CATALOGUE OF LE LAS

SPECIALIST IN THE SAFETY COMMUNICATION

Group Le Las
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Since its creation in 1909, LE LAS was given for vocation to solve the problems of communications in the most difficult environments.

Equipment of the national navy fleet and to the firedamp mines in the beginning, LE LAS extended its experiment and its dynamism to the most varied environments. Sea transports and railways, ports and airports, chemical sites, oil or quite simply urban, energy sector, laboratories and hospitals, civil or military administrations, etc...

LE LAS is a specialist of explosion-proof and weatherproof telephones, intercoms, signalling systems and loudspeakers. LE LAS equipment is used in oil and gas industry in which LE LAS has a big experience.

LE LAS products are certified ISO 9001. LELAS weatherproof devices have protection IP 66, anti-vandalism equipment has shock resistance IK 10. Explosion proof equipment is certified ATEX 94/9/CE and GOST R and has protection by explosion-proof envelope or intrinsic protection of electronic cards. LELAS devices can work at – 40 + 60°C. Completely computerised design and production departments adapt the most recent technical contributions like GSM or voice over IP.

LE LAS offer a broad line of goods easily adaptable to the customers needs at the lowest costs.
Engagements:

✓ Solutions adapted to your needs: from the smallest enterprise to the heaviest industrial groups.

✓ Effective communications, applicable to the most various environments, the most exposed, the most noisy ones.

✓ The advises and assistance from a flexible and reliable partner: from diagnostic to turnkey carrying out.

Key points:

✓ With 100 years of experience, dynamism and expansion!

✓ Always innovating and skill of the most performing technologies handling in secure communications.

✓ A unique reference due to the synergy of the 5 leading companies in their own fields.
100 YEARS AFTER

LE LAS’ S EVOLUTION
**SAFETY TELEPHONE**

**EXPLOSION - PROOF TELEPHONE**

**TELEPHONE ATEX**

**TLA227 A1AT**

*Description*

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 and offers also 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.

**TECHNICAL CHARACTERISTICS**

- Cast aluminium casing. Sealed by tightening 3 fixing screws.
- Shockproof, dual-operation pulse or DTMF dialling, 14 buttons.
- Weatherproof ringer > 92dB/1 meter
- 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, detachable and lockable.
- 8 numbers in memory
- Test controlled distance of good functioning of the phone
- Can be installed at 7-16km distance from PABX without any amplificatory
- Second cable entry to add signalization or head phones set.
- Max. / min. amb. Temp:..........................-40 °C / + 60°

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Low energy consumption with maximum power, a receiver adaptable to different environments, hands-free version, level of watertightness and high shock resistance, IP version possible, parts easy to remove for easy maintenance, and different options offered by LE LAS make most demanding customers choose this explosion proof telephone 229.

201 x 320 x 113 mm ; 2.3kg

New telephone model 229 is easy to install and to connect to the telephone line, wide choice of options, robust weatherproof and explosion proof components can be used in the hardest climatic conditions, stainless-steel screws, made of reinforced polycarbonate to resist shocks, keyboard version, LCD display, call memory, integrated flash lamp, remote testing by master station.

**TECHNICAL CHARACTERISTICS**

- Remote diagnostic
- Reinforced composite
- Flashing light
- Optional equipment: voip equipment / headset equipment
- Loudspeaker (hands-free)/microphone: vandal resistant/5W mounting: on wall
- Open the pivoting front panel removing the three screws.
- Pass the cables through the cable glands being sure that the cable fit with the rubber gasket
- Connect the telephone wires at the screw terminals as indicated in the operator’s book
- Make a functional test calling another extension and asking to be re-called
- Adjust the volume of the bell (see operator’s book)
- Adjust the sensitivity of the microphone (see operator’s book)
- Close the front panel paying attention to the position of the gaskets
- Maintenance: all circuits and control devices are fixed on the easy removable front plate for a very quick substitution of equipment in field.
WEATHER-PROOF TELEPHONE

TLA 346 E15A

DESCRIPTION

Taking advantage of experience gained with its previous generation of “346” telephones, Le Las has increased the features and facilities and user-friendliness of its weatherproof, robust telephones.

This electronic new generation telephone is protected against all electrical or radio interference. Thus, the acoustic quality is improved and operation is possible with reduced voltage (even on long lines or lines with low level of power).

209 x 240 x 117mm; 3.6 kg

The robustness of these telephones enables optimum operation, even on the most difficult sites. For example, the casing is protected by “epikote” paint and the handset by a “Teflon” coating? Equipped with stainless-steel armoured cord with resistance against vandalism greater than 200 kg.

