

MASTER STATIONS

Universal

HIGH POWER INDUSTRIAL INTERCOMS



LE LAS



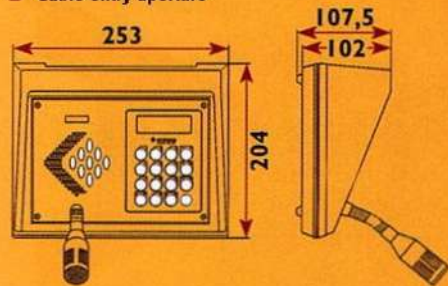
- 9 OR 99 WAY MODELS
- VARIETY OF PROGRAMMABLE CONFIGURATIONS



DESCRIPTION

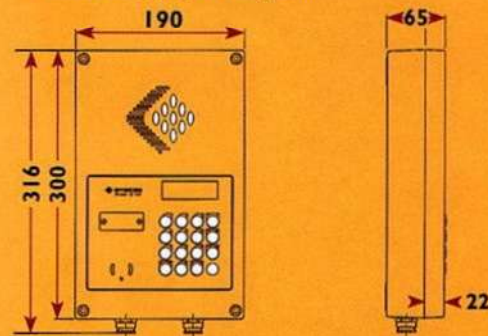
Type 153 : Desktop model

- Black plastic enclosure
- Oxidised aluminium faceplate
- Cable-entry aperture



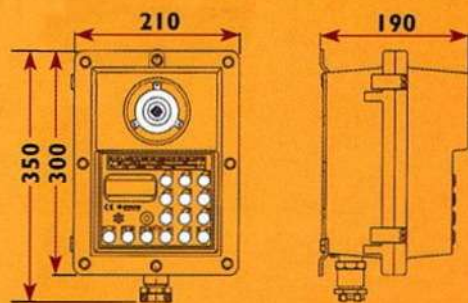
Type 376 : Weatherproof wall-mounted model

- Shielded enclosure for surface mounting, in cast aluminium, protected by epikote paint.
- Weatherproofing by IP66, flat joint, with hinged detachable front section.
- Set of hexagonal hollow stainless-steel retention screws (option: triangular screws).
- 3 cable-entry for a set of glands, supplied unfitted, with blanking plug and adaptor.



Type 214 : Explosionproof model

- Robust enclosure in cast aluminium with hinged front section, closed by hollow hexagonal stainless-steel screw set and weatherproofing provided by flat joint. Delivered with one cable-entry, diameter 5 (min) to 12 (max).



MASTER STATION/UNIVERSAL/UNI2G Series INTERCOM

Reliable and robust, the Universal Industrial Master Station intercoms have established an impressive reputation for **SYSCOM** systems. Resistant to all challenges, this new range of specialised equipment is even more powerful and user-friendly. The physical dimensions are reduced whilst the electronics offers a variety of functions.

Available in desktop, flushfitted, weatherproof or explosionproof versions in exceptionally robust enclosures, these intercoms provide in every circumstance and at lowest cost, communication on all sites, even the most exposed.

Each unit is equipped with:

- its individual electronic processing and amplification card, guaranteeing safety and communication quality with a high level of protection.
- Weatherproof loudspeaker, delivering between 5 Watts and 15 Watts (for explosionproof model).
- Protected electret microphone (with gooseneck for internal units).
- Keypad offering the following functions:
 - Management of talk/listen communication
 - Call by acoustic signal adjustable in tone and duration, from a substation or another master station
 - Response to call, in the queue and queuing management
 - Set-up of conference with 2 or more stations
 - Priority general call from the network preceded by a 3-note jingle
 - Group call

Power supply:

48 V (can be set to 24V) via local power unit, or by central power supply

Variety of peripheral units :

- Powerextension for attachment of loudspeakers whether or not linked;
- DTMF remote control card for door-entry, machine start-up, camera, etc.

CHARACTERISTICS

- Volume card associated with loudspeaker protected in its enclosure and generating a volume between 98-110 dB, with level of volume adjustable locally.
- Microprocessor technology providing programming by the user, n° of unit, connection with other susstations, etc.
- All configurations are possible starting with a simple one bus one pair link.
- Dialling keypad with lit LCD indicating the state of the network, the station called, the station calling, stations in queue, etc.
- Protected electret microphone.

REF. 10 WAY NETWORK	REF. 99 WAY NETWORK	DESCRIPTION
TCH 153 PGBL	TCH 153 PGBLT	Desktop unit
TCH 153 PGEL	TCH 153 PGELT	Flushfit unit
TLH 376 EG	TLH 376 EGT	Weatherproof unit
TLH 214 AG	TLH 214 AGT	Explosionproof unit
BDV 376 E1P12CF	BDV 376 E1P12CF	12-line junction box

Due to the constant desire to improve the quality of our products, we reserve the right to make modifications at any time.



Conforme à la normalisation CE



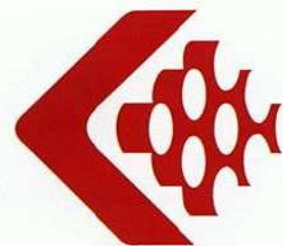
SYSCOM



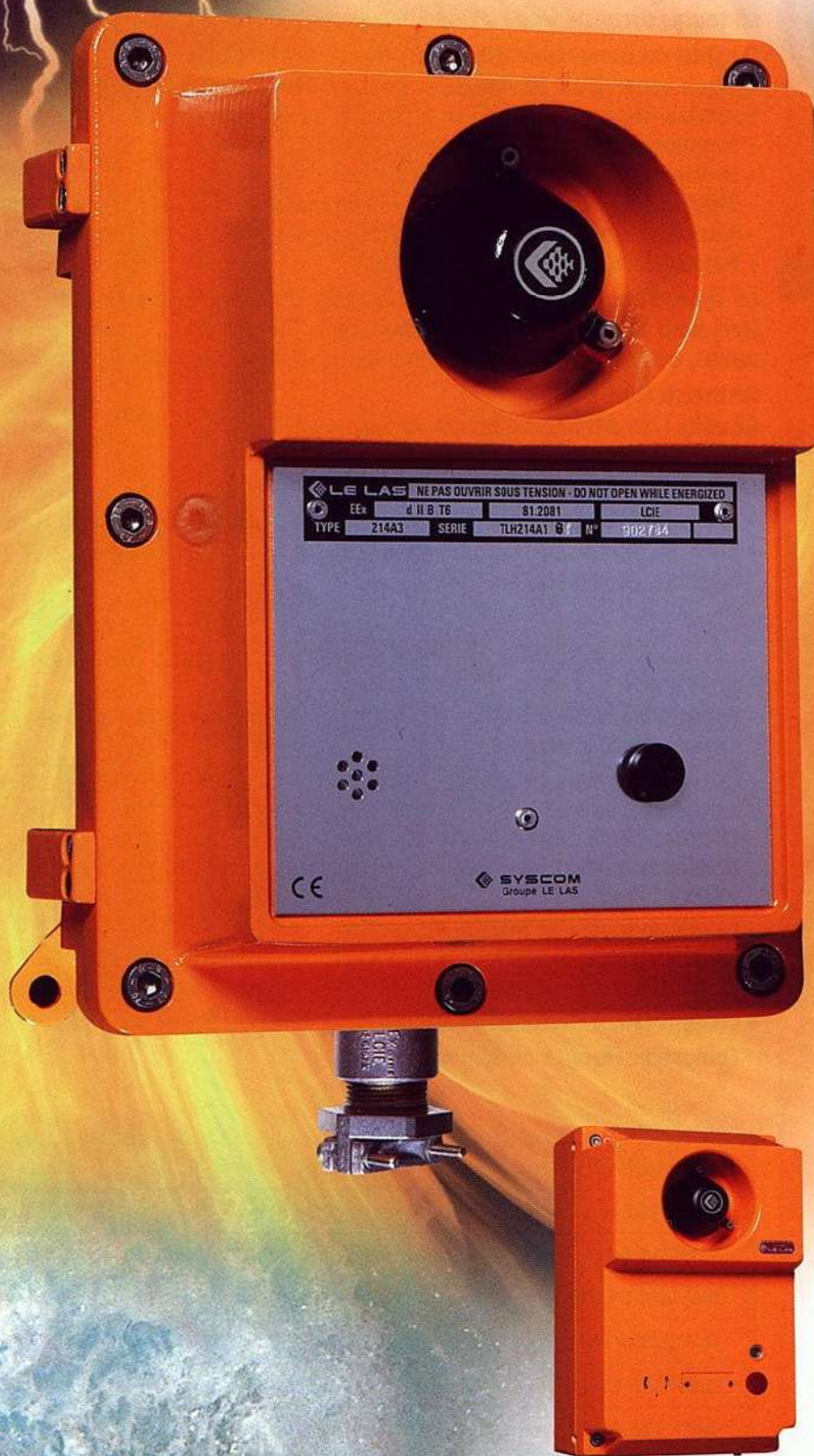
TLH 214/344

SUB-STATIONS - Universal

HIGH POWER INDUSTRIAL INTERCOMS



LE LAS



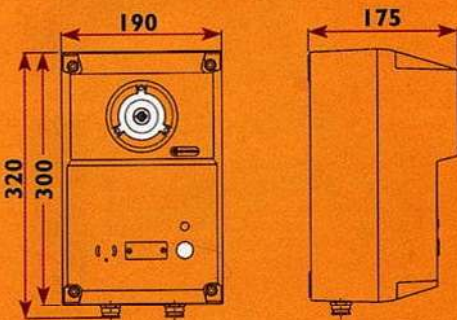
- **ROBUST**
- **EXPLOSIONPROOF**
- **WEATHERPROOF**
- **HIGH VOLUME**



DESCRIPTION

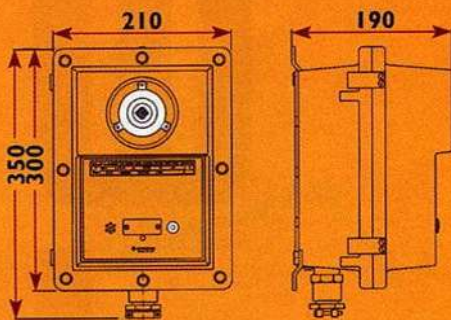
Type 344 : Weatherproof model

- Robust cast aluminium enclosure protected by epikote paint, closed by hollow hexagonal stainless-steel screws set.
- Weatherproofing assured by flat joint. Delivered with cable-entry gland set.



Type 214 : Explosionproof model

- Robust enclosure in cast aluminium, with hinged front-section, closed by hollow hexagonal stainless-steel screw set, weatherproofing assured by flat joints. Delivered with 1 cable-entry, diameter 5 (min) - 12 (max).



INTERCOMS/SUB-STATIONS/universal/uni2g Series
UNIVERSAL intercom stations have for many years gained **LE LAS** and **SYSCOM** an enviable reputation.

The new versions reinforce their prime qualities: robustness, power, reliability and improved user friendliness and compatibility. they offer increased functionality.

Available in weatherproof and explosionproof versions, in exceptionally robust enclosures these intercoms have a very powerful output. they assure at all circumstances communication at all sites even the most exposed.

Communication quality with high protection

Every unit is equipped with its own electronic processing and amplification card guarantees the safety and reliability of these units:

- 15 Watts compression-chamber motor.
- Protected electret microphone and its call button.
- Call mechanism by lit button indicating the busy status of the network.
- Call reception by ringing with programmable automatic connection to line.
- Automatic call/listen balance.

This type of intercom offers also choice of a simplified electronics model (this for network usage "conference type": one station calls others, or "DIGICOM "type : connection to a 30 or 100-way switch).

Power supply:

- 48V (can be set to 24V) via local power unit, or by central power supply.

Variety of peripheral unit:

- Power extention for attachment of loudspeakers whether or not link.
- DTMF remote control card for door-entry, machine start-up, camera, etc.

CHARACTERISTICS

- Weatherproof or explosionproof enclosure, in moulded aluminium and protected.
- Electronic volume card running a high-resistance weatherproof 15 Watts compression-chamber motor and generating an output volume of 105(Ex) - 110 dB.
- The output volume is adjustable locally or remotely adjustable from the Master Station (option)
- Electrical consumption: 500 mA.
- Compatible with 9 or 99 station network.
- This entire unit is protected in its weatherproof enclosure.
- The program of the different uses can be downline loaded by the user, n° of station, address of Master Station, etc. Thanks to the internal microprocessor, all configurations are possible from a single-pair bus connection.
- Weatherproof call button, shielded and lit, indicating the status of the network.
- Protected electret microphone.

