

INTERCOM NETWORK "TELSON"

1. GENERAL DESCRIPTION

« TELSON » is a communication system that combines a decentralized switched telephone network (for private conversations) with a loudspeaker system (announcements, paging, title messages, general information, etc.).

1.1 GENERAL

The installation allows from any place of the site equipped with a « TELSON » Unit, to:

- broadcast a general call on the whole site.
- to establish a private conversation with one to five other people maximum on the site. Simultaneously, a general call and 5 conversations (1 optional) are possible.

Each « TELSON » unit is made up of:

- 1 calling and speaking telephone set including:
 - a telephone handset
 - a general call keypad and conversation channel selector (5 or 1 channel)
 - a switching and talking circuit
- 1 or more loudspeakers with integrated amplifier

NOTE: It is possible to supply loudspeakers without an amplifier.
In this case, an amplifier box with several power amplifiers is necessary.
(Number and amplifier power depending on the number of loudspeakers).

Installation of additional loudspeakers not connected to the call equipment allows coverage of the entire site during a general call using the PA system to broadcast emergency messages.

It is possible for certain units to associate a fire flash or a howler.

Each unit is powered by a 24V/48V or optional 230Vac power source;
or by several sources in various places on the site, the power of which will depend on the power consumed and consequently on the number of units and loudspeakers (on each unit) installed and distances between units.

NOTE: The consumption on 24 and 48Vdc of a "Telson" unit with a loudspeaker with amplifier is 0.5A and each additional speaker is 0.4A.
The variation of the 48Vdc is from 42V to 54V.

The installation allows six simultaneous communications:

- 1 general call which is an announcement heard by all.
- 5 private conversation circuits (1 optional).

Each of these six channels can be accessed from any unit or, alternatively, one or more channels can be reserved for conversations between a selected number of sites.

In this system, the switching and the amplification are decentralized (optionally, it is possible to centralize the amplification).

This decentralization ensures maximum safety of the installation in the event of a fault. in an individual unit. This unit is disabled with no effect on other units.

In the case of an installation with alarm circuits, only the oscillators and control circuits are centralized.

In the case of mains power supply, several power supply boxes can be provided in order to guarantee the safety of the installation (in the event of failure of a power supply source).

OPTIONS :

1/ 1 or 5 private conversation circuits.

2/ Telson network coupled to the telephone network (with optional PABX).

From one or more telephones, it is possible to make a general call on all the loudspeakers of the Telson network.

3/ Possibility of broadcasting acoustic alarm signals (for example: fire, gas, evacuation) on all speakers in the Telson network.

2. GENERAL DESCRIPTION OF EQUIPMENT

The industrial units are robust, with waterproof or explosion-proof enclosures (cast iron, cast aluminum). and protected against corrosion with epoxy paint.

They are fitted with weather proof or explosion-proof cable glands.

The indoor desks are made of painted sheet steel.

Explosion-proof equipment can be used in explosive atmospheres of group IIB for category II2G according to the requirements of the standards in force and the European directive 2014/34/EU of April 20, 2016.

Its gas marking code is:

Ex db IIB T6 Gb or Ex db IIB+H2 T6 Gb

Ex db IIB T4 Gb or Ex db IIB+H2 T4 Gb - Version with handset

Weather proof equipment has a degree of protection at least equal to the IP66 index according to the requirements of the standards in force NF EN 60 529

2.1 DESKTOP CALL STATION "TELSON"

Desk station in sheet steel painted black RAL9005 with plastic handset and extendable cord.
This call station includes:

- Loudspeaker 5W / 50 ohms
- Keypad 5 directions + general call with indicator light
- Telephone card
- Amplifier card + mute
- TELSON card 5 channels of communication + General paging
- Power card 230Vca/24Vcc
- telephone handset

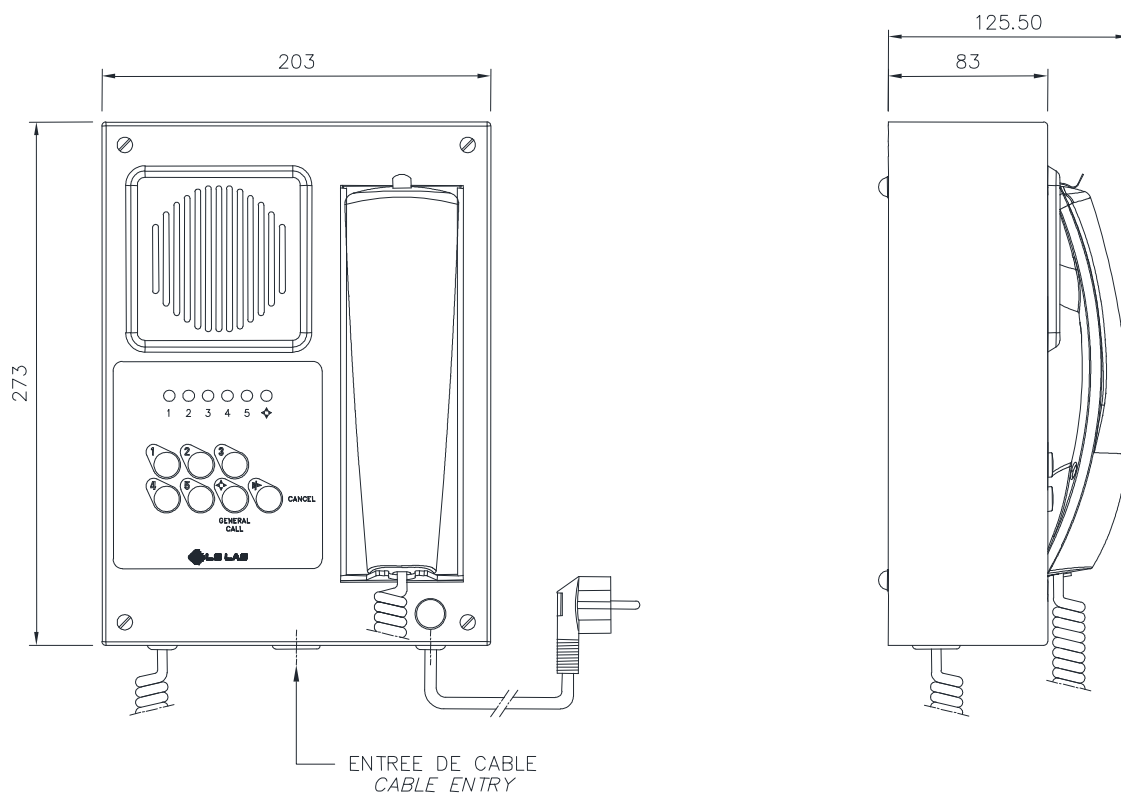
CE124V11
WK125CL9
WK119MLT
WK083AMP
WK124TES
WK056ALM
MS436A19