100% made of aluminium light-alloy epoxy painted. The telephone is protected IP65 (IP66 on demand)

TECHNICAL CHARACTERISTICS

- Protected IP66 (IEC-144)
- DTMF/Pulse dialling
- 90dB at 1m. Adjustable bell
- Heavy-duty magnetic hook (E5) or mechanic hook (E8)
- Very compact and attractive design
- Standard colour RAL2003 with black handset (other colours on demand)
- Available with 2 additional push-buttons for automatic call of pre-stored telephone

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TLA 402E1SIP

**ELECTRICAL CHARACTERISTICS:**
- Direct current supply: 12 to 48 Vdc
- Consumption: < 30mA
- Ringing voltage: 35 – 90 Va
- Dialling: DTMF / decimal
- Flashing/earth: adjustable
- Electronic Bell: 90dB at 1m.
- Noise cancelling: noise cancelling circuit
- Hook: magnetic
- Conversation Mode: By handset

**ADDITIONAL FUNCTIONS:** Flashing light / Telecommand / Handsfree type

- Body material/Colo: polyester plastic/RAL2003
- Handset cord: stainless steel (INOX) 100kg resistance
- Loudspeaker/microphone: vandal resistant/5W
- Termination: inside screw connections
- IP65 / IP66 as demand
- Max./min.amb.Temps: -40°C/+60°C
- Maintenance: all circuits and control devices are fixed on the easy removable front plate for a very quick substitution of equipment in field.

**TECHNICAL CHARACTERISTICS**

- Open the pivoting front panel removing the three screws.
- Pass the cables through the cable glands being sure that the cable fit with the rubber gasket
- Connect the telephone wires at the screw terminals as indicated in the operator’s book
- Make a functional test calling another extension and asking to be re-called
- Adjust the volume of the bell (see operator’s book)
- Adjust the sensitivity of the microphone (see operator’s book)
- Close the front panel paying attention to the position of the gaskets
- Body material / Colo: polyester plastic / RAL2003
**EXPLOSION6PROOF TELEPHONES**

**SERIE ”214”**

**TLH214AG**

**DESCRIPTION**

The “214” explosion-proof hands-free telephone is equipped with the high performances electronic card WK140, which offers the best speech performances (Full-Duplex) together with a wide range of additional facilities. The telephone automatically hangs-up at the end of conversation, thank to the microprocessor mounted on the electronic card.

It is an ACB analogue telephone-set, and you can connect it to any PTT Trunk line or to your PABX subscriber’s ports.

215 x 350 x 195 mm 9,0 kg

A version equipped with one push-button only is available. When the button is activated the telephone will automatically dial a list of 8 prememorized telephone numbers.

**TECHNICAL CHARACTERISTICS**

- Full-Duplex conversation
- Powered by the telephone line (external power supply not needed).

**TLA 337**

"Pivoting arm” telephone for railways

**DESCRIPTION**

The special telephone “337” can be realized in LB, CB or ACB version. The pivoting arm visible on the photo is equipped with a receiving capsule. When the arm is lifted the microphone mounted on the front of the telephone becomes accessible for talking.

This very singular shape has been designed to avoid that the missing hang-up of the handset at the end of conversation. The pivoting arm returns in the original position for gravity. As a second advantage the risk of handset-robbing is cancelled.

175 x 270 x150 mm, 3,0 kg
CB-LB telephone lines concentrator

TCT106A1
DESCRIPTION
The TCT106 is a telephone lines concentrator, able to manage LB, CB or ACB lines. Not with standing the very simple electronic design, it offers very interesting performances in special emergency private telephone networks in industrial areas, ships, and military applications.

The basic version is suitable to concentrate up to 21 CB or LB telephones. Each telephone is associated to a group “Push-button + LED” mounted on the front plate of the TCT106.

From the TCT106 consol you can call any of the CB/LB telephones, or receive calls from them, managing 100% of simultaneous incoming calls. The equipment keeps moreover under control the state of the telephone cables, giving alarms in case of short-circuit or interrupted cable. The TCT106 can be delivered for desk or for flush mounting.

TECHNICAL CHARACTERISTICS

- Body material / Color: Aluminum
- Handset material / color: Red antishock plastic
- Handset cord: 1 meter, coiled cord
- Mounting: flush or top desk
- Termination: Inside screw connections
- IP-rating:40
- Max. / min. amb. Temp: 0 °C / + 50°C
- Opening: 4 screws on front part

Maintenance:
All circuits and control devices are fixed on the easy removable front plate for a very quick substitution of equipment in field
HANDS-FREE TELEPHONES
WEARTHER-PROOF

TLC S376E1CL

Detection of variable programmable tones from 300 to 500 Hz; Also operates on lines with reduced current (guaranteed down to 18 mA); Exceptionally robust enclosures (industrial type); Increased weatherproofing thanks to recently adopted techniques.

