



SICE TYPE NV-V FOG HORN
ATEX & IECEx CERTIFIED - SUITABLE FOR ZONE 1 INSTALLATION
NV-V1 (1NM RANGE) - NV-V3 (2NM RANGE) - NV-V4 (MAIN & SECONDARY FOG HORN STATION)
NV-V3 M/S (MAIN & SECONDARY FOG HORN STATION WITHOUT SEPARATE EMITTER)



SICE NV-V3 FOG HORN
RANGE 2 NAUTICAL MILES
INCLUDING LOCAL CONTROL CIRCUIT
ENCLOSED IN A Ex-d JUNCTION BOX

Durable and very low maintenance fog horn, composed of omnidirectional acoustic emitters stacked in order to form a vertical column. This type of construction allows a perfect sonorous irradiation of 360 degrees and an excellent sonorous performance (column effect). One fog horn column is sufficient, as long as it can emit a 360-degree beam of sound in the horizontal plane.

GENERAL MAIN TECHNICAL DATA:

- ✓ Complies with IALA Recommendations.
- ✓ **Acoustic emitters** made in marine grade aluminum, subjected to a special protective treatment suitable for sea climate (treatment performed and tested by SICE).
- ✓ **Cylindrical Emitter Covers** made in AISI 316L Stainless Steel.
- ✓ **Acoustic drivers type SICE DR780**, equipped with special stainless steel resonant diaphragm and placed inside the emitter boxes. Each emitter box has two bolted covers, one for each side, for an easy replacement of the driver in case of failure.
- ✓ **Support base and other mechanical frame** made in AISI 316L Stainless Steel.
- ✓ The fog horn is suitable for installation in classified area of Zone 1, in large buoys or platforms. This construction allows an easy installation on the floor of the platform.
- ✓ The coder and control circuit can be installed in a centralized control panel or locally, inside an enclosure installed on the support base of the fog-horn. The coder can be programmed for each required sounding code and can be synchronized with other coders.
- ✓ Prepared for local/remote/automatic (by visibility meter) control.
- ✓ The emitters work by square waves broadcasting a complex sound that reduces the interferences due to reflexions.
- ✓ The acoustic driver used for this fog-horn is a special equipment with high reliability, with a failure rate lower than 1%, and a MTBF higher than 10 years: maintenance is not required.
- ✓ Sound pressure level tests performed in large anechoic chamber, in compliance with E-109 IALA Recommendation "On The Calculation Of The Range Of A Sound Signal", Edition 1 - May 1998.
- ✓ Minimum vertical divergence 5 degrees at maximum power output (2NM fog horn).
- ✓ Working (resonance) frequency ranging between 826Hz and 832Hz.
- ✓ Mechanical protection IP66 (available also IP67 for safe area use only, tested by Nemko).
- ✓ Marking : II 2G Ex d IIB T5 Gb IP66
- ✓ ATEX Certificate Number : INERIS 02ATEX0073X
- ✓ IECEx Certificate Number : INE 14.0043X
- ✓ Operating temperature range : from -40°C to +55°C
- ✓ Emitter painting colour : standard RAL 7000 (other colours can be required)

AVAILABLE MODELS:

- ✓ **Model NV-V1**, Range 1NM Fog Horn, complete with 1 emitter only.
- ✓ **Model NV-V3**, Range 2NM Main Fog Horn, complete with 3 stacked emitters.
- ✓ **Model NV-V4**, Range 2/½NM, Main & Secondary Fog Horn Station, as for IALA Recommendations, complete with 4 stacked emitters. The 4th separated emitter, and a dedicated amplifier set, provide the required secondary fog signal with range >½ Nautical Miles. For a better reliability, this horn is completely independently operated and controlled, but integrated into one single station for an easy installation.
- ✓ **Model NV-V3 M/S**, Main & Secondary Fog Horn Station without separate emitter

ELECTRICAL DATA:

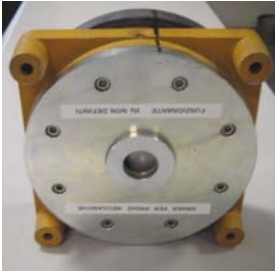
- ✓ Supply voltage : 24Vdc or 230Vac (other voltage on request)
- ✓ Power consumption NV-V1 : 30W peak (including control circuit - 4W average with U code standard IALA)
- ✓ Power consumption NV-V3 : 90W peak (including control circuit - 12W average with U code standard IALA)

SOUND PRESSURE LEVEL DATA:

- ✓ NV-V1 sound pressure level : 125dB minimum (calculated at 1 meter)
- ✓ NV-V3 sound pressure level : 134dB minimum (calculated at 1 meter)