Option:

- Booster card for general paging

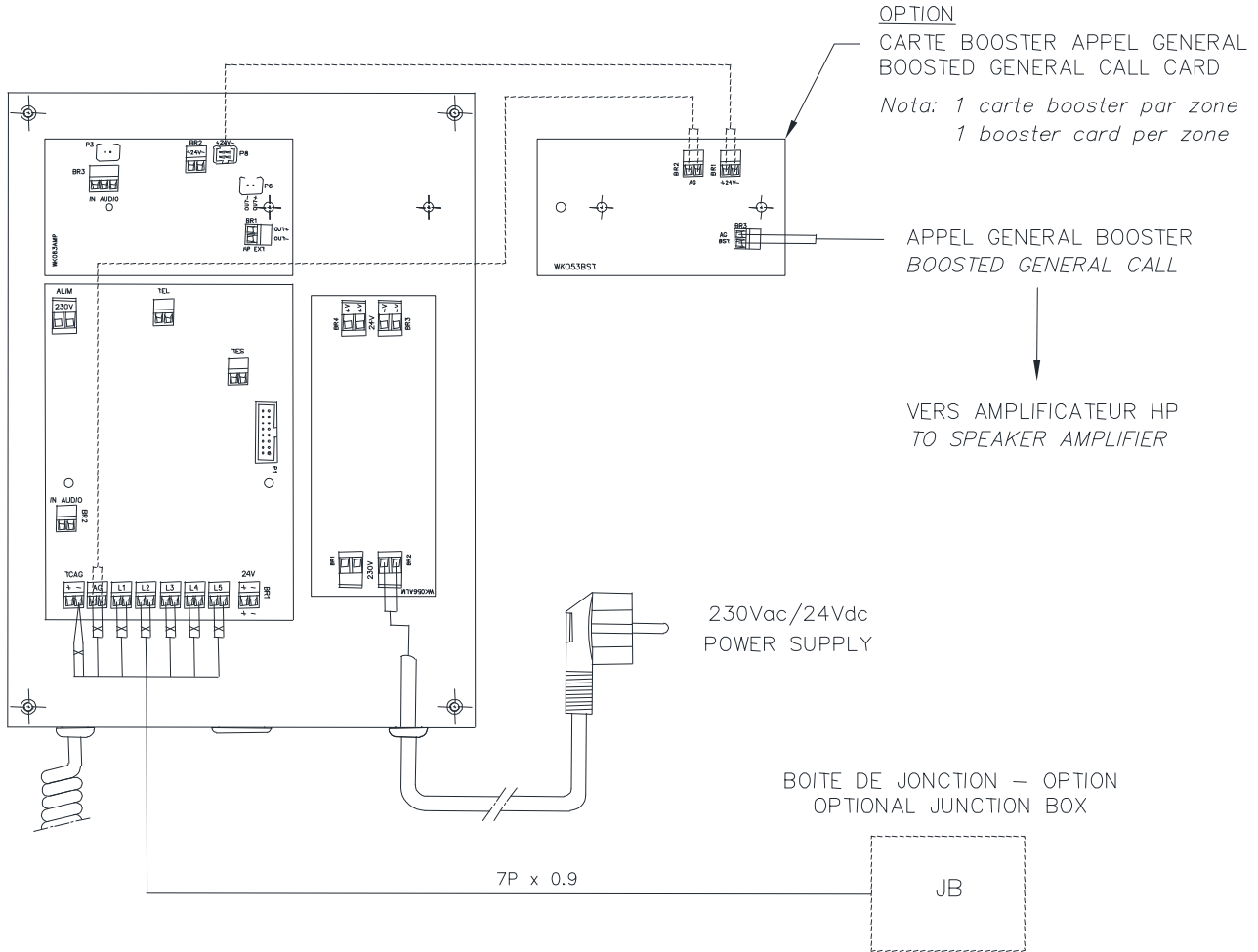
WK053BST

Reference : TLS 161P2GC5TESCA

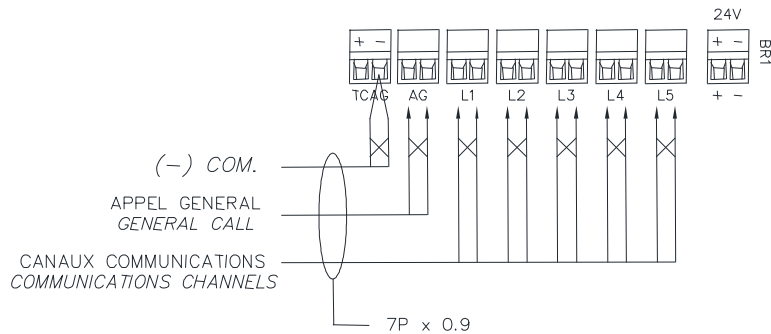


CONNECTION

VUE INTERIEURE INSIDE VIEW



DETAIL BORNIER CANAUX DE COMMUNICATIONS COMMUNICATIONS CHANNELS TERMINAL BLOCK DETAIL



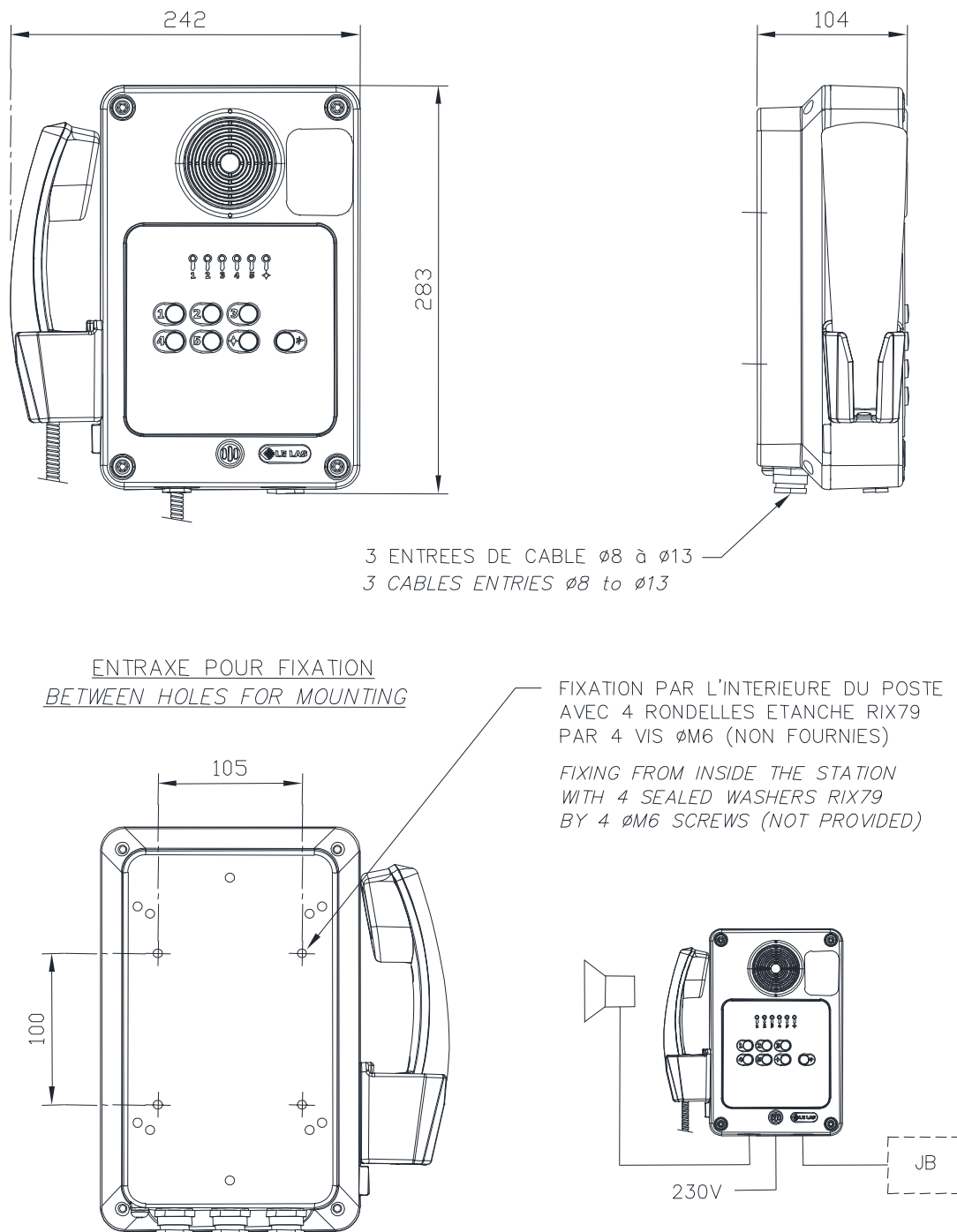
2.2 WEATHER PROOF "TELSON" CALL STATION

Weather proof molded aluminum wall box protected by RAL2003 orange paint.