These models assure any communication, even on the most exposed site; risk of shock, vandalism, dust, corrosion, and noise (option for noisy environment: amplifier to increase sound volume by 10dB).

The different versions available satisfy all user requirements for the lowest cost level:

- keypad model (with optionally a protective flap with restricted access to dialling)
- Model with 1,2,3,4 or 8 call buttons with the option of remote control relay equipment (door entry, video surveillance, public address).

All these models can be supplied with the remote diagnostics option providing remote control, using a simple DTMF telephone, or preferably using computer software (under Windows ref TCT 162P).

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These models can be supplied with LE LAS range of call-pillars type TLB 353, TLB 365 and TLB 376. (Approved in UK and in France ART no. 98656P).

**TECHNICAL CHARACTERISTICS**
- Telephone line driven
- On-line reassurance indicator
- Weatherproof loudspeaker, volume 78 dB
- Weatherproof Electret’s microphone
- Weatherproof protected pushbutton keypad
- Electronic card with microprocessor with memory back-up and lightning protection.
- Programmable ringing tone, loudspeaker output volume, adjustable microphone sensibility, duration of conversation before automatic clear down, alternative pre-programmed autodial number, ID numbers, remote clear down via transmission of a code, etc.

**TLS 376ELS**

**DESCRIPTION**

The telephones “TLS” equipped with 1 or more autodial emergency push-buttons are equipped with the WK140 electronic card.

When the push-button is activated the electronic card, microprocessor controlled, starts dialling a pre-stored telephone number, and in case of no-reply or busy line, it automatically dials up to 7 spare emergency numbers. It stops just detecting the voice of the called party.

300 X 190 X 65 mm. 3.6 kg

This telephone is 100% remotely programmable and it can be telecontrolled by the Telemaintenance Station.

Weather-proof IP55 ACB telephone for wall mounting, stainless-steel INOX front plate, galvanized steel flush-mounting frame, Hands-free Full-duplex conversation.
**ELECTRICAL CHARACTERISTICS:**

- Telephone line: 12 to 48 Vdc
- Consumption: < 30mA
- Ringing voltage: 35 – 90 Vac
- Dialling: DTMF/Pulse
- Electronic Bell: 85 dB at 1m.
- Autoreply: programmable on 1 to 90 rights
- Automatic hook
- Other characteristics: CCITT Q23

**ADDITIONAL FUNCTIONS**

An additional electronic card is available to perform the remote opening of a door or any other activation (P/N WK026CRG)

- Loudspeaker/microphone: vandal resistant
- Max. / min. amb. Temp: -10°C/ +50 °C
- DTMF/Pulse dialling & Bell 90bB at 1m. (adjustable)
- Automatic hang-up at the end of the conversation
- LED indication the telephone is one line
- Working with telephone voltage (12 to 48VCC)

180 x 260 x 58 mm; 2.0 kg
**MODUL R-RANGE**

**TLS 304S1BC**

**TLS 304S1BS**

**TLS 304S13B**

**DESCRIPTION**

With its new product range Le Las offers the most complete and the most powerful ofands-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 exceptional robustness of the enclosure, (totally metallic, stainless sell, fire resistant, weatherproof against water and dust IP66), the pure simplicity of it’s design, the clear visual identification which causes make the location to stand out (e.g. painted borders) its modular design enabling all usages to be met.

Door entry telephones, emergency panel, help points, information point, and alarmed unit.
Bank security entrance, shared office blocks, parking, automatic fire brigade, police, public places, airport terminals, shopping centres, rubbish tips, etc.

All configurations are possible, keypad, buttons, break-glass, reassurance indicator, alarm unit, security lock etc.

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

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TECHNICAL CHARACTERISTICS

- Multi frequency (DTMF) dialing loop disconnect
- Automatic clear down
- Automatic unswer
- Local dial protection
- Programming an modification of setting locally or remotely:
  - Volume and type of ringing
  - Loudspeaker volume
  - Ability to chain numbers
  - Dual function handset, dialing or memory
  - Acoustic power loudspeaker 1 Watt or 5 Watt
  - Line calling current 18mA to 35mA
  - Voltage at terminal 48 (24 mini) Umax 60VDC
  - Dialling tone 270-540Hz
  - Busy tone 300-500Hz
  - Possibility to install camera

HANDS-FREE TELEPHON
CLEAN-ROOM

TLS250S1CL
DESCRIPTION

The latest model in the LE LAS range of hands-free telephones (without holes) exploits the most recent technical advances: it offers a high level of flexibility and ease of using, thanks to the latest microprocessor technology.