RÉFÉRENCE	
TLH 344 E1G	Weatherproof station 15 Watts IP66
TLH 214 A1G	Explosionproof station 15 Watts EEXdIIBT6
BAT 376 E1A48	Weatherproof power supply 1A
BAT 226 A1A48	Explosionproof power supply EEXdIIBT6 1A
AMP 342 E1G	Public Address enclosure weatherproof 15 Watts
AMP 226 A1G	Public Address enclosure explosionproof 15 Watts

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Conforme à la normalisation CE



SYSCOM

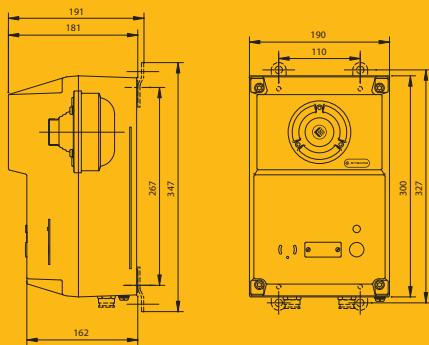




DESCRIPTION

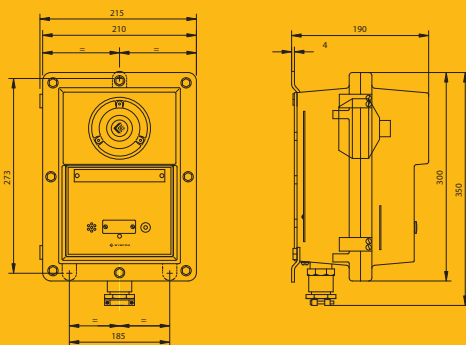
Type 344: Weatherproof model

- Robust cast aluminium enclosure protected by epikote paint, closed by hollow hexagonal stainless-steel screws set.
- Weatherproofing assured by joint. Delivered with cable-entry gland set.



Type 214: Explosionproof model

- Robust enclosure in cast aluminium, with hinged front-section, closed by hollow hexagonal stainless-steel screw set, weatherproofing assured by flat joints. Delivered with 1 cable entry, diameter 5 (mm) -12 (max).



INTERCOMS/SUB-STATIONS/universal/uni2g Series UNIVERSAL intercom stations have for many years gained LE LAS and SYSCOM an enviable reputation. The new versions reinforce their prime qualities: robustness, power, reliability and improved user friendliness and compatibility, they offer increased functionality. Available in weatherproof and explosionproof versions, in exceptionally robust enclosures these intercoms have a very powerful output. They assure at all circumstances communication at all sites even the most exposed.

Communication quality with high protection

Every unit is equipped with its own electronic processing and amplification card guarantees the safety and reliability of these units:

- 15 Watts compression-chamber motor.
- Protected electret microphone and its call button.
- Call mechanism by lit button indicating the busy status of the network.
- Call reception by ringing with programmable automatic connection to line.
- Automatic call/listen balance.

This type of intercom offers also choice of a simplified electronics model (this for network usage conference type: one station calls others, or "DIGICOM type: connection to a 30 or 100-way switch).

Power supply: 24' - 48V (can be set to via local power unit, or by central power supply).

Variety of peripheral unit:

- Power extension for attachment of loudspeakers whether or not link.
- DTMF remote control card for door-entry, machine start-up, camera, etc.

CHARACTERISTICS

- Weatherproof or explosionproof enclosure, in moulded aluminium and protected.
- Electronic volume card running a high-resistance weatherproof 15 Watts compression chamber motor and generating an output volume of 1 05(Ex) - 110 dB.
- The output volume is adjustable locally or remotely adjustable from the Master Station.
- Electrical consumption: 500 mA.
- Compatible with 9 or 99 station network.
- This entire unit is protected in its weatherproof enclosure.
- The program of the different uses can be downline loaded by the user, n° of station, address of Master Station, etc. Thanks to the internal microprocessor, all configurations are possible from a single-pair bus connection.
- Weatherproof call button, shielded and lit, indicating the status of the network.
- Protected electret microphone.

REFERENCE	
TLH 344 E1G	Weatherproof station 15 Watts 1P66
TLH 214 A1G	Explosionproof station 15 Watts EEXdIIBT6
BAT 376 E1A48	Weatherproof power supply 1A
BAT 226 A1A48	Explosionproof power supply EEXdIIBT6 1A
AMP 342 E1G	Public Address enclosure weatherproof 15 Watts
AMP 226 A1G	Public Address enclosure explosionproof 15 Watts

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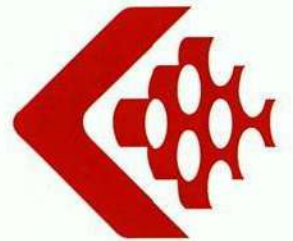
Conform to the CE normalisation



SYSCOM

TLA 227

TELEPHONES DESIGNED FOR SAFETY



LE LAS



- **ROBUST**
- **WEATHERPROOF**
- **EXPLOSIONPROOF**

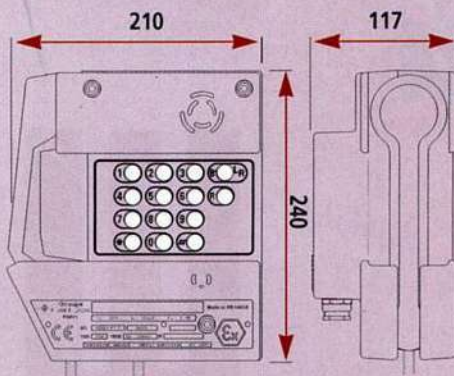
OPTIONS HANDS FREE OPERATION - REMOTE DIAGNOSTICS



Régulation : Black Line 01-48-76-13-43 - 04/2000

DESCRIPTION

- Cast aluminium casing. Sealed by tightening 3 fixing screws.
- Shockproof, dual-operation pulse or DTMF dialling (selectable), 14 buttons.
- Weatherproof ringer > 92dB/ 1 metre.
- Cast aluminium handset with Teflon finish, equipped with stainless-steel armoured cord with resistance greater than 200 Kg.
- Electronic circuit with adjustable amplification system and dual connectors (extension ringer), detachable and lockable.
- Weight: 4,5 kg.



In conformance with the new directive ATEX 94/9/CE, LE LAS has launched this new telephone - weatherproof, explosionproof ⇒ TLA 227 A.

This telephone enables you, right now, to harmonise your sites and equipment, in accordance with the mandatory directive, which comes into force as of 1/7/2003.

This equipment incorporates the latest electronic technology. It is protected by a special type of intrinsic safety. It provides classic telephone functionality (with its handset equipped with armoured cord) and offers also (as an option) the powerful features of microprocessor-driven new generation hands-free operation.

Thus equipped, this telephone guarantees "total safety". It assures permanent protection of people and equipment, on all sites, even the most exposed. The unit overall is protected to weatherproof classification IP65.

CHARACTERISTICS

This telephone conforms to CCITTQ23 recommendations.
Designed for use on public or private networks.

Certificated EE x em [ib] ib IICT5 (Certificate of Conformity Ineris 98 D 5002 X)
Compact and lightweight design.
Operating temperature up to 60°C.

OPTIONS

Hotline operation.
Autodialling.
Hands-free operation.

REFERENCE	DESCRIPTION
TLA 227 A1A	Explosionproof telephone IIC with keypad and handset.
TLA 227 A1AT	Explosionproof telephone IIC with keypad, handset, hands-free, remote diagnostics.
TLC 227 A1A	Explosionproof telephone IIC with handset, no keypad.

In the constant desire to improve the quality of our products, we reserve the right to make modifications at any time without prior notice.



Agréé ART - Conform to the CE normalisation

B A B T

Quality certified ISO 9002



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E-mail: lelas@wanadoo.fr - Internet: www.lelas.com.fr

SERIE 229

ADVANCED TECHNOLOGY

MEMORY DIAL

EXPLOSION PROOF

WEATHERPROOF

VANDAL PROOF



REMOTE
DIAGNOSTIC
REINFORCED
COMPOSITE
FLASHING
LIGHT

OPTIONAL EQUIPMENT
*VOIP EQUIPMENT
*HEADSET EQUIPMENT



HANDS FREE



www.lelas.fr
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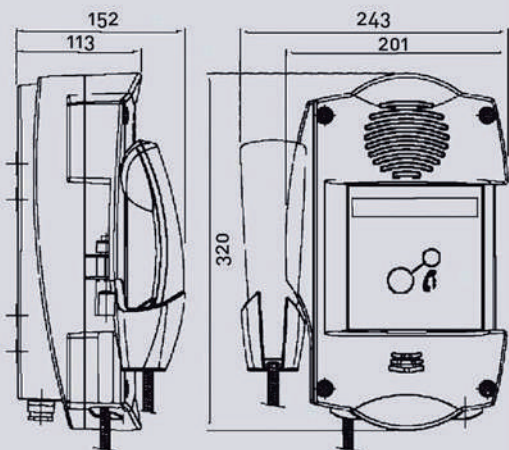
LELAS
GROUPE



DESCRIPTION

Explosion-proof EEx IP66 telephone for wall mounting, indoor and outdoor, for industrial and noisy environments.

- **Electrical Characteristics:**
 - Direct current supply: 12 to 60 Vdc
 - Consumption: 15 to 45 mA
 - Ringing voltage: 30-90 Vac
 - Dialling: DTMF/PD
 - Flashing: adjustable
 - Electronic Bell: 84 to 92 dB at 1 m subject to model
 - Flashing beacon: option
 - Noise cancelling: noise cancelling circuit
 - Hook: magnetic
 - Conversation Mode: by handset/Hands free/Headphone
 - Other characteristics: CCITT Q23
- **Options**
 - IP box
 - Remote diagnostics
 - Headphone
 - Second receiver
 - Handset cord 1m70
- **Overall dimensions**



Group LELAS, founded in 1909, has created a new range of high quality telephones reflecting these major principles: safety of communication, sound optimisation, and integration of latest technological achievements within its products.

Low energy consumption with maximum power, a receiver adaptable to different environments, a hands-free version, a high degree of watertight protection and high shock resistance, optional IP version, parts easily removed for maintenance purposes and different options offered by LELAS make the most demanding customers choose this explosion-proof telephone 229.

LELAS users benefit from the company's 100 years of experience of creating robust and safe telecommunication systems. New telephone model 229 is easy to install and to connect to the telephone line, has a wide choice of options, robust weatherproof and explosion-proof components which can be used in the harshest climatic conditions, stainless steel screws, made of reinforced polycarbonate to resist shocks, keyboard version, LCD display, call memory, integrated flashing beacon, remote testing by master station.

All LELAS equipment has a 3 year guarantee for maintenance and spare parts.

CHARACTERISTICS

- Body material / color: polyester plastic / RAL2003
- Handset material / color: polyester plastic / black
- Handset cord: stainless steel 100 kg resistance
- Loudspeaker (hands-free)/microphone: vandal resistant / 5W > 78 db at 1 m
- Mounting: on wall (2 or 4 fixing holes)
- Termination: inside screw connections
- Dimensions: 201 x 320 x 113 mm
- Weight: 2.4 kg
- IP-rating: IP66
- Impact rating (IK): 10
- EEx protection: EEx em [ib] ib IIC T5 / ATEX II 2 G D
- Max. / min. amb. temp: -40 °C / + 60°C
- Maintenance: all circuits and control devices are fixed on the easily removable front plate for a very quick substitution of equipment in the field.

REFERENCES

Model*	Handset	Hands-free	Display	Keyboard & Memory	1 button	Flashing beacon	Remote diagnostics
TLC229A1	●						●
TLA229A1	●			●			●
TLS229A1C9G	●	●		●			●
TLS229A1C9FGL	●	●	●	●		●	●
TLS229A1C9FL	●	●	●	●		●	●
TLS229A1B		●			●		●

*For Zone 2 Range 237 instead of 229; Also version A2 for -20°C / + 60°C temperature.



SERIE 402



ADVANCED TECHNOLOGY

MEMORY DIAL

WEATHERPROOF

VANDAL
PROOF



REMOTE
DIAGNOSTIC

REINFORCED
COMPOSITE

FLASHING
LIGHT

OPTIONAL EQUIPMENT
*VOIP EQUIPMENT
*HEADSET EQUIPMENT

HANDS FREE



LE LAS
GROUPE



www.lelas.fr

+33 (0)1 48 76 62 62



DESCRIPTION

Weatherproof IP66 telephone for wall mounting, indoor and outdoor, for industrial and noisy environments.

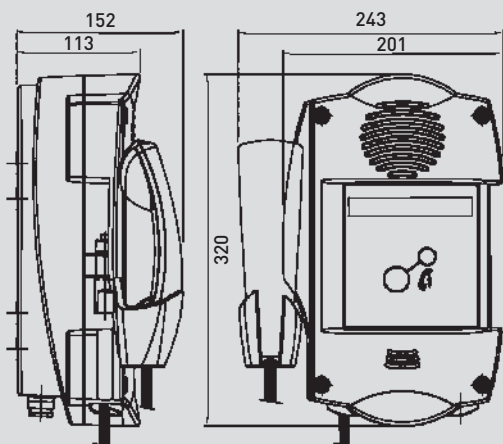
■ **Electrical Characteristics:**

- DRY current supply: 12 to 60 Vdc
- Consumption: 15 to 45 mA
- Ringing voltage: 30-90 Vac
- Dialling: DTMF/PD
- Flashing: adjustable
- Electronic Bell: 84 to 92 dB at 1 m subject to model
- Flashing beacon: option
- Noise cancelling: noise cancelling circuit
- Hook: magnetic
- Conversation Mode: by handset/Hands free/Headphone
- Other characteristics: CCITT Q23

■ **Options**

- IP box
- Booster card +9 to 18 db
- Remote diagnostics
- Headphone
- Second receiver
- Handset cord 1m70

■ **Overall dimensions**



Security communication, voice optimization, latest technology performance, with this new range, LELAS favors once again the qualities that make it successful since 1909.