Handset in molded aluminum protected by RAL2003 black paint and stainless-steel metal cord.
This call station includes:

- Keypad 5 directions + general call with indicator light
- Telephone card
- TELSON card 5 channels + General paging
- Power card 230Vca/24Vcc
- Amplifier card 30W for extra loudspeaker

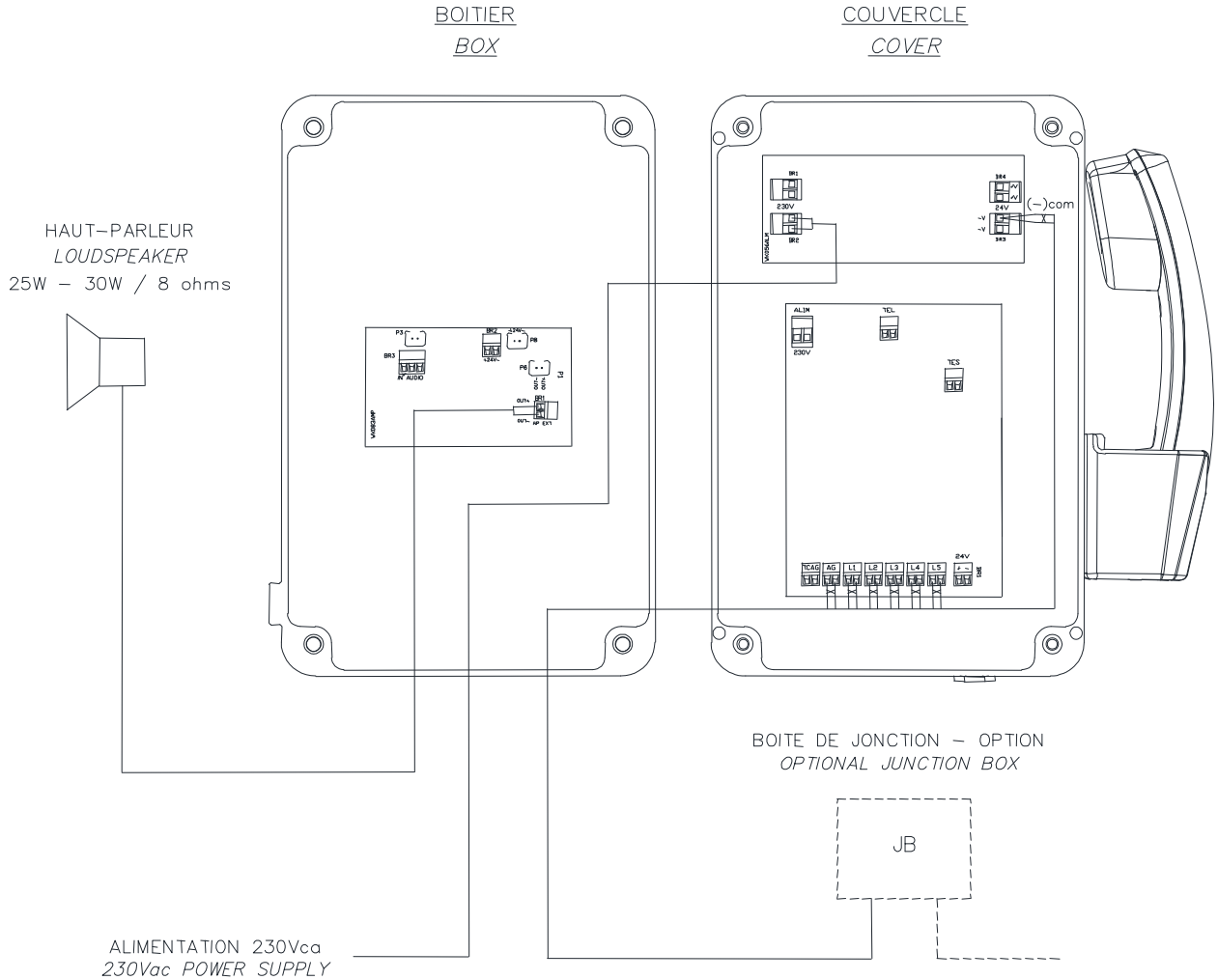
WK163CL9
WK119MLT
WK124TES
WK056ALM
WK083AMP

