50Mbps Max

• HSPA R6: (DL) 21Mbps Max and (UL) 5.76Mbps Max

• UMTS R99: (DL) 384Kbps Max and (UL) 384Kbps Max

MHz

• 4G: 600 MHz downlink at the bands B4 and B6

Transmission power:

• Class 3 (24dBm + 1 ~ 3dB for UMTS

• Class 3 (23dBm + 2dB) for LTE

Operation temperature:

• External unit: 14°F ~ 140°F

• Power supply and POE: 32°F ~ 104°F

Storage temperature:

• -4°F ~ 158°F

Ethernet Port

• RJ45 connector

• IEEE 802.3 - Ethernet 10 / 100Mbps

Maximum length of RJ45 cable:

• With original source 24 VDC / 0.75A: 328ft

• With 12 VDC / 1.5A source: 50ft

• With 12 VDC / 1.5A battery: 50ft

Factory configured IP address

• 192.168.10.254

Main directional antenna

• 700 up to 2700 MHz

• Vertical polarization

• Gain: 6 dBi

• 700 to 960 MHz: 6 dB (170 to 1910 MHz: 79 dB) 1920 to 2700 MHz: 10 dB (1920 MHz: 10 dB (2310 MHz) and 8 dB (2700 MHz)

Directional diversity antenna

• Bands: B4 and B6 (downlink)

• Vertical polarization

• Gain: 8 dBi (1700 to 2200 MHz)

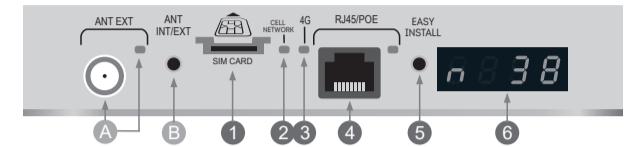
SIM Card Slot

• Accepts nano Sim Card only

Obs.: The band 600 MHz is the only one that is not covered by the product internal antenna. So, for that band, the use an external antenna is mandatory.

PRODUCT DETAILS

AMPLIMAX CONNECTIONS



1. Entrance to the SIM Card of the chosen carrier. Inserting until you feel a "click"

2. CELL NETWORK LED - Flashing, with time on longer off, indicates connection established. Flashing, with off time longer than on, indicates network search

3. 4G LED - On indicates 4G connection. Off indicates 3G connection

4. RJ45 connection - for network cable up to 328 ft

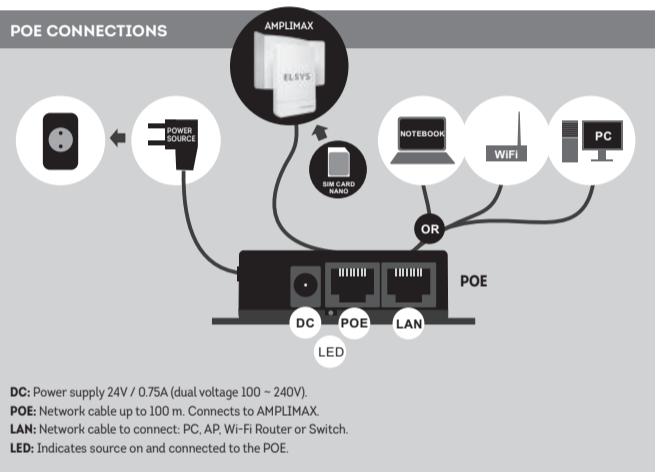
5. EASY INSTALL key - When pressed for 7 seconds, it performs the factory reset / Without the Sim Card it starts the blind search / With the Sim Card it starts the signal location

6. Display (4 digits) - Displays equipment information

A. Connector for external antenna and LED indicator: Internal Antenna - LED off /External Antenna - LED on. Use only in extreme cases and with cable up to 15m (max).

