

TP9000EX

SOLAS INTRINSICALLY SAFE RADIO - Information sheet



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What is a firefighter portable radio?

A firefighter radio is a radio telephone apparatus that meets the intrinsically safe requirements. The main purpose of the Intrinsically safe radios is to provide a dedicated communication line between the team of firefighters in a hazardous area.

Difference between a firefighter radio and standard on-board radio?

The main difference between the radios, is the firefighter radio need to be a Intrinsically Safe radio IECEx / ATEX approved.

When is the Intrinsically safe radio required to be implemented on board vessels?

The requirement in the SOLAS Chapter II-2, Regulation 10.10.4 states: "For ships constructed on or after 1 July 2014, a minimum of two two-way portable radio telephone apparatus for each fire party for firefighter's communication shall be carried on board. Ships constructed before 1 July 2014 shall comply with the requirements of this paragraph not later than the first survey after 1 July 2018".

Standards / approvals of the radios for use in hazardous areas?

The firefighter radio should be of an explosionproof or intrinsically safe type - to meet the requirements for such equipment, the standards for a firefighter radio should be for example ATEX 2014/34/EU - with approval rating such as II 2G Ex IIB T4 or II 2G Ex IIC T4. The TP9000EX covers the last mentioned II 2G Ex IIC T4 so it can cover almost all vessels including tankers.

Does the UHF Intrinsically safe radios (firefighter radio) need to be Wheelmark approved?

No, to date, IMO has not yet set the performance standards for the firefighter radios, however for use on-board (Maritime) a radio still need to meet the Maritime navigation and radio communication equipment regulations IEC 60945 and relevant radio communication standards such as EN 300 720.

Frequency band of the Intrinsically safe radios?

The Regulation 10.10.4 does not state what frequency band the firefighter radios should be working on, but referes to ITU-R M.1174-3. According to ITU-R. or international radio regulations (RR), UHF frequencies for on-board communication should be in the band between 457-467 MHz. 6x UHF frequencies are reserved for on-board communication which can be increased by using 12.5kHz spacing instead of 25kHz spacing. To obtain maximum coverage on-board a vessel, UHF frequencies are most commonly used due to the ability of the UHF frequency to propagate inside metal structures.

Prevent interference from surrounding vessels?

This can be done by using the CTCSS coding. Continuous Tone Coded Squelch System (CTCSS) is a frequency code programmed with the frequency (channel) of the radio. Only radios with this code on this specific frequency (channel) will be able to communicate.

How many Intrinsically safe radios is required on-board a SOLAS vessel?

A minimum of 2 x Intrinsically safe radios for each fire party shall be carried on-board. The actual number of firefighter radios may vary from vessel to vessel as more than two radios may be required for each Fire Party.

Can the Intrinsically safe radio be used for general communications on board the vessel?

The TP9000Ex UHF Intrinsically safe radio is designed to daily use.

Is it mandatory to have a non-rechargeable lithium battery package?

No, there is no information or mention in the Solas regulations for the UHF Intrinsically safe radio that the non-rechargeable battery is mandatory. But the benefit of having an extra battery (rechargeable lithium battery) is for back-up. If the Intrinsically safe radio is used for general communication, the risk will be that if a situation arises, the battery could be low on power.



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