Reference : TLS 410 E5GC5TESCA

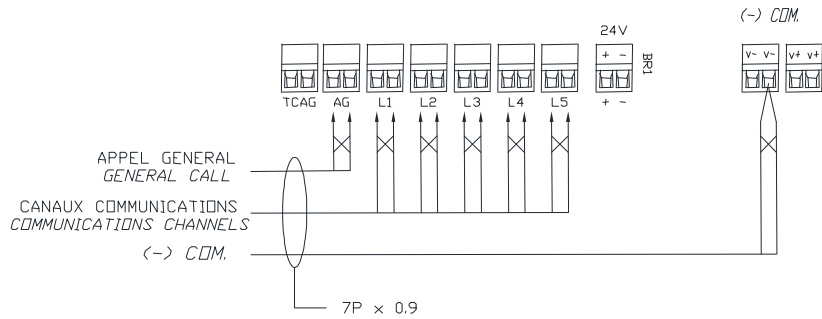


CONNECTION

VUE INTERIEURE
INSIDE VIEW



DETAIL BORNIER CANAUX DE COMMUNICATIONS
COMMUNICATIONS CHANNELS TERMINAL BLOCK DETAIL



2.3 HANDSET AND MANAGEMENT BOX "TELSON" EXPLOSION PROOF TYPE

Explosion-proof wall casing "d" in die-cast aluminum protected by RAL2003 epoxy paint.

Folding lid with hinges and closed with stainless steel hexagon socket screws.

Handset in molded aluminum protected by RAL2003 black paint and stainless-steel metal cord.

This unit includes:

- Keypad 5 directions + general call
- Telephone card
- Security barrier card for the handset.
- Telephone handset

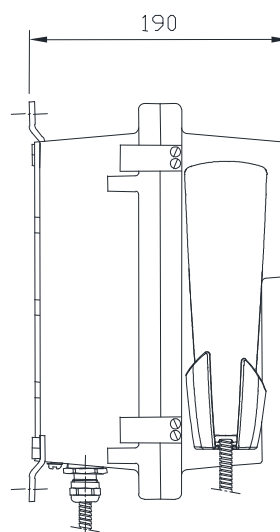
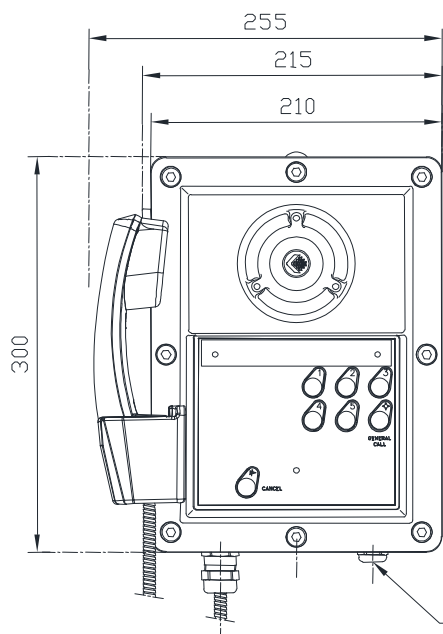
WK133CL9

WK205CMAATX

WK098PLIATX

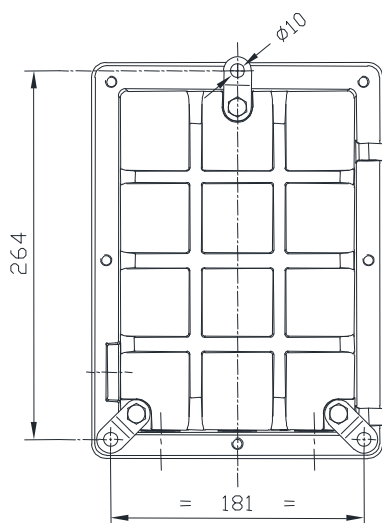
MS436AD22G68/ATX

Ref.: TLS 214 A2GC5TES



ENTREE DE CABLE $\phi 7$ A $\phi 12$ MAXI
CABLE ENTRY $\phi 7$ TO $\phi 12$ MAX

ENTRAXE POUR FIXATION
BETWEEN HOLES FOR MOUNTING



- RACCORDEMENT -
- WIRING -



LIGNE TELEPHONE
TELEPHONE LINE

Note: This set is associated with the reference amplifier box AMP226A2TESCA

MANAGEMENT BOX « TELSON » EXPLOSION PROOF TYPE

Management box associated with the explosion-proof handset TLS214A2GC5TESCA.
 Explosion-proof wall casing "d" in cast aluminum protected by RAL2003 epoxy paint.
 Folding lid with hinges and closed with stainless steel hexagon socket screws.

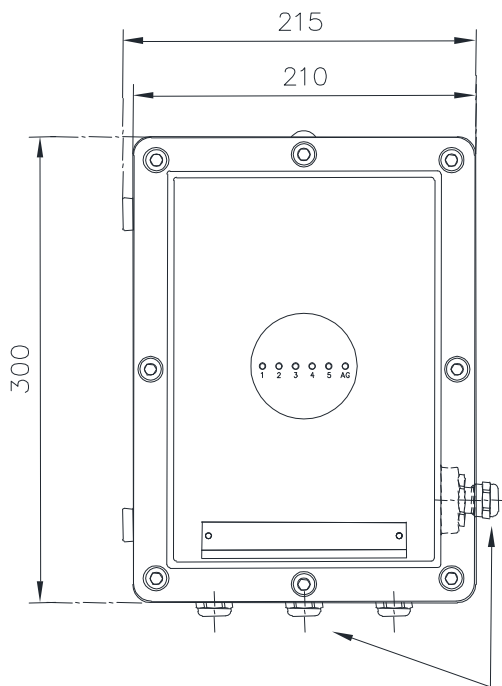
This unit includes:

- Card 5 directions + general call
 with line busy indicator LED card
- 230Vac/24Vdc power supply card
- 30W amplifier card for extra loud speaker