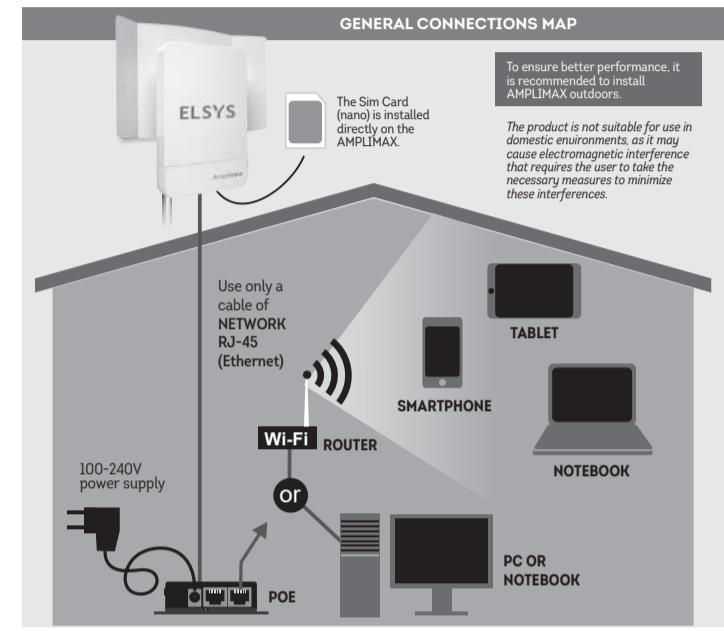
B. Switching key between internal and external antenna

POE INJECTOR CONNECTIONS



INSTALLATION

The installation of AMPLIMAX must be done according to the simplified diagram below:



Preferably, the installation must be done according to the following steps:

NETWORK CABLE ASSEMBLY

Provide a network cable that will connect the POE to the AMPLIMAX, with direct assembly that is, with the same two ends. If the cable is passed through conduits, pass it before crimping its terminals. The use of good connectors and cable is essential (it is recommended to use shielded CAT5e cable if the installation is external), especially since the cable also conducts the product supply. The correct assembly of this cable is essential for the proper functioning of the product and also to avoid damaging it. For more information on cable assembly, check the Cable Assembly section in this manual. Use cable approved by FCC, especially if the length is greater than 33 ft.

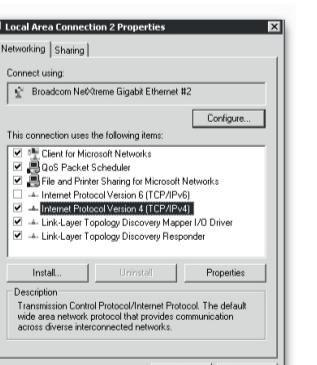
POE INSTALLATION

The POE must be installed indoors and connected to the source, computer, telephone and AMPLIMAX, as shown in the diagram above.

VERIFYING THE INSTALLATION



Typically, the installation will be completed in this step. After energizing the product, wait 1 and a half minutes. Check, then, that it is already possible to browse the Internet by connecting the network cable (RJ45) to a notebook, PC, Access Point or Wi-Fi router. If you are unable to navigate, proceed to the next step.

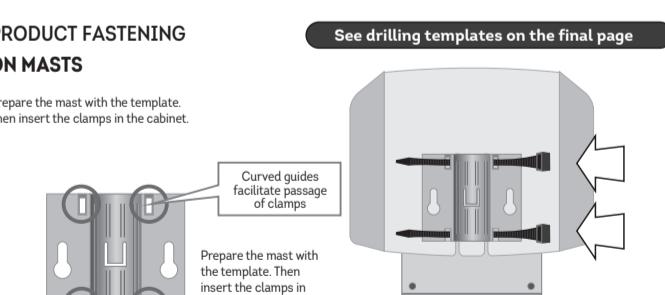


SETTING THE IP ON THE COMPUTER

(Only if necessary).

Make sure your local network card is enabled to receive IP automatically. The information below is for Windows 7:

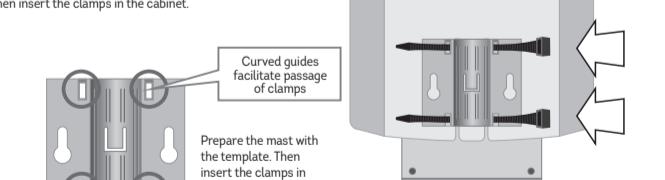
- Select the Start / Control Panel / Network and Internet / Network and Sharing Center / Change adapter settings option.
- With the right mouse button, select Local Connection and go to Tools.
- Double click on "TCP / IP Protocol Version 4".



PRODUCT FASTENING ON MASTS

Prepare the mast with the template.

Then insert the clamps in the cabinet.