Low consumption but maximum power (double amplification Line and speaker), handset adaptable to the environment or completely hands-free version, high level of sealing and impact resistance, VoIP version, sub-assemblies removable for easy maintenance and all the accessories range LELAS, Serie 402 is already the industrial telephone terminal selected by the most demanding users.

Easy installation, connection, accessories, climatic conditions resistant components, stainless steel fastenings, filled composite shockproof, keyboard, display, memory call, flashing beacon, remote diagnosis by PC station, this range makes you enjoy the whole experience of LELAS and offers to all our products guarantee part and labor three years.

CHARACTERISTICS

- Body material / color: polyester plastic / RAL2003
- Handset material / color: polyester plastic / black
- Handset cord: stainless steel 100 kg resistance
- Microphone: Electret type waterproof
- Loudspeaker (hands-free): 50 Ω / 5 watts shock and weatherproof
- power → 80 db to 1 m
- Mounting: on wall (2 or 4 fixing holes)
- Termination: inside screw connections
- Cable type: single wire or multi wire max 1.5 mm²
- Cable entry: type waterproof cable Ø10 to Ø13 mm
- Dimensions: 201 x 320 x 113 mm
- Weight: 2.3 kg
- IP-rating: IP66
- Impact rating (IK): 10
- EEx protection: no
- Max. / min. amb. temp: -40°C / + 70°C

REFERENCES

Model	Handset	Hands-free	Display	Simple Keyboard	Db function Keyboard	1 button	Flashing beacon	Remote diagnostics
TLC402E1	●							
TLA402E1	●			●				
TLA402E1F	●			●			●	
TLS402E2C9FGL	●	●	●		●		●	●
TLS402E2B		●				●		●
TLS402E2C9FL		●	●		●		●	●



Conforming to the EEC standards



COMMUNICATION HIGH SECURITY AND PROTECTION



SINCE 1909

LELAS

LELAS

LELAS

LELAS

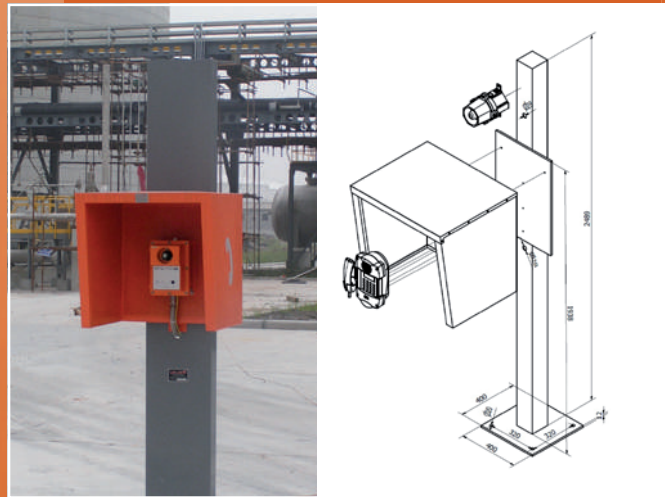


LELAS solution, for industrial, noisy and harsh environments.

In an industrial complex equipped with explosion-proof or waterproof phone, a loud noise (e.g. machinery) can make difficult or even impossible to have conversations.

That is why LELAS offers a range of acoustic booths to overcome this constraint. This solution also helps to strengthen the privacy and to protect the equipment against harsh weather and dust.

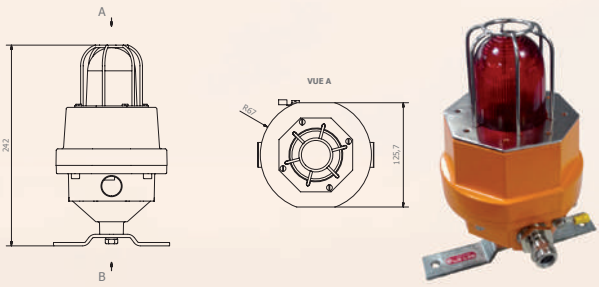
LELAS also offers a support column specially adapted to our hoods with optional mounting signaling / sounding. (See overleaf)



Type	Material	Sound attenuation in dB	Color	Weight in Kg
CBA255	(GRP)	-10	RAL2003 (ORANGE)*	17
CBA234	GRP + Rockwool	-25	RAL2003 (ORANGE)*	28
CBA240	Stainless steel + Rockwool	-25	Stainless steel *	37
MS315A19	Painted Steel	-	RAL2003 (orange)*	115

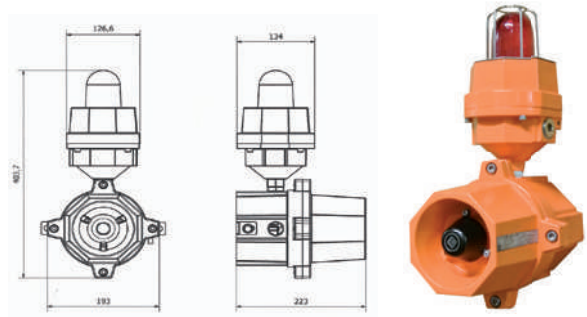
* Other color available in option





Flashing beacons 5, 15 or 21 joules. Electronics and xenon lamp fully integrated and protected in a box. (LED version also available)

ATEX	FEF 218 A
WATERPROOF	FEF 405 E
Input voltage	110/220CA
Power (Joules)	5/15/21
Consumption (VA)	5/15/21



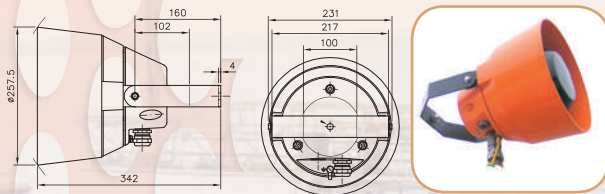
Assembly of howler and flashing beacon for an optimum performance. And a simplified installation.

ATEX	SGV 218 A
WATERPROOF	SGV 405 E
Input voltage	110/220CA
Power (Joules)	5/15/21
Sound power (dB)	110
Consumption (VA)	15/25/31

LE LAS

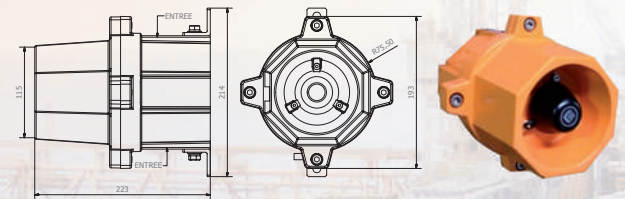
ATEX	RED 225 A
WATERPROOF	RED 364 E
Puissance en Watts	15
Sound power (dB)	110
Consumption	15VA
Input signal	15 Ohms
	amplified 24/48V
	100V

Today the LELAS loudspeakers ensure sound communication of many exposed locations in the world. They have been developed to LELAS image products: specifically designed to work flawlessly in harsh industrial environments.



ATEX	KLM 218 A
WATERPROOF	KLM 405 E
Input voltage	24/48CC
	110/220CA
Sound power (dB)	110
Consumption (VA)	10

Howler equipped with an electronic power board feeding a driver unit. Adjustable volume control 1 or 2 tones signals (Single tone high-pitched/low-pitched, dual tones high-pitched/low-pitched and melody) including evacuation AFNOR signals.

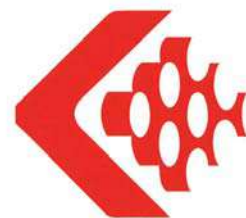


Qualité certifiée
ISO 9001 V 2008



communication

UNDER HIGH PROTECTION



GLOBAL IP

Mastery of sounding and Intercom

These materials are specially designed to work in the most aggressive conditions: noise, corrosion, bad weather, vandalism...

The new range of intercoms Global IP benefits from the experience LELAS, acquired with these devices, who are now in service on hundreds of sites, subject to extreme conditions and in the whole world.

This equipment also allows the sound of the premises by speakers.



S
SINCE 1909

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GLOBAL IP PEER TO PEER FEATURES

- Caller ID.
- Push to talk.
- Hands-free or with an handset (full or half duplex).
- Double call.
- Directory.
- General Call, Group Calls and Conference.
- Report / transfer.
- Management of a strike by activation DTMF code.
- Setting the intercom on web server.
- DHCP, static or PPPoE mode.

GLOBAL IP SERVER FEATURES

- Simultaneous calls (from 30 to 60).
- Supports up to 500 LELAS Global IP workstations.
- Recording of communications on SD card.
- Up to 99 simultaneous conferences, and 32 participants.
- Interception of calls.
- Call Forwarding (DND): Do not disturb, call forwarding if busy or unanswered, unconditional, etc...
- Queue mode: Static agents with different strategies (simultaneous, linear, less recent, less call, random, circular with memorization). Broadcast of waiting music.
- Answering machine / Voicemail: Interactive answering machine and voicemail consultation with PIN.

TECHNICAL CHARACTERISTICS

- 12V or POE power supply.
- Backlit screen.
- 12W consumption.
- Power 10W.
- Supported protocols: SIP, RTP, STUN and NTP.
- Noise Cancellation: Management of local echo suppression and ambient noise.
- Codecs: G.711 ulaw, G.711 alaw, G.722 HD, G.726 (16kbps), G.726 (24kbps), G.726 fixed payload, G.726 (40kbps), DVI4 Narrowband, DVI4 HD, Linear PCM, Linear PCM HD, Linear PCM (little endian), Linear PCM HD (little endian), ILBC-30, ILBC-20, SPEEX Narrowband, SPEEX Wideband, SILK Narrowband, SILK Wideband.

CHOICE OF MATERIAL

- Desktop, built-in, waterproof, ATEX, vandal-proof, explosion-proof, and clean room.
- Power : 1 W, 5 W, or 15 W.



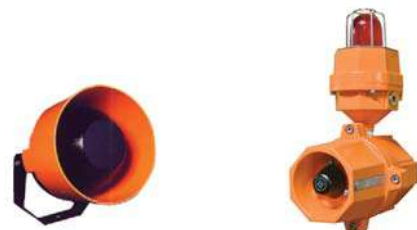
WIRING

- Simplified installation thanks to IP technology via RJ45.
- Connection of each set with a category 5 ethernet cable, plus a pair of power supply if PoE not available.



OPTIONS

- Sound and light call extension (consult us).
- Amplifier power extension or speaker.
- Remote control by relay (strike type).
- Optical fiber converter.
- Camera module.



ATEX

IECEx

PG Certified quality ISO 9001 V 2008

CE

Certified quality ISO 9001 V 2008



BABT

LELAS

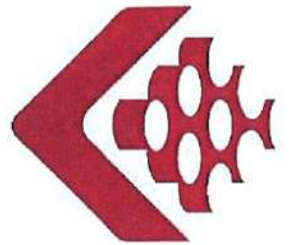
34/36, Rue Roger Salengro - 94 134 Fontenay-sous-bois CEDEX
Tél.: +33 (0)1 48 76 62 62 - Fax: +33 (0)1 48 76 83 04 - lelas@lelas.fr
www.lelas.fr

Do not throw on public roads

RED 225/364

High protection

HIGH POWER LOUDSPEAKERS



LEAS



- **EXPLOSIONPROOF: Class IIC**
- **WEATHERPROOF: IP66**
- **HIGH VOLUME**
- **INTEGRATED AMPLIFIER (option)**
- **QUALITY ACOUSTICS**
- **COMPLETE RANGE**

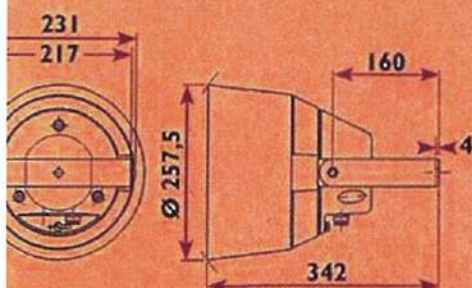
POWERFUL LOUDSPEAKERS WITH HIGH LEVEL OF PROTECTION

Le Las/Syscom loudspeakers are used extensively worldwide. The new range RED 364/225 offers state-of-the-art technologie. This range of products is designed to operate in hostile industrial environments, with high reliability, even in extreme conditions of temperature, humidity and other hazards.



DESCRIPTION

P Modèle étanche WATERPROOF LS :



Body and enclosure in cast aluminium
Fixing with hollow hexagonal stainless-steel screws with IP66 weatherproof protection by flat joint.

Mounting via adjustable stainless-steel bracket.

Connection via retention screws terminals, capacity 2,5 mm².

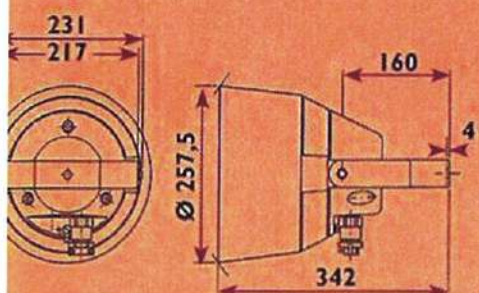
2 cable entries.