Detection of variable programmable tones from 300 to 500 Hz; also operates on line with reduced current (guaranteed down to 18mA); Robust enclosure weatherproof using techniques proven over many years.

180 x 260 x 58 mm; 2,0 kg
MRSA and other super bugs have tightened their grip on our hospitals, with the result that patients often study “league-table” before choosing a hospital for a procedure;

The TLS range of hands-free, loud-speech telephones can be disinfected or hosed down and depend upon no earpiece or mouthpiece contact for effective communication.

It is equipped with a full keypad which provides a number of one-touch autodials (“soft keys”). Approved in UK – BABT approval No 504612 and in France Art No 98656P.

The TLS250 Clean-room hands-free telephone is the results of many years of research of our laboratories. It is suitable for flush-mounting and the front surface is 100% smooth, without holes and washable.

**MRSA- Just wash it away!**
Thanks to the last version of the microprocessor controlled WK140 electronic card, these telephones can be used in several applications, not just in pharmaceutical field; they give you a very wide range of facilities.

**TECHNICAL CHARACTERISTICS**
- Telephone line driven (no power supply needed)
- One-line reassurance indicator
- Weatherproof loudspeaker, volume 78dB
- Weatherproof Electret’s microphone
- Weatherproof protected pushbutton keypad – can be washed or disinfected
- Electronic card with microprocessor with memory back-up
- Programmable ringing tone, reception volume, duration of conversation before automatic clear down, pre-programmed auto-dial numbers, automatic clear down.
- Type 250 S1C1: washable, sterile area model. Aluminium face plate protected by a polycarbonate membrane with integral keypad and LED.
GENEPHONES

AUTOGENERATOR GENEPHONE HANDSET TLG713

DESCRIPTION

No power’s supplying!

The Autogenetator handset TLG713 is special for all applications (Industry, Marine...) requiring the possibility of establishing a wired communications without any energy input. It is equipped with a system of issuing appeals, with this equipment, an audible signal perfectly audible even in a noisy environment.

Its mechanical properties allow its use in harsh conditions (falls, vibration....)

Those handsets are be used with installation fix equipped with the junction box MG391 or MG392 (see versions).

TECHNICAL CHARACTERISTICS

- Materials: Reinforced Thermoplastic
- Telescopic phone lines: 85cm – 280cm PVC
- Phone lines without plugs
- Work environment temperature: -20°C - +55°C
- Anti-tempering, salt spray corrosion resistance
- Microphone: A47421 Cellule Autogenerator
- Efficiency: 10mV / Receiver: A47421 Cellule autogenerator
- Sensitivity: > 130dB / Impedance: 200 Ohm
- No power supply

67 X 260 X122mm, 0,6 kg
AUTOGENERATOR GENEPHONE HEADSET

DESCRIPTION

As all of other Autogenerator phone type, the Autogenerator headset require no power source (Neither the pile, the battery nor the exterior power supply). They function used only the energy of the voice and it enable to establish the wire-communications in some kilometres.

TECHNICAL CHARACTERISTICS

- Phone lines without plugs
- Work environment temperature: -20°C à +55°C
- Microphone: A47421 Cellule Autogenerator
- Efficiency: 10mV / Receiver: A47421 Cellule autogenerator
- Sensitivity > 130dB
- AVS cavity type: attenuation greater than 30dB at 1,000Hz
- Resistance falls / Resistance salt spray
- R PTT button on cable
TELEPHONES ACCESSORY

METAL MADE INDUSTRIAL ACOUSTIC BOOTHS

DESCRIPTION

The acoustic booths series BTA are made of galvanized steel plates painted for outdoor.

They are normally supplied with reinforced plates suitable to mount the industrial telephones included in our range of products, but we can supply special versions, including a booth suitable for mounting one telephone and one intercom station at the same time. An additional support to mount a call repeater on the top of the box, is available (BTA-S).

The booth BTA assures a good attenuation of the noise, thanks to the 50mm of sound-in slating material (non-hygroscopic and fire retardant) filled-in between the external and internal surfaces of the booth.

The BTA booth is available in a special version made of INOXAISI304.

- BTA5/Z: galvanized painted steel
- BTA-s: top of the booth support
- BTA4: INOX-AISI 304 not painted
- BTA-SI: top of the booth support

PROTECTION BOOTH FOR EMERGENCY TELEPHONES

DESCRIPTION

The BTA-9 booth is made of polyethylene, with a modern design. It can be mounted on wall or on the square section pole as shown in the photo, with cables passage through the pole.