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SICE DR780 ACOUSTIC DRIVER



**TOP LED LANTERN
 INSTALLATION DETAIL**



**SICE NV-V1 FOG HORN
 RANGE 1 NAUTICAL MILE
 INCLUDING LOCAL CONTROL
 CIRCUIT ENCLOSED IN A
 Ex-d JUNCTION BOX**



**SICE NV-V4 MAIN & SECONDARY
 FOG HORN STATION
 2/½ NAUTICAL MILES RANGE
 INCLUDING LOCAL CONTROL
 CIRCUIT ENCLOSED IN A
 Ex-d JUNCTION BOX**



**SICE NV-V3 MAIN FOG HORN
 2 NAUTICAL MILE RANGE
 INCLUDING LOCAL CONTROL
 CIRCUIT ENCLOSED IN A
 Ex-d JUNCTION BOX AND TOP
 LED LANTERN**

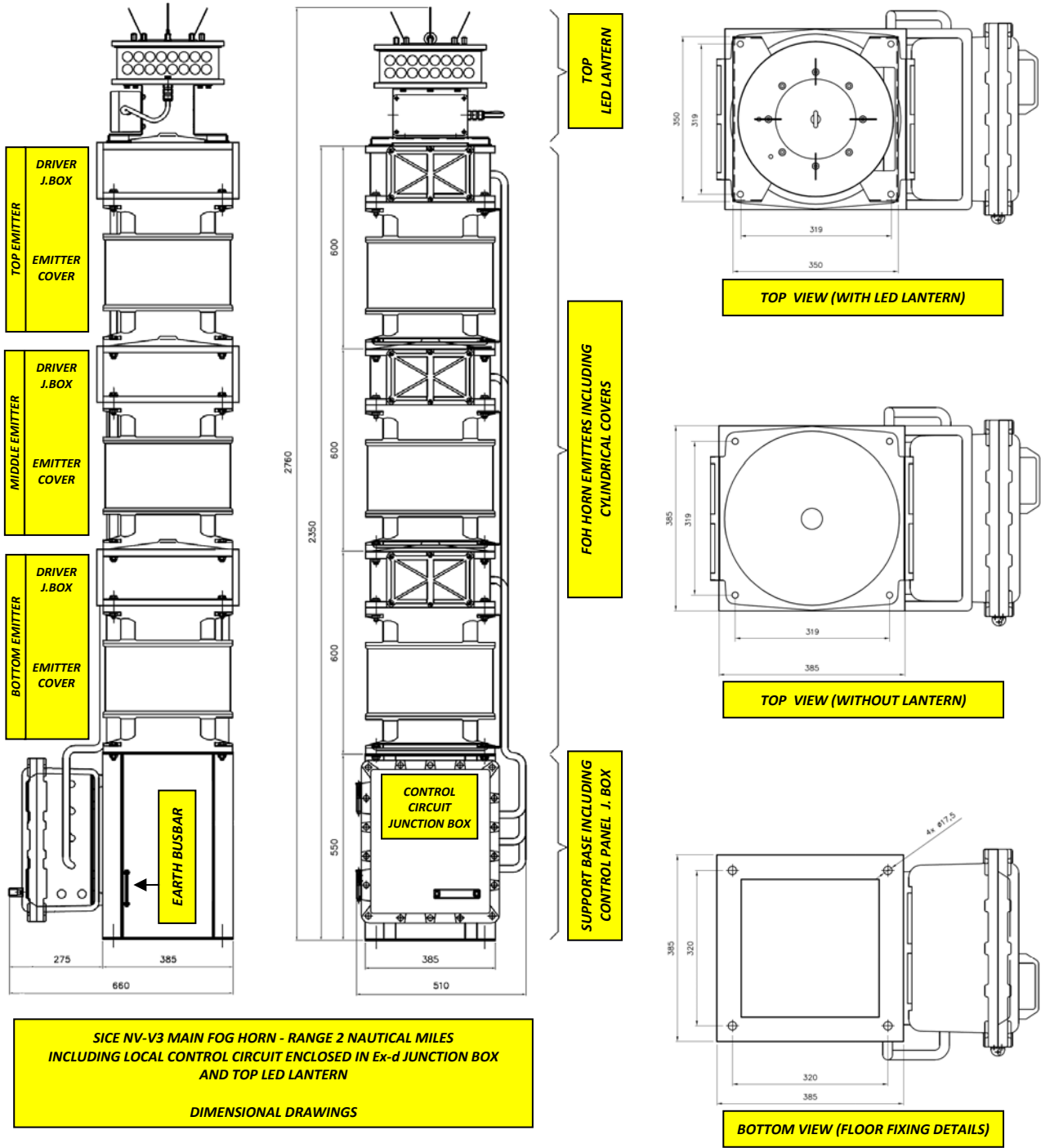
WEIGHT DETAILS

**THE FOLLOWING WEIGHT DETAILS
 INCLUDE ALSO THE FOG HORN BASE
 AND LOCAL CONTROL PANEL,
 EXPLOSION PROOF TYPE.**

Type NV-V1:	134kg
Type NV-V3:	260kg
Type NV-V4:	324kg
Type NV-V3 + Lantern:	285kg