Weatherproofing assured by a set of 2 cable-entries for cable diameter 8 to 10 mm and 1 blanking plug.

For explosionproof models: 1 cable-entry on lead of diameter 5 to 12 mm, externally up to 20 mm max.

Approval: 94.C1004X.

P Modèle antidéflagrant FLAMEPROOF LS :



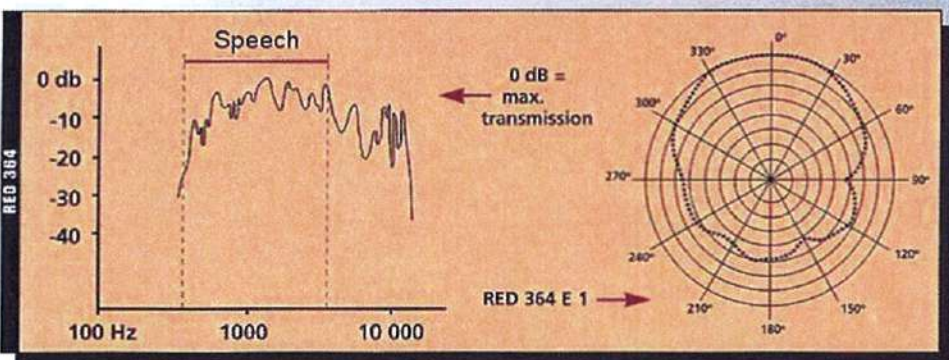
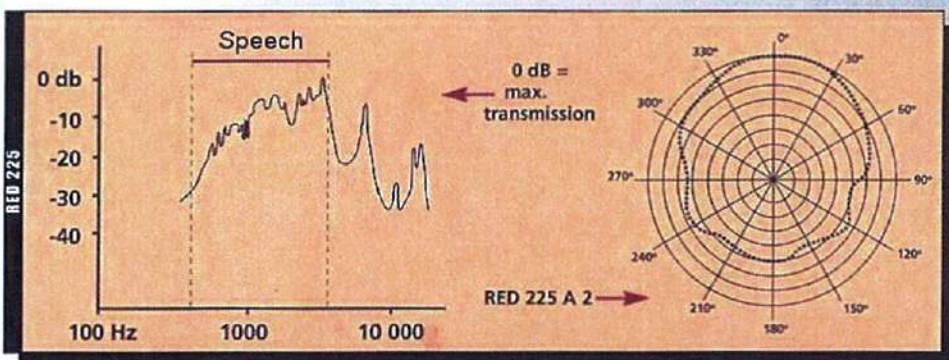
CHARACTERISTICS

POIDS / WEIGHT

Sans transfo / Without transfo :	RED 364 E	7,5 kg	RED 225 A	8,0 kg
Avec transfo / With transfo :		8,0 kg		8,5 kg
Avec amplificateur / With ampli :		7,7 kg		8,2 kg
Puissance maxi / Max power :		15 W		15 W

IMPÉDANCE / IMPEDANCE

Sans transfo / Without transfo :	15 ohm	15 ohm
Avec transfo / With transfo :	100 volts	100 volts
Avec amplificateur / With ampli :	10 kohm	10 kohm
Gamme de fréquence / Frequency range :	420 - 11500 Hz	450 - 6500 Hz
Pression sonore/Noise pressure:		
SPL 1W/1M.....	109 dB	105 dB
Dispersion 1000 Hz.....	130 °	120 °



MODÈLE étanche WATERPROOF LS	MODÈLE antidéflagrant 2 C FLAMEPROOF LS	
RED 364 E 1C1A	RED 225 A 2C1A	Sans transfo/Without transfo
RED 364 E 1C1D	RED 225 A 2C1D	Avec transfo/With transfo
RED 364 E 1C1E	RED 225 A 2C1E	Avec amplificateur/With ampli

Due to the constant desire to improve the quality of our products, we reserve the right to make modifications at any time.



Conforme à la normalisation CE



BAPT
Qualité certifiée ISO 9002

SYSCOM



MODUL - R Range



Matching Design
User Friendly
robust
modular

DEPUIS 1909
LSA
WE



All Technologies
Telephone
Voice over IP
GSM
Interphone
Videophone





MODUL - R Range

With its new product range LE LAS offers the most complete and powerful of hands-free panels.

Developed to meet the needs of their highly professional user base, this range with its patented system of modules. It is suited to all environments giving the benefits of qualities, volume and safety.

The Modul - R range accommodates equally the addition of a camera, monitor, badge reader, ticket dispenser, mini 1 watt loudspeaker, and keypad.

TECHNICAL characteristics

Main CHARACTERISTICS

ANALOGUE telephone

- Multi frequency (DTMF) or pulse dialing.
- Automatic clear down.
- Automatic answer.
- Local dial protection.
- Programming and modification of setting locally or remotely
 - volume and type of ringing
 - loudspeaker volume
- Ability to chain numbers
- Dual function Handset, dialling or memory
- Acoustic power loudspeaker 1 or 5W
- Line calling current 18mA à 35A
- Voltage at terminal 48V (24mini) Umax 60VDC
- Dialling tone : 270 - 540Hz
- Busy tone : 300 - 500Hz

VOIP telephone

- Network applications 10/100 Mbs
- 2 Ethernet port
- 2 supports :
 - DHCP (automatic addressing)
 - PPPoE (manual addressing)
- Choice of 2 power supply :
 - 12v
 - PoE : IEEE802.3AF (30 to 48v)
- Protocol : SIP

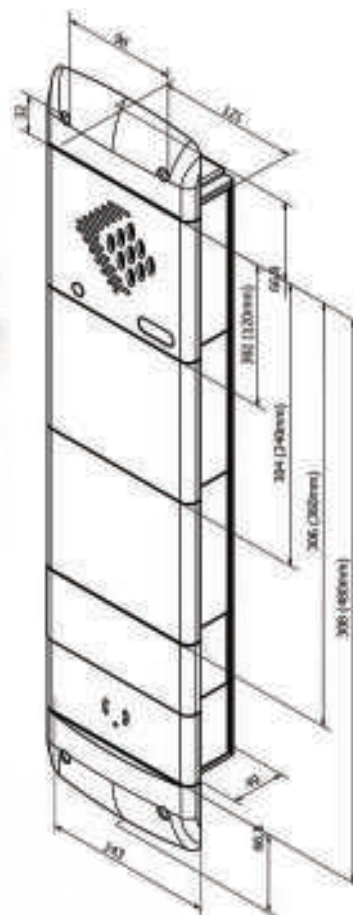
Telephony GSM

- Dual Sim (2nd for back up line)
- Quad band
- Phonebook
- Programmable by SMS and/or maintenance station
- Door entry system
- Choice of 4 power supply :
 - 12v
 - 24v
 - 230v
 - Solar

Interphone

- Universal
- IP
- Digicom
- Telson
- Please contact us for more information.

- The design is suited to flush fitting of the equipment in any support, the addition of an enclosure makes the equipment wall mounted. Providing a base allows its transformation into a pedestrian or vehicle terminal.
- The electronics, the components, of the highest professional quality, with a diagnosis (a permanent guarantee remote functionality with status on the computer every night) validated by the operation of several thousands of devices in a multitude of sites, allow to solve all the constraints.



S I N C E 1 9 0 9



**GROUPE
LELAS**

SECURITY-TELECOMMUNICATION-REMOTE DISPLAY



COMMUNICATION UNDER HIGH PROTECTION

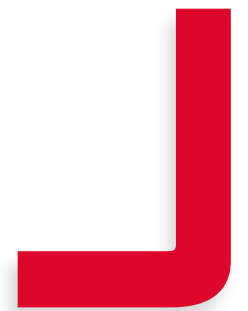
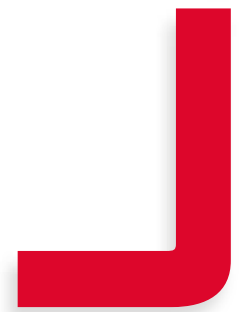
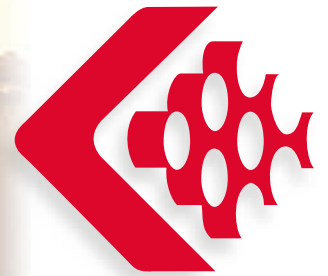
UNIVERSAL

The Public Address and intercom network

These materials are specially designed for operate in the most aggressive conditions: noise, corrosion, bad weather, vandalism ...

The new range of intercoms UNI3G enjoys LELAS experience acquired with these equipment that is now in service on hundreds of sites submitted to extreme conditions all around the world.

These equipment also provide public address of sites through loudspeakers.





THE NEW RANGE UNI3G

- Group Call
- Multi Channel 5 + General Call
- Compatibility with the old network
- Programmable via SD card or remotely
- Remote Diagnostic
- Messages broadcasting unit with USB card
- Contacts Repertory

UNIVERSAL DESIGN

■ Focus on reliability

Microprocessor and **auto commutations** technology integrated in each unit.

Advantages: **Safety** and economy. Lack of central cabinet (except multi-channel option). No risk of overall failure.

The wiring is done **on single bus and / or multiple** star network according to the requirements of each site.

■ Principle

Master stations operate alternately speak / listen allowing **optimum safety**.

■ High sound quality

All communication must be perfectly audible in all circumstances. The power of the **speaker** is optimized and **remotely adjustable** from the master station which allows optimal listening and flawless comfort.

In addition, the power amplification on high impedance line guarantee exceptional sound quality even on **long distances** (up to 20 km).

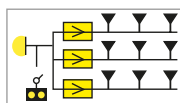
■ Safety and comfort

Substations operate in «**hands-free**» mode which enhances security. The master station works alternating in Half Duplex mode (Push to Talk).

UNIVERSAL CONFIGURATION

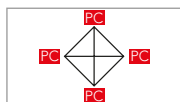
■ Star-type Network

Including a Master Unit
Possibility of a second Master station in call forwarding or transfer.
Star type network comprising up to 9 or 99 secondary Stations.



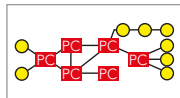
■ Intercom type Network

Up to 9 or 99
Master Station «multidirectional»



■ Mesh type Network

Mixed network: star type and intercom



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UNIVERSAL INSTALLATION

Simple and very flexible installation is independent of the configuration.

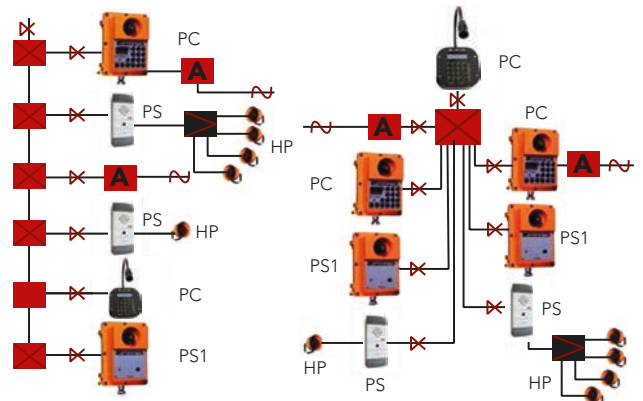
■ Two installation modes are available:

Bus wiring

Connecting stations in parallel, on bus one or two pairs cable.

Star wiring

Connecting each station in a one or two pairs by a cable. Central junction box allows easy installation in bus, star, or mix of both solutions.



■ Features / power supply

Power supply of 24 DC, 48 DC or 230 AC. installation possible on existing low current cable networks or optical fiber.

■ Options

- Extension of sound and light call (contact us).
- Extension of power by amplifier or loudspeaker.
- Remote relay (type latch).
- Remote monitoring.
- Connection to central amplification towards radio network etc...
- Optical Fiber Converter

■ Choice of materials

Office station, flush mounted, waterproof, ATEX, anti-vandal explosion proof, cleanroom.
Power: 1 W, 5 W or 15 W



SINCE 1909



LE LAS 

Critical areas **Telecommunications**

Telephony - Intercom

Watches - Signalling - Acoustic

TELEPHONY



LE LAS 

Critical

TELEPHONY

Benefiting from the experience gained since 1909, LELAS phones show exceptional quality and resistance in all environments: climatic, chemical, vandalism, clean room (international standards ATEX) and for all technologies (GSM, IP, analogue switched CB or LB) with a complete range of suitable boxes.

SIGNALLING & ACOUSTIC

INTERCOM

PA/GA SYSTEM



SIGNALLING & ACOUSTIC

To improve communication, LELAS has created a whole range of equipment to adapt to all environments: flashing beacon, howlers, amplified speakers, headphones, display, relays, remote controls...

INTERCOM

Adopting the same features as phones, LELAS intercom systems can be adapted to the most precise needs of all civilian and military organizations: factories, hospitals, refineries, railway stations, airports, railways, ports, canals, Agglomerations.