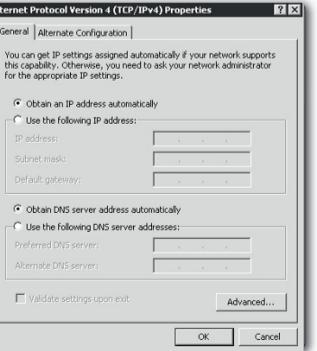
When screwing the screws, leave a space of approximately 4 mm from the wall. Then, fit the AMPLIMAX to these screws through the rear holes as in the figure:



The screen on the side will be displayed:

- Make sure that the "Obtain an IP address automatically" option is enabled.
- Press OK and exit all screens.

Enter your browser and start using the Internet. Advanced setting can be made through the product setting page, as described in the item "WEB Setting Page".



OPERATION

DISPLAY AND WEB PAGE **8888**

OPERATING MODE

- Monitoring - With the inserted Sim Card it displays: carrier, band, signal level and technology.
- Blind Search - Without the inserted Sim Card it displays: animation and audible signal until it search and displays the networks.
- Signal Finder - With the Sim Card inserted, it displays the carrier's best signal level and audible signal.
- Stand by - When it is not active, the display indicates "ON". The keys continue to function.

Network list

Carrier	Technology (Mbps)	Description
AT&T	AT&T	Download up to 70 Mbps Upload up to 50 Mbps 4G
T-Mobile	HSPA+	With Sim Card but without registration Find for the carrier
Verizon	HSPA	Searching for inserted Sim Card network
	HSPA	Integrated Antenna enabled
	HSDPA	Enabled External Antenna
	UMTS	Insert PIN on the LNK 4G setting web page
		Voltage at the RJ45 / POE connector in Volts (Ex: 9 Volts)

Received level and frequency band

Display	Description
600, 700, 850, 900, 1800, 1900	Band (MHz) in which the equipment is registered.
XX	Displays the current signal level, where XX is the percentage of the signal level. This value varies between 00 and 99. The higher the value, the better the signal.
--	Unidentified level.

Received level indication

RECEIVED LEVEL (%)	RECEIVED LEVEL (dBm) RSSI-3G and 2G	RECEIVED LEVEL (dBm) RSRP- 4G	QUALITY
91 to 99%	> -70 dBm	> -90 dBm	EXCELLENT
61 to 90%	-90 to -70 dBm	-110 to -90 dBm	GOOD
31 to 60%	-100 to -91 dBm	-120 to -11 dBm	ACCEPTABLE
0 to 30%	<-100 dBm	<-120 dBm	WEAK SIGNAL

DATA COLLECTION

To monitor performance and improve the product, some data may be collected.

INFORMATION THAT WILL BE COLLECTED:

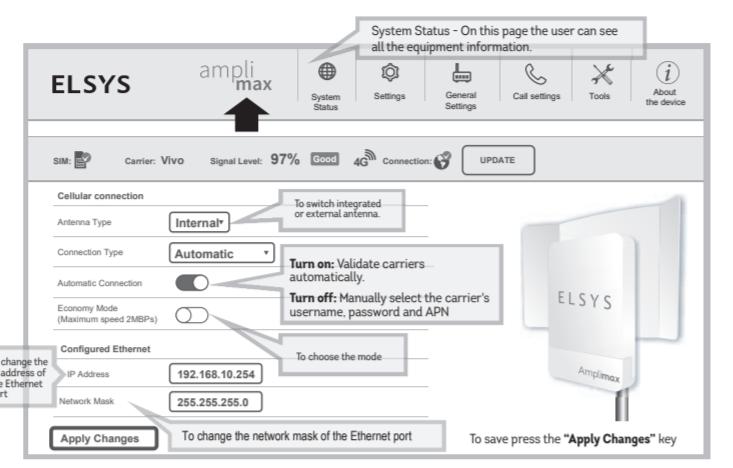
- Date / time: date and time of collection
- Serial number: Serial number "ELSYS" - Production control;
- IMEI: International Mobile Equipment Identification (Global Registration).
- MAC: Media Access Control ("Physical" address of the network interface).
- Software version: - Software version of the equipment.
- Modem Software Version: - Software version of the equipment modem.
- Antenna selection: Type of antenna being used (Internal or External).
- Carrier: User carrier (mcc / mnc).
- Connection technology (3G and G): Connection being used - 3G and / or 4G.
- Signal level: Signal level in dB
- Network frequency: Frequency used by Amplimax.
- Loc: Area location code
- CellID: Base station identification
- Power over Ethernet voltage - POE.
- Product Supply Voltage
- Module temperature: RF module temperature
- Phone Usage: Informs if the voice service was used
- Scheduled Reset: Informs if the programmed reset is enabled
- IPv6: Tells whether IPv6 is enabled
- Connection Status: Informs if the equipment had an active connection at the time of collection
- Antenna: Reports whether you are using an internal or external antenna
- IP WAN: Wan interface IP
- GPS Position: GPS position with error up to 164ft.
- Upload and Download connection speed: Upload and Download data rate.
- Time of greatest movement of use: Time of greatest use (User profile).
- Average connection speed: Average data rate speed.
- Quantity of data consumed in the month: Data consumption in the month.