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SICE TYPE NV-V3 M/S
COMBINED MAIN & SECONDARY FOG HORN STATION
 ATEX & IECEx CERTIFIED - SUITABLE FOR ZONE 1 INSTALLATION



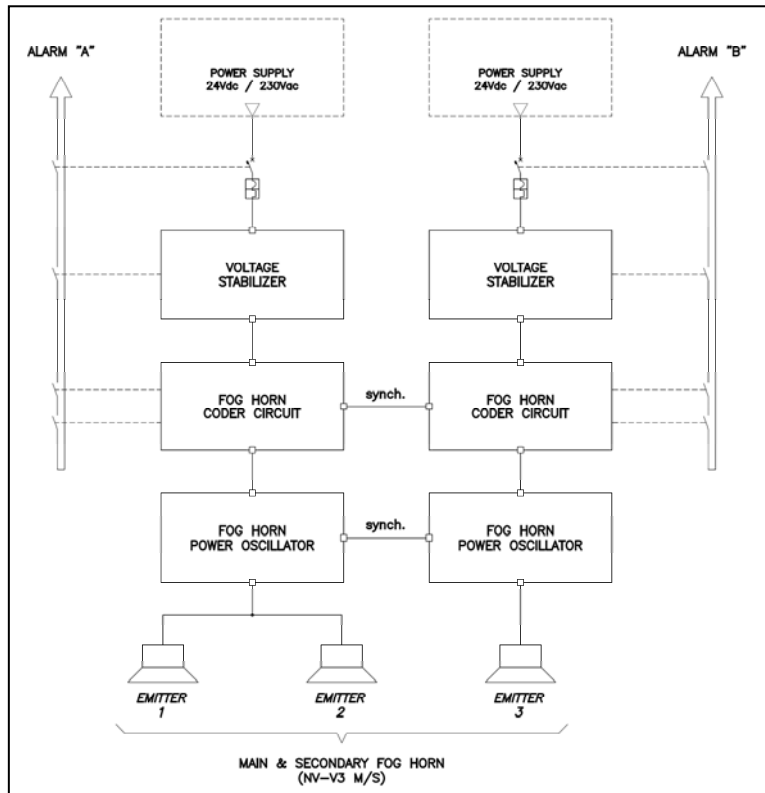
SICE NV-V3 M/S FOG HORN
 INCLUDING DUPLICATE POWER OSCILLATOR
 SYSTEM ENCLOSED IN THE Ex-d JUNCTION BOX

Dimensions: 660mm x 510mm x 2350mm (h)
 Weight: 260kg

General:

Fog horn type SICE NV-V3 M/S, supplied as “COMBINED MAIN & SECONDARY FOG HORN STATION” **without separate emitter for secondary fog horn**, in order to reduce the costs while maintaining high reliability. This system includes duplicated power supply and control circuits (voltage stabilizer, coders and power oscillators). Compliant to IALA Recommendations as Main and Secondary fog horn. Complete with raising base and local junction box, working at 24Vdc or 230Vac. The coder circuits and voltage stabilizers can be placed in the Navaid Centralized Control Panel or in the local junction box together with the oscillator.

NV-V3 M/S Fog Horn System - Block diagram:



Working philosophy:

when all power & control circuits and emitters are working correctly, all the three emitters are activated and the equipment is working as Main Fog Horn, with a range of 2 Nautical Miles. When one device fails (protection breaker or voltage stabilizer or power oscillator or emitter) at least one emitter remain working and is able to assure a range >0,5 Nautical Mile as required by IALA for Secondary Fog Horn. In this phase a “system alarm” signal is detected and expected in the local & remote control system.

Sound pressure level data:

- ✓ Three emitters working = sound pressure 134dB @1m (range 2 Nautical Miles) (*)
- ✓ Two emitters working = sound pressure 131dB @1m (range >1.5 Nautical Miles) (*)
- ✓ One emitter working = sound pressure 125dB @1m (range >0.5 Nautical Miles) (*)

(*) In compliant with IALA Guideline 1090 - The Use of Audible Signals - December 2012 - Table 2 “Usual Range”

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