IP or long range analog, mono or multichannel, open or centralized, LELAS systems already secure the communication of thousands of sites (with specialized calls, general calls, alarms, memories, remote monitoring etc)

PA/GA SYSTEM

Our PAGA systems, specially developed for the industry, in conjunction with our intercom and telephone networks will enable you to secure your broadcast and alarm functions in all circumstances.

areas Telecommu

ACCESSORIES



nications

ACCESSORIES

LELAS offers a wide range of accessories to facilitate your communications in all circumstances: stainless steel and composite acoustic hoods, pedestrian terminals, vehicles, solar, call box, emergency stop "punch" button.

WATCHES



areas Telecommu

WATCHES

Legacy of the French watchmakers LEPaute and ATO integrated in LELAS, our range of digital and analog clocks can be integrated in all industrial, naval, explosive environments.

PRESENTATION

Since its inception in 1909, Le Las has set itself aim of solving problems of communications in the most difficult environments. The equipment of the fleet of the Navy to firedamp mines in the beginning, Le Las extended its experience and dynamism to the most varied environments, sea, rail transport, ports and airports, chemical plants, oil or simply urban, energy sectors, laboratories and hospitals, civil and military administrations, etc ...

According to the certified ISO 9001 quality procedures, totally computerized design and manufacture services adapt the most recent technical inputs (like already GSM or voice over IP) in a full range. The development of electronic and mechanical modules allows us to offer a wide range of easily customizable products for the most reduced costs..

Strengths

Over 100 years of experience, dynamism and expansion !Continuous innovation and mastery of the most efficient technologies for secure communication.A unique reference due to the synergy of the 5 leading companies in their field.

HISTORIC

LE LAS group was created in 1909 with vocation to ensure the security of communications and signals in difficult environments, with the main markets :Navies and merchant : shunting telephony and rescue, transmitting orders.Collieries : security phones and telecommunication.

Hence the natural development of expertise focused on the safety of voice and data communications.Le LAS group specializes in major areas of action of the world of secure communication.

A reference that relies on big brands trust. Local Communities, ADP, RATP, Autonomous Ports, Brussels Metro, are concrete examples.



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PRESENTATION of LE LAS PAGA System

Presented by: TELEPHONES LE LAS

Date: 2024



Since **1909**

Design and **Manufacturer**

Telecommunication system and **Product** for our client in :

- Oil& Gas and petrochemical plant...
- Power plants, including nuclear and other renewable energy...
- Public transport network, such as railway, motorway and subway.
- Healthcare, including pharmaceutical factories and hospitals.



What is PAGA system

PAGA system is : Public Address and General Alarm (PAGA) system.

Application

A critical personnel safety system: Daily broadcast and emergency messages throughout a facility.

- background music,
- routing speech,
- pre-record alarm message.

Interface with 3rd party system

PAGA systems are usually linked to other system

- PABX telephone system,
- Radio system,
- Fire/gas detection and alarm systems,
- Video surveillance.

PAGA System of Lelas

- Solution for simple application : **DIGICOM Lite**
- Solution for full application : **DIGICOM3000**
- Solution with full IP technology : **DIGICOM300 plus**

INTRODUCTION

PAGA System of Lelas

		DIGICOM3000	DIGICOM3000 Plus	DIGICOM Lite
Paging	Group Paging	●	●	●
	General Paging	●	●	●
	Alarm	●	●	
	Paging priority	●	●	
	Alarm priority	●	●	
	Background music	●	●	
	Built-in or Add-on Alarm Beacons	●	●	

INTRODUCTION

PAGA System of Lelas

		DIGICOM3000	DIGICOM3000 Plus	DIGICOM Lite
Intercom	P2P communication	●	●	●
	Party call	●	●	
	Conference	●	●	
	Incoming call transfer	●	●	
	Hand free	●	●	
	Hotline	●	●	
	Station Priority	●	●	

INTRODUCTION

PAGA System of Lelas

		DIGICOM3000	DIGICOM3000 Plus	DIGICOM Lite
Other Function & Features	System Recording	●	●	
	System Real-time monitoring	●	●	
	PABX interfaces	●	●	
	Radio interfaces	●	●	
	DCS/SIS/SCADA interfaces	●	●	
	Fire Alarm System interfaces	●	●	
	System Recording	●	●	

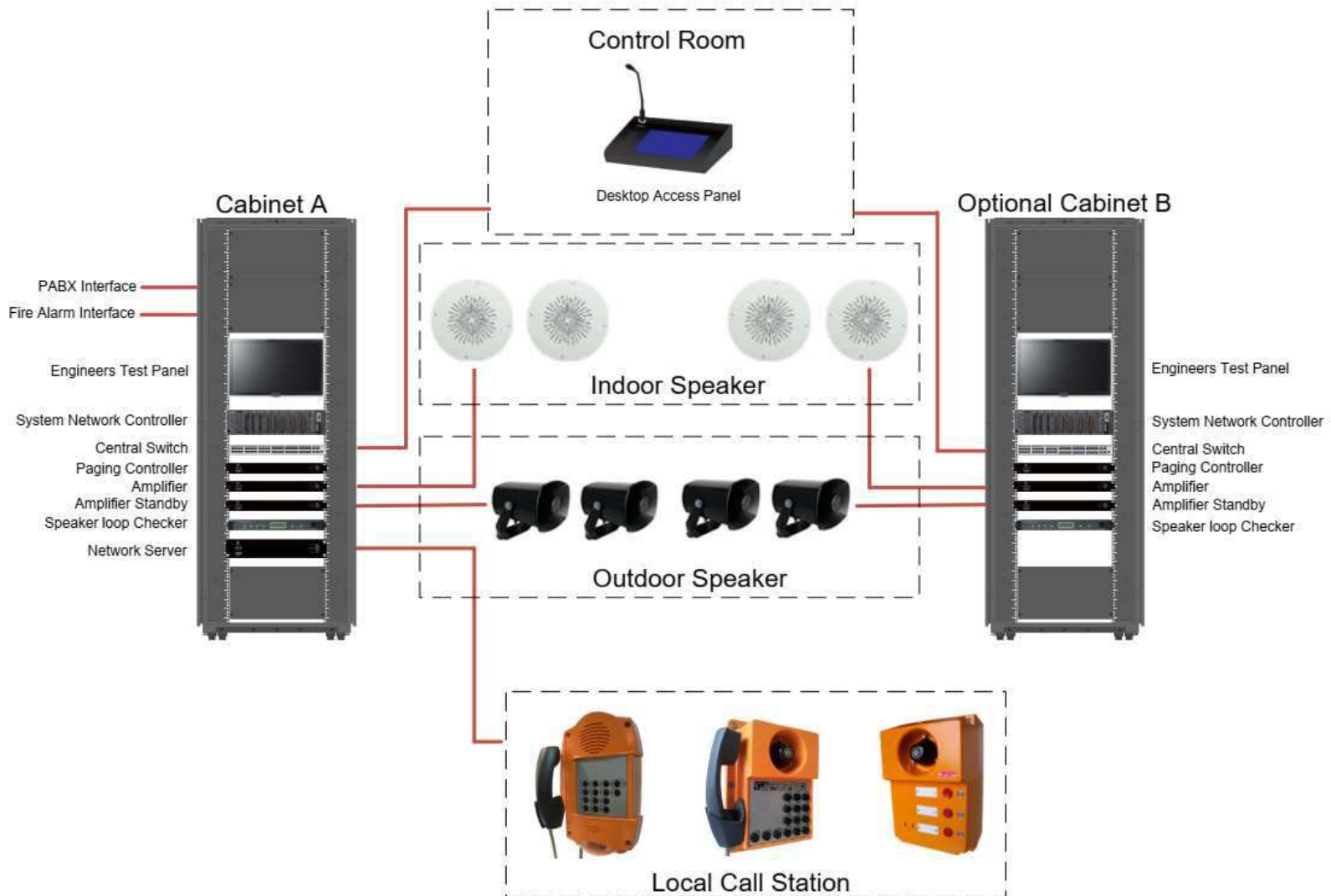
DIGICOM 3K PAGA SYSTEM

The **DIGICOM 3K** system can provide **3** different structures to meet customers' communication and security needs from basic to highest :

- The **basic PAGA** and intercom needs through a **single cabinet**.
- **Redundant structural** system implemented by a **single cabinet** to meet most project safety requirements.
- **A+B system structure**, providing customers with the **highest** level of protection.



SYSTEM BLOCK DIAGAM



SYSTEM CAPABILITIES

The **DIGICOM 3K** system offers a wide range of features and accommodates the largest of system requirements:

- ◆ Up to 255 nodes in a single network (bigger systems can be realized grouping more sub-networks).
- ◆ Up to 32 audio inputs such as Access Panels, telephone or radio systems, BGM, tone generators.
- ◆ Up to 64 paging zones per node.
- ◆ Up to 1024 I/O interface for external system interface such as fire and gas detection, process monitoring, pushbuttons, sounders, beacons, and others.
- ◆ Real time monitored amplifier and speakers loop.
- ◆ Up to 18 pre-record message by add audio module.
- ◆ Maxi 192 analog + 1024 IP intercom station in a Network.
- ◆ Amplifier back-up via hot standby, redundancy of central equipment, or complete system duplication.
- ◆ System support to set more than 600 level's priority.

SYSTEM FUNCTION

Intercom	PA	Other Function & Features
P2P communication	Group call	System Recording
Party call	General call	System Real-time monitoring
Conference	PA and alarm	PABX interfaces
Incoming call transfer	PA priority	Radio interfaces
Hand free	Alarm priority	DCS/SIS/SCADA interfaces
Hotline	Background music	Fire Alarm System interfaces
Station Priority	Built-in or Add-on Alarm Beacons	

Central Processing Unit

- Input/Output Module for management of Paging source, alarm, dry contact signal for beacon.
- Connection to standard field bus (Modbus®).
- Expandable up to approximately 1024 I/O's.
- Redundant mode available.
- Digital & Analogue Input / Outputs.
- DIN rail mounting design.
- Plug-in, screwless (push-in) terminals for ease of wiring and maintenance.
- Communication: USB / 2 x RS485 ports / EtherNet/IP.
- Support redundant CPU and power supply design, support A+B design.



Class D / IP Audio Power Amplifier



- Switching power technology, or built-in IP network audio decoder and digital Class-D power amplifier for each channel.
- Rated power output at 4x240W, 2X500W or signal channel 500W.
- Compact design 1U or 2U.
- Thermal and output overload protections.
- Support to diagnostic with monitoring unit CFT172P353.

Audio Module / Alarm Generator

- Standard 19" 1U rack suitable for any 19" cabinet.
- Support MP3, WAV format.
- Support SPIFLASH to be simulated as a USB, directly update the voice in SPIFLASH like operating a USB flash driver.
- Support 30 levels of volume adjustment.
- Support cycle times setting.
- Support external input audio and MP3 audio mixing, external input, MP3 output, external input and MP3 mixing three output switching.
- Support sip2.0 (RFC3261).
- Support IGMP.
- Support contact control.



Audio Processor Unit



- 16-Channel audio input.
- 16-Channel audio output.
- 1 TCP/IP Port for communication.
- 1 x RS232 interface for communication.
- 1 x USB Port for communication.
- 1U design for standard cabinet.

Engineer Test Panel

ETP (engineering test panel) is a rapid access platform for broadcasting, test and maintenance operations.

It consists of :

- 1 x noise suppressor microphone with relative Push to talk (PTT) button.
- 3 x green buttons for prerecorded messages / alarm audio broadcast.
- 1 x orange lights for fault signaling.
- 1 x yellow lights for management and maintenance interventions.
- 1 x red lights for alarm signaling with 1 pushbuttons for ACK.

From the ETP, each operator that have access to the cabinet can:

- Perform a test voice broadcast.
- Broadcast four different alarms / pre-recorded messages.
- Acknowledge a fault notification.





SYSTEM EQUIPMENT

HMI(Humain Machine Interface) & On-line Monitoring Software



- ✓ 15.6" 1920 x 1080 touch screen with keypad.
- ✓ Quad-core Cortex-A17 CPU with High Performance dedicated 3D Processor.
- ✓ Fan-less Cooling System.
- ✓ Built- in 4GB Flash Memory and RTC.
- ✓ Built-in Power Isolator.
- ✓ Built-in software for system configuration, system status monitoring.
- ✓ Support remotely PC work station with On-line monitoring software.

SYSTEM EQUIPMENT

Access Panel (Paging/Alarm)

- LCD touch screen with microphone
- Paging capacities: zone paging, group paging, all zone paging.
- With 3 real key protected by cover (PTT/Emergency paging/Emergency alarm).
- With system monitoring menu.



Master Call Station (Intercom)

- Indoor console used as an intercom for broadcasting and P2P call in the control room.
- Compatible with standard SIP protocol.
- With a paging microphone and 4.3" LCD 77 keys.



QUALITY SYSTEM



TECHNICAL SERVICE

- ◆ LE LAS fully trained site engineers will be responsible for providing training, commissioning, trouble shooting, documentation, engineering design etc.
- ◆ **Service Guarantee Letter/Performance Bond**
- ◆ **Standard services include**
 - ✓ Commissioning, Check up and Testing.
 - ✓ Technical Trainings.
 - ✓ UAT,SAT,FAT services.
 - ✓ Integrated training.
 - ✓ Inventory/spare parts Services.
 - ✓ During and after the warranty period.



