



Driller's Intercom Digital Communication



Features

- User-friendly programming with PC software.
- Digital communications.
- System easily expanded.
- 18 Watt on-board speaker amplifier.
- Factory sealed.
- Suitable for high noise areas; NEMA 4X.
- Handsfree duplex or simplex operation.
- Division 1 and 2 and Zone 1 and 2 hazardous areas.

Driller's Intercom Systems provide communications between drill operators and rig personnel. Comprised of a central controller or intercom server and various outstations, the system's digital architecture is used to link the stations with the intercom server.

Standard intercom servers unit include station line cards, audio interfaces and relay interfaces allowing ease of connection to PA, Radio or Alarm systems. Additionally, tone generators and telephone/radio interfaces may be added to create complex loudspeaking and PA systems. Each intercom server unit can manage up to 16 digital or analog subscribers, expandable to 32 subscribers. Intercom servers may be linked or a larger server may be used for increased system size. By combining intercom servers, the system is easily expanded at any time.



Benefits

- Allows end-user to easily control, monitor and change the system setup.
- Reduces cabling and noise induction.
- Flexible enough to accommodate all size systems and system changes.
- Lower cost: no need for amplified speakers or booster amps.
- Lower installation cost.
- Flexibility in installation.
- Adaptable for different customer requirements.
- Provides safe communications in hazardous areas.

The intercom server can interface with a variety of stations. The intercom stations are available as explosion-proof, weatherproof or desktop units.

The stations have direct access by using the keypad, pre-programmed keys or speed dials. This allows the user the capability of performing point to point private calls. Additionally, the system may be configured to allow group calls, conference calls and all call announcements.

A Windows based configuration tool allows the user to program the system parameters and update the system setting when required. If connected to a modem the user or GAI-Tronics service personnel can dial in to the unit to troubleshoot the system remotely.

Industrial Driller's Intercom

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Driller's Intercom Digital Communication

DEX-102, DEX-202, DEX-101, and DEX-201 Hazardous Area Driller's Intercom Station

This station has a highly sensitive microphone that allows the user to communicate at a distance from the station. This station also contains a high gain amplifier that enables operation in high noise environments.

To prevent feedback problems in the system, the ambient noise levels, volume settings, and station placement must be taken into consideration. In most cases, stations can be mounted perpendicular to the same surface and be placed 150 feet apart. This minimum spacing requirement between stations can be reduced under the following conditions:

- the stations are installed in a high noise environment;
- they are configured for simplex mode (depressing T button);
- they contain speaker L-pads;
- they are placed in separate rooms.