WEB SETTING PAGE

With the computer settings done correctly, open the browser of your choice and enter the IP address of the AMPLIMAX (the factory default is 192.168.10.254). If all connections are correct, the product setting page can be accessed.

AMPLIMAX HOME PAGE

Page with the basic settings of the Ethernet port and the 4G / 3G / 2G connection



If the automatic option does not work, make sure that the equipment is receiving some signal from the carrier.

FEATURED FEATURES:

BLIND SEARCH:
In the menu Tools it is possible to do a BLIND SEARCH of carriers, even with a Sim Card installed in the product. Find out which carrier is performing best in the region.

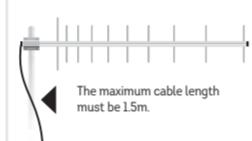
BALANCE CONSULTATION:
Still on the menu Tools it is possible to receive and send SMS. This tool is useful to check messages sent by the carrier and to make data inquiries. Another tool that allows you to make balance inquiries is the "USSD", which is also in the menu Tools.

DATA COLLECTION:
In the menu About the Device it is possible to enable or disable data collection, as well as to know its details.

EXTERNAL ANTENNA:
Although this product is integrated with a high-performance Heptaband antenna, it allows the installation of an external antenna in a practical way in a TNC connector, but there is an important detail about the cable length.

To avoid signal loss, the external antenna installation cable must not exceed 5ft.

DATA COLLECTION:
In the menu About the Device it is possible to enable or disable data collection, as well as to know its details.



WEB SETTING PAGE

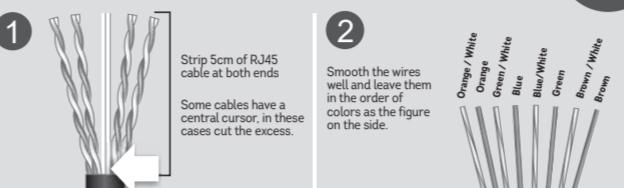
Required tools:
1 cutting pliers
1 RJ-45 connector crimping pliers
1 network cable testing

Material needed:
2 high quality RJ-45 connectors

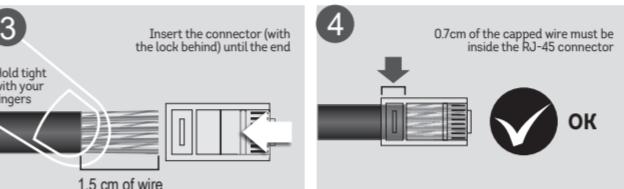
High quality RJ-45 network cable. At a minimum, it must be category 5e (cat. 5e)

ASSEMBLY INSTRUCTIONS:

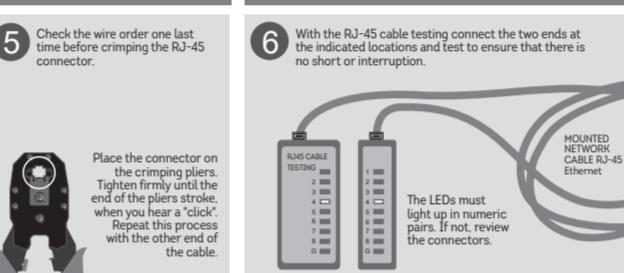
PREPARING THE RJ45 CABLE



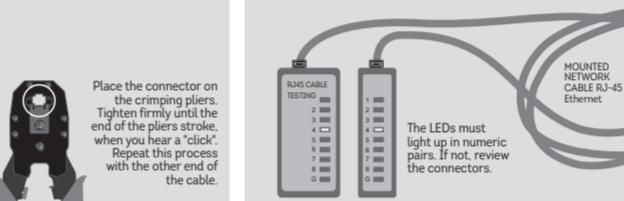
CHECK THE CABLE ALIGNMENT ON THE CONNECTOR