CONTACT US



TELEPHONES LE LAS

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Tel/What'sApp : +33 (0)6 24 36 20 90 / J-Claude DOS SANTOS

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Website : www.lelas.fr

RIGCOM INTERCOM / PA SYSTEM

INTERNAL COMMUNICATION NETWORK FOR CRANE AND DRILLER CABIN

SYSTEM DESCRIPTION

RIGCOM Intercom system has been specifically designed in conjunction with drilling operations to provide reliable, simple two way voice communications on board a drilling rig. The **RIGCOM** system comprises of a ATEX certified station with keypad at Driller's cabin as master control, which with build-in 15W speaker or work together with remotely microphone and footpedal. Subscriber station(s) with 1 call button and paging loudspeaker(s) for announcement. All station connect via standard twisted pair shielded field cables.

FEATURES

- System simple and easy to installation. With option plus, all of equipment can move to other place facility.
- Without central exchange, easy to add or reduce the number of slave station from 1 to 98 unit. Just connect a new station and system will work.
- Push to talk or control by ATEX food switch at the side of Master station, and total hands free at the side of slave station.
- Reception mode of slave station can be programmed. (take the line as soon as receiving incoming call, or after certain time ringing)
- Use half duplex, to realize high quality of communication in noisy site. (15W built in speaker till 110dB and cancellation of back ground noise)
- Work as PA system and diffuse message from Master to slave station just push a button.

SYSTEM EQUIPMENT

EX TYPE OPERATOR UNIT

Master station for operator, handsfree use with keypad, or certain direction button number as demand. Eexd IIB or IIB+H2 with 15W built-in Speaker



EX TYPE SLAVE STATION

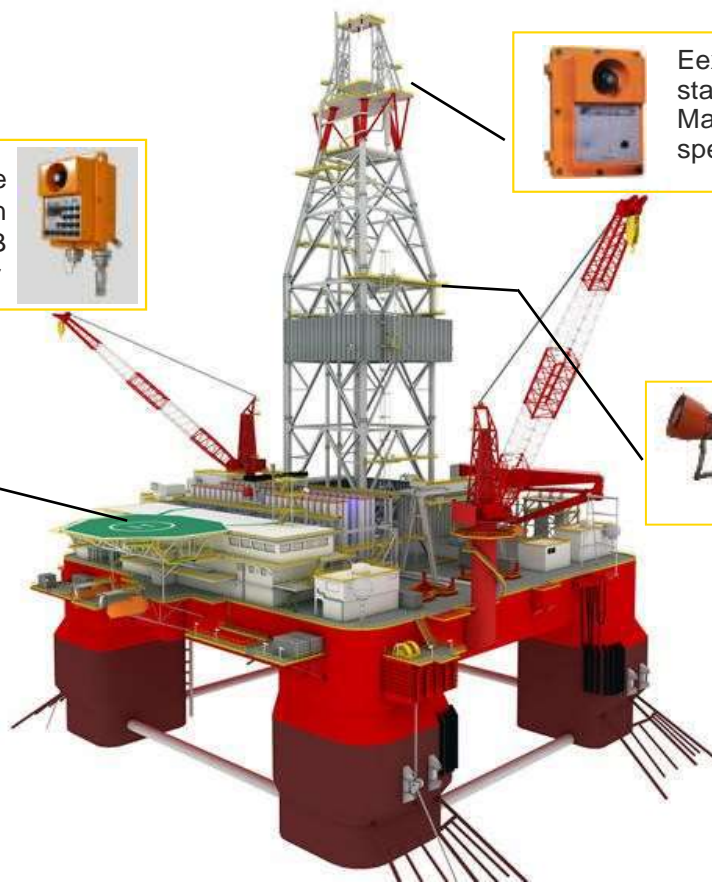


Eex d IIB or IIB+H2 type slave call station, with 1 direct call button to Master station and 15W built-in speaker.

EX TYPE SPEAKER



Self-Amplified speaker for system Paging use Exd IIB/IIC, 15 or 30 W



SYSTEM OPTIONAL ACCESSORIES

REMOTE MICROPHONE



TCH201 flush or desktop mounted remote microphone for Drilling control house With Call, Paging and Cancel buttons, for use in the hazardous area.

EX TYPE FOOT SWITCH



CM653V3 Foot Switch, Eex d IIC T6 for hazardous area To connect with Master Station at control cabinet. Operator control the talk / listen with slave station by foot.

EX TYPE BEACON



ATEX / IECEx certified flashing beacon from 5 to 21Joule, with different lens color as option. Protected by aluminum enclosure. For location with important noisy.

DATASHEET - INTERCOM / PAGING SYSTEM " TELSON "

PAGE PARTY LINE TYPE INTERCOM / PAGING SYSTEM



DESCRIPTION

"TELSON" industrial intercom system is a "Page Party Line" communications system composed by indoor desktop, weather-proof and Explosion proof type intercom stations. A tough and robust Intercom system for Harsh Industrial Environments where reliability is a necessity. The system is designed to function within, but not limited to uncompromising environments, such as: Petrochemical and Energy Production.

The All the intercom stations are connected in parallel on the same multi-pairs telephone cable. Each station is equipped with a built-in amplifier 30 Watt to driver a separate loudspeaker. All the electronic circuits distributed in the intercom stations, so that no central exchange is necessary.

Any device can send a message for research of people (Paging) diffusing a voice message which will be heard on all the speakers of the system. Appropriate design features ensure no Larsen effect (acoustic feedback). The conversation took place on one of the four party telephone channels, where they can fit more equipment in the conference. The phones are equipped with LEDs to indicate channels busy / free.

Based on a module "Telephone + Amplifier + LoudSpeaker " repeated several times and connected on a simple multi-pair telephone cable.

FEATURES

- General Paging through loudspeaker, from any station.
- Possible to associate flashing light or (and) audio signal unit.
- Conversations between two or more users on maxi 5 Party Lines
- All the stations are equipped with red/green LEDs to show the status of the Paging and Party Lines.
- Each "TELSON" unit is powered from 24VDC or 110 - 230VAC power. Fed by centralized power or by several local power suppliers.
- Directly call to control room, via private channel.
- Possible to work together with centralize PA system.
- Interface with PABX, Alarm system etc.
- All the equipments are connected in parallel on one multipairs telephone cable.
- Amplifiers are mounted inside the intercom station, or inside of special "TELSON" loudspeaker.

SYSTEM FUNCTIONALITY

The "TELSON" system is equipped with a simplified keypad consisting of buttons for channel - C1, C2, C3, C4, C5 and AG button (General Call). Each "TELSON" station can page to all speakers on the system whilst ensuring there is no "Larsen Effect" (acoustic feedback), even when the conversation is initiated from one of the five party-line intercoms stations. Further speakers can be introduced to ensure zonal or plant wide conferencing can be heard. The telephones are equipped with LEDs to indicate channel availability and the unique technical construction ensures reliability without requirement for central governance or a switchboard, this reduces the risk of technical fault causing complete system to failure.

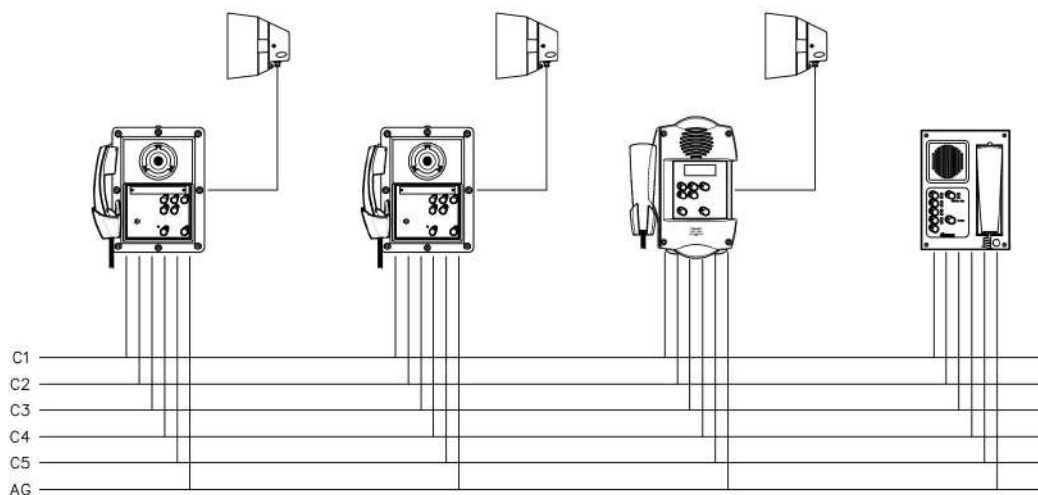
All "TELSON" call station can be handset model, or hands-free type as demande.

SYSTEM WIRING / INSTALLATION

Use telephone cable ϕ 0,9 m/m, paired, with global screen. Each "TELSON" unit is connected to the general network through the different junction box or directly to a central dispatcher by a 7 pairs cable.

The additional loudspeakers are connected to the amplifiers by a 2 conductors cable (2×1.5 m/m²)

The connection diagram is shown on the following drawing:



MAIN CONTACT: **TELEPHONES LE LAS** | ADDRESS: 34-36 RUE ROGER SALENGRO 94134 FONTENAY SOUS BOIS, FRANCE

TEL: +33(0)1 48 76 62 62 | FAX: +33(0)1 48 76 83 04 | WEB: www.lelas.fr | E-Mail: jin.du@lelas.fr

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DATASHEET - INTERCOM / PAGING SYSTEM " TELSON "

PAGE PARTY LINE TYPE INTERCOM / PAGING SYSTEM

SYSTEM MAIN EQUIPMENT



TLS161PH5GC4TES/SI98

INDOOR MASTER CALL STATION

Protected by metal enclosure
Handset with coiled cord
4 or 5 Party Lines buttons
With built in buzzer
With built in amplifier
With option to connect second ringer
Powered by 24VDC or 230VAC



TLS346E3HGAT5/SI98

OUTDOOR IP66 WP CALL STATION

Weather proof IP66 station with Aluminum metal type body
Handset with Stainless-steel cord 200kg resistance
4 or 5 Party Lines buttons and 1 All Paging button
With 30W built in amplifier
1 Direct Call to Master Station (Optional)
Powered by 24VDC or 230VAC



TLS214A3HGAT5/SI98

EXPLOSION PROOF CALL STATION

ATEX Eex d T6 IIB (TLS214A3GAT5) or IIB+H2 (TLS214A3HGAT5)
Handset with SS cord or Hands-free model as demand
Aluminum body
4 or 5 Party Lines buttons with LED to show channel statuses
With 1 All Paging button
With 30W built in amplifier
1 Direct Call to Master Station
Powered by 24VDC or 230VAC



RED346 / 225

LOUDSPEAKER FOR TELSON

Wide range of loudspeakers is available: from 15 to 35 Watt
Aluminum body with built in Amplifier, powered at 24 VDC
ATEX Eexd IIB+H2 or IIC for explosion proof type
Weather proof IP66

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LELAS

ADVANCED TECHNOLOGY

201-202
Range

INTERCOMMS



TCH 202

WATERPROOF
CALL MEMORY
ANTI-SHOCK
ROBUST MATERIALS
REMOTE DIAGNOSTIC



OPTION
HANDSET/HEADSET



COMMUNICATIONS UNDER HIGH PROTECTION
WWW.LELAS.FR | ☎ : +33(0)1 48 76 62 62





DESCRIPTION

■ Electrical characteristics :

Power supply voltage: 24, 48 or 230V
 Idle Consumption: 22mA
 Online consumption: 250mA
 Power Ring: 74 to 88dB

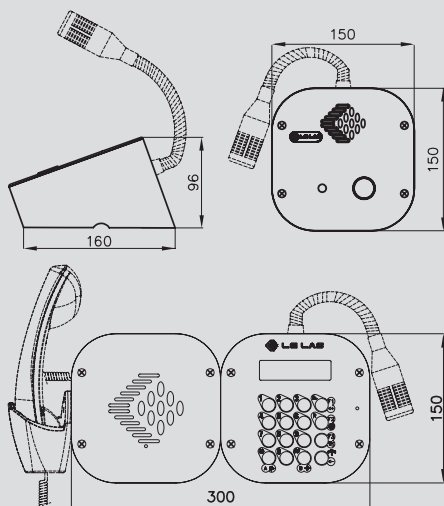
■ TCH 201 Series options :

1 or 5W loudspeaker
 2 points Wall mounted
 One button, two buttons
 Flexible microphone
 Handset
 48 and 230V power supply
 10 or 100 directions network
 IP 54 protected
 Colors on request

■ TCH 202 Series options :

1 or 5W loudspeaker
 2 points Wall mounted
 One button, two buttons
 Flexible microphone
 Handset
 Pre-recorded message broadcast
 48 and 230V power supply
 10 or 100 directions network
 IP 54 protected
 Colors on request

■ Dimensions :



INTERCOMS - 201/202 RANGE

After 15 years of existence, tested at any sites and in every configuration. The 153 series of desktops «Universal» is replaced by the 201/202 series.