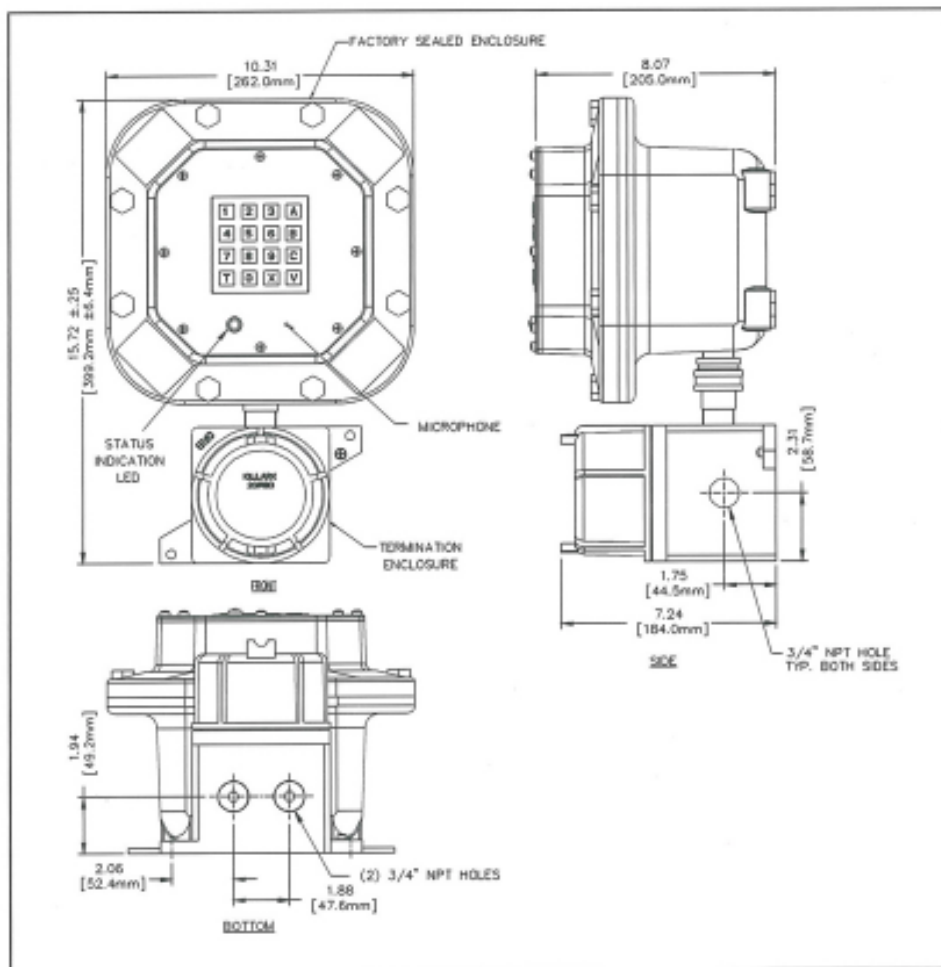


Figure 2. Driller's Intercom Outline

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Driller's Intercom Digital Communication

Field Wire Installation

Remove the termination enclosure cover and pull all wiring into the termination enclosure. Make all connections as described below.

Note: All field wiring is to be completed in the termination enclosure (bottom enclosure) only.