WK124TES

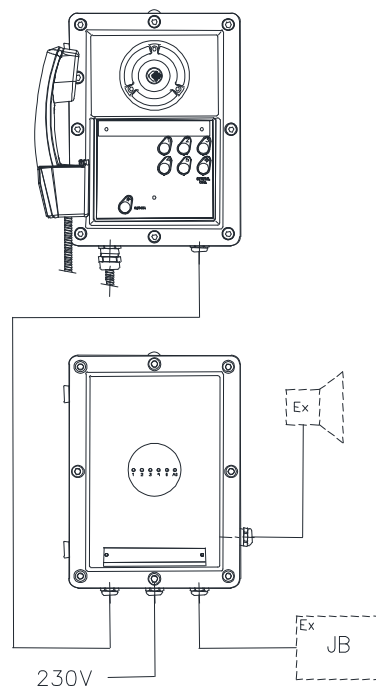
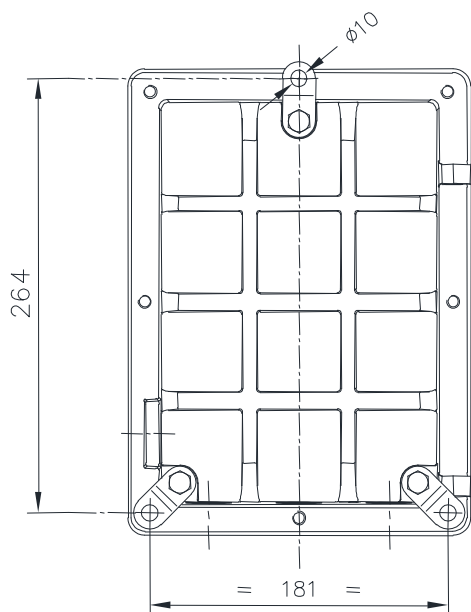
WK056ALM
 WK083AMP