More elegant, more compact, more durable, these intercoms are now available in desktop or wall mounted, with a range of 1W or 5W amp, powered from a central point and/or locally with 24, 48VDC or 230VAC.

They are used indiscriminately as: Intercom network, master station network, mesh network, wired in bus and/or star with a line of conversation, or new feature, five lines of communication with the addition of a central type TCT210P1U2.

These items retain all the 153 range fonctions :Individual Call, Group Call, general Call , dial memory, forward call, remote relay interface with all other materials in the LELAS range, recessed positions, ext. projecting position Heavy Duty composite or aluminum, 5W or 15W, clean room stations, ATEX post...

FEATURES

Material / Color: Aluminum / Black, White
 Handset Material / color: black polycarbonate
 Microphone: Electret type
 Speaker: 25Ω/1W 72dB at 1M to 91dB 50Ω/5W at 1M
 Wall mounting: 2 points
 Cable Type: 6 channels Telephone cable
 Dimensions: (201) 150x150x102 / (202) 300x150x102
 Weight: 1.2Kg to 3kg
 Shock protection index (IK): IK7
 Ambient temperature: -20 ° C/60 ° C

REFERENCES

SERIE 201 / 202 - TCH202P2C9 - EQUIPEMENT AND OPTIONS									
TCH	202	P	2	C9	Option	M	Option	Power Supply	
					Call Button	LS	Micro		
MODEL TCH : Desk TLH : Wall mounted	BOX 201 : 1 Module 202 : 2 Modules	IP Index	Network 1:conference 2:uni2G	B : 1 Button D : 2 Buttons C9 : Display + Keyboard*	H: LS 1 W H5 : LS 5 W G : Handset	M: integrated X: Flexible	Network Size 10 (standard) T : 100 directions	24V (standard) CC : 48V CA : 230V	

Also exist in telephone, VoIP telephone and SIP intercom



Conforms to the Standard CE



Certified quality ISO 9001 V2008

DIGI3K Plus - INTERCOM / PA&GA SYSTEM OVER IP

AUDIO&VIDEO INTERCOM / PUBLIC ADDRESS



SYSTEM DESCRIPTION

DIGI 3K Plus is an audio communication system with the application of advanced IP Audio TM technology. It allow to make IP public address and general alarm (PA&GA) systems and interphone system.

Each device of the **DIGI 3K Plus** system carry out its own function (handset or hands free, Central or Local type amplifier...) and therefore you can make point to point communication by dialing the keypad or just push a button from local terminal. Make a general or group paging via master consol, even complexier, by combining the proper elements, such as extra flashing beacon or siren.

DIGI 3K Plus is commonly used on used on Oil & Gas Platforms, Power Generation Plants, Refineries, Chemical Plants and industrial facilities. In order to meet variously customized demands,

Each **DIGI 3K Plus** system rack can be equipped with hot standby amplifiers that assume the load in the event of an individual amplifier failure. Defaults amplifiers and power supplies can be replaced quickly without having to power down the system or disconnect wiring. User controls and fault reporting are easily accessible by the optional touch screen PC or remotely via a computer.

FEATURES

- Simultaneous management of intercom and telephone call functions with paging through the speakers network. (Via interface)
- Management of multiple speakers areas and of general call. Management of lines dedicated to the intercom function
- Multiple hot standby power amplifiers and loudspeaker network monitoring
- Connection to VoIP telephones, amplified telephones and paging call stations.
- Multiple combined single, N+1 and A/B architectures supported on a single network

SYSTEM FUNCTION

Intercom / Call

Communicate via Handset or Hands-free by different phone model, a mode of full-duplex.

A quick call to a target terminal by picking up handset (Hotline); Through numerical keys to randomly call any terminals.

Zone Paging

Broadcasting: - to certain / all of part of zones via IP network paging microphone.

- MP3 or WAV format music files to speakers, real-time/ schedule time/triggering broadcasting are available.
- other source such as PABX or Radio via interface.

Alarm Voice

Broadcasting: - pre-record alarm message to certain / all of part of zones, with different priority

- Voice alarm to certain / all zone with highest priority

Activate pre-record alarm message by operator console, or by 3rd party system via dry contact

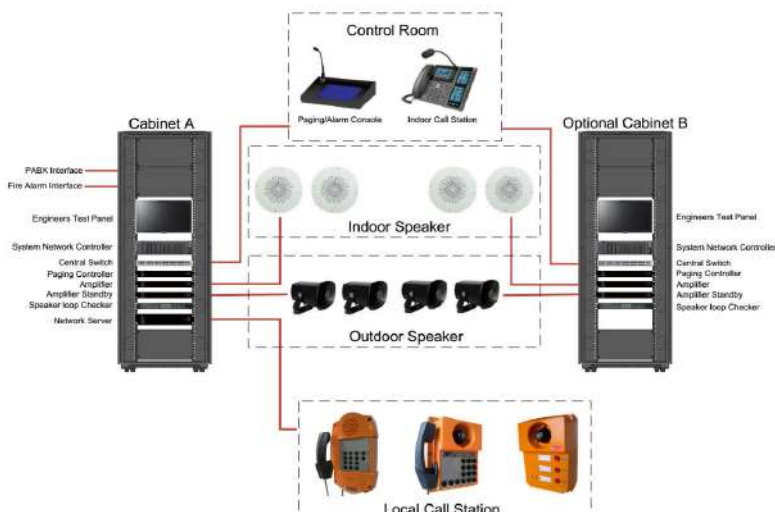
System Monitor (Optional)

Real time monitoring amplifier and hot standby (N+1) function (Optional with additional device)

Real time speaker loop monitor function with alarm (Optional with additional device)

Redundant function for system server, such as CPU and Power unit.

SYSTEM DIAGRAM



TEL: +33(0)1 48 76 62 62 | FAX: +33(0)1 48 76 83 04 | WEB: www.lelas.fr | E-Mail: lelas@lelas.fr
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DIGI3K Plus - INTERCOM / PA&GA SYSTEM OVER IP

AUDIO&VIDEO INTERCOM / PUBLIC ADDRESS

SYSTEM MAIN EQUIPMENT

MAIN ACCESS CONSOLE

Indoor console used for paging and alarm.
LCD touch screen with microphone
High definition 3W built in speaker
Device protected by key and password.



CONTROL ACCESS CONSOLE

Indoor console used as an intercom for broadcasting and P2P call in the control room.
Compatible with standard SIP protocol.
With a paging microphone and 4.3" LCD
77 keys



CENTRAL SERVER

Up to 192 analog type Intercom terminals
or maxi 1024 IP subscribers.
Optional Redundancy CPU design.DC
48V or AC 110-240V, Redundancy power
supply module as option.



CENTRAL CABINET

Doors and sides are removable, lockable
Lock upgrade options available
Cable pass-throughs on bottom of rack
With different size from 12 to max 42U



TCP / IP



LOCAL SPEAKER



Wall mounted horn, IP66 from 15 to 30W
Ex type available.
Plastic or metal enclosure. 100V line or
8/16ohm type, for indoor/outdoor Paging
system.
With speaker monitoring module(Optional)
via additional checking unit.

CENTRAL AMPLIFIER



Class D or IP decoder built-in 100V/8 Ohms. Rated
power output of 120/240/350/500W.
Enable to broadcast Mp3 program or pre-recorded
voice message from PC server to amplifier.
Remote volume control and program.

LOCAL BEACON



Indoor / Outdoor flashing beacon, from 5
to 21J with different color (signal or bi-
color as demand).
Polyester or Metal enclosure, IP66 or Ex
Use for site with important noisy or be a
part of alarm system.

LOCAL CALL STATION

WP INTERCOM TERMINAL



WEATHER PROOF IP66 402E

- Suitable for communication in extremely harsh environments.
- Durable with Polyester Carbon casing and stainless steel components.
- Four variants: Full keyboard and hot-line (no keyboard), with or without LCD
- Analog or VoIP version with amplifier (Optional)

EX INTERCOM TERMINAL



EX D IIB or IIB+H2 T6 214A

- Aluminum Light-alloy enclosure, with metal button. IP66
- With build in amplifier / 15W Speaker
- Orange as standard color. Blue, yellow gray optional.
- Power over Ethernet (PoE) or 12-24V DC for IP version. Power from Center for analog version.



PRESENTATION of LE LAS PAGA System

Presented by: TELEPHONES LE LAS

Date: 2024



Since **1909**

Design and **Manufacturer**

Telecommunication system and **Product** for our client in :

- Oil& Gas and petrochemical plant...
- Power plants, including nuclear and other renewable energy...
- Public transport network, such as railway, motorway and subway.
- Healthcare, including pharmaceutical factories and hospitals.



What is PAGA system

PAGA system is : Public Address and General Alarm (PAGA) system.

Application

A critical personnel safety system: Daily broadcast and emergency messages throughout a facility.

- background music,
- routing speech,
- pre-record alarm message.

Interface with 3rd party system

PAGA systems are usually linked to other system

- PABX telephone system,
- Radio system,
- Fire/gas detection and alarm systems,
- Video surveillance.

PAGA System of Lelas

- Solution for simple application : **DIGICOM Lite**
- Solution for full application : **DIGICOM3000**
- Solution with full IP technology : **DIGICOM300 plus**

INTRODUCTION

PAGA System of Lelas

		DIGICOM3000	DIGICOM3000 Plus	DIGICOM Lite
Paging	Group Paging	●	●	●
	General Paging	●	●	●
	Alarm	●	●	
	Paging priority	●	●	
	Alarm priority	●	●	
	Background music	●	●	
	Built-in or Add-on Alarm Beacons	●	●	

PAGA System of Lelas

		DIGICOM3000	DIGICOM3000 Plus	DIGICOM Lite
Intercom	P2P communication	●	●	●
	Party call	●	●	
	Conference	●	●	
	Incoming call transfer	●	●	
	Hand free	●	●	
	Hotline	●	●	
	Station Priority	●	●	

PAGA System of Lelas

		DIGICOM3000	DIGICOM3000 Plus	DIGICOM Lite
Other Function & Features	System Recording	●	●	
	System Real-time monitoring	●	●	
	PABX interfaces	●	●	
	Radio interfaces	●	●	
	DCS/SIS/SCADA interfaces	●	●	
	Fire Alarm System interfaces	●	●	
	System Recording	●	●	

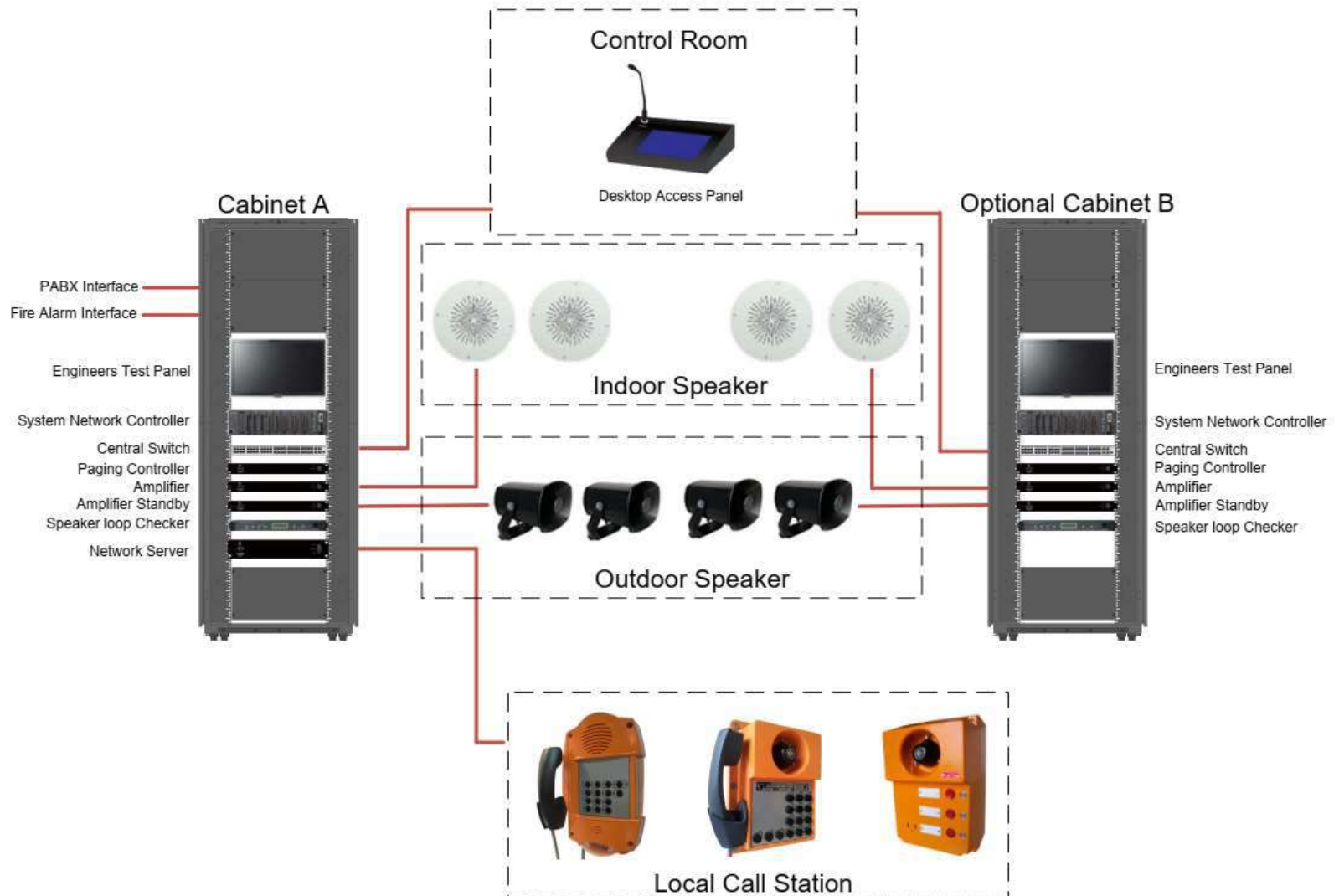
DIGICOM 3K PAGA SYSTEM

The **DIGICOM 3K** system can provide **3** different structures to meet customers' communication and security needs from basic to highest :

- The **basic PAGA** and intercom needs through a **single cabinet**.
- **Redundant structural** system implemented by a **single cabinet** to meet most project safety requirements.
- **A+B system structure**, providing customers with the **highest** level of protection.