110 x 110 x 100mm; 2kg
It can support any kind of telephone or intercom station, included in our range of products, by using a proper matching plate made of painted aluminium.

The square section pole can be interred in the ground or fixed at the floor with the floor fizzing plate.

The BTA-9 booth offers to the users a protection against weather, and makes the emergency telephone immediately visible.

It is normally supplied in yellow colour, but for large quantity we can produce it in special colours.

**VANDAL-PROOF VIDEOPHONE FOR ISON LINES**

**DESCRIPTION**

ISDN Video telephone suitable to be used in external areas with weather-proof protection and vandal resistant.

As small camera is integrated in the body of the telephone and an LCD screen protected by a tempered glass is mounted on the top.

An emergency push-button gives you the way to call a Central Station or any other ISDN Video terminal.

**TECHNICAL CHARACTERISTICS**

- Call of an emergency number simply by pressing the push-button
- IP65 protected
- Light alloy body
- Supplied at 200 Vac
- Electronic bell 85dB at 1 meter
- Equipped with IP65 cable glands
- For ISDN lines only

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**SIGNALISATION PHONES / ALARME**

**WEATHER-PROOF COMBINED**

**FLASHING + HOWLER**

**SVG 214 A6CA/CC**

*DESCRIPTION*

The combined Optical / Acoustic signaller series “214” is realized in a very robust lightalloy body, protected E Ex d IIB T6.

It is an high-performances Telephones Calls Repeater to be used in very noisy areas. It is equipped with an acoustic tone generator for a max output level of 110 dB at 1 meter, with possible choice between : High low tone & Single tone or bi-tone signal.

The optical section is equipped with a high efficiency Xenon lamp (15 Joules), which is flashing with autogenerated rhythm, emitting high intensity white light flashes.

*TECHNICAL CHARACTERISTICS*

- 110 dB at 1m.
- 15 Joules Xenon flashing lamp
- Operating between the rings pauses also
- Powered at 220 Vac or 24/48 Vdc
- Can be added to each Le Las’s phone or intercom.

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**KLM 344E6CA/CC**

**DESCRIPTION**

The Acoustic signaller series “344” is realized in a very robust light-alloy body, IP65 protected against weather.

**TECHNICAL CHARACTERISTICS**

- 110 dB at 1m.
- Operating between the rings pauses
- 220 Vac – 110 Vac 50-60Hz
- 24/48 Vdc

300 x 190 x 181 mm; 5.0 kg

**SGV 344 E6CA/CC**

**DESCRIPTION**

The optical section is equipped with a high efficiency Xenon lamp (15 joules), which is flashing with autogenerated rhythm, emitting high intensity white light flashes.

**TECHNICAL CHARACTERISTICS**

- 110 dB at 1m.
- Flash Xenon 15 Joules
- 15 Joules Xenon flashing lamp
- Operating between the rings pauses also
- Powered at 220 Vac or 24/48 Vdc

190 x 300 x 182 mm; 7.2 kg

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**KLM 214 A6CA/CC**

**DESCRIPTION**

The Calls Repeater “214” can be supplied with an integrated telephone interface, suitable to activate the acoustic signal also during pauses between “rings”.

**TECHNICAL CHARACTERISTICS**

- 110 dB at 1m.
- Operating between the rings pauses
- 220 Vac – 110 Vac 50-60Hz
- 24/48 Vdc

215 x 350 x 195 mm; 9.0 kg

**FEF 349E**

**DESCRIPTION**

The Optical and Acoustic signallers series “349” are based on a light-alloy robust body, IP65 protected.

They are suitable for various power-supplies: directly from telephone line (60 Vac call voltage); 220 Vac; 24 or 48 VDC.

Optical signaller, suitable for telephone calls repeater, with aluminium light-alloy body, weather-proof IP65

**TECHNICAL CHARACTERISTICS**

It is equipped with 17 high efficiency LEDs (Red, Green or Yellow) with polycarbonate transparent lens. The flashing is better then a common lamp.

95 x 95 x 82 mm; 0.4 kg
**KLM349E1M**

**DESCRIPTION**

Both the optical (FEF349) and acoustic (KLM349) modules can be equipped with a proper number of cable glands accordingly to the application. More modules can be fixed one to the other in files, in order to realize special optical/acoustic complex signals.

**Acoustic signal:** It is equipped with a high efficiency howler capable to generate an electronic ring between 100 to 110 dB (depending by the power-supply source).