CRIMPING



TEST THE CABLE



*PLEASE NOTE:

- In regions where one carrier rents the signal (tower) from another, the blind search will only show the name of the carrier that owns the cellular network.
- Download / Upload rates and performance depend on the quality and availability of each carrier's signal. ELSYS disclaims any guarantee of upload and / or download rate, as these conditions are relevant to each carrier. The peak download speed of 70Mbps depends on the rate of each carrier.
- The range of this product (200x * signal and 5x * range) depends on the conditions of the installation, the relief of the region, the frequency of operation of the tower, among other factors.
- The external RJ-45 cable can reach 32ft without signal loss. This cable is not included.
- Remote monitoring of cameras and alarms depends on the carrier, the contracted plan (pre or post) and the resources available on the cameras or DVRs.
- To access the Internet it is necessary to acquire SIM Card (nano) with data plan enabled. The SIM card is not included.
- Tested carriers: AT&T, T-Mobile.

FCC STATEMENT

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. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

PACKAGING CONTENT

- 1 AMPLIMAX equipment.
- 1 Metal reflector.
- 1 DC - 24V source.
- 1 RJ45 network cable (Ethernet).
- 1 POE (Power Over Ethernet) injector.
- 2 Nylon cable ties with UV protection for fastening.
- 1 Nylon cable tie with UV protection for fastening.
- 2 Strips of self-fusing tape.

Weight / measure (Individual package): 3 lb / 14.4 x 3.6 x 8.6in

Manufactured by:

ELSYS

ELSYS Equipamentos Eletrônicos Ltda.
Avenida Torquato Tapajós, 4.780
Barro Colonia Santo Antônio
POSTAL CODE 69.993-018
Manaus - AM - Brasil
CNPJ: 34.484.188/0001-02
Brazilian industry
www.elsys.com
Made in Brazil.



FACTORY RESET

To reset the equipment to the factory default, you can use the WEB setting page or the "EASY INSTALL" key on the product panel. With the product turned on, go to the Setting Page: General Settings / Factory Setting / Reset or hold the "EASY INSTALL" key for 7 seconds. A third way of restoring a factory default is to dial the number: # 1111 #, from the phone. Wait 90 seconds and the equipment will return to the factory settings.

GENERAL NOTES

- Use only original AC / DC adapter.
- Incompatible accessories compromise the operation, safety and warranty of the product.
- The AMPLIMAX power source must operate at 100 - 240VAC. Check the local voltage before connecting the device.
- If you want to clean, turn off the power and use only a slightly damp cloth. Do not use cleaning products, removers or aerosols.
- In order to ensure its best performance, do not install AMPLIMAX in locations with obstructions in the alignment sight with the chosen tower.
- Do not cover or place objects on the AMPLIMAX.
- To prevent damage and loss of warranty, use the accessories supplied with the device.
- AMPLIMAX is compatible with 12VDC batteries and solar panels. (Observe the technical specifications in this manual).
- Avoid shock or impact. Improper handling can damage the external structure as well as the device's internal circuits.
- During strong storms, it is advisable to disconnect the drop cable from the AMPLIMAX and the power source in the POE.
- Do not connect multiple power cables to a single outlet.
- Do not touch the plug with wet hands. Always hold and pull the plug and never the cable.
- Do not place heavy objects on the power cable or bend it excessively.
- Do not try to repair the device if it is not working. Any repair must be carried out by qualified personnel.
- The power supply must be installed in properly ventilated, dry places and away from objects with high temperatures, places with direct exposure to the sun, sources of water, fire or flammable / explosive materials.

WARRANTY AND TECHNICAL ASSISTANCE

SCOPE AND GUARANTEE TERM

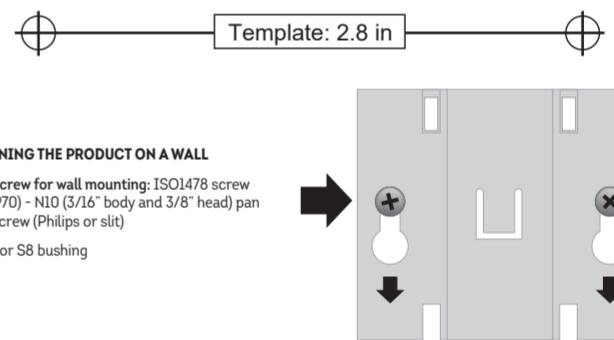
- This product is guaranteed by ELSYS for a period of one (1) year, including the three (3) months established by law. The term of this guarantee will be counted from the date of purchase of the product, evidenced by the purchase receipt of the product.