Ref.: AMP 2226A2TESCA

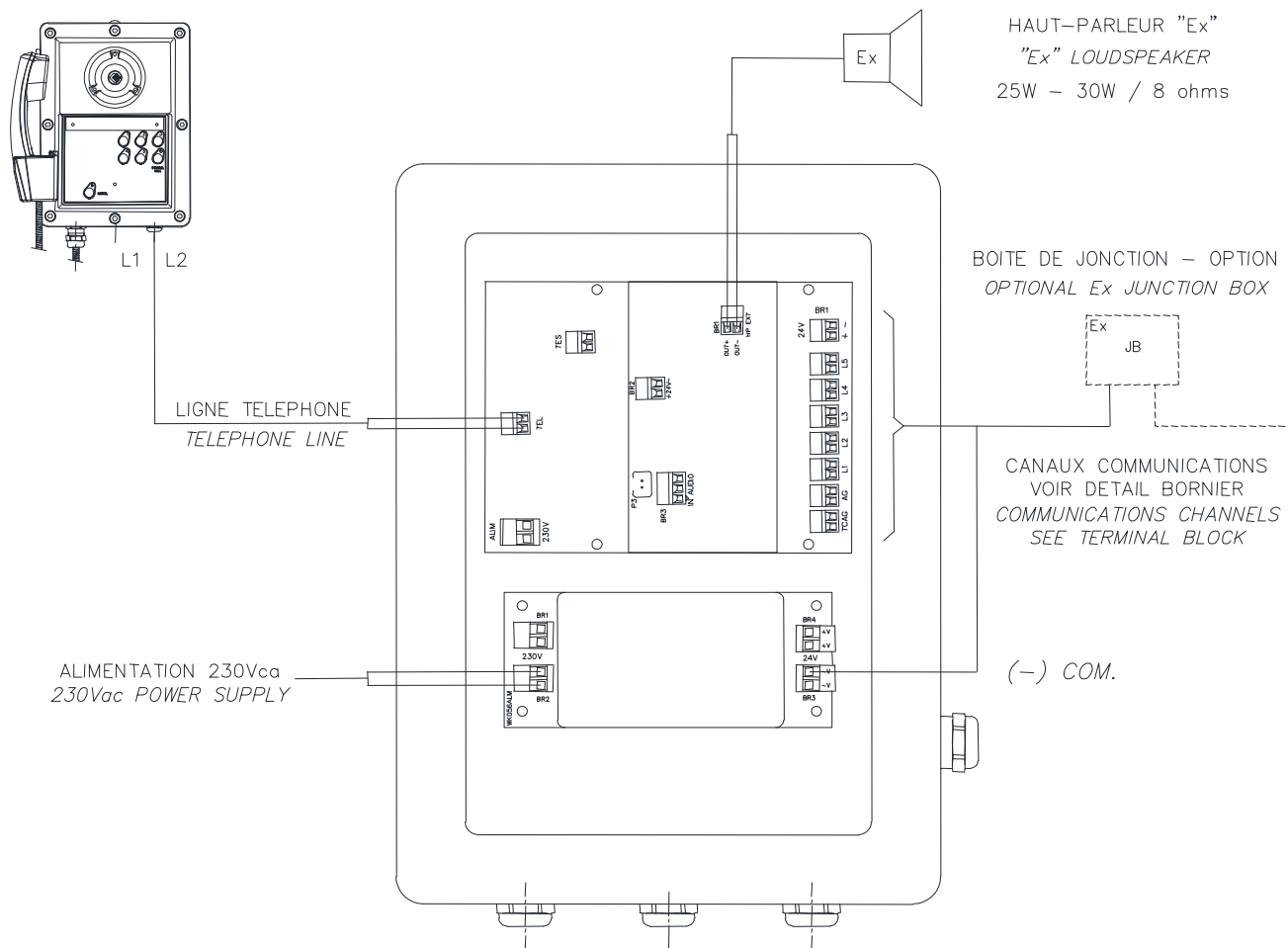


4 ENTREES DE CABLES $\phi 7$ A $\phi 12$ MAXI
 4 CABLES GLANDS $\phi 7$ TO $\phi 12$ MAX

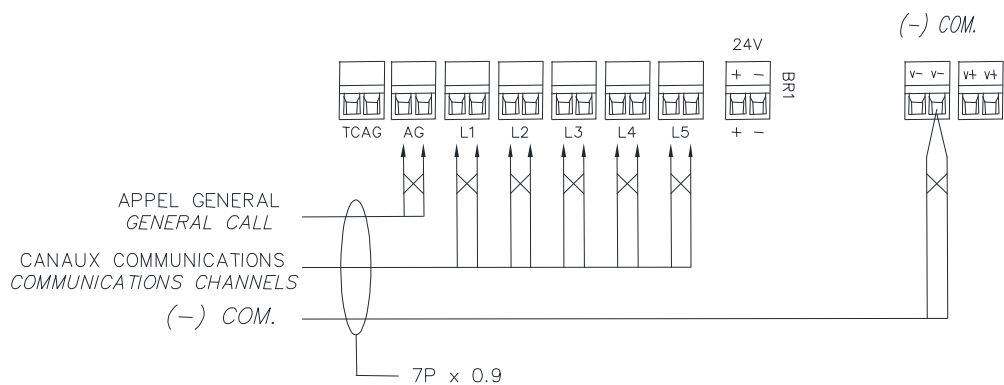
ENTRAXE POUR FIXATION
 BETWEEN HOLES FOR MOUNTING



WIRING OF THE TLS214A2GC5TES STATION WITH AMP226A2TESCA MANAGEMENT BOX



DETAIL BORNIER CANAUX DE COMMUNICATIONS
COMMUNICATIONS CHANNELS TERMINAL BLOCK DETAIL



3. AMPLIFIER BOX FOR LOUD SPEAKER 30W

3.1 EXPLOSION PROOD VERSION

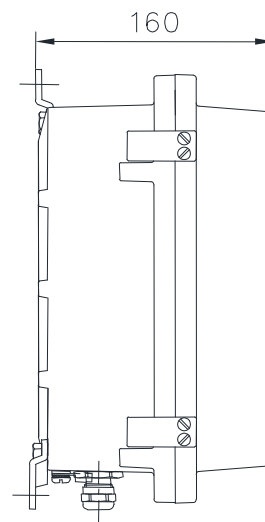
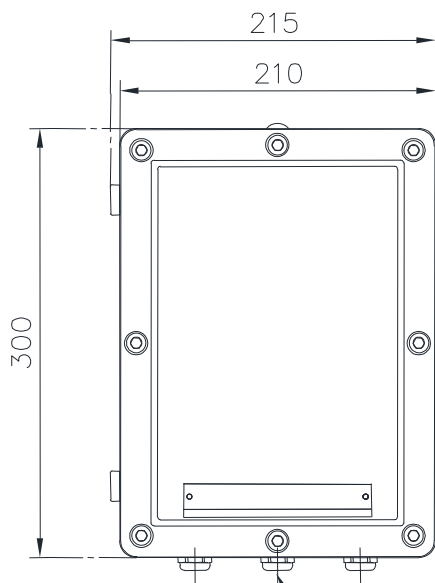
Explosion-proof wall casing "d" in cast aluminum protected by RAL2003 epoxy paint.
Folding lid with hinges and closed with stainless steel hexagon socket screws.

This unit includes:

- Power card 230Vca/24Vcc
- 30W amplifier card for extra loud speaker

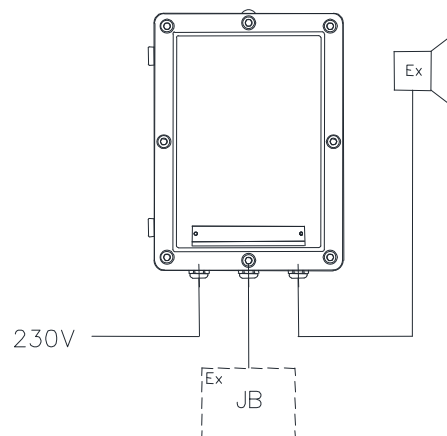
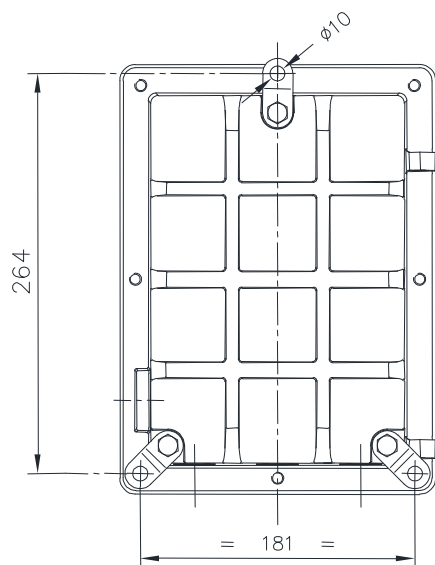
WK056ALM
WK083AMP

Ref.: AMP 226A2HPCA



3 ENTRES DE CABLES $\phi 7$ A $\phi 12$ MAXI
3 CABLES GLANDS $\phi 7$ TO $\phi 12$ MAX

ENTRAXE POUR FIXATION
BETWEEN HOLES FOR MOUNTING



3.2 WEATHER PROOF VERSION

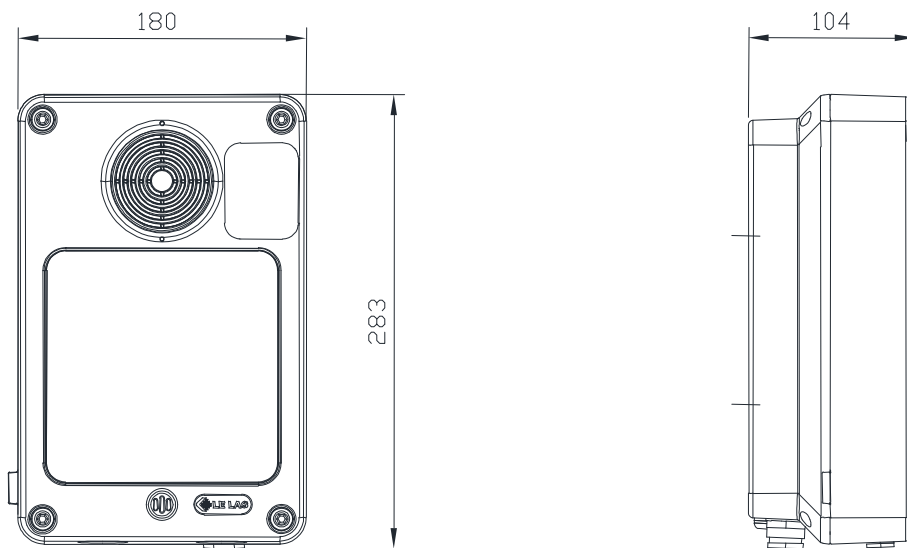
Weather proof molded aluminum wall box protected by RAL2003 orange paint.