95 x 95 x 82 mm; 0,4 kg

**RED225**

**DESCRIPTION**

The RED225 serie industrial loudspeakers are made of aluminium light-alloy, suitable for using in heavy industrial plants. They are equipped with a 15 Watt dynamic unit, and they are manufactured in five versions, all based on the same aluminium body.

250 x 350 mm; 8,0 kg

**TECHNICAL CHARACTERISTICS**

- Basic version impedance : 16 ohm
- With matching transformer for 50-100 V lines
- With 15 Watt RMS integrated amplifier, to be powered at 24-48 Vcd
- With self-adjusting power amplifier (auto regulating in function of ambient noise)

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With remote control circuit for emergency systems

RED364

DESCRIPTION

Weather-proof loudspeaker for industrial applications, realized in a cast-iron IP65 body with re-entrant cone P/N RED-364

Suitable for any PA (Public Address) and Alarm system based on a 100V amplifying line. Transformer for 100 Volt line is equipped with a few power taps, for adjusting the output power at the local area.

With built-in amplifier 15W, same characteristics as RED364E1CE, but with muting module for working in conjunction with UNI2G intercom system.

TECHNICAL CHARACTERISTICS (see RED225)

- Screws in stainless steel and bracket in galvanized steel
- Nr. 1 CABLE ENTRY ¾”
- With built-in amplifier 15W RMS – 48 Vdc
- Input signal: 0 dB / 600ohm
- Input impedance: > 10Mohm
- Volume: adjustable by built-in trimmer
- Power-supply: 48 Vdc (0,5A)
UNIVERSAL INTERCOM

GENERAL DESCRIPTION

The Teleindustria ® UNIVERSAL-OIIS (Omnibus Industrial Intercom System) has been designed to solve all the typical communication network in industrial areas (in the most hostile conditions: noise, corrosion and weather extremes, vandalism ...) like petrochemical complexes, steel-works, power-plants, ships and off-shore platforms, tunnels and mines, railways.

The system is configured on an omnibus line with distributed electronic and distributed amplifiers: these makes the UNIVERSAL system one of the bets possible solutions for many customers.

The new UNI2G range of intercoms are the result of SYSCOM’s experience of installing such equipment in hundred of locations prone to extreme conditions, throughout the world. These systems provide also Public Address facilities using loudspeakers.

THE DESIGN OF UNIVERSAL

≥ Priority of utmost importance
Microprocessor technology and integrated switching internal to each station. Advantages: Safety and cost savings – No central cabinet needed – No risk of total failure. The cabling is carried out on a single bus, or multiple in star configuration, according to the needs of each site.

≥ High voice quality
Volume is amplified on a high impedance, guaranteeing exceptional sound quality, even over long distances.

≥ Ease of listening
Every communication must be perfectly audible in all circumstances. The volume of the loudspeaker is optimised and adjustable remotely from the Master Station (option)

≥ Safety
Substations operate in “hands free” mode and Master Stations Talk / Listen alternatively.

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GENERAL TECHNICAL CHARACTERISTICS

Up to 25 km and over, with standard copper telephone cable. Easy to expand from 2 up to 100 stations, without central exchange cabinet. Possibility to close the communication cable in a loop, so that the system will be operating also in case of cable interruption. Local electronic and local amplification for the highest reliability and the best possibility of sound adjustment. Hands-Free with PTT controlled by one side only: the best performances in noisy areas. With 2 possible configurations: One MASTER and several Slaves, or all Masters – This document describes the first configuration, for details on the All-Masters configuration please refer to our technical department.

TCH153PGBL

TECHNICAL CHARACTERISTICS

- Dialling keypad
- Integrated loudspeaker 5 Watt with external volume adjustment knob
- Goose-neck microphone
- Retro-illuminated LCD display, for caller identification and programming
- To be supplied at 24 or 48 Vdc

TLH376E1G

TECHNICAL CHARACTERISTICS

- Call push-button with integrated red LED
- Integrated 5 Watt loudspeaker
- Integrated vandal-proof microphone
- Integrated booster amplifier 15 Watt RMS, suitable to connect an additional external loudspeaker
- Nº 2 threaded holes for cables inlet, with cableglands
- To be supplied at 24 or 48 Vdc
TLH214A1G

≥ **Star type network**
Comprising a Master Station and up to 9 or 99 Sub-Stations. Optional second Master Station with diversion or tarnfert.

≥ **Intercom type network**
Comprising up to 9 or 99 multiway Master Stations

TLH214A1G
*New facilities of UNI2G*

**TECHNICAL CHARACTERISTICS**

Mesh Network, with intercom connection between “multiway” (8 stations) and “selective” call to substations (99 stations).