SYSTEM BLOCK DIAGRAM



SYSTEM CAPABILITIES

The **DIGICOM 3K** system offers a wide range of features and accommodates the largest of system requirements:

- ◆ Up to 255 nodes in a single network (bigger systems can be realized grouping more sub-networks).
- ◆ Up to 32 audio inputs such as Access Panels, telephone or radio systems, BGM, tone generators.
- ◆ Up to 64 paging zones per node.
- ◆ Up to 1024 I/O interface for external system interface such as fire and gas detection, process monitoring, pushbuttons, sounders, beacons, and others.
- ◆ Real time monitored amplifier and speakers loop.
- ◆ Up to 18 pre-record message by add audio module.
- ◆ Maxi 192 analog + 1024 IP intercom station in a Network.
- ◆ Amplifier back-up via hot standby, redundancy of central equipment, or complete system duplication.
- ◆ System support to set more than 600 level's priority.

SYSTEM FUNCTION

Intercom	PA	Other Function & Features
P2P communication	Group call	System Recording
Party call	General call	System Real-time monitoring
Conference	PA and alarm	PABX interfaces
Incoming call transfer	PA priority	Radio interfaces
Hand free	Alarm priority	DCS/SIS/SCADA interfaces
Hotline	Background music	Fire Alarm System interfaces
Station Priority	Built-in or Add-on Alarm Beacons	

Central Processing Unit

- Input/Output Module for management of Paging source, alarm, dry contact signal for beacon.
- Connection to standard field bus (Modbus®).
- Expandable up to approximately 1024 I/O's.
- Redundant mode available.
- Digital & Analogue Input / Outputs.
- DIN rail mounting design.
- Plug-in, screwless (push-in) terminals for ease of wiring and maintenance.
- Communication: USB / 2 x RS485 ports / EtherNet/IP.
- Support redundant CPU and power supply design, support A+B design.



Class D / IP Audio Power Amplifier



- Switching power technology, or built-in IP network audio decoder and digital Class-D power amplifier for each channel.
- Rated power output at 4x240W, 2X500W or signal channel 500W.
- Compact design 1U or 2U.
- Thermal and output overload protections.
- Support to diagnostic with monitoring unit CFT172P353.

Audio Module / Alarm Generator

- Standard 19" 1U rack suitable for any 19" cabinet.
- Support MP3, WAV format.
- Support SPIFLASH to be simulated as a USB, directly update the voice in SPIFLASH like operating a USB flash driver.
- Support 30 levels of volume adjustment.
- Support cycle times setting.
- Support external input audio and MP3 audio mixing, external input, MP3 output, external input and MP3 mixing three output switching.
- Support sip2.0 (RFC3261).
- Support IGMP.
- Support contact control.



Audio Processor Unit



- 16-Channel audio input.
- 16-Channel audio output.
- 1 TCP/IP Port for communication.
- 1 x RS232 interface for communication.
- 1 x USB Port for communication.
- 1U design for standard cabinet.

Engineer Test Panel

ETP (engineering test panel) is a rapid access platform for broadcasting, test and maintenance operations.

It consists of :

- 1 x noise suppressor microphone with relative Push to talk (PTT) button.
- 3 x green buttons for prerecorded messages / alarm audio broadcast.
- 1 x orange lights for fault signaling.
- 1 x yellow lights for management and maintenance interventions.
- 1 x red lights for alarm signaling with 1 pushbuttons for ACK.

From the ETP, each operator that have access to the cabinet can:

- Perform a test voice broadcast.
- Broadcast four different alarms / pre-recorded messages.
- Acknowledge a fault notification.





SYSTEM EQUIPMENT

HMI(Humain Machine Interface) & On-line Monitoring Software



- ✓ 15.6" 1920 x 1080 touch screen with keypad.
- ✓ Quad-core Cortex-A17 CPU with High Performance dedicated 3D Processor.
- ✓ Fan-less Cooling System.
- ✓ Built- in 4GB Flash Memory and RTC.
- ✓ Built-in Power Isolator.
- ✓ Built-in software for system configuration, system status monitoring.
- ✓ Support remotely PC work station with On-line monitoring software.

Access Panel (Paging/Alarm)

- LCD touch screen with microphone
- Paging capacities: zone paging, group paging, all zone paging.
- With 3 real key protected by cover (PTT/Emergency paging/Emergency alarm).
- With system monitoring menu.



Master Call Station (Intercom)

- Indoor console used as an intercom for broadcasting and P2P call in the control room.
- Compatible with standard SIP protocol.
- With a paging microphone and 4.3" LCD 77 keys.



QUALITY SYSTEM



TECHNICAL SERVICE

- ◆ LE LAS fully trained site engineers will be responsible for providing training, commissioning, trouble shooting, documentation, engineering design etc.
- ◆ **Service Guarantee Letter/Performance Bond**
- ◆ **Standard services include**
 - ✓ Commissioning, Check up and Testing.
 - ✓ Technical Trainings.
 - ✓ UAT,SAT,FAT services.
 - ✓ Integrated training.
 - ✓ Inventory/spare parts Services.
 - ✓ During and after the warranty period.



CONTACT US



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France

Tel/What'sApp : +33 (0)6 24 36 20 90 / J-Claude DOS SANTOS

Email : jcds@lelas.fr

Website : www.lelas.fr

Client	Project	Product/System	Location	Year
	Esfanah cooling tower project	PAGA/INTRCOM	IRAN	2023
	NAGHSHE JAHAN STADIUM	PAGA/INTRCOM	IRAN	2023
Basra Oil Company (BOC)	Majnoon SAA LAN / PAGA Project	PAGA/INTRCOM	IRAQ	2023
Basra Oil Company (BOC)	Majnoon Sour Gas Treatment Facility Project	PAGA/INTRCOM	IRAQ	2023
BP Iraq NV	RUMAILA CPS7 PROJECT	PAGA/INTRCOM	IRAQ	2023
DOCG / CPECC	Majnoon Water injection pilot	PAGA/INTRCOM	IRAQ	2022
CPECC	Iraq Halfaya GPP Project	PAGA/INTRCOM	IRAQ	2022
ICGB AD	FEED & EIA for Natural Gas Interconnector Greece – Bulgaria (IGB) Project	PAGA/INTRCOM	GREECE	2022
HONGSA POWER COMPANY LIMITED	Hongsa 3X626MW Power plant extension project	PAGA/ Intercom	LAOS	2021
	Kangan Olefin Project	PAGA/INTRCOM/PABX	IRAN	2021
	FARASAKOU ASALOUYEH PORT AND OIL TERMINAL	PABX SYSTEM	IRAN	2021
BOC / CPECC	MAJNOON OIL FIELD WAREHOUSE BLOCK PROJECT	PAGA/INTRCOM	IRAQ	2021
CPP	Iraq Halfaya Transfer Pump Station Project	PAGA/INTRCOM	IRAQ	2021
	NIOEC Esfahan Refinery Upgrading project RHU plant	PAGA/INTRCOM	IRAN	2021
	NIOEC Esfahan Refinery Upgrading project DHU plant	PAGA/INTRCOM	IRAN	2020
ESSO (Thailand) Public Company	LLK Intercom Replacement	PAGA/INTRCOM	THAILAND	2020
BOC / CPECC	MAJNOON OIL FIELD FCC/OB and WAREHOUSE BLOCK PROJECT	PAGA/INTRCOM	IRAQ	2020
CPP	Iraq Halfaya Warehouse and workshop Project	PAGA/INTRCOM	IRAQ	2020
	Chongqing Zhengyang Oil Depot Project	PAGA/INTRCOM	CHINA	2020
	Qinghai PetroChina Pipeline LNG	PAGA/INTRCOM	CHINA	2020
Opal Parsian	SANGAN Mine Project	PAGA/INTRCOM	IRAN	2020
SINOPEC	Shanghai Yangshan Port LNG Upgrade	PAGA/INTRCOM	CHINA	2019
CPECC	Iraq Halfaya Camp project	PAGA/INTRCOM	IRAQ	2019
	Shandong Taian LNG Plant II	PAGA/INTRCOM	CHINA	2019
	Shandong Haiyang Nuclear Plant Thermal Project	PAGA/INTRCOM	CHINA	2019
PETROCHINA INTERNATIONAL Co., LTD	Iraq Halfaya CPF2 Reform Project	PAGA/INTRCOM	IRAQ	2019
Esfahan Oil Refining	Esfahan Loading project	PAGA/INTRCOM	IRAN	2019
	SHANGHAI YANGSHAN LNG TERMINIAL& TRUCKLINE PROJECT	PAGA/INTRCOM	CHINA	2018
SINOPEC	PUGUAN Gas field project	PAGA/INTRCOM	CHINA	2018
CPECC	Iraq Halfaya CPF3 Project	PAGA/INTRCOM	IRAQ	2018
	Karachi Steel Factory	PAGA/INTRCOM	PAKISTAN	2018

P.S.P. Specialties Co., Ltd	Terminal Automation System For P.S.P. Truck Loading (TASPSP)/Samutsakhon	PAGA/INTRCOM	THAILAND	2017
Jordan Petrol Refineries	Jordan Petrol Refineries	PAGA/INTRCOM	JORDAN	2016
ExxonMobil Iraq Limited	Power Generation and Distribution Phase 1 (PGD1) Project	PAGA/INTRCOM	IRAQ	2016
KAZAKSTAN CHINA ASIAN GAS PIPELINE	KAZAKSTAN CHINA ASIAN GAS PIPELINE	PAGA/INTRCOM	KAZAKSTAN	2016
IGEDC	Hamedan-Bijar Gas compressor station	PAGA/INTRCOM	IRAN	2016
IGEDC	Dehagh -Polkaleh Gas compressor station 420	PAGA/INTRCOM	IRAN	2015
IGEDC	Dehagh -Polkaleh Gas compressor station 421	PAGA/INTRCOM	IRAN	2015
South Gas Company	RUMELLA Refinery project	PAGA/INTRCOM	IRAQ	2014
PETROCHINA INTERNATIONAL Co., LTD	HALFAYA CAMP COMMUNICATIONS PROJECT PHASE II	PAGA/INTRCOM	IRAQ	2014
IGEDC	TAKAB GAS COMPRESSOR STATION	PAGA/INTRCOM	IRAN	2014
	Mahshahr petrochemical plants	PAGA/ Intercom	IRAN	2014
Qatar Petrochemical Company LTD(QAPCO)	Furnaces and Ethylene Tank Porject	PAGA/INTRCOM	QATAR	2013
Century Energy International Co. Limited	Iran Yada project	PAGA/INTRCOM	IRAN	2013
Qidong Hengan	QINGDAO Ing PUBLIC ADDRESS AND GENERAL ALARM SYSTEM	PAGA/INTRCOM	CHINA	2013
HONGSA POWER COMPANY LIMITED	Hongsa 3X626MW Power plant project	PAGA/ Intercom	LAOS	2013
IRANIAN OFFSHORE OIL COMPANY(IOOC)/SNEF	Reshadat LAVAN Plant	PAGA/INTRCOM	IRAN	2010
CGN--Shenzhen Strongjet Technology Company Limited	CGN LOT78BA Liaoning Nuclear Centre of Hongyanhe and Fujian Ningde	PAGA/INTRCOM	CHINA	2010
NINGDE NUCLEAR CENTER	NINGDE NUCLEAR CENTER	PAGA/INTRCOM	CHINA	2010
PETROCHINA INTERNATIONAL Co., LTD/gazoduc Kazakhtan	Central Asia Natural Gas Pipeline Project C1/C4/GTMEMC	PAGA/INTRCOM	KAZAKSTAN	2010
	HONGYANHE NUCLEAR CENTER	PAGA/INTRCOM	CHINA	2010