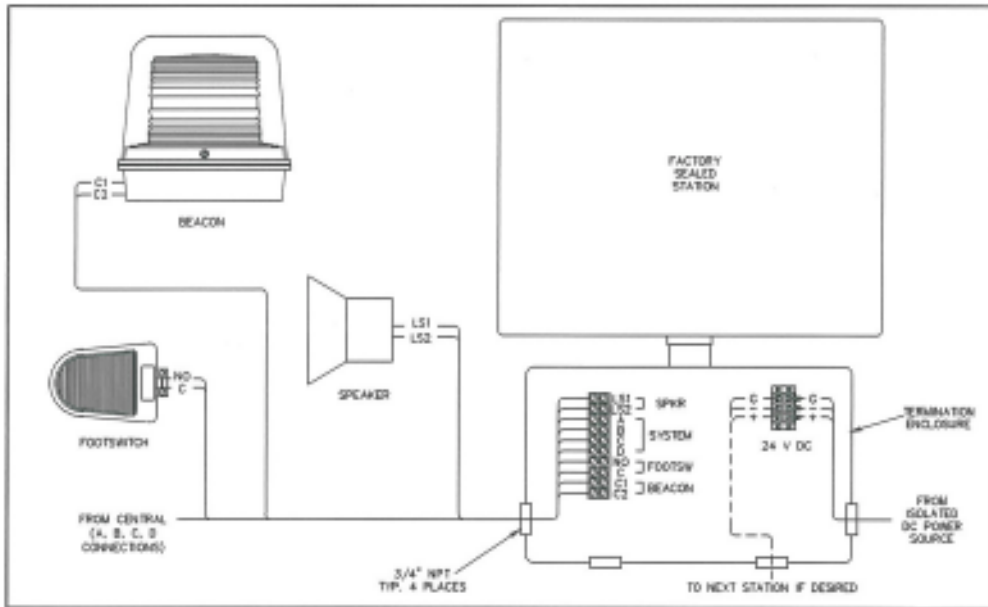


Figure 4. DC Model Installation Diagram

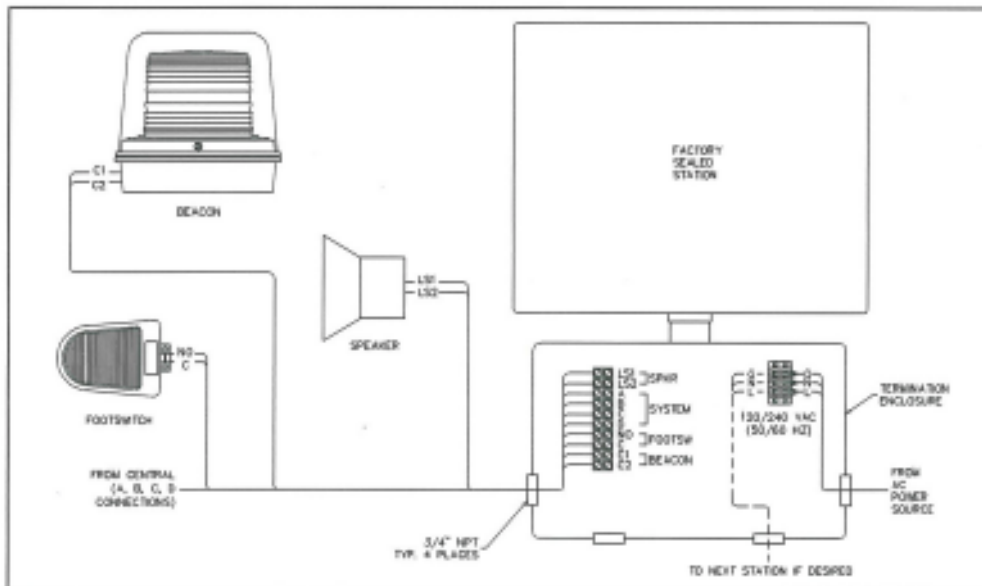


Figure 5. AC Model Installation Diagram



Driller's Intercom Digital Communication

Main Features

- Compact Central Housing.
- Easy Installation and Start-up.
- Remote Programming via Modem.
- Excellent Speech Quality.
- Beacon Output.
- Footswitch Input.

Technical Specifications

Intercom Server

Power Input	AC Power: 24 V +/- 5% 40VA DC Power: 24-35 V/40W
Physical size	12.2" W x 8.26" L x 3.05" D
Operating environment	0C to +50C @ 20-80% humidity, non-condensing
Frequency Range	200-7000 Hz
Distortion	Less than 0.9%
Mounting	Wall Mounted

Hazardous Station

Power Input	90-240VAC 50/60Hz 24 VDC +/- 10%
Physical size	10.3W x 15.9H x 8.1D; inches
Operating environment	-20C to +60C @ 95% humidity, non-condensing
Frequency Range	Transmit: 200-4kHz Receive: 200-10kHz
Termination	Screw Terminals
Speaker Amplifier	18watts / 8 Ohm Load
Cable	Signal – Twisted Pair, 20-24 AWG CAT 5 Cable
Cable Distance	9,000 ft with 20 AWG CAT 5 cable
Transmission	Full Digital, 2 X 64 kBits speech, 16 kBits/s data
Approvals	NRTL Listed – Class 1, Division 1, Groups C,D
Environmental Rating	NEMA 4X

Desktop Station

Power	Supplied by Central
Frequency range	200-7000 Hz
Housing	Shockproof ABS Plastic
Physical size	2.59" W x 9.45" L x 2.28" D
Cabling	Star Feed, twisted Pair CAT 5
Operating Temperature	0C to +50 C up to 95% non-condensing humidity
Environmental Rating	IP 50

Industrial Station

Power Input	90-240VAC 50/60Hz 24 VDC +/- 10%
Physical size	13.2"H x 9.4"W x 7.4"D
Housing	High-impact, anti-corrosive polyester
Operating environment	-20C to +60C @ 95% humidity, non-condensing
Frequency Range	Transmit: 200-4kHz Receive: 200-10kHz
Termination	Screw Terminals
Speaker Amplifier	18watts / 8 Ohm Load
Cable	Twisted Pair, 20-24 AWG CAT 5 Cable
Cable Distance	9,000 ft with 20 AWG CAT 5 cable
Transmission	Full Digital, 2 X 64 kBits speech, 16 kBits/s data
Environmental Rating	NEMA 3R

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