From the LCD display on a station with keypad, configurations are now entirely programmable by the user and furthermore facilitate:

≥ Storage in memory of calling stations
≥ Set up of several stations in conference
≥ Message distributed across one or several predefined zones, by using network stations and/or amplified loudspeakers or volume amplifier with loudspeakers.

Made of aluminium light-alloy, approved ATEX II2G – EEx d IIB T6, equipped with:

- Call push-button with integrated red LED
- Integrated 15 Watt loudspeaker (internal volume adjustment trimmer)
- Integrated vandal-proof microphone
- Integrated booster amplifier 15 Watt RMS, suitable to connect an additional external loudspeaker
- N° 2 threaded holes for cables inlet, with cableglands
- To be supplied at 24 or 48 Vdc

**Group Le Las**

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**UNIVERSAL INSTALLATION**
Simple and very flexible, installation is independent of configuration

- Bus installation: Connection of stations in parallel, on bus cable, one or two pairs
- Star installation: Connection of each station by a single cable, one or two pairs; Central junction box providing easy installation, bus, star or mixed.
- Power supply: 48V (24V adjustable) central or local (above 500 metres) according to the sitting of stations; installation possible on existing low current cable network or optical fibre.
- Choice of equipment: Medium or high volume stations (5 or 15 watts); Master stations and substations are available in desk mounted, flush-mounted, weatherproof, or explosion-proof versions.
- Options: Audio visual extension ringer; Sound extension by amplifier or loudspeaker; Remote control by relay; Telesurveillance; Link to amplifier exchange, radio network ...

**UPGRADE**: It’s so easy with “universal” simplicity

- Extention of one or several stations: The writing plan on bus cable and distributed switching enable new stations to be connected without modifying the initial installation; Change of configuration of existing stations is carried out by UNI2G programming.
- Easy extension beyond 10 stations: Identical substations; easily programmable stations with keypad.

**UNIVERSAL 2G: THE CABLE NETWORK**
All the intercom stations are connected in parallel on the same telephone cable 2 x 2 x 0,6 mm (twisted telephone pairs 6/10 mm), and can be supplied at 48 Vdc by local power-suppliers or through a separate power cable coming from a centralized power-supplier.

PAGE & PARTY LINES
INTERCOM SYSTEM TELSON

PAGE PARTY LINE SYSTEM TELSON
The Page Party Line System TELSON is just one of our different intercom systems in our wide range of products for telecommunications in industrial areas. Our technical department is available to find the best technical solution of your specific requirements.

All our equipments have been designed and manufactured to be installed in heavy industrial areas, where dust, water, humidity, salt atmosphere and chemical aggressive substances are present. Petrochemical industry, Power plants, Steel-works are the typical users of our equipments.

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GENERAL DESCRIPTION

LE LAS TELSON industrial Intercom System is a Page Line System, composed by industrial intercom stations weather-proof, Explosion proof or for desk mounting.

Each station is equipped with handset and basically 4 push buttons with LEDs. Each station is moreover equipped with a built-in amplifier 30 Watt to drive a separate re-entrant loudspeaker. Amplifier boxes 50 W are also available. All the stations are connected in parallel on the same multi pairs telephone cable. All the electronic circuits are distributed in the intercom stations. No central exchange is necessary.

The main facilities are:

- General Paging through loudspeakers (one or more zones), from any station
- Communication between two or more users by means of one of the available Party Lines (from 1 to 5 Party Lines)

(The intercom stations are normally equipped with 1 Paging and 2 Party Lines, but we can produce versions with more lines on demand)
LE LAS TELSON 3000

THE UNIQUE AND INNOVATIVE SYSTEM

GENERAL DESCRIPTION

TELSON 3000 system offers:
Performance like a standard telephone system, when the TELSON3000 is connected to any PABX;

LE LAS TELSON 3000, the unique and innovation system, satisfies the industrial requirement in terms of communication for the industrial plants. In particular, the TELSON 3000 system offers: performance like a standard telephone system, when the TELSON 3000 is connected to any PABX; Performance like a standard party-paging line intercom system, with the possibility to broadcast the message like a P.A. system;

A wide range of selectable standard telephone sets, to meet own demands in terms of environmental and functional features (civil, weather-proof, explosion-proof, cordless, hands-free types);
An appreciable reduction of the quantity of the field stations and therefore of the complete solution cost; An estimable decrease of the installation cost, due to the very simple telephone architecture: each telephone set is wired to the TELSON 3000 exchange via one standard twisted telephone pair; fully programmable numbers of communication lines trough the loudspeakers and/or the conversation lines as a stand alone unit, then all the users can operate as “Intercom” users; if the TELSON 3000 is switched off, the users can operate as standard telephone subscribers of the pabx;

Total cancellation of the “feed-back” (Larsen) problem, with no requirement of binding settings in loudspeakers volume and/or a complex cabling layout for the installation of the loudspeakers.