- In case of manufacturing defect within the guarantee period, the consumer must contact the seller. Analyses and repairs, within the guarantee period, can only be carried out by ELSYS or by authorized companies.

THIS PRODUCT GUARANTEE IS EXCLUDED:

- With defects / damage resulting from failure to follow the installation and care instructions in the manual, as well as those caused by unforeseeable circumstances (floods, lightning, outbreaks, etc.) and accidents (falls, crashes, etc.).
- With defects resulting from use in accordance with the recommended, improper installation, connections to the wrong voltage or with energy variation above that specified by the product.
- Damaged packaging and product finish.
- With altered, tampered or violated seals and / or serial numbers.
- With sales invoice missing, showing erasures, modifications or any irregularities.
- With the original power supply, supplied by ELSYS, replaced by any other one of a different or generic brand.
- Shipped for repair without the power supply.

ASSEMBLY TEMPLATE



FASTENING THE PRODUCT ON A WALL

Ideal screw for wall mounting: ISO1478 screw (DIN7970) - N10 (3/16" body and 3/8" head) pan head screw (Philips or slit)

S6, S7 or S8 bushing

PRODUCT FASTENING ON THE MAST

AMPLIMAX Lite can be fixed to both mast and wall.

To attach to a mast, first wrap the two pieces of the self-fusing tape on the mast.

The spacing between the two pieces of tape should be around 2.6", measured from center to center.

Template: 2.6 in

(center to center)

210518-A

Material: desejável papel offset 75g ou acima.

Cor de impressão: Preto

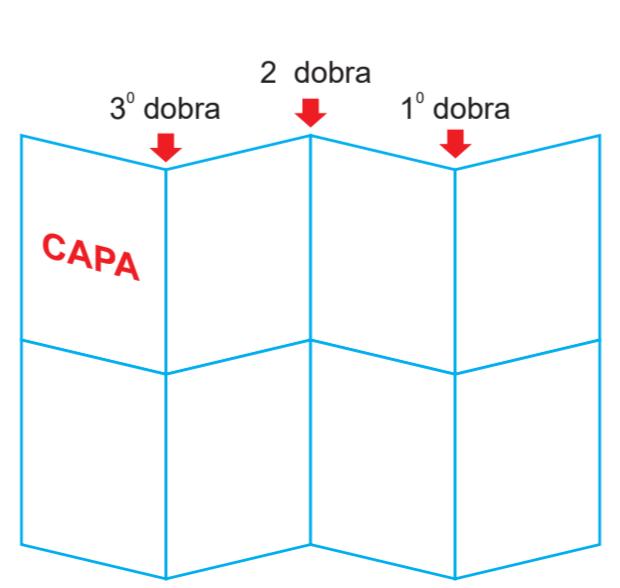
Medidas:

Aberto: (A3- 420 x 280mm

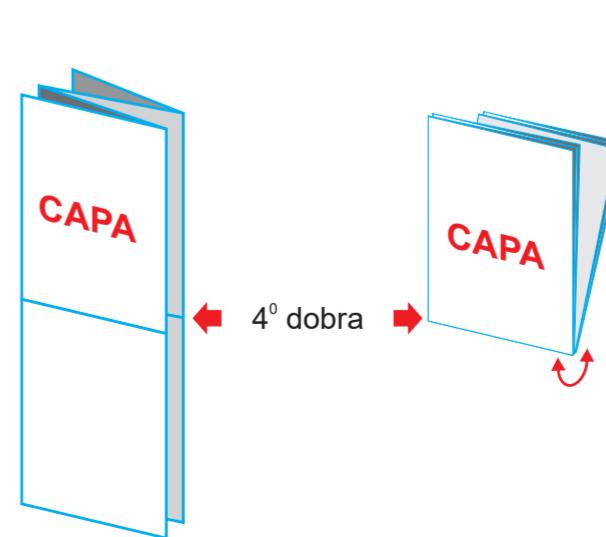
Dobrado: 148,5 x 105mm

Tolerância: 2mm

1
Marcas de dobra.
(Folha na horizontal)



2
Dobrar a folha ao meio, para trás.



3
Formato fechado