This box includes:

- Power card 230Vca/24Vcc
- 30W amplifier card for extra loud speaker

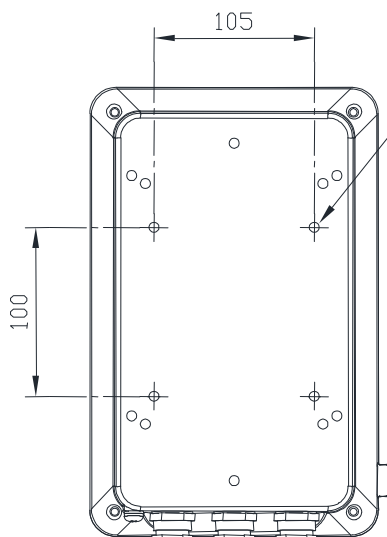
WK056ALM
WK083AMP

Reference : AMP410E2GCTESCA



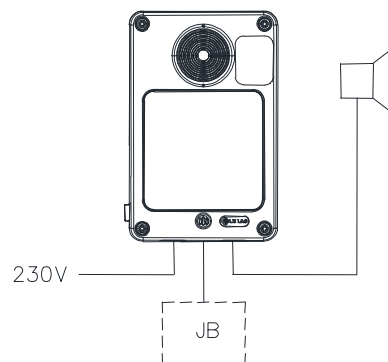
3 ENTRES DE CABLE $\varnothing 8$ à $\varnothing 13$
3 CABLES ENTRIES $\varnothing 8$ to $\varnothing 13$

ENTRAXE POUR FIXATION
BETWEEN HOLES FOR MOUNTING



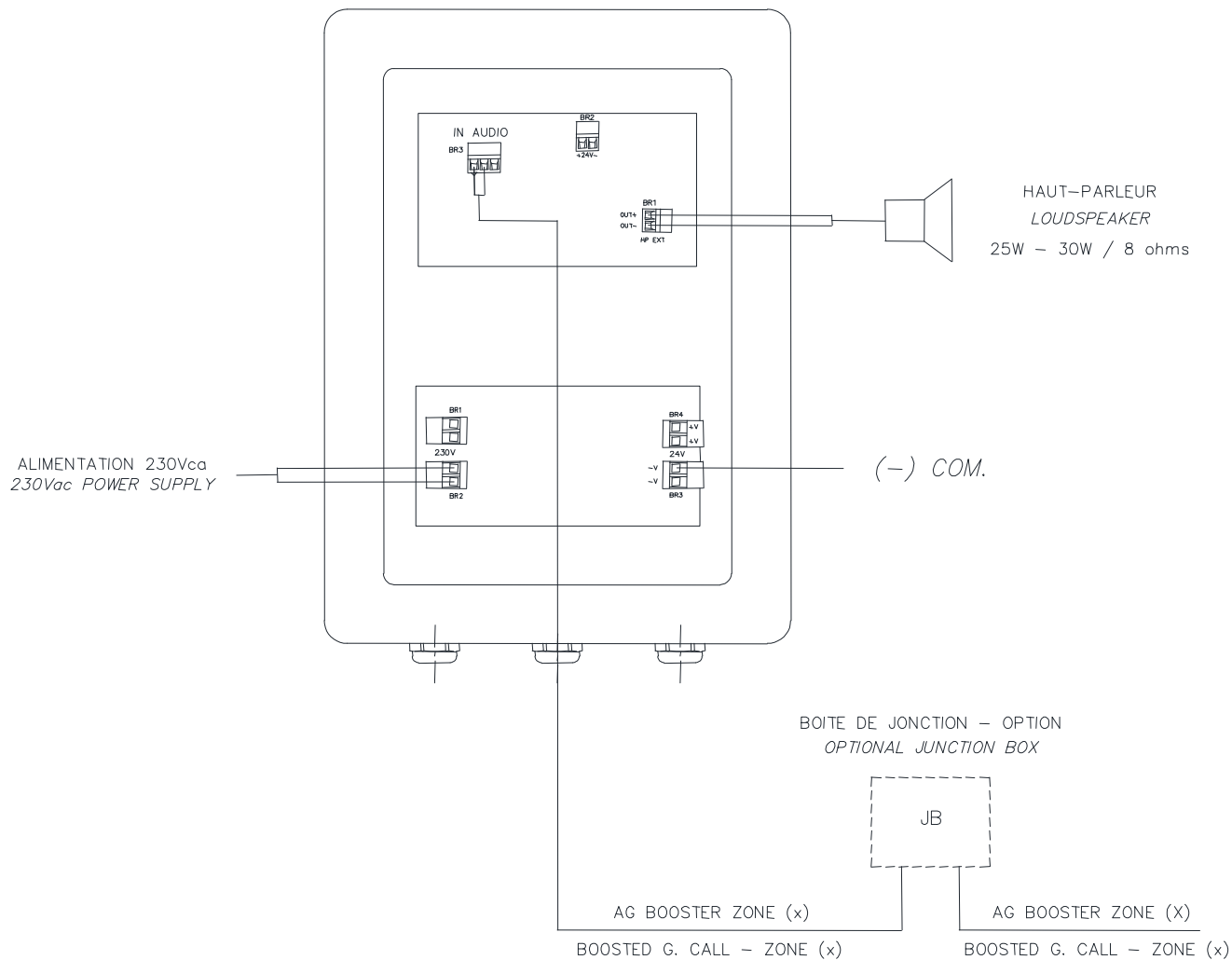
FIXATION PAR L'INTERIEURE DU POSTE
AVEC 4 RONDELLES ETANCHE RIX79
PAR 4 VIS $\varnothing 6$ (NON FOURNIES)

FIXING FROM INSIDE THE STATION
WITH 4 SEALED WASHERS RIX79
BY 4 $\varnothing 6$ SCREWS (NOT PROVIDED)