The TELSON3000 architecture is based on the 3U 19” standard modular rack. Each rack can handle up to 10 subscribers board (3 users each) with 1 loudspeakers net or 2 groups (15 users each) with 2 loudspeakers nets. More racks can be connected through customized plugged wires.

Using the standard telephone terminals, specifically designed by LE LAS for meeting all the industrial requirements, together with the high performed and flexible TELSON 3000 system, it is guaranteed the solution of the communication problems inside any type of industrial plants like chemical, petrochemical, iron and power plants, concrete factories and all the installations with specially heavy environmental conditions. Thanks to the modular architecture, the TELSON 3000 can be easy programmed and assembled in order to meet the own functional specifications of the customer.

1) Using the TELESON 3000 as a telephone system:

In this case, the TELSON 3000 central unit must be wired to a pabx. Each telephone station is connected to the pabx and can access to its programmed features, including the trunk connection. The user can decide freely if he wants to use the station as a telephone or as an intercom, dialing “0” to operate onto the telephone pabx system or “9” to operate onto the intercom system.
2) Connection to telephones out of the IF3000 system:

In addition to the direct and selective connection between an TELSON 3000 unit, with connection to a pabx, and an external user, the TELSON 3000 system agrees to the following performances (when it is equipped with an UIT interface for pabx): broadcasting of messages on the TELSON 3000 loudspeakers system from any external telephone, avoiding also the risk of acoustic feedback by means of the special ”antilarsen” interface; conversation between an external user and one of the users of TELSON 3000 system, through a dedicated line of the intercom system.

ELECTRICAL CHARACTERISTICS

- Power supply: 48 Vdc +20/-15%
- Max accepted noise: 2 mV psophometric
- Max current per each rack: 0.1 A rest condition 1.9 A peak load
- Telephone line rated signal: 0 dB on 600 ohm
- Calling signal level: 0 dB / Calling circuit output impedance: < 30 ohm
- Working temperature:0÷70 °C Rack dimensions: 19” - 3U
- Weight per each fully equipped rack:6.3 kg

CONNECTION SCHEME
DIGICOM

THE 3 LEADING ADVANTAGES

- Full duplex conversation, no change in habitat utilization.
- Terminal stations with/without handset, Hand Free and Head set with Micro (anti noises).
- Develop VIOP easily.

GENERAL DESCRIPTION

The DIGICOM is a totally digital intercom system (including switching and modulation). It makes it possible to establish the communications inside a site as well as the communications with other sites via the special line (optical fibber, copper, radio-relay, public switched network, etc...). It is also possible to establish communications with other communication systems (intercom, telephone, radio, paging, sound distribution, alarm, etc...).

Each station of the system is connected by a telephone type cable to the switching exchange which provides the control of the system.
The stations of different types can be connected to the switching exchange.

- Multidirectional intercom master station with a keypad and a display
- Indoors office type, flush-fitted or wall-mounted
- Industrial office type, built-in, wall-mounted, either weatherproof or explosion-proof.
- Substation for 1 to 3 directions with 1 to 3 calls push buttons, wall-mounted of the indoor or the industrial type.
- Analog telephone set with DTMF or digital dialling keypad.

2 models of switching exchange are available:

- Either 60 directions ad maximum (ASA 101-07) or 100 directions ad maximum which can be extended by adding module up to 4800 directions (ASA 101-03).

These switching exchanges propose the following possibilities:

- Equipment which has a number of directions and provides a number of simultaneous conversations corresponding to the requirements (basic equipment for 10 directions, 8 conversation circuits).
- Many functions are programmable such as:

  * Priority
  * Abbreviated dialling
  * Limited access to some stations or to some functions.
  * Selection of the group calls.
  * Distribution of the programme, of the information
  * Remote control.
**SWITCHING EXCHANGE**

The switching exchange provides the general control of the system.

This exchange has the following equipment:

1 DIGICOM switching exchange ASA 101.05 (100 directions) or ASA 101.07 (60 directions) in printed-circuit rack fixed on the chassis with the protective cover containing:

1 power supply board / 1 CPU board
1 board for 8 or 16 conversation circuits (Including one reserved for the general call)

1 to 6 or 10 boards for 10 station directions (i.e. 10 to 60 directions or 10 to 100 directions).

*Slots for extension or special function boards/Terminal blocks.*