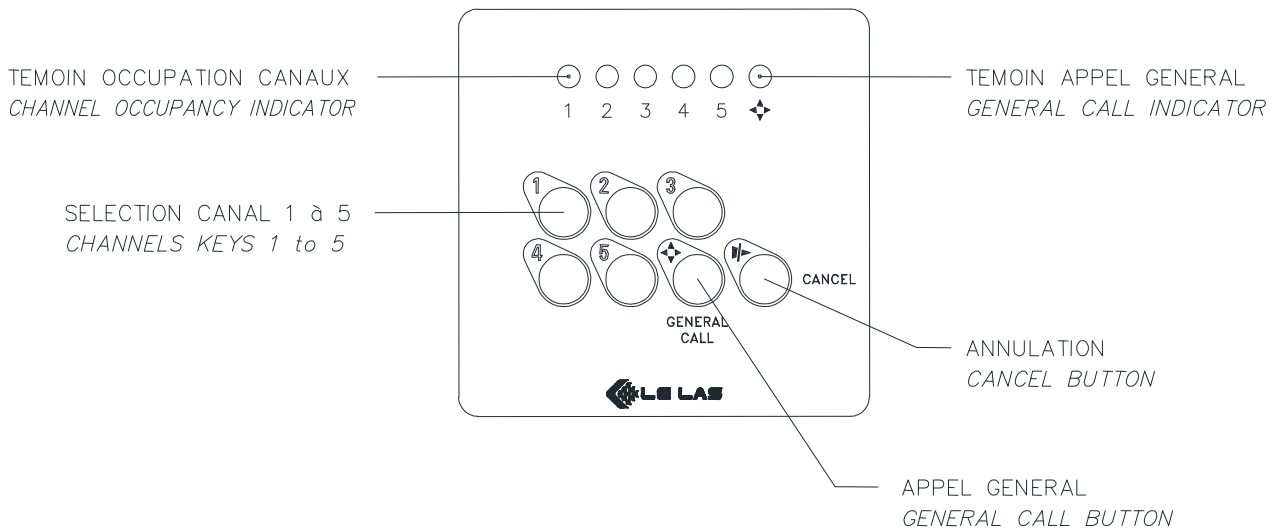
30W SPEAKER AMPLIFIER CONNECTION

FLAMEPROOF AND WEATHER PROOF VERSION



4. OPERATING PRINCIPLE

4.1 CONTROL KEYBOARD "TELSON"



4.2 GENERAL CALL

- Pick up the handset,
- Make sure that a conversation channel is free (indicator light).
- Press the general call button (if no general call is activated).
- Make your announcement to the person you are looking for by indicating the selected channel.

The message will be heard on all loudspeakers in the installation except of the loudspeaker connected to the unit in use which is automatically muted in order to avoid feedback,

- Press button 1-5 to connect to the desired channel.

Option:

During the broadcast of the general call, the Telson units equipped with flash fire are in operation.

4.3 SETTING UP A PRIVATE CONVERSATION

The wanted person goes to the nearest call station, picks up the handset and selects the channel specified by the caller by pressing its button (1 to 5).

Communication is established with the caller.

4.4 DURING THIS CONVERSATION

Another person can make another paging call and establish a conversation on a second channel.

A third call can be broadcast and a third conversation established on the third private chat channel and so on.

If a person wants to open a call when all channels are busy:

- he can use the general call to ask a question, and the answer can be given on the general call system without using a talk channel.
- he can also cut off a conversation in progress to request the release of the line so he can use it.

5. ADDITIONAL EQUIPMENT FOR VERY NOISY ENVIRONMENTS

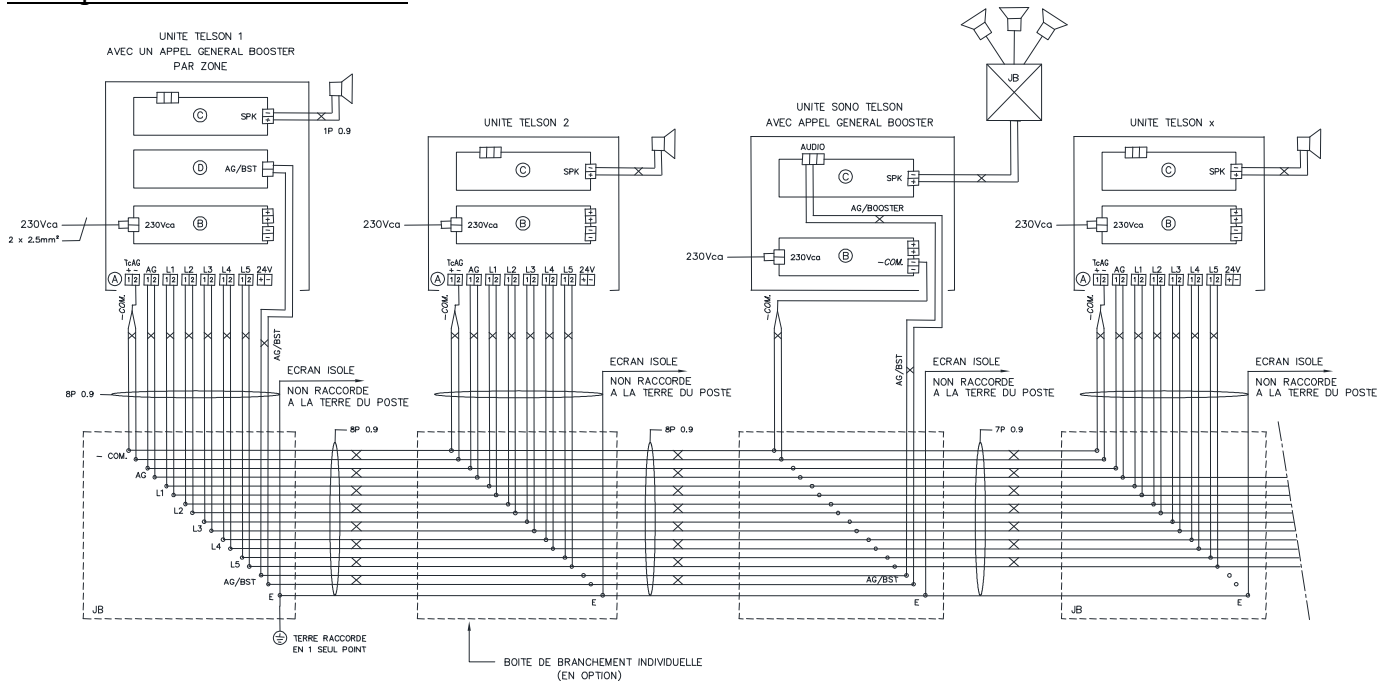
If the noisy level is high in certain places on the site, the general call may be hard to hear. To remedy this, flashing lights activated during a general call can be installed to attract the attention of people in that area.

Conversation can also be difficult to hold. In this case, installing the telephone set in a soundproof polyester or metal cabin can reduce ambient noise by around -25dB.

6. CONNECTION

The Telson units are connected to each other in parallel via the various junction boxes or directly to a central distributor by a 7-pair cable (for 5 conversation channels) or by a 3-pair cable (for 1 conversation channel) and by a 2-conductor cable for the power supply.

Exemple connection at 230Vca



Note:

In the case of a 7-pair cable, delete the "L5" pair on all stations.

Legend

- A – Telson card for 5 channel + General paging
- B – Power card 230/24Vcc
- C – Amplifier card 30W for extra loud speaker
- D – Booster card for general paging **for 1 zone only**

- WK124TES
- WK056ALM
- WK083AMP
- WK053BST - **OPTION**

JB – Optional junction box

Use a telephone cable Ø 0.9 mm, paired, with overall screen.

Each “Telson” unit is connected to the general network by the various junction boxes.

- Amplifier box / telephone connection: 1 pair
- Loudspeaker connection: 1 pair or 2 x 1.5 mm²